Power Systems

Finding parts, locations, and addresses

Note

Before using this information and the product it supports, read the information in “Safety notices” on page v, “Notices” on page 137, the *IBM Systems Safety Notices* manual, G229-9054, and the *IBM Environmental Notices and User Guide*, Z125–5823.

This edition applies to IBM® Power Systems servers that contain the POWER9™ processor and to all associated models.

Contents

Safety notices

Safety notices may be printed throughout this guide:

- **DANGER** notices call attention to a situation that is potentially lethal or extremely hazardous to people.
- **CAUTION** notices call attention to a situation that is potentially hazardous to people because of some existing condition.
- **Attention** notices call attention to the possibility of damage to a program, device, system, or data.

World Trade safety information

Several countries require the safety information contained in product publications to be presented in their national languages. If this requirement applies to your country, safety information documentation is included in the publications package (such as in printed documentation, on DVD, or as part of the product) shipped with the product. The documentation contains the safety information in your national language with references to the U.S. English source. Before using a U.S. English publication to install, operate, or service this product, you must first become familiar with the related safety information documentation. You should also refer to the safety information documentation any time you do not clearly understand any safety information in the U.S. English publications.

Replacement or additional copies of safety information documentation can be obtained by calling the IBM Hotline at 1-800-300-8751.

German safety information

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne § 2 der Bildschirmarbeitsverordnung geeignet.

Laser safety information

IBM servers can use I/O cards or features that are fiber-optic based and that utilize lasers or LEDs.

Laser compliance

IBM servers may be installed inside or outside of an IT equipment rack.

DANGER: When working on or around the system, observe the following precautions:

Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard: If IBM supplied the power cord(s), connect power to this unit only with the IBM provided power cord. Do not use the IBM provided power cord for any other product. Do not open or service any power supply assembly. Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.

- 
The product might be equipped with multiple power cords. To remove all hazardous voltages, disconnect all power cords. For AC power, disconnect all power cords from their AC power source. For racks with a DC power distribution panel (PDP), disconnect the customer's DC power source to the PDP.
- When connecting power to the product ensure all power cables are properly connected. For racks with AC power, connect all power cords to a properly wired and grounded electrical outlet. Ensure that the outlet supplies proper voltage and phase rotation according to the system rating plate. For racks with a DC power distribution panel (PDP), connect the customer's DC power source to the PDP. Ensure that the proper polarity is used when attaching the DC power and DC power return wiring.
- Connect any equipment that will be attached to this product to properly wired outlets.

- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.
- Do not attempt to switch on power to the machine until all possible unsafe conditions are corrected.
- When performing a machine inspection: Assume that an electrical safety hazard is present. Perform all continuity, grounding, and power checks specified during the subsystem installation procedures to ensure that the machine meets safety requirements. Do not attempt to switch power to the machine until all possible unsafe conditions are corrected. Before you open the device covers, unless instructed otherwise in the installation and configuration procedures: Disconnect the attached AC power cords, turn off the applicable circuit breakers located in the rack power distribution panel (PDP), and disconnect any telecommunications systems, networks, and modems.
- Connect and disconnect cables as described in the following procedures when installing, moving, or opening covers on this product or attached devices.

  To Disconnect: 1) Turn off everything (unless instructed otherwise). 2) For AC power, remove the power cords from the outlets. 3) For racks with a DC power distribution panel (PDP), turn off the circuit breakers located in the PDP and remove the power from the Customer's DC power source. 4) Remove the signal cables from the connectors. 5) Remove all cables from the devices.

  To Connect: 1) Turn off everything (unless instructed otherwise). 2) Attach all cables to the devices. 3) Attach the signal cables to the connectors. 4) For AC power, attach the power cords to the outlets. 5) For racks with a DC power distribution panel (PDP), restore the power from the Customer's DC power source and turn on the circuit breakers located in the PDP. 6) Turn on the devices.
-  Sharp edges, corners and joints may be present in and around the system. Use care when handling equipment to avoid cuts, scrapes and pinching. (D005)

(R001 part 1 of 2):

DANGER: Observe the following precautions when working on or around your IT rack system:

- Heavy equipment–personal injury or equipment damage might result if mishandled.
- Always lower the leveling pads on the rack cabinet.
- Always install stabilizer brackets on the rack cabinet if provided, unless the earthquake option is to be installed.
- To avoid hazardous conditions due to uneven mechanical loading, always install the heaviest devices in the bottom of the rack cabinet. Always install servers and optional devices starting from the bottom of the rack cabinet.
- Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices. In addition, do not lean on rack mounted devices and do not use them to stabilize your body position (for example, when working from a ladder).

  
- Stability hazard:
  - The rack may tip over causing serious personal injury.
  - Before extending the rack to the installation position, read the installation instructions.
  - Do not put any load on the slide-rail mounted equipment mounted in the installation position.
  - Do not leave the slide-rail mounted equipment in the installation position.
- Each rack cabinet might have more than one power cord.
  - For AC powered racks, be sure to disconnect all power cords in the rack cabinet when directed to disconnect power during servicing.

  - For racks with a DC power distribution panel (PDP), turn off the circuit breaker that controls the power to the system unit(s), or disconnect the customer's DC power source, when directed to disconnect power during servicing.
- Connect all devices installed in a rack cabinet to power devices installed in the same rack cabinet. Do not plug a power cord from a device installed in one rack cabinet into a power device installed in a different rack cabinet.
- An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the devices that attach to the system. It is the responsibility of the customer to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (R001 part 1 of 2)

(R001 part 2 of 2):

CAUTION:

- Do not install a unit in a rack where the internal rack ambient temperatures will exceed the manufacturer's recommended ambient temperature for all your rack-mounted devices.
- Do not install a unit in a rack where the air flow is compromised. Ensure that air flow is not blocked or reduced on any side, front, or back of a unit used for air flow through the unit.
- Consideration should be given to the connection of the equipment to the supply circuit so that overloading of the circuits does not compromise the supply wiring or overcurrent protection. To provide the correct power connection to a rack, refer to the rating labels located on the equipment in the rack to determine the total power requirement of the supply circuit.
- *(For sliding drawers.)* Do not pull out or install any drawer or feature if the rack stabilizer brackets are not attached to the rack or if the rack is not bolted to the floor. Do not pull out more than one drawer at a time. The rack might become unstable if you pull out more than one drawer at a time.

- *(For fixed drawers.)* This drawer is a fixed drawer and must not be moved for servicing unless specified by the manufacturer. Attempting to move the drawer partially or completely out of the rack might cause the rack to become unstable or cause the drawer to fall out of the rack. (R001 part 2 of 2)

CAUTION: Removing components from the upper positions in the rack cabinet improves rack stability during relocation. Follow these general guidelines whenever you relocate a populated rack cabinet within a room or building.

- Reduce the weight of the rack cabinet by removing equipment starting at the top of the rack cabinet. When possible, restore the rack cabinet to the configuration of the rack cabinet as you received it. If this configuration is not known, you must observe the following precautions:
  - Remove all devices in the 32U position and above.
  - Ensure that the heaviest devices are installed in the bottom of the rack cabinet.

  - Ensure that there are little-to-no empty U-levels between devices installed in the rack cabinet below the 32U level, unless the received configuration specifically allowed it.
- If the rack cabinet you are relocating is part of a suite of rack cabinets, detach the rack cabinet from the suite.
- If the rack cabinet you are relocating was supplied with removable outriggers they must be reinstalled before the cabinet is relocated.
- Inspect the route that you plan to take to eliminate potential hazards.
- Verify that the route that you choose can support the weight of the loaded rack cabinet. Refer to the documentation that comes with your rack cabinet for the weight of a loaded rack cabinet.
- Verify that all door openings are at least 760 x 2083 mm (30 x 82 in.).
- Ensure that all devices, shelves, drawers, doors, and cables are secure.
- Ensure that the four leveling pads are raised to their highest position.
- Ensure that there is no stabilizer bracket installed on the rack cabinet during movement.
- Do not use a ramp inclined at more than 10 degrees.
- When the rack cabinet is in the new location, complete the following steps:
  - Lower the four leveling pads.
  - Install stabilizer brackets on the rack cabinet or in an earthquake environment bolt the rack to the floor.
  - If you removed any devices from the rack cabinet, repopulate the rack cabinet from the lowest position to the highest position.
- If a long-distance relocation is required, restore the rack cabinet to the configuration of the rack cabinet as you received it. Pack the rack cabinet in the original packaging material, or equivalent. Also lower the leveling pads to raise the casters off of the pallet and bolt the rack cabinet to the pallet.

(R002)

(L001)

DANGER: Hazardous voltage, current, or energy levels are present inside any component that has this label attached. Do not open any cover or barrier that contains this label. (L001)

(L002)

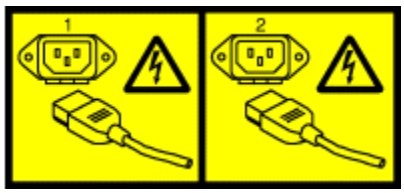
DANGER: Rack-mounted devices are not to be used as shelves or work spaces. Do not place objects on top of rack-mounted devices. In addition, do not lean on rack-mounted devices and do not use them to stabilize your body position (for example, when working from a ladder). Stability hazard:

- The rack may tip over causing serious personal injury.
- Before extending the rack to the installation position, read the installation instructions.

- Do not put any load on the slide-rail mounted equipment mounted in the installation position.
- Do not leave the slide-rail mounted equipment in the installation position.

(L002)

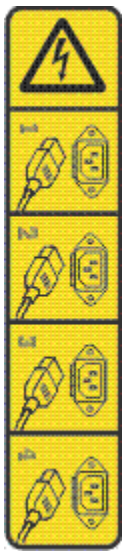
(L003)



or

or

or



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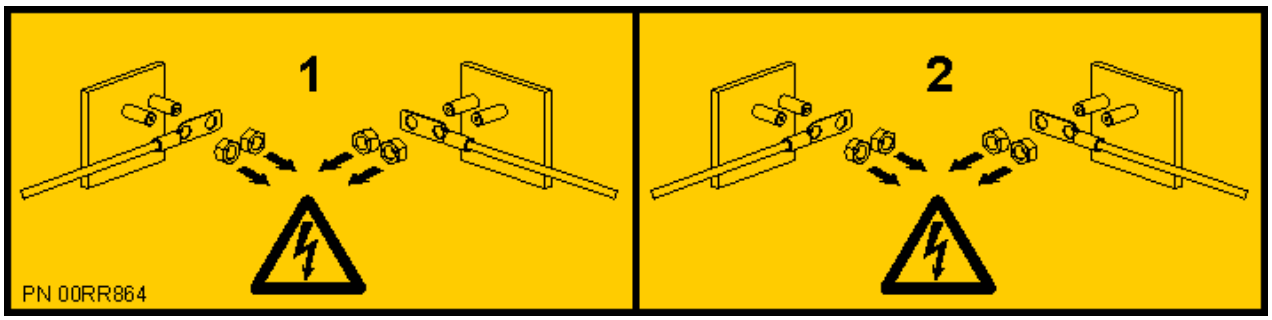

DANGER: Multiple power cords. The product might be equipped with multiple AC power cords or multiple DC power cables. To remove all hazardous voltages, disconnect all power cords and power cables. (L003)

(L007)

CAUTION: A hot surface nearby. (L007)

(L008)

CAUTION: Hazardous moving parts nearby. (L008)

All lasers are certified in the U.S. to conform to the requirements of DHHS 21 CFR Subchapter J for class 1 laser products. Outside the U.S., they are certified to be in compliance with IEC 60825 as a class 1 laser product. Consult the label on each part for laser certification numbers and approval information.

CAUTION: This product might contain one or more of the following devices: CD-ROM drive, DVD-ROM drive, DVD-RAM drive, or laser module, which are Class 1 laser products. Note the following information:

- Do not remove the covers. Removing the covers of the laser product could result in exposure to hazardous laser radiation. There are no serviceable parts inside the device.
- Use of the controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

(C026)

CAUTION: Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than Class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. Although shining light into one end and looking into the other end of a disconnected optical fiber to verify the continuity of optic fibers may not injure the eye, this procedure is potentially dangerous. Therefore, verifying the continuity of optical fibers by shining light into one end and looking at the other end is not recommended. To verify continuity of a fiber optic cable, use an optical light source and power meter. (C027)

CAUTION: This product contains a Class 1M laser. Do not view directly with optical instruments. (C028)

CAUTION: Some laser products contain an embedded Class 3A or Class 3B laser diode. Note the following information:

- Laser radiation when open.
- Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam. (C030)

(C030)

CAUTION: The battery contains lithium. To avoid possible explosion, do not burn or charge the battery.

Do Not:

- Throw or immerse into water
- Heat to more than 100 degrees C (212 degrees F)
- Repair or disassemble

Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations. In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (C003)

CAUTION: Regarding IBM provided VENDOR LIFT TOOL:

- Operation of LIFT TOOL by authorized personnel only.
- LIFT TOOL intended for use to assist, lift, install, remove units (load) up into rack elevations. It is not to be used loaded transporting over major ramps nor as a replacement for such designated tools like pallet jacks, walkies, fork trucks and such related relocation practices. When this is not practicable, specially trained persons or services must be used (for instance, riggers or movers).
- Read and completely understand the contents of LIFT TOOL operator's manual before using. Failure to read, understand, obey safety rules, and follow instructions may result in property damage and/or personal injury. If there are questions, contact the vendor's service and support. Local paper manual must remain with machine in provided storage sleeve area. Latest revision manual available on vendor's web site.
- Test verify stabilizer brake function before each use. Do not over-force moving or rolling the LIFT TOOL with stabilizer brake engaged.
- Do not raise, lower or slide platform load shelf unless stabilizer (brake pedal jack) is fully engaged. Keep stabilizer brake engaged when not in use or motion.
- Do not move LIFT TOOL while platform is raised, except for minor positioning.
- Do not exceed rated load capacity. See LOAD CAPACITY CHART regarding maximum loads at center versus edge of extended platform.
- Only raise load if properly centered on platform. Do not place more than 200 lb (91 kg) on edge of sliding platform shelf also considering the load's center of mass/gravity (CoG).
- Do not corner load the platforms, tilt riser, angled unit install wedge or other such accessory options. Secure such platforms -- riser tilt, wedge, etc options to main lift shelf or forks in all four (4x or all other provisioned mounting) locations with provided hardware only, prior to use. Load objects are designed to slide on/off smooth platforms without appreciable force, so take care not

to push or lean. Keep riser tilt [adjustable angling platform] option flat at all times except for final minor angle adjustment when needed.

- Do not stand under overhanging load.
- Do not use on uneven surface, incline or decline (major ramps).
- Do not stack loads.
- Do not operate while under the influence of drugs or alcohol.
- Do not support ladder against LIFT TOOL (unless the specific allowance is provided for one following qualified procedures for working at elevations with this TOOL).
- Tipping hazard. Do not push or lean against load with raised platform.
- Do not use as a personnel lifting platform or step. No riders.
- Do not stand on any part of lift. Not a step.
- Do not climb on mast.
- Do not operate a damaged or malfunctioning LIFT TOOL machine.
- Crush and pinch point hazard below platform. Only lower load in areas clear of personnel and obstructions. Keep hands and feet clear during operation.
- No Forks. Never lift or move bare LIFT TOOL MACHINE with pallet truck, jack or fork lift.
- Mast extends higher than platform. Be aware of ceiling height, cable trays, sprinklers, lights, and other overhead objects.
- Do not leave LIFT TOOL machine unattended with an elevated load.
- Watch and keep hands, fingers, and clothing clear when equipment is in motion.
- Turn Winch with hand power only. If winch handle cannot be cranked easily with one hand, it is probably over-loaded. Do not continue to turn winch past top or bottom of platform travel. Excessive unwinding will detach handle and damage cable. Always hold handle when lowering, unwinding. Always assure self that winch is holding load before releasing winch handle.
- A winch accident could cause serious injury. Not for moving humans. Make certain clicking sound is heard as the equipment is being raised. Be sure winch is locked in position before releasing handle. Read instruction page before operating this winch. Never allow winch to unwind freely. Freewheeling will cause uneven cable wrapping around winch drum, damage cable, and may cause serious injury.
- This TOOL must be maintained correctly for IBM Service personnel to use it. IBM shall inspect condition and verify maintenance history before operation. Personnel reserve the right not to use TOOL if inadequate. (C048)

Power and cabling information for NEBS (Network Equipment-Building System) GR-1089-CORE

The following comments apply to the IBM servers that have been designated as conforming to NEBS (Network Equipment-Building System) GR-1089-CORE:

The equipment is suitable for installation in the following:

- Network telecommunications facilities
- Locations where the NEC (National Electrical Code) applies

The intrabuilding ports of this equipment are suitable for connection to intrabuilding or unexposed wiring or cabling only. The intrabuilding ports of this equipment *must not* be metallically connected to the interfaces that connect to the OSP (outside plant) or its wiring. These interfaces are designed for use as intrabuilding interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE) and require isolation from the exposed OSP cabling. The addition of primary protectors is not sufficient protection to connect these interfaces metallically to OSP wiring.

Note: All Ethernet cables must be shielded and grounded at both ends.

The ac-powered system does not require the use of an external surge protection device (SPD).

The dc-powered system employs an isolated DC return (DC-I) design. The DC battery return terminal *shall not* be connected to the chassis or frame ground.

The dc-powered system is intended to be installed in a common bonding network (CBN) as described in GR-1089-CORE.

Finding parts, locations, and addresses

Locate physical part locations and identify parts with system diagrams.

You can identify the enclosure in which a field-replaceable unit (FRU) is plugged by its location code. The first character of the location code is always U followed by a 4–character feature code or enclosure type as shown in the following example: `U78CB.001.10ABCDE-P3-C31` In this example, the enclosure type is **78CB**.

The next 3 characters of the location code indicate the model of the enclosure (**001** in the example). The next string of characters provides the enclosure serial number (**10ABCDE** in the example).

Notes:

- On a single-node system, the characters of the location code that indicate the model might be replaced with ND1.
- On a 9080-M9S system, the model number might be replaced by a more specific enclosure indicator. SC1 indicates the system control unit, and ND1 through ND4 indicate system node 1 through system node 4.

Using this information, locate the enclosure with the FRU you want to replace. Find the enclosure type in the following table and go to the service guide for that enclosure.

Enclosure number	System
U78D3.*mmm*, where *mmm* is 001 or ND1	5105-22E, 9008-22L, 9009-22A, 9009-22G, 9223-22H, or 9223-22S
U78D2.*mmm*, where *mmm* is 001 or ND1	9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S
U78D4.*mmm*, where *mmm* is 001 or ND1	9040-MR9
U78D6.SC1	9080-M9S system control unit
U78D5.*mmm*, where *mmm* is ND1, ND2, ND3, or ND4	9080-M9S system node
U5887.001	5887 disk drive enclosure
U78CD.001	EMX0 PCIe Gen3 I/O expansion drawer
UESLL.001	ESLL disk drive enclosure
UESLS.001	ESLS disk drive enclosure

Locate the FRU

The string of characters that follow the enclosure serial number identifies the FRU location within the enclosure: `U78CB.001.10ABCDE-P3-C31` In this example, **P3-C31** is the location of the FRU to be replaced. Use the graphics and tables to locate the FRU and link to its removal and replacement procedure.

Part locations and location codes

You can find part locations by using location codes. Illustrations are provided to help you map a location code to a position on the server or expansion unit.

Using location codes

For additional information about reading your location code, use the following table to link to a specific topic.

Location code topics that might be of interest	Description
“Location code overview” on page 2	Contains background information on the use of location codes.
“Physical location codes” on page 3	Provides a definition for physical location code.
“Logical location codes” on page 3	Provides a definition for a logical location code.
“Location code format” on page 3	Provides descriptive information of the U*n* value in the location code string. For example, U5887.001.
“Location code labels” on page 4	Provides a table that identifies and defines the location code labels. The location code labels begin with an alphabetic character and follow the system serial number. For example, U5887.001.10ABCDE-P3-C31-T2-L23. (The system serial number is the 10ABCDE in the previous example.) The P3, C31, T2, and L23 all contain an alphabetic character that is identified in the Location code labels table.
“Worldwide unique identifier” on page 5	Provides a definition for the worldwide unique identifier. This group of digits follows the resource code labels and always begins with the letter *W*.

Location code overview

Servers (system unit and expansion units) use physical location codes to provide mapping of replaceable units. Location codes are produced by the server's firmware, which structures them so that they can be used to identify specific parts in a system. The location code format is the same for all servers.

If you are working with a specific location code, the feature immediately follows the first character (U5887). See the Unit type and locations table.

If the location code ends with **-Txx-Lxx**, the server's firmware could not identify the physical location. When a physical location cannot be identified, a logical location code is provided. Where logical location codes occur in enclosures, the locations topic for the enclosure has the known conversions listed. For logical location codes with no conversion, contact your next level of support.

If the location code begins with **UTMPx**, the expansion I/O unit's machine type, model, and serial number have not been set yet and this is a temporary unit identifier. To identify the unit, examine the display panels on all of the expansion I/O units connected to the server until you find one with the same characters in the first 5 digits of the top line in the unit's display. Record the unit's real machine type and model from the unit label. Match the unit's machine type and model in the Unit type and locations table, and follow the link to determine the service information.

Note: If locations for units are not in the preceding format, either they are not supported or there is a problem in the firmware. Contact your next level of support.

Physical location codes

Physical location codes provide a mapping of logical functions and components (such as backplanes, removable modules, connectors, ports, cables, and devices) to their specific locations within the physical structure of the server.

Logical location codes

If the physical location cannot be mapped to a physical location code, the server's firmware generates a logical location code. A logical location code is a sequence of location labels that identifies the path that the system uses to communicate with a given resource.

Note: A resource has as many logical location codes as it has logical connections to the system. For example, an external tape device connected to two I/O adapters will have two logical location codes.

An example of a logical location code is:

```
U5887.001.10ABCDE-P3-C31-T2-L23
```

The first part of the location code (through the T2 label) represents the physical location code for the resource that communicates with the target resource. The remainder of the logical location code (L23) represents exactly which resource is indicated.

Location code format

The location code is an alphanumeric string of variable length, consisting of a series of location identifiers, separated by a dash. An example of a physical location for a fan is U*n*-A1.

The first position, represented by U*n* (where *n* is equal to any string contained between the U and the hyphen) in the preceding example, is displayed in one of the forms in the following table.

Note: In location codes, the U is a constant digit; however, the numbered positions following the U are variables and are dependent on your server. Each column defines the numbers that follow the U in the beginning of the location code.

Machine type and model number in a location code	**Feature codes and sequence numbers in a location code**
U*tttt*.*mmm*.*sssssss*-A1	**U*ffff*.*ccc*.*sssssss*-A1**
The leftmost code is always U.	The leftmost code is always U.
tttt represents the unit type of the enclosure (drawer or node).	*ffff* represents the feature code of the enclosure (drawer or node).
mmm represents the model of the enclosure. **Notes:** • On a single node system, the characters of the location code that indicate the model number might be replaced with ND1. • On a 9080-M9S system, the model number might be replaced by a more specific enclosure indicator. SC1 indicates the system control unit, and ND1 through ND4 indicate system node 1 through system node 4.	*ccc* represents the sequence number of the enclosure.
sssssss represents the serial number for the enclosure.	*sssssss* represents the serial number of the enclosure.

Machine type and model number in a location code	Feature codes and sequence numbers in a location code
Utttt.mmm.sssssss-A1	**Ufffff.ccc.sssssss-A1**
Note: The *mmm* or *ccc* number might not be displayed on all location codes for all servers. If the *mmm* value is not displayed, the location code is displayed in one of the following forms: • U*tttt*.*sssssss*-A1 • U*fffff*.*sssssss*-A1	

The location code is hierarchical; that is, each location identifier in the string represents a physical part. The order (from left to right), in which each identifier is shown, allows you to determine which parts contain other parts in the string.

The dash (-) separator character represents a relationship between two components in the unit. In the example of the fan, whose location code is U*n*-A1, the dash shows that the fan (A1) is contained in the base unit (or U*n*). Modules, adapters, cables, and devices are all parts that are plugged into another part. Their location codes always show that they are plugged into another part as components of the server. Another example follows: U*n*-P1-C9 is a memory DIMM, with memory DIMM (C9) plugged into a backplane (P1), which is inside the unit (U*n*).

Note: For devices, certain error conditions might cause an IBM i device to display the device location in an AIX® format.

Table 1. Unit type and locations

Unit type (Utttt)	Link to location information
U78D3.*mmm*, where *mmm* is 001 or ND1	5105-22E, 9008-22L, 9009-22A, 9009-22G, 9223-22H, or 9223-22S locations
U78D2.*mmm*, where *mmm* is 001 or ND1	9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S locations
U78D4.*mmm*, where *mmm* is 001 or ND1	9040-MR9 locations
U78D6.SC1	9080-M9S system control unit locations
U78D5.*mmm*, where *mmm* is ND1, ND2, ND3, or ND4	9080-M9S system node locations
U5887.001	5887 disk drive enclosure locations
U78CD.001	EMX0 PCIe Gen3 I/O expansion drawer locations
UESLL.001	ESLL or ESLS locations
UESLS.001	ESLL or ESLS locations

Location code labels

The location code label represents a physical part of the server. The following table describes the prefixes of location code labels.

Note: These labels apply to system units only.

Table 2. Prefixes of location code labels for system units		
Prefix	**Description**	**Example**
A	Air-moving device	Fan, blower
C	Card connector	IOP, IOA, DIMM, processor card
D	Device	Diskette, control panel
E	Electrical	Battery, power supply, ac charger
L	Logical path SAS target	Integrated drive electronics (IDE) address, Fibre Channel LUN
N	Horizontal placement for an empty rack location	
P	Planar	System backplane
T	Port	
U	Unit	
V	Virtual planar	
W	Worldwide unique ID	
X	EIA value for an empty rack location	
Y	Firmware FRU	

Worldwide unique identifier

The location code label for the worldwide unique identifier consists of the prefix W followed by a maximum of 16 uppercase hexadecimal digits with no leading zeros. A location code might not consist of a worldwide unique identifier. When present, the worldwide unique identifier location label follows the location label of the resource that interfaces with the resource that has the worldwide unique identifier, usually a port.

5105-22E, 9008-22L, 9009-22A, 9009-22G, 9223-22H, or 9223-22S locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field-replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

Rack views

Note: The following graphics represent location codes for 5105-22E, 9008-22L, 9009-22A, 9009-22G, 9223-22H, or 9223-22S.

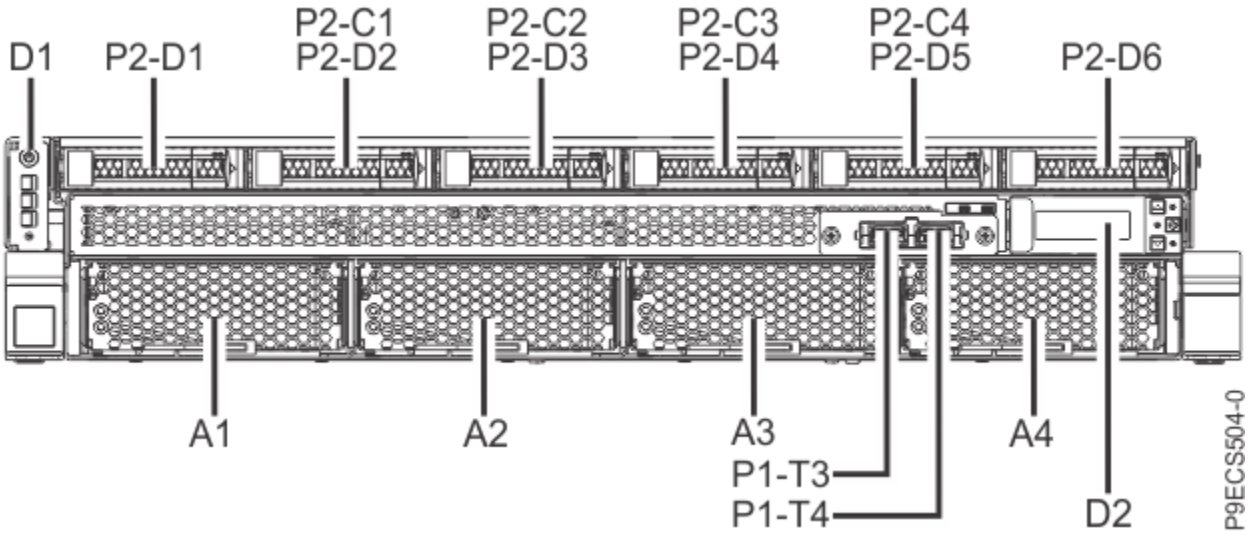

Figure 1. Rack front view

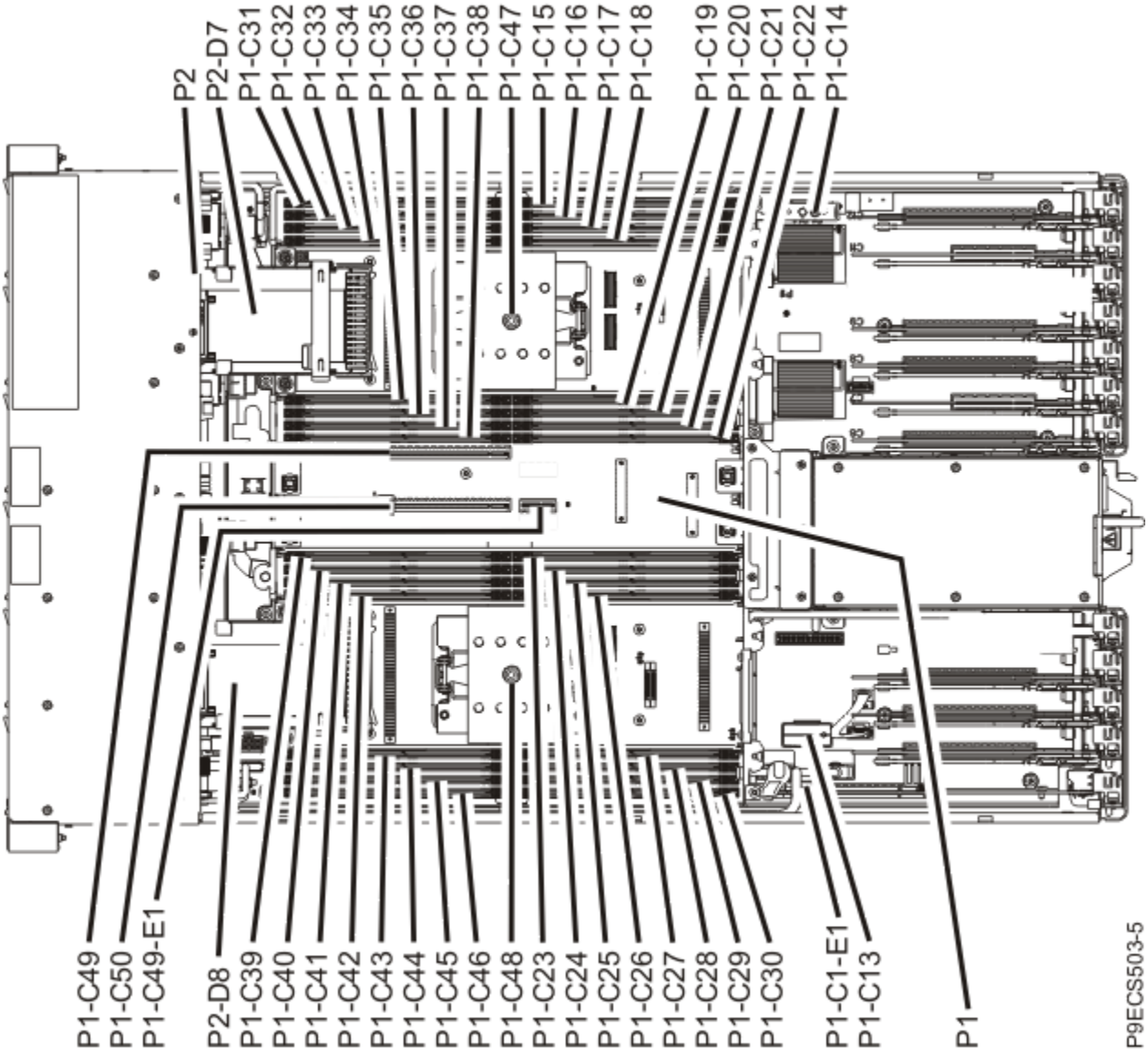

Figure 2. Rack top view

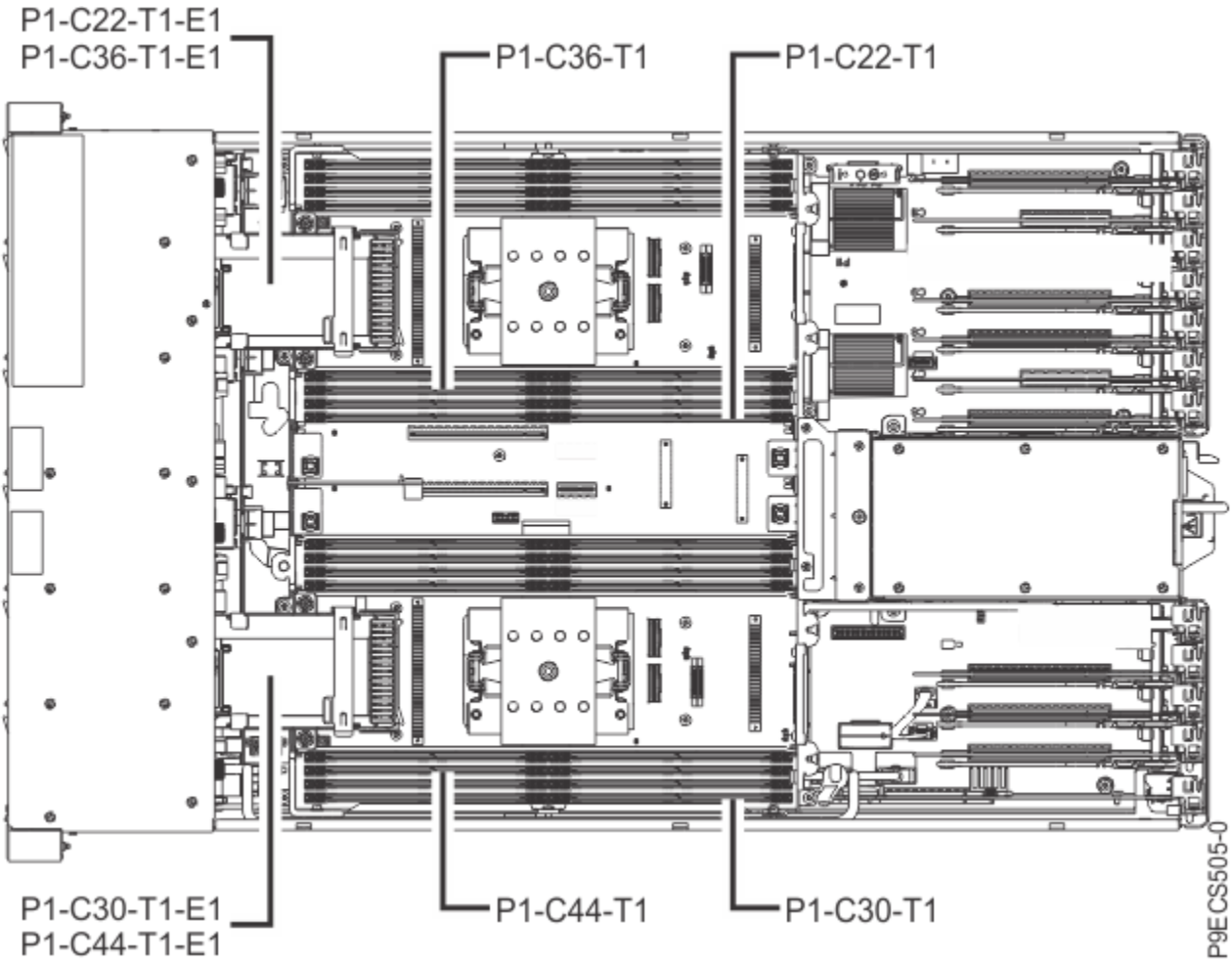

Figure 3. Rack top view with backup power module (BPM) and BPM cable locations for the 5105-22E system

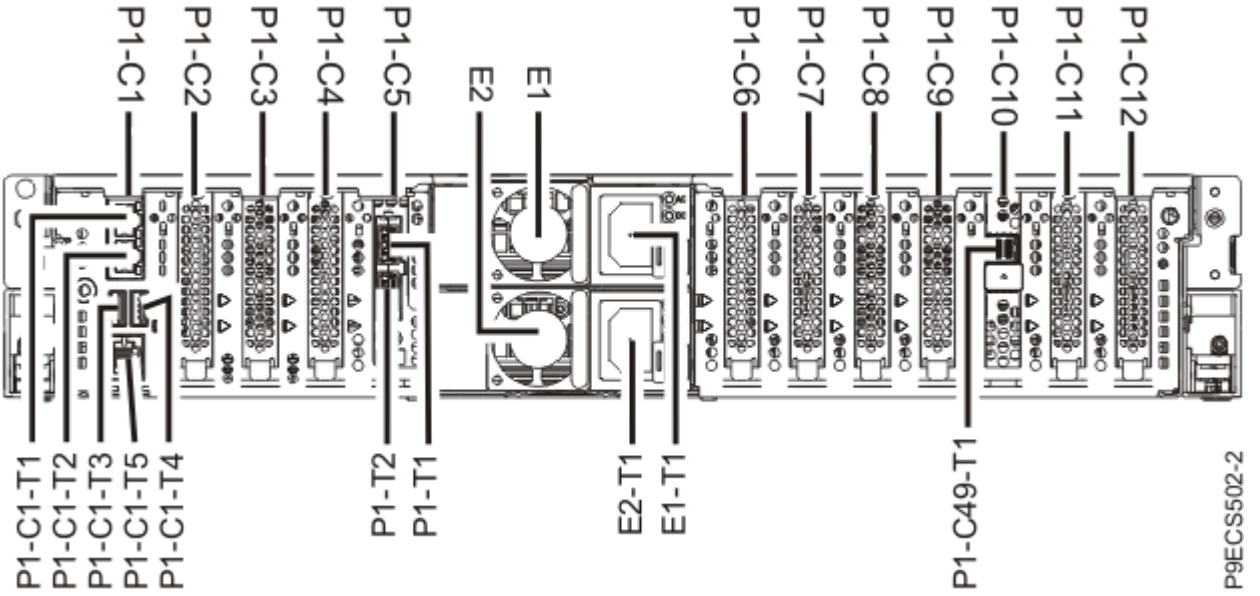

Figure 4. Rack rear view

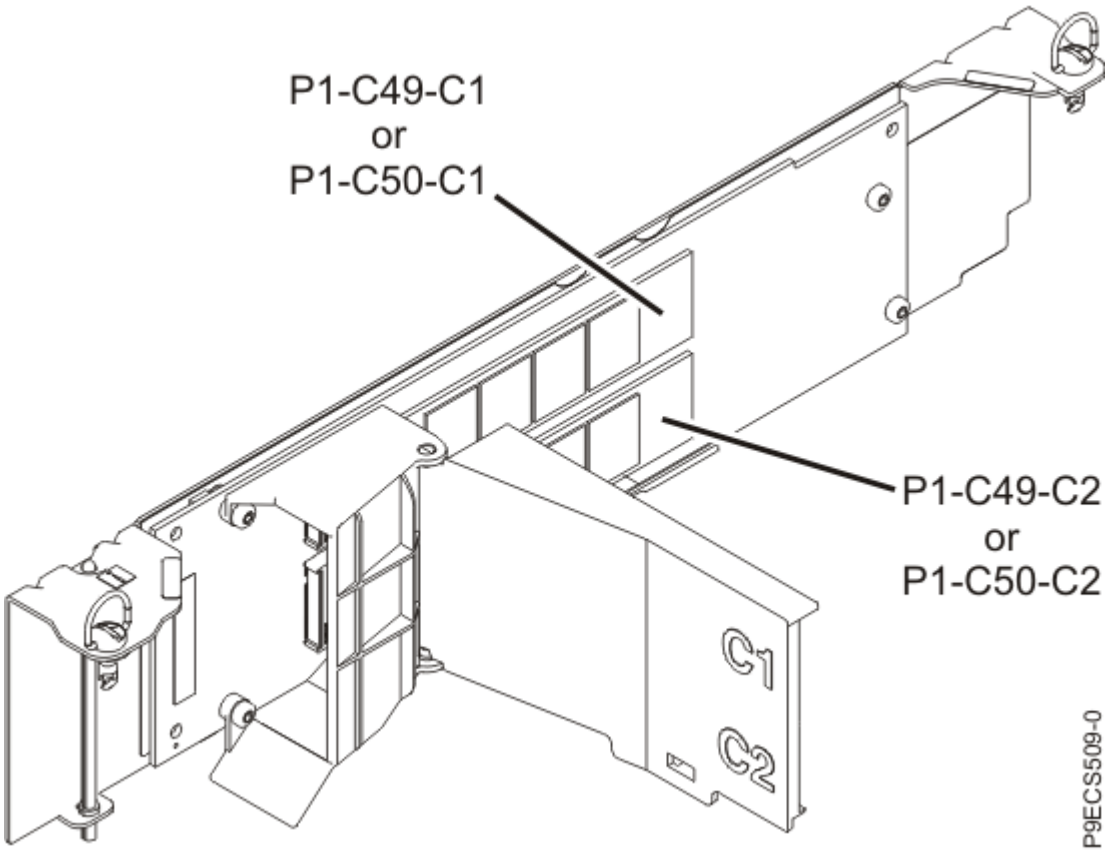

Figure 5. NVMe M.2 carrier card view

The following table provides location codes for parts that comprise the server.

Table 3. FRU location			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
System unit	U*n*		
Fans			
Fan 1	U*n*-A1	Yes	See Fans.
Fan 2	U*n*-A2	Yes	
Fan 3	U*n*-A3	Yes	
Fan 4	U*n*-A4	Yes	
Power supplies			
Power supply 1	U*n*-E1	Yes	See Power supplies.
Power supply 2	U*n*-E2	Yes	
Backplanes			
System backplane	U*n*-P1	Yes	See System backplane.
Drive backplane	U*n*-P2	Yes	See Drive backplanes.

