Junos® OS

Routing Matrix with a TX Matrix Router Deployment Guide

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Junos® OS Routing Matrix with a TX Matrix Router Deployment Guide

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- Using the Examples in This Manual on page ix
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Documentation and Release Notes

To obtain the most current version of all Juniper Networks® technical documentation, see the product documentation page on the Juniper Networks website at https://www.juniper.net/documentation/.

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Using the Examples in This Manual

If you want to use the examples in this manual, you can use the **load merge** or the **load merge relative** command. These commands cause the software to merge the incoming configuration into the current candidate configuration. The example does not become active until you commit the candidate configuration.

If the example configuration contains the top level of the hierarchy (or multiple hierarchies), the example is a *full example*. In this case, use the **load merge** command.

If the example configuration does not start at the top level of the hierarchy, the example is a *snippet*. In this case, use the **load merge relative** command. These procedures are described in the following sections.

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Merging a Full Example

To merge a full example, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration example into a text file, save the file with a name, and copy the file to a directory on your routing platform.

   For example, copy the following configuration to a file and name the file **ex-script.conf**. Copy the **ex-script.conf** file to the **/var/tmp** directory on your routing platform.

   ```
   system {
     scripts {
       commit {
         file ex-script.xsl;
       }
     }
   }
   interfaces {
     fxp0 {
       disable;
       unit 0 {
         family inet {
           address 10.0.0.1/24;
         }
       }
     }
   }
   ```

2. Merge the contents of the file into your routing platform configuration by issuing the **load merge** configuration mode command:

   ```
   [edit]
   user@host# load merge /var/tmp/ex-script.conf
   load complete
   ```

Merging a Snippet

To merge a snippet, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration snippet into a text file, save the file with a name, and copy the file to a directory on your routing platform.

   For example, copy the following snippet to a file and name the file **ex-script-snippet.conf**. Copy the **ex-script-snippet.conf** file to the **/var/tmp** directory on your routing platform.

   ```
   commit {
     file ex-script-snippet.xsl; }
   ```

2. Move to the hierarchy level that is relevant for this snippet by issuing the following configuration mode command:

   ```
   [edit]
   ```


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```
user@host# edit system scripts
[edit system scripts]
```

3. Merge the contents of the file into your routing platform configuration by issuing the **load merge relative** configuration mode command:

```
[edit system scripts]
user@host# load merge relative /var/tmp/ex-script-snippet.conf
load complete
```

For more information about the **load** command, see CLI Explorer.

Documentation Conventions

Table 1 on page xi defines notice icons used in this guide.

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.
	Tip	Indicates helpful information.
	Best practice	Alerts you to a recommended use or implementation.

Table 2 on page xi defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
Bold text like this	Represents text that you type.	To enter configuration mode, type the **configure** command: user@host> **configure**

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Table 2: Text and Syntax Conventions (continued)

Convention	Description	Examples
`Fixed-width text like this`	Represents output that appears on the terminal screen.	`user@host>` **show chassis alarms** `No alarms currently active`
Italic text like this	• Introduces or emphasizes important new terms. • Identifies guide names. • Identifies RFC and Internet draft titles.	• A policy *term* is a named structure that defines match conditions and actions. • *Junos OS CLI User Guide* • RFC 1997, *BGP Communities Attribute*
Italic text like this	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name: [edit] root@# **set system domain-name** *domain-name*
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	• To configure a stub area, include the **stub** statement at the **[edit protocols ospf area area-id]** hierarchy level. • The console port is labeled **CONSOLE**.
< > (angle brackets)	Encloses optional keywords or variables.	**stub <default-metric** ***metric*****>;**
| (pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	**broadcast | multicast** **(*string1* | *string2* | *string3*)**
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	**rsvp { # Required for dynamic MPLS only**
[ ] (square brackets)	Encloses a variable for which you can substitute one or more values.	**community name members [** ***community-ids*** **]**

Indention and braces ({ })	Identifies a level in the configuration hierarchy.	[edit]
		routing-options {
		  static {
		  route default {
		  nexthop *address*;
		  retain;
		  }
		  }
		}

; (semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
GUI Conventions		
Bold text like this	Represents graphical user interface (GUI) items you click or select.	• In the Logical Interfaces box, select **All Interfaces**. • To cancel the configuration, click **Cancel**.

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Table 2: Text and Syntax Conventions (continued)

Convention	Description	Examples
> (bold right angle bracket)	Separates levels in a hierarchy of menu selections.	In the configuration editor hierarchy, select **Protocols>Ospf**.

Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can provide feedback by using either of the following methods:

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- E-mail—Send your comments to **techpubs-comments@juniper.net**. Include the document or topic name, URL or page number, and software version (if applicable).

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- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at https://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf.
- Product warranties—For product warranty information, visit https://www.juniper.net/support/warranty/.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

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- Download the latest versions of software and review release notes: https://www.juniper.net/customers/csc/software/
- Search technical bulletins for relevant hardware and software notifications: https://kb.juniper.net/InfoCenter/
- Join and participate in the Juniper Networks Community Forum: https://www.juniper.net/company/communities/
- Open a case online in the CSC Case Management tool: https://www.juniper.net/cm/

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: https://entitlementsearch.juniper.net/entitlementsearch/

Opening a Case with JTAC

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- Use the Case Management tool in the CSC at https://www.juniper.net/cm/.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see https://www.juniper.net/support/requesting-support.html.

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CHAPTER 1

Overview

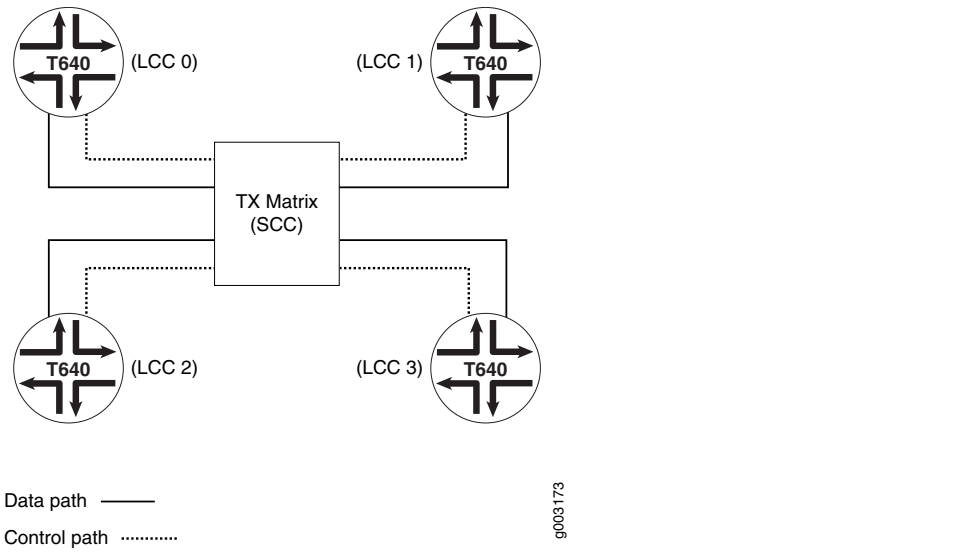
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Terms and Acronyms for the Routing Matrix on page 17

Overview of the Routing Matrix with a TX Matrix Router

The routing matrix with a TX Matrix router is the first multichassis product from Juniper Networks. The T640 and T320 routers were the first core routers that provided scalable bandwidth and intelligent networking features with a capacity of 80 to 640 gigabits per second (Gbps) of throughput. A key part of the T Series design was the ability to scale individual T640 routers to 2.5 terabits of bandwidth by combining them in a multichassis configuration. Such scalability is now available with the routing matrix.

The physical system of a routing matrix consists of one TX Matrix router and from one to four T640 routers, as shown in Figure 1 on page 15. A key element of the routing matrix design is the ability to migrate existing T640 routers and connect them with the TX Matrix router through fiber-optic cables and Switch Interface Boards (SIBs).

Figure 1: Routing Matrix with a TX Matrix Router Architecture



The TX Matrix router connection between the T640 routers uses a scalable, three-stage switch fabric. This system architecture provides terabit bandwidth expansion capacity

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and eliminates the use of subscriber line cards to connect devices within points of presence (POPs). As a result, the primary application for the routing matrix is to collapse aggregation and core layers in large POPs and central offices.

The routing matrix appears as a single router to the operator and utilizes the existing Junos OS command-line interface (CLI) for configuration and management. To manage this multichassis system, some enhancements have been made to the CLI that allow you to select the amount of output you wish to receive when you issue operational commands. You can specify the entire routing matrix, the TX Matrix router, a specific T640 router and its Flexible PIC Concentrators (FPCs), or a combination thereof.

Similarly, you can limit which portions of the routing matrix are modified during configuration or maintenance procedures (for example, performing software upgrades or halting Routing Engines).

Identifying Routing Matrix with a TX Matrix Router Components

A routing matrix with a TX Matrix router contains two types of chassis:

- TX Matrix router—

  There is only one TX Matrix router per routing matrix. It is referred to as the switch-card chassis (**scc**) in the Junos OS CLI.

- T640 routers—

  There can be one to four T640 routers in a routing matrix. These are referred to as line-card chassis 0 through 3 (**lcc0–lcc3)** in the Junos OS CLI. The T640 router number is set by the hardware. See the *TX Matrix Router Hardware Guide* for further information on installing and connecting the hardware.

Viewing the Routing Matrix with a TX Matrix Router as a Single Router

Even though a routing matrix with a TX Matrix router can be comprised of five separate physical components (a TX Matrix router and up to four T640 routers), it is best if you consider a routing matrix as a single router. When you issue configuration and operational commands on the TX Matrix router, your view of the routing matrix shows a single routing device with a high number of FPCs and PICs. For a detailed discussion of FPC numbering in a routing matrix with a TX Matrix router, see "Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router" on page 27.

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- System Requirements for the Routing Matrix with a TX Matrix Router on page 19
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

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Terms and Acronyms for the Routing Matrix

L

line-card chassis (LCC) — A T640 router or T1600 router installed in a routing matrix.

R

routing matrix — A high capacity, multichassis router. The routing matrix with a TX Matrix router combines multiple T640 routers with a TX Matrix router switch fabric. The routing matrix with a TX Matrix Plus router combines multiple T1600 routers with a TX Matrix Plus router switch fabric.

S

Switch Interface Board (SIB) — On T640 and T1600 routers and on TX Matrix router and TX Matrix Plus routers, a switch fabric plane component that forwards packets from a source Packet Forwarding Engine to a destination Packet Forwarding Engine.

switch-card chassis (SCC) — A TX Matrix router installed in a routing matrix.

switch-fabric chassis (SFC) — A TX Matrix Plus router installed in a routing matrix.

T

TX Matrix Plus router — A high-speed centralized switch fabric that connects multiple T1600 routers in a routing matrix.

TX Matrix router — A high-speed centralized switch fabric that connects multiple T640 routers in a routing matrix.

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
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CHAPTER 2

System Requirements

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System Requirements for the Routing Matrix with a TX Matrix Router

To implement the TX Matrix router, your system must meet these minimum requirements:

- Junos OS Release 7.0 or later
- One TX Matrix router
- Two Juniper Networks T640 routers
- Physical Interface Cards (PICs) of your choice (To view a list of supported PICs, see the *T640 Router PIC Guide*)

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
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CHAPTER 3

Configuring a Routing Matrix with a TX Matrix Router

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Roadmap to Configuring a Routing Matrix with a TX Matrix Router

When you configure the routing matrix with a TX Matrix router, you should do some or all of the following:

- You must connect to the Routing Engines of the routing matrix. For information on how to do this, see "Connecting to a Routing Matrix with a TX Matrix Router" on page 22.
- You must configure groups that support the components of the routing matrix. Groups offer a simple way to establish hostnames, management interfaces, and default routes. For more information on how to do this, see "Configuring Groups to Support a Routing Matrix with a TX Matrix Router Components" on page 24.
- You can adjust the configuration to accommodate the number of FPCs installed on the routing matrix. For information on FPC numbering, see "Routing Matrix with a TX Matrix Router FPC Numbering" on page 26. For information on configuring the routing matrix to accommodate FPCs, see "Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router" on page 27.

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- You can configure protocols and other features on the routing matrix. Other than the expanded range of FPC numbers for interfaces and the requirement to create groups for the T640 routers, you can configure protocols in exactly the same manner as you would for other Juniper Networks routers.
- For T640 routers, you can configure PIC-specific features, create an alarm for nodes that do not come online, and take a node offline. For more information, see "Configuring Chassis-Specific Statements for a Routing Matrix with a TX Matrix Router" on page 28.
- As with every Junos router, you must commit configurations on the routing matrix before they take effect. For information on how to do this, see "Committing Configurations on a Routing Matrix with a TX Matrix Router" on page 29.
- When you upgrade the software on the routing matrix, the new image is loaded on the TX Matrix and distributed to all T640 routers. For more information, see "Upgrading the Software for a Routing Matrix with a TX Matrix Router" on page 59.
- For information about managing system processes in the routing matrix, see "Managing System Processes in the Routing Matrix with a TX Matrix Router" on page 51.
- For information about rebooting the routing matrix or halting routing matrix software components, see "Rebooting and Halting Routing Matrix with a TX Matrix Router Components" on page 53.
- For information about enabling or temporarily disabling routing matrix hardware components, see "Enabling and Disabling Specific Routing Matrix with a TX Matrix Router Hardware Components" on page 54.
- For information about managing files on the routing matrix, see "Managing Files on Routing Engines in a Routing Matrix with a TX Matrix Router" on page 52.
- For information about commonly used commands for the routing matrix, see "Monitoring a Routing Matrix with a TX Matrix Router" on page 57.

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
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Connecting to a Routing Matrix with a TX Matrix Router

The TX Matrix router and every T640 router can each be configured with two Routing Engines to provide redundancy and graceful Routing Engine switchover capabilities. You can connect to each Routing Engine in the following ways:

- Console/AUX—Asynchronous access via the console and auxiliary ports on the TX Matrix router or T640 router Connector Interface Panel (CIP).
- Management Ethernet—Telnet access via the Fast Ethernet ports on the TX Matrix router or T640 router CIPs.

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- CLI login from one Routing Engine to another—All Routing Engines in the routing matrix with a TX Matrix router are connected to their respective control boards, which in turn are connected to the CIP on the TX Matrix router (see the *TX Matrix Router Hardware Guide* for more details). After you log in to one Routing Engine, you can connect to another Routing Engine as follows:

```
user@router> request routing-engine login ?
Possible completions:
  backup               Log in to backup RE
  lcc                  Log in to LCC (0..3)
  master               Log in to master RE
  other-routing-engine  Log in to the other Routing Engine
  re0                  Log in to RE0
  re1                  Log in to RE1

user@router>  request routing-engine login lcc ?
Possible completions:
  <lcc>                Log in to LCC (0..3)

user@router>  request routing-engine login lcc 0 ?
Possible completions:
  backup               Log in to backup RE
  master               Log in to master RE
  re0                  Log in to RE0
  re1                  Log in to RE1
```

NOTE: Because the routing matrix appears as a single router, we recommend that you access the master Routing Engine of the TX Matrix router to perform all configuration tasks for the routing matrix. Under normal operating conditions, you do not need to access or configure the T640 router directly. If you access a Routing Engine on a T640 router, the following warning is displayed:

```
user@router> request routing-engine login lcc 0 re0
--- JUNOS 7.0-20040625.1 built 2004-06-25 19:51:38 UTC
%
% cli
warning: This chassis is a Line Card Chassis (LCC) in a multichassis
 system.
warning: Use of interactive commands should be limited to debugging.
warning: Normal CLI access is provided by the Switch Card Chassis
(SCC).
warning: Use 'request routing-engine login scc' to log into the SCC.
```

To manage the backup Routing Engines on all components (for example, to upgrade Junos OS), log in to the TX Matrix router backup Routing Engine and perform the necessary operations.

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
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- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21

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- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Configuring Groups to Support a Routing Matrix with a TX Matrix Router Components

For easy maintenance of the chassis in a routing matrix with a TX Matrix router, you can add a configuration group for each Routing Engine in the T640 router and TX Matrix router. The configuration groups added to the TX Matrix router configuration offer a simple way to establish hostnames, management interfaces, and default routes. In the example below, groups **re0** and **re1** refer to the TX Matrix router Routing Engines, while groups **lcc0-re0** and **lcc0-re1** refer to the Routing Engines on T640 router **LCC0**. To configure groups for the TX Matrix router, include the **re0** and **re1** statements at the **[edit groups]** hierarchy level. To configure groups for the T640 router, include the **lcc***number*-**re0** and **lcc***number*-**re1** statements at the **[edit groups]** hierarchy level.

```
[edit]
groups {
    re0 {
        system {
            host-name hostname-scc-re0;
            backup-router ip-address;
        }
        interfaces {
            fxp0 {
                unit 0 {
                    family inet {
                        address ip-address;
                    }
                }
            }
        }
    }
    re1 {
        system {
            host-name hostname-scc-re1;
            backup-router ip-address;
        }
        interfaces {
            fxp0 {
                unit 0 {
                    family inet {
                        address ip-address;
                    }
                }
            }
        }
    }
    lcc0-re0 {
        system {
            host-name hostname-lcc0-re0;
            backup-router ip-address;
        }
        interfaces {
            fxp0 {
```


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```
            unit 0 {
              family inet {
                address ip-address;
              }
            }
          }
        }
      }
      lcc0-re1 {
        system {
          host-name hostname-lcc0-re1;
          backup-router ip-address;
        }
        interfaces {
          fxp0 {
            unit 0 {
              family inet {
                address ip-address;
              }
            }
          }
        }
      }
    }
    apply-groups [ re0 re1 lcc0-re0 lcc0-re1 ];
```

Note that apply groups can be nested. For example, any configuration statements that are common to **lcc0-re0** and **lcc0-re1** can be put into a separate group and then added as an apply group to the **lcc0-re0** and **lcc0-re1** groups, which in turn are applied to the main configuration.

For more information about configuration groups, see the *Junos OS CLI User Guide*.

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Configuring Protocols and Other Features for a Routing Matrix with a TX Matrix Router

Other than the expanded range of FPC numbers for interfaces and the requirement to create groups for the T640 routers, the configuration of a routing matrix with a TX Matrix router is exactly the same as for all other Juniper Networks routers. You can configure routing protocols, Multiprotocol Label Switching (MPLS) applications, virtual private networks (VPNs), routing and forwarding options, and other software features as usual.

For more information on configuring Junos OS-based routers, see the Junos configuration guides.

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Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Routing Matrix with a TX Matrix Router FPC Numbering

A routing matrix with a TX Matrix router can contain up to four T640 routers, and each T640 router can contain up to eight FPCs (numbered **0** through **7**). Therefore, the routing matrix as a whole can consist of up to 32 FPCs (numbered 0 through 31).

Each T640 router is assigned a number (LCCs **0** through **3**) that depends upon the hardware setup and connectivity to the TX Matrix router. Table 3 on page 26 shows the basic correspondence between the FPC hardware slot numbers in T640 routers and the FPC assignments recognized by a routing matrix.

Table 3: FPC Correspondence Between T640 Routers and the Routing Matrix with a TX Matrix Router

T640 Router	T640 FPC Range	Routing Matrix FPC Range
LCC 0	0–7	0–7
LCC 1	0–7	8–15
LCC 2	0–7	16–23
LCC 3	0–7	24–31

To easily convert FPC numbers in the T640 routers to the correct FPC number in a routing matrix, use the conversion chart shown in Table 4 on page 26. You can use the converted FPC number to configure the interfaces on the TX Matrix router in your routing matrix.

Table 4: T640 to Routing Matrix with a TX Matrix Router FPC Conversion Chart

FPC Numbering	T640 Routers							
	LCC 0							
T640 FPC Slots	0	1	2	3	4	5	6	7
Routing Matrix FPC Slots Equivalent	0	1	2	3	4	5	6	7
	LCC 1							
T640 FPC Slots	0	1	2	3	4	5	6	7
Routing Matrix FPC Slots Equivalent	8	9	10	11	12	13	14	15

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Table 4: T640 to Routing Matrix with a TX Matrix Router FPC Conversion Chart (continued)

FPC Numbering	T640 Routers							
	LCC 2							
T640 FPC Slots	0	1	2	3	4	5	6	7
Routing Matrix FPC Slots Equivalent	16	17	18	19	20	21	22	23
	LCC 3							
T640 FPC Slots	0	1	2	3	4	5	6	7
Routing Matrix FPC Slots Equivalent	24	25	26	27	28	29	30	31

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router on page 27
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router

You must adjust the routing matrix with a TX Matrix router configuration to accommodate increased FPC numbers.

For example, if you have a Gigabit Ethernet interface installed in FPC slot **7**, PIC slot **0**, port **0** of T640 router **LCC 3**, you can configure this interface on the TX Matrix router by including the **ge-31/0/0** statement at the **[edit interfaces]** hierarchy level.

```
[edit]
interfaces {
   ge-31/0/0 {
      unit 0 {
         family inet {
            address ip-address;
         }
      }
   }
}
```

For more information about physically connecting T640 routers and a TX Matrix router together in a routing matrix, see the *TX Matrix Router Hardware Guide*. For more information about the interface-naming conventions for a routing matrix, see the *Junos Network Interfaces Configuration Guide*.

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Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Routing Matrix with a TX Matrix Router FPC Numbering on page 26
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Configuring Chassis-Specific Statements for a Routing Matrix with a TX Matrix Router

You can configure PIC-specific features, such as SONET/SDH framing, on specific T640 routers within the routing matrix with a TX Matrix router. To do so, include the **lcc *lcc-number*** statement at the **[edit chassis]** hierarchy level and specify the chassis-specific feature to configure.

```
[edit]
chassis {
  lcc lcc-number {
    fpc slot-number { # Use the T640 router FPC hardware slot number.
      pic pic-number {
        ...
      }
    }
  }
}
```

NOTE: When you include statements at the **[edit chassis lcc *lcc-number*]** hierarchy level, specify the actual FPC hardware slot number as labeled on the T640 router chassis. Do not use the routing matrix-based FPC number shown in Table 4 on page 26.

By default, the Junos OS allows all T640 routers in the routing matrix to come online. Optionally, you can configure the TX Matrix router to generate an alarm if the T640 routers in the routing matrix do not come online. To configure, include the **online-expected** statement at the **[edit chassis lcc *number*]** hierarchy level on the TX Matrix router.

```
[edit chassis lcc number]
online-expected;
```

If you do not want a T640 router to be part of the routing matrix, you can configure it to be offline. This is useful when you are performing maintenance on a T640 router. To configure a T640 router so that it is offline, include the **offline** statement at the **[edit chassis lcc *number*]** hierarchy level.

```
[edit chassis lcc number]
offline;
```

When you are ready to bring the T640 router back online, delete the **offline** configuration statement at the **[edit chassis lcc *number*]** hierarchy level.

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NOTE: If you do not configure the online-expected or offline statement, any T640 router that is part of the routing matrix is allowed to come online. However, if a T640 router does not come online, the TX Matrix router does not generate an alarm.

For more information about chassis-specific statements, see the *Junos System Basics Configuration Guide*.

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Committing Configurations on a Routing Matrix with a TX Matrix Router

You must commit configuration changes for a routing matrix with a TX Matrix router on the TX Matrix router rather than on the individual T640 routers. If you commit a configuration directly on a T640 router within a routing matrix, the configuration is not distributed to the TX Matrix router or the other T640 routers in the routing matrix. Conversely, all configuration changes you commit on the TX Matrix router are distributed to all the T640 routers in the routing matrix and override any changes committed directly on a T640 router.

There are two main ways to commit configurations on a TX Matrix router. When you issue the **commit synchronize** command, you synchronize the configurations of both the primary and backup Routing Engines on the TX Matrix router and the primary and backup Routing Engines of all the associated T640 routers.

```
user@router# commit synchronize
scc-re0:
configuration check succeeds
lcc0-re1:
commit complete
lcc0-re0:
commit complete
lcc1-re1:
commit complete
lcc1-re0:
commit complete
scc-re1:
commit complete
scc-re0:
commit complete
```

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If you issue the basic form of the **commit** command on the TX Matrix router, this action updates only the master Routing Engines of the TX Matrix router and the T640 routers in the routing matrix.

```
user@router# commit
scc-re0:
configuration check succeeds
lcc0-re0:
commit complete
lcc1-re0:
commit complete
scc-re0:
commit complete
```

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Example: Routing Matrix with a TX Matrix Router Configuration

- Routing Matrix with a TX Matrix Router Topology on page 30
- TX Matrix Router—SCC on page 31
- Verifying Your Work on the Routing Matrix with a TX Matrix Router on page 37

Routing Matrix with a TX Matrix Router Topology

Figure 2 on page 31 shows Routing Matrix A, a basic routing matrix consisting of a TX Matrix router and two T640 routers. The TX Matrix router is named **SCC** and the nodes are named **LCC0** and **LCC2**. The routing matrix with a TX Matrix router is acting as a provider edge (PE) router in a Layer 2 circuit network. SONET interface **so-1/1/0** in node **LCC0** connects to an IP/MPLS core network, and Asynchronous Transfer Mode 2 (ATM2) intelligent queuing (IQ) interface **at-17/1/0** in node **LCC2** runs Layer 2 circuit trunk mode to connect to an ATM switch. (For more information about Layer 2 see the *Junos VPNs Configuration Guide*.)

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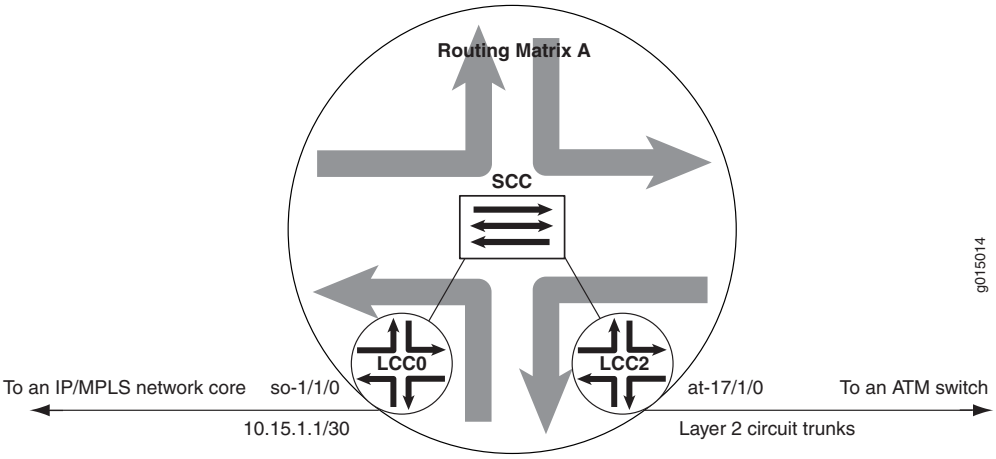
Figure 2: Routing Matrix with a TX Matrix Router Topology Diagram



Some key considerations for this configuration are as follows:

- Treat the routing matrix like a single router and execute all configuration and operational commands on the TX Matrix router **SCC**.
- Create configuration groups for each Routing Engine in the routing matrix by using groups **re0**, **re1**, **lcc0-re0**, **lcc2-re0**, **lcc0-re1**, and **lcc2-re1**. In the groups, configure hostnames, default routes, and management interfaces.
- To configure interfaces, use the routing matrix FPC numbering convention of slots **0** through **31**.
- To enable ATM2 IQ trunk mode and other chassis-based commands, include the **lcc** ***lcc-number*** statement at the **[edit chassis]** hierarchy level and use the hardware FPC slot numbers **0** through **7** of node **LCC2**.
- Configure most other processes as usual, such as routing, class of service (CoS), and firewalls.

TX Matrix Router—SCC

```
[edit]
groups { # You can create special configuration groups in a routing matrix.
  re0 { # This group corresponds to the master Routing Engine.
    system { # on the TX Matrix router.
      host-name scc;
      backup-router 192.168.17.254;
    }
    interfaces {
      fxp0 {
        unit 0 {
          family inet {
            address 192.168.77.158/21;
          }
        }
      }
    }
  }
```

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```
re1 { # This group corresponds to the backup Routing Engine
    system { # on the TX Matrix router.
        host-name scc1;
        backup-router 192.168.17.254;
    }
    interfaces {
        fxp0 {
            unit 0 {
                family inet {
                    address 192.168.77.168/21;
                }
            }
        }
    }
}
lcc0-re0 { # This group corresponds to the master Routing Engine
    system { # on the T640 router LCC0.
        host-name lcc0;
        backup-router 192.168.17.254 destination [10.0.0.0/8 192.168.0.0/16];
    }
    interfaces {
        fxp0 {
            unit 0 {
                family inet {
                    address 192.168.77.157/21;
                }
            }
        }
    }
}
lcc2-re0 { # This group corresponds to the master Routing Engine
    system { # on the T640 router LCC2.
        host-name lcc2;
        backup-router 192.168.17.254 destination [10.0.0.0/8 192.168.0.0/16];
    }
    interfaces {
        fxp0 {
            unit 0 {
                family inet {
                    address 192.168.77.159/21;
                }
            }
        }
    }
}
lcc0-re1 { # This group corresponds to the backup Routing Engine
    system { # on the T640 router LCC0.
        host-name lcc0-1;
        backup-router 192.168.17.254 destination [10.0.0.0/8 192.168.0.0/16];
    }
    interfaces {
        fxp0 {
            unit 0 {
                family inet {
                    address 192.168.77.169/21;
                }
```


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```
            }
          }
        }
      }
      lcc2-re1 { # This group corresponds to the backup Routing Engine
        system { # on the T640 routing node LCC2.
          host-name lcc2-1;
          backup-router 192.168.17.254 destination [10.0.0.0/8 192.168.0.0/16];
        }
        interfaces {
          fxp0 {
            unit 0 {
              family inet {
                address 192.168.77.192/21;
              }
            }
          }
        }
      }
    }
    apply-groups [ re0 re1 lcc0-re1 lcc2-re1 lcc0-re0 lcc2-re0 ];
    system {
      syslog {
        file messages {
          any any;
        }
      }
    }
    chassis { # You must apply chassis commands to a specific T640 router.
      lcc 2 { # Specify the T640 router and the FPC hardware slot of the node.
        fpc 1 { # This FPC is equivalent to slot 17 in the routing matrix.
          pic 1 {
            atm-l2circuit-mode {
              trunk nni;
            }
          }
        }
      }
    }
    interfaces {
      so-1/1/0 { # This is a SONET interface at FPC 1, PIC 1, port 0
        mtu 9192; # on the T640 router LCC0.
        unit 0 {
          family inet {
            address 10.15.1.1/30 {
              destination 10.15.1.2;
            }
          }
          family iso;
          family mpls {
            filter {
              input filter_1;
            }
          }
        }
      }
```

```
at-17/1/0 { # This is an ATM2 IQ interface at FPC 1, PIC 1, port 0
  encapsulation atm-ccc-cell-relay; # on the T640 router LCC2.
  atm-options {
    pic-type atm2;
    scheduler-maps { # CoS on an ATM2 IQ PIC works the same in a routing matrix.
      cos1 { # as it does in a standalone T640 router.
        forwarding-class ubr {
          priority low;
          transmit-weight percent 25;
        }
        forwarding-class nrtvbr {
          priority low;
          transmit-weight percent 25;
        }
        forwarding-class rtvbr {
          priority low;
          transmit-weight percent 25;
        }
        forwarding-class cbr {
          priority high;
          transmit-weight percent 25;
        }
      }
      cos2 {
        forwarding-class ubr {
          priority low;
          transmit-weight percent 10;
        }
        forwarding-class nrtvbr {
          priority low;
          transmit-weight percent 20;
        }
        forwarding-class rtvbr {
          priority low;
          transmit-weight percent 30;
        }
        forwarding-class cbr {
          priority high;
          transmit-weight percent 40;
        }
      }
      cos3 {
        forwarding-class ubr {
          priority low;
          transmit-weight percent 40;
        }
        forwarding-class nrtvbr {
          priority low;
          transmit-weight percent 30;
        }
        forwarding-class rtvbr {
          priority low;
          transmit-weight percent 20;
        }
        forwarding-class cbr {
          priority high;
```


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```
                transmit-weight percent 10;
              }
            }
          }
        }
        unit 0 {
          trunk-id 0;
          trunk-bandwidth 10m;
          cell-bundle-size 2;
        }
        unit 1 {
          trunk-id 1;
          trunk-bandwidth 10m;
          cell-bundle-size 1;
          atm-scheduler-map cos1;
        }
        unit 2 {
          trunk-id 2;
          trunk-bandwidth 10m;
          cell-bundle-size 2;
          atm-scheduler-map cos2;
        }
        unit 3 {
          trunk-id 3;
          trunk-bandwidth 10m;
          cell-bundle-size 3;
          atm-scheduler-map cos3;
        }
      }
      lo0 {
        unit 0 {
          family inet {
            address 127.0.0.1/32;
            address 10.255.77.158/32 {
              primary;
            }
          }
          family iso {
            address 47.0005.80ff.f800.0000.0108.0001.0102.5507.0158.00;
          }
          family inet6 {
            address 2001:db8::10:255:77:158/32 {
              primary;
            }
          }
        }
      }
    }
    protocols { # You can configure protocols in the routing matrix as usual.
      mpls {
        interface so-1/1/0.0;
      }
      isis {
        interface so-1/1/0.0;
        interface lo0.0;
      }
```

```
    ldp {
        interface so-1/1/0.0;
        interface lo0.0;
    }
    l2circuit {
        neighbor 10.255.71.97 {
            interface at-17/1/0.0 {
                virtual-circuit-id 100;
            }
            interface at-17/1/0.1 {
                virtual-circuit-id 101;
            }
            interface at-17/1/0.2 {
                virtual-circuit-id 102;
            }
            interface at-17/1/0.3 {
                virtual-circuit-id 103;
            }
        }
    }
}
class-of-service { # You can configure CoS in the routing matrix as usual.
    forwarding-classes {
        queue 0 ubr;
        queue 1 nrtvbr;
        queue 2 rtvbr;
        queue 3 cbr;
    }
    traceoptions {
        flag all;
    }
}
firewall { # You can configure firewalls in the routing matrix as usual.
    family mpls {
        filter filter_1 {
            term plp0 {
                from {
                    exp [ 0 2 4 6 ];
                }
                then {
                    count LOW;
                    loss-priority low;
                }
            }
            term plp1 {
                from {
                    exp [ 1 3 5 7 ];
                }
                then {
                    count HIGH;
                    loss-priority high;
                }
            }
        }
    }
}
```


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Verifying Your Work on the Routing Matrix with a TX Matrix Router

To verify proper operation of the routing matrix with a TX Matrix router, use the following commands on the TX Matrix router:

- **show chassis alarms** <**lcc** *lcc-number* | **scc**>
- **show chassis craft-interface** <**lcc** *lcc-number* | **scc**>
- **show chassis ethernet-switch** <**lcc** *lcc-number* | **scc**>
- **show chassis hardware** <**lcc** *lcc-number* | **scc**>
- **show chassis fpc** <**lcc** *lcc-number*>
- **show chassis lccs**
- **show chassis location** <**fpc** | **interface** | **lcc** *lcc-number* | **scc**>
- **show chassis routing-engine** <**lcc** *lcc-number* | **scc**>
- **show chassis sibs** <**lcc** *lcc-number* | **scc**>
- **show interfaces terse**
- **show route summary**
- **show system uptime** <**all-lcc** | **lcc** *lcc-number* | **scc**>
- **show version** <**all-lcc** | **lcc** *lcc-number* | **scc**>

In general, when you issue standard operational commands on a TX Matrix router, you receive output from the primary Routing Engines of all components in the routing matrix. To limit the output of information for a specific T640 router within the routing matrix, include the **lcc** *lcc-number* option. To display information for the TX Matrix router only, include the **scc** option. To display information for all T640 routers within the routing matrix (selected commands only), include the **all-lcc** option. Any exceptions to this general rule are mentioned next to the appropriate commands.

The following sections show the output of select operational commands used with the configuration example:

- Displaying the Software Version on A Routing Matrix with a TX Matrix Router on page 37
- Displaying Interfaces on page 40
- Displaying Routes on page 41
- Displaying Alarms and System Uptime on page 41
- Displaying Chassis Hardware and Status for a Routing Matrix with a TX Matrix Router on page 44

Displaying the Software Version on A Routing Matrix with a TX Matrix Router

The **show version** command provides an excellent example of how you can select output for various components of the routing matrix with a TX Matrix router. If the TX Matrix

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router (SCC) or a T640 router (LCC) is not specified in the command, then the command displays output for all components.

```
user@router> show version ?
Possible completions:
  <[Enter]>            Execute this command
  all-lcc              Show software version on all LCC chassis
  brief                Display brief output
  detail               Display detailed output
  lcc                  Show software version on specific LCC (0..3)
  scc                  Show software version on the SCC
  |                    Pipe through a command
```

To display the software version for all routing matrix components, issue the **show version** command on the TX Matrix router:

```
user@router> show version
scc-re0:
--------------------------------------------------------------------------
Hostname: scc
Model: TX Matrix
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
lcc0-re0:
--------------------------------------------------------------------------
Hostname: lcc0
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
lcc2-re0:
--------------------------------------------------------------------------
Hostname: lcc2
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
```

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To display the software version for the TX Matrix router only, include the **scc** option:

```
user@router> show version scc
Hostname: scc
Model: TX Matrix
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
```

To display the software version for a specific T640 router, include the **lcc** option:

```
user@router> show version lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Hostname: lcc0
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
```

To display the output for all T640 routers, include the **all-lcc** option:

```
user@router> show version all-lcc
lcc0-re0:
--------------------------------------------------------------------------
Hostname: lcc0
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
lcc2-re0:
--------------------------------------------------------------------------
Hostname: lcc2
Model: t640
JUNOS Base OS boot [7.0-20040630.0]
JUNOS Base OS Software Suite [7.0-20040629.0]
JUNOS Kernel Software Suite [7.0-20040630.0]
JUNOS Packet Forwarding Engine Support (T-Series) [7.0-20040630.0]
JUNOS Routing Software Suite [7.0-20040630.0]
JUNOS Online Documentation [7.0-20040630.0]
JUNOS Crypto Software Suite [7.0-20040630.0]
JUNOS Support Tools Package [7.0-20040630.0]
```

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Displaying Interfaces

Although individual FPCs are installed in each of the T640 routers, the routing matrix is designed to collect interface information centrally at the TX Matrix router. To display available interfaces in the routing matrix, issue a **show interfaces** command on the TX Matrix router:

```
user@router> show interfaces terse
Interface               Admin Link Proto Local                 Remote
so-1/0/0                up    up
so-1/1/0                up    up
so-1/1/0.0              up    up   inet  10.15.1.1           --> 10.15.1.2
                                   iso
                                   mpls
so-1/3/0                up    down
at-2/1/0                up    up
ge-2/2/0                up    up
so-3/3/0                up    up
so-3/3/1                up    up
so-3/3/2                up    down
so-3/3/3                up    down
so-16/0/0               up    down
so-16/0/1               up    down
so-16/0/2               up    down
so-16/0/3               up    up
ge-16/1/0               up    down
so-17/0/0               up    down
at-17/1/0               up    up
at-17/1/0.0             up    up   ccc
at-17/1/0.1             up    up   ccc
at-17/1/0.2             up    up   ccc
at-17/1/0.3             up    up   ccc
at-17/1/1               up    up
ge-17/2/0               up    up
ge-17/2/1               up    up
so-17/3/0               up    down
so-19/0/0               up    down
so-19/1/0               up    down
so-19/2/0               up    down
so-19/3/0               up    down
bcm0                    up    up
bcm0.0                  up    up   tnp   4
dsc                     up    up
em0                     up    up
em0.0                   up    up   tnp   4
fxp0                    up    up
fxp0.0                  up    up   inet  192.168.77.158/21
gre                     up    up
ipip                    up    up
lo0                     up    up
lo0.0                   up    up   inet  10.255.70.158       --> 0/0
                                         127.0.0.1           --> 0/0
                                   iso
47.0005.80ff.f800.0000.0108.0001.0102.5507.0158.00
                                   inet6 2001:db8::10:255:70:158
                                         fe80::280:42ff:fe13:269d
lo0.16385               up    up   inet
                                   inet6 fe80::280:42ff:fe13:269d
lsi                     up    up
```


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```
mtun                    up    up
pimd                    up    up
pime                    up    up
tap                     up    up
```

Displaying Routes

When you need to verify route information for a routing matrix, you must issue operational commands on the TX Matrix router. To display available routes for the routing matrix, issue a **show route** command:

```
user@router> show route summary
Router ID: 10.255.77.158
inet.0: 13 destinations, 14 routes (12 active, 0 holddown, 1 hidden)
              Direct:      4 routes,      3 active
               Local:      2 routes,      2 active
              Static:      6 routes,      6 active
               IS-IS:      2 routes,      1 active
inet.3: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
                 LDP:      1 routes,      1 active
iso.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
              Direct:      1 routes,      1 active
mpls.0: 7 destinations, 7 routes (7 active, 0 holddown, 0 hidden)
               MPLS:      3 routes,      3 active
                 LDP:      2 routes,      2 active
              L2CKT:      2 routes,      2 active
inet6.0: 2 destinations, 2 routes (2 active, 0 holddown, 0 hidden)
              Direct:      2 routes,      2 active
__juniper_private1__.inet6.0: 1 destinations, 1 routes (1 active, 0 holddown, 0
hidden)
              Direct:      1 routes,      1 active
l2circuit.0: 5 destinations, 5 routes (5 active, 0 holddown, 0 hidden)
                 LDP:      1 routes,      1 active
               L2CKT:      4 routes,      4 active
```

Displaying Alarms and System Uptime

To display alarms for all routing matrix components, issue the **show chassis alarms** command:

```
user@router> show chassis alarms
scc-re0:
--------------------------------------------------------------------------
2 alarms currently active
Alarm time               Class  Description
2004-09-27 08:50:57 PDT  Major  LCC 2 Major Errors
2004-09-27 08:50:42 PDT  Minor  LCC 0 Minor Errors
lcc0-re0:
--------------------------------------------------------------------------
1 alarms currently active
Alarm time               Class  Description
2004-09-27 08:50:42 PDT  Minor  PEM 1 Absent
lcc2-re0:
--------------------------------------------------------------------------
1 alarms currently active
Alarm time               Class  Description
2004-09-27 08:50:57 PDT  Major  PEM 1 Not OK
```

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To display the craft interface display for all routing matrix components, issue the **show chassis craft-interface** command:

```
user@router> show chassis craft-interface
scc-re0:
--------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
    |scc           |
    |2 Alarms active     |
    |R: LCC 2 Major Error|
    |Y: LCC 0 Minor Error|
    +--------------------|
Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *    *
Fail              .    .
Master            *    .
Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   *
Major relay  *
Minor relay  *
CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .
SIB LEDs:
  SIB  0   1   2   3   4
--------------------------
Fail   .   .   .   .   .
OK     *   *   *   *   *
Active .   *   *   *   *
lcc0-re0:
--------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
    |lcc0            |
    |1 Alarm active      |
    |Y: PEM 1 Absent     |
    |                    |
    +--------------------|
Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *    *
Fail              .    .
Master            *    .
Front Panel Alarm Indicators:
-----------------------------
Red LED      .
Yellow LED   *
Major relay  .
Minor relay  *
Front Panel FPC LEDs:
FPC    0   1   2   3   4   5   6   7
-----------------------------------
```


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```
Red    .   .   .   .   .   .   .
Green  .   *   *   *   .   .   .   .
CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .
SCG LEDs:
  SCG  0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .
SIB LEDs:
  SIB  0   1   2   3   4
--------------------------
Red    .   .   .   .   .
Green  *   *   *   *   *
lcc2-re0:
--------------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
    |lcc2          |
    |1 Alarm active      |
    |R: PEM 1 Not OK     |
    |                    |
    +--------------------|

Front Panel System LEDs:
Routing Engine    0    1
--------------------------
OK                *    *
Fail              .    .
Master            *    .
Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   .
Major relay  *
Minor relay  .
Front Panel FPC LEDs:
FPC    0   1   2   3   4   5   6   7
-----------------------------------
Red    .   .   .   .   .   .   .   .
Green  *   *   .   *   .   .   .   .
CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .
SCG LEDs:
  SCG  0   1
--------------
Amber  .   .
Green  *   .
Blue   *   .
SIB LEDs:
  SIB  0   1   2   3   4
--------------------------
```

```
Red    .   .   .   .   .
Green  *   *   *   *   *
```

To display the amount of time the routing matrix components have been in operation, issue the **show system uptime** command on the TX Matrix router:

```
user@router> show system uptime
scc-re0:
--------------------------------------------------------------------------
Current time: 2004-09-27 09:44:55 PDT
System booted: 2004-09-27 08:49:31 PDT (00:55:24 ago)
Protocols started: 2004-09-27 08:50:27 PDT (00:54:28 ago)
Last configured: 2004-09-27 09:16:08 PDT (00:28:47 ago) by user
9:44AM PDT up 55 mins, 1 user, load averages: 0.00, 0.05, 0.06
lcc0-re0:
--------------------------------------------------------------------------
Current time: 2004-09-27 09:44:55 PDT
System booted: 2004-09-27 08:49:24 PDT (00:55:31 ago)
Last configured: 2004-09-27 09:16:06 PDT (00:28:49 ago) by user
9:44AM PDT up 56 mins, 0 users, load averages: 0.00, 0.02, 0.00
lcc2-re0:
--------------------------------------------------------------------------
Current time: 2004-09-27 09:44:55 PDT
System booted: 2004-09-27 08:49:26 PDT (00:55:29 ago)
Last configured: 2004-09-27 09:16:06 PDT (00:28:49 ago) by user
9:44AM PDT up 55 mins, 0 users, load averages: 0.02, 0.01, 0.00
```

Displaying Chassis Hardware and Status for a Routing Matrix with a TX Matrix Router

To display the hardware inventory for a routing matrix with a TX Matrix router, you can select output for the TX Matrix router only, a specific T640 router, or all components. If a specific component (**lcc** or **scc**) is not specified as an option in the command, the default output displays information for the entire routing matrix.

```
user@router> show chassis hardware ?
Possible completions:
  <[Enter]>            Execute this command
  detail               Include RAM and disk information in output
  extensive            Display ID EEPROM information
  frus                 Display assembly IDs and extra PIC information
   lcc                  Display chassis-specific information (0..3)
  scc                  Display chassis-specific information
  |                    Pipe through a command
```

To display all hardware components in a routing matrix, issue the **show chassis hardware** command on the TX Matrix router:

```
user@router> show chassis hardware
scc-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  TX Matrix
Midplane         REV 04   710-004396   RB0013            SCC Midplane
FPM GBUS
FPM Display      REV 04   710-004619   HS5953            SCC FPM
```


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```
CIP 0            REV 01   710-010218   HS5726           SCC CIP
CIP 1            REV 01   710-010218   HV9163           SCC CIP
PEM 0            Rev 11   740-002595   pm18529          Power Entry Module
Routing Engine 0 REV 02   740-008883   212058900121     RE-4.0
Routing Engine 1 REV 03   740-008883   211123900258     RE-4.0
CB 0             REV 01   710-011709   HS5911           Control Board (CB-TX)
CB 1             REV 01   710-011709   HZ2163           Control Board (CB-TX)
SPMB 0           REV 09   710-003229   HT4129           T-series Switch CPU
SPMB 1           REV 09   710-003229   HT4174           T-series Switch CPU
SIB 0            REV 01   710-011223   HS0663           SIB-S8-F16 1/2
  B Board        REV 05   710-011225   HW1210           SIB-S8-F16 1/2 (B)
SIB 1            REV 01   710-005839   HW1160           SIB-S8-F16
  B Board        REV 01   710-005840   HW1213           SIB-S8-F16 (B)
SIB 2            REV 05   710-011223   HW1146           SIB-S8-F16 1/2
  B Board        REV 05   710-011225   JB8148           SIB-S8-F16 1/2 (B)
SIB 3            REV 05   710-011223   HW1218           SIB-S8-F16 1/2
  B Board        REV 05   710-011225   HW1214           SIB-S8-F16 1/2 (B)
SIB 4            REV 05   710-011223   HW1162           SIB-S8-F16 1/2
  B Board        REV 05   710-011225   HW1182           SIB-S8-F16 1/2 (B)
lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                65409            T640
Midplane         REV 03   710-005608   RA1395           T640 Backplane
FPM GBUS         REV 09   710-002901   RA2649           T640 FPM Board
FPM Display      REV 05   710-002897   RA2608           FPM Display
CIP              REV 06   710-002895   HS0753           T-series CIP
PEM 0            Rev 01   740-002595   MF16629          Power Entry Module
SCG 0            REV 11   710-003423   HS4313           T640 Sonet Clock Gen.
SCG 1            REV 11   710-003423   HR9161           T640 Sonet Clock Gen.
Routing Engine 0 REV 03   740-008883   211123900199     RE-4.0
Routing Engine 1 REV 03   740-008883   211123900248     RE-4.0
CB 0             REV 02   710-007655   HS5909           Control Board (CB-T)
CB 1             REV 02   710-007655   HS5910           Control Board (CB-T)
FPC 1            REV 07   710-007527   HR0716           FPC Type 2
  CPU            REV 15   710-001726   HS6048           FPC CPU
  PIC 0          REV 07   750-001900   AR3722           1x OC-48 SONET, SMSR
  PIC 1          REV 05   750-001900   AD3644           1x OC-48 SONET, SMSR
  PIC 3          REV 06   750-001900   HD7603           1x OC-48 SONET, SMSR
  MMB 1          REV 03   710-005555   HT5273           MMB-288mbit
  PPB 0          REV 04   710-003758   HR4249           PPB Type 2
  PPB 1          REV 04   710-003758   HR4257           PPB Type 2
FPC 2            REV 01   710-010233   HM4189           E-FPC Type 1
  CPU            REV 01   710-010169   HS9936           FPC CPU-Enhanced
  PIC 1          REV 03   750-005719   HL8326           1x OC-12 ATM-II IQ, MM
  PIC 2          REV 01   750-003141   AD9051           1x G/E, 1000 BASE-SX
  MMB 1          REV 01   710-008923   HR0848           MMB 3M 288-bit
FPC 3            REV 01   710-010154   HR0863           E-FPC Type 3
  CPU            REV 01   710-010169   HN3422           FPC CPU-Enhanced
  PIC 3          REV 01   750-009553   HP3576           4x OC-48 SONET
    SFP 0        REV 01   740-009030   P11H5N1          SFP-LR
    SFP 1        REV 01   740-009029   35D464P00060     SFP-IR
    SFP 3        REV 01   740-009030   P11H5LM          SFP-LR
  MMB 0          REV 01   710-010171   HR0821           MMB-288mbit
  MMB 1          REV 01   710-010171   HR0818           MMB-288mbit
SPMB 0           REV 09   710-003229   HT4177           T-series Switch CPU
SPMB 1           REV 09   710-003229   HT4176           T-series Switch CPU
SIB 0            REV 07   710-005781   HR5939           SIB-L8-F16
  B Board        REV 06   710-005782   HR5944           SIB-L8-F16 (B)
SIB 1            REV 02   710-005781   HZ2146           SIB-L8-F16
```

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```
  B Board        REV 03   710-005782   HY4160           SIB-L8-F16 (B)
SIB 2            REV 07   710-005781   HR5925           SIB-L8-F16
  B Board        REV 03   710-005782   HY4161           SIB-L8-F16 (B)
SIB 3            REV 07   710-005781   HR5918           SIB-L8-F16
  B Board        REV 06   710-005782   HR5972           SIB-L8-F16 (B)
SIB 4            REV 07   710-005781   HR5935           SIB-L8-F16
  B Board        REV 06   710-005782   HR5969           SIB-L8-F16 (B)
lcc2-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                55609             T640
Midplane         REV 03   710-005608   RA1444            T640 Backplane
FPM GBUS         REV 09   710-002901   RA3309            T640 FPM Board
FPM Display      REV 05   710-002897   RA3273            FPM Display
CIP              REV 06   710-002895   HS0735            T-series CIP
PEM 0            Rev 11   740-002595   PM18568           Power Entry Module
PEM 1            Rev 11   740-002595   PM18572           Power Entry Module
SCG 0            REV 11   710-003423   HS9991            T640 Sonet Clock Gen.
Routing Engine 0 REV 03   740-008883   211123900183      RE-4.0
Routing Engine 1 REV 02   740-008883   212058900178      RE-4.0
CB 0             REV 02   710-007655   HS5913            Control Board (CB-T)
CB 1             REV 02   710-007655   HS5944            Control Board (CB-T)
FPC 0            REV 05   710-001721   HD5965            FPC Type 3
  CPU            REV 09   710-001726   AY4909            FPC CPU
  PIC 0          REV 04   750-009553   HV3648            4x OC-48 SONET
    SFP 0        REV 01   740-009029   P11JXWP           SFP-IR
    SFP 1        REV 01   740-008169   36D525P00154      UNKNOWN
    SFP 2        REV 01   740-009028   2353110           SFP-SR
    SFP 3        REV 01   740-008169   36D525P00159      UNKNOWN
  PIC 1          REV 02   750-009567   HX2875            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009898   USC202YW25        XENPAK-LR
  MMB 0          REV 03   710-004047   HE3427            MMB-288mbit
  MMB 1          REV 03   710-004047   HD5812            MMB-288mbit
  ICBM           REV 04   710-003384   HB1884            FPC ICBM
  PPB 0          REV 02   710-002845   HC0964            PPB Type 3
  PPB 1          REV 02   710-002845   HC0987            PPB Type 3
FPC 1            REV 02   710-002385   HC0618            FPC Type 2
  CPU            REV 06   710-001726   HA4724            FPC CPU
  PIC 0          REV 02   750-009066   HL9900            1x OC-48 SONET SFP
    SFP 0                 NON-JNPR     P11QS8W           SFP-LR
  PIC 1          REV 02   750-007219   AZ1339            2x OC-12 ATM-II IQ, MM
  PIC 2          REV 02   750-002510   AP7476            2x G/E, 1000 BASE-SX
  PIC 3          REV 05   750-001900   AD5738            1x OC-48 SONET, SMSR
  MMB 1          REV 03   710-004047   HD5829            MMB-288mbit
  ICBM           REV 04   710-003384   HC0386            FPC ICBM
  PPB 0          REV 02   710-003758   HC0904            PPB Type 2
  PPB 1          REV 02   710-003758   HC0898            PPB Type 2
FPC 3            REV 07   710-007529   HR3311            FPC Type 3
  CPU            REV 15   710-001726   HR2788            FPC CPU
  PIC 0          REV 10   750-004535   HT0545            1x OC-192 SM SR2
  PIC 1          REV 12   750-004535   HX2065            1x OC-192 SM SR2
  PIC 2          REV 01   750-004535   HC0241            1x OC-192 SM SR1
  PIC 3          REV 01   750-004535   HF6583            1x OC-192 SM SR1
  MMB 0          REV 03   710-005555   HR5642            MMB-288mbit
  MMB 1          REV 03   710-005555   HR5586            MMB-288mbit
  PPB 0          REV 04   710-002845   HT6719            PPB Type 3
  PPB 1          REV 04   710-002845   HM0206            PPB Type 3
SPMB 0           REV 09   710-003229   HR8685            T-series Switch CPU
SPMB 1           REV 09   710-003229   HR3730            T-series Switch CPU
SIB 0            REV 07   710-005781   HR5937            SIB-L8-F16
```


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```
  B Board        REV 06   710-005782   HZ5288           SIB-L8-F16 (B)
SIB 1            REV 07   710-005781   HZ5279           SIB-L8-F16
  B Board        REV 06   710-005782   HR5951           SIB-L8-F16 (B)
SIB 2            REV 07   710-005781   HZ5276           SIB-L8-F16
  B Board        REV 06   710-005782   HR5950           SIB-L8-F16 (B)
SIB 3            REV 07   710-005781   HR5915           SIB-L8-F16
  B Board        REV 06   710-005782   HZ5285           SIB-L8-F16 (B)
SIB 4            REV 07   710-005781   HR5934           SIB-L8-F16
  B Board        REV 06   710-005782   HR5952           SIB-L8-F16 (B)
```

You can also display individual hardware components in the TX Matrix router, a specific T640 router, or the entire routing matrix. To display all the SIBs in the entire routing matrix, issue the **show chassis sibs** command on the TX Matrix router.

```
user@router> show chassis sibs
scc-re0:
--------------------------------------------------------------------------
Slot  State               Uptime
 0    Spare
 1    Online              53 minutes, 38 seconds
 2    Online              53 minutes, 36 seconds
 3    Online              53 minutes, 33 seconds
 4    Online              53 minutes, 30 seconds
lcc0-re0:
--------------------------------------------------------------------------
Slot  State               Uptime
 0    Spare
 1    Online              53 minutes, 18 seconds
 2    Online              53 minutes, 17 seconds
 3    Online              53 minutes, 16 seconds
 4    Online              53 minutes, 15 seconds
lcc2-re0:
--------------------------------------------------------------------------
Slot  State               Uptime
 0    Spare
 1    Online              53 minutes, 18 seconds
 2    Online              53 minutes, 17 seconds
 3    Online              53 minutes, 16 seconds
 4    Online              53 minutes, 15 seconds
```

To display information about all master Routing Engines in the routing matrix, issue the **show chassis routing-engine** command on the TX Matrix router:

```
user@router> show chassis routing-engine
scc-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 34 degrees C / 93 degrees F
    CPU temperature             35 degrees C / 95 degrees F
    DRAM                      2048 MB
    Memory utilization          12 percent
    CPU utilization:
      User                       0 percent
```

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```
      Background                0 percent
      Kernel                    5 percent
      Interrupt                 0 percent
      Idle                     95 percent
    Model                      RE-4.0
    Serial ID                  212058900121
    Start time                 2004-09-27 08:49:31 PDT
    Uptime                     1 hour, 4 seconds
    Load averages:             1 minute   5 minute  15 minute
                                   0.06       0.04       0.05
Routing Engine status:
  Slot 1:
    Current state              Backup
    Election priority          Backup (default)
    Temperature               33 degrees C / 91 degrees F
    CPU temperature           34 degrees C / 93 degrees F
    DRAM                    2048 MB
    Memory utilization        10 percent
    CPU utilization:
      User                     0 percent
      Background               0 percent
      Kernel                   0 percent
      Interrupt                1 percent
      Idle                    99 percent
    Model                      RE-4.0
    Serial ID                  211123900258
    Start time                 2004-09-26 13:09:13 PDT
    Uptime                     20 hours, 40 minutes, 4 seconds
lcc0-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state              Master
    Election priority          Master (default)
    Temperature               37 degrees C / 98 degrees F
    CPU temperature           38 degrees C / 100 degrees F
    DRAM                    2048 MB
    Memory utilization        11 percent
    CPU utilization:
      User                     0 percent
      Background               0 percent
      Kernel                   3 percent
      Interrupt                1 percent
      Idle                    97 percent
    Model                      RE-4.0
    Serial ID                  211123900199
    Start time                 2004-09-27 08:49:24 PDT
    Uptime                     1 hour, 11 seconds
    Load averages:             1 minute   5 minute  15 minute
                                   0.02       0.02       0.00
Routing Engine status:
  Slot 1:
    Current state              Backup
    Election priority          Backup (default)
    Temperature               35 degrees C / 95 degrees F
    CPU temperature           35 degrees C / 95 degrees F
    DRAM                    2048 MB
    Memory utilization        10 percent
    CPU utilization:
      User                     0 percent
      Background               0 percent
```


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```
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                      99 percent
    Model                          RE-4.0
    Serial ID                      211123900248
    Start time                     2004-09-26 13:09:07 PDT
    Uptime                        20 hours, 40 minutes, 12 seconds
lcc2-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                   33 degrees C / 91 degrees F
    CPU temperature               35 degrees C / 95 degrees F
    DRAM                        2048 MB
    Memory utilization            11 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     4 percent
      Interrupt                  0 percent
      Idle                      96 percent
    Model                          RE-4.0
    Serial ID                      211123900183
    Start time                     2004-09-27 08:49:26 PDT
    Uptime                        1 hour, 9 seconds
    Load averages:                 1 minute   5 minute  15 minute
                                       0.15       0.05       0.01
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                   32 degrees C / 89 degrees F
    CPU temperature               34 degrees C / 93 degrees F
    DRAM                        2048 MB
    Memory utilization            10 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  1 percent
      Idle                      99 percent
    Model                          RE-4.0
    Serial ID                      212058900178
    Start time                     2004-09-26 13:09:10 PDT
    Uptime                        20 hours, 40 minutes, 8 seconds
```

To display information about FPCs in a routing matrix, issue the **show chassis fpc** command. Because there are no FPCs in a TX Matrix router, there is no **scc** option available for this command.

```
user@router> show chassis fpc
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online           31      1          0       256         7         44
  2  Online           28      1          0       256         7         44
```

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```
  3  Online            31      3          0       256        14          44
  4  Empty
  5  Empty
  6  Empty
  7  Empty
lcc2-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            31      3          0       256        14          44
  1  Online            30      2          0       256         7          44
  2  Empty
  3  Online            31      3          0       256        14          44
  4  Empty
  5  Empty
  6  Empty
  7  Empty
```

You can also check to see if the TX Matrix router and T640 routers are communicating correctly within the routing matrix. To verify that the T640 routers have proper connectivity to the routing matrix, issue the **show chassis lccs** command. In this example, there are two T640 routers in the routing matrix.

```
user@router> show chassis lccs
Slot  State               Uptime
 0    Online             52 minutes, 5 seconds
 1    Empty
 2    Online             52 minutes, 6 seconds
 3    Empty
```

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- System Requirements for the Routing Matrix with a TX Matrix Router on page 19

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CHAPTER 4

Administering a Routing Matrix with a TX Matrix Router

- Managing System Processes in the Routing Matrix with a TX Matrix Router on page 51
- Managing Files on Routing Engines in a Routing Matrix with a TX Matrix Router on page 52
- Rebooting and Halting Routing Matrix with a TX Matrix Router Components on page 53
- Enabling and Disabling Specific Routing Matrix with a TX Matrix Router Hardware Components on page 54
- Monitoring a Routing Matrix with a TX Matrix Router on page 57

Managing System Processes in the Routing Matrix with a TX Matrix Router

Some system processes in a routing matrix with a TX Matrix router run on the TX Matrix router and some run on the T640 routers. For example, the routing protocol process (rpd) runs exclusively on the TX Matrix router. To restart the routing protocol process for the entire routing matrix, issue the **restart routing** command on the TX Matrix router.

```
user@router> restart routing ?
Possible completions:
  <[Enter]>            Execute this command
  gracefully           Gracefully restart the process
  immediately          Immediately restart (SIGKILL) the process
  logical-system       Name of logical system
  soft                 Soft reset (SIGHUP) the process
  |                    Pipe through a command
```

Other processes run on both the TX Matrix router and the T640 routers. To restart the chassis process that manages PICs, FPCs, and other hardware components, issue the **restart chassis-control** command on the TX Matrix router and select the **all**, **all-lcc**, or **lcc** ***lcc-number*** option.

```
user@router> restart chassis-control ?
Possible completions:
  <[Enter]>            Execute this command
   all          Restart software process on all chassis
 all-lcc        Restart software process on all LCC chassis
  gracefully           Gracefully restart the process
  immediately          Immediately restart (SIGKILL) the process
```

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```
  lcc          Restart software process on specific chassis (0..3)
  soft                  Soft reset (SIGHUP) the process
  |                     Pipe through a command
```

To restart the Simple Network Management Protocol (SNMP) process, issue the **restart snmp** command on the TX Matrix router and select the **all**, **all-lcc**, or **lcc** ***lcc-number*** option.

```
user@router> restart snmp ?
Possible completions:
  <[Enter]>             Execute this command
   all          Restart software process on all chassis
  all-lcc       Restart software process on all LCC chassis
  gracefully            Gracefully restart the process
  immediately           Immediately restart (SIGKILL) the process
  lcc          Restart software process on specific chassis (0..3)
  soft                  Soft reset (SIGHUP) the process
  |                     Pipe through a command
```

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Managing Files on Routing Engines in a Routing Matrix with a TX Matrix Router

You can manage files on all Routing Engines in a routing matrix with a TX Matrix router. For example, you can copy a file from the master Routing Engine in the TX Matrix router to the master Routing Engine on a T640 router.

```
user@router> file list lcc0-re0:
/var/home/user/lcc0-re0: No such file or directory

user@router> file list
/var/home/user/:
.ssh/
fred.txt

user@host> file copy fred.txt lcc0-re0:fred.txt

user@host> file list lcc0-re0:
lcc0-re0:
--------------------------------------------------------------------------
/var/home/user/:
.ssh/
fred.txt
```

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21

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- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Rebooting and Halting Routing Matrix with a TX Matrix Router Components

You can control which component in a routing matrix with a TX Matrix router is rebooted or halted. If you reboot or halt the TX Matrix router, by default you also reboot or halt the master Routing Engines on all T640 routers. To reboot a specific component, issue the **request system reboot** command with the **all-lcc**, **lcc**, or **scc** option.

```
user@router> request system reboot ?
Possible completions:
  <[Enter]>            Execute this command
   all-lcc      Reboot all LCC chassis
  at                   Time at which to perform the operation
  in                   Number of minutes to delay before operation
   lcc        Reboot LCC (0..3)
  media                Boot media for next boot
  message              Message to display to all users
   scc        Reboot SCC chassis
  |                    Pipe through a command
user@router>  request system reboot
Reboot the system ? [yes,no] (no) yes
Rebooting lcc0-re0
Rebooting lcc1-re0
```

Similarly, to halt a specific component in a routing matrix, issue the **request system halt** command with the **all-lcc**, **lcc**, or **scc** option.

CAUTION: Before entering this command, you must have access to the TX Matrix router console port and the console ports of all of the LCCs in order to bring up the TX Matrix Routing Engines.

```
user@router> request system halt ?
Possible completions:
  <[Enter]>            Execute this command
   all-lcc      Halt all LCC chassis
  at                   Time at which to perform the operation
  both-routing-engines  Halt both Routing Engines
  in                   Number of minutes to delay before operation
   lcc        Halt LCC (0..3)
  media                Boot media for next boot
  message              Message to display to all users
   scc        Halt SCC
  |                    Pipe through a command
```

Issuing the **request system halt both-routing-engines** command on a TX Matrix router halts both Routing Engines in the TX Matrix router and both Routing Engines in all T640 routers in the routing matrix. To reboot a Routing Engine that has been halted, you must connect through the console. For more information about system commands, see the CLI Explorer.

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Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

Enabling and Disabling Specific Routing Matrix with a TX Matrix Router Hardware Components

You can temporarily disable certain hardware components (such as FPCs, PICs, and SIBs) that belong to the TX Matrix router and T640 routers in the routing matrix. To do so, issue the appropriate **request chassis** command and include the **lcc** or **scc** option as needed.

NOTE: If you issue a chassis-related command that references FPCs, we recommend that you use the FPC hardware slot number (0 through 7) of the specific T640 router and specify its corresponding LCC number.

```
user@router> request chassis ?
Possible completions:
  cb                   Change Control Board status
  fpc                  Change Flexible PIC Concentrator status
  fpm                  Change craft interface status
  lcc                  Change LCC status
  pic                  Change Physical Interface Card status
  routing-engine       Change Routing Engine status
  scg                  Change SONET Clock Generator status
  sib                  Change Switch Interface Board status
  spmb                 Change Switch Processor Mezzanine Board status

user@router> request chassis fpc ?
Possible completions:
  lcc          Slot number of LCC that houses FPC (0..3)
  offline              Take FPC offline
  online               Bring FPC online
  restart              Restart FPC
  slot         FPC slot number (0..31)

user@router> request chassis pic ?
Possible completions:
  fpc-slot       Slot number of FPC that houses PIC (0..31)
  lcc                  Slot number of LCC that houses FPC (0..3)
  offline              Take PIC offline
  online               Bring PIC online
  pic-slot             PIC slot number (0..3)

user@router> request chassis sib ?
Possible completions:
  lcc          Change Switch Interface Board status (0..3)
  offline              Take SIB offline
  online               Bring SIB online
  scc          Change Switch Interface Board status
```


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```
  slot                SIB slot number (0..4)
  start-receiver      Start SIB optical receiver (0..3)
  stop-receiver       Stop SIB optical receiver (0..3)
```

The routing matrix extends the concept of taking specific hardware components offline or online to include an entire T640 router in a routing matrix. To enable or disable a T640 router in a routing matrix, issue the **request chassis lcc slot *lcc-number* (offline | online)** command.

```
user@router> request chassis lcc ?
Possible completions:
  offline             Take LCC offline
  online              Bring LCC online
  slot                LCC Slot (0..3)
```

Although you can enter the routing matrix-based slot number when you issue the **request chassis fpc** command, output from **show chassis** commands always references the FPC hardware slot number (0 through 7) of the specific T640 router and its corresponding LCC number. As a result, we recommend that you include the FPC hardware slot number when you issue **request chassis** or **show chassis** commands, as shown in the following example:

First, issue the **request chassis fpc** command with the routing matrix-based FPC slot number of **19**:

```
user@router> request chassis fpc offline slot 19
lcc2-re0:
--------------------------------------------------------------------------
Offline initiated, use "show chassis fpc" to verify
```

However, when you issue the **show chassis fpc** command to check the result, the output displays the change using node-centric terminology: FPC slot number **3** on T640 router **LCC2** (the equivalent of routing matrix slot **19**).

```
user@router> show chassis fpc
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            31      2          0       256         7         44
  2  Online            28      1          0       256         7         44
  3  Online            31      2          0       256        14         44
  4  Empty
  5  Empty
  6  Empty
  7  Empty

lcc2-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            31      2          0       256        14         44
  1  Online            30      2          0       256         7         44
  2  Empty
```

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```
  3 Offline      --- Offlined by cli command ---
  4  Empty
  5  Empty
  6  Empty
  7  Empty
```

To bring the same FPC back online, use the slot number and LCC number from the previous command output:

```
user@router> request chassis fpc online lcc 2 slot 3
lcc2-re0:
--------------------------------------------------------------------------
Online initiated, use "show chassis fpc" to verify
```

Once you bring the FPC back online, reissue the **show chassis fpc** command to see that the FPC slot and LCC number you used in the last command now matches the command output:

```
user@router> show chassis fpc
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            31      1          0       256         7         44
  2  Online            28      1          0       256         7         44
  3  Online            31      3          0       256        14         44
  4  Empty
  5  Empty
  6  Empty
  7  Empty

lcc2-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            31      3          0       256        14         44
  1  Online            30      1          0       256         7         44
  2  Empty
  3 Present     0   0    0    0    0    0
  4  Empty
  5  Empty
  6  Empty
  7  Empty
```

For more information about converting FPC hardware slot numbers on a T640 router to routing matrix FPC slot numbers, see "Adjusting the Configuration to Accommodate Increased FPC Numbers in a Routing Matrix with a TX Matrix Router" on page 27.

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

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Monitoring a Routing Matrix with a TX Matrix Router

There are a variety of other useful commands you can use to monitor a routing matrix with a TX Matrix router.

- To display the location of routing matrix components and convert FPCs from T640 router local numbering to routing matrix global numbering, issue the **show chassis location fpc** command on the TX Matrix router:

```
user@router> show chassis location fpc
Global FPC    LCC     Local FPC
     1          0         1
     2          0         2
     3          0         3
    16          2         0
    17          2         1
    19          2         3
```

- To check the status of the SIB connection between the TX Matrix router and T640 routers, issue the **show chassis fabric topology** command on the TX Matrix router. All values for each available T640 router (LCC) should be in the **UP** state. In the following excerpt of output for this command, a routing matrix that contains only LCCs **0** and **2** shows only these two T640 routers as being **UP**:

```
LCC0_SIB-L0_F0,03->SIB-S0_F0,00 UP
LCC1_SIB-L0_F0,03->SIB-S0_F0,01 RESET
LCC2_SIB-L0_F0,03->SIB-S0_F0,02 UP
LCC3_SIB-L0_F0,03->SIB-S0_F0,03 RESET
```

- To verify that the Ethernet links between the TX Matrix router and the T640 router control boards are operational, issue the **show chassis ethernet-switch** command on the TX Matrix router:

```
user@router> show chassis ethernet-switch
scc-re0:
--------------------------------------------------------------------------
Link is good on FE port 4 connected to device: LCC0
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 6 connected to device: LCC2
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 8 connected to device: SPMB
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on GE port 13 connected to device: Other RE
  Speed is 1000Mb
  Duplex is full
  Autonegotiate is Enabled
lcc0-re0:
--------------------------------------------------------------------------
Link is good on FE port 1 connected to device: FPC1
  Speed is 100Mb
```

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```
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 2 connected to device: FPC2
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 3 connected to device: FPC3
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 8 connected to device: SPMB
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 10 connected to device: SCC
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on GE port 13 connected to device: Other RE
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
lcc2-re0:
--------------------------------------------------------------------------
Link is good on FE port 0 connected to device: FPC0
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 1 connected to device: FPC1
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 3 connected to device: FPC3
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 8 connected to device: SPMB
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on FE port 10 connected to device: SCC
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
Link is good on GE port 13 connected to device: Other RE
  Speed is 100Mb
  Duplex is full
  Autonegotiate is Enabled
```

Related Documentation

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

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CHAPTER 5

Upgrading Software on a Routing Matrix with a TX Matrix Router

- Upgrading the Software for a Routing Matrix with a TX Matrix Router on page 59
- Troubleshooting Insufficient Space or DRAM Errors During Software Upgrade of a Routing Matrix with a TX Matrix Router on page 78
- Troubleshooting a Software Upgrade Failure Due to Mixed Software Versions on a Routing Matrix with a TX Matrix Router on page 83

Upgrading the Software for a Routing Matrix with a TX Matrix Router

Before you begin upgrading the software on a TX Matrix Router and to avoid unnecessary network disruption during the upgrade, ensure the following conditions are met.

NOTE: By default, when you upgrade software on the TX Matrix router (scc), the new image is loaded onto the TX Matrix router (scc) and distributed to all T640 routers (lcc) in the routing matrix.

Throughout this document, we use the term TX Matrix router to refer to the switch-card chassis (SCC) and T640 router to refer to the line-card chassis (LCC).

- A minimum of free disk space and DRAM on each Routing Engine. The software upgrade will fail on any Routing Engine without the required amount of free disk space and DRAM. To determine the amount of disk space currently available on all Routing Engines of the routing matrix, use the CLI **show system storage** command. To determine the amount of DRAM currently available on all the Routing Engines in the routing matrix, use the CLI show chassis routing-engine command.
- The master Routing Engines of the TX Matrix router (**scc**) and T640 routers (**lcc**) are all on **re0** or are all on **re1**.
- The backup Routing Engines of the TX Matrix router (**scc**) and T640 routers (**lcc**) are all on **re1** or are all on **re0**.
- All master Routing Engines in all routers run the same version of software. This is necessary for the routing matrix to operate.

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- All master and backup Routing Engines run the same version of software before beginning the upgrade procedure. Different versions of the Junos OS can have incompatible message formats especially if you turn on GRES. Because the steps in the process include changing mastership, running the same version of software is recommended.
- The same Routing Engine model is used within a TX Matrix router (**scc**) and within a T640 router (**lcc**) of a routing matrix. For example, a routing matrix with an **scc** using two RE-A-2000s and an **lcc** using two RE-1600s is supported. However, an **scc** or an **lcc** with two different Routing Engine models is *not* supported. We suggest that all Routing Engines are the same model throughout all routers in the routing matrix. To determine the Routing Engine type, use the CLI **show chassis hardware | match routing** command.

NOTE: **It is considered best practice to make sure that all master Routing Engines are re0 and all backup Routing Engines are re1 (or vice versa). For the purposes of this document, the master Routing Engine is re0 and the backup Routing Engine is re1.**

On the TX Matrix router, perform a Junos OS upgrade on each Routing Engine separately to avoid unnecessary disruption to network operation. Install the new Junos OS Release on the backup Routing Engine (**re1**) while keeping the currently running software version on the master Routing Engine (**re0**).

After making sure that the new software version is running correctly on the backup Routing Engine (**re1**), switch mastership over to **re1**, install the new software on the new backup Routing Engine (**re0**) and then revert mastership from **re1** back to **re0**. These changes are propagated to all of the T640 routers in the routing matrix.

To upgrade the Junos OS for a routing matrix, perform the following tasks:

- Disabling GRES on the Routing Matrix with a TX Matrix Router on page 60
- Installing Software on All Backup Routing Engines of a Routing Matrix with a TX Matrix Router on page 62
- Loading the New Junos OS Version on the Backup Routing Engines of the Routing Matrix with a TX Matrix Router on page 69
- Installing Software on the Master Routing Engines of a Routing Matrix with a TX Matrix Router on page 71
- Finalizing the Installation for a Routing Engine with a TX Matrix Router on page 75

Disabling GRES on the Routing Matrix with a TX Matrix Router

Before upgrading the software on the routing matrix with a TX Matrix router, you must disable graceful Routing Engine switchover (GRES) on all the routers in the routing matrix. To disable GRES, perform the following steps on the TX Matrix router:

1. Log in to the master Routing Engine's (**scc-re0**) console.

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```
login: root
Password: xxx

--- Junos 9.5R2.1 built 2009-06-05 08:52:23 UTC
%
```

2. Enter the Junos OS CLI configuration mode:

   a. Start the CLI from the shell prompt using the **cli** command:

      ```
      % cli
      {master}
      user@host-scc-re0>
      ```

   b. Launche configuration mode:

      ```
      {master}
      user@host-scc-re0> configure
      Entering configuration mode

      {master} [edit]
      user@host-scc-re0 #
      ```

3. Disable Routing Engine redundancy and verify that the configuration is removed:

   ```
   {master}[edit]
   user@host-scc-re0#  show chassis
   redundancy {
       graceful-switchover;
   }

   {master}[edit]
   user@host-scc-re0# delete chassis redundancy
   {master}[edit]
   user@host-scc-re0# show chassis
   ```

4. Save the configuration change on all Routing Engines in the routing matrix and exit the CLI configuration mode:

   ```
   {master}[edit]
   user@host-scc-re0#  commit synchronize and-quit
   scc-re0:
   configuration check succeeds
   lcc0-re1:
   commit complete
   lcc0-re0:
   commit complete
   lcc2-re1:
   commit complete
   lcc2-re0:
   commit complete
   scc-re1:
   commit complete
   scc-re0:
   commit complete

   user@host-scc-re0>
   ```

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Installing Software on All Backup Routing Engines of a Routing Matrix with a TX Matrix Router

Install the new Junos OS Release on all backup Routing Engines (**re1**) of the TX Matrix router while keeping the currently running software version on the master Routing Engines (**re0**). This enables the master Routing Engines (**re0**) to continue operations, minimizing the disruption to the routing matrix with a TX Matrix router and your network.

To install the software on all of the backup Routing Engines (**re1**), perform the following steps:

1. Log in to the backup TX Matrix router (**re1**) Routing Engine's console.

   For more information on logging in to the Routing Engine through the console port, see the administration manual for your particular router.

2. To upgrade software for all the backup Routing Engines (**re1**) in the routing matrix, issue the **request system software add** command. Below is an example of the **request system software add** command and the output as the software is being added.

```
user@host-scc-re1> request system software add
/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Pushing bundle to lcc0-re1
Pushing bundle to lcc2-re1

Validating on lcc0-re1
Checking compatibility with configuration
Initializing...
Using jbase-9.6B1.8
Verified manifest signed by PackageProduction_9_6_0
Using /var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Using jinstall-9.6B2.7-domestic.tgz
Using jbundle-9.6B2.7-domestic.tgz
Checking jbundle requirements on /
Using jbase-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using /var/validate/chroot/tmp/jbundle/jboot-9.6B2.7.tgz
Using jkernel-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jcrypto-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jpfe-9.6B2.7.tgz
Using jdocs-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jroute-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jservices-9.6B2.7.tgz
Auto-deleting old jservices-voice ...
Removing /opt/sdk/jservices-voice ...
Removing jservices-voice-bsg-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-voice ...
Verified jservices-voice-bsg-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /var/sw/pkg ...
Creating /opt/sdk/jservices-voice ...
Storing jservices-voice-bsg-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-voice/jservices-voice-bsg ->
/var/sw/pkg/jservices-voice-bsg-9.6B2.7.tgz...
```


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```
Auto-deleting old jservices-bgf ...
Removing /opt/sdk/jservices-bgf ...
Removing jservices-bgf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-bgf ...
Verified jservices-bgf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-bgf ...
Storing jservices-bgf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-bgf/jservices-bgf-pic ->
/var/sw/pkg/jservices-bgf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-aacl ...
Removing /opt/sdk/jservices-aacl ...
Removing jservices-aacl-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-aacl ...
Verified jservices-aacl-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-aacl ...
Storing jservices-aacl-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-aacl/jservices-aacl-pic ->
/var/sw/pkg/jservices-aacl-pic-9.6B2.7.tgz...
Auto-deleting old jservices-llpdf ...
Removing /opt/sdk/jservices-llpdf ...
Removing jservices-llpdf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-llpdf ...
Verified jservices-llpdf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-llpdf ...
Storing jservices-llpdf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-llpdf/jservices-llpdf-pic ->
/var/sw/pkg/jservices-llpdf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-sfw ...
Removing /opt/sdk/jservices-sfw ...
Removing jservices-sfw-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-sfw ...
Verified jservices-sfw-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-sfw ...
Storing jservices-sfw-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-sfw/jservices-sfw-pic ->
/var/sw/pkg/jservices-sfw-pic-9.6B2.7.tgz...
Auto-deleting old jservices-appid ...
Removing /opt/sdk/jservices-appid ...
Removing jservices-appid-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-appid ...
Verified jservices-appid-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-appid ...
Storing jservices-appid-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-appid/jservices-appid-pic ->
/var/sw/pkg/jservices-appid-pic-9.6B2.7.tgz...
Auto-deleting old jservices-idp ...
Removing /opt/sdk/jservices-idp ...
Removing jservices-idp-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-idp ...
Verified jservices-idp-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-idp ...
Storing jservices-idp-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-idp/jservices-idp-pic ->
/var/sw/pkg/jservices-idp-pic-9.6B2.7.tgz...
Hardware Database regeneration succeeded
```

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```
Validating against /config/juniper.conf.gz
mgd: commit complete
Validation succeeded

Validating on lcc2-re1
Checking compatibility with configuration
Initializing...
Using jbase-9.6B1.8
Verified manifest signed by PackageProduction_9_6_0
Using /var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Using jinstall-9.6B2.7-domestic.tgz
Using jbundle-9.6B2.7-domestic.tgz
Checking jbundle requirements on /
Using jbase-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using /var/validate/chroot/tmp/jbundle/jboot-9.6B2.7.tgz
Using jkernel-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jcrypto-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jpfe-9.6B2.7.tgz
Using jdocs-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jroute-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jservices-9.6B2.7.tgz
Auto-deleting old jservices-voice ...
Removing /opt/sdk/jservices-voice ...
Removing jservices-voice-bsg-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-voice ...
Verified jservices-voice-bsg-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /var/sw/pkg ...
Creating /opt/sdk/jservices-voice ...
Storing jservices-voice-bsg-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-voice/jservices-voice-bsg ->
/var/sw/pkg/jservices-voice-bsg-9.6B2.7.tgz...
Auto-deleting old jservices-bgf ...
Removing /opt/sdk/jservices-bgf ...
Removing jservices-bgf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-bgf ...
Verified jservices-bgf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-bgf ...
Storing jservices-bgf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-bgf/jservices-bgf-pic ->
/var/sw/pkg/jservices-bgf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-aacl ...
Removing /opt/sdk/jservices-aacl ...
Removing jservices-aacl-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-aacl ...
Verified jservices-aacl-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-aacl ...
Storing jservices-aacl-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-aacl/jservices-aacl-pic ->
/var/sw/pkg/jservices-aacl-pic-9.6B2.7.tgz...
Auto-deleting old jservices-llpdf ...
Removing /opt/sdk/jservices-llpdf ...
Removing jservices-llpdf-pic-9.6B1.8.tgz from /var/sw/pkg ...
```


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```
Notifying mspd ...
Installing new jservices-llpdf ...
Verified jservices-llpdf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-llpdf ...
Storing jservices-llpdf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-llpdf/jservices-llpdf-pic ->
/var/sw/pkg/jservices-llpdf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-sfw ...
Removing /opt/sdk/jservices-sfw ...
Removing jservices-sfw-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-sfw ...
Verified jservices-sfw-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-sfw ...
Storing jservices-sfw-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-sfw/jservices-sfw-pic ->
/var/sw/pkg/jservices-sfw-pic-9.6B2.7.tgz...
Auto-deleting old jservices-appid ...
Removing /opt/sdk/jservices-appid ...
Removing jservices-appid-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-appid ...
Verified jservices-appid-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-appid ...
Storing jservices-appid-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-appid/jservices-appid-pic ->
/var/sw/pkg/jservices-appid-pic-9.6B2.7.tgz...
Auto-deleting old jservices-idp ...
Removing /opt/sdk/jservices-idp ...
Removing jservices-idp-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-idp ...
Verified jservices-idp-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-idp ...
Storing jservices-idp-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-idp/jservices-idp-pic ->
/var/sw/pkg/jservices-idp-pic-9.6B2.7.tgz...
Hardware Database regeneration succeeded
Validating against /config/juniper.conf.gz
mgd: commit complete
Validation succeeded

Validating on scc-re1
Checking compatibility with configuration
Initializing...
Using jbase-9.6B1.8
Verified manifest signed by PackageProduction_9_6_0
Using /var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Using jinstall-9.6B2.7-domestic.tgz
Using jbundle-9.6B2.7-domestic.tgz
Checking jbundle requirements on /
Using jbase-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using /var/validate/chroot/tmp/jbundle/jboot-9.6B2.7.tgz
Using jkernel-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jcrypto-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jpfe-9.6B2.7.tgz
Using jdocs-9.6B2.7.tgz
```

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```
Verified manifest signed by PackageProduction_9_6_0
Using jroute-9.6B2.7.tgz
Verified manifest signed by PackageProduction_9_6_0
Using jservices-9.6B2.7.tgz
Auto-deleting old jservices-voice ...
Removing /opt/sdk/jservices-voice ...
Removing jservices-voice-bsg-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-voice ...
Verified jservices-voice-bsg-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /var/sw/pkg ...
Creating /opt/sdk/jservices-voice ...
Storing jservices-voice-bsg-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-voice/jservices-voice-bsg ->
/var/sw/pkg/jservices-voice-bsg-9.6B2.7.tgz...
Auto-deleting old jservices-bgf ...
Removing /opt/sdk/jservices-bgf ...
Removing jservices-bgf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-bgf ...
Verified jservices-bgf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-bgf ...
Storing jservices-bgf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-bgf/jservices-bgf-pic ->
/var/sw/pkg/jservices-bgf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-aacl ...
Removing /opt/sdk/jservices-aacl ...
Removing jservices-aacl-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-aacl ...
Verified jservices-aacl-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-aacl ...
Storing jservices-aacl-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-aacl/jservices-aacl-pic ->
/var/sw/pkg/jservices-aacl-pic-9.6B2.7.tgz...
Auto-deleting old jservices-llpdf ...
Removing /opt/sdk/jservices-llpdf ...
Removing jservices-llpdf-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-llpdf ...
Verified jservices-llpdf-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-llpdf ...
Storing jservices-llpdf-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-llpdf/jservices-llpdf-pic ->
/var/sw/pkg/jservices-llpdf-pic-9.6B2.7.tgz...
Auto-deleting old jservices-sfw ...
Removing /opt/sdk/jservices-sfw ...
Removing jservices-sfw-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-sfw ...
Verified jservices-sfw-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-sfw ...
Storing jservices-sfw-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-sfw/jservices-sfw-pic ->
/var/sw/pkg/jservices-sfw-pic-9.6B2.7.tgz...
Auto-deleting old jservices-appid ...
Removing /opt/sdk/jservices-appid ...
Removing jservices-appid-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-appid ...
Verified jservices-appid-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
```


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```
Creating /opt/sdk/jservices-appid ...
Storing jservices-appid-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-appid/jservices-appid-pic ->
/var/sw/pkg/jservices-appid-pic-9.6B2.7.tgz...
Auto-deleting old jservices-idp ...
Removing /opt/sdk/jservices-idp ...
Removing jservices-idp-pic-9.6B1.8.tgz from /var/sw/pkg ...
Notifying mspd ...
Installing new jservices-idp ...
Verified jservices-idp-pic-9.6B2.7.tgz signed by PackageProduction_9_6_0
Creating /opt/sdk/jservices-idp ...
Storing jservices-idp-pic-9.6B2.7.tgz in /var/sw/pkg ...
Link: /opt/sdk/jservices-idp/jservices-idp-pic ->
/var/sw/pkg/jservices-idp-pic-9.6B2.7.tgz...
Hardware Database regeneration succeeded
Validating against /config/juniper.conf.gz
mgd: commit complete
Validation succeeded
Done with validate on all chassis

lcc0-re1:
Installing package '/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz' ...
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Adding jinstall...
Verified manifest signed by PackageProduction_9_6_0

WARNING:     This package will load JUNOS 9.6B2.7 software.
WARNING:     It will save JUNOS configuration files, and SSH keys
WARNING:     (if configured), but erase all other files and information
WARNING:     stored on this machine.  It will attempt to preserve dumps
WARNING:     and log files, but this can not be guaranteed.  This is the
WARNING:     pre-installation stage and all the software is loaded when
WARNING:     you reboot the system.

Saving the config files ...
NOTICE: uncommitted changes have been saved in
/var/db/config/juniper.conf.pre-install
Installing the bootstrap installer ...

WARNING:     A REBOOT IS REQUIRED TO LOAD THIS SOFTWARE CORRECTLY. Use the
WARNING:     'request system reboot' command when software installation is
WARNING:     complete. To abort the installation, do not reboot your system,
WARNING:     instead use the 'request system software delete jinstall'
WARNING:     command as soon as this operation completes.

Saving package file in /var/sw/pkg/jinstall-9.6B2.7-domestic-signed.tgz ...
Saving state for rollback ...

lcc2-re1:
Installing package '/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz' ...
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Adding jinstall...
Verified manifest signed by PackageProduction_9_6_0

WARNING:     This package will load JUNOS 9.6B2.7 software.
WARNING:     It will save JUNOS configuration files, and SSH keys
WARNING:     (if configured), but erase all other files and information
WARNING:     stored on this machine.  It will attempt to preserve dumps
WARNING:     and log files, but this can not be guaranteed.  This is the
WARNING:     pre-installation stage and all the software is loaded when
WARNING:     you reboot the system.
```

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```
Saving the config files ...
NOTICE: uncommitted changes have been saved in
/var/db/config/juniper.conf.pre-install
Installing the bootstrap installer ...

WARNING:     A REBOOT IS REQUIRED TO LOAD THIS SOFTWARE CORRECTLY. Use the
WARNING:     'request system reboot' command when software installation is
WARNING:     complete. To abort the installation, do not reboot your system,
WARNING:     instead use the 'request system software delete jinstall'
WARNING:     command as soon as this operation completes.

Saving package file in /var/sw/pkg/jinstall-9.6B2.7-domestic-signed.tgz ...
Saving state for rollback ...

scc-re1:
Installing package '/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz' ...
Verified jinstall-9.6B2.7-domestic.tgz signed by PackageProduction_9_6_0
Adding jinstall...
Verified manifest signed by PackageProduction_9_6_0

WARNING:     This package will load JUNOS 9.6B2.7 software.
WARNING:     It will save JUNOS configuration files, and SSH keys
WARNING:     (if configured), but erase all other files and information
WARNING:     stored on this machine.  It will attempt to preserve dumps
WARNING:     and log files, but this can not be guaranteed.  This is the
WARNING:     pre-installation stage and all the software is loaded when
WARNING:     you reboot the system.

Saving the config files ...
NOTICE: uncommitted changes have been saved in
/var/db/config/juniper.conf.pre-install
Installing the bootstrap installer ...

WARNING:     A REBOOT IS REQUIRED TO LOAD THIS SOFTWARE CORRECTLY. Use the
WARNING:     'request system reboot' command when software installation is
WARNING:     complete. To abort the installation, do not reboot your system,
WARNING:     instead use the 'request system software delete jinstall'
WARNING:     command as soon as this operation completes.

Saving package file in /var/sw/pkg/jinstall-9.6B2.7-domestic-signed.tgz ...
Saving state for rollback ...

user@host-scc-re1>
```

For more information on the **request system software add** command, see the *Junos System Basics and Services Command Reference*.

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Loading the New Junos OS Version on the Backup Routing Engines of the Routing Matrix with a TX Matrix Router

After you have added the new software version to the backup Routing Engines (**re1**), reboot the routing matrix with a TX Matrix router to load the new software and verify the version of the software. To reboot the routing matrix, reboot the TX Matrix router which forces all T640 routers to reboot and loads the new software on all backup Routing Engines (**re1**) in the routing matrix.

1. Reboot the TX Matrix router to start the new software using the **request system reboot** command:

```
user@host-scc-re1> request system reboot
Reboot the system ? [yes,no] (no) yes

rebooting lcc0-re1
Rebooting lcc2-re1
Shutdown NOW!
Reboot consistency check bypassed - jinstall 9.6B2.7 will complete installation
 upon reboot
[pid 23517]

user@host-scc-re1>


*** FINAL System shutdown message from user@host-scc-re1> ***


System going down IMMEDIATELY


rlogin: connection closed
user@host-scc-re0>
```

NOTE: You must reboot to load the new installation of the Junos OS onto the backup Routing Engine (re1) of the TX Matrix router and to propagate the new image on all backup Routing Engines (re1) of the T640 routers in the routing matrix.

To abort the installation, do not reboot your system; instead, finish the installation and then issue the request system software delete jinstall command. This is your last chance to stop the installation.

All the software is loaded on all the backup Routing Engines when you reboot the system. Installation can take about 10 minutes. The backup Routing Engines (**re1**) then reboot from the boot device on which the software was just installed. When the reboot is complete, the TX Matrix router backup Routing Engine (**re1**) displays the login prompt.

While the software is being upgraded, the Routing Engine (**re1**) on which you are performing the installation is not routing traffic.

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2. Log in to the TX Matrix router backup Routing Engine (**re1**) and issue the **show version** command to verify the version of the software installed:

```
user@host-scc-re1>> show version
scc-re1:
--------------------------------------------------------------------------
Hostname: z8-1
Model: TX Matrix
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services AACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]

lcc0-re1:
--------------------------------------------------------------------------
Hostname: z8-lcc0-re1
Model: t640
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services AACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]

lcc2-re1:
--------------------------------------------------------------------------
Hostname: z8-lcc2-re1
Model: t640
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services AACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
```

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```
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]
```

Installing Software on the Master Routing Engines of a Routing Matrix with a TX Matrix Router

Before you install the new software on the master Routing Engines (**re0**) of the routing matrix with a TX Matrix router, you need to switch mastership over to the backup Routing Engines (**re1**) to minimize the disruption to network operation.

To change mastership and install the new software version on the new backup Routing Engine (**re0**), perform the following steps:

1. On the TX Matrix router, log in to the original master Routing Engine (**re0**) console port.

   For more information on logging in to the Routing Engine through the console port, see the administration guide for your particular router.

2. Transfer mastership to the backup Routing Engine (**re1**) for all routers in the routing matrix using the **request chassis routing-engine master switch all-chassis** command:

   ```
   user@host-scc-re0> request chassis routing-engine master switch all-chassis
   warning: Traffic will be interrupted while the PFE is re-initialized
   Toggle mastership between routing engines ? [yes,no] (no) yes

   lcc0-re0:
   --------------------------------------------------------------------------
   warning: Traffic will be interrupted while the PFE is re-initialized
   Resolving mastership...
   Complete. The other routing engine becomes the master.

   lcc2-re0:
   --------------------------------------------------------------------------
   warning: Traffic will be interrupted while the PFE is re-initialized
   Resolving mastership...
   Complete. The other routing engine becomes the master.

   scc-re0:
   --------------------------------------------------------------------------
   warning: Traffic will be interrupted while the PFE is re-initialized
   Resolving mastership...
   Complete. The other routing engine becomes the master.
   ```

3. Verify that the backup Routing Engine (slot 1) is now the master Routing Engine on all routers in the routing matrix using the **show chassis routing-engine** command:

   ```
   user@host-scc-re0> show chassis routing-engine
   scc-re0:
   --------------------------------------------------------------------------
   Routing Engine status:
     Slot 0:
       Current state                  Backup
       Election priority              Master (default)
       [...Output Truncated...]
   Routing Engine status:
     Slot 1:
       Current state                  Master
   ```

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```
    Election priority              Backup (default)
    [...Output Truncated...]

lcc0-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Backup
    Election priority              Master (default)
    [...Output Truncated...]
                                       0.02       0.07       0.11
Routing Engine status:
  Slot 1:
    Current state                  Master
    Election priority              Backup (default)
    [...Output Truncated...]

lcc2-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Backup
    Election priority              Master (default)
    [...Output Truncated...]
Routing Engine status:
  Slot 1:
    Current state                  Master
    Election priority              Backup (default)
    [...Output Truncated...]
```

4. Install the new software package using the **request system software add** command:

```
user@host-scc-re0> request system software add
/var/tmp/jinstall-9.6B2.7-domestic-signed.tgz
Pushing bundle to lcc0-re0
Pushing bundle to lcc2-re0
[...Output Truncated...]
```

5. Reboot the Routing Engine (**re0**) using the **request system reboot** command:

```
user@host-scc-re0> request system reboot
Reboot the system ? [yes,no] (no) yes

Rebooting lcc0-re0
Rebooting lcc2-re0
Shutdown NOW!
Reboot consistency check bypassed - jinstall 9.6B2.7 will complete installation
 upon reboot
[pid 9071]

user@host-scc-re0>

*** FINAL System shutdown message from user@host-scc-re0> ***

System going down IMMEDIATELY


Connection closed by foreign host.
```


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NOTE: You must reboot to load the new installation of the Junos OS onto the original master Routing Engine (re0) of the TX Matrix router and to propagate the new image on all original master Routing Engines (re0) of the T640 routers in the routing matrix.

To abort the installation, do not reboot your system; instead, finish the installation and then issue the **request system software delete jinstall** command. This is your last chance to stop the installation.

The software is loaded when you reboot the system. Installation can take about 10 minutes. The routers then reboot from the boot device on which the software was just installed. When the reboot is complete, the TX Matrix Routing Engine (**re0**) displays the login prompt.

While the software is being upgraded, the Routing Engine (**re0**) on which you are performing the installation does not route traffic.

6. Log in and issue the **show version** command to verify the version of the software installed:

```
user@host-scc-re0> show version
scc-re0:
--------------------------------------------------------------------------
Hostname: z8
Model: TX Matrix
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services AACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]

lcc0-re0:
--------------------------------------------------------------------------
Hostname: z8-lcc0-re0
Model: t640
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services AACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
```

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```
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]

lcc2-re0:
--------------------------------------------------------------------------
Hostname: z8-lcc2-re0
Model: t640
JUNOS Base OS boot [9.6B2.7]
JUNOS Base OS Software Suite [9.6B2.7]
JUNOS Kernel Software Suite [9.6B2.7]
JUNOS Crypto Software Suite [9.6B2.7]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B2.7]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B2.7]
JUNOS Online Documentation [9.6B2.7]
JUNOS Voice Services Container package [9.6B2.7]
JUNOS Border Gateway Function package [9.6B2.7]
JUNOS Services AACL Container package [9.6B2.7]
JUNOS Services LL-PDF Container package [9.6B2.7]
JUNOS Services Stateful Firewall [9.6B2.7]
JUNOS AppId Services [9.6B2.7]
JUNOS IDP Services [9.6B2.7]
JUNOS Routing Software Suite [9.6B2.7]
```

7. (Optional to avoid another traffic disruption) Transfer routing control back to the original master Routing Engine (**re0**) using the **request chassis routing-engine master switch all-chassis** command:

```
user@host-scc-re0> request chassis routing-engine master switch all-chassis
warning: Traffic will be interrupted while the PFE is re-initialized
Toggle mastership between routing engines ? [yes,no] (no) yes

lcc0-re0:
--------------------------------------------------------------------------
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The local routing engine becomes the master.

lcc2-re0:
--------------------------------------------------------------------------
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The local routing engine becomes the master.

scc-re0:
--------------------------------------------------------------------------
warning: Traffic will be interrupted while the PFE is re-initialized
Resolving mastership...
Complete. The local routing engine becomes the master.
```

8. Verify that the master Routing Engine (slot 0) is indeed the master Routing Engine using the show **chassis routing-engine** command:

```
user@host-scc-re0> show chassis routing-engine
scc-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
```


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```
    Current state                  Master
    Election priority              Master (default)
    [...Output Truncated...]

Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    [...Output Truncated...]

lcc0-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    [...Output Truncated...]

Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    [...Output Truncated...]

lcc2-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    [...Output Truncated...]

Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    [...Output Truncated...]
```

Finalizing the Installation for a Routing Engine with a TX Matrix Router

After the software is installed on all Routing Engines, you return the routing matrix with a TX Matrix router back to its original configuration and back up the new installation.

1. Restore the configuration that existed before you deleted it at the start of this procedure using the **configure** and **rollback** commands:

   ```
   user@host-scc-re0> configure
   Entering configuration mode

   [edit]
   user@host-scc-re0# rollback 1
   load complete
   ```

2. Save the configuration change on all Routing Engines using the **commit synchronize and-quit** command:

   ```
   [edit]
   user@host-scc-re0# commit synchronize and-quit
   ```

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```
scc-re0:
configuration check succeeds
lcc0-re1:
commit complete
lcc0-re0:
commit complete
lcc2-re1:
commit complete
lcc2-re0:
commit complete
scc-re1:
commit complete
scc-re0:
commit complete

user@host-scc-re0>
```

3. After you have installed the new software and are satisfied that it is successfully running, issue the following commands to back up the new software on both the master (**re0**) and the backup (**re1**) Routing Engines:

   ```
   user@host-scc-re0> request system snapshot
   user@host-scc-re0> request chassis routing-engine master switch all-chassis
   user@host-scc-re1> request system snapshot
   ```

   The sample output below shows examples of all the commands above.

```
{master}
user@host-scc-re0> request system snapshot
scc-re0:
--------------------------------------------------------------------------
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

lcc0-re0:
--------------------------------------------------------------------------
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

lcc2-re0:
--------------------------------------------------------------------------
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

{master}
user@host-scc-re0> request chassis routing-engine master switch all-chassis
Toggle mastership between routing engines ? [yes,no] (no) yes

lcc0-re0:
```


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```
--------------------------------------------------------------------------
Resolving mastership...
Complete. The other routing engine becomes the master.

lcc2-re0:
--------------------------------------------------------------------------
Resolving mastership...
Complete. The other routing engine becomes the master.

scc-re0:
--------------------------------------------------------------------------
Resolving mastership...
Complete. The other routing engine becomes the master.

{master}
user@host-scc-re1> request system snapshot
scc-re1:
--------------------------------------------------------------------------
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

lcc0-re1:
--------------------------------------------------------------------------
Verifying compatibility of destination media partitions...
Running newfs (223MB) on hard-disk media / partition (ad2s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad2s1e)...
Copying '/dev/ad0s1a' to '/dev/ad2s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad2s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config

lcc2-re1:
--------------------------------------------------------------------------
Verifying compatibility of destination media partitions...
Running newfs (220MB) on hard-disk media / partition (ad1s1a)...
Running newfs (24MB) on hard-disk media /config partition (ad1s1e)...
Copying '/dev/ad0s1a' to '/dev/ad1s1a' .. (this may take a few minutes)
Copying '/dev/ad0s1e' to '/dev/ad1s1e' .. (this may take a few minutes)
The following filesystems were archived: / /config
```

The root file system is backed up to **/altroot**, and **/config** is backed up to **/altconfig**. The root and **/config** file systems are on the router's CompactFlash card, and the **/altroot** and **/altconfig** file systems are on the router's hard disk.

NOTE: After you issue the **request system snapshot** command, you cannot return to the previous version of the software because the running copy and backup copy of the software are identical.

See Also

- *Routing Matrix with a TX Matrix Router Deployment Guide*
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Roadmap to Configuring a Routing Matrix with a TX Matrix Router on page 21

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- Example: Routing Matrix with a TX Matrix Router Configuration on page 30
- Troubleshooting Insufficient Space or DRAM Errors During Software Upgrade of a Routing Matrix with a TX Matrix Router on page 78
- Troubleshooting a Software Upgrade Failure Due to Mixed Software Versions on a Routing Matrix with a TX Matrix Router on page 83

Troubleshooting Insufficient Space or DRAM Errors During Software Upgrade of a Routing Matrix with a TX Matrix Router

Problem Description:

NOTE: Throughout this document, we use the term TX Matrix router to refer to the switch-card chassis (SCC) and T640 router to refer to the line-card chassis (LCC).

A routing matrix with a TX Matrix router (**scc**) and T640 routers (**lcc**) must have sufficient disk space and DRAM on all Routing Engines for an upgrade of the Junos OS to install successfully. If there is insufficient disk space or DRAM, you might receive a warning indicating that the **/var file** system is low on free disk space similar to the following:

```
WARNING: The /var filesystem is low on free disk space.
WARNING: This package requires 1075136k free, but there
WARNING: is only 666502k available.
```

To determine the amount of free disk space on the Routing Engine, use the CLI **show system storage** command. To determine the amount of DRAM available on the Routing Engine, use the CLI show chassis routing-engine command.

Below is sample output showing the two commands.

```
{backup}
user@host-re1> show system storage
scc-re1:
--------------------------------------------------------------------------
Filesystem              Size       Used      Avail  Capacity   Mounted on
/dev/ad0s1a             217M       176M       24M       88%  /
devfs                   1.0K       1.0K        0B      100%  /dev
devfs                   1.0K       1.0K        0B      100%  /dev/
/dev/md0                 31M        31M        0B      100%  /packages/mnt/jbase
/dev/md1                199M       199M        0B      100%
/packages/mnt/jkernel-9.5R2.1
/dev/md3                4.9M       4.9M        0B      100%
/packages/mnt/jdocs-9.5R2.1
/dev/md4                 55M        55M        0B      100%
/packages/mnt/jroute-9.5R2.1
/dev/md5                 14M        14M        0B      100%
/packages/mnt/jcrypto-9.5R2.1
/dev/md7                2.0G        40K       1.8G        0%  /tmp
/dev/md8                2.0G        11M       1.8G        1%  /mfs
/dev/ad0s1e              24M       1.5M        21M        7%  /config
procfs                  4.0K       4.0K        0B      100%  /proc
```


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```
/dev/ad1s1f              25G       2.4G        21G       10%  /var
/dev/ad1s1e              24M       1.5M        22M        6%  /tmp/.snp3061/mnt

lcc0-re1:
--------------------------------------------------------------------------
Filesystem              Size       Used      Avail  Capacity   Mounted on
/dev/ad0s1a             220M       186M        16M       92%  /
devfs                   1.0K       1.0K         0B      100%  /dev
devfs                   1.0K       1.0K         0B      100%  /dev/
/dev/md0                 33M        33M         0B      100%  /packages/mnt/jbase
/dev/md1                216M       216M         0B      100%
/packages/mnt/jkernel-9.6B1.8
/dev/md2                 66M        66M         0B      100%
/packages/mnt/jpfe-T-9.6B1.8
/dev/md3                4.1M       4.1M         0B      100%
/packages/mnt/jdocs-9.6B1.8
/dev/md4                 57M        57M         0B      100%
/packages/mnt/jroute-9.6B1.8
/dev/md5                 15M        15M         0B      100%
/packages/mnt/jcrypto-9.6B1.8
/dev/md6                 34M        34M         0B      100%
/packages/mnt/jpfe-common-9.6B1.8
/dev/md7                2.0G      10.0K       1.8G        0%  /tmp
/dev/md8                2.0G       532K       1.8G        0%  /mfs
/dev/ad0s1e              24M        44K        22M        0%  /config

procfs                  4.0K       4.0K         0B      100%  /proc
/dev/ad2s1f              34G        21G        11G       66%  /var

lcc2-re1:
--------------------------------------------------------------------------
Filesystem              Size       Used      Avail  Capacity   Mounted on
/dev/ad0s1a             217M       178M        21M       89%  /
devfs                   1.0K       1.0K         0B      100%  /dev
devfs                   1.0K       1.0K         0B      100%  /dev/
/dev/md0                 33M        33M         0B      100%  /packages/mnt/jbase
/dev/md1                216M       216M         0B      100%
/packages/mnt/jkernel-9.6B1.8
/dev/md2                 66M        66M         0B      100%
/packages/mnt/jpfe-T-9.6B1.8
/dev/md3                4.1M       4.1M         0B      100%
/packages/mnt/jdocs-9.6B1.8
/dev/md4                 57M        57M         0B      100%
/packages/mnt/jroute-9.6B1.8
/dev/md5                 15M        15M         0B      100%
/packages/mnt/jcrypto-9.6B1.8
/dev/md6                 34M        34M         0B      100%
/packages/mnt/jpfe-common-9.6B1.8
/dev/md7                2.0G       8.0K       1.8G        0%  /tmp
/dev/md8                2.0G       538K       1.8G        0%  /mfs
/dev/ad0s1e              24M        46K        22M        0%  /config
procfs                  4.0K       4.0K         0B      100%  /proc
/dev/ad1s1f              25G       1.3G        22G        5%  /var


{master}
user@host-re0> show chassis routing-engine
scc-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
```

```
    Current state                  Master
    Election priority              Master (default)
    Temperature                 41 degrees C / 105 degrees F
    CPU temperature             43 degrees C / 109 degrees F
    DRAM                      2048 MB
    Memory utilization          21 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     4 percent
      Interrupt                  0 percent
      Idle                      96 percent
    Model                         RE-4.0
    Serial ID                     P11123909610
    Start time                    2009-06-16 13:21:12 PDT
    Uptime                        21 hours, 19 minutes, 44 seconds
    Last reboot reason            Router rebooted after a normal shutdown.
    Load averages:                1 minute   5 minute  15 minute
                                      0.03       0.06       0.07
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 39 degrees C / 102 degrees F
    CPU temperature             38 degrees C / 100 degrees F
    DRAM                      2048 MB
    Memory utilization          20 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                     100 percent
    Model                         RE-4.0
    Serial ID                     211123900273
    Start time                    2009-06-15 13:38:48 PDT
    Uptime                        1 day, 21 hours, 2 minutes, 5 seconds
    Last reboot reason            Router rebooted after a normal shutdown.

lcc0-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 46 degrees C / 114 degrees F
    CPU temperature             50 degrees C / 122 degrees F
    DRAM                      2048 MB
    Memory utilization          18 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  0 percent
      Idle                      98 percent
    Model                         RE-4.0
    Serial ID                     P11123908065
    Start time                    2009-06-16 13:20:59 PDT
    Uptime                        21 hours, 19 minutes, 56 seconds
    Last reboot reason            Router rebooted after a normal shutdown.
    Load averages:                1 minute   5 minute  15 minute
```


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```
                                    0.05       0.03       0.00
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 50 degrees C / 122 degrees F
    CPU temperature             55 degrees C / 131 degrees F
    DRAM                      3584 MB
    Memory utilization          11 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                     100 percent
    Model                          RE-A-2000
    Serial ID                      1000673710
    Start time                     2009-06-15 13:34:44 PDT
    Uptime                         1 day, 21 hours, 6 minutes, 8 seconds
    Last reboot reason             Router rebooted after a normal shutdown.

lcc2-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 41 degrees C / 105 degrees F
    CPU temperature             42 degrees C / 107 degrees F
    DRAM                      2048 MB
    Memory utilization          18 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  0 percent
      Idle                      98 percent
    Model                          RE-4.0
    Serial ID                      P11123908326
    Start time                     2009-06-16 13:21:10 PDT
    Uptime                         21 hours, 19 minutes, 44 seconds
    Last reboot reason             Router rebooted after a normal shutdown.
    Load averages:                 1 minute   5 minute  15 minute
                                       0.00       0.00       0.00
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 41 degrees C / 105 degrees F
    CPU temperature             42 degrees C / 107 degrees F
    DRAM                      2048 MB
    Memory utilization          18 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                     100 percent
    Model                          RE-4.0
    Serial ID                      212058900119
```

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```
    Start time                      2009-06-15 13:37:41 PDT
    Uptime                          1 day, 21 hours, 3 minutes, 8 seconds
```

Solution If you find that you need to free up some space, issue the **request system storage cleanup** command and delete everything that appears in the output. then try the upgrade again.

```
{master}
user@host-re0> request system storage cleanup

List of files to delete:

         Size Date         Name
     2B Jun 16 12:46 /var/crash/bounds
  80.4M Jun 15 14:56 /var/crash/cores/kernel.0.090615.1455
  80.4M Jun 15 15:46 /var/crash/cores/kernel.1.090615.1546
  80.4M Jun 15 15:58 /var/crash/cores/kernel.2.090615.1558
  80.4M Jun 16 12:47 /var/crash/cores/kernel.3.090616.1246
  30.6M Jun 15 15:05 /var/crash/cores/vmcore.0.090615.1455.tgz
  33.5M Jun 15 16:33 /var/crash/cores/vmcore.1.090615.1546.tgz
  35.9M Jun 15 17:52 /var/crash/cores/vmcore.2.090615.1558.tgz
  48.0M Jun 16 13:47 /var/crash/cores/vmcore.3.090616.1246.tgz
   504B Jun 15 14:55 /var/crash/info.0
   504B Jun 15 15:46 /var/crash/info.1
   505B Jun 15 15:58 /var/crash/info.2
   505B Jun 16 12:46 /var/crash/info.3
   716B Jun 15 13:43 /var/log/install.0.gz
  1669B Jun 13 18:05 /var/log/install.1.gz
  [...Output Truncated...]
 201.6K Jun 11 02:27 /var/tmp/jnx-routeservice-9.6I20090611_0926_root.tgz
  59.7K Jun 10 09:07 /var/tmp/jnx_ifinfo_sanity.pl.base_test_cfg_66245
  59.9K Jun 10 15:19 /var/tmp/jnx_ifinfo_sanity.pl.base_test_cfg_74023
  59.7K Jun 11 02:57 /var/tmp/jnx_ifinfo_sanity.pl.base_test_cfg_83419
 181.0M Jul 23  2008 /var/tmp/mchassis-install.tgz
  59.7K Jun 10 09:07 /var/tmp/orig_z8_cfg_66245
  59.9K Jun 10 15:19 /var/tmp/orig_z8_cfg_74023
  59.7K Jun 11 02:57 /var/tmp/orig_z8_cfg_83419
Delete these files ? [yes,no] (no) yes
```

NOTE: For some DRAM issues, remove any superfluous files from the /root and /tmp directories.

Related Documentation

- Upgrading the Software for a Routing Matrix with a TX Matrix Router on page 59
- Troubleshooting a Software Upgrade Failure Due to Mixed Software Versions on a Routing Matrix with a TX Matrix Router on page 83
- Overview of the Routing Matrix with a TX Matrix Router on page 15
- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

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Troubleshooting a Software Upgrade Failure Due to Mixed Software Versions on a Routing Matrix with a TX Matrix Router

Problem Description:

NOTE: Throughout this document, we use the term TX Matrix router to refer to the switch-card chassis (SCC) and T640 router to refer to the line-card chassis (LCC).

A routing matrix with a TX Matrix router (**scc**) and T640 routers (**lcc**) must have all master and backup Routing Engines running the same version of software. This is necessary for the routing matrix to operate and for the Junos OS to install successfully. If the software versions on the Routing Engines are not aligned, the software upgrade will return an error.

The output below from the master (**scc-re0**) Routing Engine shows the Junos OS version on a routing matrix with a TX Matrix router and two T640 routers. The backup Routing Engine (**scc-re1**) has Junos OS Release 9.5R2.1 installed, while all the other Routing Engines have Junos OS Release 9.6B1.8 installed.