Table 3. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Ports			
USB 3.0 port 1 (front)	U*n*-P1-T3	No	See Cables.
USB 3.0 port 2 (front)	U*n*-P1-T4	No	
USB 3.0 port 1 (rear)	U*n*-P1-T1	No	
USB 3.0 port 2 (rear)	U*n*-P1-T2	No	
USB 2.0 port 1 (rear) **Note:** This port is used only for firmware update and uninterruptible power supply (UPS). This port is unavailable for host operating systems.	U*n*-P1-C1-T3	No	
USB 2.0 port 2 (rear) **Note:** This port is used only for firmware update and uninterruptible power supply (UPS). This port is unavailable for host operating systems.	U*n*-P1-C1-T4	No	
Serial port	U*n*-P1-C1-T5	No	
HMC port 1	U*n*-P1-C1-T1	No	
HMC port 2	U*n*-P1-C1-T2	No	
SAS cable port	U*n*-P1-C49-T1	No	
Adapters			
Service processor card	U*n*-P1-C1	Yes	See Service processor card.
Time-of-day battery	U*n*-P1-C1-E1	Yes	See Time-of-day battery.

Table 3. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
PCIe4 x8 adapter	U*n*-P1-C2	Yes	See Adapters.
PCIe4 x16 adapter (supports CAPI and PCIe cable adapters)	U*n*-P1-C3	Yes	
PCIe4 x16 adapter (supports CAPI and PCIe cable adapters)	U*n*-P1-C4	Yes	
PCIe4 x8 adapter (5105-22E, 9009-22G, or 9223-22S)	U*n*-P1-C5	Yes	
PCIe4 x16 adapter (5105-22E, 9009-22G, or 9223-22S) PCIe3 x8 adapter (9008-22L, 9009-22A, or 9223-22H)	U*n*-P1-C6	Yes	
PCIe4 x8 adapter (5105-22E, 9009-22G, or 9223-22S) PCIe3 x8 adapter (9008-22L, 9009-22A, or 9223-22H)	U*n*-P1-C7	Yes	
PCIe4 x8 adapter (supports CAPI adapters)	U*n*-P1-C8	Yes	See Adapters.
PCIe4 x16 adapter (supports CAPI and PCIe cable adapters)	U*n*-P1-C9	Yes	
PCIe4 x8 adapter (5105-22E, 9009-22G, or 9223-22S)	U*n*-P1-C10	Yes	
PCIe4 x8 adapter (5105-22E, 9009-22G, or 9223-22S) PCIe3 x8 adapter (9008-22L, 9009-22A, or 9223-22H)	U*n*-P1-C11	Yes	
PCIe4 x16 adapter (5105-22E, 9009-22G, or 9223-22S) PCIe3 x8 adapter (9008-22L, 9009-22A, or 9223-22H)	U*n*-P1-C12	Yes	
Vital product data card	U*n*-P1-C13	Yes	See Vital product data card.
Trusted platform module card	U*n*-P1-C14	No	See Trusted platform module card.

Table 3. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
PCIe3 x8 SAS RAID internal adapter, PCIe3 x8 cache SAS RAID internal adapter, NVMe M.2 carrier card[2], or NVMe U.2 pass-thru card[3]	U*n*-P1-C49	Yes	See one of the following procedures: • PCIe3 x8 SAS RAID or cache SAS RAID internal adapters and backup power modules • NVMe M.2 carrier card and flash modules • NVMe U.2 pass-thru cards
Backup power module card for the PCIe3 x8 cache SAS RAID internal adapter (see Figure 2 on page 6)	U*n*-P1-C49-E1	Yes	
NVMe M.2 flash module[2] (see Figure 5 on page 8)	U*n*-P1-C49-C1	No	See NVMe M.2 carrier cards and flash modules.
NVMe M.2 flash module[2] (see Figure 5 on page 8)	U*n*-P1-C49-C2	No	
PCIe3 x8 SAS RAID internal adapter, backup power module card for the PCIe3 x8 cache SAS RAID internal adapter, NVMe M.2 carrier card[2], or NVMe U.2 pass-thru card[3]	U*n*-P1-C50	Yes	See one of the following procedures: • PCIe3 x8 SAS RAID or cache SAS RAID internal adapters and backup power modules • NVMe M.2 carrier card and flash modules • NVMe U.2 pass-thru cards
NVMe M.2 flash module[2] (see Figure 5 on page 8)	U*n*-P1-C50-C1	No	See NVMe M.2 carrier cards and flash modules.
NVMe M.2 flash module[2] (see Figure 5 on page 8)	U*n*-P1-C50-C2	No	
Memory modules			

Table 3. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module 1	U*n*-P1-C15	Yes	See Memory modules.
Memory module 2	U*n*-P1-C16	Yes	
Memory module 3	U*n*-P1-C17	Yes	
Memory module 4	U*n*-P1-C18	Yes	
Memory module 5	U*n*-P1-C19	Yes	
Memory module 6	U*n*-P1-C20	Yes	
Memory module 7	U*n*-P1-C21	Yes	
Memory module 8	U*n*-P1-C22	Yes	
Backup power module (BPM) cable for NVDIMM in location U*n*-P1-C22[4]	U*n*-P1-C22-T1	No	See Removing and replacing BPM cables.
BPM for NVDIMM in location U*n*-P1-C22[4]	U*n*-P1-C22-T1-E1	No	See Removing and replacing BPMs.
Memory module 9[1]	U*n*-P1-C23	Yes	See Memory modules.
Memory module 10[1]	U*n*-P1-C24	Yes	
Memory module 11[1]	U*n*-P1-C25	Yes	
Memory module 12[1]	U*n*-P1-C26	Yes	
Memory module 13[1]	U*n*-P1-C27	Yes	
Memory module 14[1]	U*n*-P1-C28	Yes	
Memory module 15[1]	U*n*-P1-C29	Yes	
Memory module 16[1]	U*n*-P1-C30	Yes	
Backup power module (BPM) cable for NVDIMM in location U*n*-P1-C30[4]	U*n*-P1-C30-T1	No	See Removing and replacing BPM cables.
BPM for NVDIMM in location U*n*-P1-C30[4]	U*n*-P1-C30-T1-E1	No	See Removing and replacing BPMs.
Memory module 17	U*n*-P1-C31	Yes	See Memory modules.
Memory module 18	U*n*-P1-C32	Yes	
Memory module 19	U*n*-P1-C33	Yes	
Memory module 20	U*n*-P1-C34	Yes	
Memory module 21	U*n*-P1-C35	Yes	
Memory module 22	U*n*-P1-C36	Yes	
Backup power module (BPM) cable for NVDIMM in location U*n*-P1-C36[4]	U*n*-P1-C36-T1	No	See Removing and replacing BPM cables.

Table 3. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
BPM for NVDIMM in location U*n*-P1-C36[4]	U*n*-P1-C36-T1-E1	No	See Removing and replacing BPMs.
Memory module 23	U*n*-P1-C37	Yes	See Memory modules.
Memory module 24	U*n*-P1-C38	Yes	
Memory module 25[1]	U*n*-P1-C39	Yes	
Memory module 26[1]	U*n*-P1-C40	Yes	
Memory module 27[1]	U*n*-P1-C41	Yes	
Memory module 28[1]	U*n*-P1-C42	Yes	
Memory module 29[1]	U*n*-P1-C43	Yes	
Memory module 30[1]	U*n*-P1-C44	Yes	
Backup power module (BPM) cable for NVDIMM in location U*n*-P1-C44[4]	U*n*-P1-C44-T1	No	See Removing and replacing BPM cables.
BPM for NVDIMM in location U*n*-P1-C44[4]	U*n*-P1-C44-T1-E1	No	See Removing and replacing BPMs.
Memory module 31[1]	U*n*-P1-C45	Yes	See Memory modules.
Memory module 32[1]	U*n*-P1-C46	Yes	
Processor and processor regulator			
System processor module 1	U*n*-P1-C47	Yes	See System processor module.
System processor module 2[1]	U*n*-P1-C48	Yes	
Disk drives or solid-state drives			
Drive 1	U*n*-P2-D1	Yes	See Disk drives or solid-state drives.
Drive 2	U*n*-P2-D2	Yes	
Drive 3	U*n*-P2-D3	Yes	
Drive 4	U*n*-P2-D4	Yes	
Drive 5	U*n*-P2-D5	Yes	
Drive 6	U*n*-P2-D6	Yes	
Drive 7 (internal)	U*n*-P2-D7	Yes	
Drive 8 (internal)	U*n*-P2-D8	Yes	
NVMe U.2 drives			
NVMe U.2 drive 1[3]	U*n*-P2-C1	Yes	See NVMe U.2 drives.
NVMe U.2 drive 2[3]	U*n*-P2-C2	Yes	
NVMe U.2 drive 3[3]	U*n*-P2-C3	Yes	
NVMe U.2 drive 4[3]	U*n*-P2-C4	Yes	

Table 3. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Control panel			
Control panel	U*n*-D1	Yes	See Control panel and control panel display.
Control panel display	U*n*-D2	Yes	

[1] Not applicable for systems that have only one system processor module.

[2] Supported only on the 9008-22L, 9009-22A, or 9223-22H system.

[3] Supported only on the 9009-22G or 9223-22S system.

[4] Supported only on the 5105-22E system.

9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field-replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

Rack views

Note: The following graphics represent location codes for 9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S.

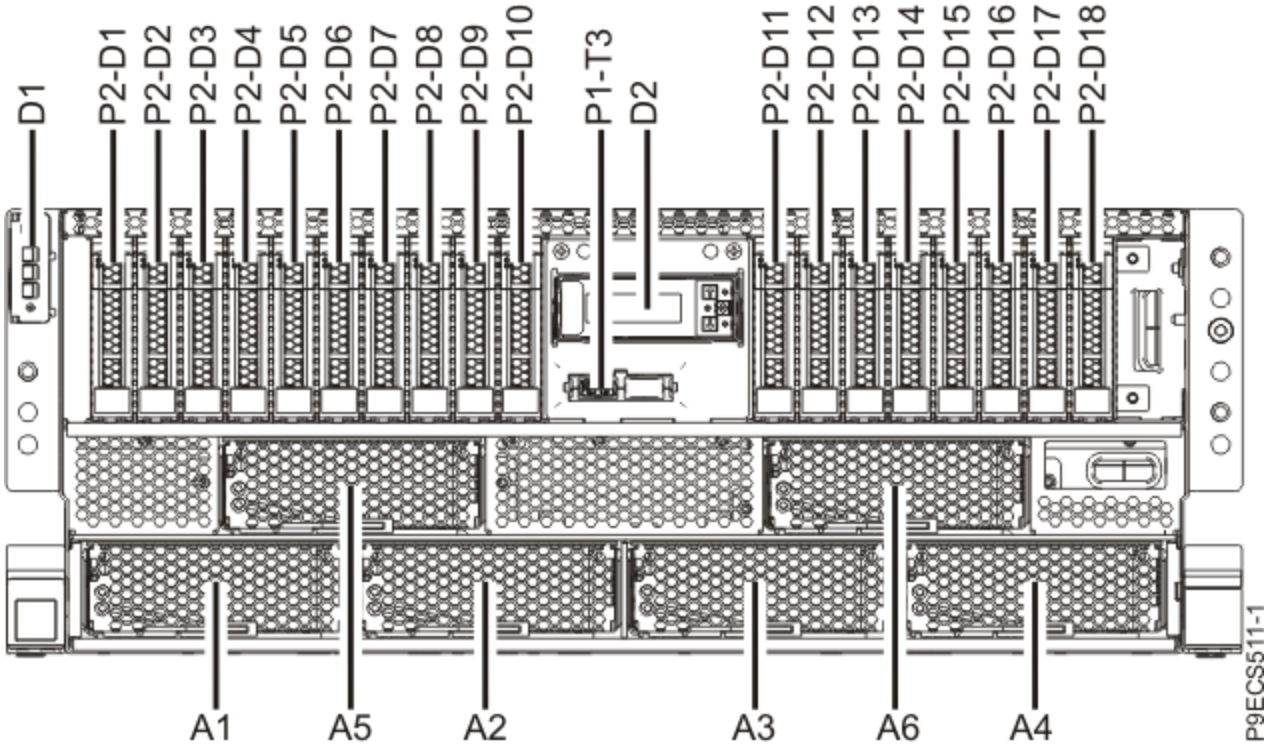

Figure 6. Rack front view

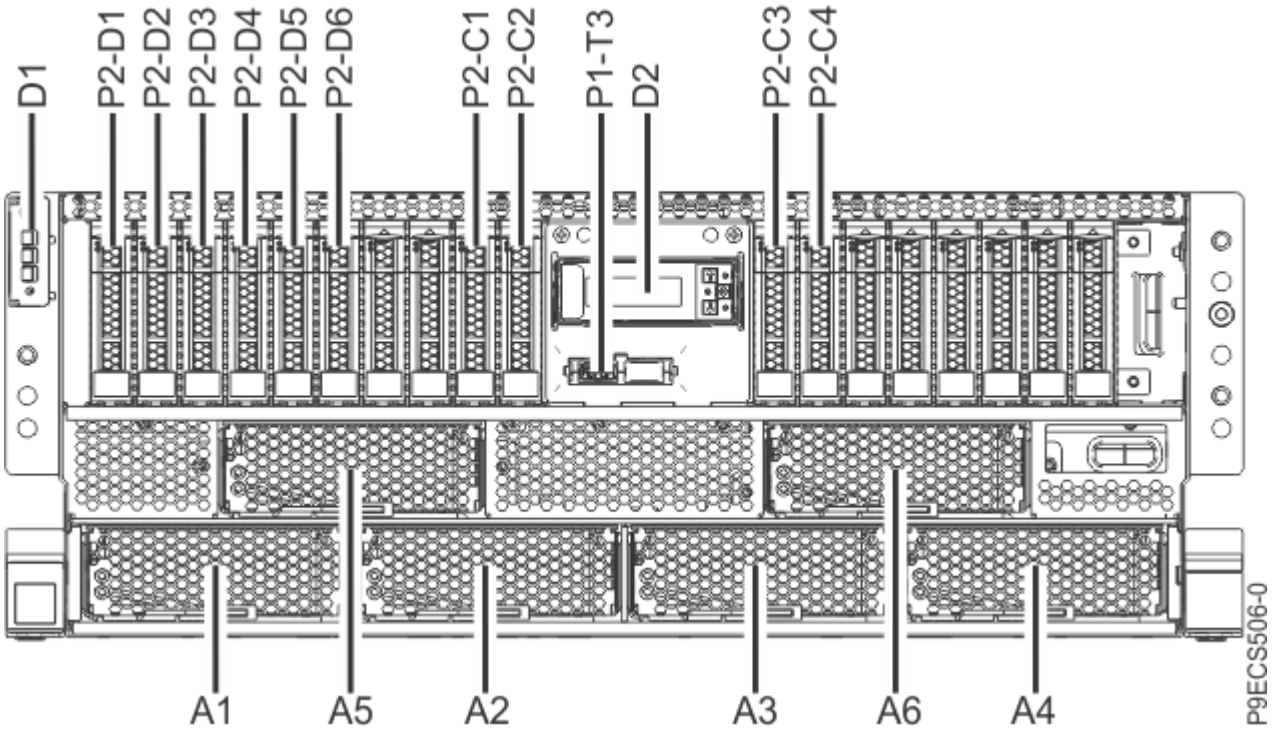

Figure 7. Rack front view with NVMe U.2 drives

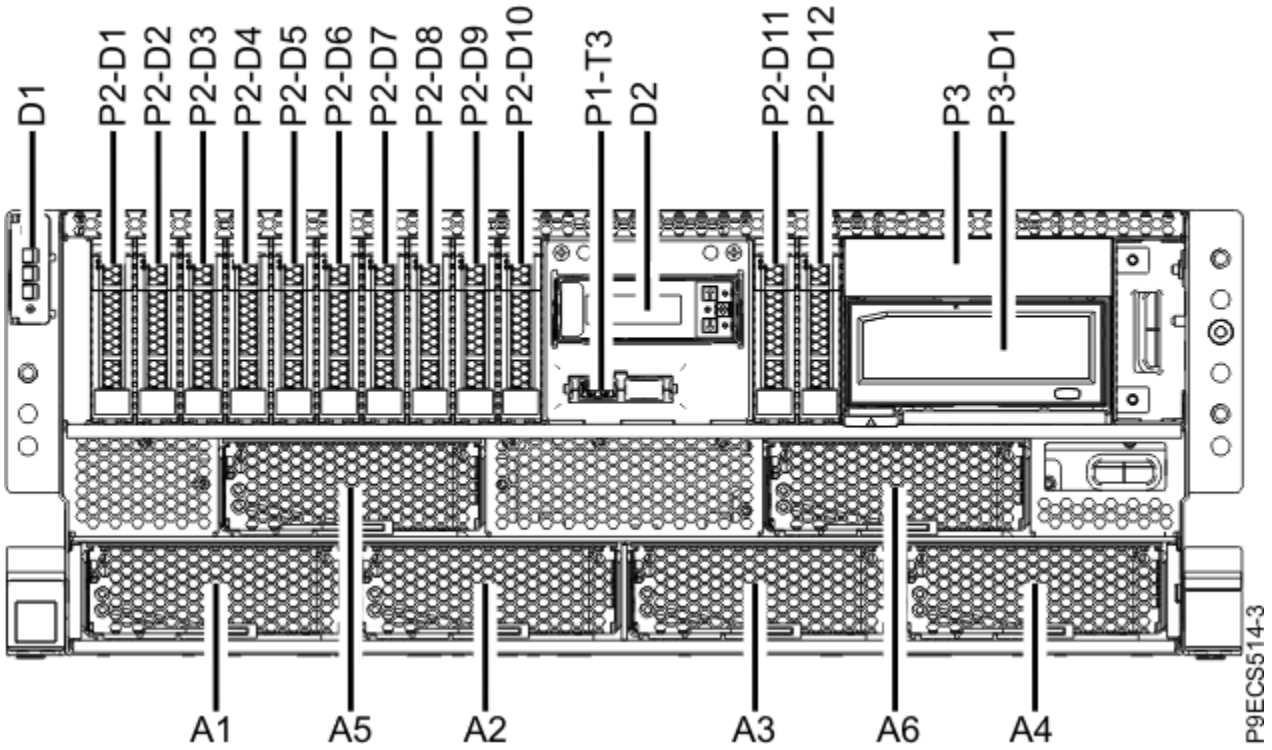

Figure 8. Rack front view with RDX removable disk drive

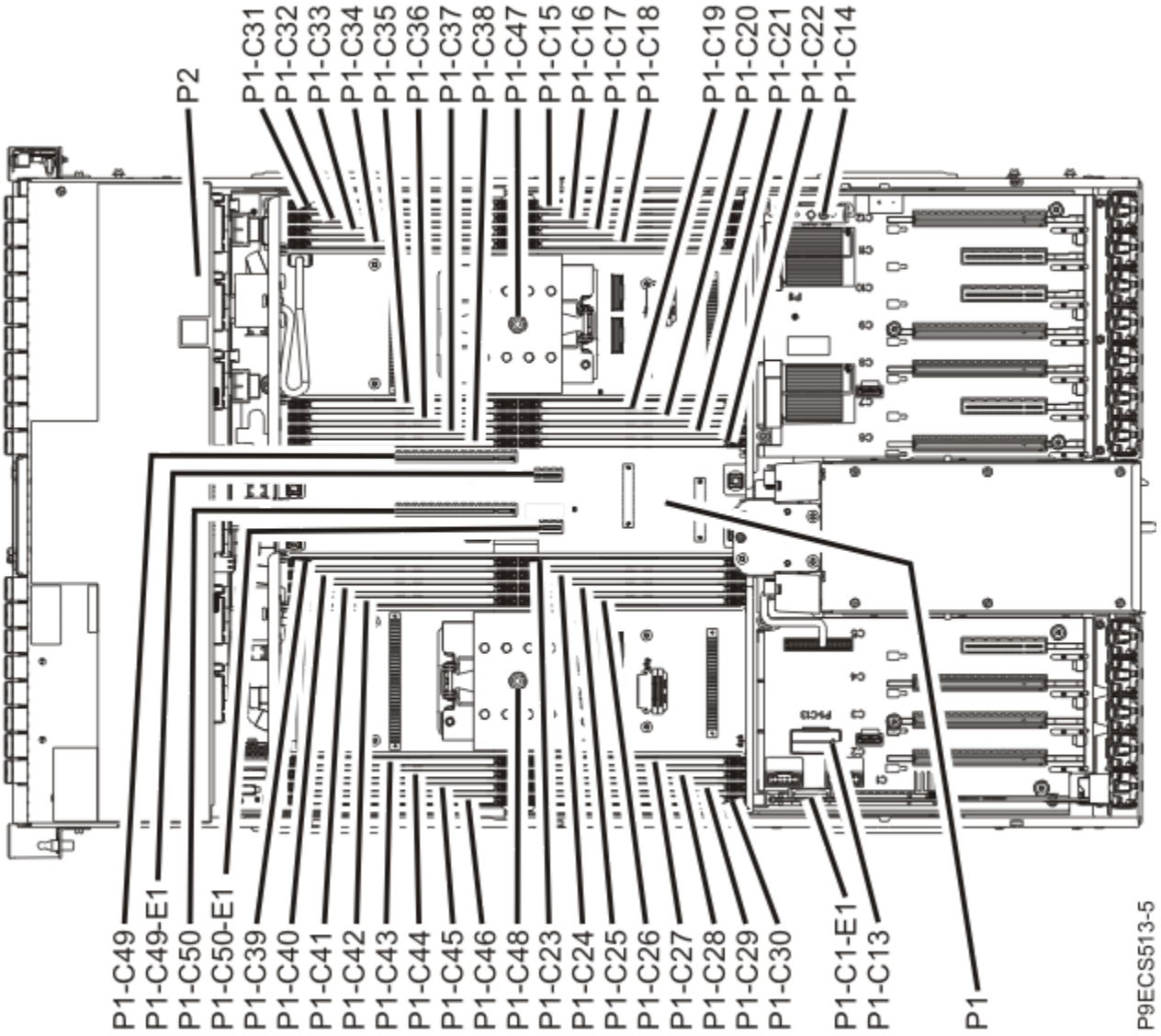

Figure 9. Rack top view

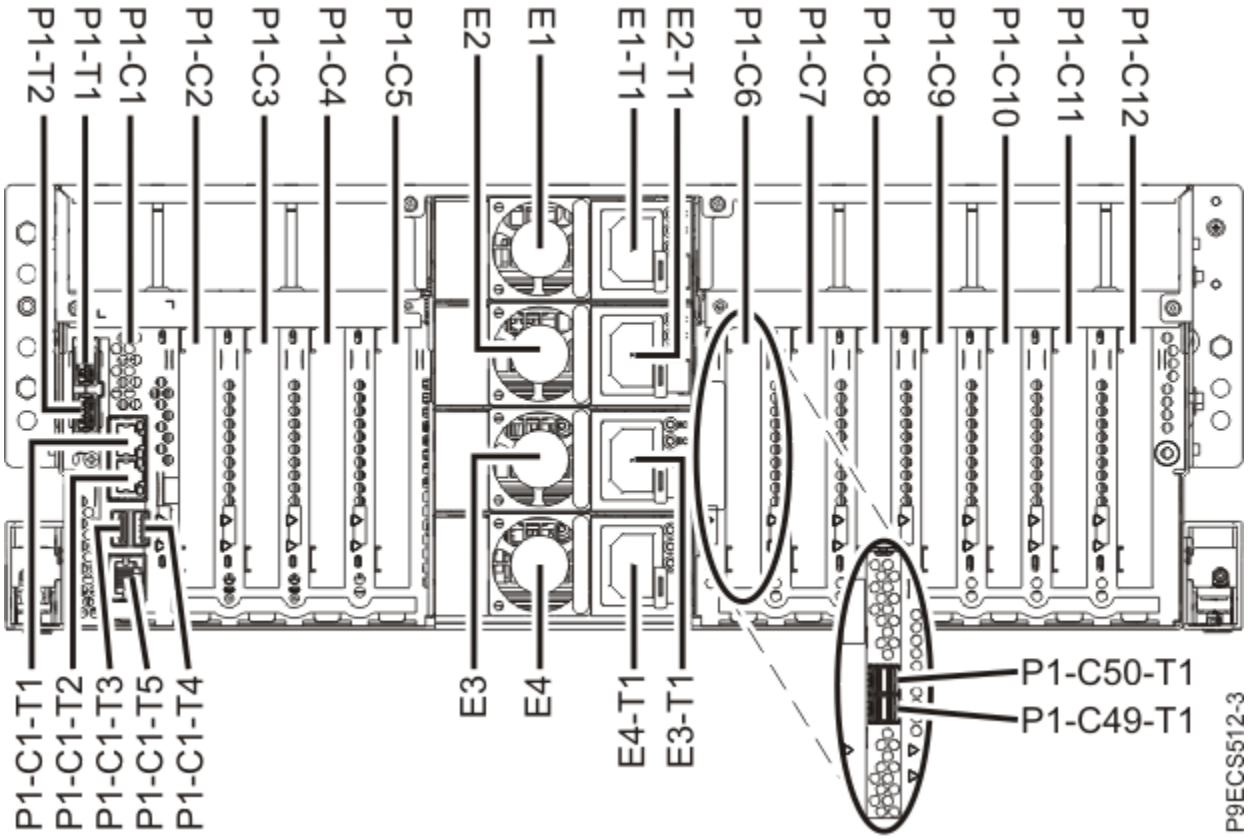

Figure 10. Rack rear view

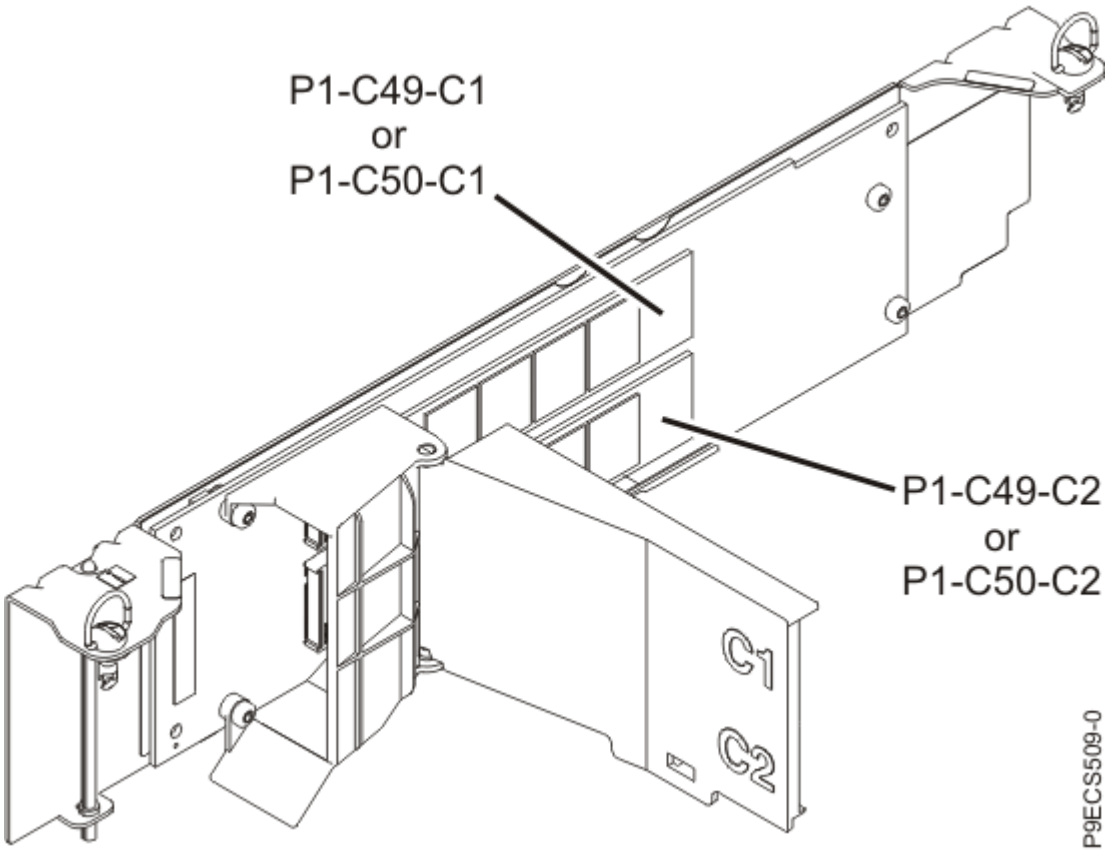

Figure 11. NVMe M.2 carrier card view

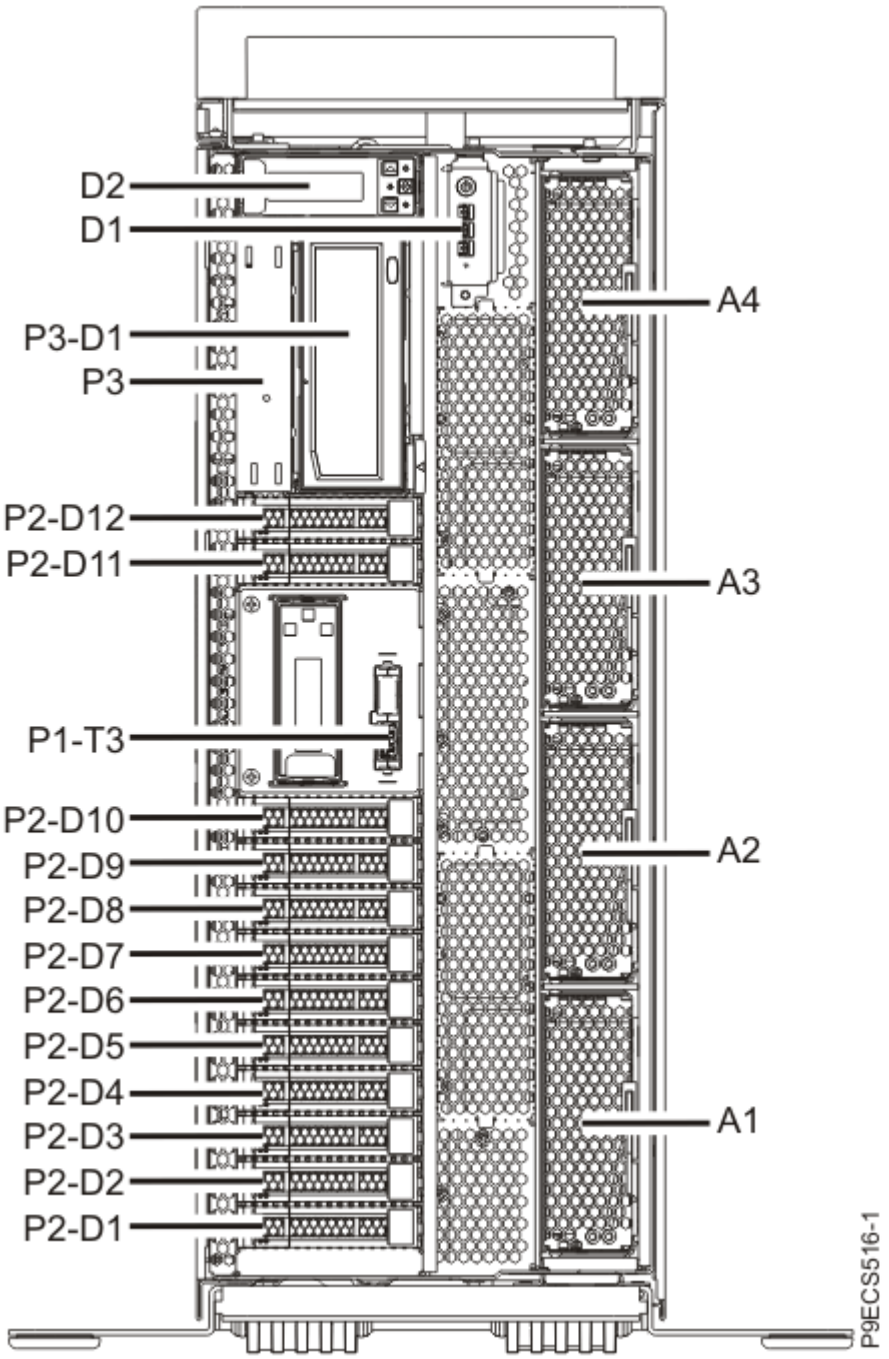

Figure 12. Tower front view

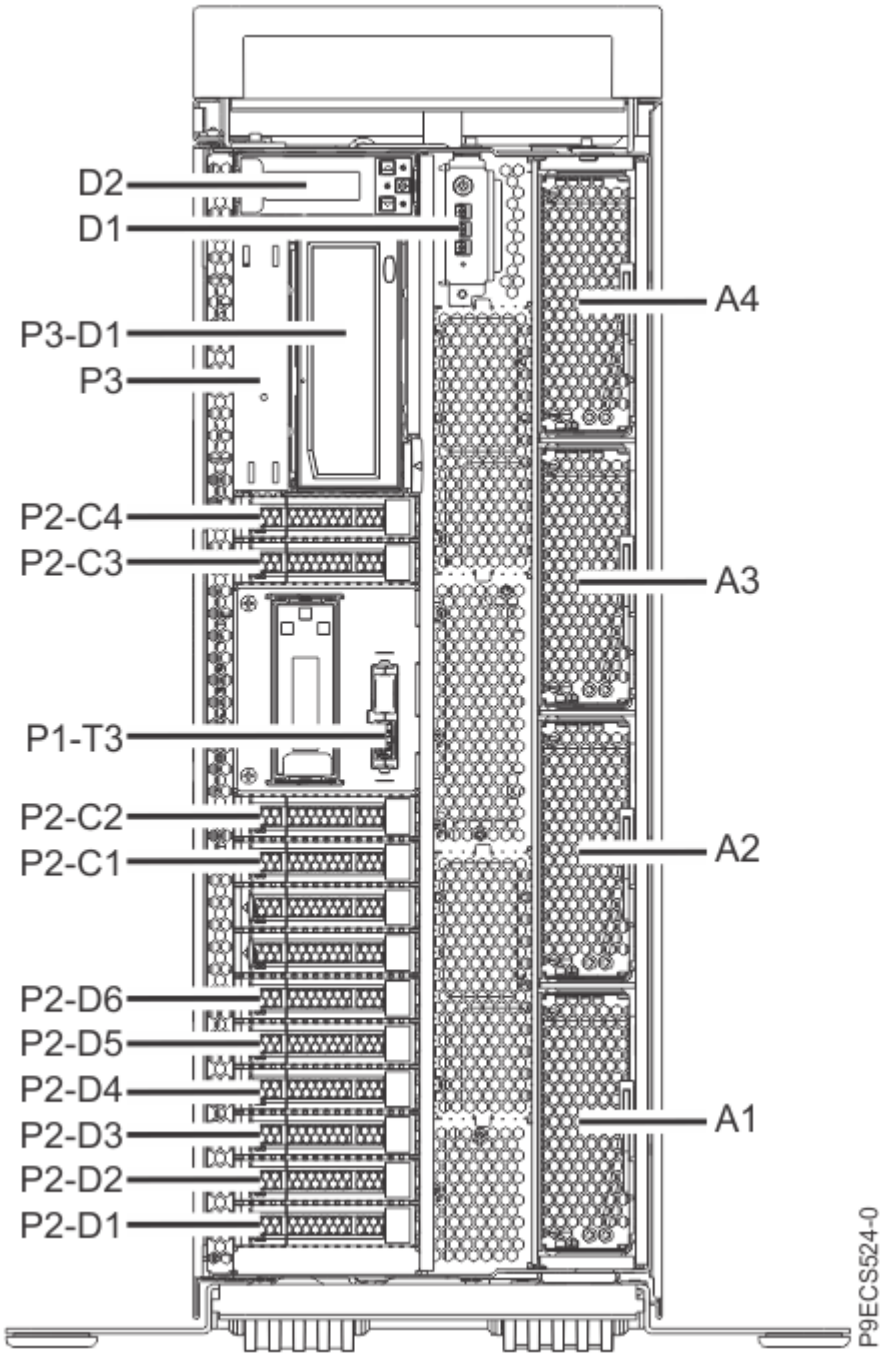

Figure 13. Tower front view with NVMe U.2 drives

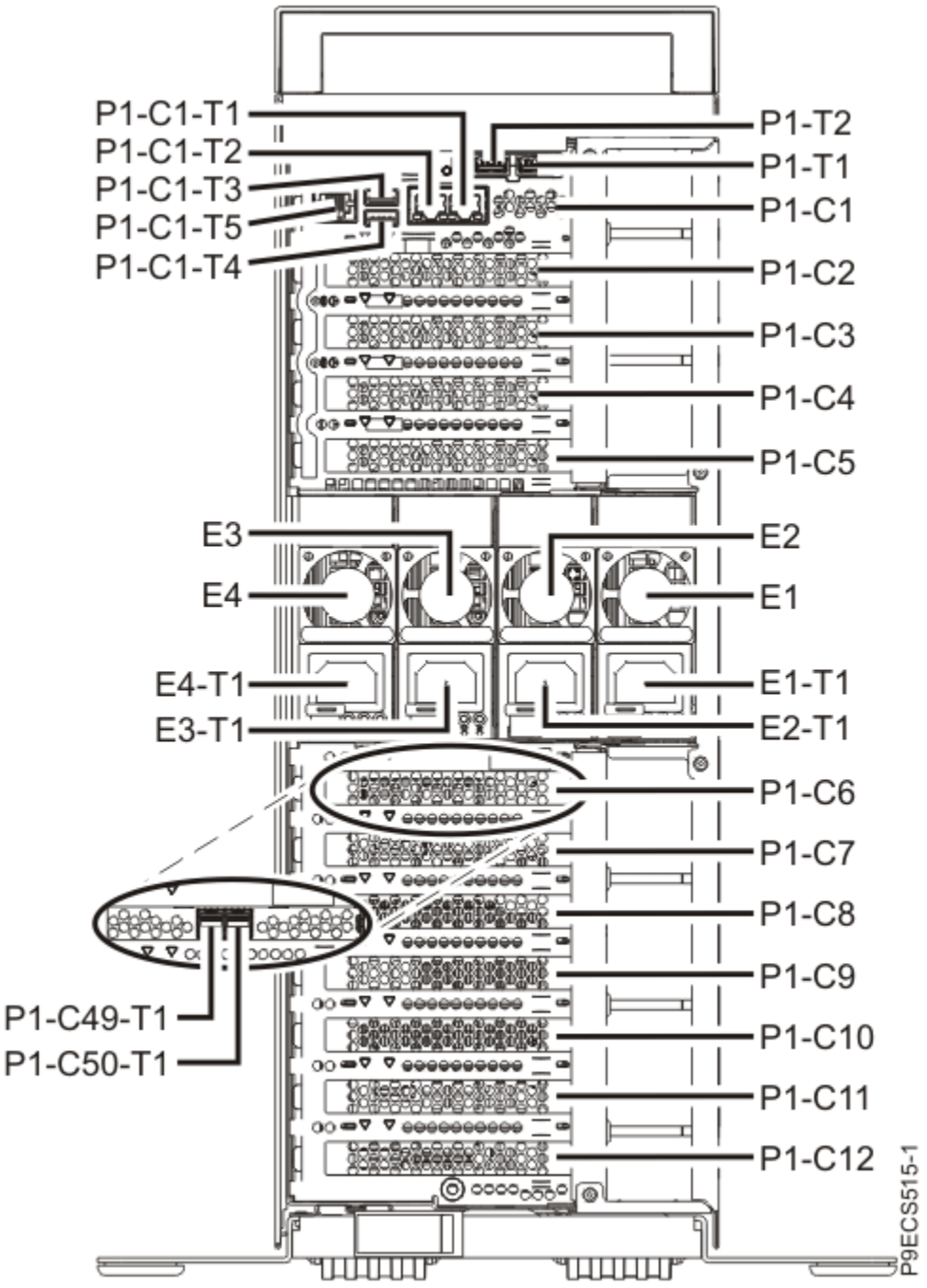

Figure 14. Tower rear view

The following table provides location codes for parts that comprise the server.

Table 4. FRU location			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
System unit	U*n*		
Fans			

Table 4. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Fan 1	U*n*-A1	Yes	See Fans.
Fan 2	U*n*-A2	Yes	
Fan 3	U*n*-A3	Yes	
Fan 4	U*n*-A4	Yes	
Fan 5[1]	U*n*-A5	Yes	
Fan 6[1]	U*n*-A6	Yes	
Power supplies			
Power supply 1	U*n*-E1	Yes	See Power supplies.
Power supply 2	U*n*-E2	Yes	
Power supply 3	U*n*-E3	Yes	
Power supply 4	U*n*-E4	Yes	
Backplanes			
System backplane	U*n*-P1	Yes	See System backplane.
Drive backplane	U*n*-P2	Yes	See Drive backplanes.
Ports			
USB 3.0 port 1 (front)	U*n*-P1-T3	No	See Cables.
USB 3.0 port 1 (rear)	U*n*-P1-T1	No	
USB 3.0 port 2 (rear)	U*n*-P1-T2	No	

Table 4. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
USB 2.0 port 1 (rear) **Note:** This port is used only for firmware update and uninterruptible power supply (UPS). This port is unavailable for host operating systems.	U*n*-P1-C1-T3	No	See Cables.
USB 2.0 port 2 (rear) **Note:** This port is used only for firmware update and uninterruptible power supply (UPS). This port is unavailable for host operating systems.	U*n*-P1-C1-T4	No	
Serial port	U*n*-P1-C1-T5	No	
HMC port 1	U*n*-P1-C1-T1	No	
HMC port 2	U*n*-P1-C1-T2	No	
SAS cable port	U*n*-P1-C49-T1	No	
SAS cable port	U*n*-P1-C50-T1	No	
Adapters			
Service processor card	U*n*-P1-C1	Yes	See Service processor card.
Time-of-day battery	U*n*-P1-C1-E1	Yes	See Time-of-day battery.

Table 4. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
PCIe4 x8 adapter[1]	U*n*-P1-C2	Yes	See Adapters.
PCIe4 x16 adapter[1] (supports CAPI and PCIe cable adapters)	U*n*-P1-C3	Yes	
PCIe4 x16 adapter[1] (supports CAPI and PCIe cable adapters)	U*n*-P1-C4	Yes	
PCIe3 x8 adapter (9009-41A, 9009-42A, or 9223-42H) PCIe4 x8 adapter (9009-41G, 9009-42G, or 9223-42S)	U*n*-P1-C5	Yes	
PCIe3 x8 adapter or SAS cable ports U*n*-P1-C49-T1 and U*n*-P1-C50-T1 (9009-41A, 9009-42A, or 9223-42H) PCIe4 x16 adapter or SAS cable ports U*n*-P1-C49-T1 and U*n*-P1-C50-T1 (9009-41G, 9009-42G, or 9223-42S)	U*n*-P1-C6	Yes	
PCIe3 x8 adapter (9009-41A, 9009-42A, or 9223-42H) PCIe4 x8 adapter (9009-41G, 9009-42G, or 9223-42S)	U*n*-P1-C7	Yes	
PCIe4 x8 adapter (supports CAPI adapters)	U*n*-P1-C8	Yes	See Adapters.
PCIe4 x16 adapter (supports CAPI and PCIe cable adapters)	U*n*-P1-C9	Yes	
PCIe3 x8 adapter (9009-41A, 9009-42A, or 9223-42H) PCIe4 x8 adapter (9009-41G, 9009-42G, or 9223-42S)	U*n*-P1-C10	Yes	
PCIe3 x8 adapter (9009-41A, 9009-42A, or 9223-42H) PCIe4 x8 adapter (9009-41G, 9009-42G, or 9223-42S)	U*n*-P1-C11	Yes	
PCIe3 x8 adapter (9009-41A, 9009-42A, or 9223-42H) PCIe4 x16 adapter (9009-41G, 9009-42G, or 9223-42S)	U*n*-P1-C12	Yes	
Vital product data card	U*n*-P1-C13	Yes	See Vital product data card.

Table 4. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Trusted platform module card	U*n*-P1-C14	No	See Trusted platform module card.
PCIe3 x8 SAS RAID internal adapter, PCIe3 x8 cache SAS RAID internal adapter, NVMe M.2 carrier card[2], or NVMe U.2 pass-thru card[3]	U*n*-P1-C49	Yes	See one of the following procedures: • PCIe3 x8 SAS RAID and cache SAS RAID internal adapters • NVMe M.2 carrier card and flash modules • NVMe U.2 pass-thru cards .
Backup power module card for the PCIe3 x8 cache SAS RAID internal adapter (see Figure 9 on page 16)	U*n*-P1-C49-E1	No	
NVMe M.2 flash module[2] (see Figure 11 on page 17)	U*n*-P1-C49-C1	No	See NVMe M.2 carrier card and flash modules.
NVMe M.2 flash module[2] (see Figure 11 on page 17)	U*n*-P1-C49-C2	No	
PCIe3 x8 SAS RAID internal adapter, PCIe3 x8 cache SAS RAID internal adapter, NVMe M.2 carrier card[2], or NVMe U.2 pass-thru card[3]	U*n*-P1-C50	Yes	See one of the following procedures: • PCIe3 x8 SAS RAID and cache SAS RAID internal adapters • NVMe M.2 carrier card and flash modules • NVMe U.2 pass-thru cards
Backup power module card for the PCIe3 x8 cache SAS RAID internal adapter (see Figure 9 on page 16)	U*n*-P1-C50-E1	No	
NVMe M.2 flash module[2] (see Figure 11 on page 17)	U*n*-P1-C50-C1	No	See NVMe M.2 carrier card and flash modules.
NVMe M.2 flash module[2] (see Figure 11 on page 17)	U*n*-P1-C50-C2	No	

Table 4. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Memory modules			

Table 4. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Memory module 1	U*n*-P1-C15	Yes	See Memory modules.
Memory module 2	U*n*-P1-C16	Yes	
Memory module 3	U*n*-P1-C17	Yes	
Memory module 4	U*n*-P1-C18	Yes	
Memory module 5	U*n*-P1-C19	Yes	
Memory module 6	U*n*-P1-C20	Yes	
Memory module 7	U*n*-P1-C21	Yes	
Memory module 8	U*n*-P1-C22	Yes	
Memory module 9[1]	U*n*-P1-C23	Yes	
Memory module 10[1]	U*n*-P1-C24	Yes	
Memory module 11[1]	U*n*-P1-C25	Yes	
Memory module 12[1]	U*n*-P1-C26	Yes	
Memory module 13[1]	U*n*-P1-C27	Yes	
Memory module 14[1]	U*n*-P1-C28	Yes	
Memory module 15[1]	U*n*-P1-C29	Yes	
Memory module 16[1]	U*n*-P1-C30	Yes	
Memory module 17	U*n*-P1-C31	Yes	
Memory module 18	U*n*-P1-C32	Yes	
Memory module 19	U*n*-P1-C33	Yes	
Memory module 20	U*n*-P1-C34	Yes	
Memory module 21	U*n*-P1-C35	Yes	
Memory module 22	U*n*-P1-C36	Yes	
Memory module 23	U*n*-P1-C37	Yes	
Memory module 24	U*n*-P1-C38	Yes	
Memory module 25[1]	U*n*-P1-C39	Yes	
Memory module 26[1]	U*n*-P1-C40	Yes	
Memory module 27[1]	U*n*-P1-C41	Yes	
Memory module 28[1]	U*n*-P1-C42	Yes	
Memory module 29[1]	U*n*-P1-C43	Yes	
Memory module 30[1]	U*n*-P1-C44	Yes	
Memory module 31[1]	U*n*-P1-C45	Yes	
Memory module 32[1]	U*n*-P1-C46	Yes	

Table 4. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Processor and processor regulator			
System processor module 1	U*n*-P1-C47	Yes	See System processor module.
System processor module 2[1]	U*n*-P1-C48	Yes	
Device physical locations for systems with a 12-drive backplane (CCINs 2D34 and 6B64)			
Drive 1	U*n*-P2-D1	Yes	See Disk drives or solid-state drives.
Drive 2	U*n*-P2-D2	Yes	
Drive 3	U*n*-P2-D3	Yes	
Drive 4	U*n*-P2-D4	Yes	
Drive 5	U*n*-P2-D5	Yes	
Drive 6	U*n*-P2-D6	Yes	
Drive 7	U*n*-P2-D7	Yes	
Drive 8	U*n*-P2-D8	Yes	
Drive 9	U*n*-P2-D9	Yes	
Drive 10	U*n*-P2-D10	Yes	
Drive 11	U*n*-P2-D11	Yes	
Drive 12	U*n*-P2-D12	Yes	
RDX docking station (optional)	U*n*-P3	No	See RDX docking stations.
RDX removable disk drive (optional)	U*n*-P3-D1	Yes	
Device physical locations for systems with an 18-drive backplane (CCIN 2D35)			

Table 4. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Drive 1	U*n*-P2-D1	Yes	See Disk drives or solid-state drives.
Drive 2	U*n*-P2-D2	Yes	
Drive 3	U*n*-P2-D3	Yes	
Drive 4	U*n*-P2-D4	Yes	
Drive 5	U*n*-P2-D5	Yes	
Drive 6	U*n*-P2-D6	Yes	
Drive 7	U*n*-P2-D7	Yes	
Drive 8	U*n*-P2-D8	Yes	
Drive 9	U*n*-P2-D9	Yes	
Drive 10	U*n*-P2-D10	Yes	
Drive 11	U*n*-P2-D11	Yes	
Drive 12	U*n*-P2-D12	Yes	
Drive 13	U*n*-P2-D13	Yes	
Drive 14	U*n*-P2-D14	Yes	
Drive 15	U*n*-P2-D15	Yes	
Drive 16	U*n*-P2-D16	Yes	
Drive 17	U*n*-P2-D17	Yes	
Drive 18	U*n*-P2-D18	Yes	
Device physical locations for systems with an NVMe drive backplane (CCIN 2D3A)[3]			
Drive 1	U*n*-P2-D1	Yes	See Disk drives or solid-state drives.
Drive 2	U*n*-P2-D2	Yes	
Drive 3	U*n*-P2-D3	Yes	
Drive 4	U*n*-P2-D4	Yes	
Drive 5	U*n*-P2-D5	Yes	
Drive 6	U*n*-P2-D6	Yes	
NVMe U.2 drive 1	U*n*-P2-C1	Yes	See NVMe U.2 drives.
NVMe U.2 drive 2	U*n*-P2-C2	Yes	
NVMe U.2 drive 3	U*n*-P2-C3	Yes	
NVMe U.2 drive 4	U*n*-P2-C4	Yes	
Control panel			
Control panel	U*n*-D1	Yes	See Control panel and control panel display.
Control panel display	U*n*-D2	Yes	

Table 4. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
[1] Not applicable for the 9009-41A or 9009-41G system. [2] Supported only on the 9009-41A, 9009-42A, or 9223-42H system. [3] Supported only on the 9009-41G, 9009-42G, or 9223-42S system.			

9040-MR9 locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field-replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

Rack views

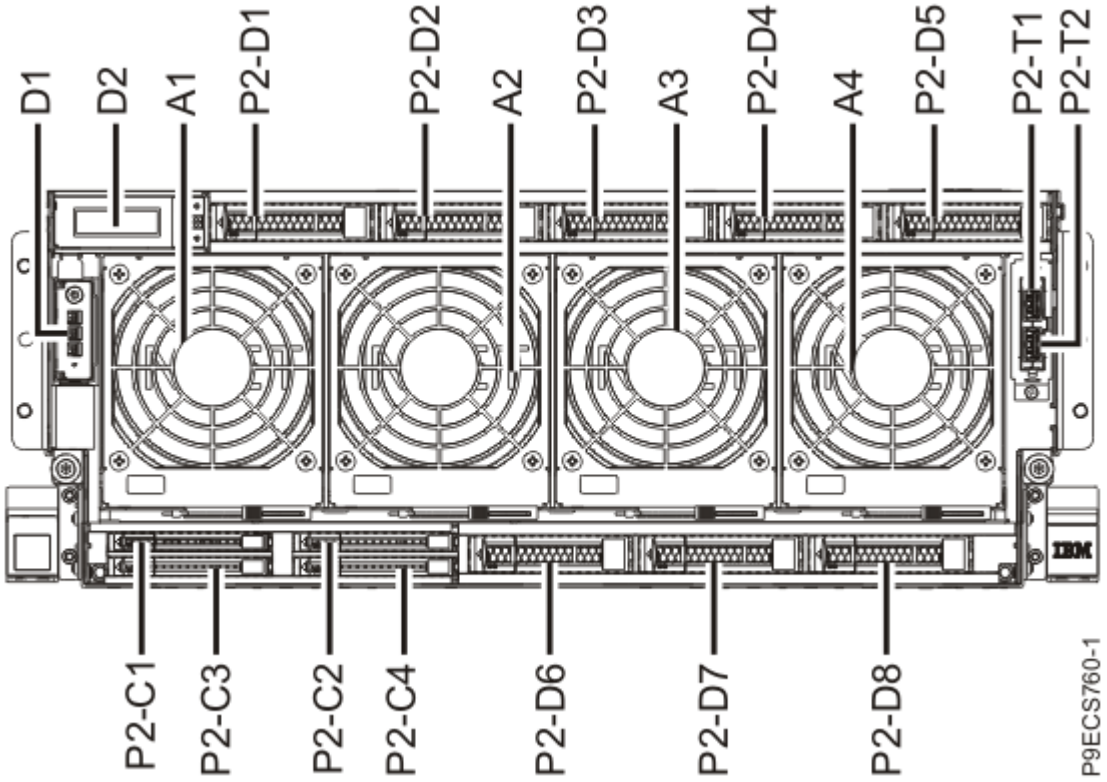

Figure 15. Rack front view

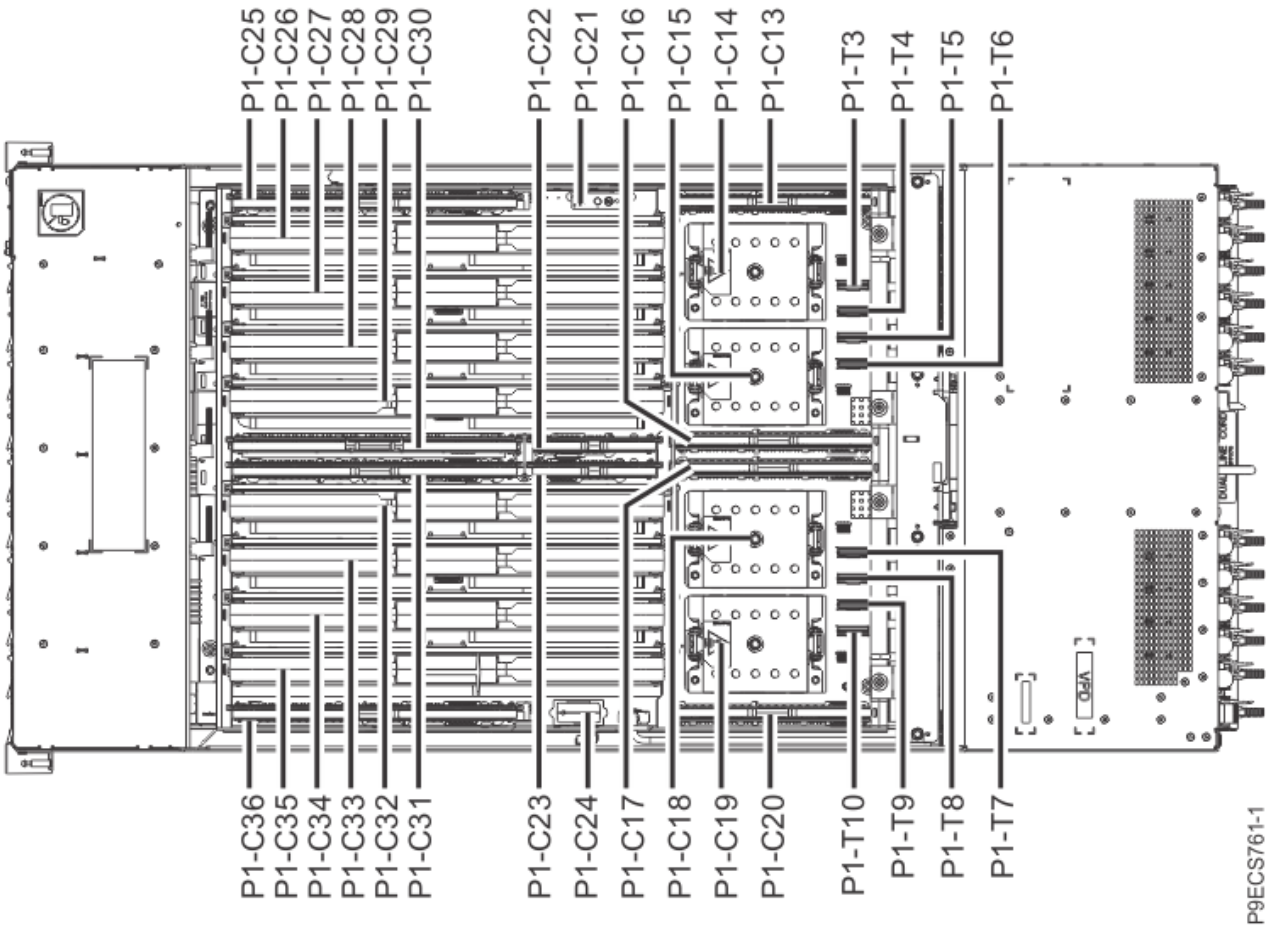

Figure 16. Rack top view

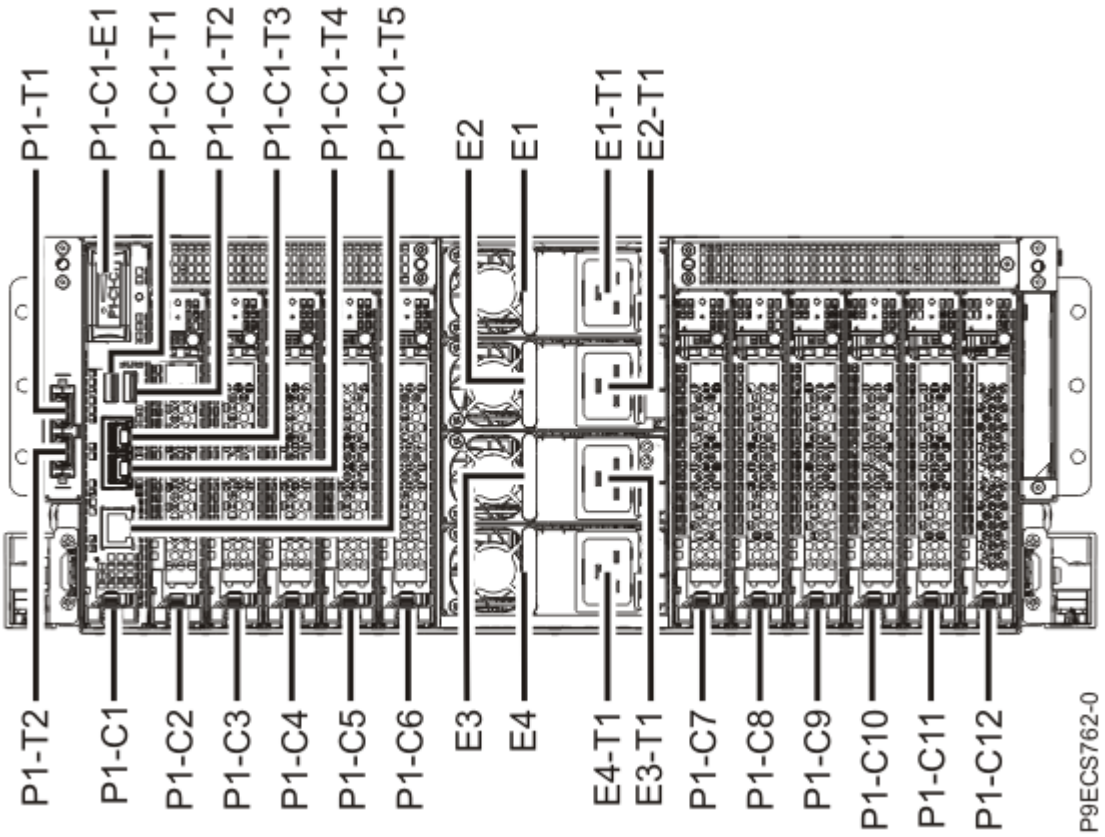

Figure 17. Rack rear view

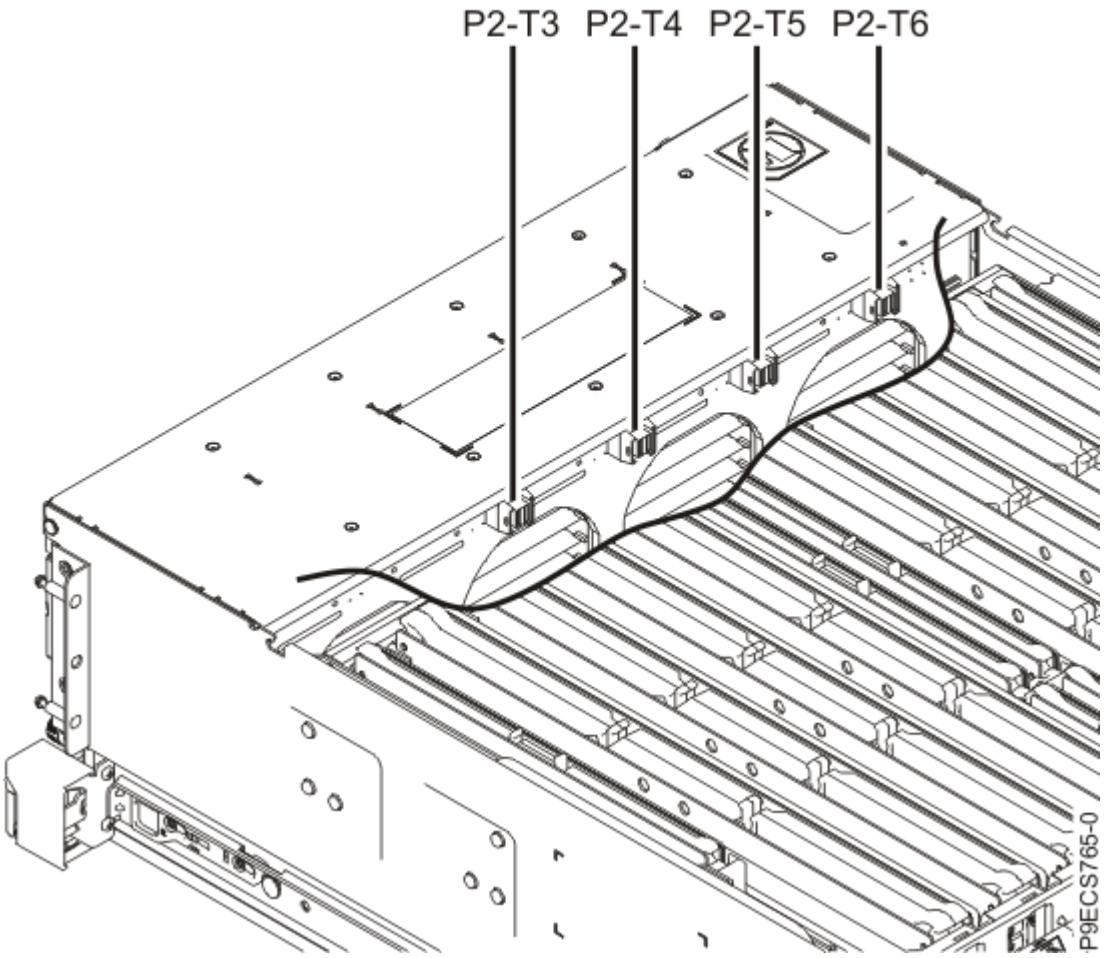

Figure 18. Disk drive backplane locations

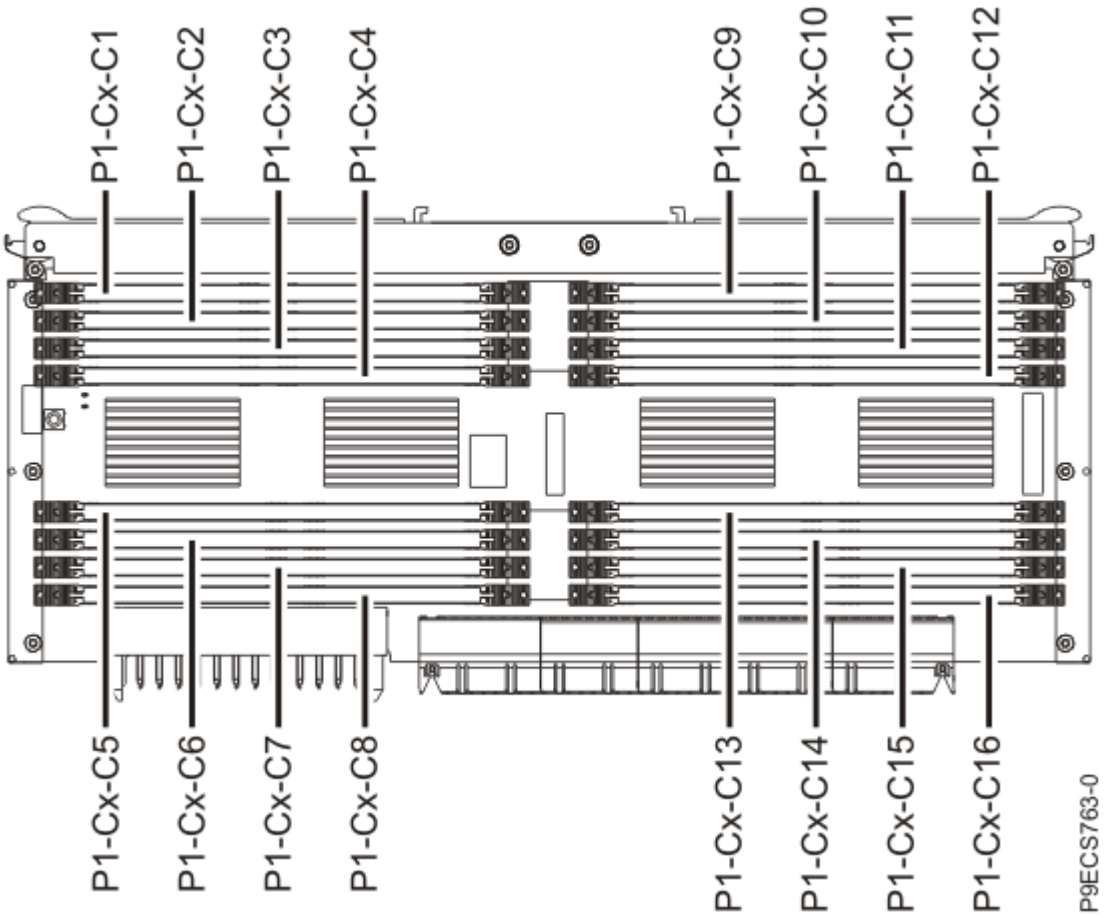

Figure 19. Memory riser locations

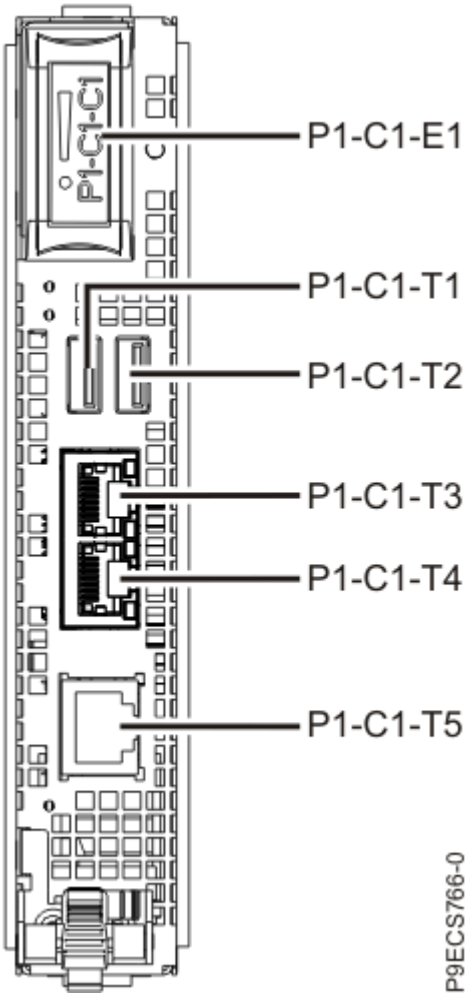

Figure 20. Service processor card assembly locations

The following table provides location codes for parts that comprise the server.

Table 5. FRU location			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
System unit	U*n*		
Fans			
Fan 1	U*n*-A1	Yes	See Fans for the 9040-MR9.
Fan 2	U*n*-A2	Yes	
Fan 3	U*n*-A3	Yes	
Fan 4	U*n*-A4	Yes	
Power supplies			

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Power supply 1	U*n*-E1	Yes	See Power supplies for the 9040-MR9.
Power supply 2	U*n*-E2	Yes	
Power supply 3	U*n*-E3	Yes	
Power supply 4	U*n*-E4	Yes	
Backplanes			
System backplane	U*n*-P1	Yes	See System backplane for the 9040-MR9.
Disk drive backplane	U*n*-P2	Yes	See Disk drive backplane for the 9040-MR9.
Power midplane	U*n*-P3	Yes	See Power midplane for the 9040-MR9.
Ports			
USB 3.0 port 1 (front)	U*n*-P2-T1	No	See Cables.
USB 3.0 port 2 (front)	U*n*-P2-T2	No	
USB 3.0 port 1 (rear)	U*n*-P1-T1	No	
USB 3.0 port 2 (rear)	U*n*-P1-T2	No	
USB 2.0 port 1 (rear) **Note:** This port is used only for firmware update and uninterruptible power supply (UPS). This port is unavailable for host operating systems.	U*n*-P1-C1-T1	No	See Cables.
USB 2.0 port 2 (rear) **Note:** This port is used only for firmware update and uninterruptible power supply (UPS). This port is unavailable for host operating systems.	U*n*-P1-C1-T2	No	
HMC port 1	U*n*-P1-C1-T3	No	
HMC port 2	U*n*-P1-C1-T4	No	
Serial Port	U*n*-P1-C1-T5	No	
SAS Port 1	U*n*-P2-T3	No	
SAS Port 2	U*n*-P2-T4	No	
SAS Port 3	U*n*-P2-T5	No	
SAS Port 4	U*n*-P2-T6	No	

Table 5. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Adapters			
Service processor card assembly	U*n*-P1-C1	Yes	See Service processor card for the 9040-MR9.
Time-of-day battery	U*n*-P1-C1-E1	Yes	See Time-of-day battery for the 9040-MR9.
PCIe x16 adapter (supports PCIe cable adapters)	U*n*-P1-C2	Yes	See Adapters for the 9040-MR9.
PCIe x16 adapter (supports PCIe cable adapters)	U*n*-P1-C3	Yes	
PCIe x16 adapter (supports PCIe cable adapters)	U*n*-P1-C4	Yes	
PCIe x16 adapter (supports PCIe cable adapters)	U*n*-P1-C5	Yes	
PCIe x8 adapter	U*n*-P1-C6	Yes	
PCIe x16 adapter (supports PCIe cable adapters)	U*n*-P1-C7	Yes	
PCIe x16 adapter (supports PCIe cable adapters)	U*n*-P1-C8	Yes	
PCIe x8 adapter (supports SAS RAID adapters for controlling internal drive bays) **Note:** SAS RAID adapters (feature code EJ0K) in this slot do not support Dual Storage Adapter configurations.	U*n*-P1-C9	Yes	
PCIe x16 adapter (supports PCIe cable adapters)	U*n*-P1-C10	Yes	
PCIe x16 adapter (supports PCIe cable adapters)	U*n*-P1-C11	Yes	
PCIe x8 adapter (supports SAS RAID adapters for controlling internal drive bays) **Note:** SAS RAID adapters (feature code EJ0K) in this slot do not support Dual Storage Adapter configurations.	U*n*-P1-C12	Yes	
Vital product data card	U*n*-P1-C24	Yes	See Vital product data card for the 9040-MR9.

Table 5. FRU location (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Trusted platform module card	U*n*-P1-C21	Yes	See Trusted platform module card for the 9040-MR9.
Memory modules, memory module risers, and memory voltage regulator modules			
Memory voltage regulator module for memory module riser cards 1 - 4	U*n*-P1-C25	Yes	See Voltage regulator modules for the 9040-MR9.
Memory voltage regulator module for memory module riser cards 1 - 4	U*n*-P1-C30	Yes	
Memory voltage regulator module for memory module riser cards 5 - 8	U*n*-P1-C31	Yes	
Memory voltage regulator module for memory module riser cards 5 - 8	U*n*-P1-C36	Yes	
Memory module riser card 1	U*n*-P1-C26	Yes	See Memory for the 9040-MR9.

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module riser card 1 - memory module 1	U*n*-P1-C26-C1	Yes	See Memory for the 9040-MR9.
Memory module riser card 1 - memory module 2	U*n*-P1-C26-C2	Yes	
Memory module riser card 1 - memory module 3	U*n*-P1-C26-C3	Yes	
Memory module riser card 1 - memory module 4	U*n*-P1-C26-C4	Yes	
Memory module riser card 1 - memory module 5	U*n*-P1-C26-C5	Yes	
Memory module riser card 1 - memory module 6	U*n*-P1-C26-C6	Yes	
Memory module riser card 1 - memory module 7	U*n*-P1-C26-C7	Yes	
Memory module riser card 1 - memory module 8	U*n*-P1-C26-C8	Yes	
Memory module riser card 1 - memory module 9	U*n*-P1-C26-C9	Yes	
Memory module riser card 1 - memory module 10	U*n*-P1-C26-C10	Yes	
Memory module riser card 1 - memory module 11	U*n*-P1-C26-C11	Yes	
Memory module riser card 1 - memory module 12	U*n*-P1-C26-C12	Yes	
Memory module riser card 1 - memory module 13	U*n*-P1-C26-C13	Yes	
Memory module riser card 1 - memory module 14	U*n*-P1-C26-C14	Yes	
Memory module riser card 1 - memory module 15	U*n*-P1-C26-C15	Yes	
Memory module riser card 1 - memory module 16	U*n*-P1-C26-C16	Yes	
Memory module riser card 2	U*n*-P1-C27	Yes	See Memory for the 9040-MR9.

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module riser card 2 - memory module 1	U*n*-P1-C27-C1	Yes	See Memory for the 9040-MR9.
Memory module riser card 2 - memory module 2	U*n*-P1-C27-C2	Yes	
Memory module riser card 2 - memory module 3	U*n*-P1-C27-C3	Yes	
Memory module riser card 2 - memory module 4	U*n*-P1-C27-C4	Yes	
Memory module riser card 2 - memory module 5	U*n*-P1-C27-C5	Yes	
Memory module riser card 2 - memory module 6	U*n*-P1-C27-C6	Yes	
Memory module riser card 2 - memory module 7	U*n*-P1-C27-C7	Yes	
Memory module riser card 2 - memory module 8	U*n*-P1-C27-C8	Yes	
Memory module riser card 2 - memory module 9	U*n*-P1-C27-C9	Yes	
Memory module riser card 2 - memory module 10	U*n*-P1-C27-C10	Yes	
Memory module riser card 2 - memory module 11	U*n*-P1-C27-C11	Yes	
Memory module riser card 2 - memory module 12	U*n*-P1-C27-C12	Yes	
Memory module riser card 2 - memory module 13	U*n*-P1-C27-C13	Yes	
Memory module riser card 2 - memory module 14	U*n*-P1-C27-C14	Yes	
Memory module riser card 2 - memory module 15	U*n*-P1-C27-C15	Yes	
Memory module riser card 2 - memory module 16	U*n*-P1-C27-C16	Yes	
Memory module riser card 3	U*n*-P1-C28	Yes	See Memory for the 9040-MR9.

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module riser card 3 - memory module 1	U*n*-P1-C28-C1	Yes	See Memory for the 9040-MR9.
Memory module riser card 3 - memory module 2	U*n*-P1-C28-C2	Yes	
Memory module riser card 3 - memory module 3	U*n*-P1-C28-C3	Yes	
Memory module riser card 3 - memory module 4	U*n*-P1-C28-C4	Yes	
Memory module riser card 3 - memory module 5	U*n*-P1-C28-C5	Yes	
Memory module riser card 3 - memory module 6	U*n*-P1-C28-C6	Yes	
Memory module riser card 3 - memory module 7	U*n*-P1-C28-C7	Yes	
Memory module riser card 3 - memory module 8	U*n*-P1-C28-C8	Yes	
Memory module riser card 3 - memory module 9	U*n*-P1-C28-C9	Yes	
Memory module riser card 3 - memory module 10	U*n*-P1-C28-C10	Yes	
Memory module riser card 3 - memory module 11	U*n*-P1-C28-C11	Yes	
Memory module riser card 3 - memory module 12	U*n*-P1-C28-C12	Yes	
Memory module riser card 3 - memory module 13	U*n*-P1-C28-C13	Yes	
Memory module riser card 3 - memory module 14	U*n*-P1-C28-C14	Yes	
Memory module riser card 3 - memory module 15	U*n*-P1-C28-C15	Yes	
Memory module riser card 3 - memory module 16	U*n*-P1-C28-C16	Yes	
Memory module riser card 4	U*n*-P1-C29	Yes	See Memory for the 9040-MR9.

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module riser card 4 - memory module 1	U*n*-P1-C29-C1	Yes	See Memory for the 9040-MR9.
Memory module riser card 4 - memory module 2	U*n*-P1-C29-C2	Yes	
Memory module riser card 4 - memory module 3	U*n*-P1-C29-C3	Yes	
Memory module riser card 4 - memory module 4	U*n*-P1-C29-C4	Yes	
Memory module riser card 4 - memory module 5	U*n*-P1-C29-C5	Yes	
Memory module riser card 3 - memory module 6	U*n*-P1-C29-C6	Yes	
Memory module riser card 4 - memory module 7	U*n*-P1-C29-C7	Yes	
Memory module riser card 4 - memory module 8	U*n*-P1-C29-C8	Yes	
Memory module riser card 4 - memory module 9	U*n*-P1-C29-C9	Yes	
Memory module riser card 4 - memory module 10	U*n*-P1-C29-C10	Yes	
Memory module riser card 4 - memory module 11	U*n*-P1-C29-C11	Yes	
Memory module riser card 4 - memory module 12	U*n*-P1-C29-C12	Yes	
Memory module riser card 4 - memory module 13	U*n*-P1-C29-C13	Yes	
Memory module riser card 4 - memory module 14	U*n*-P1-C29-C14	Yes	
Memory module riser card 4 - memory module 15	U*n*-P1-C29-C15	Yes	
Memory module riser card 4 - memory module 16	U*n*-P1-C29-C16	Yes	
Memory module riser card 5	U*n*-P1-C32	Yes	See Memory for the 9040-MR9.

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module riser card 5 - memory module 1	U*n*-P1-C32-C1	Yes	See Memory for the 9040-MR9.
Memory module riser card 5 - memory module 2	U*n*-P1-C32-C2	Yes	
Memory module riser card 5 - memory module 3	U*n*-P1-C32-C3	Yes	
Memory module riser card 5 - memory module 4	U*n*-P1-C32-C4	Yes	
Memory module riser card 5 - memory module 5	U*n*-P1-C32-C5	Yes	
Memory module riser card 5 - memory module 6	U*n*-P1-C32-C6	Yes	
Memory module riser card 5 - memory module 7	U*n*-P1-C32-C7	Yes	
Memory module riser card 5 - memory module 8	U*n*-P1-C32-C8	Yes	
Memory module riser card 5 - memory module 9	U*n*-P1-C32-C9	Yes	
Memory module riser card 5 - memory module 10	U*n*-P1-C32-C10	Yes	
Memory module riser card 5 - memory module 11	U*n*-P1-C32-C11	Yes	
Memory module riser card 5 - memory module 12	U*n*-P1-C32-C12	Yes	
Memory module riser card 5 - memory module 13	U*n*-P1-C32-C13	Yes	
Memory module riser card 5 - memory module 14	U*n*-P1-C32-C14	Yes	
Memory module riser card 5 - memory module 15	U*n*-P1-C32-C15	Yes	
Memory module riser card 5 - memory module 16	U*n*-P1-C32-C16	Yes	
Memory module riser card 6	U*n*-P1-C33	Yes	See Memory for the 9040-MR9.

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module riser card 6 - memory module 1	U*n*-P1-C33-C1	Yes	See Memory for the 9040-MR9.
Memory module riser card 6 - memory module 2	U*n*-P1-C33-C2	Yes	
Memory module riser card 6 - memory module 3	U*n*-P1-C33-C3	Yes	
Memory module riser card 6 - memory module 4	U*n*-P1-C33-C4	Yes	
Memory module riser card 6 - memory module 5	U*n*-P1-C33-C5	Yes	
Memory module riser card 6 - memory module 6	U*n*-P1-C33-C6	Yes	
Memory module riser card 6 - memory module 7	U*n*-P1-C33-C7	Yes	
Memory module riser card 6 - memory module 8	U*n*-P1-C33-C8	Yes	
Memory module riser card 6 - memory module 9	U*n*-P1-C33-C9	Yes	
Memory module riser card 6 - memory module 10	U*n*-P1-C33-C10	Yes	
Memory module riser card 6 - memory module 11	U*n*-P1-C33-C11	Yes	
Memory module riser card 6 - memory module 12	U*n*-P1-C33-C12	Yes	
Memory module riser card 6 - memory module 13	U*n*-P1-C33-C13	Yes	
Memory module riser card 6 - memory module 14	U*n*-P1-C33-C14	Yes	
Memory module riser card 6 - memory module 15	U*n*-P1-C33-C15	Yes	
Memory module riser card 6 - memory module 16	U*n*-P1-C33-C16	Yes	
Memory module riser card 7	U*n*-P1-C34	Yes	See Memory for the 9040-MR9.

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module riser card 7 - memory module 1	U*n*-P1-C34-C1	Yes	See Memory for the 9040-MR9.
Memory module riser card 7 - memory module 2	U*n*-P1-C34-C2	Yes	
Memory module riser card 7 - memory module 3	U*n*-P1-C34-C3	Yes	
Memory module riser card 7 - memory module 4	U*n*-P1-C34-C4	Yes	
Memory module riser card 7 - memory module 5	U*n*-P1-C34-C5	Yes	
Memory module riser card 7 - memory module 6	U*n*-P1-C34-C6	Yes	
Memory module riser card 7 - memory module 7	U*n*-P1-C34-C7	Yes	
Memory module riser card 7 - memory module 8	U*n*-P1-C34-C8	Yes	
Memory module riser card 7 - memory module 9	U*n*-P1-C34-C9	Yes	
Memory module riser card 7 - memory module 10	U*n*-P1-C34-C10	Yes	
Memory module riser card 7 - memory module 11	U*n*-P1-C34-C11	Yes	
Memory module riser card 7 - memory module 12	U*n*-P1-C34-C12	Yes	
Memory module riser card 7 - memory module 13	U*n*-P1-C34-C13	Yes	
Memory module riser card 7 - memory module 14	U*n*-P1-C34-C14	Yes	
Memory module riser card 7 - memory module 15	U*n*-P1-C34-C15	Yes	
Memory module riser card 7 - memory module 16	U*n*-P1-C34-C16	Yes	
Memory module riser card 8	U*n*-P1-C35	Yes	See Memory for the 9040-MR9.