```
[edit]
user@host-reo# run show version invoke-on all-routing-engines
scc-re0:
--------------------------------------------------------------------------
Hostname: z8
Model: TX Matrix
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]

scc-re1:
--------------------------------------------------------------------------
Hostname: z8-1
Model: TX Matrix
JUNOS Base OS boot [9.5R2.1]
JUNOS Base OS Software Suite [9.5R2.1]
JUNOS Kernel Software Suite [9.5R2.1]
JUNOS Crypto Software Suite [9.5R2.1]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.5R2.1]
JUNOS Packet Forwarding Engine Support (T-Series) [9.5R2.1]
JUNOS Online Documentation [9.5R2.1]
JUNOS Voice Services Container package [9.5R2.1]
JUNOS Services AACL Container package [9.5R2.1]
```

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```
JUNOS Services LL-PDF Container package [9.5R2.1]
JUNOS Services Stateful Firewall [9.5R2.1]
JUNOS AppId Services [9.5R2.1]
JUNOS IDP Services [9.5R2.1]
JUNOS Routing Software Suite [9.5R2.1]
JUNOS Installation Software [9.6B1.8]

lcc0-re0:
--------------------------------------------------------------------------
Hostname: z8-lcc0-re0
Model: t640
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]

lcc0-re1:
--------------------------------------------------------------------------
Hostname: z8-lcc0-re1
Model: t640
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]
JUNOS Installation Software [9.6B1.8]

lcc2-re0:
--------------------------------------------------------------------------
Hostname: z8-lcc2-re0
Model: t640
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
```


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```
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]

lcc2-re1:
--------------------------------------------------------------------------
Hostname: z8-lcc2-re1
Model: t640
JUNOS Base OS boot [9.6B1.8]
JUNOS Base OS Software Suite [9.6B1.8]
JUNOS Kernel Software Suite [9.6B1.8]
JUNOS Crypto Software Suite [9.6B1.8]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.6B1.8]
JUNOS Packet Forwarding Engine Support (T-Series) [9.6B1.8]
JUNOS Online Documentation [9.6B1.8]
JUNOS Voice Services Container package [9.6B1.8]
JUNOS Border Gateway Function package [9.6B1.8]
JUNOS Services AACL Container package [9.6B1.8]
JUNOS Services LL-PDF Container package [9.6B1.8]
JUNOS Services Stateful Firewall [9.6B1.8]
JUNOS AppId Services [9.6B1.8]
JUNOS IDP Services [9.6B1.8]
JUNOS Routing Software Suite [9.6B1.8]
```

Solution

Different versions of the Junos OS can have incompatible message formats especially if you turn on GRES. Because the steps in the upgrade process include changing mastership, running the same version of software is recommended. For information about upgrading a routing matrix with a TX Matrix router (**scc**) and T640 (**lcc**) routers, see "Upgrading the Software for a Routing Matrix with a TX Matrix Router" on page 59.

Log directly into the Routing Engine with the different Junos version and issue the CLI **request system software add** command with the appropriate Junos version. For example:

```
user@host-re1> request system software add
/var/tmp/jinstall-9.6B1.8-domestic-signed.tgz
```

When all the Routing Engines are running the same version of the Junos OS, try the upgrade again.

To log in to other Routing Engines, issue the **request routing-engine login** command in the appropriate format for your situation. Below are some examples of the version of the command you might use:

```
user@host-re1> request routing-engine login other-routing-engine
user@host-re1> request routing-engine login lcc 2 re1
```

Related Documentation

- Upgrading the Software for a Routing Matrix with a TX Matrix Router on page 59
- Troubleshooting Insufficient Space or DRAM Errors During Software Upgrade of a Routing Matrix with a TX Matrix Router on page 78
- Overview of the Routing Matrix with a TX Matrix Router on page 15

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- Example: Routing Matrix with a TX Matrix Router Configuration on page 30

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CHAPTER 6

Operational Commands

- show chassis alarms
- show chassis craft-interface
- show chassis hardware
- show chassis fpc
- show chassis lccs
- show chassis location
- show chassis routing-engine
- show chassis sibs
- show route summary
- show system uptime
- show version

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show chassis alarms

List of Syntax

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Syntax (TX Matrix Routers) on page 88
Syntax (TX Matrix Plus Routers) on page 88
Syntax (MX Series Routers) on page 88
Syntax (MX104, MX2010, MX2020, and MX2008 3D Universal Edge Routers) on page 88
Syntax (MX10003, MX204, and MX10008) on page 88
Syntax (QFX Series) on page 88
Syntax (OCX Series) on page 88
Syntax (PTX Series Packet Transport Routers) on page 88
Syntax (ACX Series Universal Metro Routers) on page 89
Syntax (EX9251, EX9253 Switches) on page 89

Syntax

```
show chassis alarms
```

Syntax (TX Matrix Routers)

```
show chassis alarms
<lcc number | scc>
```

Syntax (TX Matrix Plus Routers)

```
show chassis alarms
<lcc number | sfc number>
```

Syntax (MX Series Routers)

```
show chassis alarms
<all-members>
<local>
<member member-id>
```

Syntax (MX104, MX2010, MX2020, and MX2008 3D Universal Edge Routers)

```
show chassis alarms
<satellite [slot-id slot-id]>
```

Syntax (MX10003, MX204, and MX10008)

```
show chassis alarms
```

Syntax (QFX Series)

```
show chassis alarms
<interconnect-device name>
<node-device name>
```

Syntax (OCX Series)

```
show chassis alarms
```

Syntax (PTX Series Packet Transport Routers)

```
show chassis alarms
```


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Syntax (ACX Series Universal Metro Routers) show chassis alarms

Syntax (EX9251, EX9253 Switches) show chassis alarms

Release Information
Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
sfc option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 12.1 for the PTX Series Packet Transport Routers.
Command introduced in Junos OS Release 12.2 for the ACX Series Universal Metro Routers.
Command introduced in Junos OS Release 12.3 for MX 2010 and MX2020 3D Universal Edge Routers.
Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
satellite option introduced in Junos OS Release 14.2R3 for Junos Fusion.
Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.
Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.4 for MX204 3D Universal Edge Routers.
Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.
Command introduced in Junos OS Release 18.2 for EX9253 Switches.
Command introduced in Junos OS Release 18.2R1 for MX10008 3D Universal Edge Routers.

Description Display information about the conditions that have been configured to trigger alarms.

Options

none—Display information about the conditions that have been configured to trigger alarms.

all-members—(MX Series routers only) (Optional) Display information about alarm conditions for all the member routers of the Virtual Chassis configuration.

interconnect-device *name*—(QFabric systems only) (Optional) Display information about alarm conditions for the Interconnect device.

lcc *number*—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.

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- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

local—(MX Series routers only) (Optional) Display information about alarm conditions for the local Virtual Chassis member.

member *member-id*—(MX Series routers only) (Optional) Display information about alarm conditions for the specified member of the Virtual Chassis configuration. Replace *member-id* variable with a value of 0 or 1.

node-device *name*—(QFabric systems only) (Optional) Display information about alarm conditions for the Node device.

satellite [slot-id *slot-id*]—(Junos Fusion only)(Optional) Display information about alarm conditions for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

scc—(TX Matrix router only) (Optional) Show information about the TX Matrix router (switch-card chassis).

sfc *number*—(TX Matrix Plus router only) (Optional) Show information about the respective TX Matrix Plus router, which is the switch-fabric chassis. Replace *number* variable with **0**.

Additional Information

Chassis alarms are preset. You cannot modify them.

You cannot clear the alarms for chassis components. Instead, you must remedy the cause of the alarm. When a chassis alarm LED is lit, it indicates that you are running the router or switch in a manner that we do not recommend.

On routers, you can manually silence external devices connected to the alarm relay contacts by pressing the alarm cutoff button, located on the craft interface. Silencing the device does not remove the alarm messages from the display (if present on the router) or extinguish the alarm LEDs. In addition, new alarms that occur after you silence an external device reactivate the external device.

NOTE: MX10003 routers do not support craft interface.

In Junos OS release 11.1 and later, alarms for fans also show the slot number of the fans in the CLI output.

In Junos OS Release 11.2 and later, the command output on EX8200 switches shows the detailed location (**Plane/FPC/PFE**) for link errors in the chassis.

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In Junos OS Release 10.2 and later, an alarm is shown on T Series routers for a standby SONET Clock Generator (SCG) that is offline or absent.

You may often see the following error messages, in which only the error code is shown and no other information is provided:

```
Apr 12 08:04:10 send: red alarm set, device FPC 6, reason FPC 6 Major Errors
 - Error code: 257
Apr 12 08:04:19 send: red alarm set, device FPC 1, reason FPC 1 Major Errors
 - Error code: 559
```

To understand what CM_ALARM error codes mean, you need to first identify the structure of the CM Alarm codes. A CM_ALARM code has the following structure:

Bits:	Error type:
1-31	Major (1)
0	Minor (0)

According to the table above, the LSB (bit 0) identifies the **Error Type** (major alarm, if the bit is set and minor alarm if the bit is unset). The rest of the bits (1 - 31) identify the actual error code.

Take an example of the following error code, which was logged on a T1600:

```
Apr 12 08:04:10 send: red alarm set, device FPC 1, reason FPC 1 Major Errors
 - Error code: 559
```

First, you have to convert 559 to binary; that is **1000101111**. The LSB in this case is **1**, which means that this is a major alarm. After removing the LSB, you are left with **100010111**, which is equal to 279 in decimal. This is the actual error code, its meaning can be found from the following list:

Chip Type: L Chip	Code
CMALARM_LCHIP_LOUT_DESRD_PARITY_ERR	1
CMALARM_LCHIP_LOUT_DESRD_UNINIT_ERR	2
CMALARM_LCHIP_LOUT_DESRD_ILLEGALLINK_ERR	3
CMALARM_LCHIP_LOUT_DESRD_ILLEGALSIZE_ERR	4
CMALARM_LCHIP_LOUT_HDRF_TOERR_ERR	5
CMALARM_LCHIP_LOUT_HDRF_PARITY_ERR	6
CMALARM_LCHIP_LOUT_HDRF_UCERR_ERR	7
CMALARM_LCHIP_LOUT_NLIF_CRCDROP_ERR	8
CMALARM_LCHIP_LOUT_NLIF_CRCERR_ERR	9

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CMALARM_LCHIP_UCODE_TIMEOUT_ERR	10
CMALARM_LCHIP_LIN_SRCTL_ACCT_DROP_ERR	11
CMALARM_LCHIP_LIN_SRCTL_ACCT_ADDR_SIZE_ERR	12
CMALARM_LCHIP_SRAM_PARITY_ERR	13
CMALARM_LCHIP_UCODE_OVFLW_ERR	14
CMALARM_LCHIP_LOUT_HDRF_MTU_ERR	15

Chip Type: M Chip	Code
CMALARM_MCHIP_ECC_UNCORRECT_ERR	128

Chip Type: N Chip	Code
CMALARM_NCHIP_RDDMA_JBUS_TIMEOUT_ERR	256
CMALARM_NCHIP_RDDMA_FIFO_OVFLW_ERR	257
CMALARM_NCHIP_RDDMA_FIFO_UNFLW_ERR	258
CMALARM_NCHIP_RDDMA_SIZE_ERR	259
CMALARM_NCHIP_RDDMA_JBUS_CRC_ERR	260
CMALARM_NCHIP_WRDMA_PKTR_ERR	261
CMALARM_NCHIP_WRDMA_PKT_CRC_ERR	262
CMALARM_NCHIP_WRDMA_JBUS_TIMEOUT_ERR	263
CMALARM_NCHIP_WRDMA_FIFO_OVFLW_ERR	264
CMALARM_NCHIP_WRDMA_FIFO_UNFLW_ERR	265
CMALARM_NCHIP_WRDMA_PKT_LEN_ERR	266
CMALARM_NCHIP_WRDMA_JBUS_CRC_ERR	267
CMALARM_NCHIP_PKTR_DMA_AGE_ERR	268
CMALARM_NCHIP_PKTR_ICELLSIG_ERR	269
CMALARM_NCHIP_PKTR_FTTL_ERR	270
CMALARM_NCHIP_RODR_OFFSET_OVFLW_ERR	271

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CMALARM_NCHIP_PKTR_TMO_CELL_ERR	272
CMALARM_NCHIP_PKTR_TMO_OUTRANGE_ERR	273
CMALARM_NCHIP_PKTR_MD_REQUEST_Q_OVFLW_ERR	274
CMALARM_NCHIP_PKTR_DMA_BUFFER_OVFLW_ERR	275
CMALARM_NCHIP_PKTR_GRT_OVFLW_ERR	276
CMALARM_NCHIP_FRQ_ERR	277
CMALARM_NCHIP_RODR_IN_Q_OVFLW_ERR	278
CMALARM_NCHIP_DBUF_CRC_ERR	279

Chip Type: R Chip	Code
CMALARM_RCHIP_SRAM_PARITY_ERR	512

Chip Type: R Chip	Code
CMALARM_ICHIP_WO_DESRD_ID_ERR	601
CMALARM_ICHIP_WO_DESRD_DATA_ERR	602
CMALARM_ICHIP_WO_DESRD_OFLOW_ERR	603
CMALARM_ICHIP_WO_HDRF_UCERR_ERR	604
CMALARM_ICHIP_WO_HDRF_MTUERR_ERR	605
CMALARM_ICHIP_WO_HDRF_PARITY_ERR	606
CMALARM_ICHIP_WO_HDRF_TOERR_ERR	607
CMALARM_ICHIP_WO_IP_CRC_ERR	608
CMALARM_ICHIP_WO_IP_INTER_ERR	609
CMALARM_ICHIP_WI_WAN_TIMEOUT_ERR	625
CMALARM_ICHIP_WI_FAB_TIMEOUT_ERR	626
CMALARM_ICHIP_RLDRAM_BIST_ERR	630
CMALARM_ICHIP_SDRAM_BIST_ERR	631
CMALARM_ICHIP_RLDRAM_PARITY_ERR	632

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CMALARM_ICHIP_SDRAM_UNCORRECT_ERR	633
CMALARM_ICHIP_SDRAM_CORRECT_ERR	634
CMALARM_ICHIP_FUSE_DONE_ERR	635

According to the table above, the **279** error code corresponds to **CMALARM_NCHIP_DBUF_CRC_ERR**; this means that new CRC errors were seen on the NCHIP of this particular FPC, which is FPC as per the logs.

If you do not want to convert decimal to binary and vice versa, you may use the following shortcut:

For major alarms, the **Actual Error Code = (Error Code - 1)/2**, where **Error Code** is the code that you get in the log message. For example, if you get the following log:

```
    Apr 12 08:04:10 send: red alarm set, device FPC 6, reason FPC 6 Major
Errors - Error code: 257
```

Actual Error Code = (257-1)/2 = 128. Similarly, for minor alarms, Actual Error Code = (Error Code)/2

NOTE: Starting in Junos OS Release 18.2R1, on MX Series routers, the **show chassis alarms** output does not display error codes for PFE-related errors. You can use the following commands to view more details of the errors that caused the alarms:

- **show chassis errors active**
- **show chassis errors active detail**

Required Privilege Level view

Related Documentation

- *Configuring an RMON Alarm Entry and Its Attributes*
- *Chassis Conditions That Trigger Alarms*

List of Sample Output

show chassis alarms (Alarms Active) on page 96
show chassis alarms (No Alarms Active) on page 96
show chassis alarms (Fan Tray) on page 96
show chassis alarms (MX150) on page 96
show chassis alarms (MX104 Router) on page 96
show chassis alarms (MX2010 Router) on page 96
show chassis alarms (MX2020 Router) on page 97
show chassis alarms (MX10003 Router) on page 97
show chassis alarms (MX204 Router) on page 97

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show chassis alarms (MX2008 Router) on page 97
show chassis alarms (MX960, MX480, and MX240 Routers showing Major CB Failure) on page 97
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show chassis alarms (T4000 Router) on page 98
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show chassis alarms (Backup Routing Engine) on page 101
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show chassis alarms (Alarms Active on an ACX2000 Universal Metro Router) on page 104
show chassis alarms (Active Alarm to Indicate Status of the Bad SCB Clock on MX Series) on page 104
show chassis alarms (Alarms active on a PTX1000 Packet Transport Router) on page 105
show chassis alarms (MX10003 Router) on page 105
show chassis alarms (Alarms active on a MX10008 Router) on page 106

Output Fields Table 5 on page 95 lists the output fields for the **show chassis alarms** command. Output fields are listed in the approximate order in which they appear.

Table 5: show chassis alarms Output Fields

Field Name	Field Description
Alarm time	Date and time the alarm was first recorded.
Class	Severity class for this alarm: **Minor** or **Major**.

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Table 5: show chassis alarms Output Fields (continued)

Field Name	Field Description
Description	Information about the alarm.

Sample Output

show chassis alarms (Alarms Active)

```
user@host> show chassis alarms
3 alarms are currently active
Alarm time               Class  Description
2000-02-07 10:12:22 UTC Major fxp0: ethernet link down
2000-02-07 10:11:54 UTC Minor YELLOW ALARM - PEM 1 Removed
2000-02-07 10:11:03 UTC Minor YELLOW ALARM - Lower Fan Tray Removed
```

show chassis alarms (No Alarms Active)

```
user@host> show chassis alarms
No alarms are currently active
```

show chassis alarms (Fan Tray)

```
user@host> show chassis alarms
4 alarms currently active
Alarm time               Class  Description
2010-11-11 20:27:38 UTC  Major  Side Fan Tray 7 Failure
2010-11-11 20:27:13 UTC  Minor  Side Fan Tray 7 Overspeed
2010-11-11 20:27:13 UTC  Major  Side Fan Tray 5 Failure
2010-11-11 20:27:13 UTC  Major  Side Fan Tray 0 Failure
```

show chassis alarms (MX150)

```
user@host > show chassis alarms
1 alarms currently active
Alarm time               Class  Description
2016-06-04 01:49:43 PDT  Major  Fan Tray 1 Fan 0 failed
```

show chassis alarms (MX104 Router)

```
user@host >show chassis alarms
1 alarms currently active
Alarm time               Class  Description
2013-06-05 14:43:31 IST  Minor  Backup RE Active
```

show chassis alarms (MX2010 Router)

```
user@host> show chassis alarms
7 alarms currently active
Alarm time               Class  Description
2012-08-07 00:46:06 PDT  Major  Fan Tray 2 Failure
2012-08-06 18:24:36 PDT  Minor  Redundant feed missing for PSM 6
2012-08-06 07:41:04 PDT  Minor  Redundant feed missing for PSM 8
2012-08-04 02:42:06 PDT  Minor  Redundant feed missing for PSM 5
2012-08-03 21:14:24 PDT  Minor  Loss of communication with Backup RE
```


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```
2012-08-03 12:26:03 PDT  Minor  Redundant feed missing for PSM 4
2012-08-03 10:40:18 PDT  Minor  Redundant feed missing for PSM 7
```

show chassis alarms (MX2020 Router)

```
user@host> show chassis alarms
1 alarms currently active
Alarm time Class Description
2012-10-03 12:14:59 PDT Minor Plane 0 not online
```

show chassis alarms (MX10003 Router)

```
user@host> show chassis alarms

9 alarms currently active
Alarm time               Class  Description
2017-07-13 21:50:31 PDT  Major  FPC 1 Temperature Hot
2017-07-13 21:50:04 PDT  Minor  FPC 1 PIC 1 Invalid port profile configuration
2017-07-13 21:49:13 PDT  Minor  FPC 1 PIC 0 Invalid port profile configuration
2017-07-13 21:48:54 PDT  Major  FPC 0 Temperature Hot
2017-07-13 21:43:57 PDT  Minor  PEM 5 Not Present
2017-07-13 21:43:57 PDT  Minor  PEM 4 Not Present
2017-07-13 21:43:54 PDT  Minor  CB 1 Voltage Sensor ADS7830_0x4B Sensor Failed
2017-07-13 21:43:54 PDT  Minor  CB 0 Voltage Sensor ADS7830_0x4B Sensor Failed
2017-07-13 21:43:31 PDT  Minor  Loss of communication with Backup RE
```

show chassis alarms (MX204 Router)

```
user@host> show chassis alarms

1 alarms currently active
Alarm time               Class  Description
2017-11-05 22:13:03 PST  Major  PEM 0 Not Present
```

show chassis alarms (MX2008 Router)

```
user@host>show chassis alarms
No alarms currently active
```

show chassis alarms (MX960, MX480, and MX240 Routers showing Major CB Failure)

A major CB 0 failure alarm occurs in the event of a bad CB (unknown or mismatched CBs do not trigger this alarm in Junos Release OS 12.3R9 and later). Following GRES or recovery, if the hardware issue persists, the traffic moves to the good CB and continues. If the alarm was triggered by something transient like a power zone budget on GRES, bringing the CB back online can clear the alarm. Otherwise, replace the bad CB. Note that fabric link speed is not impacted by an offline SCB. The alarm migh be raised on CB0, CB1, and CB2.

```
user@host> show chassis alarms
6 alarms currently active
Alarm time               Class  Description
2014-10-31 16:49:41 EDT  Major  PEM 3 Not OK
2014-10-31 16:49:41 EDT  Major  PEM 2 Not OK
2014-10-31 16:49:31 EDT  Major  CB 0 Failure
2014-10-31 16:49:31 EDT  Minor  CB 0 Fabric Chip 0 Not Online
2014-10-31 16:49:31 EDT  Minor  CB 0 Fabric Chip 1 Not Online
2014-10-31 16:49:31 EDT  Minor  Backup RE Active
```

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show chassis alarms (PTX10008 Router)

```
user@host>show chassis alarms
12 alarms currently active
Alarm time               Class  Description
2017-05-09 01:38:55 PDT  Minor  Loss of communication with Backup RE
2017-05-05 06:49:57 PDT  Major  FPC 5 LCPU Temp Sensor Access Failed
2017-05-05 06:49:57 PDT  Major  FPC 5 PE2 Temp Sensor Hot
2017-05-05 06:49:57 PDT  Major  FPC 5 PE1 Temp Sensor Hot
2017-05-05 06:49:57 PDT  Major  FPC 5 PE0 Temp Sensor Hot
2017-05-05 06:49:57 PDT  Major  FPC 5 Exhaust-C Temp Sensor Hot
2017-05-05 06:49:57 PDT  Major  FPC 5 Exhaust-B Temp Sensor Hot
2017-05-05 06:49:57 PDT  Major  FPC 5 Exhaust-A Temp Sensor Hot
2017-05-05 06:49:57 PDT  Major  FPC 5 Intake-B Temp Sensor Access Failed
2017-05-05 06:49:57 PDT  Major  FPC 5 Intake-A Temp Sensor Access Failed
2017-05-05 06:49:57 PDT  Major  Fan Tray 0 Fan 5 running at lower speed
2017-05-05 06:49:57 PDT  Major  Fan Tray 0 Fan 4 running at lower speed
```

show chassis alarms (T4000 Router)

```
user@host> show chassis alarms
9 alarms currently active
Alarm time               Class  Description
2007-06-02 01:41:10 UTC  Minor  RE 0 Not Supported
2007-06-02 01:41:10 UTC  Minor  CB 0 Not Supported
2007-06-02 01:41:10 UTC  Minor  Mixed Master and Backup RE types
2007-05-30 19:37:33 UTC  Major  SPMB 1 not online
2007-05-30 19:37:29 UTC  Minor  Front Bottom Fan Tray Absent
2007-05-30 19:37:13 UTC  Major  PEM 1 Input Failure
2007-05-30 19:37:13 UTC  Major  PEM 0 Not OK
2007-05-30 19:37:03 UTC  Major  PEM 0 Improper for Platform
2007-05-30 19:37:03 UTC  Minor  Backup RE Active
```

show chassis alarms (Unreachable Destinations Present on a T Series Router)

```
user@host> show chassis alarms
10 alarms currently active
Alarm time               Class  Description
2011-08-30 18:43:53 PDT  Major  FPC 7 has unreachable destinations
2011-08-30 18:43:53 PDT  Major  FPC 5 has unreachable destinations
2011-08-30 18:43:52 PDT  Major  FPC 3 has unreachable destinations
2011-08-30 18:43:52 PDT  Major  FPC 2 has unreachable destinations
2011-08-30 18:43:52 PDT  Minor  SIB 0 Not Online
2011-08-30 18:43:33 PDT  Minor  SIB 4 Not Online
2011-08-30 18:43:28 PDT  Minor  SIB 3 Not Online
2011-08-30 18:43:05 PDT  Minor  SIB 2 Not Online
2011-08-30 18:43:28 PDT  Minor  SIB 1 Not Online
2011-08-30 18:43:05 PDT  Major  PEM 1 Not Ok
```

show chassis alarms (FPC Offline Due to Unreachable Destinations on a T Series Router)

```
user@host> show chassis alarms
10 alarms currently active
Alarm time               Class  Description
2011-08-30 18:43:53 PDT  Major  FPC 7 offline due to unreachable destinations
2011-08-30 18:43:53 PDT  Major  FPC 5 offline due to unreachable destinations
2011-08-30 18:43:52 PDT  Major  FPC 3 offline due to unreachable destinations
2011-08-30 18:43:52 PDT  Major  FPC 2 offline due to unreachable destinations
2011-08-30 18:43:52 PDT  Minor  SIB 0 Not Online
```


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```
2011-08-30 18:43:33 PDT  Minor  SIB 4 Not Online
2011-08-30 18:43:28 PDT  Minor  SIB 3 Not Online
2011-08-30 18:43:05 PDT  Minor  SIB 2 Not Online
2011-08-30 18:43:28 PDT  Minor  SIB 1 Not Online
2011-08-30 18:43:05 PDT  Major  PEM 1 Not Ok
```

show chassis alarms (SCG Absent on a T Series Router)

```
user@host> show chassis alarms
4 alarms currently active
Alarm time               Class  Description
2011-01-23 21:42:46 PST  Major  SCG 0 NO EXT CLK MEAS-BKUP SCG ABS
```

show chassis alarms (Alarms Active on a TX Matrix Router)

```
user@host> show chassis alarms
scc-re0:
--------------------------------------------------------------------------
8 alarms currently active
Alarm time               Class  Description
2004-08-05 18:43:53 PDT  Minor  LCC 0 Minor Errors
2004-08-05 18:43:53 PDT  Minor  SIB 3 Not Online
2004-08-05 18:43:52 PDT  Major  SIB 2 Absent
2004-08-05 18:43:52 PDT  Major  SIB 1 Absent
2004-08-05 18:43:52 PDT  Major  SIB 0 Absent
2004-08-05 18:43:33 PDT  Major  LCC 2 Major Errors
2004-08-05 18:43:28 PDT  Major  LCC 0 Major Errors
2004-08-05 18:43:05 PDT  Minor  LCC 2 Minor Errors
lcc0-re0:
--------------------------------------------------------------------------
5 alarms currently active
Alarm time               Class  Description
2004-08-05 18:43:53 PDT  Minor  SIB 3 Not Online
2004-08-05 18:43:49 PDT  Major  SIB 2 Absent
2004-08-05 18:43:49 PDT  Major  SIB 1 Absent
2004-08-05 18:43:49 PDT  Major  SIB 0 Absent
2004-08-05 18:43:28 PDT  Major  PEM 0 Not OK
lcc2-re0:
--------------------------------------------------------------------------
5 alarms currently active
Alarm time               Class  Description
2004-08-05 18:43:35 PDT  Minor  SIB 3 Not Online
2004-08-05 18:43:33 PDT  Major  SIB 2 Absent
2004-08-05 18:43:33 PDT  Major  SIB 1 Absent
2004-08-05 18:43:33 PDT  Major  SIB 0 Absent
2004-08-05 18:43:05 PDT  Minor  PEM 1 Absent
```

show chassis alarms (TX Matrix Plus router with 3D SIBs)

```
user@host> show chassis alarms
sfc0-re0:
--------------------------------------------------------------------------
Alarm time               Class  Description

2014-04-08 14:35:13 IST  Minor  FPM 0 SFC Config Size Changed
2014-04-08 14:32:58 IST  Major  Fan Tray Failure
2014-04-08 14:31:53 IST  Major  SIB F13 6 Fault
2014-04-08 14:31:43 IST  Major  SIB F13 11 Fault
2014-04-08 14:31:08 IST  Minor  Check SIB F13 12 CXP 14 Fbr Cbl
2014-04-08 14:31:08 IST  Minor  Check SIB F13 12 CXP 8 Fbr Cbl
```

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```
2014-04-08 14:31:08 IST  Minor  Check SIB F13 12 CXP 3 Fbr Cbl
2014-04-08 14:31:08 IST  Major  SIB F13 12 CXP 15 fault
2014-04-08 14:31:08 IST  Minor  SIB F13 12 CXP 14 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 12 CXP 14
2014-04-08 14:31:08 IST  Major  SIB F13 12 CXP 10 fault
2014-04-08 14:31:08 IST  Minor  SIB F13 12 CXP 8 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 12 CXP 8
2014-04-08 14:31:08 IST  Major  SIB F13 12 CXP 7 fault
2014-04-08 14:31:08 IST  Major  SIB F13 12 CXP 4 fault
2014-04-08 14:31:08 IST  Minor  SIB F13 12 CXP 3 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 12 CXP 3
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 14 Fbr Cbl
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 12 Fbr Cbl
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 8 Fbr Cbl
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 6 Fbr Cbl
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 4 Fbr Cbl
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 2 Fbr Cbl
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 0 Fbr Cbl
2014-04-08 14:31:08 IST  Minor  SIB F13 6 CXP 14 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 14
2014-04-08 14:31:08 IST  Minor  SIB F13 6 CXP 12 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 12
2014-04-08 14:31:08 IST  Major  SIB F13 6 CXP 10 fault
2014-04-08 14:31:08 IST  Minor  SIB F13 6 CXP 8 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 8
2014-04-08 14:31:08 IST  Minor  SIB F13 6 CXP 6 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 6
2014-04-08 14:31:08 IST  Minor  SIB F13 6 CXP 4 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 4
2014-04-08 14:31:08 IST  Minor  SIB F13 6 CXP 2 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 2
2014-04-08 14:31:08 IST  Minor  SIB F13 6 CXP 0 LOL
2014-04-08 14:31:08 IST  Minor  Check SIB F13 6 CXP 0
2014-04-08 14:31:08 IST  Minor  SIB F13 12 CXP 14 XC HSL Link Error
2014-04-08 14:29:27 IST  Minor  LCC 0 Minor Errors
2014-04-08 14:28:37 IST  Major  LCC 0 Major Errors
2014-04-08 14:28:37 IST  Major  LCC 2 Major Errors
2014-04-08 14:28:37 IST  Minor  LCC 2 Minor Errors
2014-04-08 14:28:24 IST  Major  SIB F2S 4/6 Absent
2014-04-08 14:28:24 IST  Major  SIB F2S 4/4 Absent
2014-04-08 14:28:24 IST  Major  SIB F2S 4/2 Absent
2014-04-08 14:28:24 IST  Major  SIB F2S 4/0 Absent
2014-04-08 14:28:24 IST  Major  SIB F2S 3/6 Absent
2014-04-08 14:28:24 IST  Major  SIB F2S 3/4 Absent
2014-04-08 14:28:24 IST  Major  SIB F2S 3/2 Absent
2014-04-08 14:28:24 IST  Major  SIB F2S 3/0 Absent
2014-04-08 14:28:24 IST  Major  SIB F13 9 Absent
2014-04-08 14:28:24 IST  Major  SIB F13 8 Absent
2014-04-08 14:28:24 IST  Major  SIB F13 7 Absent
2014-04-08 14:28:24 IST  Major  SIB F13 4 Absent
2014-04-08 14:28:24 IST  Major  SIB F13 1 Absent
2014-04-08 14:28:22 IST  Major  PEM 0 Input Failure
2014-04-08 14:28:22 IST  Major  PEM 0 Not OK

lcc0-re0:
--------------------------------------------------------------------------
12 alarms currently active
Alarm time               Class  Description
2014-04-08 14:36:08 IST  Minor  CB 1  M/S Switch Changed
2014-04-08 14:36:08 IST  Minor  CB 1  CHASSIS ID Changed
2014-04-08 14:35:43 IST  Minor  CB 0  M/S Switch Changed
```


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```
2014-04-08 14:35:43 IST  Minor  CB 0  CHASSIS ID Changed
2014-04-08 14:29:30 IST  Minor  SIB 4 Not Online
2014-04-08 14:29:30 IST  Minor  SIB 3 Not Online
2014-04-08 14:29:30 IST  Minor  SIB 2 Not Online
2014-04-08 14:29:24 IST  Major  Rear Fan Tray Failure
2014-04-08 14:29:24 IST  Major  Front Bottom Fan Tray Improper for Platform
2014-04-08 14:29:24 IST  Major  Front Top Fan Tray Improper for Platform
2014-04-08 14:28:37 IST  Major  SIB 4 Absent
2014-04-08 14:28:37 IST  Major  SIB 3 Absent

lcc2-re0:
--------------------------------------------------------------------------
12 alarms currently active
Alarm time               Class  Description
2014-04-08 14:36:02 IST  Minor  CB 1  M/S Switch Changed
2014-04-08 14:36:02 IST  Minor  CB 1  CHASSIS ID Changed
2014-04-08 14:35:42 IST  Minor  CB 0  M/S Switch Changed
2014-04-08 14:34:42 IST  Minor  CB 0  CHASSIS ID Changed
2014-04-08 14:29:29 IST  Minor  SIB 0 CXP 7 Unsupported Optics
2014-04-08 14:29:27 IST  Major  Front Bottom Fan Tray Improper for Platform
2014-04-08 14:29:27 IST  Major  Front Top Fan Tray Improper for Platform
2014-04-08 14:29:25 IST  Minor  SIB 4 Not Online
2014-04-08 14:29:25 IST  Minor  SIB 3 Not Online
2014-04-08 14:28:47 IST  Major  PEM 0 Not OK
2014-04-08 14:28:36 IST  Major  SIB 2 Absent
2014-04-08 14:28:36 IST  Minor  Host 0 Boot from alternate media

lcc6-re0:
--------------------------------------------------------------------------
2 alarms currently active
Alarm time               Class  Description
2013-11-06 04:03:56 PST  Minor  SIB 1 CXP 0 XC HSL Link Error
2013-11-06 03:49:32 PST  Major  PEM 1 Not OK
```

show chassis alarms (Alarms on a T4000 Router After the enhanced-mode Statement is Enabled)

To enable improved virtual private LAN service (VPLS) MAC address learning on T4000 routers, you must include the **enhanced-mode** statement at the **[edit chassis network-services]** hierarchy level and reboot the router. When router reboots, only the T4000 Type 5 FPCs are required to be present on the router. If there are any other FPCs (apart from T4000 Type 5 FPCs) on the T4000 router, such FPCs become offline, and FPC misconfiguration alarms are generated. The **show chassis alarm** command output displays FPC misconfiguration (**FPC *fpc-slot* misconfig**) as the reason for the generation of the alarms.

```
user@host> show chassis alarms
2 alarms currently active
  Alarm time               Class  Description
  2011-10-22 10:10:47 PDT  Major  FPC 1 misconfig
  2011-10-22 10:10:46 PDT  Major  FPC 0 misconfig
```

show chassis alarms (Backup Routing Engine)

```
user@host> show chassis alarms
2 alarms are currently active
Alarm time               Class  Description
2005-04-07 10:12:22 PDT  Minor  Host 1 Boot from alternate media
2005-04-07 10:11:54 PDT  Major  Host 1 compact-flash missing in Boot List
```

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show chassis alarms (EX Series Switch)

```
user@switch> show chassis alarms
 4 alarms currently active
Alarm time               Class  Description
2014-03-12 15:36:09 UTC  Minor  Require a Fan Tray upgrade
2014-03-12 15:00:02 UTC  Major  PEM 0 Input Failure
2014-03-12 15:00:02 UTC  Major  PEM 0 Not OK
2014-03-12 14:59:51 UTC  Minor  Host 1 Boot from alternate media
```

show chassis alarms (Alarms Active on the QFX Series and OCX Series Switches)

```
user@switch> show chassis alarms
1 alarms currently active
Alarm time               Class  Description
2012-03-05 2:10:24 UTC  Major  FPC 0 PEM 0 Airflow not matching Chassis Airflow
```

show chassis alarms node-device (Alarms Active on the QFabric System)

```
user@switch> show chassis alarms node-device Test
node-device ED3694
3 alarms currently active
Alarm time               Class  Description
2011-08-24 16:04:15 UTC  Major  Test:fte-0/1/2: Link down
2011-08-24 16:04:14 UTC  Major  Test:fte-0/1/0: Link down
2011-08-24 14:21:14 UTC  Major  Test PEM 0 is not supported/powered
```

show chassis alarms (Alarms Active on the QFabric System)

```
user@switch> show chassis alarms
IC-1:
--------------------------------------------------------------------------
1 alarms currently active
Alarm time               Class  Description
2011-08-24 16:04:15 UTC  Minor  Backup RE Active

Test:
--------------------------------------------------------------------------
3 alarms currently active
Alarm time               Class  Description
2011-08-24 16:04:15 UTC  Major  Test:fte-0/1/2: Link down
2011-08-24 16:04:14 UTC  Major  Test:fte-0/1/0: Link down
2011-08-24 14:21:14 UTC  Major  Test PEM 0 is not supported/powered

SNG-0:
--------------------------------------------------------------------------

NW-NG-0:
--------------------------------------------------------------------------
1 alarms currently active
Alarm time               Class  Description
2011-08-24 15:49:27 UTC  Major  Test PEM 0 is not supported/powered
```

show chassis alarms (Alarms Active on an EX8200 Switch)

```
user@switch> show chassis alarms

6 alarms currently active
```


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```
Alarm time               Class  Description
2010-12-02 19:15:22 UTC  Major  Fan Tray Failure
2010-12-02 19:15:22 UTC  Major  Fan Tray Failure
2010-12-02 19:15:14 UTC  Minor  Check CB 0 Fabric Chip 1 on Plane/FPC/PFE: 1/5/0,
 1/5/1, 1/5/2, 1/5/3, 1/7/0, 1/7/1, 1/7/2, 1/7/3, 2/5/0, 2/5/1, ...
2010-12-02 19:15:14 UTC  Minor  Check CB 0 Fabric Chip 0 on Plane/FPC/PFE: 1/5/0,
 1/5/1, 1/5/2, 1/5/3, 1/7/0, 1/7/1, 1/7/2, 1/7/3, 2/5/0, 2/5/1, ...
2010-12-02 19:14:18 UTC  Major  PSU 1 Output Failure
2010-12-02 19:14:18 UTC  Minor  Loss of communication with Backup RE
```

show chassis alarms (EX9251 Switch)

```
user@switch> show chassis alarms
 2 alarms currently active
Alarm time               Class  Description
2018-03-08 05:13:10 PST  Major  PEM 0 Not Powered
2018-03-08 05:13:10 PST  Major  Fan Tray 2 is not present
```

show chassis alarms (EX9253 Switch)

```
user@switch> show chassis alarms
6 alarms currently active
Alarm time               Class  Description
2018-03-07 01:09:01 PST  Major  Power Budget:Insufficient Power
2018-03-06 23:56:34 PST  Minor  Loss of communication with Backup RE
2018-02-15 00:48:10 PST  Minor  PEM 3 Not Present
2018-02-15 00:48:10 PST  Minor  PEM 2 Not Present
2018-02-15 00:48:07 PST  Major  PEM 4 Not Powered
2018-02-15 00:48:07 PST  Major  PEM 1 Not Powered
```

show chassis alarms (Alarms Active on a PTX5000 Packet Transport Router)

```
user@host> show chassis alarms

23 alarms currently active
Alarm time               Class  Description
2011-07-12 16:22:05 PDT  Minor  No Redundant Power for Rear Chassis
2011-07-12 16:22:05 PDT  Major  PDU 0 PSM 1 Not OK
2011-07-12 16:21:57 PDT  Minor  No Redundant Power for Fan 0-2
2011-07-12 16:21:57 PDT  Major  PDU 0 PSM 0 Not OK
2011-07-12 15:56:06 PDT  Major  PDU 1 PSM 2 Not OK
2011-07-12 15:56:06 PDT  Minor  No Redundant Power for FPC 0-7
2011-07-12 15:56:06 PDT  Major  PDU 0 PSM 3 Not OK
2011-07-12 15:28:20 PDT  Major  PDU 0 PSM 2 Not OK
2011-07-12 15:19:14 PDT  Minor  Backup RE Active
```

show chassis alarms (Mix of PDUs Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

All PDUs installed on a PTX5000 router must be of the same type. The **Mix of PDUs** or **Power Manager Non Operational** alarm is raised when different types of PDUs are installed on a PTX5000 router.

```
user@host> show chassis alarms
15 alarms currently active
Alarm time               Class  Description
2013-03-19 23:03:53 PDT  Minor  No Redundant Power
2013-03-19 23:03:48 PDT  Minor  Mix of PDUs
2013-03-19 23:03:47 PDT  Minor  PDU 1 PSM 3 Absent
2013-03-19 23:03:47 PDT  Minor  PDU 1 PSM 2 Absent
```

```
2013-03-19 23:03:47 PDT  Minor  PDU 1 PSM 1 Absent
2013-03-19 23:03:47 PDT  Minor  PDU 1 PSM 0 Absent
2013-03-19 23:03:46 PDT  Major  No CG Online
```

show chassis alarms (PDU Converter Failed Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

The **PDU Converter Failed** alarm is raised when one or more 36 V booster converter of a DC PDU fails. If two or more 36 V booster converter fails, fan trays fail and the router might get over heated. Therefore, when this alarm is raised, check the PDU and replace it, if required.

```
user@host> show chassis alarms
11 alarms currently active
Alarm time               Class  Description
2013-12-11 22:14:13 PST  Minor  No Redundant Power for System
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 7 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 6 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 5 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 4 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 3 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 2 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 1 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 PSM 0 Not OK
2013-12-11 22:14:10 PST  Major  PDU 0 Not OK
2013-12-11 22:14:01 PST  Major  PDU 0 Converter Failed
```

show chassis alarms (No Power for System Alarm on a PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis alarms
8 alarms currently active
Alarm time               Class  Description
2013-11-19 01:58:41 PST  Major  No Power for System
2013-11-19 01:58:37 PST  Major  PDU 0 PSM 1 Not OK
2013-11-19 01:56:46 PST  Major  PDU 0 PSM 2 Not OK
2013-11-19 01:54:26 PST  Major  PDU 0 PSM 3 Not OK
2013-11-19 01:53:30 PST  Major  PDU 1 PSM 3 Not OK
2013-11-19 01:53:29 PST  Major  PDU 1 PSM 2 Not OK
2013-11-19 01:53:29 PST  Major  PDU 1 PSM 1 Not OK
2013-11-19 01:53:29 PST  Major  PDU 1 PSM 0 Not OK
```

show chassis alarms (Alarms Active on an ACX2000 Universal Metro Router)

```
user@host> show chassis alarms
7 alarms currently active
Alarm time               Class  Description
2012-05-22 11:19:09 UTC  Major  xe-0/3/1: Link down
2012-05-22 11:19:09 UTC  Major  xe-0/3/0: Link down
2012-05-22 11:19:09 UTC  Major  ge-0/1/7: Link down
2012-05-22 11:19:09 UTC  Major  ge-0/1/6: Link down
2012-05-22 11:19:09 UTC  Major  ge-0/1/3: Link down
2012-05-22 11:19:09 UTC  Major  ge-0/1/2: Link down
2012-05-22 11:19:09 UTC  Major  ge-0/1/1: Link down
```

show chassis alarms (Active Alarm to Indicate Status of the Bad SCB Clock on MX Series)

```
user@host> show chassis alarms
1 alarm currently active
Alarm time               Class  Description
2013-08-06 07:48:35 PDT  Major  CB 0 19.44 MHz clock failure
```


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show chassis alarms (Alarms active on a PTX1000 Packet Transport Router)

```
user@host> show chassis alarms
2 alarms currently active
Alarm time               Class  Description
2004-08-10 00:55:49 UTC  Major  PEM 1 Not Present
2004-08-10 00:55:49 UTC  Major  PEM 0 Not Present
```

show chassis alarms (MX10003 Router)

If LCMD is down on the backup RE, then the following alarm is seen on the Master.

```
user@host> show chassis alarms
1 alarm currently active
Alarm time               Class  Description
2017-05-09 13:26:27 PDT  Major  VMHost RE 1 host application failed
```

If LCMD is down on the master, then following alarms are displayed.

```
user@host> show chassis alarms
3 alarms currently active
Alarm time               Class  Description
2017-05-10 14:12:21 PDT  Major  VMHost RE 0 host application failed
2017-05-10 14:12:16 PDT  Minor  LCM Peer Absent
2017-05-09 13:26:27 PDT  Major  VMHost RE 1 host application failed
```

If the LCMD process is crashing on the master, the system will switchover after one minute provided the backup RE LCMD connection is stable. The system will not switchover under the following conditions: if the backup RE LCMD connection is unstable or if the current master just gained mastership. When the master has just gained mastership, the switchover happens only after four minutes.

The LCM peer connection un-stable alarm is raised when the LCMD-CHASD IPC communication flaps three times within a small interval of two to three minutes. Once LCM peer connection un-stable alarm is raised, the connection status is monitored for two minutes.

```
user@host> show chassis alarms
7 alarms currently active
Alarm time               Class  Description
2017-05-29 10:12:17 PDT  Minor  LCM Peer Connection un-stable
2017-05-29 09:04:17 PDT  Minor  PEM 8 Not Powered
2017-05-29 09:04:17 PDT  Minor  PEM 9 Not Powered
2017-05-29 09:04:17 PDT  Minor  PEM 7 Not Powered
2017-05-29 09:04:17 PDT  Minor  PEM 3 Not Powered
2017-05-29 09:04:17 PDT  Minor  PEM 0 Not Powered
2017-05-29 09:04:08 PDT  Minor  Loss of communication with Backup RE
```

If there are no more connection flaps within this two minutes time interval, the LCM peer connection un-stable alarm is cleared.

```
6 alarms currently active
Alarm time               Class  Description
2017-05-29 09:04:17 PDT  Minor  PEM 8 Not Powered
2017-05-29 09:04:17 PDT  Minor  PEM 9 Not Powered
2017-05-29 09:04:17 PDT  Minor  PEM 7 Not Powered
2017-05-29 09:04:17 PDT  Minor  PEM 3 Not Powered
```

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```
2017-05-29 09:04:17 PDT  Minor  PEM 0 Not Powered
2017-05-29 09:04:08 PDT  Minor  Loss of communication with Backup RE
```

A major alarm is raised even if there is on one PLL lock error, and this alarm can be cleared only through an FPC restart.

```
user@host> show chassis alarms
4 alarms currently active
Alarm time               Class  Description
2017-02-16 09:06:06 PDT  Major  FPC 0 Major Errors
2017-02-16 09:08:40 PDT  Major  FPC 1 Major Errors
2017-02-16 09:11:47 PST  Minor  Fan Tray 3 Pair 1 Outer Fan running at over speed
2017-02-16 09:11:47 PST  Minor  Fan Tray 3 Pair 1 Inner Fan running at over speed
```

show chassis alarms (Alarms active on a MX10008 Router)

```
user@host> show chassis alarms
19 alarms currently active
Alarm time               Class  Description
2018-05-29 11:03:00 PDT  Minor  FPC 1 PIC 5 Need bounce
2018-05-29 11:03:00 PDT  Minor  FPC 1 PIC 4 Need bounce
2018-05-29 11:03:00 PDT  Minor  FPC 1 PIC 3 Need bounce
2018-05-29 11:03:00 PDT  Minor  FPC 1 PIC 2 Need bounce
2018-05-29 11:03:00 PDT  Minor  FPC 1 PIC 1 Need bounce
2018-05-29 11:03:00 PDT  Minor  FPC 1 PIC 0 Need bounce
2018-05-29 05:20:03 PDT  Major  FPC 2 Hard errors
2018-05-29 03:05:49 PDT  Major  FPC 5 I2C Failure
2018-05-29 03:05:49 PDT  Major  FPC 1 I2C Failure
2018-05-29 03:04:30 PDT  Minor  PEM 4 Feed 2 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 4 Feed 1 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 3 Feed 2 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 3 Feed 1 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 2 Feed 2 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 2 Feed 1 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 1 Feed 2 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 1 Feed 1 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 0 Feed 2 switch OFF but input connected
2018-05-29 03:04:30 PDT  Minor  PEM 0 Feed 1 switch OFF but input connected
```


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show chassis craft-interface

List of Syntax

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Syntax (ACX Series Universal Metro Routers) on page 107

Syntax

```
show chassis craft-interface
```

Syntax (MX Series Routers)

```
show chassis craft-interface
<all-members>
<local>
<member member-id>
```

Syntax (MX104, MX2010, MX2020, and MX2008 3D Universal Edge Routers)

```
show chassis craft-interface
```

Syntax (TX Matrix Routers)

```
show chassis craft-interface
<lcc number | scc>
```

Syntax (TX Matrix Plus Routers)

```
show chassis craft-interface
<lcc number | sfc number>
```

Syntax (ACX Series Universal Metro Routers)

```
show chassis craft-interface
```

Release Information

Command introduced before Junos OS Release 7.4.
sfc option for the TX Matrix Plus router introduced in Junos OS Release 9.6.
Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.
Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.
Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.
Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.

Description

For routers or switches that have a display on the craft interface, show the messages that are currently displayed. On all routers except for the M20 router, you must enter this command on the master Routing Engine.

Options

none—(TX Matrix, TX Matrix Plus routers, MX104, MX2010, MX2020, and MX2008 routers, and ACX Series routers only) On a TX Matrix router, show messages that are currently displayed on the craft interface on the TX Matrix router and its attached T640 routers.

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On a TX Matrix Plus router, show messages that are currently displayed on the craft interface on the TX Matrix Plus router and its attached routers.

all-members—(MX Series routers only) (Optional) Display information currently on the craft interface for all members of the Virtual Chassis configuration.

lcc *number*—(TX Matrix, TX Matrix Plus routers only) (Optional) On a TX Matrix router, show messages that are currently displayed on the craft interface for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, show messages that are currently displayed on the craft interface for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

local—(MX Series routers only) (Optional) Display information currently on the craft interface for the local Virtual Chassis member.

member *member-id*—(MX Series routers only) (Optional) Display information currently on the craft interface for the specified member of the Virtual Chassis configuration. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

scc—(TX Matrix router only) (Optional) Show messages that are currently displayed on the craft interface for the TX Matrix router (switch-card chassis).

sfc *number*—(TX Matrix Plus router only) (Optional) Show messages that are currently displayed on the craft interface for the respective TX Matrix Plus router (switch-fabric chassis). Replace *number* variable with **0**.

Required Privilege Level view

Related Documentation
- *clear chassis display message*
- *set chassis display message*

List of Sample Output
show chassis craft-interface (M20 Router) on page 110
show chassis craft-interface (M40 Router) on page 111
show chassis craft-interface (M120 Router) on page 111

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show chassis craft-interface (TX Matrix Routing Matrix) on page 117
show chassis craft-interface (TX Matrix Plus Routing Matrix) on page 119
show chassis craft-interface (TX Matrix Plus router with 3D SIBs) on page 122
show chassis craft-interface (ACX2000 Universal Metro Router) on page 123
show chassis craft-interface (ACX500 Router) on page 124

Output Fields Table 6 on page 109 lists the output fields for the **show chassis craft-interface** command. Output fields are listed in the approximate order in which they appear.

Table 6: show chassis craft-interface Output Fields

Field Name	Field Description
LCD screen or **FPM Display Contents**	Contents of the Front Panel Module display: • ***router-name***—Name of the router. • **Up**—How long the router has been operational, in days, hours, minutes, and seconds. • ***message***—Information about the router traffic load, the power supply status, the fan status, and the temperature status. The display of this information changes every 2 seconds. If a text message has been created with the **set chassis display** command, this message appears on all four lines of the craft interface display. The display alternates between the text message and the standard system status messages every 2 seconds.
SFC Front Panel Switch Settings	(TX Matrix Plus Routers)—Display the SFC front panel switch settings: **SFC Chassis Number** and **Config Size** are settings on physical switches located on the left side of the craft interface of the TX Matrix Plus router. • **SFC Chassis Number**—This field always displays the value **00**. • **Config Size**—The value of this field is **0** for the TX Matrix Plus router. The value of this filed is **3** for TX Matrix Plus router with 3D SIBs.
Front Panel System LEDs	(MX104, MX2010, MX2020, and MX2008 Routers) Status of the Front Panel System LEDs. A dot (**.**) indicates the LED is not lit. An asterisk (*****) indicates the LED is lit.
Front Panel Alarm Indicators	(MX104, MX2010, MX2020, and MX2008 Routers) Status of the Front Panel Alarm indicators. A dot (**.**) indicates the relay is off. An asterisk (*****) indicates the relay is active.
Input Relay	Status of the configured input relay ports—0 through 3. The mode is normally open or closed. The status is clear or raised.
Output Relay	Status of the configured output ports—0 or 1. The mode is normally open or closed. The status is clear or raised.

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Table 6: show chassis craft-interface Output Fields (continued)

Field Name	Field Description
Front Panel FPC LEDs	(MX2010, MX2020, and MX2008 Routers) Status of the Front Panel Flexible PIC Concentrator (FPC) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit. On MX2010 and MX2008 routers, there are 10 (0-9) FPCs LEDs. On MX2020 routers, there are 20 (0-9 and 10-19) FPCs LEDs.
CB LEDs	Status of the Control Board (CB) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
PS LEDs	(MX2010, MX2020, and MX2008 Routers) Status of the Power Supply (PS) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit. On MX2010 and MX2008 routers, there are 9 (0-8) PS LEDs. On MX2020 routers, there are 18 (0-8 and 9-17) PS LEDs.
PS Status	(MX104 Routers) Status of the Power Supply (PS). Green indicates that the power supply is functioning. Red indicates that the power supply is not functioning. A dot (.) indicates the LED is not lit. An asterix (*) indicates the LED is lit.
FAN Tray LEDs	(MX2010, MX2020, and MX2008 Routers) Status of the Fan Tray LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
Front Panel SFB LEDs	(MX2010, MX2020, and MX2008 Routers) Status of the Front Panel Switch Fabric Boards (SFB) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
Front Panel Chassis Info	(MX2010, MX2020, and MX2008 Routers) Information about the chassis such as the chassis number and role. User can set the chassis number in multi-chassis configurations.
MCS and SFM LEDs	Status of the Miscellaneous Control Subsystem (MCS) and Switching and Forwarding Module (SFM) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit. When neither a dot nor an asterisk is displayed, there is no board in that slot.
SIB LEDs	Status of the Switch Interface Board (SIB) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.
SCG LEDs	Status of the SONET Clock Generator (SCG) LEDs. A dot (.) indicates the LED is not lit. An asterisk (*) indicates the LED is lit.

Sample Output

show chassis craft-interface (M20 Router)

```
user@host> show chassis craft-interface
Red alarm:     LED off, relay off
Yellow alarm:  LED on, relay on
Host OK LED:   On
Host fail LED: Off
FPCs     0  1  2  3
-------------------
Green  .  *  *.
Red    ....
LCD screen:
     +--------------------+
     |host                |
```


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```
     |1 Alarm active      |
     |Y: FERF             |
     |                    |
     +--------------------+
```

show chassis craft-interface (M40 Router)

```
user@host> show chassis craft-interface
Front Panel LCD Display: enabled
Red alarm:     LED off, relay off
Yellow alarm:  LED off, relay off
Host OK LED:   On
Host Fail LED: Off
NICs    0  1  2  3  4  5  6  7
-------------------------------
Green   *.  *.  *.  *.
Red   ........
LCD Screen:
     +--------------------+
     |host                |
     |Up: 27+18:52:37     |
     |                    |
     |52.649kpps Load     |
     +--------------------+
```

show chassis craft-interface (M120 Router)

```
user@host> show chassis craft-interface
Front Panel System LEDs:
Routing Engine    0    1
--------------------------
OK                *    .
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   .
Major relay  *
Minor relay  .

Front Panel FPC LEDs:
FPC    0   1   2   3   4   5
---------------------------
Red    .   .   .   .   .   .
Green  .   *   .   *   *   *

CB LEDs:
 CB    0   1
--------------
Amber  .   .
Green  *   *

PS LEDs:
  PS   0   1
------------------------
Red    .   .
Green  *   *
```

```
FEB LEDs:
  FEB  0   1   2   3   4   5
------------------------------
Red    .   .   .   .   .   .
Green  .   .   .   *   *   *
Active .   .   .   *   *   *
```

show chassis craft-interface (M160 Router)

```
user@host> show chassis craft-interface
FPM Display contents:
    +--------------------+
    |hosts               |
    |Up: 1+16:46         |
    |                    |
    |Fans OK             |
    +--------------------+

Front Panel System LEDs:
Host     0    1
------------------------
OK       .    *
Fail     .  .
Master .    *

Front Panel Alarm Indicators:
-----------------------------
Red LED    .
Yellow LED .
Major relay.
Minor relay.

Front Panel FPC LEDs:
FPC    0   1   2   3   4   5   6   7
-------------------------------------
Red  . . . . . . . .
Green  *   * . . . . . .

MCS and SFM LEDs:
MCS    0   1      SFM    0   1   2   3
--------------------------------------
Amber    .           . .
Green    .           . .
Blue       *             *   *
```

show chassis craft-interface (MX150)

```
user@host > show chassis craft-interface
                LED status for: FPC 0
                ---------------------------------

LEDs status:
    Alarm LED : Off
    System LED: Green
    Master LED: Green

Interface               STATUS LED      LINK/ACTIVITY LED
-----------------------------------------------------------
ge-0/0/0                N/A             (null)
lc-0/0/0                (null)          (null)
ge-0/0/10               N/A             (null)
```


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```
gr-0/0/10               N/A             (null)
ip-0/0/10               N/A             (null)
vt-0/0/10               N/A             (null)
ge-0/0/11               N/A             (null)
```

show chassis craft-interface (MX104 Router)

```
user@host > show chassis craft-interface
Front Panel System LEDs:
Routing Engine    0    1
--------------------------------------
OK                *    .
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
--------------------------------------
Red LED      .
Yellow LED   *
Major relay  .
Minor relay  *

Input relay:
--------------------------------------
Port    Mode    Status
 0      Open    Clear
 1      Open    Clear
 2      Open    Clear
 3      Open    Clear

Output relay:
--------------------------------------
Port    Mode    Status
 0      Open    Clear
 1      Open    Clear

PS Status:
  PS   0    1
--------------------------------------
Red    .   .
Green  *   .
```

show chassis craft-interface (MX2010 Router)

```
user@host > show chassis craft-interface
Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *    .
Fail              .    *
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      .
Yellow LED   *
Major relay  .
Minor relay  *

Front Panel FPC LEDs:
```

```
FPC    0    1    2    3    4    5    6    7    8    9
-------------------------------------------------------
Red    .    .    .    .    .    .    .    .    .    .
Green  *    *    .    .    .    .    .    .    *    *

CB LEDs:
 CB    0   1
------------
Amber  .   .
Green  *   *

PS LEDs:
  PS    0    1    2    3    4    5    6    7    8
-----------------------------------------------
Red     .    .    .    .    .    .    .    .    .
Green   .    .    .    .    *    *    *    *    *

Fan Tray LEDs:
  FT   0   1   2   3
--------------------
Red    .   .   .   .
Green  *   *   *   *

Front Panel SFB LEDs:
SFB    0   1   2   3   4   5   6   7
-------------------------------------
Red    .   .   .   .   .   .   .   .
Green  *   *   *   *   *   *   *   *

Front Panel Chassis Info:
Chassis Number    0x0
Chassis Role      S
```

show chassis craft-interface (MX2020 Router)

```
user@host > show chassis craft-interface
Front Panel System LEDs:
Routing Engine 0 1
--------------------------
OK * *
Fail . .
Master * .
Front Panel Alarm Indicators:
-----------------------------
Red LED .
Yellow LED .
Major relay .
Minor relay .
Front Panel FPC LEDs:
FPC 0 1 2 3 4 5 6 7 8 9
-------------------------------------------------------
Red . . . . . . . . . .
Green * * * * * * * * * *
Front Panel FPC LEDs:
FPC 10 11 12 13 14 15 16 17 18 19
-------------------------------------------------------
Red . . . . . . . . . .
Green * * * * * * * * * *
CB LEDs:
CB 0 1
```


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```
------------
Amber . .
Green * *
PS LEDs:
PS 0 1 2 3 4 5 6 7 8
-----------------------------------------------
Red . . . . . . . . .
Green * * * * * . . * *
PS LEDs:
PS 9 10 11 12 13 14 15 16 17
-----------------------------------------------
Red . . . . . . . . .
Green * * * * * * * * *
Fan Tray LEDs:
FT 0 1 2 3
--------------------
Red . . . .
Green * * * *
Front Panel SFB LEDs:
SFB 0 1 2 3 4 5 6 7
-----------------------------------
Red . . . . . . . .
Green * * * * * * * *
Front Panel Chassis Info:
Chassis Number 0x57
Chassis Role M
```

show chassis craft-interface (MX2008 Router)

```
user@host> show chassis craft-interface
Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *    *
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      .
Yellow LED   .
Major relay  .
Minor relay  .

Front Panel FPC LEDs:
FPC    0    1    2    3    4    5    6    7    8    9
-------------------------------------------------------
Red    .    .    .    .    .    .    .    .    .    .
Green  *    *    .    .    .    .    .    *    .    .

CB LEDs:
 CB    0   1
------------
Amber  .   .
Green  *   *

PS LEDs:
  PS    0    1    2    3    4    5    6    7    8
-------------------------------------------------
Red     .    .    .    .    .    .    .    .    .
Green   .    *    *    *    *    *    *    *    .
```

```
Fan Tray LEDs:
  FT   0   1
------------
Red    .   .
Green  *   *

Front Panel SFB LEDs:
SFB    0   1   2   3   4   5   6   7
-----------------------------------
Red    .   .   .   .   .   .   .   .
Green  *   *   *   *   *   *   *   *

Front Panel Chassis Info:
Chassis Number    0x36
Chassis Role      M
```

show chassis craft-interface (T4000 Router)

```
user@host> show chassis craft-interface
FPM Display contents:
    +--------------------+
    |stymphalian         |
    |2 Alarms active     |
    |R: Front Top Fan Tra|
    |Y: PEM 1 Absent     |
    +--------------------|

Front Panel System LEDs:
Routing Engine    0    1
--------------------------
OK                *    *
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   *
Major relay  *
Minor relay  *

Front Panel FPC LEDs:
FPC    0   1   2   3   4   5   6   7
-----------------------------------
Red    .   .   .   .   .   .   .   .
Green  *   .   .   *   .   *   *   .

CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .

SCG LEDs:
  SCG  0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .
```


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```
SIB LEDs:
  SIB  0   1   2   3   4
-------------------------
Red    .   .   .   .   .
Green  *   *   *   *   *
```

show chassis craft-interface (TX Matrix Routing Matrix)

```
user@host> show chassis craft-interface
scc-re0:
--------------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
    |bradley             |
    |8 Alarms active     |
    |R: SIB 2 Absent     |
    |R: SIB 1 Absent     |
    +--------------------|

Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *  .
Fail            .  .
Master            *  .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   *
Major relay  *
Minor relay  *

CB LEDs:
  CB   0   1
--------------
Amber. .
Green  * .
Blue   * .

SIB LEDs:
  SIB  0   1   2   3   4
-------------------------
Fail . . . . .
OK   . . . .   *
Active . . . .   *

lcc0-re0:
--------------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
    |hybrid              |
    |5 Alarms active     |
    |R: SIB 2 Absent     |
    |R: SIB 1 Absent     |
    +--------------------|
Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *  .
```

```
Fail            .  .
Master            *  .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   *
Major relay  *
Minor relay  *

Front Panel FPC LEDs:
FPC    0   1   2   3   4   5   6   7
------------------------------------
Red  . . . . . . . .
Green.   *   * . . . . .

CB LEDs:
  CB   0   1
-------------
Amber. .
Green  * .
Blue   * .

SCG LEDs:
  SCG  0   1
-------------
Amber. .
Green  * .
Blue   * .

SIB LEDs:
  SIB  0   1   2   3   4
--------------------------
Red  . . . . .
Green. . . .   *

lcc2-re0:
--------------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
    |prius               |
    |5 Alarms active     |
    |R: SIB 2 Absent     |
    |R: SIB 1 Absent     |
    +--------------------|

Front Panel System LEDs:
Routing Engine    0    1
--------------------------
OK                *  .
Fail            .  .
Master            *  .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   *
Major relay  *
Minor relay  *

Front Panel FPC LEDs:
```


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```
FPC    0   1   2   3   4   5   6   7
-----------------------------------
Red  . . . . . . . .
Green  *   *   * . . . . .

CB LEDs:
  CB   0   1
--------------
Amber. .
Green  * .
Blue   * .

SCG LEDs:
  SCG  0   1
--------------
Amber. .
Green  * .
Blue   * .

SIB LEDs:
  SIB  0   1   2   3   4
--------------------------
Red  . . . . .
Green. . . .   *
```

show chassis craft-interface (TX Matrix Plus Routing Matrix)

```
user@host> show chassis craft-interface
sfc0-re0:
--------------------------------------------------------------------------------
FPM Display Contents:
    +--------------------+
    |noname              |
    |12 Alarms active    |
    |R: SIB F13 12 Absent|
    |R: SIB F13 9 Absent |
    +--------------------+

SFC Front Panel Switch Settings:
SFC Chassis Number : 00
Config Size        : 1

Front Panel System LEDs:
Routing Engine    0    1
--------------------------
OK                *    *
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   *
Major relay  *
Minor relay  *

Front Panel F13 SIB LEDs:
SIB    0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15
-----------------------------------------------------------------------
Fail   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
OK     *   .   .   *   .   .   *   .   *   .   .   *   .   .   .   .
```

```
Active .   .   .   *   .   .   *   .   *   .   .   *   .   .   .   .

PS LEDs:
  PS   0   1
------------
Red    .   *
Green  *   .

Fan Tray LEDs:
  FT   0   1   2   3   4   5
----------------------------
Red    .   .   .   .   *   *
Green  *   *   *   *   .   .

CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .

lcc0-re0:
--------------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
    |noname1             |
    |1 Alarm active      |
    |R: PEM 1 Not OK     |
    |                    |
    +--------------------|

Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *    *
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   .
Major relay  *
Minor relay  .

Front Panel FPC LEDs:
FPC    0   1   2   3   4   5   6   7
-------------------------------------
Red    .   .   .   .   .   .   .   .
Green  .   *   .   *   *   .   .   *

CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .

SCG LEDs:
  SCG  0   1
--------------
```


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```
Amber  .   .
Green  *   *
Blue   *   .

SIB LEDs:
  SIB  0   1   2   3   4
-------------------------
Red    .   .   .   .   .
Green  *   *   *   *   *

lcc1-re0:
--------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
    |noname2             |
    |2 Alarms active     |
    |R: FPC 0 PIC 0 Failu|
    |R: PEM 1 Not OK     |
    +--------------------|

Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *    *
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   .
Major relay  *
Minor relay  .

Front Panel FPC LEDs:
FPC    0   1   2   3   4   5   6   7
-----------------------------------
Red    .   .   .   .   .   .   .   .
Green  *   *   *   .   .   *   .   .

CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .

SCG LEDs:
  SCG  0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .

SIB LEDs:
  SIB  0   1   2   3   4
-------------------------
Red    .   .   .   .   .
Green  *   *   *   *   *
```

show chassis craft-interface (TX Matrix Plus router with 3D SIBs)

```
user@host> show chassis craft-interface
sfc0-re0:
--------------------------------------------------------------------------------
FPM Display Contents:
    +--------------------+
    |noname              |
    |48 Alarms active    |
    |R: LCC 2 Major Error|
    |R: LCC 0 Major Error|
    +--------------------+

SFC Front Panel Switch Settings:
SFC Chassis Number : 00
Config Size        : 3

Front Panel System LEDs:
Routing Engine    0    1
--------------------------
OK                *    *
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   *
Major relay  *
Minor relay  *

Front Panel F13 SIB LEDs:
SIB    0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15
-------------------------------------------------------------------
Fail   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
OK     *   .   .   *   .   .   *   .   .   .   .   .   .   .   .   .
Active *   .   .   *   .   .   *   .   .   .   .   .   .   .   .   .

PS LEDs:
  PS   0   1
------------
Red    *   .
Green  .   *

Fan Tray LEDs:
  FT   0   1   2   3   4   5
----------------------------
Red    .   .   .   .   .   *
Green  *   *   *   *   *   .

CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .

lcc0-re0:
--------------------------------------------------------------------------------
FPM Display contents:
    +--------------------+
```


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```
    |noname1            |
    |14 Alarms active    |
    |R: PEM 1 Not OK     |
    |R: FPC 7 misconfig  |
    +--------------------|

Front Panel System LEDs:
Routing Engine    0    1
-------------------------
OK                *    *
Fail              .    .
Master            *    .

Front Panel Alarm Indicators:
-----------------------------
Red LED      *
Yellow LED   *
Major relay  *
Minor relay  *

Front Panel FPC LEDs:
FPC    0   1   2   3   4   5   6   7
-----------------------------------
Red    .   .   .   .   .   .   .   .
Green  .   .   .   .   *   .   .   .

CB LEDs:
  CB   0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .

SCG LEDs:
  SCG  0   1
--------------
Amber  .   .
Green  *   *
Blue   *   .

SIB LEDs:
  SIB  0   1   2   3   4
---------------------------
Red    .   .   .   .   .
Green  *   *   *   .   .
```

show chassis craft-interface (ACX2000 Universal Metro Router)

```
user@host> show chassis craft-interface
Front Panel System LEDs:
Routing Engine
------------------
OK                *
Fail              .

Front Panel Alarm Indicators:
-----------------------------
Red LED      .
Yellow LED   .
Major relay  .
Minor relay  .
```

```
Input relay:
------------
Port    Mode    Status
 0      Open    Clear
 1      Open    Clear
 2      Open    Clear
 3      Open    Clear

Output relay:
-------------
Port    Mode    Status
 0      Open    Clear
 1      Open    Clear

PS Status:
  PS   0    1
---------------
Red    .   .
Green  *   *
```

show chassis craft-interface (ACX500 Router)

```
user@host> show chassis craft-interface

Front Panel System LEDs:
Routing Engine
------------------
OK                *
Fail              .

Front Panel Alarm Indicators:
-----------------------------
Red LED      .
Yellow LED   .
Major relay  .
Minor relay  .

Input relay:
------------
Port    Mode    Status
 0      Open    Clear
 1      Open    Clear
 2      Open    Clear
 3      Open    Clear

Output relay:
-------------
Port    Mode    Status
 0      Open    Clear
 1      Open    Clear

PS Status:
  PS   0    1
---------------
Red    .   .
Green  *   *
```


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show chassis hardware

List of Syntax

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Syntax (QFX Series) on page 126
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Syntax (ACX Series Universal Metro Routers) on page 126
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Syntax (ACX500 Routers) on page 126

Syntax

```
show chassis hardware
<detail | extensive>
<clei-models>
<models>
```

Syntax (EX Series)

```
show chassis hardware
<clei-models>
<detail | extensive>
<models>
<satellite [slot-id slot-id |device-alias alias-name]>
```

Syntax (T4000 Router)

```
show chassis hardware
<clei-models>
<detail | extensive>
<models>
```

Syntax (TX Matrix Router)

```
show chassis hardware
<clei-models>
<detail | extensive>
<models>
<lcc number |  scc>
```

Syntax (TX Matrix Plus Router)

```
show chassis hardware
<clei-models>
<detail | extensive>
<models>
<lcc number |  sfc number>
```

Syntax (MX Series Routers)

```
show chassis hardware
<detail | extensive>
<clei-models>
<models>
```

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<all-members>
<local>
<member *member-id*>

Syntax (MX104, MX204, MX2010, MX2020, MX10003, MX10008, and MX2008 3D Universal Edge Routers)

show chassis hardware
<clei-models>
<detail | extensive>
<models>
<satellite [slot-id *slot-id* |device-alias *alias-name*]>

Syntax (QFX Series)

show chassis hardware
<detail | extensive>
<clei-models>
<interconnect-device *name*>
<node-device *name*>
<models>

Syntax (OCX Series)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Syntax (PTX Series Packet Transport Routers)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Syntax (ACX Series Universal Metro Routers)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Syntax (ACX5048 and ACX5096 Routers)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Syntax (ACX500 Routers)

show chassis hardware
<detail | extensive>
<clei-models>
<models>

Release Information

Command introduced before Junos OS Release 7.4.
models option introduced in Junos OS Release 8.2.
Command introduced in Junos OS Release 9.0 for EX Series switches.
sfc option introduced in Junos OS Release 9.6 for the TX Matrix Plus router.
Command introduced in Junos OS Release 11.1 for QFX Series.

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Command introduced in Junos OS Release 12.1X48 for PTX Series Packet Transport Routers.
Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.
Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 3D Universal Edge Routers.
Information for **disk** and **usb** introduced in Junos OS Release 15.1X53-D60 for QFX10002, QFX10008, and QFX10016 switches.
Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.
Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.
Command introduced in Junos OS Release 17.4 for MX204 Routers.
Command introduced in Junos OS Release 18.1R1 for EX9251 Switches.
Command introduced in Junos OS Release 18.2 for EX9253 Switches.
Command introduced in Junos OS Release 18.2R1 for MX10008 Routers

Description Display a list of all Flexible PIC Concentrators (FPCs) and PICs installed in the router or switch chassis, including the hardware version level and serial number.

In the EX Series switch command output, FPC refers to the following:

- On EX2200 switches, EX3200 switches, EX4200 standalone switches, and EX4500 switches—Refers to the switch; FPC *number* is always 0.
- On EX4200 switches in a Virtual Chassis configuration—Refers to the member of a Virtual Chassis; FPC *number* equals the member ID, from 0 through 9.
- On EX8208 and EX8216 switches—Refers to a line card; FPC *number* equals the slot number for the line card.

On QFX3500, QFX5100, and OCX Series standalone switches, and PTX1000 routers both the FPC and FPC *number* are always **0**.

On T4000 Type 5 FPCs, there are no **top temperature sensor** or **bottom temperature sensor** parameters. Instead, **fan intake temperature sensor** and **fan exhaust temperature sensors** parameters are displayed.

Starting from Junos OS Release 11.4, the output of the **show chassis hardware models** operational mode command displays the enhanced midplanes FRU model numbers (CHAS-BP3-MX240-S, CHAS-BP3-MX480-S or CHAS-BP3-MX960-S) based on the router. Prior to release 11.4, the FRU model numbers are left blank when the router has enhanced midplanes. Note that the enhanced midplanes are introduced through the Junos OS Release 13.3, but can be supported on all Junos OS releases.

Starting with Junos OS Release 14.1, the output of the **show chassis hardware detail | extensive | clei-models | models** operational mode command displays the new DC power supply module (PSM) and power distribution unit (PDU) that are added to provide power to the high-density FPC (FPC2-PTX-P1A) and other components in a PTX5000 Packet Transport Router.

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Options

none—Display information about hardware. For a TX Matrix router, display information about the TX Matrix router and its attached T640 routers. For a TX Matrix Plus router, display information about the TX Matrix Plus router and its attached routers.

clei-models—(Optional) Display Common Language Equipment Identifier (CLEI) barcode and model number for orderable field-replaceable units (FRUs).

detail—(Optional) Include RAM and disk information in output.

extensive—(Optional) Display ID EEPROM information.

all-members—(MX Series routers only) (Optional) Display hardware-specific information for all the members of the Virtual Chassis configuration.

interconnect-device ***name***—(QFabric systems only) (Optional) Display hardware-specific information for the Interconnect device.

lcc ***number***—(TX Matrix routers and TX Matrix Plus router only) (Optional) On a TX Matrix router, display hardware information for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display hardware information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

local—(MX Series routers only) (Optional) Display hardware-specific information for the local Virtual Chassis members.

member ***member-id***—(MX Series routers and EX Series switches) (Optional) Display hardware-specific information for the specified member of the Virtual Chassis configuration. Replace *member-id* variable with a value 0 or 1.

models—(Optional) Display model numbers and part numbers for orderable FRUs and, for components that use ID EEPROM format v2, the CLEI code.

node-device ***name***—(QFabric systems only) (Optional) Display hardware-specific information for the Node device.

satellite [slot-id ***slot-id*** **| device-alias** ***alias-name*****]**—(Junos Fusion only) (Optional) Display hardware information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

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scc—(TX Matrix router only) (Optional) Display hardware information for the TX Matrix router (switch-card chassis).

sfc *number*—(TX Matrix Plus router only) (Optional) Display hardware information for the TX Matrix Plus router (switch-fabric chassis). Replace *number* variable with **0**.

Additional Information

The **show chassis hardware detail** command now displays DIMM information for the following Routing Engines, as shown in Table 7 on page 129.

Table 7: Routing Engines Displaying DIMM Information

Routing Engines	Routers
RE-S-1800x2 and RE-S-1800x4	MX240, MX480, and MX960 routers
RE-A-1800x2	M120 and M320 routers

In Junos OS Release 11.4 and later, the output for the **show chassis hardware models** operational mode command for MX Series routers display the enhanced midplanes FRU model numbers—CHAS-BP3-MX240-S, CHAS-BP3-MX480-S, or CHAS-BP3-MX960-S—based on the router. In releases before Junos OS Release 11.4, the FRU model numbers are left blank when the router has enhanced midplanes. Note that the enhanced midplanes are introduced through Junos OS Release 13.3, but can be supported on all Junos OS releases.

Starting with Junos OS Release 17.3R1, the output of the **show chassis hardware** command displays the mode in which vMX is running (performance mode or lite mode) in the part number field for the FPC. **RIOT-PERF** indicates performance mode and **RIOT-LITE** indicates lite mode.

Required Privilege Level

view

Related Documentation

- *show chassis power*

List of Sample Output

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show chassis hardware clei-models (EX8216 Switch) on page 138
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Output Fields Table 8 on page 134 lists the output fields for the **show chassis hardware** command. Output fields are listed in the approximate order in which they appear.

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Table 8: show chassis hardware Output Fields

Field Name	Field Description	Level of Output
Item	Chassis component: • (EX Series switches)—Information about the chassis, Routing Engine (SRE and Routing Engine modules in EX8200 switches), power supplies, fan trays, and LCD panel. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs). Information about the backplane, midplane, and SIBs (SF modules) is displayed for EX8200 switches. • (MX Series routers and EX Series switches)—Information about the backplane, Routing Engine, Power Entry Modules (PEMs), and fan trays. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs), Modular Port Concentrators (MPCs) and associated Modular Interface Cards (MICs), or Dense Port Concentrators (DPCs). MX80 routers have a single Routing Engine and a built-in Packet Forwarding Engine that attaches directly to MICs. The Packet Forwarding Engine has two "pseudo" FPCs (FPC 0 and FPC1). MX80 routers also have a Forwarding Engine Board (FEB). MX104 routers have a built-in Packet forwarding Engine and a Forwarding Engine Board (FEB). The Packet Forwarding Engine of the MX104 router has three "pseudo" FPCs (FPC0, FPC1, and FPC2). • (M Series routers, except for the M320 router)—Information about the backplane; power supplies; fan trays; Routing Engine; maxicab (the connection between the Routing Engine and the backplane, for the M40 router only); SCB, SSB, SFM, or FEB; MCS and PCG (for the M160 router only); each FPC and PIC; and each fan, blower, and impeller. • (M120, M320, and T Series routers)—Information about the backplane, power supplies, fan trays, midplane, FPM (craft interface), CIP, PEM, SCG, CB, FPC, PIC, SFP, SPMB, and SIB. • (QFX Series)—Information about the chassis, Pseudo CB, Routing Engine, power supplies, fan trays, Interconnect devices, and Node devices. Also displays information about Flexible PIC Concentrators (FPCs) and associated Physical Interface Cards (PICs). • (PTX Series)—Information about the chassis, midplane, craft interface (FPM), power distribution units (PDUs) and Power Supply Modules (PSMs), Centralized Clock Generators (CCGs), Routing Engines, Control Boards (CBs) and Switch Processor Mezzanine Boards (SPMBs), Flexible PIC Concentrators (FPCs), PICs, Switch Interface Boards (SIBs), and fan trays (vertical and horizontal). • (MX2010, MX2020, and MX2008 routers)—Information about the chassis, midplane, craft interface (FPM), power midplane (PMP), Power Supply Modules (PSMs), Power Distribution Modules (PDMs), Routing Engines, Control Boards (CBs) and Switch Processor Mezzanine Boards (SPMBs), Switch Fabric Boards (SFBs), Flexible PIC Concentrators (FPCs), PICs, adapter cards (ADCs) and fan trays. • (vMX routers)—Information about the chassis, midplane, Routing Engines, and Control Boards (CBs). Also displays information about Flexible PIC Concentrators (FPCs) and associated Modular Interface Cards (MICs) and Physical Interface Cards (PICs).	All levels
Version	Revision level of the chassis component.	All levels
Part number	Part number of the chassis component.	All levels

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Table 8: show chassis hardware Output Fields (continued)

Field Name	Field Description	Level of Output
Serial number	Serial number of the chassis component. The serial number of the backplane is also the serial number of the router chassis. Use this serial number when you need to contact Juniper Networks Customer Support about the router or switch chassis.	All levels
Assb ID or **Assembly ID**	(**extensive** keyword only) Identification number that describes the FRU hardware.	**extensive**
Assembly Version	(**extensive** keyword only) Version number of the FRU hardware.	**extensive**
Assembly Flags	(**extensive** keyword only) Flags.	**extensive**
FRU model number	(**clei-models**, **extensive**, and **models** keyword only) Model number of the FRU hardware component.	none specified
CLEI code	(**clei-models** and **extensive** keyword only) Common Language Equipment Identifier code. This value is displayed only for hardware components that use ID EEPROM format v2. This value is not displayed for components that use ID EEPROM format v1.	none specified
EEPROM Version	ID EEPROM version used by the hardware component: **0x00** (version 0), **0x01** (version 1), or **0x02** (version 2).	**extensive**
Description	Brief description of the hardware item: • Type of power supply. • Type of PIC. If the PIC type is not supported on the current software release, the output states **Hardware Not Supported**. • Type of FPC: **FPC Type 1**, **FPC Type 2**, **FPC Type 3**, **FPC Type 4** , or **FPC TypeOC192**. On EX Series switches, a brief description of the FPC. The following list shows the PIM abbreviation in the output and the corresponding PIM name. • **2x FE**—Either two built-in Fast Ethernet interfaces (fixed PIM) or dual-port Fast Ethernet PIM • **4x FE**—4-port Fast Ethernet ePIM • **1x GE Copper**—Copper Gigabit Ethernet ePIM (one 10-Mbps, 100-Mbps, or 1000-Mbps port) • **1x GE SFP**—SFP Gigabit Ethernet ePIM (one fiber port) • **2x Serial**—Dual-port serial PIM • **2x T1**—Dual-port T1 PIM • **2x E1**—Dual-port E1 PIM • **2x CT1E1**—Dual-port channelized T1/E1 PIM • **1x T3**—T3 PIM (one port) • **1x E3**—E3 PIM (one port) • **4x BRI S/T**—4-port ISDN BRI S/T PIM • **4x BRI U**—4-port ISDN BRI U PIM • **1x ADSL Annex A**—ADSL 2/2+ Annex A PIM (one port, for POTS)	All levels

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Table 8: show chassis hardware Output Fields (continued)

Field Name	Field Description	Level of Output
	• **1x ADSL Annex B**—ADSL 2/2+ Annex B PIM (one port, for ISDN) • **2x SHDSL (ATM)**—G SHDSL PIM (2-port two-wire module or 1-port four-wire module) • **1x TGM550**—TGM550 Telephony Gateway Module (Avaya VoIP gateway module with one console port, two analog **LINE** ports, and two analog **TRUNK** ports) • **1x DS1 TIM510**—TIM510 E1/T1 Telephony Interface Module (Avaya VoIP media module with one E1 or T1 trunk termination port and ISDN PRI backup) • **4x FXS, 4xFXO, TIM514**—TIM514 Analog Telephony Interface Module (Avaya VoIP media module with four analog **LINE** ports and four analog **TRUNK** ports) • **4x BRI TIM521**—TIM521 BRI Telephony Interface Module (Avaya VoIP media module with four ISDN BRI ports) • **Crypto Accelerator Module**—For enhanced performance of cryptographic algorithms used in IP Security (IPsec) services • **MPC M 16x 10GE**—16-port 10-Gigabit Module Port Concentrator that supports SFP+ optical transceivers. (Not on EX Series switches.) • For hosts, the Routing Engine type. • For small form-factor pluggable transceiver (SFP) modules, the type of fiber: **LX**, **SX**, **LH**, or **T**. • LCD description for EX Series switches (except EX2200 switches). • **MPC2**—1-port MPC2 that supports two separate slots for MICs. • **MPC3E**—1-port MPC3E that supports two separate slots for MICs (MIC-3D-1X100GE-CFP and MIC-3D-20GE-SFP) on MX960, MX480, and MX240 routers. The MPC3E maps one MIC to one PIC (1 MIC, 1 PIC), which differs from the mapping of legacy MPCs. • 100GBASE-LR4, pluggable CFP optics • Supports the Enhanced MX Switch Control Board with fabric redundancy and existing SCBs without fabric redundancy. • Interoperates with existing MX Series line cards, including Flexible Port Concentrators (FPC), Dense Port Concentrators (DPCs), and Modular Port Concentrators (MPCs). • **MPC4E**—Fixed configuration MPC4E that is available in two flavors: MPC4E-3D-32XGE-SFPP and MPC4E-3D-2CGE-8XGE on MX2020, MX960, MX480, and MX240 routers. • LCD description for MX Series routers	

Sample Output

show chassis hardware (EX8216 Switch)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis          REV 06                CY0109220035      EX8216
Midplane         REV 06   710-016845   BA0909120112      EX8216-MP
CB 0             REV 22   710-020771   AX0109197723      EX8216-RE320
CB 1             REV 22   710-020771   AX0109197726      EX8216-RE320
  Routing Engine 1        BUILTIN      BUILTIN           RE-EX8216
```


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```
FPC 3            REV 19   710-020683   BC0109083125      EX8200-48F
  CPU            REV 13   710-020598   BF0109144549      EX8200-CPU
FPC 4            REV 17   710-020683   BC0108500127      EX8200-48F
  CPU            REV 10   710-020598   BF0108460510      EX8200-CPU
  PIC 0                   BUILTIN      BUILTIN           48x 100 Base-QFX/1000
Base-X
    Xcvr 1       REV 01   740-011613   PE70V89           SFP-SX
    Xcvr 11      REV 01   740-011613   PE70YCE           SFP-SX
    Xcvr 12      REV 01   740-011613   PE70VSH           SFP-SX
    Xcvr 13      REV 01   740-011613   E08C02063         SFP-SX
    Xcvr 14      REV 01   740-011613   PE70VKU           SFP-SX
    Xcvr 15      REV 01   740-011613   E08E03372         SFP-SX
    Xcvr 21      REV 01   740-011613   PE70VAD           SFP-SX
    Xcvr 22      REV 01   740-011613   E08E01228         SFP-SX
    Xcvr 23      REV 01   740-011613   PE70VSL           SFP-SX
    Xcvr 24      REV 01   740-011613   E08E03409         SFP-SX
    Xcvr 25      REV 01   740-011613   PE70VL4           SFP-SX
    Xcvr 26      REV 01   740-011613   PDQ4L2Z           SFP-SX
    Xcvr 27      REV 01   740-011613   PE70WFK           SFP-SX
    Xcvr 28      REV 01   740-011782   PBD2B5U           SFP-SX
    Xcvr 29      REV 01   740-011613   PE70UQX           SFP-SX
    Xcvr 30      REV 01   740-011613   PE70VL5           SFP-SX
    Xcvr 31      REV 01   740-011613   PE70V0F           SFP-SX
    Xcvr 32      REV 01   740-011613   E08C02052         SFP-SX
    Xcvr 33      REV 01   740-011613   E08C02197         SFP-SX
    Xcvr 34      REV 01   740-011613   PE70V0L           SFP-SX
    Xcvr 35      REV 01   740-011613   E08E03390         SFP-SX
    Xcvr 36      REV 01   740-011613   PDQ4VL9           SFP-SX
    Xcvr 37      REV 01   740-011613   E08E03370         SFP-SX
    Xcvr 38      REV 01   740-011613   E08E03362         SFP-SX
    Xcvr 39      REV 01   740-011613   E08C02065         SFP-SX
    Xcvr 40      REV 01   740-011613   E08E03405         SFP-SX
    Xcvr 41      REV 01   740-011613   E08E03411         SFP-SX
    Xcvr 43      REV 01   740-011613   E08C02171         SFP-SX
    Xcvr 45      REV 01   740-011613   E08E03410         SFP-SX
FPC 13           REV 16   710-016837   BB0109051344      EX8200-8XS
  CPU
SIB 0            REV 10   710-021613   AY0109166244      EX8216-SF320
SIB 1            REV 10   710-021613   AY0109166357      EX8216-SF320
SIB 2            REV 10   710-021613   AY0109166362      EX8216-SF320
SIB 3            REV 10   710-021613   AY0109166338      EX8216-SF320
SIB 4            REV 10   710-021613   AY0109166350      EX8216-SF320
SIB 5            REV 10   710-021613   AY0109166365      EX8216-SF320
SIB 6            REV 10   710-021613   AY0109166361      EX8216-SF320
SIB 7            REV 10   710-021613   AY0109166399      EX8216-SF320
PSU 0            REV 17   740-021466   BG0709170003      EX8200-AC2K
PSU 1            REV 17   740-021466   BG0709170004      EX8200-AC2K
PSU 2            REV 17   740-021466   BG0709170020      EX8200-AC2K
PSU 3            REV 17   740-021466   BG0709170017      EX8200-AC2K
PSU 4            REV 17   740-021466   BG0709170008      EX8200-AC2K
PSU 5            REV 17   740-021466   BG0709170018      EX8200-AC2K
Top Fan Tray
  FTC 0          REV 4    760-022620   CX1209140212      EX8216-FT
  FTC 1          REV 4    760-022620   CX1209140212      EX8216-FT
Bottom Fan Tray
  FTC 0          REV 4    760-022620   CX1209140211      EX8216-FT
  FTC 1          REV 4    760-022620   CX1209140211      EX8216-FT
LCD 0            REV 04   710-025742   CE0109186919      EX8200 LCD
```

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show chassis hardware clei-models (EX8216 Switch)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 08   710-016845
PSU 0            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 1            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 2            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 3            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 4            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
PSU 5            REV 05   740-023002   COUPAEAEAA        EX8200-PWR-AC3KR
Top Fan Tray
Bottom Fan Tray
```

show chassis hardware clei-models (T1600 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 03   710-005608                     CHAS-BP-T640-S
FPM Display      REV 05   710-002897                     CRAFT-T640-S
CIP              REV 06   710-002895                     CIP-L-T640-S
PEM 0            Rev 07   740-017906   IPUPAC7KTA        PWR-T1600-3-80-DC-S
PEM 1            Rev 18   740-002595                     PWR-T-DC-S
SCG 0            REV 15   710-003423                     SCG-T-S
Routing Engine 0 REV 08   740-014082                     RE-A-2000-4096-S
Routing Engine 1 REV 07   740-014082                     RE-A-2000-4096-S
CB 0             REV 05   710-007655                     CB-T-S
CB 1             REV 03   710-017707                     CB-T-S
FPC 0            REV 07   710-013558                     T640-FPC2-E2
  PIC 0          REV 01   750-010618                     PB-4GE-SFP
  PIC 1          REV 06   750-001900                     PB-1OC48-SON-SMSR
  PIC 2          REV 14   750-001901                     PB-4OC12-SON-SMIR
  PIC 3          REV 07   750-001900                     PB-1OC48-SON-SMSR
FPC 1            REV 06   710-013553                     T640-FPC1-E2
  PIC 0          REV 08   750-001072                     P-1GE-SX
  PIC 1          REV 10   750-012266                     PB-4GE-TYPE1-SFP-IQ2
  PIC 2          REV 22   750-005634                     PB-1CHOC12SMIR-QPP
FPC 2
  PIC 0          REV 16   750-007141                     PC-10GE-SFP
  PIC 1          REV 06   750-015217                     PC-8GE-TYPE3-SFP-IQ2
  PIC 2          REV 05   750-004695                     PC-TUNNEL
  PIC 3          REV 17   750-009553                     PC-4OC48-SON-SFP
FPC 3            REV 01   710-010154                     T640-FPC3-E
  PIC 0          REV 07   750-012793                     PC-1XGE-TYPE3-XFP-IQ2
  PIC 1          REV 25   750-007141                     PC-10GE-SFP
  PIC 2          REV 17   750-009553                     PC-4OC48-SON-SFP
  PIC 3          REV 32   750-003700                     PC-1OC192-SON-VSR
FPC 4            REV 16   710-013037                     T1600-FPC4-ES
 PIC 1           REV 06   750-034781                     PD-1CE-CFP
FPC 5            REV 02   710-013037                     T1600-FPC4-ES
  PIC 0          REV 16   750-012518                     PD-4OC192-SON-XFP
  PIC 1          REV 01   750-010850                     PD-1OC768-SON-SR
FPC 6            REV 14   710-013037                     T1600-FPC4-ES
  PIC 0          REV 11   750-017405                     PD-4XGE-XFP
  PIC 1          REV 13   750-017405                     PD-4XGE-XFP
FPC 7            REV 09   710-007529                     T640-FPC3
  PIC 0          REV 10   750-012793                     PC-1XGE-TYPE3-XFP-IQ2
  PIC 1          REV 01   750-015217                     PC-8GE-TYPE3-SFP-IQ2
```


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```
  PIC 2          REV 01   750-015217                    PC-8GE-TYPE3-SFP-IQ2
  PIC 3          REV 15   750-009450                    PC-1OC192-SON-SR2
SIB 0            REV 07   710-013074                    SIB-I-T1600-S
SIB 1            REV 07   710-013074                    SIB-I-T1600-S
SIB 2            REV 07   710-013074                    SIB-I-T1600-S
SIB 3            REV 07   710-013074                    SIB-I-T1600-S
SIB 4            REV 07   710-013074                    SIB-I-T1600-S
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T-S
Fan Tray 2                                              FAN-REAR-TX-T640-S
```

show chassis hardware clei-models (PTX10008 Routers)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 27   750-054097   CMMUM00ARA        QFX10008-CHAS
CB 0             REV 02   750-068820   CMUCAH3CTB        QFX10000-RE
CB 1             REV 02   750-068820   CMUCAH3CTB        QFX10000-RE
FPC 0            REV 36   750-051354   CMUIAM9BAA        QFX10000-36Q
  PIC 0                   BUILTIN
FPC 1            REV 33   750-051354   CMUIAM9BAA        QFX10000-36Q
  PIC 0                   BUILTIN
FPC 2            REV 32   750-051357   CMUIANABAA        QFX10000-30C
  PIC 0                   BUILTIN
FPC 3            REV 35   750-051357   CMUIANABAA        QFX10000-30C
  PIC 0                   BUILTIN
FPC 5            REV 08   750-068822   CMUIAM9BAB        QFX10000-36Q
  PIC 0                   BUILTIN
FPC 6            REV 08   750-068822   CMUIAM9BAB        QFX10000-36Q
  PIC 0                   BUILTIN
FPD Board        REV 07   711-054687
Power Supply 0   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 1   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 2   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 3   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 4   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
Power Supply 5   REV 02   740-049388   CMUPADNBAA        QFX10000-PWR-AC
FTC 0            REV 14   750-050108   CMUCAHZCAA        QFX10008-FAN-CTRL
FTC 1            REV 14   750-050108   CMUCAHZCAA        QFX10008-FAN-CTRL
Fan Tray 0       REV 09   760-054372   CMUCAHYCAA        QFX10008-FAN
Fan Tray 1       REV 09   760-054372   CMUCAHYCAA        QFX10008-FAN
SIB 0            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 1            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 2            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 3            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 4            REV 24   750-050058   CMUCAH0CAA        QFX10008-SF
SIB 5            REV 23   750-050058   CMUCAH0CAA        QFX10008-SF
```

show chassis hardware clei-models (PTX10016 Routers)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 24   750-077138   CMMUN00ARA        JNP10016
CB 0             REV 04   711-065897   PROTOXCLEI        PROTO-ASSEMBLY
CB 1             REV 05   711-065897   PROTOXCLEI        PROTO-ASSEMBLY
FPC 2
  PIC 0                   BUILTIN
FPC 4            REV 35   750-071976   CMUIANABAA        JNP10K-LC1101
```

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```
  PIC 0                   BUILTIN
FPC 5            REV 13   750-068822   CMUIAM9BAC        QFX10000-36Q
  PIC 0                   BUILTIN
FPC 6            REV 41   750-071976   CMUIANABAB        JNP10K-LC1101
  PIC 0                   BUILTIN
FPC 7            REV 35   750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                   BUILTIN
FPC 8            REV 35   750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                   BUILTIN
FPC 9            REV 41   750-071976   CMUIANABAB        JNP10K-LC1101
  PIC 0                   BUILTIN
FPC 10           REV 35   750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                   BUILTIN
FPC 11           REV 35   750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                   BUILTIN
FPC 13           REV 41   750-071976   CMUIANABAB        JNP10K-LC1101
  PIC 0                   BUILTIN
FPC 15           REV 37   750-071976   CMUIANABAA        JNP10K-LC1101
  PIC 0                   BUILTIN
Power Supply 0   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 1   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 2   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 3   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 4   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 5   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 6   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 7   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 8   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Power Supply 9   REV 01   740-073147   CMUPADPBAA        JNP10K-PWR-DC
Fan Tray 0                                             QFX5100-FAN-AFO
Fan Tray 1                                             QFX5100-FAN-AFO
SIB 0            REV 15   750-077140   CMUCAH6CAA        JNP10016-SF
SIB 1            REV 15   750-077140   CMUCAH6CAA        JNP10016-SF
SIB 2            REV 15   750-077140   CMUCAH6CAA        JNP10016-SF
SIB 3            REV 15   750-077140   CMUCAH6CAA        JNP10016-SF
SIB 4            REV 15   750-077140   CMUCAH6CAA        JNP10016-SF
SIB 5            REV 15   750-077140   CMUCAH6CAA        JNP10016-SF
FPD Board        REV 07   711-054687
```

show chassis hardware (EX2300-C Switch)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                HV0215410003      EX2300-C-12P
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           RE-EX2300C-12P
FPC 0            REV 04   650-059984   HV0215410003      EX2300-C-12P
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0          REV 04   BUILTIN      BUILTIN           12x10/100/1000 Base-T
  PIC 1          REV 04   650-059984   HV0215410003      2x10G SFP/SFP+
    Xcvr 0       REV 01   740-021309   T09K00695         SFP+-10G-LR
    Xcvr 1       REV 01   740-030658   AD1146A05JT       SFP+-10G-USR
Power Supply 0                                          JPSU-170W-AC
```

show chassis hardware (EX2300 Switch)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
```


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```
Chassis                                 JY0215410033      EX2300-24P
Pseudo CB 0
Routing Engine 0          BUILTIN       BUILTIN           RE-EX2300-24P
FPC 0            REV 05   650-059968    JY0215410033      EX2300-24P
  CPU                     BUILTIN       BUILTIN           FPC CPU
  PIC 0          REV 05   BUILTIN       BUILTIN           24x10/100/1000 Base-T
  PIC 1          REV 05   650-059968    JY0215410033      4x10G SFP/SFP+
    Xcvr 0       REV 01   740-030658    AD1125A03ES       SFP+-10G-USR
    Xcvr 1       REV 01   740-021308    AJP0TDZ           SFP+-10G-SR
    Xcvr 3       REV 01   740-021309    A9401FL           SFP+-10G-LR
Power Supply 0                                            JPSU-450W-AC-AFO
Fan Tray 0                                                Fan Module, Airflow Out
 (AFO)
Fan Tray 1                                                Fan Module, Airflow Out
 (AFO)
```

show chassis hardware detail (EX4200 Switch)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                BM0208327733      EX4200-24T
Routing Engine 0 REV 11   750-021256   BM0208327733      EX4200-24T, 8 POE
Routing Engine 0                       BM0208327733      EX4200-24T, 8 POE
FPC 0            REV 11   750-021256   BM0208327733      EX4200-24T, 8 POE
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           24x 10/100/1000 Base-T
  PIC 1          REV 03B  711-021270   AR0208162285      4x GE SFP
  BRD            REV 08   711-021264   AK0208328289      EX4200-24T, 8 POE
Power Supply 0   REV 03   740-020957   AT0508346354      PS 320W AC
Fan Tray                                                  Fan Tray
```

show chassis hardware (EX4300 Switch)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                PD3713160055      EX4300-48P
Routing Engine 0 REV 04   650-044930   PD3713160055      EX4300-48P
FPC 0            REV 04   650-044930   PD3713160055      EX4300-48P
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0          REV 04   BUILTIN      BUILTIN           48x 10/100/1000 Base-T
  PIC 1          REV 04   BUILTIN      BUILTIN           4x 40GE
Power Supply 0   REV 01   740-046871   1EDA3090026       JPSU-1100-AC-AFO-A
Fan Tray 0                                                Fan Module, Airflow Out
 (AFO)
Fan Tray 1                                                Fan Module, Airflow Out
 (AFO)
```

show chassis hardware models (EX4500 Switch)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Routing Engine 0 REV 01   750-035700   GG0210271867      EX4500-40F-FB-C
FPC 0            REV 01   750-035700   GG0210271867      EX4500-40F-FB-C
  PIC 0                   BUILTIN      BUILTIN           EX4500-40F-FB-C
Power Supply 1   REV 01   740-029654   H884FS00JC09      EX4500-PWR1-AC-FB
```

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show chassis hardware detail (EX9200 Switch)

```
user@switch> show chassis hardware

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN111DA44RFB      EX9208
Midplane         REV 05   710-017414   TS2912            EX9208-BP
FPM Board        REV 02   710-017254   XN1804            Front Panel Display
PEM 0            Rev 01   740-022697   QCS0906C033       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 01   740-022697   QCS0906C095       PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 08   740-031116   9009122883        RE-S-EX9200-1800X4
CB 0             REV 16   750-031391   CAAW4391          EX9200-SCBEF
PC 0             REV 07   750-049612   CABJ9312          EX9200 40x1G Copper
  CPU          REV 04   711-038484   CABH8268          MPCE PMB 2G
  MIC 0          REV 02   750-049607   CABT9623          40x 1GE RJ45
    PIC 0                BUILTIN      BUILTIN           10x 1GE RJ45
    PIC 1                BUILTIN      BUILTIN           10x 1GE RJ45
    PIC 2                BUILTIN      BUILTIN           10x 1GE RJ45
    PIC 3                BUILTIN      BUILTIN           10x 1GE RJ45
FPC 1            REV 10   710-013699   CAAN3529          EX9200-40x1G-SFP
  CPU            REV 04   711-038484   CAAL7608          MPCE PMB 2G
   MIC 0          REV 26   750-028392   CAAS5151          20x 1GE SFP
    PIC 0                BUILTIN      BUILTIN           10x 1GE SFP
    PIC 1                BUILTIN      BUILTIN           10x 1GE SFP
  MIC 1          REV 26   750-028392   CAAC8006          20x 1GE SFP
    PIC 2                BUILTIN      BUILTIN           10x 1GE SFP
      Xcvr 8     REV 01   740-011613   E08L03674         SFP-SX
      Xcvr 9     REV 01   740-011613   E08M00243         SFP-SX
    PIC 3                BUILTIN      BUILTIN           10x 1GE SFP
    FPC 3        REV 10   710-013699   CAAR5261          EX9200-40x1G-SFP
  CPU            REV 04   711-038484   CAAS2118          MPCE PMB 2G
   MIC 0          REV 26   750-028392   CAAS5067          20x 1GE SFP
    PIC 0                BUILTIN      BUILTIN           10x 1GE SFP
      Xcvr 2     REV 01   740-031851   PNA7L8U           SFP-SX
      Xcvr 3     REV 02   740-011613   AM0943SEKGZ       SFP-SX
      Xcvr 4     REV 02   740-011613   AM0943SEJZ9       SFP-SX
    PIC 1                BUILTIN      BUILTIN           10x 1GE SFP
  MIC 1          REV 26   750-028392   CAAS5132          20x 1GE SFP
    PIC 2                BUILTIN      BUILTIN           10x 1GE SFP
      Xcvr 4     REV 01   740-011613   E08D02625         SFP-SX
      Xcvr 9     REV 02   740-011613   PJH4RD9           SFP-SX
    PIC 3                BUILTIN      BUILTIN           10x 1GE SFP
      Xcvr 0     REV 01   740-011613   AM0813S8YME       SFP-SX
      Fan Tray                                          Left Fan Tray
```

show chassis hardware detail (EX9251 Switch)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                BLANK             EX9251
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x6
CB 0             REV 05   750-069579   CAGT1382          EX9251
FPC 0                     BUILTIN      BUILTIN           MPC
  PIC 0                   BUILTIN      BUILTIN           4XQSFP28 PIC
    Xcvr 0       REV 01   740-044512   APF14500007NHC    QSFP+-40G-CU50CM
    Xcvr 2       REV 01   740-046565   QH21035H          QSFP+-40G-SR4
```


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```
  PIC 1                 BUILTIN      BUILTIN          8XSFPP PIC
    Xcvr 0       REV 01   740-031980   AA15393URH7      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AA162832LVG      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   MXA0NKJ          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   MXA0K75          SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   MXA138L          SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   13T511102684     SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   MXA138E          SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   MXA152N          SFP+-10G-SR
PEM 0            REV 02   740-070749   1F186390060      AC AFO 650W PSU
PEM 1            REV 02   740-070749   1F186390045      AC AFO 650W PSU
Fan Tray 0                                             Fan Tray, Front to Back
 Airflow - AFO
Fan Tray 1                                             Fan Tray, Front to Back
 Airflow - AFO
```

show chassis hardware detail (EX9253 Switch)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN126145CJCB      EX9253
Midplane         REV 06   750-074276   CAJE4108          Midplane 2
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x6
Routing Engine 1          BUILTIN      BUILTIN           RE-S-2X00x6
CB 0             REV 24   750-067071   CAJF6414          Control Board
  Mezz           REV 14   711-066896   CAJF6327          Control Mezz Board
CB 1             REV 24   750-067071   CAJF6398          Control Board
  Mezz           REV 14   711-066896   CAJF6314          Control Mezz Board
FPC 0            REV 19   750-066879   CAJD1692          LC2103
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0                   BUILTIN      BUILTIN           6xQSFPP
    Xcvr 0       REV 01   740-054053   QH20019A          QSFP+-4X10G-SR
  PIC 1          REV 15   750-068806   CAJD1416          MIC1
    Xcvr 0       REV 01   740-061405   1ECQ1151163       QSFP-100GBASE-SR4
    Xcvr 1       REV 01   740-061405   1ECQ11511AK       QSFP-100GBASE-SR4
    Xcvr 2       REV 01   740-032986   QB160112          QSFP+-40G-SR4
FPC 1            REV 19   750-066879   CAJD1685          LC2103
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0                   BUILTIN      BUILTIN           6xQSFPP
  PIC 1          REV 15   750-068806   CAJD1393          MIC1
    Xcvr 0       REV 01   740-032986   QB120887          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-032986   QD465034          QSFP+-40G-SR4
    Xcvr 2       REV 01   740-052009   UWE2CBQ           QSFP+-40G-LR4
    Xcvr 4       REV 01   740-032986   QB120701          QSFP+-40G-SR4
PEM 0            REV 01   740-066937   1HS17070027       JNP-PWR1600-AC
PEM 1            REV 01   740-066937   1HS17070151       JNP-PWR1600-AC
PEM 4            REV 01   740-066937   1HS17070090       JNP-PWR1600-AC
PEM 5            REV 01   740-066937   1HS16480119       JNP-PWR1600-AC
Fan Tray 0       REV 08   760-069329   CAJF6944          JNP FAN 3RU
Fan Tray 1       REV 08   760-069329   CAJF6863          JNP FAN 3RU
Fan Tray 2       REV 08   760-069329   CAJF6891          JNP FAN 3RU
Fan Tray 3       REV 08   760-069329   CAJF6937          JNP FAN 3RU
```

show chassis hardware detail (PTX10008 Routers)

```
user@switch> show chassis hardware detail

Hardware inventory:
Item             Version  Part number  Serial number     Description
```

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```
Chassis                                 DE487             JNP10008 [PTX10008 -
PILOT BUILD V1.1]
Midplane         REV 27   750-054097   ACPD4307          Midplane 8
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    128 MB  QEMU                  QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0       Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32     vendor 0x8087     uhub1
Routing Engine 1          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    128 MB  QEMU                  QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0       Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32     vendor 0x8087     uhub1
CB 0             REV 02   750-068820   ACNZ4440          Control Board
CB 1             REV 02   750-068820   ACNZ8284          Control Board
FPC 0            REV 36   750-051354   ACNP4679          LC1102 - 12C / 36Q /
144X
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                  BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 1       REV 01   740-058734   1ECQ113834D       QSFP-100GBASE-SR4
    Xcvr 5       REV 01   740-058734   1ECQ1137067       QSFP-100GBASE-SR4
    Xcvr 6       REV 01   740-054053   QF3205SD          QSFP+-4X10G-SR
    Xcvr 7       REV 01   740-058734   1ECQ11381MP       QSFP-100GBASE-SR4
    Xcvr 11      REV 01   740-061405   1ACQ110507K       QSFP-100GBASE-SR4
    Xcvr 13      REV 01   740-058734   1ECQ11390ZB       QSFP-100GBASE-SR4
    Xcvr 17      REV 01   740-058734   1ECQ11381M1       QSFP-100GBASE-SR4
    Xcvr 19      REV 01   740-058734   1ECQ11381JS       QSFP-100GBASE-SR4
    Xcvr 23      REV 01   740-058734   1ACQ112000E       QSFP-100GBASE-SR4
    Xcvr 25      REV 01   740-058734   1ECQ11381NT       QSFP-100GBASE-SR4
    Xcvr 28      REV 01   740-054053   QG1502WV          QSFP+-4X10G-SR
    Xcvr 29      REV 01   740-058734   1ACQ112000D       QSFP-100GBASE-SR4
    Xcvr 33      REV 01   740-058734   1ACQ1134065       QSFP-100GBASE-SR4
    Xcvr 34      REV 01   740-067442   XV20L4L           QSFP+-40G-SR4
FPC 1            REV 33   750-051354   ACNX8831          LC1102 - 12C / 36Q /
144X
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                  BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 5                NON-JNPR     37700171YY0084    QSFP-100GBASE-LR4
    Xcvr 25               NON-JNPR     GDA2017459        QSFP-100GBASE-LR4
    Xcvr 29               NON-JNPR     GDF2008750        QSFP-100GBASE-LR4
FPC 2           REV 32   750-051357   ACPB0341          LC1101 - 30C / 30Q / 96X

  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                  BUILTIN      BUILTIN          30x100GE/30x40GE/96x10GE

    Xcvr 0                NON-JNPR     37700170YZC305    QSFP-100GBASE-LR4
    Xcvr 4                NON-JNPR     37700170YZC306    QSFP-100GBASE-LR4
    Xcvr 9       REV 01   740-054053   QF36013S          QSFP+-4X10G-SR
    Xcvr 12      REV 01   740-067442   XV301AU           QSFP+-40G-SR4
    Xcvr 14      REV 01   740-043308   UWE2CG9           QSFP+-40G-LR4
    Xcvr 16      REV 01   740-043308   UWH141S           QSFP+-40G-LR4
    Xcvr 17      REV 01   740-058734   1ECQ11180VH       QSFP-100GBASE-SR4
    Xcvr 18      REV 01   740-054050   INFAJ0492237      QSFP+-4X10G-LR
    Xcvr 26      REV 01   740-058734   1ACQ111803N       QSFP-100GBASE-SR4
    Xcvr 27      REV 01   740-058734   1ACQ113405S       QSFP-100GBASE-SR4
FPC 3           REV 35   750-051357   ACPD2186          LC1101 - 30C / 30Q / 96X
```


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```
  CPU                  BUILTIN      BUILTIN          FPC CPU
  PIC 0               BUILTIN      BUILTIN          30x100GE/30x40GE/96x10GE

    Xcvr 0       REV 01   740-061409   1GCQA1470A3      QSFP-100GBASE-LR4-T2
    Xcvr 1       REV 01   740-061409   1GCQA1470XC      QSFP-100GBASE-LR4-T2
    Xcvr 7                NON-JNPR     FG4550500008     QSFP-100G-CWDM4
    Xcvr 24      REV 01   740-058734   1ECQ11381LX      QSFP-100GBASE-SR4
    Xcvr 29      REV 01   740-043308   UWE0UYS          QSFP+-40G-LR4
FPC 5            REV 08   750-068822   ACPF0057         LC1102 - 12C / 36Q /
144X
  CPU                  BUILTIN      BUILTIN          FPC CPU
  PIC 0               BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE
FPC 6            REV 08   750-068822   ACPE9951         LC1102 - 12C / 36Q /
144X
  CPU                  BUILTIN      BUILTIN          FPC CPU
  PIC 0               BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 1       REV 01   740-054053   QF3208LG         QSFP+-4X10G-SR
    Xcvr 7       REV 01   740-067442   XV20LGN          QSFP+-40G-SR4
    Xcvr 8       REV 01   740-067442   XV20VMV          QSFP+-40G-SR4
    Xcvr 9       REV 01   740-067442   XV20KCN          QSFP+-40G-SR4
    Xcvr 10      REV 01   740-067442   XU504QD          QSFP+-40G-SR4
    Xcvr 11      REV 01   740-067442   XU504X7          QSFP+-40G-SR4
    Xcvr 12      REV 01   740-067442   XU504W8          QSFP+-40G-SR4
    Xcvr 16      REV 01   740-032986   QF4301JP         QSFP+-40G-SR4
    Xcvr 17      REV 01   740-032986   QF4303AE         QSFP+-40G-SR4
    Xcvr 18      REV 01   740-054050   INFAJ0492400     QSFP+-4X10G-LR
    Xcvr 19      REV 01   740-054050   INFAJ0492142     QSFP+-4X10G-LR
    Xcvr 24      REV 01   740-032986   QF4301KB         QSFP+-40G-SR4
    Xcvr 25      REV 01   740-032986   QF4303YP         QSFP+-40G-SR4
    Xcvr 30      REV 01   740-067442   XV300ZX          QSFP+-40G-SR4
    Xcvr 31      REV 01   740-043308   UWH2KBW          QSFP+-40G-LR4
    Xcvr 34      REV 01   740-054053   QG1501YU         QSFP+-4X10G-SR
FPD Board        REV 07   711-054687   ACPC7142         Front Panel Display
Power Supply 0   REV 02   740-049388   1EDL62102N9      Power Supply AC
Power Supply 1   REV 02   740-049388   1EDL60300KX      Power Supply AC
Power Supply 2   REV 02   740-049388   1EDL60300DL      Power Supply AC
Power Supply 3   REV 02   740-049388   1EDL61701BT      Power Supply AC
Power Supply 4   REV 02   740-049388   1EDL62102P7      Power Supply AC
Power Supply 5   REV 02   740-049388   1EDL62102PP      Power Supply AC
FTC 0            REV 14   750-050108   ACPE4038         Fan Controller 8
FTC 1            REV 14   750-050108   ACPE4032         Fan Controller 8
Fan Tray 0       REV 09   760-054372   ACPD6799         Fan Tray 8
Fan Tray 1       REV 09   760-054372   ACNZ3584         Fan Tray 8
SIB 0            REV 24   750-050058   ACPD4587         Switch Fabric 8
SIB 1            REV 24   750-050058   ACNZ0635         Switch Fabric 8
SIB 2            REV 24   750-050058   ACPD4908         Switch Fabric 8
SIB 3            REV 24   750-050058   ACNZ0617         Switch Fabric 8
SIB 4            REV 24   750-050058   ACNZ0527         Switch Fabric 8
SIB 5            REV 23   750-050058   ACNX6980         Switch Fabric 8
```

show chassis hardware detail (PTX10016 Routers)

```
user@switch> show chassis hardware detail

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DH995             JNP10016 [PTX10016]
Midplane         REV 22   750-056555   ACPM7810          Midplane 16
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                        Virtio Block Disk
```

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```
  vtbd1 15360 MB                                          Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
Routing Engine 1          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                          Virtio Block Disk
  vtbd1 15360 MB                                          Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
CB 0             REV 03   750-068820   ACPL7238          Control Board
CB 1             REV 03   750-068820   ACPL7298          Control Board
FPC 1            REV 36   750-077140   ACNP4590          LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 0       REV 01   740-054053   QF3600AV          QSFP+-4X10G-SR
    Xcvr 35      REV 01   740-061405   1ACQ110507K       QSFP-100GBASE-SR4
FPC 3            REV 07   750-071975   CAHA2224          LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 0       REV 01   740-054053   QG1505YM          QSFP+-4X10G-SR
    Xcvr 11              NON-JNPR     GDA2017459        QSFP-100GBASE-LR4
    Xcvr 35              NON-JNPR     GDF2008750        QSFP-100GBASE-LR4
FPC 5            REV 13   750-068822   ACPD6501          LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 1       REV 01   740-058734   1ECQ11381LA       QSFP-100GBASE-SR4
    Xcvr 2       REV 01   740-043308   UWH141S           QSFP+-40G-LR4
    Xcvr 3       REV 01   740-043308   UWE2CG9           QSFP+-40G-LR4
FPC 6            REV 37   750-077140   ACNS2793          LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 0       REV 01   740-032986   QH0400VH          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-032986   QH0400VM          QSFP+-40G-SR4
    Xcvr 35      REV 01   740-058734   1ECQ11390ZB       QSFP-100GBASE-SR4
FPC 8            REV 36   750-077140   ACNP4625          LC1102 - 12C / 36Q /
144X
  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          12x100GE/36x40GE/144x10GE

    Xcvr 1       REV 01   740-058732   1AMQA14206D       QSFP-100GBASE-LR4
    Xcvr 10      REV 01   740-032986   QF4301KB          QSFP+-40G-SR4
    Xcvr 24      REV 01   740-054050   INFAJ0492244      QSFP+-4X10G-LR
FPC 9           REV 35   750-071976   ACPD3055         LC1101 - 30C / 30Q / 96X

  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN          30x100GE/30x40GE/96x10GE

    Xcvr 0               NON-JNPR     INGBT7970007      QSFP-100GBASE-LR4
    Xcvr 1               NON-JNPR     UWQ24D9           QSFP-100GBASE-LR4
    Xcvr 2               NON-JNPR     INGBT7970011      QSFP-100GBASE-LR4
    Xcvr 3               NON-JNPR     UX60AF1           QSFP-100G-CWDM4
    Xcvr 4               NON-JNPR     UX408JJ           QSFP-100GBASE-LR4
```


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```
    Xcvr 11      REV 01   740-058734   1ECQ113835F       QSFP-100GBASE-SR4
    Xcvr 18               NON-JNPR     Q7496             QSFP-100G-CWDM4
    Xcvr 29      REV 01   740-058734   1ECQ11380LZ       QSFP-100GBASE-SR4
Power Supply 0   REV 02   740-049388   1EDL625039E       Power Supply AC
Power Supply 1   REV 02   740-049388   1EDL62503AD       Power Supply AC
Power Supply 2   REV 02   740-049388   1EDL625039P       Power Supply AC
Power Supply 3   REV 02   740-049388   1EDL702004E       Power Supply AC
Power Supply 4   REV 02   740-049388   1EDL625039D       Power Supply AC
Power Supply 5   REV 02   740-049388   1EDL63706JD       Power Supply AC
Power Supply 6   REV 02   740-049388   1EDL63706JH       Power Supply AC
FTC 0            REV 10   750-050309   ACPM2918          Fan Controller 16
FTC 1            REV 10   750-050309   ACPE8185          Fan Controller 16
Fan Tray 0       REV 10   760-077141   ACPV7288          Fan Tray 16
Fan Tray 1       REV 10   760-057901   ACPL0546          Fan Tray 16
SIB 0            REV 15   750-058270   ACPM2804          Switch Fabric 16
SIB 1            REV 15   750-058270   ACPM2808          Switch Fabric 16
SIB 2            REV 15   750-058270   ACPL4450          Switch Fabric 16
SIB 3            REV 15   750-058270   ACPJ9834          Switch Fabric 16
SIB 4            REV 15   750-058270   ACPM2814          Switch Fabric 16
SIB 5            REV 15   750-058270   ACPL4277          Switch Fabric 16
FPD Board        REV 07   711-054687   ACPL1407          Front Panel Display
```

show chassis hardware (M7i Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                31959             M7i
Midplane         REV 02   710-008761   CA0209            M7i Midplane
Power Supply 0   Rev 04   740-008537   PD10272           AC Power Supply
Routing Engine   REV 01   740-008846   1000396803        RE-5.0
CFEB             REV 02   750-009492   CA0166            Internet Processor IIv1
FPC 0                                                   E-FPC
  PIC 0          REV 04   750-003163   HJ6416            1x G/E, 1000 BASE-SX
  PIC 1          REV 04   750-003163   HJ6423            1x G/E, 1000 BASE-SX
  PIC 2          REV 04   750-003163   HJ6421            1x G/E, 1000 BASE-SX
  PIC 3          REV 02   750-003163   HJ0425            1x G/E, 1000 BASE-SX
FPC 1                                                   E-FPC
  PIC 2          REV 01   750-009487   HM2275            ASP - Integrated
  PIC 3          REV 01   750-009098   CA0142            2x F/E, 100 BASE-TX

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                B1157             M7i
Midplane         REV 05   710-008761   DM0840            M7i Midplane
Power Supply 0   Rev 08   740-008537   TE53755           AC Power Supply
Routing Engine   REV 07   740-011202   1000736567        RE-850
CFEB             REV 09   750-010463   DK6952            Internet Processor II
FPC 0                                                   E-FPC
  PIC 0          REV 12   750-012838   DL7993            4x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011614   PD94TDJ           SFP-LX10
    Xcvr 1       REV 01   740-011615   PAD5EER           UNSUPPORTED
    Xcvr 2       REV 01   740-011614   PD94THU           SFP-LX10
    Xcvr 3                NON-JNPR     PDC2E7A           SFP-LX10
  PIC 1          REV 03   750-023116   JT0203            4x CHSTM1 SDH CE SFP
    Xcvr 0       REV 01   740-012434   AGT063832PS       SFP-SR
    Xcvr 1       REV 01   740-012434   AGT063832LY       SFP-SR
    Xcvr 3       REV 01   740-016064   C06J19018         SFP-LR
  PIC 2          REV 15   750-014895   DM5757            MultiServices 100
  PIC 3          REV 01   750-025390   JW9448            12x T1/E1 CE
FPC 1                                                   E-FPC
```

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```
  PIC 2                 BUILTIN      BUILTIN          1x Tunnel
  PIC 3          REV 09 750-009099   DM0899           1x G/E, 1000 BASE
    Xcvr 0       REV 01 740-012434   AGT0715OHGJ      UNSUPPORTED
Fan Tray                                            Rear Fan Tray
```

show chassis hardware (M10 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                1122              M10
Midplane         REV 1.1  710-001950   S/N AC6626
Power supply A   Rev 01   740-002497   S/N LC36095       AC
Power supply B   Rev 01   740-002497   S/N LC36100       AC
Display          REV 1.2  710-001995   S/N AC6656
Host                                   18000005dfb3fb01  teknor
FEB              REV 01   710-001948   S/N AC6632        Internet Processor II
FPC 0
  PIC 0          REV 08   750-001072   S/N AB2485        1x G/E, 1000 BASE-SX
  PIC 1          REV 01   750-000613   S/N AA1048        1x OC-12 SONET, SMIR
FPC 1
Fan Tray 0                                              FANTRAY-M10I-S
Fan Tray 1                                              FANTRAY-M10I-S
```

show chassis hardware models (M10 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 04   710-008920                     CHAS-MP-M10i-S
Power Supply 0   Rev 06   740-008537                     PWR-M10i-M7i-AC-S
Power Supply 1   Rev 06   740-008537                     PWR-M10i-M7i-AC-S
HCM 0            REV 03   710-010580                     HCM-M10i-S
HCM 1            REV 03   710-010580                     HCM-M10i-S
Routing Engine 0 REV 09   740-009459                     RE-400-256-S
CFEB 0           REV 05   750-010465                     FEB-M10i-M7i-S
FPC 0
  PIC 0          REV 10   750-002971                     PE-4OC3-SON-MM
  PIC 1          REV 11   750-002992                     PE-4FE-TX
  PIC 2          REV 03   750-002977                     PE-2OC3-ATM-MM
  PIC 3          REV 08   750-005724                     PE-2OC3-ATM2-MM
FPC 1
  PIC 2          REV 12   750-008425                     PE-AS
  PIC 3          REV 13   750-005636                     PE-4CHDS3-QPP
Fan Tray 0                                              FANTRAY-M10I-S
Fan Tray 1                                              FANTRAY-M10I-S
```

show chassis hardware (M20 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                20033             M20
Backplane        REV 07   710-001517   S/N AA7940
Power supply B   Rev 01   740-001465   S/N 000001        AC
Display          REV 02   710-001519   S/N AA9704
Host 0                                 98000004f8f27501  teknor
SSB slot 0       REV 01   710-001951   S/N AD5905        Internet Processor II
  SSRAM bank 0   REV 01   710-001385   S00480            2 MB
  SSRAM bank 1   REV 01   710-001385   S00490            2 MB
```


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```
  SSRAM bank 2   REV 01   710-001385   S001:?           2 MB
  SSRAM bank 3   REV 01   710-001385   S00483           2 MB
SSB slot 1       N/A      N/A          N/A              Backup
FPC 1            REV 01   710-001292   S/N AB7528
  SSRAM          REV 01   710-000077   S/N 304209       1 MB
  SDRAM bank 0   REV 01   710-000099   S/N 000603       64 MB
  SDRAM bank 1   REV 01   710-000099   S/N 000414       64 MB
  PIC 0          REV 03   750-000612   S/N AB8433       2x OC-3 ATM, MM
  PIC 1          REV 01   750-000616   S/N AA1168       1x OC-12 ATM, MM
  PIC 2          REV 01   750-000613   S/N AA1008       1x OC-12 SONET, SMIR
  PIC 3          REV 01   750-002501   S/N AD5810       4x E3
FPC 2            REV 01   710-001292   S/N AC0119
  SSRAM          REV 01   710-000077   S/N 503241       1 MB
  SDRAM bank 0   REV 01   710-000099   S/N 306835       64 MB
  SDRAM bank 1   REV 01   710-000099   S/N 306832       64 MB
Fan Tray 0                                              Front Upper Fan Tray
Fan Tray 1                                              Front Middle Fan Tray
Fan Tray 2                                              Front Bottom Fan Tray
Fan Tray 3                                              Rear Fan Tray
```

show chassis hardware models (M20 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Backplane        REV 03   710-002334                     CHAS-MP-M20-S
Power Supply A   REV 06   740-001465                     PWR-M20-AC-S
Display          REV 04   710-001519                     CRAFT-M20-S
Routing Engine 0 REV 06   740-003239                     RE-333-768-S
Routing Engine 1 REV 06   740-003239                     RE-333-768-S
SSB 0            REV 02   710-001951                     SSB-E-M20
SSB 1            N/A      N/A
FPC 0            REV 03   710-003308                     FPC-E
  PIC 0          REV 08   750-002303                     P-4FE-TX
  PIC 1          REV 07   750-004745                     P-2MCDS3
  PIC 2          REV 03   750-002965                     PE-4CHDS3
FPC 1            REV 03   710-003308                     FPC-E
  PIC 0          REV 03   750-002914                     P-2OC3-ATM-MM
Fan Tray 0                                               FANTRAY-F-M20-S
Fan Tray 1                                               FANTRAY-F-M20-S
Fan Tray 2                                               FANTRAY-F-M20-S
Fan Tray 3                                               FANTRAY-R-M20-S
```

show chassis hardware (M40 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Backplane        REV 02   710-000073   S/N AA0053
Power supply A   Rev 2    740-000235   S/N 000042        DC
Maxicab          REV X1   710-000229   S/N AA0139
Minicab          REV X1   710-000482   S/N AA0201
Display          REV 06   710-000150   S/N AA0905
Host                                                    cpv5000
SCB              REV X1   710-000075   S/N AA0158        Internet Processor I
  SSRAM bank 0   REV 02   710-000077   S/N AA2267        1 MB
  SSRAM bank 1   REV 02   710-000077   S/N AA2270        1 MB
  SSRAM bank 2   REV 02   710-000077   S/N AA2269        1 MB
  SSRAM bank 3   REV 02   710-000077   S/N AA2268        1 MB
FPC 0            REV 01   710-000175   S/N AA0048
```

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```
  SSRAM          REV 01   710-000077   S/N AA2333        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N AA2332        64 MB
  SDRAM bank 1   REV X1   710-000099   S/N AA2337        64 MB
  PIC 0          REV 04   750-000613   S/N aa0343        1x OC-12 SONET, SMIR
  PIC 1          REV 04   750-000613   S/N AA0379        1x OC-12 SONET, SMIR
  PIC 2          REV 04   750-000613   S/N AA0377        1x OC-12 SONET, SMIR
  PIC 3          REV 04   750-000613   S/N AA0378        1x Tunnel
FPC 2            REV 01   710-000175   S/N AA0042
  SSRAM          REV 02   710-000077   S/N AA2288        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N AA2331        64 MB
  SDRAM bank 1   REV 01   710-000099   S/N AA2330        64 MB
  PIC 0          REV X1   750-000603   S/N AA0143        4x OC-3 SONET, SMIR
  PIC 1          REV X1   750-000615   S/N AA0149        4x OC-3 SONET, MM
  PIC 2          REV X1   750-000611   S/N AA0148        4x OC-3 SONET, MM
  PIC 3          REV 04   750-000613   S/N AA0330        1x OC-12 SONET, SMIR
FPC 4            REV 01   710-000175   S/N AA0050
  SSRAM          REV 01   710-000077   S/N AA2327        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N AA2329        64 MB
  SDRAM bank 1   REV 01   710-000099   S/N AA2328        64 MB
  PIC 0          REV 04   750-000613   S/N AA0320        1x OC-12 SONET, SMIR
  PIC 2          REV 05   750-000616   S/N AA1341        1x OC-12 ATM, MM
  PIC 3          REV 08   750-001072   S/N AB2462        1x G/E, 1000 BASE-SX
FPC 5            REV 10   710-000175   S/N AA7663
  SSRAM          REV 01   710-000077   S/N 501590        1 MB
  SDRAM bank 0   REV 01   710-000099   S/N 300949        64 MB
  SDRAM bank 1   REV 01   710-000099   S/N 300868        64 MB
  PIC 1          REV 01   750-001323   S/N AB1670        1x Tunnel
```

show chassis hardware (M40e Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  m40e
Midplane         REV 01   710-005071   AX3671
FPM CMB          REV 03   710-001642   AR9074
FPM Display      REV 03   710-001647   AR7331
CIP              REV 04   710-002649   BB4449
PEM 0            Rev 01   740-003787   MC12364           Power Entry Module
PEM 1            Rev 01   740-003787   MC12383           Power Entry Module
PCG 0            REV 07   710-001568   AG1332
PCG 1            REV 07   710-001568   AR3789
Host 0                                 3e000007c8176601  Present
MCS 0            REV 11   710-001226   AN5813
SFM 0 SPP        REV 07   710-001228   AG4676
SFM 0 SPR        REV 05   710-002189   AE4735            Internet Processor II
SFM 1 SPP        REV 07   710-001228   AP1347
SFM 1 SPR        REV 05   710-002189   BE0063            Internet Processor II
FPC 0            REV 01   710-011725   BE0669            M40e-EP-FPC Type 1
  CPU            REV 01   710-004600   BD9504
  PIC 0          REV 03   750-003737   AY3991            4x G/E, 1000 BASE-SX
FPC 1            REV 01   710-005197   BD9842            M40e-FPC Type 2
  CPU            REV 01   710-004600   BB4869
  PIC 0          REV 07   750-001900   AR8278            1x OC-48 SONET, SMSR
FPC 2            REV 02   710-005197   BD9824            M40e-FPC Type 2
  CPU            REV 01   710-004600   BD9531
  PIC 0          REV 03   750-003737   AY3986            4x G/E, 1000 BASE-SX
FPC 4            REV 02   710-005078   BE0664            M40e-FPC Type 1
  CPU            REV 01   710-004600   BD9559
  PIC 0          REV 03   750-001894   AG7963            1x G/E, 1000 BASE-SX
  PIC 2          REV 01   750-002575   AF2472            4x OC-3 SONET, SMIR
```


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```
FPC 6            REV 02   710-005078   BE0652           M40e-FPC Type 1
  CPU            REV 01   710-004600   BD9607
  PIC 0          REV 02   750-002911   AN2286           4x F/E, 100 BASE-TX
  PIC 2          REV 01   750-002577   AP6345           4x OC-3 SONET, MM
```

show chassis hardware (M120 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN000054AC        M120
Midplane         REV 01   710-013667   RB4170            M120 Midplane
FPM Board        REV 02   710-011407   CJ9186            M120 FPM Board
FPM Display      REV 02   710-011405   CJ9173            M120 FPM Display
FPM CIP          REV 02   710-011410   CJ9221            M120 FPM CIP
PEM 0            Rev 05   740-011936   RM28320           AC Power Entry Module
PEM 1            Rev 05   740-011936   RM28321           AC Power Entry Module
Routing Engine 0 REV 03   740-014080   1000642883        RE-A-1000
CB 0             REV 03   710-011403   CM8346            M120 Control Board
CB 1             REV 06   710-011403   CP6728            M120 Control Board
FPC 1            REV 02   710-015908   CP6925            M120 CFPC 10GE
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN) XFP
    Xcvr 0       REV 01   740-014279   62E204N00007      XFP-10G-LR
FPC 3            REV 03   710-011393   CJ9234            M120 FPC Type 2
  PIC 0          REV 16   750-008155   NB5229            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F15JB           SFP-SX
    Xcvr 1       REV 01   740-007326   P4Q0R9G           SFP-SX
  PIC 1          REV 09   750-007745   CG4360            4x OC-3 SONET, SMIR
  PIC 2          REV 16   750-008155   ND7787            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F12AS           SFP-SX
    Xcvr 1       REV 01   740-011613   P9F1ALU           SFP-SX
  PIC 3          REV 07   750-011800   JW1284            8x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011613   P9F1AM6           SFP-SX
    Xcvr 6       REV 01   740-011613   P9F16NN           SFP-SX
    Xcvr 7       REV 01   740-011782   P8C29Y7           SFP-SX
  Board B        REV 02   710-011395   CN3754            M120 FPC Mezz
FPC 4            REV 02   710-011398   CP6741            M120 FPC Type 3
  PIC 0          REV 16   750-007141   NB2855            10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011782   P922A1F           SFP-SX
    Xcvr 1       REV 01   740-011782   P922A16           SFP-SX
    Xcvr 2       REV 01   740-011782   P922A0U           SFP-SX
    Xcvr 3       REV 01   740-011782   P9229UZ           SFP-SX
    Xcvr 4       REV 01   740-009029   P11JXWP           SFP-LX
    Xcvr 6       REV 01   740-011613   P9F1ALW           SFP-SX
FPC 5            REV 01   710-011388   CJ9088            M120 FPC Type 1
  PIC 0          *** Hardware Not Supported ***
  PIC 1          REV 05   750-012052   NB0410            1x CHOC3 IQ SONET, SMLR

  PIC 2          REV 01   750-013167   CM3824            4x CHDS3 IQ
  PIC 3          REV 01   750-010240   CB5366            1x G/E SFP, 1000 BASE
  Board B        REV 01   710-011390   CJ9103            M120 FPC Mezz Board
FEB 3            REV 04   710-011663   CP6673            M120 FEB
FEB 4            REV 04   710-011663   CJ9368            M120 FEB
FEB 5            REV 04   710-011663   CJ9386            M120 FEB
Fan Tray 0                                                Front Top Fan Tray
Fan Tray 1                                                Front Bottom Fan Tray
Fan Tray 2                                                Rear Top Fan Tray
Fan Tray 3                                                Rear Bottom Fan Tray
```

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show chassis hardware detail (M120 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN000054AC        M120
Midplane         REV 01   710-013667   RB4170            M120 Midplane
FPM Board        REV 02   710-011407   CJ9186            M120 FPM Board
FPM Display      REV 02   710-011405   CJ9173            M120 FPM Display
FPM CIP          REV 02   710-011410   CJ9221            M120 FPM CIP
PEM 0            Rev 05   740-011936   RM28320           AC Power Entry Module
PEM 1            Rev 05   740-011936   RM28321           AC Power Entry Module
Routing Engine 0 REV 03   740-014080   1000642883        RE-A-1000
  ad0     248 MB  SILICONSYSTEMS INC 256M 126CT505S0763SC00110 Compact Flash
  ad2   38154 MB  HTE541040G9SA00      MPBBT0X2HS2E3M    Hard Disk
CB 0             REV 03   710-011403   CM8346            M120 Control Board
CB 1             REV 06   710-011403   CP6728            M120 Control Board
FPC 1            REV 02   710-015908   CP6925            M120 CFPC 10GE
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN) XFP
    Xcvr 0       REV 01   740-014279   62E204N00007      XFP-10G-LR
FPC 3            REV 03   710-011393   CJ9234            M120 FPC Type 2
  PIC 0          REV 16   750-008155   NB5229            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F15JB           SFP-SX
    Xcvr 1       REV 01   740-007326   P4Q0R9G           SFP-SX
  PIC 1          REV 09   750-007745   CG4360            4x OC-3 SONET, SMIR
  PIC 2          REV 16   750-008155   ND7787            2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F12AS           SFP-SX
    Xcvr 1       REV 01   740-011613   P9F1ALU           SFP-SX
  PIC 3          REV 07   750-011800   JW1284            8x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011613   P9F1AM6           SFP-SX
    Xcvr 6       REV 01   740-011613   P9F16NN           SFP-SX
    Xcvr 7       REV 01   740-011782   P8C29Y7           SFP-SX
  Board B        REV 02   710-011395   CN3754            M120 FPC Mezz
FPC 4            REV 02   710-011398   CP6741            M120 FPC Type 3
  PIC 0          REV 16   750-007141   NB2855            10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011782   P922A1F           SFP-SX
    Xcvr 1       REV 01   740-011782   P922A16           SFP-SX
    Xcvr 2       REV 01   740-011782   P922A0U           SFP-SX
    Xcvr 3       REV 01   740-011782   P9229UZ           SFP-SX
    Xcvr 4       REV 01   740-009029   P11JXWP           SFP-LX
    Xcvr 6       REV 01   740-011613   P9F1ALW           SFP-SX
FPC 5            REV 01   710-011388   CJ9088            M120 FPC Type 1
  PIC 0          *** Hardware Not Supported ***
  PIC 1          REV 05   750-012052   NB0410            1x CHOC3 IQ SONET, SMLR

  PIC 2          REV 01   750-013167   CM3824            4x CHDS3 IQ
  PIC 3          REV 01   750-010240   CB5366            1x G/E SFP, 1000 BASE
  Board B        REV 01   710-011390   CJ9103            M120 FPC Mezz Board
FEB 3            REV 04   710-011663   CP6673            M120 FEB
FEB 4            REV 04   710-011663   CJ9368            M120 FEB
FEB 5            REV 04   710-011663   CJ9386            M120 FEB
Fan Tray 0                                              Front Top Fan Tray
Fan Tray 1                                              Front Bottom Fan Tray
Fan Tray 2                                              Rear Top Fan Tray
Fan Tray 3                                              Rear Bottom Fan Tray
```

show chassis hardware models (M120 Router)

```
user@host> show chassis hardware models
```


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```
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   710-013667
FPM CIP          REV 02   710-011410                     CRAFT-M120-S
PEM 0            Rev 05   740-011936                     PWR-M120-AC-S
PEM 1            Rev 05   740-011936                     PWR-M120-AC-S
Routing Engine 0 REV 03   740-014080                     RE-A-1000-2048-S
CB 0             REV 03   710-011403                     CB-M120-S
CB 1             REV 06   710-011403                     CB-M120-S
FPC 1            REV 02   710-015908                     M120-cFPC-1XGE-XFP
FPC 3
  PIC 0          REV 16   750-008155                     PB-2GE-SFP-QPP
  PIC 1          REV 09   750-007745                     PC-4OC3-SON-SMIR
  PIC 2          REV 16   750-008155                     PB-2GE-SFP-QPP
  PIC 3          REV 07   750-011800                     PB-8GE-TYPE2-SFP-IQ2
FPC 4
  PIC 0          REV 16   750-007141                     PC-10GE-SFP
FPC 5
  PIC 1          REV 05   750-012052                     PB-1CHOC3-SMIR-QPP
  PIC 2          REV 01   750-013167                     PE-4CHDS3-QPP
  PIC 3          REV 01   750-010240                     PB-1GE-SFP
Fan Tray 0                                              FFANTRAY-M120-S
Fan Tray 1                                              FFANTRAY-M120-S
Fan Tray 2                                              RFANTRAY-M120-S
Fan Tray 3                                              RFANTRAY-M120-S
```

show chassis hardware (M160 Router)

```
user@host> show chassis hardware
Item             Version  Part number  Serial number     Description
Chassis                               101               M160
Midplane         REV 02   710-001245   S/N AB4107
FPM CMB          REV 01   710-001642   S/N AA2911
FPM Display      REV 01   710-001647   S/N AA2999
CIP              REV 02   710-001593   S/N AA9563
PEM 0            Rev 01   740-001243   S/N KJ35769       DC
PEM 1            Rev 01   740-001243   S/N KJ35765       DC
PCG 0            REV 01   710-001568   S/N AA9794
PCG 1            REV 01   710-001568   S/N AA9804
Host 1                                da000004f8d57001  teknor
MCS 1            REV 03   710-001226   S/N AA9777
SFM 0 SPP        REV 04   710-001228   S/N AA2975
SFM 0 SPR        REV 02   710-001224   S/N AA9838        Internet Processor I
SFM 1 SPP        REV 04   710-001228   S/N AA2860
SFM 1 SPR        REV 01   710-001224   S/N AB0139        Internet Processor I
FPC 0            REV 03   710-001255   S/N AA9806        FPC Type 1
  CPU            REV 02   710-001217   S/N AA9590
  PIC 1          REV 05   750-000616   S/N AA1527        1x OC-12 ATM, MM
  PIC 2          REV 05   750-000616   S/N AA1535        1x OC-12 ATM, MM
  PIC 3          REV 01   750-000616   S/N AA1519        1x OC-12 ATM, MM
FPC 1            REV 02   710-001611   S/N AA9523        FPC Type 2
  CPU            REV 02   710-001217   S/N AA9571
  PIC 0          REV 03   750-001900   S/N AA9626        1x STM-16 SDH, SMIR
  PIC 1          REV 01   710-002381   S/N AD3633        2x G/E, 1000 BASE-SX
FPC 2                                                   FPC Type OC192
  CPU            REV 03   710-001217   S/N AB3329
  PIC 0          REV 01                                 1x OC-192 SM SR-2
Fan Tray 0                                              Rear Bottom Blower
Fan Tray 1                                              Rear Top Blower
Fan Tray 2                                              Front Top Blower
Fan Tray 3                                              Front Fan Tray
```

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show chassis hardware models (M160 Router)

```
user@host> show chassis hardware models
 Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 03   710-009120                     CHAS-BP-M320-S
FPM Display      REV 02   710-009351                     CRAFT-M320-S
CIP              REV 03   710-005926                     CIP-M320-S
PEM 2            Rev X4   740-009148                     PWR-M-DC-S
PEM 3            Rev X4   740-009148                     PWR-M-DC-S
Routing Engine 0 REV 02   740-008883                     RE-1600-2048-S
Routing Engine 1 REV 02   740-008883                     RE-1600-2048-S
FPC 0            REV 02   710-010419                     M320-FPC1
  PIC 0          REV 01   750-001323                     P-TUNNEL
  PIC 1          REV 02   750-002987                     PE-1OC12-SON-SMIR
  PIC 2          REV 04   750-001894                     PB-1GE-SX
  PIC 3          REV 04   750-001896                     PB-1OC12-SON-SMIR
FPC 1            REV 02   710-010419                     M320-FPC1
  PIC 0          REV 04   750-001894                     PB-1GE-SX
  PIC 1          REV 04   750-001894                     PB-1GE-SX
  PIC 3          REV 03   750-001894                     PB-1GE-SX
FPC 2            REV 02   710-010419                     M320-FPC1
  PIC 0          REV 10   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 1          REV 10   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 2          REV 07   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 3          REV 07   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 1          REV 10   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 2          REV 07   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 3          REV 07   750-005634                     PB-1CHOC12SMIR-QPP
FPC 3
  PIC 0          REV 03   750-001895                     PB-1OC12-SON-MM
  PIC 1          REV 04   750-001894                     PB-1GE-SX
  PIC 3          REV 04   750-003141                     PB-1GE-SX-B
FPC 4            REV 02   710-010419                     M320-FPC1
FPC 5            REV 02   710-010419                     M320-FPC1
FPC 6            REV 02   710-010419                     M320-FPC1
FPC 7
  PIC 0          REV 15   750-001901                     PB-4OC12-SON-SMIR
  PIC 1          REV 06   750-001900                     PB-1OC48-SON-SMSR
  PIC 2          REV 07   750-001900                     PB-1OC48-SON-SMSR
  PIC 3          REV 05   750-003737                     PB-4GE-SX
SIB 0            REV 03   710-009184                     SIB-M-S
SIB 1            REV 03   710-009184                     SIB-M-S
SIB 2            REV 03   710-009184                     SIB-M-S
SIB 3            REV 03   710-009184                     SIB-M-S
Fan Tray 0                                               FFANTRAY-M320-S
Fan Tray 1                                               FFANTRAY-M320-S
Fan Tray 2                                               RFANTRAY-M320-S
```

show chassis hardware detail (M160 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               101               M160
Midplane         REV 02   710-001245   S/N AB4107
FPM CMB          REV 01   710-001642   S/N AA2911
FPM Display      REV 01   710-001647   S/N AA2999
CIP              REV 02   710-001593   S/N AA9563
PEM 0            Rev 01   740-001243   S/N KJ35769       DC
```


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```
PEM 1            Rev 01   740-001243   S/N KJ35765       DC
PCG 0            REV 01   710-001568   S/N AA9794
PCG 1            REV 01   710-001568   S/N AA9804
Host 1                                 da000004f8d57001  teknor
MCS 1            REV 03   710-001226   S/N AA9777
SFM 0 SPP        REV 04   710-001228   S/N AA2975
SFM 0 SPR        REV 02   710-001224   S/N AA9838        Internet Processor I
  SSRAM bank 0   REV 01   710-000077   S/N 306456        1 MB
  SSRAM bank 1   REV 01   710-000077   S/N 306474        1 MB
  SSRAM bank 2   REV 01   710-000077   S/N 306388        1 MB
  SSRAM bank 3   REV 01   710-000077   S/N 306392        1 MB
SFM 1 SPP        REV 04   710-001228   S/N AA2860
SFM 1 SPR        REV 01   710-001224   S/N AB0139        Internet Processor I
  SSRAM bank 0   REV 01   710-000077   S/N 302917        1 MB
  SSRAM bank 1   REV 01   710-000077   S/N 302662        1 MB
  SSRAM bank 2   REV 01   710-000077   S/N 302593        1 MB
  SSRAM bank 3   REV 01   710-000077   S/N 100160        1 MB
FPC 0            REV 03   710-001255   S/N AA9806        FPC Type 1
  CPU            REV 02   710-001217   S/N AA9590
  SSRAM          REV 01   710-000077   S/N 302836        1 MB
  SDRAM 0        REV 01   710-001196   S00141            32 MB
  SDRAM 1        REV 01   710-001196   S0010;            32 MB
  SSRAM          REV 01   710-000077   S/N 302633        1 MB
  SDRAM 0        REV 01   710-001196   S00143            32 MB
  SDRAM 1        REV 01   710-001196   S00115            32 MB
  SSRAM          REV 01   710-000077   S/N 302952        1 MB
  SDRAM 0        REV 01   710-001196   S00135            32 MB
  SDRAM 1        REV 01   710-001196   S001=3            32 MB
  SSRAM          REV 01   710-000077   S/N 302892        1 MB
  SDRAM 0        REV 01   710-001196   S000?6            32 MB
  SDRAM 1        REV 01   710-001196   S001=5            32 MB
  PIC 1          REV 05   750-000616   S/N AA1527        1x OC-12 ATM, MM
  PIC 2          REV 05   750-000616   S/N AA1535        1x OC-12 ATM, MM
  PIC 3          REV 01   750-000616   S/N AA1519        1x OC-12 ATM, MM
FPC 1            REV 02   710-001611   S/N AA9523        FPC Type 2
  CPU            REV 02   710-001217   S/N AA9571
  SSRAM          REV 01   710-000077   S/N 306340        1 MB
  SDRAM 0        REV 01   710-001196   S00012            32 MB
  SDRAM 1        REV 01   710-001196   S0001?            32 MB
  SSRAM          REV 01   710-000077   S/N 306454        1 MB
  SDRAM 0        REV 01   710-001196   S00028            32 MB
  SDRAM 1        REV 01   710-001196   S0002?            32 MB
  SSRAM          REV 01   710-000077   S/N 306492        1 MB
  SDRAM 0        REV 01   710-001196   S00015            32 MB
  SDRAM 1        REV 01   710-001196   S00031            32 MB
  SSRAM          REV 01   710-000077   S/N 306363        1 MB
  SDRAM 0        REV 01   710-001196   S00013            32 MB
  SDRAM 1        REV 01   710-001196   S00032            32 MB
  PIC 0          REV 03   750-001900   S/N AA9626        1x STM-16 SDH, SMIR
  PIC 1          REV 01   710-002381   S/N AD3633        2x G/E, 1000 BASE-SX
FPC 2                                                    FPC Type OC192
... SSRAM          REV 01   710-000077   S/N 306466        1 MB
```

show chassis hardware (M320 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                67245             M320
Midplane         REV 05   710-009120   RB1202            M320 Midplane
FPM GBUS         REV 04   710-005928   HZ5697            M320 Board
```

```
FPM Display      REV 05   710-009351   HR1464           M320 FPM Display
CIP              REV 04   710-005926   HT8672           M320 CIP
PEM 0            Rev 05   740-009148   QK34208          DC Power Entry Module
PEM 1            Rev 05   740-009148   QK34262          DC Power Entry Module
PEM 2            Rev 05   740-009148   QF10449          DC Power Entry Module
PEM 3            Rev 05   740-009148   QJ18257          DC Power Entry Module
Routing Engine 0 REV 06   740-008883   P11123901185     RE-4.0
CB 0             REV 07   710-009115   JB2382           M320 Control Board
FPC 0            REV 02   710-005017   CD9926           M320 FPC Type 2
  CPU            REV 01   710-011659   CJ6940           M320 PCA SCPU
  PIC 0          REV 07   750-001900   AT1594           1x OC-48 SONET, SMSR
  PIC 1          REV 03   750-001850   HS2746           1x Tunnel
  PIC 2          REV 05   750-010618   JE7117           4x G/E SFP, 1000 BASE
  PIC 3          REV 06   750-001900   HE6083           1x OC-48 SONET, SMSR
FPC 2            REV 02   710-005017   CH0319           M320 FPC Type 1
  CPU            REV 01   710-011659   CJ6942           M320 PCA SCPU
  PIC 0          REV 05   750-003034   BD8705           4x OC-3 SONET, SMIR
FPC 5            REV 02   710-005017   CD9938           M320 FPC Type 2
  CPU
FPC 7            REV 02   710-005017   CD9934           M320 FPC Type 2
  CPU
SIB 0            REV 09   710-009184   JA6540           M320 SIB
SIB 1            REV 09   710-009184   HV9511           M320 SIB
SIB 2            REV 09   710-009184   HW2057           M320 SIB
SIB 3            REV 09   710-009184   JA6687           M320 SIB
Fan Tray 0                                              Front Top Fan Tray
Fan Tray 1                                              Front Bottom Fan Tray
Fan Tray 2                                              Rear Fan Tray
```

show chassis hardware models (M320 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code        FRU model number
Midplane         REV 03   710-009120                    CHAS-BP-M320-S
FPM Display      REV 02   710-009351                    CRAFT-M320-S
CIP              REV 03   710-005926                    CIP-M320-S
PEM 2            Rev X4   740-009148                    PWR-M-DC-S
PEM 3            Rev X4   740-009148                    PWR-M-DC-S
Routing Engine 0 REV 02   740-008883                    RE-1600-2048-S
Routing Engine 1 REV 02   740-008883                    RE-1600-2048-S
FPC 0            REV 02   710-010419                    M320-FPC1
  PIC 0          REV 01   750-001323                    P-TUNNEL
  PIC 1          REV 02   750-002987                    PE-1OC12-SON-SMIR
  PIC 2          REV 04   750-001894                    PB-1GE-SX
  PIC 3          REV 04   750-001896                    PB-1OC12-SON-SMIR
FPC 1            REV 02   710-010419                    M320-FPC1
  PIC 0          REV 04   750-001894                    PB-1GE-SX
  PIC 1          REV 04   750-001894                    PB-1GE-SX
  PIC 3          REV 03   750-001894                    PB-1GE-SX
FPC 2            REV 02   710-010419                    M320-FPC1
  PIC 0          REV 10   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 1          REV 10   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 2          REV 07   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 3          REV 07   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 1          REV 10   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 2          REV 07   750-005634                    PB-1CHOC12SMIR-QPP
  PIC 3          REV 07   750-005634                    PB-1CHOC12SMIR-QPP
FPC 3
  PIC 0          REV 03   750-001895                    PB-1OC12-SON-MM
  PIC 1          REV 04   750-001894                    PB-1GE-SX
```


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```
  PIC 3          REV 04   750-003141                    PB-1GE-SX-B
FPC 4            REV 02   710-010419                    M320-FPC1
FPC 5            REV 02   710-010419                    M320-FPC1
FPC 6            REV 02   710-010419                    M320-FPC1
FPC 7
  PIC 0          REV 15   750-001901                    PB-4OC12-SON-SMIR
  PIC 1          REV 06   750-001900                    PB-1OC48-SON-SMSR
  PIC 2          REV 07   750-001900                    PB-1OC48-SON-SMSR
  PIC 3          REV 05   750-003737                    PB-4GE-SX
SIB 0            REV 03   710-009184                    SIB-M-S
SIB 1            REV 03   710-009184                    SIB-M-S
SIB 2            REV 03   710-009184                    SIB-M-S
SIB 3            REV 03   710-009184                    SIB-M-S
Fan Tray 0                                              FFANTRAY-M320-S
Fan Tray 1                                              FFANTRAY-M320-S
Fan Tray 2                                              RFANTRAY-M320-S
```

show chassis hardware (MX5 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                E1368             MX5-T
Midplane         REV 01   711-038215   YF5288            MX5-T
PEM 0            Rev 04   740-028288   VA01215           AC Power Entry Module
PEM 1            Rev 04   740-028288   VA01218           AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN           Routing Engine
TFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
  QXM 0          REV 05   711-028408   ZA9136            MPC QXM
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 24   750-028392   YX9820            3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   AM1045SUAQ3       SFP-SX
      Xcvr 1     REV 01   740-031851   AM1045SUAPA       SFP-SX
      Xcvr 2     REV 01   740-031851   AM1045SUAN7       SFP-SX
      Xcvr 3     REV 01   740-031851   AM1045SU91Q       SFP-SX
      Xcvr 4     REV 01   740-031851   AM1045SUDDR       SFP-SX
      Xcvr 9     REV 01   740-011613   AM0848SB6A1       SFP-SX
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   AM1045SUAN0       SFP-SX
      Xcvr 1     REV 01   740-011613   AS0812S0719       SFP-SX
      Xcvr 2     REV 01   740-011613   AM0821SA121       SFP-SX
      Xcvr 3     REV 01   740-011613   PF21K21           SFP-SX
      Xcvr 4     REV 01   740-011613   AM0848SB69Z       SFP-SX
      Xcvr 5     REV 01   740-011782   P9P0XV3           SFP-SX
      Xcvr 6     REV 01   740-011613   AM0812S8WJN       SFP-SX
      Xcvr 7     REV 01   740-011613   PAM3G9Q           SFP-SX
      Xcvr 8     REV 01   740-011613   AM0848SB4A6       SFP-SX
      Xcvr 9     REV 01   740-011782   P9M0U37           SFP-SX
  MIC 1          REV 20   750-028380   ZG2657            3D 2x 10GE XFP
    PIC 2                 BUILTIN      BUILTIN           1x 10GE XFP
    PIC 3                 BUILTIN      BUILTIN           1x 10GE XFP
Fan Tray                                                Fan Tray
```

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show chassis hardware (MX10 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                E1372             MX10-T
Midplane         REV 01   711-038211   YF5285            MX10-T
PEM 0            Rev 04   740-028288   VB01678           AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN           Routing Engine
TFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
  QXM 0          REV 05   711-028408   ZA9053            MPC QXM
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 24   750-028392   YX9436            3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   AM1107SUFQW       SFP-SX
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
Fan Tray                                                 Fan Tray
```

show chassis hardware (MX40 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                E1367             MX40-T
Midplane         REV 01   711-038211   YF5284            MX40-T
PEM 0            Rev 04   740-028288   VB01680           AC Power Entry Module
PEM 1            Rev 04   740-028288   VB01700           AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN           Routing Engine
TFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
  QXM 0          REV 05   711-028408   ZA9048            MPC QXM
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
      Xcvr 0     REV 01   740-014279   M7067UPP          XFP-10G-LR
      Xcvr 1              NON-JNPR     K9J02UN           XFP-10G-LR
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 24   750-028392   YX3504            3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011613   AM0812S8WTE       SFP-SX
      Xcvr 1     REV 01   740-011613   PFA6KV2           SFP-SX
      Xcvr 2     REV 01   740-031851   AM1045SUDDM       SFP-SX
      Xcvr 3     REV 01   740-011613   PD63C7M           SFP-SX
      Xcvr 4     REV 01   740-011613   PD63DJY           SFP-SX
      Xcvr 5     REV 02   740-011613   AA0950STLL9       SFP-SX
      Xcvr 6     REV 01   740-011782   PAR1YHC           SFP-SX
      Xcvr 7     REV 01   740-011782   P9P0XXL           SFP-SX
      Xcvr 8     REV 01   740-011613   PD63D95           SFP-SX
      Xcvr 9     REV 01   740-031851   AM1045SU9B8       SFP-SX
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011613   PF21L3Z           SFP-SX
      Xcvr 1     REV 01   740-031851   AM1045SU7M9       SFP-SX
      Xcvr 2     REV 01   740-031851   AM1045SUAPT       SFP-SX
      Xcvr 3     REV 01   740-011613   PFF2BZH           SFP-SX
      Xcvr 4     REV 01   740-031851   AM1045SUDDN       SFP-SX
      Xcvr 5     REV 01   740-031851   AM1039S00ZR       SFP-SX
```


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```
      Xcvr 6      REV 01   740-031851   AM1045SUD6Y       SFP-SX
      Xcvr 8      REV 01   740-011613   PFM1QBS           SFP-SX
      Xcvr 9      REV 01   740-011613   PFF2E25           SFP-SX
  MIC 1           REV 01   750-021130   KG4391            3D 2x 10GE XFP
    PIC 2                  BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0      REV 01   740-011571   C645XJ04G         XFP-10G-SR
    PIC 3                  BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0               NON-JNPR     CA49BK0AE         XFP-10G-SR
Fan Tray                                                  Fan Tray
```

show chassis hardware (Fixed MX80 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  MX80-48T
Midplane         REV 01   711-031603   KF9250            MX80-48T
Routing Engine            BUILTIN      BUILTIN           Routing Engine
FEB 0                     BUILTIN      BUILTIN           Forwarding Engine Board
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
      Xcvr 0              NON-JNPR     M6439D41          XFP-10G-LR
      Xcvr 1      REV 01   740-014279   6XE931N00202      XFP-10G-LR
      Xcvr 2      REV 01   740-014289   C715XU05F         XFP-10G-SR
      Xcvr 3      REV 01   740-014289   C650XU0EP         XFP-10G-SR
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0           REV 01   711-029399   JR6981            12x 1GE(LAN) RJ45
    PIC 0                 BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
    PIC 1                 BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
  MIC 1           REV 01   BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
    PIC 2                 BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
    PIC 3                 BUILTIN      BUILTIN           12x 1GE(LAN) RJ45
Fan Tray                                                 Fan Tray
```

show chassis hardware (Modular MX80 Router)

```
user@host> show chassis hardware

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  MX80
Midplane         REV 02   711-031594   JR7084            MX80
PEM 0            Rev 01   740-028288   000018            AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN           Routing Engine
FEB 0                     BUILTIN      BUILTIN           Forwarding Engine Board

  QXM 0           REV 05   711-028408   JR7041            MPC QXM
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0           REV 02   750-028380   JR6598            3D 2x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0      REV 01   740-014289   T07M86365         XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0      REV 01   740-014289   T07M71094         XFP-10G-SR
  MIC 1           REV 02   750-028380   JG8548            3D 2x 10GE XFP
    PIC 2                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0      REV 02   740-014289   T08L86302         XFP-10G-SR
```

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```
    PIC 3                 BUILTIN      BUILTIN          1x 10GE XFP
      Xcvr 0      REV 02  740-014289   C810XU0BA        XFP-10G-SR
Fan Tray                                               Fan Tray
```

show chassis hardware (MX150)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DD2316AF0078      MX150
Midplane         REV 04   650-066113   DD2316AF0078      MX150
Power Supply 0
Routing Engine 0                                         RE-VMX
CB 0                                                     VMX SCB
CB 1                                                     VMX SCB
FPC 0                                                    Virtual FPC
  CPU            Rev. 1.0 RIOT         BUILTIN
  MIC 0                                                  Virtual
    PIC 0                BUILTIN      BUILTIN          Virtual
      Xcvr 10    REV 02  740-013111   A331846          SFP-T
      Xcvr 11    REV 02  740-013111   C248517          SFP-T
Fan Tray 0                                               fan-ctrl-0 0, Front to
Back Airflow - AFO
Fan Tray 1                                               fan-ctrl-0 1, Front to
Back Airflow - AFO
```

show chassis hardware models (MX150)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 04   650-066113   DD2316AF0163      MX150
Fan Tray 0                                               Assy,Sub,Fan
Tray,AFO,Opus-AFO
Fan Tray 1                                               Assy,Sub,Fan
Tray,AFO,Opus-AFO
```

show chassis hardware (MX104 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                G3503             MX104
Midplane         REV 28   750-044219   CAAX5741          MX104
PEM 0            REV 03   740-045933   1H072500016       AC Power Entry Module
PEM 1            REV 03   740-045932   1H073050017       DC Power Entry Module
Routing Engine 0 REV 20   750-044228   CAAY7935          RE-MX-104
Routing Engine 1 REV 13   750-044228   CAAM6380          RE-MX-104
AFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 15   750-036132   CAAF7948          2xOC12/8xOC3 CC-CE
    PIC 0                 BUILTIN      BUILTIN           2xOC12/8xOC3 CC-CE
      Xcvr 0     REV 01   740-011615   PCQ0U2J           SFP-IR
      Xcvr 1     REV 01   740-016068   PJL7A6G           SFP-SR
      Xcvr 2     REV 01   740-016068   PJL7A5J           SFP-SR
      Xcvr 3     REV 01   740-016065   PJN5HPZ           SFP-SR
      Xcvr 4     REV 01   740-029122   PKB38TL           SFP-LR
      Xcvr 5     REV 01   740-011787   P6A107G           SFP-LR
```


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```
      Xcvr 6     REV 01   740-029122   PKB38TR           SFP-LR
      Xcvr 7     REV 01   740-011787   PBK0NK3           SFP-LR
  MIC 1
FPC 2                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    PIC 0                 BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
      Xcvr 0     REV 01   740-031980   B10F00465         SFP+-10G-SR
      Xcvr 1     REV 01   740-031980   B10F00461         SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   B10G01545         SFP+-10G-SR
      Xcvr 3     REV 01   740-031980   B10G01385         SFP+-10G-SR
Fan Tray 0       REV 02   711-049570   CAAX6538          Fan Tray
```

show chassis hardware detail (MX104 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               G3503             MX104
Midplane         REV 28   750-044219   CAAX5741          MX104
PEM 0            REV 03   740-045933   1H072500016       AC Power Entry Module
PEM 1            REV 03   740-045932   1H073050017       DC Power Entry Module
Routing Engine 0 REV 20   750-044228   CAAY7935          RE-MX-104
  da0    7836 MB  ATP IG eUSB SSD                       Nand Flash 0
  usb0 (addr 1)  EHCI root hub 0       Freescale         uhub0
  usb0 (addr 2)  USB2513Bi  9491       SMSC              uhub1
  usb0 (addr 3)  ATP IG eUSB SSD 44801 ATP Electronics   umass0
Routing Engine 1 REV 13   750-044228   CAAM6380          RE-MX-104
  da0    7836 MB  ATP IG eUSB SSD                       Nand Flash 0
AFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 15   750-036132   CAAF7948          2xOC12/8xOC3 CC-CE
    PIC 0                 BUILTIN      BUILTIN           2xOC12/8xOC3 CC-CE
      Xcvr 0     REV 01   740-011615   PCQ0U2J           SFP-IR
      Xcvr 1     REV 01   740-016068   PJL7A6G           SFP-SR
      Xcvr 2     REV 01   740-016068   PJL7A5J           SFP-SR
      Xcvr 3     REV 01   740-016065   PJN5HPZ           SFP-SR
      Xcvr 4     REV 01   740-029122   PKB38TL           SFP-LR
      Xcvr 5     REV 01   740-011787   P6A107G           SFP-LR
      Xcvr 6     REV 01   740-029122   PKB38TR           SFP-LR
      Xcvr 7     REV 01   740-011787   PBK0NK3           SFP-LR
  MIC 1
FPC 2                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    PIC 0                 BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
      Xcvr 0     REV 01   740-031980   B10F00465         SFP+-10G-SR
      Xcvr 1     REV 01   740-031980   B10F00461         SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   B10G01545         SFP+-10G-SR
      Xcvr 3     REV 01   740-031980   B10G01385         SFP+-10G-SR
Fan Tray 0       REV 02   711-049570   CAAX6538          Fan Tray
```

show chassis hardware detail (MX480 Packet Transport Router with details of virtual disk size)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN122FFD9AFB      MX480
Midplane         REV 05   710-017414   ACRB8882          MX480 Midplane
FPM Board        REV 02   710-017254   CADF7623          Front Panel Display
```

```
PEM 0            Rev 07   740-017343   QCS1128A0TY       DC Power Entry Module
PEM 1            Rev 07   740-017343   QCS1128A0JM       DC Power Entry Module
Routing Engine 0 REV 07   750-054758   CADG2028          RE-S-2X00x6
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002           Emulated IDE Disk
  usb0 (addr 1)  UHCI root HUB 0       Intel             uhub0
Routing Engine 1 REV 00   750-054758                    RE-S-2X00x6
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002           Emulated IDE Disk
  usb0 (addr 1)  UHCI root HUB 0       Intel             uhub0
CB 0             REV 01   750-055976   CACS1837          Enhanced MX SCB 2
CB 1             REV 01   750-055976   CADD9894          Enhanced MX SCB 2
  Xcvr 1         REV 01   740-031980   AP41KCL           SFP+-10G-SR
FPC 0            REV 09   750-049040   CACX1759          LOAD MPC Type 2
  CPU            REV 10   711-035209   CACP9324          HMPC PMB 2G
FPC 4            REV 28   750-037355   CACY8384          MPC4E 3D 2CGE+8XGE
  CPU            REV 10   711-035209   CACX0428          HMPC PMB 2G
Fan Tray                                                 Enhanced Left Fan Tray
```

show chassis hardware extensive (MX104 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                G3503             MX104
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               G3503
 Assembly ID:  0x0560            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX104
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 60 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 47 33 35 30 33 00 00 00 00 00 00 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 28   750-044219   CAAX5741          MX104
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044219        S/N:               CAAX5741
 Assembly ID:  0x0560            Assembly Version:  01.28
 Date:         03-27-2013        Assembly Flags:    0x00
 Version:      REV 28            CLEI Code:         PROTOXCLEI
 ID: MX104                       FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 08 00 b0 a8 6e a7 f8 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 60 01 1c 52 45 56 20 32 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 31 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 58 35 37 34 31 00 1b 03 07
  Address 0x30: dd ff ff ff ad 01 08 00 b0 a8 6e a7 f8 00 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 47 33 35 30 33 00 00 00 00 00 00 00
```


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```
PEM 0            REV 03   740-045933   1H072500016       AC Power Entry Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045933        S/N:               1H072500016
 Assembly ID:  0x0475            Assembly Version:  00.03
 Date:         12-14-2012        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         IPUPAJ9KAA
 ID: AC Power Entry Module       FRU Model Number:  PWR-AMX1100-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 02 02 00 ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 75 00 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 39 33 33 00 00
  Address 0x20: 31 48 30 37 32 35 30 30 30 31 36 00 00 0e 0c 07
  Address 0x30: dc 30 43 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 02 02 00 ff 01 49 50 55 50 41 4a 39 4b 41 41 50
  Address 0x50: 57 52 2d 41 4d 58 31 31 30 30 2d 41 43 2d 53 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 70 ff ff ff ff ff ff ff ff ff ff ff ff
PEM 1            REV 03   740-045932   1H073050017       DC Power Entry Module
Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045932        S/N:               1H073050017
 Assembly ID:  0x0476            Assembly Version:  00.03
 Date:         01-30-2013        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         IPUPAJ8KAA
 ID: DC Power Entry Module       FRU Model Number:  PWR-AMX1100-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 02 02 00 ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 76 00 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 39 33 32 00 00
  Address 0x20: 31 48 30 37 33 30 35 30 30 31 37 00 00 1e 01 07
  Address 0x30: dd 30 44 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 02 02 00 ff 01 49 50 55 50 41 4a 38 4b 41 41 50
  Address 0x50: 57 52 2d 41 4d 58 31 31 30 30 2d 44 43 2d 53 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 72 ff ff ff ff ff ff ff ff ff ff ff ff
Routing Engine 0 REV 20   750-044228   CAAY7935          RE-MX-104
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044228        S/N:               CAAY7935
 Assembly ID:  0x0b81            Assembly Version:  01.20
 Date:         03-18-2013        Assembly Flags:    0x00
 Version:      REV 20            CLEI Code:         PROTOXCLEI
 ID: RE-MX-104                   FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 00 08 b0 a8 6e a6 fc 10 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0b 81 01 14 52 45 56 20 32 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 32 38 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 59 37 39 33 35 00 12 03 07
  Address 0x30: dd ff ff ff ad 01 00 08 b0 a8 6e a6 fc 10 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  da0    7836 MB  ATP IG eUSB SSD                        Nand Flash 0
  usb0 (addr 1)  EHCI root hub 0       Freescale         uhub0
  usb0 (addr 2)  USB2513Bi  9491       SMSC              uhub1
  usb0 (addr 3)  ATP IG eUSB SSD 44801 ATP Electronics   umass0
Routing Engine 1 REV 13   750-044228   CAAM6380          RE-MX-104
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044228        S/N:               CAAM6380
```

```
 Assembly ID:  0x0b81            Assembly Version:  01.13
 Date:         09-17-2012        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         PROTOXCLEI
 ID: RE-MX-104                   FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 00 08 64 87 88 27 08 18 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0b 81 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 32 32 38 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 4d 36 33 38 30 00 11 09 07
  Address 0x30: dc ff ff ff ad 01 00 08 64 87 88 27 08 18 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  da0    7836 MB  ATP IG eUSB SSD                        Nand Flash 0
AFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 15   750-036132   CAAF7948          2xOC12/8xOC3 CC-CE
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-036132        S/N:               CAAF7948
 Assembly ID:  0x0a1a            Assembly Version:  01.15
 Date:         07-03-2012        Assembly Flags:    0x00
 Version:      REV 15            CLEI Code:         IP9IAM2DAA
 ID: 2xOC12/8xOC3 CC-CE          FRU Model Number:  MIC-3D-8OC3-2OC12-ATM
 Board Information Record:
  Address 0x00: 12 01 05 03 05 ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0a 1a 01 0f 52 45 56 20 31 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 36 31 33 32 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 46 37 39 34 38 00 03 07 07
  Address 0x30: dc ff ff ff 12 01 05 03 05 ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 39 49 41 4d 32 44 41 41 4d
  Address 0x50: 49 43 2d 33 44 2d 38 4f 43 33 2d 32 4f 43 31 32
  Address 0x60: 2d 41 54 4d 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff e3 c0 02 a3 9c 00 00 00 00 0a 60 00 00
    PIC 0                 BUILTIN      BUILTIN           2xOC12/8xOC3 CC-CE
      Xcvr 0     REV 01   740-011615   PCQ0U2J           SFP-IR
      Xcvr 1     REV 01   740-016068   PJL7A6G           SFP-SR
      Xcvr 2     REV 01   740-016068   PJL7A5J           SFP-SR
      Xcvr 3     REV 01   740-016065   PJN5HPZ           SFP-SR
      Xcvr 4     REV 01   740-029122   PKB38TL           SFP-LR
      Xcvr 5     REV 01   740-011787   P6A107G           SFP-LR
      Xcvr 6     REV 01   740-029122   PKB38TR           SFP-LR
      Xcvr 7     REV 01   740-011787   PBK0NK3           SFP-LR
  MIC 1
FPC 2                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0a60            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: 4x 10GE(LAN) SFP+
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 60 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 4d 58 43 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 4d 58 43 00 00 00 00 00
```


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```
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 02 a5 04 7f b0 02 ff 0a 1a 01 0f
    PIC 0                 BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
      Xcvr 0     REV 01   740-031980   B10F00465         SFP+-10G-SR
      Xcvr 1     REV 01   740-031980   B10F00461         SFP+-10G-SR
      Xcvr 2     REV 01   740-031980   B10G01545         SFP+-10G-SR
      Xcvr 3     REV 01   740-031980   B10G01385         SFP+-10G-SR
Fan Tray 0       REV 02   711-049570   CAAX6538          Fan Tray
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-049570        S/N:               CAAX6538
 Assembly ID:  0x0b82            Assembly Version:  01.02
 Date:         03-01-2013        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         PROTOXCLEI
 ID: Fan Tray                    FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 82 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 34 39 35 37 30 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 58 36 35 33 38 00 01 03 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware extensive (PTX10008 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DE487             JNP10008 [PTX10008 -
PILOT BUILD V1.1]
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               DE487
 Assembly ID:  0x0566            Assembly Version:  01.27
 Date:         08-08-2016        Assembly Flags:    0x00
                                 CLEI Code:         CMMUM00ARA
 ID: JNP10008                    FRU Model Number:  QFX10008-CHAS
 Board Information Record:
  Address 0x00: ad 01 08 00 30 b6 4f e9 74 c4 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 66 01 1b 00 45 56 20 32 37 00 00
  Address 0x10: 00 00 00 00 00 35 30 2d 30 35 34 30 39 37 00 00
  Address 0x20: 44 45 34 38 37 00 00 00 00 00 00 00 00 08 08 07
  Address 0x30: e0 ff ff ff ad 01 08 00 30 b6 4f e9 74 c4 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 4d 55 4d 30 30 41 52 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 43 48 41 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 63 44 45 34 38 37 00 00 00 00 00 00 00
Midplane         REV 27   750-054097   ACPD4307          Midplane 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-054097        S/N:               ACPD4307
 Assembly ID:  0x0be3            Assembly Version:  01.27
 Date:         08-08-2016        Assembly Flags:    0x00
 Version:      REV 27            CLEI Code:         CMMUM00ARA
 ID: QFX10008 Midplane           FRU Model Number:  QFX10008-CHAS
 Board Information Record:
```

```
  Address 0x00: ad 01 08 00 30 b6 4f e9 74 c4 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e3 01 1b 52 45 56 20 32 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 34 30 39 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 34 33 30 37 00 08 08 07
  Address 0x30: e0 ff ff ff ad 01 08 00 30 b6 4f e9 74 c4 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 4d 55 4d 30 30 41 52 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 43 48 41 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 63 44 45 34 38 37 00 00 00 00 00 00 00
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                       Virtio Block Disk
  vtbd1 15360 MB                                       Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
Routing Engine 1          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                       Virtio Block Disk
  vtbd1 15360 MB                                       Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
CB 0             REV 02   750-068820   ACNZ4440          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068820        S/N:               ACNZ4440
 Assembly ID:  0x0b9d            Assembly Version:  01.02
 Date:         06-13-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUCAH3CTB
 ID: Control Board               FRU Model Number:  QFX10000-RE
 Board Information Record:
  Address 0x00: ad 01 00 10 84 c1 c1 54 10 be ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9d 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 34 34 34 30 00 0d 06 07
  Address 0x30: e0 ff ff ff ad 01 00 10 84 c1 c1 54 10 be ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
CB 1             REV 02   750-068820   ACNZ8284          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068820        S/N:               ACNZ8284
 Assembly ID:  0x0b9d            Assembly Version:  01.02
 Date:         06-27-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUCAH3CTB
 ID: Control Board               FRU Model Number:  QFX10000-RE
 Board Information Record:
  Address 0x00: ad 01 00 10 84 c1 c1 e5 b1 46 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9d 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 38 32 38 34 00 1b 06 07
  Address 0x30: e0 ff ff ff ad 01 00 10 84 c1 c1 e5 b1 46 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
FPC 0             REV 36   750-051354   ACNP4679          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```


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```
P/N:          750-051354        S/N:               ACNP4679
Assembly ID:  0x0be7            Assembly Version:  01.36
Date:         11-11-2016        Assembly Flags:    0x00
Version:      REV 36            CLEI Code:         CMUIAM9BAA
ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 34 00 00
 Address 0x20: 53 2f 4e 20 41 43 4e 50 34 36 37 39 00 0b 0b 07
 Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
 Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
 CPU                     BUILTIN      BUILTIN           FPC CPU
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0xf020            Assembly Version:  02.17
Date:         04-19-2012        Assembly Flags:    0x00
Board Information Record:
 Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff f0 20 02 11 00 e0 3c fa 09 00 70 87
 Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 e0 3c fa
 Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
 Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
 Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
 PIC 0                   BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0xf050            Assembly Version:  02.17
Date:         04-19-2012        Assembly Flags:    0x00
Board Information Record:
 Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
 Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
 Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
 Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
 Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
   Xcvr 1       REV 01   740-058734   1ECQ113834D       QSFP-100GBASE-SR4
   Xcvr 5       REV 01   740-058734   1ECQ1137067       QSFP-100GBASE-SR4
   Xcvr 6       REV 01   740-054053   QF3205SD          QSFP+-4X10G-SR
   Xcvr 7       REV 01   740-058734   1ECQ11381MP       QSFP-100GBASE-SR4
   Xcvr 11      REV 01   740-061405   1ACQ110507K       QSFP-100GBASE-SR4
   Xcvr 13      REV 01   740-058734   1ECQ11390ZB       QSFP-100GBASE-SR4
   Xcvr 17      REV 01   740-058734   1ECQ11381M1       QSFP-100GBASE-SR4
   Xcvr 19      REV 01   740-058734   1ECQ11381JS       QSFP-100GBASE-SR4
   Xcvr 23      REV 01   740-058734   1ACQ112000E       QSFP-100GBASE-SR4
   Xcvr 25      REV 01   740-058734   1ECQ11381NT       QSFP-100GBASE-SR4
   Xcvr 28      REV 01   740-054053   QG1502WV          QSFP+-4X10G-SR
   Xcvr 29      REV 01   740-058734   1ACQ112000D       QSFP-100GBASE-SR4
```

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```
    Xcvr 33      REV 01   740-058734   1ACQ1134065       QSFP-100GBASE-SR4
    Xcvr 34      REV 01   740-067442   XV20L4L           QSFP+-40G-SR4
FPC 1            REV 33   750-051354   ACNX8831          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-051354        S/N:               ACNX8831
 Assembly ID:  0x0be7            Assembly Version:  01.33
 Date:         06-03-2016        Assembly Flags:    0x00
 Version:      REV 33            CLEI Code:         CMUIAM9BAA
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 21 52 45 56 20 33 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 34 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 58 38 38 33 31 00 03 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff fb ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 20 3e fa 09 00 10 8a
  Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 20 3e fa
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 5                NON-JNPR     37700171YY0084    QSFP-100GBASE-LR4
    Xcvr 25               NON-JNPR     GDA2017459        QSFP-100GBASE-LR4
    Xcvr 29               NON-JNPR     GDF2008750        QSFP-100GBASE-LR4
FPC 2             REV 32   750-051357   ACPB0341          LC1101 - 30C / 30Q / 96X

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-051357        S/N:               ACPB0341
```


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```
 Assembly ID:  0x0be8            Assembly Version:  01.32
 Date:         06-04-2016        Assembly Flags:    0x00
 Version:      REV 32            CLEI Code:         CMUIANABAA
 ID: ULC-30Q28                   FRU Model Number:  QFX10000-30C
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e8 01 20 52 45 56 20 33 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 42 30 33 34 31 00 04 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 30 43 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ef ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 00 67 00 0a 00 b0 8c
  Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 00 67 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                   BUILTIN      BUILTIN           30x100GE/30x40GE/96x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 de ad be ef de ad be ef de ad be ef
    Xcvr 0                NON-JNPR     37700170YZC305    QSFP-100GBASE-LR4
    Xcvr 4                NON-JNPR     37700170YZC306    QSFP-100GBASE-LR4
    Xcvr 9       REV 01   740-054053   QF36013S          QSFP+-4X10G-SR
    Xcvr 12      REV 01   740-067442   XV301AU           QSFP+-40G-SR4
    Xcvr 14      REV 01   740-043308   UWE2CG9           QSFP+-40G-LR4
    Xcvr 16      REV 01   740-043308   UWH141S           QSFP+-40G-LR4
    Xcvr 17      REV 01   740-058734   1ECQ11180VH       QSFP-100GBASE-SR4
    Xcvr 18      REV 01   740-054050   INFAJ0492237      QSFP+-4X10G-LR
    Xcvr 26      REV 01   740-058734   1ACQ111803N       QSFP-100GBASE-SR4
    Xcvr 27      REV 01   740-058734   1ACQ113405S       QSFP-100GBASE-SR4
FPC 3            REV 35   750-051357   ACPD2186          LC1101 - 30C / 30Q / 96X

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```

```
  P/N:          750-051357        S/N:               ACPD2186
  Assembly ID:  0x0be8            Assembly Version:  01.35
  Date:         09-21-2016        Assembly Flags:    0x00
  Version:      REV 35            CLEI Code:         CMUIANABAA
  ID: ULC-30Q28                   FRU Model Number:  QFX10000-30C
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b e8 01 23 52 45 56 20 33 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 31 33 35 37 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 44 32 31 38 36 00 15 09 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 33 30 43 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff
   CPU                     BUILTIN      BUILTIN           FPC CPU
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf020            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 20 02 11 00 80 70 fa 09 00 50 8f
   Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 80 70 fa
   Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
   PIC 0                   BUILTIN      BUILTIN           30x100GE/30x40GE/96x10GE

  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf050            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
   Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
   Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
     Xcvr 0       REV 01   740-061409   1GCQA1470A3       QSFP-100GBASE-LR4-T2
     Xcvr 1       REV 01   740-061409   1GCQA1470XC       QSFP-100GBASE-LR4-T2
     Xcvr 7                NON-JNPR     FG4550500008      QSFP-100G-CWDM4
     Xcvr 24      REV 01   740-058734   1ECQ11381LX       QSFP-100GBASE-SR4
     Xcvr 29      REV 01   740-043308   UWE0UYS           QSFP+-40G-LR4
FPC 5             REV 08   750-068822   ACPF0057          LC1102 - 12C / 36Q /
144X
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-068822        S/N:               ACPF0057
  Assembly ID:  0x0be7            Assembly Version:  01.08
  Date:         09-01-2016        Assembly Flags:    0x00
  Version:      REV 08            CLEI Code:         CMUIAM9BAB
```


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```
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 46 30 30 35 37 00 01 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 00 3d fa 09 00 90 94
  Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 00 3d fa
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                   BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
FPC 6            REV 08   750-068822   ACPE9951          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068822        S/N:               ACPE9951
 Assembly ID:  0x0be7            Assembly Version:  01.08
 Date:         09-01-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         CMUIAM9BAB
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 39 39 35 31 00 01 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 42 51
```

```
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 3e fa 09 00 30 97
  Address 0x10: 09 38 bb ff 42 55 49 4c 54 49 4e 00 00 c0 3e fa
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN           12x10GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 1       REV 01   740-054053   QF3208LG          QSFP+-4X10G-SR
    Xcvr 7       REV 01   740-067442   XV20LGN           QSFP+-40G-SR4
    Xcvr 8       REV 01   740-067442   XV20VMV           QSFP+-40G-SR4
    Xcvr 9       REV 01   740-067442   XV20KCN           QSFP+-40G-SR4
    Xcvr 10      REV 01   740-067442   XU504QD           QSFP+-40G-SR4
    Xcvr 11      REV 01   740-067442   XU504X7           QSFP+-40G-SR4
    Xcvr 12      REV 01   740-067442   XU504W8           QSFP+-40G-SR4
    Xcvr 16      REV 01   740-032986   QF4301JP          QSFP+-40G-SR4
    Xcvr 17      REV 01   740-032986   QF4303AE          QSFP+-40G-SR4
    Xcvr 18      REV 01   740-054050   INFAJ0492400      QSFP+-4X10G-LR
    Xcvr 19      REV 01   740-054050   INFAJ0492142      QSFP+-4X10G-LR
    Xcvr 24      REV 01   740-032986   QF4301KB          QSFP+-40G-SR4
    Xcvr 25      REV 01   740-032986   QF4303YP          QSFP+-40G-SR4
    Xcvr 30      REV 01   740-067442   XV300ZX           QSFP+-40G-SR4
    Xcvr 31      REV 01   740-043308   UWH2KBW           QSFP+-40G-LR4
    Xcvr 34      REV 01   740-054053   QG1501YU          QSFP+-4X10G-SR
FPD Board        REV 07   711-054687   ACPC7142          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-054687        S/N:               ACPC7142
 Assembly ID:  0x0bf2            Assembly Version:  01.07
 Date:         07-22-2016        Assembly Flags:    0x00
 Version:      REV 07
 ID: QFX10000 FPD
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```


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```
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 0b f2 01 07 52 45 56 20 30 37 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 35 34 36 38 37 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 43 37 31 34 32 00 16 07 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 0   REV 02   740-049388   1EDL62102N9       Power Supply AC
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          740-049388        S/N:               1EDL62102N9
  Assembly ID:  0x0483            Assembly Version:  01.02
  Date:         05-25-2016        Assembly Flags:    0x00
  Version:      REV 02            CLEI Code:         CMUPADNBAA
  ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
   Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
   Address 0x20: 31 45 44 4c 36 32 31 30 32 4e 39 00 00 19 05 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
   Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 1   REV 02   740-049388   1EDL60300KX       Power Supply AC
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          740-049388        S/N:               1EDL60300KX
  Assembly ID:  0x0483            Assembly Version:  01.02
  Date:         01-20-2016        Assembly Flags:    0x00
  Version:      REV 02            CLEI Code:         CMUPADNBAA
  ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
   Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
   Address 0x20: 31 45 44 4c 36 30 33 30 30 4b 58 00 00 14 01 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
   Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 2   REV 02   740-049388   1EDL60300DL       Power Supply AC
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          740-049388        S/N:               1EDL60300DL
  Assembly ID:  0x0483            Assembly Version:  01.02
  Date:         01-20-2016        Assembly Flags:    0x00
  Version:      REV 02            CLEI Code:         CMUPADNBAA
  ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
   Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
   Address 0x20: 31 45 44 4c 36 30 33 30 30 44 4c 00 00 14 01 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
```

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```
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 3   REV 02   740-049388   1EDL61701BT       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL61701BT
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         05-01-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 31 37 30 31 42 54 00 00 01 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 4   REV 02   740-049388   1EDL62102P7       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL62102P7
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         05-25-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 31 30 32 50 37 00 00 19 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 5   REV 02   740-049388   1EDL62102PP       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL62102PP
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         05-25-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 31 30 32 50 50 00 00 19 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
FTC 0            REV 14   750-050108   ACPE4038          Fan Controller 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050108        S/N:               ACPE4038
 Assembly ID:  0x0bee            Assembly Version:  01.14
 Date:         09-27-2016        Assembly Flags:    0x00
```


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```
 Version:      REV 14            CLEI Code:         CMUCAHZCAA
 ID: QFX10000 FTC                FRU Model Number:  QFX10008-FAN-CTRL
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ee 01 0e 52 45 56 20 31 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 31 30 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 34 30 33 38 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 5a 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 98 ff ff ff ff ff ff ff ff ff ff ff ff
FTC 1            REV 14   750-050108   ACPE4032          Fan Controller 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050108        S/N:               ACPE4032
 Assembly ID:  0x0bee            Assembly Version:  01.14
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 14            CLEI Code:         CMUCAHZCAA
 ID: QFX10000 FTC                FRU Model Number:  QFX10008-FAN-CTRL
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ee 01 0e 52 45 56 20 31 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 31 30 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 34 30 33 32 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 5a 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 44 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 98 ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 0       REV 09   760-054372   ACPD6799          Fan Tray 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-054372        S/N:               ACPD6799
 Assembly ID:  0x0bf0            Assembly Version:  01.09
 Date:         09-28-2016        Assembly Flags:    0x00
 Version:      REV 09            CLEI Code:         CMUCAHYCAA
 ID: QFX10008 FHB                FRU Model Number:  QFX10008-FAN
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f0 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 34 33 37 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 36 37 39 39 00 1c 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 59 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1       REV 09   760-054372   ACNZ3584          Fan Tray 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-054372        S/N:               ACNZ3584
 Assembly ID:  0x0bf0            Assembly Version:  01.09
 Date:         08-30-2016        Assembly Flags:    0x00
 Version:      REV 09            CLEI Code:         CMUCAHYCAA
 ID: QFX10008 FHB                FRU Model Number:  QFX10008-FAN
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f0 01 09 52 45 56 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 34 33 37 32 00 00
```

```
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 33 35 38 34 00 1e 08 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 59 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f1 ff ff ff ff ff ff ff ff ff ff ff ff
SIB 0            REV 24   750-050058   ACPD4587          Switch Fabric 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050058        S/N:               ACPD4587
 Assembly ID:  0x0bec            Assembly Version:  01.24
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 24            CLEI Code:         CMUCAH0CAA
 ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 34 35 38 37 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 1            REV 24   750-050058   ACNZ0635          Switch Fabric 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050058        S/N:               ACNZ0635
 Assembly ID:  0x0bec            Assembly Version:  01.24
 Date:         06-06-2016        Assembly Flags:    0x00
 Version:      REV 24            CLEI Code:         CMUCAH0CAA
 ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 36 33 35 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 2            REV 24   750-050058   ACPD4908          Switch Fabric 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050058        S/N:               ACPD4908
 Assembly ID:  0x0bec            Assembly Version:  01.24
 Date:         07-12-2016        Assembly Flags:    0x00
 Version:      REV 24            CLEI Code:         CMUCAH0CAA
 ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 34 39 30 38 00 0c 07 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 3            REV 24   750-050058   ACNZ0617          Switch Fabric 8
```


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```
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050058        S/N:               ACNZ0617
 Assembly ID:  0x0bec            Assembly Version:  01.24
 Date:         06-07-2016        Assembly Flags:    0x00
 Version:      REV 24            CLEI Code:         CMUCAH0CAA
 ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 36 31 37 00 07 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 4            REV 24   750-050058   ACNZ0527          Switch Fabric 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050058        S/N:               ACNZ0527
 Assembly ID:  0x0bec            Assembly Version:  01.24
 Date:         06-06-2016        Assembly Flags:    0x00
 Version:      REV 24            CLEI Code:         CMUCAH0CAA
 ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 18 52 45 56 20 32 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 5a 30 35 32 37 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d1 00 00 00 00 00 00 00 00 00 00 00 00
SIB 5            REV 23   750-050058   ACNX6980          Switch Fabric 8
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050058        S/N:               ACNX6980
 Assembly ID:  0x0bec            Assembly Version:  01.23
 Date:         05-16-2016        Assembly Flags:    0x00
 Version:      REV 23            CLEI Code:         CMUCAH0CAA
 ID: QFX10008 SIB                FRU Model Number:  QFX10008-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ec 01 17 52 45 56 20 32 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 35 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 58 36 39 38 30 00 10 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 30 43 41 41 51
  Address 0x50: 46 58 31 30 30 30 38 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ce 00 00 00 00 00 00 00 00 00 00 00 00
```

show chassis hardware extensive (PTX10016 Router)

```
user@host> show chassis hardware extensive

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DH995             JNP10016 [PTX10016]
```

```
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               DH995
 Assembly ID:  0x0566            Assembly Version:  01.22
 Date:         02-16-2017        Assembly Flags:    0x00
                                 CLEI Code:         CMMUN00ARA
 ID: JNP10016                    FRU Model Number:  QFX10016-CHAS
 Board Information Record:
  Address 0x00: ad 01 10 00 44 aa 50 ab 1b b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 66 01 16 00 45 56 20 32 32 00 00
  Address 0x10: 00 00 00 00 00 35 30 2d 30 35 36 35 35 35 00 00
  Address 0x20: 44 48 39 39 35 00 00 00 00 00 00 00 00 10 02 07
  Address 0x30: e1 ff ff ff ad 01 10 00 44 aa 50 ab 1b b6 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 4d 55 4e 30 30 41 52 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 43 48 41 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 32 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 51 44 48 39 39 35 00 00 00 00 00 00 00
Midplane         REV 22   750-056555   ACPM7810          Midplane 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-056555        S/N:               ACPM7810
 Assembly ID:  0x0be4            Assembly Version:  01.22
 Date:         02-16-2017        Assembly Flags:    0x00
 Version:      REV 22            CLEI Code:         CMMUN00ARA
 ID: QFX10016 Midplane           FRU Model Number:  QFX10016-CHAS
 Board Information Record:
  Address 0x00: ad 01 10 00 44 aa 50 ab 1b b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e4 01 16 52 45 56 20 32 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 36 35 35 35 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4d 37 38 31 30 00 10 02 07
  Address 0x30: e1 ff ff ff ad 01 10 00 44 aa 50 ab 1b b6 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 4d 55 4e 30 30 41 52 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 43 48 41 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 32 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 51 44 48 39 39 35 00 00 00 00 00 00 00
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                       Virtio Block Disk
  vtbd1 15360 MB                                       Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
Routing Engine 1          BUILTIN      BUILTIN           RE-PTX-2X00x4
  vtbd0 15360 MB                                       Virtio Block Disk
  vtbd1 15360 MB                                       Virtio Block Disk
  ada0    128 MB  QEMU                 QM00002           Virtio Block Disk
  usb0 (addr 0.1) EHCI root HUB 0      Intel             uhub0
  usb1 (addr 0.2) product 0x0020 32    vendor 0x8087     uhub1
CB 0             REV 03   750-068820   ACPL7238          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068820        S/N:               ACPL7238
 Assembly ID:  0x0b9d            Assembly Version:  01.03
 Date:         03-15-2017        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         CMUCAH3CTB
 ID: Control Board               FRU Model Number:  QFX10000-RE
 Board Information Record:
  Address 0x00: ad 01 00 10 e8 b6 c2 46 aa 29 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9d 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 37 32 33 38 00 0f 03 07
  Address 0x30: e1 ff ff ff ad 01 00 10 e8 b6 c2 46 aa 29 ff ff
```


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```
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
CB 1             REV 03   750-068820   ACPL7298          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068820        S/N:               ACPL7298
 Assembly ID:  0x0b9d            Assembly Version:  01.03
 Date:         03-15-2017        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         CMUCAH3CTB
 ID: Control Board               FRU Model Number:  QFX10000-RE
 Board Information Record:
  Address 0x00: ad 01 00 10 e8 b6 c2 46 99 b9 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9d 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 37 32 39 38 00 0f 03 07
  Address 0x30: e1 ff ff ff ad 01 00 10 e8 b6 c2 46 99 b9 ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 33 43 54 42 51
  Address 0x50: 46 58 31 30 30 30 30 2d 52 45 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff db ff ff ff ff ff ff ff ff ff ff ff ff
FPC 1            REV 36   750-077140   ACNP4590          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-077140        S/N:               ACNP4590
 Assembly ID:  0x0be7            Assembly Version:  01.36
 Date:         10-17-2016        Assembly Flags:    0x00
 Version:      REV 36            CLEI Code:         CMUIAM9BAA
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 50 34 35 39 30 00 11 0a 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                    BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 40 36 bd 09 40 25 32
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 40 36 bd
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                 BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
```

```
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 0       REV 01   740-054053   QF3600AV          QSFP+-4X10G-SR
    Xcvr 35      REV 01   740-061405   1ACQ110507K       QSFP-100GBASE-SR4
FPC 3            REV 07   750-071975   CAHA2224          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-071975        S/N:               CAHA2224
 Assembly ID:  0x0be7            Assembly Version:  01.07
 Date:         01-17-2017        Assembly Flags:    0x00
 Version:      REV 07            CLEI Code:         PROTOXCLEI
 ID: ULC-36Q-12Q28               FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 07 52 45 56 20 30 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 31 39 37 35 00 00
  Address 0x20: 53 2f 4e 20 43 41 48 41 32 32 32 34 00 11 01 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                    BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 60 b6 be 09 c0 cf 38
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 60 b6 be
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
```


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```
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 0       REV 01   740-054053   QG1505YM          QSFP+-4X10G-SR
    Xcvr 11              NON-JNPR     GDA2017459        QSFP-100GBASE-LR4
    Xcvr 35              NON-JNPR     GDF2008750        QSFP-100GBASE-LR4
FPC 5            REV 13   750-068822   ACPD6501          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-068822        S/N:               ACPD6501
 Assembly ID:  0x0be7            Assembly Version:  01.13
 Date:         06-29-2017        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         CMUIAM9BAC
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 38 38 32 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 36 35 30 31 00 1d 06 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 43 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 43 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff fd ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 c6 bc 09 c0 ca 40
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 c0 c6 bc
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                   BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
```

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```
    Xcvr 1       REV 01   740-058734   1ECQ11381LA       QSFP-100GBASE-SR4
    Xcvr 2       REV 01   740-043308   UWH141S           QSFP+-40G-LR4
    Xcvr 3       REV 01   740-043308   UWE2CG9           QSFP+-40G-LR4
FPC 6            REV 37   750-077140   ACNS2793          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-077140        S/N:               ACNS2793
 Assembly ID:  0x0be7            Assembly Version:  01.37
 Date:         03-25-2017        Assembly Flags:    0x00
 Version:      REV 37            CLEI Code:         CMUIAM9BAA
 ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e7 01 25 52 45 56 20 33 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 4e 53 32 37 39 33 00 19 03 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 a0 e6 d4 09 00 bd 43
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 a0 e6 d4
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                  BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 0       REV 01   740-032986   QH0400VH          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-032986   QH0400VM          QSFP+-40G-SR4
    Xcvr 35      REV 01   740-058734   1ECQ11390ZB       QSFP-100GBASE-SR4
FPC 8            REV 36   750-077140   ACNP4625          LC1102 - 12C / 36Q /
144X
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```


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```
  P/N:          750-077140        S/N:               ACNP4625
  Assembly ID:  0x0be7            Assembly Version:  01.36
  Date:         10-17-2016        Assembly Flags:    0x00
  Version:      REV 36            CLEI Code:         CMUIAM9BAA
  ID: ULC-36Q-12Q28               FRU Model Number:  QFX10000-36Q
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b e7 01 24 52 45 56 20 33 36 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 37 37 31 34 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 4e 50 34 36 32 35 00 11 0a 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4d 39 42 41 41 51
   Address 0x50: 46 58 31 30 30 30 30 2d 33 36 51 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 42 45 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff fe ff ff ff ff ff ff ff ff ff ff ff ff
   CPU                     BUILTIN      BUILTIN           FPC CPU
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf020            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 20 02 11 00 c0 e6 d4 09 40 59 4a
   Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 c0 e6 d4
   Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
   PIC 0                  BUILTIN      BUILTIN           12x100GE/36x40GE/144x10GE

  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0xf050            Assembly Version:  02.17
  Date:         04-19-2012        Assembly Flags:    0x00
  Board Information Record:
   Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
   Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
   Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
   Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
     Xcvr 1       REV 01   740-058732   1AMQA14206D       QSFP-100GBASE-LR4
     Xcvr 10      REV 01   740-032986   QF4301KB          QSFP+-40G-SR4
     Xcvr 24      REV 01   740-054050   INFAJ0492244      QSFP+-4X10G-LR
  FPC 9           REV 35   750-071976   ACPD3055          LC1101 - 30C / 30Q / 96X

  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-071976        S/N:               ACPD3055
  Assembly ID:  0x0be8            Assembly Version:  01.35
  Date:         05-26-2016        Assembly Flags:    0x00
  Version:      REV 35            CLEI Code:         CMUIANABAA
  ID: ULC-30Q28                   FRU Model Number:  JNP10K-LC1101
  Board Information Record:
```

```
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b e8 01 23 52 45 56 20 33 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 37 31 39 37 36 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 44 33 30 35 35 00 1a 05 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 49 41 4e 41 42 41 41 4a
  Address 0x50: 4e 50 31 30 4b 2d 4c 43 31 31 30 31 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ef ff ff ff ff ff ff ff ff ff ff ff ff
  CPU                     BUILTIN      BUILTIN           FPC CPU
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf020            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 20 02 11 00 20 e7 d4 09 00 a6 4d
  Address 0x10: 09 e8 ba ff 42 55 49 4c 54 49 4e 00 00 20 e7 d4
  Address 0x20: 42 55 49 4c 54 49 4e 00 42 55 49 4c 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 50 36 36 36 36 00 00 00 00 00 00 00
  PIC 0                   BUILTIN      BUILTIN           30x100GE/30x40GE/96x10GE

 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0xf050            Assembly Version:  02.17
 Date:         04-19-2012        Assembly Flags:    0x00
 Board Information Record:
  Address 0x00: ad 01 01 04 ac 4b c8 1d f7 b6 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff f0 50 02 11 00 00 00 00 07 0a 20 45
  Address 0x10: 6c 61 70 73 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 13 04 07
  Address 0x30: dc ff ff ff ad 01 01 04 ac 4b c8 1d f7 b6 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 45 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f3 55 55 55 55 55 55 55 55 55 55 55 55
    Xcvr 0                NON-JNPR     INGBT7970007      QSFP-100GBASE-LR4
    Xcvr 1                NON-JNPR     UWQ24D9           QSFP-100GBASE-LR4
    Xcvr 2                NON-JNPR     INGBT7970011      QSFP-100GBASE-LR4
    Xcvr 3                NON-JNPR     UX60AF1           QSFP-100G-CWDM4
    Xcvr 4                NON-JNPR     UX408JJ           QSFP-100GBASE-LR4
    Xcvr 11      REV 01   740-058734   1ECQ113835F       QSFP-100GBASE-SR4
    Xcvr 18               NON-JNPR     Q7496             QSFP-100G-CWDM4
    Xcvr 29      REV 01   740-058734   1ECQ11380LZ       QSFP-100GBASE-SR4
Power Supply 0   REV 02   740-049388   1EDL625039E       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL625039E
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
```


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```
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 35 30 33 39 45 00 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 1   REV 02   740-049388   1EDL62503AD       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL62503AD
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 35 30 33 41 44 00 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 2   REV 02   740-049388   1EDL625039P       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL625039P
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 35 30 33 39 50 00 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 3   REV 02   740-049388   1EDL702004E       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL702004E
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         01-18-2017        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 37 30 32 30 30 34 45 00 00 12 01 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
```

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```
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 4   REV 02   740-049388   1EDL625039D       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL625039D
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         06-19-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 32 35 30 33 39 44 00 00 13 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 5   REV 02   740-049388   1EDL63706JD       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL63706JD
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         09-13-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 33 37 30 36 4a 44 00 00 0d 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
Power Supply 6   REV 02   740-049388   1EDL63706JH       Power Supply AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-049388        S/N:               1EDL63706JH
 Assembly ID:  0x0483            Assembly Version:  01.02
 Date:         09-13-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         CMUPADNBAA
 ID: QFX10000 AC                 FRU Model Number:  QFX10000-PWR-AC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 83 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 39 33 38 38 00 00
  Address 0x20: 31 45 44 4c 36 33 37 30 36 4a 48 00 00 0d 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 50 41 44 4e 42 41 41 51
  Address 0x50: 46 58 31 30 30 30 30 2d 50 57 52 2d 41 43 00 00
  Address 0x60: 00 00 00 00 00 00 01 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff dc ff ff ff ff ff ff ff ff ff ff ff ff
FTC 0            REV 10   750-050309   ACPM2918          Fan Controller 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050309        S/N:               ACPM2918
 Assembly ID:  0x0b9c            Assembly Version:  01.10
 Date:         01-13-2017        Assembly Flags:    0x00
 Version:      REV 10            CLEI Code:         CMUCAH5CAA
```


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```
 ID: QFX10016 FTC                FRU Model Number:  QFX10016-FAN-CTRL
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9c 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 33 30 39 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4d 32 39 31 38 00 0d 01 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 35 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 6f ff ff ff ff ff ff ff ff ff ff ff ff
FTC 1            REV 10   750-050309   ACPE8185          Fan Controller 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-050309        S/N:               ACPE8185
 Assembly ID:  0x0b9c            Assembly Version:  01.10
 Date:         12-22-2016        Assembly Flags:    0x00
 Version:      REV 10            CLEI Code:         CMUCAH5CAA
 ID: QFX10016 FTC                FRU Model Number:  QFX10016-FAN-CTRL
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 9c 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 33 30 39 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 45 38 31 38 35 00 16 0c 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 35 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 2d 43 54 52 4c
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 6f ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 0       REV 10   760-077141   ACPV7288          Fan Tray 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-077141        S/N:               ACPV7288
 Assembly ID:  0x0bf1            Assembly Version:  01.10
 Date:         06-07-2017        Assembly Flags:    0x00
 Version:      REV 10            CLEI Code:         CMUCAH4CAA
 ID: QFX10016 FHB                FRU Model Number:  JNP10016-FAN
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f1 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 37 37 31 34 31 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 56 37 32 38 38 00 07 06 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 34 43 41 41 4a
  Address 0x50: 4e 50 31 30 30 31 36 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 0d ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1       REV 10   760-057901   ACPL0546          Fan Tray 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-057901        S/N:               ACPL0546
 Assembly ID:  0x0bf1            Assembly Version:  01.10
 Date:         02-14-2017        Assembly Flags:    0x00
 Version:      REV 10            CLEI Code:         CMUCAH4CAA
 ID: QFX10016 FHB                FRU Model Number:  QFX10016-FAN
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b f1 01 0a 52 45 56 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 37 39 30 31 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 30 35 34 36 00 0e 02 07
```

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```
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 34 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 46 41 4e 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 0d ff ff ff ff ff ff ff ff ff ff ff ff
SIB 0            REV 15   750-058270   ACPM2804          Switch Fabric 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-058270        S/N:               ACPM2804
 Assembly ID:  0x0bed            Assembly Version:  01.15
 Date:         12-21-2016        Assembly Flags:    0x00
 Version:      REV 15            CLEI Code:         CMUCAH6CAA
 ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 30 34 00 15 0c 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 1            REV 15   750-058270   ACPM2808          Switch Fabric 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-058270        S/N:               ACPM2808
 Assembly ID:  0x0bed            Assembly Version:  01.15
 Date:         12-21-2016        Assembly Flags:    0x00
 Version:      REV 15            CLEI Code:         CMUCAH6CAA
 ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 30 38 00 15 0c 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 2            REV 15   750-058270   ACPL4450          Switch Fabric 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-058270        S/N:               ACPL4450
 Assembly ID:  0x0bed            Assembly Version:  01.15
 Date:         02-17-2017        Assembly Flags:    0x00
 Version:      REV 15            CLEI Code:         CMUCAH6CAA
 ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
  Address 0x20: 53 2f 4e 20 41 43 50 4c 34 34 35 30 00 11 02 07
  Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
  Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 3            REV 15   750-058270   ACPJ9834          Switch Fabric 16
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```


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```
  P/N:          750-058270        S/N:               ACPJ9834
  Assembly ID:  0x0bed            Assembly Version:  01.15
  Date:         12-17-2016        Assembly Flags:    0x00
  Version:      REV 15            CLEI Code:         CMUCAH6CAA
  ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 4a 39 38 33 34 00 11 0c 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
   Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 4             REV 15   750-058270   ACPM2814          Switch Fabric 16
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-058270        S/N:               ACPM2814
  Assembly ID:  0x0bed            Assembly Version:  01.15
  Date:         12-21-2016        Assembly Flags:    0x00
  Version:      REV 15            CLEI Code:         CMUCAH6CAA
  ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 4d 32 38 31 34 00 15 0c 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
   Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
SIB 5             REV 15   750-058270   ACPL4277          Switch Fabric 16
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-058270        S/N:               ACPL4277
  Assembly ID:  0x0bed            Assembly Version:  01.15
  Date:         02-17-2017        Assembly Flags:    0x00
  Version:      REV 15            CLEI Code:         CMUCAH6CAA
  ID: QFX10016 SIB                FRU Model Number:  QFX10016-SF
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b ed 01 0f 52 45 56 20 31 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 35 38 32 37 30 00 00
   Address 0x20: 53 2f 4e 20 41 43 50 4c 34 32 37 37 00 11 02 07
   Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4d 55 43 41 48 36 43 41 41 51
   Address 0x50: 46 58 31 30 30 31 36 2d 53 46 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 42 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff d3 00 00 00 00 00 00 00 00 00 00 00 00
FPD Board         REV 07   711-054687   ACPL1407          Front Panel Display
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-054687        S/N:               ACPL1407
  Assembly ID:  0x0bf2            Assembly Version:  01.07
  Date:         02-12-2017        Assembly Flags:    0x00
  Version:      REV 07
  ID: QFX10000 FPD
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
I2C Hex Data:
 Address 0x00: 7f b0 01 ff 0b f2 01 07 52 45 56 20 30 37 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 35 34 36 38 37 00 00
 Address 0x20: 53 2f 4e 20 41 43 50 4c 31 34 30 37 00 0c 02 07
 Address 0x30: e1 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware models (MX104 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 20   750-044219   CAAS5849          PROTO-ASSEMBLY
PEM 0            REV 01   740-045932   1H072400065
Routing Engine 0 REV 16   750-044228   CAAR5915          PROTO-ASSEMBLY
AFEB 0                    BUILTIN      BUILTIN
FPC 0                     BUILTIN      BUILTIN
FPC 1                     BUILTIN      BUILTIN
  MIC 0          REV 01   750-046905   CAAK7103          MIC-3D-20GE-SFP-EH
FPC 2                     BUILTIN      BUILTIN
Fan Tray         REV 02   711-049570   CAAX6538          PROTO-ASSEMBLY
```

show chassis hardware models (PTX10008 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 27   750-054097   ACPD4307          QFX10008-CHAS
CB 0             REV 02   750-068820   ACNZ4440          QFX10000-RE
CB 1             REV 02   750-068820   ACNZ8284          QFX10000-RE
FPC 0            REV 36   750-051354   ACNP4679          QFX10000-36Q
  PIC 0                   BUILTIN      BUILTIN
FPC 1            REV 33   750-051354   ACNX8831          QFX10000-36Q
  PIC 0                   BUILTIN      BUILTIN
FPC 2            REV 32   750-051357   ACPB0341          QFX10000-30C
  PIC 0                   BUILTIN      BUILTIN
FPC 3            REV 35   750-051357   ACPD2186          QFX10000-30C
  PIC 0                   BUILTIN      BUILTIN
FPC 5            REV 08   750-068822   ACPF0057          QFX10000-36Q
  PIC 0                   BUILTIN      BUILTIN
FPC 6            REV 08   750-068822   ACPE9951          QFX10000-36Q
  PIC 0                   BUILTIN      BUILTIN
FPD Board        REV 07   711-054687   ACPC7142
Power Supply 0   REV 02   740-049388   1EDL62102N9       QFX10000-PWR-AC
Power Supply 1   REV 02   740-049388   1EDL60300KX       QFX10000-PWR-AC
Power Supply 2   REV 02   740-049388   1EDL60300DL       QFX10000-PWR-AC
Power Supply 3   REV 02   740-049388   1EDL61701BT       QFX10000-PWR-AC
Power Supply 4   REV 02   740-049388   1EDL62102P7       QFX10000-PWR-AC
Power Supply 5   REV 02   740-049388   1EDL62102PP       QFX10000-PWR-AC
FTC 0            REV 14   750-050108   ACPE4038          QFX10008-FAN-CTRL
FTC 1            REV 14   750-050108   ACPE4032          QFX10008-FAN-CTRL
Fan Tray 0       REV 09   760-054372   ACPD6799          QFX10008-FAN
Fan Tray 1       REV 09   760-054372   ACNZ3584          QFX10008-FAN
SIB 0            REV 24   750-050058   ACPD4587          QFX10008-SF
SIB 1            REV 24   750-050058   ACNZ0635          QFX10008-SF
SIB 2            REV 24   750-050058   ACPD4908          QFX10008-SF
SIB 3            REV 24   750-050058   ACNZ0617          QFX10008-SF
```


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```
SIB 4            REV 24   750-050058   ACNZ0527          QFX10008-SF
SIB 5            REV 23   750-050058   ACNX6980          QFX10008-SF
```

show chassis hardware models (PTX10016 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 24   750-077138   ACPR5157          JNP10016
CB 0             REV 04   711-065897   CAHA9983          PROTO-ASSEMBLY
CB 1             REV 05   711-065897   CAJD3802          PROTO-ASSEMBLY
FPC 2
  PIC 0                   BUILTIN      BUILTIN
FPC 4            REV 35   750-071976   ACPD2168          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 5            REV 13   750-068822   ACPA0336          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 6            REV 41   750-071976   ACPF0695          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 7            REV 35   750-071976   ACPD2139          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 8            REV 35   750-071976   ACPD2142          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 9            REV 41   750-071976   ACPM5461          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 10           REV 35   750-071976   ACNS6795          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 11           REV 35   750-071976   ACPD1831          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 13           REV 41   750-071976   ACPS2075          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
FPC 15           REV 37   750-071976   ACPL7163          JNP10K-LC1101
  PIC 0                   BUILTIN      BUILTIN
Power Supply 0   REV 01   740-073147   1EDM6171155       JNP10K-PWR-DC
Power Supply 1   REV 01   740-073147   1EDM6281575       JNP10K-PWR-DC
Power Supply 2   REV 01   740-073147   1EDM6171044       JNP10K-PWR-DC
Power Supply 3   REV 01   740-073147   1EDM6281244       JNP10K-PWR-DC
Power Supply 4   REV 01   740-073147   1EDM6282093       JNP10K-PWR-DC
Power Supply 5   REV 01   740-073147   1EDM6281413       JNP10K-PWR-DC
Power Supply 6   REV 01   740-073147   1EDM6171071       JNP10K-PWR-DC
Power Supply 7   REV 01   740-073147   1EDM6170709       JNP10K-PWR-DC
Power Supply 8   REV 01   740-073147   1EDM6171169       JNP10K-PWR-DC
Power Supply 9   REV 01   740-073147   1EDM6170754       JNP10K-PWR-DC
Fan Tray 0                                              QFX5100-FAN-AFO
Fan Tray 1                                              QFX5100-FAN-AFO
SIB 0            REV 15   750-077140   ACPV3933          JNP10016-SF
SIB 1            REV 15   750-077140   ACPV3938          JNP10016-SF
SIB 2            REV 15   750-077140   ACPV3974          JNP10016-SF
SIB 3            REV 15   750-077140   ACPV3879          JNP10016-SF
SIB 4            REV 15   750-077140   ACPV3964          JNP10016-SF
SIB 5            REV 15   750-077140   ACPV3981          JNP10016-SF
FPD Board        REV 07   711-054687   ACPS8855
```

show chassis hardware clei-models (MX104 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 20   750-044219   PROTOXCLEI        PROTO-ASSEMBLY
PEM 0            REV 01   740-045932
```

```
Routing Engine 0 REV 16   750-044228   PROTOXCLEI        PROTO-ASSEMBLY
AFEB 0                    BUILTIN
FPC 0                     BUILTIN
FPC 1                     BUILTIN
  MIC 0          REV 01   750-046905   PROTOXCLEI        MIC-3D-20GE-SFP-EH
FPC 2                     BUILTIN
Fan Tray        REV 02    711-049570   CAAX6538          PROTO-ASSEMBLY
```

show chassis hardware (MX240 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10C7F7EAFC      MX240
Midplane         REV 01   710-021041   TR1502            MX240 Backplane
FPM Board        REV 01   710-017254   KD4017            Front Panel Display
PEM 0            Rev 02   740-017330   000332            PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   000226            PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 06   740-013063   1000703522        RE-S-2000
Routing Engine 1 REV 06   740-015113   1000687625        RE-S-1300
CB 0             REV 07   710-013385   KC9057            MX SCB
CB 1             REV 05   710-013385   JY4760            MX SCB
FPC 1            REV 01   750-021679   KC7340            DPCE 40x 1GE R
  CPU            REV 06   710-013713   KD4078            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   P9F18ME           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
FPC 2            REV 04   710-016669   JS4529            DPCE 40x 1GE R EQ
  CPU            REV 06   710-013713   KB3969            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3Y79           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3XU8           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3YG6           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3XUG           SFP-SX
    Xcvr 4       REV 01   740-011613   PBG3XTJ           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3ZUM           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3Y5H           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3UZT           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3US1           SFP-SX
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3YG7           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3XZ9           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3XTY           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3UZG           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3Y8W           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3YVX           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3YB3           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG43VQ           SFP-SX
Fan Tray 0       REV 01   710-021113   JS4642            MX240 Fan Tray
```

show chassis hardware detail (MX 240 Router with Routing Engine Displaying DIMM Information)

```
user@host> show chassis hardware detail
```


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```
Item             Version  Part number  Serial number     Description
Chassis                                JN11279B4AFC      MX240 Backplane
Midplane         REV 07   760-021404   TS2474            MX240 Backplane
FPM Board        REV 03   760-021392   XC2643            Front Panel Display
PEM 0            Rev 03   740-017343   QCS0908A068       DC Power Entry Module
Routing Engine 0 REV 01   740-031117   AARCHOO           RE-S-1800x4
  ad0    3764 MB  STEC M2+ CF 9.0.2    STIM2Q3209239145303 Removable Compact Flash

  ad1   28626 MB  WDC SSD-F0030S-5000  C933Z036237215548S00 Compact Flash
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         VL31B5263E-F8S DIE REV-0 PCB REV-0      MFR ID-ce80
  DIMM 1         VL31B5263E-F8S DIE REV-0 PCB REV-0      MFR ID-ce80
  DIMM 2         VL31B5263E-F8S DIE REV-0 PCB REV-0      MFR ID-ce80
  DIMM 3         SL31B5263E-F8S DIE REV-0 PCB REV-0      MFR ID-ce80
CB 0             REV 03   710-021523   XD7225            MX SCB
Fan Tray 0       REV 01   710-021113   WZ4986            MX240 Fan Tray
```

show chassis hardware (MX240 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10C7F7EAFC      MX240
Midplane         REV 01   710-021041   TR1502            MX240 Backplane
FPM Board        REV 01   710-017254   KD4017            Front Panel Display
PEM 0            Rev 02   740-017330   000332            PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   000226            PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 06   740-013063   1000703522        RE-S-2000
Routing Engine 1 REV 06   740-015113   1000687625        RE-S-1300
CB 0             REV 02   710-031391   YE8494            Enhanced MX SCB
CB 1             REV 05   710-031391   YOP5764           Enhanced MX SCB
FPC 1            REV 01   750-021679   KC7340            DPCE 40x 1GE R
  CPU            REV 06   710-013713   KD4078            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   P9F18ME           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
FPC 2            REV 04   710-016669   JS4529            DPCE 40x 1GE R EQ
  CPU            REV 06   710-013713   KB3969            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3Y79           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3XU8           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3YG6           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3XUG           SFP-SX
    Xcvr 4       REV 01   740-011613   PBG3XTJ           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3ZUM           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3Y5H           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3UZT           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3US1           SFP-SX
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
    Xcvr 0       REV 01   740-011613   PBG3YG7           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3XZ9           SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3XTY           SFP-SX
    Xcvr 3       REV 01   740-011613   PBG3UZG           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
```

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```
    Xcvr 0       REV 01   740-011613   PBG3Y8W          SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3YVX          SFP-SX
    Xcvr 2       REV 01   740-011613   PBG3YB3          SFP-SX
    Xcvr 3       REV 01   740-011613   PBG43VQ          SFP-SX
Fan Tray 0       REV 01   710-021113   JS4642           MX240 Fan Tray
```

show chassis hardware (MX480 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10C7F7FAFB      MX480
Midplane         REV 04   710-017414   TR2071            MX480 Midplane
FPM Board        REV 02   710-017254   KB8459            Front Panel Display
PEM 0            Rev 02   740-017330   QCS07519029       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   QCS07519041       PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 02   740-017330   QCS07519097       PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 07   740-013063   1000733381        RE-S-2000
Routing Engine 1 REV 07   740-013063   1000733540        RE-S-2000
CB 0             REV 07   710-013385   KA8022            MX SCB
CB 1             REV 07   710-013385   KA8303            MX SCB
FPC 0            REV 09   750-020452   KA8660            DPCE 40x 1GE X EQ
  CPU            REV 06   710-013713   KA8185            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
Fan Tray                                                 Left Fan Tray
```

show chassis hardware (MX480 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10C7F7FAFB      MX480
Midplane         REV 04   710-017414   TR2071            MX480 Midplane
FPM Board        REV 02   710-017254   KB8459            Front Panel Display
PEM 0            Rev 02   740-017330   QCS07519029       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 02   740-017330   QCS07519041       PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 02   740-017330   QCS07519097       PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 07   740-013063   1000733381        RE-S-2000
Routing Engine 1 REV 07   740-013063   1000733540        RE-S-2000
CB 0             REV 07   710-013385   KA8022            Enhanced MX SCB
CB 1             REV 07   710-013385   KA8303            Enhanced MX SCB
FPC 0            REV 09   750-020452   KA8660            DPCE 40x 1GE X EQ
  CPU            REV 06   710-013713   KA8185            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN) EQ
Fan Tray                                                 Left Fan Tray
```


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show chassis hardware (MX480 Routers with MPC5E and Built-In OTN PIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11C0338AFB      MX480
Midplane         REV 05   710-017414   ABAB8430          MX480 Midplane
FPM Board        REV 02   710-017254   ZS8005            Front Panel Display
PEM 0            Rev 05   740-029970   QCS1024U089       PS 1.4-2.52kW; 90-264V
AC in
PEM 1            Rev 10   740-029970   QCS1314U0FJ       PS 1.4-2.52kW; 90-264V
AC in
PEM 2            Rev 07   740-029970   QCS1121U076       PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116   9009092471        RE-S-1800x4
Routing Engine 1 REV 05   740-031116   9009097958        RE-S-1800x4
CB 0             REV 16   750-031391   CAAX0789          Enhanced MX SCB
CB 1             REV 16   750-031391   CAAX0856          Enhanced MX SCB
FPC 0            REV 32   750-028467   ABBP1782          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBP5410          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   983152A00038      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00211         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AQ72LPB           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AHN0WR5           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11J03627         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00300         SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ42WSS           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ43HGC           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   ANA0ND0           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   ANA0NGF           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   ANA0NG9           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   ANA0MP9           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQA06CG           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   19T511100493      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   APR040J           SFP+-10G-SR
FPC 1            REV 26   750-046005   CACN1894          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACN8698          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   163363A03046      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ40JS8           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   153363A00593      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ40JUJ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     UQC0B53           CFP2-100G-LR4-D
FPC 2            REV 26   750-046005   CACN1891          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACN8694          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0                NON-JNPR     URA012A           SFP+-10G-LR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     J13F47042         CFP2-100G-LR4-D
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   AJC0BM3           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   11T511100917      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     UQK07SU           CFP2-100G-LR4-D
```

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```
FPC 3            REV 03   750-045372   CAAD9425          MPCE Type 3 3D
CPU            REV 08   711-035209   CAAD9094          HMPC PMB 2G
  MIC 0          REV 14   750-033196   CAAW9204          1X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC034         CFP2-100G-SR10
  MIC 1          REV 19   750-033199   CAAJ1814          1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CFP
FPC 4            REV 21.0.11 750-045715 CAAY3568        MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 07   711-045719   CAAW7430          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   AP406NG           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AR41NLP           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11D05630         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
  WAN MEZZ       REV 12   750-049136   CACM6678          MPC5E 24XGE OTN Mezz
FPC 5            REV 11   750-045372   CABK7539          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABJ2466          HMPC PMB 2G
  MIC 0          REV 19   750-033199   CAAJ9719          1X100GE CFP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CFP
      Xcvr 0     REV 01   740-035329   UP1020P           CFP-100G-SR10
  MIC 1          REV 07   750-033196   YZ0797            1X100GE CXP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XC42FC022         CFP2-100G-SR10
Fan Tray                                                 Enhanced Left Fan Tray
```

show chassis hardware detail (MX480 Routers with MPC5E and Built-In OTN PIC)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN11C0338AFB      MX480
Midplane         REV 05   710-017414   ABAB8430          MX480 Midplane
FPM Board        REV 02   710-017254   ZS8005            Front Panel Display
PEM 0            Rev 05   740-029970   QCS1024U089       PS 1.4-2.52kW; 90-264V
AC in
PEM 1            Rev 10   740-029970   QCS1314U0FJ       PS 1.4-2.52kW; 90-264V
AC in
PEM 2            Rev 07   740-029970   QCS1121U076       PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116   9009092471        RE-S-1800x4
  ad0    3896 MB  VRFCF14096DIHK1      VM4096MB 6862     Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-478612-001127 Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 05   740-031116   9009097958        RE-S-1800x4
  ad0    3896 MB  VRFCF14096DIHK1      VM4096MB 6145     Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000273 Disk 1
CB 0             REV 16   750-031391   CAAX0789          Enhanced MX SCB
CB 1             REV 16   750-031391   CAAX0856          Enhanced MX SCB
FPC 0            REV 32   750-028467   ABBP1782          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBP5410          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   983152A00038      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00211         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AQ72LPB           SFP+-10G-SR
```


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```
    Xcvr 3       REV 01   740-031980   AHN0WR5          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11J03627        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00300        SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ42WSS          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ43HGC          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   ANA0ND0          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   ANA0NGF          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   ANA0NG9          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   ANA0MP9          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQA06CG          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   19T511100493     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   APR040J          SFP+-10G-SR
FPC 1            REV 26   750-046005   CACN1894         MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACN8698         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   163363A03046     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ40JS8          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
  PIC 2                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   153363A00593     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ40JUJ          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     UQC0B53          CFP2-100G-LR4-D
FPC 2            REV 26   750-046005   CACN1891         MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACN8694         RMPC PMB
PIC 0                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0                NON-JNPR     URA012A          SFP+-10G-LR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     J13F47042        CFP2-100G-LR4-D
  PIC 2                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   AJC0BM3          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   11T511100917     SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     UQK07SU          CFP2-100G-LR4-D
FPC 3            REV 03   750-045372   CAAD9425         MPCE Type 3 3D
  CPU            REV 08   711-035209   CAAD9094         HMPC PMB 2G
  MIC 0          REV 14   750-033196   CAAW9204         1X100GE CXP
    PIC 0                 BUILTIN      BUILTIN          1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC034        CFP2-100G-SR10
  MIC 1          REV 19   750-033199   CAAJ1814         1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN          1X100GE CFP
FPC 4            REV 21.0.11 750-045715 CAAY3568       MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 07   711-045719   CAAW7430         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          12X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   AP406NG          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AR41NLP          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11D05630        SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN          3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN          3X40GE QSFPP
  WAN MEZZ       REV 12   750-049136   CACM6678         MPC5E 24XGE OTN Mezz
FPC 5            REV 11   750-045372   CABK7539         MPCE Type 3 3D
  CPU            REV 08   711-035209   CABJ2466         HMPC PMB 2G
  MIC 0          REV 19   750-033199   CAAJ9719         1X100GE CFP
    PIC 0                 BUILTIN      BUILTIN          1X100GE CFP
      Xcvr 0     REV 01   740-035329   UP1020P          CFP-100G-SR10
  MIC 1          REV 07   750-033196   YZ0797           1X100GE CXP
    PIC 2                 BUILTIN      BUILTIN          1X100GE CXP
```

```
      Xcvr 0      REV 01   740-046563   XC42FC022          CFP2-100G-SR10
Fan Tray                                                  Enhanced Left Fan Tray
```

show chassis hardware extensive (MX480 Routers with MPC5E and Built-In OTN PIC)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11C0338AFB      MX480
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN11C0338AFB
 Assembly ID:  0x01fe            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x02
 ID: MX480
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 01 fe 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 43 30 33 33 38 41 46 42 02 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 05   710-017414   ABAB8430          MX480 Midplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-017414        S/N:               ABAB8430
 Assembly ID:  0x01fe            Assembly Version:  01.05
 Date:         12-13-2011        Assembly Flags:    0x00
 Version:      REV 05
 ID: MX480 Midplane              FRU Model Number:  CHAS-BP-MX480-S
 Board Information Record:
  Address 0x00: ad 01 08 00 00 23 9c fc 98 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 01 fe 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 31 37 34 31 34 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 38 34 33 30 00 0d 0c 07
  Address 0x30: db ff ff ff ad 01 08 00 00 23 9c fc 98 00 ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 48 41 53 2d 42 50 2d 4d 58 34 38 30 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 02   710-017254   ZS8005            Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-017254        S/N:               ZS8005
 Assembly ID:  0x01ff            Assembly Version:  01.02
 Date:         11-21-2011        Assembly Flags:    0x00
 Version:      REV 02
 ID: Front Panel Display         FRU Model Number:  CRAFT-MX480-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 01 ff 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 31 37 32 35 34 00 00
  Address 0x20: 53 2f 4e 20 5a 53 38 30 30 35 00 00 00 15 0b 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 52 41 46 54 2d 4d 58 34 38 30 2d 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
```


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```
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PEM 0            Rev 05   740-029970   QCS1024U089       PS 1.4-2.52kW; 90-264V
AC in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-029970        S/N:               QCS1024U089
 Assembly ID:  0x0432            Assembly Version:  01.05
 Date:         06-17-2010        Assembly Flags:    0x00
 Version:      Rev 05
 ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number:  PWR-MX480-2520-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 32 01 05 52 65 76 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
  Address 0x20: 51 43 53 31 30 32 34 55 30 38 39 00 00 11 06 07
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 1            Rev 10   740-029970   QCS1314U0FJ       PS 1.4-2.52kW; 90-264V
AC in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-029970        S/N:               QCS1314U0FJ
 Assembly ID:  0x0432            Assembly Version:  01.10
 Date:         04-04-2013        Assembly Flags:    0x00
 Version:      Rev 10
 ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number:  PWR-MX480-2520-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 32 01 0a 52 65 76 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
  Address 0x20: 51 43 53 31 33 31 34 55 30 46 4a 00 00 04 04 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 2            Rev 07   740-029970   QCS1121U076       PS 1.4-2.52kW; 90-264V
AC in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-029970        S/N:               QCS1121U076
 Assembly ID:  0x0432            Assembly Version:  01.07
 Date:         05-23-2011        Assembly Flags:    0x00
 Version:      Rev 07
 ID: PS 1.4-2.52kW; 90-264V AC in FRU Model Number:  PWR-MX480-2520-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 32 01 07 52 65 76 20 30 37 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 39 39 37 30 00 00
  Address 0x20: 51 43 53 31 31 32 31 55 30 37 36 00 00 17 05 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 34 38 30 2d 32 35 32 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 05   740-031116   9009092471        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-031116        S/N:               9009092471
```

```
 Assembly ID:  0x09c0            Assembly Version:  01.05
 Date:         11-01-2011        Assembly Flags:    0x00
 Version:      REV 05            CLEI Code:         COUCALDBAA
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 43 41 2d 34 32 46 42 23 23 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
  Address 0x20: 39 30 30 39 30 39 32 34 37 31 00 00 00 01 0b 07
  Address 0x30: db ff ff ff 54 32 30 32 37 43 41 2d 34 32 46 42
  Address 0x40: 23 23 23 00 01 43 4f 55 43 41 4c 44 42 41 41 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 4b ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3896 MB  VRFCF14096DIHK1      VM4096MB 6862     Compact Flash
  ad1   30533 MB  UGB94ARF32HOS3-KC    UNIGEN-478612-001127 Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BB2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 05   740-031116   9009097958        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-031116        S/N:               9009097958
 Assembly ID:  0x09c0            Assembly Version:  01.05
 Date:         02-06-2012        Assembly Flags:    0x00
 Version:      REV 05            CLEI Code:         COUCALDBAA
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 43 41 2d 34 32 46 42 23 23 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
  Address 0x20: 39 30 30 39 30 39 37 39 35 38 00 00 00 06 02 07
  Address 0x30: dc ff ff ff 54 32 30 32 37 43 41 2d 34 32 46 42
  Address 0x40: 23 23 23 00 01 43 4f 55 43 41 4c 44 42 41 41 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 4b ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3896 MB  VRFCF14096DIHK1      VM4096MB 6145     Compact Flash
  ad1   30533 MB  UGB94ARF32HOS3-KC    UNIGEN-499551-000273 Disk 1

...
```

show chassis hardware (MX960 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  MX960
Midplane         REV 01   710-013698   AA6082            MX960 Midplane
PIM              Rev 01   740-013110   000008            Power Inlet Module
PEM 2
PEM 3            Rev 01   740-013682   000038            PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 00   740-015113   1000617944        RE-S-1300
CB 0             REV 05   710-013725   JK6947            MX960 Test SCB
FPC 4            REV 01   710-013305   JM7617            MX960 Test DPC
  CPU
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
```


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```
  PIC 1                 BUILTIN      BUILTIN          10x 1GE
FPC 7           REV 01  710-013305   JL9634           MX960 Test DPC
  CPU
  PIC 0                 BUILTIN      BUILTIN          1x 10GE(LAN/WAN)
    Xcvr 0              NON-JNPR     MYBG65I82C       XFP-10G-SR
  PIC 1                 BUILTIN      BUILTIN          10x 1GE
    Xcvr 1      REV 01  740-011782   P7N0368          SFP-SX
    Xcvr 4      REV 01  740-011782   P8J1W27          SFP-SX
    Xcvr 6      REV 01  740-011782   P8J1VSD          SFP-SX
    Xcvr 9      REV 01  740-011782   P8J1W25          SFP-SX
Fan Tray 0
Fan Tray 1
```

show chassis hardware (MX960 Router with Bidirectional Optics)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN10BA5B9AFA      MX960
Midplane         REV 03   710-013698   TR0234            MX960 Backplane
FPM Board        REV 03   710-014974   JA0878            Front Panel Display
PDM             Rev 03   740-013110   QCS11135028       Power Distribution Module
PEM 0            Rev 03   740-013682   QCS11154036       PS 1.7kW; 200-240VAC in
PEM 1            Rev 03   740-013682   QCS11154010       PS 1.7kW; 200-240VAC in
PEM 2            Rev 03   740-013682   QCS11154022       PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 06   740-013063   1000691458        RE-S-2000
CB 0             REV 07   710-013385   KA2190            MX SCB
CB 1             REV 07   710-013385   KA0837            MX SCB
FPC 3            REV 02   750-018122   KB3890            DPCE 40x 1GE R
  CPU
FPC 4            REV 01   750-018122   KB3889            DPCE 40x 1GE R
  CPU            REV 06   710-013713   KB3976            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 1       REV 01   740-020426   4910549           SFP-1000BASE-BX40-D
    Xcvr 2       REV 01   740-020426   4910551           SFP-1000BASE-BX40-D
    Xcvr 5       REV 01   740-021340   77E245N00006      SFP-1000BASE-BX10-U
    Xcvr 6       REV 01   740-020425   4882821           SFP-1000BASE-BX40-U
    Xcvr 8       REV 01   740-020425   4882820           SFP-1000BASE-BX40-U
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-020465   77E555N00894      SFP-1000BASE-BX10-D
    Xcvr 1       REV 01   740-020465   75E467X00818      SFP-1000BASE-BX10-D
    Xcvr 2       REV 01   740-020465   75E467X00573      SFP-1000BASE-BX10-D
    Xcvr 3       REV 01   740-020465   4888227           SFP-1000BASE-BX10-D
    Xcvr 4       REV 01   740-020465   4888241           SFP-1000BASE-BX10-D
    Xcvr 5       REV 01   740-021340   77E245N00005      SFP-1000BASE-BX10-U
    Xcvr 6       REV 01   740-021340   76E245X00487      SFP-1000BASE-BX10-U
    Xcvr 7       REV 01   740-021341   5255889           SFP-1000BASE-BX10-U
    Xcvr 8       REV 01   740-021341   5255887           SFP-1000BASE-BX10-U
    Xcvr 9       REV 01   740-021340   77E245N00004      SFP-1000BASE-BX10-U
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-020424   5007582           SFP-1000BASE-BX10-D
    Xcvr 1       REV 01   740-020424   4888187           SFP-1000BASE-BX10-D
    Xcvr 2       REV 01   740-020424   4656500           SFP-1000BASE-BX10-D
    Xcvr 5       REV 01   740-021341   5255886           SFP-1000BASE-BX10-U
    Xcvr 7       REV 01   740-021340   77E245N00003      SFP-1000BASE-BX10-U
    Xcvr 8       REV 01   740-021341   5255888           SFP-1000BASE-BX10-U
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-017726   74S184H30341      SFP-EX
    Xcvr 1       REV 01   740-017726   4814061           SFP-EX
    Xcvr 5       REV 01   740-017726   6ZS184H31108      SFP-EX
    Xcvr 9       REV 01   740-021340   76E245X00486      SFP-1000BASE-BX10-U
```

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```
Fan Tray 0
Fan Tray 1       REV 03   740-014971   TP0850           Fan Tray
```

show chassis hardware (MX960 Router with Enhanced MX SCB)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1096805AFA      MX960
Midplane         REV 03   710-013698   TR0183            MX960 Backplane
Fan Extender     REV 02   710-018051   JY5227            Extended Cable Manager
FPM Board        REV 03   710-014974   JZ6876            Front Panel Display
PDM             Rev 03   740-013110   QCS11035023       Power Distribution Module
PEM 1            Rev 03   740-013682   QCS1109400L       PS 1.7kW; 200-240VAC in
PEM 2            Rev 03   740-013682   QCS11094015       PS 1.7kW; 200-240VAC in
PEM 3            Rev 03   740-013682   QCS11094012       PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 06   740-013063   1000687969        RE-S-2000
Routing Engine 1 REV 06   740-013063   1000687955        RE-S-2000
CB 0             REV 11   750-031391   YZ6072            Enhanced MX SCB
CB 1             REV 11   750-031391   YZ6068            Enhanced MX SCB
CB 2             REV 11   750-031391   YZ6081            Enhanced MX SCB
FPC 0            REV 01   750-018122   KA5576            DPCE 40x 1GE R
  CPU            REV 06   710-013713   KB3961            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   P9F18GF           SFP-SX
    Xcvr 2       REV 01   740-011782   P9M0TL9           SFP-SX
    Xcvr 7       REV 01   740-011782   P9P0XXH           SFP-SX
    Xcvr 9       REV 01   740-011782   P9M0TN1           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   PAJ4UHC           SFP-SX
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011613   PFF2CD0           SFP-SX
    Xcvr 1       REV 01   740-011613   PBG3ZUT           SFP-SX
    Xcvr 2       REV 01   740-011613   PFF2DDV           SFP-SX
    Xcvr 5       REV 01   740-011613   P8E2SST           SFP-SX
    Xcvr 9       REV 01   740-011782   PB8329N           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-026192   1U0201084503342   SFP-100BASE-BX10-U
    Xcvr 1       REV 01   740-026193   1U1201084503313   SFP-100BASE-BX10-D
    Xcvr 2       REV 01   740-011613   PAJ4Y5B           SFP-SX
    Xcvr 6       REV 01   740-011782   P9M0U3M           SFP-SX
    Xcvr 7       REV 01   740-011782   P9M0TLA           SFP-SX
FPC 1            REV 16   750-031089   YL0719            MPC Type 2 3D
  CPU            REV 06   711-030884   YL1463            MPC PMB 2G
  MIC 0          REV 07   750-028387   JR6500            3D 4x 10GE  XFP
    PIC 0                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0     REV 01   740-014279   733019A00154      XFP-10G-LR
      Xcvr 1     REV 02   740-014289   T09F55034         XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0     REV 01   740-014279   913019B00791      XFP-10G-LR
      Xcvr 1     REV 01   740-014289   98S803A90384      XFP-10G-SR
  MIC 1          REV 24   750-028387   YJ3950            3D 4x 10GE  XFP
    PIC 2                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0     REV 02   740-014279   T10B36134         XFP-10G-LR
      Xcvr 1     REV 01   740-014289   T07M86354         XFP-10G-SR
    PIC 3                 BUILTIN      BUILTIN           2x 10GE  XFP
FPC 2            REV 08   710-014219   JY9654            DPCE 4x 10GE R
  CPU            REV 06   710-013713   JZ6549            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
  PIC 1                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
  PIC 2                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
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    Xcvr 0       REV 03   740-011571   C931BK028         XFP-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
FPC 3            REV 10   750-024199   XJ6692            MX FPC Type 3
  CPU            REV 03   710-022351   XF5182            DPC PMB
  PIC 0          REV 17   750-009553   RJ2945            4x OC-48 SONET
    Xcvr 1       REV 01   740-011785   PCP3YLL           SFP-SR
    Xcvr 3       REV 01   740-011785   PDS0MRY           SFP-SR
  PIC 1          REV 32   750-003700   DP2113            1x OC-192 12xMM VSR
FPC 5            REV 25   750-028467   YM8256            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   YL3029            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 1       REV 01   740-031980   AHN0X1Z           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
FPC 7            REV 02   750-031092   JR6658            MPC Type 1 3D Q
  CPU            REV 01   711-030884   JZ9038            MPC PMB 2G
  MIC 0          REV 08   750-028392   JZ8737            3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011782   PBE2C6Y           SFP-SX
      Xcvr 2              NON-JNPR     U8105N8           SFP-SX
      Xcvr 4     REV 01   740-011613   PFM18EF           SFP-SX
      Xcvr 7     REV 01   740-011613   PFF2AM8           SFP-SX
      Xcvr 8     REV 01   740-011613   PFF2CT6           SFP-SX
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011782   PB82VHH           SFP-SX
      Xcvr 1     REV 01   740-011613   PFF2CSW           SFP-SX
      Xcvr 9     REV 01   740-011613   PFF2BY0           SFP-SX
  QXM 0          REV 04   711-028408   JR6372            MPC QXM
FPC 8            REV 05   750-024387   JW9754            MX FPC Type 2
  CPU            REV 03   710-022351   KF1651            DPC PMB
  PIC 0          REV 08   750-014730   DM3664            4x OC-3 1x OC-12 SFP
    Xcvr 0       REV 01   740-016065   81S290N00077      SFP-SR
    Xcvr 1                NON-JNPR     2191844           SFP-SR
    Xcvr 2       REV 01   740-011618   PD81EE5           SFP-IR
  PIC 1          REV 08   750-014637   DM3671            4x OC-12-3 SFP
    Xcvr 0       REV 01   740-011785   PCK3UNK           SFP-SR
    Xcvr 3       REV 01   740-011785   PDS0MPZ           SFP-SR
FPC 10           REV 04   710-013699   JY4654            DPCE 40x 1GE R
  CPU            REV 05   710-013713   JS9717            DPC PMB
  PIC 0                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 5       REV 01   740-011782   PAR1L72           SFP-SX
    Xcvr 6       REV 01   740-011782   P8N1YQ4           SFP-SX
  PIC 1                   BUILTIN      BUILTIN           10x 1GE(LAN)
  PIC 2                   BUILTIN      BUILTIN           10x 1GE(LAN)
    Xcvr 0       REV 01   740-011782   P8Q2AVL           SFP-SX
    Xcvr 5       REV 01   740-011782   PAR1L7B           SFP-SX
    Xcvr 6       REV 01   740-011782   PAR1L2J           SFP-SX
    Xcvr 8       REV 01   740-011782   P8N1YMY           SFP-SX
  PIC 3                   BUILTIN      BUILTIN           10x 1GE(LAN)
Fan Tray 0       REV 03   740-014971   TP0567            Fan Tray
Fan Tray 1       REV 03   740-014971   TP0702            Fan Tray
```

show chassis hardware models (MX960 Router with Enhanced MX SCB)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 03   710-013698   TR0183            CHAS-BP-MX960-S
Fan Extender     REV 02   710-018051   JY5227            ECM-MX960
FPM Board        REV 03   710-014974   JZ6876            CRAFT-MX960-S
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Routing Engine 0 REV 06   740-013063   1000687969        RE-S-2000-4096-S
Routing Engine 1 REV 06   740-013063   1000687955        RE-S-2000-4096-S
CB 0             REV 11   750-031391   YZ6072            SCBE-MX-S
CB 1             REV 11   750-031391   YZ6068            SCBE-MX-S
CB 2             REV 11   750-031391   YZ6081            SCBE-MX-S
FPC 0            REV 01   750-018122   KA5576            DPCE-R-40GE-SFP
FPC 1            REV 16   750-031089   YL0719            MX-MPC2-3D
  MIC 0          REV 07   750-028387   JR6500            MIC-3D-4XGE-XFP
  MIC 1          REV 24   750-028387   YJ3950            MIC-3D-4XGE-XFP
FPC 2            REV 08   710-014219   JY9654            DPC-R-4XGE-XFP
FPC 3            REV 10   750-024199   XJ6692            MX-FPC3
  PIC 0          REV 17   750-009553   RJ2945            PC-4OC48-SON-SFP
  PIC 1          REV 32   750-003700   DP2113            PC-1OC192-SON-VSR
FPC 5            REV 25   750-028467   YM8256            MPC-3D-16XGE-SFPP
FPC 7            REV 02   750-031092   JR6658            MX-MPC1-3D-Q
  MIC 0          REV 08   750-028392   JZ8737            MIC-3D-20GE-SFP
FPC 8            REV 05   750-024387   JW9754            MX-FPC2
  PIC 0          REV 08   750-014730   DM3664            PB-4OC3-1OC12-SON2-SFP
  PIC 1          REV 08   750-014637   DM3671            PB-4OC3-4OC12-SON-SFP
FPC 10           REV 04   710-013699   JY4654            DPC-R-40GE-SFP
Fan Tray 0       REV 03   740-014971   TP0567            FFANTRAY-MX960-S
Fan Tray 1       REV 03   740-014971   TP0702            FFANTRAY-MX960-S
```

show chassis hardware (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1214852AFA      MX960
Midplane         REV 01   710-030012   ACAX3674          MX960 Backplane
FPM Board        REV 03   710-014974   CAAZ9326          Front Panel Display
PDM             Rev 03   740-013110   QCS17025017       Power Distribution Module
PEM 0            Rev 10   740-027760   QCS1702N062       PS 4.1kW; 200-240V AC
in
PEM 1            Rev 04   740-027760   QCS1422N02C       PS 4.1kW; 200-240V AC
in
PEM 2            Rev 09   740-027760   QCS1614N01X       PS 4.1kW; 200-240V AC
in
Routing Engine 0 REV 08   740-031116   9009131803        RE-S-1800x4
Routing Engine 1 REV 08   740-031116   9009124913        RE-S-1800x4
CB 0             REV 18   750-031391   CABF0579          Enhanced MX SCB
CB 1             REV 16   750-031391   CAAZ2471          Enhanced MX SCB
CB 2             REV 16   750-031391   CAAW9595          Enhanced MX SCB
FPC 0            REV 18   750-046005   CACE6574          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8908          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA0DYT           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MS7           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-046563   XD16FC03Z         CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   ANA0NAJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRQ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-049775   J13K72993         CFP2-100G-LR4
FPC 1            REV 11   750-045372   CABK8154          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABE7370          HMPC PMB 2G
  MIC 0          REV 07   750-033307   CABD5255          10X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           10X10GE SFPP
      Xcvr 0     REV 01   740-021308   AQ50319           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQ5035V           SFP+-10G-SR
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      Xcvr 2      REV 01   740-021308   AQ502XJ          SFP+-10G-SR
      Xcvr 3      REV 01   740-021308   AQ43HHR          SFP+-10G-SR
      Xcvr 4      REV 01   740-021308   AQ502YA          SFP+-10G-SR
      Xcvr 5      REV 01   740-021308   AQ502EU          SFP+-10G-SR
      Xcvr 6      REV 01   740-021308   AQ502HR          SFP+-10G-SR
      Xcvr 7      REV 01   740-021308   AQ502A6          SFP+-10G-SR
      Xcvr 8      REV 01   740-021308   AQ43H8M          SFP+-10G-SR
  MIC 1           REV 14   750-033196   CAAP1398         1X100GE CXP
    PIC 2                  BUILTIN      BUILTIN          1X100GE CXP
      Xcvr 0      REV 01   740-046563   XD16FC064        CFP-100G-SR10
FPC 3             REV 35   750-028467   CAAT9156         MPC 3D 16x 10GE
  CPU             REV 11   711-029089   CAAV4645         AMPC PMB
  PIC 0                    BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0        REV 01   740-021308   AQ43HZ1          SFP+-10G-SR
    Xcvr 1        REV 01   740-021308   AQ43HZC          SFP+-10G-SR
    Xcvr 2        REV 01   740-021308   AQ43HD2          SFP+-10G-SR
    Xcvr 3        REV 01   740-021308   AQ502HN          SFP+-10G-SR
  PIC 1                    BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0        REV 01   740-021308   AQ43HGF          SFP+-10G-SR
    Xcvr 1        REV 01   740-021308   AQ501RZ          SFP+-10G-SR
    Xcvr 2        REV 01   740-021308   AQ5029V          SFP+-10G-SR
    Xcvr 3        REV 01   740-021308   AQ501X9          SFP+-10G-SR
  PIC 2                    BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0        REV 01   740-021308   AQ502ZN          SFP+-10G-SR
 Xcvr 1       REV 01   740-021308   AQ43H86          SFP+-10G-SR
    Xcvr 2        REV 01   740-021308   AQ502ZY          SFP+-10G-SR
    Xcvr 3        REV 01   740-021308   AQ502PZ          SFP+-10G-SR
  PIC 3                    BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0        REV 01   740-021308   AQ503E6          SFP+-10G-SR
    Xcvr 1        REV 01   740-021308   AQ502XN          SFP+-10G-SR
    Xcvr 2        REV 01   740-031980   B11F00213        SFP+-10G-SR
    Xcvr 3        REV 01   740-021308   AQ50336          SFP+-10G-SR
FPC 4             REV 18   750-046005   CACE6568         MPC5E 3D Q 2CGE+4XGE
  CPU             REV 09   711-045719   CACG8900         RMPC PMB
  PIC 0                    BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0        REV 01   740-021308   AQA095A          SFP+-10G-SR
    Xcvr 1        REV 01   740-021308   AQG0M1E          SFP+-10G-SR
  PIC 1                    BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                 NON-JNPR     FE13F000F        CFP2-100G-SR10
  PIC 2                    BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0        REV 01   740-021308   AQG0LYC          SFP+-10G-SR
    Xcvr 1        REV 01   740-021308   AQG0LYB          SFP+-10G-SR
  PIC 3                    BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0        REV 01   740-048813   XD32FE00Z        CFP2-100G-SR10
FPC 5             REV 18   750-046005   CACE6577         MPC5E 3D Q 2CGE+4XGE
  CPU             REV 09   711-045719   CACG8902         RMPC PMB
  PIC 0                    BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0        REV 01   740-021308   AQG0MXE          SFP+-10G-SR
    Xcvr 1        REV 01   740-021308   AQG0LVY          SFP+-10G-SR
  PIC 1                    BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0        REV 01   740-046563   XD16FC03T        CFP2-100G-SR10
  PIC 2                    BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0        REV 01   740-021308   AQG0LW1          SFP+-10G-SR
    Xcvr 1        REV 01   740-021308   AQG0LW3          SFP+-10G-SR
  PIC 3                    BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                 NON-JNPR     FE13F000J        CFP2-100G-SR10
FPC 7             REV 09   750-037355   CAAF0937         MPC4E 3D 2CGE+8XGE
  CPU             REV 08   711-035209   CAAD8004         HMPC PMB 2G
  PIC 0                    BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0        REV 01   740-021308   ANA0MM3          SFP+-10G-SR
  PIC 1                    BUILTIN      BUILTIN          1X100GE CFP
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    Xcvr 0       REV 01   740-035329   X000C163          CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-021308   AQG0MS6           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRX           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQG0M6Y           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQG0LZM           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00499         CFP-100G-SR10
FPC 8            REV 39   750-045715   CACD1903          MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACD1815          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP OTN
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QC480289          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QC480274          QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130190          QSFP+-40G-SR4
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QD130197          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130180          QSFP+-40G-SR4
 Xcvr 2       REV 01   740-046565   QD130199          QSFP+-40G-SR4
  WAN MEZZ       REV 09   750-049136   CABN0415          MPC5E 24XGE OTN Mezz
FPC 9            REV 05   750-044444   CAAY9801          MPCE Type 2 3D P
  CPU            REV 04   711-038484   CAAW3673          MPCE PMB 2G
  MIC 0          REV 28   750-028387   CAAX1071          3D 4x 10GE  XFP
    PIC 0                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0              NON-JNPR     T12L92342         XFP-10G-SR
      Xcvr 1              NON-JNPR     T12L92303         XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           2x 10GE  XFP
      Xcvr 0              NON-JNPR     CC07BK02X         XFP-10G-SR
  QXM 0          REV 06   711-028408   CAAW4883          MPC QXM
  QXM 1          REV 06   711-028408   CAAW4603          MPC QXM
FPC 10           REV 21.0.11 750-045715 CAAY3541        MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 07   711-045719   CAAW7426          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP
    Xcvr 0       REV 01   740-031980   AHK01AP           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ502ZU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AP41BLS           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQA08YA           SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   AQA0K26           SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQA06S3           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQA06AS           SFP+-10G-SR
    Xcvr 8       REV 01   740-021308   AQA053N           SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQA0E97           SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQA0GS4           SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQA0JVA           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP
    Xcvr 0       REV 01   740-021308   AQA057A           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   ANA0MLS           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQA093A           SFP+-10G-SR
    Xcvr 3       REV 01   740-021309   943153A00075      SFP+-10G-LR
    Xcvr 4       REV 01   740-021308   AQA077B           SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   AQA0JSC           SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQA0735           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQ5028N           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AP40VN5           SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQA0K0J           SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQA07AP           SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQA08YB           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
  WAN MEZZ       REV 07   750-045717   CAAX3123          MPC5E 24XGE Mezz
```


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```
FPC 11           REV 17   750-037355   CAAT3986          MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAR3972          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-021308   AQA0DSE           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501Y3           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ501XU           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ5036Y           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00247         CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   ALQ1DKF           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ403YA           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AP40TY0           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   ALQ14G0           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00095         CFP-100G-SR10
Fan Tray 0       REV 08   740-031521   ACAF4219          Enhanced Fan Tray
Fan Tray 1       REV 08   740-031521   ACAF4225          Enhanced Fan Tray
```

show chassis hardware detail (MX960 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  MX960
Midplane         REV 01   710-013698   AA6082            MX960 Midplane
PIM              Rev 01   740-013110   000008            Power Inlet Module
PEM 2
PEM 3            Rev 01   740-013682   000038            PS 1.7kW; 200-240VAC in
Routing Engine 0 REV 00   740-015113   1000617944        RE-S-1300
  ad0     245 MB  SanDisk SDCFB-256    111419E1805T1141  Compact Flash
  ad2   38154 MB  FUJITSU MHT2040BH    NR0WT5925N77      Hard Disk
CB 0             REV 05   710-013725   JK6947            MX960 Test SCB
FPC 4            REV 01   710-013305   JM7617            MX960 Test DPC
  CPU
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
  PIC 1                   BUILTIN      BUILTIN           10x 1GE
FPC 7            REV 01   710-013305   JL9634            MX960 Test DPC
  CPU
  PIC 0                   BUILTIN      BUILTIN           1x 10GE(LAN/WAN)
    Xcvr 0                NON-JNPR     MYBG65I82C        XFP-10G-SR
  PIC 1                   BUILTIN      BUILTIN           10x 1GE
    Xcvr 1       REV 01   740-011782   P7N0368           SFP-SX
    Xcvr 4       REV 01   740-011782   P8J1W27           SFP-SX
    Xcvr 6       REV 01   740-011782   P8J1VSD           SFP-SX
    Xcvr 9       REV 01   740-011782   P8J1W25           SFP-SX
Fan Tray 0
Fan Tray 1
```

show chassis hardware detail (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN1214852AFA      MX960
Midplane         REV 01   710-030012   ACAX3674          MX960 Backplane
FPM Board        REV 03   710-014974   CAAZ9326          Front Panel Display
PDM              Rev 03   740-013110   QCS17025017       Power Distribution Module
PEM 0            Rev 10   740-027760   QCS1702N062       PS 4.1kW; 200-240V AC
in
```