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Memory module riser card 8 - memory module 1	U*n*-P1-C35-C1	Yes	See Memory for the 9040-MR9.
Memory module riser card 8 - memory module 2	U*n*-P1-C35-C2	Yes	
Memory module riser card 8 - memory module 3	U*n*-P1-C35-C3	Yes	
Memory module riser card 8 - memory module 4	U*n*-P1-C35-C4	Yes	
Memory module riser card 8 - memory module 5	U*n*-P1-C35-C5	Yes	
Memory module riser card 8 - memory module 6	U*n*-P1-C35-C6	Yes	
Memory module riser card 8 - memory module 7	U*n*-P1-C35-C7	Yes	
Memory module riser card 8 - memory module 8	U*n*-P1-C35-C8	Yes	
Memory module riser card 8 - memory module 9	U*n*-P1-C35-C9	Yes	
Memory module riser card 8 - memory module 10	U*n*-P1-C35-C10	Yes	
Memory module riser card 8 - memory module 11	U*n*-P1-C35-C11	Yes	
Memory module riser card 8 - memory module 12	U*n*-P1-C35-C12	Yes	
Memory module riser card 8 - memory module 13	U*n*-P1-C35-C13	Yes	
Memory module riser card 8 - memory module 14	U*n*-P1-C35-C14	Yes	
Memory module riser card 8 - memory module 15	U*n*-P1-C35-C15	Yes	
Memory module riser card 8 - memory module 16	U*n*-P1-C35-C16	Yes	
Processors and regulators			
System processor module 1	U*n*-P1-C14	Yes	See System processor modules for the 9040-MR9.
System processor module 2	U*n*-P1-C15	Yes	
System processor module 3	U*n*-P1-C18	Yes	
System processor module 4	U*n*-P1-C19	Yes	

Table 5. FRU location (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Processor voltage regulator module for system processor module 1	U*n*-P1-C13	Yes	See Voltage regulator modules for the 9040-MR9.
Processor voltage regulator module for system processor module 2	U*n*-P1-C16	Yes	
Processor voltage regulator module for system processor module 3	U*n*-P1-C17	Yes	
Processor voltage regulator module for system processor module 4	U*n*-P1-C20	Yes	
Standby voltage regulator module	U*n*-P1-C22	Yes	See Voltage regulator modules for the 9040-MR9.
I/O voltage regulator module	U*n*-P1-C23	Yes	See Voltage regulator modules for the 9040-MR9.
Drives			
Drive 1	U*n*-P2-D1	Yes	See Disk drives or solid-state drives for the 9040-MR9.
Drive 2	U*n*-P2-D2	Yes	
Drive 3	U*n*-P2-D3	Yes	
Drive 4	U*n*-P2-D4	Yes	
Drive 5	U*n*-P2-D5	Yes	
Drive 6	U*n*-P2-D6	Yes	
Drive 7	U*n*-P2-D7	Yes	
Drive 8	U*n*-P2-D8	Yes	
NVMe U.2 drive 1	U*n*-P2-C1	Yes	See NVMe U.2 drives for the 9040-MR9.
NVMe U.2 drive 2	U*n*-P2-C2	Yes	
NVMe U.2 drive 3	U*n*-P2-C3	Yes	
NVMe U.2 drive 4	U*n*-P2-C4	Yes	
Control panel			
Control panel	U*n*-D1	Yes	See Control panel and control panel display for the 9040-MR9.
Control panel display	U*n*-D2	Yes	

9080-M9S locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show field–replaceable unit (FRU) layouts in the system. Use these diagrams with the following tables.

Views of the system control unit

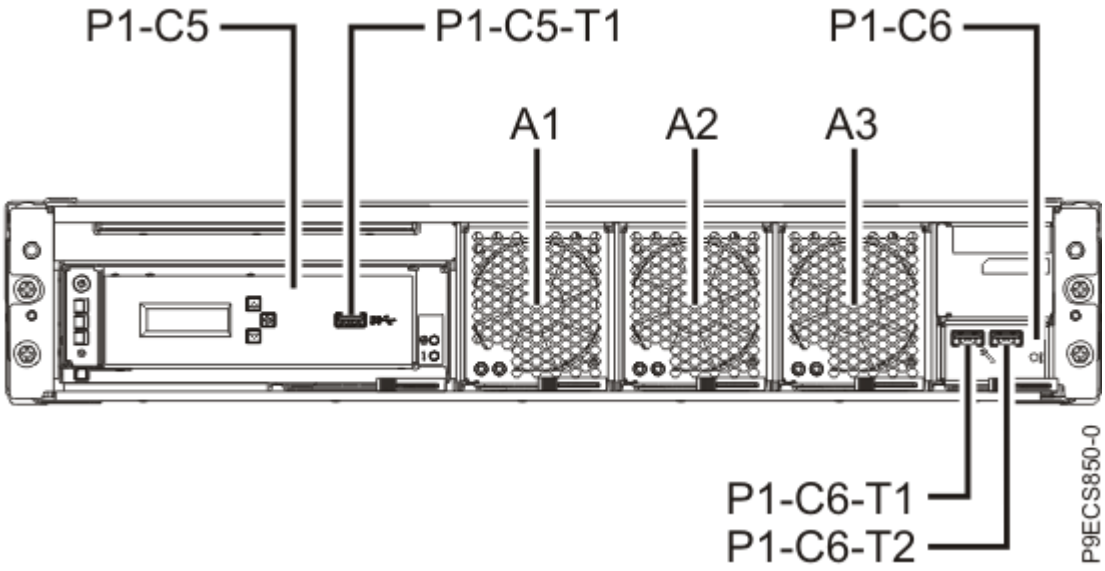

Figure 21. Front view of the system control unit

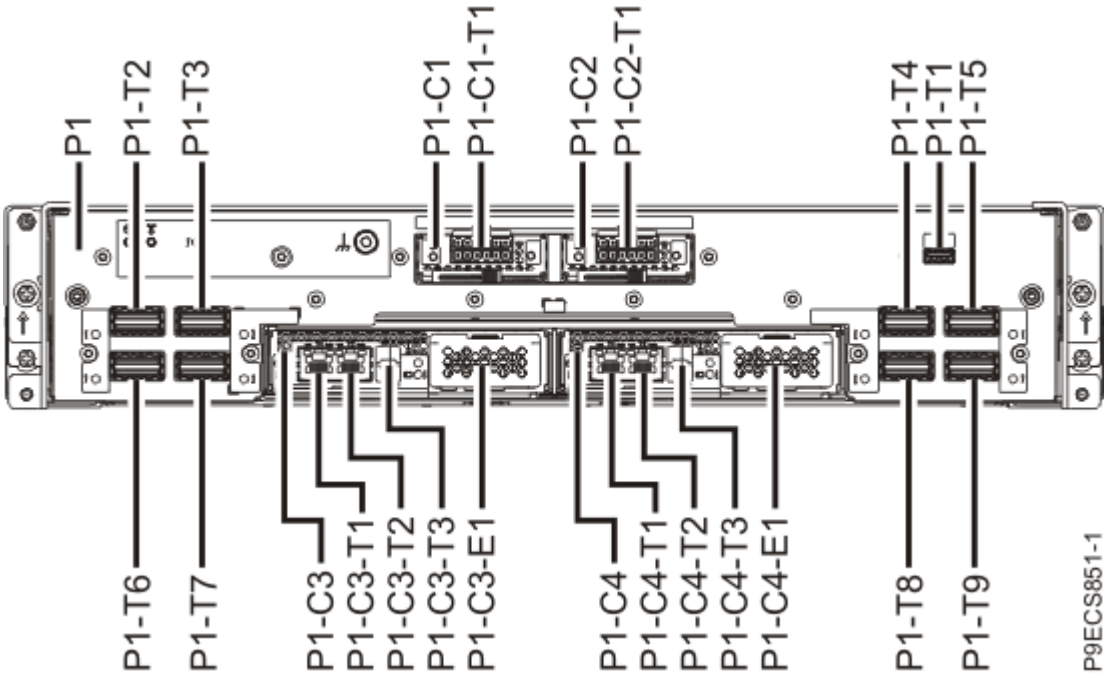

Figure 22. Rear view of the system control unit

The following table provides location codes for parts that comprise the system control unit.

Table 6. FRU locations for the system control unit		
Failing item name	**Physical location code**	**Identify LED**
System unit	U*n*	
Fans		
Fan 1	U*n*-A1	Yes
Fan 2	U*n*-A2	Yes
Fan 3	U*n*-A3	Yes
Backplane		
System backplane	U*n*-P1	Yes
Cards		
Power interface card 1	U*n*-P1-C1	Yes
Power interface card 2	U*n*-P1-C2	Yes
Service processor card 1	U*n*-P1-C3	Yes
Service processor card 2	U*n*-P1-C4	Yes
Time-of-day battery 1*	U*n*-P1-C3-E1	Yes
Time-of-day battery 2*	U*n*-P1-C4-E1	Yes
Vital product data (VPD) card	U*n*-P1-C6	Yes
Ports		
UPIC port 1	U*n*-P1-C1-T1	Yes
UPIC port 2	U*n*-P1-C2-T1	Yes
Service processor card 1 - HMC port 1	U*n*-P1-C3-T1	No
Service processor card 1 - HMC port 2	U*n*-P1-C3-T2	No
Service processor card 1 - USB 2.0 port	U*n*-P1-C3-T3	Yes
Service processor card 2 - HMC port 1	U*n*-P1-C4-T1	No
Service processor card 2 - HMC port 2	U*n*-P1-C4-T2	No
Service processor card 2 - USB 2.0 port	U*n*-P1-C4-T3	Yes
VPD card - USB 2.0 port 1	U*n*-P1-C6-T1	Yes
VPD card - USB 2.0 port 2	U*n*-P1-C6-T2	Yes
USB 3.0 port **Note:** This port connects to port U*n*–P1–T1 on the system backplane.	U*n*-P1-C5-T1	No
Service processor card 1 - port 1	U*n*-P1-T2	Yes

Table 6. FRU locations for the system control unit (continued)		
Failing item name	**Physical location code**	**Identify LED**
Service processor card 1 - port 2	U*n*-P1-T3	Yes
Service processor card 2 - port 1	U*n*-P1-T4	Yes
Service processor card 2 - port 2	U*n*-P1-T5	Yes
Service processor card 1 - port 3	U*n*-P1-T6	Yes
Service processor card 1 - port 4	U*n*-P1-T7	Yes
Service processor card 2 - port 3	U*n*-P1-T8	Yes
Service processor card 2 - port 4	U*n*-P1-T9	Yes
Control Panel		
Control panel	U*n*-P1-C5	Yes

* See Removing the time-of-day batteries at the end of life of your system.

Views of the system node

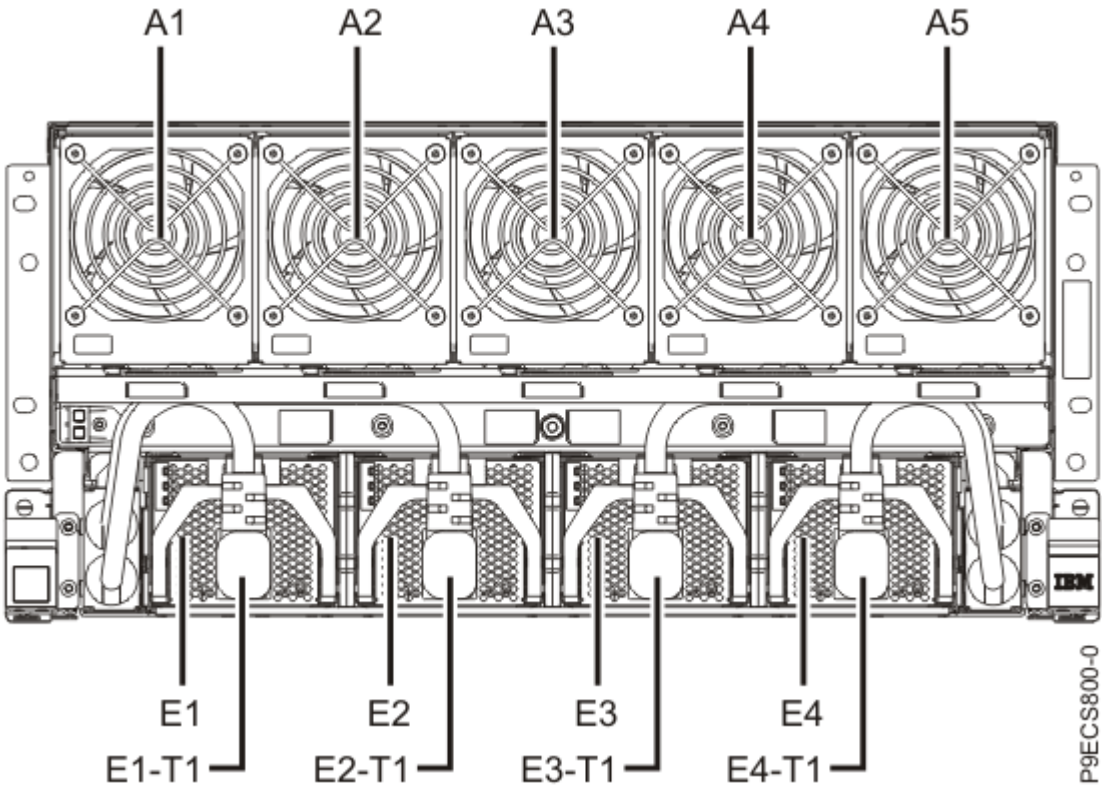

Figure 23. Front view of the system node

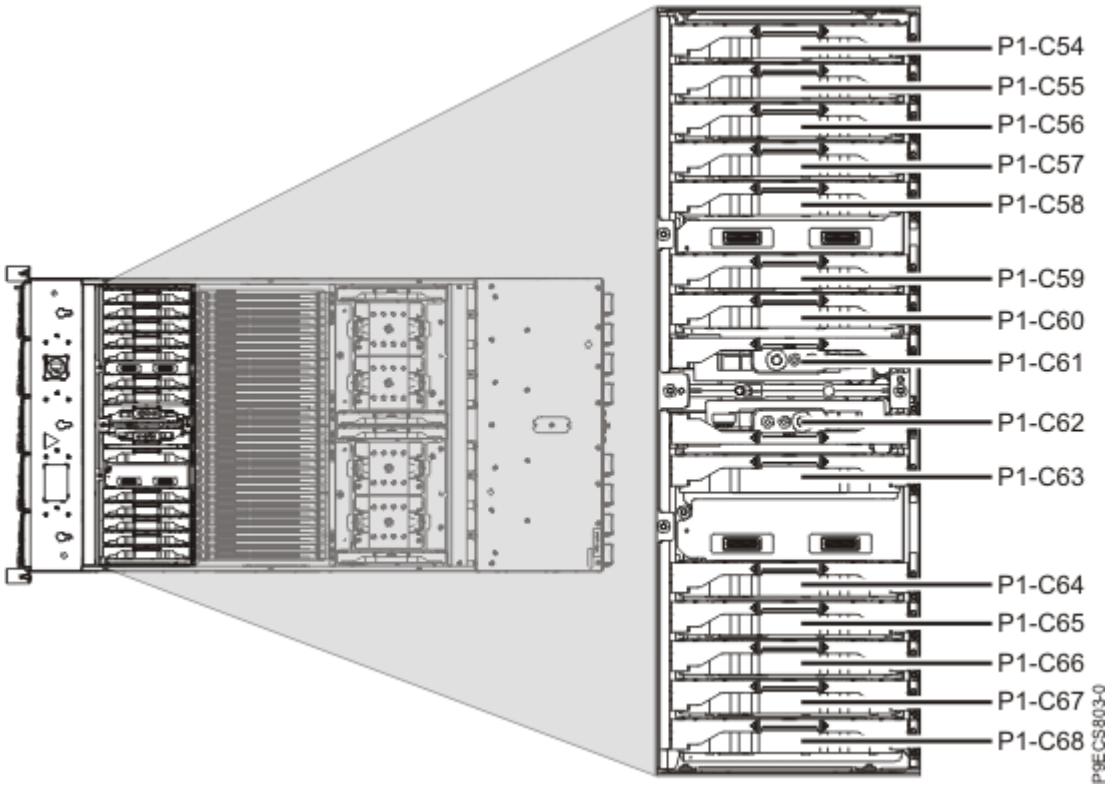

Figure 24. Top view of the system node

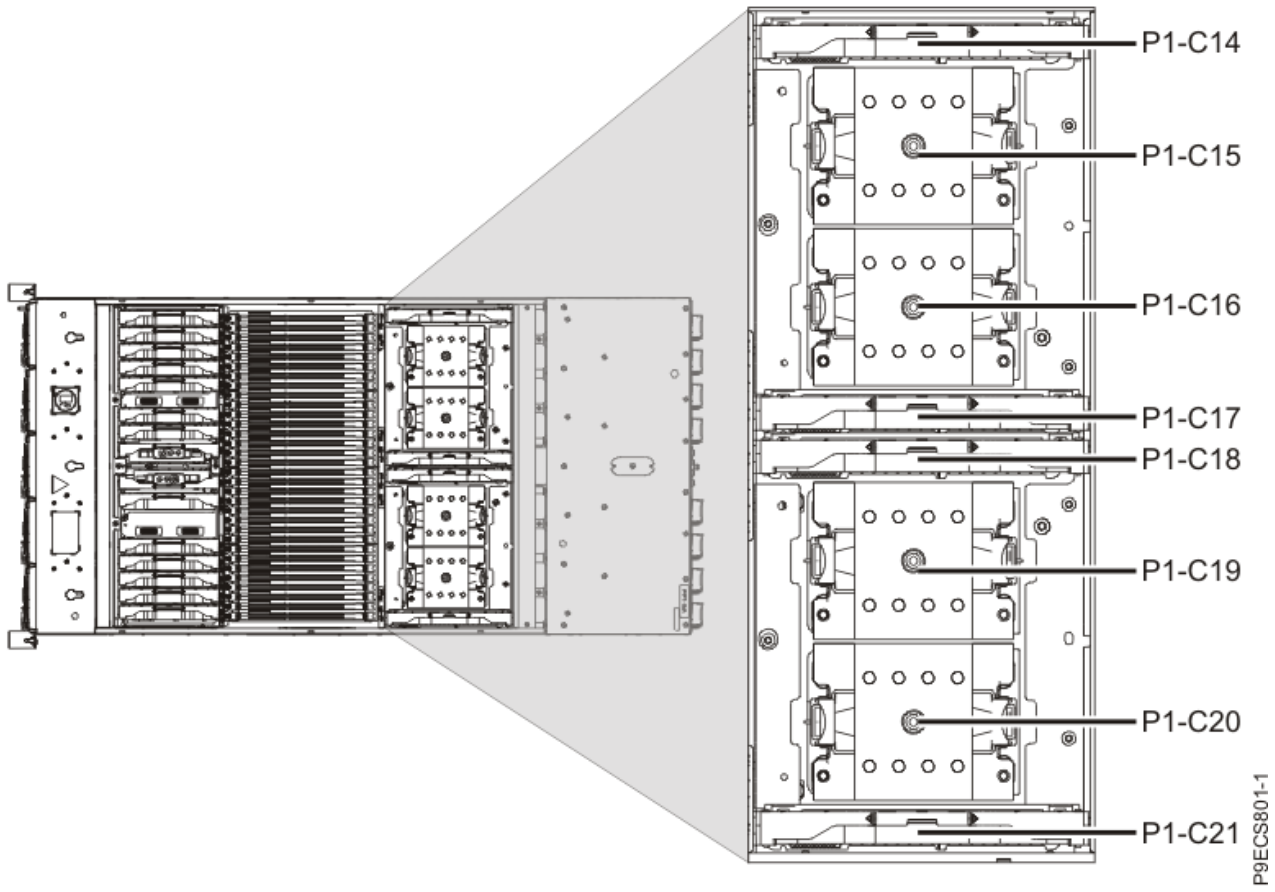

Figure 25. Top view of the system node (CPU locations)

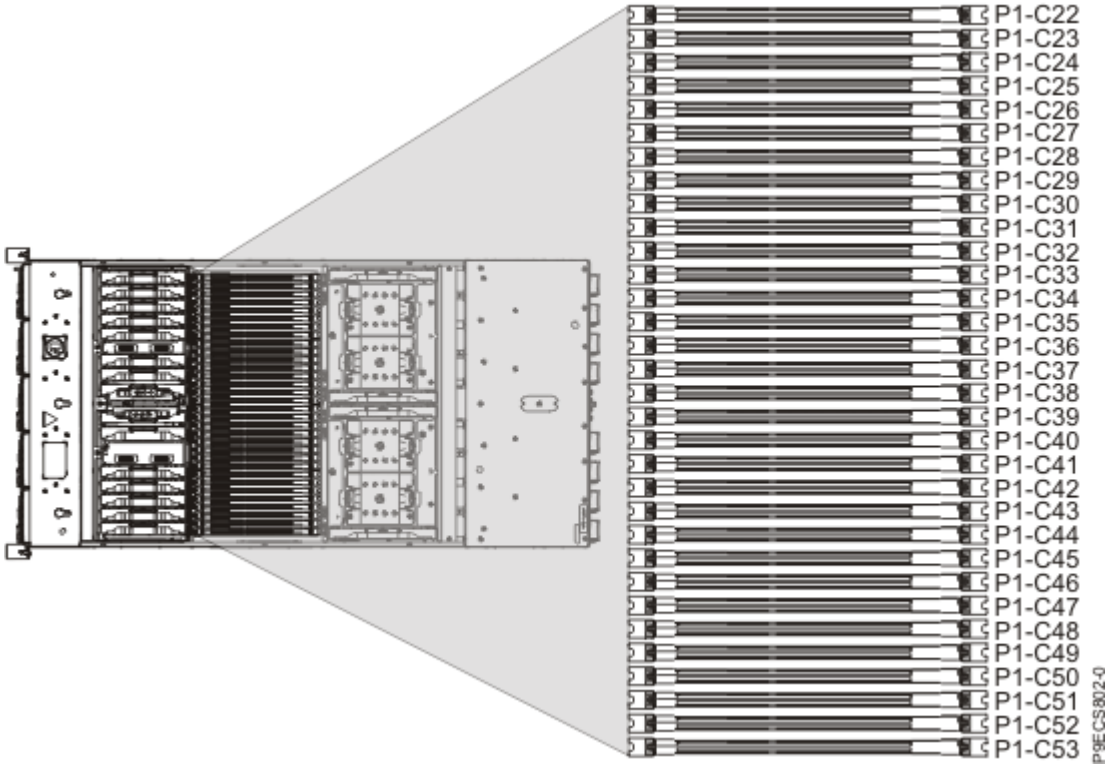

Figure 26. Top view of the system node (memory locations)

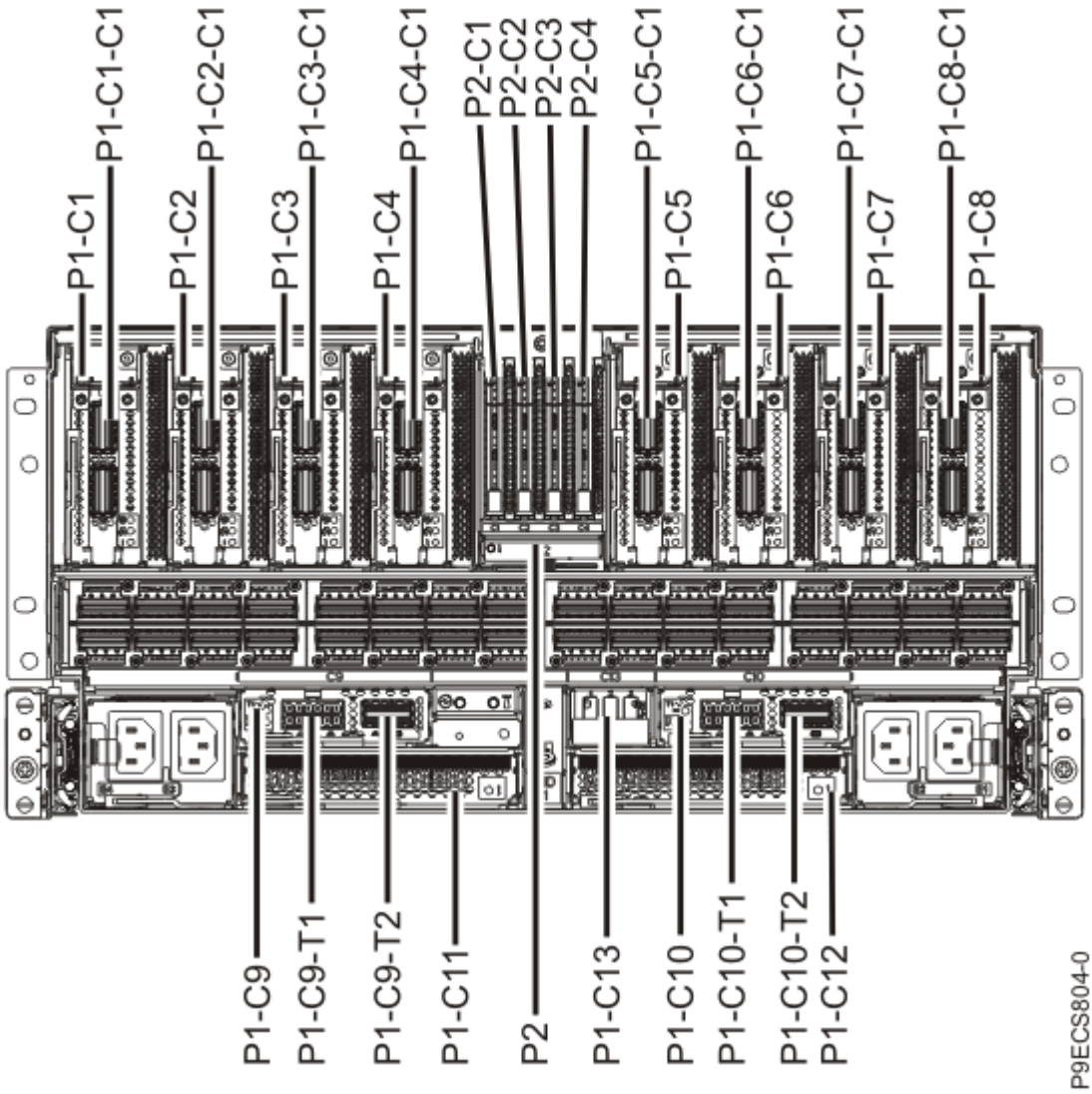

Figure 27. Rear view of the system node

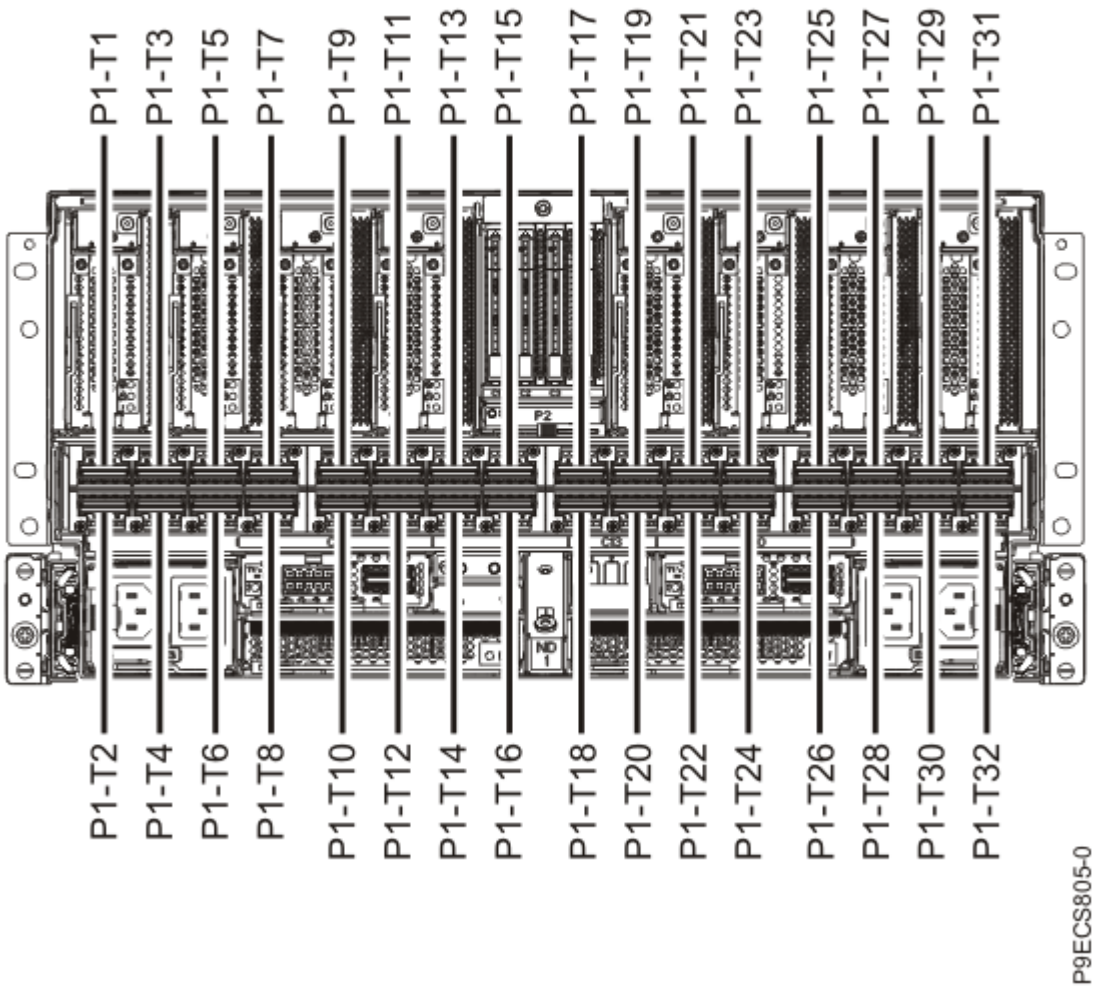

Figure 28. SMP port locations on the system node (rear view)

The following table provides location codes for parts that comprise the system node.

Table 7. FRU locations of the system node		
Failing item name	**Physical location code**	**Identify LED**
System unit	U*n*	
Fans		
Fan 1	U*n*-A1	Yes
Fan 2	U*n*-A2	Yes
Fan 3	U*n*-A3	Yes
Fan 4	U*n*-A4	Yes
Fan 5	U*n*-A5	Yes
Power supplies		
Power supply 1	U*n*-E1	Yes

Table 7. FRU locations of the system node (continued)		
Failing item name	**Physical location code**	**Identify LED**
Power supply 2	U*n*-E2	Yes
Power supply 3	U*n*-E3	Yes
Power supply 4	U*n*-E4	Yes
Backplanes		
System backplane	U*n*-P1	Yes
NVMe drive backplane	U*n*-P2	Yes
Adapters and adapter ports		
PCIe adapter cassette 1	U*n*-P1-C1	Yes
PCIe adapter 1	U*n*-P1-C1-C1	Yes
PCIe adapter cassette 2	U*n*-P1-C2	Yes
PCIe adapter 2	U*n*-P1-C2-C1	Yes
PCIe adapter cassette 3	U*n*-P1-C3	Yes
PCIe adapter 3	U*n*-P1-C3-C1	Yes
PCIe adapter cassette 4	U*n*-P1-C4	Yes
PCIe adapter 4	U*n*-P1-C4-C1	Yes
PCIe adapter cassette 5	U*n*-P1-C5	Yes
PCIe adapter 5	U*n*-P1-C5-C1	Yes
PCIe adapter cassette 6	U*n*-P1-C6	Yes
PCIe adapter 6	U*n*-P1-C6-C1	Yes
PCIe adapter cassette 7	U*n*-P1-C7	Yes
PCIe adapter 7	U*n*-P1-C7-C1	Yes
PCIe adapter cassette 8	U*n*-P1-C8	Yes
PCIe adapter 8	U*n*-P1-C8-C1	Yes
Cards		
Service processor interface card 1	U*n*-P1-C9	Yes
Service processor interface card 2	U*n*-P1-C10	Yes
Clock and control card 1	U*n*-P1-C11	Yes
Clock and control card 2	U*n*-P1-C12	Yes
Universal serial bus (USB) card	U*n*-P1-C13	Yes
Power APSS and TPM card 1	U*n*-P1-C61	Yes
Power APSS and TPM card 2	U*n*-P1-C62	Yes
Concurrent maintenance circuit card	U*n*-P1-C63	Yes
Processors and processor voltage regulator modules		
System processor module 1	U*n*-P1-C15	Yes

Table 7. FRU locations of the system node (continued)		
Failing item name	**Physical location code**	**Identify LED**
System processor module 2	U*n*-P1-C16	Yes
System processor module 3	U*n*-P1-C19	Yes
System processor module 4	U*n*-P1-C20	Yes
Processor voltage regulator module for system processor module 1	U*n*-P1-C14	Yes
Processor voltage regulator module for system processor module 2	U*n*-P1-C17	Yes
Processor voltage regulator module for system processor module 3	U*n*-P1-C18	Yes
Processor voltage regulator module for system processor module 4	U*n*-P1-C21	Yes
Ports		
Universal power interconnect (UPIC) port 1	U*n*-P1-C9-T1	Yes
Service processor interface card port 1	U*n*-P1-C9-T2	Yes
UPIC port 2	U*n*-P1-C10-T1	Yes
Service processor interface card port 2	U*n*-P1-C10-T2	Yes
USB 3.0 port 1 (rear)	U*n*-P1-C13-T1	No
USB 3.0 port 2 (rear)	U*n*-P1-C13-T2	No
USB 3.0 port 3 (rear)	U*n*-P1-C13-T3	No
Memory modules		
Memory module 1	U*n*-P1-C22	Yes
Memory module 2	U*n*-P1-C23	Yes
Memory module 3	U*n*-P1-C24	Yes
Memory module 4	U*n*-P1-C25	Yes
Memory module 5	U*n*-P1-C26	Yes
Memory module 6	U*n*-P1-C27	Yes
Memory module 7	U*n*-P1-C28	Yes
Memory module 8	U*n*-P1-C29	Yes
Memory module 9	U*n*-P1-C30	Yes
Memory module 10	U*n*-P1-C31	Yes
Memory module 11	U*n*-P1-C32	Yes
Memory module 12	U*n*-P1-C33	Yes
Memory module 13	U*n*-P1-C34	Yes
Memory module 14	U*n*-P1-C35	Yes
Memory module 15	U*n*-P1-C36	Yes

Table 7. FRU locations of the system node (continued)		
Failing item name	**Physical location code**	**Identify LED**
Memory module 16	U*n*-P1-C37	Yes
Memory module 17	U*n*-P1-C38	Yes
Memory module 18	U*n*-P1-C39	Yes
Memory module 19	U*n*-P1-C40	Yes
Memory module 20	U*n*-P1-C41	Yes
Memory module 21	U*n*-P1-C42	Yes
Memory module 22	U*n*-P1-C43	Yes
Memory module 23	U*n*-P1-C44	Yes
Memory module 24	U*n*-P1-C45	Yes
Memory module 25	U*n*-P1-C46	Yes
Memory module 26	U*n*-P1-C47	Yes
Memory module 27	U*n*-P1-C48	Yes
Memory module 28	U*n*-P1-C49	Yes
Memory module 29	U*n*-P1-C50	Yes
Memory module 30	U*n*-P1-C51	Yes
Memory module 31	U*n*-P1-C52	Yes
Memory module 32	U*n*-P1-C53	Yes
Voltage regulator modules		
Memory voltage regulator module	U*n*-P1-C54	Yes
Memory voltage regulator module	U*n*-P1-C55	Yes
Miscellaneous A voltage regulator module	U*n*-P1-C56	Yes
Memory voltage regulator module	U*n*-P1-C57	Yes
Memory voltage regulator module	U*n*-P1-C58	Yes
Miscellaneous B voltage regulator module	U*n*-P1-C59	Yes
Miscellaneous A voltage regulator module	U*n*-P1-C60	Yes
Memory voltage regulator module	U*n*-P1-C64	Yes
Miscellaneous A voltage regulator module	U*n*-P1-C65	Yes
Miscellaneous A voltage regulator module	U*n*-P1-C66	Yes
Memory voltage regulator module	U*n*-P1-C67	Yes
Memory voltage regulator module	U*n*-P1-C68	Yes
SMP Cables		
SMP port 1	U*n*-P1-T1	Yes
SMP port 2	U*n*-P1-T2	Yes
SMP port 3	U*n*-P1-T3	Yes

Table 7. FRU locations of the system node (continued)		
Failing item name	**Physical location code**	**Identify LED**
SMP port 4	U*n*-P1-T4	Yes
SMP port 5	U*n*-P1-T5	Yes
SMP port 6	U*n*-P1-T6	Yes
SMP port 7	U*n*-P1-T7	Yes
SMP port 8	U*n*-P1-T8	Yes
SMP port 9	U*n*-P1-T9	Yes
SMP port 10	U*n*-P1-T10	Yes
SMP port 11	U*n*-P1-T11	Yes
SMP port 12	U*n*-P1-T12	Yes
SMP port 13	U*n*-P1-T13	Yes
SMP port 14	U*n*-P1-T14	Yes
SMP port 15	U*n*-P1-T15	Yes
SMP port 16	U*n*-P1-T16	Yes
SMP port 17	U*n*-P1-T17	Yes
SMP port 18	U*n*-P1-T18	Yes
SMP port 19	U*n*-P1-T19	Yes
SMP port 20	U*n*-P1-T20	Yes
SMP port 21	U*n*-P1-T21	Yes
SMP port 22	U*n*-P1-T22	Yes
SMP port 23	U*n*-P1-T23	Yes
SMP port 24	U*n*-P1-T24	Yes
SMP port 25	U*n*-P1-T25	Yes
SMP port 26	U*n*-P1-T26	Yes
SMP port 27	U*n*-P1-T27	Yes
SMP port 28	U*n*-P1-T28	Yes
SMP port 29	U*n*-P1-T29	Yes
SMP port 30	U*n*-P1-T30	Yes
SMP port 31	U*n*-P1-T31	Yes
SMP port 32	U*n*-P1-T32	Yes
Drives		
NVMe U.2 drive 1	U*n*-P2-C1	Yes
NVMe U.2 drive 2	U*n*-P2-C2	Yes
NVMe U.2 drive 3	U*n*-P2-C3	Yes
NVMe U.2 drive 4	U*n*-P2-C4	Yes

Unit views

The following diagram shows the unit types and their locations. Use these diagrams with the following table.

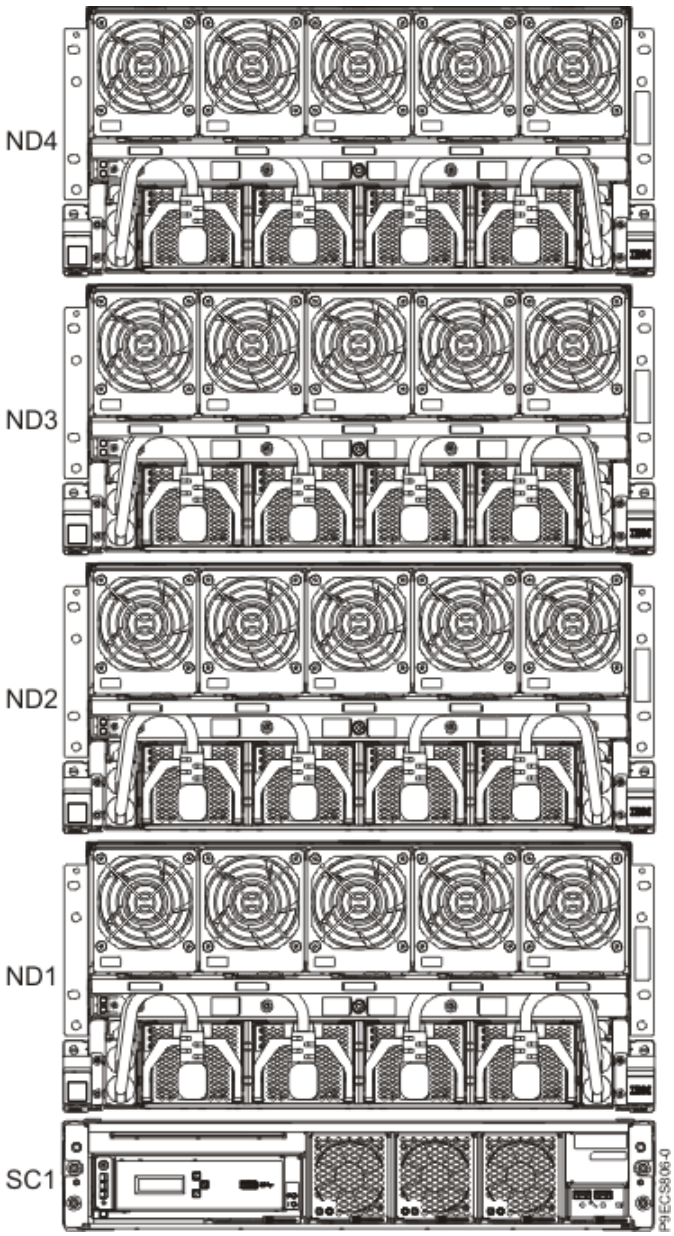

Figure 29. Unit types and locations

Table 8. Unit type and descriptions	
Unit type (Utttt)	**Description**
U78D6.SC1	system control unit
U78D5.ND1	system node 1
U78D5.ND2	system node 2
U78D5.ND3	system node 3
U78D5.ND4	system node 4

5887 disk drive enclosure locations

Use this information to help you map a location code to a position on the unit.

Note: The known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.

The following diagrams show the field replaceable unit (FRU) layout in the system. Use these diagrams with the following tables.