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```
PEM 1            Rev 04   740-027760   QCS1422N02C       PS 4.1kW; 200-240V AC
in
PEM 2            Rev 09   740-027760   QCS1614N01X       PS 4.1kW; 200-240V AC
in
Routing Engine 0 REV 08   740-031116   9009131803        RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 000016CD Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000061346       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 1         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 2         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 3         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
Routing Engine 1 REV 08   740-031116   9009124913        RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 0000106D Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000052402       Disk 1
CB 0             REV 18   750-031391   CABF0579          Enhanced MX SCB
CB 1             REV 16   750-031391   CAAZ2471          Enhanced MX SCB
CB 2             REV 16   750-031391   CAAW9595          Enhanced MX SCB
FPC 0            REV 18   750-046005   CACE6574          MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8908          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA0DYT           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MS7           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-046563   XD16FC03Z         CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN           2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   ANA0NAJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRQ           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-049775   J13K72993         CFP2-100G-LR4
FPC 1            REV 11   750-045372   CABK8154          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABE7370          HMPC PMB 2G
  MIC 0          REV 07   750-033307   CABD5255          10X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           10X10GE SFPP
      Xcvr 0     REV 01   740-021308   AQ50319           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQ5035V           SFP+-10G-SR
      Xcvr 2     REV 01   740-021308   AQ502XJ           SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQ43HHR           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   AQ502YA           SFP+-10G-SR
      Xcvr 5     REV 01   740-021308   AQ502EU           SFP+-10G-SR
      Xcvr 6     REV 01   740-021308   AQ502HR           SFP+-10G-SR
      Xcvr 7     REV 01   740-021308   AQ502A6           SFP+-10G-SR
      Xcvr 8     REV 01   740-021308   AQ43H8M           SFP+-10G-SR
  MIC 1          REV 14   750-033196   CAAP1398          1X100GE CXP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC064         CFP2-100G-SR10
FPC 3            REV 35   750-028467   CAAT9156          MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAV4645          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43HZ1           SFP+-10G-SR
Xcvr 1       REV 01   740-021308   AQ43HZC           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ43HD2           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ502HN           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43HGF           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501RZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ5029V           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ501X9           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ502ZN           SFP+-10G-SR
```


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```
    Xcvr 1       REV 01   740-021308   AQ43H86          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ502ZY          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ502PZ          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ503E6          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ502XN          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11F00213        SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ50336          SFP+-10G-SR
FPC 4            REV 18   750-046005   CACE6568         MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8900         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA095A          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0M1E          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     FE13F000F        CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0LYC          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LYB          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-048813   XD32FE00Z        CFP2-100G-SR10
FPC 5            REV 18   750-046005   CACE6577         MPC5E 3D Q 2CGE+4XGE
  CPU            REV 09   711-045719   CACG8902         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0MXE          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LVY          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0       REV 01   740-046563   XD16FC03T        CFP2-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          2X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQG0LW1          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0LW3          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP2 OTN
    Xcvr 0                NON-JNPR     FE13F000J        CFP2-100G-SR10
FPC 7            REV 09   750-037355   CAAF0937         MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAD8004         HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   ANA0MM3          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0       REV 01   740-035329   X000C163         CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   AQG0MS6          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0MRX          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQG0M6Y          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQG0LZM          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00499        CFP-100G-SR10
FPC 8            REV 39   750-045715   CACD1903         MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACD1815         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          12X10GE SFPP OTN
 PIC 1                   BUILTIN      BUILTIN          12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN          3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QC480289         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QC480274         QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130190         QSFP+-40G-SR4
  PIC 3                   BUILTIN      BUILTIN          3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QD130197         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130180         QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130199         QSFP+-40G-SR4
  WAN MEZZ       REV 09   750-049136   CABN0415         MPC5E 24XGE OTN Mezz
FPC 9            REV 05   750-044444   CAAY9801         MPCE Type 2 3D P
  CPU            REV 04   711-038484   CAAW3673         MPCE PMB 2G
  MIC 0          REV 28   750-028387   CAAX1071         3D 4x 10GE  XFP
```

```
    PIC 0                 BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0              NON-JNPR     T12L92342        XFP-10G-SR
      Xcvr 1              NON-JNPR     T12L92303        XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0              NON-JNPR     CC07BK02X        XFP-10G-SR
  QXM 0          REV 06   711-028408   CAAW4883         MPC QXM
  QXM 1          REV 06   711-028408   CAAW4603         MPC QXM
FPC 10           REV 21.0.11 750-045715 CAAY3541        MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 07   711-045719   CAAW7426         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          12X10GE SFPP
    Xcvr 0       REV 01   740-031980   AHK01AP          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ502ZU          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AP41BLS          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQA08YA          SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   AQA0K26          SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQA06S3          SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQA06AS          SFP+-10G-SR
    Xcvr 8       REV 01   740-021308   AQA053N          SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQA0E97          SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQA0GS4          SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQA0JVA          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          12X10GE SFPP
    Xcvr 0       REV 01   740-021308   AQA057A          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   ANA0MLS          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQA093A          SFP+-10G-SR
    Xcvr 3       REV 01   740-021309   943153A00075     SFP+-10G-LR
    Xcvr 4       REV 01   740-021308   AQA077B          SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   AQA0JSC          SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQA0735          SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQ5028N          SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AP40VN5          SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQA0K0J          SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQA07AP          SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQA08YB          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN          3X40GE QSFPP
  WAN MEZZ       REV 07   750-045717   CAAX3123         MPC5E 24XGE Mezz
FPC 11           REV 17   750-037355   CAAT3986         MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAR3972         HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   AQA0DSE          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501Y3          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ501XU          SFP+-10G-SR
 Xcvr 3       REV 01   740-021308   AQ5036Y          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00247        CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-031980   ALQ1DKF          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ403YA          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AP40TY0          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   ALQ14G0          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0       REV 01   740-035329   X12J00095        CFP-100G-SR10
Fan Tray 0       REV 08   740-031521   ACAF4219         Enhanced Fan Tray
Fan Tray 1       REV 08   740-031521   ACAF4225         Enhanced Fan Tray
```

show chassis hardware extensive (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
```


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```
Chassis                                 JN1214852AFA      MX960
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN1214852AFA
 Assembly ID:  0x0512            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX960
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 12 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 32 31 34 38 35 32 41 46 41 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 01   710-030012   ACAX3674          MX960 Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          710-030012        S/N:               ACAX3674
 Assembly ID:  0x01df            Assembly Version:  01.01
 Date:         01-19-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         COM8T00CRB
 ID: MX960 Backplane             FRU Model Number:  CHAS-BP-MX960-S
 Board Information Record:
  Address 0x00: ad 01 08 00 54 e0 32 bc 68 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 01 df 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 33 30 30 31 32 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 58 33 36 37 34 00 13 01 07
  Address 0x30: dd ff ff ff ad 01 08 00 54 e0 32 bc 68 00 ff ff
  Address 0x40: ff ff ff ff 01 43 4f 4d 38 54 30 30 43 52 42 43
  Address 0x50: 48 41 53 2d 42 50 2d 4d 58 39 36 30 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff aa ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 03   710-014974   CAAZ9326          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-014974        S/N:               CAAZ9326
 Assembly ID:  0x01e6            Assembly Version:  01.03
 Date:         12-31-2012        Assembly Flags:    0x00
 Version:      REV 03
 ID: Front Panel Display         FRU Model Number:  CRAFT-MX960-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 01 e6 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 31 34 39 37 34 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 5a 39 33 32 36 00 1f 0c 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 52 41 46 54 2d 4d 58 39 36 30 2d 53 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PDM              Rev 03   740-013110   QCS17025017       Power Distribution Module
Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-013110        S/N:               QCS17025017
 Assembly ID:  0x0416            Assembly Version:  01.03
 Date:         01-10-2013        Assembly Flags:    0x00
 Version:      Rev 03
 ID: Power Distribution Module
 Board Information Record:
```

```
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 16 01 03 52 65 76 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 31 33 31 31 30 00 00
  Address 0x20: 51 43 53 31 37 30 32 35 30 31 37 00 00 0a 01 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 0            Rev 10   740-027760   QCS1702N062       PS 4.1kW; 200-240V AC
in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-027760        S/N:               QCS1702N062
 Assembly ID:  0x0430            Assembly Version:  01.10
 Date:         01-15-2013        Assembly Flags:    0x00
 Version:      Rev 10
 ID: PS 4.1kW; 200-240V AC in    FRU Model Number:  PWR-MX960-4100-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 0a 52 65 76 20 31 30 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
  Address 0x20: 51 43 53 31 37 30 32 4e 30 36 32 00 00 0f 01 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 1            Rev 04   740-027760   QCS1422N02C       PS 4.1kW; 200-240V AC
in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-027760        S/N:               QCS1422N02C
 Assembly ID:  0x0430            Assembly Version:  01.04
 Date:         06-04-2010        Assembly Flags:    0x00
 Version:      Rev 04
 ID: PS 4.1kW; 200-240V AC in    FRU Model Number:  PWR-MX960-4100-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 04 52 65 76 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
  Address 0x20: 51 43 53 31 34 32 32 4e 30 32 43 00 00 04 06 07
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
PEM 2            Rev 09   740-027760   QCS1614N01X       PS 4.1kW; 200-240V AC
in
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          740-027760        S/N:               QCS1614N01X
Assembly ID:  0x0430            Assembly Version:  01.09
 Date:         04-07-2012        Assembly Flags:    0x00
 Version:      Rev 09
 ID: PS 4.1kW; 200-240V AC in    FRU Model Number:  PWR-MX960-4100-AC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 30 01 09 52 65 76 20 30 39 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 32 37 37 36 30 00 00
```


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  Address 0x20: 51 43 53 31 36 31 34 4e 30 31 58 00 00 07 04 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: 00 00 00 00 01 00 00 00 00 00 00 00 00 00 00 50
  Address 0x50: 57 52 2d 4d 58 39 36 30 2d 34 31 30 30 2d 41 43
  Address 0x60: 2d 53 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 08   740-031116   9009131803        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-031116        S/N:               9009131803
 Assembly ID:  0x09c0            Assembly Version:  01.08
 Date:         03-04-2013        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         COUCASKBAA
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 44 42 2d 34 34 47 42 23 42 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
  Address 0x20: 39 30 30 39 31 33 31 38 30 33 00 00 00 04 03 07
  Address 0x30: dd ff ff ff 54 32 30 32 37 44 42 2d 34 34 47 42
  Address 0x40: 23 42 23 00 01 43 4f 55 43 41 53 4b 42 41 41 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 59 ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 000016CD Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000061346       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 1         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 2         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 3         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
Routing Engine 1 REV 08   740-031116   9009124913        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-031116        S/N:               9009124913
 Assembly ID:  0x09c0            Assembly Version:  01.08
 Date:         01-09-2013        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         COUCASKBAA
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 44 42 2d 34 34 47 42 23 42 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 31 31 31 36 00 00
  Address 0x20: 39 30 30 39 31 32 34 39 31 33 00 00 00 09 01 07
  Address 0x30: dd ff ff ff 54 32 30 32 37 44 42 2d 34 34 47 42
  Address 0x40: 23 42 23 00 01 43 4f 55 43 41 53 4b 42 41 41 52
 Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 59 ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 0000106D Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000052402       Disk 1
CB 0             REV 18   750-031391   CABF0579          Enhanced MX SCB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-031391        S/N:               CABF0579
 Assembly ID:  0x09b0            Assembly Version:  01.18
 Date:         04-15-2013        Assembly Flags:    0x00
 Version:      REV 18            CLEI Code:         COUCASRBAA
 ID: Enhanced MX SCB             FRU Model Number:  SCBE-MX-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 09 b0 01 12 52 45 56 20 31 38 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
   Address 0x20: 53 2f 4e 20 43 41 42 46 30 35 37 39 00 0f 04 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4f 55 43 41 53 52 42 41 41 53
   Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 43 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff 7d ff ff ff ff ff ff ff ff ff ff ff ff
CB 1             REV 16   750-031391   CAAZ2471          Enhanced MX SCB
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-031391        S/N:               CAAZ2471
  Assembly ID:  0x09b0            Assembly Version:  01.16
  Date:         03-09-2013        Assembly Flags:    0x00
  Version:      REV 16            CLEI Code:         COUCARCBAB
  ID: Enhanced MX SCB             FRU Model Number:  SCBE-MX-S
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 09 b0 01 10 52 45 56 20 31 36 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
   Address 0x20: 53 2f 4e 20 43 41 41 5a 32 34 37 31 00 09 03 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4f 55 43 41 52 43 42 41 42 53
   Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff 6d ff ff ff ff ff ff ff ff ff ff ff ff
CB 2             REV 16   750-031391   CAAW9595          Enhanced MX SCB
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-031391        S/N:               CAAW9595
  Assembly ID:  0x09b0            Assembly Version:  01.16
  Date:         02-01-2013        Assembly Flags:    0x00
  Version:      REV 16            CLEI Code:         COUCARCBAB
  ID: Enhanced MX SCB             FRU Model Number:  SCBE-MX-S
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 09 b0 01 10 52 45 56 20 31 36 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 33 31 33 39 31 00 00
   Address 0x20: 53 2f 4e 20 43 41 41 57 39 35 39 35 00 01 02 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4f 55 43 41 52 43 42 41 42 53
  Address 0x50: 43 42 45 2d 4d 58 2d 53 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 42 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff 6d ff ff ff ff ff ff ff ff ff ff ff ff
FPC 0             REV 18   750-046005   CACE6574          MPC5E 3D Q 2CGE+4XGE
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-046005        S/N:               CACE6574
  Assembly ID:  0x0b8c            Assembly Version:  01.18
  Date:         11-20-2013        Assembly Flags:    0x00
  Version:      REV 18            CLEI Code:         PROTOXCLEI
  ID: MPC5E 3D Q 2CGE+4XGE        FRU Model Number:  PROTO-ASSEMBLY
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 8c 01 12 52 45 56 20 31 38 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 34 36 30 30 35 00 00
   Address 0x20: 53 2f 4e 20 43 41 43 45 36 35 37 34 00 14 0b 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
   Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
```


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```
 Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
 CPU            REV 09   711-045719   CACG8908          RMPC PMB
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          711-045719        S/N:               CACG8908
Assembly ID:  0x0b85            Assembly Version:  01.09
Date:         11-13-2013        Assembly Flags:    0x00
Version:      REV 09
ID: RMPC PMB
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0b 85 01 09 52 45 56 20 30 39 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 34 35 37 31 39 00 00
 Address 0x20: 53 2f 4e 20 43 41 43 47 38 39 30 38 00 0d 0b 07
 Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
 Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
 PIC 0                  BUILTIN      BUILTIN           2X10GE SFPP OTN
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x0a90            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 2X10GE SFPP OTN
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 0a 90 00 00 00 00 00 00 00 00 00 00
 Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
 Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
 Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x70: 00 00 00 00 c0 02 ae dc 00 00 00 00 0a 6e 00 00
Xcvr 0       REV 01   740-021308   AQA0DYT           SFP+-10G-SR
   Xcvr 1       REV 01   740-021308   AQG0MS7           SFP+-10G-SR
 PIC 1                  BUILTIN      BUILTIN           1X100GE CFP2 OTN
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x0a6e            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 1X100GE CFP2 OTN
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 0a 6e 00 00 00 00 00 00 00 00 00 00
 Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
 Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
 Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x70: 00 00 00 00 c0 03 f3 8c 31 5c e7 80 00 00 00 02
   Xcvr 0       REV 01   740-046563   XD16FC03Z         CFP2-100G-SR10
 PIC 2                  BUILTIN      BUILTIN           2X10GE SFPP OTN
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x0a90            Assembly Version:  00.00
```

```
  Date:         00-00-0000        Assembly Flags:    0x00
  ID: 2X10GE SFPP OTN
  Board Information Record:
   Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  I2C Hex Data:
   Address 0x00: 00 00 00 00 0a 90 00 00 00 00 00 00 00 00 00 00
   Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
   Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
   Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x70: 00 00 00 00 c0 03 f5 6c 31 5c db 40 00 00 00 02
     Xcvr 0       REV 01   740-021308   ANA0NAJ           SFP+-10G-SR
     Xcvr 1       REV 01   740-021308   AQG0MRQ           SFP+-10G-SR
   PIC 3                   BUILTIN      BUILTIN           1X100GE CFP2 OTN
  Jedec Code:   0x0000            EEPROM Version:    0x00
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0x0a6e            Assembly Version:  00.00
  Date:         00-00-0000        Assembly Flags:    0x00
  ID: 1X100GE CFP2 OTN
  Board Information Record:
   Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  I2C Hex Data:
   Address 0x00: 00 00 00 00 0a 6e 00 00 00 00 00 00 00 00 00 00
   Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
   Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
   Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x70: 00 00 00 00 c0 03 ed ec 31 5c e2 e8 00 00 00 02
  Xcvr 0       REV 01   740-049775   J13K72993         CFP2-100G-LR4
FPC 1            REV 11   750-045372   CABK8154          MPCE Type 3 3D
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-045372        S/N:               CABK8154
  Assembly ID:  0x09db            Assembly Version:  04.11
  Date:         05-18-2013        Assembly Flags:    0x00
  Version:      REV 11            CLEI Code:         COUIBBNBAA
  ID: MPCE Type 3 3D              FRU Model Number:  MX-MPC3E-3D
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 09 db 04 0b 52 45 56 20 31 31 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 34 35 33 37 32 00 00
   Address 0x20: 53 2f 4e 20 43 41 42 4b 38 31 35 34 00 12 05 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4e 42 41 41 4d
   Address 0x50: 58 2d 4d 50 43 33 45 2d 33 44 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 44 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff cf ff ff ff ff ff ff ff ff ff ff ff ff
   CPU              REV 08   711-035209   CABE7370          HMPC PMB 2G
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-035209        S/N:               CABE7370
  Assembly ID:  0x0b04            Assembly Version:  01.08
  Date:         05-08-2013        Assembly Flags:    0x00
  Version:      REV 08
  ID: HMPC PMB 2G
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
```


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```
  Address 0x00: 7f b0 01 ff 0b 04 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 35 32 30 39 00 00
  Address 0x20: 53 2f 4e 20 43 41 42 45 37 33 37 30 00 08 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  MIC 0          REV 07   750-033307   CABD5255          10X10GE SFPP
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-033307        S/N:               CABD5255
 Assembly ID:  0x0a2a            Assembly Version:  02.07
 Date:         04-25-2013        Assembly Flags:    0x00
 Version:      REV 07            CLEI Code:         COUIBBJBAA
 ID: 10X10GE SFPP                FRU Model Number:  MIC3-3D-10XGE-SFPP
 Board Information Record:
  Address 0x00: 34 01 03 03 05 ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0a 2a 02 07 52 45 56 20 30 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 33 33 30 37 00 00
  Address 0x20: 53 2f 4e 20 43 41 42 44 35 32 35 35 00 19 04 07
  Address 0x30: dd ff ff ff 34 01 03 03 05 ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4a 42 41 41 4d
  Address 0x50: 49 43 33 2d 33 44 2d 31 30 58 47 45 2d 53 46 50
  Address 0x60: 50 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 82 c0 03 f0 bc 57 79 83 80 00 00 00 02
    PIC 0                BUILTIN      BUILTIN           10X10GE SFPP
Xcvr 0     REV 01   740-021308   AQ50319           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQ5035V           SFP+-10G-SR
      Xcvr 2     REV 01   740-021308   AQ502XJ           SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQ43HHR           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   AQ502YA           SFP+-10G-SR
      Xcvr 5     REV 01   740-021308   AQ502EU           SFP+-10G-SR
      Xcvr 6     REV 01   740-021308   AQ502HR           SFP+-10G-SR
      Xcvr 7     REV 01   740-021308   AQ502A6           SFP+-10G-SR
      Xcvr 8     REV 01   740-021308   AQ43H8M           SFP+-10G-SR
  MIC 1          REV 14   750-033196   CAAP1398          1X100GE CXP
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-033196        S/N:               CAAP1398
 Assembly ID:  0x0a29            Assembly Version:  03.14
 Date:         10-27-2012        Assembly Flags:    0x00
 Version:      REV 14            CLEI Code:         COUIBBKBAA
 ID: 1X100GE CXP                 FRU Model Number:  MIC3-3D-1X100GE-CXP
 Board Information Record:
  Address 0x00: 34 01 07 07 08 ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0a 29 03 0e 52 45 56 20 31 34 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 33 31 39 36 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 50 31 33 39 38 00 1b 0a 07
  Address 0x30: dc ff ff ff 34 01 07 07 08 ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 42 42 4b 42 41 41 4d
  Address 0x50: 49 43 33 2d 33 44 2d 31 58 31 30 30 47 45 2d 43
  Address 0x60: 58 50 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 96 c0 03 ef cc 57 79 85 08 00 00 00 02
    PIC 2                BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC064         CFP2-100G-SR10
FPC 3            REV 35   750-028467   CAAT9156          MPC 3D 16x 10GE
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          750-028467        S/N:               CAAT9156
 Assembly ID:  0x0997            Assembly Version:  01.35
 Date:         12-17-2012        Assembly Flags:    0x00
```

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```
Version:      REV 35
ID: MPC 3D 16x 10GE             FRU Model Number:  MPC-3D-16XGE-SFPP
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 01 ff 09 97 01 23 52 45 56 20 33 35 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 32 38 34 36 37 00 00
 Address 0x20: 53 2f 4e 20 43 41 41 54 39 31 35 36 00 11 0c 07
 Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 4d
 Address 0x50: 50 43 2d 33 44 2d 31 36 58 47 45 2d 53 46 50 50
 Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 CPU            REV 11   711-029089   CAAV4645          AMPC PMB
Jedec Code:   0x7fb0            EEPROM Version:    0x01
P/N:          711-029089        S/N:               CAAV4645
Assembly ID:  0x0998            Assembly Version:  01.11
Date:         12-13-2012        Assembly Flags:    0x00
Version:      REV 11
ID: AMPC PMB
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 01 ff 09 98 01 0b 52 45 56 20 31 31 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 32 39 30 38 39 00 00
 Address 0x20: 53 2f 4e 20 43 41 41 56 34 36 34 35 00 0d 0c 07
 Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
 Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
 PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x02fe            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 4x 10GE(LAN) SFP+
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 02 fe 00 00 00 00 00 00 00 00 00 00
 Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
 Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
 Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x70: 00 00 00 00 c0 02 6b 94 00 00 00 00 02 fe 00 00
   Xcvr 0       REV 01   740-021308   AQ43HZ1           SFP+-10G-SR
   Xcvr 1       REV 01   740-021308   AQ43HZC           SFP+-10G-SR
   Xcvr 2       REV 01   740-021308   AQ43HD2           SFP+-10G-SR
   Xcvr 3       REV 01   740-021308   AQ502HN           SFP+-10G-SR
 PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
Jedec Code:   0x0000            EEPROM Version:    0x00
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x02fe            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: 4x 10GE(LAN) SFP+
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
```


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```
  Address 0x00: 00 00 00 00 02 fe 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 25 73 3a 20
  Address 0x20: 42 55 49 4c 54 49 4e 00 25 73 3a 20 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 c0 02 ac 0c 00 00 00 00 02 fe 00 00
    Xcvr 0       REV 01   740-021308   AQ43HGF           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQ501RZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ5029V           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQ501X9           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x02fe            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
......
```

show chassis hardware models (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 01   710-030012   ACAX3674          CHAS-BP-MX960-S
FPM Board        REV 03   710-014974   CAAZ9326          CRAFT-MX960-S
PEM 0            Rev 10   740-027760   QCS1702N062       PWR-MX960-4100-AC-S
PEM 1            Rev 04   740-027760   QCS1422N02C       PWR-MX960-4100-AC-S
PEM 2            Rev 09   740-027760   QCS1614N01X       PWR-MX960-4100-AC-S
Routing Engine 0 REV 08   740-031116   9009131803        RE-S-1800X4-16G-S
Routing Engine 1 REV 08   740-031116   9009124913        RE-S-1800X4-16G-S
CB 0             REV 18   750-031391   CABF0579          SCBE-MX-S
CB 1             REV 16   750-031391   CAAZ2471          SCBE-MX-S
CB 2             REV 16   750-031391   CAAW9595          SCBE-MX-S
FPC 0            REV 18   750-046005   CACE6574          PROTO-ASSEMBLY
FPC 1            REV 11   750-045372   CABK8154          MX-MPC3E-3D
  MIC 0          REV 07   750-033307   CABD5255          MIC3-3D-10XGE-SFPP
  MIC 1          REV 14   750-033196   CAAP1398          MIC3-3D-1X100GE-CXP
FPC 3            REV 35   750-028467   CAAT9156          MPC-3D-16XGE-SFPP
FPC 4            REV 18   750-046005   CACE6568          PROTO-ASSEMBLY
FPC 5            REV 18   750-046005   CACE6577          PROTO-ASSEMBLY
FPC 7            REV 09   750-037355   CAAF0937          MPC4E-2CGE-8XGE
FPC 8            REV 39   750-045715   CACD1903          PROTO-ASSEMBLY
FPC 9            REV 05   750-044444   CAAY9801          MX-MPC2E-3D-P
  MIC 0          REV 28   750-028387   CAAX1071          MIC-3D-4XGE-XFP
FPC 10           REV 21.0.11 750-045715 CAAY3541         PROTO-ASSEMBLY
FPC 11           REV 17   750-037355   CAAT3986          MPC4E-3D-2CGE-8XGE
Fan Tray 0       REV 08   740-031521   ACAF4219          FFANTRAY-MX960-HC-S
Fan Tray 1       REV 08   740-031521   ACAF4225          FFANTRAY-MX960-HC-S
```

show chassis hardware clei-models (MX960 Router with MPC5EQ)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   710-030012   COM8T00CRB        CHAS-BP-MX960-S
FPM Board        REV 03   710-014974                     CRAFT-MX960-S
PEM 0            Rev 10   740-027760                     PWR-MX960-4100-AC-S
PEM 1            Rev 04   740-027760                     PWR-MX960-4100-AC-S
PEM 2            Rev 09   740-027760                     PWR-MX960-4100-AC-S
```

```
Routing Engine 0 REV 08   740-031116   COUCASKBAA        RE-S-1800X4-16G-S
Routing Engine 1 REV 08   740-031116   COUCASKBAA        RE-S-1800X4-16G-S
CB 0             REV 18   750-031391   COUCASRBAA        SCBE-MX-S
CB 1             REV 16   750-031391   COUCARCBAB        SCBE-MX-S
CB 2             REV 16   750-031391   COUCARCBAB        SCBE-MX-S
FPC 0            REV 18   750-046005   PROTOXCLEI        PROTO-ASSEMBLY
FPC 1            REV 11   750-045372   COUIBBNBAA        MX-MPC3E-3D
  MIC 0          REV 07   750-033307   COUIBBJBAA        MIC3-3D-10XGE-SFPP
  MIC 1          REV 14   750-033196   COUIBBKBAA        MIC3-3D-1X100GE-CXP
FPC 3            REV 35   750-028467                     MPC-3D-16XGE-SFPP
FPC 4            REV 18   750-046005   PROTOXCLEI        PROTO-ASSEMBLY
FPC 5            REV 18   750-046005   PROTOXCLEI        PROTO-ASSEMBLY
FPC 7            REV 09   750-037355   PROTOXCLEI        MPC4E-2CGE-8XGE
FPC 8            REV 39   750-045715   PROTOXCLEI        PROTO-ASSEMBLY
FPC 9            REV 05   750-044444   COUIBBGBAA        MX-MPC2E-3D-P
  MIC 0          REV 28   750-028387   COUIA16BAA        MIC-3D-4XGE-XFP
FPC 10           REV 21.0.11 750-045715 PROTOXCLEI       PROTO-ASSEMBLY
FPC 11           REV 17   750-037355   IPU3A4DHAA        MPC4E-3D-2CGE-8XGE
Fan Tray 0       REV 08   740-031521                     FFANTRAY-MX960-HC-S
Fan Tray 1       REV 08   740-031521                     FFANTRAY-MX960-HC-S
```

show chassis hardware (MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN123F6D9AFA      MX960
Midplane         REV 04   750-047849   ACRC8764          Enhanced MX960 Backplane
FPM Board        REV 03   710-014974   CACS4395          Front Panel Display
PDM              Rev 03   740-013110   QCS1809500Z       Power Distribution Module
PEM 0            Rev 08   740-029344   QCS1817V0LK       DC 4.1kW Power Entry
Module
PEM 1            Rev 08   740-029344   QCS1814V01F       DC 4.1kW Power Entry
Module
PEM 2            Rev 08   740-029344   QCS1810V1EW       DC 4.1kW Power Entry
Module
PEM 3            Rev 08   740-029344   QCS1810V1K5       DC 4.1kW Power Entry
Module
Routing Engine 0 REV 11   740-031116   9013103483        RE-S-1800x4
Routing Engine 1 REV 10   740-031116   9009198513        RE-S-1800x4
CB 0             REV 23   750-031391   CADW3218          Enhanced MX SCB
CB 1             REV 14   750-031391   ABBK5220          Enhanced MX SCB
FPC 1            REV 14   750-045372   CADK0464          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADM9839          HMPC PMB 2G
  MIC 0          REV 19   750-033199   CAAE5870          1X100GE CFP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CFP
      Xcvr 0     REV 01   740-032210   UTH0H0W           CFP-100G-LR4
FPC 2            REV 14   750-045372   CADN3262          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADN8129          HMPC PMB 2G
FPC 3            REV 14   750-045372   CADH0146          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADT2458          HMPC PMB 2G
  MIC 0          REV 03   750-057666   CADP1386          1X100GE DWDM CFP2-ACO
    PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
      Xcvr 0     REV 01   740-062357   SMD5136.1         OTN-100G-LH
FPC 4            REV 18   750-045372   CAEV5668          MPCE Type 3 3D
  CPU            REV 10   711-035209   CAET7827          HMPC PMB 2G
FPC 7            REV 14   750-045372   CADJ1947          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADJ1561          HMPC PMB 2G
  MIC 0          REV 05   750-057666   CAEB5763          1X100GE DWDM CFP2-ACO
    PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
      Xcvr 0     REV 01   740-062357   1DJBZ052002       OTN-100G-LH
```


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```
FPC 8            REV 14   750-045372   CADK0485          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADM9828          HMPC PMB 2G
  MIC 0          REV 03   750-057666   CADP1390          1X100GE DWDM CFP2-ACO
    PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
FPC 9            REV 14   750-045372   CADJ1936          MPCE Type 3 3D
  CPU            REV 10   711-035209   CADJ1566          HMPC PMB 2G
  MIC 0          REV 14   750-057666   CAFF7544          1X100GE DWDM CFP2-ACO
    PIC 0                 BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
      Xcvr 0     REV 01   740-062357   1DJBZ05100K       OTN-100G-LH
FPC 10           REV 14   750-054901   CADJ3846          MPC3E NG HQoS
  CPU            REV 11   711-045719   CADN5471          RMPC PMB
  MIC 0          REV 05   750-057666   CAEB5760          1X100GE DWDM CFP2-ACO
 PIC 0                  BUILTIN      BUILTIN           1X100GE DWDM CFP2-ACO
      Xcvr 0     REV 01   740-062357   SMD5091.1         CFP-Loopback
Fan Tray 0       REV 08   740-031521   ACDB4083          Enhanced Fan Tray
Fan Tray 1       REV 08   740-031521   ACDB3995          Enhanced Fan Tray
```

show chassis hardware clei-models(MX960 Router with MPC3E and 100-Gigabit DWDM OTN MIC)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 04   750-047849   CMMJA10BRA        CHAS-BP3-MX960-S
FPM Board        REV 03   710-014974                     CRAFT-MX960-S
PEM 0            Rev 08   740-029344                     PWR-MX960-4100-DC-S
PEM 1            Rev 08   740-029344                     PWR-MX960-4100-DC-S
PEM 2            Rev 08   740-029344                     PWR-MX960-4100-DC-S
PEM 3            Rev 08   740-029344                     PWR-MX960-4100-DC-S
Routing Engine 0 REV 11   740-031116   COUCASYBAB        RE-S-1800X4-16G-S
Routing Engine 1 REV 10   740-031116   COUCASYBAA        RE-S-1800X4-16G-S
CB 0             REV 23   750-031391   COUCATXBAA        SCBE-MX-S
CB 1             REV 14   750-031391   COUCARCBAA        SCBE-MX-S
FPC 1            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 19   750-033199   COUIBA8BAA        MIC3-3D-1X100GE-CFP
FPC 2            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
FPC 3            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 03   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
FPC 4            REV 18   750-045372   COUIBBNBAC        MX-MPC3E-3D
FPC 7            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 05   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
FPC 8            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 03   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
FPC 9            REV 14   750-045372   COUIBBNBAB        MX-MPC3E-3D
  MIC 0          REV 14   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
FPC 10           REV 14   750-054901   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 0          REV 05   750-057666   PROTOXCLEI        PROTO-ASSEMBLY
Fan Tray 0       REV 08   740-031521                     FFANTRAY-MX960-HC-S
Fan Tray 1       REV 08   740-031521                     FFANTRAY-MX960-HC-S
```

show chassis hardware (MX10008 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               BLANK             JNP10008-MX
Midplane         REV 03   750-054097   ACAM1747          JNP10008 Midplane
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x10
Routing Engine 1          BUILTIN      BUILTIN           RE-S-2X00x10
CB 0             REV 17   750-052688   ACAM7468          Control Board
CB 1             REV 18   750-052688   ACAM7709          Control Board
```

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```
FPC 0            REV 33   750-054576   CAFC8443          MPCAE 3D
  CPU                     BUILTIN      BUILTIN           MPC CPU
  PIC 0                   BUILTIN      BUILTIN           MRATE-8xQSFPP-XGE-XLGE
    Xcvr 0       REV 01   740-032986   QD472831          QSFP+-40G-SR4
    Xcvr 1       REV 01   740-032986   QD472839          QSFP+-40G-SR4
    Xcvr 2       REV 01   740-032986   QB421310          QSFP+-40G-SR4
    Xcvr 3       REV 01   740-032986   QD472831          QSFP+-40G-SR4
  .
.
.


    PIC 5                BUILTIN      BUILTIN
MRATE-16xQSFPP-XGE-XLGE-CGE
      Xcvr 0     REV 01   740-054053   QE419464          QSFP+-4X10G-SR
      Xcvr 1     REV 01   740-046565   QE413929          QSFP+-40G-SR4
      Xcvr 2     REV 01   740-058734   1ACQ1042028       QSFP28-100GBASE-SR4
      Xcvr 3     REV 01   740-046565   QE414116          QSFP+-40G-SR4
FPC 1            REV 33   750-054576   CAFC8443          MPCCE 3D
  CPU                     BUILTIN      BUILTIN           MPC CPU
  PIC 0                   BUILTIN      BUILTIN           MRATE-8xQSFPP-XGE-XLGE
    Xcvr 0       REV 01   740-032986   QD472831          QSFP+-40G-SR4
    Xcvr 2       REV 01   740-032986   QB421310          QSFP+-40G-SR4
    Xcvr 4       REV 01   740-032986   QA480242          QSFP+-40G-SR4
    Xcvr 5       REV 01   740-032986   QE112585          QSFP+-40G-SR4
FPD Board        REV 01   740-XXXXXX   XXXXXXXX          Front Panel Display
Power Supply 0   REV 02   740-049388   1EDL534003N       AC 2850W Power Supply
Power Supply 1   REV 01   740-049388   1EDL44300CF       AC 2850W Power Supply
Power Supply 2   REV 02   740-049388   1EDL534004F       AC 2850W Power Supply
Power Supply 3   REV 02   740-049388   1EDL5340049       AC 2850W Power Supply
FTC 0            REV 08   750-050108   ACAM7310          Fan Tray Controller
FTC 1            REV 08   750-050108   ACAM7316          Fan Tray Controller
Fan Tray 0       REV 01                ACAM1683          Top Fan Tray
Fan Tray 1       REV 01   760-054372   ACAM1657          Vertical Fan Tray
SFB 0            REV 13   750-050058   ACAM8990          Switch Fabric Board
SFB 1            REV 13   750-050058   ACAM8978          Switch Fabric Board
SFB 2            REV 10   750-050058   ACAM8350          Switch Fabric Board
SFB 3            REV 10   750-050058   ACAM8365          Switch Fabric Board
SFB 4            REV 13   750-050058   ACAM8941          Switch Fabric Board
SFB 5            REV 13   750-050058   ACAM8925          Switch Fabric Board
```

show chassis hardware (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN123AC42AJC      PTX3000
Midplane         REV 22   750-044645   ACLP6640          Backplane
FPM              REV 07   760-044663   ACMX2146          Front Panel Display
PSM 1            REV 02   740-044980   1EDD3080169       DC 12V Power Supply
PSM 2            REV 06   740-044981   1EDK5040563       AC 12V Power Supply
PSM 3            REV 06   740-044981   1EDK5040313       AC 12V Power Supply
PSM 4            REV 04   740-044980   1EDJ3330088       DC 12V Power Supply
Routing Engine 0 REV 12   740-026942   P737A-006029      RE-DUO-2600
CB 0             REV 18   750-044656   ACMZ3179          Control Board
FPC 2            REV 06   750-057064   ACAM6098          FPC3-SFF-PTX-1X
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0          REV 17   750-059747   ACNW3510          5X100GE DWDM CFP2-ACO
    Xcvr 0       REV 01   740-062357   1DJBZ040003       OTN-100G-LH
    Xcvr 2       REV 01   740-062357   1DJBZ044004       OTN-100G-LH
    Xcvr 3       REV 01   740-062357   1DJBZ03500P       OTN-100G-LH
```


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```
    Xcvr 4       REV 01   740-062357   1DJBZ03700C       OTN-100G-LH
FPC 4            REV 12   750-057064   ACAM7153          FPC3-SFF-PTX-1X
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0          REV 17   750-059747   ACNW3511          5X100GE DWDM CFP2-ACO
    Xcvr 0       REV 01   740-061663   47                OTN-100G-LH
    Xcvr 1       REV 01   740-061663   39                OTN-100G-LH
    Xcvr 2       REV 01   740-062357   1DJBZ044002       OTN-100G-LH
    Xcvr 3       REV 01   740-062357   1DJBZ03700G       OTN-100G-LH
    Xcvr 4       REV 01   740-062357   1DJBZ041001       OTN-100G-LH
FPC 8            REV 11   750-057064   ACAM6808          FPC3-SFF-PTX-1X
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0          REV 17   750-059747   ACNW3508          5X100GE DWDM CFP2-ACO
    Xcvr 0       REV 01   740-061663   194               OTN-100G-LH
    Xcvr 1       REV 01   740-061663   168               OTN-100G-LH
    Xcvr 2       REV 01   740-061663   52                OTN-100G-LH
    Xcvr 3       REV 01   740-061663   85                OTN-100G-LH
    Xcvr 4       REV 01   740-061663   218               OTN-100G-LH
SIB 0            REV 03   750-057067   ACAM8513          SIB3-SFF-PTX
SIB 1            REV 01   750-057067   ACAM5918          SIB3-SFF-PTX
SIB 2            REV 01   711-057066   ACAM4325          SIB3-SFF-PTX
SIB 3            REV 01   711-057066   ACAM4328          SIB3-SFF-PTX
SIB 4            REV 01   711-057066   ACAM4349          SIB3-SFF-PTX
SIB 5            REV 01   711-057066   ACAM4323          SIB3-SFF-PTX
SIB 6            REV 01   711-057066   ACAM4344          SIB3-SFF-PTX
SIB 7            REV 01   750-057067   ACAM4346          SIB3-SFF-PTX
SIB 8            REV 01   750-057067   ACAM5911          SIB3-SFF-PTX
Fan Tray 0       REV 13   760-044659   ACMP6395          Fan Tray (Exhaust)
Fan Tray 1       REV 13   760-044659   ACMZ6957          Fan Tray (Exhaust)
```

show chassis hardware clei-models (PTX3000 Router with 5-port 100-Gigabit DWDM OTN PIC)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 22   750-044645   IPMVN10FRA        CHAS-MP-PTX3000-S
FPM              REV 07   760-044663   IPUCBE5CAA        FPD-SFF-PTX-S
PSM 1            REV 02   740-044980   PROTOPWRDC        PSM-SFF-PTX-DC-2200-S
PSM 2            REV 06   740-044981   IPUPAK0KAB        PSM-SFF-PTX-AC-S
PSM 3            REV 06   740-044981   IPUPAK0KAB        PSM-SFF-PTX-AC-S
PSM 4            REV 04   740-044980   IPUPAK1KAA        PSM-SFF-PTX-DC-S
Routing Engine 0 REV 12   740-026942                     RE-DUO-C2600-16G-S
CB 0             REV 18   750-044656   IPUCBE6CAB        CB-SFF-PTX-S
FPC 2            REV 06   750-057064   PROTOXCLEI        PROTO-ASSEMBLY
  PIC 0          REV 17   750-059747   IPU3BC5HAA        PTX-5-100G-WDM
FPC 4            REV 12   750-057064
  PIC 0          REV 17   750-059747   IPU3BC5HAA        PTX-5-100G-WDM
FPC 8            REV 11   750-057064
  PIC 0          REV 17   750-059747   IPU3BC5HAA        PTX-5-100G-WDM
SIB 0            REV 03   750-057067   PROTOXCLEI        PROTO-ASSEMBLY
SIB 1            REV 01   750-057067   PROTOXCLEI        PROTO-ASSEMBLY
SIB 2            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 3            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 4            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 5            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 6            REV 01   711-057066   PROTOXCLEI        PROTO-ASSEMBLY
SIB 7            REV 01   750-057067   PROTOXCLEI        PROTO-ASSEMBLY
SIB 8            REV 01   750-057067   PROTOXCLEI        PROTO-ASSEMBLY
Fan Tray 0       REV 13   760-044659   IPUCBE8CAA        FAN-SFF-PTX-S
Fan Tray 1       REV 13   760-044659   IPUCBE8CAA        FAN-SFF-PTX-S
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show chassis hardware (MX2010 Router)

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user@host > show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E3217AFK      MX2010
Midplane         REV 01   750-044636   ABAB8506          Lower Backplane
Midplane 1       REV 01   711-044557   ZY8296            Upper Backplane
PMP              REV 03   711-032426   ACAJ1388          Power Midplane
FPM Board        REV 06   711-032349   ZX8744            Front Panel Display
PSM 4            REV 0C   740-033727   VK00254           DC 52V Power Supply
Module
PSM 5            REV 0B   740-033727   VG00015           DC 52V Power Supply
Module
PSM 6            REV 0B   740-033727   VH00097           DC 52V Power Supply
Module
PSM 7            REV 0C   740-033727   VJ00151           DC 52V Power Supply
Module
PSM 8            REV 0C   740-033727   VJ00149           DC 52V Power Supply
Module
PDM 0            REV 0B   740-038109   WA00008           DC Power Dist Module
PDM 1            REV 0B   740-038109   WA00014           DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009094134        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009094141        RE-S-1800x4
CB 0             REV 08   750-040257   CAAB3491          Control Board
CB 1             REV 08   750-040257   CAAB3489          Control Board
SPMB 0           REV 02   711-041855   CAAA6135          PMB Board
SPMB 1           REV 02   711-041855   CAAA6137          PMB Board
SFB 0            REV 06   711-032385   ZV1828            Switch Fabric Board
SFB 1            REV 07   711-032385   ZZ2568            Switch Fabric Board
SFB 2            REV 07   711-032385   ZZ2563            Switch Fabric Board
SFB 3            REV 07   711-032385   ZZ2564            Switch Fabric Board
SFB 4            REV 07   711-032385   ZZ2580            Switch Fabric Board
SFB 5            REV 07   711-032385   ZZ2579            Switch Fabric Board
SFB 6            REV 07   711-032385   CAAB4882          Switch Fabric Board
SFB 7            REV 07   711-032385   CAAB4898          Switch Fabric Board
FPC 0            REV 33   750-028467   CAAB1919          MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAB7174          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMH02RE           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMH038C           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AMH0390           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AMG0SUA           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMH0579           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMG0SGP           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AMH04SV           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AMH04X3           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMH0135           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMH02NC           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AMH02XB           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AMH02PN           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AMH057Y           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AMG0JHE           SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AMH02HT           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AMH04V4           SFP+-10G-SR
FPC 1            REV 21   750-033205   ZG5027            MPC Type 3
  CPU            REV 04   711-035209   YT4780            HMPC PMB 2G
  MIC 0          REV 03   750-033307   ZV6299            10X10GE SFPP
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    PIC 0                 BUILTIN      BUILTIN          10X10GE SFPP
      Xcvr 0      REV 01  740-031980   083363A00410     SFP+-10G-SR
      Xcvr 1      REV 01  740-031980   083363A00334     SFP+-10G-SR
      Xcvr 2      REV 01  740-031980   113363A00125     SFP+-10G-SR
      Xcvr 3      REV 01  740-031980   083363A00953     SFP+-10G-SR
      Xcvr 4      REV 01  740-031980   AHR013D          SFP+-10G-SR
      Xcvr 5      REV 01  740-031980   AJ40JUR          SFP+-10G-SR
      Xcvr 6      REV 01  740-031980   AJ40JKL          SFP+-10G-SR
      Xcvr 7      REV 01  740-031980   AJ30ECK          SFP+-10G-SR
      Xcvr 8      REV 01  740-021308   19T511100864     SFP+-10G-SR
      Xcvr 9      REV 01  740-021308   19T511100868     SFP+-10G-SR
  MIC 1           REV 03  750-033307   ZV6268           10X10GE SFPP
    PIC 2                 BUILTIN      BUILTIN          10X10GE SFPP
      Xcvr 0      REV 01  740-031980   AJC0JML          SFP+-10G-SR
      Xcvr 1      REV 01  740-031980   AJ403PC          SFP+-10G-SR
      Xcvr 2      REV 01  740-031980   AJ10N25          SFP+-10G-SR
      Xcvr 3      REV 01  740-031980   AJ40JF4          SFP+-10G-SR
      Xcvr 4      REV 01  740-031980   AJ40JSJ          SFP+-10G-SR
      Xcvr 5      REV 01  740-031980   AJ403V7          SFP+-10G-SR
      Xcvr 6      REV 01  740-031980   AJ40JN3          SFP+-10G-SR
      Xcvr 7      REV 01  740-031980   AJ40JSU          SFP+-10G-SR
      Xcvr 8      REV 01  740-021308   19T511100468     SFP+-10G-SR
      Xcvr 9      REV 01  740-021308   19T511101363     SFP+-10G-SR
FPC 8             REV 22  750-031089   ZT9746           MPC Type 2 3D
  CPU             REV 06  711-030884   ZS1271           MPC PMB 2G
  MIC 0           REV 26  750-028392   ABBS1150         3D 20x 1GE(LAN) SFP
    PIC 0                 BUILTIN      BUILTIN          10x 1GE(LAN) SFP
      Xcvr 0      REV 01  740-031851   PLG023C          SFP-SX
      Xcvr 1      REV 01  740-031851   PLG09C6          SFP-SX
      Xcvr 2      REV 02  740-011613   AM0950SF9L7      SFP-SX
      Xcvr 3      REV 02  740-011613   AM1001SFN1H      SFP-SX
      Xcvr 4      REV 02  740-011613   AM1001SFM9D      SFP-SX
      Xcvr 5      REV 02  740-011613   AM1001SFLTJ      SFP-SX
      Xcvr 6      REV 01  740-031851   AC1108S03L9      SFP-SX
      Xcvr 7      REV 01  740-031851   AC1102S00NC      SFP-SX
      Xcvr 8      REV 01  740-031851   AC1102S00MX      SFP-SX
      Xcvr 9      REV 01  740-031851   AC1102S0085      SFP-SX
    PIC 1                 BUILTIN      BUILTIN          10x 1GE(LAN) SFP
      Xcvr 0      REV 01  740-031851   AC1102S00KU      SFP-SX
      Xcvr 1      REV 01  740-031851   AC1102S00NG      SFP-SX
      Xcvr 2      REV 01  740-031851   AC1102S00K3      SFP-SX
      Xcvr 3      REV 01  740-031851   AC1102S008R      SFP-SX
      Xcvr 4      REV 01  740-031851   AM1107SUFVJ      SFP-SX
      Xcvr 5      REV 01  740-031851   AC1108S03LG      SFP-SX
  MIC 1           REV 26  750-028387   ABBR9582         3D 4x 10GE  XFP
    PIC 2                 BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0              NON-JNPR     T10A91703        XFP-10G-SR
      Xcvr 1              NON-JNPR     T09L42604        XFP-10G-SR
    PIC 3                 BUILTIN      BUILTIN          2x 10GE  XFP
FPC 9             REV 11  750-036284   ZL3591           MPC 3D 16x 10GE EM
  CPU             REV 10  711-029089   ZL0513           AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0        REV 01  740-031980   1YT517101825     SFP+-10G-SR
    Xcvr 1        REV 01  740-031980   1YT517101821     SFP+-10G-SR
    Xcvr 2        REV 01  740-031980   1YT517101682     SFP+-10G-SR
    Xcvr 3        REV 01  740-031980   ALQ13R6          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0        REV 01  740-031980   1YT517101828     SFP+-10G-SR
    Xcvr 1        REV 01  740-031980   1YT517101716     SFP+-10G-SR
    Xcvr 2        REV 01  740-031980   1YT517101732     SFP+-10G-SR
    Xcvr 3        REV 01  740-031980   ALP0TR1          SFP+-10G-SR
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  PIC 2                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   1YT517101741     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   1YT517101829     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   1YT517101669     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   ALQ14E3          SFP+-10G-SR
  PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   1YT517101826     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   1YT517101817     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   1YT517101735     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   ALQ159A          SFP+-10G-SR
ADC 0           REV 05  750-043596   CAAC2073         Adapter Card
ADC 1           REV 01  750-043596   ZV4117           Adapter Card
ADC 8           REV 01  750-043596   ZV4107           Adapter Card
ADC 9           REV 02  750-043596   ZW1555           Adapter Card
Fan Tray 0      REV 2A  760-046960   ACAY0015         172mm FanTray - 6 Fans
Fan Tray 1      REV 2A  760-046960   ACAY0019         172mm FanTray - 6 Fans
Fan Tray 2      REV 2A  760-046960   ACAY0020         172mm FanTray - 6 Fans
Fan Tray 3      REV 2A  760-046960   ACAY0021         172mm FanTray - 6 Fans
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show chassis hardware detail (MX2010 Router)

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Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E233DAFK      MX2010
Midplane         REV 26   750-044636   ABAB9357          Lower Backplane
Midplane 1       REV 01   711-044557   ABAB8643          Upper Backplane
PMP              REV 04   711-032426   ACAJ1677          Power Midplane
FPM Board        REV 08   760-044634   ABBV9726          Front Panel Display
PSM 0            REV 01   740-045050   1E02224000P       DC 52V Power Supply
Module
PSM 1            REV 01   740-045050   1E02224000M       DC 52V Power Supply
Module
PSM 2            REV 01   740-045050   1E022240010       DC 52V Power Supply
Module
PSM 3            REV 01   740-045050   1E02224000G       DC 52V Power Supply
Module
PSM 4            REV 01   740-045050   1E022240013       DC 52V Power Supply
Module
PSM 5            REV 01   740-045050   1E022240007       DC 52V Power Supply
Module
PSM 6            REV 01   740-045050   1E02224001C       DC 52V Power Supply
Module
PSM 7            REV 01   740-045050   1E02224001D       DC 52V Power Supply
Module
PSM 8            REV 01   740-045050   1E02224001B       DC 52V Power Supply
Module
PDM 0            REV 01   740-045234   1E262250067       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009099704        RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 00000651 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000019592       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009099706        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200262860208 114 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000404 Disk 1
CB 0             REV 13   750-040257   CAAF8436          Control Board
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CB 1             REV 13   750-040257   CAAF8434         Control Board
SPMB 0           REV 02   711-041855   ABBV3825         PMB Board
SPMB 1           REV 02   711-041855   ABBV3833         PMB Board
SFB 0            REV 05   711-044466   ABBX5682         Switch Fabric Board
SFB 1            REV 05   711-044466   ABBX5676         Switch Fabric Board
SFB 2            REV 05   711-044466   ABBX5665         Switch Fabric Board
SFB 3            REV 05   711-044466   ABBX5699         Switch Fabric Board
SFB 4            REV 05   711-044466   ABBX5603         Switch Fabric Board
SFB 5            REV 05   711-044466   ABBX5587         Switch Fabric Board
SFB 6            REV 05   711-044466   ABBX5607         Switch Fabric Board
SFB 7            REV 05   711-044466   ABBX5669         Switch Fabric Board
FPC 0            REV 09   750-037355   CAAF0924         MPC Type 4-2
  CPU            REV 08   711-035209   CAAB9842         HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-021308   19T511101656     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AMA04RU          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00558     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10M00202        SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00328        CFP-100G-SR10
  PIC 2                   BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA088W          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B10L04211        SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   19T511101602     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10L04151        SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          1X100GE CFP
Xcvr 0                NON-JNPR     X12J00332        CFP-100G-SR10
FPC 1            REV 18   750-033205   ZE0128           MPC Type 3
  CPU            REV 06   711-035209   ZG5431           HMPC PMB 2G
  MIC 0          REV 15   750-033199   ZP6435           1X100GE CFP
    PIC 0                 BUILTIN      BUILTIN          1X100GE CFP
      Xcvr 0     REV 01   740-032210   J11E46118        CFP-100G-LR4
  MIC 1          REV 15   750-033199   ZP6442           1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN          1X100GE CFP
      Xcvr 0     REV 01   740-032210   UMN03T4          CFP-100G-LR4
FPC 2            REV 16   750-037358   CAAL1001         MPC Type 4-1
  CPU            REV 08   711-035209   CAAK7927         HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN          8X10GE SFPP
    Xcvr 0       REV 01   740-031980   193363A00589     SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00028     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00376     SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00016     SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00499     SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   973152A00039     SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11E01239        SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   973152A00058     SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          8X10GE SFPP
    Xcvr 0       REV 01   740-031980   B10M00075        SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00014     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AMA0638          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00063     SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AMA0629          SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   973152A00053     SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00344     SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   973152A00046     SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA062M          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00080     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00580     SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00064     SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   093363A01494     SFP+-10G-SR
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    Xcvr 5       REV 01   740-021308   973152A00020      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   123363A00047      SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   973152A00072      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-021308   03DZ06A01033      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00022      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   03DZ06A01026      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00013      SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   03DZ06A01028      SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   973152A00079      SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   03DZ06A01018      SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   973152A00025      SFP+-10G-SR
FPC 3            REV 33   750-028467   CAAF5400          MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAH7626          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00066      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00021      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   973152A00062      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00027      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00065      SFP+-10G-SR
 Xcvr 1       REV 01   740-021308   973152A00069      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   973152A00026      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00003      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00035      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00004      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   973152A00049      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00055      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00010      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   973152A00001      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   973152A00073      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   973152A00012      SFP+-10G-SR
FPC 4            REV 21   750-033205   ZG5028            MPC Type 3
  CPU            REV 05   711-035209   YX3911            HMPC PMB 2G
  MIC 0          REV 03   750-036233   ZL2036            2X40GE QSFP
    PIC 0                 BUILTIN      BUILTIN           2X40GE QSFP
      Xcvr 0     REV 01   740-032986   QB220708          QSFP+-40G-SR4
      Xcvr 1     REV 01   740-032986   QB220735          QSFP+-40G-SR4
  MIC 1          REV 03   750-036233   ZL2028            2X40GE QSFP
    PIC 2                 BUILTIN      BUILTIN           2X40GE QSFP
      Xcvr 0     REV 01   740-032986   QB220727          QSFP+-40G-SR4
      Xcvr 1     REV 01   740-032986   QB220715          QSFP+-40G-SR4
FPC 5            REV 11   750-037358   CAAE2196          MPC Type 4-1
  CPU            REV 08   711-035209   CAAD9074          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA062S           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AMA062P           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AMA052R           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AMA0632           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00564      SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   193363A00229      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00363      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00278      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA04CC           SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AD0927A001W       SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AMA04N2           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AMA062U           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00491      SFP+-10G-SR
```


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    Xcvr 5       REV 01   740-031980   183363A01511      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00565      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00405      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA07QX           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AMA06MS           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00318      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   193363A00402      SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00174      SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   193363A00388      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00377      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00234      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA062T           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   193363A00550      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00364      SFP+-10G-SR
Xcvr 3       REV 01   740-031980   AMA0630           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   193363A00509      SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   193363A00459      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   113363A00191      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00352      SFP+-10G-SR
FPC 6            REV 33   750-028467   CAAF5552          MPC 3D 16x 10GE
  CPU            REV 11   711-029089   CAAH7601          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AD0927A0036       SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AD0927A003M       SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AD0927A003G       SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AD0927A0031       SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   193363A00331      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   193363A00325      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00417      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A02509      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   T09K75140         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11A04356         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01952         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01914         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   T09K75157         SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   T09K75194         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01926         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01936         SFP+-10G-SR
FPC 7            REV 16   750-037358   CAAL1012          MPC Type 4-1
  CPU            REV 08   711-035209   CAAJ3851          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   AMA04NK           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11F00260         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11E02192         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AMA04CP           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AJ40JKK           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11F00238         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B10M00275         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   193363A00211      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   B11D05577         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11G00586         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AMA08B7           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AMA04Q0           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11D05840         SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11E00467         SFP+-10G-SR
```

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    Xcvr 6       REV 01   740-031980   B11E00029         SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   19T511101712      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-031980   193363A00568      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B10M00166         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B10M00212         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11D05823         SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   03DZ06A01005      SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   03DZ06A01003      SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   03DZ06A01009      SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   03DZ06A01004      SFP+-10G-SR
PIC 3                   BUILTIN      BUILTIN           8X10GE SFPP
    Xcvr 0       REV 01   740-021308   03DZ06A01017      SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   03DZ06A01016      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   03DZ06A01024      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   03DZ06A01008      SFP+-10G-SR
    Xcvr 4       REV 01   740-030658   AD0946A02UH       SFP+-10G-USR
    Xcvr 5       REV 01   740-021308   T09J67913         SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AD0837ES09G       SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   03DZ06A01015      SFP+-10G-SR
FPC 8            REV 03   750-045372   CAAD3111          MPC Type 3
  CPU            REV 08   711-035209   CAAD8033          HMPC PMB 2G
  MIC 0          REV 03   750-036233   ZL2032            2X40GE QSFP
    PIC 0                 BUILTIN      BUILTIN           2X40GE QSFP
      Xcvr 0     REV 01   740-032986   QB230273          QSFP+-40G-SR4
      Xcvr 1     REV 01   740-032986   QB230254          QSFP+-40G-SR4
  MIC 1          REV 03   750-036233   ZL2021            2X40GE QSFP
    PIC 2                 BUILTIN      BUILTIN           2X40GE QSFP
      Xcvr 0     REV 01   740-032986   QB390962          QSFP+-40G-SR4
      Xcvr 1     REV 01   740-032986   QB390960          QSFP+-40G-SR4
FPC 9            REV 09   750-037355   CAAF1531          MPC Type 4-2
  CPU            REV 08   711-035209   CAAB9927          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   193363A00525      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   193363A00504      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00368      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJ40JSS           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   123363A00042      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B10M00023         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJ802EM           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11E02348         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
ADC 0            REV 13   750-043596   ABBX5532          Adapter Card
ADC 1            REV 13   750-043596   ABBX5550          Adapter Card
ADC 2            REV 13   750-043596   ABBX5571          Adapter Card
ADC 3            REV 13   750-043596   ABBX5568          Adapter Card
ADC 4            REV 13   750-043596   ABBX5556          Adapter Card
ADC 5            REV 13   750-043596   ABBX5553          Adapter Card
ADC 6            REV 13   750-043596   ABBX5541          Adapter Card
ADC 7            REV 13   750-043596   ABBX5578          Adapter Card
ADC 8            REV 13   750-043596   ABBX5560          Adapter Card
ADC 9            REV 07   750-043596   ABBV7188          Adapter Card
Fan Tray 0       REV 03   760-046960   ACAY0127          172mm FanTray - 6 Fans
Fan Tray 1       REV 2A   760-046960   ACAY0068          172mm FanTray - 6 Fans
Fan Tray 2       REV 2A   760-046960   ACAY0072          172mm FanTray - 6 Fans
Fan Tray 3       REV 2A   760-046960   ACAY0070          172mm FanTray - 6 Fans
```


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show chassis hardware extensive (MX2010 Router)

```
user@host > show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E233DAFK      MX2010
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN11E233DAFK
 Assembly ID:  0x0557            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX2010
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 45 32 33 33 44 41 46 4b 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 26   750-044636   ABAB9357          Lower Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044636        S/N:               ABAB9357
 Assembly ID:  0x0b66            Assembly Version:  01.26
 Date:         08-28-2012        Assembly Flags:    0x00
 Version:      REV 26            CLEI Code:         PROTOXCLEI
 ID: Lower Backplane             FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 08 00 2c 21 72 70 a0 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 66 01 1a 52 45 56 20 32 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 39 33 35 37 00 1c 08 07
  Address 0x30: dc ff ff ff ad 01 08 00 2c 21 72 70 a0 00 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1       REV 01   711-044557   ABAB8643          Upper Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-044557        S/N:               ABAB8643
 Assembly ID:  0x0b65            Assembly Version:  01.01
 Date:         07-27-2012        Assembly Flags:    0x00
 Version:      REV 01
 ID: Upper Backplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 65 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 35 35 37 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 38 36 34 33 00 1b 07 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP              REV 04   711-032426   ACAJ1677          Power Midplane
Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-032426        S/N:               ACAJ1677
```

```
 Assembly ID:  0x045d            Assembly Version:  01.04
 Date:         07-20-2012        Assembly Flags:    0x00
 Version:      REV 04
 ID: Power Midplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 4a 31 36 37 37 00 14 07 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 08   760-044634   ABBV9726          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-044634        S/N:               ABBV9726
 Assembly ID:  0x0b64            Assembly Version:  01.08
 Date:         09-10-2012        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         IPMYA4EJRA
 ID: Front Panel Display         FRU Model Number:  MX2010-CRAFT-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 64 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 34 34 36 33 34 00 00
  Address 0x20: 53 2f 4e 20 41 42 42 56 39 37 32 36 00 0a 09 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 59 41 34 45 4a 52 41 4d
  Address 0x50: 58 32 30 31 30 2d 43 52 41 46 54 2d 53 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 93 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0            REV 01   740-045050   1E02224000P       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045050        S/N:               1E02224000P
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         12-06-2012        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         XXXXXXXXXX
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-HC-DC-S-A
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 30 35 30 00 00
  Address 0x20: 31 45 30 32 32 32 34 30 30 30 50 00 00 06 0c 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 58 58 58 58 58 58 58 58 58 58 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 48 43 2d 44 43 2d
  Address 0x60: 53 2d 41 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 4a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1            REV 01   740-045050   1E02224000M       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045050        S/N:               1E02224000M
Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         12-06-2012        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         XXXXXXXXXX
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-HC-DC-S-A
 Board Information Record:
```


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```
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 30 35 30 00 00
  Address 0x20: 31 45 30 32 32 32 34 30 30 30 4d 00 00 06 0c 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 58 58 58 58 58 58 58 58 58 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 48 43 2d 44 43 2d
  Address 0x60: 53 2d 41 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 4a 00 00 00 00 00 00 00 00 00 00 00 00
...
PDM 0            REV 01   740-045234   1E262250067       DC Power Dist Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045234        S/N:               1E262250067
 Assembly ID:  0x047b            Assembly Version:  01.01
 Date:         06-28-2012        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAJSKAA
 ID: DC Power Dist Module        FRU Model Number:  MX2000-PDM-DC-S-A
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 7b 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 32 33 34 00 00
  Address 0x20: 31 45 32 36 32 32 35 30 30 36 37 00 00 1c 06 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4a 53 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 44 4d 2d 44 43 2d 53 2d 41
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 89 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0 REV 02   740-041821   9009099704        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-041821        S/N:               9009099704
 Assembly ID:  0x09c0            Assembly Version:  01.02
 Date:         03-15-2012        Assembly Flags:    0x00
 Version:      REV 02
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 44 41 2d 34 34 47 42 23 41 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 31 38 32 31 00 00
  Address 0x20: 39 30 30 39 30 39 39 37 30 34 00 00 00 0f 03 07
  Address 0x30: dc ff ff ff 54 32 30 32 37 44 41 2d 34 34 47 42
  Address 0x40: 23 41 23 00 01 00 00 00 00 00 00 00 00 00 00 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 8c ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 00000651 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000019592       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009099706        RE-S-1800x4
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-041821        S/N:               9009099706
 Assembly ID:  0x09c0            Assembly Version:  01.02
 Date:         02-23-2012        Assembly Flags:    0x00
 Version:      REV 02
```

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```
 ID: RE-S-1800x4                 FRU Model Number:  RE-S-1800X4-16G-S
 Board Information Record:
  Address 0x00: 54 32 30 32 37 44 41 2d 34 34 47 42 23 41 23 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 09 c0 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 31 38 32 31 00 00
 Address 0x20: 39 30 30 39 30 39 39 37 30 36 00 00 00 17 02 07
  Address 0x30: dc ff ff ff 54 32 30 32 37 44 41 2d 34 34 47 42
  Address 0x40: 23 41 23 00 01 00 00 00 00 00 00 00 00 00 00 52
  Address 0x50: 45 2d 53 2d 31 38 30 30 58 34 2d 31 36 47 2d 53
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 8c ff ff ff ff ff ff ff ff ff ff ff ff
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200262860208 114 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000404 Disk 1
CB 0             REV 13   750-040257   CAAF8436          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-040257        S/N:               CAAF8436
 Assembly ID:  0x0b26            Assembly Version:  01.13
 Date:         08-29-2012        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         PROTOXCLEI
 ID: Control Board               FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 26 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 30 32 35 37 00 00
  Address 0x20: 53 2f 4e 20 43 41 41 46 38 34 33 36 00 1d 08 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
...
SPMB 0           REV 02   711-041855   ABBV3825          PMB Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-041855        S/N:               ABBV3825
 Assembly ID:  0x0b29            Assembly Version:  01.02
 Date:         08-14-2012        Assembly Flags:    0x00
 Version:      REV 02
 ID: PMB Board
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0b 29 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 34 31 38 35 35 00 00
  Address 0x20: 53 2f 4e 20 41 42 42 56 33 38 32 35 00 0e 08 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
...
SFB 0            REV 05   711-044466   ABBX5682          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-044466        S/N:               ABBX5682
 Assembly ID:  0x0b25            Assembly Version:  01.05
 Date:         09-07-2012        Assembly Flags:    0x00
 Version:      REV 05            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```


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```
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 25 01 05 52 45 56 20 30 35 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 34 36 36 00 00
   Address 0x20: 53 2f 4e 20 41 42 42 58 35 36 38 32 00 07 09 07
   Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
   Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff c2 00 00 00 01 00 00 00 00 00 00 48 00
...
FPC 0            REV 09   750-037355   CAAF0924          MPC Type 4-2
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-037355        S/N:               CAAF0924
  Assembly ID:  0x0b4e            Assembly Version:  01.09
  Date:         05-21-2012        Assembly Flags:    0x00
  Version:      REV 09            CLEI Code:         PROTOXCLEI
  ID: MPC Type 4-2                FRU Model Number:  MPC4E-2CGE-8XGE
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 4e 01 09 52 45 56 20 30 39 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 33 35 35 00 00
   Address 0x20: 53 2f 4e 20 43 41 41 46 30 39 32 34 00 15 05 07
   Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 4d
   Address 0x50: 50 43 34 45 2d 32 43 47 45 2d 38 58 47 45 00 00
   Address 0x60: 00 00 00 00 00 00 30 39 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff c6 ff ff ff ff ff ff ff ff ff ff ff ff
   CPU            REV 08   711-035209   CAAB9842          HMPC PMB 2G
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-035209        S/N:               CAAB9842
  Assembly ID:  0x0b04            Assembly Version:  01.08
  Date:         05-17-2012        Assembly Flags:    0x00
  Version:      REV 08
  ID: HMPC PMB 2G
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 0b 04 01 08 52 45 56 20 30 38 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 33 35 32 30 39 00 00
   Address 0x20: 53 2f 4e 20 43 41 41 42 39 38 34 32 00 11 05 07
   Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
   Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
   PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
  Jedec Code:   0x0000            EEPROM Version:    0x00
  P/N:          BUILTIN           S/N:               BUILTIN
  Assembly ID:  0x0a53            Assembly Version:  00.00
  Date:         00-00-0000        Assembly Flags:    0x00
  ID: 4x10GE SFPP
  Board Information Record:
   Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  I2C Hex Data:
   Address 0x00: 00 00 00 00 0a 53 00 00 00 00 00 00 00 00 00 00
   Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 4d 58 43 00
   Address 0x20: 42 55 49 4c 54 49 4e 00 4d 58 43 00 00 00 00 00
   Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
```

```
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Address 0x70: 00 00 00 00 c0 02 ae 64 00 00 00 00 0a 52 00 00
    Xcvr 0       REV 01   740-021308   19T511101656      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AMA04RU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   193363A00558      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10M00202         SFP+-10G-SR
...
ADC 0            REV 13   750-043596   ABBX5532          Adapter Card
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-043596        S/N:               ABBX5532
 Assembly ID:  0x0b3d            Assembly Version:  01.13
 Date:         09-12-2012        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         IPUCBA8CAA
 ID: Adapter Card                FRU Model Number:  MX2000-LC-ADAPTER
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 3d 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 33 35 39 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 42 58 35 35 33 32 00 0c 09 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 41 38 43 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 4c 43 2d 41 44 41 50 54 45 52
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 3a 00 00 00 00 00 00 00 00 00 00 00 00
...
```

show chassis hardware models (MX2010 Router)

```
user@host > show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
FPM Board        REV 06   711-032349   ZX8744            711-032349
PSM 4            REV 0C   740-033727   VK00254           00000000000000000000000
PSM 5            REV 0B   740-033727   VG00015           00000000000000000000000
PSM 6            REV 0B   740-033727   VH00097           00000000000000000000000
PSM 7            REV 0C   740-033727   VJ00151           00000000000000000000000
PSM 8            REV 0C   740-033727   VJ00149           00000000000000000000000
PDM 0            REV 0B   740-038109   WA00008
PDM 1            REV 0B   740-038109   WA00014
Routing Engine 0 REV 02   740-041821   9009094134        RE-S-1800X4-16G-S
Routing Engine 1 REV 02   740-041821   9009094141        RE-S-1800X4-16G-S
CB 0             REV 08   750-040257   CAAB3491          750-040257
CB 1             REV 08   750-040257   CAAB3489          750-040257
SFB 0            REV 06   711-032385   ZV1828            711-032385
SFB 1            REV 07   711-032385   ZZ2568            711-032385
SFB 2            REV 07   711-032385   ZZ2563            711-032385
SFB 3            REV 07   711-032385   ZZ2564            711-032385
SFB 4            REV 07   711-032385   ZZ2580            711-032385
SFB 5            REV 07   711-032385   ZZ2579            711-0323856
SFB 6            REV 07   711-032385   CAAB4882          711-044170
SFB 7            REV 07   711-032385   CAAB4898          711-044170
FPC 0            REV 33   750-028467   CAAB1919          MPC-3D-16XGE-SFPP
FPC 1            REV 21   750-033205   ZG5027            MX-MPC3-3D
  MIC 0          REV 03   750-033307   ZV6299            MIC3-3D-10XGE-SFPP
  MIC 1          REV 03   750-033307   ZV6268            MIC3-3D-10XGE-SFPP
FPC 8            REV 22   750-031089   ZT9746            MX-MPC2-3D
  MIC 0          REV 26   750-028392   ABBS1150          MIC-3D-20GE-SFP
  MIC 1          REV 26   750-028387   ABBR9582          MIC-3D-4XGE-XFP
FPC 9            REV 11   750-036284   ZL3591            MPCE-3D-16XGE-SFPP
ADC 0            REV 05   750-043596   CAAC2073          750-043596
```


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```
ADC 1            REV 01   750-043596   ZV4117           750-043596
ADC 8            REV 01   750-043596   ZV4107           750-043596
ADC 9            REV 02   750-043596   ZW1555           750-043596
Fan Tray 0       REV 2A   760-046960   ACAY0015
Fan Tray 1       REV 2A   760-046960   ACAY0019
Fan Tray 2       REV 2A   760-046960   ACAY0020
Fan Tray 3       REV 2A   760-046960   ACAY0021
```

show chassis hardware clei-models (MX2010 Routers)

```
user@host > show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
FPM Board        REV 06   711-032349   PROTOXCLEI        711-032349
PSM 4            REV 0C   740-033727   0000000000        00000000000000000000000
PSM 5            REV 0B   740-033727   0000000000        00000000000000000000000
PSM 6            REV 0B   740-033727   0000000000        00000000000000000000000
PSM 7            REV 0C   740-033727   0000000000        00000000000000000000000
PSM 8            REV 0C   740-033727   0000000000        00000000000000000000000
PDM 0            REV 0B   740-038109
PDM 1            REV 0B   740-038109
Routing Engine 0 REV 02   740-041821                     RE-S-1800X4-16G-S
Routing Engine 1 REV 02   740-041821                     RE-S-1800X4-16G-S
CB 0             REV 08   750-040257   PROTOXCLEI        750-040257
CB 1             REV 08   750-040257   PROTOXCLEI        750-040257
SFB 0            REV 06   711-032385   PROTOXCLEI        711-032385
SFB 1            REV 07   711-032385   PROTOXCLEI        711-032385
SFB 2            REV 07   711-032385   PROTOXCLEI        711-032385
SFB 3            REV 07   711-032385   PROTOXCLEI        711-032385
SFB 4            REV 07   711-032385   PROTOXCLEI        711-032385
SFB 5            REV 07   711-032385   PROTOXCLEI        711-0323856
SFB 6            REV 07   711-032385   PROTOXCLEI        711-044170
SFB 7            REV 07   711-032385   PROTOXCLEI        711-044170
FPC 0            REV 33   750-028467                     MPC-3D-16XGE-SFPP
FPC 1            REV 21   750-033205                     MX-MPC3-3D
  MIC 0          REV 03   750-033307   PROTOXCLEI        MIC3-3D-10XGE-SFPP
  MIC 1          REV 03   750-033307   PROTOXCLEI        MIC3-3D-10XGE-SFPP
FPC 8            REV 22   750-031089   COUIBAYBAA        MX-MPC2-3D
  MIC 0          REV 26   750-028392   COUIA15BAA        MIC-3D-20GE-SFP
  MIC 1          REV 26   750-028387   COUIA16BAA        MIC-3D-4XGE-XFP
FPC 9            REV 11   750-036284   CMUIACGBAA        MPCE-3D-16XGE-SFPP
ADC 0            REV 05   750-043596   PROTOXCLEI        750-043596
ADC 1            REV 01   750-043596   PROTOXCLEI        750-043596
ADC 8            REV 01   750-043596   PROTOXCLEI        750-043596
ADC 9            REV 02   750-043596   PROTOXCLEI        750-043596
Fan Tray 0       REV 2A   760-046960
Fan Tray 1       REV 2A   760-046960
Fan Tray 2       REV 2A   760-046960
Fan Tray 3       REV 2A   760-046960
```

show chassis hardware (MX2010 Routers with MPC6E and OTN MIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN11C9AFEAFK      MX2010
Midplane         REV 35   750-044636   ABAB9188          Lower Backplane
Midplane 1       REV 02   711-044557   ABAB8729          Upper Backplane
PMP              REV 04   711-032426   ACAJ2432          Power Midplane
FPM Board        REV 09   760-044634   ABCA4314          Front Panel Display
```

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```
PSM 0            REV 01   740-050037   1EDB321015C       DC 52V Power Supply
Module
PSM 1            REV 01   740-050037   1EDB321015J       DC 52V Power Supply
Module
PSM 2            REV 01   740-050037   1EDB32000K8       DC 52V Power Supply
Module
PSM 3            REV 01   740-050037   1EDB32101JW       DC 52V Power Supply
Module
PSM 4            REV 01   740-050037   1EDB321015G       DC 52V Power Supply
Module
PSM 5            REV 01   740-050037   1EDB32101HH       DC 52V Power Supply
Module
PSM 6            REV 01   740-050037   1EDB32101HD       DC 52V Power Supply
Module
PSM 7            REV 01   740-050037   1EDB321015F       DC 52V Power Supply
Module
PSM 8            REV 01   740-050037   1EDB321015B       DC 52V Power Supply
Module
PDM 0            REV 03   740-045234   1EFA3220433       DC Power Dist Module
PDM 1            REV 03   740-045234   1EFA3220425       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009115685        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009099711        RE-S-1800x4
CB 0             REV 23   750-040257   CABE8395          Control Board
CB 1             REV 12   750-040257   CAAD9499          Control Board
SPMB 0           REV 02   711-041855   ABCG8426          PMB Board
SPMB 1           REV 02   711-041855   ABBS1481          PMB Board
SFB 0            REV 06   711-044466   ABCD5013          Switch Fabric Board
SFB 1            REV 06   711-044466   ABCD5160          Switch Fabric Board
SFB 2            REV 06   711-044466   ABCD5175          Switch Fabric Board
SFB 3            REV 06   711-044466   ABCD4938          Switch Fabric Board
SFB 4            REV 06   711-044466   ABCD4944          Switch Fabric Board
SFB 5            REV 06   711-044466   ABCD4968          Switch Fabric Board
SFB 6            REV 06   711-044466   ABCD5267          Switch Fabric Board
SFB 7            REV 06   711-044466   ABCD4997          Switch Fabric Board
FPC 0            REV 59   750-044130   ABCT7676          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8527          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7810          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7811          MPC6E XL
FPC 2            REV 27   750-033205   ZL6014            MPCE Type 3 3D
  CPU            REV 07   711-035209   ZK9068            HMPC PMB 2G
  MIC 0          REV 14   750-033196   CAAW9214          1X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XC49FC030         CFP2-100G-SR10
  MIC 1          REV 18   750-033199   CAAC3231          1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CFP
FPC 3            REV 59   750-044130   ABCT7682          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8531          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7818          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7819          MPC6E XL
FPC 4            REV 33   750-044130   ABBY9278          MPC6E 3D
  CPU            REV 09   711-045719   ABBY8677          RMPC PMB
  XLM 0          REV 06.2.00 711-046638 ABBY8844         MPC6E XL
  XLM 1          REV 06.2.00 711-046638 ABBY8830         MPC6E XL
FPC 5            REV 59   750-044130   ABCT7675          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8526          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7808          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7809          MPC6E XL
FPC 6            REV 30   750-028467   ZM4986            MPC 3D 16x 10GE
 CPU           REV 10   711-029089   ZP6541           AMPC PMB
  PIC 0                 BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43GAC           SFP+-10G-SR
```


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```
  PIC 1                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   ALM0A6D          SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   AQF0RB3          SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   153363A00333     SFP+-10G-SR
    Xcvr 3      REV 01  740-021308   AN10KYE          SFP+-10G-SR
  PIC 2                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-021308   APK04YM          SFP+-10G-SR
  PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   AQF0H44          SFP+-10G-SR
FPC 8           REV 38  750-031090   CABF7313         MPC Type 2 3D EQ
  CPU           REV 08  711-030884   CABE6727         MPC PMB 2G
  MIC 0         REV 18  750-028380   YK8253           3D 2x 10GE XFP
    PIC 0               BUILTIN      BUILTIN          1x 10GE XFP
      Xcvr 0    REV 03  740-014289   AD1148M00TP      XFP-10G-SR
    PIC 1               BUILTIN      BUILTIN          1x 10GE XFP
  QXM 0         REV 06  711-028408   CABC5614         MPC QXM
  QXM 1         REV 06  711-028408   CABC5550         MPC QXM
FPC 9           REV 39  750-044130   ABCK1652         MPC6E 3D
  CPU           REV 09  711-045719   ABCK1655         RMPC PMB
  MIC 0         REV 09  750-049457   ABCP1230         2X100GE CFP2 OTN
    PIC 0               BUILTIN      BUILTIN          2X100GE CFP2 OTN
      Xcvr 0            NON-JNPR     37300222WP0002   CFP2-100G-LR4-D
      Xcvr 1            NON-JNPR     FD46F001Y        CFP2-100G-SR10
  MIC 1         REV 07  750-049457   ABCV6662         2X100GE CFP2 OTN
    PIC 1               BUILTIN      BUILTIN          2X100GE CFP2 OTN
      Xcvr 0            NON-JNPR     UQD0014          CFP2-100G-LR4-D
      Xcvr 1            NON-JNPR     J13J68335        CFP2-100G-LR4-D
  XLM 0         REV 07.2.00 711-046638 ABCK5491       MPC6E XL
  XLM 1         REV 07.2.00 711-046638 ABCK5475       MPC6E XL
ADC 1           REV 17  750-043596   ABCG9023         Adapter Card
ADC 2           REV 01  750-043596   ZV4079           Adapter Card
ADC 6           REV 17  750-043596   ABCG8866         Adapter Card
ADC 8           REV 17  750-043596   ABCA8993         Adapter Card
Fan Tray 0      REV 06  760-046960   ACAY0354         172mm FanTray - 6 Fans
Fan Tray 1      REV 06  760-046960   ACAY0831         172mm FanTray - 6 Fans
Fan Tray 2      REV 06  760-046960   ACAY0892         172mm FanTray - 6 Fans
Fan Tray 3      REV 06  760-046960   ACAY0839         172mm FanTray - 6 Fans
```

show chassis hardware detail (MX2010 Routers with MPC6E and OTN MIC)

```
user@host> show chassis hardware detail
Hardware inventory:
Item            Version  Part number  Serial number     Description
Chassis                               JN11C9AFEAFK      MX2010
Midplane        REV 35   750-044636   ABAB9188          Lower Backplane
Midplane 1      REV 02   711-044557   ABAB8729          Upper Backplane
PMP             REV 04   711-032426   ACAJ2432          Power Midplane
FPM Board       REV 09   760-044634   ABCA4314          Front Panel Display
PSM 0           REV 01   740-050037   1EDB321015C       DC 52V Power Supply
Module
PSM 1           REV 01   740-050037   1EDB321015J       DC 52V Power Supply
Module
PSM 2           REV 01   740-050037   1EDB32000K8       DC 52V Power Supply
Module
PSM 3           REV 01   740-050037   1EDB32101JW       DC 52V Power Supply
Module
PSM 4           REV 01   740-050037   1EDB321015G       DC 52V Power Supply
Module
PSM 5           REV 01   740-050037   1EDB32101HH       DC 52V Power Supply
Module
PSM 6           REV 01   740-050037   1EDB32101HD       DC 52V Power Supply
```

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```
Module
PSM 7            REV 01   740-050037   1EDB321015F       DC 52V Power Supply
Module
PSM 8            REV 01   740-050037   1EDB321015B       DC 52V Power Supply
Module
PDM 0            REV 03   740-045234   1EFA3220433       DC Power Dist Module
PDM 1            REV 03   740-045234   1EFA3220425       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009115685        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200274310822 191 Compact Flash
  ad1   30533 MB  UGB94BPH32HOS1-KCI   11000043190       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 1         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 2         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
  DIMM 3         VL31B5263F-F8SD DIE REV-0 PCB REV-0     MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009099711        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200262860208 30 Compact Flash
  ad1   30533 MB  UGB94ARF32HOS3-KC    UNIGEN-499551-000146 Disk 1
CB 0             REV 23   750-040257   CABE8395          Control Board
CB 1             REV 12   750-040257   CAAD9499          Control Board
SPMB 0           REV 02   711-041855   ABCG8426          PMB Board
SPMB 1           REV 02   711-041855   ABBS1481          PMB Board
SFB 0            REV 06   711-044466   ABCD5013          Switch Fabric Board
SFB 1            REV 06   711-044466   ABCD5160          Switch Fabric Board
SFB 2            REV 06   711-044466   ABCD5175          Switch Fabric Board
SFB 3            REV 06   711-044466   ABCD4938          Switch Fabric Board
SFB 4            REV 06   711-044466   ABCD4944          Switch Fabric Board
SFB 5            REV 06   711-044466   ABCD4968          Switch Fabric Board
SFB 6            REV 06   711-044466   ABCD5267          Switch Fabric Board
SFB 7            REV 06   711-044466   ABCD4997          Switch Fabric Board
FPC 0            REV 59   750-044130   ABCT7676          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8527          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7810          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7811          MPC6E XL
FPC 2            REV 27   750-033205   ZL6014            MPCE Type 3 3D
  CPU            REV 07   711-035209   ZK9068            HMPC PMB 2G
  MIC 0          REV 14   750-033196   CAAW9214          1X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           1X100GE CXP
      Xcvr 0     REV 01   740-046563   XC49FC030         CFP2-100G-SR10
  MIC 1          REV 18   750-033199   CAAC3231          1X100GE CFP
    PIC 2                 BUILTIN      BUILTIN           1X100GE CFP
FPC 3            REV 59   750-044130   ABCT7682          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8531          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7818          MPC6E XL
 XLM 1          REV 13   711-046638   ABCT7819          MPC6E XL
FPC 4            REV 33   750-044130   ABBY9278          MPC6E 3D
  CPU            REV 09   711-045719   ABBY8677          RMPC PMB
  XLM 0          REV 06.2.00 711-046638 ABBY8844        MPC6E XL
  XLM 1          REV 06.2.00 711-046638 ABBY8830        MPC6E XL
FPC 5            REV 59   750-044130   ABCT7675          MPC6E 3D
  CPU            REV 10   711-045719   ABCK8526          RMPC PMB
  XLM 0          REV 13   711-046638   ABCT7808          MPC6E XL
  XLM 1          REV 13   711-046638   ABCT7809          MPC6E XL
FPC 6            REV 30   750-028467   ZM4986            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ZP6541            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   AQ43GAC           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   ALM0A6D           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AQF0RB3           SFP+-10G-SR
```


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```
    Xcvr 2       REV 01   740-031980   153363A00333      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AN10KYE           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   APK04YM           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AQF0H44           SFP+-10G-SR
FPC 8            REV 38   750-031090   CABF7313          MPC Type 2 3D EQ
  CPU            REV 08   711-030884   CABE6727          MPC PMB 2G
  MIC 0          REV 18   750-028380   YK8253            3D 2x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           1x 10GE XFP
      Xcvr 0     REV 03   740-014289   AD1148M00TP       XFP-10G-SR
    PIC 1                 BUILTIN      BUILTIN           1x 10GE XFP
  QXM 0          REV 06   711-028408   CABC5614          MPC QXM
  QXM 1          REV 06   711-028408   CABC5550          MPC QXM
FPC 9            REV 39   750-044130   ABCK1652          MPC6E 3D
  CPU            REV 09   711-045719   ABCK1655          RMPC PMB
  MIC 0          REV 09   750-049457   ABCP1230          2X100GE CFP2 OTN
    PIC 0                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0              NON-JNPR     37300222WP0002    CFP2-100G-LR4-D
      Xcvr 1              NON-JNPR     FD46F001Y         CFP2-100G-SR10
  MIC 1          REV 07   750-049457   ABCV6662          2X100GE CFP2 OTN
    PIC 1                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0              NON-JNPR     UQD0014           CFP2-100G-LR4-D
      Xcvr 1              NON-JNPR     J13J68335         CFP2-100G-LR4-D
  XLM 0          REV 07.2.00 711-046638 ABCK5491         MPC6E XL
  XLM 1          REV 07.2.00 711-046638 ABCK5475         MPC6E XL
ADC 1            REV 17   750-043596   ABCG9023          Adapter Card
ADC 2            REV 01   750-043596   ZV4079            Adapter Card
ADC 6            REV 17   750-043596   ABCG8866          Adapter Card
ADC 8            REV 17   750-043596   ABCA8993          Adapter Card
Fan Tray 0       REV 06   760-046960   ACAY0354          172mm FanTray - 6 Fans
Fan Tray 1       REV 06   760-046960   ACAY0831          172mm FanTray - 6 Fans
Fan Tray 2       REV 06   760-046960   ACAY0892          172mm FanTray - 6 Fans
Fan Tray 3       REV 06   760-046960   ACAY0839          172mm FanTray - 6 Fans
```

show chassis hardware extensive (MX2010 Routers with MPC6E and OTN MIC)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11C9AFEAFK      MX2010
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN11C9AFEAFK
 Assembly ID:  0x0557            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX2010
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 43 39 41 46 45 41 46 4b 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 35   750-044636   ABAB9188          Lower Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044636        S/N:               ABAB9188
 Assembly ID:  0x0b66            Assembly Version:  01.35
```

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```
  Date:         06-21-2013        Assembly Flags:    0x00
  Version:      REV 35            CLEI Code:         IPMU810ARA
  ID: Lower Backplane             FRU Model Number:  CHAS-BP-MX2010-S
  Board Information Record:
   Address 0x00: ad 01 08 00 3c 8a b0 38 68 00 ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 66 01 23 52 45 56 20 33 35 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
   Address 0x20: 53 2f 4e 20 41 42 41 42 39 31 38 38 00 15 06 07
   Address 0x30: dd ff ff ff ad 01 08 00 3c 8a b0 38 68 00 ff ff
   Address 0x40: ff ff ff ff 01 49 50 4d 55 38 31 30 41 52 41 43
   Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 31 30 2d 53 00
   Address 0x60: 00 00 00 00 00 00 30 36 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff f8 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1       REV 02   711-044557   ABAB8729          Upper Backplane
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-044557        S/N:               ABAB8729
  Assembly ID:  0x0b65            Assembly Version:  01.02
  Date:         03-21-2013        Assembly Flags:    0x00
  Version:      REV 02
  ID: Upper Backplane
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 0b 65 01 02 52 45 56 20 30 32 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 34 34 35 35 37 00 00
   Address 0x20: 53 2f 4e 20 41 42 41 42 38 37 32 39 00 15 03 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP              REV 04   711-032426   ACAJ2432          Power Midplane
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-032426        S/N:               ACAJ2432
  Assembly ID:  0x045d            Assembly Version:  01.04
  Date:         03-28-2013        Assembly Flags:    0x00
  Version:      REV 04
  ID: Power Midplane
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
   Address 0x20: 53 2f 4e 20 41 43 41 4a 32 34 33 32 00 1c 03 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
   Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
   Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 09   760-044634   ABCA4314          Front Panel Display
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          760-044634        S/N:               ABCA4314
  Assembly ID:  0x0b64            Assembly Version:  01.09
  Date:         03-28-2013        Assembly Flags:    0x00
  Version:      REV 09            CLEI Code:         IPMYA4EJRA
  ID: Front Panel Display         FRU Model Number:  MX2010-CRAFT-S
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 64 01 09 52 45 56 20 30 39 00 00
```


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```
  Address 0x10: 00 00 00 00 37 36 30 2d 30 34 34 36 33 34 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 41 34 33 31 34 00 1c 03 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 59 41 34 45 4a 52 41 4d
  Address 0x50: 58 32 30 31 30 2d 43 52 41 46 54 2d 53 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 93 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0            REV 01   740-050037   1EDB321015C       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015C
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 43 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1            REV 01   740-050037   1EDB321015J       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015J
Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 4a 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2            REV 01   740-050037   1EDB32000K8       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32000K8
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-23-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 30 30 30 4b 38 00 00 17 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
```

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```
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3            REV 01   740-050037   1EDB32101JW       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32101JW
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 4a 57 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4            REV 01   740-050037   1EDB321015G       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015G
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 47 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5            REV 01   740-050037   1EDB32101HH       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32101HH
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 48 48 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6            REV 01   740-050037   1EDB32101HD       DC 52V Power Supply
```


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```
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32101HD
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 48 44 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7            REV 01   740-050037   1EDB321015F       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015F
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 46 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 8            REV 01   740-050037   1EDB321015B       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB321015B
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-28-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 31 30 31 35 42 00 00 1c 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PDM 0            REV 03   740-045234   1EFA3220433       DC Power Dist Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045234        S/N:               1EFA3220433
 Assembly ID:  0x047b            Assembly Version:  01.03
 Date:         05-30-2013        Assembly Flags:    0x00
```

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```
 Version:      REV 03            CLEI Code:         IPUPAJSKAA
 ID: DC Power Dist Module        FRU Model Number:  MX2000-PDM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 7b 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 34 35 32 33 34 00 00
  Address 0x20: 31 45 46 41 33 32 32 30 34 33 33 00 00 1e 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4a 53 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 44 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 33 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 1d 00 00 00 00 00 00 00 00 00 00 00 00
PDM 1            REV 03   740-045234   1EFA3220425       DC Power Dist Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-045234        S/N:               1EFA3220425
 Assembly ID:  0x047b            Assembly Version:  01.03
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         IPUPAJSKAA
 ID: DC Power Dist Module        FRU Model Number:  MX2000-PDM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
..
```

show chassis hardware (MX2020 Router)

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user@host > show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E2227AFJ      MX2020
Midplane         REV 27   750-040240   ABAB9384          Lower Power Midplane
Midplane 1       REV 04   711-032386   ABAB9386          Upper Backplane
PMP 1            REV 05   711-032428   ACAJ1579          Upper Power Midplane
PMP 0            REV 04   711-032426   ACAJ1524          Lower Power Midplane
FPM Board        REV 06   760-040242   ABBT8837          Front Panel Display
PSM 0            REV 01   740-045050   1E022240056       DC 52V Power Supply
Module
PSM 1            REV 01   740-045050   1E022240054       DC 52V Power Supply
Module
PSM 2            REV 01   740-045050   1E02224005H       DC 52V Power Supply
Module
PSM 3            REV 01   740-045050   1E022240053       DC 52V Power Supply
Module
PSM 4            REV 01   740-045050   1E02224004K       DC 52V Power Supply
Module
PSM 7            REV 01   740-045050   1E02224006W       DC 52V Power Supply
Module
PSM 8            REV 01   740-045050   1E022240062       DC 52V Power Supply
Module
PSM 9            REV 01   740-045050   1E02224005B       DC 52V Power Supply
Module
PSM 10           REV 01   740-045050   1E02224005A       DC 52V Power Supply
Module
PSM 11           REV 01   740-045050   1E022240052       DC 52V Power Supply
Module
PSM 12           REV 01   740-045050   1E022240051       DC 52V Power Supply
Module
PSM 13           REV 01   740-045050   1E022240058       DC 52V Power Supply
Module
PSM 14           REV 01   740-045050   1E02224004L       DC 52V Power Supply
Module
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PSM 15           REV 01   740-045050   1E02224005M       DC 52V Power Supply
Module
PSM 16           REV 01   740-045050   1E02224006S       DC 52V Power Supply
Module
PSM 17           REV 01   740-045050   1E02224005Z       DC 52V Power Supply
Module
PDM 0            REV 01   740-045234   1E012150033       DC Power Dist Module
PDM 1            REV 01   740-045234   1E012150027       DC Power Dist Module
PDM 2            REV 01   740-045234   1E012150028       DC Power Dist Module
PDM 3            REV 01   740-045234   1E012150045       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009089704        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009094138        RE-S-1800x4
CB 0             REV 14   750-040257   CAAF8430          Control Board
CB 1             REV 08   750-040257   CAAB3482          Control Board
SPMB 0           REV 01   711-041855   ZS2290            PMB Board
SPMB 1           REV 02   711-041855   CAAA6141          PMB Board
SFB 0            REV 03   711-044466   ABBV6789          Switch Fabric Board
SFB 1            REV 05   711-044466   ABBX5666          Switch Fabric Board
SFB 2            REV 05   711-044466   ABBX5678          Switch Fabric Board
SFB 3            REV 05   711-044466   ABBX5687          Switch Fabric Board
SFB 4            REV 05   711-044466   ABBX5609          Switch Fabric Board
SFB 5            REV 05   711-044466   ABBX5675          Switch Fabric Board
SFB 6            REV 03   711-044466   ABBV6805          Switch Fabric Board
SFB 7            REV 05   711-044466   ABBX5701          Switch Fabric Board
FPC 0            REV 30   750-028467   ABBN0284          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0507          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00990         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E04357         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01327         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04375         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02760         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02904         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E03963         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00756         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04418         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01077         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01128         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01253         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E01140         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01626         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01075         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01177         SFP+-10G-USR
FPC 1            REV 30   750-028467   ABBN0208          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1084          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04745         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01570         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E04388         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01439         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04739         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01869         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01675         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01901         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01346         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01288         SFP+-10G-USR
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    Xcvr 2       REV 01   740-030658   B11F01824         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04312         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02811         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E03847         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01495         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01265         SFP+-10G-USR
FPC 2            REV 30   750-028467   ZM5111            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ZP6607            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LJA           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MFZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKL           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KF4           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80FBJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MM2           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LJV           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NXV           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N1H           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLS           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FL5           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL9           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NG2           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80KDU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80MG1           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80MM0           SFP+-10G-SR
FPC 3            REV 30   750-028467   ABBN0302          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0495          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01581         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01176         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01251         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02752         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00786         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01020         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01023         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02819         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02812         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11D04437         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01279         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01333         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00978         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01018         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01784         SFP+-10G-USR
    Xcvr 3       REV 01   740-031980   AK80NKP           SFP+-10G-SR
FPC 4            REV 30   750-028467   ABBN0308          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1095          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04305         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01147         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01195         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01743         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01892         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02880         SFP+-10G-USR
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    Xcvr 2       REV 01   740-030658   B11E00725         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01057         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02816         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11C04501         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E02764         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00789         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01250         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02847         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00787         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E03803         SFP+-10G-USR
FPC 5            REV 30   750-028467   ABBN0316          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1082          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00523         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01848         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01865         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00540         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00422         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00428         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K00423         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01855         SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K01847         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00526         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K00529         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00525         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00425         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00530         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01851         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00528         SFP+-10G-SR
FPC 6            REV 32   750-028467   ABBN6832          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6534          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MB4           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FQ6           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N1F           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLQ           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80KDR           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FGJ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N5G           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KD8           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LET           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80N1X           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NRF           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL2           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N3D           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MRB           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LEQ           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LER           SFP+-10G-SR
FPC 7            REV 32   750-028467   ABBN6811          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7288          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NK8           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80LJG           SFP+-10G-SR
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    Xcvr 2       REV 01   740-031980   AK80LBU          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N21          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEU          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLM          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NL6          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LES          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEN          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80ME0          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LMG          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80MM1          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MG7          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80KF9          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NRQ          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLE          SFP+-10G-SR
FPC 8            REV 23   750-028467   YN2977           MPC 3D 16x 10GE
  CPU            REV 10   711-029089   YP1856           AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00875     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00851     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00772     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00882     SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00735     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00169     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00726     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00077     SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00168     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00676     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00732     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00091     SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00725     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00642     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00871     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00853     SFP+-10G-SR
FPC 9            REV 32   750-028467   ABBN6798         MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6556         AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   9ZDZ06A00055     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00239     SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AD0915E003K      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AD0915E003A      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MRC          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NL5          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKN          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N3U          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N1T          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ808DJ          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NG4          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80FND          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80FKQ          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLT          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKR          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LKM          SFP+-10G-SR
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FPC 10           REV 32   750-028467   ABBN6813          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6542          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NA3           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLF           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80MRH           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KE4           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00030      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80L9H           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80ME8           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLR           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NG1           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MCA           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LFC           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LEM           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N9X           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80LAC           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LF2           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N8T           SFP+-10G-SR
FPC 11           REV 30   750-028467   ABBN0281          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0526          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01326         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E03973         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00950         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00674         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00775         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E04461         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01074         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02821         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04501         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00757         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01623         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01022         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04359         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02751         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E02736         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01178         SFP+-10G-USR
FPC 12           REV 32   750-028467   ABBN6796          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7259          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K01856         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01853         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01863         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02863      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02668      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02881      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01671      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02627      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02725      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02692      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02730      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03081      SFP+-10G-SR
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  PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   163363A02736     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   163363A02568     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   163363A02747     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   163363A02579     SFP+-10G-SR
FPC 13          REV 30  750-028467   ABBN0270         MPC 3D 16x 10GE
  CPU           REV 10  711-029089   ABBJ0966         AMPC PMB
  PIC 0                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   AK80NL1          SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   AK80NXW          SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   AK80KD2          SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   AK80FMD          SFP+-10G-SR
  PIC 1                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   AK80NKQ          SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   AK80MGH          SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   AK80N38          SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   AK80NL7          SFP+-10G-SR
  PIC 2                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   AK80LEL          SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   AK80NKD          SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   AK80KCY          SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   AK80LHK          SFP+-10G-SR
  PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   AK80M5J          SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   AK80MBE          SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   AK80NLG          SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   AK80LFH          SFP+-10G-SR
FPC 14          REV 32  750-028467   ABBN6790         MPC 3D 16x 10GE
  CPU           REV 10  711-029089   ABBK6515         AMPC PMB
  PIC 0                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   AK80LZM          SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   AK80MCC          SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   AK80KCM          SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   AK80KE0          SFP+-10G-SR
  PIC 1                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-021310   C10F99155        SFP+-10G-LRM
    Xcvr 1      REV 01  740-021310   C10F99049        SFP+-10G-LRM
    Xcvr 2      REV 01  740-021310   C10F99128        SFP+-10G-LRM
    Xcvr 3      REV 01  740-021310   C10F99169        SFP+-10G-LRM
  PIC 2                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   AK80LF3          SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   163363A02597     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   163363A03060     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   163363A03057     SFP+-10G-SR
  PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   AK80LEX          SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   AK80FEU          SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   AK80FNM          SFP+-10G-SR
    Xcvr 3      REV 01  740-021308   AJQ0Q5G          SFP+-10G-SR
FPC 15          REV 32  750-028467   ABBN6791         MPC 3D 16x 10GE
  CPU           REV 10  711-029089   ABBN7289         AMPC PMB
  PIC 0                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   B11K00424        SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   B11K01849        SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   B11K01862        SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   B11K01852        SFP+-10G-SR
  PIC 1                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   B11K00427        SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   B11K00430        SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   B11K01854        SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   B11K00426        SFP+-10G-SR
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  PIC 2                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   B11K00429        SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   B11K01864        SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   B11K01850        SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   B11K00522        SFP+-10G-SR
  PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-030658   B11E01144        SFP+-10G-USR
    Xcvr 1      REV 01  740-030658   B11E00985        SFP+-10G-USR
    Xcvr 2      REV 01  740-030658   B11E00796        SFP+-10G-USR
    Xcvr 3      REV 01  740-031980   B11K01866        SFP+-10G-SR
FPC 16          REV 30  750-028467   ABBM4592         MPC 3D 16x 10GE
  CPU           REV 10  711-029089   ABBN0465         AMPC PMB
  PIC 0                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-030658   B11F01435        SFP+-10G-USR
    Xcvr 1      REV 01  740-030658   B11E01052        SFP+-10G-USR
    Xcvr 2      REV 01  740-030658   B11F01328        SFP+-10G-USR
    Xcvr 3      REV 01  740-030658   B11F01254        SFP+-10G-USR
  PIC 1                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-030658   B11E02738        SFP+-10G-USR
    Xcvr 1      REV 01  740-030658   B11E02881        SFP+-10G-USR
    Xcvr 2      REV 01  740-030658   B11F01624        SFP+-10G-USR
    Xcvr 3      REV 01  740-030658   B11E00889        SFP+-10G-USR
  PIC 2                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-030658   B11E02883        SFP+-10G-USR
    Xcvr 1      REV 01  740-030658   B11E00681        SFP+-10G-USR
    Xcvr 2      REV 01  740-030658   B11E04306        SFP+-10G-USR
    Xcvr 3      REV 01  740-030658   B11E02813        SFP+-10G-USR
  PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-030658   B11F01801        SFP+-10G-USR
    Xcvr 1      REV 01  740-030658   B11E02753        SFP+-10G-USR
    Xcvr 2      REV 01  740-030658   B11E01156        SFP+-10G-USR
    Xcvr 3      REV 01  740-030658   B11E04324        SFP+-10G-USR
FPC 17          REV 32  750-028467   ABBN6810         MPC 3D 16x 10GE
  CPU           REV 10  711-029089   ABBN7237         AMPC PMB
  PIC 0                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   163363A02638     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   163363A02082     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   163363A01674     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   163363A03058     SFP+-10G-SR
  PIC 1                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   163363A03048     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   163363A02729     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   163363A02566     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   163363A02567     SFP+-10G-SR
  PIC 2                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   163363A02878     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   163363A02739     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   163363A01959     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   163363A02660     SFP+-10G-SR
  PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   163363A02731     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   163363A02588     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   163363A02673     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   163363A02654     SFP+-10G-SR
FPC 18          REV 30  750-028467   ABBM4739         MPC 3D 16x 10GE
  CPU           REV 10  711-029089   ABBN0487         AMPC PMB
  PIC 0                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980   163363A02569     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980   163363A02886     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980   163363A03082     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980   133363A00297     SFP+-10G-SR
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  PIC 1                 BUILTIN     BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980  163363A02726     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980  163363A03050     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980  163363A02884     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980  163363A03076     SFP+-10G-SR
  PIC 2                 BUILTIN     BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980  163363A02581     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980  163363A02873     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980  163363A02582     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980  163363A03083     SFP+-10G-SR
  PIC 3                 BUILTIN     BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031981  UL70BU6          SFP+-10G-LR
    Xcvr 1      REV 01  740-031981  UL50QC6          SFP+-10G-LR
    Xcvr 2      REV 01  740-031981  UL708N6          SFP+-10G-LR
    Xcvr 3      REV 01  740-031981  UL603KK          SFP+-10G-LR
FPC 19          REV 32  750-028467  ABBN6827         MPC 3D 16x 10GE
  CPU           REV 10  711-029089  ABBK6508         AMPC PMB
  PIC 0                 BUILTIN     BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980  163363A01688     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980  163363A01724     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980  163363A01773     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980  163363A02593     SFP+-10G-SR
  PIC 1                 BUILTIN     BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980  163363A03061     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980  163363A03056     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980  163363A02669     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980  163363A03070     SFP+-10G-SR
  PIC 2                 BUILTIN     BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980  163363A02572     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980  163363A02697     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980  163363A02585     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980  163363A03052     SFP+-10G-SR
  PIC 3                 BUILTIN     BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01  740-031980  163363A02591     SFP+-10G-SR
    Xcvr 1      REV 01  740-031980  163363A02649     SFP+-10G-SR
    Xcvr 2      REV 01  740-031980  163363A02577     SFP+-10G-SR
    Xcvr 3      REV 01  740-031980  163363A02698     SFP+-10G-SR
ADC 0           REV 13  750-043596  ABBX5561         Adapter Card
ADC 1           REV 13  750-043596  ABBX5546         Adapter Card
ADC 2           REV 13  750-043596  ABBX5535         Adapter Card
ADC 3           REV 13  750-043596  ABBX5552         Adapter Card
ADC 4           REV 13  750-043596  ABBX5581         Adapter Card
ADC 5           REV 13  750-043596  ABBX5545         Adapter Card
ADC 6           REV 13  750-043596  ABBX5554         Adapter Card
ADC 7           REV 07  750-043596  ABBV7194         Adapter Card
ADC 8           REV 07  750-043596  ABBV7251         Adapter Card
ADC 9           REV 07  750-043596  ABBV7202         Adapter Card
ADC 10          REV 13  750-043596  ABBX5538         Adapter Card
ADC 11          REV 13  750-043596  ABBX5566         Adapter Card
ADC 12          REV 13  750-043596  ABBX5542         Adapter Card
ADC 13          REV 13  750-043596  ABBX5539         Adapter Card
ADC 14          REV 13  750-043596  ABBX5555         Adapter Card
ADC 15          REV 13  750-043596  ABBX5557         Adapter Card
ADC 16          REV 13  750-043596  ABBX5536         Adapter Card
ADC 17          REV 13  750-043596  ABBX5559         Adapter Card
ADC 18          REV 13  750-043596  ABBX5537         Adapter Card
ADC 19          REV 11  750-043596  ABBW5685         Adapter Card
Fan Tray 0      REV 2A  760-046960  ACAY0030         172mm FanTray - 6 Fans
Fan Tray 1      REV 2A  760-046960  ACAY0039         172mm FanTray - 6 Fans
Fan Tray 2      REV 2A  760-046960  ACAY0033         172mm FanTray - 6 Fans
Fan Tray 3      REV 2A  760-046960  ACAY0062         172mm FanTray - 6 Fans
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show chassis hardware detail (MX2020 Router)

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Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E2227AFJ      MX2020
Midplane         REV 27   750-040240   ABAB9384          Lower Power Midplane
Midplane 1       REV 04   711-032386   ABAB9386          Upper Backplane
PMP 1            REV 05   711-032428   ACAJ1821          Upper Power Midplane
PMP 0            REV 04   711-032426   ACAJ1524          Lower Power Midplane
FPM Board        REV 06   760-040242   ABBT8837          Front Panel Display
PSM 0            REV 01   740-045050   1E02224006G       DC 52V Power Supply
Module
PSM 1            REV 01   740-045050   1E022240053       DC 52V Power Supply
Module
PSM 2            REV 01   740-045050   1E02224004K       DC 52V Power Supply
Module
PSM 3            REV 01   740-045050   1E022240056       DC 52V Power Supply
Module
PSM 4            REV 01   740-045050   1E022240054       DC 52V Power Supply
Module
PSM 5            REV 01   740-045050   1E02224005H       DC 52V Power Supply
Module
PSM 6            REV 01   740-045050   1E02224006S       DC 52V Power Supply
Module
PSM 7            REV 01   740-045050   1E02224005M       DC 52V Power Supply
Module
PSM 8            REV 01   740-045050   1E022240062       DC 52V Power Supply
Module
PSM 9            REV 03   740-045050   1EDB2350095       DC 52V Power Supply
Module
PSM 10           REV 03   740-045050   1EDB235009L       DC 52V Power Supply
Module
PSM 11           REV 03   740-045050   1EDB2350092       DC 52V Power Supply
Module
PSM 12           REV 03   740-045050   1EDB23500AT       DC 52V Power Supply
Module
PSM 13           REV 03   740-045050   1EDB2350094       DC 52V Power Supply
Module
PSM 15           REV 03   740-045050   1EDB235008X       DC 52V Power Supply
Module
PDM 0            REV 01   740-045234   1E012150033       DC Power Dist Module
PDM 1            REV 01   740-045234   1E012150027       DC Power Dist Module
PDM 2            REV 01   740-045234   1E262250072       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009094138        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDisk VCF3 20110825A021D0000064 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-499551-000347 Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009089709        RE-S-1800x4
  ad0    3831 MB  UGB30SFA4000T1       SFA4000T1 00000113 Compact Flash
  ad1   30533 MB  UGB94ARF32H0S3-KC    UNIGEN-478612-001044 Disk 1
CB 0             REV 08   750-040257   CAAB3482          Control Board
CB 1             REV 04   750-040257   ZT2864            Control Board
SPMB 0           REV 02   711-041855   CAAA6141          PMB Board
SPMB 1           REV 01   711-041855   ZS2275            PMB Board
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SFB 0            REV 05   711-044466   ABBT2161          Switch Fabric Board
SFB 1            REV 05   711-044466   ABBT2159          Switch Fabric Board
SFB 2            REV 05   711-044466   ABBX3718          Switch Fabric Board
SFB 3            REV 05   711-044466   ABBT2152          Switch Fabric Board
SFB 4            REV 05   711-044466   ABBT2160          Switch Fabric Board
SFB 5            REV 05   711-044466   ABBT2145          Switch Fabric Board
SFB 6            REV 05   711-044466   ABBT2150          Switch Fabric Board
SFB 7            REV 05   711-044466   ABBT2163          Switch Fabric Board
FPC 0            REV 30   750-028467   ABBN0284          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0507          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00990         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E04357         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01327         SFP+-10G-USR
Xcvr 3       REV 01   740-030658   B11E04375         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02760         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02904         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E03963         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00756         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04418         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01077         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01128         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01253         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E01140         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01626         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01075         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01177         SFP+-10G-USR
FPC 1            REV 30   750-028467   ABBN0308          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1095          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04305         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01147         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01195         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01743         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01892         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02880         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00725         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01057         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02816         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11C04501         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E02764         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00789         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01250         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02847         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00787         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E03803         SFP+-10G-USR
FPC 2            REV 30   750-028467   ABBN0316          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1082          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00523         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01848         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01865         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00540         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00422         SFP+-10G-SR
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    Xcvr 1       REV 01   740-031980   B11K00428         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K00423         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01855         SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K01847         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00526         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K00529         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00525         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
Xcvr 0       REV 01   740-031980   B11K00425         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00530         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01851         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00528         SFP+-10G-SR
FPC 3            REV 32   750-028467   ABBN6832          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6534          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MB4           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FQ6           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N1F           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLQ           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80KDR           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FGJ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N5G           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KD8           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LET           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80N1X           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NRF           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL2           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N3D           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MRB           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LEQ           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LER           SFP+-10G-SR
FPC 4            REV 32   750-028467   ABBN6811          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7288          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NK8           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80LJG           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LBU           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N21           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEU           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLM           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NL6           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LES           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEN           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80ME0           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LMG           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80MM1           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MG7           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80KF9           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NRQ           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLE           SFP+-10G-SR
FPC 5            REV 32   750-028467   ABBN6791          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7289          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00424         SFP+-10G-SR
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    Xcvr 1       REV 01   740-031980   B11K01849         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01862         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K01852         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP
Xcvr 0       REV 01   740-031980   B11K00427         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K00430         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01854         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00426         SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K00429         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01864         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01850         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11K00522         SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E01144         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00985         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00796         SFP+-10G-USR
    Xcvr 3       REV 01   740-031980   B11K01866         SFP+-10G-SR
FPC 6            REV 30   750-028467   ABBM4592          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0465          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01435         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01052         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01328         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01254         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02738         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02881         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01624         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00889         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02883         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00681         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E04306         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02813         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01801         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02753         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01156         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04324         SFP+-10G-USR
FPC 7            REV 32   750-028467   ABBN6810          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7237          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A03058      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02082      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01674      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02638      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A03048      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02729      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02566      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02567      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02878      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02739      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01959      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02660      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02731      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02588      SFP+-10G-SR
 Xcvr 2       REV 01   740-031980   163363A02673      SFP+-10G-SR
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    Xcvr 3       REV 01   740-031980   163363A02654      SFP+-10G-SR
FPC 8            REV 30   750-028467   ABBM4739          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0487          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02569      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02886      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A03082      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   133363A00297      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02726      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A03050      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02884      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03076      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02581      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02873      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02582      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03083      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031981   UL70BU6           SFP+-10G-LR
    Xcvr 1       REV 01   740-031981   UL50QC6           SFP+-10G-LR
    Xcvr 2       REV 01   740-031981   UL708N6           SFP+-10G-LR
    Xcvr 3       REV 01   740-031981   UL603KK           SFP+-10G-LR
FPC 9            REV 32   750-028467   ABBN6827          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6508          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A01688      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A01724      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01773      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02593      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A03061      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A03056      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02669      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03070      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02572      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02697      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02585      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03052      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02591      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02649      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02577      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02698      SFP+-10G-SR
FPC 10           REV 30   750-028467   ABBN0302          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0495          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01581         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01176         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01251         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02752         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00786         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01020         SFP+-10G-USR
 Xcvr 2       REV 01   740-030658   B11E01023         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02819         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02812         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11D04437         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01279         SFP+-10G-USR
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    Xcvr 3       REV 01   740-030658   B11F01333         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00978         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E01018         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01784         SFP+-10G-USR
    Xcvr 3       REV 01   740-031980   AK80NKP           SFP+-10G-SR
FPC 11           REV 32   750-028467   ABBN6790          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6515          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LZM           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MCC           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KCM           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KE0           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021310   C10F99155         SFP+-10G-LRM
    Xcvr 1       REV 01   740-021310   C10F99049         SFP+-10G-LRM
    Xcvr 2       REV 01   740-021310   C10F99128         SFP+-10G-LRM
    Xcvr 3       REV 01   740-021310   C10F99169         SFP+-10G-LRM
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LF3           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02597      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A03060      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03057      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEX           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80FEU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FNM           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AJQ0Q5G           SFP+-10G-SR
FPC 12           REV 30   750-028467   ZM5111            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ZP6607            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LJA           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MFZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKL           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KF4           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80FBJ           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MM2           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LJV           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NXV           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N1H           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLS           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FL5           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL9           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NG2           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80KDU           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80MG1           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80MM0           SFP+-10G-SR
FPC 13           REV 30   750-028467   ABBN0208          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ1084          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04745         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01570         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E04388         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01439         SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04739         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01869         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01675         SFP+-10G-USR
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    Xcvr 3       REV 01   740-030658   B11F01901         SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01346         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11F01288         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01824         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E04312         SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E02811         SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E03847         SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01495         SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11F01265         SFP+-10G-USR
FPC 14           REV 23   750-028467   YN2977            MPC 3D 16x 10GE
  CPU            REV 10   711-029089   YP1856            AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00875      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00851      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00772      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00882      SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00735      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00169      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00726      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00077      SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00168      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00676      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00732      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00091      SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   183363A00725      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00642      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   183363A00871      SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   183363A00853      SFP+-10G-SR
FPC 15           REV 32   750-028467   ABBN6798          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBK6556          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   9ZDZ06A00055      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   183363A00239      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AD0915E003K       SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AD0915E003A       SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80MRC           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NL5           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKN           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N3U           SFP+-10G-SR
 PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N1T           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJ808DJ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NG4           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80FND           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80FKQ           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLT           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NKR           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LKM           SFP+-10G-SR
FPC 16           REV 30   750-028467   ABBN0270          MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBJ0966          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NL1           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NXW           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KD2           SFP+-10G-SR
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    Xcvr 3       REV 01   740-031980   AK80FMD          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NKQ          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MGH          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80N38          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NL7          SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80M5J          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NKD          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80KCY          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LHK          SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LEL          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MBE          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80NLG          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LFH          SFP+-10G-SR
FPC 17           REV 32   750-028467   ABBN6796         MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN7259         AMPC PMB
  PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   B11K01856        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11K01853        SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11K01863        SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02863     SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02668     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02881     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A01671     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02627     SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02725     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02692     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02730     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A03081     SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   163363A02736     SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   163363A02568     SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   163363A02747     SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   163363A02579     SFP+-10G-SR
FPC 18           REV 30   750-028467   ABBN0281         MPC 3D 16x 10GE
  CPU            REV 10   711-029089   ABBN0526         AMPC PMB
PIC 0                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11F01326        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E03973        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E00950        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E00674        SFP+-10G-USR
  PIC 1                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E00775        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E04461        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E01074        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E02821        SFP+-10G-USR
  PIC 2                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04501        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E00757        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11F01623        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01022        SFP+-10G-USR
  PIC 3                   BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-030658   B11E04359        SFP+-10G-USR
    Xcvr 1       REV 01   740-030658   B11E02751        SFP+-10G-USR
    Xcvr 2       REV 01   740-030658   B11E02736        SFP+-10G-USR
    Xcvr 3       REV 01   740-030658   B11E01178        SFP+-10G-USR
FPC 19           REV 32   750-028467   ABBN6813         MPC 3D 16x 10GE
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  CPU            REV 10   711-029089   ABBK6542          AMPC PMB
  PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NA3           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80NLF           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80MRH           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80KE4           SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-021308   973152A00030      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80L9H           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80ME8           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80NLR           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80NG1           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80MCA           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LFC           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80LEM           SFP+-10G-SR
  PIC 3                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80N9X           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AK80LAC           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80LF2           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AK80N8T           SFP+-10G-SR
ADC 0            REV 13   750-043596   ABBX5561          Adapter Card
ADC 1            REV 13   750-043596   ABBX5546          Adapter Card
ADC 2            REV 13   750-043596   ABBX5535          Adapter Card
ADC 3            REV 13   750-043596   ABBX5552          Adapter Card
ADC 4            REV 13   750-043596   ABBX5581          Adapter Card
ADC 5            REV 13   750-043596   ABBX5545          Adapter Card
ADC 6            REV 13   750-043596   ABBX5554          Adapter Card
ADC 7            REV 07   750-043596   ABBV7194          Adapter Card
ADC 8            REV 07   750-043596   ABBV7251          Adapter Card
ADC 9            REV 07   750-043596   ABBV7202          Adapter Card
ADC 10           REV 13   750-043596   ABBX5579          Adapter Card
ADC 11           REV 13   750-043596   ABBX5548          Adapter Card
ADC 12           REV 13   750-043596   ABBX5575          Adapter Card
ADC 13           REV 13   750-043596   ABBX5539          Adapter Card
ADC 14           REV 13   750-043596   ABBX5555          Adapter Card
ADC 15           REV 13   750-043596   ABBX5557          Adapter Card
ADC 16           REV 13   750-043596   ABBX5536          Adapter Card
ADC 17           REV 13   750-043596   ABBX5559          Adapter Card
ADC 18           REV 13   750-043596   ABBX5537          Adapter Card
ADC 19           REV 11   750-043596   ABBW5685          Adapter Card
Fan Tray 0       REV 04   760-046960   ACAY0090          172mm FanTray - 6 Fans
Fan Tray 1       REV 04   760-046960   ACAY0088          172mm FanTray - 6 Fans
Fan Tray 2       REV 04   760-046960   ACAY0089          172mm FanTray - 6 Fans
Fan Tray 3       REV 04   760-046960   ACAY0108          172mm FanTray - 6 Fans
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show chassis hardware models (MX2020 Router)

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Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 27   750-040240   ABAB9384          750-040240
FPM Board        REV 06   760-040242   ABBT8837          760-040242
PSM 0            REV 01   740-045050   1E02224006G       MX2000-PSM-HC-DC-S-A
PSM 1            REV 01   740-045050   1E022240053       MX2000-PSM-HC-DC-S-A
PSM 2            REV 01   740-045050   1E02224004K       MX2000-PSM-HC-DC-S-A
PSM 3            REV 01   740-045050   1E022240056       MX2000-PSM-HC-DC-S-A
PSM 4            REV 01   740-045050   1E022240054       MX2000-PSM-HC-DC-S-A
PSM 5            REV 01   740-045050   1E02224005H       MX2000-PSM-HC-DC-S-A
PSM 6            REV 01   740-045050   1E02224006S       MX2000-PSM-HC-DC-S-A
PSM 7            REV 01   740-045050   1E02224005M       MX2000-PSM-HC-DC-S-A
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PSM 8            REV 01   740-045050   1E022240062       MX2000-PSM-HC-DC-S-A
PSM 9            REV 03   740-045050   1EDB2350095       MX2000-PSM-DC-S-A
PSM 10           REV 03   740-045050   1EDB235009L       MX2000-PSM-DC-S-A
PSM 11           REV 03   740-045050   1EDB2350092       MX2000-PSM-DC-S-A
PSM 12           REV 03   740-045050   1EDB23500AT       MX2000-PSM-DC-S-A
PSM 13           REV 03   740-045050   1EDB2350094       MX2000-PSM-DC-S-A
PSM 15           REV 03   740-045050   1EDB235008X       MX2000-PSM-DC-S-A
PDM 0            REV 01   740-045234   1E012150033
PDM 1            REV 01   740-045234   1E012150027
PDM 2            REV 01   740-045234   1E262250072       MX2000-PDM-DC-S-A
Routing Engine 0 REV 02   740-041821   9009094138        RE-S-1800X4-16G-S
Routing Engine 1 REV 02   740-041821   9009089709        RE-S-1800X4-16G-S
CB 0             REV 08   750-040257   CAAB3482          750-040257
CB 1             REV 04   750-040257   ZT2864            750-040257
SFB 0            REV 05   711-044466   ABBT2161          MX2000-SFB-S
SFB 1            REV 05   711-044466   ABBT2159          MX2000-SFB-S
SFB 2            REV 05   711-044466   ABBX3718          MX2000-SFB-S
SFB 4            REV 05   711-044466   ABBT2160          MX2000-SFB-S
SFB 5            REV 05   711-044466   ABBT2145          MX2000-SFB-S
SFB 7            REV 05   711-044466   ABBT2163          MX2000-SFB-S
FPC 0            REV 30   750-028467   ABBN0284          MPC-3D-16XGE-SFPP
FPC 1            REV 30   750-028467   ABBN0308          MPC-3D-16XGE-SFPP
FPC 2            REV 30   750-028467   ABBN0316          MPC-3D-16XGE-SFPP
FPC 3            REV 32   750-028467   ABBN6832          MPC-3D-16XGE-SFPP
FPC 4            REV 32   750-028467   ABBN6811          MPC-3D-16XGE-SFPP
FPC 5            REV 32   750-028467   ABBN6791          MPC-3D-16XGE-SFPP
FPC 6            REV 30   750-028467   ABBM4592          MPC-3D-16XGE-SFPP
FPC 7            REV 32   750-028467   ABBN6810          MPC-3D-16XGE-SFPP
FPC 8            REV 30   750-028467   ABBM4739          MPC-3D-16XGE-SFPP
FPC 9            REV 32   750-028467   ABBN6827          MPC-3D-16XGE-SFPP
FPC 10           REV 30   750-028467   ABBN0302          MPC-3D-16XGE-SFPP
FPC 11           REV 32   750-028467   ABBN6790          MPC-3D-16XGE-SFPP
FPC 12           REV 30   750-028467   ZM5111            MPC-3D-16XGE-SFPP
FPC 13           REV 30   750-028467   ABBN0208          MPC-3D-16XGE-SFPP
FPC 14           REV 23   750-028467   YN2977            MPC-3D-16XGE-SFPP
FPC 15           REV 32   750-028467   ABBN6798          MPC-3D-16XGE-SFPP
FPC 16           REV 30   750-028467   ABBN0270          MPC-3D-16XGE-SFPP
FPC 17           REV 32   750-028467   ABBN6796          MPC-3D-16XGE-SFPP
FPC 18           REV 30   750-028467   ABBN0281          MPC-3D-16XGE-SFPP
FPC 19           REV 32   750-028467   ABBN6813          MPC-3D-16XGE-SFPP
ADC 0            REV 13   750-043596   ABBX5561          PROTO-ASSEMBLY
ADC 1            REV 13   750-043596   ABBX5546          PROTO-ASSEMBLY
ADC 2            REV 13   750-043596   ABBX5535          MX2000-LC-ADAPTER
ADC 3            REV 13   750-043596   ABBX5552          MX2000-LC-ADAPTER
ADC 4            REV 13   750-043596   ABBX5581          MX2000-LC-ADAPTER
ADC 5            REV 13   750-043596   ABBX5545          PROTO-ASSEMBLY
ADC 6            REV 13   750-043596   ABBX5554          PROTO-ASSEMBLY
ADC 7            REV 07   750-043596   ABBV7194          MX2000-LC-ADAPTER
ADC 8            REV 07   750-043596   ABBV7251          MX2000-LC-ADAPTER
ADC 9            REV 07   750-043596   ABBV7202          MX2000-LC-ADAPTER
ADC 10           REV 13   750-043596   ABBX5579          MX2000-LC-ADAPTER
ADC 12           REV 13   750-043596   ABBX5575          MX2000-LC-ADAPTER
ADC 13           REV 13   750-043596   ABBX5539          PROTO-ASSEMBLY
ADC 14           REV 13   750-043596   ABBX5555          PROTO-ASSEMBLY
ADC 15           REV 13   750-043596   ABBX5557          MX2000-LC-ADAPTER
ADC 16           REV 13   750-043596   ABBX5536          PROTO-ASSEMBLY
ADC 17           REV 13   750-043596   ABBX5559          PROTO-ASSEMBLY
ADC 18           REV 13   750-043596   ABBX5537          PROTO-ASSEMBLY
ADC 19           REV 11   750-043596   ABBW5685          PROTO-ASSEMBLY
Fan Tray 0       REV 04   760-046960   ACAY0090
Fan Tray 1       REV 04   760-046960   ACAY0088
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Fan Tray 2       REV 04   760-046960   ACAY0089
Fan Tray 3       REV 04   760-046960   ACAY0108
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show chassis hardware clei-models (MX2020 Router)

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user@ host > show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 27   750-040240   PROTOXCLEI        750-040240
FPM Board        REV 06   760-040242   PROTOXCLEI        760-040242
PSM 0            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 1            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 2            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 3            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 4            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 5            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 6            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 7            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 8            REV 01   740-045050   IPUPAJMKAA        MX2000-PSM-HC-DC-S-A
PSM 9            REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 10           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 11           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 12           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 13           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PSM 15           REV 03   740-045050   IPUPAJMKAA        MX2000-PSM-DC-S-A
PDM 0            REV 01   740-045234
PDM 1            REV 01   740-045234
PDM 2            REV 01   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S-A
Routing Engine 0 REV 02   740-041821                     RE-S-1800X4-16G-S
Routing Engine 1 REV 02   740-041821                     RE-S-1800X4-16G-S
CB 0             REV 08   750-040257   PROTOXCLEI        750-040257
CB 1             REV 04   750-040257   PROTOXCLEI        750-040257
SFB 0            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 1            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 2            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 4            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 5            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 7            REV 05   711-044466   IPUCBA6CAA        MX2000-SFB-S
FPC 0            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 1            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 2            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 3            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 4            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 5            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 6            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 7            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 8            REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 9            REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 10           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 11           REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 12           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 13           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 14           REV 23   750-028467                     MPC-3D-16XGE-SFPP
FPC 15           REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 16           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 17           REV 32   750-028467                     MPC-3D-16XGE-SFPP
FPC 18           REV 30   750-028467                     MPC-3D-16XGE-SFPP
FPC 19           REV 32   750-028467                     MPC-3D-16XGE-SFPP
ADC 0            REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 1            REV 13   750-043596   PROTOXCLEI        PROTO-ASSEMBLY
ADC 2            REV 13   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
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ADC 3           REV 13   750-043596   IPUCBA8CAA       MX2000-LC-ADAPTER
ADC 4           REV 13   750-043596   IPUCBA8CAA       MX2000-LC-ADAPTER
ADC 5           REV 13   750-043596   PROTOXCLEI       PROTO-ASSEMBLY
ADC 6           REV 13   750-043596   PROTOXCLEI       PROTO-ASSEMBLY
ADC 7           REV 07   750-043596   PROTOXCLEI       MX2000-LC-ADAPTER
ADC 8           REV 07   750-043596   PROTOXCLEI       MX2000-LC-ADAPTER
ADC 9           REV 07   750-043596   PROTOXCLEI       MX2000-LC-ADAPTER
ADC 10          REV 13   750-043596   IPUCBA8CAA       MX2000-LC-ADAPTER
ADC 12          REV 13   750-043596   IPUCBA8CAA       MX2000-LC-ADAPTER
ADC 13          REV 13   750-043596   PROTOXCLEI       PROTO-ASSEMBLY
ADC 14          REV 13   750-043596   PROTOXCLEI       PROTO-ASSEMBLY
ADC 15          REV 13   750-043596   IPUCBA8CAA       MX2000-LC-ADAPTER
ADC 16          REV 13   750-043596   PROTOXCLEI       PROTO-ASSEMBLY
ADC 17          REV 13   750-043596   PROTOXCLEI       PROTO-ASSEMBLY
ADC 18          REV 13   750-043596   PROTOXCLEI       PROTO-ASSEMBLY
ADC 19          REV 11   750-043596   PROTOXCLEI       PROTO-ASSEMBLY
Fan Tray 0      REV 04   760-046960
Fan Tray 1      REV 04   760-046960
Fan Tray 2      REV 04   760-046960
Fan Tray 3      REV 04   760-046960
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show chassis hardware (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis hardware
Hardware inventory:
Item            Version  Part number  Serial number     Description
Chassis                               JN120BADBAFJ      MX2020
Midplane        REV 51   750-040240   ABAB9243          Lower Backplane
Midplane 1      REV 04   711-032386   ABAB9399          Upper Backplane
PMP 1           REV 05   711-032428   ACAJ2541          Upper Power Midplane
PMP 0           REV 04   711-032426   ACAJ2194          Lower Power Midplane
FPM Board       REV 13   760-040242   ABCA8835          Front Panel Display
PSM 0           REV 01   740-050037   1EDB32403L5       DC 52V Power Supply
Module
PSM 1           REV 01   740-050037   1EDB32403L3       DC 52V Power Supply
Module
PSM 2           REV 01   740-050037   1EDB32403KM       DC 52V Power Supply
Module
PSM 3           REV 01   740-050037   1EDB3130079       DC 52V Power Supply
Module
PSM 4           REV 01   740-050037   1EDB3130077       DC 52V Power Supply
Module
PSM 5           REV 01   740-050037   1EDB3130020       DC 52V Power Supply
Module
PSM 6           REV 01   740-050037   1EDB313009S       DC 52V Power Supply
Module
PSM 7           REV 01   740-050037   1EDB313008E       DC 52V Power Supply
Module
PSM 8           REV 01   740-050037   1EDB3130063       DC 52V Power Supply
Module
PSM 12          REV 01   740-050037   1EDB3130026       DC 52V Power Supply
Module
PSM 13          REV 01   740-050037   1EDB3130074       DC 52V Power Supply
Module
PSM 14          REV 01   740-050037   1EDB313009D       DC 52V Power Supply
Module
PSM 15          REV 01   740-050037   1EDB3130024       DC 52V Power Supply
Module
PSM 16          REV 01   740-050037   1EDB3130054       DC 52V Power Supply
Module
PSM 17          REV 01   740-050037   1EDB3130080       DC 52V Power Supply
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Module
PDM 0            REV 03   740-045234   1EGA3170144       DC Power Dist Module
PDM 1            REV 03   740-045234   1EGA3170158       DC Power Dist Module
PDM 2            REV 03   740-045234   1EGA3170182       DC Power Dist Module
PDM 3            REV 03   740-045234   1EGA3170207       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009112112        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009112087        RE-S-1800x4
CB 0             REV 23   750-040257   CABA2295          Control Board
CB 1             REV 23   750-040257   CABE8379          Control Board
SPMB 0           REV 02   711-041855   ABCE8851          PMB Board
SPMB 1           REV 02   711-041855   ABCE8839          PMB Board
SFB 0            REV 06   711-044466   ABCD5001          Switch Fabric Board
SFB 1            REV 06   711-044466   ABCD5034          Switch Fabric Board
SFB 2            REV 06   711-044466   ABCH3899          Switch Fabric Board
SFB 3            REV 06   711-044466   ABCD5020          Switch Fabric Board
SFB 4            REV 06   711-044466   ABCD4975          Switch Fabric Board
SFB 5            REV 06   711-044466   ABCH3881          Switch Fabric Board
SFB 6            REV 06   711-044466   ABCD5026          Switch Fabric Board
SFB 7            REV 06   711-044466   ABCD5032          Switch Fabric Board
FPC 0            REV 39   750-045715   CACD1902          MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACB1933          RMPC PMB
  PIC 0                   BUILTIN      BUILTIN           12X10GE SFPP OTN
    Xcvr 0       REV 01   740-031980   B11F00361         SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   19T511101854      SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   19T511100377      SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   ANT0878           SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   19T511100398      SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQ4363J           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   19T511101377      SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   ANT072M           SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AG90C7N           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AM30M09           SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B10E01016         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           12X10GE SFPP OTN
 Xcvr 0       REV 01   740-031980   B10L04151         SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   19T511101379      SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQ5036J           SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AG90C4M           SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   19T511101104      SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   AQ502ZM           SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AN10KY2           SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQ43G41           SFP+-10G-SR
    Xcvr 8       REV 01   740-021308   AQ41F04           SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AMS16N3           SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AMH04Y3           SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   ANA093E           SFP+-10G-SR
  PIC 2                   BUILTIN      BUILTIN           3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN           3X40GE QSFPP
  WAN MEZZ       REV 09   750-049136   CABN0410          MPC5E 24XGE OTN Mezz
FPC 1            REV 11   750-045372   CABK8112          MPCE Type 3 3D
  CPU            REV 08   711-035209   CABJ6621          HMPC PMB 2G
  MIC 0          REV 07   750-033307   CAAZ2897          10X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           10X10GE SFPP
      Xcvr 0     REV 01   740-021308   AQ501VK           SFP+-10G-SR
      Xcvr 1     REV 01   740-021308   AQ501YC           SFP+-10G-SR
      Xcvr 2     REV 01   740-021308   AQ43HJF           SFP+-10G-SR
      Xcvr 3     REV 01   740-021308   AQ43H8D           SFP+-10G-SR
      Xcvr 4     REV 01   740-021308   19T511100370      SFP+-10G-SR
      Xcvr 5     REV 01   740-031980   153363A00763      SFP+-10G-SR
      Xcvr 6     REV 01   740-021308   APH2LXB           SFP+-10G-SR
      Xcvr 7     REV 01   740-031980   AMC0LVV           SFP+-10G-SR
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    Xcvr 8     REV 01   740-031980   B11F00230         SFP+-10G-SR
  MIC 1        REV 14   750-033196   CAAP1390          1X100GE CXP
    PIC 2                BUILTIN     BUILTIN           1X100GE CXP
      Xcvr 0   REV 01   740-032166   XB11F000M         CFP2-100G-SR10
FPC 2          REV 17   750-037355   CAAS5826          MPC4E 3D 2CGE+8XGE
  CPU          REV 08   711-035209   CAAR3986          HMPC PMB 2G
  PIC 0                BUILTIN     BUILTIN           4x10GE SFPP
    Xcvr 0     REV 01   740-021308   T09F43722         SFP+-10G-SR
    Xcvr 1     REV 01   740-031980   ALP0KXF           SFP+-10G-SR
    Xcvr 2     REV 01   740-021308   AQ502FG           SFP+-10G-SR
    Xcvr 3     REV 01   740-021308   AQ502T7           SFP+-10G-SR
  PIC 1                BUILTIN     BUILTIN           1X100GE CFP
    Xcvr 0     REV 01   740-035329   X12J00571         CFP-100G-SR10
  PIC 2                BUILTIN     BUILTIN           4x10GE SFPP
    Xcvr 0     REV 01   740-031980   AJ71KEH           SFP+-10G-SR
    Xcvr 1     REV 01   740-031980   B11E01355         SFP+-10G-SR
    Xcvr 3     REV 01   740-031980   B11F00249         SFP+-10G-SR
  PIC 3                BUILTIN     BUILTIN           1X100GE CFP
FPC 3          REV 05   750-044444   CAAY9920          MPCE Type 2 3D P
  CPU          REV 04   711-038484   CAAW3639          MPCE PMB 2G
  MIC 0        REV 28   750-028387   CAAX1083          3D 4x 10GE  XFP
    PIC 0                BUILTIN     BUILTIN           2x 10GE  XFP
      Xcvr 0             NON-JNPR    CC07BK05B         XFP-10G-SR
      Xcvr 1   REV 01   740-011571   C728XJ00U         XFP-10G-SR
    PIC 1                BUILTIN     BUILTIN           2x 10GE  XFP
      Xcvr 0             NON-JNPR    T12L92339         XFP-10G-SR
  QXM 0        REV 06   711-028408   CAAW4915          MPC QXM
  QXM 1        REV 06   711-028408   CAAW4894          MPC QXM
FPC 4          REV 18   750-046005   CACH5661          MPC5E 3D Q 2CGE+4XGE
 CPU           REV 09   711-045719   CACF2880          RMPC PMB
  PIC 0                BUILTIN     BUILTIN           2X10GE SFPP OTN
  PIC 1                BUILTIN     BUILTIN           1X100GE CFP2 OTN
    Xcvr 0     REV 01   740-046563   XD16FC03Y         CFP2-100G-SR10
  PIC 2                BUILTIN     BUILTIN           2X10GE SFPP OTN
  PIC 3                BUILTIN     BUILTIN           1X100GE CFP2 OTN
    Xcvr 0     REV 01   740-049775   J13K72997         CFP2-100G-LR4-D
FPC 5          REV 35   750-028467   CAAR2623          MPC 3D 16x 10GE
  CPU          REV 11   711-029089   CAAR0491          AMPC PMB
  PIC 0                BUILTIN     BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0     REV 01   740-021308   AQ5027T           SFP+-10G-SR
    Xcvr 1     REV 01   740-021308   AQ502J0           SFP+-10G-SR
    Xcvr 2     REV 01   740-021308   AQ5027S           SFP+-10G-SR
    Xcvr 3     REV 01   740-021308   AQ501Y7           SFP+-10G-SR
  PIC 1                BUILTIN     BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0     REV 01   740-021308   AQ501YB           SFP+-10G-SR
    Xcvr 1     REV 01   740-021308   AQ503EB           SFP+-10G-SR
    Xcvr 2     REV 01   740-021308   AQ43HJH           SFP+-10G-SR
    Xcvr 3     REV 01   740-021308   AQ43J0Y           SFP+-10G-SR
  PIC 2                BUILTIN     BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0     REV 01   740-021308   AQ50352           SFP+-10G-SR
    Xcvr 1     REV 01   740-021308   AQ501X6           SFP+-10G-SR
    Xcvr 2     REV 01   740-021308   AQ502NV           SFP+-10G-SR
    Xcvr 3     REV 01   740-021308   AQ502ZJ           SFP+-10G-SR
  PIC 3                BUILTIN     BUILTIN           4x 10GE(LAN) SFP+
    Xcvr 0     REV 01   740-021308   AQ502H4           SFP+-10G-SR
    Xcvr 1     REV 01   740-021308   AQ43HJK           SFP+-10G-SR
    Xcvr 2     REV 01   740-031980   AJ30CU7           SFP+-10G-SR
FPC 9          REV 30   750-044130   ABCF5773          MPC6E 3D
  CPU          REV 09   711-045719   ABCF1270          RMPC PMB
  MIC 0        REV 05   750-049457   ABCD7829          2X100GE CFP2 OTN
    PIC 0                BUILTIN     BUILTIN           2X100GE CFP2 OTN
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    Xcvr 0                NON-JNPR     FE13F000K         CFP2-100G-SR10
    Xcvr 1      REV 01    740-048813   XD32FE017         CFP2-100G-LR-D
  MIC 1         REV 07    750-049457   ABCK2812          2X100GE CFP2 OTN
    PIC 1                 BUILTIN      BUILTIN           2X100GE CFP2 OTN
      Xcvr 0    REV 01    740-048813   XD32FE018         CFP2-100G-SR10
      Xcvr 1              NON-JNPR     FE13F000E         CFP2-100G-LR4-D
  XLM 0         REV 05.2.00 711-046638 ABCF5915          MPC6E XL
  XLM 1         REV 05.2.00 711-046638 ABCF5916          MPC6E XL
FPC 10          REV 36    750-044130   ABCS8602          MPC6E 3D
  CPU           REV 09    711-045719   ABCS8779          RMPC PMB
  MIC 0         REV 06    750-049979   ABCK2656          24X10GE SFPP OTN
    PIC 0                 BUILTIN      BUILTIN           24X10GE SFPP OTN
      Xcvr 0    REV 01    740-021308   AQ43J08           SFP+-10G-SR
      Xcvr 1    REV 01    740-021308   AQE1Y2E           SFP+-10G-SR
      Xcvr 2    REV 01    740-021308   AQE1UW4           SFP+-10G-SR
      Xcvr 3    REV 01    740-021308   AQE1MQF           SFP+-10G-SR
      Xcvr 4    REV 01    740-021308   AQG0MN1           SFP+-10G-SR
      Xcvr 5    REV 01    740-021308   AQE1L9M           SFP+-10G-SR
      Xcvr 6    REV 01    740-021308   AQG0MPD           SFP+-10G-SR
      Xcvr 7    REV 01    740-021308   AQE1Y2B           SFP+-10G-SR
      Xcvr 8    REV 01    740-021308   AQG0LT5           SFP+-10G-SR
      Xcvr 9    REV 01    740-021308   AQD2ET4           SFP+-10G-SR
      Xcvr 10   REV 01    740-021308   AQG0MPC           SFP+-10G-SR
      Xcvr 11   REV 01    740-021308   AQG0M63           SFP+-10G-SR
     Xcvr 12    REV 01    740-021308   AQG0LT1           SFP+-10G-SR
      Xcvr 13   REV 01    740-021308   AQG0M4L           SFP+-10G-SR
      Xcvr 14   REV 01    740-021308   AQG0LS7           SFP+-10G-SR
      Xcvr 15   REV 01    740-021308   AQE1MQB           SFP+-10G-SR
      Xcvr 16   REV 01    740-021308   AQG0LZP           SFP+-10G-SR
      Xcvr 17   REV 01    740-021308   AQE1LU9           SFP+-10G-SR
      Xcvr 18   REV 01    740-021308   AQG0MRZ           SFP+-10G-SR
      Xcvr 19   REV 01    740-021308   AQE1MQ9           SFP+-10G-SR
      Xcvr 20   REV 01    740-021308   AQG0LRX           SFP+-10G-SR
      Xcvr 21   REV 01    740-021308   AQE1UWD           SFP+-10G-SR
      Xcvr 22   REV 01    740-021308   AQG0LT4           SFP+-10G-SR
      Xcvr 23   REV 01    740-021308   AQE1MQL           SFP+-10G-SR
  MIC 1         REV 12    750-050008   ABCK5372          4X100GE CXP
    PIC 1                 BUILTIN      BUILTIN           4X100GE CXP
      Xcvr 3    REV 01    740-046563   XD16FC02Z         CFP2-100G-SR10
  XLM 0         REV 07.2.00 711-046638 ABCK3481          MPC6E XL
  XLM 1         REV 07.2.00 711-046638 ABCK4725          MPC6E XL
FPC 17          REV 28    750-044130   ABBZ3873          MPC6E 3D
  CPU           REV 08    711-045719   ABBZ3770          RMPC PMB
  MIC 0         REV 11    750-046535   ABCC7731          24X10GE SFPP
    PIC 0                 BUILTIN      BUILTIN           24X10GE SFPP
      Xcvr 1    REV 01    740-021308   APK0543           SFP+-10G-SR
      Xcvr 2    REV 01    740-031980   B10G01119         SFP+-10G-SR
      Xcvr 3    REV 01    740-021308   AQ502SX           SFP+-10G-SR
      Xcvr 4    REV 01    740-021308   AQ43H84           SFP+-10G-SR
      Xcvr 5    REV 01    740-021308   AQ501TB           SFP+-10G-SR
      Xcvr 6    REV 01    740-021308   AQ502JZ           SFP+-10G-SR
      Xcvr 7    REV 01    740-021308   AQ502SC           SFP+-10G-SR
      Xcvr 8    REV 01    740-021308   AQ502JW           SFP+-10G-SR
      Xcvr 9    REV 01    740-021308   AQ502RM           SFP+-10G-SR
      Xcvr 10   REV 01    740-031980   AHK013B           SFP+-10G-SR
      Xcvr 11   REV 01    740-021308   AQG0MRT           SFP+-10G-SR
      Xcvr 13   REV 01    740-031980   AMC0JTC           SFP+-10G-SR
      Xcvr 14   REV 01    740-021308   ANA0MQ0           SFP+-10G-SR
      Xcvr 15   REV 01    740-021308   AQ502GS           SFP+-10G-SR
      Xcvr 16   REV 01    740-021308   AQG0M0J           SFP+-10G-SR
      Xcvr 17   REV 01    740-021308   AQG0MUR           SFP+-10G-SR
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      Xcvr 18    REV 01   740-021308   AQG0MRR          SFP+-10G-SR
      Xcvr 19    REV 01   740-021308   AQG0M0F          SFP+-10G-SR
      Xcvr 20    REV 01   740-021308   AQ50312          SFP+-10G-SR
      Xcvr 21    REV 01   740-021308   AQ5032U          SFP+-10G-SR
      Xcvr 22    REV 01   740-021308   APE17B5          SFP+-10G-SR
      Xcvr 23    REV 01   740-021309   91D104A00011     SFP+-10G-LR
  MIC 1          REV 03   750-050008   ABCC4522         4X100GE CXP
    PIC 1                 BUILTIN      BUILTIN          4X100GE CXP
      Xcvr 0     REV 01   740-046563   XD16FC02U        CFP2-100G-SR10
      Xcvr 1     REV 01   740-046563   XC42FC03K        CFP2-100G-SR10
      Xcvr 2     REV 01   740-046563   XC42FC01Z        CFP2-100G-SR10
      Xcvr 3     REV 01   740-046563   XC42FC02U        CFP2-100G-SR10
  XLM 0          REV 04.2.00 711-046638 ABBZ3779       MPC6E XL
  XLM 1          REV 04.2.00 711-046638 ABBZ3780       MPC6E XL
FPC 18           REV 39   750-045715   CACD1910         MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACD1817         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          12X10GE SFPP OTN
  PIC 1                   BUILTIN      BUILTIN          12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN          3X40GE QSFPP
 Xcvr 0       REV 01   740-046565   QD130194         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130193         QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130196         QSFP+-40G-SR4
  PIC 3                   BUILTIN      BUILTIN          3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QD130191         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130198         QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130192         QSFP+-40G-SR4
  WAN MEZZ       REV 09   750-049136   CABN0411         MPC5E 24XGE OTN Mezz
FPC 19           REV 39   750-045715   CACD1908         MPC5E 3D Q 24XGE+6XLGE
  CPU            REV 09   711-045719   CACD1820         RMPC PMB
  PIC 0                   BUILTIN      BUILTIN          12X10GE SFPP OTN
    Xcvr 0       REV 01   740-021308   AQA0EXJ          SFP+-10G-SR
    Xcvr 1       REV 01   740-021308   AQG0M6D          SFP+-10G-SR
    Xcvr 2       REV 01   740-021308   AQG0LW7          SFP+-10G-SR
    Xcvr 3       REV 01   740-021308   AQA0JKB          SFP+-10G-SR
    Xcvr 4       REV 01   740-021308   AQG0MTM          SFP+-10G-SR
    Xcvr 5       REV 01   740-021308   AQA07NE          SFP+-10G-SR
    Xcvr 6       REV 01   740-021308   AQG0M41          SFP+-10G-SR
    Xcvr 7       REV 01   740-021308   AQG0MU7          SFP+-10G-SR
    Xcvr 8       REV 01   740-021308   AQG0MUG          SFP+-10G-SR
    Xcvr 9       REV 01   740-021308   AQG0MMX          SFP+-10G-SR
    Xcvr 10      REV 01   740-021308   AQG0M5K          SFP+-10G-SR
    Xcvr 11      REV 01   740-021308   AQG0LVZ          SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN          12X10GE SFPP OTN
  PIC 2                   BUILTIN      BUILTIN          3X40GE QSFPP
  PIC 3                   BUILTIN      BUILTIN          3X40GE QSFPP
    Xcvr 0       REV 01   740-046565   QD130242         QSFP+-40G-SR4
    Xcvr 1       REV 01   740-046565   QD130245         QSFP+-40G-SR4
    Xcvr 2       REV 01   740-046565   QD130613         QSFP+-40G-SR4
  WAN MEZZ       REV 09   750-049136   CABN0418         MPC5E 24XGE OTN Mezz
ADC 0            REV 17   750-043596   ABCD5378         Adapter Card
ADC 1            REV 17   750-043596   ABCD5465         Adapter Card
ADC 2            REV 17   750-043596   ABCD5431         Adapter Card
ADC 3            REV 17   750-043596   ABCD5356         Adapter Card
ADC 4            REV 02   750-043596   ZW1545           Adapter Card
ADC 5            REV 17   750-043596   ABCD5517         Adapter Card
ADC 18           REV 17   750-043596   ABCD5535         Adapter Card
ADC 19           REV 01   750-043596   ZV4127           Adapter Card
Fan Tray 0       REV 06   760-046960   ACAY0791         172mm FanTray - 6 Fans
Fan Tray 1       REV 06   760-046960   ACAY0788         172mm FanTray - 6 Fans
Fan Tray 2       REV 06   760-046960   ACAY0755         172mm FanTray - 6 Fans
Fan Tray 3       REV 06   760-046960   ACAY0441         172mm FanTray - 6 Fans
```