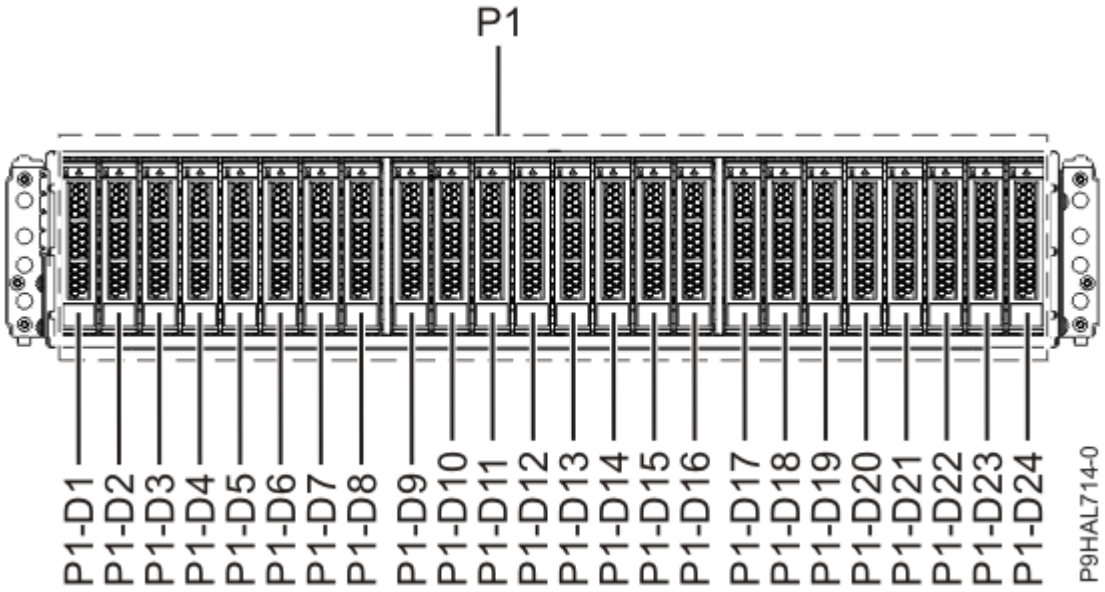

Figure 30. Front view

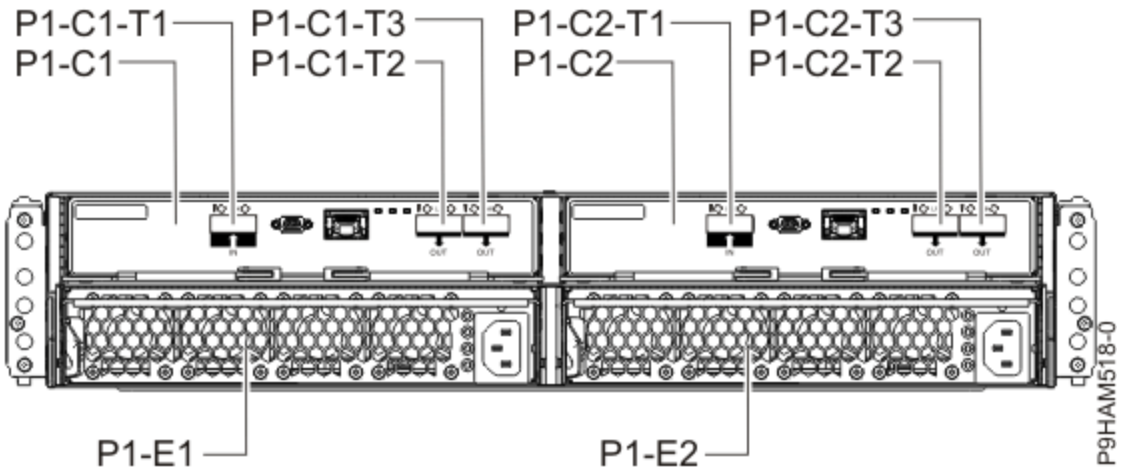

Figure 31. Rear view

The following table provides location codes for parts that make up the server.

Table 9. FRU locations and failing components			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
System unit	U*n*		

Table 9. FRU locations and failing components (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
ESM			
Event Services Manager (ESM) A	U*n*-P1-C1	Yes	See Removing and installing an enclosure services manager.
ESM B	U*n*-P1-C2	Yes	
ESM A connector	U*n*-P1-C1-T1		
ESM A connector	U*n*-P1-C1-T2		
ESM A connector	U*n*-P1-C1-T3		
ESM B connector	U*n*-P1-C2-T1		
ESM B connector	U*n*-P1-C2-T2		
ESM B connector	U*n*-P1-C2-T3		
Power supplies			
Power supply	U*n*-P1-E1	Yes	See Removing and installing a power supply.
Power supply	U*n*-P1-E2	Yes	
Midplane			
Midplane	U*n*-P1	Yes	See Removing and installing a midplane.
Device physical locations			

Table 9. FRU locations and failing components (continued)			
Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Disk drive 1	U*n*-P1-D1	Yes	See Removing and installing a disk drive.
Disk drive 2	U*n*-P1-D2	Yes	
Disk drive 3	U*n*-P1-D3	Yes	
Disk drive 4	U*n*-P1-D4	Yes	
Disk drive 5	U*n*-P1-D5	Yes	
Disk drive 6	U*n*-P1-D6	Yes	
Disk drive 7	U*n*-P1-D7	Yes	
Disk drive 8	U*n*-P1-D8	Yes	
Disk drive 9	U*n*-P1-D9	Yes	
Disk drive 10	U*n*-P1-D10	Yes	
Disk drive 11	U*n*-P1-D11	Yes	
Disk drive 12	U*n*-P1-D12	Yes	
Disk drive 13	U*n*-P1-D13	Yes	
Disk drive 14	U*n*-P1-D14	Yes	
Disk drive 15	U*n*-P1-D15	Yes	
Disk drive 16	U*n*-P1-D16	Yes	
Disk drive 17	U*n*-P1-D17	Yes	
Disk drive 18	U*n*-P1-D18	Yes	
Disk drive 19	U*n*-P1-D19	Yes	
Disk drive 20	U*n*-P1-D20	Yes	
Disk drive 21	U*n*-P1-D21	Yes	
Disk drive 22	U*n*-P1-D22	Yes	
Disk drive 23	U*n*-P1-D23	Yes	
Disk drive 24	U*n*-P1-D24	Yes	

Related reference

5887 disk drive enclosure system parts
Indexed drawings show system part numbers.

EMX0 PCIe Gen3 I/O expansion drawer locations

Use this information to help you map a location code to a position on the unit.

The following diagrams show the field-replaceable unit (FRU) layout in the system. Use these diagrams with the following tables.

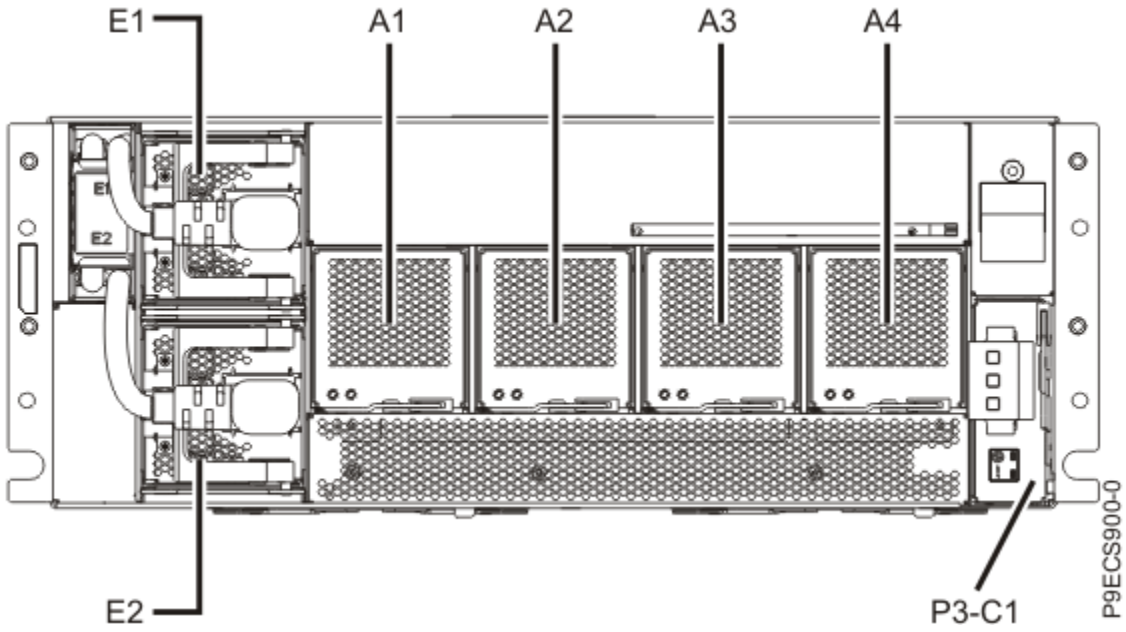

Figure 32. Front view

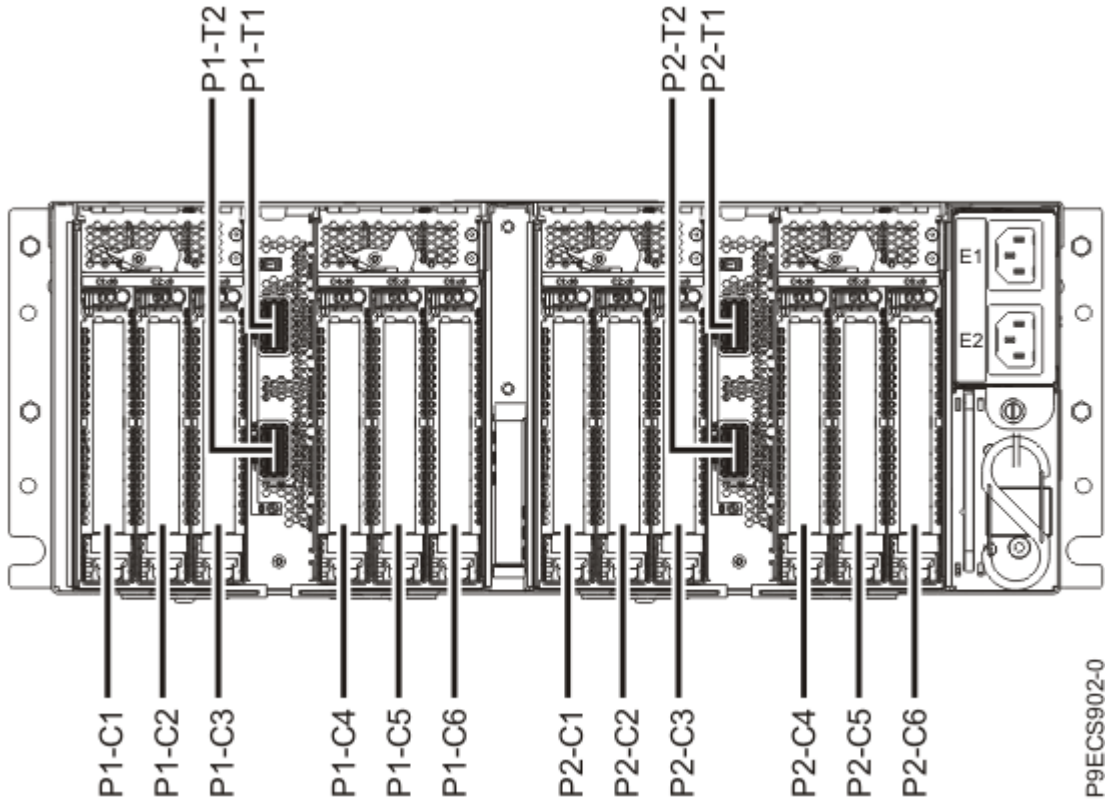

Figure 33. Rear view

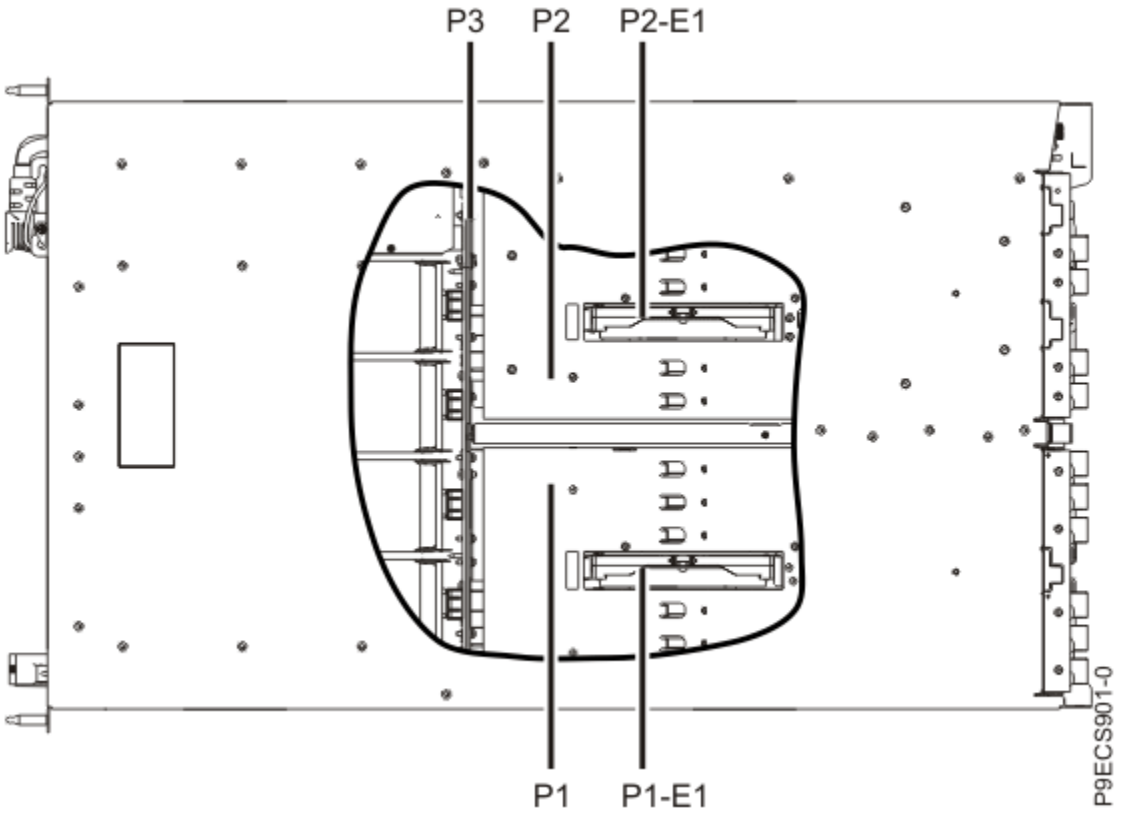

Figure 34. Top view

The following table provides location codes for parts that make up the server.

Table 10. FRU locations and failing components

Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Fans			
Fan	U*n*-A1	Yes	See Removing and replacing parts.
Fan	U*n*-A2	Yes	
Fan	U*n*-A3	Yes	
Fan	U*n*-A4	Yes	
Left PCIe3 6-slot fanout module			
Left I/O module	U*n*-P1	Yes	See Removing and replacing parts.
PCIe x16 slot 1	U*n*-P1-C1	Yes	See Removing and replacing parts.
PCIe x8 slot 2	U*n*-P1-C2	Yes	
PCIe x8 slot 3	U*n*-P1-C3	Yes	
PCIe x16 slot 4	U*n*-P1-C4	Yes	
PCIe x8 slot 5	U*n*-P1-C5	Yes	
PCIe x8 slot 6	U*n*-P1-C6	Yes	

Table 10. FRU locations and failing components (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Top expansion drawer cable	U*n*-P1-T1	Yes	See Removing and replacing parts.
Bottom expansion drawer cable	U*n*-P1-T2	Yes	
Right PCIe3 6-slot fanout module			
Right I/O module	U*n*-P2	Yes	See Removing and replacing parts.
PCIe x16 slot 1	U*n*-P2-C1	Yes	See Removing and replacing parts.
PCIe x8 slot 2	U*n*-P2-C2	Yes	
PCIe x8 slot 3	U*n*-P2-C3	Yes	
PCIe x16 slot 4	U*n*-P2-C4	Yes	
PCIe x8 slot 5	U*n*-P2-C5	Yes	
PCIe x8 slot 6	U*n*-P2-C6	Yes	
Top expansion drawer cable	U*n*-P2-T1	Yes	See Removing and replacing parts.
Bottom expansion drawer cable	U*n*-P2-T2	Yes	
Chassis management card			
Chassis management card	U*n*-P3-C1	Yes	See Removing and replacing parts.
Midplane			
Midplane	U*n*-P3	Yes	See Removing and replacing parts.
VRMs			
Voltage regulator module 1	U*n*-P1-E1	Yes	See Removing and replacing parts.
Voltage regulator module 2	U*n*-P2-E1	Yes	
Power supplies			
Power supply (top)	U*n*-E1	Yes	See Removing and replacing parts.
Power supply (bottom)	U*n*-E2	Yes	

Related reference
EMX0 PCIe Gen3 I/O expansion drawer system parts

Indexed drawings show system part numbers.

ESLL or ESLS storage enclosure locations

Use this information to help you map a location code to a position on the unit.

Note: The known logical location codes for this unit are listed next to the corresponding physical location in the following information. If you are working with a logical location code for this unit and it is not listed in the following information, contact your next level of support.

The following diagrams show the field replaceable unit (FRU) layout in the system. Use these diagrams with the following tables.

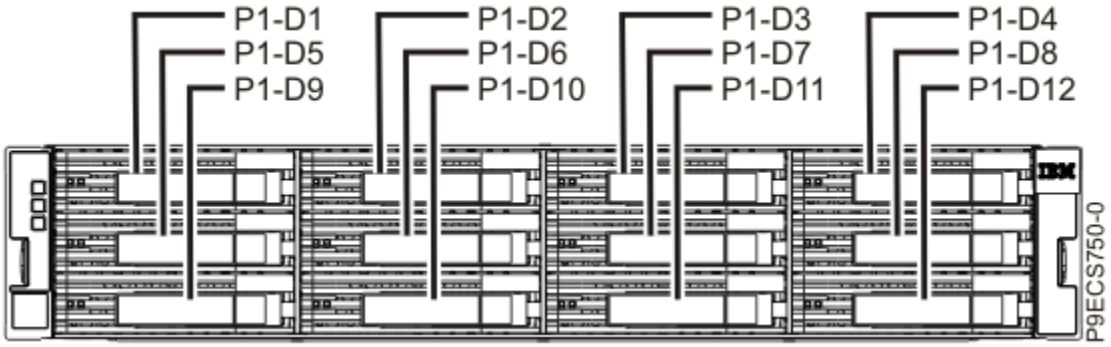

Figure 35. Front view of the ESLL storage enclosure

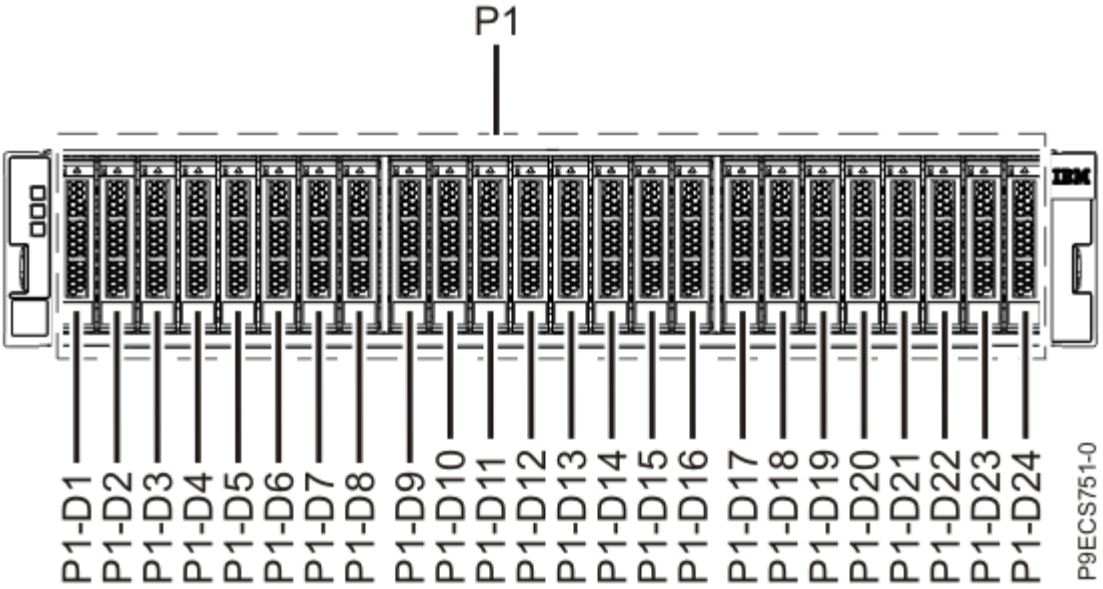

Figure 36. Front view of the ESLS storage enclosure

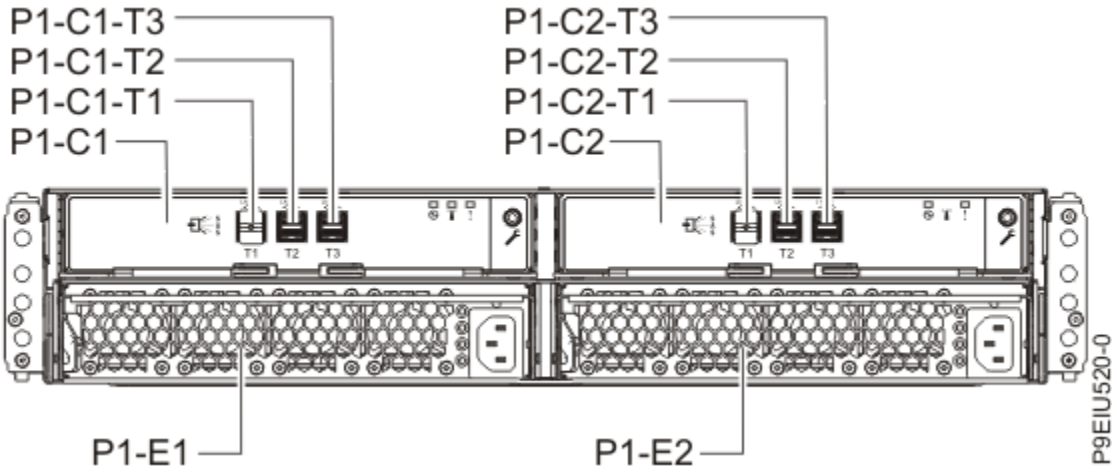

Figure 37. Rear view of the ESLL or ESLS storage enclosure

The following table provides location codes for parts that make up the storage enclosure.

Table 11. FRU locations and failing components

Failing item name	**Physical location code**	**Identify LED**	**Failing item removal and replacement procedures**
Storage enclosure	U*n*	Yes	
ESM			
Enclosure Services Manager (ESM) A	U*n*-P1-C1	Yes	See Removing and replacing an enclosure services manager in an ESLL or ESLS storage enclosure.
ESM B	U*n*-P1-C2	Yes	
ESM A connector	U*n*-P1-C1-T1		**Note:** The connector in the U*n*-P1-C1-T1 location is not used.
ESM A connector	U*n*-P1-C1-T2		
ESM A connector	U*n*-P1-C1-T3		
ESM B connector	U*n*-P1-C2-T1		**Note:** The connector in the U*n*-P1-C2-T1 location is not used.
ESM B connector	U*n*-P1-C2-T2		
ESM B connector	U*n*-P1-C2-T3		
Power supplies			
Power supply	U*n*-P1-E1	Yes	See Removing and replacing a power supply in an ESLL or ESLS storage enclosure.
Power supply	U*n*-P1-E2	Yes	
Midplane			

Table 11. FRU locations and failing components (continued)

Failing item name	Physical location code	Identify LED	Failing item removal and replacement procedures
Midplane	U*n*-P1		See Removing and replacing a midplane in an ESLL or ESLS storage enclosure.
ESLL and ESLS device physical locations			
Disk drive 1	U*n*-P1-D1	Yes	See Removing and replacing disk drives or solid-state drives in an ESLL or ESLS storage enclosure.
Disk drive 2	U*n*-P1-D2	Yes	
Disk drive 3	U*n*-P1-D3	Yes	
Disk drive 4	U*n*-P1-D4	Yes	
Disk drive 5	U*n*-P1-D5	Yes	
Disk drive 6	U*n*-P1-D6	Yes	
Disk drive 7	U*n*-P1-D7	Yes	
Disk drive 8	U*n*-P1-D8	Yes	
Disk drive 9	U*n*-P1-D9	Yes	
Disk drive 10	U*n*-P1-D10	Yes	
Disk drive 11	U*n*-P1-D11	Yes	
Disk drive 12	U*n*-P1-D12	Yes	
ESLS device physical locations			
Disk drive 13	U*n*-P1-D13	Yes	See Removing and replacing disk drives or solid-state drives in an ESLL or ESLS storage enclosure.
Disk drive 14	U*n*-P1-D14	Yes	
Disk drive 15	U*n*-P1-D15	Yes	
Disk drive 16	U*n*-P1-D16	Yes	
Disk drive 17	U*n*-P1-D17	Yes	
Disk drive 18	U*n*-P1-D18	Yes	
Disk drive 19	U*n*-P1-D19	Yes	
Disk drive 20	U*n*-P1-D20	Yes	
Disk drive 21	U*n*-P1-D21	Yes	
Disk drive 22	U*n*-P1-D22	Yes	
Disk drive 23	U*n*-P1-D23	Yes	
Disk drive 24	U*n*-P1-D24	Yes	

Addresses

Use this information to locate system addresses.

Use the address to find the location, and then go to “Part locations and location codes” on page 2 to find the physical location.

9009-22G addresses

You can cross-reference the address to the physical location code.

Use the address to find the location for the system, and then go to "5105-22E, 9008-22L, 9009-22A, 9009-22G, 9223-22H, or 9223-22S locations" on page 5 to find additional location information.

Table 12. PCIe slot address information

Position	Possible failing item	Direct select address (DSA)	Unit address
U*n*-P1	Embedded USB controller	00170000	B0FFFFFF
U*n*-P1-C2	PCIe adapter	00210000	Not applicable
U*n*-P1-C3	PCIe adapter	00220000	Not applicable
U*n*-P1-C4	PCIe adapter	00200000	Not applicable
U*n*-P1-C5	PCIe adapter	001A0000	Not applicable
U*n*-P1-C6	PCIe adapter	001B0000	Not applicable
U*n*-P1-C7	PCIe adapter	001C0000	Not applicable
U*n*-P1-C8	PCIe adapter	00180000	Not applicable
U*n*-P1-C9	PCIe adapter	00100000	Not applicable
U*n*-P1-C10	PCIe adapter	00120000	Not applicable
U*n*-P1-C11	PCIe adapter	00130000	Not applicable
U*n*-P1-C12	PCIe adapter	00140000	Not applicable
U*n*-P1-C49	PCIe3 x8 SAS RAID internal adapter or PCIe3 x8 cache SAS RAID internal adapter	00150000	Not applicable
U*n*-P1-C50	PCIe3 x8 SAS RAID internal adapter or PCIe3 x8 cache SAS RAID internal adapter	001D0000	Not applicable

Table 13. Disk drive backplane address information

Position	Possible failing item	Direct select address (DSA)	Unit address
U*n*-P2-D1	Drive 1	00150000	0003FFFF
U*n*-P2-D2	Drive 2	00150000	0002FFFF
U*n*-P2-D3	Drive 3	00150000	0000FFFF
U*n*-P2-D4	Drive 4	001D0000	0009FFFF
U*n*-P2-D5	Drive 5	001D0000	000AFFFF
U*n*-P2-D6	Drive 6	001D0000	0008FFFF
U*n*-P2-D7	Drive 7 (internal)	00150000	0001FFFF

Table 13. Disk drive backplane address information (continued)			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P2-D8	Drive 8 (internal)	001D0000	000BFFFF

Table 14. NVMe drive backplane address information			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P2-C1	NVMe U.2 drive 1	00150000	7FFFFFFF or 00*xx*00FF through 00*xx*FFFF
U*n*-P2-C2	NVMe U.2 drive 2	00160000	7FFFFFFF or 00*xx*00FF through 00*xx*FFFF
U*n*-P2-C3	NVMe U.2 drive 3	001D0000	7FFFFFFF or 00*xx*00FF through 00*xx*FFFF
U*n*-P2-C4	NVMe U.2 drive 4	001E0000	7FFFFFFF or 00*xx*00FF through 00*xx*FFFF

9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S addresses

You can cross-reference the address to the physical location code.

Use the address to find the location for the system, and then go to "9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S locations" on page 14 to find additional location information.

Table 15. PCIe slot address information			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P1	Embedded USB controller	00170000	B0FFFFFF
U*n*-P1-C2	PCIe adapter	00210000	Not applicable
U*n*-P1-C3	PCIe adapter	00220000	Not applicable
U*n*-P1-C4	PCIe adapter	00200000	Not applicable
U*n*-P1-C5	PCIe adapter	001A0000	Not applicable
U*n*-P1-C6	PCIe adapter	001B0000	Not applicable
U*n*-P1-C7	PCIe adapter	001C0000	Not applicable
U*n*-P1-C8	PCIe adapter	00180000	Not applicable
U*n*-P1-C9	PCIe adapter	00100000	Not applicable
U*n*-P1-C10	PCIe adapter	00120000	Not applicable
U*n*-P1-C11	PCIe adapter	00130000	Not applicable
U*n*-P1-C12	PCIe adapter	00140000	Not applicable

Table 15. PCIe slot address information (continued)			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P1-C49	PCIe3 x8 SAS RAID internal adapter or PCIe3 x8 cache SAS RAID internal adapter	00150000	Not applicable
U*n*-P1-C50	PCIe3 x8 SAS RAID internal adapter or PCIe3 x8 cache SAS RAID internal adapter	001D0000	Not applicable

Table 16. Base function disk drive backplane address information			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P2-D1	Drive 1	00150000	0000FFFF
U*n*-P2-D2	Drive 2	00150000	0003FFFF
U*n*-P2-D3	Drive 3	00150000	0001FFFF
U*n*-P2-D4	Drive 4	00150000	0002FFFF
U*n*-P2-D5	Drive 5	00150000	0005FFFF
U*n*-P2-D6	Drive 6	00150000	0006FFFF
U*n*-P2-D7	Drive 7	00150000	000AFFFF
U*n*-P2-D8	Drive 8	00150000	0009FFFF
U*n*-P2-D9	Drive 9	00150000	0008FFFF
U*n*-P2-D10	Drive 10	00150000	000BFFFF
U*n*-P2-D11	Drive 11	00150000	000EFFFF
U*n*-P2-D12	Drive 12	00150000	000DFFFF
U*n*-P3-D1	RDX drive	00170000	60000000

Table 17. 12-drive expanded function disk drive backplane address information			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P2-D1	Drive 1	001D0000 or 00150000	000C00FF
U*n*-P2-D2	Drive 2	001D0000 or 00150000	000C01FF
U*n*-P2-D3	Drive 3	001D0000 or 00150000	000C02FF
U*n*-P2-D4	Drive 4	001D0000 or 00150000	000C03FF
U*n*-P2-D5	Drive 5	001D0000 or 00150000	000C04FF
U*n*-P2-D6	Drive 6	001D0000 or 00150000	000C05FF
U*n*-P2-D7	Drive 7	001D0000 or 00150000	000C06FF

Table 17. 12-drive expanded function disk drive backplane address information (continued)			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P2-D8	Drive 8	001D0000 or 00150000	000C07FF
U*n*-P2-D9	Drive 9	001D0000 or 00150000	000C08FF
U*n*-P2-D10	Drive 10	001D0000 or 00150000	000C09FF
U*n*-P2-D11	Drive 11	001D0000 or 00150000	000C0AFF
U*n*-P2-D12	Drive 12	001D0000 or 00150000	000C0BFF
U*n*-P3-D1	RDX drive	00170000	60000000

Table 18. 18-drive expanded function disk drive backplane address information			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P2-D1	Drive 1	001D0000 or 00150000	000800FF
U*n*-P2-D2	Drive 2	001D0000 or 00150000	000801FF
U*n*-P2-D3	Drive 3	001D0000 or 00150000	000802FF
U*n*-P2-D4	Drive 4	001D0000 or 00150000	000803FF
U*n*-P2-D5	Drive 5	001D0000 or 00150000	000804FF
U*n*-P2-D6	Drive 6	001D0000 or 00150000	000805FF
U*n*-P2-D7	Drive 7	001D0000 or 00150000	000806FF
U*n*-P2-D8	Drive 8	001D0000 or 00150000	000807FF
U*n*-P2-D9	Drive 9	001D0000 or 00150000	000808FF
U*n*-P2-D10	Drive 10	001D0000 or 00150000	000809FF
U*n*-P2-D11	Drive 11	001D0000 or 00150000	00080AFF
U*n*-P2-D12	Drive 12	001D0000 or 00150000	00080BFF
U*n*-P2-D13	Drive 13	001D0000 or 00150000	00080CFF
U*n*-P2-D14	Drive 14	001D0000 or 00150000	00080DFF
U*n*-P2-D15	Drive 15	001D0000 or 00150000	00080EFF
U*n*-P2-D16	Drive 16	001D0000 or 00150000	00080FFF
U*n*-P2-D17	Drive 17	001D0000 or 00150000	000810FF
U*n*-P2-D18	Drive 18	001D0000 or 00150000	000811FF

Table 19. NVMe drive backplane address information			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P2-D1	Drive 1	00150000	0000FFFF
U*n*-P2-D2	Drive 2	00150000	0003FFFF
U*n*-P2-D3	Drive 3	00150000	0001FFFF

Table 19. NVMe drive backplane address information (continued)			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P2-D4	Drive 4	00150000	0002FFFF
U*n*-P2-D5	Drive 5	00150000	0005FFFF
U*n*-P2-D6	Drive 6	00150000	0006FFFF
U*n*-P2-C1	NVMe U.2 drive 1	00150000	7FFFFFFF or 00*xx*00FF through 00*xx*FFFF
U*n*-P2-C2	NVMe U.2 drive 2	00160000	7FFFFFFF or 00*xx*00FF through 00*xx*FFFF
U*n*-P2-C3	NVMe U.2 drive 3	001D0000	7FFFFFFF or 00*xx*00FF through 00*xx*FFFF
U*n*-P2-C4	NVMe U.2 drive 4	001E0000	7FFFFFFF or 00*xx*00FF through 00*xx*FFFF

9080-M9S addresses

You can cross-reference the address to the physical location code.

Use the address to find the location for the system, and then go to “9080-M9S locations” on page 47 to find additional location information.

Table 20. Device address information (system node)			
Position	**Possible failing item**	**Direct select address (DSA)**	**Unit address**
U*n*-P1-C1-C1	PCIe adapter	0010xxxx (node 1) 0020xxxx (node 2) 0030xxxx (node 3) 0040xxxx (node 4)	Not applicable
U*n*-P1-C2-C1	PCIe adapter	0011xxxx (node 1) 0021xxxx (node 2) 0031xxxx (node 3) 0041xxxx (node 4)	Not applicable
U*n*-P1-C3-C1	PCIe adapter	0012xxxx (node 1) 0022xxxx (node 2) 0032xxxx (node 3) 0042xxxx (node 4)	Not applicable
U*n*-P1-C4-C1	PCIe adapter	0013xxxx (node 1) 0023xxxx (node 2) 0033xxxx (node 3) 0043xxxx (node 4)	Not applicable

Table 20. Device address information (system node) (continued)

Position	Possible failing item	Direct select address (DSA)	Unit address
U*n*-P1-C5-C1	PCIe adapter	0014xxxx (node 1) 0024xxxx (node 2) 0034xxxx (node 3) 0044xxxx (node 4)	Not applicable
U*n*-P1-C6-C1	PCIe adapter	0015xxxx (node 1) 0025xxxx (node 2) 0035xxxx (node 3) 0045xxxx (node 4)	Not applicable
U*n*-P1-C7-C1	PCIe adapter	0016xxxx (node 1) 0026xxxx (node 2) 0036xxxx (node 3) 0046xxxx (node 4)	Not applicable
U*n*-P1-C8-C1	PCIe adapter	0017xxxx (node 1) 0027xxxx (node 2) 0037xxxx (node 3) 0047xxxx (node 4)	Not applicable
U*n*-P2-C1	NVMe U.2 drive	0018xxxx (node 1) 0028xxxx (node 2) 0038xxxx (node 3) 0048xxxx (node 4)	Not applicable
U*n*-P2-C2	NVMe U.2 drive	0019xxxx (node 1) 0029xxxx (node 2) 0039xxxx (node 3) 0049xxxx (node 4)	Not applicable
U*n*-P2-C3	NVMe U.2 drive	001Axxxx (node 1) 002Axxxx (node 2) 003Axxxx (node 3) 004Axxxx (node 4)	Not applicable
U*n*-P2-C4	NVMe U.2 drive	001Bxxxx (node 1) 002Bxxxx (node 2) 003Bxxxx (node 3) 004Bxxxx (node 4)	Not applicable

5887 disk drive enclosure addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to "5887 disk drive enclosure locations" on page 59 to find additional location information.

Note: The *x* in the following table depends on which I/O adapter port is used and can have values of 0, 4, or 8.

Table 21. Device address information

Physical location code	Unit address
U*n*-P1-D1	0*x*0000FF or 00*xx*00FF
U*n*-P1-D2	0*x*0100FF or 00*xx*01FF
U*n*-P1-D3	0*x*0200FF or 00*xx*02FF
U*n*-P1-D4	0*x*0300FF or 00*xx*03FF
U*n*-P1-D5	0*x*0400FF or 00*xx*04FF
U*n*-P1-D6	0*x*0500FF or 00*xx*05FF
U*n*-P1-D7	0*x*0600FF or 00*xx*06FF
U*n*-P1-D8	0*x*0700FF or 00*xx*07FF
U*n*-P1-D9	0*x*0800FF or 00*xx*08FF
U*n*-P1-D10	0*x*0900FF or 00*xx*09FF
U*n*-P1-D11	0*x*0A00FF or 00*xx*0AFF
U*n*-P1-D12	0*x*0B00FF or 00*xx*0BFF
U*n*-P1-D13	0*x*0C00FF or 00*xx*0CFF
U*n*-P1-D14	0*x*0D00FF or 00*xx*0DFF
U*n*-P1-D15	0*x*0E00FF or 00*xx*0EFF
U*n*-P1-D16	0*x*0F00FF or 00*xx*0FFF
U*n*-P1-D17	0*x*1000FF or 00*xx*10FF
U*n*-P1-D18	0*x*1100FF or 00*xx*11FF
U*n*-P1-D19	0*x*1200FF or 00*xx*12FF
U*n*-P1-D20	0*x*1300FF or 00*xx*13FF
U*n*-P1-D21	0*x*1400FF or 00*xx*14FF
U*n*-P1-D22	0*x*1500FF or 00*xx*15FF
U*n*-P1-D23	0*x*1600FF or 00*xx*16FF
U*n*-P1-D24	0*x*1700FF or 00*xx*17FF

EMX0 PCIe Gen3 I/O expansion drawer addresses

You can cross-reference a PCIe adapter physical location code to the address.

Use the direct select address (DSA) to find the location for the system, and then go to "EMX0 PCIe Gen3 I/O expansion drawer locations" on page 61 to find additional location information.

Table 22. Address information for a EMX0 PCIe Gen3 I/O expansion drawer			
Physical location code	**Possible failing item**	**DSA (BBBBCcbb)**	**Unit address**
U*n*-P*y*-C1	PCIe adapter	0xx1xxxx	Not applicable
U*n*-P*y*-C2	PCIe adapter	0xx2xxxx	Not applicable
U*n*-P*y*-C3	PCIe adapter	0xx3xxxx	Not applicable
U*n*-P*y*-C4	PCIe adapter	0xx4xxxx	Not applicable
U*n*-P*y*-C5	PCIe adapter	0xx5xxxx	Not applicable
U*n*-P*y*-C6	PCIe adapter	0xx6xxxx	Not applicable

To determine if P*y* is P1 or P2, complete the following steps:

1. The hexadecimal IOA card bus number is the four leftmost digits of the DSA. Convert the hexadecimal IOA card bus number into a hexadecimal PCIe3 optical cable adapter bus number by removing the first and last digits of the IOA card bus number. For example, if the IOA card bus number is 0102, then the PCIe3 optical cable adapter bus number is 10.
2. Go to Card positions, find the table for your system unit, and use the hexadecimal PCIe3 optical cable adapter bus number to look up the location of the PCIe3 cable adapter.
3. Trace the cables from the PCIe3 cable adapter in the system unit to the I/O module in the EMX0 PCIe Gen3 I/O expansion drawer. The I/O module on the left side is P1. The I/O module on the right side is P2.

ESLL or ESLS storage enclosure addresses

You can cross-reference a disk drive physical location code to the address.

Use the address to find the location for the system, and then go to "ESLL or ESLS storage enclosure locations" on page 65 to find additional location information.

Note: The *x* in the following table depends on which I/O adapter port is used and it can have values of 0, 4, or 8.

Table 23. Device address information	
Physical location code	**Unit address**
U*n*-P1-D1	0*x*0000FF or 00*xx*00FF
U*n*-P1-D2	0*x*0100FF or 00*xx*01FF
U*n*-P1-D3	0*x*0200FF or 00*xx*02FF
U*n*-P1-D4	0*x*0300FF or 00*xx*03FF
U*n*-P1-D5	0*x*0400FF or 00*xx*04FF
U*n*-P1-D6	0*x*0500FF or 00*xx*05FF
U*n*-P1-D7	0*x*0600FF or 00*xx*06FF
U*n*-P1-D8	0*x*0700FF or 00*xx*07FF
U*n*-P1-D9	0*x*0800FF or 00*xx*08FF
U*n*-P1-D10	0*x*0900FF or 00*xx*09FF
U*n*-P1-D11	0*x*0A00FF or 00*xx*0AFF
U*n*-P1-D12	0*x*0B00FF or 00*xx*0BFF
U*n*-P1-D13	0*x*0C00FF or 00*xx*0CFF

Table 23. Device address information (continued)	
Physical location code	**Unit address**
U*n*-P1-D14	0*x*0D00FF or 00*xx*0DFF
U*n*-P1-D15	0*x*0E00FF or 00*xx*0EFF
U*n*-P1-D16	0*x*0F00FF or 00*xx*0FFF
U*n*-P1-D17	0*x*1000FF or 00*xx*10FF
U*n*-P1-D18	0*x*1100FF or 00*xx*11FF
U*n*-P1-D19	0*x*1200FF or 00*xx*12FF
U*n*-P1-D20	0*x*1300FF or 00*xx*13FF
U*n*-P1-D21	0*x*1400FF or 00*xx*14FF
U*n*-P1-D22	0*x*1500FF or 00*xx*15FF
U*n*-P1-D23	0*x*1600FF or 00*xx*16FF
U*n*-P1-D24	0*x*1700FF or 00*xx*17FF

System parts

Use this information to locate and identify common hardware parts.

This section contains only the part numbers that are likely to be needed during hardware servicing, and is not a complete part number listing. Indexed assembly diagrams help you map the part to its position on the unit. Use “Part locations and location codes” on page 2 to help you identify location codes.

5105-22E, 9008-22L, 9009-22A, 9009-22G, 9223-22H, or 9223-22S system parts

Indexed drawings show system part numbers of each part.

Rack final assembly

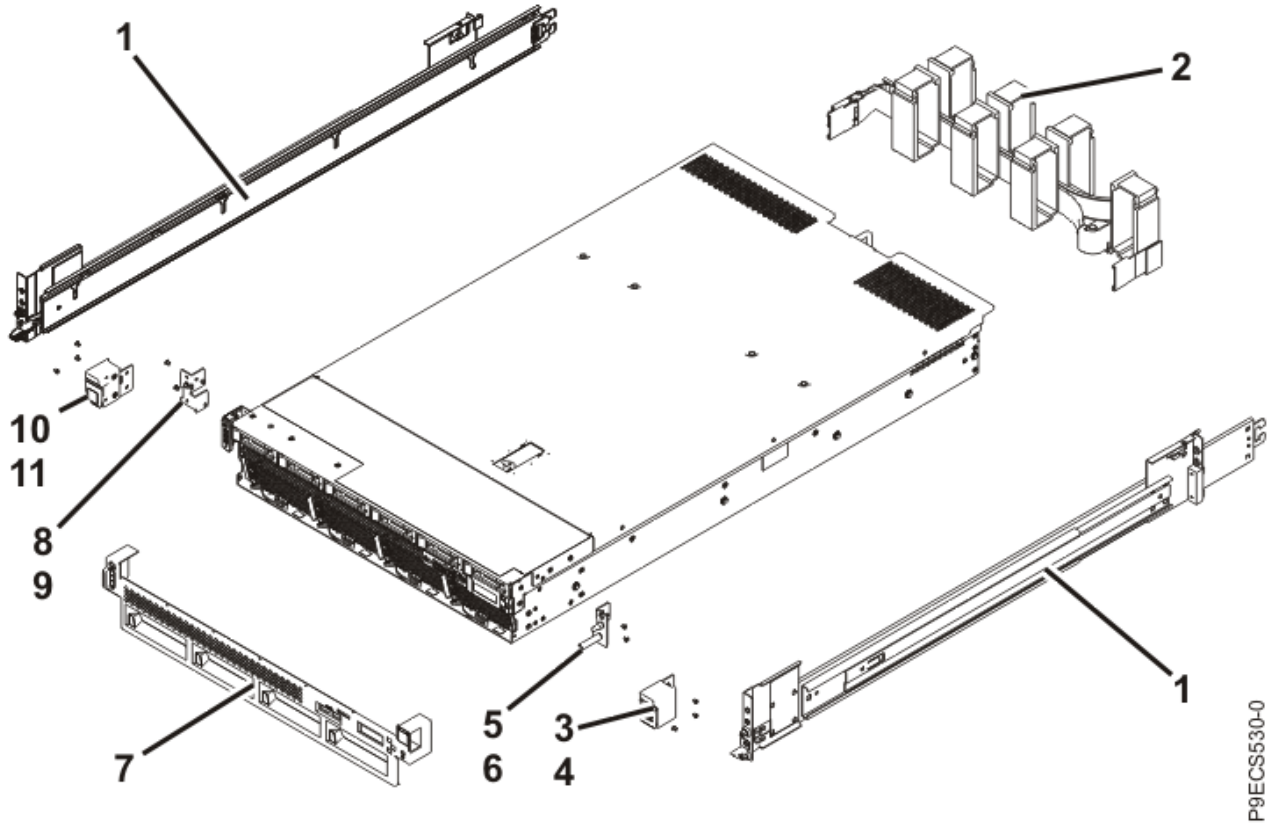

Table 24. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		01GY478	1	Slide rail kit - contains left and right slide rails and attaching screws
2		01GY476	1	Cable management arm assembly
3			1	Electronic Industries Association (EIA) latch (right)
4			3	Screws
5			1	EIA bracket (right)
6			2	Screws
7		01ML069	1	Front bezel
		02DE781	1	Front bezel (Only for the 9009-22G or 9223-22S system with the NVMe drive backplane)
8			1	EIA bracket (left)
9			1	Screws
10			1	EIA latch (left)

Table 24. Rack assembly part numbers (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
11			3	Screws

System parts

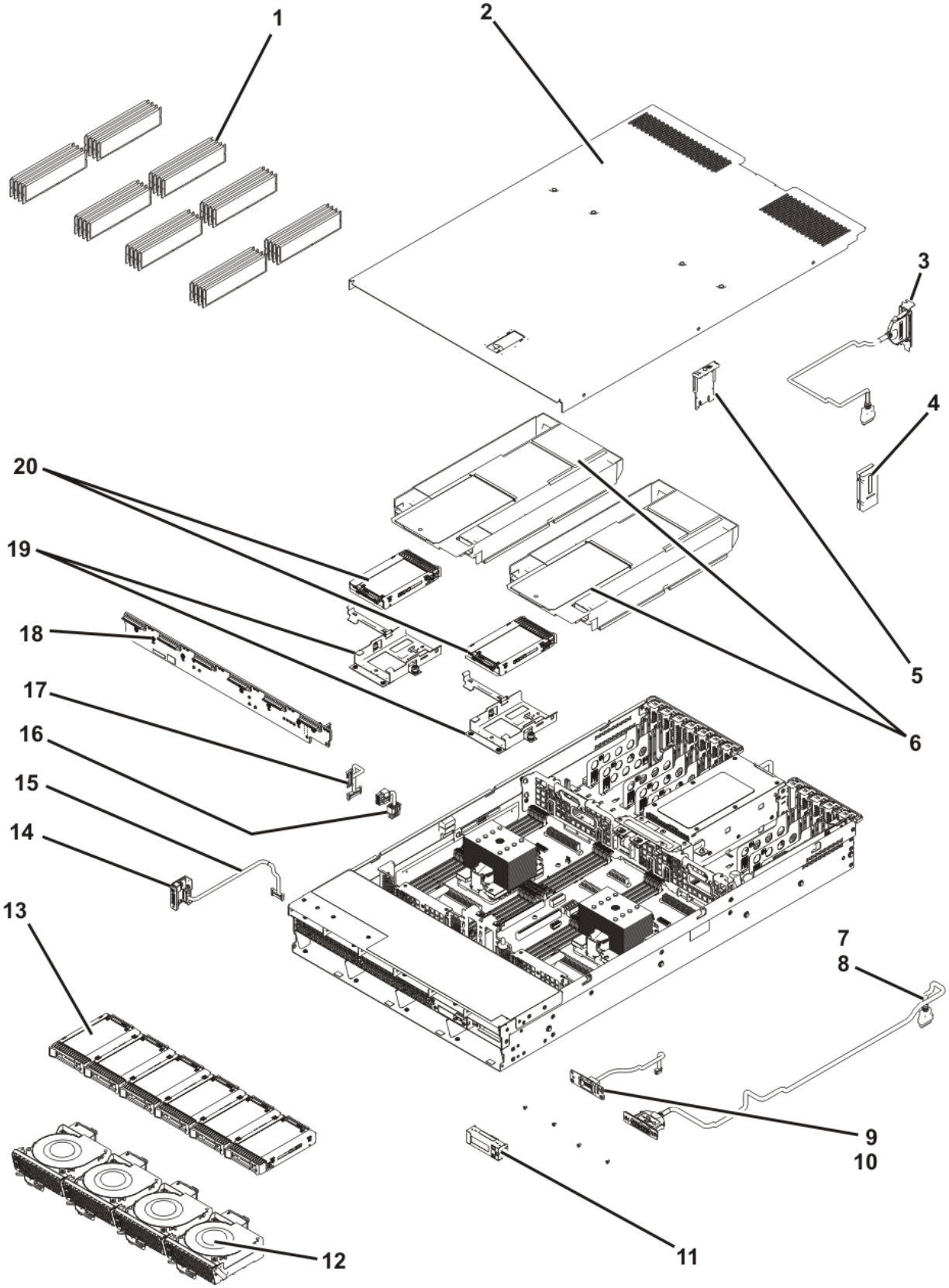

Table 25. System parts				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1	324D	78P4191	4-32	8 GB ISDIMM
	324E	78P4197	4-32	16 GB ISDIMM
	324F	78P4198	4-32	32 GB ISDIMM
	325A	78P4199	4-32	64 GB ISDIMM (8 Gb memory density)
	32BB	78P6815	4-32	64 GB ISDIMM (16 Gb memory density) **Note:** The system firmware level must be FW950.*xx*, or later.
	324C	78P4200	4-32	128 GB ISDIMM (8 Gb memory density)
	32BC	78P6925**	4-32	128 GB ISDIMM (16 Gb memory density and manufactured by SK Hynix, Inc.) **Note:** The system firmware level must be FW950.00, or later.
	32BC	78P7468**	4-32	128 GB ISDIMM (16 Gb memory density and manufactured by Samsung Electronics Co., Ltd.) **Note:** If you are installing the 128 GB ISDIMM in a new or existing configuration so that the resulting configuration will have more than half of the allowable memory module locations populated, the system firmware level must be FW950.50, or later. Otherwise, the system firmware level must be FW950.00, or later.
		01GY204	0-28	DIMM filler
2			1	Top cover assembly
3		01KL674	1	Rear USB cable and connector
4	563C	01DH178	1	Vital product data card (9008-22L)
	563A	01DH176	1	Vital product data card (9009-22A or 9223-22H)
	565C	02WG640	1	Vital product data card (5105-22E, 9009-22G, or 9223-22S)
5	6B5A	00VK519	1	Trusted platform module
6			2	Air baffles
7		01KL673	1	Front USB cable and connector
8			2	Screws
9		01ML097	1	Control panel display cable and holder
10			2	Screws
11	6B5D	00VK547	1	Control panel display
12	6B5F	01GY151	4	Fan
13			8	Disk drive. See Disk drive and solid-state drive system parts.

Table 25. System parts (continued)

Index number	CCIN	Part number	Units per assembly	Description
13	5947	01LU974	0-4	800 GB NVMe U.2 drive (9009-22G) **Note:** Supported only on the IBM i operating system.
13	5949	02YC661	0-4	800 GB NVMe U.2 drive (9009-22G or 9223-22S) **Note:** Supported only on the AIX and Linux® operating systems.
13	59B7	02YC615	0-4	800 GB NVMe U.2 drive (9009-22G or 9223-22S) **Note:** Supported only on the AIX and Linux operating systems.
13	59B8	01LU967	0-4	1600 GB NVMe U.2 drive (9009-22G or 9223-22S)
13	59B9	01LU968	0-4	3200 GB NVMe U.2 drive (9009-22G or 9223-22S)
13	59BA	01LU969	0-4	6400 GB NVMe U.2 drive (9009-22G or 9223-22S)
14	6B5C	00VK541	1	Control panel
15		01GY455	1	Control panel cable
16		01ML051	1	Disk drive backplane and NVMe backplane power cable
17		01ML052	1	Disk drive backplane and NVMe backplane signal cable
18	2D36	01DH189	1	Disk drive backplane
	2D3B	01DH247	1	NVMe drive backplane (9009-22G or 9223-22S) **Note:** The NVMe drive backplane has 4 drive connectors.
19		01GY241	2	Internal disk drive tray
20			0-2	Internal disk drive. See Disk drive and solid-state drive system parts.

** Order the same part number as the part that you are replacing.

Additional system parts

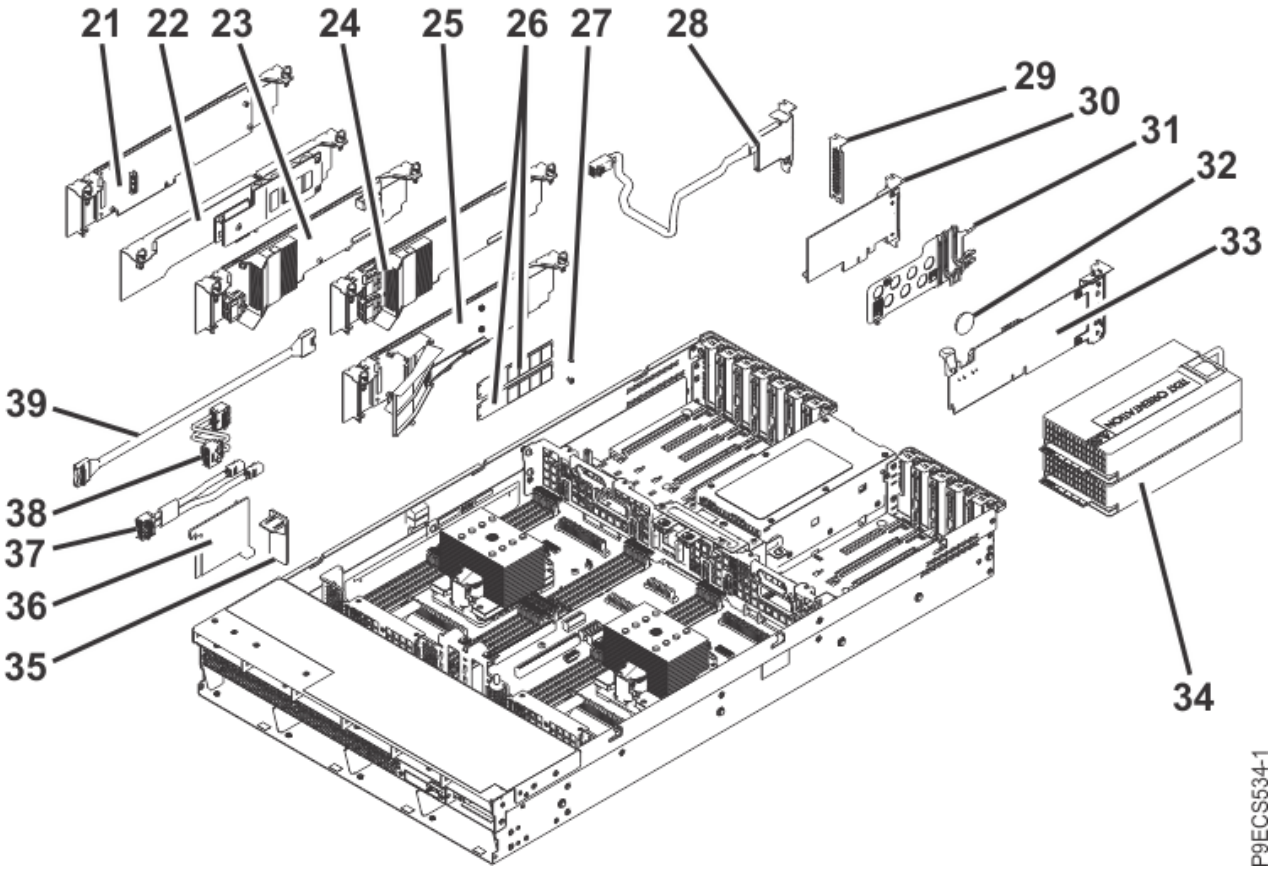

Table 26. Additional system parts				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
21		02WG645	0-2	NVMe U.2 pass-thru card (9009-22G or 9223-22S)
22	57DC		0-1	Backup power module card **Note:** The backup power module card is included with the expanded function RAID adapter (PCIe3 x8 cache SAS RAID internal adapter) part number. Replace the PCIe3 x8 cache SAS RAID internal adapter and the backup power module card together.
23	57DC	01JC780	0-1	Expanded function RAID adapter (includes backup power module card)
24	57D7	01LK399	0-2	Base function RAID adapter
25		01DH181	0-2	NVMe M.2 carrier card (9008-22L, 9009-22A, or 9223-22H)
26		00LY537	0-4	NVMe M.2 flash module (9008-22L, 9009-22A, or 9223-22H)
27			0-1	Screw
28		01ML060	0-1	Rear SAS cable and bracket
29		00E7338		Adapter filler

Table 26. Additional system parts (continued)

Index number	CCIN	Part number	Units per assembly	Description
30				Adapter. Use the feature code of the adapter to find the FRU number in Adapter information by feature code.
31		00E7333		Adapter divider
32		44V4359	1	Time-of-day battery
33	2DEA		1	Service processor card **Notes:** • For systems with system firmware level FW910.*xx*, order part number 01DH338. • For systems with system firmware level FW930.*xx* or FW940.*xx*, order part number 02PX060. • For systems with system firmware level FW941.*xx*, order part number 02AU384. • For systems with system firmware level FW950.*xx*, order part number 02PX093.
34	2B1D	03FP372	2	900 W power supply (9009-22G or 9223-22S)
	2B1E		2	1400 W or 1600 W power supply **Notes:** • For a system with 1400 W power supplies, order part number 03FP302. • For a system with 1600 W power supplies, order part number 03FP728. • 1400 W power supplies and 1600 W power supplies are not interchangeable.
35		01GY494	0-1	SAS cable slot filler
36		01GY502	0-1	SAS divider
37		01GY461	0-1	Front SAS Y cable (expanded function)
38		01GY462	0-2	Front SAS cable (base function)
39		02DE774	0-2	NVMe cable

Value
For a system with 1400 W power supplies, order part number 03FP302.

Additional system parts (continued)

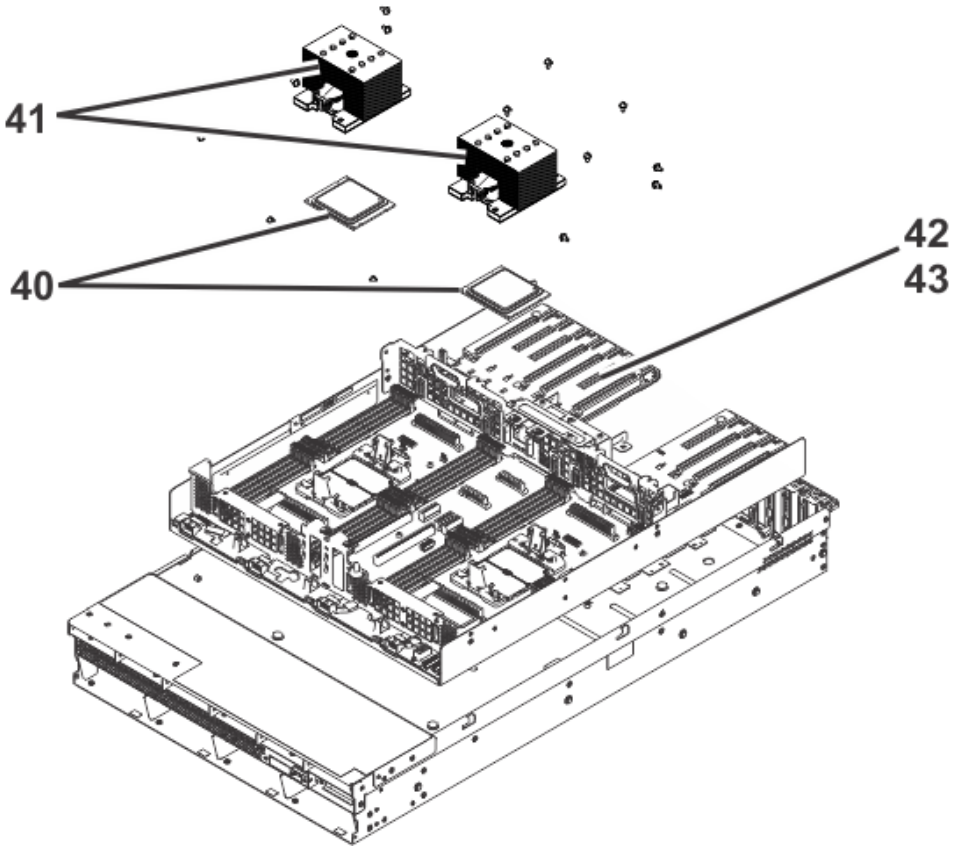

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Table 27. Additional system parts (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
40	5C22	01ML131*	1-2	System processor module kit (includes 4 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-22A or 9223-22H)
	5C3A	02DE685*	1-2	System processor module kit (includes 1-4 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) **Notes:** • The processor is a 1 core processor for the 9009-22G system with the IBM i operating system. • The processor is a 4 core processor for the 9009-22A, 9009-22G, or 9223-22H system with the AIX operating system.
	5C27	01ML127*	1-2	System processor module kit (includes 8 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9008-22L, 9009-22A, or 9223-22H)
	5C3B	02DE682*	1-2	System processor module kit (includes 8 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9008-22L, 9009-22A, 9009-22G, 9223-22H, or 9223-22S)
	5C24	01ML124*	1-2	System processor module kit (includes 10 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9008-22L, 9009-22A, or 9223-22H)
	5C3C	02DE680*	1-2	System processor module kit (includes 10 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9008-22L, 9009-22A, 9009-22G, 9223-22H, or 9223-22S)

Table 27. Additional system parts (continued) (continued)

Index number	CCIN	Part number	Units per assembly	Description
40	5C61	03FP050*	1-2	System processor module kit (includes 11 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-22A)
	5C63	03FP048*	1-2	System processor module kit (includes 11 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-22A, 9009-22G, or 9223-22S)
	5C26	01ML121*	1-2	System processor module kit (includes 12 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9008-22L)
	5C3D	02DE678**	1-2	System processor module kit (includes 12 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9008-22L or 9009-22G)
	5C3D	02FJ803**	1-2	System processor module kit (includes 12 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9223-22S)
	5C4B	02DE688*	1-2	System processor module kit (includes 20 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (5105-22E)
41		01EM317		Heat sink kit (includes heat sink, TIM, and tweezers)
42	2D36	01EK965	1	System backplane (9008-22L, 9009-22A, or 9223-22H)
	2E2C		1	System backplane (5105-22E, 9009-22G, or 9223-22S) **Notes:** • For systems with system firmware level FW941.*xx* or for systems where the firmware level is not known, order the same part number as the system backplane that you are replacing. • For systems with system firmware level FW950.00, order part number 03GM010. • For systems with system firmware level FW950.10 or later, order part number 00E5437.
43			12	Screws

* Use the CCIN of the system processor module that you are replacing to determine the correct system processor module kit to order.

** Order the same part number as the part that you are replacing.

Additional system parts for the 5105-22E

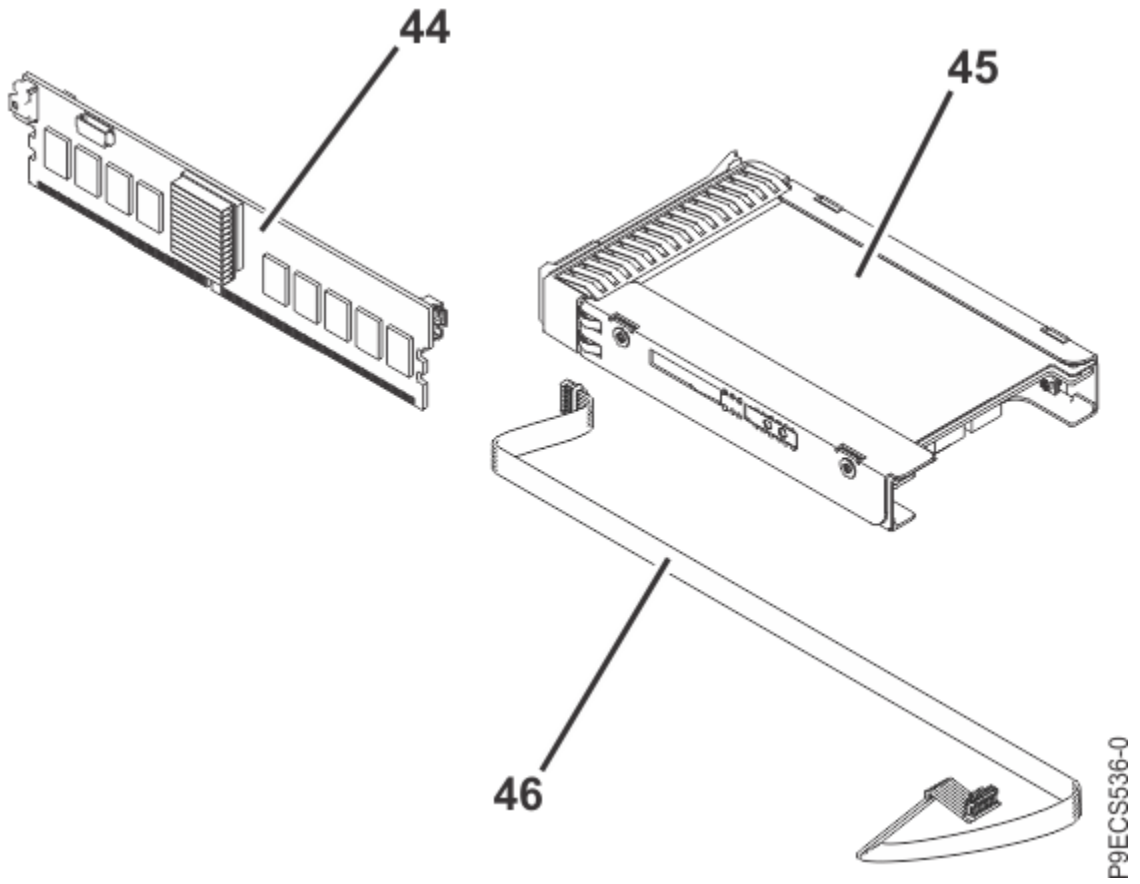

Table 28. Additional system parts for the 5105-22E				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
44	330A	78P6756	0-4	16 GB NVDIMM (5105-22E)
45		03FP003	0-2	Backup power module (BPM) for NVDIMM (5105-22E)
46		03FP027	0-4	BPM cable for NVDIMM (5105-22E)

Miscellaneous system parts

Table 29. Miscellaneous system parts		
Description	**Part number**	**Units per assembly**
Control panel display filler	01ML157	1
Disk drive backplane filler **Note:** You only need this part if you plan to use an NVMe M.2 carrier card instead of a disk drive backplane.	01ML145	1
Power signal cable	00FW701	1
Socket dust cover	01KL620	0-1

9009-41A, 9009-41G, 9009-42A, 9009-42G, 9223-42H, or 9223-42S system parts

Indexed drawings show system part numbers of each part.

Rack final assembly

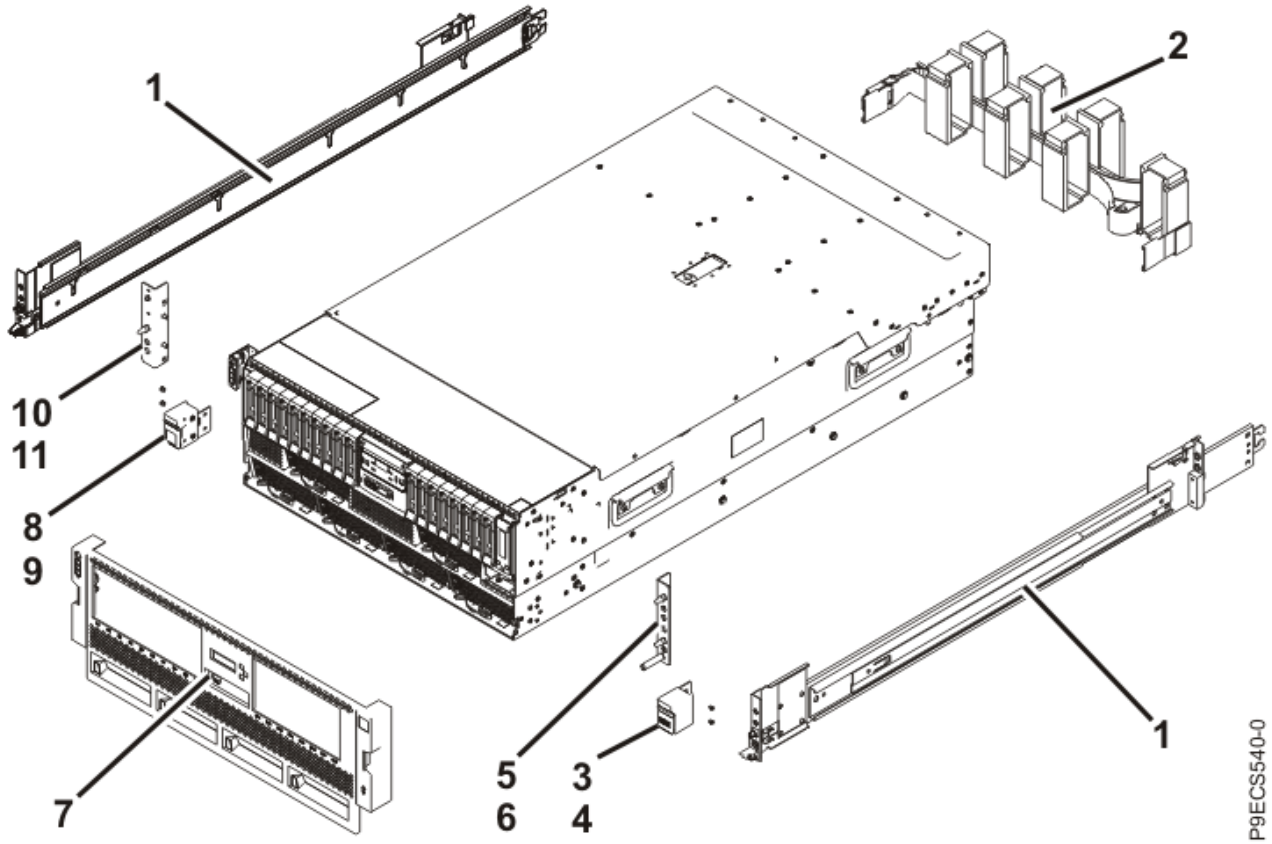

Table 30. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		01GY478		Slide rail kit - contains left and right slide rails and attaching screws
2		01GY477		Cable management arm assembly
3			1	Electronic Industries Association (EIA) latch (right)
4			2	Screws
5			1	EIA bracket (right)
6			2	Screws
7		01ML070	1	Front bezel (systems with the 18-drive disk drive backplane)
		01ML071	1	Front bezel (systems with the 12-drive disk drive backplane)
		02DE779		Front bezel (systems with the NVMe drive backplane)
8			1	EIA latch (left)

Table 30. Rack assembly part numbers (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
9			2	Screws
10			1	EIA bracket (left)
11			2	Screws

System parts

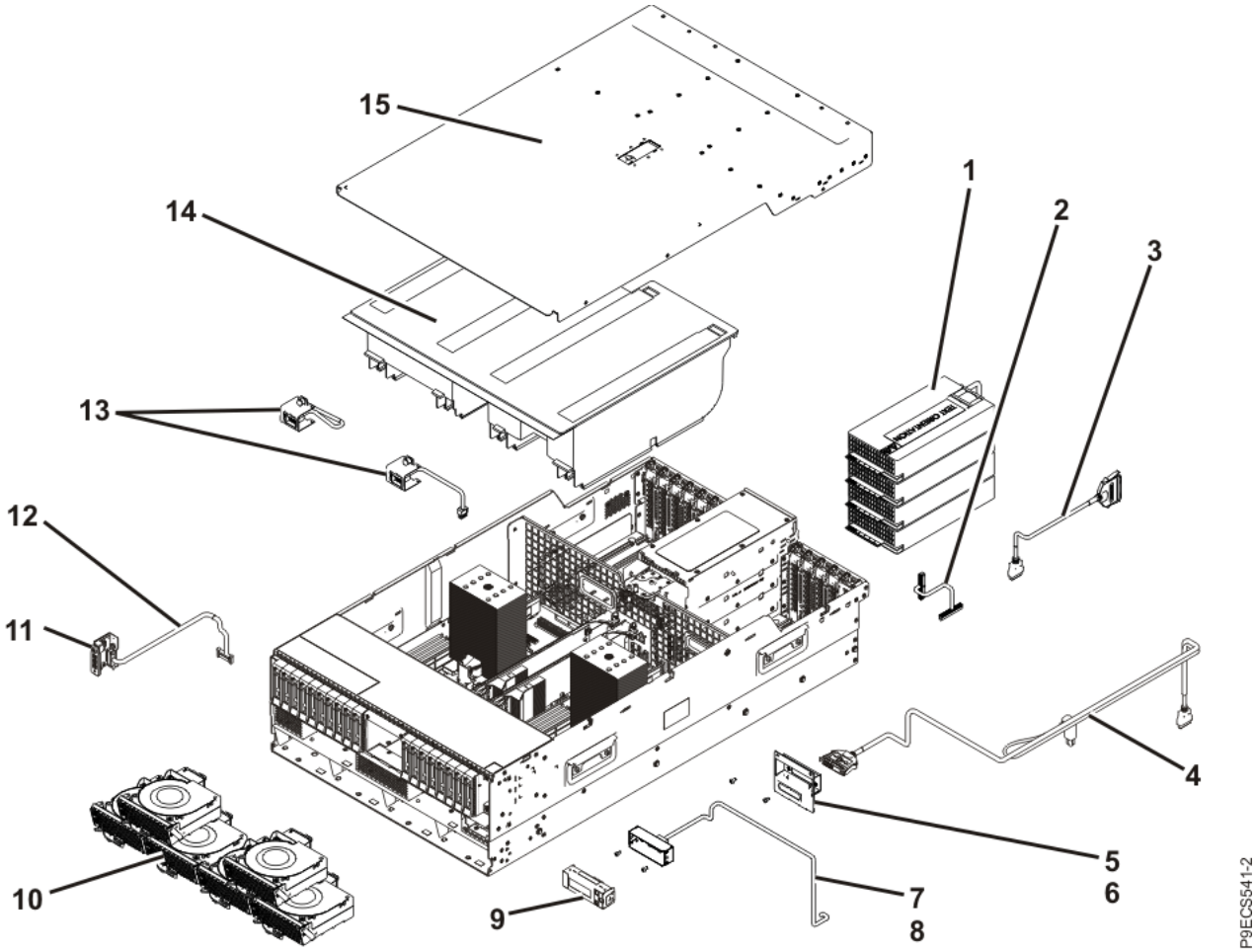

Table 31. System part numbers				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1	2B1D	01AF895	4	900 W power supply (9009-41A or 9009-41G stand-alone)
	2B1E		4	1400 W or 1600 W power supply **Notes:** • For a system with 1400 W power supplies, order part number 03FP302. • For a system with 1600 W power supplies, order part number 03FP728. • 1400 W power supplies and 1600 W power supplies are not interchangeable.
2		00FW701	1	Power signal cable
3		00E7284	1	Rear USB cable
4		01GY463	1	Front USB cable **Note:** One end of the USB cable is connected to the USB front connector and the other end of the USB cable is connected to an RDX drive (when available).
5			1	Front USB holder
6			2	Screws
7		01ML095	1	Control panel display cable (rack-mounted systems) **Note:** For the control panel display cable and holder for stand-alone systems, see Table 34 on page 97.
8			2	Screws
9	6B5D	00VK547	1	Control panel display
10	6B5F	01GY151	4-6	Fan
11	6B5C	00VK541	1	Control panel (rack-mounted systems) **Note:** For the control panel for stand-alone systems, see Table 34 on page 97.
12		01GY446	1	Control panel cable (rack-mounted systems) **Note:** For the control panel cable for stand-alone systems, see Table 34 on page 97.
13		01AF758	1	Fan cable (9009-42A, 9009-42G, 9223-42H, or 9223-42S) **Note:** The fan cable bracket is not included with the part. You must remove the fan cable bracket from the original part and install it on the replacement part.

Table 31. System part numbers (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
14				Air baffle
15			1	Top cover assembly

Additional system parts

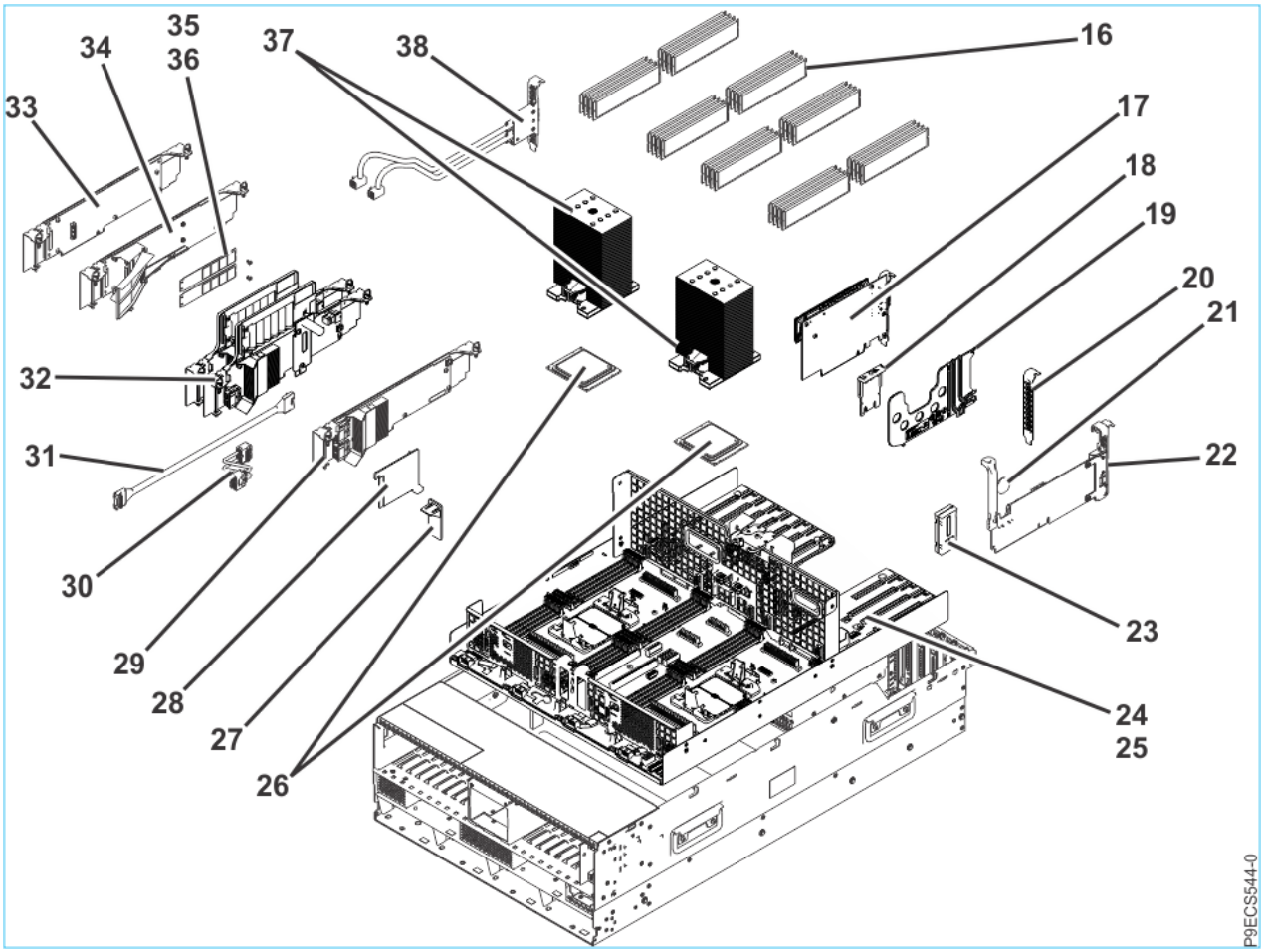

Table 32. Additional system part numbers				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
16	324D	78P4191	4-32	8 GB ISDIMM
	324E	78P4197	4-32	16 GB ISRDIMM
	324F	78P4198	4-32	32 GB ISDIMM
	325A	78P4199	4-32	64 GB ISDIMM (8 Gb memory density)
	32BB	78P6815	4-32	64 GB ISDIMM (16 Gb memory density) **Note:** The system firmware level must be FW950.*xx*, or later.
	324C	78P4200	4-32	128 GB ISDIMM (8 Gb memory density)
	32BC	78P6925**	4-32	128 GB ISDIMM (16 Gb memory density and manufactured by SK Hynix, Inc.) **Note:** The system firmware level must be FW950.00, or later.
	32BC	78P7468**	4-32	128 GB ISDIMM (16 Gb memory density and manufactured by Samsung Electronics Co., Ltd.) **Note:** If you are installing the 128 GB ISDIMM in a new or existing configuration so that the resulting configuration will have more than half of the allowable memory module locations populated, the system firmware level must be FW950.50, or later. Otherwise, the system firmware level must be FW950.00, or later.
		01GY204	0-28	DIMM filler
17				Adapter. Use the feature code of the adapter to find the FRU number in Adapter information by feature code.
18	6B5A	00VK519	1	Trusted platform module
19				Adapter divider
21		44V4359	1	Time-of-day battery
22	2DEA		1	Service processor card **Notes:** • For systems with system firmware level FW910.*xx*, order part number 01DH043. • For systems with system firmware level FW930.*xx* or FW940.*xx*, order part number 02PX057. • For systems with system firmware level FW941.*xx*, order part number 02AU381. • For systems with system firmware level FW950.*xx*, order part number 02PX090.
23	562E	01DH177	1	Vital product data card (9009-41A)
	562F	01DH175	1	Vital product data card (9009-42A or 9223-42H)
	565A	02WG637	1	Vital product data card (9009-41G)
	565B	02WG638	1	Vital product data card (9009-42G or 9223-42S)

Table 32. Additional system part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
24	2E23	01EK966	1	System backplane (9009-41A)
	2E24	01EK943	1	System backplane (9009-42A or 9223-42H)
	2E2A		1	System backplane (9009-41G) **Notes:** • For systems with system firmware level FW941.*xx* or for systems where the firmware level is not known, order the same part number as the system backplane that you are replacing. • For systems with system firmware level FW950.00, order part number 03GM016. • For systems with system firmware level FW950.10 or later, order part number 00E5443.
	2E2B		1	System backplane (9009-42G or 9223-42S) **Notes:** • For systems with system firmware level FW941.*xx* or for systems where the firmware level is not known, order the same part number as the system backplane that you are replacing. • For systems with system firmware level FW950.00, order part number 03GM001. • For systems with system firmware level FW950.10 or later, order part number 00E5430.
25			13-14	Screws **Note:** 9009-41A and 9009-41G systems have 13 screws. 9009-42A, 9009-42G, 9223-42H, and 9223-42S systems have 14 screws.