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show chassis hardware detail (MX2020 Router with MPC5EQ and MPC6E)

```
user@host>show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN120BADBAFJ      MX2020
Midplane         REV 51   750-040240   ABAB9243          Lower Backplane
Midplane 1       REV 04   711-032386   ABAB9399          Upper Backplane
PMP 1            REV 05   711-032428   ACAJ2541          Upper Power Midplane
PMP 0            REV 04   711-032426   ACAJ2194          Lower Power Midplane
FPM Board        REV 13   760-040242   ABCA8835          Front Panel Display
PSM 0            REV 01   740-050037   1EDB32403L5       DC 52V Power Supply
Module
PSM 1            REV 01   740-050037   1EDB32403L3       DC 52V Power Supply
Module
PSM 2            REV 01   740-050037   1EDB32403KM       DC 52V Power Supply
Module
PSM 3            REV 01   740-050037   1EDB3130079       DC 52V Power Supply
Module
PSM 4            REV 01   740-050037   1EDB3130077       DC 52V Power Supply
Module
PSM 5            REV 01   740-050037   1EDB3130020       DC 52V Power Supply
Module
PSM 6            REV 01   740-050037   1EDB313009S       DC 52V Power Supply
Module
PSM 7            REV 01   740-050037   1EDB313008E       DC 52V Power Supply
Module
PSM 8            REV 01   740-050037   1EDB3130063       DC 52V Power Supply
Module
PSM 12           REV 01   740-050037   1EDB3130026       DC 52V Power Supply
Module
PSM 13           REV 01   740-050037   1EDB3130074       DC 52V Power Supply
Module
PSM 14           REV 01   740-050037   1EDB313009D       DC 52V Power Supply
Module
PSM 15           REV 01   740-050037   1EDB3130024       DC 52V Power Supply
Module
PSM 16           REV 01   740-050037   1EDB3130054       DC 52V Power Supply
Module
PSM 17           REV 01   740-050037   1EDB3130080       DC 52V Power Supply
Module
PDM 0            REV 03   740-045234   1EGA3170144       DC Power Dist Module
PDM 1            REV 03   740-045234   1EGA3170158       DC Power Dist Module
PDM 2            REV 03   740-045234   1EGA3170182       DC Power Dist Module
PDM 3            REV 03   740-045234   1EGA3170207       DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009112112        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200274310822 113 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000031656       Disk 1
  usb0 (addr 1)  EHCI root hub 0       Intel             uhub0
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub1
  DIMM 0         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 1         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 2         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
  DIMM 3         SGU04G72H1BD2SA-BB DIE REV-52 PCB REV-54 MFR ID-ce80
Routing Engine 1 REV 02   740-041821   9009112087        RE-S-1800x4
  ad0    3998 MB  Virtium - TuffDrive VCF P1T0200274310822 366 Compact Flash
  ad1   30533 MB  UGB94BPH32H0S1-KCI   11000039979       Disk 1
CB 0             REV 23   750-040257   CABA2295          Control Board
CB 1             REV 23   750-040257   CABE8379          Control Board
SPMB 0
```

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```
SPMB 1
FPC 0            REV 39   750-045715   CACD1902          MPC5E 3D Q 24XGE+6XLGE
  CPU
FPC 1            REV 11   750-045372   CABK8112          MPCE Type 3 3D
  CPU
FPC 2            REV 17   750-037355   CAAS5826          MPC4E 3D 2CGE+8XGE
  CPU
FPC 3            REV 05   750-044444   CAAY9920          MPCE Type 2 3D P
  CPU
FPC 4            REV 18   750-046005   CACH5661          MPC5E 3D Q 2CGE+4XGE
  CPU
FPC 5            REV 35   750-028467   CAAR2623          MPC 3D 16x 10GE
 CPU
FPC 9            REV 30   750-044130   ABCF5773          MPC6E 3D
  CPU
FPC 10           REV 36   750-044130   ABCS8602          MPC6E 3D
  CPU
FPC 17           REV 28   750-044130   ABBZ3873          MPC6E 3D
  CPU
FPC 18           REV 39   750-045715   CACD1910          MPC5E 3D Q 24XGE+6XLGE
  CPU
FPC 19           REV 39   750-045715   CACD1908          MPC5E 3D Q 24XGE+6XLGE
  CPU
Fan Tray 0       REV 06   760-046960   ACAY0791          172mm FanTray - 6 Fans
Fan Tray 1       REV 06   760-046960   ACAY0788          172mm FanTray - 6 Fans
Fan Tray 2       REV 06   760-046960   ACAY0755          172mm FanTray - 6 Fans
Fan Tray 3       REV 06   760-046960   ACAY0441          172mm FanTray - 6 Fans
```

show chassis hardware extensive (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN120BADBAFJ      MX2020
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN120BADBAFJ
 Assembly ID:  0x0557            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX2020
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 32 30 42 41 44 42 41 46 4a 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 51   750-040240   ABAB9243          Lower Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-040240        S/N:               ABAB9243
 Assembly ID:  0x0b22            Assembly Version:  01.51
 Date:         05-30-2013        Assembly Flags:    0x00
 Version:      REV 51            CLEI Code:         IPMU710ARA
 ID: Lower Backplane             FRU Model Number:  CHAS-BP-MX2020-S
 Board Information Record:
  Address 0x00: ad 01 10 00 4c 96 14 72 30 08 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 22 01 33 52 45 56 20 35 31 00 00
```


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```
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 30 32 34 30 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 39 32 34 33 00 1e 05 07
  Address 0x30: dd ff ff ff ad 01 10 00 4c 96 14 72 30 08 ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 55 37 31 30 41 52 41 43
  Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 32 30 2d 53 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff d3 ff ff ff ff ff ff ff ff ff ff ff ff
Midplane 1       REV 04   711-032386   ABAB9399          Upper Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-032386        S/N:               ABAB9399
 Assembly ID:  0x0b23            Assembly Version:  01.04
 Date:         10-22-2012        Assembly Flags:    0x00
 Version:      REV 04
 ID: Upper Backplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 fe 0b 23 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 33 38 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 42 39 33 39 39 00 16 0a 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP 1            REV 05   711-032428   ACAJ2541          Upper Power Midplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-032428        S/N:               ACAJ2541
 Assembly ID:  0x045c            Assembly Version:  01.05
 Date:         04-26-2013        Assembly Flags:    0x00
 Version:      REV 05
 ID: Upper Power Midplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 5c 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 38 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 4a 32 35 34 31 00 1a 04 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
PMP 0            REV 04   711-032426   ACAJ2194          Lower Power Midplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-032426        S/N:               ACAJ2194
 Assembly ID:  0x045d            Assembly Version:  01.04
 Date:         01-29-2013        Assembly Flags:    0x00
 Version:      REV 04
 ID: Lower Power Midplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 5d 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 32 34 32 36 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 4a 32 31 39 34 00 1d 01 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

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```
FPM Board        REV 13   760-040242   ABCA8835          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-040242        S/N:               ABCA8835
 Assembly ID:  0x0b24            Assembly Version:  01.13
 Date:         04-13-2013        Assembly Flags:    0x00
 Version:      REV 13            CLEI Code:         IPMYAE5JRA
 ID: Front Panel Display         FRU Model Number:  MX2020-CRAFT-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 24 01 0d 52 45 56 20 31 33 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 34 30 32 34 32 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 41 38 38 33 35 00 0d 04 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 59 41 45 35 4a 52 41 4d
  Address 0x50: 58 32 30 32 30 2d 43 52 41 46 54 2d 53 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 95 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 0            REV 01   740-050037   1EDB32403L5       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32403L5
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         06-21-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 34 30 33 4c 35 00 00 15 06 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 1            REV 01   740-050037   1EDB32403L3       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32403L3
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         06-21-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 34 30 33 4c 33 00 00 15 06 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2            REV 01   740-050037   1EDB32403KM       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB32403KM
 Assembly ID:  0x0478            Assembly Version:  01.01
```


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```
 Date:         06-21-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 32 34 30 33 4b 4d 00 00 15 06 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3            REV 01   740-050037   1EDB3130079       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130079
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-16-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 37 39 00 00 10 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4            REV 01   740-050037   1EDB3130077       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130077
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 37 37 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5            REV 01   740-050037   1EDB3130020       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130020
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-16-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
```

```
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 32 30 00 00 10 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6            REV 01   740-050037   1EDB313009S       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB313009S
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 39 53 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7            REV 01   740-050037   1EDB313008E       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB313008E
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 38 45 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 8            REV 01   740-050037   1EDB3130063       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130063
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
```


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```
  Address 0x20: 31 45 44 42 33 31 33 30 30 36 33 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 12           REV 01   740-050037   1EDB3130026       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130026
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-16-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 32 36 00 00 10 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 13           REV 01   740-050037   1EDB3130074       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130074
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 37 34 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 14           REV 01   740-050037   1EDB313009D       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB313009D
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-17-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 33 31 33 30 30 39 44 00 00 11 05 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4b 52 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
```

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```
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 2a 00 00 00 00 00 00 00 00 00 00 00 00
PSM 15           REV 01   740-050037   1EDB3130024       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB3130024
 Assembly ID:  0x0478            Assembly Version:  01.01
 Date:         05-16-2013        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAKRKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 01 52 45 56 20 30 31 00 00
...
```

show chassis hardware models (MX2020 Routers with MPC5EQ and MPC6E)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 51   750-040240   ABAB9243          CHAS-BP-MX2020-S
FPM Board        REV 13   760-040242   ABCA8835          MX2020-CRAFT-S
PSM 0            REV 01   740-050037   1EDB32403L5       MX2000-PSM-DC-S
PSM 1            REV 01   740-050037   1EDB32403L3       MX2000-PSM-DC-S
PSM 2            REV 01   740-050037   1EDB32403KM       MX2000-PSM-DC-S
PSM 3            REV 01   740-050037   1EDB3130079       MX2000-PSM-DC-S
PSM 4            REV 01   740-050037   1EDB3130077       MX2000-PSM-DC-S
PSM 5            REV 01   740-050037   1EDB3130020       MX2000-PSM-DC-S
PSM 6            REV 01   740-050037   1EDB313009S       MX2000-PSM-DC-S
PSM 7            REV 01   740-050037   1EDB313008E       MX2000-PSM-DC-S
PSM 8            REV 01   740-050037   1EDB3130063       MX2000-PSM-DC-S
PSM 12           REV 01   740-050037   1EDB3130026       MX2000-PSM-DC-S
PSM 13           REV 01   740-050037   1EDB3130074       MX2000-PSM-DC-S
PSM 14           REV 01   740-050037   1EDB313009D       MX2000-PSM-DC-S
PSM 15           REV 01   740-050037   1EDB3130024       MX2000-PSM-DC-S
PSM 16           REV 01   740-050037   1EDB3130054       MX2000-PSM-DC-S
PSM 17           REV 01   740-050037   1EDB3130080       MX2000-PSM-DC-S
PDM 0            REV 03   740-045234   1EGA3170144       MX2000-PDM-DC-S
PDM 1            REV 03   740-045234   1EGA3170158       MX2000-PDM-DC-S
PDM 2            REV 03   740-045234   1EGA3170182       MX2000-PDM-DC-S
PDM 3            REV 03   740-045234   1EGA3170207       MX2000-PDM-DC-S
Routing Engine 0 REV 02   740-041821   9009112112        RE-MX2000-1800X4-S
Routing Engine 1 REV 02   740-041821   9009112087        RE-MX2000-1800X4-S
CB 0             REV 23   750-040257   CABA2295          RE-MX2000-1800X4-S
CB 1             REV 23   750-040257   CABE8379          RE-MX2000-1800X4-S
SFB 0            REV 06   711-044466   ABCD5001          MX2000-SFB-S
SFB 1            REV 06   711-044466   ABCD5034          MX2000-SFB-S
SFB 2            REV 06   711-044466   ABCH3899          MX2000-SFB-S
SFB 3            REV 06   711-044466   ABCD5020          MX2000-SFB-S
SFB 4            REV 06   711-044466   ABCD4975          MX2000-SFB-S
SFB 5            REV 06   711-044466   ABCH3881          MX2000-SFB-S
SFB 6            REV 06   711-044466   ABCD5026          MX2000-SFB-S
SFB 7            REV 06   711-044466   ABCD5032          MX2000-SFB-S
FPC 0            REV 39   750-045715   CACD1902          PROTO-ASSEMBLY
FPC 1            REV 11   750-045372   CABK8112          MX-MPC3E-3D
FPC 2            REV 17   750-037355   CAAS5826          MPC4E-3D-2CGE-8XGE
FPC 3            REV 05   750-044444   CAAY9920          MX-MPC2E-3D-P
FPC 4            REV 18   750-046005   CACH5661          PROTO-ASSEMBLY
FPC 5            REV 35   750-028467   CAAR2623          MPC-3D-16XGE-SFPP
FPC 9            REV 30   750-044130   ABCF5773          PROTO-ASSEMBLY
```


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```
FPC 10           REV 36   750-044130   ABCS8602          PROTO-ASSEMBLY
FPC 17           REV 28   750-044130   ABBZ3873          PROTO-ASSEMBLY
FPC 18           REV 39   750-045715   CACD1910          PROTO-ASSEMBLY
FPC 19           REV 39   750-045715   CACD1908          PROTO-ASSEMBLY
ADC 0            REV 17   750-043596   ABCD5378          MX2000-LC-ADAPTER
ADC 1            REV 17   750-043596   ABCD5465          MX2000-LC-ADAPTER
ADC 2            REV 17   750-043596   ABCD5431          MX2000-LC-ADAPTER
ADC 3            REV 17   750-043596   ABCD5356          MX2000-LC-ADAPTER
ADC 4            REV 02   750-043596   ZW1545            750-043596
ADC 5            REV 17   750-043596   ABCD5517          MX2000-LC-ADAPTER
ADC 18           REV 17   750-043596   ABCD5535          MX2000-LC-ADAPTER
ADC 19           REV 01   750-043596   ZV4127            750-043596
Fan Tray 0       REV 06   760-046960   ACAY0791          MX2000-FANTRAY-S
Fan Tray 1       REV 06   760-046960   ACAY0788          MX2000-FANTRAY-S
Fan Tray 2       REV 06   760-046960   ACAY0755          MX2000-FANTRAY-S
Fan Tray 3       REV 06   760-046960   ACAY0441          MX2000-FANTRAY-S
```

show chassis hardware clei-models (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 51   750-040240   IPMU710ARA        CHAS-BP-MX2020-S
FPM Board        REV 13   760-040242   IPMYAE5JRA        MX2020-CRAFT-S
PSM 0            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 1            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 2            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 3            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 4            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 5            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 6            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 7            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 8            REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 12           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 13           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 14           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 15           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 16           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PSM 17           REV 01   740-050037   IPUPAKRKAA        MX2000-PSM-DC-S
PDM 0            REV 03   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S
PDM 1            REV 03   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S
PDM 2            REV 03   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S
PDM 3            REV 03   740-045234   IPUPAJSKAA        MX2000-PDM-DC-S
CB 0             REV 23   750-040257   IPUCBA7CTA        RE-MX2000-1800X4-S
CB 1             REV 23   750-040257   IPUCBA7CTA        RE-MX2000-1800X4-S
SFB 0            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 1            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 2            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 3            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 4            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 5            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 6            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
SFB 7            REV 06   711-044466   IPUCBA6CAA        MX2000-SFB-S
FPC 0            REV 39   750-045715   PROTOXCLEI        PROTO-ASSEMBLY
FPC 1            REV 11   750-045372   COUIBBNBAA        MX-MPC3E-3D
FPC 2            REV 17   750-037355   IPU3A4DHAA        MPC4E-3D-2CGE-8XGE
FPC 3            REV 05   750-044444   COUIBBGBAA        MX-MPC2E-3D-P
  MIC 0          REV 28   750-028387   COUIA16BAA        MIC-3D-4XGE-XFP
FPC 4            REV 18   750-046005   PROTOXCLEI        PROTO-ASSEMBLY
FPC 5            REV 35   750-028467                     MPC-3D-16XGE-SFPP
FPC 9            REV 30   750-044130   PROTOXCLEI        PROTO-ASSEMBLY
```

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```
  MIC 0          REV 05   750-049457   PROTOXCLEI        PROTO-ASSEMBLY
FPC 10           REV 36   750-044130   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 0          REV 06   750-049979   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 1          REV 12   750-050008   PROTOXCLEI        PROTO-ASSEMBLY
FPC 17           REV 28   750-044130   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 1          REV 03   750-050008   PROTOXCLEI        PROTO-ASSEMBLY
FPC 18           REV 39   750-045715   PROTOXCLEI        PROTO-ASSEMBLY
FPC 19           REV 39   750-045715   PROTOXCLEI        PROTO-ASSEMBLY
ADC 0            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 1            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 2            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 3            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 4            REV 02   750-043596   PROTOXCLEI        750-043596
ADC 5            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 18           REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
ADC 19           REV 01   750-043596   PROTOXCLEI        750-043596
Fan Tray 0       REV 06   760-046960   IPUCBA5CAA        MX2000-FANTRAY-S
Fan Tray 1       REV 06   760-046960   IPUCBA5CAA        MX2000-FANTRAY-S
Fan Tray 2       REV 06   760-046960   IPUCBA5CAA        MX2000-FANTRAY-S
Fan Tray 3       REV 06   760-046960   IPUCBA5CAA        MX2000-FANTRAY-S
```

show chassis hardware (MX Series routers with ATM MIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN115736EAFC      MX240
Midplane         REV 07   760-021404   ABAA5038          MX240 Backplane
FPM Board        REV 03   760-021392   ABBA2758          Front Panel Display
PEM 0            Rev 01   740-022697   QCS0937C07K       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 01   740-022697   QCS0939C04X       PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 01   740-022697   QCS0937C06B       PS 1.2-1.7kW; 100-240V
AC in
PEM 3            Rev 01   740-022697   QCS0937C07U       PS 1.2-1.7kW; 100-240V
AC in
Routing Engine 0 REV 12   740-013063   9009042291        RE-S-2000
Routing Engine 1 REV 12   740-013063   9009042266        RE-S-2000
CB 0             REV 06   710-021523   ABBC1435          MX SCB
CB 1             REV 06   710-021523   ABBC1497          MX SCB
FPC 2     REV 14   750-031088   YH8446            MPC Type 2 3D Q
  CPU            REV 06   711-030884   YH9612            MPC PMB 2G
  MIC 0
  MIC 1          REV 10   750-036132   ZP7062            2xOC12/8xOC3 CC-CE
    PIC 2                 BUILTIN      BUILTIN           2xOC12/8xOC3 CC-CE

  Xcvr 0              NON-JNPR     23393-00492       UNKNOWN
      Xcvr 1              NON-JNPR     23393-00500       UNKNOWN
      Xcvr 2              NON-JNPR     23393-00912       UNKNOWN
      Xcvr 3     REV 01   740-015638   22216-00575       Load SFP
      Xcvr 4     REV 01   740-015638   24145-00110       Load SFP
      Xcvr 5     REV 01   740-015638   24145-00016       Load SFP
      Xcvr 6     REV 01   740-015638   24145-00175       Load SFP
      Xcvr 7              NON-JNPR     23393-00627       UNKNOWN
  QXM 0          REV 05   711-028408   YF4681            MPC QXM
  QXM 1          REV 05   711-028408   YF4817            MPC QXM
Fan Tray 0       REV 01   710-021113   XL3645            MX240 Fan Tray
```


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show chassis hardware (MX240, MX480, MX960 routers with Application Services Modular Line Card)

```
user@host>show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11D969BAFA      MX960
Midplane         REV 03   710-013698   ACAA2362          MX960 Backplane
FPM Board        REV 03   710-014974   ZR0639            Front Panel Display
PDM              Rev 03   740-013110   QCS152250SX       Power Distribution Module
PEM 0            Rev 10   740-013683   QCS1512718W       DC Power Entry Module
PEM 1            Rev 10   740-013683   QCS1512702Y       DC Power Entry Module
Routing Engine 0 REV 15   740-013063   9012024667        RE-S-2000
Routing Engine 1 REV 15   740-013063   9012024649        RE-S-2000
CB 0             REV 14   750-031391   ZJ7749            Enhanced MX SCB
CB 1             REV 14   750-031391   ZJ7750            Enhanced MX SCB
CB 2             REV 14   750-031391   ZY9233            Enhanced MX SCB
FPC 0            REV 17   750-031089   YR7434            MPC Type 2 3D
  CPU
FPC 1            REV 11   750-037207   ZW9727            AS-MCC
  CPU            REV 04   711-038173   ZW4817            AS-MCC-PMB
  MIC 0          REV 01   750-037214   ZH3764            AS-MSC
    PIC 0                 BUILTIN      BUILTIN           AS-MSC
  MIC 1          REV 01   711-028408   JZ9200            AS-MXC
    PIC 2                 BUILTIN      BUILTIN           AS-MXC
FPC 4            REV 30   750-028467   ABBN0232          MPC 3D 16x 10GE
  CPU
FPC 5            REV 04   750-037207   ZK9074            AS-MCC
  CPU
Fan Tray 0       REV 05   740-014971   VT5683            Fan Tray
Fan Tray 1       REV 05   740-014971   VT5684            Fan Tray
```

show chassis hardware extensive (MX240, MX480, MX960 Routers with Application Services Modular Line Card)

```
user@host> show chassis hardware extensive

ID: AS-MCC                      FRU Model Number:  750-037207
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 37 01 0b 52 45 56 20 31 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 30 37 00 00
  Address 0x20: 53 2f 4e 20 5a 57 39 37 32 37 00 00 00 11 02 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 35 30 2d 30 33 37 32 30 37 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 31 31 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 5e ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 04   711-038173   ZW4817            AS-MCC-PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-038173        S/N:               ZW4817
 Assembly ID:  0x0b38            Assembly Version:  01.04
 Date:         12-30-2011        Assembly Flags:    0x00
 Version:      REV 04
 ID: AS-MCC-PMB
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 38 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 31 37 33 00 00
```

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```
  Address 0x20: 53 2f 4e 20 5a 57 34 38 31 37 00 00 00 1e 0c 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 31 31 2d 30 33 38 31 37 33 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 30 34 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 60 00 00 00 00 00 00 00 00 00 00 00 00
  MIC 0          REV 01   750-037214   ZH3764            AS-MSC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-037214        S/N:               ZH3764
 Assembly ID:  0x0a44            Assembly Version:  01.01
 Date:         07-04-2011        Assembly Flags:    0x00
 Version:      REV 01
 ID: AS-MSC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff  I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0a 44 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 34 00 00
  Address 0x20: 53 2f 4e 20 5a 48 33 37 36 34 00 00 00 04 07 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff f6 c0 03 e1 bc 00 00 00 00 00 00 00 00
    PIC 0                 BUILTIN      BUILTIN           AS-MSC
FPC 4            REV 30   750-028467   ABBN0232          MPC 3D 16x 10GE
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
```

show chassis hardware (MX480 Router with MPC4E)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN10FF57BAFB      MX480
Midplane         REV 05   750-047849   Good              MX480 Midplane
FPM Board        REV 02   710-017254   KG2066            Front Panel Display
PEM 0            Rev 03   740-017330   QCS081590BJ       PS 1.2-1.7kW; 100-240V
AC in
PEM 1            Rev 03   740-017330   QCS0815908Z       PS 1.2-1.7kW; 100-240V
AC in
PEM 2            Rev 03   740-029970   QCS1001U001       PS 1.4-2.52kW; 90-264V
AC in
Routing Engine 0 REV 05   740-031116   9009089502        RE-S-1800x4
Routing Engine 1 REV 05   740-031116   9009089624        RE-S-1800x4
CB 0             REV 02   750-031391   YE8506            Enhanced MX SCB
CB 1             REV 14   750-031391   ZK8265            Enhanced MX SCB
FPC 2            REV 05   750-037358   ZT0638            MPC4E 3D 32XGE
  CPU            REV 07   711-035209   ZK3187            HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           8X10GE SFPP
  PIC 1                   BUILTIN      BUILTIN           8X10GE SFPP
  PIC 2                   BUILTIN      BUILTIN           8X10GE SFPP
  PIC 3                   BUILTIN      BUILTIN           8X10GE SFPP
FPC 3            REV 06   750-037355   CAAB1144          MPC4E 3D 2CGE+8XGE
  CPU            REV 08   711-035209   CAAB1278          HMPC PMB 2G
  PIC 0                   BUILTIN      BUILTIN           4x10GE SFPP
    Xcvr 0       REV 01   740-031980   B11E01439         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11D05809         SFP+-10G-SR
  PIC 1                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0                NON-JNPR     D5418             UNKNOWN
  PIC 2                   BUILTIN      BUILTIN           4x10GE SFPP
  PIC 3                   BUILTIN      BUILTIN           1X100GE CFP
    Xcvr 0                NON-JNPR     X12J00362         CFP-100G-SR10
```


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```
FPC 4            REV 12.3.10 750-033205 YR9445          MPCE Type 3 3D
  CPU
Fan Tray                                                Enhanced Left Fan Tray
```

show chassis hardware (MX2020 Router with MPC4E)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11E188CAFJ      MX2020
Midplane         REV 04   711-032387   ABAC7474          Lower Backplane
Midplane 1       REV 04   711-032386   ABAC7408          Upper Backplane
PMP 1            REV 03   711-032428   ACAJ1137          Upper Power Midplane
PMP 0            REV 03   711-032426   ACAJ1016          Lower Power Midplane
FPM Board        REV 06   760-040242   ABBT8832          Front Panel Display
PSM 3            REV 0C   740-033727   VK00255           DC 52V Power Supply
Module
PSM 4            REV 0C   740-033727   VJ00148           DC 52V Power Supply
Module
PSM 5            REV 0C   740-033727   VK00207           DC 52V Power Supply
Module
PSM 6            REV 0C   740-033727   VK00319           DC 52V Power Supply
Module
PSM 7            REV 0C   740-033727   VK00264           DC 52V Power Supply
Module
PSM 8            REV 0B   740-033727   VG00025           DC 52V Power Supply
Module
PSM 13           REV 0C   740-033727   VK00274           DC 52V Power Supply
Module
PSM 14           REV 0C   740-033727   VJ00167           DC 52V Power Supply
Module
PSM 15           REV 0C   740-033727   VK00299           DC 52V Power Supply
Module
PSM 16           REV 0C   740-033727   VK00213           DC 52V Power Supply
Module
PSM 17           REV 0C   740-033727   VK00253           DC 52V Power Supply
Module
PDM 0            REV 0B   740-038109   VJ00040           DC Power Dist Module
PDM 2            REV 0B   740-038109   VJ00025           DC Power Dist Module
Routing Engine 0 REV 02   740-041821   9009089735        RE-S-1800x4
Routing Engine 1 REV 02   740-041821   9009089731        RE-S-1800x4
CB 0             REV 04   750-040257   ZT2846            Control Board
CB 1             REV 04   750-040257   ZT2877            Control Board
SPMB 0           REV 01   711-041855   ZS2282            PMB Board
SPMB 1           REV 01   711-041855   ZS2261            PMB Board
SFB 0            REV 07   711-032385   ZZ2582            Switch Fabric Board
SFB 1            REV 04   711-032385   ZV4229            Switch Fabric Board
SFB 2            REV 07   711-032385   CAAB4902          Switch Fabric Board
SFB 3            REV 07   711-032385   CAAB4891          Switch Fabric Board
SFB 4            REV 07   711-032385   CAAB4883          Switch Fabric Board
SFB 5            REV 07   711-032385   CAAB4889          Switch Fabric Board
SFB 6            REV 06   711-032385   ZV1818            Switch Fabric Board
SFB 7            REV 07   711-032385   CAAB4897          Switch Fabric Board
FPC 0            REV 34   750-031090   ZT9799            MPC Type 2 3D EQ
  CPU            REV 06   711-030884   ZS1122            MPC PMB 2G
  MIC 0          REV 11   750-033535   CAAD7674          MIC-3D-10C192-XFP
    PIC 0                 BUILTIN      BUILTIN           MIC-3D-10C192-XFP
      Xcvr 0     REV 01   740-014279   753019A00404      XFP-OC192-SR
  MIC 1          REV 14   750-031967   ZM6103            MIC-3D-8OC3OC12-4OC48
    PIC 2                 BUILTIN      BUILTIN           MIC-3D-8OC3OC12-4OC48
      Xcvr 0     REV 01   740-011615   PEF1AZP           SFP-IR
```

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```
    Xcvr 1      REV 01   740-011615   PEF1AZN          SFP-IR
    Xcvr 2      REV 01   740-021308   ANA0N8S          SFP+-10G-SR
  QXM 0         REV 06   711-028408   ZT9339           MPC QXM
  QXM 1         REV 06   711-028408   ZT9237           MPC QXM
FPC 9           REV 34   750-031090   ZT9770           MPC Type 2 3D EQ
  CPU           REV 06   711-030884   ZS1302           MPC PMB 2G
  MIC 0         REV 24   750-028387   YJ3950           3D 4x 10GE  XFP
    PIC 0               BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0            NON-JNPR     T09M52516        XFP-10G-SR
      Xcvr 1            NON-JNPR     CA49BK095        XFP-10G-SR
    PIC 1               BUILTIN      BUILTIN          2x 10GE  XFP
      Xcvr 0    REV 02   740-014289   C834XU01T        XFP-10G-SR
      Xcvr 1            NON-JNPR     T09M52515        XFP-10G-SR
  MIC 1         REV 11   750-033535   CAAD7681         MIC-3D-1OC192-XFP
    PIC 2               BUILTIN      BUILTIN          MIC-3D-1OC192-XFP
      Xcvr 0    REV 01   740-014279   KBQ02BE          XFP-OC192-SR
  QXM 0         REV 06   711-028408   ZT9151           MPC QXM
  QXM 1         REV 06   711-028408   ZT9116           MPC QXM
FPC 10          REV 27   750-033205   ZL6215           MPCE Type 3 3D
  CPU           REV 07   711-035209   ZK9038           HMPC PMB 2G
  MIC 0         REV 18   750-028380   YG6885           3D 2x 10GE XFP
    PIC 0               BUILTIN      BUILTIN          1x 10GE XFP
      Xcvr 0    REV 01   740-014289   C706XU0AG        XFP-10G-SR
    PIC 1               BUILTIN      BUILTIN          1x 10GE XFP
      Xcvr 0    REV 02   740-014289   T08L84366        XFP-10G-SR
FPC 14          REV 09   750-037355   CAAF1534         MPC4E 3D 2CGE+8XGE
  CPU           REV 08   711-035209   CAAB9879         HMPC PMB 2G
  PIC 0                  BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0      REV 01   740-021308   21T511100436     SFP+-10G-SR
    Xcvr 1      REV 01   740-031980   AHP0GPM          SFP+-10G-SR
    Xcvr 2      REV 01   740-031980   123363A00032     SFP+-10G-SR
    Xcvr 3      REV 01   740-021308   19T511100477     SFP+-10G-SR
  PIC 1                  BUILTIN      BUILTIN          1X100GE CFP
    Xcvr 0               NON-JNPR     X12J00260        CFP-100G-SR10
  PIC 2                  BUILTIN      BUILTIN          4x10GE SFPP
    Xcvr 0      REV 01   740-021308   21T511104086     SFP+-10G-SR
    Xcvr 1      REV 01   740-021308   21T511104627     SFP+-10G-SR
    Xcvr 3      REV 01   740-021308   21T511104644     SFP+-10G-SR
  PIC 3                  BUILTIN      BUILTIN          1X100GE CFP
FPC 19          REV 32   750-028467   ZR2008           MPC 3D 16x 10GE
  CPU           REV 10   711-029089   ZT6933           AMPC PMB
  PIC 0                  BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01   740-021308   19T511100291     SFP+-10G-SR
    Xcvr 1      REV 01   740-021308   AMH02VE          SFP+-10G-SR
  PIC 1                  BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01   740-021308   23T511102128     SFP+-10G-SR
  PIC 2                  BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01   740-021308   AMS15PP          SFP+-10G-SR
  PIC 3                  BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    Xcvr 0      REV 01   740-031980   123363A00716     SFP+-10G-SR
ADC 0           REV 05   750-043596   CAAC2072         Adapter Card
ADC 9           REV 01   750-043596   ZV4111           Adapter Card
ADC 10          REV 05   750-043596   CAAC2058         Adapter Card
ADC 14          REV 02   750-043596   ZW1561           Adapter Card
ADC 19          REV 01   750-043596   ZV4127           Adapter Card
Fan Tray 0      REV 03   760-046960   ACAY0124         172mm FanTray - 6 Fans
Fan Tray 1      REV 2A   760-046960   ACAY0022         172mm FanTray - 6 Fans
Fan Tray 2      REV 2A   760-046960   ACAY0023         172mm FanTray - 6 Fans
Fan Tray 3      REV 2A   760-046960   ACAY0025         172mm FanTray - 6 Fans
```


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show chassis hardware (MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                F3434             MX80-P
Midplane         REV 01   711-044315   ZK2681            MX80-P
PEM 0            Rev 04   740-028288   VE05267           AC Power Entry Module
PEM 1            Rev 04   740-028288   VE05270           AC Power Entry Module
Routing Engine            BUILTIN      BUILTIN           Routing Engine
TFEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
  QXM 0          REV 05   711-028408   ZK0952            MPC QXM
FPC 0                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           4x 10GE XFP
    PIC 0                 BUILTIN      BUILTIN           4x 10GE XFP
FPC 1                     BUILTIN      BUILTIN           MPC BUILTIN
  MIC 0          REV 02   750-049846   CAAV2153          3D 20x 1GE(LAN)-E,SFP
    PIC 0                 BUILTIN      BUILTIN           10x 1GE(LAN) -E  SFP
      Xcvr 0     REV 01   740-011613   AM0816S9B81       SFP-SX
      Xcvr 1     REV 02   740-011613   AM0925SBLK7       SFP-SX
      Xcvr 2     REV 01   740-011613   UAQ0005           SFP-SX
      Xcvr 3     REV 01   740-011613   UAQ000C           SFP-SX
      Xcvr 4     REV 01   740-011613   P9F195E           SFP-SX
      Xcvr 5     REV 01   740-011613   UAQ0003           SFP-SX
      Xcvr 6     REV 01   740-031851   AM1041SU1LD       SFP-SX
      Xcvr 8     REV 02   740-013111   B101501           SFP-T
    PIC 1                 BUILTIN      BUILTIN           10x 1GE(LAN) -E  SFP
      Xcvr 0     REV 01   740-011613   PFM1ML7           SFP-SX
      Xcvr 4     REV 01   740-011613   PE729P6           SFP-SX
      Xcvr 6     REV 02   740-011613   AM1014SGC84       SFP-SX
      Xcvr 9     REV 01   740-011613   AM0812S8UK3       SFP-SX
  MIC 1          REV 26   750-028392   ZY0187            3D 20x 1GE(LAN) SFP
    PIC 2                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-011613   P9F1AN9           SFP-SX
      Xcvr 5     REV 02   740-011613   AM1003SFUF4       SFP-SX
      Xcvr 9     REV 01   740-031851   AM1041SU1LM       SFP-SX
    PIC 3                 BUILTIN      BUILTIN           10x 1GE(LAN) SFP
      Xcvr 4     REV 01   740-011613   PAJ4MYT           SFP-SX
      Xcvr 7     +        NON-JNPR     XG32A024          SFP-SX
      Xcvr 8              NON-JNPR     PFR0V6J           SFP-SX
      Xcvr 9     REV 01   740-031851   AM1041SU02U       SFP-SX
Fan Tray
```

show chassis hardware models (MX5, MX10, MX40, MX80, MX240, MX480, and MX960 Routers with Enhanced 20-Port Gigabit Ethernet MIC)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
PEM 0            Rev 04   740-028288   VE05267           PWR-MX80-AC-S
PEM 1            Rev 04   740-028288   VE05270           PWR-MX80-AC-S
Routing Engine            BUILTIN      BUILTIN
TFEB 0                    BUILTIN      BUILTIN
FPC 0                     BUILTIN      BUILTIN
FPC 1                     BUILTIN      BUILTIN
  MIC 0          REV 02   750-049846   CAAV2153          MIC-3D-20GE-SFP-E
  MIC 1          REV 26   750-028392   ZY0187            MIC-3D-20GE-SFP
Fan Tray                                                 FANTRAY-MX80-S
```

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show chassis hardware (MX2008 Router)

```
user@host>show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1259E1CAFL      MX2008
Midplane         REV 47   750-044636   ABAD1739          Lower Backplane
PMP              REV 01   711-051406   ACVD0738          Power Midplane
FPM Board        REV 02   760-068193   ABDG7408          Front Panel Display
PSM 1            REV 06   740-050037   1EDB61200R8       DC 52V Power Supply
Module
PSM 2            REV 06   740-050037   1EDB61200WA       DC 52V Power Supply
Module
PSM 3            REV 06   740-050037   1EDB61200NY       DC 52V Power Supply
Module
PSM 4            REV 06   740-050037   1EDB61200N2       DC 52V Power Supply
Module
PSM 5            REV 06   740-050037   1EDB61200RN       DC 52V Power Supply
Module
PSM 6            REV 06   740-050037   1EDB61200RF       DC 52V Power Supply
Module
PSM 7            REV 06   740-050037   1EDB61200R7       DC 52V Power Supply
Module
PDM 0            REV 01   740-060189   1EFF5250143       DC PDM Optimized
PDM 1            REV 01   740-060189   1EFF5250074       DC PDM Optimized
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x8
Routing Engine 1          BUILTIN      BUILTIN           RE-S-2X00x8
CB 0             REV 01   750-067373   ABDJ0047          Control Board
CB 1             REV 03   750-067373   ABDH3016          Control Board
SFB 0            REV 08   750-067371   ABDK7180          Switch Fabric Board
SFB 1            REV 08   750-067371   ABDK7024          Switch Fabric Board
SFB 2            REV 08   750-067371   ABDK7188          Switch Fabric Board
SFB 3            REV 08   750-067371   ABDK7143          Switch Fabric Board
SFB 4            REV 08   750-067371   ABDK7030          Switch Fabric Board
SFB 5            REV 08   750-067371   ABDK7146          Switch Fabric Board
SFB 6            REV 08   750-067371   ABDK7203          Switch Fabric Board
SFB 7            REV 08   750-067371   ABDK7238          Switch Fabric Board
FPC 0            REV 36   750-044130   ABCS8607          MPC6E 3D
  CPU            REV 09   711-045719   ABCS8776          RMPC PMB
  MIC 0          REV 21   750-050008   ABCT5920          4X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           4X100GE CXP
  XLM 0          REV 07.2.00 711-046638 ABCK3488         MPC6E XL
  XLM 1          REV 07.2.00 711-046638 ABCK5482         MPC6E XL
FPC 1            REV 22   750-063414   CAFJ3026          MPC9E 3D
  CPU            REV 16   750-057177   CAFF9332          SMPC PMB
FPC 7            REV 08   750-038492   ZX4080            MPCE Type 2 3D EQ
  CPU            REV 03   711-038484   ZX3665            MPCE PMB 2G
  MIC 0          REV 05   750-037128   ZR4031            1xCOC12/4xCOC3 CH-CE
    PIC 0                 BUILTIN      BUILTIN           1xCOC12/4xCOC3 CH-CE
  MIC 1          REV 23   750-032479   CADE8614          MIC-3D-8DS3-E3
    PIC 2                 BUILTIN      BUILTIN           MIC-3D-8DS3-E3
  QXM 0          REV 06   711-028408   ZW8299            MPC QXM
  QXM 1          REV 06   711-028408   ZY0609            MPC QXM
ADC 7            REV 17   750-043596   ABCA0990          Adapter Card
Fan Tray 0       REV 01   760-052467   ACAY6190          172mm FanTray - 6 Fans
Fan Tray 1       REV 01   760-052467   ACAY6414          172mm FanTray - 6 Fans
```

show chassis hardware detail (MX2008 Router)

```
user@host>show chassis hardware detail
```


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```
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1259E1CAFL      MX2008
Midplane         REV 47   750-044636   ABAD1739          Lower Backplane
PMP              REV 01   711-051406   ACVD0738          Power Midplane
FPM Board        REV 02   760-068193   ABDG7408          Front Panel Display
PSM 1            REV 06   740-050037   1EDB61200R8       DC 52V Power Supply
Module
PSM 2            REV 06   740-050037   1EDB61200WA       DC 52V Power Supply
Module
PSM 3            REV 06   740-050037   1EDB61200NY       DC 52V Power Supply
Module
PSM 4            REV 06   740-050037   1EDB61200N2       DC 52V Power Supply
Module
PSM 5            REV 06   740-050037   1EDB61200RN       DC 52V Power Supply
Module
PSM 6            REV 06   740-050037   1EDB61200RF       DC 52V Power Supply
Module
PSM 7            REV 06   740-050037   1EDB61200R7       DC 52V Power Supply
Module
PDM 0            REV 01   740-060189   1EFF5250143       DC PDM Optimized
PDM 1            REV 01   740-060189   1EFF5250074       DC PDM Optimized
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x8
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002           Emulated IDE Disk
  usb0 (addr 1)  XHCI root HUB 0       0x8086            uhub0
Routing Engine 1          BUILTIN      BUILTIN           RE-S-2X00x8
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002           Emulated IDE Disk
  usb0 (addr 1)  XHCI root HUB 0       0x8086            uhub0
CB 0             REV 01   750-067373   ABDJ0047          Control Board
CB 1             REV 03   750-067373   ABDH3016          Control Board
SFB 0            REV 08   750-067371   ABDK7180          Switch Fabric Board
SFB 1            REV 08   750-067371   ABDK7024          Switch Fabric Board
SFB 2            REV 08   750-067371   ABDK7188          Switch Fabric Board
SFB 3            REV 08   750-067371   ABDK7143          Switch Fabric Board
SFB 4            REV 08   750-067371   ABDK7030          Switch Fabric Board
SFB 5            REV 08   750-067371   ABDK7146          Switch Fabric Board
SFB 6            REV 08   750-067371   ABDK7203          Switch Fabric Board
SFB 7            REV 08   750-067371   ABDK7238          Switch Fabric Board
FPC 0            REV 36   750-044130   ABCS8607          MPC6E 3D
  CPU            REV 09   711-045719   ABCS8776          RMPC PMB
  MIC 0          REV 21   750-050008   ABCT5920          4X100GE CXP
    PIC 0                 BUILTIN      BUILTIN           4X100GE CXP
  XLM 0          REV 07.2.00 711-046638 ABCK3488         MPC6E XL
  XLM 1          REV 07.2.00 711-046638 ABCK5482         MPC6E XL
FPC 1            REV 22   750-063414   CAFJ3026          MPC9E 3D
  CPU            REV 16   750-057177   CAFF9332          SMPC PMB
FPC 7            REV 08   750-038492   ZX4080            MPCE Type 2 3D EQ
  CPU            REV 03   711-038484   ZX3665            MPCE PMB 2G
  MIC 0          REV 05   750-037128   ZR4031            1xCOC12/4xCOC3 CH-CE
    PIC 0                 BUILTIN      BUILTIN           1xCOC12/4xCOC3 CH-CE
  MIC 1          REV 23   750-032479   CADE8614          MIC-3D-8DS3-E3
    PIC 2                 BUILTIN      BUILTIN           MIC-3D-8DS3-E3
  QXM 0          REV 06   711-028408   ZW8299            MPC QXM
  QXM 1          REV 06   711-028408   ZY0609            MPC QXM
ADC 7            REV 17   750-043596   ABCA0990          Adapter Card
Fan Tray 0       REV 01   760-052467   ACAY6190          172mm FanTray - 6 Fans
Fan Tray 1       REV 01   760-052467   ACAY6414          172mm FanTray - 6 Fans
```

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show chassis hardware extensive (MX2008 Router)

```
user@host>show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1259E1CAFL      MX2008
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN1259E1CAFL
 Assembly ID:  0x0557            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: MX2008
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 57 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 32 35 39 45 31 43 41 46 4c 00 00 00 00
  Address 0x30: 00 00 00 ff 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 47   750-044636   ABAD1739          Lower Backplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044636        S/N:               ABAD1739
 Assembly ID:  0x0b66            Assembly Version:  01.47
 Date:         06-08-2016        Assembly Flags:    0x00
 Version:      REV 47            CLEI Code:         IPMU810ARB
 ID: Lower Backplane             FRU Model Number:  CHAS-BP-MX2010-S
 Board Information Record:
  Address 0x00: ad 01 08 00 f4 cc 55 3e 35 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 66 01 2f 52 45 56 20 34 37 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 36 33 36 00 00
  Address 0x20: 53 2f 4e 20 41 42 41 44 31 37 33 39 00 08 06 07
  Address 0x30: e0 ff ff ff ad 01 08 00 f4 cc 55 3e 35 00 ff ff
  Address 0x40: ff ff ff ff 01 49 50 4d 55 38 31 30 41 52 42 43
  Address 0x50: 48 41 53 2d 42 50 2d 4d 58 32 30 31 30 2d 53 00
  Address 0x60: 00 00 00 00 00 00 42 43 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 18 ff ff ff ff ff ff ff ff ff ff ff ff
PMP              REV 01   711-051406   ACVD0738          Power Midplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          711-051406        S/N:               ACVD0738
 Assembly ID:  0x045d            Assembly Version:  01.01
 Date:         06-06-2016        Assembly Flags:    0x00
 Version:      REV 01
 ID: Power Midplane
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 04 5d 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 35 31 34 30 36 00 00
  Address 0x20: 53 2f 4e 20 41 43 56 44 30 37 33 38 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Board        REV 02   760-068193   ABDG7408          Front Panel Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```


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```
 P/N:          760-068193        S/N:               ABDG7408
 Assembly ID:  0x0cac            Assembly Version:  01.02
 Date:         06-06-2016        Assembly Flags:    0x00
 Version:      REV 02            CLEI Code:         PROTOXCLEI
 ID: Front Panel Display         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c ac 01 02 52 45 56 20 30 32 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 36 38 31 39 33 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 47 37 34 30 38 00 06 06 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
PSM 1            REV 06   740-050037   1EDB61200R8       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200R8
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 52 38 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 2            REV 06   740-050037   1EDB6120OWA       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB6120OWA
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 57 41 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 3            REV 06   740-050037   1EDB6120ONY       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB6120ONY
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
```

```
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 4e 59 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 4            REV 06   740-050037   1EDB61200N2       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200N2
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 4e 32 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 5            REV 06   740-050037   1EDB61200RN       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200RN
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 52 4e 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 6            REV 06   740-050037   1EDB61200RF       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200RF
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
```


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```
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 52 46 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PSM 7            REV 06   740-050037   1EDB61200R7       DC 52V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-050037        S/N:               1EDB61200R7
 Assembly ID:  0x0478            Assembly Version:  01.06
 Date:         03-16-2016        Assembly Flags:    0x00
 Version:      REV 06            CLEI Code:         IPUPAPDKAA
 ID: DC 52V Power Supply Module  FRU Model Number:  MX2000-PSM-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 78 01 06 52 45 56 20 30 36 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 35 30 30 33 37 00 00
  Address 0x20: 31 45 44 42 36 31 32 30 30 52 37 00 00 10 03 07
  Address 0x30: e0 72 75 ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 50 44 4b 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 50 53 4d 2d 44 43 2d 53 00 00
  Address 0x60: 00 00 00 00 00 00 31 30 36 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 26 00 00 00 00 00 00 00 00 00 00 00 00
PDM 0            REV 01   740-060189   1EFF5250143       DC PDM Optimized
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-060189        S/N:               1EFF5250143
 Assembly ID:  0x0495            Assembly Version:  01.01
 Date:         07-21-2015        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAN1KAA
 ID: DC PDM Optimized            FRU Model Number:  MX2K-PDM-OP-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 95 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 36 30 31 38 39 00 00
  Address 0x20: 31 45 46 46 35 32 35 30 31 34 33 00 00 15 07 07
  Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4e 31 4b 41 41 4d
  Address 0x50: 58 32 4b 2d 50 44 4d 2d 4f 50 2d 44 43 2d 53 00
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 84 00 00 00 00 00 00 00 00 00 00 00 00
PDM 1            REV 01   740-060189   1EFF5250074       DC PDM Optimized
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-060189        S/N:               1EFF5250074
 Assembly ID:  0x0495            Assembly Version:  01.01
 Date:         07-21-2015        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUPAN1KAA
 ID: DC PDM Optimized            FRU Model Number:  MX2K-PDM-OP-DC-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 95 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 36 30 31 38 39 00 00
  Address 0x20: 31 45 46 46 35 32 35 30 30 37 34 00 00 15 07 07
  Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 50 41 4e 31 4b 41 41 4d
  Address 0x50: 58 32 4b 2d 50 44 4d 2d 4f 50 2d 44 43 2d 53 00
```

```
  Address 0x60: 00 00 00 00 00 00 31 30 31 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 84 00 00 00 00 00 00 00 00 00 00 00 00
Routing Engine 0          BUILTIN      BUILTIN           RE-S-2X00x8
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0c10            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: RE-S-2X00x8
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0c 10 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 00 00 00 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 00 00 00 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002          Emulated IDE Disk
  usb0 (addr 1)  XHCI root HUB 0       0x8086           uhub0
Routing Engine 1          BUILTIN      BUILTIN           RE-S-2X00x8
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0c10            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: RE-S-2X00x8
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0c 10 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 00 00 00 00
  Address 0x20: 42 55 49 4c 54 49 4e 00 00 00 00 00 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  vtbd0 15361 MB                                        Virtio Block Disk
  vtbd1 15360 MB                                        Virtio Block Disk
  ada0    511 MB  QEMU HARDDISK        QM00002          Emulated IDE Disk
  usb0 (addr 1)  XHCI root HUB 0       0x8086           uhub0
CB 0            REV 01   750-067373   ABDJ0047         Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067373        S/N:               ABDJ0047
 Assembly ID:  0x0c96            Assembly Version:  01.01
 Date:         06-21-2016        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         PROTOXCLEI
 ID: Control Board               FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 00 20 28 8a 1c 6d c4 7e ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 96 01 01 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 33 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4a 30 30 34 37 00 15 06 07
  Address 0x30: e0 ff ff ff ad 01 00 20 28 8a 1c 6d c4 7e ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
```


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```
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
CB 1             REV 03   750-067373   ABDH3016          Control Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067373        S/N:               ABDH3016
 Assembly ID:  0x0c96            Assembly Version:  01.03
 Date:         05-07-2016        Assembly Flags:    0x00
 Version:      REV 03            CLEI Code:         PROTOXCLEI
 ID: Control Board               FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ad 01 00 20 f4 cc 55 35 71 a0 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 96 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 33 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 48 33 30 31 36 00 07 05 07
  Address 0x30: e0 ff ff ff ad 01 00 20 f4 cc 55 35 71 a0 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
SFB 0             REV 08   750-067371   ABDK7180          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7180
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 38 30 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 00 00 48 00
SFB 1             REV 08   750-067371   ABDK7024          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7024
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 30 32 34 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 01 00 48 00
SFB 2             REV 08   750-067371   ABDK7188          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7188
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-28-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
```

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```
  ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
   Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 38 38 00 1c 09 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
   Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 02 00 48 00
SFB 3            REV 08   750-067371   ABDK7143          Switch Fabric Board
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-067371        S/N:               ABDK7143
  Assembly ID:  0x0c97            Assembly Version:  01.08
  Date:         09-27-2016        Assembly Flags:    0x00
  Version:      REV 08            CLEI Code:         PROTOXCLEI
  ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
   Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 34 33 00 1b 09 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
   Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 03 00 48 00
SFB 4            REV 08   750-067371   ABDK7030          Switch Fabric Board
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-067371        S/N:               ABDK7030
  Assembly ID:  0x0c97            Assembly Version:  01.08
  Date:         09-24-2016        Assembly Flags:    0x00
  Version:      REV 08            CLEI Code:         PROTOXCLEI
  ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
   Address 0x20: 53 2f 4e 20 41 42 44 4b 37 30 33 30 00 18 09 07
   Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
   Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
   Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 04 00 48 00
SFB 5            REV 08   750-067371   ABDK7146          Switch Fabric Board
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-067371        S/N:               ABDK7146
  Assembly ID:  0x0c97            Assembly Version:  01.08
  Date:         09-27-2016        Assembly Flags:    0x00
  Version:      REV 08            CLEI Code:         PROTOXCLEI
  ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
   Address 0x20: 53 2f 4e 20 41 42 44 4b 37 31 34 36 00 1b 09 07
```


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```
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 05 00 48 00
SFB 6            REV 08   750-067371   ABDK7203          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7203
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-28-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 32 30 33 00 1c 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 06 00 48 00
SFB 7            REV 08   750-067371   ABDK7238          Switch Fabric Board
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-067371        S/N:               ABDK7238
 Assembly ID:  0x0c97            Assembly Version:  01.08
 Date:         09-27-2016        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         PROTOXCLEI
 ID: Switch Fabric Board         FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0c 97 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 37 33 37 31 00 00
  Address 0x20: 53 2f 4e 20 41 42 44 4b 37 32 33 38 00 1b 09 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 07 00 00 00 00 00 00 00 07 00 48 00
FPC 0            REV 36   750-044130   ABCS8607          MPC6E 3D
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-044130        S/N:               ABCS8607
 Assembly ID:  0x0b86            Assembly Version:  01.36
 Date:         10-29-2013        Assembly Flags:    0x00
 Version:      REV 36            CLEI Code:         PROTOXCLEI
 ID: MPC6E 3D                    FRU Model Number:  PROTO-ASSEMBLY
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 0b 86 01 24 52 45 56 20 33 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 34 34 31 33 30 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 53 38 36 30 37 00 1d 0a 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 ff ff ff ff ff ff ff ff ff ff ff ff
  CPU              REV 09   711-045719   ABCS8776          RMPC PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
```

```
P/N:          711-045719        S/N:               ABCS8776
Assembly ID:  0x0b85            Assembly Version:  01.09
Date:         10-24-2013        Assembly Flags:    0x00
Version:      REV 09
ID: RMPC PMB
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0b 85 01 09 52 45 56 20 30 39 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 34 35 37 31 39 00 00
 Address 0x20: 53 2f 4e 20 41 42 43 53 38 37 37 36 00 18 0a 07
 Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
 Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff c2 00 00 00 00 16 47 1f b0 00 00 00 00
 MIC 0          REV 21   750-050008   ABCT5920          4X100GE CXP
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          750-050008        S/N:               ABCT5920
Assembly ID:  0x0a83            Assembly Version:  01.21
Date:         09-29-2014        Assembly Flags:    0x00
Version:      REV 21            CLEI Code:         IP9IATYDAA
ID: 4X100GE CXP                 FRU Model Number:  MIC6-100G-CXP
Board Information Record:
 Address 0x00: 12 01 07 02 03 ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0a 83 01 15 52 45 56 20 32 31 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 35 30 30 30 38 00 00
 Address 0x20: 53 2f 4e 20 41 42 43 54 35 39 32 30 00 1d 09 07
 Address 0x30: de ff ff ff 12 01 07 02 03 ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 49 50 39 49 41 54 59 44 41 41 4d
 Address 0x50: 49 43 36 2d 31 30 30 47 2d 43 58 50 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 74 00 00 00 00 10 09 73 3c c0 02 70 3c
   PIC 0                 BUILTIN      BUILTIN           4X100GE CXP
 XLM 0          REV 07.2.00 711-046638 ABCK3488         MPC6E XL
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          711-046638        S/N:               ABCK3488
Assembly ID:  0x0b88            Assembly Version:  01.07
Date:         11-11-2013        Assembly Flags:    0x00
Version:      REV 07.2.00
ID: MPC6E XL
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0b 88 01 07 52 45 56 20 30 37 2e 32
 Address 0x10: 2e 30 30 00 37 31 31 2d 30 34 36 36 33 38 00 00
 Address 0x20: 53 2f 4e 20 41 42 43 4b 33 34 38 38 00 0b 0b 07
 Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
 Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
 XLM 1          REV 07.2.00 711-046638 ABCK5482         MPC6E XL
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          711-046638        S/N:               ABCK5482
Assembly ID:  0x0b88            Assembly Version:  01.07
Date:         10-21-2013        Assembly Flags:    0x00
Version:      REV 07.2.00
ID: MPC6E XL
Board Information Record:
```


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```
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 88 01 07 52 45 56 20 30 37 2e 32
  Address 0x10: 2e 30 30 00 37 31 31 2d 30 34 36 36 33 38 00 00
  Address 0x20: 53 2f 4e 20 41 42 43 4b 35 34 38 32 00 15 0a 07
  Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 50
  Address 0x50: 52 4f 54 4f 2d 41 53 53 45 4d 42 4c 59 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 30 30 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff c2 00 00 00 00 00 00 00 00 00 00 00 00
FPC 1            REV 22   750-063414   CAFJ3026          MPC9E 3D
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-063414        S/N:               CAFJ3026
 Assembly ID:  0x0c43            Assembly Version:  01.22
 Date:         03-28-2016        Assembly Flags:    0x00
 Version:      REV 22            CLEI Code:         IPUCBMUCAA
 ID: MPC9E 3D                    FRU Model Number:  MX2K-MPC9E
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0c 43 01 16 52 45 56 20 32 32 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 36 33 34 31 34 00 00
  Address 0x20: 53 2f 4e 20 43 41 46 4a 33 30 32 36 00 1c 03 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 4d 55 43 41 41 4d
  Address 0x50: 58 32 4b 2d 4d 50 43 39 45 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 16   750-057177   CAFF9332          SMPC PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          750-057177        S/N:               CAFF9332
 Assembly ID:  0x0c22            Assembly Version:  01.16
 Date:         03-20-2016        Assembly Flags:    0x00
 Version:      REV 16
 ID: SMPC PMB
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 0c 22 01 10 52 45 56 20 31 36 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 35 37 31 37 37 00 00
  Address 0x20: 53 2f 4e 20 43 41 46 46 39 33 33 32 00 14 03 07
  Address 0x30: e0 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff 00 00 00 00 38 f9 0d e0 4f d1 4b 08
FPC 7            REV 08   750-038492   ZX4080            MPCE Type 2 3D EQ
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-038492        S/N:               ZX4080
 Assembly ID:  0x0b35            Assembly Version:  01.08
 Date:         02-03-2012        Assembly Flags:    0x00
 Version:      REV 08            CLEI Code:         COUIBA5BAA
 ID: MPCE Type 2 3D EQ           FRU Model Number:  MX-MPC2E-3D-EQ
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 35 01 08 52 45 56 20 30 38 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 38 34 39 32 00 00
  Address 0x20: 53 2f 4e 20 5a 58 34 30 38 30 00 00 00 03 02 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 43 4f 55 49 42 41 35 42 41 41 4d
```

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```
 Address 0x50: 58 2d 4d 50 43 32 45 2d 33 44 2d 45 51 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 74 ff ff ff ff ff ff ff ff ff ff ff ff
 CPU            REV 03   711-038484   ZX3665           MPCE PMB 2G
Jedec Code:   0x7fb0            EEPROM Version:    0x01
P/N:          711-038484        S/N:               ZX3665
Assembly ID:  0x0b36            Assembly Version:  01.03
Date:         02-01-2012        Assembly Flags:    0x00
Version:      REV 03
ID: MPCE PMB 2G
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 01 ff 0b 36 01 03 52 45 56 20 30 33 00 00
 Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 34 38 34 00 00
 Address 0x20: 53 2f 4e 20 5a 58 33 36 36 35 00 00 00 01 02 07
 Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
 Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff 00 00 00 02 00 00 0c 00 42 5f c0 a4
 MIC 0          REV 05   750-037128   ZR4031           1xCOC12/4xCOC3 CH-CE
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          750-037128        S/N:               ZR4031
Assembly ID:  0x0a1b            Assembly Version:  01.05
Date:         12-04-2011        Assembly Flags:    0x00
Version:      REV 05            CLEI Code:         PROTOXCLEI
ID: 1xCOC12/4xCOC3 CH-CE        FRU Model Number:  MIC-3D-4CHOC3-1OC12-CE
Board Information Record:
 Address 0x00: 12 01 05 03 05 ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0a 1b 01 05 52 45 56 20 30 35 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 31 32 38 00 00
 Address 0x20: 53 2f 4e 20 5a 52 34 30 33 31 00 00 00 04 0c 07
 Address 0x30: db ff ff ff 12 01 05 03 05 ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 4d
 Address 0x50: 49 43 2d 33 44 2d 34 43 48 4f 43 33 2d 31 4f 43
 Address 0x60: 31 32 2d 43 45 00 30 32 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 98 c0 02 61 bc 7f b0 02 ff 0a 11 01 17
   PIC 0                BUILTIN      BUILTIN          1xCOC12/4xCOC3 CH-CE
 MIC 1          REV 23   750-032479   CADE8614         MIC-3D-8DS3-E3
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          750-032479        S/N:               CADE8614
Assembly ID:  0x0a11            Assembly Version:  01.23
Date:         07-24-2014        Assembly Flags:    0x00
Version:      REV 23            CLEI Code:         COUIA8DBAA
ID: MIC-3D-8DS3-E3              FRU Model Number:  MIC-3D-8DS3-E3
Board Information Record:
 Address 0x00: 56 01 ff ff 03 ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0a 11 01 17 52 45 56 20 32 33 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 33 32 34 37 39 00 00
 Address 0x20: 53 2f 4e 20 43 41 44 45 38 36 31 34 00 18 07 07
 Address 0x30: de ff ff ff 56 01 ff ff 03 ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 43 4f 55 49 41 38 44 42 41 41 4d
 Address 0x50: 49 43 2d 33 44 2d 38 44 53 33 2d 45 33 00 00 00
 Address 0x60: 00 00 00 00 00 00 41 41 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 7b c0 03 e5 7c 4f 8a 9e 10 00 00 00 02
   PIC 2                BUILTIN      BUILTIN          MIC-3D-8DS3-E3
 QXM 0          REV 06   711-028408   ZW8299           MPC QXM
Jedec Code:   0x7fb0            EEPROM Version:    0x01
```


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```
  P/N:          711-028408        S/N:               ZW8299
  Assembly ID:  0x097a            Assembly Version:  02.06
  Date:         01-19-2012        Assembly Flags:    0x00
  Version:      REV 06
  ID: MPC QXM
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 09 7a 02 06 52 45 56 20 30 36 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 32 38 34 30 38 00 00
   Address 0x20: 53 2f 4e 20 5a 57 38 32 39 39 00 00 00 13 01 07
   Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
   Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
   QXM 1          REV 06   711-028408   ZY0609            MPC QXM
  Jedec Code:   0x7fb0            EEPROM Version:    0x01
  P/N:          711-028408        S/N:               ZY0609
  Assembly ID:  0x097a            Assembly Version:  02.06
  Date:         01-19-2012        Assembly Flags:    0x00
  Version:      REV 06
  ID: MPC QXM
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 01 ff 09 7a 02 06 52 45 56 20 30 36 00 00
   Address 0x10: 00 00 00 00 37 31 31 2d 30 32 38 34 30 38 00 00
   Address 0x20: 53 2f 4e 20 5a 59 30 36 30 39 00 00 00 13 01 07
   Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
   Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x70: ff ff ff ff 00 00 00 00 00 00 00 00 00 00 00 00
ADC 7             REV 17   750-043596   ABCA0990          Adapter Card
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          750-043596        S/N:               ABCA0990
  Assembly ID:  0x0b3d            Assembly Version:  01.17
  Date:         03-07-2013        Assembly Flags:    0x00
  Version:      REV 17            CLEI Code:         IPUCBA8CAA
  ID: Adapter Card                FRU Model Number:  MX2000-LC-ADAPTER
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  I2C Hex Data:
   Address 0x00: 7f b0 02 ff 0b 3d 01 11 52 45 56 20 31 37 00 00
   Address 0x10: 00 00 00 00 37 35 30 2d 30 34 33 35 39 36 00 00
   Address 0x20: 53 2f 4e 20 41 42 43 41 30 39 39 30 00 07 03 07
   Address 0x30: dd ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
   Address 0x40: ff ff ff ff 01 49 50 55 43 42 41 38 43 41 41 4d
   Address 0x50: 58 32 30 30 30 2d 4c 43 2d 41 44 41 50 54 45 52
   Address 0x60: 00 00 00 00 00 00 41 00 00 ff ff ff ff ff ff ff
   Address 0x70: ff ff ff 3a 00 00 00 00 00 00 00 00 00 00 00 00
Fan Tray 0        REV 01   760-052467   ACAY6190          172mm FanTray - 6 Fans
  Jedec Code:   0x7fb0            EEPROM Version:    0x02
  P/N:          760-052467        S/N:               ACAY6190
  Assembly ID:  0x0b96            Assembly Version:  02.10
  Date:         09-18-2015        Assembly Flags:    0x00
  Version:      REV 01            CLEI Code:         IPUCBENCAA
  ID: 172mm FanTray - 6 Fans      FRU Model Number:  MX2000-FANTRAY-S
  Board Information Record:
   Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

```
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 96 02 0a 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 32 34 36 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 59 36 31 39 30 00 12 09 07
  Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 45 4e 43 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 46 41 4e 54 52 41 59 2d 53 00
  Address 0x60: 00 00 00 00 00 00 31 ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 1a ff ff ff ff ff ff ff ff ff ff ff ff
Fan Tray 1       REV 01   760-052467   ACAY6414          172mm FanTray - 6 Fans
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          760-052467        S/N:               ACAY6414
 Assembly ID:  0x0b96            Assembly Version:  02.10
 Date:         10-28-2015        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         IPUCBENCAA
 ID: 172mm FanTray - 6 Fans      FRU Model Number:  MX2000-FANTRAY-S
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 96 02 0a 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 37 36 30 2d 30 35 32 34 36 37 00 00
  Address 0x20: 53 2f 4e 20 41 43 41 59 36 34 31 34 00 1c 0a 07
  Address 0x30: df ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 49 50 55 43 42 45 4e 43 41 41 4d
  Address 0x50: 58 32 30 30 30 2d 46 41 4e 54 52 41 59 2d 53 00
  Address 0x60: 00 00 00 00 00 00 31 ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 1a ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware models (MX2008 Router)

```
user@host>show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 47   750-044636   ABAD1739          CHAS-BP-MX2010-S
PMP              REV 01   711-051406   ACVD0738
FPM Board        REV 02   760-068193   ABDG7408          PROTO-ASSEMBLY
PSM 1            REV 06   740-050037   1EDB61200R8       MX2000-PSM-DC-S
PSM 2            REV 06   740-050037   1EDB61200WA       MX2000-PSM-DC-S
PSM 3            REV 06   740-050037   1EDB61200NY       MX2000-PSM-DC-S
PSM 4            REV 06   740-050037   1EDB61200N2       MX2000-PSM-DC-S
PSM 5            REV 06   740-050037   1EDB61200RN       MX2000-PSM-DC-S
PSM 6            REV 06   740-050037   1EDB61200RF       MX2000-PSM-DC-S
PSM 7            REV 06   740-050037   1EDB61200R7       MX2000-PSM-DC-S
PDM 0            REV 01   740-060189   1EFF5250143       MX2K-PDM-OP-DC-S
PDM 1            REV 01   740-060189   1EFF5250074       MX2K-PDM-OP-DC-S
CB 0             REV 01   750-067373   ABDJ0047          PROTO-ASSEMBLY
CB 1             REV 03   750-067373   ABDH3016          PROTO-ASSEMBLY
SFB 0            REV 08   750-067371   ABDK7180          PROTO-ASSEMBLY
SFB 1            REV 08   750-067371   ABDK7024          PROTO-ASSEMBLY
SFB 2            REV 08   750-067371   ABDK7188          PROTO-ASSEMBLY
SFB 3            REV 08   750-067371   ABDK7143          PROTO-ASSEMBLY
SFB 4            REV 08   750-067371   ABDK7030          PROTO-ASSEMBLY
SFB 5            REV 08   750-067371   ABDK7146          PROTO-ASSEMBLY
SFB 6            REV 08   750-067371   ABDK7203          PROTO-ASSEMBLY
SFB 7            REV 08   750-067371   ABDK7238          PROTO-ASSEMBLY
FPC 0            REV 36   750-044130   ABCS8607          PROTO-ASSEMBLY
  MIC 0          REV 21   750-050008   ABCT5920          MIC6-100G-CXP
FPC 1            REV 22   750-063414   CAFJ3026          MX2K-MPC9E
FPC 7            REV 08   750-038492   ZX4080            MX-MPC2E-3D-EQ
  MIC 0          REV 05   750-037128   ZR4031            MIC-3D-4CHOC3-1OC12-CE
  MIC 1          REV 23   750-032479   CADE8614          MIC-3D-8DS3-E3
```


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```
ADC 7            REV 17   750-043596   ABCA0990          MX2000-LC-ADAPTER
Fan Tray 0       REV 01   760-052467   ACAY6190          MX2000-FANTRAY-S
Fan Tray 1       REV 01   760-052467   ACAY6414          MX2000-FANTRAY-S
```

show chassis hardware clei-models (MX2008 Router)

```
user@host>show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 47   750-044636   IPMU810ARB        CHAS-BP-MX2010-S
PMP              REV 01   711-051406
FPM Board        REV 02   760-068193   PROTOXCLEI        PROTO-ASSEMBLY
PSM 1            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 2            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 3            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 4            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 5            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 6            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PSM 7            REV 06   740-050037   IPUPAPDKAA        MX2000-PSM-DC-S
PDM 0            REV 01   740-060189   IPUPAN1KAA        MX2K-PDM-OP-DC-S
PDM 1            REV 01   740-060189   IPUPAN1KAA        MX2K-PDM-OP-DC-S
CB 0             REV 01   750-067373   PROTOXCLEI        PROTO-ASSEMBLY
CB 1             REV 03   750-067373   PROTOXCLEI        PROTO-ASSEMBLY
SFB 0            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 1            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 2            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 3            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 4            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 5            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 6            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
SFB 7            REV 08   750-067371   PROTOXCLEI        PROTO-ASSEMBLY
FPC 0            REV 36   750-044130   PROTOXCLEI        PROTO-ASSEMBLY
  MIC 0          REV 21   750-050008   IP9IATYDAA        MIC6-100G-CXP
FPC 1            REV 22   750-063414   IPUCBMUCAA        MX2K-MPC9E
FPC 7            REV 08   750-038492   COUIBA5BAA        MX-MPC2E-3D-EQ
  MIC 0          REV 05   750-037128   PROTOXCLEI        MIC-3D-4CHOC3-1OC12-CE
  MIC 1          REV 23   750-032479   COUIA8DBAA        MIC-3D-8DS3-E3
ADC 7            REV 17   750-043596   IPUCBA8CAA        MX2000-LC-ADAPTER
Fan Tray 0       REV 01   760-052467   IPUCBENCAA        MX2000-FANTRAY-S
Fan Tray 1       REV 01   760-052467   IPUCBENCAA        MX2000-FANTRAY-S
```

show chassis hardware (MX10003 Router)

```
user@host> show chassis hardware

Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                BLANK             JNP10003 [MX10003]
Midplane         REV 01   750-066883   CAGM0759          Midplane 2
Routing Engine 0          BUILTIN      BUILTIN           Routing Engine
Routing Engine 1          BUILTIN      BUILTIN           Routing Engine
CB 0             REV 07   750-067071   CAGX4354          SPM
  Mezz           REV 10   711-066896   CAHS7200          SPM Mezz Board
CB 1             REV 07   750-067071   CAGX4363          SPM
  Mezz           REV 10   711-066896   CAHS7193          SPM Mezz Board
FPC 0            REV 05   750-066879   CAGV0273          LC2103
  CPU                     BUILTIN      BUILTIN           SMPC PMB
  PIC 0
  PIC 1
FPC 1            REV 05   750-066879   CAGV0278          LC2103
```

```
  CPU                   BUILTIN      BUILTIN          SMPC PMB
  PIC 0                 BUILTIN      BUILTIN          6xQSFPP
  PIC 1
PEM 0           REV 01  740-066937   1HS16320003      JNP-PWR1600-AC
PEM 1           REV 01  740-066937   1HS16320002      JNP-PWR1600-AC
Fan Tray 0      REV 02  760-069329   CAGS7731         JNP FAN 3RU
Fan Tray 1      REV 02  760-069329   CAGS7776         JNP FAN 3RU
Fan Tray 2      REV 02  760-069329   CAGS7659         JNP FAN 3RU
Fan Tray 3      REV 02  760-069329   CAGS7669         JNP FAN 3RU
```

show chassis hardware (MX204 Router)

```
user@host> show chassis hardware

Hardware inventory:
Item            Version  Part number  Serial number     Description
Chassis                               BB768             JNP204 [MX204]
Routing Engine 0         BUILTIN      BUILTIN           RE-S-2X00x6
CB 0            REV 11   750-069579   CAJD3113          JNP204 [MX204]
FPC 0                    BUILTIN      BUILTIN           MPC
  PIC 0                  BUILTIN      BUILTIN           4XQSFP28 PIC
    Xcvr 0      REV 01   740-061405   1ACQ110409R       QSFP-100GBASE-SR4
    Xcvr 1      REV 01   740-054053   QF027546          QSFP+-4X10G-SR
    Xcvr 2      REV 01   740-058732   1AMQA142092       QSFP-100GBASE-LR4
    Xcvr 3      REV 01   740-058732   1AMQA14203J       QSFP-100GBASE-LR4
  PIC 1                  BUILTIN      BUILTIN           8XSFPP PIC
PEM 1           REV 04   740-043886   1GA46361256       JPSU-650W-DC-AFO
Fan Tray 0                                             Fan Tray, Front to Back
 Airflow - AFO
Fan Tray 1                                             Fan Tray, Front to Back
 Airflow - AFO
Fan Tray 2                                             Fan Tray, Front to Back
 Airflow - AFO
```

show chassis hardware (vMX running in lite mode)

```
user@host> show chassis hardware
Hardware inventory:
Item            Version  Part number  Serial number     Description
Chassis                               VM54599D128A      VMX
Midplane
Routing Engine 0                                        RE-VMX
CB 0                                                    VMX SCB
CB 1                                                    VMX SCB
FPC 0                                                   Virtual FPC
  CPU           Rev. 1.0 RIOT-LITE    BUILTIN
  MIC 0                                                 Virtual
    PIC 0                BUILTIN      BUILTIN           Virtual
```

show chassis hardware (vMX running in performance mode)

```
user@host> show chassis hardware
Hardware inventory:
Item            Version  Part number  Serial number     Description
Chassis                               VM54599D128A      VMX
Midplane
Routing Engine 0                                        RE-VMX
CB 0                                                    VMX SCB
CB 1                                                    VMX SCB
FPC 0                                                   Virtual FPC
```


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```
  CPU            Rev. 1.0 RIOT-PERF    BUILTIN
  MIC 0                                                Virtual
    PIC 0                 BUILTIN      BUILTIN         Virtual
```

show chassis hardware (T320 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                 19093             T320
Midplane         REV 04   710-004339   BC1436            T320 Backplane
FPM GBUS         REV 03   710-004461   BC1407            T320 FPM Board
FPM Display      REV 04   710-002897   BE0763            FPM Display
CIP              REV 05   710-002895   BB2311            T Series CIP
PEM 0            Rev 01   740-004359   NB12546           Power Entry Module
SCG 0            REV 06   710-004455   AY4522            T320 Sonet
Clock Gen.
Routing Engine 0                                        unknown
CB 0             REV 13   710-002728   BC1577            T Series
Control Board
CB 1             REV 13   710-002728   BC1595            T Series
Control Board
FPC 1            REV 09   710-007531   HS1572            FPC Type 2
   CPU            REV 15   710-001726   HR8763             FPC CPU
   PIC 0          REV 01   750-010618   CB5579             4x G/E SFP,
1000 BASE
     SFP 0        REV 01   740-007326   P5809Z1            SFP-SX
     SFP 1        REV 01   740-007326   P4Q10XU            SFP-SX
     SFP 2                 NON-JNPR     RA45020031         SFP-SX
     SFP 3                 NON-JNPR     RA45020032         SFP-SX
   PIC 1          REV 01   750-010618   CD9587             4x G/E SFP,
1000 BASE
     SFP 0                 NON-JNPR     P5A08QZ            SFP-T
     SFP 1        REV 01   740-007326   P4Q133K            SFP-SX
     SFP 2        REV 01   740-007326   P5809YY            SFP-SX
     SFP 3        REV 01   740-007327   4C81704            SFP-LX
   MMB 1          REV 03   710-005555   HR9401             MMB-288mbit
   PPB 0          REV 04   710-003758   HR2886             PPB Type 2
FPC 2            REV 07   710-005860   HP2392            FPC Type 1
   CPU            REV 14   710-001726   HP7797             FPC CPU
   PIC 0          REV 02   750-007643   HM0853             1x G/E QPP,
1000 BASE
     SFP 0        REV 01   740-007326   P11E9JJ            SFP-SX
   MMB 1          REV 02   710-005555   HN2379             MMB-288mbit
   PPB 0          REV 04   710-003758   HP8092             PPB Type 2
FPC 3            REV 07   710-005860   HP2393            FPC Type 1
   CPU            REV 14   710-001726   HP0968             FPC CPU
   PIC 0          REV 01   750-010240   CB5363             1x G/E SFP,
1000 BASE
     SFP 0        REV 01   740-007326   P4R0PNH            SFP-SX
   PIC 1          REV 03   750-003034   HD2832             4x OC-3 SONET,
SMIR
   MMB 1          REV 02   710-005555   HN6307             MMB-288mbit
   PPB 0          REV 04   710-003758   HP5051             PPB Type 2
FPC 4            REV 01   710-010845   JD3872            FPC Type 4
   CPU            REV 02   710-011481   JB6042             FPC CPU
 5            REV 01   710-005802   BC1566            FPC Type 2
   CPU            REV 09   710-001726   AY4922             FPC CPU
   PIC 0          REV 02   750-008155   BE2114             2x G/E QPP,
1000 BASE
     SFP 0        REV 01   740-007326   P4R0PMQ            SFP-SX
```

```
    SFP 1        REV 01   740-007326   P4R0PN9          SFP-SX
  PIC 1          REV 01   750-008155   BE2116           2x G/E QPP,
1000 BASE
    SFP 0        REV 01   740-007326   P4R0PNZ          SFP-SX
    SFP 1                 NON-JNPR     2908             SFP-T
  MMB 1          REV 01   710-005555   AZ2246           MMB-288mbit
  PPB 0          REV 03   710-003758   AY4839           PPB Type 2
FPC 7            REV 01   710-005803   AZ2123           FPC Type 3
...
```

show chassis hardware (T640 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                19182             T640
Midplane         REV 04   710-002726   AX5608            T640 Backplane
FPM GBUS         REV 02   710-002901   HE3064            T640 FPM Board
FPM Display      REV 02   710-002897   HE7864            FPM Display
CIP              REV 05   710-002895   HA5024            T Series CIP
PEM 0            Rev 02   740-029522   VH26235           AC PEM 10kW US
PEM 1            Rev 02   740-029522   VH26230           AC PEM 10kW US
SCG 0            REV 03   710-003423   HA4508            T640 Sonet Clock Gen.
Routing Engine 0 REV 02   740-005022   210865700483      RE-3.0 (RE-600)
CB 0             REV 01   710-002728   HD3044            T Series Control Board
FPC 2            REV 04   710-001721   HD5572            FPC Type 3
  CPU            REV 06   710-001726   HA4712            FPC CPU
  PIC 1          REV 03   750-009567   HV2331            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009898   USC202R103        XENPAK-SR
  PIC 2          REV 03   750-009567   HV2332            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-011268   USC202R112        XENPAK-ZR
  PIC 3          REV 03   750-009567   HX4416            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-012056   434TC004          XENPAK-CX4
  PIC 4          REV 03   750-009567   HX4420            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-012058   434TC124          XENPAK-LX4
FPC 5            REV 01   710-013553   JE4839            E2-FPC Type 1
  CPU            REV 01   710-013569   JW9163            FPC CPU
  PIC 0          REV 01   750-009567   HX4419            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009898   USC202RT05        XENPAK-LR
  PIC 1          REV 03   750-009567   HN7426            1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009550   03L90051          XENPAK-ER
  PIC 2          REV 03   750-009467   HT7423            1x 10GE(LAN),XENPAK
    SFP 0                 NON-JNPR                       UNKNOWON
  PIC 3          REV 04   750-005100   AY4850            1x 10GE(LAN),DWDM
FPC 4            REV 01   710-010845   JD3872            FPC Type 4
  CPU            REV 02   710-011481   JB6042            FPC CPU
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray
```

show chassis hardware models (T640 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 04   710-002726                     CHAS-BP-T640-S
FPM Display      REV 02   710-002897                     CRAFT-T640-S
CIP              REV 05   710-002895                     CIP-L-T640-S
PEM 0            Rev 01   740-002595                     PWR-T-DC-S
SCG 0            REV 04   710-003423                     SCG-T-S
```


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```
SCG 1            REV 04   710-003423                    SCG-T-S
Routing Engine 0 REV 01   740-005022                    RE-600-2048-S
Routing Engine 1 REV 07   740-005022                    RE-600-2048-S
CB 0             REV 06   710-002726                    CHAS-BP-T640-S
CB 1             REV 06   710-002728                    CB-L-T-S
FPC 5            REV 05   710-007527                    T640-FPC2
  PIC 0          REV 05   750-002510                    PB-2GE-SX
  PIC 1          REV 05   750-001901                    PB-4OC12-SON-SMIR
FPC 6            REV 03   710-001721                    T640-FPC3
  PIC 1          REV 01   750-009553                    PC-4OC48-SON-SFP
SIB 4            REV 02   750-005486                    SIB-I-T640-S
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T-S
Fan Tray 2                                              FAN-REAR-TX-T640-S
```

show chassis hardware extensive (T640 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  T640
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:        ...........       S/N:             ...........
 Assembly ID:  0x0507            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 Version:    ...........
 ID: Gibson LCC Chassis
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 05 07 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: ff ff ff ff ff ff ff ff ff ff ff ff 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 04   710-002726   AX5633
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-002726.       S/N:               AX5633.
 Assembly ID:  0x0127            Assembly Version:  01.04
 Date:         06-27-2001        Assembly Flags:    0x00
 Version:      REV 04.....
 ID: Gibson Backplane
 Board Information Record:
  Address 0x00: ad 01 08 00 00 90 69 0e f8 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 01 27 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 30 32 37 32 36 00 00
  Address 0x20: 53 2f 4e 20 41 58 35 36 33 33 00 00 00 1b 06 07
  Address 0x30: d1 ff ff ff ad 01 08 00 00 90 69 0e f8 00 ff ff
  Address 0x40: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM GBUS         REV 02   710-002901   HE3245
 ...
FPM Display      REV 02   710-002897   HA4873
 ...
CIP              REV 05   710-002895   HA4729
...
PEM 1            RevX02   740-002595   MD21815           Power Entry Module
 ...
SCG 0            REV 04   710-003423   HF6023
 ...
SCG 1            REV 04   710-003423   HF6061
```

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```
 ...
Routing Engine 0 REV 01   740-005022   210865700292      RE-3.0
...
CB 0             REV 06   710-002728   HE3614
...
FPC 1            REV 01   710-002385   HE3009            FPC Type 1
...              REV 06   710-001726   HC0010
```

show chassis hardware (T4000 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1172F25AHA      T4000
Midplane         REV 01   710-027486   RC8355            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAE0927          T640 FPM Board
FPM Display      REV 01   710-021387   EF6764            T1600 FPM Display
CIP              REV 06   710-002895   BBAD9210          T-series CIP
PEM 0            REV 01   740-036442   VA00016           Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAD7248          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAE3874          T640 Sonet Clock Gen.
Routing Engine 0 REV 05   740-026941   P737F-002248      RE-DUO-1800
Routing Engine 1 REV 06   740-026941   P737F-002653      RE-DUO-1800
CB 0             REV 09   710-022597   ED0295            LCC Control Board
CB 1             REV 09   710-022597   EA6050            LCC Control Board
FPC 0            REV 26   750-032819   EK1173            FPC Type 5-3D
  CPU            REV 12   711-030686   EJ8584            SNG PMB
  PIC 0          REV 07   750-034624   EF6837            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   123363A01145      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   123363A01147      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01P3           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10M03256         SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AJJ01M2           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   123363A01137      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01PN           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   AJJ01NW           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   123363A01139      SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJJ01KE           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   123363A01336      SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B10M01325         SFP+-10G-SR
  PIC 1          REV 07   750-034624   EF6800            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   AJJ01SA           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJJ01QZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJH0217           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJJ01TE           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AJJ01KV           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   AJJ01MU           SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01R0           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   AJJ01TC           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AJJ0364           SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJD0GV3           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B10M03343         SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AJJ01QJ           SFP+-10G-SR
  LMB 0          REV 05   711-034381   EJ8490            Type-0 LMB
  LMB 1          REV 04   711-035774   EJ8517            Type-1 LMB
  LMB 2          REV 05   711-034381   EJ8489            Type-0 LMB
FPC 3            REV 07   750-032819   EG3637            FPC Type 5-3D
  CPU            REV 09   711-030686   EG0150            SNG PMB
  PIC 0          REV 08   750-035293   EF3657            1x100GE
    Xcvr 0       REV 01   740-032210   C22CQNJ           CFP-100G-LR4
  PIC 1          REV 10   750-034624   BBAN4098          12x10GE (LAN/WAN) SFPP
```


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```
    Xcvr 0       REV 01   740-031980   B11J04902         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11J04891         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01MX           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11J04183         SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11J04894         SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J04184         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11J04897         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11J04899         SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AJJ01TV           SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   B11J04057         SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AJJ01M4           SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B11J04905         SFP+-10G-SR
  LMB 0          REV 04   711-034381   EG1524            Type-0 LMB
  LMB 1          REV 03   711-035774   EG0345            Type-1 LMB
  LMB 2          REV 04   711-034381   EG1522            Type-0 LMB
FPC 5            REV 03   710-033871   BBAJ0768          FPC Type 4-ES
  CPU            REV 11   710-016744   BBAH9342          ST-PMB2
  PIC 0          REV 09   750-029262   EE6789            100GE
  PIC 1          REV 03   750-034781   EE6655            100GE CFP
    Xcvr 0       REV 01   740-032210   J11A22334         CFP-100G-LR4
  BRIDGE 0       REV 03   711-029995   EE6572            100GE Bridge Board
  MMB 0          REV 07   710-025563   BBAJ4657          ST-MMB2
  MMB 1          REV 07   710-025563   BBAJ3073          ST-MMB2
FPC 6            REV 05   750-010153   EF4936            FPC Type 5-3D
  CPU            REV 06   711-030686   EF4189            SNG PMB
  PIC 0          REV 10   750-034624   BBAN4109          12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   B11J04895         SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11J04898         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11J04021         SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11J04903         SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11J04311         SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J04059         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11J04016         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11J04017         SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   B11J04887         SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   B11J04297         SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B11J04893         SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B11J04022         SFP+-10G-SR
  PIC 1          REV 02   750-034624   EE3711            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   AJH033X           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJJ01N0           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01SV           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJJ032L           SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B10M01593         SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   AJD0FF1           SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01NU           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   123363A01305      SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   B10M00361         SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJJ01M7           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AJJ032X           SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AJJ01PG           SFP+-10G-SR
  LMB 0          REV 04   711-034381   EF3838            Type-0 LMB
  LMB 1          REV 03   711-035774   EF3821            Type-1 LMB
  LMB 2          REV 04   711-034381   EF3834            Type-0 LMB
SPMB 0           REV 05   710-023321   ED1990            LCC Switch CPU
SPMB 1           REV 05   710-023321   EA2768            LCC Switch CPU
SIB 0            REV 02   711-036340   EF8802            SIB-HC-3D
SIB 1            REV 07   711-036340   EG2286            SIB-HC-3D
SIB 2            REV 07   711-036340   EG2252            SIB-HC-3D
SIB 3            REV 02   711-036340   EF1358            SIB-HC-3D
SIB 4            REV 02   711-036340   EF8806            SIB-HC-3D
```

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```
Fan Tray 0                                                    Front Top Fan Tray
Fan Tray 1                                                    Front Bottom Fan Tray
-- Rev 2
Fan Tray 2                                                    Rear Fan Tray -- Rev 3
```

show chassis hardware (T4000 Router with 16-GB Line Card Chassis (LCC) Routing Engine)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11BDF2CAHA      T1600
Midplane         REV 01   710-027486   ACAJ0774          T640 Backplane
FPM GBUS         REV 13   710-002901   BBAL6812          T640 FPM Board
FPM Display      REV 04   710-021387   BBAP2679          T1600 FPM Display
CIP              REV 06   710-002895   BBAP4758          T-series CIP
PEM 0            Rev 03   740-026384   XF86421           Power Entry Module 3x80
PEM 1            Rev 03   740-026384   XF86429           Power Entry Module 3x80
SCG 0            REV 18   710-003423   BBAP1896          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAN8659          T640 Sonet Clock Gen.
Routing Engine 0 REV 01   740-042243   737F-002238       RE-DUO-1800-16G
Routing Engine 1 REV 01   740-042243   737F-002403       RE-DUO-1800-16G
CB 1             REV 11   710-022597   EK4526            LCC Control Board
CB 1             REV 11   710-022597   EK4527            LCC Control Board
FPC 0            REV 05   710-033871   EK5644            FPC Type 4-ES
  CPU            REV 11   710-016744   EK3428            ST-PMB2
  PIC 0          REV 20   750-017405   EJ3041            4x 10GE (LAN/WAN) XFP
  PIC 1          REV 17   750-026962   EH7536            10x10GE(LAN/WAN) SFPP
  MMB 0          REV 07   710-025563   EK6039            ST-MMB2
  MMB 1          REV 07   710-025563   EK6086            ST-MMB2
FPC 1            REV 05   710-033871   EK6583            FPC Type 4-ES
  CPU            REV 11   710-016744   EK3401            ST-PMB2
  PIC 0          REV 17   750-026962   EJ8948            10x10GE(LAN/WAN) SFPP
  MMB 0          REV 07   710-025563   EK6202            ST-MMB2
  MMB 1          REV 07   710-025563   EK6112            ST-MMB2
SPMB 1           REV 05   710-023321   EK4900            LCC Switch CPU
SIB 0            REV 11   710-013074   EK5958            SIB-I8-SF
SIB 1            REV 11   710-013074   EK4606            SIB-I8-SF
SIB 2            REV 11   710-013074   EK5971            SIB-I8-SF
SIB 3            REV 11   710-013074   EK4609            SIB-I8-SF
SIB 4            REV 11   710-013074   EK4602            SIB-I8-SF
Fan Tray 0                                                Front Top Fan Tray
Fan Tray 1                                                Front Bottom Fan Tray
Fan Tray 2                                                Rear Fan Tray -- Rev 2
```

show chassis hardware (T4000 Router with LSR FPC)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1173A24AHA      T4000
FPC 3            REV      750-048373   AN7797            FPC Type 5-LSR
  CPU            REV 10   711-030686   AN6649            SNG PMB
  PIC 0          REV 07   750-034624   EF6830            12x10GE (LAN/WAN) SFPP
```

show chassis hardware clei-models (T4000 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   710-027486   IPMJ700DRD        CHAS-BP-T1600-S
```


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```
FPM Display      REV 01   710-021387                    CRAFT-T1600-S
CIP              REV 06   710-002895                    CIP-L-T640-S
PEM 0            REV 01   740-036442   IPUPAG6KAA       PWR-T-6-60-DC
SCG 0            REV 18   710-003423                    SCG-T-S
SCG 1            REV 18   710-003423                    SCG-T-S
Routing Engine 0 REV 05   740-026941                    RE-DUO-C1800-8G-S
Routing Engine 1 REV 06   740-026941                    RE-DUO-C1800-8G-S
CB 0             REV 09   710-022597                    CB-LCC-S
CB 1             REV 09   710-022597                    CB-LCC-S
FPC 3
  PIC 0          REV 08   750-035293   XXXXXXXXBB       PF-1CGE-CFP
  PIC 1          REV 10   750-034624   XXXXXXXXCC       PF-12XGE-SFPP
FPC 5            REV 03   710-033871   IPUCAMBCTD       T1600-FPC4-ES
  PIC 1          REV 03   750-034781   IPUIBKLMAA       PD-1CE-CFP-FPC4
FPC 6
  PIC 0          REV 10   750-034624   XXXXXXXXCC       PF-12XGE-SFPP
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T4000-S
Fan Tray 2                                              FANTRAY-TXP-R-S
```

show chassis hardware detail (T4000 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1172F25AHA      T4000
Midplane         REV 01   710-027486   RC8355            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAE0927          T640 FPM Board
FPM Display      REV 01   710-021387   EF6764            T1600 FPM Display
CIP              REV 06   710-002895   BBAD9210          T-series CIP
PEM 0            REV 01   740-036442   VA00016           Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAD7248          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAE3874          T640 Sonet Clock Gen.
Routing Engine 0 REV 05   740-026941   P737F-002248      RE-DUO-1800
  ad0     3823 MB  SMART CF             2009121602A661576157 Compact Flash
  ad1    59690 MB  STEC MACH-8 SSD      STM000103FDB      Disk 1
Routing Engine 1 REV 06   740-026941   P737F-002653      RE-DUO-1800
  ad0     3823 MB  SMART CF             201011150153F52CF52C Compact Flash
  ad1    62720 MB  SMART Lite SATA Drive 2010110900150A880A88 Disk 1
CB 0             REV 09   710-022597   ED0295            LCC Control Board
CB 1             REV 09   710-022597   EA6050            LCC Control Board
FPC 0            REV 26   750-032819   EK1173            FPC Type 5-3D
  CPU            REV 12   711-030686   EJ8584            SNG PMB
  PIC 0          REV 07   750-034624   EF6837            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   123363A01145      SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   123363A01147      SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01P3           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B10M03256         SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   AJJ01M2           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   123363A01137      SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01PN           SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   AJJ01NW           SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   123363A01139      SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJJ01KE           SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   123363A01336      SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B10M01325         SFP+-10G-SR
  PIC 1          REV 07   750-034624   EF6800            12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   AJJ01SA           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJJ01QZ           SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJH0217           SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJJ01TE           SFP+-10G-SR
```

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```
    Xcvr 4       REV 01   740-031980   AJJ01KV          SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   AJJ01MU          SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   AJJ01R0          SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   AJJ01TC          SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AJJ0364          SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJD0GV3          SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B10M03343        SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AJJ01QJ          SFP+-10G-SR
  LMB 0          REV 05   711-034381   EJ8490           Type-0 LMB
  LMB 1          REV 04   711-035774   EJ8517           Type-1 LMB
  LMB 2          REV 05   711-034381   EJ8489           Type-0 LMB
FPC 3            REV 07   750-032819   EG3637           FPC Type 5-3D
  CPU            REV 09   711-030686   EG0150           SNG PMB
  PIC 0          REV 08   750-035293   EF3657           1x100GE
    Xcvr 0       REV 01   740-032210   C22CQNJ          CFP-100G-LR4
  PIC 1          REV 10   750-034624   BBAN4098         12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   B11J04902        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11J04891        SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01MX          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11J04183        SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11J04894        SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J04184        SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11J04897        SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11J04899        SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AJJ01TV          SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   B11J04057        SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AJJ01M4          SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B11J04905        SFP+-10G-SR
  LMB 0          REV 04   711-034381   EG1524           Type-0 LMB
  LMB 1          REV 03   711-035774   EG0345           Type-1 LMB
  LMB 2          REV 04   711-034381   EG1522           Type-0 LMB
FPC 5            REV 03   710-033871   BBAJ0768         FPC Type 4-ES
  CPU            REV 11   710-016744   BBAH9342         ST-PMB2
  PIC 0          REV 09   750-029262   EE6789           100GE
  PIC 1          REV 03   750-034781   EE6655           100GE CFP
    Xcvr 0       REV 01   740-032210   J11A22334        CFP-100G-LR4
  BRIDGE 0       REV 03   711-029995   EE6572           100GE Bridge Board
  MMB 0          REV 07   710-025563   BBAJ4657         ST-MMB2
  MMB 1          REV 07   710-025563   BBAJ3073         ST-MMB2
FPC 6            REV 05   750-010153   EF4936           FPC Type 5-3D
  CPU            REV 06   711-030686   EF4189           SNG PMB
  PIC 0          REV 10   750-034624   BBAN4109         12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   B11J04895        SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11J04898        SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   B11J04021        SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   B11J04903        SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B11J04311        SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J04059        SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11J04016        SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11J04017        SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   B11J04887        SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   B11J04297        SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B11J04893        SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   B11J04022        SFP+-10G-SR
  PIC 1          REV 02   750-034624   EE3711           12x10GE (LAN/WAN) SFPP
    Xcvr 0       REV 01   740-031980   AJH033X          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   AJJ01N0          SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AJJ01SV          SFP+-10G-SR
    Xcvr 3       REV 01   740-031980   AJJ032L          SFP+-10G-SR
    Xcvr 4       REV 01   740-031980   B10M01593        SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   AJD0FF1          SFP+-10G-SR
```


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```
    Xcvr 6       REV 01   740-031980   AJJ01NU          SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   123363A01305     SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   B10M00361        SFP+-10G-SR
    Xcvr 9       REV 01   740-031980   AJJ01M7          SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   AJJ032X          SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AJJ01PG          SFP+-10G-SR
  LMB 0          REV 04   711-034381   EF3838           Type-0 LMB
  LMB 1          REV 03   711-035774   EF3821           Type-1 LMB
  LMB 2          REV 04   711-034381   EF3834           Type-0 LMB
SPMB 0           REV 05   710-023321   ED1990           LCC Switch CPU
SPMB 1           REV 05   710-023321   EA2768           LCC Switch CPU
SIB 0            REV 02   711-036340   EF8802           SIB-HC-3D
SIB 1            REV 07   711-036340   EG2286           SIB-HC-3D
SIB 2            REV 07   711-036340   EG2252           SIB-HC-3D
SIB 3            REV 02   711-036340   EF1358           SIB-HC-3D
SIB 4            REV 02   711-036340   EF8806           SIB-HC-3D
Fan Tray 0                                              Front Top Fan Tray
Fan Tray 1                                              Front Bottom Fan Tray
-- Rev 2
Fan Tray 2                                              Rear Fan Tray -- Rev 3
```

show chassis hardware models (T4000 Router)

```
user@host> show chassis hardware models

Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 01   710-027486   RC8355           CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   EF6764           CRAFT-T1600-S
CIP              REV 06   710-002895   BBAD9210         CIP-L-T640-S
PEM 0            REV 01   740-036442   VA00016          PWR-T-6-60-DC
SCG 0            REV 18   710-003423   BBAD7248         SCG-T-S
SCG 1            REV 18   710-003423   BBAE3874         SCG-T-S
Routing Engine 0 REV 05   740-026941   P737F-002248     RE-DUO-C1800-8G-S
Routing Engine 1 REV 06   740-026941   P737F-002653     RE-DUO-C1800-8G-S
CB 0             REV 09   710-022597   ED0295           CB-LCC-S
CB 1             REV 09   710-022597   EA6050           CB-LCC-S
FPC 3
  PIC 0          REV 08   750-035293   EF3657           PF-1CGE-CFP
  PIC 1          REV 10   750-034624   BBAN4098         PF-12XGE-SFPP
FPC 5            REV 03   710-033871   BBAJ0768         T1600-FPC4-ES
  PIC 1          REV 03   750-034781   EE6655           PD-1CE-CFP-FPC4
FPC 6
  PIC 0          REV 10   750-034624   BBAN4109         PF-12XGE-SFPP
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T4000-S
Fan Tray 2                                              FAN-REAR-TXP-LCC
```

show chassis hardware lcc (TX Matrix Router)

```
user@host> show chassis hardware lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                65751            T640
Midplane         REV 03   710-005608   RA1408           T640 Backplane
FPM GBUS         REV 09   710-002901   RA2784           T640 FPM Board
FPM Display      REV 05   710-002897   RA2825           FPM Display
CIP              REV 06   710-002895   HT0684           T Series CIP
```

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```
PEM 0            Rev 11   740-002595   PM18483          Power Entry Module
PEM 1            Rev 11   740-002595   qb13984          Power Entry Module
SCG 0            REV 11   710-003423   HT0022           T640 Sonet Clock Gen.
Routing Engine 0 REV 13   740-005022   210865700363     RE-3.0 (RE-600)
CB 0             REV 03   710-007655   HW1195           Control Board (CB-T)
FPC 1            REV 05   710-007527   HM3245           FPC Type 2
  CPU            REV 14   710-001726   HM1084           FPC CPU
  PIC 0          REV 02   750-007218   AZ1112           2x OC-12 ATM2 IQ, SMIR
  PIC 1          REV 02   750-007745   HG3462           4x OC-3 SONET, SMIR
  PIC 2          REV 14   750-001901   BA5390           4x OC-12 SONET, SMIR
  PIC 3          REV 09   750-008155   HS3012           2x G/E IQ, 1000 BASE
    SFP 0                 NON-JNPR     P1186TY          SFP-S
    SFP 1        REV 01   740-007326   P11WLTF          SFP-SX
  MMB 1          REV 02   710-005555   HL7514           MMB-288mbit
  PPB 0          REV 04   710-003758   HM4405           PPB Type 2
  PPB 1          REV 04   710-003758   AV1960           PPB Type 2
FPC 2            REV 08   710-010154   HZ3578           E-FPC Type 3
  CPU            REV 05   710-010169   HZ3219           FPC CPU-Enhanced
  PIC 0          REV 02   750-009567   HX2882           1x 10GE(LAN),XENPAK
    SFP 0        REV 01   740-009898   USC202U709       XENPAK-LR
  PIC 1          REV 03   750-003336   HJ9954           4x OC-48 SONET, SMSR
  PIC 2          REV 01   750-004535   HC0235           1x OC-192 SM SR1
  PIC 3          REV 07   750-007141   HX1699           10x 1GE(LAN), 1000 BASE

    SFP 0        REV 01   740-007326   2441042          SFP-SX
    SFP 1        REV 01   740-007326   2441027          SFP-SX
  MMB 0          REV 03   710-010171   HV2365           MMB-5M3-288mbit
  MMB 1          REV 03   710-010171   HZ3888           MMB-5M3-288mbit
SPMB 0           REV 09   710-003229   HW5245           T Series Switch CPU
SIB 3            REV 07   710-005781   HR5927           SIB-L8-F16
  B Board        REV 06   710-005782   HR5971           SIB-L8-F16 (B)
SIB 4            REV 07   710-005781   HR5903           SIB-L8-F16
  B Board        REV 06   710-005782   HZ5275           SIB-L8-F16 (B)
```

show chassis hardware scc (TX Matrix Router)

```
user@host> show chassis hardware scc
scc-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  TX Matrix
Midplane         REV 04   710-004396   RB0014           SCC Midplane
FPM GBUS         REV 04   710-004617   HW9141           SCC FPM Board
FPM Display      REV 04   710-004619   HS5950           SCC FPM
CIP 0            REV 01   710-010218   HV9151           SCC CIP
CIP 1            REV 01   710-010218   HV9152           SCC CIP
PEM 1            Rev 11   740-002595   QB13977          Power Entry Module
Routing Engine 0 REV 05   740-008883   P11123900153     RE-4.0 (RE-1600)
CB 0             REV 01   710-011709   HR5964           Control Board (CB-TX)
SPMB 0           REV 09   710-003229   HW5293           T Series Switch CPU
SIB 3
SIB 4            REV 01   710-005839   HW1177           SIB-S8-F16
  B Board        REV 01   710-005840   HW1202           SIB-S8-F16 (B)
```

show chassis hardware (T1600 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
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Chassis                                 B2703           T1600
Midplane         REV 03   710-005608   RC4137          T640 Backplane
FPM GBUS         REV 10   710-002901   DT7062          T640 FPM Board
FPM Display      REV 05   710-002897   DS3067          FPM Display
CIP              REV 06   710-002895   DT3386          T-series CIP
PEM 0            Rev 07   740-017906   UA26344         Power Entry Module 3x80
PEM 1            Rev 18   740-002595   UF38441         Power Entry Module
SCG 0            REV 15   710-003423   DV0941          T640 Sonet Clock Gen.
Routing Engine 0 REV 08   740-014082   9009014502      RE-A-2000
Routing Engine 1 REV 07   740-014082   9009009591      RE-A-2000
CB 0             REV 05   710-007655   JA9360          Control Board (CB-T)
CB 1             REV 03   710-017707   DT3251          Control Board (CB-T)
FPC 0            REV 07   710-013558   DR4253          E2-FPC Type 2
  CPU            REV 05   710-013563   DS3902          FPC CPU-Enhanced
  PIC 0          REV 01   750-010618   CB5446          4x G/E SFP, 1000 BASE
    Xcvr 0       REV 01   740-011613   P9F11CW         SFP-SX
    Xcvr 1       REV 01   740-011613   P9F15C2         SFP-SX
    Xcvr 2       REV 01   740-011782   PB94K0L         SFP-SX
  PIC 1          REV 06   750-001900   HB6399          1x OC-48 SONET, SMSR
  PIC 2          REV 14   750-001901   AP1092          4x OC-12 SONET, SMIR
  PIC 3          REV 07   750-001900   AR8275          1x OC-48 SONET, SMSR
  MMB 1          REV 07   710-010171   DS1524          MMB-5M3-288mbit
FPC 1            REV 06   710-013553   DL9067          E2-FPC Type 1
  CPU            REV 04   710-013563   DM1685          FPC CPU-Enhanced
  PIC 0          REV 08   750-001072   AB1688          1x G/E, 1000 BASE-SX
  PIC 1          REV 10   750-012266   JX5519          4x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011613   AM0812S8UK6     SFP-SX
    Xcvr 2       REV 01   740-011613   AM0812S8UK1     SFP-SX
    Xcvr 3       REV 01   740-011782   P8N1YHG         SFP-SX
  PIC 2          REV 22   750-005634   DP0083          1x CHOC12 IQ SONET, SMIR

  MMB 1          REV 07   710-008923   DN1862          MMB 3M 288-bit
FPC 2            REV 01   710-005548   HJ9899          FPC Type 3
  CPU            REV 06   710-001726   HC0586          FPC CPU
  PIC 0          REV 16   750-007141   NC9660          10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011613   AM0812S8XAR     SFP-SX
    Xcvr 1       REV 01   740-011782   P920E7B         SFP-SX
    Xcvr 2       REV 01   740-011613   AM0812S8XAU     SFP-SX
    Xcvr 4       REV 01   740-011613   AM0812S8XAK     SFP-SX
    Xcvr 5       REV 01   740-011613   AM0812S8XAA     SFP-SX
    Xcvr 6       REV 01   740-011613   PAJ4NKY         SFP-SX
    Xcvr 7       REV 01   740-011613   AM0812S8UJW     SFP-SX
    Xcvr 8       REV 01   740-011782   PB81X89         SFP-SX
    Xcvr 9       REV 01   740-011613   AM0812S8UJX     SFP-SX
  PIC 1          REV 06   750-015217   DK3280          8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011782   P8P0A3T         SFP-SX
    Xcvr 1       REV 01   740-013111   5090002         SFP-T
    Xcvr 2       REV 01   740-011613   AM0814S93BQ     SFP-SX
    Xcvr 4                NON-JNPR     PDE0FAN         SFP-SX
    Xcvr 5       REV 01   740-011782   P8Q20XY         SFP-SX
    Xcvr 6       REV 01   740-011613   AM0812S8UJV     SFP-SX
    Xcvr 7       REV 01   740-011613   AM0812S8UP7     SFP-SX
  PIC 2          REV 05   750-004695   HT4383          1x Tunnel
  PIC 3          REV 17   750-009553   RL0204          4x OC-48 SONET
    Xcvr 0       REV 01   740-011785   PDS3T23         SFP-SR
    Xcvr 1       REV 01   740-011785   P6Q0F3E         SFP-SR
  MMB 0          REV 03   710-004047   HD5843          MMB-288mbit
  MMB 1          REV 03   710-004047   HE3208          MMB-288mbit
  PPB 0          REV 02   710-002845   HA4524          PPB Type 3
  PPB 1          REV 02   710-002845   HA4766          PPB Type 3
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FPC 3            REV 01   710-010154   HR0863           E-FPC Type 3
  CPU            REV 01   710-010169   HN3422           FPC CPU-Enhanced
  PIC 0          REV 07   750-012793   WF5096           1x 10GE(LAN/WAN) IQ2
    Xcvr 0                NON-JNPR     M64294TP         XFP-10G-LR
  PIC 1          REV 25   750-007141   DV2127           10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011613   PFA6LTJ          SFP-SX
    Xcvr 1       REV 01   740-011782   P9P0XV4          SFP-SX
    Xcvr 2       REV 01   740-011782   P9M0TNX          SFP-SX
    Xcvr 4       REV 01   740-011782   P9B0TTP          SFP-SX
    Xcvr 5                NON-JNPR     PBS4LED          SFP-SX
  PIC 2          REV 17   750-009553   RL0212           4x OC-48 SONET
    Xcvr 0       REV 01   740-011785   PDS3T8G          SFP-SR
  PIC 3          REV 32   750-003700   DL1279           1x OC-192 12xMM VSR
  MMB 0          REV 01   710-010171   HR0821           MMB-288mbit
  MMB 1          REV 01   710-010171   HR0818           MMB-288mbit
FPC 4            REV 16   710-013037   EB4919           FPC Type 4-ES
  CPU            REV 09   710-016744   BBAA4382         ST-PMB2
  PIC 0          REV 03   711-029996   EB1569           100GE
  PIC 1          REV 05   711-029999   EB9983           100GE CFP
    Xcvr 0       REV 0    740-032210   J10G80746        CFP-100G-LR4
  BRIDGE 0       REV 02   711-029995   EB2235           100GE Bridge Board
  MMB 0          REV 04   710-025563   BBAA7112         ST-MMB2
  MMB 1          REV 04   710-025563   BBAA7149         ST-MMB2
FPC 5            REV 02   710-013037   DE3407           FPC Type 4-ES
  CPU            REV 04   710-016744   DA2124           ST-PMB2
  PIC 0          REV 16   750-012518   DF2554           4x OC-192 SONET XFP
    Xcvr 0       REV 01   740-014279   AA0745N1FX8      XFP-OC192-SR
    Xcvr 1       REV 01   740-014279   AA0748N1HN5      XFP-OC192-SR
    Xcvr 2       REV 01   740-014279   AA0748N1HT6      XFP-OC192-SR
    Xcvr 3       REV 01   740-014279   AA0744N1EC9      XFP-OC192-SR
  PIC 1          REV 01   750-010850   JA0329           1x OC-768 SONET SR
  MMB 0          REV 04   710-016036   DE9577           ST-MMB2
  MMB 1          REV 04   710-016036   DK4060           ST-MMB2
FPC 6            REV 14   710-013037   DV1431           FPC Type 4-ES
  CPU            REV 09   710-016744   DT9020           ST-PMB2
  PIC 0          REV 11   750-017405   DM6261           4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 01   740-014289   C701XU05Q        XFP-10G-SR
    Xcvr 1       REV 01   740-014279   AA0748N1HPT      XFP-10G-LR
    Xcvr 2       REV 01   740-014289   T08E19189        XFP-10G-SR
    Xcvr 3       REV 01   740-014289   C715XU058        XFP-10G-SR
  PIC 1          REV 13   750-017405   DP8772           4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 02   740-011571   C850XJ037        XFP-10G-SR
    Xcvr 1       REV 02   740-014289   C839XU0L9        XFP-10G-SR
    Xcvr 2       REV 02   740-014289   C834XU05A        XFP-10G-SR
    Xcvr 3       REV 02   740-014289   C810XU0CE        XFP-10G-SR
  MMB 0          REV 01   710-025563   DT8454           ST-MMB2
  MMB 1          REV 01   710-025563   DT8366           ST-MMB2
FPC 7            REV 09   710-007529   HZ7624           FPC Type 3
  CPU            REV 15   710-001726   HZ1413           FPC CPU
  PIC 0          REV 10   750-012793   DM5627           1x 10GE(LAN/WAN) IQ2
    Xcvr 0       REV 02   740-011571   C831XJ062        XFP-10G-SR
  PIC 1          REV 01   750-015217   JT6762           8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011782   P8Q25JU          SFP-SX
    Xcvr 1       REV 01   740-011782   P9B0U0K          SFP-SX
  PIC 2          REV 01   750-015217   JS4268           8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011613   AM0812S8XBZ      SFP-SX
    Xcvr 1       REV 01   740-011613   AM0812S8XAP      SFP-SX
    Xcvr 2       REV 01   740-011613   AM0812S8XBY      SFP-SX
    Xcvr 3       REV 01   740-011613   AM0812S8XBX      SFP-SX
    Xcvr 4       REV 01   740-011613   P9F1652          SFP-SX
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    Xcvr 5       REV 01   740-011782   P8Q21YC          SFP-SX
    Xcvr 6       REV 01   740-011782   P8Q27HQ          SFP-SX
    Xcvr 7       REV 01   740-011613   P8E2SSU          SFP-SX
  PIC 3          REV 15   750-009450   NB6790           1x OC-192 SM SR2
  MMB 0          REV 03   710-005555   HZ3450           MMB-288mbit
  MMB 1          REV 03   710-005555   HZ3415           MMB-288mbit
  PPB 0          REV 04   710-002845   HP0887           PPB Type 3
  PPB 1          REV 04   710-002845   HW5255           PPB Type 3
SPMB 0           REV 10   710-003229   HX3699           T-series Switch CPU
SPMB 1           REV 12   710-003229   DT3091           T-series Switch CPU
SIB 0            REV 07   710-013074   DS4747           SIB-I8-SF
SIB 1            REV 07   710-013074   DS4942           SIB-I8-SF
SIB 2            REV 07   710-013074   DS4965           SIB-I8-SF
SIB 3            REV 07   710-013074   DS4990           SIB-I8-SF
SIB 4            REV 07   710-013074   DS4944           SIB-I8-SF
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 2
```

show chassis hardware (TX Matrix Plus Router)

```
user@host> show chassis hardware
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN113186EAHB      TXP
Midplane         REV 05   710-022574   TS3822            SFC Midplane
FPM Display      REV 03   710-024027   DW4701            TXP FPM Display
CIP 0            REV 05   710-023792   DW7998            TXP CIP
CIP 1            REV 05   710-023792   DW7999            TXP CIP
PEM 0            Rev 04   740-027463   UM26367           Power Entry Module
PEM 1            Rev 04   740-027463   UM26346           Power Entry Module
Routing Engine 0 REV 06   740-026942   737A-1081         RE-DUO-2600
Routing Engine 1 REV 06   740-026942   737A-1043         RE-DUO-2600
CB 0             REV 05   710-022606   DW4435            SFC Control Board
CB 1             REV 09   710-022606   DW6100            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 04   750-024564   DW5764            F13 SIB
  B Board        REV 03   710-023431   DW9053            F13 SIB Mezz
SIB F13 3        REV 04   750-024564   DW5785            F13 SIB
  B Board        REV 03   710-023431   DW9030            F13 SIB Mezz
SIB F13 6
SIB F13 8        REV 04   750-024564   DW5752            F13 SIB
  B Board        REV 03   710-023431   DW9051            F13 SIB Mezz
SIB F13 11       REV 04   750-024564   DW5782            F13 SIB
  B Board        REV 03   710-023431   DW9058            F13 SIB Mezz
SIB F13 12       REV 03   750-024564   DT9466            F13 SIB
  B Board        REV 02   710-023431   DT6556            F13 SIB Mezz
SIB F2S 0/0      REV 05   710-022603   DW7898            F2S SIB
  B Board        REV 05   710-023787   DW7625            F2S SIB Mezz
SIB F2S 0/2      REV 05   710-022603   DW7811            F2S SIB
  B Board        REV 05   710-023787   DW7550            F2S SIB Mezz
SIB F2S 0/4      REV 04   710-022603   DW4873            F2S SIB
  B Board        REV 05   710-023787   DW8509            F2S SIB Mezz
SIB F2S 0/6      REV 04   710-022603   DW4867            F2S SIB
  B Board        REV 05   710-023787   DW8472            F2S SIB Mezz
SIB F2S 1/0      REV 04   710-022603   DW4871            F2S SIB
  B Board        REV 05   710-023787   DW8497            F2S SIB Mezz
SIB F2S 1/2      REV 05   710-022603   DW7868            F2S SIB
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  B Board        REV 05   710-023787   DW7551           F2S SIB Mezz
SIB F2S 1/4      REV 04   710-022603   DW4854           F2S SIB
  B Board        REV 05   710-023787   DW8496           F2S SIB Mezz
SIB F2S 1/6      REV 05   710-022603   DW7889           F2S SIB
  B Board        REV 05   710-023787   DW7496           F2S SIB Mezz
SIB F2S 2/0      REV 04   710-022603   DW4852           F2S SIB
  B Board        REV 05   710-023787   DW8498           F2S SIB Mezz
SIB F2S 2/2      REV 04   710-022603   DW4845           F2S SIB
  B Board        REV 05   710-023787   DW8457           F2S SIB Mezz
SIB F2S 2/4      REV 05   710-022603   DW7802           F2S SIB
  B Board        REV 05   710-023787   DW7562           F2S SIB Mezz
SIB F2S 2/6      REV 04   710-022603   DW4822           F2S SIB
  B Board        REV 05   710-023787   DW8467           F2S SIB Mezz
SIB F2S 3/0      REV 05   710-022603   DW7815           F2S SIB
  B Board        REV 05   710-023787   DW7518           F2S SIB Mezz
SIB F2S 3/2      REV 03   710-022603   DV0068           F2S SIB
  B Board        REV 03   710-023787   DT9974           F2S SIB Mezz
SIB F2S 3/4      REV 05   710-022603   DW7874           F2S SIB
  B Board        REV 05   710-023787   DW7601           F2S SIB Mezz
SIB F2S 3/6      REV 03   710-022603   DV0033           F2S SIB
  B Board        REV 03   710-023787   DT9969           F2S SIB Mezz
SIB F2S 4/0      REV 03   710-022603   DV0043           F2S SIB
  B Board        REV 03   710-023787   DT9948           F2S SIB Mezz
SIB F2S 4/2      REV 05   710-022603   DW5446           F2S SIB
  B Board        REV 05   710-023787   DW7611           F2S SIB Mezz
SIB F2S 4/4      REV 04   710-022603   DW4826           F2S SIB
  B Board        REV 05   710-023787   DW8458           F2S SIB Mezz
SIB F2S 4/6      REV 03   710-022603   DV0026           F2S SIB
  B Board        REV 03   710-023787   DT9963           F2S SIB Mezz
Fan Tray 0       REV 02   760-024497   DR8290           Front Fan Tray
Fan Tray 1       REV 02   760-024497   DR8293           Front Fan Tray
Fan Tray 2       REV 05   760-024502   DR8280           Rear Fan Tray
Fan Tray 3
Fan Tray 4       REV 05   760-024502   DR8276           Rear Fan Tray
Fan Tray 5       REV 02   760-024502   DP5643           Rear Fan Tray

lcc0-re0:
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Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11036F8AHA      T1600
Midplane         REV 03   710-017247   RC3799            T-series Backplane
FPM GBUS         REV 10   710-002901   DP7009            T640 FPM Board
FPM Display      REV 01   710-021387   DN7026            T1600 FPM Display
CIP              REV 06   710-002895   DP6024            T-series CIP
PEM 1           Rev 02   740-023211   WA50019          Power Entry Module 4x60A
SCG 0            REV 15   710-003423   DR6757            T640 Sonet Clock Gen.
SCG 1            REV 15   710-003423   DS2225            T640 Sonet Clock Gen.
Routing Engine 0 REV 01   740-026941   737F-1040         RE-DUO-1800
Routing Engine 1 REV 01   740-026941   737F-1016         RE-DUO-1800
CB 0             REV 06   710-022597   DX4011            LCC Control Board
CB 1             REV 06   710-022597   DX4017            LCC Control Board
FPC 1            REV 07   710-013035   DN5847            FPC Type 3-ES
  CPU            REV 08   710-016744   DP2570            ST-PMB2
  PIC 0          REV 05   750-015217   DB0418            8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011782   P8Q27ZG           SFP-SX
    Xcvr 1                NON-JNPR     PDA1U0D           SFP-SX
    Xcvr 2       REV 01   740-011613   P9F1ALW           SFP-SX
    Xcvr 3       REV 01   740-011782   PBA403V           SFP-SX
    Xcvr 4                NON-JNPR     PDE09DP           SFP-SX
    Xcvr 5       REV 01   740-011782   PCH2P4K           SFP-SX
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    Xcvr 6       REV 01   740-011782   PB94K0F          SFP-SX
    Xcvr 7       REV 01   740-011782   PBA2R2A          SFP-SX
  PIC 1          REV 03   750-004424   HJ4020           1x 10GE(LAN),DWDM
  PIC 2          REV 01   750-003336   HG6073           4x OC-48 SONET, SMSR
  MMB 0          REV 04   710-016036   DP3401           ST-MMB2
FPC 3            REV 12   710-013037   DR1169           FPC Type 4-ES
  CPU            REV 08   710-016744   DP9429           ST-PMB2
  PIC 0          REV 02   750-010850   JA0332           1x OC-768 SONET SR
  MMB 0          REV 04   710-016036   DR0628           ST-MMB2
  MMB 1          REV 04   710-016036   DR0592           ST-MMB2
FPC 4            REV 05   710-021534   DR7350           FPC Type 1-ES
  CPU            REV 08   710-016744   DP8096           ST-PMB2
  PIC 0          REV 04   750-014627   DP9171           4x OC-3 1x OC-12 SFP
    Xcvr 0       REV 02   740-011615   PDE2RVR          SFP-SR
  PIC 1          REV 22   750-005634   DS5815           1x CHOC12 IQ SONET, SMIR

  PIC 2          REV 09   750-002911   CF4539           4x F/E, 100 BASE-TX
  PIC 3          REV 08   750-021652   DR2827           1x CHOC12 IQE SONET
    Xcvr 0                NON-JNPR     8                UNKNOWN
  MMB 0          REV 04   710-016036   DR0809           ST-MMB2
FPC 5            REV 07   710-007529   HS5608           FPC Type 3
  CPU            REV 15   710-001726   HX4351           FPC CPU
  PIC 0          REV 14   750-009567   WJ8961           1x 10GE(LAN),XENPAK
    Xcvr 0       REV 01   740-013170   J05K05961        XENPAK-LR
  PIC 1          REV 16   750-007141   JJ8146           10x 1GE(LAN), 1000 BASE

    Xcvr 1       REV 01   740-011613   P9F117T          SFP-SX
    Xcvr 2       REV 01   740-011782   PBA2VCL          SFP-SX
    Xcvr 3       REV 01   740-011782   PB83DRB          SFP-SX
    Xcvr 4       REV 01   740-011613   AM0812S8UP8      SFP-SX
  PIC 2          REV 12   750-009567   WF3566           1x 10GE(LAN),XENPAK
    Xcvr 0       REV 02   740-013170   T07C94489        XENPAK-LR
  MMB 0          REV 03   710-005555   HZ1907           MMB-288mbit
  MMB 1          REV 03   710-005555   HW5283           MMB-288mbit
  PPB 0          REV 04   710-002845   HZ7717           PPB Type 3
  PPB 1          REV 04   710-002845   HS0110           PPB Type 3
FPC 6            REV 07   710-013035   DP7486           FPC Type 3-ES
  CPU            REV 08   710-016744   DP2545           ST-PMB2
  PIC 0          REV 09   750-009567   NE6323           1x 10GE(LAN),XENPAK
    Xcvr 0       REV 02   740-013170   T09C71959        XENPAK-LR
  PIC 1          REV 06   750-015217   DN4775           8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011782   P7E0T6M          SFP-SX
    Xcvr 1       REV 01   740-011613   AM0812S8XAY      SFP-SX
    Xcvr 2       REV 01   740-011782   P7E0T6J          SFP-SX
    Xcvr 3       REV 01   740-011782   PCH2P7D          SFP-SX
    Xcvr 4       REV 01   740-011782   P9B0QYT          SFP-SX
    Xcvr 5       REV 01   740-011613   AM0812S8WQJ      SFP-SX
    Xcvr 6       REV 02   740-013111   9301220          SFP-T
    Xcvr 7       REV 01   740-011782   P9B0TZ5          SFP-SX
  PIC 2          REV 06   750-015217   DM6747           8x 1GE(TYPE3), IQ2
    Xcvr 0       REV 01   740-011613   PAP0ZB2          SFP-SX
    Xcvr 1       REV 01   740-013111   70191002         SFP-T
    Xcvr 6       REV 01   740-011782   PBA29H8          SFP-SX
    Xcvr 7       REV 01   740-011613   AM0812S8WQG      SFP-SX
  MMB 0          REV 04   710-016036   DP3238           ST-MMB2
FPC 7            REV 03   710-021540   DV3154           FPC Type 2-ES
  CPU            REV 09   710-016744   DT9053           ST-PMB2
  PIC 0          REV 13   750-001901   HB4225           4x OC-12 SONET, SMIR
  PIC 1          REV 05   750-001900   AD3644           1x OC-48 SONET, SMSR
  PIC 2          REV 10   750-008155   HV0335           2x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011782   PCH2UKF          SFP-SX
```

```
    Xcvr 1       REV 01   740-011782   PCH2V19          SFP-SX
  PIC 3          REV 03   750-014638   JS9493           1x OC-48-12-3 SFP
    Xcvr 0       REV 01   740-011785   P6Q0ENK          SFP-SR
  MMB 0          REV 05   710-016036   DP3323           ST-MMB2
SPMB 0           REV 04   710-023321   DX3004           LCC Switch CPU
SPMB 1           REV 04   710-023321   DX3009           LCC Switch CPU
SIB 0            REV 07   710-022594   DW4195           LCC SIB
  B Board        REV 07   710-023185   DW3930           LCC SIB Mezz
SIB 1            REV 07   710-022594   DW4179           LCC SIB
  B Board        REV 07   710-023185   DW3919           LCC SIB Mezz
SIB 2
SIB 3            REV 06   710-022594   DT8251           LCC SIB
  B Board        REV 06   710-023185   DT5792           LCC SIB Mezz
SIB 4            REV 08   710-022594   DW8014           LCC SIB
  B Board        REV 07   710-023185   DW3917           LCC SIB Mezz
Fan Tray 0                                             Front Top Fan Tray
Fan Tray 1                                             Front Bottom Fan Tray
Fan Tray 2                                             Rear Fan Tray -- Rev 3

lcc1-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN1102270AHA      T1600
Midplane         REV 04   710-017247   RC5358           T-series Backplane
FPM GBUS         REV 10   710-002901   DS3443           T640 FPM Board
FPM Display      REV 01   710-021387   DS6411           T1600 FPM Display
CIP              REV 06   710-002895   DS4235           T-series CIP
PEM 0           Rev 02   740-023211   VM82438          Power Entry Module 4x60A
SCG 0            REV 15   710-003423   DS6649           T640 Sonet Clock Gen.
SCG 1            REV 15   710-003423   DR6775           T640 Sonet Clock Gen.
Routing Engine 0 REV 01   740-026941   737F-1083        RE-DUO-1800
Routing Engine 1 REV 01   740-026941   737F-1104        RE-DUO-1800
CB 0             REV 06   710-022597   DW8542           LCC Control Board
CB 1             REV 06   710-022597   DW8530           LCC Control Board
FPC 0            REV 02   710-010845   JE2392           FPC Type 4
  CPU            REV 02   710-011481   JF6820           FPC CPU-Enhanced
  PIC 0          REV 11   750-017405   DP7259           4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 01   740-014279   AA0741N1C8T      XFP-10G-LR
    Xcvr 1       REV 01   740-014279   AA0746N1GAM      XFP-10G-LR
    Xcvr 2       REV 01   740-014279   AA0747N1H0B      XFP-10G-LR
    Xcvr 3       REV 01   740-014279   AA0748N1HZ5      XFP-10G-LR
  MMB 0          REV 03   710-010842   HY7601           ST-MMB
FPC 1            REV 16   710-013037   BBAA7398         FPC Type 4-ES
  CPU            REV 09   710-016744   BBAA2329         ST-PMB2
  PIC 0          REV 03   711-029996   EB1575           100GE
  PIC 1          REV 06   750-034781   EB9980           100GE CFP
  MMB 0          REV 04   710-025563   BBAA5325         ST-MMB2
  MMB 1          REV 04   710-025563   BBAA5444         ST-MMB2
FPC 2            REV 16   710-013037   BBAA7185         FPC Type 4-ES
  CPU            REV 09   710-016744   BBAA3522         ST-PMB2
  PIC 0          REV 03   711-029996   EB1557           100GE
  PIC 1          REV 05   750-034781   EB4660           100GE CFP
    Xcvr 0       REV 0    740-032210   J10F73666        CFP-100G-LR4
  BRIDGE 0       REV 02   711-029995   EB2237           100GE Bridge Board
  MMB 0          REV 04   710-025563   BBAA5347         ST-MMB2
  MMB 1          REV 04   710-025563   BBAA5401         ST-MMB2
FPC 3            REV 10   710-021534   DZ0941           FPC Type 1-ES
  CPU            REV 09   710-016744   DY6364           ST-PMB2
  PIC 0          REV 13   750-012266   DK9192           4x 1GE(LAN), IQ2
    Xcvr 0       REV 01   740-011613   AM0812S8WVD      SFP-SX
```


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    Xcvr 1                NON-JNPR     PDD63Q4           SFP-SX
    Xcvr 2                NON-JNPR     PDE4G54           SFP-SX
    Xcvr 3                NON-JNPR     PD40MAG           SFP-SX
  PIC 1          REV 01   750-007641   HJ2003            1x G/E IQ, 1000 BASE
    Xcvr 0       REV 01   740-011613   AM0812S8WVG       SFP-SX
  PIC 3          REV 17   750-007444   JB6873            1x CHSTM1 IQ SDH, SMIR
  MMB 0          REV 04   710-025563   DZ0281            ST-MMB2
FPC 4            REV 06   710-013035   DK0614            FPC Type 3-ES
  CPU            REV 07   710-016744   DK1616            ST-PMB2
  PIC 0          REV 22   750-007141   DM1870            10x 1GE(LAN), 1000 BASE

    Xcvr 0       REV 01   740-011782   PCL3UKW           SFP-SX
    Xcvr 1       REV 01   740-011782   P7E0T73           SFP-SX
    Xcvr 2       REV 01   740-007326   P4T0WLR           SFP-SX
    Xcvr 3       REV 01   740-011782   PAR1LRL           SFP-SX
    Xcvr 4       REV 01   740-011782   P9M0U3Z           SFP-SX
    Xcvr 5       REV 01   740-011782   P9M0U0C           SFP-SX
    Xcvr 6       REV 01   740-011782   P9M0TLG           SFP-SX
    Xcvr 7       REV 01   740-011782   P9M0U0F           SFP-SX
    Xcvr 8       REV 01   740-011613   PFA6LAP           SFP-SX
    Xcvr 9       REV 01   740-011782   PCH2P0U           SFP-SX
  PIC 1          REV 16   750-009450   CV2565            1x OC-192 SM SR2
  PIC 2          REV 05   750-004424   HH3057            1x 10GE(LAN),10GBASE-LR

  PIC 3          REV 12   750-013423   DP0403            MultiServices 500
  MMB 0          REV 04   710-016036   DK1988            ST-MMB2
FPC 5            REV 07   710-013560   DR0004            E2-FPC Type 3
  CPU            REV 05   710-013563   DR0089            FPC CPU-Enhanced
  PIC 0          REV 11   750-012793   DR6107            1x 10GE(LAN/WAN) IQ2
    Xcvr 0       REV 01   740-014289   C743XU074         XFP-10G-SR
  PIC 1          REV 01   750-004695   HD5980            1x Tunnel
  PIC 2          REV 32   750-003700   DL3770            1x OC-192 12xMM VSR
  PIC 3          REV 12   750-009553   WB8901            4x OC-48 SONET
    Xcvr 0       REV 01   740-011785   P9D1GTQ           SFP-SR
    Xcvr 1       REV 01   740-011785   PDS0MMB           SFP-SR
    Xcvr 3       REV 01   740-011785   PDE1KXP           SFP-SR
  MMB 0          REV 07   710-010171   DP7374            MMB-5M3-288mbit
  MMB 1          REV 07   710-010171   DP7404            MMB-5M3-288mbit
FPC 6            REV 07   710-013035   DM0994            FPC Type 3-ES
  CPU            REV 07   710-016744   DM3651            ST-PMB2
  PIC 0          REV 07   750-015217   DN4743            8x 1GE(TYPE3), IQ2
    Xcvr 3       REV 01   740-011613   AM0812S8XB0       SFP-SX
    Xcvr 4       REV 01   740-011782   PB829RB           SFP-SX
    Xcvr 5       REV 01   740-011782   P8J1SYX           SFP-SX
  PIC 1          REV 03   750-003336   HJ9954            4x OC-48 SONET, SMSR
  PIC 3          REV 02   750-012793   JM7665            1x 10GE(LAN/WAN) IQ2
  MMB 0          REV 04   710-016036   DN6913            ST-MMB2
FPC 7            REV 08   710-010845   JM3958            FPC Type 4
  CPU            REV 04   710-011481   JK3669            FPC CPU-Enhanced
  PIC 0          REV 11   750-017405   DP8837            4x 10GE (LAN/WAN) XFP
    Xcvr 1       REV 01   740-014279   753019A00277      XFP-10G-LR
    Xcvr 2       REV 02   740-011571   C850XJ00P         XFP-10G-SR
    Xcvr 3       REV 01   740-014279   AA0813N1RTG       XFP-10G-LR
  MMB 0          REV 04   710-010842   JN1971            ST-MMB
SPMB 0           REV 04   710-023321   DW3629            LCC Switch CPU
SPMB 1           REV 04   710-023321   DW3621            LCC Switch CPU
SIB 0            REV 07   710-022594   DW4200            LCC SIB
  B Board        REV 07   710-023185   DW3932            LCC SIB Mezz
SIB 1            REV 07   710-022594   DW4193            LCC SIB
  B Board        REV 07   710-023185   DW3904            LCC SIB Mezz
SIB 2
```

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```
SIB 3            REV 07   710-022594   DW4210           LCC SIB
  B Board        REV 06   710-023185   DT5780           LCC SIB Mezz
SIB 4            REV 08   710-022594   DW8019           LCC SIB
  B Board        REV 06   710-023185   DT5795           LCC SIB Mezz
Fan Tray 0                                             Front Top Fan Tray
Fan Tray 1                                             Front Bottom Fan Tray
Fan Tray 2                                             Rear Fan Tray -- Rev 3
```

show chassis hardware sfc (TX Matrix Plus Router)

```
user@host> show chassis hardware sfc 0
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN112F007AHB      TXP
Midplane         REV 05   710-022574   TS4027            SFC Midplane
FPM Display      REV 03   710-024027   DX0282            TXP FPM Display
CIP 0            REV 04   710-023792   DW4889            TXP CIP
CIP 1            REV 04   710-023792   DW4887            TXP CIP
PEM 0            Rev 07   740-027463   UM26368           Power Entry Module
Routing Engine 0 REV 01   740-026942   737A-1064         SFC RE
Routing Engine 1 REV 01   740-026942   737A-1082         SFC RE
CB 0             REV 09   710-022606   DW6099            SFC Control Board
CB 1             REV 09   710-022606   DW6096            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 04   710-022600   DX0841            F13 SIB
  B Board        REV 03   710-023431   DX0966            F13 SIB Mezz
SIB F13 1        REV 04   750-024564   DW5776            F13 SIB
  B Board        REV 03   710-023431   DW9028            F13 SIB
SIB F13 3        REV 04   750-024564   DW5762            F13 SIB
  B Board        REV 03   710-023431   DW9059            F13 SIB
SIB F13 4        REV 04   750-024564   DW5797            F13 SIB
  B Board        REV 03   710-023431   DW9041            F13 SIB
SIB F13 6        REV 04   750-024564   DW5770            F13 SIB
  B Board        REV 03   710-023431   DW9079            F13 SIB Mezz
SIB F13 7        REV 04   750-024564   DW5758            F13 SIB
  B Board        REV 03   710-023431   DW9047            F13 SIB
SIB F13 8        REV 04   750-024564   DW5761            F13 SIB
  B Board        REV 03   710-023431   DW9043            F13 SIB Mezz
SIB F13 9        REV 04   750-024564   DW5754            F13 SIB
  B Board        REV 03   710-023431   DW9078            F13 SIB Mezz
SIB F13 11       REV 04   710-022600   DX0826            F13 SIB
  B Board        REV 03   710-023431   DX0967            F13 SIB Mezz
SIB F13 12       REV 04   750-024564   DW5794            F13 SIB
  B Board        REV 03   710-023431   DW9044            F13 SIB Mezz
SIB F2S 0/0      REV 05   710-022603   DW7897            F2S SIB
  B Board        REV 05   710-023787   DW7657            NEO PMB
SIB F2S 0/2      REV 05   710-022603   DW7833            F2S SIB
  B Board        REV 05   710-023787   DW7526            NEO PMB
SIB F2S 0/4      REV 05   710-022603   DW7875            F2S SIB
  B Board        REV 05   710-023787   DW7588            NEO PMB
SIB F2S 0/6      REV 05   710-022603   DW7860            F2S SIB
  B Board        REV 05   710-023787   DW7589            NEO PMB
SIB F2S 1/0      REV 04   710-022603   DW4820            F2S SIB
  B Board        REV 05   710-023787   DW8510            NEO PMB
SIB F2S 1/2      REV 05   710-022603   DW7849            F2S SIB
  B Board        REV 05   710-023787   DW7525            NEO PMB
SIB F2S 1/4      REV 05   710-022603   DW7927            F2S SIB
  B Board        REV 05   710-023787   DW7556            F2S SIB Mezz
```


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SIB F2S 1/6      REV 05   710-022603   DW7866           F2S SIB
  B Board        REV 05   710-023787   DW7651           NEO PMB
SIB F2S 2/0      REV 05   710-022603   DW7880           F2S SIB
  B Board        REV 05   710-023787   DW7523           NEO PMB
SIB F2S 2/2      REV 05   710-022603   DW7895           F2S SIB
  B Board        REV 05   710-023787   DW7591           NEO PMB
SIB F2S 2/4      REV 05   710-022603   DW7907           F2S SIB
  B Board        REV 05   710-023787   DW7590           NEO PMB
SIB F2S 2/6      REV 05   710-022603   DW7785           F2S SIB
  B Board        REV 05   710-023787   DW7524           NEO PMB
SIB F2S 3/0      REV 05   710-022603   DW7782           F2S SIB
  B Board        REV 05   710-023787   DW7634           NEO PMB
SIB F2S 3/2      REV 05   710-022603   DW7793           F2S SIB
  B Board        REV 05   710-023787   DW7548           NEO PMB
SIB F2S 3/4      REV 05   710-022603   DW7779           F2S SIB
  B Board        REV 05   710-023787   DW7587           NEO PMB
SIB F2S 3/6      REV 05   710-022603   DW7930           F2S SIB
  B Board        REV 05   710-023787   DW7505           NEO PMB
SIB F2S 4/0      REV 05   710-022603   DW7867           F2S SIB
  B Board        REV 05   710-023787   DW7656           NEO PMB
SIB F2S 4/2      REV 05   710-022603   DW7917           F2S SIB
  B Board        REV 05   710-023787   DW7640           NEO PMB
SIB F2S 4/4      REV 05   710-022603   DW7929           F2S SIB
  B Board        REV 05   710-023787   DW7643           NEO PMB
SIB F2S 4/6      REV 05   710-022603   DW7870           F2S SIB
  B Board        REV 05   710-023787   DW7635           NEO PMB
Fan Tray 0       REV 06   760-024497   DV7831           Front Fan Tray
Fan Tray 1       REV 06   760-024497   DV9614           Front Fan Tray
Fan Tray 2       REV 06   760-024502   DV9618           Rear Fan Tray
Fan Tray 3       REV 06   760-024502   DV9616           Rear Fan Tray
Fan Tray 4       REV 06   760-024502   DV7807           Rear Fan Tray
Fan Tray 5       REV 06   760-024502   DV7828           Rear Fan Tray
```

show chassis hardware extensive (TX Matrix Plus Router)

```
user@host> show chassis hardware extensive
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN112F007AHB      TXP
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               JN112F007AHB
 Assembly ID:  0x052c            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: TXP
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 2c 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 4a 4e 31 31 32 46 30 30 37 41 48 42 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 05   710-022574   TS4027            SFC Midplane
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-022574        S/N:               TS4027
 Assembly ID:  0x0962            Assembly Version:  01.05
```

```
 Date:         03-23-2009        Assembly Flags:    0x00
 Version:      REV 05
 ID: SFC Midplane
 Board Information Record:
  Address 0x00: ad 01 ff ff 00 1d b5 14 00 00 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 62 01 05 52 45 56 20 30 35 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 32 32 35 37 34 00 00
  Address 0x20: 53 2f 4e 20 54 53 34 30 32 37 00 00 00 17 03 07
  Address 0x30: d9 ff ff ff ad 01 ff ff 00 1d b5 14 00 00 ff ff
  Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
  Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
FPM Display      REV 03   710-024027   DX0282           TXP FPM Display
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-024027        S/N:               DX0282
 Assembly ID:  0x096c            Assembly Version:  01.03
 Date:         02-10-2009        Assembly Flags:    0x00
 Version:      REV 03
 ID: TXP FPM Display             FRU Model Number:  CRAFT-TXP
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 01 ff 09 6c 01 03 52 45 56 20 30 33 00 00
  Address 0x10: 00 00 00 00 37 31 30 2d 30 32 34 30 32 37 00 00
  Address 0x20: 53 2f 4e 20 44 58 30 32 38 32 00 00 00 0a 02 07
  Address 0x30: d9 ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 00 00 00 00 00 00 00 00 00 00 43
  Address 0x50: 52 41 46 54 2d 54 58 50 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 ff ff ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
CIP 0            REV 04   710-023792   DW4889           TXP CIP
 Jedec Code:   0x7fb0            EEPROM Version:    0x01
 P/N:          710-023792        S/N:               DW4889
 Assembly ID:  0x0969            Assembly Version:  01.04
 Date:         01-26-2009        Assembly Flags:    0x00
 Version:      REV 04
 ID: TXP CIP                     FRU Model Number:  CIP-TXP
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware clei-models (TX Matrix Plus Router)

```
user@host> show chassis hardware clei-models
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 05   710-022574                     CHAS-BP-TXP-S
FPM Display      REV 03   710-024027                     CRAFT-TXP-S
CIP 0            REV 05   710-023792                     CIP-TXP-S
CIP 1            REV 05   710-023792                     CIP-TXP-S
PEM 0            Rev 04   740-027463   IPUPAFGKTA        PWR-TXP-7-60-DC
PEM 1            Rev 04   740-027463   IPUPAFGKTA        PWR-TXP-7-60-DC
Routing Engine 0 REV 06   740-026942                     RE-DUO-C2600-16G-S
Routing Engine 1 REV 06   740-026942                     RE-DUO-C2600-16G-S
CB 0             REV 05   710-022606                     CB-TXP-S
CB 1             REV 09   710-022606                     CB-TXP-S
SIB F13 0        REV 04   750-024564                     SIB-TXP-F13
SIB F13 3        REV 04   750-024564                     SIB-TXP-F13
```


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SIB F13 8        REV 04   750-024564                    SIB-TXP-F13
SIB F13 11       REV 04   750-024564                    SIB-TXP-F13
SIB F13 12       REV 03   750-024564                    SIB-TXP-F13
SIB F2S 0/0      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 0/2      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 0/4      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 0/6      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 1/0      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 1/2      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 1/4      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 1/6      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 2/0      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 2/2      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 2/4      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 2/6      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 3/0      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 3/2      REV 03   710-022603                    SIB-TXP-F2S-S
SIB F2S 3/4      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 3/6      REV 03   710-022603                    SIB-TXP-F2S-S
SIB F2S 4/0      REV 03   710-022603                    SIB-TXP-F2S-S
SIB F2S 4/2      REV 05   710-022603                    SIB-TXP-F2S-S
SIB F2S 4/4      REV 04   710-022603                    SIB-TXP-F2S-S
SIB F2S 4/6      REV 03   710-022603                    SIB-TXP-F2S-S
Fan Tray 0       REV 02   760-024497                    FANTRAY-TXP-H-S
Fan Tray 1       REV 02   760-024497                    FANTRAY-TXP-H-S
Fan Tray 2       REV 05   760-024502                    FANTRAY-TXP-V-S
Fan Tray 3
Fan Tray 4       REV 05   760-024502                    FANTRAY-TXP-V-S
Fan Tray 5       REV 02   760-024502                    FANTRAY-TXP-V-S

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 03   710-017247                     CHAS-BP-T1600-S
FPM Display      REV 01   710-021387                     CRAFT-T1600-S
CIP              REV 06   710-002895                     CIP-L-T640-S
PEM 1            Rev 02   740-023211   IPUPAC8KTA        PWR-T1600-4-60-DC-S
SCG 0            REV 15   710-003423                     SCG-T-S
SCG 1            REV 15   710-003423                     SCG-T-S
Routing Engine 0 REV 01   740-026941                     RE-DUO-C1800-8G-S
Routing Engine 1 REV 01   740-026941                     RE-DUO-C1800-8G-S
CB 0             REV 06   710-022597                     CB-LCC-S
CB 1             REV 06   710-022597                     CB-LCC-S
FPC 1            REV 07   710-013035                     T640-FPC3-ES
  PIC 0          REV 05   750-015217                     PC-8GE-TYPE3-SFP-IQ2
  PIC 1          REV 03   750-004424                     PC-1XGE-LR
  PIC 2          REV 01   750-003336                     PC-4OC48-SON-SMSR
FPC 3            REV 12   710-013037                     T1600-FPC4-ES
  PIC 0          REV 02   750-010850                     PD-1OC768-SON-SR
FPC 4            REV 05   710-021534                     T640-FPC1-ES
  PIC 0          REV 04   750-014627                     PB-4OC3-1OC12-SON-SFP
  PIC 1          REV 22   750-005634                     PB-1CHOC12SMIR-QPP
  PIC 2          REV 09   750-002911                     PB-4FE-TX
  PIC 3          REV 08   750-021652                     PB-1CHOC12-STM4-IQE-SFP
FPC 5            REV 07   710-007529                     T640-FPC3
  PIC 0          REV 14   750-009567                     PC-1XGE-XENPAK
  PIC 1          REV 16   750-007141                     PC-10GE-SFP
  PIC 2          REV 12   750-009567                     PC-1XGE-XENPAK
FPC 6            REV 07   710-013035                     T640-FPC3-ES
  PIC 0          REV 09   750-009567                     PC-1XGE-XENPAK
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  PIC 1          REV 06   750-015217                    PC-8GE-TYPE3-SFP-IQ2
  PIC 2          REV 06   750-015217                    PC-8GE-TYPE3-SFP-IQ2
FPC 7            REV 03   710-021540                    T640-FPC2-ES
  PIC 0          REV 13   750-001901                    PB-4OC12-SON-SMIR
  PIC 1          REV 05   750-001900                    PB-1OC48-SON-SMSR
  PIC 2          REV 10   750-008155                    PB-2GE-SFP-QPP
  PIC 3          REV 03   750-014638                    PB-1OC48-SON-B-SFP
SIB 0            REV 07   710-022594                    SIB-TXP-T1600-S
SIB 1            REV 07   710-022594                    SIB-TXP-T1600-S
SIB 3            REV 06   710-022594                    SIB-TXP-T1600-S
SIB 4            REV 08   710-022594                    SIB-TXP-T1600-S
Fan Tray 0                                              FANTRAY-T-S
Fan Tray 1                                              FANTRAY-T-S
Fan Tray 2                                              FANTRAY-TXP-R-S

lcc1-re0:
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Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 04   710-017247                    CHAS-BP-T1600-S
FPM Display      REV 01   710-021387                    CRAFT-T1600-S
CIP              REV 06   710-002895                    CIP-L-T640-S
PEM 0            Rev 02   740-023211   IPUPAC8KTA       PWR-T1600-4-60-DC-S
SCG 0            REV 15   710-003423                    SCG-T-S
SCG 1            REV 15   710-003423                    SCG-T-S
Routing Engine 0 REV 01   740-026941                    RE-DUO-C1800-8G-S
Routing Engine 1 REV 01   740-026941                    RE-DUO-C1800-8G-S
CB 0             REV 06   710-022597                    CB-LCC-S
CB 1             REV 06   710-022597                    CB-LCC-S
FPC 0            REV 02   710-010845                    T640-FPC4-ES
  PIC 0          REV 11   750-017405                    PD-4XGE-XFP
FPC 1            REV 16   710-013037                    T1600-FPC4-ES
  PIC 1          REV 06   750-034781                    PD-1CE-CFP
FPC 2            REV 16   710-013037                    T1600-FPC4-ES
  PIC 1          REV 05   750-034781                    PD-1CE-CFP
FPC 3            REV 10   710-021534                    T640-FPC1-ES
  PIC 0          REV 13   750-012266                    PB-4GE-TYPE1-SFP-IQ2
  PIC 1          REV 01   750-007641                    PE-1GE-SFP-QPP
  PIC 3          REV 17   750-007444                    PB-1CHSTM1-SMIR-QPP
FPC 4            REV 06   710-013035                    T640-FPC3-ES
  PIC 0          REV 22   750-007141                    PC-10GE-SFP
  PIC 1          REV 16   750-009450                    PC-1OC192-SON-SR2
  PIC 2          REV 05   750-004424                    PC-1XGE-LR
  PIC 3          REV 12   750-013423                    PC-MS-500-3
FPC 5            REV 07   710-013560                    T640-FPC3-E2
  PIC 0          REV 11   750-012793                    PC-1XGE-TYPE3-XFP-IQ2
  PIC 1          REV 01   750-004695                    PC-TUNNEL
  PIC 2          REV 32   750-003700                    PC-1OC192-SON-VSR
  PIC 3          REV 12   750-009553                    PC-4OC48-SON-SFP
FPC 6            REV 07   710-013035                    T640-FPC3-ES
  PIC 0          REV 07   750-015217                    PC-8GE-TYPE3-SFP-IQ2
  PIC 1          REV 03   750-003336                    PC-4OC48-SON-SMSR
  PIC 3          REV 02   750-012793                    PC-1XGE-TYPE3-XFP-IQ2
FPC 7            REV 08   710-010845                    T640-FPC4-ES
  PIC 0          REV 11   750-017405                    PD-4XGE-XFP
SIB 0            REV 07   710-022594                    SIB-TXP-T1600-S
SIB 1            REV 07   710-022594                    SIB-TXP-T1600-S
SIB 3            REV 07   710-022594                    SIB-TXP-T1600-S
SIB 4            REV 08   710-022594                    SIB-TXP-T1600-S
Fan Tray 0                                              FANTRAY-T-S
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Fan Tray 1                                                        FANTRAY-T-S
Fan Tray 2                                                        FANTRAY-TXP-R-S
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show chassis hardware detail (TX Matrix Plus Router)

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user@host> show chassis hardware detail
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN111B023AHB      TXP
Midplane         REV 01   710-022574   TR7990            SFC Midplane
FPM Display      REV 03   710-024027   DW4699            TXP FPM Display
CIP 0            REV 01   710-023792   DR1437            TXP CIP
CIP 1            REV 02   710-023792   DS4564            TXP CIP
PEM 0            Rev 07   740-027463   UM26360           Power Entry Module
Routing Engine 0 REV 01   740-026942   737A-1024         SFC RE
  ad0    3887 MB  SMART CF             200811050193CEB1CEB1 Compact Flash
  ad1   30533 MB  SAMSUNG MCBQE32G8MPP-0V SY814A0762     Disk 1
Routing Engine 1 REV 01   740-026942   737A-1024         SFC RE
  ad0    3887 MB  SMART CF             20081105004C19A019A0 Compact Flash
  ad1   30533 MB  SAMSUNG MCBQE32G8MPP-0V SY814A0794     Disk 1
CB 0             REV 03   710-022606   DR7134            SFC Control Board
CB 1             REV 01   710-022606   DP8890            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 03   750-024564   DT9478            F13 SIB
  B Board        REV 02   710-023431   DT6554            F13 SIB
SIB F13 1        REV 03   750-024564   DT9454            F13 SIB
  B Board        REV 02   710-023431   DT6551            F13 SIB
SIB F2S 0/0      REV 02   710-022603   DT2838            F2S SIB
  B Board        REV 02   710-023787   DT1725            NEO PMB
SIB F2S 0/2      REV 02   710-022603   DT2824            F2S SIB
  B Board        REV 02   710-023787   DT1706            NEO PMB
SIB F2S 0/4      REV 02   710-022603   DT2822            F2S SIB
  B Board        REV 02   710-023787   DT1696            NEO PMB
SIB F2S 0/6      REV 02   710-022603   DT2823            F2S SIB
  B Board        REV 02   710-023787   DT1717            NEO PMB
SIB F2S 1/0      REV 03   710-022603   DV0059            F2S SIB
  B Board        REV 03   710-023787   DT9942            NEO PMB
SIB F2S 1/2      REV 02   710-022603   DT2826            F2S SIB
  B Board        REV 02   710-023787   DT1713            NEO PMB
SIB F2S 1/4      REV 03   710-022603   DV0092            F2S SIB
  B Board        REV 03   710-023787   DV0000            NEO PMB
SIB F2S 1/6      REV 03   710-022603   DV0079            F2S SIB
  B Board        REV 03   710-023787   DT9972            NEO PMB
SIB F2S 2/0      REV 03   710-022603   DV0100            F2S SIB
  B Board        REV 03   710-023787   DT9925            NEO PMB
SIB F2S 2/2      REV 03   710-022603   DV0050            F2S SIB
  B Board        REV 03   710-023787   DV0005            NEO PMB
SIB F2S 2/4      REV 03   710-022603   DV0097            F2S SIB
  B Board        REV 03   710-023787   DT9936            NEO PMB
Fan Tray 0       REV 02   760-024497   DR8286            Front Fan Tray
Fan Tray 1       REV 06   760-024497   DV9624            Front Fan Tray
Fan Tray 2       REV 02   760-024502   DR8259            Rear Fan Tray
Fan Tray 3       REV 02   760-024502   DR8270            Rear Fan Tray
Fan Tray 4       REV 02   760-024502   DR8284            Rear Fan Tray
Fan Tray 5       REV 06   760-024502   DV7813            Rear Fan Tray

lcc0-re0:
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Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1101F27AHA      T1600
Midplane         REV 04   710-017247   RC5317            T Series Backplane
FPM GBUS         REV 10   710-002901   DS8197            T640 FPM Board
FPM Display      REV 01   710-021387   DS6433            T1600 FPM Display
CIP              REV 06   710-002895   DS1493            T Series CIP
PEM 0            Rev 08   740-017906   UD26601           Power Entry Module 3x80
SCG 0            REV 15   710-003423   DP5847            T640 Sonet Clock Gen.
SCG 1            REV 15   710-003423   DR0924            T640 Sonet Clock Gen.
Routing Engine 0 REV 01   740-026942   737F-1024         LCC RE
  ad0    3887 MB  SMART CF             2008110502B63E513E51 Compact Flash
  ad1   30533 MB  SAMSUNG MCBQE32G8MPP-0V SY814A1208     Disk 1
Routing Engine 1 REV 01   740-026942   737F-1024         LCC RE
  ad0    3887 MB  SMART CF             2008110500F9A8A8A8A8 Compact Flash
  ad1   30533 MB  SAMSUNG MCBQE32G8MPP-0V SY814A1076     Disk 1
CB 0             REV 05   710-022597   DV4264            LCC Control Board
CB 1             REV 03   710-022597   DP8558            LCC Control Board
FPC 0            REV 14   710-013037   DS9967            FPC Type 4-ES
  CPU            REV 08   710-016744   DS3989            ST-PMB2
  PIC 0          REV 12   750-013198   DL7506            1x Tunnel
  PIC 1          REV 12   750-013198   DL7505            1x Tunnel
  MMB 0          REV 01   710-025563   DS8524            ST-MMB2
  MMB 1          REV 01   710-025563   DS8373            ST-MMB2
FPC 1            REV 14   710-013037   DT0027            FPC Type 4-ES
  CPU            REV 09   710-016744   DS7684            ST-PMB2
  PIC 0          REV 12   750-013198   DL7512            1x Tunnel
  PIC 1          REV 12   750-013198   DL7498            1x Tunnel
  MMB 0          REV 01   710-025563   DS8494            ST-MMB2
  MMB 1          REV 01   710-025563   DS8436            ST-MMB2
SPMB 0           REV 04   710-023321   DV3867            LCC Switch CPU
SPMB 1           REV 02   710-023321   DP0238            LCC Switch CPU
SIB 0            REV 06   710-022594   DT8268            LCC SIB
  B Board        REV 06   710-023185   DT5791            LCC SIB Mezz
SIB 1            REV 06   710-022594   DT8261            LCC SIB
  B Board        REV 06   710-023185   DT5769            LCC SIB Mezz
SIB 2            REV 04   710-022594   DS2315            LCC SIB
  B Board        REV 06   710-023185   DT5788            LCC SIB Mezz
SIB 3            REV 06   710-022594   DT8253            LCC SIB
  B Board        REV 06   710-023185   DT5811            LCC SIB Mezz
SIB 4            REV 06   710-022594   DT8248            LCC SIB
  B Board        REV 06   710-023185   DT5812            LCC SIB Mezz
Fan Tray 0                                                Front Top Fan Tray
Fan Tray 1                                                Front Bottom Fan Tray
Fan Tray 2                                                Rear Fan Tray
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show chassis hardware models (TX Matrix Plus Router)

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user@host> show chassis hardware models
sfc0-re0:
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Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
FPM Display      REV 03   710-024027   DX0282            CRAFT-TXP
CIP 0            REV 04   710-023792   DW4889            CIP-TXP
CIP 1            REV 04   710-023792   DW4887            CIP-TXP
PEM 0            Rev 07   740-027463   UM26368           ÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿÿ
Routing Engine 0 REV 01   740-026942   737A-1064         RE-TXP-SFC-DUO-2600-16G
Routing Engine 1 REV 01   740-026942   737A-1082         RE-TXP-SFC-DUO-2600-16G
CB 0             REV 09   710-022606   DW6099            CB-TXP
CB 1             REV 09   710-022606   DW6096            CB-TXP
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SIB F13 1        REV 04   750-024564   DW5776            SIB-TXP-F13
SIB F13 3        REV 04   750-024564   DW5762            SIB-TXP-F13
SIB F13 4        REV 04   750-024564   DW5797            SIB-TXP-F13
SIB F13 6        REV 04   750-024564   DW5770            SIB-TXP-F13
SIB F13 7        REV 04   750-024564   DW5758            SIB-TXP-F13
SIB F13 8        REV 04   750-024564   DW5761            SIB-TXP-F13
SIB F13 9        REV 04   750-024564   DW5754            SIB-TXP-F13
SIB F13 12       REV 04   750-024564   DW5794            SIB-TXP-F13
SIB F2S 0/0      REV 05   710-022603   DW7897
SIB F2S 0/2      REV 05   710-022603   DW7833
SIB F2S 0/4      REV 05   710-022603   DW7875
SIB F2S 0/6      REV 05   710-022603   DW7860
SIB F2S 1/0      REV 04   710-022603   DW4820
SIB F2S 1/2      REV 05   710-022603   DW7849
SIB F2S 1/4      REV 05   710-022603   DW7927            SIB-TXP-F2S
SIB F2S 1/6      REV 05   710-022603   DW7866
SIB F2S 2/0      REV 05   710-022603   DW7880
SIB F2S 2/2      REV 05   710-022603   DW7895
SIB F2S 2/4      REV 05   710-022603   DW7907
SIB F2S 2/6      REV 05   710-022603   DW7785
SIB F2S 3/0      REV 05   710-022603   DW7782
SIB F2S 3/2      REV 05   710-022603   DW7793
SIB F2S 3/4      REV 05   710-022603   DW7779
SIB F2S 3/6      REV 05   710-022603   DW7930
SIB F2S 4/0      REV 05   710-022603   DW7867
SIB F2S 4/2      REV 05   710-022603   DW7917
SIB F2S 4/4      REV 05   710-022603   DW7929
SIB F2S 4/6      REV 05   710-022603   DW7870
Fan Tray 0       REV 06   760-024497   DV7831            FANTRAY-TXP-F
Fan Tray 1       REV 06   760-024497   DV9614            FANTRAY-TXP-F
Fan Tray 2       REV 06   760-024502   DV9618            FANTRAY-TXP-R
Fan Tray 3       REV 06   760-024502   DV9616            FANTRAY-TXP-R
Fan Tray 4       REV 06   760-024502   DV7807            FANTRAY-TXP-R
Fan Tray 5       REV 06   760-024502   DV7828            FANTRAY-TXP-R

lcc0-re0:
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Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 03   710-017247   RC3765            CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   DN5441            CRAFT-T1600-S
CIP              REV 06   710-002895   DP6021            CIP-L-T640-S
PEM 0            Rev 07   740-017906   UA26384           PWR-T1600-3-80-DC-S
PEM 1            Rev 07   740-017906   UA26296           PWR-T1600-3-80-DC-S
SCG 0            REV 15   710-003423   DR0875            SCG-T-S
CB 0             REV 06   710-022597   DW8534            CB-LCC
CB 1             REV 06   710-022597   DW8527            CB-LCC
FPC 4            REV 12   710-013037   DJ8717            T1600-FPC4-ES
  PIC 0          REV 11   750-017405   DP8795            PD-4XGE-XFP
  PIC 1          REV 11   750-017405   DP8794            PD-4XGE-XFP
FPC 6            REV 14   710-013037   DS5335            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS7634            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS7637            PD-4XGE-XFP
FPC 7            REV 07   710-013035   DM0990            T1600-FPC3-ES
  PIC 0          REV 16   750-007141   JJ8067            PC-10GE-SFP
  PIC 1          REV 08   750-015749   WE9598            PC-1OC192-SON-XFP
  PIC 2          REV 10   750-009450   HX6466            PC-1OC192-SON-SR2
SIB 0            REV 08   710-022594   DW8033            SIB-TXP-T1600-S
SIB 1            REV 08   710-022594   DW8044            SIB-TXP-T1600-S
SIB 2            REV 08   710-022594   DW8020            SIB-TXP-T1600-S
SIB 3            REV 08   710-022594   DW8063            SIB-TXP-T1600-S
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SIB 4            REV 08   710-022594   DW8064           SIB-TXP-T1600-S
Fan Tray 0                                             FANTRAY-T-S
Fan Tray 1                                             FANTRAY-T-S
Fan Tray 2                                             FANTRAY-TXP-R-S

lcc1-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 04   710-017247   RC5361           CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   DS6430           CRAFT-T1600-S
CIP              REV 06   710-002895   DS4239           CIP-L-T640-S
PEM 0            Rev 08   740-017906   UD26649          PWR-T1600-3-80-DC-S
SCG 0            REV 15   710-003423   DP5820           SCG-T-S
CB 0             REV 06   710-022597   DW8523           CB-LCC
CB 1             REV 06   710-022597   DW8528           CB-LCC
FPC 4            REV 12   710-013037   DP8509           T1600-FPC4-ES
  PIC 0          REV 11   750-017405   DP8808           PD-4XGE-XFP
  PIC 1          REV 11   750-017405   DP7263           PD-4XGE-XFP
FPC 6            REV 14   710-013037   DS9961           T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS5532           PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS7639           PD-4XGE-XFP
FPC 7            REV 03   710-013035   DF5564           T1600-FPC3-ES
  PIC 0          REV 16   750-007141   JJ8063           PC-10GE-SFP
SIB 0            REV 08   710-022594   DW8035           SIB-TXP-T1600-S
SIB 1            REV 10   710-022594   DX7672           SIB-TXP-T1600-S
SIB 2            REV 08   710-022594   DW8060           SIB-TXP-T1600-S
SIB 3            REV 08   710-022594   DW8072           SIB-TXP-T1600-S
SIB 4            REV 08   710-022594   DW8043           SIB-TXP-T1600-S
Fan Tray 0                                             FANTRAY-T-S
Fan Tray 1                                             FANTRAY-T-S
Fan Tray 2                                             FANTRAY-TXP-R-S

lcc2-re0:
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Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 03   710-017247   RC3956           CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   DN7030           CRAFT-T1600-S
CIP              REV 06   710-002895   DM3962           CIP-L-T640-S
PEM 0            Rev 08   740-017906   UD26519          PWR-T1600-3-80-DC-S
PEM 1            Rev 07   740-017906   UC26601          PWR-T1600-3-80-DC-S
SCG 0            REV 15   710-003423   DP0277           SCG-T-S
CB 0             REV 06   710-022597   DW8524           CB-LCC
CB 1             REV 06   710-022597   DW8536           CB-LCC
FPC 4            REV 12   710-013037   DR1194           T1600-FPC4-ES
  PIC 0          REV 11   750-017405   DP8811           PD-4XGE-XFP
  PIC 1          REV 11   750-017405   DP8823           PD-4XGE-XFP
FPC 5            REV 12   710-013037   DR1184           T1600-FPC4-ES
  PIC 1          REV 11   750-017405   DP4744           PD-4XGE-XFP
FPC 6            REV 12   710-013037   DN8622           T1600-FPC4-ES
  PIC 0          REV 14   750-012518   JY9924           PD-4OC192-SON-XFP
  PIC 1          REV 11   750-017405   DP8776           PD-4XGE-XFP
FPC 7            REV 04   710-013560   JR3968           T640-FPC3-E2
  PIC 0          REV 16   750-007141   NC9330           PC-10GE-SFP
SIB 0            REV 07   710-022594   DW4217           SIB-TXP-T1600-S
SIB 1            REV 07   710-022594   DW4213           SIB-TXP-T1600-S
SIB 2            REV 07   710-022594   DW4189           SIB-TXP-T1600-S
SIB 3            REV 07   710-022594   DW4173           SIB-TXP-T1600-S
SIB 4            REV 07   710-022594   DW4201           SIB-TXP-T1600-S
Fan Tray 0                                             FANTRAY-T-S
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Fan Tray 1                                                        FANTRAY-T-S
Fan Tray 2                                                        FANTRAY-TXP-R-S

lcc3-re0:
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Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 04   710-017247   RC5319            CHAS-BP-T1600-S
FPM Display      REV 01   710-021387   DS6402            CRAFT-T1600-S
CIP              REV 06   710-002895   DR9973            CIP-L-T640-S
PEM 0            Rev 07   740-017906   UC26496           PWR-T1600-3-80-DC-S
PEM 1            Rev 07   740-017906   UC26599           PWR-T1600-3-80-DC-S
SCG 0            REV 15   710-003423   DP5831            SCG-T-S
CB 0             REV 06   710-022597   DW8533            CB-LCC
CB 1             REV 06   710-022597   DW8538            CB-LCC
FPC 0            REV 14   710-013037   DS5345            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS7641            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS5479            PD-4XGE-XFP
FPC 1            REV 14   710-013037   DS7338            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS7631            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS7632            PD-4XGE-XFP
FPC 2            REV 14   710-013037   DS9962            T1600-FPC4-ES
  PIC 0          REV 13   750-017405   DS7581            PD-4XGE-XFP
  PIC 1          REV 13   750-017405   DS7627            PD-4XGE-XFP
FPC 4            REV 10   710-010845   JZ6573            T640-FPC4-ES
  PIC 0          REV 14   750-012518   JT5124            PD-4OC192-SON-XFP
FPC 5            REV 14   710-013037   DT0016            T1600-FPC4-ES
  PIC 0          REV 14   750-012518   JY9918            PD-4OC192-SON-XFP
FPC 7            REV 07   710-013035   DM0967            T1600-FPC3-ES
  PIC 0          REV 16   750-007141   JJ8059            PC-10GE-SFP
  PIC 1          REV 13   750-004695   DM5712            PC-TUNNEL
SIB 0            REV 07   710-022594   DW4174            SIB-TXP-T1600-S
SIB 1            REV 07   710-022594   DW4207            SIB-TXP-T1600-S
SIB 2            REV 06   710-022594   DT8231            SIB-TXP-T1600-S
SIB 3            REV 07   710-022594   DW4175            SIB-TXP-T1600-S
SIB 4            REV 07   710-022594   DW4209            SIB-TXP-T1600-S
Fan Tray 0                                                FANTRAY-T-S
Fan Tray 1                                                FANTRAY-T-S
Fan Tray 2                                                FANTRAY-TXP-R-S
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show chassis hardware (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11CAAA4AHB      TXP
Midplane         REV 05   710-022574   ABAC4696          SFC Midplane
FPM Display      REV 09   710-024027   EH3138            TXP FPM Display
CIP 0            REV 12   710-023792   EF6349            TXP CIP
CIP 1            REV 12   710-023792   EG5294            TXP CIP
PEM 0            Rev 06   740-027463   XH04595           Power Entry Module
PEM 1            Rev 06   740-027463   XH04592           Power Entry Module
Routing Engine 0 REV 07   740-026942   P737A-002541      RE-DUO-2600
Routing Engine 1 REV 07   740-026942   P737A-002602      RE-DUO-2600
CB 0             REV 15   710-022606   EH4376            SFC Control Board
CB 1             REV 15   710-022606   EH4379            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 10   750-035002   EM9305            F13 SIB 3D
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  B Board        REV 06   711-035082   EM9667           F13 SIB 3D Mezz
  P Board        REV 05   711-043544   EM9708           F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB34FB00S        CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01H        CXP Module
  Xcvr 4         REV 01   740-047547   XB34FB02W        CXP Module
  Xcvr 6         REV 01   740-047547   XB34FB01T        CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB00W        CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01S        CXP Module
  Xcvr 12        REV 01   740-047547   XB34FB03H        CXP Module
  Xcvr 14        REV 01   740-047547   XB34FB023        CXP Module
SIB F13 3        REV 01   710-035001   EJ2612           F13 SIB 3D
  B Board        REV 01   711-035082   EJ3815           F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2678           F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB04C        CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB00Z        CXP Module
  Xcvr 4         REV 01   740-047547   XB47FB036        CXP Module
  Xcvr 6         REV 01   740-047547   XB47FB029        CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02N        CXP Module
  Xcvr 10        REV 01   740-047547   XB42FB0CS        CXP Module
  Xcvr 12        REV 01   740-047547   XB47FB01X        CXP Module
  Xcvr 14        REV 01   740-047547   XB48FB02F        CXP Module
SIB F13 6        REV 05   750-035002   EK2675           F13 SIB 3D
  B Board        REV 03   711-035082   EK2612           F13 SIB 3D Mezz
  P Board        REV 04   711-043544   EK1179           F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB01T        CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB02M        CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB031        CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB04P        CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02T        CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01V        CXP Module
  Xcvr 12        REV 01   740-047547   XB48FB02C        CXP Module
  Xcvr 14                 NON-JNPR                      No Module
SIB F13 12       REV 01   710-035001   EJ2631           F13 SIB 3D
  B Board        REV 01   711-035082   EJ3808           F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2676           F13 SIB 3D Power
SIB F2S 0/0      REV 01   711-034977   EH9829           F2S SIB 3D
  B Board        REV 01   711-034979   EH9927           F2S SIB 3D Mezz
SIB F2S 0/2      REV 01   711-034977   EH9791           F2S SIB 3D
  B Board        REV 01   711-034979   EH9852           F2S SIB 3D Mezz
SIB F2S 0/4      REV 01   711-034977   EH9803           F2S SIB 3D
  B Board        REV 01   711-034979   EH9915           F2S SIB 3D Mezz
SIB F2S 0/6      REV 01   711-034977   EH9763           F2S SIB 3D
  B Board        REV 01   711-034979   EH9880           F2S SIB 3D Mezz
SIB F2S 1/0      REV 01   711-034977   EH9757           F2S SIB 3D
  B Board        REV 01   711-034979   EH9889           F2S SIB 3D Mezz
SIB F2S 1/2      REV 01   711-034977   EH9815           F2S SIB 3D
  B Board        REV 01   711-034979   EH9890           F2S SIB 3D Mezz
SIB F2S 1/4      REV 08   750-034978   EN1954           F2S SIB 3D
  B Board        REV 02   711-034979   EN1436           F2S SIB 3D Mezz
SIB F2S 1/6      REV 01   711-034977   EJ7054           F2S SIB 3D
  B Board        REV 01   711-034979   EJ8238           F2S SIB 3D Mezz
SIB F2S 2/0      REV 01   711-034977   EH9830           F2S SIB 3D
  B Board        REV 01   711-034979   EH9844           F2S SIB 3D Mezz
SIB F2S 2/2      REV 01   711-034977   EH9818           F2S SIB 3D
  B Board        REV 01   711-034979   EH9888           F2S SIB 3D Mezz
SIB F2S 2/4      REV 01   711-034977   EH9795           F2S SIB 3D
  B Board        REV 01   711-034979   EH9869           F2S SIB 3D Mezz
SIB F2S 2/6      REV 01   711-034977   EJ7026           F2S SIB 3D
  B Board        REV 01   711-034979   EJ8273           F2S SIB 3D Mezz
SIB F2S 3/0      REV 01   711-034977   EH9811           F2S SIB 3D
  B Board        REV 01   711-034979   EH9892           F2S SIB 3D Mezz
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SIB F2S 3/2      REV 01   711-034977   EH9812           F2S SIB 3D
  B Board        REV 01   711-034979   EH9877           F2S SIB 3D Mezz
SIB F2S 3/4      REV 08   750-034978   EN1947           F2S SIB 3D
  B Board        REV 02   711-034979   EN1471           F2S SIB 3D Mezz
Fan Tray 0       REV 10   760-024497   EH3313           Front Fan Tray
Fan Tray 1       REV 10   760-024497   EH3290           Front Fan Tray
Fan Tray 2       REV 10   760-024502   EH3292           Rear Fan Tray
Fan Tray 3       REV 10   760-024502   EH3287           Rear Fan Tray
Fan Tray 4       REV 10   760-024502   EH3286           Rear Fan Tray
Fan Tray 5       REV 10   760-024502   EH3285           Rear Fan Tray

lcc0-re0:
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Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B23FEAHA      T1600
Midplane         REV 01   710-027486   RC9787           T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5132         T640 FPM Board
FPM Display      REV 04   710-021387   BBAL9612         T1600 FPM Display
CIP              REV 06   710-002895   BBAN0605         T-series CIP
PEM 0            REV 05   740-036442   1G022060143      Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060011      Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAL7318         T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7255         T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002933     RE-DUO-1800
Routing Engine 1 REV 06   740-026941   P737F-002749     RE-DUO-1800
CB 0             REV 11   710-022597   EH3611           LCC Control Board
CB 1             REV 11   710-022597   EH4798           LCC Control Board
FPC 5            REV 17   710-013037   BBAC5333         FPC Type 4-ES
  CPU            REV 10   710-016744   BBAB7619         ST-PMB2
  PIC 0          REV 18   750-017405   BBAE3420         4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10C90659        XFP-10G-SR
  MMB 0          REV 05   710-025563   BBAB9538         ST-MMB2
  MMB 1          REV 05   710-025563   BBAB9502         ST-MMB2
FPC 7            REV 01   750-045173   BBAV0032         FPC Type 5-3D
  CPU
SPMB 0           REV 05   710-023321   EG9434           LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3878           LCC Switch CPU
SIB 0            REV 01   750-041657   EH7997           LCC SIB 3D
  B Board        REV 01   711-042424   EH7674           LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB014        CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB05A        CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB052        CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB01B        CXP Module
SIB 1            REV 01   750-041657   EH8023           LCC SIB 3D
  B Board        REV 01   711-042424   EH7659           LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05J        CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01E        CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB01J        CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB02S        CXP Module
SIB 2            REV 03   750-041657   EJ6554           LCC SIB 3D
  B Board        REV 02   711-042424   EJ5756           LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB34FB01Z        CXP Module
  Xcvr 2         REV 01   740-047547   XB34FB013        CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04Z        CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05N        CXP Module
Fan Tray 0                                             Front Top Fan Tray
Fan Tray 1                                             Front Bottom Fan Tray
Fan Tray 2                                             Rear Fan Tray -- Rev 4

lcc2-re0:
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Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B3975AHA      T1600
Midplane         REV 01   710-027486   RC9826            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5124          T640 FPM Board
FPM Display      REV 03   710-021387   BBAJ1112          T1600 FPM Display
CIP              REV 06   710-002895   BBAL3744          T-series CIP
PEM 0            REV 05   740-036442   1G022060081       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060188       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAH8775          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7272          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002992      RE-DUO-1800
Routing Engine 1 REV 07   740-026941   P737F-002938      RE-DUO-1800
CB 0             REV 11   710-022597   EH4805            LCC Control Board
CB 1             REV 11   710-022597   EH4786            LCC Control Board
FPC 1            REV 01   710-033873   BBAH0320          FPC Type 3-ES
  CPU            REV 11   710-016744   BBAF3281          ST-PMB2
  MMB 0          REV 06   710-025563   BBAF5061          ST-MMB2
FPC 5            REV 04   710-033871   BBAM5070          FPC Type 4-ES
  CPU            REV 11   710-016744   BBAM6653          ST-PMB2
  PIC 1          REV 20   750-017405   BBAM1296          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10B42981         XFP-10G-SR
  MMB 0          REV 07   710-025563   BBAN2631          ST-MMB2
  MMB 1          REV 07   710-025563   BBAN2538          ST-MMB2
SPMB 0           REV 05   710-023321   EH3903            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3902            LCC Switch CPU
SIB 0            REV 01   750-041657   EH8019            LCC SIB 3D
  B Board        REV 01   711-042424   EH7680            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB04F         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB04S         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04B         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB043         CXP Module
SIB 1            REV 01   750-041657   EH8012            LCC SIB 3D
  B Board        REV 01   711-042424   EH7658            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05E         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01Z         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB018         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB054         CXP Module
SIB 2            REV 01   750-041657   EH7993            LCC SIB 3D
  B Board        REV 01   711-042424   EH7678            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05C         CXP Module
  Xcvr 2         REV 01   740-047547   XB47FB00N         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB05U         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05L         CXP Module
Fan Tray 0                                               Front Top Fan Tray
Fan Tray 1                                               Front Bottom Fan Tray
Fan Tray 2                                               Rear Fan Tray -- Rev 4
```

show chassis hardware clei-models (TX Matrix Plus Router with 3D SIBs)

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user@host> show chassis hardware clei-models
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 05   710-022574                     CHAS-BP-TXP-S
FPM Display      REV 09   710-024027                     CRAFT-TXP-S
CIP 0            REV 12   710-023792                     CIP-TXP-S
CIP 1            REV 12   710-023792                     CIP-TXP-S
PEM 0            Rev 06   740-027463   IPUPAFGKTA        PWR-TXP-7-60-DC-S
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Routing Engine 0 REV 07   740-026942                    RE-DUO-C2600-16G-S
Routing Engine 1 REV 07   740-026942                    RE-DUO-C2600-16G-S
CB 0             REV 13   710-022606                    CB-TXP-S
CB 1             REV 14   710-022606                    CB-TXP-S
SIB F13 0        REV 10   750-035002   PROTOXCLEI       SIB-TXP-3D-F13-S
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
SIB F13 1        REV 10   750-035002   PROTOXCLEI       SIB-TXP-3D-F13-S
  Xcvr 0         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 1         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 2         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 3         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 4         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 5         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
  Xcvr 8         REV 01   740-048813
  Xcvr 10        REV 01   740-048813
  Xcvr 12        REV 01   740-048813
  Xcvr 14        REV 01   740-048813
  Xcvr 0         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 1         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 2         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 3         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 4         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 5         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
SIB F13 6        REV 16   750-035002   PROTOXCLEI       SIB-TXP-3D-F13
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
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  Xcvr 6          REV 01   740-048813
  Xcvr 7          REV 01   740-048813
  Xcvr 8          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14         REV 01   740-047547                    CXP-TXP-3D
SIB F13 7         REV 10   750-035002   PROTOXCLEI       SIB-TXP-3D-F13-S
  Xcvr 0          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 1          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 2          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 3          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 4          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 5          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 0          REV 01   740-048813
  Xcvr 1          REV 01   740-048813
  Xcvr 2          REV 01   740-048813
  Xcvr 3          REV 01   740-048813
  Xcvr 4          REV 01   740-048813
  Xcvr 5          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14         REV 01   740-047547                    CXP-TXP-3D
SIB F13 9         REV 16   750-035002   PROTOXCLEI       SIB-TXP-3D-F13
  Xcvr 0          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 1          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 2          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 3          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 4          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 5          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14         REV 01   740-047547                    CXP-TXP-3D
SIB F13 11        REV 10   750-035002   PROTOXCLEI       750-035002
  Xcvr 0          REV 01   740-048813
  Xcvr 1          REV 01   740-048813
  Xcvr 2          REV 01   740-048813
  Xcvr 3          REV 01   740-048813
  Xcvr 4          REV 01   740-048813
  Xcvr 5          REV 01   740-048813
  Xcvr 6          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7          REV 01   740-048813
  Xcvr 8          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14         REV 01   740-047547                    CXP-TXP-3D
SIB F13 12        REV 16   750-035002   PROTOXCLEI       SIB-TXP-3D-F13
  Xcvr 0          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 1          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 2          REV 01   740-047547                    CXP-TXP-3D
  Xcvr 3          REV 01   740-047547                    CXP-TXP-3D
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  Xcvr 4         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 5         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 6         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 7         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 8         REV 01   740-047547                    CXP-TXP-3D
  Xcvr 10        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 12        REV 01   740-047547                    CXP-TXP-3D
  Xcvr 14        REV 01   740-047547                    CXP-TXP-3D
SIB F2S 0/0      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 0/2      REV 07   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 0/4      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 0/6      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 1/0      REV 07   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 1/2      REV 07   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 1/4      REV 07   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 1/6      REV 08   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 2/0      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 2/2      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 2/4      REV 07   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 2/6      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 3/0      REV 07   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 3/2      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 3/4      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 3/6      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 4/0      REV 07   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 4/2      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 4/4      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
SIB F2S 4/6      REV 06   750-034978   PROTOXCLEI       SIB-TXP-3D-F2S
Fan Tray 0       REV 10   760-024497                    FANTRAY-TXP-H-S
Fan Tray 1       REV 10   760-024497                    FANTRAY-TXP-H-S
Fan Tray 2       REV 10   760-024502                    FANTRAY-TXP-V-S
Fan Tray 3       REV 10   760-024502                    FANTRAY-TXP-V-S
Fan Tray 4       REV 10   760-024502                    FANTRAY-TXP-V-S
Fan Tray 5       REV 10   760-024502                    FANTRAY-TXP-V-S

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  CLEI code        FRU model number
Midplane         REV 01   710-027486   IPMJ700DRD       CHAS-BP-T1600-S
FPM Display      REV 04   710-021387                    CRAFT-T1600-S
CIP              REV 06   710-002895                    CIP-L-T640-S
PEM 0            REV 05   740-036442   IPUPAG6KAA       PWR-T-6-60-DC-S
PEM 1            REV 05   740-036442   IPUPAG6KAA       PWR-T-6-60-DC-S
SCG 0            REV 18   710-003423                    SCG-T-S
SCG 1            REV 18   710-003423                    SCG-T-S
Routing Engine 0 REV 10   740-026941                    RE-DUO-C1800-8G-S
Routing Engine 1 REV 07   740-026941                    RE-DUO-C1800-8G-S
CB 0             REV 11   710-022597                    CB-LCC-S
CB 1             REV 11   710-022597                    CB-LCC-S
FPC 0            REV 01   750-045173   IP9IAL4DAB       T4000-FPC5-3D
  PIC 0          REV 17   750-034624   IP9IAL2DAA       PF-12XGE-SFPP
  PIC 1          REV 17   750-034624   IP9IAL2DAA       PF-12XGE-SFPP
FPC 3            REV 01   750-045173   IP9IAL4DAB       T4000-FPC5-3D
  PIC 0          REV 13   750-033423   XXXXXXXXDD       PF-12-24XGE-SFPP
FPC 4            REV 02   750-045173   IP9IAL4DAC       T4000-FPC5-3D
  PIC 0          REV 17   750-034624   IP9IAL2DAA       PF-12XGE-SFPP
  PIC 1          REV 17   750-034624   IP9IAL2DAA       PF-12XGE-SFPP
FPC 5            REV 01   750-045173   IP9IAL4DAB       T4000-FPC5-3D
  PIC 0          REV 17   750-034624   IP9IAL2DAA       PF-12XGE-SFPP
  PIC 1          REV 17   750-034624   IP9IAL2DAA       PF-12XGE-SFPP
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FPC 6            REV 01   750-045173   IP9IAL4DAB        T4000-FPC5-3D
  PIC 0          REV 17   750-034624   IP9IAL2DAA        PF-12XGE-SFPP
  PIC 1          REV 10   750-035293   IP9IAL3DAA        PF-1CGE-CFP
SIB 0            REV 06   750-041657   PROTOXCLEI        SIB-TXP-3D-LCC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
SIB 1            REV 06   750-041657   PROTOXCLEI        SIB-TXP-3D-LCC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
SIB 2            REV 06   750-041657   PROTOXCLEI        SIB-TXP-3D-LCC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
SIB 3            REV 07   750-041657   PROTOXCLEI        SIB-TXP-3D-LLC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
SIB 4            REV 06   750-041657   PROTOXCLEI        SIB-TXP-3D-LCC
  Xcvr 0         REV 01   740-048813
  Xcvr 1         REV 01   740-048813
  Xcvr 2         REV 01   740-048813
  Xcvr 3         REV 01   740-048813
  Xcvr 4         REV 01   740-048813
  Xcvr 5         REV 01   740-048813
  Xcvr 6         REV 01   740-048813
  Xcvr 7         REV 01   740-048813
Fan Tray 0                                          FANTRAY-T-S
Fan Tray 1                                          FANTRAY-T-S
Fan Tray 2                                          FANTRAY-TXP3D-LCC-R-S
[Output Truncated]
```

show chassis hardware detail (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware detail
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11CAAA4AHB      TXP
```


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```
Midplane         REV 05   710-022574   ABAC4696          SFC Midplane
FPM Display      REV 09   710-024027   EH3138            TXP FPM Display
CIP 0            REV 12   710-023792   EF6349            TXP CIP
CIP 1            REV 12   710-023792   EG5294            TXP CIP
PEM 0            Rev 06   740-027463   XH04595           Power Entry Module
PEM 1            Rev 06   740-027463   XH04592           Power Entry Module
Routing Engine 0 REV 07   740-026942   P737A-002541      RE-DUO-2600
  ad0    3823 MB  SMART CF             2011030400062C132C13 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 201105100009A452A452 Disk 1
Routing Engine 1 REV 07   740-026942   P737A-002602      RE-DUO-2600
  ad0    3823 MB  SMART CF             20110508085EE471E471 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 201110210089DF39DF39 Disk 1
CB 0             REV 15   710-022606   EH4376            SFC Control Board
CB 1             REV 15   710-022606   EH4379            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 10   750-035002   EM9305            F13 SIB 3D
  B Board        REV 06   711-035082   EM9667            F13 SIB 3D Mezz
  P Board        REV 05   711-043544   EM9708            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB34FB00S         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01H         CXP Module
  Xcvr 4         REV 01   740-047547   XB34FB02W         CXP Module
  Xcvr 6         REV 01   740-047547   XB34FB01T         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB00W         CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01S         CXP Module
  Xcvr 12        REV 01   740-047547   XB34FB03H         CXP Module
  Xcvr 14        REV 01   740-047547   XB34FB023         CXP Module
SIB F13 3        REV 01   710-035001   EJ2612            F13 SIB 3D
  B Board        REV 01   711-035082   EJ3815            F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2678            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB04C         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB00Z         CXP Module
  Xcvr 4         REV 01   740-047547   XB47FB036         CXP Module
  Xcvr 6         REV 01   740-047547   XB47FB029         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02N         CXP Module
  Xcvr 10        REV 01   740-047547   XB42FB0CS         CXP Module
  Xcvr 12        REV 01   740-047547   XB47FB01X         CXP Module
  Xcvr 14        REV 01   740-047547   XB48FB02F         CXP Module
SIB F13 6        REV 05   750-035002   EK2675            F13 SIB 3D
  B Board        REV 03   711-035082   EK2612            F13 SIB 3D Mezz
  P Board        REV 04   711-043544   EK1179            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB01T         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB02M         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB031         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB04P         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02T         CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01V         CXP Module
  Xcvr 12        REV 01   740-047547   XB48FB02C         CXP Module
  Xcvr 14                 NON-JNPR                       No Module
SIB F13 12       REV 01   710-035001   EJ2631            F13 SIB 3D
  B Board        REV 01   711-035082   EJ3808            F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2676            F13 SIB 3D Power
SIB F2S 0/0      REV 01   711-034977   EH9829            F2S SIB 3D
  B Board        REV 01   711-034979   EH9927            F2S SIB 3D Mezz
SIB F2S 0/2      REV 01   711-034977   EH9791            F2S SIB 3D
  B Board        REV 01   711-034979   EH9852            F2S SIB 3D Mezz
SIB F2S 0/4      REV 01   711-034977   EH9803            F2S SIB 3D
  B Board        REV 01   711-034979   EH9915            F2S SIB 3D Mezz
SIB F2S 0/6      REV 01   711-034977   EH9763            F2S SIB 3D
  B Board        REV 01   711-034979   EH9880            F2S SIB 3D Mezz
SIB F2S 1/0      REV 01   711-034977   EH9757            F2S SIB 3D
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  B Board        REV 01   711-034979   EH9889           F2S SIB 3D Mezz
SIB F2S 1/2      REV 01   711-034977   EH9815           F2S SIB 3D
  B Board        REV 01   711-034979   EH9890           F2S SIB 3D Mezz
SIB F2S 1/4      REV 08   750-034978   EN1954           F2S SIB 3D
  B Board        REV 02   711-034979   EN1436           F2S SIB 3D Mezz
SIB F2S 1/6      REV 01   711-034977   EJ7054           F2S SIB 3D
  B Board        REV 01   711-034979   EJ8238           F2S SIB 3D Mezz
SIB F2S 2/0      REV 01   711-034977   EH9830           F2S SIB 3D
  B Board        REV 01   711-034979   EH9844           F2S SIB 3D Mezz
SIB F2S 2/2      REV 01   711-034977   EH9818           F2S SIB 3D
  B Board        REV 01   711-034979   EH9888           F2S SIB 3D Mezz
SIB F2S 2/4      REV 01   711-034977   EH9795           F2S SIB 3D
  B Board        REV 01   711-034979   EH9869           F2S SIB 3D Mezz
SIB F2S 2/6      REV 01   711-034977   EJ7026           F2S SIB 3D
  B Board        REV 01   711-034979   EJ8273           F2S SIB 3D Mezz
SIB F2S 3/0      REV 01   711-034977   EH9811           F2S SIB 3D
  B Board        REV 01   711-034979   EH9892           F2S SIB 3D Mezz
SIB F2S 3/2      REV 01   711-034977   EH9812           F2S SIB 3D
  B Board        REV 01   711-034979   EH9877           F2S SIB 3D Mezz
SIB F2S 3/4      REV 08   750-034978   EN1947           F2S SIB 3D
  B Board        REV 02   711-034979   EN1471           F2S SIB 3D Mezz
Fan Tray 0       REV 10   760-024497   EH3313           Front Fan Tray
Fan Tray 1       REV 10   760-024497   EH3290           Front Fan Tray
Fan Tray 2       REV 10   760-024502   EH3292           Rear Fan Tray
Fan Tray 3       REV 10   760-024502   EH3287           Rear Fan Tray
Fan Tray 4       REV 10   760-024502   EH3286           Rear Fan Tray
Fan Tray 5       REV 10   760-024502   EH3285           Rear Fan Tray

lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B23FEAHA      T1600
Midplane         REV 01   710-027486   RC9787            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5132          T640 FPM Board
FPM Display      REV 04   710-021387   BBAL9612          T1600 FPM Display
CIP              REV 06   710-002895   BBAN0605          T-series CIP
PEM 0            REV 05   740-036442   1G022060143       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060011       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAL7318          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7255          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002933      RE-DUO-1800
  ad0    3823 MB  SMART CF             20110303049O604E604E Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 20110729028B11D411D4 Disk 1
Routing Engine 1 REV 06   740-026941   P737F-002749      RE-DUO-1800
  ad0    3823 MB  SMART CF             2011010504EB99649964 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 201102140058934A934A Disk 1
CB 0             REV 11   710-022597   EH3611            LCC Control Board
CB 1             REV 11   710-022597   EH4798            LCC Control Board
FPC 5            REV 17   710-013037   BBAC5333          FPC Type 4-ES
  CPU            REV 10   710-016744   BBAB7619          ST-PMB2
  PIC 0          REV 18   750-017405   BBAE3420          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10C90659         XFP-10G-SR
  MMB 0          REV 05   710-025563   BBAB9538          ST-MMB2
  MMB 1          REV 05   710-025563   BBAB9502          ST-MMB2
FPC 7            REV 01   750-045173   BBAV0032          FPC Type 5-3D
  CPU
SPMB 0           REV 05   710-023321   EG9434            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3878            LCC Switch CPU
SIB 0            REV 01   750-041657   EH7997            LCC SIB 3D
  B Board        REV 01   711-042424   EH7674            LCC SIB 3D Mezz
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  Xcvr 0         REV 01   740-047547   XB48FB014         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB05A         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB052         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB01B         CXP Module
SIB 1            REV 01   750-041657   EH8023            LCC SIB 3D
  B Board        REV 01   711-042424   EH7659            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05J         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01E         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB01J         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB02S         CXP Module
SIB 2            REV 03   750-041657   EJ6554            LCC SIB 3D
  B Board        REV 02   711-042424   EJ5756            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB34FB01Z         CXP Module
  Xcvr 2         REV 01   740-047547   XB34FB013         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04Z         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05N         CXP Module
Fan Tray 0                                              Front Top Fan Tray
Fan Tray 1                                              Front Bottom Fan Tray
Fan Tray 2                                              Rear Fan Tray -- Rev 4

lcc2-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B3975AHA      T1600
Midplane         REV 01   710-027486   RC9826            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5124          T640 FPM Board
FPM Display      REV 03   710-021387   BBAJ1112          T1600 FPM Display
CIP              REV 06   710-002895   BBAL3744          T-series CIP
PEM 0            REV 05   740-036442   1G022060081       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060188       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAH8775          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7272          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002992      RE-DUO-1800
  ad0    3823 MB  SMART CF             20110303030356329E329E Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 2011051000488D8B8D8B Disk 1
Routing Engine 1 REV 07   740-026941   P737F-002938      RE-DUO-1800
  ad0    3823 MB  SMART CF             20110304000F02680268 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 201105300A70F325F325 Disk 1
CB 0             REV 11   710-022597   EH4805            LCC Control Board
CB 1             REV 11   710-022597   EH4786            LCC Control Board
FPC 1            REV 01   710-033873   BBAH0320          FPC Type 3-ES
  CPU            REV 11   710-016744   BBAF3281          ST-PMB2
  MMB 0          REV 06   710-025563   BBAF5061          ST-MMB2
FPC 5            REV 04   710-033871   BBAM5070          FPC Type 4-ES
  CPU            REV 11   710-016744   BBAM6653          ST-PMB2
  PIC 1          REV 20   750-017405   BBAM1296          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10B42981         XFP-10G-SR
  MMB 0          REV 07   710-025563   BBAN2631          ST-MMB2
  MMB 1          REV 07   710-025563   BBAN2538          ST-MMB2
SPMB 0           REV 05   710-023321   EH3903            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3902            LCC Switch CPU
SIB 0            REV 01   750-041657   EH8019            LCC SIB 3D
  B Board        REV 01   711-042424   EH7680            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB04F         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB04S         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04B         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB043         CXP Module
SIB 1            REV 01   750-041657   EH8012            LCC SIB 3D
  B Board        REV 01   711-042424   EH7658            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05E         CXP Module
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  Xcvr 2          REV 01   740-047547   XB48FB01Z          CXP Module
  Xcvr 4          REV 01   740-047547   XB48FB018          CXP Module
  Xcvr 6          REV 01   740-047547   XB48FB054          CXP Module
SIB 2             REV 01   750-041657   EH7993             LCC SIB 3D
  B Board         REV 01   711-042424   EH7678             LCC SIB 3D Mezz
  Xcvr 0          REV 01   740-047547   XB48FB05C          CXP Module
  Xcvr 2          REV 01   740-047547   XB47FB00N          CXP Module
  Xcvr 4          REV 01   740-047547   XB48FB05U          CXP Module
  Xcvr 6          REV 01   740-047547   XB48FB05L          CXP Module
Fan Tray 0                                                 Front Top Fan Tray
Fan Tray 1                                                 Front Bottom Fan Tray
Fan Tray 2                                                 Rear Fan Tray -- Rev 4
```

show chassis hardware lcc (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11B23FEAHA      T1600
Midplane         REV 01   710-027486   RC9787            T-series Backplane
FPM GBUS         REV 13   710-002901   BBAG5132          T640 FPM Board
FPM Display      REV 04   710-021387   BBAL9612          T1600 FPM Display
CIP              REV 06   710-002895   BBAN0605          T-series CIP
PEM 0            REV 05   740-036442   1G022060143       Power Entry Module 6x60
PEM 1            REV 05   740-036442   1G022060011       Power Entry Module 6x60
SCG 0            REV 18   710-003423   BBAL7318          T640 Sonet Clock Gen.
SCG 1            REV 18   710-003423   BBAL7255          T640 Sonet Clock Gen.
Routing Engine 0 REV 07   740-026941   P737F-002933      RE-DUO-1800
Routing Engine 1 REV 06   740-026941   P737F-002749      RE-DUO-1800
CB 0             REV 11   710-022597   EH3611            LCC Control Board
CB 1             REV 11   710-022597   EH4798            LCC Control Board
FPC 5            REV 17   710-013037   BBAC5333          FPC Type 4-ES
  CPU            REV 10   710-016744   BBAB7619          ST-PMB2
  PIC 0          REV 18   750-017405   BBAE3420          4x 10GE (LAN/WAN) XFP
    Xcvr 0       REV 03   740-014289   T10C90659         XFP-10G-SR
  MMB 0          REV 05   710-025563   BBAB9538          ST-MMB2
  MMB 1          REV 05   710-025563   BBAB9502          ST-MMB2
FPC 7            REV 01   750-045173   BBAV0032          FPC Type 5-3D
  CPU
SPMB 0           REV 05   710-023321   EG9434            LCC Switch CPU
SPMB 1           REV 05   710-023321   EH3878            LCC Switch CPU
SIB 0            REV 01   750-041657   EH7997            LCC SIB 3D
  B Board        REV 01   711-042424   EH7674            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB014         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB05A         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB052         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB01B         CXP Module
SIB 1            REV 01   750-041657   EH8023            LCC SIB 3D
  B Board        REV 01   711-042424   EH7659            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB48FB05J         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01E         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB01J         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB02S         CXP Module
SIB 2            REV 03   750-041657   EJ6554            LCC SIB 3D
  B Board        REV 02   711-042424   EJ5756            LCC SIB 3D Mezz
  Xcvr 0         REV 01   740-047547   XB34FB01Z         CXP Module
  Xcvr 2         REV 01   740-047547   XB34FB013         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB04Z         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB05N         CXP Module
```


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```
Fan Tray 0                                                    Front Top Fan Tray
Fan Tray 1                                                    Front Bottom Fan Tray
Fan Tray 2                                                    Rear Fan Tray -- Rev 4
```

show chassis hardware sfc (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis hardware sfc 0
sfc0-re0:
--------------------------------------------------------------------------
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11CAAA4AHB      TXP
Midplane         REV 05   710-022574   ABAC4696          SFC Midplane
FPM Display      REV 09   710-024027   EH3138            TXP FPM Display
CIP 0            REV 12   710-023792   EF6349            TXP CIP
CIP 1            REV 12   710-023792   EG5294            TXP CIP
PEM 0            Rev 06   740-027463   XH04595           Power Entry Module
PEM 1            Rev 06   740-027463   XH04592           Power Entry Module
Routing Engine 0 REV 07   740-026942   P737A-002541      RE-DUO-2600
Routing Engine 1 REV 07   740-026942   P737A-002602      RE-DUO-2600
CB 0             REV 15   710-022606   EH4376            SFC Control Board
CB 1             REV 15   710-022606   EH4379            SFC Control Board
SPMB 0                    BUILTIN                        SFC Switch CPU
SPMB 1                    BUILTIN                        SFC Switch CPU
SIB F13 0        REV 10   750-035002   EM9305            F13 SIB 3D
  B Board        REV 06   711-035082   EM9667            F13 SIB 3D Mezz
  P Board        REV 05   711-043544   EM9708            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB34FB00S         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB01H         CXP Module
  Xcvr 4         REV 01   740-047547   XB34FB02W         CXP Module
  Xcvr 6         REV 01   740-047547   XB34FB01T         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB00W         CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01S         CXP Module
  Xcvr 12        REV 01   740-047547   XB34FB03H         CXP Module
  Xcvr 14        REV 01   740-047547   XB34FB023         CXP Module
SIB F13 3        REV 01   710-035001   EJ2612            F13 SIB 3D
  B Board        REV 01   711-035082   EJ3815            F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2678            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB04C         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB00Z         CXP Module
  Xcvr 4         REV 01   740-047547   XB47FB036         CXP Module
  Xcvr 6         REV 01   740-047547   XB47FB029         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02N         CXP Module
  Xcvr 10        REV 01   740-047547   XB42FB0CS         CXP Module
  Xcvr 12        REV 01   740-047547   XB47FB01X         CXP Module
  Xcvr 14        REV 01   740-047547   XB48FB02F         CXP Module
SIB F13 6        REV 05   750-035002   EK2675            F13 SIB 3D
  B Board        REV 03   711-035082   EK2612            F13 SIB 3D Mezz
  P Board        REV 04   711-043544   EK1179            F13 SIB 3D Power
  Xcvr 0         REV 01   740-047547   XB48FB01T         CXP Module
  Xcvr 2         REV 01   740-047547   XB48FB02M         CXP Module
  Xcvr 4         REV 01   740-047547   XB48FB031         CXP Module
  Xcvr 6         REV 01   740-047547   XB48FB04P         CXP Module
  Xcvr 8         REV 01   740-047547   XB48FB02T         CXP Module
  Xcvr 10        REV 01   740-047547   XB34FB01V         CXP Module
  Xcvr 12        REV 01   740-047547   XB48FB02C         CXP Module
  Xcvr 14                 NON-JNPR                       No Module
SIB F13 12       REV 01   710-035001   EJ2631            F13 SIB 3D
  B Board        REV 01   711-035082   EJ3808            F13 SIB 3D Mezz
  P Board        REV 01   711-043544   EJ2676            F13 SIB 3D Power
SIB F2S 0/0      REV 01   711-034977   EH9829            F2S SIB 3D
```

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```
  B Board         REV 01   711-034979   EH9927           F2S SIB 3D Mezz
SIB F2S 0/2       REV 01   711-034977   EH9791           F2S SIB 3D
  B Board         REV 01   711-034979   EH9852           F2S SIB 3D Mezz
SIB F2S 0/4       REV 01   711-034977   EH9803           F2S SIB 3D
  B Board         REV 01   711-034979   EH9915           F2S SIB 3D Mezz
SIB F2S 0/6       REV 01   711-034977   EH9763           F2S SIB 3D
  B Board         REV 01   711-034979   EH9880           F2S SIB 3D Mezz
SIB F2S 1/0       REV 01   711-034977   EH9757           F2S SIB 3D
  B Board         REV 01   711-034979   EH9889           F2S SIB 3D Mezz
SIB F2S 1/2       REV 01   711-034977   EH9815           F2S SIB 3D
  B Board         REV 01   711-034979   EH9890           F2S SIB 3D Mezz
SIB F2S 1/4       REV 08   750-034978   EN1954           F2S SIB 3D
  B Board         REV 02   711-034979   EN1436           F2S SIB 3D Mezz
SIB F2S 1/6       REV 01   711-034977   EJ7054           F2S SIB 3D
  B Board         REV 01   711-034979   EJ8238           F2S SIB 3D Mezz
SIB F2S 2/0       REV 01   711-034977   EH9830           F2S SIB 3D
  B Board         REV 01   711-034979   EH9844           F2S SIB 3D Mezz
SIB F2S 2/2       REV 01   711-034977   EH9818           F2S SIB 3D
  B Board         REV 01   711-034979   EH9888           F2S SIB 3D Mezz
SIB F2S 2/4       REV 01   711-034977   EH9795           F2S SIB 3D
  B Board         REV 01   711-034979   EH9869           F2S SIB 3D Mezz
SIB F2S 2/6       REV 01   711-034977   EJ7026           F2S SIB 3D
  B Board         REV 01   711-034979   EJ8273           F2S SIB 3D Mezz
SIB F2S 3/0       REV 01   711-034977   EH9811           F2S SIB 3D
  B Board         REV 01   711-034979   EH9892           F2S SIB 3D Mezz
SIB F2S 3/2       REV 01   711-034977   EH9812           F2S SIB 3D
  B Board         REV 01   711-034979   EH9877           F2S SIB 3D Mezz
SIB F2S 3/4       REV 08   750-034978   EN1947           F2S SIB 3D
  B Board         REV 02   711-034979   EN1471           F2S SIB 3D Mezz
Fan Tray 0        REV 10   760-024497   EH3313           Front Fan Tray
Fan Tray 1        REV 10   760-024497   EH3290           Front Fan Tray
Fan Tray 2        REV 10   760-024502   EH3292           Rear Fan Tray
Fan Tray 3        REV 10   760-024502   EH3287           Rear Fan Tray
Fan Tray 4        REV 10   760-024502   EH3286           Rear Fan Tray
Fan Tray 5        REV 10   760-024502   EH3285           Rear Fan Tray
```

show chassis hardware (16-Port 10-Gigabit Ethernet MPC with SFP+ Optics [MX Series Routers])

```
user@host> show chassis hardware
Hardware inventory:
    Item             Version  Part number  Serial number     Description
    Chassis                                JN112D865AFA      MX960
    Midplane         REV 03   710-013698   TS3339            MX960 Backplane
    FPM Board        REV 03   710-014974   WW6267            Front Panel Display

    PDM              Rev 03   740-013110   QCS12485026       Power Distribution
Module
    PEM 0            Rev 04   740-013682   QCS12434086       PS 1.7kW; 200-240VAC
 in
    PEM 1            Rev 04   740-013682   QCS1243408Z       PS 1.7kW; 200-240VAC
 in
    PEM 2            Rev 04   740-013682   QCS1243407X       PS 1.7kW; 200-240VAC
 in
    Routing Engine 0 REV 07   740-015113   9009009677        RE-S-1300
    Routing Engine 1 REV 07   740-015113   9009011510        RE-S-1300
    CB 0             REV 03   710-021523   XF0394            MX SCB
    CB 1             REV 03   710-021523   XF0550            MX SCB
    CB 2             REV 03   710-021523   XD7455            MX SCB
    FPC 4            REV 02   750-028467   JR6127            MPC M 16x 10GE
      CPU            REV 02   711-029089   JX0129            AS PMB
      PIC 0                   BUILTIN      BUILTIN           4x 10GE(LAN) SFP+
```


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```
    PIC 1                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    PIC 2                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
    PIC 3                 BUILTIN      BUILTIN          4x 10GE(LAN) SFP+
  Fan Tray 0       REV 05   740-014971   TP9990           Fan Tray
  Fan Tray 1       REV 05   740-014971   VS1709           Fan Tray
```

show chassis hardware (MPC3E [MX Series Routers])

```
user@host> show chassis hardware
Hardware inventory:
   Item             Version  Part number   Serial number     Description
   Chassis                                  JN1101AFEAFB      MX480
   Midplane         REV 05   710-017414    TR4444            MX480 Midplane
   FPM Board        REV 02   710-017254    KG6056            Front Panel Display

   PEM 0           Rev 03   740-017330    QCS082090FC       PS 1.2-1.7kW; 100-240V

   PEM 1           Rev 03   740-017330    QCS082090FD       PS 1.2-1.7kW; 100-240V

   Routing Engine 0 REV 07   740-013063    9009004124        RE-S-2000
   Routing Engine 1 REV 07   740-013063    9009005569        RE-S-2000
   CB 0             REV 07   710-021523    XZ3587            MX SCB
   CB 1             REV 03   710-021523    KH8306            MX SCB
   FPC 1            REV 04.1.07 750-033205 P1240            MPC Type 3
    CPU             REV 01   711-035209    YL0504            HMPC PMB 2G
    MIC 1           REV 10   750-033199    YX4495            1X100GE CFP
     PIC 2                   BUILTIN       BUILTIN           1X100GE CFP
      Xcvr 0        REV 01   740-032210    C22CQNE           CFP-100G-LR4
   FPC 2            REV 26   750-016670    KH0045            DPCE 40x 1GE R EQ
    CPU             REV 07   710-013713    KF5448            DPC PMB
    PIC 0                    BUILTIN       BUILTIN           10x 1GE(LAN) EQ
     Xcvr 0         REV 01   740-011613    PF21JHU           SFP-SX
    PIC 1                    BUILTIN       BUILTIN           10x 1GE(LAN) EQ
     Xcvr 9         REV 01   740-011613    AM0813S8ZL6       SFP-SX
    PIC 2                    BUILTIN       BUILTIN           10x 1GE(LAN) EQ
     Xcvr 0         REV 02   740-011613    PGL2KYF           SFP-SX
     Xcvr 2         REV 01   740-011613    AM0806S8N4P       SFP-SX
    PIC 3                    BUILTIN       BUILTIN           10x 1GE(LAN) EQ
     Xcvr 5         REV 01   740-011613    AM0815S967N       SFP-SX
     Xcvr 7         REV 01   740-011613    AM0806S8N1X       SFP-SX
     Xcvr 8         REV 01   740-011613    AM0815S967J       SFP-SX
     Xcvr 9         REV 01   740-011613    AM0815S967M       SFP-SX
   FPC 3            REV 12.2.09 750-033205 YR9443           MPC Type 3
    CPU             REV 03   711-035209    YL6931            HMPC PMB 2G
    MIC 0           REV 05   750-033199    YR3269            1X100GE CFP
     PIC 0                   BUILTIN       BUILTIN           1X100GE CFP
      Xcvr 0        REV 01   740-032210    ULH0KG3           CFP-100G-LR4
    MIC 1           REV 02   750-033199    YG3245            1X100GE CFP
     PIC 2                   BUILTIN       BUILTIN           1X100GE CFP
      Xcvr 0        REV 01   740-032210    ULH0KGF           CFP-100G-LR4
  FPC 4              REV 12.3.09 750-033205 YR9437           MPC Type 3
   CPU               REV 03   711-035209    YT5857            HMPC PMB 2G
   MIC 0             REV 05   750-033199    YR3295            1X100GE CFP
    PIC 0                    BUILTIN       BUILTIN           1X100GE CFP
     Xcvr 0                  NON-JNPR      X12000187         CFP-100G-SR10
   MIC 1             REV 10   750-033199    YX4518            1X100GE CFP
    PIC 2                    BUILTIN       BUILTIN           1X100GE CFP
     Xcvr 0         REV 01   740-035329    X12J00008         CFP-100G-SR10
  FPC 5              REV 06   750-024884    JW9769            MPC Type 2 3D EQ
  CPU                REV 02   711-028401    JR6158            MPC PMB 2G Proto
  MIC 0              REV 05   750-028387    JR6197            3D 4x 10GE  XFP
```

```
  PIC 0                   BUILTIN      BUILTIN          2x 10GE  XFP
   Xcvr 0        REV 01   740-014289   T07M71112        XFP-10G-SR
   Xcvr 1        REV 02   740-014289   T08L85610        XFP-10G-SR
   PIC 1                  BUILTIN      BUILTIN          2x 10GE  XFP
 MIC 1           REV 22   750-028392   YM0053           3D 20x 1GE(LAN) SFP

  PIC 2                   BUILTIN      BUILTIN          10x 1GE(LAN) SFP
   Xcvr 0        REV 01   740-011613   AM0703S005B      SFP-SX
   Xcvr 1        REV 01   740-011613   E07L01352        SFP-SX
  PIC 3                   BUILTIN      BUILTIN          10x 1GE(LAN) SFP
   Xcvr 5        REV 01   740-013111   6500217          SFP-T
   Xcvr 9        REV 02   740-013111   8499527          SFP-T
 Fan Tray                                               Left Fan Tray
```

The PIC number for MIC 1 always starts from 2 (even if the first MIC is a 1X100GE CFP or a legacy MIC).

show chassis hardware (QFX3500 Switches)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                                  QFX3500
Routing Engine 0          BUILTIN      BUILTIN           QFX Routing Engine
FPC 0            REV 04   750-044071   BBAR3902          QFX3500-48S4Q-AFI
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x 10G-SFP+
  PIC 1                   BUILTIN      BUILTIN           15x 10G-SFP+
  MGMT BRD       REV 02   750-044063   BBAR0398          QFX3500-MGMT-SFP-AFO
    Xcvr 0       REV 01   740-011614   AC0946S0BD1       SFP-LX10
    Xcvr 1       REV 02   740-013111   A281922           SFP-T
Power Supply 0   Rev 04   740-032091   UI00677           JPSU-650W-AC-AFI
Power Supply 1   REV 00   740-041741   VJ00162           JPSU-650W-AC-AFO
Fan Tray 0                                               QFX Fan Tray, Back to
Front Airlfow
Fan Tray 1                                               QFX Fan Tray, Back to
Front Airlfow
Fan Tray 2                                               QFX Fan Tray, Back to
Front Airlfow
```

show chassis hardware detail (QFX3500 Switches)

```
user@switch> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN000TEST5        QFX3500
Routing Engine 0          BUILTIN      BUILTIN           QFX Routing Engine
FPC 0            REV 05   750-036931   EE0823            QFX3500-48S4Q-AFI


  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x 10G-SFP+
    Xcvr 0       REV 01   740-030589   S99E270079        SFP+-10G-LPBK
    Xcvr 1       REV 01   740-030589   S9AK450099        SFP+-10G-LPBK
    Xcvr 2       REV 01   740-030589   S99E270078        SFP+-10G-LPBK
    Xcvr 3       REV 01   740-030589   S9AK450098        SFP+-10G-LPBK
    Xcvr 4       REV 01   740-030589   S99E270075        SFP+-10G-LPBK
    Xcvr 5       REV 01   740-030589   S9AK450093        SFP+-10G-LPBK
    Xcvr 6       REV 01   740-030589   S9AK450097        SFP+-10G-LPBK
    Xcvr 7       REV 01   740-030589   S9AK450095        SFP+-10G-LPBK
```


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```
    Xcvr 8       REV 01   740-030589   S99E270072        SFP+-10G-LPBK
    Xcvr 9       REV 01   740-030589   S99E270073        SFP+-10G-LPBK
    Xcvr 10      REV 01   740-030589   S99E270080        SFP+-10G-LPBK
    Xcvr 11      REV 01   740-030589   S9AK450169        SFP+-10G-LPBK
    Xcvr 12      REV 01   740-030589   S99E270076        SFP+-10G-LPBK
    Xcvr 13      REV 01   740-030589   S9AK450167        SFP+-10G-LPBK
    Xcvr 14      REV 01   740-030589   S9AK450170        SFP+-10G-LPBK
    Xcvr 15      REV 01   740-030589   S9AK450166        SFP+-10G-LPBK
    Xcvr 16      REV 01   740-030589   S9AK450092        SFP+-10G-LPBK
    Xcvr 17      REV 01   740-030589   S9AK450163        SFP+-10G-LPBK
    Xcvr 18      REV 01   740-030589   S9AK450094        SFP+-10G-LPBK
    Xcvr 19      REV 01   740-030589   S9AK450100        SFP+-10G-LPBK
    Xcvr 20      REV 01   740-030589   S9AK450168        SFP+-10G-LPBK
    Xcvr 21      REV 01   740-030589   S9AK450165        SFP+-10G-LPBK
    Xcvr 22      REV 01   740-030589   S9AK450073        SFP+-10G-LPBK
    Xcvr 23      REV 01   740-030589   S9AK450164        SFP+-10G-LPBK
    Xcvr 24      REV 01   740-030589   S9AK450074        SFP+-10G-LPBK
    Xcvr 25      REV 01   740-030589   SA62270195        SFP+-10G-LPBK
    Xcvr 26      REV 01   740-030589   S9AK450078        SFP+-10G-LPBK
    Xcvr 27      REV 01   740-030589   S9AK450024        SFP+-10G-LPBK
    Xcvr 28      REV 01   740-030589   S9AK450027        SFP+-10G-LPBK
    Xcvr 29      REV 01   740-030589   S9AK450080        SFP+-10G-LPBK
    Xcvr 30      REV 01   740-030589   S9AK450030        SFP+-10G-LPBK
    Xcvr 31      REV 01   740-030589   S9AK450025        SFP+-10G-LPBK
    Xcvr 32      REV 01   740-030589   S9AK450023        SFP+-10G-LPBK
    Xcvr 33      REV 01   740-030589   S9AK450075        SFP+-10G-LPBK
    Xcvr 34      REV 01   740-030589   S9AK450161        SFP+-10G-LPBK
    Xcvr 35      REV 01   740-030589   S9AK450071        SFP+-10G-LPBK
    Xcvr 36      REV 01   740-030589   S9AK450072        SFP+-10G-LPBK
    Xcvr 37      REV 01   740-030589   S9AK450022        SFP+-10G-LPBK
    Xcvr 38      REV 01   740-030589   S9AK450021        SFP+-10G-LPBK
    Xcvr 39      REV 01   740-030589   S9AK450175        SFP+-10G-LPBK
    Xcvr 40      REV 01   740-030589   S9AK450162        SFP+-10G-LPBK
    Xcvr 41      REV 01   740-030589   S99E270074        SFP+-10G-LPBK
    Xcvr 42      REV 01   740-030589   S9AK450174        SFP+-10G-LPBK
    Xcvr 43      REV 01   740-030589   S9AK450077        SFP+-10G-LPBK
    Xcvr 44      REV 01   740-030589   S9AK450076        SFP+-10G-LPBK
    Xcvr 45      REV 01   740-030589   S9AK450026        SFP+-10G-LPBK
    Xcvr 46      REV 01   740-030589   S9AK450079        SFP+-10G-LPBK
    Xcvr 47      REV 01   740-030589   S9AK450029        SFP+-10G-LPBK
  PIC 1                   BUILTIN      BUILTIN           15x 10G-SFP+
    Xcvr 1       REV 01   740-032986   QA170087          QSFP+-40G-SR4
    Xcvr 4       REV 01   740-032986   QA360442          QSFP+-40G-SR4
    Xcvr 8       REV 01   740-032986   QA170091          QSFP+-40G-SR4
    Xcvr 12      REV 01   740-032986   QA170042          QSFP+-40G-SR4
MGMT BRD       REV 08   750-036946   EE0731            QFX3500-MB
Power Supply 0   Rev 04   740-032091   UI00690           QFX PS 650W AC
Power Supply 1   Rev 04   740-032091   UI00679           QFX PS 650W AC
Fan Tray 0                                              QFX Fan Tray
Fan Tray 1                                              QFX Fan Tray
```

show chassis hardware models (QFX3500 Switches)

```
user@switch> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Routing Engine 0          BUILTIN      BUILTIN
FPC 0            REV 02   711-032234   EC4074
Power Supply 0   PSMI 2C  11-d65800    --
```

show chassis hardware clei-models (QFX3500 Switches)

```
user@switch> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Routing Engine 0          BUILTIN
FPC 0            REV 02   711-032234
Power Supply 0   PSMI 2C  11-d65800
```

show chassis hardware clei-models (QFX5100 Switches)

```
user@switch> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Routing Engine 0          BUILTIN      CMMNV10BRA
FPC 0            REV 01   611-053010   CMMNV10BRA
  PIC 0                   BUILTIN      CMMNV10BRA
Power Supply 0   REV 03   740-053352   MUPABHBAA         JPSU-850W-AC-AFO
Power Supply 1   REV 03   740-053352   MUPABHBAA         JPSU-850W-AC-AFO
Fan Tray 0                                              QFX5100-96S-FANAFO
Fan Tray 1                                              QFX5100-96S-FANAFO
Fan Tray 2                                              QFX5100-96S-FANAFO
```

show chassis hardware (QFX10002 Switches)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                12345             QFX10002-36Q
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           RE-QFX10002-36Q
FPC 0            REV 26   750-059497   ACNL1387          QFX10002-36Q
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           36X40G
    Xcvr 0       REV 01   740-038623   MOC15476230389    QSFP+-40G-CU1M
    Xcvr 1       REV 01   740-038623   MOC15476230438    QSFP+-40G-CU1M
    Xcvr 2       REV 01   740-038623   MOC15446231917    QSFP+-40G-CU1M
    Xcvr 3       REV 01   740-038623   MOC15446232043    QSFP+-40G-CU1M
    Xcvr 4       REV      740-038624   APF15470032AVB    QSFP+-40G-CU3M
    Xcvr 5       REV      740-038624   APF15470032H15    QSFP+-40G-CU3M
    Xcvr 6       REV      740-038624   APF15470032A9J    QSFP+-40G-CU3M
    Xcvr 7       REV      740-038624   APF15470032AG7    QSFP+-40G-CU3M
    Xcvr 8       REV      740-038624   APF15470032ALD    QSFP+-40G-CU3M
    Xcvr 9       REV 01   740-053203   APF15470071V43    QSFP+-40G-ACU7M
    Xcvr 10      REV 01   740-053203   APF15470071V15    QSFP+-40G-ACU7M
    Xcvr 11      REV 01   740-053203   APF15470071V12    QSFP+-40G-ACU7M
    Xcvr 13      REV      740-038624   APF15470032H1N    QSFP+-40G-CU3M
    Xcvr 18      REV 01   740-053203   APF154800738HW    QSFP+-40G-ACU7M
    Xcvr 19      REV 01   740-038153   MOC12161530041    QSFP+-40G-CU3M
    Xcvr 20      REV 01   740-038153   APF15500034A29    QSFP+-40G-CU3M
    Xcvr 30      REV 01   740-038623   MOC15476230444    QSFP+-40G-CU1M
    Xcvr 31      REV 01   740-032986   QC330038          QSFP+-40G-SR4
    Xcvr 32      REV 01   740-032986   QC290540          QSFP+-40G-SR4
  Mezz           REV 02   711-059316   ACNG9344          QFX10002 36X40G Mezz
Power Supply 0   REV 03   740-054405   1EDN5389293       AC AFO 1600W PSU
Power Supply 1   REV 03   740-054405   1EDN5346300       AC AFO 1600W PSU
Fan Tray 0                                              QFX10002 Fan Tray 0,
Front to Back Airflow - AFO
Fan Tray 1                                              QFX10002 Fan Tray 1,
```


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```
Front to Back Airflow - AFO
Fan Tray 2                                                    QFX10002 Fan Tray 2,
Front to Back Airflow - AFO
```

show chassis hardware detail (QFX10002 Switches)

```
user@switch> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                12345             QFX10002-72Q
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           RE-QFX10002-72Q
ada0   8193 MB  QEMU                   QM00001           Virtio Block Disk
ada1   4096 MB  QEMU                   QM00002           Virtio Block Disk
ada2    512 MB  QEMU                   QM00003           Virtio Block Disk
ada3   1024 MB  QEMU                   QM00004           Virtio Block Disk
usb0 (addr 0.1)  UHCI root HUB 0       Intel             uhub0
usb0 (addr 1.1)  EHCI root HUB 0       Intel             uhub1
usb0 (addr 1.2)  product 0x0020 32     vendor 0x8087     uhub2
usb0 (addr 1.3)  Ultra Fit  21891      SanDisk           umass0
FPC 0            REV 05   750-055415 ACAM4724          QFX10002-72Q
CPU                      BUILTIN      BUILTIN           FPC CPU
```

show chassis hardware (QFX10008 and QFX10016 Switches)

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                DE994             QFX10008
Midplane         REV 28   750-054097   ACPG3671          QFX10008 Midplane
Routing Engine 0          BUILTIN      BUILTIN           Routing Engine
Routing Engine 1          BUILTIN      BUILTIN           Routing Engine
CB 0             REV 03   750-068820   ACPA3224          Control Board
CB 1             REV 03   750-068820   ACPM9059          Control Board
FPC 0            REV 33   750-051354   ACNP4522          ULC-36Q-12Q28
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           36X40G
    Xcvr 0       REV 01   740-038623   MOC16016230802    QSFP+-40G-CU1M
    Xcvr 1       REV 01   740-038623   MOC16016230802    QSFP+-40G-CU1M
    Xcvr 2       REV 01   740-038623   MOC16016231080    QSFP+-40G-CU1M
    Xcvr 3       REV 01   740-038623   MOC16016231080    QSFP+-40G-CU1M
    Xcvr 4       REV      740-038624   APF16220038H15    QSFP+-40G-CU3M
    Xcvr 5       REV      740-038624   APF16220038H5M    QSFP+-40G-CU3M
    Xcvr 6       REV      740-038624   APF160600308W8    QSFP+-40G-CU3M
    Xcvr 8       REV      740-038624   APF16210038FFL    QSFP+-40G-CU3M
    Xcvr 9       REV      740-038624   APF16210038F6F    QSFP+-40G-CU3M
    Xcvr 10      REV      740-038624   APF1605003032B    QSFP+-40G-CU3M
    Xcvr 11      REV      740-038624   APF16070030CDB    QSFP+-40G-CU3M
    Xcvr 13      REV      740-038624   APF16210038FEW    QSFP+-40G-CU3M
    Xcvr 15      REV 01   740-052307   APF16100071C1L    QSFP+-40G-ACU7M
    Xcvr 16      REV      740-038625   APF1623005048E    QSFP+-40G-CU5M
    Xcvr 17      REV      740-038625   APF16230050471    QSFP+-40G-CU5M
    Xcvr 18      REV      740-038625   APF1623005044D    QSFP+-40G-CU5M
    Xcvr 19      REV 01   740-052307   APF16100071C30    QSFP+-40G-ACU7M
    Xcvr 20      REV      740-038625   APF16290055004    QSFP+-40G-CU5M
    Xcvr 21      REV 01   740-038153   APF1622003970G    QSFP+-40G-CU3M
    Xcvr 22      REV      740-038624   APF16190036R90    QSFP+-40G-CU3M
    Xcvr 23      REV      740-038624   APF16050030374    QSFP+-40G-CU3M
    Xcvr 24      REV 01   740-038153   APF162400318HC    QSFP+-40G-CU3M
```