Table 32. Additional system part numbers (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
26	5C22	01ML131*	1	System processor module kit (includes 4 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-41A)
	5C3A	02DE685*	1	System processor module kit (includes 4 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-41A or 9009-41G)
	5C23	01ML130*	1	System processor module kit (includes 6 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-41A)
	5C3E	02DE684*	1	System processor module kit (includes 6 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-41A or 9009-41G)
	5C31	01ML128*	1	System processor module kit (includes 8 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-41A)
	5C3F	02DE683*	1	System processor module kit (includes 8 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-41A or 9009-41G)
	5C28	01ML126*	1-2	System processor module kit (includes 8 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42A or 9223-42H rack assembly only)
	5C40	02DE681*	1-2	System processor module kit (includes 8 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42A, 9009-42G, 9223-42H, or 9223-42S rack assembly only)
	5C25	01ML123*	1-2	System processor module kit (includes 10 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42A or 9223-42H rack assembly only)
	5C41	02DE679*	1-2	System processor module kit (includes 10 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42A, 9009-42G, 9223-42H, or 9223-42S rack assembly only)

Table 32. Additional system part numbers (continued)

Index number	CCIN	Part number	Units per assembly	Description
26	5C60	03FP049*	1-2	System processor module kit (includes 11 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42A rack assembly only)
	5C62	03FP047*	1-2	System processor module kit (includes 11 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42A, 9009-42G, or 9223-42S rack assembly only)
	5C29	01ML120*	1-2	System processor module kit (includes 12 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42A or 9223-42H rack assembly only)
	5C42	02DE677**	1-2	System processor module kit (includes 12 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42A, 9009-42G, 9223-42H, or 9223-42S rack assembly only)
	5C42	02FJ802**	1-2	System processor module kit (includes 12 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump) (9009-42G rack assembly only)
27				SAS cable slot filler
28				SAS divider
29	57D7	01LK399	1-2	Base function RAID adapter
30		01ML061	0-2	Front SAS cable
31		02DE775	0-2	NVMe cable
32	57D8	01JC773	2	Expanded function RAID adapter (includes backup power module card)
33		02WG645	0-2	NVMe U.2 pass-thru card (9009-41G, 9009-42G, or 9223-42S)
34		01DH181	0-2	NVMe M.2 carrier card (9009-41A, 9009-42A, or 9223-42H)
35		00LY537	0-4	NVMe M.2 flash module (9009-41A, 9009-42A, or 9223-42H)
36			0-4	Screws
37		02CL474	2	Heat sink kit (includes heat sink, TIM, and tweezers)
38		01AF778	1	Rear SAS cable and bracket

* Use the CCIN of the system processor module that you are replacing to determine the correct system processor module kit to order.

** Order the same part number as the part that you are replacing.

Disk drives and disk drive backplanes

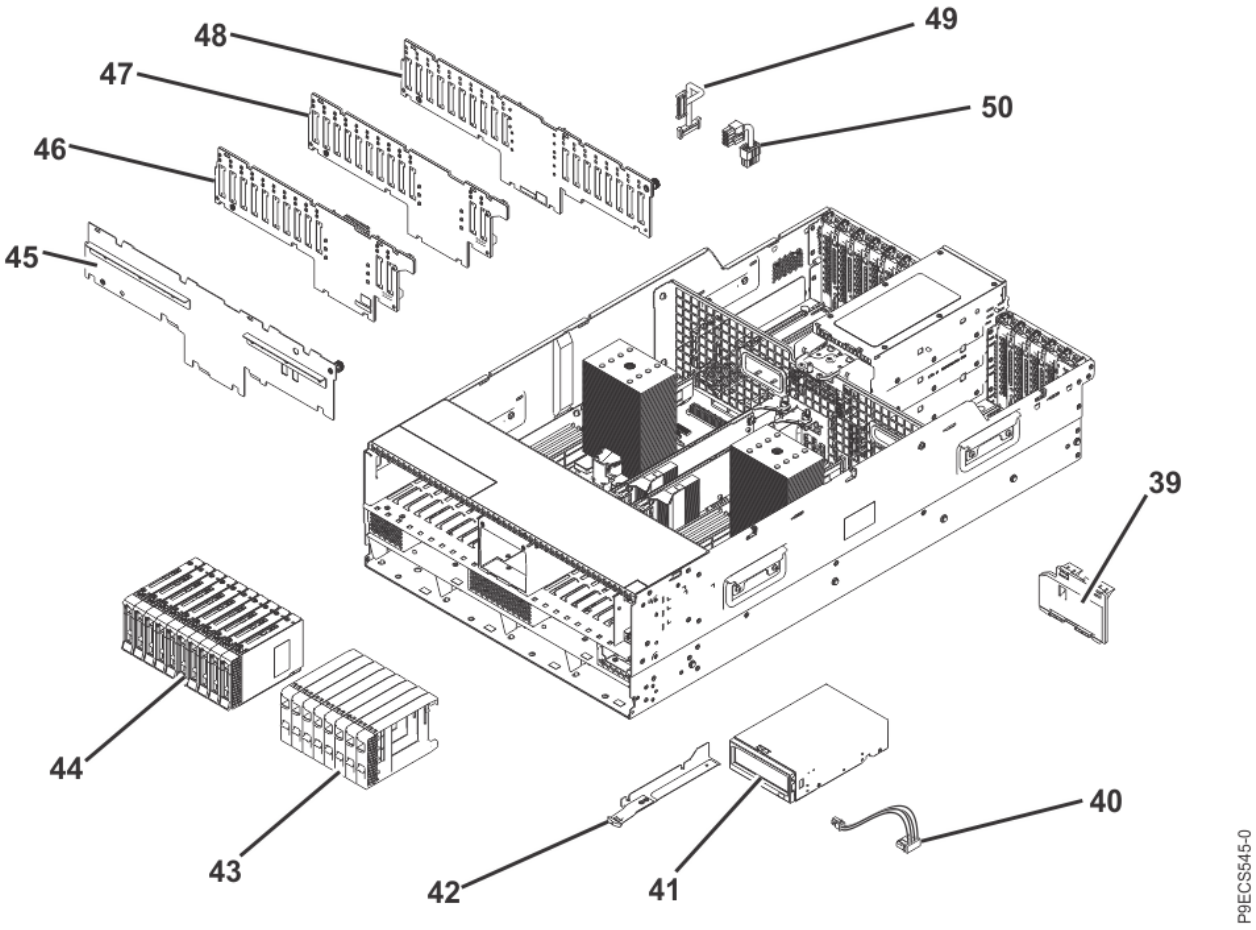

Table 33. Disk drives and disk drive backplanes				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
39			0-1	RDX docking station filler
40		01GY348	0-1	RDX docking station power cable
41		46C2444	0-1	RDX docking station
42		01GY411	0-1	RDX docking station latch
43		01ML137	0-17	Disk drive or NVMe drive filler
44			1-18	Disk drive. See Disk drive and solid-state drive system parts.
44	5947	01LU974	0-4	800 GB NVMe U.2 drive (9009-41G or 9009-42G) **Note:** Supported only on the IBM i operating system.
44	5949	02YC661	0-4	800 GB NVMe U.2 drive (9009-41G, 9009-42G, or 9223-42S) **Note:** Supported only on the AIX and Linux operating systems.

Table 33. Disk drives and disk drive backplanes (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
44	59B7	02YC615	0-4	800 GB NVMe U.2 drive (9009-41G, 9009-42G, or 9223-42S) **Note:** Supported only on the AIX and Linux operating systems.
44	59B8	01LU967	0-4	1600 GB NVMe U.2 drive (9009-41G, 9009-42G, or 9223-42S)
44	59B9	01LU968	0-4	3200 GB NVMe U.2 drive (9009-41G, 9009-42G, or 9223-42S)
44	59BA	01LU969	0-4	6400 GB NVMe U.2 drive (9009-41G, 9009-42G, or 9223-42S)
45		01ML146	1	Disk drive backplane filler **Note:** You only need this part if you plan to use an NVMe M.2 carrier card instead of a disk drive backplane.
46	2D34	01DH379	1	12-drive base function disk drive backplane **Note:** This backplane supports split disk storage.
47	6B64	01DH486	1	12-drive expanded function disk drive backplane **Note:** This backplane supports high function RAID storage; and the tape drive (RDX) bay is included.
	2D3A	01DH294	1	NVMe drive backplane (9009-41G, 9009-42G, or 9223-42S) **Note:** • The NVMe backplane has 10 drive connectors. • The NVMe backplane supports 4 NVMe U.2 drives or 6 disk drives and 2 NVMe U.2 drives.
48	2D35	01DH407	1	18-drive expanded function disk drive backplane **Note:** This backplane supports high function RAID storage; however, the tape drive (RDX) bay is not included.
49		01ML053	1	Disk drive backplane and NVMe backplane signal cable
50		01GY452	1	Disk drive backplane and NVMe backplane power cable

Miscellaneous system parts

Table 34. Miscellaneous system parts			
Description	**CCIN**	**Part number**	**Units per assembly**
Control panel display filler		01ML057	1

Table 34. Miscellaneous system parts (continued)			
Description	**CCIN**	**Part number**	**Units per assembly**
Control panel display cable filler (stand-alone systems)		01ML159	1
Control panel (stand-alone systems)	6B5C	00VK560	1
Control panel cable (stand-alone systems)		01ML059	1
Control panel display cable and holder (stand-alone systems)		01ML096	1
Socket dust cover		01KL620	0-1
Tower cover, left (stand-alone systems)		01ML076	1
Tower cover, right (stand-alone systems)		01ML106	1
Tower door (stand-alone systems with the 12-drive disk drive backplane or the 18-drive disk drive backplane)		01ML085	1
Tower door (stand-alone systems with the NVMe drive backplane)		02CL835	1

9040-MR9 system parts

Use this information to locate and identify common hardware parts.

Rack final assembly

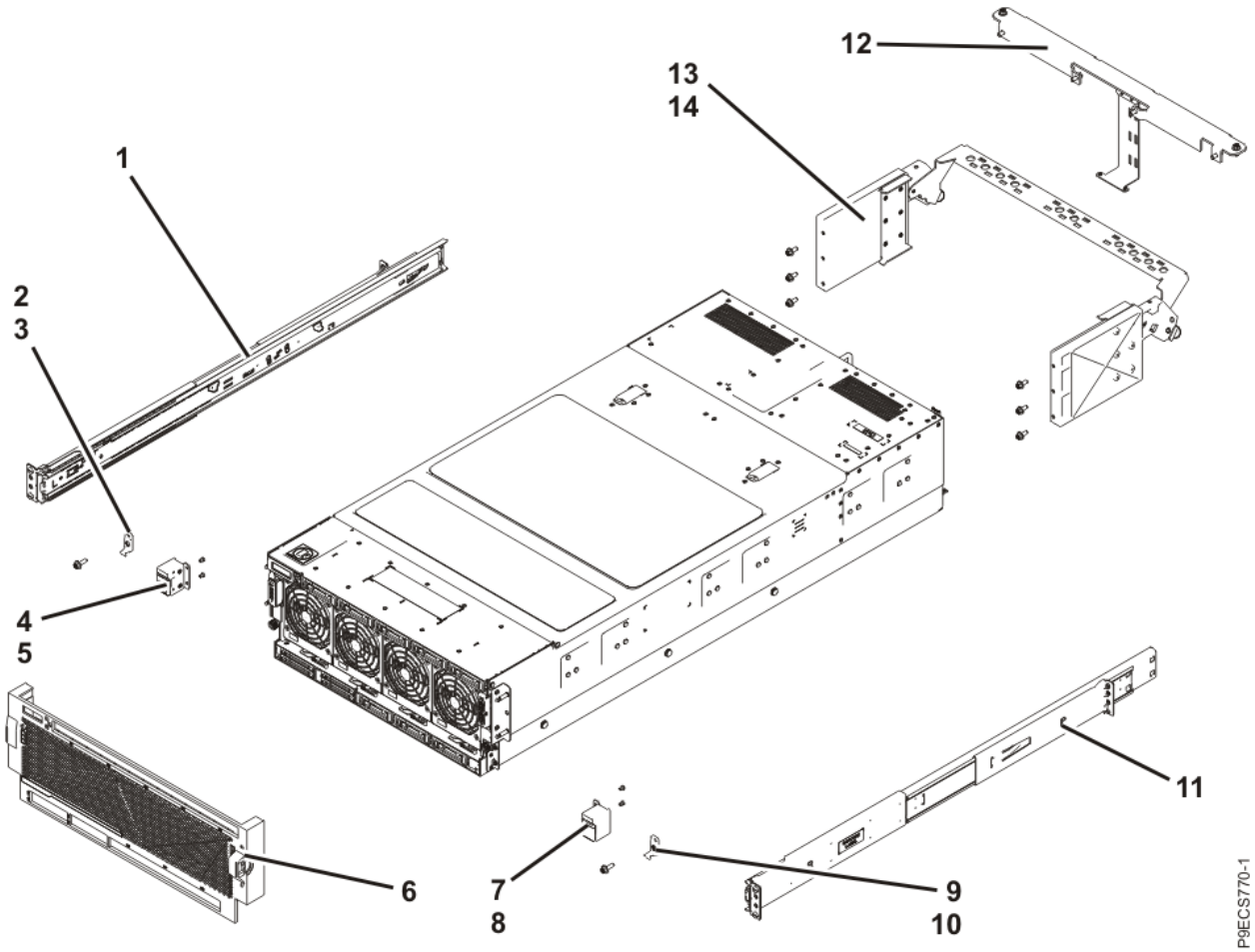

Figure 38. Rack final assembly

Table 35. Rack assembly part numbers

Index number	CCIN	Part number	Units per assembly	Description
1		01ML385	1	Slide rail kit - contains left slide rail and attaching screws
2			1	EIA bracket (left)
3			1	Screw
4			1	EIA latch (left)
5			2	Screws
6		02EC494	1	Front cover (9040-MR9)
6		02EC495	1	Front cover (OEM)
7			1	EIA latch (right)
8			2	Screws

Table 35. Rack assembly part numbers (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
9			1	EIA bracket (right)
10			1	Screw
11		01ML386	1	Slide rail kit - contains right slide rail and attaching screws
12			1	Bracket
13			1	Cable management bracket
14			6	Screws

System parts

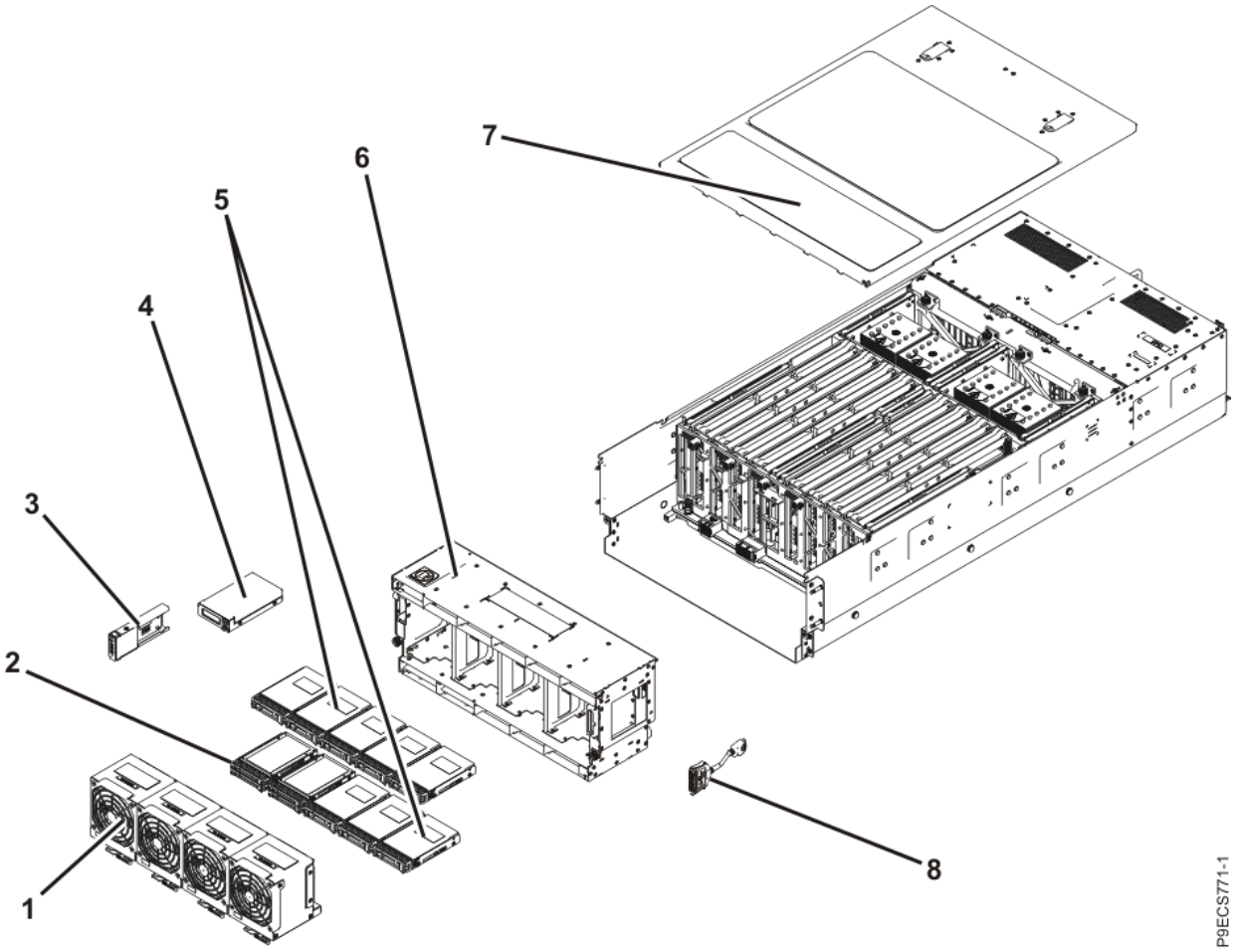

Figure 39. System parts

Table 36. System parts				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1		01PP186	4	Fan
2	5948	02YC660	0-4	800 GB NVMe U.2 drive

Table 36. System parts (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
2	59B4	01LU763	0-4	800 GB NVMe U.2 drive
2	59B5	01LU764	0-4	1600 GB NVMe U.2 drive
2	59B6	01LU765	0-4	3200 GB NVMe U.2 drive
3	2E27	01PP147		Control panel
4	6B7B	01KV551	1	Control panel display
5			0-8	Disk drive assembly. See Disk drive and solid-state drive system parts.
6	2D37	02EA635	1	Base function disk drive backplane
6	2D38	02EA636	1	Expanded function disk drive backplane
7			1	Top cover assembly
8		00E7283	1	Front USB cable

Additional system parts

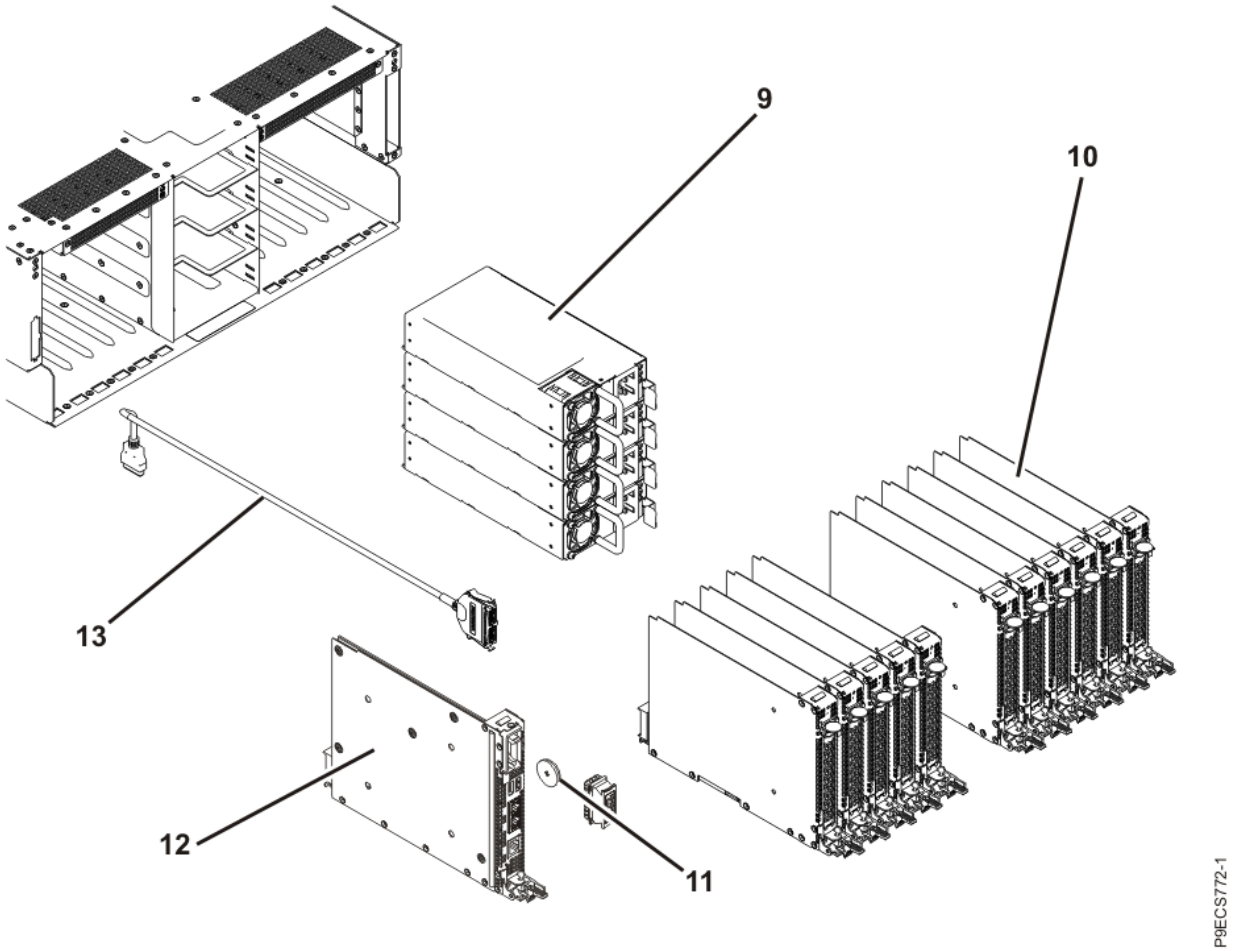

Figure 40. Additional system parts

Table 37. Additional system parts				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
9	51DE	00RY772	4	Power® supply
10			11	Adapter. Use the feature code of the adapter to find the FRU number in Adapter information by feature code.
		00DE173	11	Adapter cassette
11		02EC736	1	Time-of-day battery
12	2DEC	00DE031	1	Service processor card
13		02EC880	1	Rear USB cable

Additional system parts (continued)

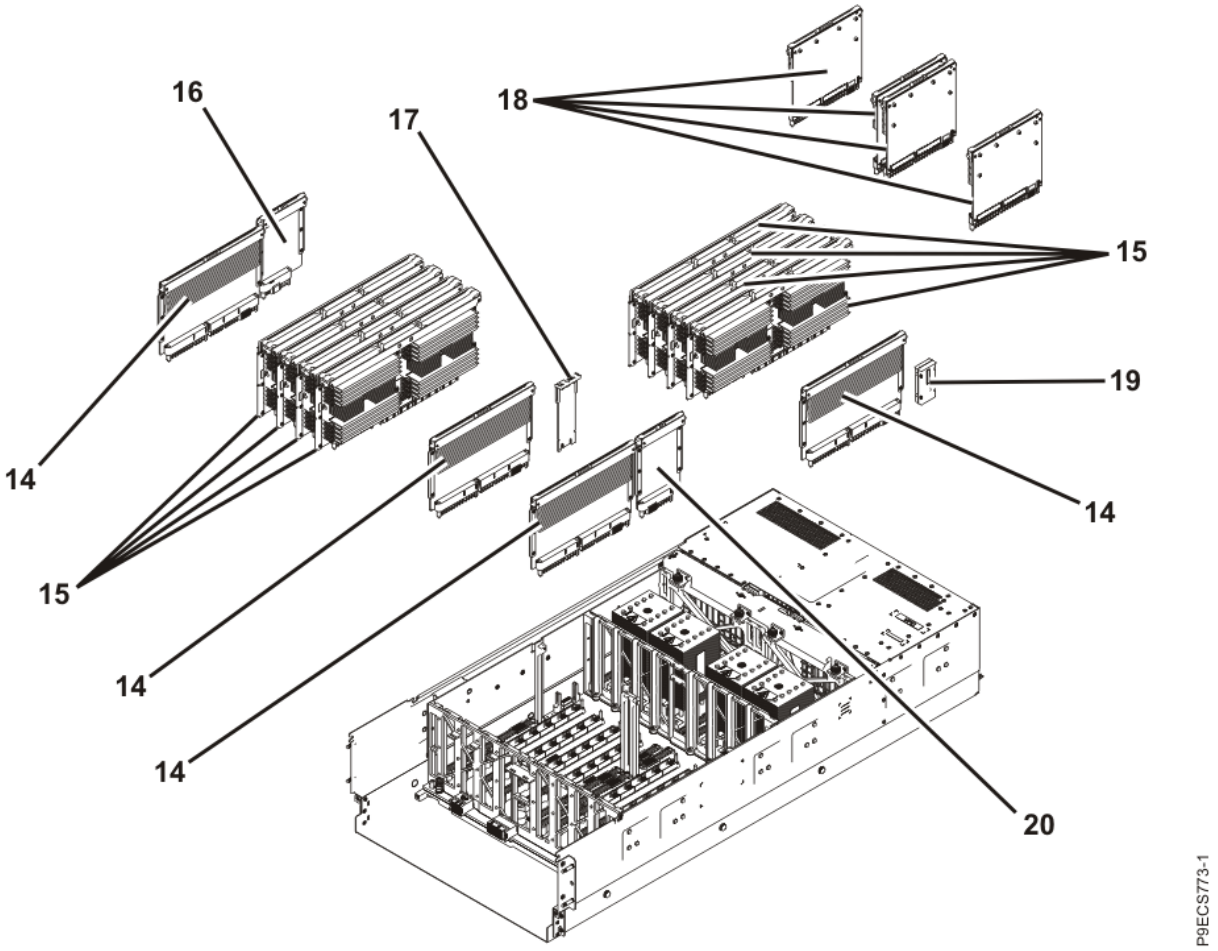

Figure 41. Additional system parts (continued)

Table 38. Additional system parts (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
14	51E1	01EL709	4	Memory voltage regulator module
15	2C62	02EA865	8	Memory module riser card

Table 38. Additional system parts (continued) (continued)

Index number	CCIN	Part number	Units per assembly	Description
15	324D	78P4191	0-28	8 GB ISDIMM
	324E	78P4197	0-28	16 GB ISDIMM
	324F	78P4198	0-28	32 GB ISDIMM
	325A	78P4199	0-28	64 GB ISDIMM (8 Gb memory density)
	32BB	78P6815	0-28	64 GB ISDIMM (16 Gb memory density) **Note:** The system firmware level must be FW950.*xx*, or later.
	324C	78P4200	0-28	128 GB ISDIMM (8 Gb memory density)
	32BC	78P6925**	0-28	128 GB ISDIMM (16 Gb memory density and manufactured by SK Hynix, Inc.) **Note:** The system firmware level must be FW950.00, or later.
	32BC	78P7468**	0-28	128 GB ISDIMM (16 Gb memory density and manufactured by Samsung Electronics Co., Ltd.) **Note:** If you are installing the 128 GB ISDIMM in a new or existing configuration so that the resulting configuration will have more than half of the allowable memory module locations populated, the system firmware level must be FW950.50, or later. Otherwise, the system firmware level must be FW950.00, or later.
16	51E3	01EL712	1	Standby voltage regulator module
17	2DEE	01KV813	1	Trusted platform module card
18	51E0	01EL708	4	Processor voltage regulator module
19	563F	01DH220	1	Vital product data card
20	51E2	01EL711	1	I/O voltage regulator module

** Order the same part number as the part that you are replacing.

Additional system parts (concluded)

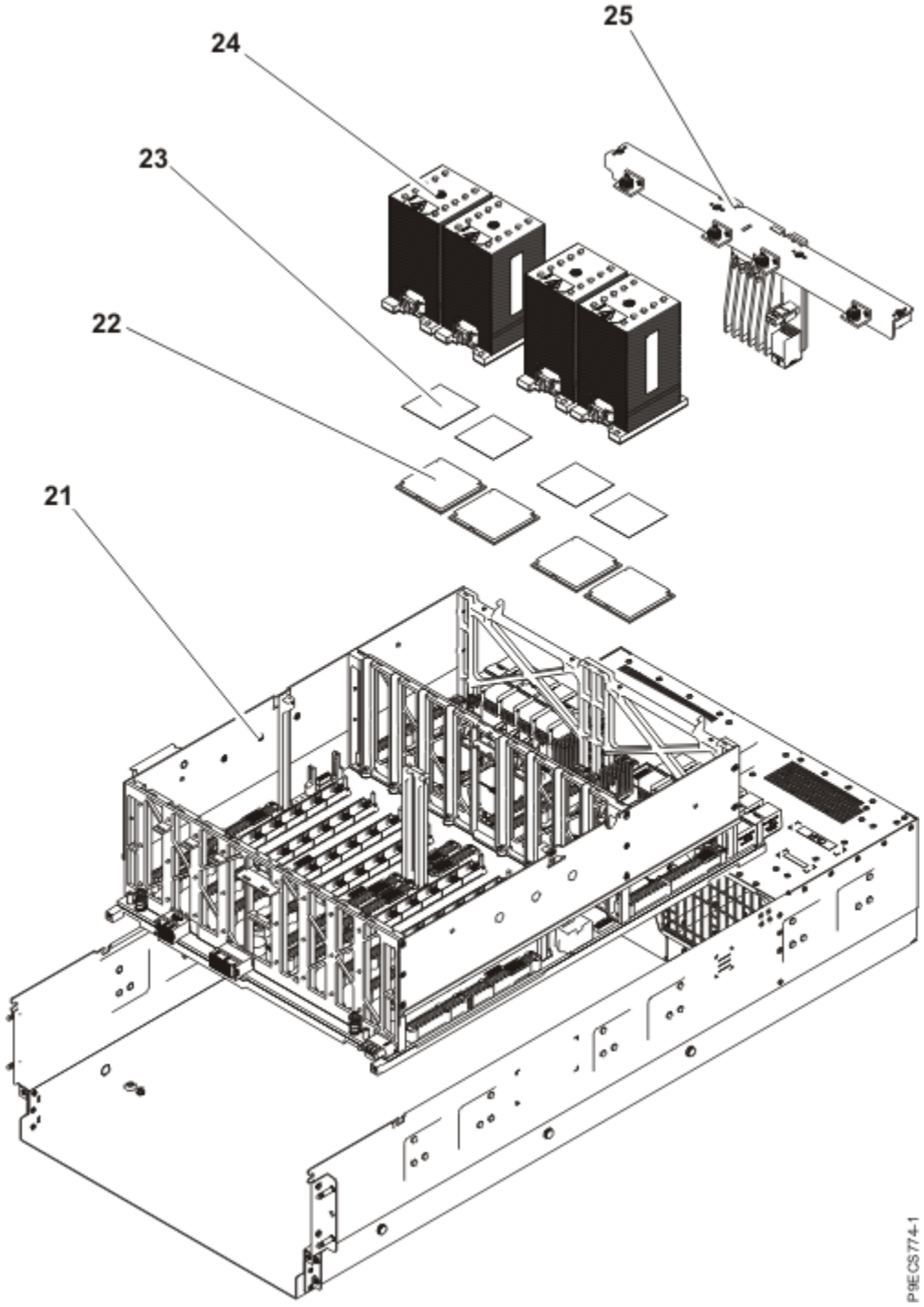

Figure 42. Additional system parts (concluded)

Table 39. Additional system parts (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
21	C110	00DE209	1	System backplane

Table 39. Additional system parts (continued) (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
22	5C34	01PP547* or 02CL950	4	System processor module kit (includes 8 core 3.5 GHz processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
	5C37	01PP544* or 02CL949	4	System processor module kit (includes 10 core 3.4 GHz processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
	5C45	02EC285* or 02CL948	4	System processor module kit (includes 11 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
	5C38	01PP543* or 02CL947	4	System processor module kit (includes 12 core 3.31GHz processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
23		01EL446	4	Thermal interface material
24		01PP198	4	Heat sink kit (includes thermal interface material and removal tool)
25	2C63	01EL719	1	Power midplane card and bulkhead

* If your system firmware level is earlier than FW920.10, you must order the part number that is indicated by the asterisk sign.

Miscellaneous system parts

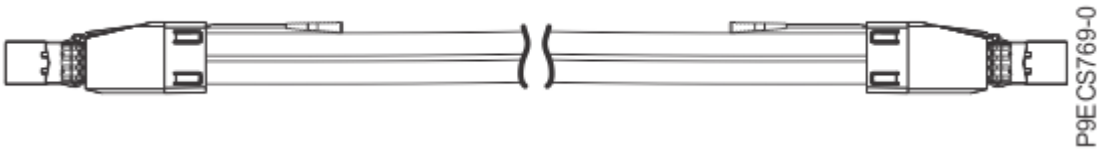

Figure 43. HD SAS AA12 narrow connector cable, SAS adapter to SAS adapter

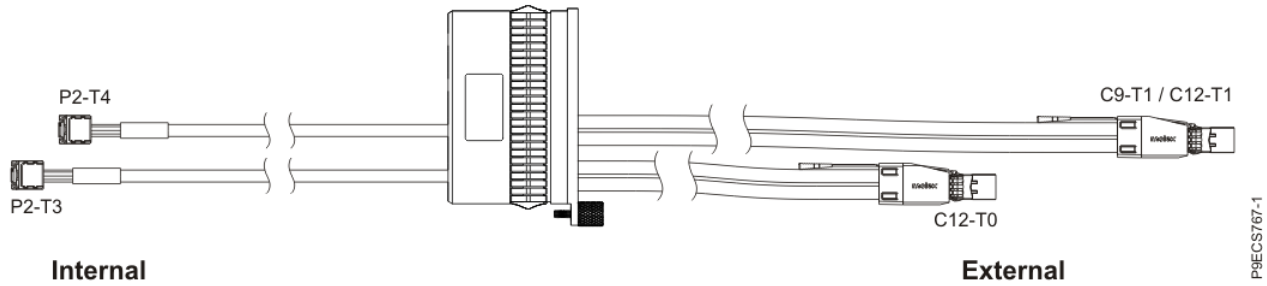

Figure 44. 2-wire SAS AZ cable

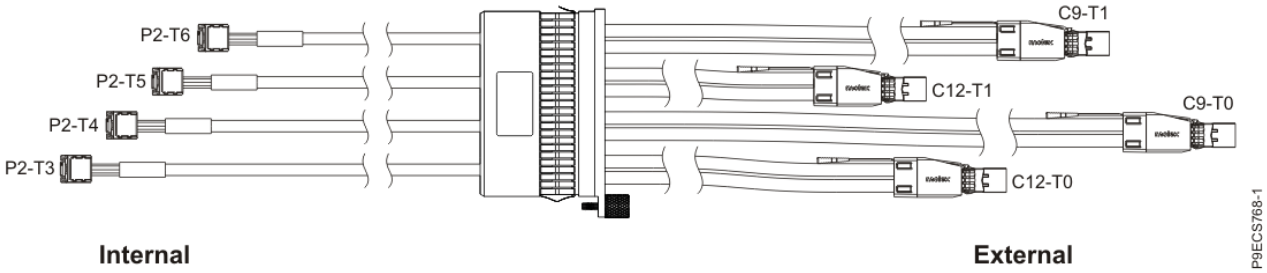

Figure 45. 4-wire SAS AZ4 cable

Table 40. Miscellaneous system parts		
Description	**CCIN**	**Part number**
0.6-meter HD SAS AA12 narrow connector cable, SAS adapter to SAS adapter		01AF505
2-wire SAS AZ cable		02EA757
4-wire SAS AZ4 cable		02EA758

9080-M9S system parts

Use this information to locate and identify common hardware parts.

Rack final assembly (system control unit)

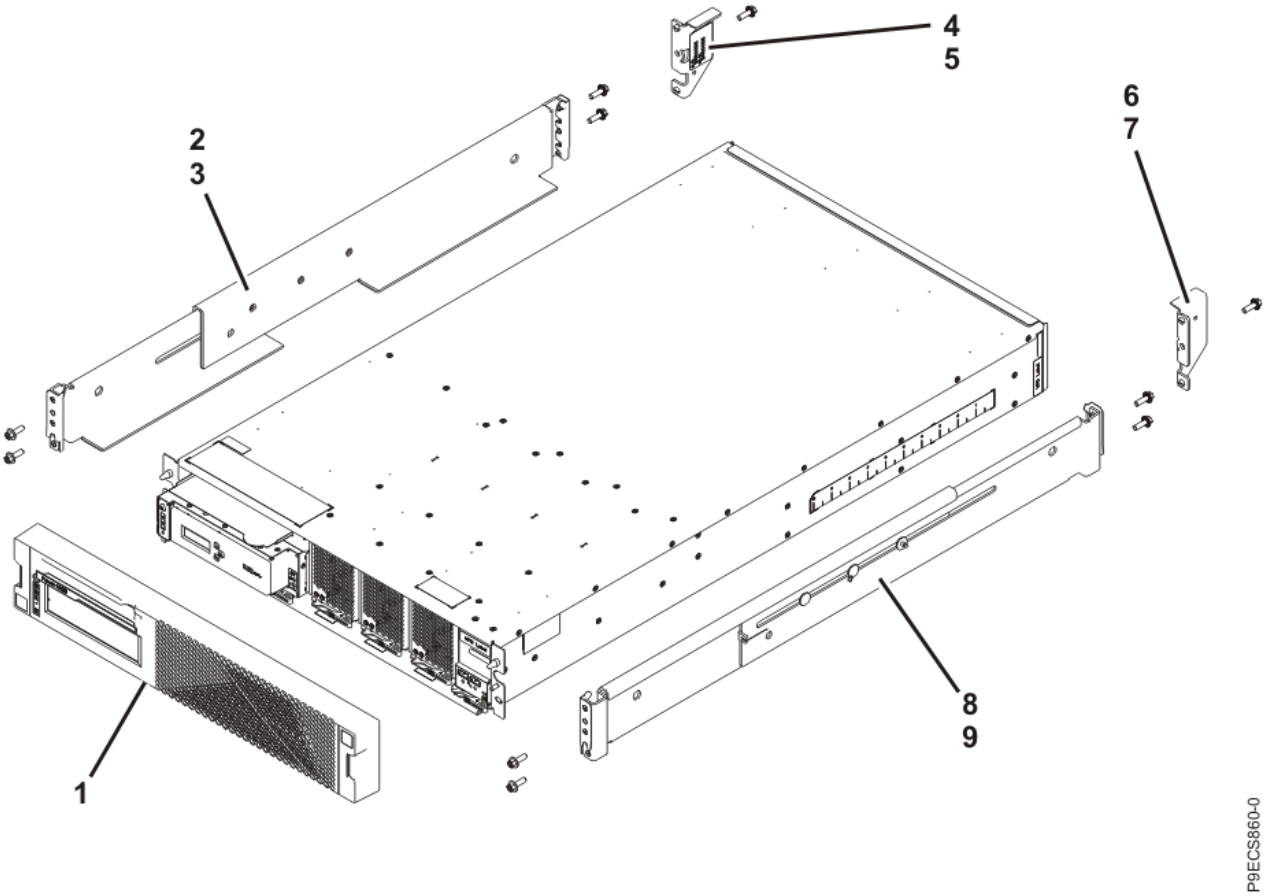

Figure 46. Rack final assembly (system control unit)

Table 41. Rack assembly part numbers (system control unit)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1		02DE544	1	Front cover
1		02DE546	1	Front cover (OEM)
2		01KL470	1	Fixed rail kit - contains left and right slide rails and attaching screws
3			4	Screws
4				Hold down bracket
5			1	Screw
6				Hold down bracket
7			1	Screw
8		39J5189	1	Fixed rail kit - contains left and right slide rails and attaching screws (factory-integrated)
9			4	Screws

System control unit parts (accessed from the front of the system control unit)

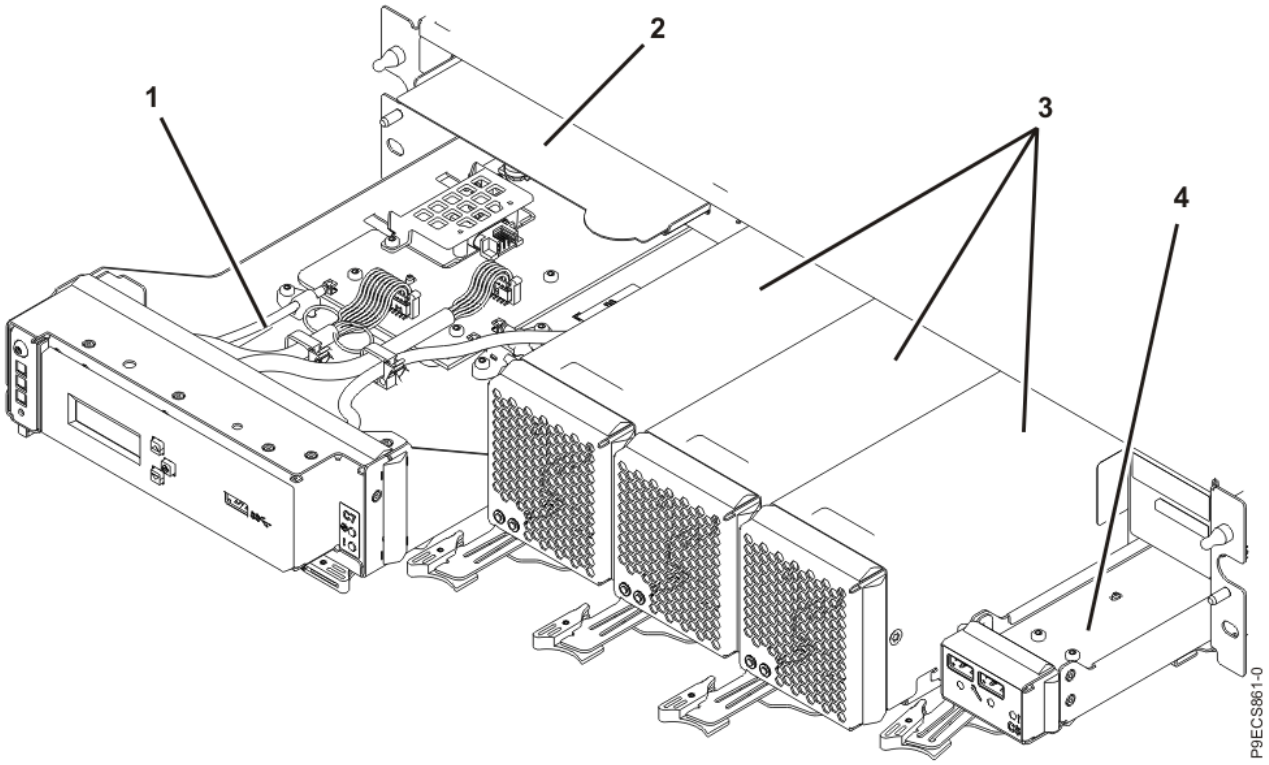

Figure 47. System control unit parts (accessed from the front of the system control unit)