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```
    Xcvr 30      REV      740-038624   APF1606003097A    QSFP+-40G-CU3M
    Xcvr 31      REV 01   740-052307   APF160500702R9    QSFP+-40G-ACU7M
    Xcvr 32      REV      740-038624   APF16220038GVR    QSFP+-40G-CU3M
FPD Board        REV 07   711-054687   ACPC7158          QFX10000 FPD
Power Supply 0   REV 02   740-049388   1EDL63104D6       QFX10000 AC
Power Supply 1   REV 02   740-049388   1EDL62503XC       QFX10000 AC
Power Supply 2   REV 02   740-049388   1EDL62503XS       QFX10000 AC
Power Supply 3   REV 02   740-049388   1EDL62503T8       QFX10000 AC
Power Supply 4   REV 02   740-049388   1EDL62503TR       QFX10000 AC
Power Supply 5   REV 02   740-049388   1EDL62503T5       QFX10000 AC
FTC 0            REV 15   750-050108   ACPF4227          QFX10000 FTC
FTC 1            REV 15   750-050108   ACPF4228          QFX10000 FTC
Fan Tray 0       REV 09   760-054372   ACNV5506          QFX10008 FHB
Fan Tray 1       REV 09   760-054372   ACNV5365          QFX10008 FHB
SIB 0            REV 27   750-050058   ACPM4212          QFX10008 SIB
SIB 1            REV 27   750-050058   ACPM4253          QFX10008 SIB
SIB 2            REV 27   750-050058   ACPM4174          QFX10008 SIB
SIB 3            REV 27   750-050058   ACPM4191          QFX10008 SIB
SIB 4            REV 27   750-050058   ACPM4216          QFX10008 SIB
SIB 5            REV 27   750-050058   ACPM4286          QFX10008 SIB
```

show chassis hardware detail (QFX10008 and QFX10016 Switches)

```
user@switch> show chassis hardware details
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                12345             QFX10008
Midplane         REV 01   750-054097   ACAM1754          QFX10008 Midplane
Routing Engine 0          BUILTIN      BUILTIN           Routing Engine
ada0   8193 MB  QEMU                   QM00001           Virtio Block Disk
ada1   4096 MB  QEMU                   QM00002           Virtio Block Disk
ada2    512 MB  QEMU                   QM00003           Virtio Block Disk
ada3   1024 MB  QEMU                   QM00004           Virtio Block Disk
usb0 (addr 1)  UHCI root HUB 0         Intel             uhub0
usb0 (addr 1)  EHCI root HUB 0         Intel             uhub1
usb0 (addr 2)  product 0x0020 32       vendor 0x8087     uhub2
Routing Engine 1          BUILTIN      BUILTIN           Routing Engine
ada0   8193 MB  QEMU                   QM00001           Virtio Block Disk
ada1   4096 MB  QEMU                   QM00002           Virtio Block Disk
ada2    512 MB  QEMU                   QM00003           Virtio Block Disk
ada3   1024 MB  QEMU                   QM00004           Virtio Block Disk
usb0 (addr 0.1)  UHCI root HUB 0       Intel             uhub0
usb0 (addr 1.1)  EHCI root HUB 0       Intel             uhub1
usb0 (addr 1.2)  product 0x0020 32     vendor 0x8087     uhub2
CB 0             REV 16   750-052688   ACAM7936          Control Board
CB 1             REV 18   750-052688   ACAM7708          Control Board
FPC 0            REV 26   750-051351   ACPJ1372          ULC-60S-6Q Main Board
CPU                      BUILTIN      BUILTIN           FPC CPU
```

show chassis hardware interconnect-device (QFabric Systems)

```
user@switch> show chassis hardware interconnect-device interconnect1
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis          REV 07                                  QFX_olive
Midplane         REV 07   750-021261   BH0208188289      QFX Midplane
CB 0             REV 07   750-021261   BH0208188289      QFXIC08-CB4S
```


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show chassis hardware node-device (QFabric Systems)

```
user@switch> show chassis hardware node-device node1
Routing Engine 0   BUILTIN      BUILTIN           QFX Routing Engine
node1              REV 05   711-032234   ED3694            QFX3500-48S4Q-AFI


  CPU                      BUILTIN      BUILTIN           FPC CPU
  PIC 0                    BUILTIN      BUILTIN           48x 10G-SFP+
    Xcvr 8         REV 01   740-030658   AD0946A028B       SFP+-10G-USR
...
```

show chassis hardware (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN11D1FD7AJA      PTX5000
Midplane         REV 03   711-031896   ABAC5589          Midplane-8S
FPM              REV 08   760-030647   EG1679            Front Panel Display
PDU 0            Rev 05   740-032019   ZE00006           DC Power Dist Unit
  PSM 0          Rev 05   740-032022   ZJ00018           DC 12V Power Supply
  PSM 1          Rev 04   740-032022   ZC00052           DC 12V Power Supply
  PSM 2          Rev 04   740-032022   ZD00051           DC 12V Power Supply
  PSM 3          Rev 05   740-032022   ZJ00060           DC 12V Power Supply
CCG 0            REV 04   750-030653   EG3703            Clock Generator
CCG 1            REV 04   750-030653   EG3698            Clock Generator
Routing Engine 0 REV 05   740-026942   P737A-002231      RE-DUO-2600
Routing Engine 1 REV 06   740-026942   P737A-002438      RE-DUO-2600
CB 0             REV 08   750-030625   EG5519            Control Board
CB 1             REV 08   750-030625   EG5516            Control Board
FPC 0            REV 18   750-036844   EJ3080            FPC
  CPU            REV 12   711-030686   EJ3260            SNG PMB
FPC 2            REV 13   750-036844   EG5065            FPC
  CPU            REV 09   711-030686   EG4082            SNG PMB
  PIC 0          REV 14   750-031913   EG5127            24x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   143363A00240      SFP+-10G-SR
    Xcvr 1       REV 01   740-031981   UK90PZ1           SFP+-10G-LR
    Xcvr 2       REV 01   740-031980   AD1141A04XH       SFP+-10G-SR
    Xcvr 3       REV 01   740-031981   UK90Q46           SFP+-10G-LR
    Xcvr 4       REV 01   740-031980   AD1141A04X4       SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11H02560         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11C01589         SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AD1141A04XF       SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   123363A01094      SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AK80LKF           SFP+-10G-SR
    Xcvr 12      REV 01   740-031980   183363A01528      SFP+-10G-SR
    Xcvr 14      REV 01   740-031980   193363A01079      SFP+-10G-SR
    Xcvr 15      REV 01   740-031980   AK80MC8           SFP+-10G-SR
    Xcvr 16      REV 01   740-031980   AJC0BHC           SFP+-10G-SR
    Xcvr 19      REV 01   740-021309   J08D26856         SFP+-10G-LR
    Xcvr 21      REV 01   740-031980   AK80KCT           SFP+-10G-SR
    Xcvr 22      REV 01   740-031981   UK90PZL           SFP+-10G-LR
    Xcvr 23      REV 01   740-031980   AK80N1V           SFP+-10G-SR
FPC 3            REV 13   750-036844   EG5074            FPC
  CPU            REV 09   711-030686   EG4064            SNG PMB
  PIC 1          REV 10   750-031903   EG0325            SNG Load
FPC 5            REV 06   750-036844   EH3198            FPC
  CPU
  PIC 0          REV 14   750-031913   EG5134            24x 10GE(LAN) SFP+
```

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```
    Xcvr 0       REV 01   740-031980   AK80LBH          SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11B03724        SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FMH          SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J00818        SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00743     SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11B06125        SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B11H02529        SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AK80LFB          SFP+-10G-SR
    Xcvr 12      REV 01   740-031980   193363A01061     SFP+-10G-SR
    Xcvr 15      REV 01   740-031980   B11J00687        SFP+-10G-SR
    Xcvr 16      REV 01   740-031980   193363A00738     SFP+-10G-SR
    Xcvr 18      REV 01   740-031980   AK80MQX          SFP+-10G-SR
    Xcvr 19      REV 01   740-021309   J08C17257        SFP+-10G-LR
    Xcvr 22      REV 01   740-031980   B11J00730        SFP+-10G-SR
    Xcvr 23      REV 01   740-031980   AK80KEE          SFP+-10G-SR
  PIC 1          REV 08   750-036710   EG3105           2x 40GE CFP
    Xcvr 0       REV 01   740-034554   B260HLT          CFP-40G-LR4
    Xcvr 1       REV 01   740-034554   B11C02847        CFP-40G-LR4
FPC 6            REV 18   750-036844   EJ4391           FPC
  CPU            REV 12   711-030686   EJ3257           SNG PMB
FPC 7            REV 18   750-036844   EJ4382           FPC
  CPU            REV 12   711-030686   EJ3238           SNG PMB
SPMB 0           REV 10   711-030686   EG5418           SNG PMB
SPMB 1           REV 09   711-030686   EG5373           SNG PMB
SIB 0            REV 07   750-030631   EG4858           SIB-I-8S
SIB 1            REV 07   750-030631   EG4872           SIB-I-8S
SIB 2            REV 07   750-030631   EG4866           SIB-I-8S
SIB 3            REV 07   750-030631   EG6011           SIB-I-8S
SIB 4            REV 07   750-030631   EG4907           SIB-I-8S
SIB 5            REV 07   750-030631   EG4879           SIB-I-8S
SIB 6            REV 07   750-030631   EG4864           SIB-I-8S
SIB 7            REV 07   750-030631   EG4899           SIB-I-8S
SIB 8            REV 07   750-030631   EG4880           SIB-I-8S
Fan Tray 0       REV 04   760-032784   EG1496           Vertical Fan Tray
Fan Tray 1       REV 04   760-030642   EG1335           Horizontal Fan Tray
Fan Tray 2       REV 02   760-030642   ED4952           Horizontal Fan Tray
```

show chassis hardware (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               JN12223A6AJA      PTX5000
Midplane         REV 16   750-035893   ACRA1350          Midplane-8S
FPM              REV 12   760-030647   BBBD5625          Front Panel Display
PDU 0           Rev 01   740-048338   1GB83360005       High Capacity AC WYE PDU

  PSM 0          Rev 01   740-048334   1GB43360074       High Capacity AC PSM
  PSM 1          Rev 01   740-048334   1GB43360001       High Capacity AC PSM
  PSM 2          Rev 01   740-048334   1GB43360104       High Capacity AC PSM
  PSM 3          Rev 01   740-048334   1GB43360042       High Capacity AC PSM
  PSM 4          Rev 01   740-048334   1GB43360068       High Capacity AC PSM
  PSM 5          Rev 01   740-048334   1GB43360080       High Capacity AC PSM
  PSM 6          Rev 01   740-048334   1GB43360046       High Capacity AC PSM
  PSM 7          Rev 01   740-048334   1GB43360100       High Capacity AC PSM
PDU 1           Rev 01   740-048338   1GB83360006       High Capacity AC WYE PDU

  PSM 0          Rev 01   740-048334   1GB43360069       High Capacity AC PSM
  PSM 1          Rev 01   740-048334   1GB43360099       High Capacity AC PSM
  PSM 2          Rev 01   740-048334   1GB43360050       High Capacity AC PSM
  PSM 3          Rev 01   740-048334   1GB43360095       High Capacity AC PSM
```


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```
  PSM 4          Rev 01   740-048334   1GB43360101       High Capacity AC PSM
  PSM 5          Rev 01   740-048334   1GB43360075       High Capacity AC PSM
  PSM 6          Rev 01   740-048334   1GB43360047       High Capacity AC PSM
  PSM 7          Rev 01   740-048334   1GB43360019       High Capacity AC PSM
CCG 0            REV 09   750-030653   BBAZ5345          Clock Generator
...
```

show chassis hardware (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1204FC0AJA      PTX5000
Midplane         REV 11   750-035893   ACAB8038          Midplane-8S
FPM              REV 12   760-030647   BBBD5619          Front Panel
Display
PDU 0            Rev 04   740-048336   1GB93470043       High Capacity DC PDU
  PSM 0          Rev 04   740-046988   1GB63500184       High Capacity DC PSM
  PSM 2          Rev 04   740-046988   1GB63500169       High Capacity DC PSM
  PSM 4          Rev 04   740-046988   1GB63500306       High Capacity DC PSM
  PSM 6          Rev 04   740-046988   1GB63500074       High Capacity DC PSM
PDU 1            Rev 04   740-048336   1GB93470045       High Capacity DC PDU
  PSM 1          Rev 04   740-046988   1GB63500193       High Capacity DC PSM
  PSM 3          Rev 04   740-046988   1GB63500143       High Capacity DC PSM
  PSM 5          Rev 04   740-046988   1GB63500146       High Capacity DC PSM
  PSM 7          Rev 04   740-046988   1GB63500192       High Capacity DC PSM
CCG 0            REV 09   750-030653   BBBC1909          Clock Generator
CCG 1            REV 09   750-030653   BBBD2970          Clock Generator
...
```

show chassis hardware clei-models (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
FPM              REV 08   760-030647   PROTOXCLEI        CRAFT-PTX5000-S
PDU 0            Rev 05   740-032019   IPUPAHLKAA        PWR-SAN-PDU-DC
  PSM 0          Rev 05   740-032022   IPUPAHNKAA        PSM-PTX-DC-120-S
  PSM 1          Rev 04   740-032022   032022XXXX        PWR-SAN-12-DC
  PSM 2          Rev 04   740-032022   032022XXXX        PWR-SAN-12-DC
  PSM 3          Rev 05   740-032022   IPUPAHNKAA        PSM-PTX-DC-120-S
CCG 0            REV 04   750-030653   PROTOXCLEI        CCG-PTX-S
CCG 1            REV 04   750-030653   PROTOXCLEI        CCG-PTX-S
Routing Engine 0 REV 05   740-026942                     RE-DUO-C2600-16G-S
Routing Engine 1 REV 06   740-026942                     RE-DUO-C2600-16G-S
CB 0             REV 08   750-030625   PROTOXCLEI        CB-PTX-S
CB 1             REV 08   750-030625   PROTOXCLEI        CB-PTX-S
FPC 0            REV 18   750-036844   PROTOXCLEI        FPC-PTX-P1-A
FPC 2            REV 13   750-036844   PROTOXCLEI        FPC-PTX-P1-A
  PIC 0          REV 14   750-031913   PROTOXCLEI        P1-PTX-24-10GE-SFPP
FPC 3            REV 13   750-036844   PROTOXCLEI        FPC-PTX-P1-A
FPC 5
  PIC 0          REV 14   750-031913   PROTOXCLEI        P1-PTX-24-10GE-SFPP
FPC 6            REV 18   750-036844   PROTOXCLEI        FPC-PTX-P1-A
FPC 7            REV 18   750-036844   PROTOXCLEI        FPC-PTX-P1-A
SIB 0            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 1            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 2            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 3            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 4            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
```

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```
SIB 5            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 6            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 7            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
SIB 8            REV 07   750-030631   PROTOXCLEI        SIB-I-PTX5008
Fan Tray 1       REV 04   760-030642   PROTOXCLEI        FAN-PTX-H-S
```

show chassis hardware clei-models (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 16   750-035893   IPMUN00ARA        CHAS-MP-PTX5000-S
FPM              REV 12   760-030647   IPUCA7SCAA        CRAFT-PTX5000-S
PDU 0            Rev 01   740-048338   PROTOACPDU        PDU2-PTX-AC-W
  PSM 0          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 1          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 2          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 3          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 4          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 5          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 6          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 7          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
PDU 1            Rev 01   740-048338   PROTOACPDU        PDU2-PTX-AC-W
  PSM 0          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 1          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 2          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 3          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 4          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 5          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 6          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
  PSM 7          Rev 01   740-048334   PROTOACPSM        PSM2-PTX-AC
CCG 0            REV 09   750-030653   IPUCA7DCAA        CCG-PTX-S
...
```

show chassis hardware clei-models (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 11   750-035893   IPMUN00ARA        CHAS-MP-PTX5000-S
FPM              REV 12   760-030647   IPUCA7SCAA        CRAFT-PTX5000-S
PDU 0            Rev 04   740-048336   IPUPAL7KAA        PDU2-PTX-DC-S
  PSM 0          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 2          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 4          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 6          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
PDU 1            Rev 04   740-048336   IPUPAL7KAA        PDU2-PTX-DC-S
  PSM 1          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 3          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 5          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
  PSM 7          Rev 04   740-046988   IPUPAL8KAA        PSM2-PTX-DC-S
CCG 0            REV 09   750-030653   IPUCA7DCAA        CCG-PTX-S
CCG 1            REV 09   750-030653   IPUCA7DCAA        CCG-PTX-S
...
```

show chassis hardware detail (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
```


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```
Chassis                                 JN11D1FD7AJA      PTX5000
Midplane         REV 03   711-031896   ABAC5589          Midplane-8S
FPM              REV 08   760-030647   EG1679            Front Panel Display
PDU 0            Rev 05   740-032019   ZE00006           DC Power Dist Unit
  PSM 0          Rev 05   740-032022   ZJ00018           DC 12V Power Supply
  PSM 1          Rev 04   740-032022   ZC00052           DC 12V Power Supply
  PSM 2          Rev 04   740-032022   ZD00051           DC 12V Power Supply
  PSM 3          Rev 05   740-032022   ZJ00060           DC 12V Power Supply
CCG 0            REV 04   750-030653   EG3703            Clock Generator
CCG 1            REV 04   750-030653   EG3698            Clock Generator
Routing Engine 0 REV 05   740-026942   P737A-002231      RE-DUO-2600
  ad0    3823 MB  SMART CF             201006190039C02DC02D Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 2011042300CF4C6B4C6B Disk 1
Routing Engine 1 REV 06   740-026942   P737A-002438      RE-DUO-2600
  ad0    3823 MB  SMART CF             20100619053455F055F0 Compact Flash
  ad1   62720 MB  SMART Lite SATA Drive 20110423000AE8E7E8E7 Disk 1
CB 0             REV 08   750-030625   EG5519            Control Board
CB 1             REV 08   750-030625   EG5516            Control Board
FPC 0            REV 18   750-036844   EJ3080            FPC
  CPU            REV 12   711-030686   EJ3260            SNG PMB
FPC 2            REV 13   750-036844   EG5065            FPC
  CPU            REV 09   711-030686   EG4082            SNG PMB
  PIC 0          REV 14   750-031913   EG5127            24x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   143363A00240      SFP+-10G-SR
    Xcvr 1       REV 01   740-031981   UK90PZ1           SFP+-10G-LR
    Xcvr 2       REV 01   740-031980   AD1141A04XH       SFP+-10G-SR
    Xcvr 3       REV 01   740-031981   UK90Q46           SFP+-10G-LR
    Xcvr 4       REV 01   740-031980   AD1141A04X4       SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   B11H02560         SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11C01589         SFP+-10G-SR
    Xcvr 8       REV 01   740-031980   AD1141A04XF       SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   123363A01094      SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AK80LKF           SFP+-10G-SR
    Xcvr 12      REV 01   740-031980   183363A01528      SFP+-10G-SR
    Xcvr 14      REV 01   740-031980   193363A01079      SFP+-10G-SR
    Xcvr 15      REV 01   740-031980   AK80MC8           SFP+-10G-SR
    Xcvr 16      REV 01   740-031980   AJC0BHC           SFP+-10G-SR
    Xcvr 19      REV 01   740-021309   J08D26856         SFP+-10G-LR
    Xcvr 21      REV 01   740-031980   AK80KCT           SFP+-10G-SR
    Xcvr 22      REV 01   740-031981   UK90PZL           SFP+-10G-LR
    Xcvr 23      REV 01   740-031980   AK80N1V           SFP+-10G-SR
FPC 3            REV 13   750-036844   EG5074            FPC
  CPU            REV 09   711-030686   EG4064            SNG PMB
  PIC 1          REV 10   750-031903   EG0325            SNG Load
FPC 5            REV 06   750-036844   EH3198            FPC
  CPU
  PIC 0          REV 14   750-031913   EG5134            24x 10GE(LAN) SFP+
    Xcvr 0       REV 01   740-031980   AK80LBH           SFP+-10G-SR
    Xcvr 1       REV 01   740-031980   B11B03724         SFP+-10G-SR
    Xcvr 2       REV 01   740-031980   AK80FMH           SFP+-10G-SR
    Xcvr 5       REV 01   740-031980   B11J00818         SFP+-10G-SR
    Xcvr 6       REV 01   740-031980   193363A00743      SFP+-10G-SR
    Xcvr 7       REV 01   740-031980   B11B06125         SFP+-10G-SR
    Xcvr 10      REV 01   740-031980   B11H02529         SFP+-10G-SR
    Xcvr 11      REV 01   740-031980   AK80LFB           SFP+-10G-SR
    Xcvr 12      REV 01   740-031980   193363A01061      SFP+-10G-SR
    Xcvr 15      REV 01   740-031980   B11J00687         SFP+-10G-SR
    Xcvr 16      REV 01   740-031980   193363A00738      SFP+-10G-SR
    Xcvr 18      REV 01   740-031980   AK80MQX           SFP+-10G-SR
    Xcvr 19      REV 01   740-021309   J08C17257         SFP+-10G-LR
    Xcvr 22      REV 01   740-031980   B11J00730         SFP+-10G-SR
```

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```
    Xcvr 23      REV 01   740-031980   AK80KEE          SFP+-10G-SR
  PIC 1          REV 08   750-036710   EG3105           2x 40GE CFP
    Xcvr 0       REV 01   740-034554   B260HLT          CFP-40G-LR4
    Xcvr 1       REV 01   740-034554   B11C02847        CFP-40G-LR4
FPC 6            REV 18   750-036844   EJ4391           FPC
  CPU            REV 12   711-030686   EJ3257           SNG PMB
FPC 7            REV 18   750-036844   EJ4382           FPC
  CPU            REV 12   711-030686   EJ3238           SNG PMB
SPMB 0           REV 10   711-030686   EG5418           SNG PMB
SPMB 1           REV 09   711-030686   EG5373           SNG PMB
SIB 0            REV 07   750-030631   EG4858           SIB-I-8S
SIB 1            REV 07   750-030631   EG4872           SIB-I-8S
SIB 2            REV 07   750-030631   EG4866           SIB-I-8S
SIB 3            REV 07   750-030631   EG6011           SIB-I-8S
SIB 4            REV 07   750-030631   EG4907           SIB-I-8S
SIB 5            REV 07   750-030631   EG4879           SIB-I-8S
SIB 6            REV 07   750-030631   EG4864           SIB-I-8S
SIB 7            REV 07   750-030631   EG4899           SIB-I-8S
SIB 8            REV 07   750-030631   EG4880           SIB-I-8S
Fan Tray 0       REV 04   760-032784   EG1496           Vertical Fan Tray
Fan Tray 1       REV 04   760-030642   EG1335           Horizontal Fan Tray
Fan Tray 2       REV 02   760-030642   ED4952           Horizontal Fan Tray
```

show chassis hardware detail (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN12223A6AJA      PTX5000
Midplane         REV 16   750-035893   ACRA1350          Midplane-8S
FPM              REV 12   760-030647   BBBD5625          Front Panel Display
PDU 0           Rev 01   740-048338   1GB83360005       High Capacity AC WYE PDU

  PSM 0          Rev 01   740-048334   1GB43360074       High Capacity AC PSM
  PSM 1          Rev 01   740-048334   1GB43360001       High Capacity AC PSM
  PSM 2          Rev 01   740-048334   1GB43360104       High Capacity AC PSM
  PSM 3          Rev 01   740-048334   1GB43360042       High Capacity AC PSM
  PSM 4          Rev 01   740-048334   1GB43360068       High Capacity AC PSM
  PSM 5          Rev 01   740-048334   1GB43360080       High Capacity AC PSM
  PSM 6          Rev 01   740-048334   1GB43360046       High Capacity AC PSM
  PSM 7          Rev 01   740-048334   1GB43360100       High Capacity AC PSM
PDU 1           Rev 01   740-048338   1GB83360006       High Capacity AC WYE PDU

  PSM 0          Rev 01   740-048334   1GB43360069       High Capacity AC PSM
  PSM 1          Rev 01   740-048334   1GB43360099       High Capacity AC PSM
  PSM 2          Rev 01   740-048334   1GB43360050       High Capacity AC PSM
  PSM 3          Rev 01   740-048334   1GB43360095       High Capacity AC PSM
  PSM 4          Rev 01   740-048334   1GB43360101       High Capacity AC PSM
  PSM 5          Rev 01   740-048334   1GB43360075       High Capacity AC PSM
  PSM 6          Rev 01   740-048334   1GB43360047       High Capacity AC PSM
  PSM 7          Rev 01   740-048334   1GB43360019       High Capacity AC PSM
CCG 0            REV 09   750-030653   BBAZ5345          Clock Generator
```

show chassis hardware detail (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1204FC0AJA      PTX5000
Midplane         REV 11   750-035893   ACAB8038          Midplane-8S
```


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```
FPM              REV 12   760-030647   BBBD5619          Front Panel
Display
PDU 0            Rev 04   740-048336   1GB93470043       High Capacity DC PDU
  PSM 0          Rev 04   740-046988   1GB63500184       High Capacity DC PSM
  PSM 2          Rev 04   740-046988   1GB63500169       High Capacity DC PSM
  PSM 4          Rev 04   740-046988   1GB63500306       High Capacity DC PSM
  PSM 6          Rev 04   740-046988   1GB63500074       High Capacity DC PSM
PDU 1            Rev 04   740-048336   1GB93470045       High Capacity DC PDU
  PSM 1          Rev 04   740-046988   1GB63500193       High Capacity DC PSM
  PSM 3          Rev 04   740-046988   1GB63500143       High Capacity DC PSM
  PSM 5          Rev 04   740-046988   1GB63500146       High Capacity DC PSM
  PSM 7          Rev 04   740-046988   1GB63500192       High Capacity DC PSM
CCG 0            REV 09   750-030653   BBBC1909          Clock Generator
CCG 1            REV 09   750-030653   BBBD2970          Clock Generator
...
```

show chassis hardware models (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
FPM              REV 08   760-030647   EG1679            CRAFT-PTX5000-S
PDU 0            Rev 05   740-032019   ZE00006           PWR-SAN-PDU-DC
  PSM 0          Rev 05   740-032022   ZJ00018           PSM-PTX-DC-120-S
  PSM 1          Rev 04   740-032022   ZC00052           PWR-SAN-12-DC
  PSM 2          Rev 04   740-032022   ZD00051           PWR-SAN-12-DC
  PSM 3          Rev 05   740-032022   ZJ00060           PSM-PTX-DC-120-S
CCG 0            REV 04   750-030653   EG3703            CCG-PTX-S
CCG 1            REV 04   750-030653   EG3698            CCG-PTX-S
Routing Engine 0 REV 05   740-026942   P737A-002231      RE-DUO-C2600-16G-S
Routing Engine 1 REV 06   740-026942   P737A-002438      RE-DUO-C2600-16G-S
CB 0             REV 08   750-030625   EG5519            CB-PTX-S
CB 1             REV 08   750-030625   EG5516            CB-PTX-S
FPC 0            REV 18   750-036844   EJ3080            FPC-PTX-P1-A
FPC 2            REV 13   750-036844   EG5065            FPC-PTX-P1-A
  PIC 0          REV 14   750-031913   EG5127            P1-PTX-24-10GE-SFPP
FPC 3            REV 13   750-036844   EG5074            FPC-PTX-P1-A
FPC 5
  PIC 0          REV 14   750-031913   EG5134            P1-PTX-24-10GE-SFPP
FPC 6            REV 18   750-036844   EJ4391            FPC-PTX-P1-A
FPC 7            REV 18   750-036844   EJ4382            FPC-PTX-P1-A
SIB 0            REV 07   750-030631   EG4858            SIB-I-PTX5008
SIB 1            REV 07   750-030631   EG4872            SIB-I-PTX5008
SIB 2            REV 07   750-030631   EG4866            SIB-I-PTX5008
SIB 3            REV 07   750-030631   EG6011            SIB-I-PTX5008
SIB 4            REV 07   750-030631   EG4907            SIB-I-PTX5008
SIB 5            REV 07   750-030631   EG4879            SIB-I-PTX5008
SIB 6            REV 07   750-030631   EG4864            SIB-I-PTX5008
SIB 7            REV 07   750-030631   EG4899            SIB-I-PTX5008
SIB 8            REV 07   750-030631   EG4880            SIB-I-PTX5008
Fan Tray 1       REV 04   760-030642   EG1335            FAN-PTX-H-S
```

show chassis hardware models (PTX5000 Packet Transport Router with AC PSM and PDU)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 16   750-035893   ACRA1350          CHAS-MP-PTX5000-S
FPM              REV 12   760-030647   BBBD5625          CRAFT-PTX5000-S
PDU 0            Rev 01   740-048338   1GB83360005       PDU2-PTX-AC-W
```

```
  PSM 0          Rev 01   740-048334   1GB43360074       PSM2-PTX-AC
  PSM 1          Rev 01   740-048334   1GB43360001       PSM2-PTX-AC
  PSM 2          Rev 01   740-048334   1GB43360104       PSM2-PTX-AC
  PSM 3          Rev 01   740-048334   1GB43360042       PSM2-PTX-AC
  PSM 4          Rev 01   740-048334   1GB43360068       PSM2-PTX-AC
  PSM 5          Rev 01   740-048334   1GB43360080       PSM2-PTX-AC
  PSM 6          Rev 01   740-048334   1GB43360046       PSM2-PTX-AC
  PSM 7          Rev 01   740-048334   1GB43360100       PSM2-PTX-AC
PDU 1            Rev 01   740-048338   1GB83360006       PDU2-PTX-AC-W
  PSM 0          Rev 01   740-048334   1GB43360069       PSM2-PTX-AC
  PSM 1          Rev 01   740-048334   1GB43360099       PSM2-PTX-AC
  PSM 2          Rev 01   740-048334   1GB43360050       PSM2-PTX-AC
  PSM 3          Rev 01   740-048334   1GB43360095       PSM2-PTX-AC
  PSM 4          Rev 01   740-048334   1GB43360101       PSM2-PTX-AC
  PSM 5          Rev 01   740-048334   1GB43360075       PSM2-PTX-AC
  PSM 6          Rev 01   740-048334   1GB43360047       PSM2-PTX-AC
  PSM 7          Rev 01   740-048334   1GB43360019       PSM2-PTX-AC
CCG 0            REV 09   750-030653   BBAZ5345          CCG-PTX-S
...
```

show chassis hardware models (PTX5000 Packet Transport Router with FPC2-PTX-P1A)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 11   750-035893   ACAB8038          CHAS-MP-PTX5000-S
FPM              REV 12   760-030647   BBBD5619          CRAFT-PTX5000-S
PDU 0            Rev 04   740-048336   1GB93470043       PDU2-PTX-DC-S
  PSM 0          Rev 04   740-046988   1GB63500184       PSM2-PTX-DC-S
  PSM 2          Rev 04   740-046988   1GB63500169       PSM2-PTX-DC-S
  PSM 4          Rev 04   740-046988   1GB63500306       PSM2-PTX-DC-S
  PSM 6          Rev 04   740-046988   1GB63500074       PSM2-PTX-DC-S
PDU 1            Rev 04   740-048336   1GB93470045       PDU2-PTX-DC-S
  PSM 1          Rev 04   740-046988   1GB63500193       PSM2-PTX-DC-S
  PSM 3          Rev 04   740-046988   1GB63500143       PSM2-PTX-DC-S
  PSM 5          Rev 04   740-046988   1GB63500146       PSM2-PTX-DC-S
  PSM 7          Rev 04   740-046988   1GB63500192       PSM2-PTX-DC-S
CCG 0            REV 09   750-030653   BBBC1909          CCG-PTX-S
CCG 1            REV 09   750-030653   BBBD2970          CCG-PTX-S
...
```

show chassis hardware extensive (PTX5000 Packet Transport Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
................
PDU 0            Rev 04   740-032019   UE0003            DC Power Dist Unit
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-032019        S/N:               UE0003
 Assembly ID:  0x043d            Assembly Version:  04.00
 Date:         11-29-2010        Assembly Flags:    0x00
 Version:      Rev 04            CLEI Code:         032022XXXX
 ID: DC Power Dist Unit          FRU Model Number:  PWR-SAN-PDU-DC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 3d 04 00 52 65 76 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 32 30 31 39 00 00
  Address 0x20: 53 2f 4e 20 55 45 30 30 30 33 00 00 00 1d 0b 07
```


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```
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 30 33 32 30 32 32 58 58 58 58 50
  Address 0x50: 57 52 2d 53 41 4e 2d 50 44 55 2d 44 43 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 a3 ff ff ff ff ff ff ff ff ff ff ff ff
  PSM 0          Rev 04   740-032022   YG00065           DC 12V Power Supply
Module
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          740-032022        S/N:               YG00065
 Assembly ID:  0x0440            Assembly Version:  04.00
 Date:         07-30-2010        Assembly Flags:    0x00
 Version:      Rev 04            CLEI Code:         032022XXXX
 ID: DC 12V Power Supply Module  FRU Model Number:  PWR-SAN-12-DC
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 04 40 04 00 52 65 76 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 34 30 2d 30 33 32 30 32 32 00 00
  Address 0x20: 53 2f 4e 20 59 47 30 30 30 36 35 00 00 1e 07 07
  Address 0x30: da ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 30 33 32 30 32 32 58 58 58 58 50
  Address 0x50: 57 52 2d 53 41 4e 2d 31 32 2d 44 43 20 20 20 20
  Address 0x60: 20 20 20 20 20 20 01 00 ff ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 0c ff ff ff ff ff ff ff ff ff ff ff ff
```

show chassis hardware extensive (PTX1000 Packet Transport Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                UNDEFINED         PTX1000
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           RE-PTX1000
FPC 0            REV 06   750-053330   ACAM4850          PTX1000-FPC-P2-BUILTIN
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                  BUILTIN      BUILTIN          288X10GE/72X40GE/24X100GE

    Xcvr 2       REV 01   740-046565   QE240845          QSFP+-40G-SR4
    Xcvr 3       REV 01   740-046565   QE240962          QSFP+-40G-SR4
    Xcvr 5       REV 01   740-032986   ES400LZ           QSFP+-40G-SR4
    Xcvr 12      REV 01   740-054053   QE419452          QSFP+-4X10G-SR
    Xcvr 18      REV 01   740-054053   QE419481          QSFP+-4X10G-SR
    Xcvr 30      REV 01   740-046565   QE440485          QSFP+-40G-SR4
    Xcvr 48      REV 01   740-032986   ES400K3           QSFP+-40G-SR4
    Xcvr 68      REV 01   740-046565   QF2805J3          QSFP+-40G-SR4
  Mezz           REV 05   711-053333   ACAM4282          Mezzanine Board
Power Supply 2   REV 01   740-054405   1EDN4470131       AC AFO 1600W PSU
Power Supply 3   REV 01   740-054405   1EDN4470112       AC AFO 1600W PSU
Fan Tray 0                                              PTX1000 Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                              PTX1000 Fan Tray 1, Front
 to Back Airflow - AFO
Fan Tray 2                                              PTX1000 Fan Tray 2, Front
 to Back Airflow - AFO
```

show chassis hardware extensive (PTX5000 with Control Board 2)

```
user@host> show chassis hardware grep CB
CB 0             REV 06   750-055537   ACLZ9541          Control Board 2
CB 1             REV 06   750-055537   ACLY5329          Control Board 2
```

show chassis hardware (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                JN1100FB1AFB      MX480
Midplane         REV 05   710-017414   TR3310            MX480 Midplane
FPM Board        REV 02   710-017254   KG1872            Front Panel Display
PEM 2            Rev 02   740-017343   QCS0812A00N       DC Power Entry Module
PEM 3            Rev 02   740-017343   QCS0812A00U       DC Power Entry Module
Routing Engine 0 REV 07   740-015113   1000740938        RE-S-1300
CB 0             REV 03   710-021523   KF4630            MX SCB
FPC 1            REV 11   750-037207   ZW9726            AS-MCC
  CPU            REV 04   711-038173   ZW4819            AS-MCC PMB
  MIC 0          REV 06   750-037214   ZW3574            AS-MSC
    PIC 0                 BUILTIN      BUILTIN           AS-MSC
  MIC 1          REV 00   750-037211                      AS-MXC
    PIC 2                 BUILTIN      BUILTIN           AS-MXC
```

show chassis hardware extensive (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis hardware extensive
FPC 1            REV 11   750-037207   ZW9726            AS-MCC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          750-037207        S/N:               ZW9726
 Assembly ID:  0x0b37            Assembly Version:  01.11
 Date:         02-17-2012        Assembly Flags:    0x00
 Version:      REV 11            CLEI Code:         PROTOXCLEI
 ID: AS-MCC          FRU Model Number:  750-037207
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 37 01 0b 52 45 56 20 31 31 00 00
  Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 30 37 00 00
  Address 0x20: 53 2f 4e 20 5a 57 39 37 32 36 00 00 00 11 02 07
  Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 35 30 2d 30 33 37 32 30 37 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 31 31 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 5e ff ff ff ff ff ff ff ff ff ff ff ff
  CPU            REV 04   711-038173   ZW4819            AS-MCC-PMB
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          711-038173        S/N:               ZW4819
 Assembly ID:  0x0b38            Assembly Version:  01.04
 Date:         12-30-2011        Assembly Flags:    0x00
 Version:      REV 04
 ID: AS-MCC PMB
 Board Information Record:
  Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 0b 38 01 04 52 45 56 20 30 34 00 00
  Address 0x10: 00 00 00 00 37 31 31 2d 30 33 38 31 37 33 00 00
  Address 0x20: 53 2f 4e 20 5a 57 34 38 31 39 00 00 00 1e 0c 07
  Address 0x30: db ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
  Address 0x40: ff ff ff ff 00 50 52 4f 54 4f 58 43 4c 45 49 37
  Address 0x50: 31 31 2d 30 33 38 31 37 33 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 30 34 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 60 00 00 00 00 00 00 00 00 00 00 00 00
  MIC 0          REV 06   750-037214   ZW3574            AS-MSC
```


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```
Jedec Code:   0x7fb0            EEPROM Version:    0x02
P/N:          750-037214        S/N:               ZW3574
Assembly ID:  0x0a44            Assembly Version:  01.06
Date:         02-19-2012        Assembly Flags:    0x00
Version:      REV 06            CLEI Code:         PROTOXCLEI
ID: AS-MSC          FRU Model Number:  750-037214
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 02 ff 0a 44 01 06 52 45 56 20 30 36 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 34 00 00
 Address 0x20: 53 2f 4e 20 5a 57 33 35 37 34 00 00 00 13 02 07
 Address 0x30: dc ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 37
 Address 0x50: 35 30 2d 30 33 37 32 31 34 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 30 36 00 ff ff ff ff ff ff ff
 Address 0x70: ff ff ff 60 c0 03 e5 f4 00 00 00 00 00 00 00 00
   PIC 0                 BUILTIN      BUILTIN           AS-MSC
 MIC 1          REV 00   750-037211                     AS-MXC
Jedec Code:   0x7fb0            EEPROM Version:    0x01
P/N:          750-037211
Assembly ID:  0x0a43            Assembly Version:  01.00
Date:         255-255-65535     Assembly Flags:    0x00
Version:      REV 00
ID: AS-MXC
Board Information Record:
 Address 0x00: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
I2C Hex Data:
 Address 0x00: 7f b0 01 ff 0a 43 01 00 52 45 56 20 30 30 00 00
 Address 0x10: 00 00 00 00 37 35 30 2d 30 33 37 32 31 31 00 00
 Address 0x20: 00 00 00 00 00 00 00 00 00 00 00 00 00 ff ff ff
 Address 0x30: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x40: ff ff ff ff 00 ff ff ff ff ff ff ff ff ff ff ff
 Address 0x50: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x60: ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff ff
 Address 0x70: ff ff ff ff c0 02 e6 6c 7f b0 02 ff 0a 44 01 06
   PIC 2                 BUILTIN      BUILTIN           AS-MXC
```

show chassis hardware (ACX5048 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VF3714170810      ACX5048
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           ACX5K Routing Engine
FPC 0            REV 05   650-056267   VF3714170810      ACX5048
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x10G-6x40G
    Xcvr 0       REV 02   740-011613   NR2051S           SFP-SX
    Xcvr 33      REV 01   740-030589   SE5N290041        SFP+-10G-LPBK
    Xcvr 35      REV 01   740-030589   SE5N290926        SFP+-10G-LPBK
    Xcvr 37      REV 01   740-030589   SE5N290049        SFP+-10G-LPBK
    Xcvr 39      REV 01   740-030589   SE5N290046        SFP+-10G-LPBK
    Xcvr 48              NON-JNPR     409310098         UNKNOWN
Power Supply 1   REV 03   740-041741   1GA24081097       JPSU-650W-AC-AFO
Fan Tray 0                                              ACX5K Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                              ACX5K Fan Tray 1, Front
 to Back Airflow - AFO
```

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```
Fan Tray 2                                                    ACX5K Fan Tray 2, Front
 to Back Airflow - AFO
Fan Tray 3                                                    ACX5K Fan Tray 3, Front
 to Back Airflow - AFO
Fan Tray 4                                                    ACX5K Fan Tray 4, Front
 to Back Airflow - AFO
```

show chassis hardware detail (ACX5048 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VF3714170810      ACX5048
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           ACX5K Routing Engine
  ad0      509 MB  QEMU HARDDISK        QM00001           Hard Disk
  ad1     4095 MB  QEMU HARDDISK        QM00002           Hard Disk
  ad2      511 MB  QEMU HARDDISK        QM00003           Hard Disk
  ad3     1023 MB  QEMU HARDDISK        QM00004           Hard Disk
  usb0 (addr 1)  product 0x0000 0       vendor 0x0000     uhub1
  usb0 (addr 2)  product 0x0020 32      vendor 0x8087     uhub2
FPC 0            REV 05   650-056267   VF3714170810      ACX5048
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           48x10G-6x40G
    Xcvr 0       REV 02   740-011613   NR2051S           SFP-SX
    Xcvr 33      REV 01   740-030589   SE5N290041        SFP+-10G-LPBK
    Xcvr 35      REV 01   740-030589   SE5N290926        SFP+-10G-LPBK
    Xcvr 37      REV 01   740-030589   SE5N290049        SFP+-10G-LPBK
    Xcvr 39      REV 01   740-030589   SE5N290046        SFP+-10G-LPBK
    Xcvr 48               NON-JNPR     409310098         UNKNOWN
Power Supply 1   REV 03   740-041741   1GA24081097       JPSU-650W-AC-AFO
Fan Tray 0                                                ACX5K Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                                ACX5K Fan Tray 1, Front
 to Back Airflow - AFO
Fan Tray 2                                                ACX5K Fan Tray 2, Front
 to Back Airflow - AFO
Fan Tray 3                                                ACX5K Fan Tray 3, Front
 to Back Airflow - AFO
Fan Tray 4                                                ACX5K Fan Tray 4, Front
 to Back Airflow - AFO
```

show chassis hardware clei-models (ACX5048 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Routing Engine 0          BUILTIN      CMMRG00BRA        ACX5048
FPC 0            REV 05   650-056267   CMMRG00BRA        ACX5048
  PIC 0                   BUILTIN      CMMRG00BRA        ACX5048
Power Supply 1   REV 03   740-041741   CMUPABHBAA        JPSU-650W-AC-AFO
Fan Tray 0                                              ACX5K-FAN
Fan Tray 1                                              ACX5K-FAN
Fan Tray 2                                              ACX5K-FAN
Fan Tray 3                                              ACX5K-FAN
Fan Tray 4                                              ACX5K-FAN
```

show chassis hardware models (ACX5048 Router)

```
user@host> show chassis hardware models
```


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```
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Routing Engine 0          BUILTIN      BUILTIN           ACX5048
FPC 0            REV 05   650-056267   VF3714170810      ACX5048
  PIC 0                   BUILTIN      BUILTIN           ACX5048
Power Supply 1   REV 03   740-041741   1GA24081097       JPSU-650W-AC-AFO
Fan Tray 0                                              ACX5K-FAN
Fan Tray 1                                              ACX5K-FAN
Fan Tray 2                                              ACX5K-FAN
Fan Tray 3                                              ACX5K-FAN
Fan Tray 4                                              ACX5K-FAN
```

show chassis hardware (ACX5096 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VB3714510139      ACX5096
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           ACX5K Routing Engine
FPC 0            REV 09   650-053391   VB3714510139      ACX5096
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           96x10G-8x40G
    Xcvr 0       REV 01   740-021308   ARS186H           SFP+-10G-SR
    Xcvr 2       REV 01   740-031851   AM1045SUA1G       SFP-SX
    Xcvr 10      REV 02   740-011613   NS11KRP           SFP-SX
    Xcvr 14      REV 01   740-031980   AMC0LKL           SFP+-10G-SR
    Xcvr 20      REV 01   740-021308   ARS18A2           SFP+-10G-SR
    Xcvr 30      REV 02   740-011613   PJ21954           SFP-SX
    Xcvr 35      REV 01   740-031851   PN344LV           SFP-SX
    Xcvr 40      REV 01   740-031851   PLG028R           SFP-SX
    Xcvr 41      REV 01   740-021308   L12D01919         SFP+-10G-SR
    Xcvr 46      REV 01   740-011613   PD91F10           SFP-SX
    Xcvr 64      REV 01   740-031980   AMS0YSS           SFP+-10G-SR
    Xcvr 96      REV 01   740-032986   QE481421          QSFP+-40G-SR4
    Xcvr 99      REV 01   740-032986   QE494942          QSFP+-40G-SR4
    Xcvr 100     REV 01   740-032986   QE494756          QSFP+-40G-SR4
Power Supply 0   REV 01   740-053352   1GD14220106       JPSU-850W-AC-AFO
Power Supply 1   REV 01   740-053352   1GD14220102       JPSU-850W-AC-AFO
Fan Tray 0                                              ACX5K Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                              ACX5K Fan Tray 1, Front
 to Back Airflow - AFO
Fan Tray 2                                              ACX5K Fan Tray 2, Front
 to Back Airflow - AFO
```

show chassis hardware detail (ACX5096 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VB3714510139      ACX5096
Pseudo CB 0
Routing Engine 0          BUILTIN      BUILTIN           ACX5K Routing Engine
  ad0      509 MB  QEMU HARDDISK       QM00001           Hard Disk
  ad1     4095 MB  QEMU HARDDISK       QM00002           Hard Disk
  ad2      511 MB  QEMU HARDDISK       QM00003           Hard Disk
  ad3     1023 MB  QEMU HARDDISK       QM00004           Hard Disk
  usb0 (addr 1)  product 0x0000 0      vendor 0x0000     uhub1
  usb0 (addr 2)  product 0x0020 32     vendor 0x8087     uhub2
```

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```
FPC 0            REV 09   650-053391   VB3714510139      ACX5096
  CPU                     BUILTIN      BUILTIN           FPC CPU
  PIC 0                   BUILTIN      BUILTIN           96x10G-8x40G
    Xcvr 0       REV 01   740-021308   ARS186H           SFP+-10G-SR
    Xcvr 10      REV 02   740-011613   NS11KRP           SFP-SX
    Xcvr 14      REV 01   740-031980   AMC0LKL           SFP+-10G-SR
    Xcvr 20      REV 01   740-021308   ARS18A2           SFP+-10G-SR
    Xcvr 30      REV 02   740-011613   PJ21954           SFP-SX
    Xcvr 41      REV 01   740-021308   L12D01919         SFP+-10G-SR
    Xcvr 46      REV 01   740-011613   PD91F10           SFP-SX
    Xcvr 64      REV 01   740-031980   AMS0YSS           SFP+-10G-SR
    Xcvr 78      REV 01   740-031851   AM1045SUA1G       SFP-SX
    Xcvr 96      REV 01   740-032986   QE481421          QSFP+-40G-SR4
    Xcvr 99      REV 01   740-032986   QE494942          QSFP+-40G-SR4
    Xcvr 100     REV 01   740-032986   QE494756          QSFP+-40G-SR4
Power Supply 0   REV 01   740-053352   1GD14220106       JPSU-850W-AC-AFO
Power Supply 1   REV 01   740-053352   1GD14220102       JPSU-850W-AC-AFO
Fan Tray 0                                              ACX5K Fan Tray 0, Front
 to Back Airflow - AFO
Fan Tray 1                                              ACX5K Fan Tray 1, Front
 to Back Airflow - AFO
Fan Tray 2                                              ACX5K Fan Tray 2, Front
 to Back Airflow - AFO
```

show chassis hardware clei-models (ACX5096 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Routing Engine 0          BUILTIN      CMMNX10BRA        ACX5096
FPC 0            REV 09   650-053391   CMMNX10BRA        ACX5096
  PIC 0                   BUILTIN      CMMNX10BRA        ACX5096
Power Supply 0   REV 01   740-053352   CMUPACSBAA        JPSU-850W-AC-AFO
Power Supply 1   REV 01   740-053352   CMUPACSBAA        JPSU-850W-AC-AFO
Fan Tray 0                                              ACX5K-FAN
Fan Tray 1                                              ACX5K-FAN
Fan Tray 2                                              ACX5K-FAN
```

show chassis hardware models (ACX5096 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Routing Engine 0          BUILTIN      BUILTIN           ACX5096
FPC 0            REV 09   650-053391   VB3714510139      ACX5096
  PIC 0                   BUILTIN      BUILTIN           ACX5096
Power Supply 0   REV 01   740-053352   1GD14220106       JPSU-850W-AC-AFO
Power Supply 1   REV 01   740-053352   1GD14220102       JPSU-850W-AC-AFO
Fan Tray 0                                              ACX5K-FAN
Fan Tray 1                                              ACX5K-FAN
Fan Tray 2                                              ACX5K-FAN
```

show chassis hardware (ACX500 Router)

```
user@host> show chassis hardware
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                               VJ0214510035      ACX500-AC
Midplane         REV 01   650-055932   VJ0214510035      ACX500-AC
Routing Engine            BUILTIN      BUILTIN           Routing Engine
```


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```
FEB 0                    BUILTIN      BUILTIN          Forwarding Engine
Processor
FPC 0                    BUILTIN      BUILTIN          FPC BUILTIN
  MIC 0                  BUILTIN      BUILTIN          2x 1GE(LAN) SFP
    PIC 0                BUILTIN      BUILTIN          2x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   PMF2Y3C          SFP-SX
      Xcvr 1     REV 01   740-031851   PN342QN          SFP-SX
  MIC 1                  BUILTIN      BUILTIN          4x 1GE(LAN) SFP, RJ45
    PIC 1                BUILTIN      BUILTIN          4x 1GE(LAN) SFP, RJ45
      Xcvr 0     REV 01   740-011613   PF30K0L          SFP-SX
  MIC 2                  BUILTIN      BUILTIN          MS BUILTIN
    PIC 2                BUILTIN      BUILTIN          MS BUILTIN
```

show chassis hardware detail (ACX500 Router)

```
user@host> show chassis hardware detail
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VJ0214510035      ACX500-AC
Midplane         REV 01   650-055932   VJ0214510035      ACX500-AC
Routing Engine           BUILTIN      BUILTIN           Routing Engine
  da0    3820 MB  USB DISK 2.0                          Nand Flash 0
FEB 0                    BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                    BUILTIN      BUILTIN           FPC BUILTIN
  MIC 0                  BUILTIN      BUILTIN           2x 1GE(LAN) SFP
    PIC 0                BUILTIN      BUILTIN           2x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   PMF2Y3C           SFP-SX
      Xcvr 1     REV 01   740-031851   PN342QN           SFP-SX
  MIC 1                  BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
    PIC 1                BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
      Xcvr 0     REV 01   740-011613   PF30K0L           SFP-SX
  MIC 2                  BUILTIN      BUILTIN           MS BUILTIN
    PIC 2                BUILTIN      BUILTIN           MS BUILTIN
```

show chassis hardware extensive (ACX500 Router)

```
user@host> show chassis hardware extensive
Hardware inventory:
Item             Version  Part number  Serial number     Description
Chassis                                VJ0214510035      ACX500-AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
                                 S/N:               VJ0214510035
 Assembly ID:  0x057c            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: ACX500-AC
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 7f b0 02 ff 05 7c 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x20: 56 4a 30 32 31 34 35 31 30 30 33 35 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
Midplane         REV 01   650-055932   VJ0214510035      ACX500-AC
 Jedec Code:   0x7fb0            EEPROM Version:    0x02
 P/N:          650-055932        S/N:               VJ0214510035
```

```
 Assembly ID:  0x057c            Assembly Version:  01.00
 Date:         12-23-2014        Assembly Flags:    0x00
 Version:      REV 01            CLEI Code:         PROTOXCLEI
 ID: ACX500-AC                   FRU Model Number:  ACX500-AC
 Board Information Record:
  Address 0x00: ad 01 00 80 f0 1c 2d 1b 60 80 ff ff ff ff ff ff
 I2C Hex Data:
  Address 0x00: 7f b0 02 fe 05 7c 01 00 52 45 56 20 30 31 00 00
  Address 0x10: 00 00 00 00 36 35 30 2d 30 35 35 39 33 32 00 00
  Address 0x20: 56 4a 30 32 31 34 35 31 30 30 33 35 00 17 0c 07
  Address 0x30: de ff ff ff ad 01 00 80 f0 1c 2d 1b 60 80 ff ff
  Address 0x40: ff ff ff ff 01 50 52 4f 54 4f 58 43 4c 45 49 41
  Address 0x50: 43 58 35 30 30 2d 41 43 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 30 41 00 ff ff ff ff ff ff ff
  Address 0x70: ff ff ff 93 56 4a 30 32 31 34 35 31 30 30 33 35
Routing Engine            BUILTIN      BUILTIN           Routing Engine
  da0    3820 MB  USB DISK 2.0                          Nand Flash 0
FEB 0                     BUILTIN      BUILTIN           Forwarding Engine
Processor
FPC 0                     BUILTIN      BUILTIN           FPC BUILTIN
  MIC 0                   BUILTIN      BUILTIN           2x 1GE(LAN) SFP
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0a40            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: 2x 1GE(LAN) SFP
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a 40 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
  Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 de ad be ef 64 20 22 a8 60 af 21 38
    PIC 0                 BUILTIN      BUILTIN           2x 1GE(LAN) SFP
      Xcvr 0     REV 01   740-031851   PMF2Y3C           SFP-SX
      Xcvr 1     REV 01   740-031851   PN342QN           SFP-SX
 MIC 1                    BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
 Jedec Code:   0x0000            EEPROM Version:    0x00
 P/N:          BUILTIN           S/N:               BUILTIN
 Assembly ID:  0x0aac            Assembly Version:  00.00
 Date:         00-00-0000        Assembly Flags:    0x00
 ID: 4x 1GE(LAN) SFP, RJ45
 Board Information Record:
  Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 I2C Hex Data:
  Address 0x00: 00 00 00 00 0a ac 00 00 00 00 00 00 00 00 00 00
  Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
  Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
  Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  Address 0x70: 00 00 00 00 00 00 00 00 64 20 b5 c0 60 af 21 38
    PIC 1                 BUILTIN      BUILTIN           4x 1GE(LAN) SFP, RJ45
      Xcvr 0     REV 01   740-011613   PF30K0L           SFP-SX
 MIC 2                    BUILTIN      BUILTIN           MS BUILTIN
 Jedec Code:   0x0000            EEPROM Version:    0x00
```


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```
P/N:          BUILTIN           S/N:               BUILTIN
Assembly ID:  0x0aaf            Assembly Version:  00.00
Date:         00-00-0000        Assembly Flags:    0x00
ID: MS BUILTIN
Board Information Record:
 Address 0x00: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
I2C Hex Data:
 Address 0x00: 00 00 00 00 0a af 00 00 00 00 00 00 00 00 00 00
 Address 0x10: 00 00 00 00 42 55 49 4c 54 49 4e 00 49 6e 76 61
 Address 0x20: 42 55 49 4c 54 49 4e 00 49 6e 76 61 00 00 00 00
 Address 0x30: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x40: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x60: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
 Address 0x70: 00 00 00 00 de ad be ef 64 22 cd 48 60 af 21 38
   PIC 2                 BUILTIN      BUILTIN           MS BUILTIN
```

show chassis hardware clei-models (ACX500 Router)

```
user@host> show chassis hardware clei-models
Hardware inventory:
Item             Version  Part number  CLEI code         FRU model number
Midplane         REV 01   650-055932   PROTOXCLEI        ACX500-AC
Routing Engine            BUILTIN
FEB 0                     BUILTIN
FPC 0                     BUILTIN
```

show chassis hardware models (ACX500 Router)

```
user@host> show chassis hardware models
Hardware inventory:
Item             Version  Part number  Serial number     FRU model number
Midplane         REV 01   650-055932   VJ0214510035      ACX500-AC
Routing Engine            BUILTIN      BUILTIN
FEB 0                     BUILTIN      BUILTIN
FPC 0                     BUILTIN      BUILTIN
```

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show chassis fpc

List of Syntax

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Syntax

show chassis fpc
<detail <*slot*>> | <pic-status <*slot*>>

Syntax (EX Series Switches)

show chassis fpc
<detail <*fpc-slot*>> | <pic-status <*fpc-slot*>>
<*fpc-slot*>

Syntax (T4000 Routers)

show chassis fpc
<detail <*fpc-slot*>>
<pic-status <*fpc-slot*>>

Syntax (TX Matrix and TX Matrix Plus Routers)

show chassis fpc
<detail <*fpc-slot*>> | <pic-status <*fpc-slot*>>
<*slot*>

Syntax (MX Series Routers and EX Series switches)

show chassis fpc
<detail <*slot*>> | <pic-status <*slot*>>
<all-members>
<local>
<member *member-id*>

Syntax (MX104, MX204, MX2010, MX2020, MX10003, and MX2008 3D Universal Edge Routers)

show chassis fpc
<*slot*> detail | <detail <*slot*>> | <pic-status <*slot*>>
<*fpc-slot*>

Syntax (Mx10008 3D Universal Edge Routers)

show chassis fpc
<detail>
<errors>
<*fpc-slot*>
pic-status <*fpc-slot*>

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Syntax (QFX Series)

show chassis fpc
<detail>
<interconnect-device *name* <fpc-slot *fpc-slot*>>
<node-device *name*>

Syntax (OCX Series)

show chassis fpc
<detail>

Syntax (PTX Series Packet Transport Routers)

show chassis fpc
<detail <*fpc-slot*>> | <pic-status <*fpc-slot*>>
<*fpc-slot*>

Syntax (ACX Series Universal Metro Routers)

show chassis fpc
<detail <*fpc-slot*>> | <pic-status <*fpc-slot*>>
<*fpc-slot*>

Syntax (ACX500 Routers)

show chassis fpc
<*fpc-slot*>
detail <*fpc-slot*>
pic-status <*fpc-slot*>

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for QFX Series.
Command introduced in Junos OS Release 12.1x48 for PTX Series Packet Transport Routers.
Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.
Command introduced in Junos OS Release 12.3 for MX2020 3D Universal Edge Routers.
Command introduced in Junos OS Release 12.3 for MX2010 3D Universal Edge Routers.
Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
Command introduced in Junos OS Release 17.2 for MX2008 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.3 for MX150 Router Appliance.
Command introduced in Junos OS Release 17.4 for MX204 3D Universal Edge Routers.
Command introduced in Junos OS Release 18.1R1 for EX9251 switch.
Command introduced in Junos OS Release 18.2 for EX9253 Switches.

Description

Display status information about the installed Flexible PIC Concentrators (FPCs)and PICs.

Options

none—Display status information for all FPCs. On a TX Matrix router, display status information for all FPCs on the attached T640 routers in the routing matrix. On a TX Matrix Plus router, display status information for all FPCs on the attached routers in the routing matrix.

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NOTE: In EX8200 switches, line cards initialize Packet Forwarding Engine during startup. If an error occurs during hardware initialization, the FPCs with bad hardware parts power down after transferring the debug information to the Routing Engine. The Routing Engine marks the FPC offline, logs the error in system log messages (/var/log/messages), and generates an alarm to inform the user.

See the following sample output:

```
user@host> show chassis fpc
                    Temp  CPU Utilization (%)   Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap
  Buffer
  0  Empty
  1  Empty
  2  Empty
  3  Empty
  4  Empty
  5  Offline         ---Hard FPC error---
  6  Empty
  7  Online            26      4          0       1024        0
     32
```

The following sample output shows the alarm raised for the failed FPCs:

```
user@host> show chassis alarms
4 alarms currently active
Alarm time               Class  Description
2011-03-24 00:52:51 UTC  Major  FPC 5 Hard errors
2011-03-24 00:52:31 UTC  Major  Fan Tray Failure
2011-03-24 00:52:31 UTC  Major  Fan Tray Failure
2011-03-24 00:51:26 UTC  Minor  Loss of communication with Backup
RE
```


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NOTE: On T4000 routers, when you include the **enhanced-mode** statement at the **[edit chassis network-services]** hierarchy level and reboot the system, only the T4000 Type 5 FPCs present on the router become online while the remaining FPCs are offline, and FPC misconfiguration alarms are generated. The **show chassis alarm** command output displays FPC misconfiguration (FPC *fpc-slot* misconfig) as the reason for the generation the alarms.

The following sample output shows the FPC status after the **enhanced-mode** statement is configured on the T4000 router. The T4000 Type 5 FPC present in slot 5 becomes online while the remaining FPCs are offline.

```
user@host> show chassis fpc
                    Temp  CPU Utilization (%)   Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap
  Buffer
  0  offline         ---FPC misconfiguration---
  1  offline         ---FPC misconfiguration---
  2  offline         ---FPC misconfiguration---
  3  Empty
  4  Empty
  5  Online            66      50          0       2816       29
    27
```

The following sample output shows FPC misconfiguration alarms:

```
user@host> show chassis alarms
3 alarms currently active
Alarm time               Class  Description
2011-03-24 00:52:51 PST  Major  FPC 1 misconfig
2011-03-24 00:52:31 PST  Major  FPC 2 misconfig
2011-03-24 00:52:31 PST  Major  FPC 3 misconfig
```

detail—(Optional) Display detailed status information for all FPCs or for the FPC in the specified slot (see ***fpc-slot*** or ***slot***).

all-members—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on all members of the Virtual Chassis configuration.

interconnect-device ***name***—(QFabric systems only) (Optional) Display status information for all FPCs on the Interconnect device.

fpc-slot—(Optional) FPC slot number:

- (TX Matrix and TX Matrix Plus routers only)—On a TX Matrix router, if you specify the number of the T640 router (line-card chassis) by using the **lcc** ***number*** option (the recommended method), replace ***fpc-slot*** with a value from **0** through **7**. Otherwise, replace ***fpc-slot*** with a value from **0** through **31**. Likewise, on a TX Matrix

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Plus router, if you specify the number of the specified router (line-card chassis) by using the **lcc *number*** option (the recommended method), replace ***fpc-slot*** with a value from **0** through **7**. Otherwise, replace ***fpc-slot*** with a value from **0** through **31**. For example, the following commands have the same result:

```
user@host> show chassis fpc detail 1 lcc 1
user@host> show chassis fpc detail 9
```

- M120 router—Replace ***fpc-slot*** with a value from **0** through **5**.
- MX80 router—Replace ***fpc-slot*** with a value from **0** through **1**.
- MX104 and MX104-40G routers—Replace ***fpc-slot*** with a value from **0** through **2**.
- MX240 router—Replace ***fpc-slot*** with a value from **0** through **2**.
- MX480 router—Replace ***fpc-slot*** with a value from **0** through **5**.
- MX-960 router—Replace ***fpc-slot*** with a value from **0** through **11**.
- MX2010 router—Replace ***fpc-slot-number*** with a value from **0** through **9**.
- MX2008 router—Replace ***fpc-slot-number*** with a value from **0** through **9**.
- MX2020 router—Replace ***fpc-slot-number*** with a value from **0** through **19**.
- Other routers—Replace ***fpc-slot*** with a value from **0** through **7**.
- EX Series switches:
  - EX3200 switches and EX4200 standalone switches—Replace ***fpc-slot*** with **0**.
  - EX4200 switches in a Virtual Chassis configuration—Replace ***fpc-slot*** with a value from **0** through **9**.
  - EX6210 switches—Replace ***fpc-slot*** with a value from **0** through **9**.
  - EX8208 switches—Replace ***fpc-slot*** with a value from **0** through **7**.
  - EX8216 switches—Replace ***fpc-slot*** with a value from **0** through **15**.
  - EX9204 switches—Replace ***fpc-slot*** with a value from **0** through **2**.
  - EX9208 switches—Replace ***fpc-slot*** with a value from **0** through **5**.
  - EX9214 switches—Replace ***fpc-slot*** with a value from **0** through **11**.
- QFX Series:
  - QFXSeries and OCX Series switches—Replace ***fpc-slot*** with 0.
  - QFabric systems—Replace ***fpc-slot*** with 0 through 31 on the Interconnect device.
- PTX Series Packet Transport Routers:
  - PTX5000 Packet Transport Router—Replace ***fpc-slot*** with a value from **0** through **7**.
- ACX Series Universal Metro Routers:

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- ACX1000 and ACX2000 Universal Metro Routers—Replace ***fpc-slot*** with **0**.

local—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on the local Virtual Chassis member.

member *member-id*—(MX Series routers and EX Series switches only) (Optional) Display status information for all FPCs on the specified member of the Virtual Chassis configuration. Replace ***member-id*** with a value of 0 or 1.

node-device *name*—(QFabric systems only) (Optional) Display status information for each Node device. Each Node device is equivalent to an FPC.

pic-status—(Optional) Display status information for all PICs or for the PIC in the specified slot (see ***fpc-slot***).

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NOTE: On T1600 routers, Type 4 FPCs with ASICs based on the SL2.0 chipset do not support the 10-Gigabit Ethernet LAN/WAN PIC with SFP+ (10x10GE [LAN/WAN] SFPP). If you issue the **show chassis fpc** command with the **pic-status** option, the CLI displays the string "Not Supported" for 10x10GE(LAN/WAN) SFPP PICs installed on such FPCs. The following is a sample output:

```
user@host> show chassis fpc pic-status
Slot 0   Online       E2-FPC Type 1
  PIC 0  Online       1x G/E SFP, 1000 BASE
  PIC 1  Online       Adaptive Services-II
  PIC 2  Online       1x G/E IQ, 1000 BASE
  PIC 3  Online       1x G/E IQ, 1000 BASE
Slot 1   Online       FPC Type 3-ES
  PIC 0  Present      UNUSED- Not Supported
Slot 2   Online       FPC Type 4-ES
  PIC 0  Offline      4x OC-192 SONET XFP
  PIC 1  Present      10x10GE(LAN/WAN) SFPP- Not Supported
<<<<<<
Slot 4   Offline      FPC Type 1-ES
Slot 5   Offline      FPC Type 2-ES
Slot 6   Online       E2-FPC Type 3
  PIC 0  Online       1x OC-192 SONET XFP
  PIC 1  Online       4x OC-48 SONET
  PIC 2  Online       4x OC-48 SONET
  PIC 3  Online       MultiServices 500
Slot 7   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
```

In addition, an entry is logged in the system log messages (/var/log/messages) that the PIC is not supported. The following is a sample message logged in the system log:

```
Apr  5 08:47:36  router1 chassisd[2770]: CHASSISD_UNSUPPORTED_PIC:
 PIC 1 in FPC 2 (type 763, version 257) is not supported
```

If you see this issue, contact Juniper Networks Technical Assistance Center (JTAC) for a possible fix. For more information about this issue and a possible solution, see PSN-2010-03-696.

NOTE: When there is a double-bit ECC error in a network processor's memory, the Channelized OC3/STM1 (Multi-Rate) Circuit Emulation MIC with SFP or Channelized E1/T1 Circuit Emulation MIC is switched to the offline state.

```
user@host> show chassis fpc pic-status
Slot 1   Online       MPC Type 2 3D Q
PIC 0  Offline      1xCOC12/4xCOC3 CH-CE- ECC error detected
```


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lcc *number*—(TX Matrix router and TX Matrix Plus router only) (Optional) Line-card chassis number.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

Required Privilege Level view

Related Documentation

- *request chassis fpc*
- *show chassis fpc-feb-connectivity*
- *show chassis fabric fpcs*
- *Configuring the Junos OS to Resynchronize FPC Sequence Numbers with Active FPCs when an FPC Comes Online*
- *MX960 Flexible PIC Concentrator Description*
- *ACX2000 and ACX2100 Routers Hardware and CLI Terminology Mapping*
- *enhanced-mode*

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Output Fields Table 9 on page 376 lists the output fields for the **show chassis fpc** command. Output fields are listed in the approximate order in which they appear.

Table 9: show chassis fpc Output Fields

Field Name	Field Description	Level of Output

Slot or **Slot State**	Slot number and state. The state can be one of the following conditions:
	• **Dead**—Held in reset because of errors.
	• **Diag**—Slot is being ignored while the FPC is running diagnostics.
	• **Dormant**—Held in reset.
	• **Empty**—No FPC is present.
	• **Offline**—(PTX Series Packet Transport Routers only) One of the following two states is displayed:
	  ◦ **FPC offlined due to unreachable destinations**
	  ◦ **FPC Offlined due to degraded FPC action**
	• **Online**—FPC is online and running.
	• **Present**—FPC is detected by the chassis daemon but either is not supported by the current version of Junos OS or is inserted in the wrong slot. The output also states either **Hardware Not Supported** or **Hardware Not In Right Slot**. The FPC is coming up but not yet online.
	• **Probed**—Probe is complete; awaiting restart of the Packet Forwarding Engine.
	• **Probe-wait**—Waiting to be probed.
		all levels

Logical slot	Slot number.	all levels
Temp (C) or **Temperature**	Temperature of the air passing by the FPC, in degrees Celsius or in both Celsius and Fahrenheit.	all levels all levels
Temperature (PTX Series)	On PTX Series Packet Transport Routers, temperature details are provided in degrees Celsius and Fahrenheit. Output includes: • Temperature (PMB)—Temperature of the air passing by the Processor Mezzanine Board (PMB) at the bottom of the FPC. • Temperature (Intake)—Temperature of the air flowing into the chassis. • Temperature (Exhaust)—Exhaust temperatures for multiple zones (Exhaust A and Exhaust B). • Temperature (TL*n*)-–Temperature of the specified Lookup ASIC (TL) of the packet forwarding engine on the FPC. • Temperature (TQ*n*)-–Temperature of the specified Queuing and Memory Interface ASIC (TQ) of the packet forwarding engine on the FPC.	**detail**
Total CPU Utilization (%)	Total percentage of CPU being used by the FPC's processor.	all levels
Interrupt CPU Utilization (%)	Of the total CPU being used by the FPC's processor, the percentage being used for interrupts.	none specified

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Table 9: show chassis fpc Output Fields (continued)

Field Name	Field Description	Level of Output
1 min CPU utilization (%) NOTE: Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 1 minute.	none specified
5 min CPU utilization (%) NOTE: Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 5 minutes.	none specified
15 min CPU utilization (%) NOTE: Supported only on MX240, MX480, MX960, MX2010, MX2020, and MX2008.	Information about the Routing Engine's CPU utilization in the past 15 minutes.	none specified
Memory DRAM (MB)	Total DRAM, in megabytes, available to the FPC's processor.	none specified
Heap Utilization (%)	Percentage of heap space (dynamic memory) being used by the FPC's processor. If this number exceeds 80 percent, there may be a software problem (memory leak). NOTE: On MX Series routers and EX Series switches in a broadband edge environment, heap utilization levels higher than 70 percent can affect unified ISSU, router stability, or scaling capability.	none specified
Buffer Utilization (%)	Percentage of buffer space being used by the FPC's processor for buffering internal messages.	none specified
Total CPU DRAM	Amount of DRAM available to the FPC's CPU.	**detail**
Total RLDRAM	Amount of reduced latency dynamic random access memory (RLDRAM) available to the FPC CPU.	**detail**
Total DDR DRAM	Amount of double data rate dynamic random access memory (DDR DRAM) available to the FPC CPU.	**detail**
Total SRAM	Amount of static RAM (SRAM) used by the FPC's CPU.	**detail**
Total SDRAM	Total amount of memory used for storing packets and notifications.	**detail**

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Table 9: show chassis fpc Output Fields (continued)

Field Name	Field Description	Level of Output
I/O Manager ASICs information	I/O Manager version number, manufacturer, and part number.	**detail**
Start time	Time when the Routing Engine detected that the FPC was running.	**detail**
Uptime	How long the Routing Engine has been connected to the FPC and, therefore, how long the FPC has been up and running.	**detail**
PIC type	(**pic-status** output only) Type of PIC.	none specified
GNF (Node slicing)	GNF identifier associated with each line card. (**pic-status** output only) GNF identifier associated with each PIC.	all levels

Sample Output

show chassis fpc (EX6210 Switch)

```
user@switch> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online             7      5          0       1024        0         32
  2  Empty
  3  Empty
  4  Online            25     17          2       2048        0         30
  5  Online            25      3          0       2048        0         24
  6  Online             6      5          0       1024        0         32
  7  Empty
  8  Empty
  9  Online             8      7          0       1024        0         32
```

show chassis fpc (M10 Router)

```
user@host> show chassis fpc
FPC status:
                Temp
Slot State       (C)
  0  Online       27
  1  Online       28
```

show chassis fpc (M20 Router)

```
user@host> show chassis fpc
FPC status:
                Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State       (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty         0      0          0          0         0          0
  1  Online       38      0          0          8         0          4
  2  Online       35      0          0          8         0          3
  3  Empty         0      0          0          0         0          0
```


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show chassis fpc detail (M Series Routers)

```
user@host> show chassis fpc detail 1
Slot 1 information:
  State                               Online
  Temperature                      48 degrees C
  Total CPU DRAM                   32 MB
  Total SRAM                        4 MB
  Total SDRAM                     256 MB
  I/O Manager ASICs information       Version 2.0, Foundry IBM, Part number 0
  I/O Manager ASICs information       Version 2.0, Foundry IBM, Part number 0
  Start time                          2000-02-08 02:18:49 UTC
  Uptime                              14 hours, 41 minutes, 41 seconds
```

show chassis fpc detail (MX150)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                      42 degrees C / 107 degrees F
  Total CPU DRAM                 2048 MB
  Total RLDRAM                     10 MB
  Total DDR DRAM                    0 MB
  Start time                          2017-04-04 04:44:04 PDT
  Uptime                              7 days, 19 hours, 45 minutes, 50 seconds
```

show chassis fpc detail (MX80 Router)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                      47 degrees C / 116 degrees F
  Total CPU DRAM                 1024 MB
  Total SRAM                      331 MB
  Total SDRAM                    1280 MB
  Start time                          2010-02-08 12:25:33 PST
  Uptime                              2 hours, 13 minutes, 19 seconds
Slot 1 information:
  State                               Online
  Temperature                      47 degrees C / 116 degrees F
  Total CPU DRAM                 1024 MB
  Total SRAM                      331 MB
  Total SDRAM                    1280 MB
  Start time                          2010-02-08 12:25:33 PST
  Uptime                              2 hours, 13 minutes, 19 seconds
```

show chassis fpc (MX104 Router)

```
user@host> show chassis fpc
Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            32     15          5       2048       22         13
  1  Online            32     15          5       2048       22         13
  2  Online            32     15          5       2048       22         13
```

show chassis fpc detail (MX104 Router)

```
user@host> show chassis fpc detail
```

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```
Slot 0 information:
  State                               Online
  Temperature                      32 (C)
  Total CPU DRAM                2048 MB
  Total SRAM                     403 MB
  Total SDRAM                  1316 MB
  Start time                          2013-05-23 14:39:18 IST
  Uptime                              1 hour, 20 minutes, 22 seconds
Slot 1 information:
  State                               Online
  Temperature                      32 (C)
  Total CPU DRAM                2048 MB
  Total SRAM                     403 MB
  Total SDRAM                  1316 MB
  Start time                          2013-05-23 14:39:18 IST
  Uptime                              1 hour, 20 minutes, 22 seconds
Slot 2 information:
  State                               Online
  Temperature                      32 (C)
  Total CPU DRAM                2048 MB
  Total SRAM                     403 MB
  Total SDRAM                  1316 MB
  Start time                          2013-05-23 14:39:18 IST
  Uptime                              1 hour, 20 minutes, 22 seconds
```

show chassis fpc pic-status (MX104 Router)

```
user@host> show chassis fpc pic-status
Slot 0   Online
Slot 1   Online
  PIC 0  Online       10x 1GE(LAN) -E  SFP
  PIC 1  Online       10x 1GE(LAN) -E  SFP
Slot 2   Online
  PIC 0  Online       4x 10GE(LAN) SFP+
```

show chassis fpc (MX240 Router)

```
user@host> show chassis fpc
                    Temp    CPU Utilization (%)     Memory       Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            34      6          0       1024       18         30
  2  Online            33      9          0       1024       24         30
```

show chassis fpc (MX480 Router)

```
user@host> show chassis fpc
                   Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State           (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            36      9          0       1024       17         57
  2  Empty
  3  Empty
  4  Empty
  5  Empty
```

show chassis fpc detail (EX9200 Switch)

```
user@switch> show chassis fpc detail
```


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```
Slot 2 information:
  State                                 Online
  Temperature                            37
  Total CPU DRAM                       2048 MB
  Total RLDRAM                          331 MB
  Total DDR DRAM                       1536 MB
  Start time:                           2014-03-12 15:35:28 UTC
  Uptime:                               1 hour, 4 minutes, 29 seconds
  Max Power Consumption                 239 Watts
Slot 3 information:
  State                                 Online
  Temperature                            39
  Total CPU DRAM                       2048 MB
  Total RLDRAM                         1036 MB
  Total DDR DRAM                       6656 MB
  Start time:                           2014-03-12 15:00:18 UTC
  Uptime:                               1 hour, 39 minutes, 39 seconds
  Max Power Consumption                 520 Watts
```

show chassis fpc (MX480 Router)

```
user@host> show chassis fpc
                    Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online                    1          0        1      2      3    1024
  4         56
  1  Online                    1          0        2      2      3    1024
  4         56
```

show chassis fpc (MX480 Router with 100-Gigabit Ethernet CFP)

```
user@host> show chassis fpc
        Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State     (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
 0  Online      33   4      0              2048      10       13
 1  Online      36   7      0              2048      16       13
 2  Online      29   6      0              1024      27       29
 3  Online      33   0      0                 0       0        0
 4  Online      36   7      0              2048      19       13
 5  Online      34  31      11             2048      14       13
```

show chassis fpc pic-status (MX480 Router with 100-Gigabit Ethernet CFP)

```
user@host> show chassis fpc pic-status
Slot 1   Online       MPC Type 3
  PIC 2  Online       1X100GE CFP
 Slot 2  Online       DPCE 40x 1GE R EQ
  PIC 0  Online       10x 1GE(LAN) EQ
  PIC 1  Online       10x 1GE(LAN) EQ
  PIC 2  Online       10x 1GE(LAN) EQ
  PIC 3  Online       10x 1GE(LAN) EQ
 Slot 3  Online       MPC Type 3
  PIC 0  Online       1X100GE CFP
  PIC 2  Online       1X100GE CFP
 Slot 4  Online       MPC Type 3
  PIC 0  Online       1X100GE CFP
  PIC 2  Online       1X100GE CFP
 Slot 5  Online       MPC Type 2 3D EQ
```

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```
  PIC 0  Online       2x 10GE  XFP
  PIC 1  Online       2x 10GE  XFP
  PIC 2  Online       10x 1GE(LAN) SFP
  PIC 3  Online       10x 1GE(LAN) SFP
```

show chassis fpc pic-status (EX Series Switch)

```
user@host> show chassis fpc pic-status
Slot 1   Online       EX9200 32x10G SFP
  PIC 0  Online       8X10GE SFPP
  PIC 1  Online       8X10GE SFPP
  PIC 2  Online       8X10GE SFPP
  PIC 3  Online       8X10GE SFPP
Slot 2   Online       EX9200 32x10G SFP
  PIC 0  Online       8X10GE SFPP
  PIC 1  Online       8X10GE SFPP
  PIC 2  Online       8X10GE SFPP
  PIC 3  Online       8X10GE SFPP
```

show chassis fpc (MX480 Router with MPC4E)

```
user@host> show chassis fpc
       Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online            38      7          0       2048       19         14
  3  Online            39      8          0       2048       18         14
  4  Online            39      7          0       2048       17         14
  5  Empty
```

show chassis fpc detail (MX480 Router with MPC4E)

```
user@host> show chassis fpc detail
Slot 2 information:
  State                               Online
  Temperature                      38
  Total CPU DRAM                 2048 MB
  Total RLDRAM                   1036 MB
  Total DDR DRAM                 11264 MB
  Start time:                         2013-02-18 05:06:57 PST
  Uptime:                             17 hours, 41 minutes, 9 seconds
  Max Power Consumption           610 Watts
Slot 3 information:
  State                               Online
  Temperature                      38
  Total CPU DRAM                 2048 MB
  Total RLDRAM                   1036 MB
  Total DDR DRAM                 11264 MB
  Start time:                         2013-02-18 05:07:00 PST
  Uptime:                             17 hours, 41 minutes, 6 seconds
  Max Power Consumption           610 Watts
Slot 4 information:
  State                               Diagnostics
  Temperature                      37
  Total CPU DRAM                   0 MB
  Total RLDRAM                     0 MB
  Total DDR DRAM                   0 MB
  Max Power Consumption           520 Watts
```


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show chassis fpc (MX480 Router with MPC4E)

```
user@host> show chassis fpc
                    Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online            38      7          0       2048       19         14
  3  Online            39      8          0       2048       18         14
  4  Online            39      7          0       2048       17         14
  5  Empty
```

show chassis fpc detail (MX480 Router with MPC4E)

```
user@host> show chassis fpc detail
Slot 2 information:
  State                               Online
  Temperature                         38
  Total CPU DRAM                      2048 MB
  Total RLDRAM                        1036 MB
  Total DDR DRAM                      11264 MB
  Start time:                              2013-02-18 05:06:57 PST
  Uptime:                                  17 hours, 41 minutes, 9 seconds
  Max Power Consumption               610 Watts
Slot 3 information:
  State                               Online
  Temperature                         38
  Total CPU DRAM                      2048 MB
  Total RLDRAM                        1036 MB
  Total DDR DRAM                      11264 MB
  Start time:                              2013-02-18 05:07:00 PST
  Uptime:                                  17 hours, 41 minutes, 6 seconds
  Max Power Consumption               610 Watts
Slot 4 information:
  State                               Diagnostics
  Temperature                         37
  Total CPU DRAM                      0 MB
  Total RLDRAM                        0 MB
  Total DDR DRAM                      0 MB
  Max Power Consumption               520 Watts
```

show chassis fpc (MX960 Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State       (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
 0  Empty
 1  Empty
 2  Empty
 3  Online       25     19          0       1024       15         57
 4  Empty
 5  Online       26     27          0       1024       15         57
 6  Empty
 7  Empty
 8  Empty
 9  Empty
 10  Empty
 11  Empty
```

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show chassis fpc (MX960 Router with MPC5EQ)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            38     16          0       3584        7         13
  1  Online            31     15          0       2048       17         13
  2  Empty
  3  Online            31     14          0       2048       20         13
  4  Online            34     16          0       3584        7         13
  5  Online            34     16          0       3584        7         13
  6  Empty
  7  Online            32      9          0       2048       18         14
  8  Online            36     19          0       3584        7         13
  9  Online            31      9          0       2048       13         13
 10  Online            35     14          0       3584        7         13
 11  Online            33     11          0       2048       18         14
```

show chassis fpc detail (MX960 Router with MPC5EQ)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                          38
  Total CPU DRAM                     3584 MB
  Total XR2                           291 MB
  Total DDR DRAM                    24960 MB
  Start time:                         2014-04-22 10:01:46 PDT
  Uptime:                             1 hour, 23 minutes, 40 seconds
  Max Power Consumption               607 Watts
Slot 1 information:
  State                               Online
  Temperature                          31
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1036 MB
  Total DDR DRAM                     6656 MB
  Start time:                         2014-04-22 10:01:50 PDT
  Uptime:                             1 hour, 23 minutes, 36 seconds
  Max Power Consumption               520 Watts
Slot 3 information:
  State                               Online
  Temperature                          31
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1324 MB
  Total DDR DRAM                     5120 MB
  Start time:                         2014-04-22 10:01:50 PDT
  Uptime:                             1 hour, 23 minutes, 36 seconds
  Max Power Consumption               440 Watts
Slot 4 information:
  State                               Online
  Temperature                          34
  Total CPU DRAM                     3584 MB
  Total XR2                           291 MB
  Total DDR DRAM                    24960 MB
  Start time:                         2014-04-22 10:01:54 PDT
  Uptime:                             1 hour, 23 minutes, 32 seconds
  Max Power Consumption               607 Watts
Slot 5 information:
  State                               Online
  Temperature                          34
```


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```
  Total CPU DRAM                  3584 MB
  Total XR2                        291 MB
  Total DDR DRAM                 24960 MB
  Start time:                         2014-04-22 10:01:56 PDT
  Uptime:                             1 hour, 23 minutes, 30 seconds
  Max Power Consumption            607 Watts
Slot 7 information:
  State                               Online
  Temperature                       32
  Total CPU DRAM                  2048 MB
  Total RLDRAM                    1036 MB
  Total DDR DRAM                 11264 MB
  Start time:                         2014-04-22 10:02:02 PDT
  Uptime:                             1 hour, 23 minutes, 24 seconds
  Max Power Consumption            608 Watts
Slot 8 information:
  State                               Online
  Temperature                       36
  Total CPU DRAM                  3584 MB
  Total XR2                        291 MB
  Total DDR DRAM                 24960 MB
  Start time:                         2014-04-22 10:02:07 PDT
  Uptime:                             1 hour, 23 minutes, 19 seconds
  Max Power Consumption            607 Watts
Slot 9 information:
  State                               Online
  Temperature                       31
  Total CPU DRAM                  2048 MB
  Total RLDRAM                     734 MB
  Total DDR DRAM                  3108 MB
  Start time:                         2014-04-22 10:02:05 PDT
  Uptime:                             1 hour, 23 minutes, 21 seconds
  Max Power Consumption            368 Watts
Slot 10 information:
  State                               Online
  Temperature                       35
  Total CPU DRAM                  3584 MB
  Total XR2                        291 MB
  Total DDR DRAM                 24960 MB
  Start time:                         2014-04-22 10:02:11 PDT
  Uptime:                             1 hour, 23 minutes, 15 seconds
  Max Power Consumption            607 Watts
Slot 11 information:
  State                               Online
  Temperature                       33
  Total CPU DRAM                  2048 MB
  Total RLDRAM                    1036 MB
  Total DDR DRAM                 11264 MB
  Start time:                         2014-04-22 10:02:16 PDT
  Uptime:                             1 hour, 23 minutes, 10 seconds
  Max Power Consumption            608 Watts
```

show chassis fpc pic-status(MX960 Router with MPC5EQ)

```
user@host> show chassis fpc pic-status
Slot 0   Online       MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
```

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```
Slot 1   Online       MPCE Type 3 3D
  PIC 0  Online       10X10GE SFPP
  PIC 2  Online       1X100GE CXP
Slot 3   Online       MPC 3D 16x 10GE
  PIC 0  Online       4x 10GE(LAN) SFP+
  PIC 1  Online       4x 10GE(LAN) SFP+
  PIC 2  Online       4x 10GE(LAN) SFP+
  PIC 3  Online       4x 10GE(LAN) SFP+
Slot 4   Online       MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 5   Online       MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 7   Online       MPC4E 3D 2CGE+8XGE
  PIC 0  Online       4x10GE SFPP
  PIC 1  Online       1X100GE CFP
  PIC 2  Online       4x10GE SFPP
  PIC 3  Online       1X100GE CFP
Slot 8   Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Offline      12X10GE SFPP OTN
  PIC 1  Offline      12X10GE SFPP OTN
  PIC 2  Online       3X40GE QSFPP
  PIC 3  Online       3X40GE QSFPP
Slot 9   Online       MPCE Type 2 3D P
  PIC 0  Online       2x 10GE  XFP
  PIC 1  Online       2x 10GE  XFP
Slot 10  Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Online       12X10GE SFPP
  PIC 1  Online       12X10GE SFPP
  PIC 2  Offline      3X40GE QSFPP
  PIC 3  Offline      3X40GE QSFPP
Slot 11  Online       MPC4E 3D 2CGE+8XGE
  PIC 0  Online       4x10GE SFPP
  PIC 1  Online       1X100GE CFP
  PIC 2  Online       4x10GE SFPP
  PIC 3  Online       1X100GE CFP
```

show chassis fpc (MX240, MX480, MX960 Routers with Application Services Modular Line Card

```
user@host> show chassis fpc 1
    Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  1  Online            34      5          0       3072        5         13
```

show chassis fpc (MX240, MX480, MX960 with Application Services Modular Line Card

```
user@host> show chassis fpc 1 detail
Slot 1 information:
  State                                 Online
  Temperature                             34
  Total CPU DRAM                        3072 MB
  Total RLDRAM                           259 MB
  Total DDR DRAM                        4864 MB
  Start time:                                2012-06-19 10:51:43 PDT
```


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```
  Uptime:                                16 minutes, 48 seconds
  Max Power Consumption             550 Watts
```

show chassis fpc (MX240, MX480, MX960, MX2010, MX2020, and MX2008 3D Universal Edge Routers with Dynamic Power Management)

```
user@host> show chassis fpc 2 detail

Slot 2 information:
  State                                  Online
  Temperature                         37
  Total CPU DRAM                    3584 MB
  Total XR2                          275 MB
  Total DDR DRAM                   20352 MB
  Start time:                            2014-07-18 02:51:23 PDT
  Uptime:                                5 minutes, 19 seconds
  Max MPC Base Power Consumption   485 Watts
  Max MIC0 Power Consumption        50 Watts
  Max MIC1 Power Consumption        50 Watts
  Max MPC Total Power Consumption  585 Watts
```

show chassis fpc (MX2010 Routers)

```
user@host> show chassis fpc
     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            34      9          0       2048       18         13
  1  Online            32      9          0       2048       15         13
  2  Empty
  3  Empty
  4  Empty
  5  Empty
  6  Empty
  7  Empty
  8  Online            31     13          0       2048       11         13
  9  Online            33     10          0       2048       18         13
```

show chassis fpc (MX2010 Router with Fabric Grant Bypass Enabled)

Following is the output of the **show chassis fpc** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass is enabled by default. All MPCs power on.

```
user@host> show chassis fpc
Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            34     20          0       2048        9         14
  1  Offline           33     22       0       2048        9         14
  2  Online            33     17          0       2048        9         14
  3  Offline           34     25        0       2048        9         14
  4  Online            32     27          0       2048        9         14
  5  Offline           32     26       0      2048        9         14
  6  Empty
  7  Empty
  8  Empty
  9  Empty
```

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show chassis fpc (MX2010 Router with Fabric Grant Bypass Disabled)

Following is the output of the **show chassis fpc** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been disabled. MPC1 (MX-MPC1-3D), MPC2 (MX-MPC2-3D), and the 16-port 10-Gigabit Ethernet MPC (MPC-3D-16XGE-SFP) do not power on after you disable fabric grant bypass and reboot the router. Also, FPC misconfiguration alarms are generated.

```
user@host> show chassis fpc
 Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            34     20          0       2048        9         14
  1  Offline         ---FPC misconfiguration---
  2  Online            33     17          0       2048        9         14
  3  Offline         ---FPC misconfiguration---
  4  Online            32     27          0       2048        9         14
  5  Offline         ---FPC misconfiguration---
  6  Empty
  7  Empty
  8  Empty
  9  Empty
```

show chassis fpc pic-status (MX2010 Router with Fabric Grant Bypass Enabled)

Following is the output of the **show chassis fpc pic-status** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been enabled by default. All MPCs power on.

```
user@host> show chassis fpc pic-status
Slot 0   Present      MPCE Type 3 3D
Slot 1   Present      MPC Type 2 3D EQ
Slot 2   Present      MPCE Type 3 3D
Slot 3   Present      MPC 3D 16x 10GE
Slot 4   Present      MPCE Type 3 3D
Slot 5   Present      MPCE Type 1 3D Q
```

show chassis fpc pic-status (MX2010 Router with Fabric Grant Bypass Disabled)

Following is the output of the **show chassis fpc pic-status** command on an MX2010 router with Switch Fabric Board (SFB), where fabric grant bypass has been disabled. MPC1 (MX-MPC1-3D), MPC2 (MX-MPC2-3D), and the 16-port 10-Gigabit Ethernet MPC (MPC-3D-16XGE-SFP) do not power on after you disable fabric grant bypass mode and reboot the router.

```
user@host> show chassis fpc pic-status
Slot 0   Present      MPCE Type 3 3D
Slot 1   Offline      MPC Type 2 3D EQ
Slot 2   Present      MPCE Type 3 3D
Slot 3   Offline      MPC 3D 16x 10GE
Slot 4   Present      MPCE Type 3 3D
Slot 5   Offline      MPCE Type 1 3D Q
```

show chassis fpc (MX2020 Routers)

```
user@host> show chassis fpc
                    Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State           (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
```


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```
  0  Online            10     12          0       2048       18         13
  1  Online             8      9          0       2048       18         13
  2  Online             7      9          0       2048       18         13
  3  Online             8     10          0       2048       18         13
  4  Online             9     10          0       2048       18         13
  5  Online             8      9          0       2048       18         13
  6  Online             8     10          0       2048       18         13
  7  Online             9      9          0       2048       18         13
  8  Online             9     10          0       2048       18         13
  9  Online            10      9          0       2048       18         13
 10  Online            16      8          0       2048       18         13
 11  Online            11     10          0       2048       18         13
 12  Online            10     10          0       2048       18         13
 13  Online            11      9          0       2048       18         13
 14  Online            12     10          0       2048       18         13
 15  Online            13      9          0       2048       18         13
 16  Online            13      9          0       2048       18         13
 17  Online            12      9          0       2048       18         13
 18  Online            12      8          0       2048       18         13
 19  Online            14     10          0       2048       18         13
```

show chassis fpc (MX2020 Router with MPC4E)

```
user@host> show chassis fpc
     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap      Buffer
  0  Online            33     12          2       2048       11         13
  1  Empty
  2  Empty
  3  Empty
  4  Empty
  5  Empty
  6  Empty
  7  Empty
  8  Empty
  9  Online            31     10          0       2048       11         13
 10  Online            32      7          0       2048       14         13
 11  Empty
 12  Empty
 13  Empty
 14  Online            28     12          0       2048       15         14
 15  Empty
 16  Empty
 17  Empty
 18  Empty
 19  Online            38      8          0       2048       18         13
```

show chassis fpc (MX10003 Router)

```
user@host> show chassis fpc

                    Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State           (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online            59     25          0       25     24     23    3136
 12         11
  1  Online            62     29          0       26     24     23    3136
 12         11
```

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show chassis fpc detail (MX10003 Router)

```
user@host> show chassis fpc detail

Slot 0 information:
  State                               Online
  Total CPU DRAM                 3136 MB
  Total RLDRAM                    771 MB
  Total DDR DRAM                18432 MB
  Temperature                     60 degrees C / 140 degrees F
  Start time                          2017-07-19 20:49:58 PDT
  Uptime                              2 hours, 29 minutes, 22 seconds
  Max MPC base power consumption   910 Watts
  Max MIC1 power consumption        95 Watts
  Max MPC total power consumption 1005 Watts
Slot 1 information:
  State                               Online
  Total CPU DRAM                 3136 MB
  Total RLDRAM                    771 MB
  Total DDR DRAM                18432 MB
  Temperature                     63 degrees C / 145 degrees F
  Start time                          2017-07-19 20:48:01 PDT
  Uptime                              2 hours, 31 minutes, 19 seconds
  Max MPC base power consumption   910 Watts
  Max MIC1 power consumption       155 Watts
  Max MPC total power consumption 1065 Watts
```

show chassis fpc <fpc-slot> (MX10003 Router)

```
user@host> show chassis fpc 0

                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online            49     26          0       22     22     23    3136
 12         11
```

show chassis fpc (MX204 Router)

```
user@host> show chassis fpc

                    Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online          Absent   8          0        8      8      8    3136
  8          8
```

show chassis fpc detail (MX204 Router)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Total CPU DRAM                 3136 MB
  Total RLDRAM                    257 MB
  Total DDR DRAM                 4096 MB
  Temperature                     Absent
  Start time                          2017-11-05 22:14:01 PST
  Uptime                              2 days, 8 hours, 5 minutes, 55 seconds
```


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show chassis fpc <fpc-slot> (MX204 Router)

```
user@host> show chassis fpc 0

                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online           Absent   8          0        8      8      8    3136
  8          8
```

show chassis fpc (MX10008 Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Empty
  1  Online            42     29          0       26     27     27    3136
 20         26
  2  Offline         ---Unresponsive---
  3  Empty
  4  Empty
  5  Online            52     20          0       22     23     23    3136
 20         26
  6  Empty
  7  Empty
```

show chassis fpc detail (MX10008 Router)

```
user@host> show chassis fpc detail
Slot 1 information:
  State                               Online
  Total CPU DRAM                  3136 MB
  Total RLDRAM                    1542 MB
  Total DDR DRAM                  36864 MB
  Temperature                       43 degrees C / 109 degrees F
  Start time                          2018-05-29 06:15:55 PDT
  Uptime                              15 hours, 53 minutes, 18 seconds
  Max power consumption           1535 Watts
  Configured Bandwidth             2400 G
  Operating Bandwidth              2400 G
Slot 2 information:
  State                               Offline
  Reason                              Unresponsive
  Total CPU DRAM                   0 MB
  Total RLDRAM                     0 MB
  Total DDR DRAM                   0 MB
  Temperature                      34 degrees C / 93 degrees F
  Max power consumption           1535 Watts
  Configured Bandwidth             2400 G
  Operating Bandwidth              2400 G
Slot 5 information:
  State                               Online
  Total CPU DRAM                  3136 MB
  Total RLDRAM                    1542 MB
  Total DDR DRAM                  36864 MB
  Temperature                       53 degrees C / 127 degrees F
  Start time                          2018-05-29 03:08:40 PDT
```

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```
  Uptime                              19 hours, 33 seconds
  Max power consumption             1535 Watts
  Configured Bandwidth               2400 G
  Operating Bandwidth                2400 G
```

show chassis fpc <fpc-slot> (MX10008 Router)

```
user@host> show chassis fpc 0

                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Empty
```

show chassis fpc detail (MX2020 Router with MPC4E)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                          34
  Total CPU DRAM                     2048 MB
  Total RLDRAM                        806 MB
  Total DDR DRAM                     2632 MB
  Start time:                             2013-02-17 08:17:35 PST
  Uptime:                                 1 day, 14 hours, 50 minutes, 39 seconds
  Max Power Consumption               368 Watts
Slot 9 information:
  State                               Online
  Temperature                          32
  Total CPU DRAM                     2048 MB
  Total RLDRAM                        806 MB
  Total DDR DRAM                     2632 MB
  Start time:                             2013-02-17 08:17:43 PST
  Uptime:                                 1 day, 14 hours, 50 minutes, 31 seconds
  Max Power Consumption               368 Watts
Slot 10 information:
  State                               Online
  Temperature                          37
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1036 MB
  Total DDR DRAM                     6656 MB
  Start time:                             2013-02-17 08:17:54 PST
  Uptime:                                 1 day, 14 hours, 50 minutes, 20 seconds
  Max Power Consumption               520 Watts
Slot 14 information:
  State                               Online
  Temperature                          32
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1036 MB
  Total DDR DRAM                    11264 MB
  Start time:                             2013-02-17 08:18:01 PST
  Uptime:                                 1 day, 14 hours, 50 minutes, 13 seconds
  Max Power Consumption               610 Watts
Slot 19 information:
  State                               Online
  Temperature                          38
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1324 MB
  Total DDR DRAM                     5120 MB
```


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```
  Start time:                          2013-02-17 08:18:08 PST
  Uptime:                              1 day, 14 hours, 50 minutes, 6 seconds
  Max Power Consumption            440 Watts
```

show chassis fpc (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online           31     20          0       3584        7         13
  1  Online           28     19          0       2048       17         13
  2  Online           27     10          0       2048       18         14
  3  Online           26     10          0       2048       13         13
  4  Online           29     19          0       3584        7         13
  5  Online           28     68          0       2048       20         13
  6  Empty
  7  Empty
  8  Empty
  9  Online           36     19          0       3584       10         13
 10  Online           37     26          0       3584       10         13
 11  Empty
 12  Empty
 13  Empty
 14  Empty
 15  Empty
 16  Empty
 17  Online           28     43          0       3584       10         13
 18  Online           29     19          0       3584        7         13
 19  Online           31     19          0       3584        7         13
```

show chassis fpc detail (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                Online
  Temperature                       31
  Total CPU DRAM                 3584 MB
  Total XR2                       291 MB
  Total DDR DRAM                24960 MB
  Start time:                          2014-04-22 23:33:19 PDT
  Uptime:                              6 minutes, 24 seconds
  Max Power Consumption           607 Watts
Slot 1 information:
  State                                Online
  Temperature                       28
  Total CPU DRAM                 2048 MB
  Total RLDRAM                   1036 MB
  Total DDR DRAM                 6656 MB
  Start time:                          2014-04-22 23:33:24 PDT
  Uptime:                              6 minutes, 19 seconds
  Max Power Consumption           520 Watts
Slot 2 information:
  State                                Online
  Temperature                       27
  Total CPU DRAM                 2048 MB
  Total RLDRAM                   1036 MB
  Total DDR DRAM                11264 MB
  Start time:                          2014-04-22 23:33:34 PDT
  Uptime:                              6 minutes, 9 seconds
```

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```
  Max Power Consumption            608 Watts
Slot 3 information:
  State                                Online
  Temperature                       26
  Total CPU DRAM                   2048 MB
  Total RLDRAM                      734 MB
  Total DDR DRAM                   3108 MB
  Start time:                          2014-04-22 23:33:39 PDT
  Uptime:                              6 minutes, 4 seconds
  Max Power Consumption            368 Watts
Slot 4 information:
  State                                Online
  Temperature                       29
  Total CPU DRAM                   3584 MB
  Total XR2                         291 MB
  Total DDR DRAM                  24960 MB
  Start time:                          2014-04-22 23:33:51 PDT
  Uptime:                              5 minutes, 52 seconds
  Max Power Consumption            607 Watts
Slot 5 information:
  State                                Online
  Temperature                       28
  Total CPU DRAM                   2048 MB
  Total RLDRAM                     1324 MB
  Total DDR DRAM                   5120 MB
  Start time:                          2014-04-22 23:33:57 PDT
  Uptime:                              5 minutes, 46 seconds
  Max Power Consumption            440 Watts
Slot 9 information:
  State                                Online
 Temperature                       25
  Total CPU DRAM                   3584 MB
  Total XR2                         518 MB
  Total DDR DRAM                  49920 MB
  Start time:                          2014-04-22 23:31:20 PDT
  Uptime:                              8 minutes, 23 seconds
  Max Power Consumption           1130 Watts
Slot 10 information:
  State                                Online
  Temperature                       32
  Total CPU DRAM                   3584 MB
  Total XR2                         518 MB
  Total DDR DRAM                  49920 MB
  Start time:                          2014-04-22 23:31:25 PDT
  Uptime:                              8 minutes, 18 seconds
  Max Power Consumption           1130 Watts
Slot 17 information:
  State                                Online
  Temperature                       25
  Total CPU DRAM                   3584 MB
  Total XR2                         518 MB
  Total DDR DRAM                  49920 MB
  Start time:                          2014-04-22 23:31:29 PDT
  Uptime:                              8 minutes, 14 seconds
  Max Power Consumption           1130 Watts
Slot 18 information:
  State                                Online
  Temperature                       29
  Total CPU DRAM                   3584 MB
  Total XR2                         291 MB
  Total DDR DRAM                  24960 MB
```


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```
  Start time:                          2014-04-22 23:34:11 PDT
  Uptime:                              5 minutes, 32 seconds
  Max Power Consumption             607 Watts
Slot 19 information:
  State                                Online
  Temperature                        32
  Total CPU DRAM                   3584 MB
  Total XR2                         291 MB
  Total DDR DRAM                  24960 MB
  Start time:                          2014-04-22 23:34:20 PDT
  Uptime:                              5 minutes, 23 seconds
  Max Power Consumption             607 Watts
```

show chassis fpc detail (MX2008 Router)

```
user@host>show chassis fpc detail
Slot 0 information:
  State                                Online
  Temperature                       33 degrees C / 91 degrees F
  Total CPU DRAM                  2048 MB
  Total RLDRAM                     734 MB
  Total DDR DRAM                  2596 MB
  Start time                           2017-04-14 07:14:26 PDT
  Uptime                               15 hours, 29 minutes, 20 seconds
  Max power consumption             347 Watts
Slot 3 information:
  State                                Online
  Temperature                       31 degrees C / 87 degrees F
  Total CPU DRAM                  3584 MB
  Total RLDRAM                     259 MB
  Total DDR DRAM                 20352 MB
  Start time                           2017-04-14 07:14:38 PDT
  Uptime                               15 hours, 29 minutes, 8 seconds
  Max MPC base power consumption   376 Watts
  Max MIC0 power consumption         0 Watts
  Max MIC1 power consumption         0 Watts
  Max MPC total power consumption  376 Watts
Slot 5 information:
  State                                Online
  Temperature                       32 degrees C / 89 degrees F
  Total CPU DRAM                  3584 MB
  Total RLDRAM                     275 MB
  Total DDR DRAM                 20352 MB
  Start time                           2017-04-14 07:14:46 PDT
  Uptime                               15 hours, 29 minutes
  Max MPC base power consumption   422 Watts
  Max MIC0 power consumption        18 Watts
  Max MIC1 power consumption         0 Watts
  Max MPC total power consumption  440 Watts
Slot 7 information:
  State                                Online
  Temperature                       28 degrees C / 82 degrees F
  Total CPU DRAM                  2048 MB
  Total RLDRAM                     403 MB
  Total DDR DRAM                  1572 MB
  Start time                           2017-04-14 07:14:50 PDT
  Uptime                               15 hours, 28 minutes, 56 seconds
  Max power consumption             347 Watts
Slot 9 information:
  State                                Online
  Temperature                       29
```

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```
  Total CPU DRAM                3584 MB
  Total XR2                      518 MB
  Total DDR DRAM                49920 MB
  Start time                         2017-04-14 07:13:16 PDT
  Uptime                             15 hours, 30 minutes, 30 seconds
  Max MPC base power consumption   834 Watts
  Max MIC0 power consumption        56 Watts
  Max MIC1 power consumption         0 Watts
  Max MPC total power consumption  890 Watts
```

show chassis fpc pic-status (MX2020 Router with MPC5EQ and MPC6E)

```
user@host> show chassis fpc pic-status
Slot 0   Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Online       12X10GE SFPP OTN
  PIC 1  Online       12X10GE SFPP OTN
  PIC 2  Offline      3X40GE QSFPP
  PIC 3  Offline      3X40GE QSFPP
Slot 1   Online       MPCE Type 3 3D
  PIC 0  Online       10X10GE SFPP
  PIC 2  Online       1X100GE CXP
Slot 2   Online       MPC4E 3D 2CGE+8XGE
  PIC 0  Online       4x10GE SFPP
  PIC 1  Online       1X100GE CFP
  PIC 2  Online       4x10GE SFPP
  PIC 3  Online       1X100GE CFP
Slot 3   Online       MPCE Type 2 3D P
  PIC 0  Online       2x 10GE  XFP
  PIC 1  Online       2x 10GE  XFP
Slot 4   Online       MPC5E 3D Q 2CGE+4XGE
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 5   Online       MPC 3D 16x 10GE
  PIC 0  Online       4x 10GE(LAN) SFP+
  PIC 1  Online       4x 10GE(LAN) SFP+
  PIC 2  Online       4x 10GE(LAN) SFP+
  PIC 3  Online       4x 10GE(LAN) SFP+
Slot 9   Online       MPC6E 3D
  PIC 0  Online       2X100GE CFP2 OTN
  PIC 1  Online       2X100GE CFP2 OTN
Slot 10  Online       MPC6E 3D
  PIC 0  Online       24X10GE SFPP OTN
  PIC 1  Online       4X100GE CXP
Slot 17  Online       MPC6E 3D
  PIC 0  Online       24X10GE SFPP
  PIC 1  Online       4X100GE CXP
Slot 18  Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Offline      12X10GE SFPP OTN
  PIC 1  Offline      12X10GE SFPP OTN
  PIC 2  Online       3X40GE QSFPP
  PIC 3  Online       3X40GE QSFPP
Slot 19  Online       MPC5E 3D Q 24XGE+6XLGE
  PIC 0  Online       12X10GE SFPP OTN
  PIC 1  Offline      12X10GE SFPP OTN
  PIC 2  Offline      3X40GE QSFPP
  PIC 3  Online       3X40GE QSFPP
```


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show chassis fpc detail (MX Series Routers)

```
user@host> show chassis fpc detail 2
Slot 0 information:
  State                                   Online
  Temperature                          36 degrees C / 96 degrees F
  Total CPU DRAM                     1024 MB
  Total RLDRAM                        256 MB
  Total DDR DRAM                     4096 MB
  Start time:                             2009-08-11 21:20:30 PDT
  Uptime:                                 2 hours, 8 minutes, 50 seconds
  Max Power Consumption               335 Watts
```

show chassis fpc detail (EX Series Switches)

```
user@host> show chassis fpc detail 2
Slot 1 information:
  State                                   Online
  Temperature                          41
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1036 MB
  Total DDR DRAM                     11264 MB
  Start time:                             2013-04-02 00:04:52 PDT
  Uptime:                                 7 days, 9 hours, 47 minutes, 46 seconds
  Max Power Consumption               610 Watts
Slot 2 information:
  State                                   Online
  Temperature                          41
  Total CPU DRAM                     2048 MB
  Total RLDRAM                       1036 MB
  Total DDR DRAM                     11264 MB
  Start time:                             2013-04-02 00:04:56 PDT
  Uptime:                                 7 days, 9 hours, 47 minutes, 42 seconds
  Max Power Consumption               610 Watts
```

show chassis fpc detail (EX9251 Switches)

```
user@switch> show chassis fpc detail 2
Slot 0 information:
  State                                     Online
  Total CPU DRAM                   3136 MB
  Total RLDRAM                      257 MB
  Total DDR DRAM                   4096 MB
  Temperature                        Absent
  Start time                            2018-03-12 14:59:49 PDT
  Uptime                                1 day, 1 hour, 10 minutes, 48 seconds
```

show chassis fpc detail (EX9253 Switches)

```
user@switch> show chassis fpc detail 1
Slot 1 information:
  State                                     Online
  Total CPU DRAM                   3136 MB
  Total RLDRAM                      771 MB
  Total DDR DRAM                  18432 MB
  Temperature                        59 degrees C / 138 degrees F
  Start time                            2018-03-04 14:20:42 PST
  Uptime                                3 days, 10 hours, 40 minutes, 57 seconds
  Max MPC base power consumption   910 Watts
```

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```
  Max MIC1 power consumption        95 Watts
  Max MPC total power consumption 1005 Watts
```

show chassis fpc (Hardware Not Supported)

```
user@host> show chassis fpc
show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
 Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online          -------------------- CPU less FPC --------------------
  1  Present         ------ Hardware Not In Right Slot ------
  2  Online                    0          0         0         0          0
  3  Present         ------ Hardware Not Supported ------
  4  Empty
  5  Empty
  6  Online                    0          0         0         0          0
```

show chassis fpc detail (Hardware Not Supported)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Total CPU DRAM                      ---- CPU less FPC ----
  Start time                          2006-07-07 03:21:00 UTC
  Uptime                              27 minutes, 51 seconds
 Slot 1 information:
  State                               Present
  Reason                              --- Hardware Not In Right Slot ---
 Slot 2 information:
  State                               Online
  Total CPU DRAM                    32 MB
  Start time                          2006-07-07 03:20:59 UTC
  Uptime                              27 minutes, 52 seconds
 Slot 3 information:
  State                               Present
  Reason                              --- Hardware Not Supported ---
  Total CPU DRAM                     0 MB
 Slot 6 information:
  State                               Online
  Total CPU DRAM                    32 MB
  Start time                          2006-07-07 03:21:01 UTC
  Uptime                              27 minutes, 50 seconds
```

show chassis fpc pic-status

```
user@host> show chassis fpc pic-status
Slot 0 Online
  PIC 1    1x OC-12 ATM, MM
  PIC 2    1x OC-12 ATM, MM
  PIC 3    1x OC-12 ATM, MM
Slot 1 Online
  PIC 0    1x OC-48 SONET, SMIR
Slot 2 Online
  PIC 0    1x OC-192 SONET, SMSR
```

show chassis fpc pic-status (M Series Routers)

```
user@host> show chassis fpc pic-status
```


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```
Slot 1   Online       FPC Type 1
  PIC 0  Present      2x OC-3 ATM, MM- Hardware Error
  PIC 1  Online       4x OC-3 SONET, SMIR
Slot 2   Online       E-FPC Type 2
  PIC 0  Online       4x G/E, 1000 BASE-SX
  PIC 1  Online       2x G/E SFP, 1000 BASE
  PIC 3  Online       1x Tunnel
Slot 3   Online       E-FPC Type 1
  PIC 0  Online       1x G/E IQ, 1000 BASE
  PIC 2  Online       1x G/E SFP, 1000 BASE
Slot 4   Online       E-FPC Type 2
  PIC 0  Online       4x G/E SFP, 1000 BASE
  PIC 1  Online       4x G/E SFP, 1000 BASE
  PIC 2  Online       4x G/E SFP, 1000 BASE
  PIC 3  Online       4x G/E SFP, 1000 BASE
Slot 5   Online       FPC Type 2
...
```

show chassis fpc pic-status (M120 Router)

```
user@host> show chassis fpc pic-status
Slot 1   Online       M120 CFPC 10GE
  PIC 0  Online       1x 10GE(LAN/WAN) XFP
Slot 3   Online       M120 FPC Type 2 (proto)
  PIC 0  Online       2x G/E IQ, 1000 BASE
  PIC 1  Online       4x OC-3 SONET, SMIR
  PIC 2  Online       2x G/E IQ, 1000 BASE
  PIC 3  Online       8x 1GE(LAN), IQ2
Slot 4   Online       M120 FPC Type 3 (proto)
  PIC 0  Online       10x 1GE(LAN), 1000 BASE
Slot 5   Online       M120 FPC Type 1 (proto)
  PIC 0  Present      1x G/E, 1000 BASE-LX- Not Supported
  PIC 1  Online       1x CHOC3 IQ SONET, SMLR
  PIC 2  Online       4x CHDS3 IQ
  PIC 3  Online       1x G/E SFP, 1000 BASE
```

show chassis fpc pic-status (MX240, MX480, and MX960 Routers with Application Services Modular Line Card)

In the following output **Slot 1 and Slot 5** are the Application Services Modular Carrier Cards (AS MCC), **PIC 0** is the Application Services Modular Storage Card (AS MSC), and **PIC 2** is the Application Services Modular Processing Card (AS MXC).

```
user@host>show chassis fpc pic-status
Slot 2   Online       MPC Type 1 3D Q
  Slot 1   Online       AS-MCC
  PIC 0  Online       AS-MSC
  PIC 2  Online       AS-MXC
Slot 4   Offline      MPC 3D 16x 10GE
Slot 5   Offline      AS-MCC
```

show chassis fpc lcc (TX Matrix Router)

```
user@host> show chassis fpc lcc 0
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU       Utilization (%)  Memory    Utilization (%)
Slot State      (C)  Total  Interrupt     DRAM (MB)       Heap   Buffer
  0  Empty
  1  Online      27      2          0       256         8         44
```

```
  2  Online      27      3          0        256        15         44
  3  Empty
  4  Empty
  5  Empty
  6  Empty
  7  Empty
```

show chassis fpc pic-status (TX Matrix Router)

```
user@host> show chassis fpc pic-status
lcc0-re0:
--------------------------------------------------------------------------
Slot 0   Online       FPC Type 3
  PIC 0  Online       1x OC-192 SM SR1
  PIC 1  Online       1x OC-192 SM SR2
  PIC 2  Online       1x OC-192 SM SR1
  PIC 3  Online       1x Tunnel
Slot 1   Online       FPC Type 2
  PIC 0  Online       1x OC-48 SONET, SMSR
  PIC 1  Online       1x OC-48 SONET, SMSR

lcc1-re0:
--------------------------------------------------------------------------

lcc2-re0:
--------------------------------------------------------------------------
Slot 1   Online       FPC Type 3
  PIC 0  Online       1x OC-192 SM SR1
Slot 5   Online       FPC Type 2
  PIC 0  Online       1x OC-48 SONET, SMSR
  PIC 1  Online       2x G/E, 1000 BASE-LX
  PIC 2  Online       2x G/E, 1000 BASE-LX
  PIC 3  Online       1x OC-48 SONET, SMSR

lcc3-re0:
--------------------------------------------------------------------------
```

show chassis fpc pic-status lcc (TX Matrix Router)

```
user@host> show chassis fpc pic-status lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Slot 0   Online       FPC Type 3
  PIC 0  Online       1x OC-192 SM SR2
Slot 1   Online       FPC Type 2
  PIC 0  Online       2x OC-12 ATM2 IQ, MM
  PIC 1  Online       1x OC-48 SONET, SMSR
  PIC 2  Online       1x OC-48 SONET, SMSR
  PIC 3  Online       4x G/E, 1000 BASE-SX
```

show chassis fpc (TX Matrix Plus Router)

```
user@host> show chassis fpc
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online            38      4          0       2048        3         24
  2  Online            43      8          0       2048        6         24
```


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```
  3  Empty
  4  Online           43      6          0       2048        6          24
  5  Empty
  6  Online           42     13          0       2048        6          24
  7  Online           45      7          0       2048        3          24

lcc2-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online           42     10          0       2048        6          24
  1  Empty
  2  Online           42     11          0       2048        6          24
  3  Online           40      5          0       2048        3          24
  4  Online           33     26          0       1024        8          49
  5  Empty
  6  Online           43      8          0       2048        6          24
  7  Online           46      6          0       2048        3          24

lcc3-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online           39     30          0       2048        7          24
  3  Empty
  4  Online           41      8          0       2048        6          24
  5  Online           41     12          0       2048        6          24
  6  Online           40      8          0       2048        6          24
  7  Online           42      4          0       2048        3          24
```

show chassis fpc lcc (TX Matrix Plus Router)

```
user@host> show chassis fpc lcc 0
lcc0-re0:
--------------------------------------------------------------------------
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Online           38      4          0       2048        3          24
  2  Online           43      8          0       2048        6          24
  3  Empty
  4  Online           43      6          0       2048        6          24
  5  Empty
  6  Online           42     14          0       2048        6          24
  7  Online           45      6          0       2048        3          24
```

show chassis fpc detail (TX Matrix Plus Router)

```
user@host> show chassis fpc details

lcc0-re0:
--------------------------------------------------------------------------
Slot 1 information:
  State                               Online
  Temperature                      38 degrees C / 100 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
```

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```
  Start time                          2010-10-04 20:06:22 PDT
  Uptime                              1 hour, 32 minutes, 51 seconds
Slot 2 information:
  State                               Online
  Temperature                        43 degrees C / 109 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                          2010-10-04 20:06:37 PDT
  Uptime                              1 hour, 32 minutes, 36 seconds
Slot 4 information:
  State                               Online
  Temperature                        43 degrees C / 109 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                          2010-10-04 20:06:40 PDT
  Uptime                              1 hour, 32 minutes, 33 seconds
Slot 6 information:
  State                               Online
  Temperature                        42 degrees C / 107 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                          2010-10-04 20:06:42 PDT
  Uptime                              1 hour, 32 minutes, 31 seconds
Slot 7 information:
  State                               Online
  Temperature                        45 degrees C / 113 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                         64 MB
  Total SDRAM                      1280 MB
  Start time                          2010-10-04 20:06:43 PDT
  Uptime                              1 hour, 32 minutes, 30 seconds

lcc2-re0:
--------------------------------------------------------------------------
Slot 0 information:
  State                               Online
  Temperature                        42 degrees C / 107 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                          2010-10-04 20:06:35 PDT
  Uptime                              1 hour, 32 minutes, 38 seconds
Slot 2 information:
  State                               Online
  Temperature                        42 degrees C / 107 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                          2010-10-04 20:06:37 PDT
  Uptime                              1 hour, 32 minutes, 36 seconds
Slot 3 information:
  State                               Online
  Temperature                        40 degrees C / 104 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                         64 MB
  Total SDRAM                      1280 MB
  Start time                          2010-10-04 20:06:28 PDT
  Uptime                              1 hour, 32 minutes, 45 seconds
```


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```
Slot 4 information:
  State                           Online
  Temperature                  33 degrees C / 91 degrees F
  Total CPU DRAM             1024 MB
  Total SRAM                   64 MB
  Total SDRAM                1280 MB
  Start time                      2010-10-04 20:08:03 PDT
  Uptime                          1 hour, 31 minutes, 10 seconds
Slot 6 information:
  State                           Online
  Temperature                  43 degrees C / 109 degrees F
  Total CPU DRAM             2048 MB
  Total SRAM                  128 MB
  Total SDRAM                2560 MB
  Start time                      2010-10-04 20:06:44 PDT
  Uptime                          1 hour, 32 minutes, 29 seconds
Slot 7 information:
  State                           Online
  Temperature                  46 degrees C / 114 degrees F
  Total CPU DRAM             2048 MB
  Total SRAM                   64 MB
  Total SDRAM                1280 MB
  Start time                      2010-10-04 20:06:46 PDT
  Uptime                          1 hour, 32 minutes, 27 seconds

lcc3-re0:
--------------------------------------------------------------------------
Slot 2 information:
  State                           Online
  Temperature                  38 degrees C / 100 degrees F
  Total CPU DRAM             2048 MB
  Total SRAM                  128 MB
  Total SDRAM                2560 MB
  Start time                      2010-10-04 20:17:31 PDT
  Uptime                          1 hour, 21 minutes, 42 seconds
Slot 4 information:
  State                           Online
  Temperature                  41 degrees C / 105 degrees F
  Total CPU DRAM             2048 MB
  Total SRAM                  128 MB
  Total SDRAM                2560 MB
  Start time                      2010-10-04 20:17:34 PDT
  Uptime                          1 hour, 21 minutes, 39 seconds
Slot 5 information:
  State                           Online
  Temperature                  41 degrees C / 105 degrees F
  Total CPU DRAM             2048 MB
  Total SRAM                  128 MB
  Total SDRAM                2560 MB
  Start time                      2010-10-04 20:17:36 PDT
  Uptime                          1 hour, 21 minutes, 37 seconds
Slot 6 information:
  State                           Online
  Temperature                  40 degrees C / 104 degrees F
  Total CPU DRAM             2048 MB
  Total SRAM                  128 MB
  Total SDRAM                2560 MB
  Start time                      2010-10-04 20:17:39 PDT
  Uptime                          1 hour, 21 minutes, 34 seconds
Slot 7 information:
  State                           Online
```

```
  Temperature                      42 degrees C / 107 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 20:17:41 PDT
  Uptime                              1 hour, 21 minutes, 32 seconds
```

show chassis fpc pic-status (TX Matrix Plus Router)

```
user@host> show chassis fpc pic-status

lcc0-re0:
--------------------------------------------------------------------------
Slot 1   Online       FPC Type 2-ES
  PIC 0  Online       8x 1GE(LAN), IQ2
Slot 2   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
Slot 4   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
Slot 6   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
Slot 7   Online       FPC Type 3-ES
  PIC 0  Online       10x 1GE(LAN), 1000 BASE
  PIC 2  Online       1x OC-192 SM SR2
  PIC 3  Online       10x 1GE(LAN), 1000 BASE

lcc2-re0:
--------------------------------------------------------------------------
Slot 0   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
Slot 2   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
Slot 3   Online       FPC Type 2-ES
  PIC 0  Online       8x 1GE(LAN), IQ2
Slot 4   Online       FPC Type 4
  PIC 0  Online       10x10GE(LAN/WAN) SFPP
Slot 6   Online       FPC Type 4-ES
  PIC 0  Online       4x OC-192 SONET XFP
Slot 7   Online       FPC Type 3-ES
  PIC 0  Online       10x 1GE(LAN), 1000 BASE
  PIC 1  Offline      1x 10GE(LAN/WAN) IQ2E
  PIC 2  Online       1x OC-192 SM SR2
  PIC 3  Online       1x Tunnel

lcc3-re0:
--------------------------------------------------------------------------
Slot 2   Online       FPC Type 4-ES
  PIC 0  Online       10x10GE(LAN/WAN) SFPP
Slot 4   Online       FPC Type 4-ES
  PIC 0  Online       4x OC-192 SONET XFP
Slot 5   Online       FPC Type 4-ES
  PIC 0  Online       4x OC-192 SONET XFP
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
Slot 6   Online       FPC Type 4-ES
  PIC 1  Online       4x 10GE (LAN/WAN) XFP
Slot 7   Online       FPC Type 3-ES
  PIC 0  Online       10x 1GE(LAN), 1000 BASE
  PIC 1  Online       8x 1GE(TYPE3), IQ2E
  PIC 2  Online       4x OC-48 SONET
```


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show chassis fpc (T1600 Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online            49      3          0       2048        3         24
  3  Online            46      6          0       2048        6         24
  4  Empty
  5  Online            46      5          0       2048        3         24
  6  Empty
  7  Online            44      8          0       1024        7         49
```

show chassis fpc detail (T1600 Router)

```
user@host> show chassis fpc detail

show chassis fpc detail
Slot 2 information:
  State                               Online
  Temperature                      49 degrees C / 120 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 21:12:52 PDT
  Uptime                              32 minutes, 9 seconds
Slot 3 information:
  State                               Online
  Temperature                      47 degrees C / 116 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                      128 MB
  Total SDRAM                    2560 MB
  Start time                          2010-10-04 21:13:06 PDT
  Uptime                              31 minutes, 55 seconds
Slot 5 information:
  State                               Online
  Temperature                      46 degrees C / 114 degrees F
  Total CPU DRAM                 2048 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 21:12:56 PDT
  Uptime                              32 minutes, 5 seconds
Slot 7 information:
  State                               Online
  Temperature                      44 degrees C / 111 degrees F
  Total CPU DRAM                 1024 MB
  Total SRAM                       64 MB
  Total SDRAM                    1280 MB
  Start time                          2010-10-04 21:14:34 PDT
  Uptime                              30 minutes, 27 seconds
```

show chassis fpc <fpc-slot> (EX Series Switch)

```
user@host> show chassis fpc 2

                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  2  Online            40     12          0       2048       19         14
```

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show chassis fpc slot (T1600 Router)

```
user@host> show chassis fpc slot 2

                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  2  Online           49      3          0       2048        3         24
```

show chassis fpc pic-status (T1600 Router)

```
user@host> show chassis fpc pic-status

Slot 2   Online       FPC Type 1-ES
  PIC 0  Online       Load Type 1
  PIC 1  Online       4x 1GE(LAN), IQ2E
  PIC 3  Online       1x OC-12-3 SFP
Slot 3   Online       FPC Type 4-ES
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
  PIC 1  Online       4x OC-192 SONET XFP
Slot 5   Online       FPC Type 2-ES
  PIC 0  Online       Load Type 2
  PIC 1  Online       8x 1GE(LAN), IQ2E
  PIC 2  Online       8x 1GE(LAN), IQ2E
  PIC 3  Online       1x OC-48-12-3 SFP
Slot 7   Online       FPC Type 4
  PIC 0  Online       4x 10GE (LAN/WAN) XFP
```

show chassis fpc (T4000 Router)

```
user@host> show chassis fpc

                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online           48     15          0       2816       21         27
  1  Empty
  2  Empty
  3  Online           51     15          0       2816       21         27
  4  Empty
  5  Online           39      8          0       2048        6         23
  6  Online           49     15          0       2816       21         27
  7  Empty
```

show chassis fpc detail (T4000 Router)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                      48 degrees C / 118 degrees F
  Total CPU DRAM                   2816 MB
  Total SRAM                       1554 MB
  Total SDRAM                      10752 MB
  Start time                          2012-02-09 22:56:25 PST
  Uptime                              2 hours, 40 minutes, 52 seconds
Slot 3 information:
  State                               Online
  Temperature                      51 degrees C / 123 degrees F
  Total CPU DRAM                   2816 MB
  Total SRAM                       1554 MB
  Total SDRAM                      10752 MB
```


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```
  Start time                          2012-02-09 22:56:22 PST
  Uptime                              2 hours, 40 minutes, 55 seconds
Slot 5 information:
  State                               Online
  Temperature                        39 degrees C / 102 degrees F
  Total CPU DRAM                   2048 MB
  Total SRAM                        128 MB
  Total SDRAM                      2560 MB
  Start time                          2012-02-09 22:51:27 PST
  Uptime                              2 hours, 45 minutes, 50 seconds
Slot 6 information:
  State                               Online
  Temperature                        49 degrees C / 120 degrees F
  Total CPU DRAM                   2816 MB
  Total SRAM                       1554 MB
  Total SDRAM                     10752 MB
  Start time                          2012-02-09 22:56:29 PST
  Uptime                              2 hours, 40 minutes, 48 seconds
```

show chassis fpc pic-status (T4000 Router)

```
user@host> show chassis fpc pic-status
Slot 0   Online       FPC Type 5-3D
  PIC 0  Online       12x10GE (LAN/WAN) SFPP
  PIC 1  Online       12x10GE (LAN/WAN) SFPP
Slot 3   Online       FPC Type 5-3D
  PIC 0  Online       1x100GE
  PIC 1  Online       12x10GE (LAN/WAN) SFPP
Slot 5   Online       FPC Type 4-ES
  PIC 0  Online       100GE
  PIC 1  Online       100GE CFP
Slot 6   Online       FPC Type 5-3D
  PIC 0  Online       12x10GE (LAN/WAN) SFPP
  PIC 1  Online       12x10GE (LAN/WAN) SFPP
```

show chassis fpc (QFX Series and OCX Series)

```
user@switch> show chassis fpc
Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
0  Online            26      2          0       2820        0         49
```

show chassis fpc detail (QFX3500 Switches)

```
user@switch> show chassis fpc detail
Slot 0 information:
  State                               Online
  Temperature                        28 degrees C / 82 degrees F
  Total CPU DRAM                   2820 MB
  Total SRAM                          0 MB
  Total SDRAM                         0 MB
  Start time                          2010-09-20 01:34:13 PDT
  Uptime                              3 days, 3 hours, 31 minutes, 48 seconds
```

show chassis fpc pic-status (QFX3500 Switches)

```
user@switch> show chassis fpc pic-status
Slot 0   Online       QFX 48x10G 4x40G Switch
  PIC 0  Online       48x 10G-SFP+
  PIC 1  Online       15x 10G-SFP+
```

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show chassis fpc interconnect-device (QFabric System)

```
user@switch> show chassis fpc interconnect-device interconnect1
FPC status:
                     Temp
Slot State            (C)
  0  Online             0
  1  Online             0
  2  Online             0
  3  Online             0
  4  Online             0
  5  Online             0
  6  Online             0
  7  Online             0
  8  Online             0
  9  Online             0
 10  Online             0
 11  Online             0
 12  Online             0
 13  Online             0
 14  Online             0
 15  Online             0
```

show chassis fpc interconnect-device (QFabric System)

```
user@switch> show chassis fpc interconnect-device interconnect1 3
FPC status:
                     Temp
Slot State            (C)
  3  Online             0
```

show chassis fpc interconnect-device detail (QFabric System)

```
user@switch> show chassis fpc interconnect-device interconnect1 3 detail
Slot 3 information:
  State                                 Online
  Temperature                      0 degrees C / 32 degrees F
  Start time                          2011-08-18 10:45:04 PDT
  Uptime                              1 minute, 49 seconds
```

show chassis fpc pic-status interconnect-device (QFabric System)

```
user@switch> show chassis fpc pic-status interconnect-device interconnect1
Slot 0   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 1   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
 PIC 1  Online       16x 40G-GE
Slot 2   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 3   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 4   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 5   Online       QFX 16-port QSFP+ Front Card
```


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```
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 6   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 7   Online       QFX 16-port QSFP+ Front Card
  PIC 0  Online       16x 40G-QSFP+
  PIC 1  Online       16x 40G-GE
Slot 8   Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 9   Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 10  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 11  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 12  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 13  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 14  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
Slot 15  Online       QFX Fabric Rear Card
  PIC 0  Online       16x 40G-GE
```

show chassis fpc pic-status node-device (QFabric System)

```
user@switch> show chassis fpc pic-status node-device node1
Slot node1 Online      QFX 48x10G 4x40G Switch
  PIC 0  Online       48x 10G-SFP+
  PIC 1  Online       4x 40G-QSFP+
```

show chassis fpc (PTX5000 Packet Transport Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Empty
  1  Empty
  2  Online           50      6          0       2816        5         27
  3  Empty
  4  Empty
  5  Online           48      9          0       2816        5         27
  6  Empty
  7  Online           49      8          0       2816        5         27
```

show chassis fpc detail (PTX5000 Packet Transport Router)

```
user@host> show chassis fpc detail
Slot 2 information:
  State                               Online
  Temperature                    35 degrees C / 95 degrees F (PMB)
  Temperature                    35 degrees C / 95 degrees F (Intake)
  Temperature                    50 degrees C / 122 degrees F (Exhaust A)
  Temperature                    54 degrees C / 129 degrees F (Exhaust B)
  Temperature                    54 degrees C / 129 degrees F (TL0)
  Temperature                    52 degrees C / 125 degrees F (TQ0)
  Temperature                    61 degrees C / 141 degrees F (TL1)
  Temperature                    58 degrees C / 136 degrees F (TQ1)
```

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```
  Temperature                      57 degrees C / 134 degrees F (TL2)
  Temperature                      58 degrees C / 136 degrees F (TQ2)
  Temperature                      62 degrees C / 143 degrees F (TL3)
  Temperature                      61 degrees C / 141 degrees F (TQ3)
  Total CPU DRAM                 2816 MB
  Total SRAM                        0 MB
  Total SDRAM                       0 MB
  Start time                          2012-01-12 12:05:42 PST
  Uptime                              3 hours, 14 minutes, 7 seconds
Slot 5 information:
  State                               Online
  Temperature                      35 degrees C / 95 degrees F (PMB)
  Temperature                      34 degrees C / 93 degrees F (Intake)
  Temperature                      48 degrees C / 118 degrees F (Exhaust A)
  Temperature                      53 degrees C / 127 degrees F (Exhaust B)
  Temperature                      54 degrees C / 129 degrees F (TL0)
  Temperature                      52 degrees C / 125 degrees F (TQ0)
  Temperature                      69 degrees C / 156 degrees F (TL1)
  Temperature                      56 degrees C / 132 degrees F (TQ1)
  Temperature                      54 degrees C / 129 degrees F (TL2)
  Temperature                      56 degrees C / 132 degrees F (TQ2)
  Temperature                      59 degrees C / 138 degrees F (TL3)
  Temperature                      60 degrees C / 140 degrees F (TQ3)
  Total CPU DRAM                 2816 MB
  Total SRAM                        0 MB
  Total SDRAM                       0 MB
  Start time                          2012-01-12 12:05:43 PST
  Uptime                              3 hours, 14 minutes, 6 seconds
Slot 7 information:
  State                               Online
  Temperature                      35 degrees C / 95 degrees F (PMB)
  Temperature                      33 degrees C / 91 degrees F (Intake)
  Temperature                      50 degrees C / 122 degrees F (Exhaust A)
  Temperature                      55 degrees C / 131 degrees F (Exhaust B)
  Temperature                      56 degrees C / 132 degrees F (TL0)
  Temperature                      56 degrees C / 132 degrees F (TQ0)
  Temperature                      61 degrees C / 141 degrees F (TL1)
  Temperature                      57 degrees C / 134 degrees F (TQ1)
  Temperature                      55 degrees C / 131 degrees F (TL2)
  Temperature                      59 degrees C / 138 degrees F (TQ2)
  Temperature                      62 degrees C / 143 degrees F (TL3)
  Temperature                      62 degrees C / 143 degrees F (TQ3)
  Total CPU DRAM                 2816 MB
  Total SRAM                        0 MB
  Total SDRAM                       0 MB
  Start time                          2012-01-12 12:05:44 PST
  Uptime                              3 hours, 14 minutes, 5 seconds
```

show chassis fpc pic-status (PTX5000 Packet Transport Router)

```
user@host> show chassis fpc pic-status
Slot 2   Online       FPC
  PIC 0  Online       24x 10GE(LAN) SFP+
  PIC 1  Online       24x 10GE(LAN) SFP+
Slot 5   Online       FPC
  PIC 0  Online       24x 10GE(LAN) SFP+
  PIC 1  Online       2x 40GE CFP
Slot 7   Online       FPC
  PIC 0  Online       24x 10GE(LAN) SFP+
  PIC 1  Online       2x 40GE CFP
```


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show chassis fpc (PTX10008 Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Online            38     26          2       26     26     26    1953
 20         32
  1  Empty
  2  Empty
  3  Empty
  4  Empty
  5  Online            67     26          2       26     26     26    1953
 25         32
  6  Online            52     26          2       26     26     26    1953
 25         32
  7  Empty
```

show chassis fpc (PTX10016 Router)

```
user@host> show chassis fpc

                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer
  0  Empty
  1  Online            36     27          2       27     27     27    1953
 22         32
  2  Empty
  3  Online            36     27          2       27     27     27    1953
 22         32
  4  Empty
  5  Empty
  6  Online            35     27          2       27     27     27    1953
 22         32
  7  Empty
  8  Online            34     27          2       27     27     27    1953
 22         32
  9  Online            46     24          2       24     24     24    1953
 26         32
 10  Empty
 11  Empty
 12  Empty
 13  Empty
 14  Empty
 15  Empty
```

show chassis fpc (ACX2000 Universal Metro Router)

```
user@host> show chassis fpc
                     Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State            (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            61     17          6       512        21         37
```

show chassis fpc 0 (ACX2000 Universal Metro Router)

```
user@host> show chassis fpc 0
```

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```
                      Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State             (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  0  Online            61     17          6       512        21         37
```

show chassis fpc detail (ACX2000 Universal Metro Router)

```
user@host> show chassis fpc detail
Slot 0 information:
  State                                Online
  Temperature                       61 degrees C / 141 degrees F
  Total CPU DRAM                   512 MB
  Start time                           2012-05-29 02:52:06 PDT
  Uptime                               27 minutes, 17 seconds
```

show chassis fpc pic-status (ACX2000 Universal Metro Router)

```
user@host> show chassis fpc pic-status
Slot 0   Online
  PIC 0  Online       16x CHE1T1, RJ48
  PIC 1  Online       8x 1GE(LAN) RJ45
  PIC 2  Online       2x 1GE(LAN) SFP
  PIC 3  Online       2x 10GE(LAN) SFP+
```

show chassis FPC 1 (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis fpc 1
                    Temp  CPU Utilization (%)   Memory    Utilization (%)
Slot State           (C)  Total  Interrupt      DRAM (MB) Heap     Buffer
  1  Online            34      5          0       3072        5         13
```

show chassis FPC 1 detail (MX Routers with Media Services Blade [MSB])

```
user@switch> show chassis fpc 1 detail
Slot 1 information:
  State                                Online
  Temperature                        34
  Total CPU DRAM                   3072 MB
  Total RLDRAM                      259 MB
  Total DDR DRAM                   4864 MB
  Start time:                          2012-06-19 10:51:43 PDT
  Uptime:                              16 minutes, 48 seconds
  Max Power Consumption             550 Watts
```

Sample Output

show chassis fpc (Node Slicing)

```
user@router>show chassis fpc
                     Temp  CPU Utilization (%)   CPU Utilization (%)  Memory
Utilization (%)
Slot State            (C)  Total  Interrupt      1min   5min   15min  DRAM (MB)
Heap     Buffer    GNF
  0  Online           45     12          0       12     12     12     3584
  6         25       3
  1  Online           57     22          0       20     20     20     3136
 16         22       2
  2  Online           50     19          0       17     17     16     3584
```


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```
  6         25       3
  3  Online              28     10          0       11      11      11     2048
 10         20       6
  4  Online              42     20          0       20      19      19     3584
  8         25       6
  5  Online              58     22          0       21      20      20     3136
 16         22       4
  6  Online              49     17          0       15      16      16     3136
 13         20       1
  7  Online              44     11          0       10      10      10     3584
  6         25       5
  8  Online              40     19          0       18      18      18     3584
  8         25       5
  9  Online              44     19          0       20      20      20     3584
  8         25       5
```

Sample Output

show chassis fpc pic-status (Node Slicing)

```
user@router> show chassis fpc pic-status
Slot 0   Online       MPC5E 3D 24XGE+6XLGE                        GNF 3
  PIC 0  Online       12X10GE SFPP OTN
  PIC 1  Offline      12X10GE SFPP OTN
  PIC 2  Offline      3X40GE QSFPP
  PIC 3  Online       3X40GE QSFPP
Slot 1   Online       MPC9E 3D                                    GNF 2
  PIC 1  Online       MRATE-12xQSFPP-XGE-XLGE-CGE
Slot 2   Online       MPC5E 3D Q 2CGE+4XGE                        GNF 3
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 3   Online       MPCE Type 2 3D EQ                           GNF 6
Slot 4   Online       MPC6E 3D                                    GNF 6
  PIC 0  Online       24X10GE SFPP
  PIC 1  Online       2X100GE CFP2 OTN
Slot 5   Online       MPC9E 3D                                    GNF 4
  PIC 0  Online       MRATE-12xQSFPP-XGE-XLGE-CGE
Slot 6   Online       MPC7E 3D MRATE-12xQSFPP-XGE-XLGE-CGE        GNF 1
  PIC 0  Online       MRATE-6xQSFPP-XGE-XLGE-CGE
  PIC 1  Online       MRATE-6xQSFPP-XGE-XLGE-CGE
Slot 7   Online       MPC5E 3D 2CGE+4XGE                          GNF 5
  PIC 0  Online       2X10GE SFPP OTN
  PIC 1  Online       1X100GE CFP2 OTN
  PIC 2  Online       2X10GE SFPP OTN
  PIC 3  Online       1X100GE CFP2 OTN
Slot 8   Online       MPC6E 3D                                    GNF 5
  PIC 0  Online       24X10GE SFPP OTN
Slot 9   Online       MPC6E 3D                                    GNF 5
  PIC 0  Online       24X10GE SFPP
  PIC 1  Online       4X100GE CXP
```

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show chassis lccs

Syntax show chassis lccs

Release Information Command introduced before Junos OS Release 7.4.

Description (TX Matrix and TX Matrix Plus routers only) On a TX Matrix router, display the status of all T640 LCC connected to the TX Matrix router. On a TX Matrix Plus router, display the status of all LCC connected to the TX Matrix Plus router.

Options This command has no options.

Required Privilege Level view

Related Documentation

- *request chassis lcc*
- *Configuring Line-Card Upgrade Groups for Nonstop Software Upgrade (CLI Procedure)*
- *fpc*

List of Sample Output

show chassis lccs on page 414
show chassis lccs (TX Matrix Plus router with 3D SIBs) on page 415

Output Fields Table 10 on page 414 lists the output fields for the **show chassis lccs** command. Output fields are listed in the approximate order in which they appear.

Table 10: show chassis lccs Output Fields

Field Name	Field Description
Slot	LCC slot number.
State	LCC status: • **Online**—LCC is online and running. • **Offline**—LCC is powered down. • **Empty**—No LCC is present.
Uptime	How long the LCC has been up and running.

Sample Output

show chassis lccs

```
user@host> show chassis lccs
Slot  State               Uptime
 0    Online             3 minutes, 17 seconds
 1    Empty
```


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```
 2    Online             3 minutes, 23 seconds
 3    Empty
```

show chassis lccs (TX Matrix Plus router with 3D SIBs)

```
user@host> show chassis lccs
Slot  State               Uptime
 0    Offline
 1    Empty
 2    Online             1 day, 4 hours, 57 minutes, 7 seconds
 3    Empty
 4    Online             1 day, 4 hours, 56 minutes, 58 seconds
 5    Empty
 6    Empty
 7    Online             3 hours, 45 minutes, 41 seconds
```

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show chassis location

List of Syntax

Syntax on page 416
Syntax (TX Matrix Router) on page 416
Syntax (TX Matrix Plus Router) on page 416
Syntax (MX Series Router) on page 416
Syntax (QFX Series) on page 416
Syntax (OCX Series) on page 416

Syntax

show chassis location

Syntax (TX Matrix Router)

show chassis location
<fpc | interface (by-name *name* | by-slot fpc *number* lcc *number*) | lcc *number* | scc>

Syntax (TX Matrix Plus Router)

show chassis location
<fpc | interface (by-name *name* | by-slot fpc *number* lcc *number*) | lcc *number* | sfc *number*>

Syntax (MX Series Router)

show chassis location
<all-members>
<local>
<member *member-id*>

Syntax (QFX Series)

show chassis location
<interconnect-device *name*>
<node-device *name*>

Syntax (OCX Series)

show chassis location

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
sfc option introduced for the TX Matrix Plus router in Junos OS Release 9.6.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description

Display the physical location of the chassis. This command can only be used on the master Routing Engine.

Options

none—Display all information about the physical location of the chassis. On a TX Matrix router, display all information about the physical location of the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display all information about the physical location of the TX Matrix Plus router and its attached routers.

all-members—(MX Series routers only) (Optional) Display the physical location of the chassis for all the member routers in the Virtual Chassis configuration.

fpc—(TX Matrix router and TX Matrix Plus router only) (Optional) Display the physical location of all Flexible PIC Concentrators (FPCs).

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interconnect-device ***name***—(QFabric systems only) (Optional) Display the physical location of the Interconnect device.

interface by-name ***name***—(TX Matrix and TX Matrix Plus routers only) (Optional) Display the physical location of a specified interface name. On a TX Matrix router, this option displays the FPC number and T640 router (line-card chassis) number associated with the specified interface. On a TX Matrix Plus router, this option displays the FPC number and router (line-card chassis) number associated with the specified interface.

interface by-slot fpc ***number*** **lcc** ***number***—(TX Matrix and TX Matrix Plus router only) (Optional) On a TX Matrix router, display the global FPC number of an interface by specifying its local FPC number and T640 router (line-card chassis) number. On a TX Matrix Plus router, display the global FPC number of an interface by specifying its local FPC number and router (line-card chassis) number.

- The global FPC number is the FPC slot number when all the FPC slots in the routing matrix are considered: **0** through **31**. On TX Matrix Plus router with 3D SIBs, the value is **0** through **63**. The local FPC number is the FPC slot number on a particular T640 router.
- For **fpc**, replace ***number*** with a value from **0** through **7**.
- For **lcc**, replace ***number*** with a value from **0** through **7**.

lcc ***number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display the physical location of a specified T640 router (line-card chassis) that is connected to a TX Matrix router. On a TX Matrix Plus router , display the physical location of a specified router (line-card chassis) that is connected to a TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

local—(MX Series routers only) (Optional) Display the physical location of the chassis for the local Virtual Chassis member.

member ***member-id***—(MX Series routers only) (Optional) Display the physical location of the chassis for the specified member of the Virtual Chassis configuration. Replace ***member-id*** with a value of 0 or 1.

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node-device *name*—(QFabric systems only) (Optional) Display the physical location of the Node device.

scc—(TX Matrix routers only) (Optional) Display the physical location of the TX Matrix router (switch-card chassis).

sfc—(TX Matrix Plus routers only) (Optional) Display the physical location of the TX Matrix Plus router (or switch-fabric chassis).

Required Privilege Level

view

Related Documentation

- *Displaying Chassis Physical Locations for a Routing Matrix with a TX Matrix Plus Router*

List of Sample Output

show chassis location on page 419
show chassis location fpc (TX Matrix Router) on page 419
show chassis location interface by-slot (TX Matrix Router) on page 419
show chassis location fpc (TX Matrix Plus Router) on page 419
show chassis location interface by-slot (TX Matrix Plus Router) on page 419
show chassis location (QFX Series and OCX Series) on page 419
show chassis location (QFabric Systems) on page 419

Output Fields

Table 11 on page 418 lists the output fields for the **show chassis location** command. Output fields are listed in the approximate order in which they appear.

Table 11: show chassis location Output Fields

Field Name	Field Description
country-code	Country code information.
postal-code	Postal code information.
Building	Building information.
Floor	Floor information.
Global FPC	Global FPC number. The FPC slot number, when all FPC slots in the routing matrix are considered. The range of values is **0** through **31**. On TX Matrix Plus router with 3D SIBs the value is **0** through **63**.
LATA	Local access transport area information.
LCC	Line-card chassis number. On a TX Matrix router, the number of a particular T640 router connected to the TX Matrix router. On a TX Matrix Plus router, the number of a particular router connected to the TX Matrix Plus router.

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Table 11: show chassis location Output Fields (continued)

Field Name	Field Description
Local FPC	Local FPC number. On a TX Matrix router, the FPC slot number on a particular T640 router. On a TX Matrix Plus router, the FPC slot number on a particular router.

Sample Output

show chassis location

```
user@host> show chassis location
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

show chassis location fpc (TX Matrix Router)

```
user@host> show chassis location fpc
Global FPC    LCC     Local FPC
    17          2         1
    21          2         5
```

show chassis location interface by-slot (TX Matrix Router)

```
user@host> show chassis location interface by-slot fpc 1 lcc 1
Global FPC: 9
```

show chassis location fpc (TX Matrix Plus Router)

```
user@host> show chassis location fpc
Global FPC    LCC     Local FPC
     0          0         0
     1          0         1
```

show chassis location interface by-slot (TX Matrix Plus Router)

```
user@host> show chassis location interface by-slot fpc 2 lcc 1
Global FPC: 10
```

show chassis location (QFX Series and OCX Series)

```
user@switch> show chassis location
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

show chassis location (QFabric Systems)

```
user@switch> show chassis location interconnect-device interconnect1
country-code: US
postal-code: 94404
Building: Building 2, Floor: 2
```

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show chassis routing-engine

List of Syntax

Syntax on page 420
Syntax (ACX Series Universal Metro Routers) on page 420
Syntax (EX Series Switches) on page 420
Syntax (QFX Series) on page 420
Syntax (MX Series Routers) on page 420
Syntax (MX2010 3D Universal Edge Routers) on page 420
Syntax (MX2020 3D Universal Edge Routers) on page 420
Syntax (MX104 3D Universal Edge Routers) on page 421
Syntax (MX204, and MX10003 3D Universal Edge Routers) on page 421
Syntax (PTX Series Packet Transport Routers) on page 421
Syntax (T Series Routers) on page 421
Syntax (TX Matrix Routers) on page 421
Syntax (TX Matrix Plus Routers) on page 421

Syntax

show chassis routing-engine
<bios | *slot*>

Syntax (ACX Series Universal Metro Routers)

show chassis routing-engine

Syntax (EX Series Switches)

show chassis routing-engine
<*slot*>
<satellite [slot-id *slot-id* |device-alias *alias-name*>

Syntax (QFX Series)

show chassis routing-engine
<interconnect-device *name*>
<node-device *name*>
<*slot*>
<*bios*>
<*errors*>

Syntax (MX Series Routers)

show chassis routing-engine
<all-members>
<bios | *slot*>
<local>
<member *member-id*>
<satellite [slot-id *slot-id* |device-alias *alias-name*>

Syntax (MX2010 3D Universal Edge Routers)

show chassis routing-engine
<bios | *slot*>

Syntax (MX2020 3D Universal Edge Routers)

show chassis routing-engine
<bios | *slot*>

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Syntax (MX104 3D Universal Edge Routers)

```
show chassis routing-engine
```

Syntax (MX204, and MX10003 3D Universal Edge Routers)

```
show chassis routing-engine
<slot>
<bios>
<errors>
```

Syntax (PTX Series Packet Transport Routers)

```
show chassis routing-engine
```

Syntax (T Series Routers)

```
show chassis routing-engine
<bios | slot>
```

Syntax (TX Matrix Routers)

```
show chassis routing-engine
<bios | slot>
<lcc number | scc>
```

Syntax (TX Matrix Plus Routers)

```
show chassis routing-engine
<bios | slot>
<lcc number | sfc number>
```

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
sfc option introduced in Junos OS Release in 9.6 for the TX Matrix Plus router.
Command introduced in Junos OS Release 11.1 for QFX Series.
5 sec CPU Utilization, **1 min CPU Utilization**, **5 min CPU Utilization**, and **15 min CPU Utilization** output fields introduced in Junos OS Release 11.3R1.
Command introduced in Junos OS Release 12.2 for ACX Series Universal Metro Routers.
Command introduced in Junos OS Release 12.3 for MX2010 and MX2020 3D Universal Edge Routers.
Command introduced in Junos OS Release 13.2 for MX104 3D Universal Edge Routers.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.
satellite option introduced in Junos OS Release 14.2R3.
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.
Command introduced in Junos OS Release 17.3 for MX10003 3D Universal Edge Routers.
Command introduced in Junos OS Release 17.4 for MX204 3D Universal Edge Routers.
Command introduced in Junos OS Release 18.1R1 for EX9251 switches.

Description

Display the status of the Routing Engine.

Options

none—Display information about one or more Routing Engines. On a TX Matrix router, display information about all Routing Engines on the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display information about all Routing Engines on the TX Matrix Plus router and its attached routers.

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all-members—(MX Series routers only) (Optional) Display Routing Engine information for all members of the Virtual Chassis configuration.

bios—(Optional) Display the (BIOS) firmware version.

errors—(Optional) Display routing engine errors.

interconnect-device ***number***—(QFabric systems only) (Optional) Display Routing Engine information for a specified Interconnect device.

lcc ***number***—(TX Matrix and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display Routing Engine information for a specified T640 router (line-card chassis) that is connected to the TX Matrix router. On a TX Matrix Plus router, display Routing Engine information for a specified router (line-card chassis) that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

local—(MX Series routers only) (Optional) Display Routing Engine information for the local Virtual Chassis member.

member ***member-id***—(MX Series routers only) (Optional) Display Routing Engine information for the specified member of the Virtual Chassis configuration. For an MX Series Virtual Chassis, replace *member-id* with a value of 0 or 1.

node-device ***number***—(QFabric systems only) (Optional) Display Routing Engine information for a specified Node device.

satellite [slot-id ***slot-id*** **|device-alias** ***alias-name*****]**—(Junos Fusion only) (Optional) Display Routing Engine information for the specified satellite device in a Junos Fusion, or for all satellite devices in the Junos Fusion if no satellite devices are specified.

scc—(TX Matrix routers only) (Optional) Display Routing Engine information for the TX Matrix router (switch-card chassis).

sfc ***number***—(TX Matrix Plus routers only) (Optional) Display Routing Engine information for the TX Matrix Plus router (or switch-fabric chassis). Replace ***number*** with 0.

slot—(Systems with multiple Routing Engines) (Optional) Display information for an individual Routing Engine. Replace ***slot*** with 0 or 1. For QFX3500 switches, there is only one Routing Engine, so you do not need to specify the slot number.

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Required Privilege Level view

Related Documentation

- *request chassis routing-engine master*
- *Configuring Routing Engine Redundancy*
- *Switching the Global Master and Backup Roles in a Virtual Chassis Configuration*

List of Sample Output

show chassis routing-engine (M5 Router) on page 426
show chassis routing-engine (M10 Router) on page 427
show chassis routing-engine (M20 Router) on page 427
show chassis routing-engine (M40 Router) on page 428
show chassis routing-engine (M120 Router) on page 428
show chassis routing-engine (M160 Router) on page 429
show chassis routing-engine (MX104 Router) on page 430
show chassis routing-engine (MX240 Router) on page 430
show chassis routing-engine (MX480 Router) on page 431
show chassis routing-engine (MX960 Router) on page 432
show chassis routing-engine (MX2010 Router) on page 434
show chassis routing-engine (MX2020 Router) on page 435
show chassis routing-engine (MX10003 Router) on page 435
show chassis routing-engine (MX204 Router) on page 436
show chassis routing-engine (T320 Router) on page 437
show chassis routing-engine (T640 Router) on page 438
show chassis routing-engine (T1600 Router) on page 438
show chassis routing-engine (T4000 Router) on page 439
show chassis routing-engine (TX Matrix Router) on page 440
show chassis routing-engine lcc (TX Matrix Router) on page 441
show chassis routing-engine bios (TX Matrix Router) on page 442
show chassis routing-engine (TX Matrix Plus Router) on page 442
show chassis routing-engine lcc (TX Matrix Plus Router) on page 443
show chassis routing-engine bios (TX Matrix Plus Router) on page 444
show chassis routing-engine (QFX Series) on page 444
show chassis routing-engine (OCX Series) on page 445
show chassis routing engine interconnect-device (QFabric Systems) on page 445
show chassis routing-engine (PTX Series Packet Transport Router) on page 446
show chassis routing-engine (EX9200 Switch) on page 446
show chassis routing-engine (EX9251 Switch) on page 447
show chassis routing-engine (ACX2000 Universal Metro Router) on page 448
show chassis routing-engine (ACX1000 Universal Metro Router) on page 448
show chassis routing-engine (Displaying the guest reboot reason on PTX5000,MX240, MX480, MX960< MX2010, and MX2020) on page 448

Output Fields Table 12 on page 424 lists the output fields for the **show chassis routing-engine** command. Output fields are listed in the approximate order in which they appear.

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Table 12: show chassis routing-engine Output Fields

Field Name	Field Description
Slot	(Systems with single and multiple Routing Engines) Slot number.
Current state	(Systems with multiple Routing Engines) Current state of the Routing Engine: **Master**, **Backup**, or **Disabled**.
Election priority	(Systems with multiple Routing Engines) Election priority for the Routing Engine: **Master** or **Backup**.
Temperature	Temperature of the air flowing past the Routing Engine.
CPU Temperature	Temperature of the CPU.
DRAM	Total DRAM available to the Routing Engine's processor. Starting with Junos OS Release 12.3R1, the DRAM field displays both available memory and installed memory.
Memory utilization	Percentage of Routing Engine memory being used. NOTE: For platforms running Junos OS with upgraded FreeBSD, the way memory utilization is calculated has changed. Starting in Junos OS Release 15.1R1, inactive memory is no longer included in the calculation for memory utilization. Inactive memory is now considered as free. That is, the value for used memory decreases and results in more memory to be available for other processes. For platforms that run Junos OS with upgraded FreeBSD, see *Release Information for Junos OS with Upgraded FreeBSD*.
CPU utilization	Information about the Routing Engine's CPU utilization: • **User**—Percentage of CPU time being used by user processes. • **Background**—Percentage of CPU time being used by background processes. • **Kernel**—Percentage of CPU time being used by kernel processes. • **Interrupt**—Percentage of CPU time being used by interrupts. • **Idle**—Percentage of CPU time that is idle.
5 sec CPU Utilization	Information about the Routing Engine's CPU utilization in the past 5 seconds: • **User**—Percentage of CPU time being used by user processes. • **Background**—Percentage of CPU time being used by background processes. • **Kernel**—Percentage of CPU time being used by kernel processes. • **Interrupt**—Percentage of CPU time being used by interrupts. • **Idle**—Percentage of CPU time that is idle.
1 min CPU Utilization	Information about the Routing Engine's CPU utilization in the past 1 minute: • **User**—Percentage of CPU time being used by user processes. • **Background**—Percentage of CPU time being used by background processes. • **Kernel**—Percentage of CPU time being used by kernel processes. • **Interrupt**—Percentage of CPU time being used by interrupts. • **Idle**—Percentage of CPU time that is idle.

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Table 12: show chassis routing-engine Output Fields (continued)

Field Name	Field Description
5 min CPU Utilization	Information about the Routing Engine's CPU utilization in the past 5 minutes: • **User**—Percentage of CPU time being used by user processes. • **Background**—Percentage of CPU time being used by background processes. • **Kernel**—Percentage of CPU time being used by kernel processes. • **Interrupt**—Percentage of CPU time being used by interrupts. • **Idle**—Percentage of CPU time that is idle.
15 min CPU Utilization	Information about the Routing Engine's CPU utilization in the past 15 minutes: • **User**—Percentage of CPU time being used by user processes. • **Background**—Percentage of CPU time being used by background processes. • **Kernel**—Percentage of CPU time being used by kernel processes. • **Interrupt**—Percentage of CPU time being used by interrupts. • **Idle**—Percentage of CPU time that is idle.
Model	Routing Engine model number.
Serial ID	(Systems with multiple Routing Engines) Identification number of the Routing Engine in this slot.
Start time	Time at which the Routing Engine started running.
Uptime	How long the Routing Engine has been running.
Routing Engine BIOS Version	BIOS version being run by the Routing Engine.

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Table 12: show chassis routing-engine Output Fields (continued)

Field Name	Field Description
Last reboot reason	Reason for last reboot, including: • **power cycle/failure**—Halt of the Routing Engine using the **halt** command, powering down using the power button on the chassis or any other method (such as removal of the control board or Routing Engine), and then powering back the Routing Engine. A halt of the operating system also occurs if you enter the **request system halt** command. You can enter this command to halt the system operations on the chassis or specific Routing Engines. To restart the software, press any key on the keyboard. • **watchdog**—Reboot due to a hardware watchdog. A watchdog is a hardware monitoring process that examines the health and performance of the router to enable the device to recover from failures. A watchdog checks for problems at certain intervals, and reboots the routing engine if a problem is encountered. • **reset-button reset**—(Not available on the EX Series switch) Reboot due to pressing of the reset button on the Routing Engine. • **power-button hard power off**—Reboot due to pressing of the power button on the chassis. A powering down of the software also occurs if you enter the **request system power-off** command. You can enter this command to power down the chassis or specific Routing Engines; you can then restart the software. • **misc hardware reason**—Reboot due to miscellaneous hardware reasons. • **thermal shutdown**—Reboot due to the router or switch reaching a critical temperature at which point it is unsafe to continue operations. • **hard disk failure**—Reboot due to a hard disk or solid-state drive (SSD) failure. • **reset from debugger**—Reboot due to reset from the debugger. • **chassis control reset**—Restart the chassis process that manages PICs, FPCs, and other hardware components. The chassis control module that runs the Routing Engine performs management and monitoring functions, and it provides a single access point for operational and maintenance functions. A reset of the chassis management process occurs when you enter the **restart chassis-control** command. • **bios auto recovery reset**—Reboot due to a BIOS auto-recovery reset. • **could not be determined**—Reboot due to an undetermined reason. • **Router rebooted after a normal shutdown**—Reboot due to a normal shutdown. This reason is displayed if the Routing Engine is powered down by pushing and holding the online/offline button on the Routing Engine faceplate for 30 seconds, and then powered back. A reboot of the software also occurs if you enter the **request system reboot** command. You can enter this command to reboot the chassis or specific Routing Engines. • **Hypervisor reboot**—When both Linux host and Junos OS is rebooted using the **request vmhost reboot** command. • **VJUNOS Reboot**—When Junos OS is rebooted using the **request system reboot** command.
Load averages	Routing Engine load averages for the last 1, 5, and 15 minutes.

Sample Output

show chassis routing-engine (M5 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
    Temperature                 25 degrees C / 77 degrees F
    DRAM                       768 MB
    Memory utilization          21 percent
    CPU utilization:
```


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```
    User                     0 percent
    Background               0 percent
    Kernel                   0 percent
    Interrupt                0 percent
    Idle                   100 percent
  Model                      RE-2.0
  Serial ID                  31000007349bf701
  Start time                 2003-12-04 09:42:17 PST
  Uptime                     26 days, 1 hour, 12 minutes, 27 seconds
  Last reboot reason         Router rebooted after a normal shutdown
  Load averages:             1 minute   5 minute  15 minute
                                 0.00       0.01       0.00
```

show chassis routing-engine (M10 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
    Temperature               25 degrees C / 77 degrees F
    DRAM                     768 MB
    Memory utilization        21 percent
    CPU utilization:
      User                     0 percent
      Background               0 percent
      Kernel                   0 percent
      Interrupt                0 percent
      Idle                   100 percent
    Model                      RE-2.0
    Serial ID                  31000007349bf701
    Start time                 2003-12-04 09:42:17 PST
    Uptime                     26 days, 1 hour, 12 minutes, 27 seconds
    Last reboot reason         Router rebooted after a normal shutdown
    Load averages:             1 minute   5 minute  15 minute
                                   0.00       0.01       0.00
```

show chassis routing-engine (M20 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state              Master
    Election priority          Master (default)
    Temperature               29 degrees C / 84 degrees F
    DRAM                     768 MB
    Memory utilization        20 percent
    CPU utilization:
      User                     1 percent
      Background               0 percent
      Kernel                   2 percent
      Interrupt                0 percent
      Idle                    97 percent
    Model                      RE-2.0
    Serial ID                  58000007348d9a01
    Start time                 2003-12-30 07:05:47 PST
    Uptime                    3 hours, 41 minutes, 14 seconds
    Last reboot reason         Router rebooted after a normal shutdown
    Load averages:             1 minute   5 minute  15 minute
                                   0.00       0.02       0.00
Routing Engine status:
  Slot 1:
    Current state              Backup
```

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```
    Election priority              Backup (default)
    Temperature                 29 degrees C / 84 degrees F
    DRAM                       768 MB
    Memory utilization           0 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     1 percent
      Interrupt                  0 percent
      Idle                      99 percent
    Model                        RE-2.0
    Serial ID                    d800000734745701
    Start time                   2003-06-17 16:37:33 PDT
    Uptime                      195 days, 18 hours, 47 minutes, 9 seconds
    Last reboot reason           Router rebooted after a normal shutdown
```

show chassis routing-engine (M40 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
    Temperature                 25 degrees C / 77 degrees F
    DRAM                       768 MB
    Memory utilization          21 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                     100 percent
    Model                        RE-2.0
    Serial ID                    31000007349bf701
    Start time                   2003-12-04 09:42:17 PST
    Uptime                       26 days, 1 hour, 12 minutes, 27 seconds
    Last reboot reason           Router rebooted after a normal shutdown
    Load averages:               1 minute   5 minute  15 minute
                                     0.00       0.01       0.00
```

show chassis routing-engine (M120 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                Master
    Election priority            Master (default)
    Temperature                 46 degrees C / 114 degrees F
    CPU temperature             44 degrees C / 111 degrees F
    DRAM                      2048 MB
    Memory utilization          18 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     5 percent
      Interrupt                  0 percent
      Idle                      95 percent
    Model                        RE-A-1000
    Serial ID                    1000621154
    Start time                   2006-10-31 17:10:05 PST
    Uptime                       14 minutes, 31 seconds
    Last reboot reason           Router rebooted after a normal shutdown
    Load averages:               1 minute   5 minute  15 minute
```


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```
                                        0.02       0.07       0.07
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 45 degrees C / 113 degrees F
    CPU temperature             42 degrees C / 107 degrees F
    DRAM                      2048 MB
    Memory utilization          15 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                     100 percent
    Model                          RE-A-1000
    Serial ID                      1000621151
    Start time                     2006-10-31 17:10:04 PST
    Uptime                         14 minutes, 30 seconds
    Last reboot reason             Router rebooted after a normal shutdown
```

show chassis routing-engine (M160 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 43 degrees C / 109 degrees F
    DRAM                      2048 MB
    Memory utilization          11 percent
    CPU utilization:
      User                       1 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  0 percent
      Idle                      97 percent
    Model                          RE-3.0
    Serial ID                      210865700403
    Start time                     2003-12-23 12:25:55 PST
    Uptime                       6 days, 22 hours, 33 minutes, 24 seconds
    Last reboot reason             Router rebooted after a normal shutdown
    Load averages:                 1 minute   5 minute  15 minute
                                       0.24       0.13       0.04
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 40 degrees C / 104 degrees F
    DRAM                      2048 MB
    Memory utilization           9 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                     100 percent
    Model                          RE-3.0
    Serial ID                      210865700332
    Start time                     2003-12-23 12:25:55 PST
```

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```
    Uptime                          6 days, 22 hours, 33 minutes, 21 seconds
    Last reboot reason               Router rebooted after a normal shutdown
```

show chassis routing-engine (MX104 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 32 degrees C / 89 degrees F
    CPU temperature             42 degrees C / 107 degrees F
    DRAM                      3840 MB (3840 MB installed)
    Memory utilization          18 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     3 percent
      Interrupt                  2 percent
      Idle                      94 percent
    Model                          RE-MX-104
    Serial ID                      CAAR5925
    Start time                     2013-06-05 13:17:08 IST
    Uptime                         1 hour, 15 minutes, 8 seconds
    Last reboot reason             0x200:normal shutdown
    Load averages:                 1 minute   5 minute  15 minute
                                       0.87       0.90       0.41
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 32 degrees C / 89 degrees F
    CPU temperature             38 degrees C / 100 degrees F
    DRAM                      3840 MB (3840 MB installed)
    Memory utilization          13 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     1 percent
      Interrupt                  2 percent
      Idle                      97 percent
    Model                          RE-MX-104
    Serial ID                      CAAM6369
    Start time                     2013-06-05 13:07:37 IST
    Uptime                         1 hour, 24 minutes, 34 seconds
    Last reboot reason             0x200:normal shutdown
    Load averages:                 1 minute   5 minute  15 minute
                                       0.19       0.15       0.06
```

show chassis routing-engine (MX240 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 36 degrees C / 96 degrees F
    CPU temperature             35 degrees C / 95 degrees F
    DRAM                      3314 MB (8192 MB installed)
    Memory utilization          37 percent
```


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```
    5 sec CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    1 percent
      Interrupt                 0 percent
      Idle                     99 percent
    1 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    1 percent
      Interrupt                 0 percent
      Idle                     99 percent
    5 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    1 percent
      Interrupt                 0 percent
      Idle                     99 percent
    15 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    1 percent
      Interrupt                 0 percent
      Idle                     99 percent
    Model                       RE-S-1800x4
    Serial ID                   9009074155
    Start time                  2014-10-13 00:35:41 PDT
    Uptime                      98 days, 2 hours, 6 minutes, 35 seconds
    Last reboot reason          Router rebooted after a normal shutdown.
    Load averages:              1 minute   5 minute  15 minute
                                    0.12       0.12       0.13

Routing Engine status:
  Slot 1:
    Current state               Present
```

show chassis routing-engine (MX480 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state               Backup
    Election priority           Master (default)
    Temperature                30 degrees C / 86 degrees F
    CPU temperature            32 degrees C / 89 degrees F
    DRAM                     3314 MB (8192 MB installed)
    Memory utilization         51 percent
    5 sec CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 0 percent
      Idle                    100 percent
    1 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 0 percent
      Idle                      0 percent
    5 min CPU utilization:
      User                      0 percent
      Background                0 percent
```

```
      Kernel                    0 percent
      Interrupt                 0 percent
      Idle                      0 percent
    15 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 0 percent
      Idle                      0 percent
    Model                         RE-S-1800x4
    Serial ID                     9009079817
    Start time                    2015-01-19 01:45:58 PST
    Uptime                        7 minutes, 23 seconds
    Last reboot reason            Router rebooted after a normal shutdown.
    Load averages:                1 minute   5 minute  15 minute
                                      0.16       0.16       0.09
Routing Engine status:
  Slot 1:
    Current state                 Master
    Election priority             Backup (default)
    Temperature                31 degrees C / 87 degrees F
    CPU temperature            32 degrees C / 89 degrees F
    DRAM                     8144 MB (8192 MB installed)
    Memory utilization         23 percent
    5 sec CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    1 percent
      Interrupt                 0 percent
      Idle                     99 percent
    1 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    1 percent
      Interrupt                 0 percent
      Idle                     98 percent
    5 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    1 percent
      Interrupt                 0 percent
      Idle                     98 percent
    15 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    1 percent
      Interrupt                 0 percent
      Idle                     98 percent
    Model                         RE-S-1800x4
    Serial ID                     9009079838
    Start time                    2015-01-09 10:52:20 PST
    Uptime                        9 days, 15 hours, 1 minute, 4 seconds
    Last reboot reason            Router rebooted after a normal shutdown.
    Load averages:                1 minute   5 minute  15 minute
                                      0.10       0.16       0.16
```

show chassis routing-engine (MX960 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
```


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```
    Current state                  Master
    Election priority              Master (default)
    Temperature                 37 degrees C / 98 degrees F
    CPU temperature             34 degrees C / 93 degrees F
    DRAM                      3313 MB (16384 MB installed)
    Memory utilization          31 percent
    5 sec CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     3 percent
      Interrupt                  1 percent
      Idle                      96 percent
    1 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     4 percent
      Interrupt                  1 percent
      Idle                      96 percent
    5 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     4 percent
      Interrupt                  1 percent
      Idle                      95 percent
    15 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     4 percent
      Interrupt                  1 percent
      Idle                      95 percent
    Model                         RE-S-1800x4
    Serial ID                     9013043785
    Start time                    2015-01-12 23:37:53 PST
    Uptime                        6 days, 2 hours, 17 minutes, 3 seconds
    Last reboot reason            Router rebooted after a normal shutdown.
    Load averages:                1 minute   5 minute  15 minute
                                      0.00       0.02       0.00
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 37 degrees C / 98 degrees F
    CPU temperature             34 degrees C / 93 degrees F
    DRAM                      3313 MB (16384 MB installed)
    Memory utilization          26 percent
    5 sec CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                      99 percent
    1 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                       0 percent
    5 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
```

```
    Interrupt                0 percent
    Idle                     0 percent
  15 min CPU utilization:
    User                     0 percent
    Background               0 percent
    Kernel                   0 percent
    Interrupt                0 percent
    Idle                     0 percent
  Model                        RE-S-1800x4
  Serial ID                    9013037303
  Start time                   2015-01-12 23:25:29 PST
  Uptime                       6 days, 2 hours, 29 minutes, 21 seconds
  Last reboot reason           Router rebooted after a normal shutdown.
  Load averages:               1 minute   5 minute  15 minute
                                   0.00       0.00       0.00
```

show chassis routing-engine (MX2010 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                Master
    Election priority            Master (default)
    Temperature                 41 degrees C / 105 degrees F
    CPU temperature             38 degrees C / 100 degrees F
    DRAM                      3313 MB (16384 MB installed)
    Memory utilization          37 percent
    5 sec CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  2 percent
      Idle                      96 percent
    1 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  2 percent
      Idle                      97 percent
    5 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  2 percent
      Idle                      97 percent
    15 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  2 percent
      Idle                      97 percent
    Model                        RE-S-1800x4
    Serial ID                    9009146890
    Start time                   2015-01-18 21:35:12 PST
    Uptime                       4 hours, 21 minutes, 34 seconds
    Last reboot reason           Router rebooted after a normal shutdown.
    Load averages:               1 minute   5 minute  15 minute
                                     0.11       0.14       0.14
```


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show chassis routing-engine (MX2020 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 2 degrees C / 35 degrees F
    CPU temperature             32 degrees C / 89 degrees F
    DRAM                     32735 MB (32768 MB installed)
    Memory utilization          10 percent
    5 sec CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     1 percent
      Interrupt                  1 percent
      Idle                      98 percent
    1 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     1 percent
      Interrupt                  1 percent
      Idle                      99 percent
    5 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     1 percent
      Interrupt                  1 percent
      Idle                      99 percent
    15 min CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     1 percent
      Interrupt                  1 percent
      Idle                      99 percent
    Model                        RE-S-2X00x8
    Serial ID                    CADN0309
    Start time                   2015-01-08 16:31:15 PST
    Uptime                       4 days, 22 hours, 59 minutes, 3 seconds
    Last reboot reason           Router rebooted after a normal shutdown.
    Load averages:               1 minute   5 minute  15 minute
                                     0.39       0.41       0.34
```

show chassis routing-engine (MX10003 Router)

```
user@host> show chassis routing-engine

Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 43 degrees C / 109 degrees F
    CPU temperature             40 degrees C / 104 degrees F
    DRAM                     49112 MB (49152 MB installed)
    Memory utilization          4 percent
    5 sec CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  0 percent
```

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```
      Idle                        98 percent
    1 min CPU utilization:
      User                         0 percent
      Background                   0 percent
      Kernel                       1 percent
      Interrupt                    0 percent
      Idle                        98 percent
    5 min CPU utilization:
      User                         0 percent
      Background                   0 percent
      Kernel                       1 percent
      Interrupt                    0 percent
      Idle                        98 percent
    15 min CPU utilization:
      User                         0 percent
      Background                   0 percent
      Kernel                       1 percent
      Interrupt                    0 percent
      Idle                        96 percent
    Model                          RE-S-2X00x6
    Start time                     2017-08-08 23:13:16 PDT
    Uptime                         53 minutes, 38 seconds
    Last reboot reason             0x1:power cycle/failure
    Load averages:                 1 minute   5 minute  15 minute
                                       0.23       0.28       0.25
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 38 degrees C / 100 degrees F
    CPU temperature             39 degrees C / 102 degrees F
    DRAM                     49112 MB (49152 MB installed)
    Memory utilization           4 percent
    5 sec CPU utilization:
      User                         0 percent
      Background                   0 percent
      Kernel                       1 percent
      Interrupt                    0 percent
      Idle                        99 percent
    Model                          RE-S-2X00x6
    Start time                     2017-08-08 23:13:18 PDT
    Uptime                         53 minutes, 25 seconds
    Last reboot reason             0x1:power cycle/failure
    Load averages:                 1 minute   5 minute  15 minute
                                       0.21       0.19       0.17
```

show chassis routing-engine (MX204 Router)

```
user@host> show chassis routing-engine

Routing Engine status:
    Temperature                 52 degrees C / 125 degrees F
    CPU temperature             52 degrees C / 125 degrees F
    DRAM                     16341 MB (16384 MB installed)
    Memory utilization          11 percent
    5 sec CPU utilization:
      User                         0 percent
      Background                   0 percent
      Kernel                       0 percent
      Interrupt                    0 percent
      Idle                       100 percent
```


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```
    1 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 0 percent
      Idle                    100 percent
    5 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 0 percent
      Idle                    100 percent
    15 min CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 0 percent
      Idle                    100 percent
    Model                       RE-S-2X00x6
    Start time                  2017-11-04 00:30:31 PDT
    Uptime                      4 days, 7 hours, 17 minutes, 3 seconds
    Last reboot reason          0x1:power cycle/failure
    Load averages:              1 minute   5 minute  15 minute
                                    0.17       0.12       0.13
```

show chassis routing-engine (T320 Router)

```
user@host> show chassis routing-engine
Slot 0:
    Current state               Master
    Election priority           Master (default)
    Temperature                51 degrees C / 123 degrees F
    CPU temperature            55 degrees C / 131 degrees F
    DRAM                     3584 MB
    Memory utilization          11 percent
    CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    2 percent
      Interrupt                 0 percent
      Idle                     97 percent
    Model                       RE-A-2000
    Serial ID                   9009010618
    Start time                  2012-10-10 01:24:05 PDT
    Uptime                      5 days, 10 hours, 49 minutes, 23 seconds
    Last reboot reason          0x1:power cycle/failure
    Load averages:              1 minute   5 minute  15 minute
                                    0.00       0.05       0.04
Routing Engine status:
  Slot 1:
    Current state               Backup
    Election priority           Backup (default)
    Temperature                45 degrees C / 113 degrees F
    CPU temperature            48 degrees C / 118 degrees F
    DRAM                     3584 MB
    Memory utilization           9 percent
    CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 0 percent
```

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```
    Idle                      100 percent
  Model                         RE-A-2000
  Serial ID                     9009003642
  Start time                    2012-10-10 01:24:04 PDT
  Uptime                        5 days, 10 hours, 49 minutes, 28 seconds
  Last reboot reason            0x1:power cycle/failure
```

show chassis routing-engine (T640 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                 Master
    Election priority             Master (default)
    Temperature                50 degrees C / 122 degrees F
    CPU temperature            58 degrees C / 136 degrees F
    DRAM                     3584 MB
    Memory utilization         14 percent
    CPU utilization:
      User                      1 percent
      Background                0 percent
      Kernel                    4 percent
      Interrupt                 1 percent
      Idle                     95 percent
    Model                       RE-A-2000
    Serial ID                   1000686556
    Start time                  2012-10-10 01:24:02 PDT
    Uptime                      5 days, 10 hours, 50 minutes, 27 seconds
    Last reboot reason          0x1:power cycle/failure
    Load averages:              1 minute   5 minute  15 minute
                                    1.24       0.33       0.12
Routing Engine status:
  Slot 1:
    Current state                 Backup
    Election priority             Backup (default)
    Temperature                44 degrees C / 111 degrees F
    CPU temperature            49 degrees C / 120 degrees F
    DRAM                     3584 MB
    Memory utilization         12 percent
    CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 1 percent
      Idle                     99 percent
    Model                       RE-A-2000
    Serial ID                   1000702739
    Start time                  2012-10-10 01:24:02 PDT
    Uptime                      5 days, 10 hours, 50 minutes, 26 seconds
    Last reboot reason          0x1:power cycle/failure
```

show chassis routing-engine (T1600 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                 Master
    Election priority             Master (default)
    Temperature                48 degrees C / 118 degrees F
    CPU temperature            58 degrees C / 136 degrees F
```


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```
    DRAM                       3584 MB
    Memory utilization           13 percent
    CPU utilization:
      User                        0 percent
      Background                  0 percent
      Kernel                      3 percent
      Interrupt                   1 percent
      Idle                       96 percent
    Model                         RE-A-2000
    Serial ID                     1000704521
    Start time                    2012-10-10 01:23:41 PDT
    Uptime                        5 days, 10 hours, 46 minutes, 56 seconds
    Last reboot reason            0x1:power cycle/failure
    Load averages:                1 minute   5 minute  15 minute
                                      0.05       0.03       0.01
Routing Engine status:
  Slot 1:
    Current state                 Backup
    Election priority             Backup (default)
    Temperature                  44 degrees C / 111 degrees F
    CPU temperature              48 degrees C / 118 degrees F
    DRAM                       3584 MB
    Memory utilization           12 percent
    CPU utilization:
      User                        0 percent
      Background                  0 percent
      Kernel                      0 percent
      Interrupt                   0 percent
      Idle                      100 percent
    Model                         RE-A-2000
    Serial ID                     9009006579
    Start time                    2012-10-10 01:23:42 PDT
    Uptime                        5 days, 10 hours, 46 minutes, 54 seconds
    Last reboot reason            0x1:power cycle/failure
```

show chassis routing-engine (T4000 Router)

```
user@host> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                 Master
    Election priority             Master (default)
    Temperature                  33 degrees C / 91 degrees F
    CPU temperature              50 degrees C / 122 degrees F
    DRAM                       8960 MB
    Memory utilization           18 percent
    CPU utilization:
      User                        0 percent
      Background                  0 percent
      Kernel                      4 percent
      Interrupt                   1 percent
      Idle                       95 percent
    Model                         RE-DUO-1800
    Serial ID                     P737F-002248
    Start time                    2012-02-09 22:49:53 PST
    Uptime                        2 hours, 21 minutes, 35 seconds
    Last reboot reason            Router rebooted after a normal shutdown.
    Load averages:                1 minute   5 minute  15 minute
                                      0.00       0.04       0.00
Routing Engine status:
  Slot 1:
```

```
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 32 degrees C / 89 degrees F
    CPU temperature             46 degrees C / 114 degrees F
    DRAM                      8960 MB
    Memory utilization          24 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                      99 percent
    Model                          RE-DUO-1800
    Serial ID                      P737F-002653
    Start time                     2012-02-08 20:12:51 PST
    Uptime                         1 day, 4 hours, 58 minutes, 28 seconds
    Last reboot reason             Router rebooted after a normal shutdown.
```

show chassis routing-engine (TX Matrix Router)

```
user@host> show chassis routing-engine
scc-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 34 degrees C / 93 degrees F
    CPU temperature             33 degrees C / 91 degrees F
    DRAM                      2048 MB
    Memory utilization          12 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  0 percent
      Idle                      98 percent
    Model                          RE-4.0
    Serial ID                      P11123900153
    Start time                     2004-08-05 18:42:05 PDT
    Uptime                       9 days, 22 hours, 49 minutes, 50 seconds
    Last reboot reason             Router rebooted after a normal shutdown
    Load averages:                 1 minute   5 minute  15 minute
                                       0.00       0.08       0.07

lcc0-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 33 degrees C / 91 degrees F
    CPU temperature             30 degrees C / 86 degrees F
    DRAM                      2048 MB
    Memory utilization          12 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     1 percent
      Interrupt                  0 percent
      Idle                      98 percent
```


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```
    Model                           RE-3.0
    Serial ID                       210865700363
    Start time                      2004-08-05 18:42:05 PDT
    Uptime                         9 days, 22 hours, 48 minutes, 20 seconds
    Last reboot reason              Router rebooted after a normal shutdown
    Load averages:                  1 minute   5 minute  15 minute
                                        0.00       0.02       0.00

lcc2-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                   Master
    Election priority               Master (default)
    Temperature                  34 degrees C / 93 degrees F
    CPU temperature              35 degrees C / 95 degrees F
    DRAM                       2048 MB
    Memory utilization           12 percent
    CPU utilization:
      User                        0 percent
      Background                  0 percent
      Kernel                      2 percent
      Interrupt                   0 percent
      Idle                       98 percent
    Model                           RE-4.0
    Serial ID                       P11123900126
    Start time                      2004-08-05 18:42:05 PDT
    Uptime                        9 days, 22 hours, 49 minutes, 4 seconds
    Last reboot reason              Router rebooted after a normal shutdown
    Load averages:                  1 minute   5 minute  15 minute
                                        0.01       0.01       0.0
```

show chassis routing-engine lcc (TX Matrix Router)

```
user@host> show chassis routing-engine 0 lcc 0
lcc0-re0:
--------------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                   Master
    Election priority               Master (default)
    Temperature                  33 degrees C / 91 degrees F
    CPU temperature              30 degrees C / 86 degrees F
    DRAM                       2048 MB
    Memory utilization           12 percent
    CPU utilization:
      User                        0 percent
      Background                  0 percent
      Kernel                      1 percent
      Interrupt                   0 percent
      Idle                       98 percent
    Model                           RE-3.0
    Serial ID                       210865700363
    Start time                      2004-08-05 18:42:05 PDT
    Uptime                        7 days, 22 hours, 49 minutes, 6 seconds
    Last reboot reason              Router rebooted after a normal shutdown
    Load averages:                  1 minute   5 minute  15 minute
                                        0.00       0.00       0.00
```

show chassis routing-engine bios (TX Matrix Router)

```
user@host> show chassis routing-engine bios
scc-re0:
--------------------------------------------------------------------------
Routing Engine BIOS Version: V1.0.0
lcc0-re0:
--------------------------------------------------------------------------
Routing Engine BIOS Version: V1.0.17
lcc2-re0:
--------------------------------------------------------------------------
Routing Engine BIOS Version: V1.0.0
```

show chassis routing-engine (TX Matrix Plus Router)

```
user@host> show chassis routing-engine
sfc0-re0:
--------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 27 degrees C / 80 degrees F
    CPU temperature             42 degrees C / 107 degrees F
    DRAM                      3327 MB
    Memory utilization          12 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  0 percent
      Idle                      98 percent
    Model                          RE-TXP-SFC
    Serial ID                      737A-1024
    Start time                     2009-05-11 17:39:49 PDT
    Uptime                         3 hours, 45 minutes, 25 seconds
    Last reboot reason             Router rebooted after a normal shutdown.
    Load averages:                 1 minute   5 minute  15 minute
                                       0.00       0.00       0.00
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 29 degrees C / 84 degrees F
    CPU temperature             43 degrees C / 109 degrees F
    DRAM                      3327 MB
    Memory utilization          11 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                     100 percent
    Model                          RE-TXP-SFC
    Serial ID                      737A-1024
    Start time                     2009-05-11 17:08:54 PDT
    Uptime                         4 hours, 16 minutes, 52 seconds
    Last reboot reason             0x1:power cycle/failure

lcc0-re0:
```


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```
---------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 30 degrees C / 86 degrees F
    CPU temperature             43 degrees C / 109 degrees F
    DRAM                      3327 MB
    Memory utilization           9 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  0 percent
      Idle                      98 percent
    Model                        RE-TXP-LCC
    Serial ID                    737F-1024
    Start time                   2009-05-11 17:40:32 PDT
    Uptime                       3 hours, 44 minutes, 51 seconds
    Last reboot reason           Router rebooted after a normal shutdown.
    Load averages:               1 minute   5 minute  15 minute
                                     0.00       0.00       0.00
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 30 degrees C / 86 degrees F
    CPU temperature             43 degrees C / 109 degrees F
    DRAM                      3327 MB
    Memory utilization           9 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     0 percent
      Interrupt                  0 percent
      Idle                     100 percent
    Model                        RE-TXP-LCC
    Serial ID                    737F-1024
    Start time                   2009-05-06 17:31:32 PDT
    Uptime                       5 days, 3 hours, 54 minutes, 19 seconds
    Last reboot reason           Router rebooted after a normal shutdown.
```

show chassis routing-engine lcc (TX Matrix Plus Router)

```
user@host> show chassis routing-engine 0 lcc 0
lcc0-re0:
---------------------------------------------------------------------------
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 30 degrees C / 86 degrees F
    CPU temperature             43 degrees C / 109 degrees F
    DRAM                      3327 MB
    Memory utilization           9 percent
    CPU utilization:
      User                       0 percent
      Background                 0 percent
      Kernel                     2 percent
      Interrupt                  0 percent
      Idle                      98 percent
```

```
    Model                           RE-TXP-LCC
    Serial ID                       737F-1024
    Start time                      2009-05-11 17:40:32 PDT
    Uptime                          3 hours, 45 minutes, 26 seconds
    Last reboot reason              Router rebooted after a normal shutdown.
    Load averages:                  1 minute   5 minute  15 minute
                                        0.00       0.00       0.00
Routing Engine status:
  Slot 1:
    Current state                   Backup
    Election priority               Backup (default)
    Temperature                  30 degrees C / 86 degrees F
    CPU temperature              43 degrees C / 109 degrees F
    DRAM                       3327 MB
    Memory utilization            9 percent
    CPU utilization:
      User                        0 percent
      Background                  0 percent
      Kernel                      0 percent
      Interrupt                   0 percent
      Idle                      100 percent
    Model                           RE-TXP-LCC
    Serial ID                       737F-1024
    Start time                      2009-05-06 17:31:32 PDT
    Uptime                          5 days, 3 hours, 54 minutes, 59 seconds
    Last reboot reason              Router rebooted after a normal shutdown.
```

show chassis routing-engine bios (TX Matrix Plus Router)

```
user@host> show chassis routing-engine bios
sfc0-re0:
--------------------------------------------------------------------------
    Routing Engine BIOS Version: V0.0.Z

lcc0-re0:
--------------------------------------------------------------------------
    Routing Engine BIOS Version: V0.0.N
```

show chassis routing-engine (QFX Series)

```
user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
Current state Master
Election priority Master (default)
DRAM 2820 MB
Memory utilization 49 percent
CPU utilization:
User 1 percent
Background 0 percent
Kernel 1 percent
Interrupt 0 percent
Idle 97 percent
Model QFX3500-48S4Q
Serial ID S/N ED3709
Uptime 3 days, 4 hours, 29 minutes, 42 seconds
Last reboot reason 0x200:chassis control reset
Load averages: 1 minute 5 minute 15 minute
0.37 0.26 0.19
```


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show chassis routing-engine (OCX Series)

```
user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
Current state Master
Election priority Master (default)
DRAM 2820 MB
Memory utilization 49 percent
CPU utilization:
User 1 percent
Background 0 percent
Kernel 1 percent
Interrupt 0 percent
Idle 97 percent
Model OCX-1100-48SX-AFI
Serial ID S/N ED3709
Uptime 3 days, 4 hours, 29 minutes, 42 seconds
Last reboot reason 0x200:chassis control reset
Load averages: 1 minute 5 minute 15 minute
0.37 0.26 0.19
```

show chassis routing engine interconnect-device (QFabric Systems)

```
user@switch> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                  Master
    Election priority              Master (default)
    Temperature                 48 degrees C / 118 degrees F
    DRAM                      3312 MB
    Memory utilization          63 percent
    CPU utilization:
      User                      14 percent
      Background                 0 percent
      Kernel                     5 percent
      Interrupt                  0 percent
      Idle                      81 percent
    Model                          RE-QFXC08-CB4S
    Serial ID                      BUILTIN
    Start time                     2011-07-06 13:26:15 UTC
    Uptime                         11 hours, 24 minutes, 57 seconds
    Last reboot reason             0x4:reset-button reset
    Load averages:                 1 minute   5 minute  15 minute
                                       2.62       2.31       2.28
Routing Engine status:
  Slot 1:
    Current state                  Backup
    Election priority              Backup (default)
    Temperature                 39 degrees C / 102 degrees F
    DRAM                      3312 MB
    Memory utilization          59 percent
    CPU utilization:
      User                       9 percent
      Background                 0 percent
      Kernel                     1 percent
      Interrupt                  0 percent
      Idle                      91 percent
    Model                          RE-QFXC08-CB4S
    Serial ID                      BUILTIN
```

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```
    Start time                      2011-07-06 13:24:58 UTC
    Uptime                          11 hours, 26 minutes, 18 seconds
    Last reboot reason              0x4:reset-button reset
```

show chassis routing-engine (PTX Series Packet Transport Router)

```
user@switch> show chassis routing-engine
Routing Engine status:
  Slot 0:
    Current state                   Master
    Election priority               Master (default)
    Temperature                  60 degrees C / 140 degrees F
    CPU temperature              76 degrees C / 168 degrees F
    DRAM                        17152 MB
    Memory utilization           11 percent
    CPU utilization:
      User                        0 percent
      Background                  0 percent
      Kernel                      4 percent
      Interrupt                   0 percent
      Idle                       95 percent
    Model                          RE-DUO-2600
    Serial ID                      P737A-002231
    Start time                     2011-12-21 16:54:37 PST
    Uptime                         25 minutes, 44 seconds
    Last reboot reason             Router rebooted after a normal shutdown.
    Load averages:                 1 minute   5 minute  15 minute
                                       0.01       0.02       0.06
Routing Engine status:
  Slot 1:
    Current state                   Backup
    Election priority               Backup (default)
    Temperature                  50 degrees C / 122 degrees F
    CPU temperature              64 degrees C / 147 degrees F
    DRAM                        17152 MB
    Memory utilization           10 percent
    CPU utilization:
      User                        0 percent
      Background                  0 percent
      Kernel                      0 percent
      Interrupt                   0 percent
      Idle                       99 percent
    Model                          RE-DUO-2600
    Serial ID                      P737A-002438
    Start time                     2011-12-21 16:52:26 PST
    Uptime                         27 minutes, 49 seconds
    Last reboot reason             Router rebooted after a normal shutdown.
```

show chassis routing-engine (EX9200 Switch)

```
user@switch> show chassis routing-engine
Routing Engine status:
Slot 0:
  Current state                   Master
  Election priority               Master (default)
  Temperature                  35 degrees C / 95 degrees F
  CPU temperature              33 degrees C / 91 degrees F
  DRAM                        8157 MB
    Installed Memory          8192 MB
```


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```
  Memory utilization          18 percent
CPU utilization:
  User                       1 percent
  Background                 0 percent
  Kernel                     4 percent
  Interrupt                  1 percent
  Idle                      94 percent
Model                        RE-S-EX9200-1800X4
Serial ID                    9009119555
Start time                   2014-03-12 14:58:05 UTC
Uptime                       1 hour, 41 minutes, 51 seconds
Last reboot reason           Router rebooted after a normal shutdown.
Load averages:               1 minute   5 minute  15 minute
                             0.02       0.02       0.00
Routing Engine status:
Slot 1:
  Current state                Backup
  Election priority            Backup (default)

[...Output truncasted...]
```

show chassis routing-engine (EX9251 Switch)

```
user@switch> show chassis routing-engine
Routing Engine status:
    Temperature                50 degrees C / 122 degrees F
    CPU temperature            50 degrees C / 122 degrees F
    DRAM                    16340 MB (16384 MB installed)
    Memory utilization          6 percent
    5 sec CPU utilization:
      User                      2 percent
      Background                0 percent
      Kernel                   19 percent
      Interrupt                 0 percent
      Idle                     79 percent
    1 min CPU utilization:
      User                      2 percent
      Background                0 percent
      Kernel                   19 percent
      Interrupt                 0 percent
      Idle                     79 percent
    5 min CPU utilization:
      User                      2 percent
      Background                0 percent
      Kernel                   19 percent
      Interrupt                 0 percent
      Idle                     79 percent
    15 min CPU utilization:
      User                      2 percent
      Background                0 percent
      Kernel                   19 percent
      Interrupt                 0 percent
      Idle                     79 percent
    Model                       RE-S-2X00x6
    Start time                  2018-03-08 05:11:33 PST
    Uptime                      10 days, 18 hours, 59 minutes, 15 seconds
    Last reboot reason          0x4000:VJUNOS reboot
    Load averages:              1 minute   5 minute  15 minute
                                    1.06       1.09       1.08
```

show chassis routing-engine (ACX2000 Universal Metro Router)

```
user@host> show chassis routing-engine
Routing Engine status:
    Temperature                53 degrees C / 127 degrees F
    DRAM                     1536 MB
    Memory utilization         25 percent
    CPU utilization:
      User                      0 percent
      Background                0 percent
      Kernel                    0 percent
      Interrupt                 1 percent
      Idle                     99 percent
    Model                       RE-ACX-2000
    Start time                  2012-05-09 00:57:07 PDT
    Uptime                      5 days, 3 hours, 16 minutes, 15 seconds
    Last reboot reason          Router rebooted after a normal shutdown.
    Load averages:              1 minute   5 minute  15 minute
                                    0.00       0.03       0.05
```

show chassis routing-engine (ACX1000 Universal Metro Router)

```
user@host> show chassis routing-engine
Routing Engine status:
    Temperature                36 degrees C / 96 degrees F
    DRAM                      768 MB
    Memory utilization         50 percent
    CPU utilization:
      User                      3 percent
      Background                0 percent
      Kernel                    6 percent
      Interrupt                 0 percent
      Idle                     91 percent
    Model                       RE-ACX-1000
    Start time                  2012-05-10 07:12:23 PDT
    Uptime                      4 days, 10 hours, 46 minutes, 53 seconds
    Last reboot reason          Router rebooted after a normal shutdown.
    Load averages:              1 minute   5 minute  15 minute
                                    0.00       0.00       0.00
```

show chassis routing-engine (Displaying the guest reboot reason on PTX5000,MX240, MX480, MX960< MX2010, and MX2020)

```
user@host> show chassis routing-engine re0 | match "Last reboot reason"
Last reboot reason 0x4000:VJUNOS reboot
```


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show chassis sibs

List of Syntax

Syntax on page 449
Syntax (TX Matrix Router) on page 449
Syntax (TX Matrix Plus Router) on page 449
Syntax (PTX Series Packet Transport Routers) on page 449

Syntax

```
show chassis sibs
```

Syntax (TX Matrix Router)

```
show chassis sibs
<lcc number | scc>
```

Syntax (TX Matrix Plus Router)

```
show chassis sibs
<lcc number | sfc number>
```

Syntax (PTX Series Packet Transport Routers)

```
show chassis sibs
<detail>
<slot>
```

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 12.1 for the PTX Series Packet Transport Routers.
sfc option introduced for the TX Matrix Plus router in Junos OS Release 9.6.
detail and ***sib-slot*** options introduced for the PTX Packet Transport Router in Junos OS Release 12.1
Command introduced in Junos OS Release 17.2 for PTX10008 Routers.

Description

(M320,T Series routers, TX Matrix routers, TX Matrix Plus routers, and PTX Series routers only) Display Switch Interface Boards (SIBs) status information.

Options

none—(TX Matrix routers and TX Matrix Plus routers only) On a TX Matrix router, display the SIB status for the TX Matrix router and its attached T640 routers. On a TX Matrix Plus router, display the SIB status for the TX Matrix Plus router and its attached routers.

detail—(PTX Series) (Optional) Display detailed SIB status information.

lcc *number*—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display SIB status information for a specified T640 router (line-card chassis or LCC) that is connected to the TX Matrix router. On a TX Matrix Plus router, display SIB status information for a specified T1600 or T4000 router (LCC) that is connected to the TX Matrix Plus router.

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Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

scc—(TX Matrix routers only) (Optional) Display SIB status information for the TX Matrix router (switch-card chassis).

sfc *number*—(TX Matrix Plus routers only) (Optional) Display SIB status information for the TX Matrix Plus router (switch-fabric chassis or SFC). Replace ***number*** with **0**.

slot—(PTX Series) (Optional) Display status information about the SIB in the specified slot only. The range of values is 0 through 8.

Required Privilege Level

view

Related Documentation

- *request chassis sib*
- *show chassis spmb sibs*
- *show chassis environment sib*
- *Monitoring the SIBs*
- *M320 SIB Description*
- *Routing Matrix with a TX Matrix Plus Router Solutions Page*

List of Sample Output

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show chassis sibs (TX Matrix Router) on page 454
show chassis sibs (T1600 Router) on page 454
show chassis sibs (TX Matrix Plus Router) on page 454
show chassis sibs (TX Matrix Plus Router with 3D SIBs) on page 456
show chassis sibs sfc (TX Matrix Plus Router)) on page 457
show chassis sibs lcc (TX Matrix Plus Router) on page 458
show chassis sibs lcc (TX Matrix Plus Router with 3D SIBs) on page 459
show chassis sibs (M320 Router) on page 459
show chassis sibs (PTX Series) on page 459
show chassis sibs (PTX Series) on page 459

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Output Fields Table 13 on page 451 lists the output fields for the **show chassis sibs** command. Output fields are listed in the approximate order in which they appear.

Table 13: show chassis sibs Output Fields

Field Name	Field Description
Slot	SIB slot number.
Type	(TX Matrix Plus router only) SIB type.
Uptime	How long the SIB has been up and running.
State	SIB status: • **Activating**—SIB is coming online; this is a transitional state. • **Deactivating**—SIB is going offline; this is a transitional state. • **Connected**—SIBs on a T1600 router are connected and trained but are either not online or are spare, because the plane on the TX Matrix Plus router (or switch-fabric chassis) is still offline. • **Disconnected**—SIBs on all T640 routers on the TX Matrix router (switch-card chassis) are in the **Disconnected** state, because a SIB on the SCC has gone offline. Likewise, SIBs on all T1600 routers on the TX Matrix Plus router (or switch-fabric chassis) are in the **Disconnected** state, because a SIB on the SFC has gone offline. On the TX Matrix Plus router with 3D SIBs, the LCC SIB is also disconnected if the F13 SIB is online, but none of the cables are connected or trained. • **Online**—SIB is operational and running. • **Offline**—SIB is powered down. NOTE: If a SIB transitions to the **Offline** state, the command displays an appropriate reason in the output. For instance, if the SIB is taken offline using the **request chassis sib** command, the **show chassis sibs** command displays **--- Offlined by cli command ---** in the output. • **Spare**—SIB is redundant and will move to active state if one of the working SIBs fails to pass traffic. NOTE: **Spare** does not apply to PTX Series Packet Transport Routers, as there are no spare SIBs. • **Empty**—No SIB is present. • **Fault**—SIB is in an alarmed state in which none of the SIB's planes are operational for one of the following reasons: ◦ All onboard fabric ASICs are not operational. ◦ Fiber-optic connector faults. ◦ FPC connector faults. ◦ SIB midplane connector faults. • **Check**—SIB is in an alarmed state due to link errors or destination errors. A SIB can transition to the **Check** state from the online or spare state.

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Table 13: show chassis sibs Output Fields (continued)

Field Name	Field Description
	The **Check** state can be caused by the following reasons: • Unsupported FPC installed on a router. • SIB not inserted properly (such as bent pins). • Destination errors are detected on the SIB. In this case, the Packet Forwarding Engine stops using the SIB to send traffic to the affected destination Packet Forwarding Engine. When a Packet Forwarding Engine cannot be reached on that plane or SIB, a destination error is reported against that SIB. NOTE: For SIBs in the **Check** state, the output displays some additional information: • In Junos OS Release 9.6 and later, the **Check** state message shows the number of Packet Forwarding Engines in the plane having destination errors. For example, **Check (10 destination errors)** indicates 10 Packet Fowarding Engines cannot be reached on that particular SIB. If there are no destination errors, and if the SIB transitions to the **Check** state because of link errors only, the **Check** state message shows **Check (0 destination errors)**. • In Junos OS Release 9.5 and earlier, the **Check** state message shows **Check (destination errors)** if there are Packet Forwarding Engines with destination errors in this plane. However, it does not show the number of Packet Forwarding Engines having destination errors. If there are no destination errors and if the SIB transitions to the **Check** state because of link errors only, the **Check** state message shows **Check (no destination errors)**. If the SIB is in a **Check** state, because of destination errors, the CLI displays an additional line in the output, **use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details**. • Link errors are detected on the channel between the SIB and a Packet Forwarding Engine. Link errors can be detected at initialization time or runtime: • Link errors caused by a link training failure at initialization time—The Packet Forwarding Engine does not use the SIB to send traffic. The **show chassis fabric fpcs** command shows **Plane disabled** as status for this link. • Link errors caused by CRC errors detected at runtime—The Packet Forwarding Engine continues to use the SIB to send traffic. The **show chassis fabric fpcs** command shows **Link error** as the status for this link. NOTE: The **Check** state does not apply to PTX Series Packet Transport Routers. • **SFC Error**—If an F13 SIB on the TX Matrix Plus router (SFC) transitions to the **Fault** state (for instance, because of link errors), and then if an LCC SIB (connected to the F13 SIB) comes online, the LCC SIB transitions to the **SFC Error** state. This state indicates that the F13 SIB to which the LCC SIB is connected has errors. NOTE: The **Connected**, **Disconnected**, and **SFC Error** states are only applicable to the SIBs on an LCC.

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Table 13: show chassis sibs Output Fields (continued)

Field Name	Field Description
	• **Invalid**—The specific SIB slot is not valid for 4-LCC chassis configuration. See the *TX Matrix Plus Hardware Guide* for more information about the supported SIB slots. NOTE: The **Invalid** state is applicable to TX Matrix Plus routers only.
Fabric links	Indicates status of fabric links on the SIB. • **Active**—All fabric links on SIB are active. Errors detected on the SIB's fabric links, if any, are reported in the Errors column. • **Unused**—All fabric links on the SIB are not used for fabric traffic.
Errors	Indicates if there is any error on the SIB. • **None**—No errors • **Link Errors**—Fabric link errors were found on SIB RX link. • **Cell drops**—Fabric cell drops were found on the SIB ASIC. • **Link Errors, Cell drops**—Both link errors and cell drops were detected on at least one of the SIB's fabric links. • **Asic Errors**—A fault affecting one of the ASICs on the SIB is detected. It can be an IO error or an internal error signaled by the ASIC.
Link Errors	indicate the number of links which are marked faulty because the errors on them have crossed threshold.
Cable Errors	Indicate the number of mandatory cables that are not connected, or in up state for that plane
Destination Errors	Indicate the number of destinations that are not reachable on this plane.

Sample Output

show chassis sibs (T640 Router)

```
user@host> show chassis sibs
Slot  State                       Uptime
 0    Empty
 1    Offline                          --- Offlined by cli command ---
 2    Check (21 destination errors)    1 day, 1 hour, 32 minutes, 55 seconds
 3    Check (0 destination errors)     1 day, 1 hour, 32 minutes, 45 seconds
 4    Empty

use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details
```

show chassis sibs (T4000 Router)

```
user@host> show chassis sibs
```

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```
Slot  State                          Uptime
 0    Spare
 1    Online                         3 hours, 48 minutes, 38 seconds
 2    Online                         3 hours, 48 minutes, 22 seconds
 3    Online                         3 hours, 48 minutes, 5 seconds
 4    Online                         3 hours, 47 minutes, 49 seconds
```

show chassis sibs (TX Matrix Router)

```
user@host> show chassis sibs
scc-re0:
---------------------------------------------------------------------------
Slot  State               Uptime
 0    Empty
 1    Empty
 2    Offline             --- Offlined by cli command ---
 3    Offline
 4    Online              7 days, 21 hours, 50 minutes, 4 seconds
lcc0-re0:
---------------------------------------------------------------------------
Slot  State                          Uptime
 0    Offline                        --- Offlined by cli command ---
 1    Empty
 2    Check (21 destination errors)  1 day, 1 hour, 32 minutes, 55 seconds
 3    Check (0 destination errors)   1 day, 1 hour, 32 minutes, 45 seconds
 4    Empty

use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details
```

show chassis sibs (T1600 Router)

```
user@host> show chassis sibs
Slot
 Slot  State                          Uptime
  0    Check (destination errors)     2 hours, 23 minutes, 2 seconds
  1    Offline                        --- Offlined by cli command ---
  2    Check (destination errors)     2 hours, 23 minutes, 3 seconds
  3    Check (destination errors)     2 hours, 23 minutes, 3 seconds
  4    Check (destination errors)     2 hours, 23 minutes, 3 seconds

 use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details
```

show chassis sibs (TX Matrix Plus Router)

```
user@host> show chassis sibs
sfc0-re0:
---------------------------------------------------------------------------
Slot  State             Type          Link errors  Destination errors  Uptime
 0    Spare             SIB F13          NONE             NONE
 1    Empty                              NONE             NONE
 2    Invalid                            NONE             NONE
 3    Online            SIB F13          NONE             NONE         1 hour,
53 minutes, 19 seconds
 4    Empty                              NONE             NONE
 5    Invalid                            NONE             NONE
 6    Online            SIB F13          NONE             NONE         1 hour,
53 minutes, 8 seconds
 7    Empty                              NONE             NONE
 8    Online            SIB F13          NONE             NONE         1 hour,
```


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```
52 minutes, 57 seconds
 9    Empty                                NONE             NONE
10    Invalid                              NONE             NONE
11    Online             SIB F13           NONE             NONE          1 hour,
52 minutes, 46 seconds
12    Empty                                NONE             NONE
13    Invalid                              NONE             NONE
14    Invalid                              NONE             NONE
15    Invalid                              NONE             NONE
0/0   Spare              SIB F2S           NONE             NONE
0/2   Spare              SIB F2S           NONE             NONE
0/4   Spare              SIB F2S           NONE             NONE
0/6   Spare              SIB F2S           NONE             NONE
1/0   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 29 seconds
1/2   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 28 seconds
1/4   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 27 seconds
1/6   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 26 seconds
2/0   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 18 seconds
2/2   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 17 seconds
2/4   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 16 seconds
2/6   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 14 seconds
3/0   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 7 seconds
3/2   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 5 seconds
3/4   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 4 seconds
3/6   Online             SIB F2S           NONE             NONE          1 hour,
53 minutes, 3 seconds
4/0   Online             SIB F2S           NONE             NONE          1 hour,
52 minutes, 56 seconds
4/2   Online             SIB F2S           NONE             NONE          1 hour,
52 minutes, 54 seconds
4/4   Online             SIB F2S           NONE             NONE          1 hour,
52 minutes, 53 seconds
4/6   Online             SIB F2S           NONE             NONE          1 hour,
52 minutes, 52 seconds

lcc0-re0:
--------------------------------------------------------------------------
Slot  State              Link errors  Destination errors  Uptime
 0    Spare                 NONE             NONE
 1    Online                NONE             NONE         1 hour, 53 minutes, 31
 seconds
 2    Online                NONE             NONE         1 hour, 53 minutes, 27
 seconds
 3    Online                NONE             NONE         1 hour, 53 minutes, 23
 seconds
 4    Online                NONE             NONE         1 hour, 53 minutes, 19
 seconds
```

show chassis sibs (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis sibs
sfc0-re0:
--------------------------------------------------------------------------
Slot  State              Type          Cable errors  Link errors  Destination
errors  Uptime
 0    Online             SIB F13            6           NONE             NONE
      21 hours, 54 minutes, 28 seconds
 1    Online             SIB F13            8           NONE             NONE
      21 hours, 54 minutes, 12 seconds
 2    Invalid                              NONE         NONE             NONE
 3    Online             SIB F13            6           NONE             NONE
      21 hours, 57 minutes, 6 seconds
 4    Online             SIB F13            8            1               NONE
      21 hours, 56 minutes, 49 seconds
 5    Invalid                              NONE         NONE             NONE
 6    Online             SIB F13            6           NONE             NONE
      21 hours, 56 minutes, 25 seconds
 7    Online             SIB F13            8           NONE             NONE
      21 hours, 56 minutes, 8 seconds
 8    Online             SIB F13            6           NONE             NONE
      21 hours, 55 minutes, 43 seconds
 9    Online             SIB F13            8           NONE             NONE
      21 hours, 55 minutes, 26 seconds
10    Invalid                              NONE         NONE             NONE
11    Empty                                NONE         NONE             NONE
12    Empty                                NONE         NONE             NONE
13    Invalid                              NONE         NONE             NONE
14    Invalid                              NONE         NONE             NONE
15    Invalid                              NONE         NONE             NONE
0/0   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 55 minutes, 16 seconds
0/2   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 54 minutes, 49 seconds
0/4   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 54 minutes, 47 seconds
0/6   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 54 minutes, 45 seconds
1/0   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 57 minutes, 29 seconds
1/2   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 57 minutes, 27 seconds
1/4   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 57 minutes, 25 seconds
1/6   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 57 minutes, 23 seconds
2/0   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 56 minutes, 48 seconds
2/2   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 56 minutes, 46 seconds
2/4   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 56 minutes, 43 seconds
2/6   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 56 minutes, 41 seconds
3/0   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 56 minutes, 6 seconds
3/2   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 56 minutes, 4 seconds
3/4   Online             SIB F2S          -n/a-         NONE             NONE
      21 hours, 56 minutes, 2 seconds
```


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```
3/6   Online            SIB F2S          -n/a-        NONE            NONE
      21 hours, 56 minutes
4/0   Online            SIB F2S          -n/a-        NONE            NONE
      21 hours, 55 minutes, 24 seconds
4/2   Online            SIB F2S          -n/a-        NONE            NONE
      21 hours, 55 minutes, 22 seconds
4/4   Online            SIB F2S          -n/a-        NONE            NONE
      21 hours, 55 minutes, 20 seconds
4/6   Online            SIB F2S          -n/a-        NONE            NONE
      21 hours, 55 minutes, 18 seconds

lcc0-re0:
--------------------------------------------------------------------------
Slot  State           Cable errors  Link errors  Destination errors  Uptime
 0    Online               6           NONE            NONE         21 hours,
47 minutes, 29 seconds
 1    Online               6           NONE            NONE         21 hours,
47 minutes, 50 seconds
 2    Online               6           NONE            NONE         21 hours,
47 minutes, 43 seconds
 3    Online               6           NONE            NONE         21 hours,
47 minutes, 36 seconds
 4    Empty               NONE         NONE            NONE
use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details

lcc4-re0:
--------------------------------------------------------------------------
Slot  State           Cable errors  Link errors  Destination errors  Uptime
 0    Online               6           NONE            NONE         21 hours,
57 minutes, 1 second
 1    Online               6           NONE            NONE         21 hours,
57 minutes, 21 seconds
 2    Online               6           NONE            NONE         21 hours,
57 minutes, 14 seconds
 3    Online               6           NONE            NONE         21 hours,
57 minutes, 7 seconds
 4    Empty               NONE         NONE            NONE
use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details

lcc7-re0:
--------------------------------------------------------------------------
Slot  State           Cable errors  Link errors  Destination errors  Uptime
 0    Online               2           NONE            NONE         21 hours,
56 minutes, 54 seconds
 1    Online               2           NONE            NONE         21 hours,
57 minutes, 21 seconds
 2    Online               2           NONE            NONE         21 hours,
57 minutes, 12 seconds
 3    Online               2           NONE            NONE         21 hours,
57 minutes, 3 seconds
 4    Empty               NONE         NONE            NONE
use "show chassis fabric fpcs" and "show chassis fabric sibs" for more details
```

show chassis sibs sfc (TX Matrix Plus Router))

```
user@host> show chassis sibs sfc 0
sfc0-re0:
--------------------------------------------------------------------------
Slot  State             Type          Link errors  Destination errors  Uptime
 0    Spare             SIB F13          NONE            NONE
 1    Empty                              NONE            NONE
```

```
 2    Invalid                          NONE             NONE
 3    Online            SIB F13        NONE             NONE          12 hours,
 6 minutes, 22 seconds
 4    Empty                            NONE             NONE
 5    Invalid                          NONE             NONE
 6    Online            SIB F13        NONE             NONE          12 hours,
 6 minutes, 11 seconds
 7    Empty                            NONE             NONE
 8    Online            SIB F13        NONE             NONE          12 hours,
 6 minutes
 9    Empty                            NONE             NONE
10    Invalid                          NONE             NONE
11    Online            SIB F13        NONE             NONE          12 hours,
 5 minutes, 49 seconds
12    Empty                            NONE             NONE
13    Invalid                          NONE             NONE
14    Invalid                          NONE             NONE
15    Invalid                          NONE             NONE
0/0   Spare              SIB F2S        NONE             NONE
0/2   Spare              SIB F2S        NONE             NONE
0/4   Spare              SIB F2S        NONE             NONE
0/6   Spare              SIB F2S        NONE             NONE
1/0   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 32 seconds
1/2   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 31 seconds
1/4   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 30 seconds
1/6   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 29 seconds
2/0   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 21 seconds
2/2   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 20 seconds
2/4   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 19 seconds
2/6   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 17 seconds
3/0   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 10 seconds
3/2   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 9 seconds
3/4   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 7 seconds
3/6   Online             SIB F2S        NONE             NONE          12 hours,
 6 minutes, 6 seconds
4/0   Online             SIB F2S        NONE             NONE          12 hours,
 5 minutes, 59 seconds
4/2   Online             SIB F2S        NONE             NONE          12 hours,
 5 minutes, 57 seconds
4/4   Online             SIB F2S        NONE             NONE          12 hours,
 5 minutes, 56 seconds
4/6   Online             SIB F2S        NONE             NONE          12 hours,
 5 minutes, 55 seconds
```

show chassis sibs lcc (TX Matrix Plus Router)

```
user@host> show chassis sibs lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Slot  State              Link errors  Destination errors  Uptime
```


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```
 0    Online               NONE            NONE         20 hours, 14 minutes,
50 seconds
 1    Fault                NONE            NONE
 2    Online               NONE            NONE         20 hours, 15 minutes,
2 seconds
 3    Online               NONE            NONE         20 hours, 14 minutes,
58 seconds
 4    Online               NONE            NONE         20 hours, 14 minutes,
54 seconds
```

show chassis sibs lcc (TX Matrix Plus Router with 3D SIBs)

```
user@host> show chassis sibs lcc 0
lcc0-re0:
--------------------------------------------------------------------------
Slot  State            Cable errors  Link errors  Destination errors  Uptime
 0    Disconnected         NONE         NONE             NONE         17 hours,
2 minutes, 37 seconds
 1    Online               NONE         NONE             NONE         17 hours,
3 minutes, 6 seconds
 2    Online               NONE         NONE             NONE         17 hours,
2 minutes, 59 seconds
 3    Online               NONE         NONE             NONE         17 hours,
2 minutes, 52 seconds
 4    Online               NONE         NONE             NONE         17 hours,
2 minutes, 44 seconds
```

show chassis sibs (M320 Router)

```
user@host> show chassis sibs

 0    Online            1 hour, 18 minutes, 3 seconds
 1    Offline           --- Offlined by cli command ---
 2    Online            1 hour, 18 minutes, 18 seconds
 3    Online            1 hour, 18 minutes, 3 seconds
```

show chassis sibs (PTX Series)

```
user@host> show chassis sibs
Slot  State         Fabric links        Errors
0    Online             Active         Asic Errors
1    Online             Active         Link Errors
2    Online             Active         None
3    Online             Active         Cell drops
4    Offline            Unused         None
5    Online             Active         None
6    Online             Active         None
7    Online             Active         None
8    Online             Active         None
```

show chassis sibs (PTX Series)

```
user@host> show chassis sibs detail
Slot 4 information
  State                               Offline
  Reason                              Offlined by cli command
  Fabric links                        Unused
  Errors                              None
```

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show route summary

List of Syntax
Syntax on page 461
Syntax (EX Series Switches) on page 461

Syntax
show route summary
<logical-system (all | *logical-system-name*)>
<table *routing-table-name*>

Syntax (EX Series Switches)
show route summary

Release Information
Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.

Description
Display summary statistics about the entries in the routing table.

CPU utilization might increase while the device learns routes. We recommend that you use the **show route summary** command after the device learns and enters the routes into the routing table. Depending on the size of your network, this might take several minutes. If you receive a "timeout communicating with routing daemon" error when using the **show route summary** command, wait several minutes before attempting to use the command again. This is not a critical system error, but you might experience a delay in using the command-line interface (CLI).

Options
none—Display summary statistics about the entries in the routing table.

logical-system (all | *logical-system-name*)—(Optional) Perform this operation on all logical systems or on a particular logical system.

table *routing-table-name*—(Optional) Display summary statistics for all routing tables whose name begins with this string (for example, **inet.0** and **inet6.0** are both displayed when you run the **show route summary table inet** command). If you only want to display statistics for a specific routing table, make sure to enter the exact name of that routing table.

Required Privilege Level
view

List of Sample Output
show route summary on page 463
show route summary table on page 463
show route summary table (with Route Limits Configured for the Routing Table) on page 464

Output Fields
Table 14 on page 462 lists the output fields for the **show route summary** command. Output fields are listed in the approximate order in which they appear.

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Table 14: show route summary Output Fields

Field Name	Field Description
Router ID	Address of the local routing device.
routing-table-name	Name of the routing table (for example, **inet.0**).
destinations	Number of destinations for which there are routes in the routing table.
routes	Number of routes in the routing table: • **active**—Number of routes that are active. • **holddown**—Number of routes that are in the hold-down state before being declared inactive. • **hidden**—Number of routes that are not used because of routing policy.

Restart complete	All protocols have restarted for this routing table.
	Restart state:
	• **Pending:*protocol-name***—List of protocols that have not yet completed graceful restart for this routing table.
	• **Complete**—All protocols have restarted for this routing table.
	For example, if the output shows-
	• `LDP.inet.0: 5 routes (4 active, 1 holddown, 0 hidden)`
	`Restart Pending: OSPF LDP VPN`
	This indicates that **OSPF**, **LDP**, and **VPN** protocols did not restart for **LDP.inet.0** routing table.
	• `vpls_1.l2vpn.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)`
	`Restart Complete`
	This indicates that all protocols have restarted for **vpls_1.l2vpn.0** routing table.

Limit/Threshold	Displays the configured route limits for the routing table set with the ***maximum-prefixes*** and the **maximum-paths** statements. If you do not configure route limits for the routing table, the show output does not display this information. • **destinations**—The first number represents the maximum number of route prefixes installed in the routing table. The second number represents the number of route prefixes that trigger a warning message. • **routes**—The first number represents the maximum number of routes. The second number represents the number of routes that trigger a warning message.
Direct	Routes on the directly connected network.
Local	Local routes.
protocol-name	Name of the protocol from which the route was learned. For example, **OSPF**, **RSVP**, and **Static**.

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Sample Output

show route summary

```
user@host> show route summary
Autonomous system number: 69
Router ID: 10.255.71.52
Maximum-ECMP: 32
inet.0: 24 destinations, 25 routes (23 active, 0 holddown, 1 hidden)
Restart Complete
              Direct:      6 routes,      5 active
               Local:      4 routes,      4 active
                OSPF:      5 routes,      4 active
              Static:      7 routes,      7 active
                IGMP:      1 routes,      1 active
                 PIM:      2 routes,      2 active

inet.3: 2 destinations, 2 routes (2 active, 0 holddown, 0 hidden)
Restart Complete
                RSVP:      2 routes,      2 active

iso.0: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
Restart Complete
              Direct:      1 routes,      1 active

mpls.0: 7 destinations, 7 routes (5 active, 0 holddown, 2 hidden)
Restart Complete
                MPLS:      3 routes,      3 active
                VPLS:      4 routes,      2 active

inet6.0: 5 destinations, 5 routes (5 active, 0 holddown, 0 hidden)
Restart Complete
              Direct:      2 routes,      2 active
                 PIM:      2 routes,      2 active
                 MLD:      1 routes,      1 active

green.l2vpn.0: 4 destinations, 4 routes (4 active, 0 holddown, 0 hidden)
Restart Complete
                 BGP:      2 routes,      2 active
               L2VPN:      2 routes,      2 active

red.l2vpn.0: 3 destinations, 3 routes (3 active, 0 holddown, 0 hidden)
Restart Complete
                 BGP:      2 routes,      2 active
               L2VPN:      1 routes,      1 active

bgp.l2vpn.0: 4 destinations, 4 routes (4 active, 0 holddown, 0 hidden)
Restart Complete
                 BGP:      4 routes,      4 active
```

show route summary table

```
user@host> show route summary table inet
Router ID: 192.168.0.1

inet.0: 32 destinations, 34 routes (31 active, 0 holddown, 1 hidden)
              Direct:      6 routes,      5 active
               Local:      9 routes,      9 active
                OSPF:      3 routes,      1 active
              Static:     13 routes,     13 active
```

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```
                IGMP:      1 routes,      1 active
                 PIM:      2 routes,      2 active

inet.1: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
           Multicast:      1 routes,      1 active

inet6.0: 3 destinations, 3 routes (3 active, 0 holddown, 0 hidden)
               Local:      1 routes,      1 active
                 PIM:      2 routes,      2 active

inet6.1: 1 destinations, 1 routes (1 active, 0 holddown, 0 hidden)
           Multicast:      1 routes,      1 active
```

show route summary table (with Route Limits Configured for the Routing Table)

```
user@host> show route summary table VPN-A.inet.0
Autonomous system number: 100
Router ID: 10.255.182.142

VPN-A.inet.0: 13 destinations, 14 routes (13 active, 0 holddown, 0 hidden)
Limit/Threshold: 2000/200 destinations 20/12 routes
              Direct:      2 routes,      2 active
               Local:      1 routes,      1 active
                OSPF:      4 routes,      3 active
                 BGP:      4 routes,      4 active
                IGMP:      1 routes,      1 active
                 PIM:      2 routes,      2 active
```


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show system uptime

List of Syntax

Syntax on page 465
Syntax (EX Series Switches) on page 465
Syntax (QFX Series) on page 465
Syntax (TX Matrix Router) on page 465
Syntax (TX Matrix Plus Router) on page 465
Syntax (MX Series Router) on page 465

Syntax

```
show system uptime
```

Syntax (EX Series Switches)

```
show system uptime
<all-members>
<local>
<member member-id>
```

Syntax (QFX Series)

```
show system uptime
<director-group name>
<infrastructure name>
<interconnect-device name>
<node-group name>
```

Syntax (TX Matrix Router)

```
show system uptime
<all-chassis | all-lcc | lcc number | scc>
```

Syntax (TX Matrix Plus Router)

```
show system uptime
<detail>
<all-chassis | all-lcc | lcc number | sfc number>
```

Syntax (MX Series Router)

```
show system uptime
<all-members>
<invoke-on>
<local>
<member member-id>
```

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
sfc option introduced for the TX Matrix Plus router in JUNOS Release 9.6.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description

Display the current time and information about how long the router or switch, router or switch software, and routing protocols have been running.

NOTE: Time values computed from differences in timestamps can vary due to the insertion or deletion of leap-seconds between them.

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Options **none**—Show time since the system rebooted and processes started.

all-chassis—(TX Matrix routers and TX Matrix Plus routers only) (Optional) Show time since the system rebooted and processes started on all the routers in the chassis.

all-lcc—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, show time since the system rebooted and processes started for all T640 routers (or line-card chassis) connected to the TX Matrix router. On a TX Matrix Plus router, show time since the system rebooted and processes started for all connected T1600 or T4000 LCCs.

all-members—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on all members of the Virtual Chassis configuration.

director-group ***name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Director group.

infrastructure ***name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the fabric control Routing Engine and fabric manager Routing Engine.

interconnect-device ***name***—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Interconnect device.

invoke-on—(MX Series routers only) (Optional) Display the time since the system rebooted and processes started on the master Routing Engine, backup Routing Engine, or both, on a router with two Routing Engines.

lcc ***number***—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, show time since the system rebooted and processes started for a specific T640 router that is connected to the TX Matrix router. On a TX Matrix Plus router, show time since the system rebooted and processes started for a specific router that is connected to the TX Matrix Plus router.

Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

local—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on the local Virtual Chassis member.

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member *member-id*—(EX4200 switches and MX Series routers only) (Optional) Show time since the system rebooted and processes started on the specified member of the Virtual Chassis configuration. For EX4200 switches, replace ***member-id*** with a value from 0 through 9. For an MX Series Virtual Chassis, replace ***member-id*** with a value of 0 or 1.

node-group *name*—(QFabric systems only) (Optional) Show time since the system rebooted and processes started on the Node group.

scc—(TX Matrix routers only) (Optional) Show time since the system rebooted and processes started for the TX Matrix router (or switch-card chassis).

sfc *number*—(TX Matrix Plus routers only) (Optional) Show time since the system rebooted and processes started for the TX Matrix Plus router. Replace *number* with 0.

Additional Information

By default, when you issue the **show system uptime** command on the master Routing Engine of a TX Matrix router or a TX Matrix Plus router, the command is broadcast to all the master Routing Engines of the LCCs connected to it in the routing matrix. Likewise, if you issue the same command on the backup Routing Engine of a TX Matrix or a TX Matrix Plus router, the command is broadcast to all backup Routing Engines of the LCCs that are connected to it in the routing matrix.

Required Privilege Level

view

Related Documentation

- *10-Gigabit Ethernet LAN/WAN PIC with XFP (T640 Router)*
- *Routing Matrix with a TX Matrix Plus Router Solutions Page*

List of Sample Output

show system uptime on page 468
show system uptime all-lcc (TX Matrix Router) on page 468
show system uptime all-lcc (TX Matrix Plus Router) on page 468
show system uptime (EX Series) on page 469
show system uptime (QFX Series) on page 469

Output Fields

Table 15 on page 467 describes the output fields for the **show system uptime** command. Output fields are listed in the approximate order in which they appear.

Table 15: show system uptime Output Fields

Field Name	Field Description
Current time	Current system time in UTC.
Time Source	Reference time source that the system is locked to.
System booted	Date and time when the Routing Engine on the router or switch was last booted and how long it has been running.

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Table 15: show system uptime Output Fields (continued)

Field Name	Field Description
Protocols started	Date and time when the routing protocols were last started and how long they have been running.
Last configured	Date and time when a configuration was last committed. Also shows the name of the user who issued the last **commit** command.
***time* and up**	Current time, in the local time zone, and how long the router or switch has been operational.
users	Number of users logged in to the router or switch.
load averages	Load averages for the last 1 minute, 5 minutes, and 15 minutes.

Sample Output

show system uptime

```
user@host> show system uptime
Current time:      1998-10-13 19:45:47 UTC
Time Source:       NTP CLOCK
System booted:     1998-10-12 20:51:41 UTC (22:54:06 ago)
Protocols started: 1998-10-13 19:33:45 UTC (00:12:02 ago)
Last configured:   1998-10-13 19:33:45 UTC (00:12:02 ago) by abc
12:45PM  up 22:54, 2 users, load averages: 0.07, 0.02, 0.01
```

show system uptime all-lcc (TX Matrix Router)

```
user@host> show system uptime all-lcc
lcc0-re0:
--------------------------------------------------------------------------
Current time: 2004-09-13 09:55:35 PDT
Time Source: LOCAL CLOCK
System booted: 2004-09-13 03:13:55 PDT (06:41:40 ago)
Last configured: 2004-09-13 03:17:48 PDT (06:37:47 ago) by root
9:55AM PDT up 6:42, 1 user, load averages: 0.02, 0.03, 0.00
lcc2-re0:
--------------------------------------------------------------------------
Current time: 2004-09-13 09:55:35 PDT
Time Source: LOCAL CLOCK
System booted: 2004-09-12 03:23:43 PDT (1d 06:31 ago)
Last configured: 2004-09-13 03:05:36 PDT (06:49:59 ago) by root
9:55AM PDT up 1 day,  6:32, 1 user, load averages: 0.02, 0.01, 0.00
```

show system uptime all-lcc (TX Matrix Plus Router)

```
user@host> show system uptime all-lcc
sfc0-re0:
--------------------------------------------------------------------------
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:33 PDT (17:44:57 ago)
Protocols started: 2009-05-24 06:40:30 PDT (17:44:00 ago)
Last configured: 2009-05-24 06:33:27 PDT (17:51:03 ago) by user1
12:24AM  up 17:45, 2 users, load averages: 0.07, 0.05, 0.01
```


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```
lcc0-re0:
--------------------------------------------------------------------------
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:46 PDT (17:44:44 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:47 PDT (17:43:43 ago) by root
12:24AM  up 17:45, 0 users, load averages: 0.00, 0.00, 0.00

lcc1-re0:
--------------------------------------------------------------------------
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:38 PDT (17:44:52 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:18 PDT (17:44:12 ago) by root
12:24AM  up 17:45, 0 users, load averages: 0.00, 0.00, 0.00

lcc2-re0:
--------------------------------------------------------------------------
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:48 PDT (17:44:42 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:44 PDT (17:43:46 ago) by root
12:24AM  up 17:45, 0 users, load averages: 0.00, 0.00, 0.00

lcc3-re0:
--------------------------------------------------------------------------
Current time: 2009-05-25 00:24:30 PDT
Time Source: NTP CLOCK
System booted: 2009-05-24 06:39:44 PDT (17:44:46 ago)
error: the routing subsystem is not running
Last configured: 2009-05-24 06:40:08 PDT (17:44:22 ago) by root
12:24AM  up 17:45, 0 users, load averages: 0.00, 0.00, 0.00
```

show system uptime (EX Series)

```
user@switch> show system uptime
Current time: 2014-03-12 16:39:56 UTC
Time Source: NTP CLOCK
System booted: 2014-03-12 14:58:05 UTC (01:41:51 ago)
Protocols started: 2014-03-12 14:59:48 UTC (01:40:08 ago)
Last configured: 2014-03-12 14:58:58 UTC (01:40:58 ago) by root
 4:39PM  up 1:42, 4 users, load averages: 0.02, 0.02, 0.00
```

show system uptime (QFX Series)

```
user@switch> show system uptime
Current time: 2010-08-27 03:12:30 PDT
Time Source: NTP CLOCK
System booted: 2010-08-13 17:11:54 PDT (1w6d 10:00 ago)
Protocols started: 2010-08-13 17:13:56 PDT (1w6d 09:58 ago)
Last configured: 2010-08-26 05:54:00 PDT (21:18:30 ago) by user
 3:12AM  up 13 days, 10:01, 3 users, load averages: 0.00, 0.00, 0.00
```

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show version

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Syntax (ACX5048 and ACX5096 Routers) on page 470

Syntax

show version
<brief | detail>

Syntax (EX Series Switches)

show version
<all-members>
<brief | detail>
<local>
<member *member-id*>

Syntax (TX Matrix Router)

show version
<brief | detail>
<all-chassis | all-lcc | lcc *number* | scc>

Syntax (TX Matrix Plus Router)

show version
<all-chassis | all-lcc | lcc *number* | sfc *number*>
<brief | detail>

Syntax (MX Series Router)

show version
<brief | detail>
<all-members>
<local>
<member *member-id*>

Syntax (QFX Series)

show version
<brief | detail>
<component *component-name* | all>

Syntax (ACX5048 and ACX5096 Routers)

show version
<brief | detail>

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
sfc option introduced for the TX Matrix Plus router in Junos OS Release 9.6.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 15.1X54-D20 for ACX5048 and ACX5096 Routers.

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Description Display the hostname and version information about the software running on the router or switch.

Beginning in Junos OS Release 13.3, the **show version** command output includes the **Junos** field that displays the Junos OS version running on the device. This field provides a consistent means of identifying the Junos OS version, rather than extracting that information from the list of installed sub-packages.

Options **none**—Display standard information about the hostname and version of the software running on the router or switch.

brief | detail—(Optional) Display the specified level of output.

all-members—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on all members of the Virtual Chassis configuration.

component all—(QFabric systems only) (Optional) Display the host name and version information about the software running on all the components on the QFabric system.

component *component-name*—(QFabric systems only) (Optional) Display the host name and version information about the software running on a specific QFabric system component. Replace *component-name* with the name of the QFabric system component. The *component-name* can be the name of a diagnostics Routing Engine, Director group, fabric control Routing Engine, fabric manager Routing Engine, Interconnect device, or Node group.

local—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on the local Virtual Chassis member.

member *member-id*—(EX4200 switches and MX Series routers only) (Optional) Display standard information about the hostname and version of the software running on the specified member of the Virtual Chassis configuration. For EX4200 switches, replace ***member-id*** with a value from 0 through 9. For an MX Series Virtual Chassis, replace ***member-id*** with a value of 0 or 1.

scc—(TX Matrix routers only) (Optional) Display the hostname and version information about the software running on the TX Matrix router (or switch-card chassis).

lcc *number*—(TX Matrix routers and TX Matrix Plus routers only) (Optional) On a TX Matrix router, display the host name and version information about the software running on for a specified T640 router (line-card chassis or LCC) that is connected to the TX Matrix router. On a TX Matrix Plus router, display the host name and version information about the software running for a specified T1600 or T4000 router (LCC) that is connected to the TX Matrix Plus router.

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Replace *number* with the following values depending on the LCC configuration:

- 0 through 3, when T640 routers are connected to a TX Matrix router in a routing matrix.
- 0 through 3, when T1600 routers are connected to a TX Matrix Plus router in a routing matrix.
- 0 through 7, when T1600 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.
- 0, 2, 4, or 6, when T4000 routers are connected to a TX Matrix Plus router with 3D SIBs in a routing matrix.

sfc *number*—(TX Matrix Plus routers only) (Optional) Display the hostname and version information about the software running on the TX Matrix Plus router (or switch-fabric chassis). Replace *number* with 0.

Additional Information

By default, when you issue the **show version** command on a TX Matrix or TX Matrix Plus master Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on a TX Matrix router) or T1600 or T4000 (in a routing matrix based on a TX Matrix Plus router) master Routing Engines connected to it. Likewise, if you issue the same command on the TX Matrix or TX Matrix Plus backup Routing Engine, the command is broadcast to all the T640 (in a routing matrix based on a TX Matrix router) or T1600 or T4000 (in a routing matrix based on a TX Matrix Plus router) backup Routing Engines that are connected to it.

Required Privilege Level

view

List of Sample Output

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Sample Output

show version (Devices Running Junos OS Release 13.3 and Later)

The following output is from the MX240 Router and shows the **Junos** field introduced in Junos OS 13.3. Depending on the platform running Junos OS 13.3, you might see different installed sub-packages, but the **Junos** field is common across all platforms that run Junos OS 13.3 and later.

```
user@host > show version
Hostname: lab
Model: mx240
Junos: 13.3R1.4
JUNOS Base OS boot [13.3R1.4]
JUNOS Base OS Software Suite [13.3R1.4]
JUNOS Kernel Software Suite [13.3R1.4]
JUNOS Crypto Software Suite [13.3R1.4]
JUNOS Packet Forwarding Engine Support (M/T/EX Common) [13.3R1.4]
JUNOS Packet Forwarding Engine Support (MX Common) [13.3R1.4]
JUNOS Online Documentation [113.3R1.4]
JUNOS Services AACL Container package [13.3R1.4]
JUNOS Services Application Level Gateways [13.3R1.4]
JUNOS AppId Services [13.3R1.4]
JUNOS Border Gateway Function package [13.3R1.4]
JUNOS Services Captive Portal and Content Delivery Container package [13.3R1.4]
JUNOS Services HTTP Content Management package [13.3R1.4]
JUNOS IDP Services [13.3R1.4]
JUNOS Services Jflow Container package [13.3R1.4]
JUNOS Services LL-PDF Container package [13.3R1.4]
JUNOS Services MobileNext Software package [13.3R1.4]
JUNOS Services Mobile Subscriber Service Container package [13.3R1.4]
JUNOS Services NAT [13.3R1.4]
JUNOS Services PTSP Container package [13.3R1.4]
JUNOS Services RPM [13.3R1.4]
JUNOS Services Stateful Firewall [13.3R1.4]
JUNOS Voice Services Container package [13.3R1.4]
JUNOS Services Crypto [13.3R1.4]
JUNOS Services SSL [13.3R1.4]
JUNOS Services IPSec [13.3R1.4]
JUNOS platform Software Suite [13.3R1.4]
JUNOS Runtime Software Suite [13.3R1.4]
JUNOS Routing Software Suite [13.3R1.4]
JUNOS py-base-i386 [13.3R1.4]
```

show version

```
user@host> show version
Hostname: router1
Model: m20
JUNOS Base OS boot [7.2-20050312.0]
JUNOS Base OS Software Suite [7.2-20050312.0]
JUNOS Kernel Software Suite [7.2R1.7]
JUNOS Packet Forwarding Engine Support (M20/M40) [7.2R1.7]
JUNOS Routing Software Suite [7.2R1.7]
JUNOS Online Documentation [7.2R1.7]
JUNOS Crypto Software Suite [7.2R1.7]


{master}
```

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```
user@host> show version psd 1
psd1-re0:
--------------------------------------------------------------------------
Hostname: china
Model: t640
JUNOS Base OS boot [9.1I20080311_1959_builder]
JUNOS Base OS Software Suite [9.1-20080321.0]
JUNOS Kernel Software Suite [9.1-20080321.0]
JUNOS Crypto Software Suite [9.1-20080321.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [9.1-20080321.0]
JUNOS Packet Forwarding Engine Support (T-series) [9.1-20080321.0]
JUNOS Online Documentation [9.1-20080321.0]
JUNOS Routing Software Suite [9.1-20080321.0]
labpkg [7.0]
```

show version (TX Matrix Plus Router)

```
user@host> show version
sfc0-re0:
--------------------------------------------------------------------------
Hostname: host
Model: txp
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

lcc0-re0:
--------------------------------------------------------------------------
Hostname: host1
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
```


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```
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

lcc1-re0:
--------------------------------------------------------------------------
Hostname: host2
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

lcc2-re0:
--------------------------------------------------------------------------
Hostname: host3
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
```

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```
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]

lcc3-re0:
--------------------------------------------------------------------------
Hostname: host4
Model: t1600
JUNOS Base OS boot [12.3-20121019.0]
JUNOS Base OS Software Suite [12.3-20121019.0]
JUNOS Kernel Software Suite [12.3-20121019.0]
JUNOS Crypto Software Suite [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [12.3-20121019.0]
JUNOS Packet Forwarding Engine Support (T-Series) [12.3-20121019.0]
JUNOS Online Documentation [12.3-20121019.0]
JUNOS Services AACL Container package [12.3-20121019.0]
JUNOS Services Application Level Gateways [12.3-20121019.0]
JUNOS AppId Services [12.3-20121019.0]
JUNOS Border Gateway Function package [12.3-20121019.0]
JUNOS Services Captive Portal and Content Delivery Container package
[12.3-20121019.0]
JUNOS Services HTTP Content Management package [12.3-20121019.0]
JUNOS IDP Services [12.3-20121019.0]
JUNOS Services LL-PDF Container package [12.3-20121019.0]
JUNOS Services NAT [12.3-20121019.0]
JUNOS Services PTSP Container package [12.3-20121019.0]
JUNOS Services RPM [12.3-20121019.0]
JUNOS Services Stateful Firewall [12.3-20121019.0]
JUNOS Voice Services Container package [12.3-20121019.0]
JUNOS Services Example Container package [12.3-20121019.0]
JUNOS Services Crypto [12.3-20121019.0]
JUNOS Services SSL [12.3-20121019.0]
JUNOS Services IPSec [12.3-20121019.0]
JUNOS Runtime Software Suite [12.3-20121019.0]
JUNOS Routing Software Suite [12.3-20121019.0]
```

show version (TX Matrix Plus Router with 3D SIBs)

```
user@host>show version
sfc0-re0:
--------------------------------------------------------------------------
```


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```
Hostname: sfc0
Model: txp
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

lcc0-re0:
--------------------------------------------------------------------------
Hostname: lcc0
Model: t4000
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
```

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```
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

lcc2-re0:
--------------------------------------------------------------------------
Hostname: lcc2
Model: t4000
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]


lcc4-re0:
--------------------------------------------------------------------------
Hostname: lcc4
Model: t4000
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
```

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```
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]

lcc6-re0:
--------------------------------------------------------------------------
Hostname: lcc6
Model: t1600
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]


lcc7-re0:
--------------------------------------------------------------------------
Hostname: lcc7
Model: t1600
JUNOS Base OS boot [13.1-20130306.0]
JUNOS Base OS Software Suite [13.1-20130306.0]
JUNOS Kernel Software Suite [13.1-20130306.0]
JUNOS Crypto Software Suite [13.1-20130306.0]
```

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```
JUNOS Packet Forwarding Engine Support (M/T Common) [13.1-20130306.0]
JUNOS Packet Forwarding Engine Support (T-Series) [13.1-20130306.0]
JUNOS Online Documentation [13.1-20130306.0]
JUNOS Services AACL Container package [13.1-20130306.0]
JUNOS Services Application Level Gateways [13.1-20130306.0]
JUNOS AppId Services [13.1-20130306.0]
JUNOS Border Gateway Function package [13.1-20130306.0]
JUNOS Services Captive Portal and Content Delivery Container package
[13.1-20130306.0]
JUNOS Services HTTP Content Management package [13.1-20130306.0]
JUNOS IDP Services [13.1-20130306.0]
JUNOS Services Jflow Container package [13.1-20130306.0]
JUNOS Services LL-PDF Container package [13.1-20130306.0]
JUNOS Services MobileNext Software package [13.1-20130306.0]
JUNOS Services Mobile Subscriber Service Container package [13.1-20130306.0]
JUNOS Services NAT [13.1-20130306.0]
JUNOS Services PTSP Container package [13.1-20130306.0]
JUNOS Services RPM [13.1-20130306.0]
JUNOS Services Stateful Firewall [13.1-20130306.0]
JUNOS Voice Services Container package [13.1-20130306.0]
JUNOS Services Example Container package [13.1-20130306.0]
JUNOS Services Crypto [13.1-20130306.0]
JUNOS Services SSL [13.1-20130306.0]
JUNOS Services IPSec [13.1-20130306.0]
JUNOS Runtime Software Suite [13.1-20130306.0]
JUNOS Routing Software Suite [13.1-20130306.0]
```

show version (MX Series Router)

```
user@host5> show version
Hostname: host5
Model: mx80
JUNOS Base OS boot [11.3-20110717.0]
JUNOS Base OS Software Suite [11.3-20110717.0]
JUNOS Kernel Software Suite [11.3-20110717.0]
JUNOS Crypto Software Suite [11.3-20110717.0]
JUNOS Packet Forwarding Engine Support (MX80) [11.3-20110717.0]
JUNOS Online Documentation [11.3-20110717.0]
JUNOS Routing Software Suite [11.3-20110717.0]
```

show version (QFX3500 Switch)

```
user@switch> show version
Hostname: switch
Model: qfx_s3500
JUNOS Base OS boot [11.1R1]
JUNOS Base OS Software Suite [11.1R1]
JUNOS Kernel Software Suite [11.1R1]
JUNOS Crypto Software Suite [11.1R1
JUNOS Online Documentation [11.1R1]
JUNOS Enterprise Software Suite [11.1R1]
JUNOS Packet Forwarding Engine Support (QFX) [11.1R1]
JUNOS Routing Software Suite [11.1R1]
```

show version (QFabric System)

```
user@qfabric> show version
Hostname: qfabric
Model: qfx3000-g
```


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```
Serial Number: qfsn-0123456789
QFabric System ID: f158527a-f99e-11e0-9fbd-00e081c57cda
JUNOS Base Version [12.2I20111018_0215_dc-builder]
```

show version component all (QFabric System)

```
user@switch> show version component all
dg1:
-
Hostname: qfabric
Model: qfx3100
JUNOS Base Version [11.3R1.6]

dg0:
-
Hostname: qfabric
Model: qfx3100
JUNOS Base Version [11.3R1.6]

NW-NG-0:
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

FC-0:
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

FC-1:
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

DRE-0:
-
Hostname: dre-0
Model: qfx-jvre
```

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```
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

FM-0:
-
Hostname: qfabric
Model: qfx-jvre
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

nodedevice1:
-
Hostname: qfabric
Model: QFX3500
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]

interconnectdevice1:
-
Hostname: qfabric
Model: QFX3108
JUNOS Base OS boot [11.3R1.6]
JUNOS Base OS Software Suite [11.3R1.6]
JUNOS Kernel Software Suite [11.3R1.6]
JUNOS Crypto Software Suite [11.3R1.6]
JUNOS Online Documentation [11.3R1.6]
JUNOS Enterprise Software Suite [11.3R1.6]
JUNOS Packet Forwarding Engine Support (QFX RE) [11.3R1.6]
JUNOS Routing Software Suite [11.3R1.6]
warning:  from interconnectdevice0: Disconnected
```

show version (ACX5048 Router)

```
user@host> show version
fpc0:
Hostname: acx5k11-ac
Model: acx5048
Junos: 15.1X54-D20.3
JUNOS Base OS boot [15.1X54-D20.3]
JUNOS Online Documentation [15.1X54-D20.3]
JUNOS Crypto Software Suite [15.1X54-D20.3]
JUNOS Base OS Software Suite [15.1X54-D20.3]
JUNOS Kernel Software Suite [15.1X54-D20.3]
```


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```
JUNOS Packet Forwarding Engine Support (acx5k) [15.1X54-D20.3]
JUNOS Enterprise Software Suite [15.1X54-D20.3]
JUNOS Routing Software Suite [15.1X54-D20.3]
JUNOS py-base-i386 [15.1X54-D20.3]
JUNOS Host Software [15.1X54-D20.3]
```

show version (ACX5096 Router)

```
user@host> show version
fpc0:
Hostname: acx5k13-ac
Model: acx5096
Junos: 15.1X54-D20.3
JUNOS Base OS boot [15.1X54-D20.3]
JUNOS Online Documentation [15.1X54-D20.3]
JUNOS Crypto Software Suite [15.1X54-D20.3]
JUNOS Base OS Software Suite [15.1X54-D20.3]
JUNOS Kernel Software Suite [15.1X54-D20.3]
JUNOS Packet Forwarding Engine Support (acx5k) [15.1X54-D20.3]
JUNOS Enterprise Software Suite [15.1X54-D20.3]
JUNOS Routing Software Suite [15.1X54-D20.3]
JUNOS py-base-i386 [15.1X54-D20.3]
JUNOS Host Software [15.1X54-D20.3]
```

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