Table 42. System control unit parts (accessed from the front of the system control unit)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1	6B78	01DH429	1	Control panel

Table 42. System control unit parts (accessed from the front of the system control unit) (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
2		01ML352	1	Front service card
3	6B43	01KL829	3	Fan
4	564A	01DH213	1	Vital product data (VPD) card

System control unit parts (accessed from the rear of the system control unit)

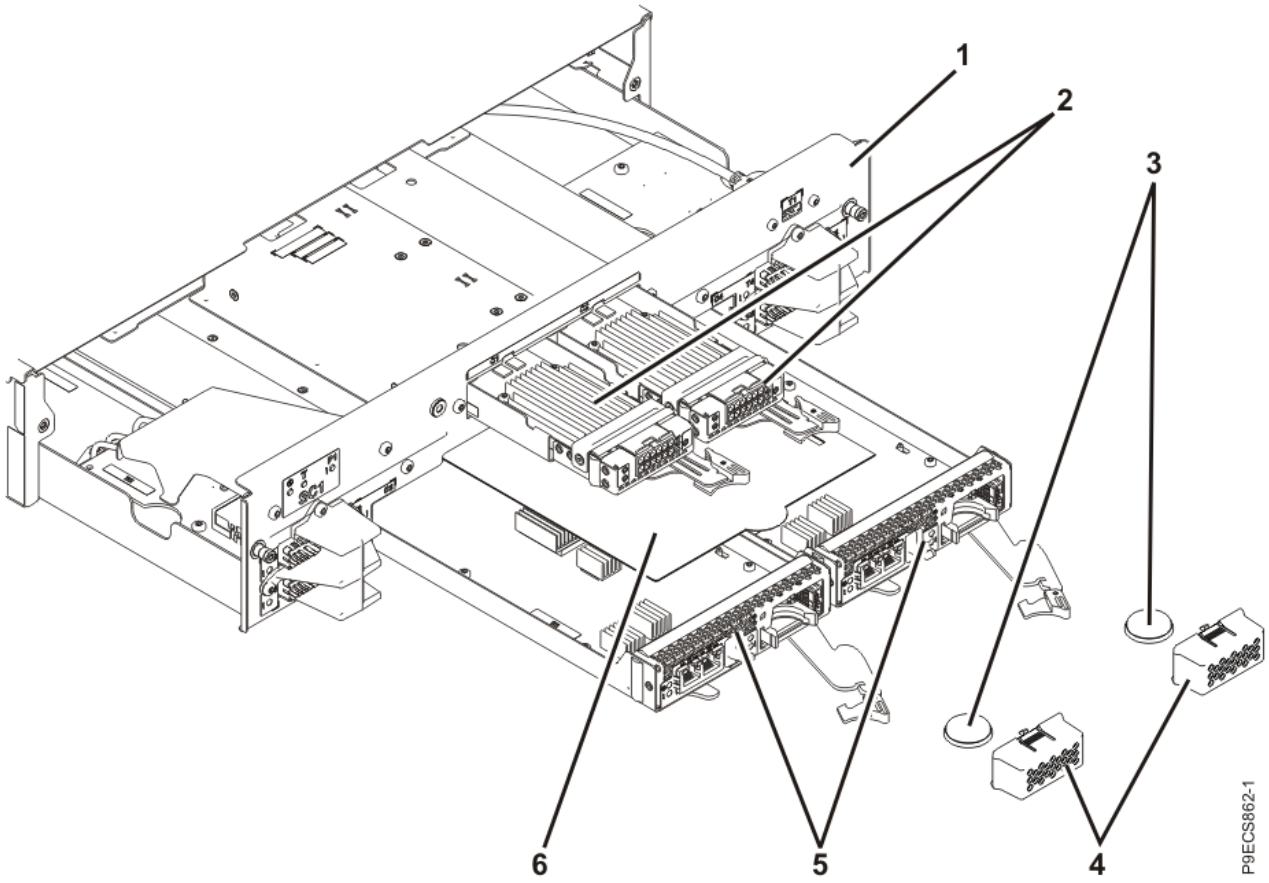

Figure 48. System control unit parts (accessed from the rear of the system control unit)

Table 43. System control unit parts (accessed from the rear of the system control unit)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1	6B76	00VK497	1	System backplane
2	6B79	00VK607	1-2	Power interface card
3		74Y9628	2	Time-of-day battery
4			2	Cover for time-of-day battery
5	2E05	01DH416	1-2	Service processor card
6		01ML353	1-2	Rear service card

Rack final assembly (system node)

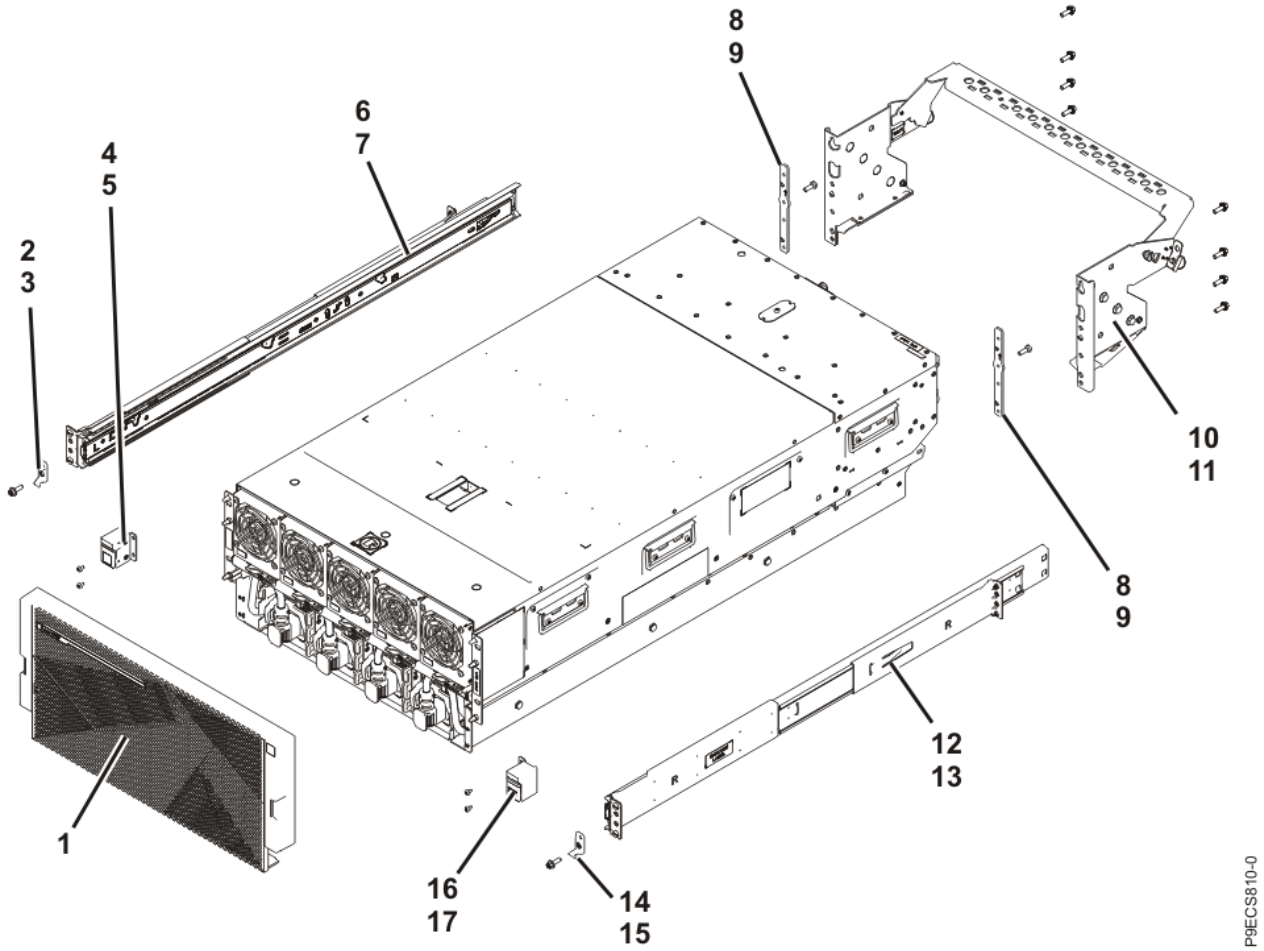

Figure 49. Rack final assembly (system node)

Table 44. Rack assembly part numbers (system node)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1		02DE547	1	Front cover
1		02DE549	1	Front cover (OEM)
2			1	EIA bracket (left)
3			1	Screw
4		01ML643	1	EIA latch (left)
5			2	Screw
6		02AU422	1	Slide rail kit - contains left and right slide rails and attaching screws
7				Screw
8			2	Stiffener plate
9			2	Screw
10			1	Cable management bracket
11			8	Screw

Table 44. Rack assembly part numbers (system node) (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
12		02AU422	1	Slide rail kit - contains left and right slide rails and attaching screws
13				Screw
14			1	EIA bracket (right)
15			1	Screw
16		01ML639	1	EIA latch (right)
17			1	Screw

System node parts (accessed from the front of the system node)

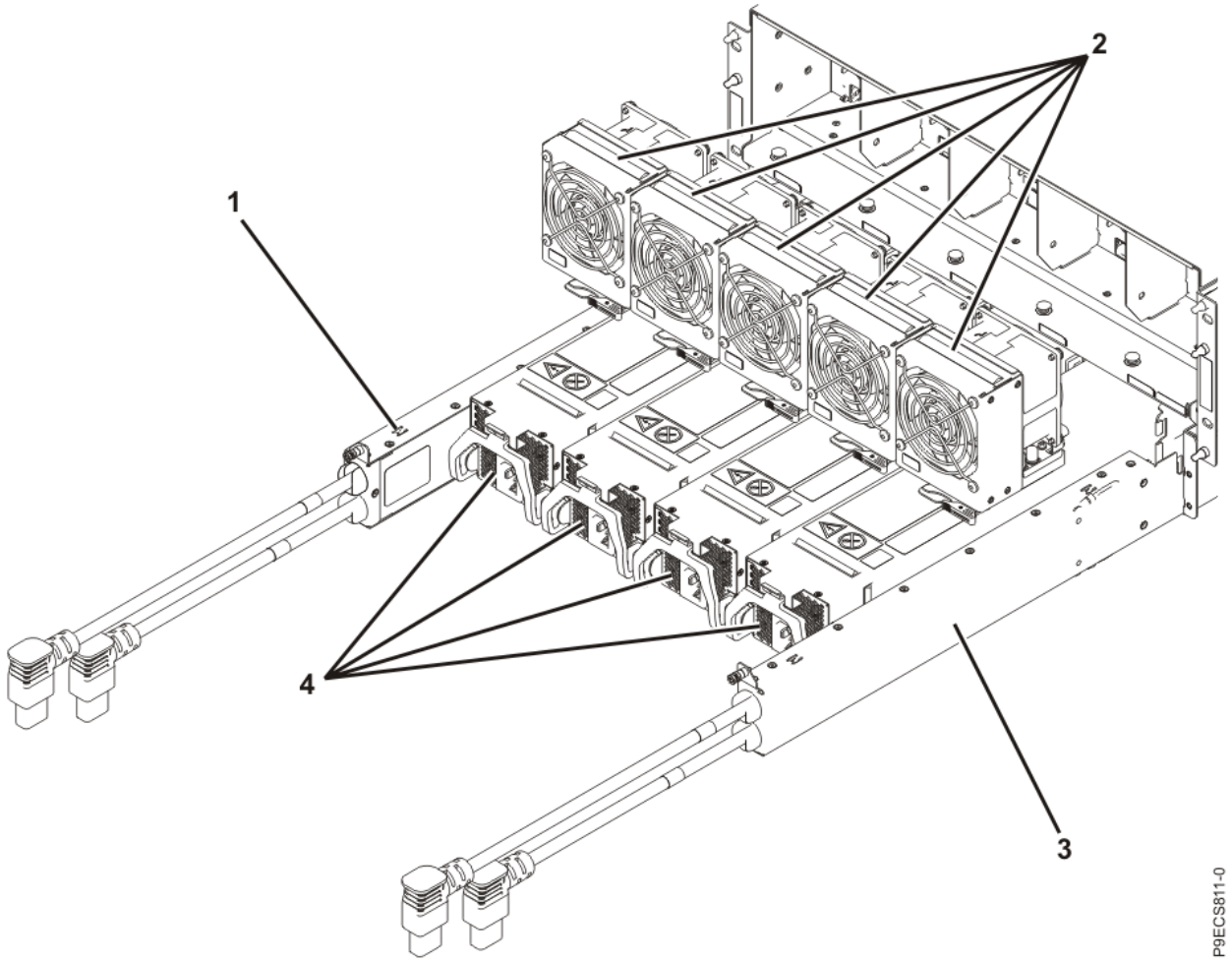

Figure 50. System node parts (accessed from the front of the system node)

Table 45. System node parts (accessed from the front of the system node)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1		00FV898	1	Line cord conduit (front left)
2	6B42	01KL290	5	Fan

Table 45. System node parts (accessed from the front of the system node) (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
3		00FV902	1	Line cord conduit (front right)
4	51DF	02CL817	4	Power supply

System node parts (accessed from the top of the system node)

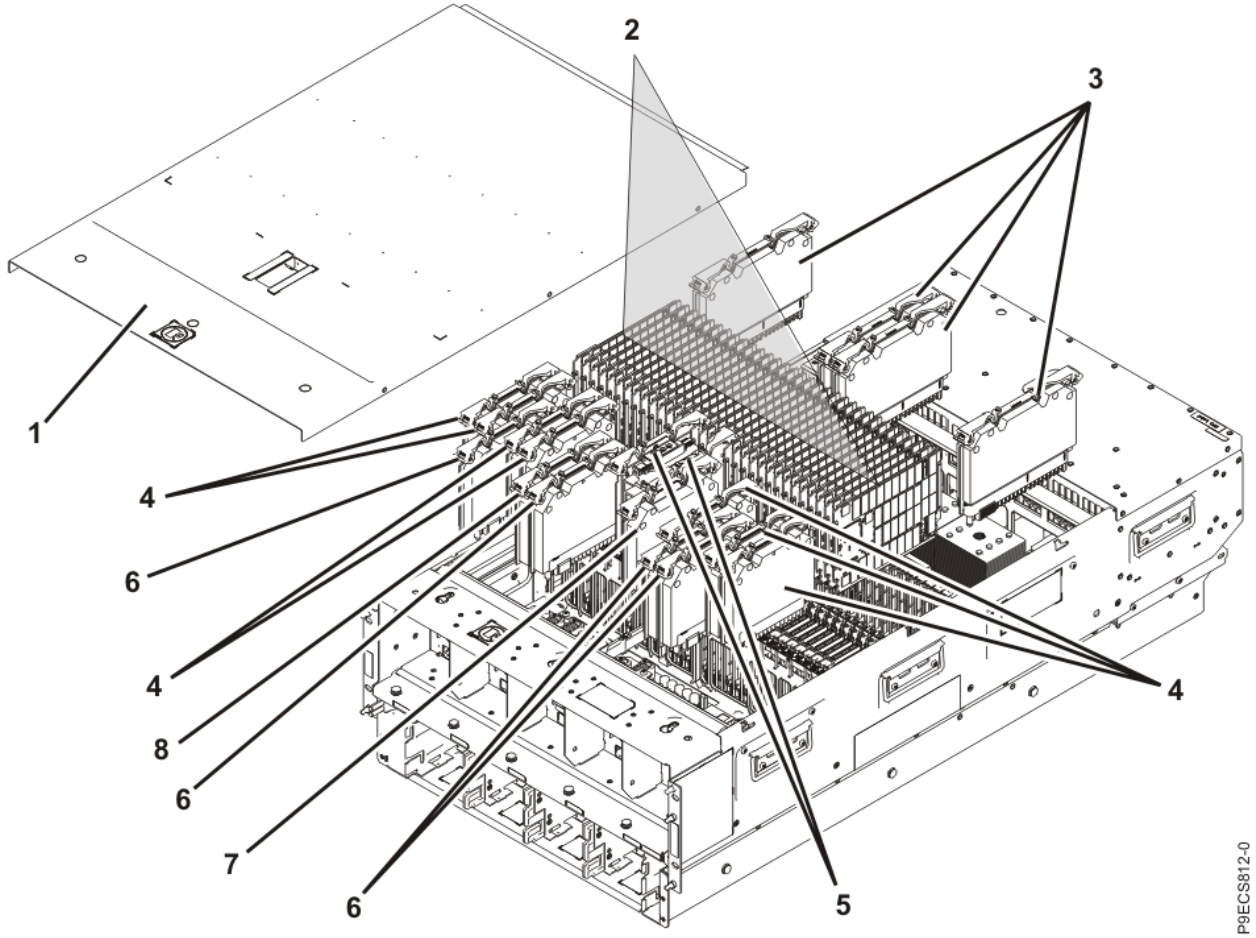

Figure 51. System node parts (accessed from the top of the system node)

Table 46. System node parts (accessed from the top of the system node)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1			1	Top cover assembly
2	31E8	00VK193	0-32	16 GB DDR3 CDIMM*
2	31EC	00VK252	0-32	16 GB DDR4 CDIMM*
2	31E9	00VK195	0-32	32 GB DDR3 CDIMM*
2	31ED	00VK296	0-32	32 GB DDR4 CDIMM*
2	31EA	00VK197	0-32	64 GB DDR3 CDIMM*
2	31EE	00VK306	0-32	64 GB DDR4 CDIMM*

Table 46. System node parts (accessed from the top of the system node) (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
2	31EB	00VK198	0-32	128 GB DDR3 CDIMM*
2	31EF	00VK351	0-32	128 GB DDR4 CDIMM*
2	31FC	00VK242	0-32	256 GB DDR4 CDIMM*
2	31FD	01GY794	0-32	512 GB DDR4 CDIMM*
3	51E4	02CL809	1-4	Processor voltage regulator module
4	51E7	02CL815	1-7	Memory voltage regulator module
5	6B66	01DH200	1-2	Power APSS and trusted platform module (TPM) card
6	51E5	02CL811	1-4	Miscellaneous A voltage regulator module
7	51E8	02CL821	1	Concurrent maintenance circuit card
8	51E6	02CL813	1	Miscellaneous B voltage regulator module

*You can install DDR3 and DDR4 memory within a single system as long as all of the memory within each system node is of the same type.

System node parts (accessed from the rear of the system node)

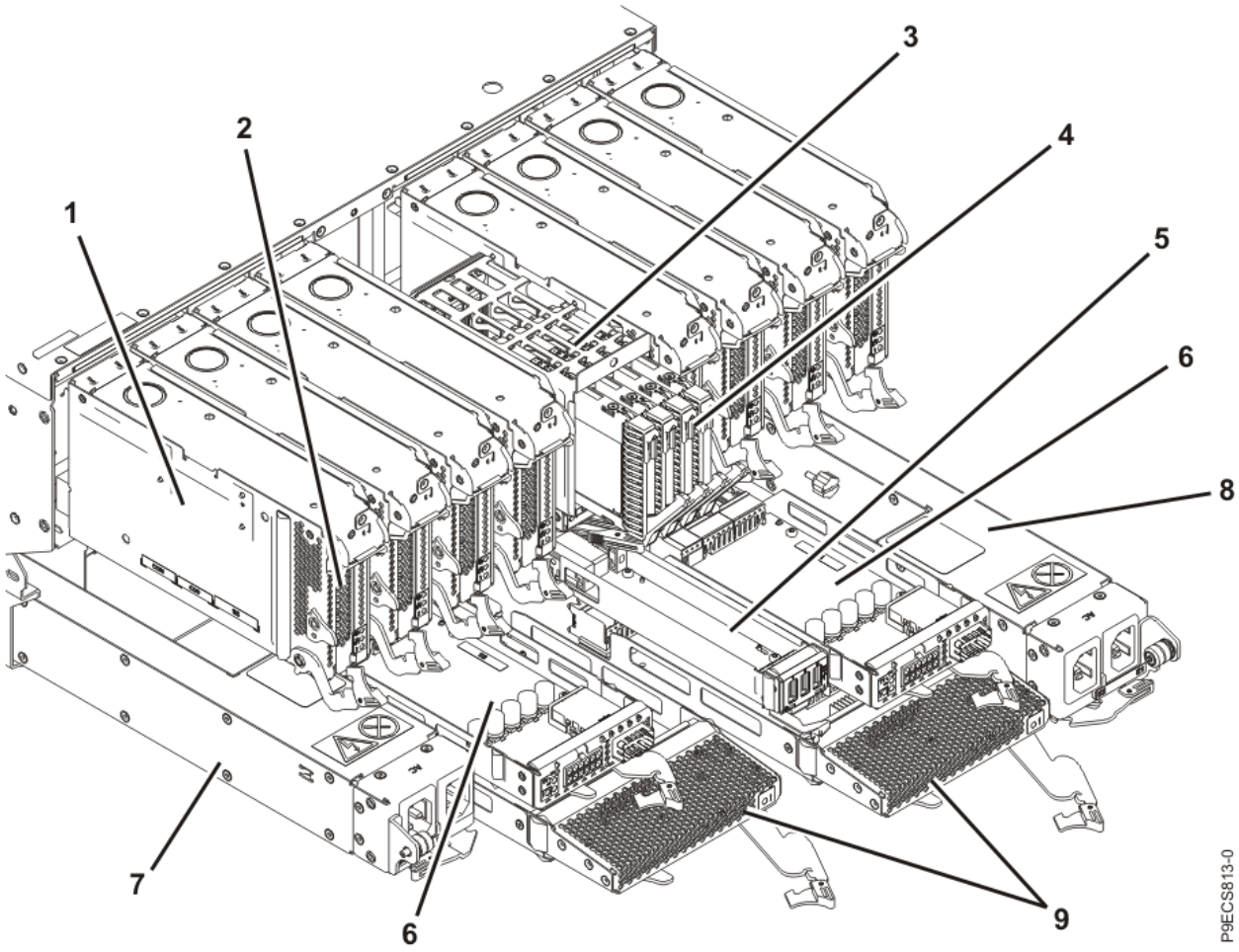

Figure 52. System node parts (accessed from the rear of the system node)

Table 47. System node parts (accessed from the rear of the system node)

Index number	CCIN	Part number	Units per assembly	Description
1	6B69	01DH092	1-7	Adapter cassette
2			1-7	Adapter. Use the feature code of the adapter to find the FRU number in Adapter information by feature code.
		00FX558	1-7	Adapter filler
3	6B6B	00VK510		NVMe drive backplane
4	5948	02YC660	1-4	800 GB NVMe U.2 drive **Note:** Supported only on the AIX and Linux operating systems.
4	59B4	01LU763	1-4	800 GB NVMe U.2 drive **Note:** Supported only on the AIX and Linux operating systems.

Table 47. System node parts (accessed from the rear of the system node) (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
4	59B5	01LU764	1-4	1600 GB NVMe U.2 drive **Note:** Supported only on the AIX and Linux operating systems.
4	59B6	01LU765	1-4	3200 GB NVMe U.2 drive **Note:** Supported only on the AIX and Linux operating systems.
5	6B6C	01DH206	0-1	USB card
6	6B68	01DH087	1-2	Service processor interface card
7		00FV915	1	Line cord conduit (rear right)
8		00FV906	1	Line cord conduit (rear left)
9	6B67	01DH194 or 00E5324**	1-2	Clock and control card ** Order the same part number as the clock and control card that you are replacing.

System node parts (on the system backplane)

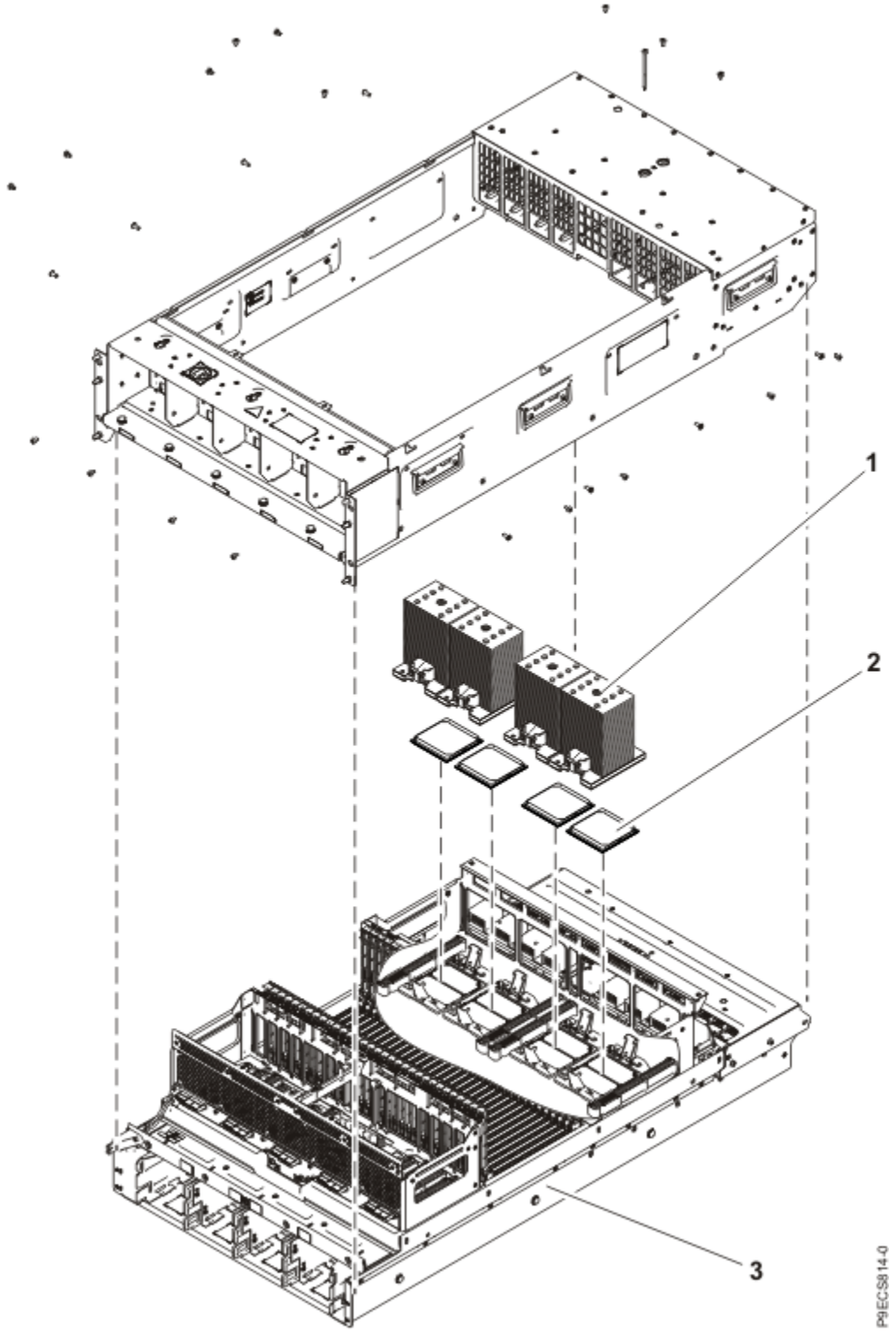

Figure 53. System node parts (on the system backplane)

Table 48. System node parts (on the system backplane)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
1		02DE543	1-4	Heat sink kit (includes thermal interface material and removal tool)

Table 48. System node parts (on the system backplane) (continued)				
Index number	**CCIN**	**Part number**	**Units per assembly**	**Description**
2	5C33	02CM284	1-4	System processor module kit (includes 6 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
2	5C35	01PP546	1-4	System processor module kit (includes 8 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
2	5C36	01PP545	1-4	System processor module kit (includes 10 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
2	5C46	02EC284	1-4	System processor module kit (includes 11 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
2	5C39	01PP542	1-4	System processor module kit (includes 12 core processor module, processor handling tool, 4mm Hex driver, TIM, tweezers, and air pump)
3	2E28	01DH066	1	System backplane

Miscellaneous system parts

Table 49. Miscellaneous system parts		
Description	**CCIN**	**Part number**
1 m UPIC cable	6B3F	00RR148
355 mm service processor cable	6B6D	02CL348
855 mm service processor cable	6B6E	02CL398
1110 mm service processor cable	6B72	02CL399
1330 mm service processor cable	6B73	02CL400
880 mm SMP cable (yellow color)	6B6F	02EA657
1005 mm SMP cable (orange color)	6B70	02EA658
1225 mm SMP cable (blue color)	6B71	02EA659
1425 mm SMP cable (brown color)	6B74	02EA660
1625 mm SMP cable (grey color)	6B75	02EA661
1050 mm USB cable		01KL255
Extra large electrostatic discharge (ESD) mat		43W3084

5887 disk drive enclosure system parts

Indexed drawings show system part numbers.

Final assembly

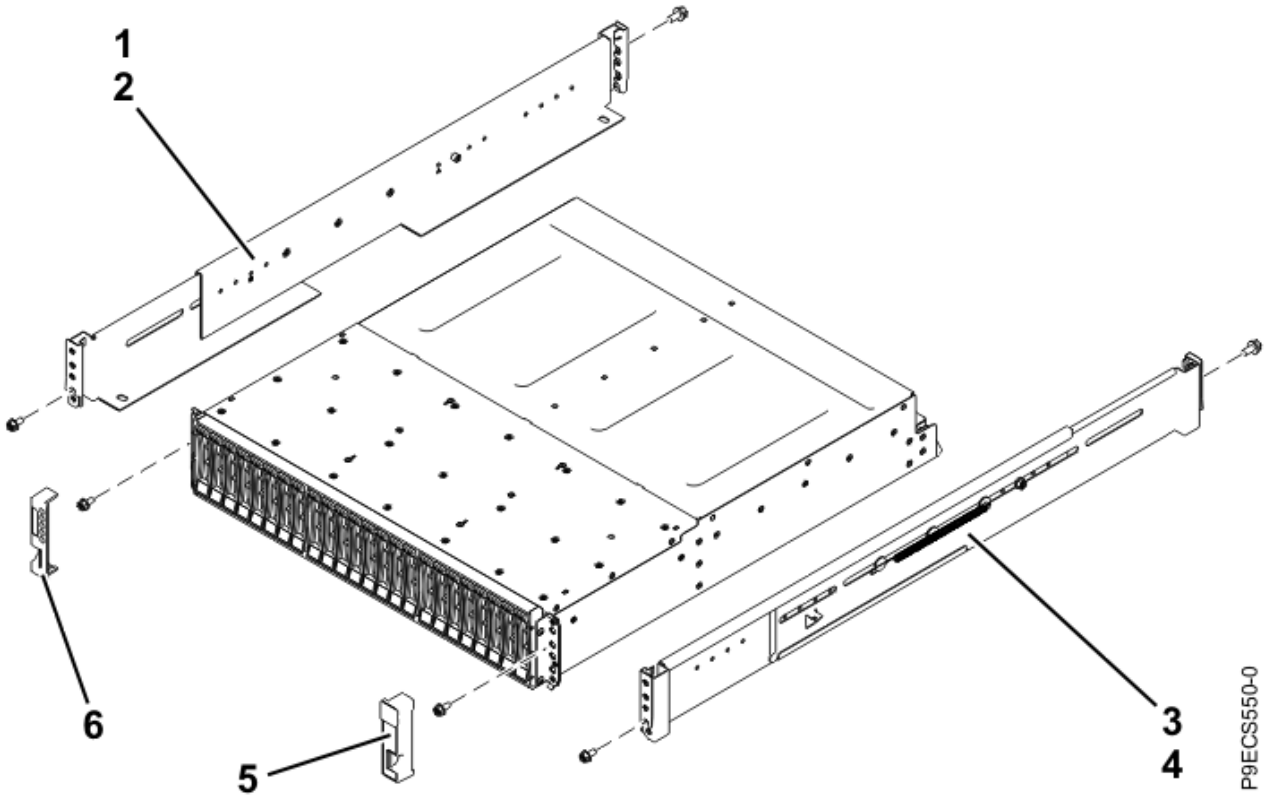

Table 50. Final assembly part numbers

Index number	CCIN	Part number	Units	Description
1		45W8836	1	Rail kit (left slide rail assembly)
2			1	Attaching screw for the left slide rail assembly
3		45W8836	1	Rail kit (right slide rail assembly)
4			1	Attaching screw for the right slide rail assembly
5			1	Right bezel
6			1	Left bezel

System assembly

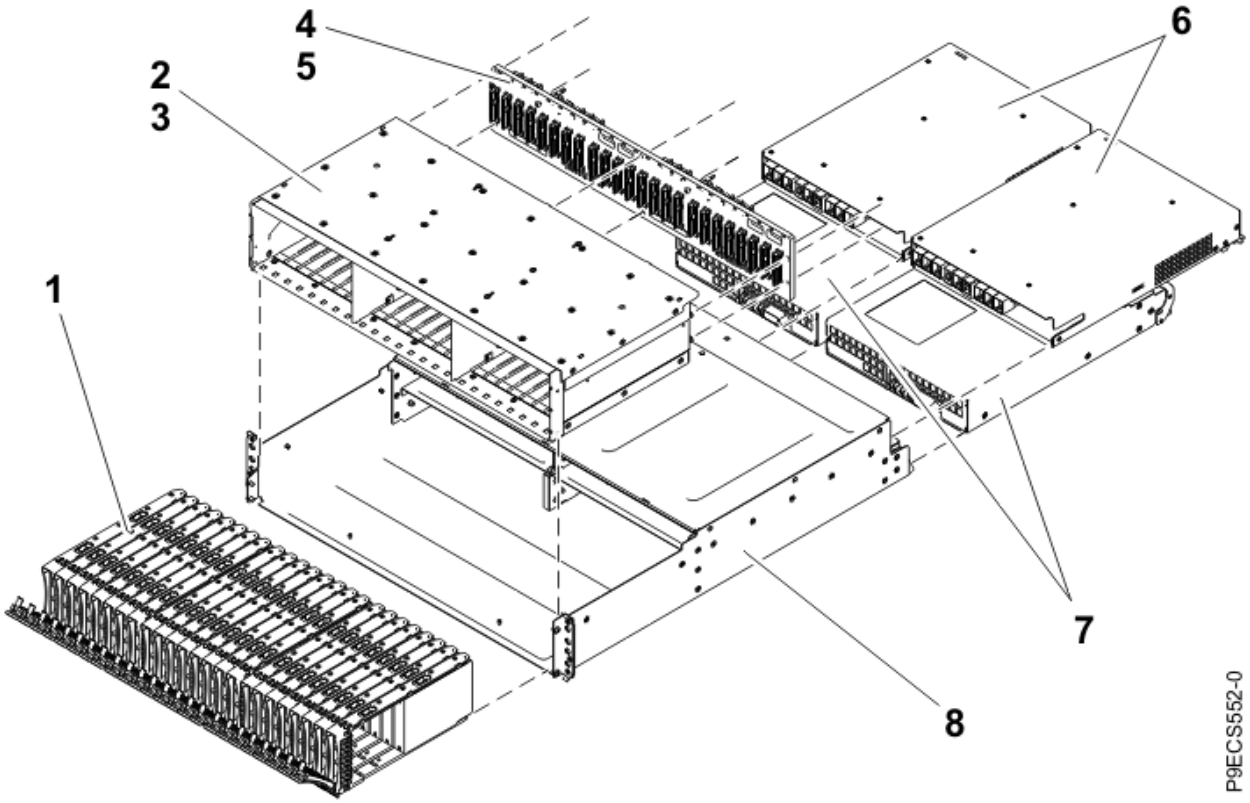

Table 51. System assembly part numbers				
Index number	**CCIN**	**Part number**	**Units**	**Description**
1			1 – 24	See Disk drive and solid-state drive system parts.
2			1	Midplane assembly
3			2	Attaching screw for the midplane assembly
4	50B0	45W9576	1	Midplane
5			6	Attaching screw for the midplane
6	50B1	45W7653	2	Enclosure Services Manager (ESM)
7	50B2	45W8229	2	Power supply
8			1	Enclosure chassis

Table 52. Cables		
CCIN	**Part number**	**Description**
	44V4157	1.5 meter SAS YO cable (5887 in Mode 1 connected to a single I/O adapter)
	44V4158	3 meter SAS YO cable (5887 in Mode 1 connected to a single I/O adapter)
	44V4159	6 meter SAS YO cable (5887 in Mode 1 connected to a single I/O adapter)

Table 52. Cables (continued)		
CCIN	**Part number**	**Description**
	44V4160	15 meter SAS YO cable (5887 in Mode 1 connected to a single I/O adapter)
	44V4161	1.5 meter SAS YI cable
	44V4162	3 meter SAS YI cable
	44V4154	3 meter SAS X cable (5887 in Mode 2 or 4 connected to dual SAS adapters)
	44V4155	6 meter SAS X cable (5887 in Mode 2 or 4 connected to dual SAS adapters)
	44V4156	15 meter SAS X cable (5887 in Mode 2 or 4 connected to dual SAS adapters)

Table 53. Miscellaneous parts		
CCIN	**Part number**	**Description**
	External cables and cords	See Planning for cables.
	Cable configuration	See Enclosures and expansion units.
	39M5377	Power cord rack jumper
	45W8836	Rail kit
	45W8681	Disk drive filler

EMX0 PCIe Gen3 I/O expansion drawer system parts

Indexed drawings show system part numbers.

Final assembly

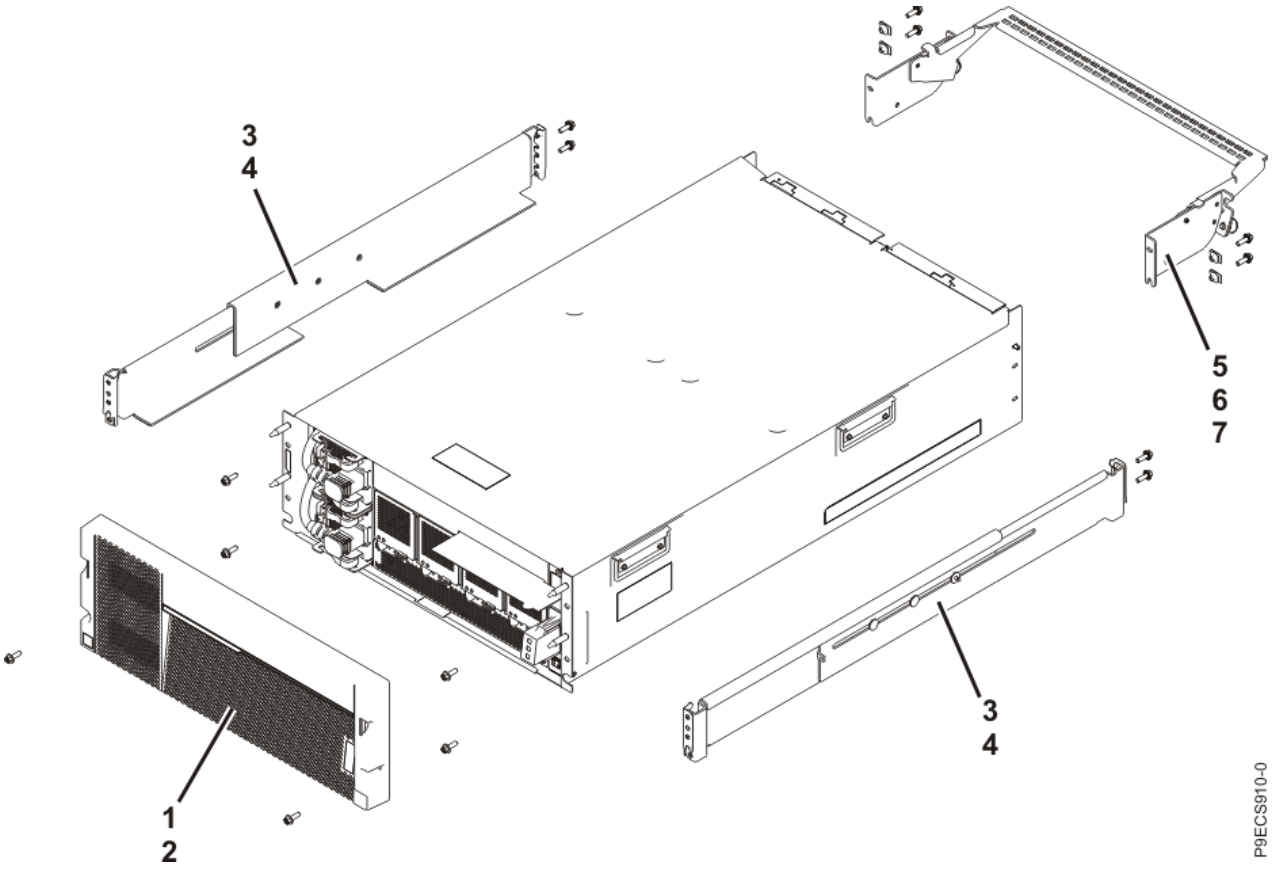

Table 54. Final assembly part numbers

Index number	CCIN	Part number	Units	Description
1		00FV896	1	Front bezel
2			2	Attaching screws for the front bezel
3		44V8572	1	Rail kit (not all parts in the kit are used for the EMX0 PCIe Gen3 I/O expansion drawer)
4			2	Attaching screw for rail kit
5		00FY274	1	Cable management bracket assembly
6			4	Attaching screws for the cable management bracket assembly
7			4	Nut clips for the cable management bracket assembly

System assembly

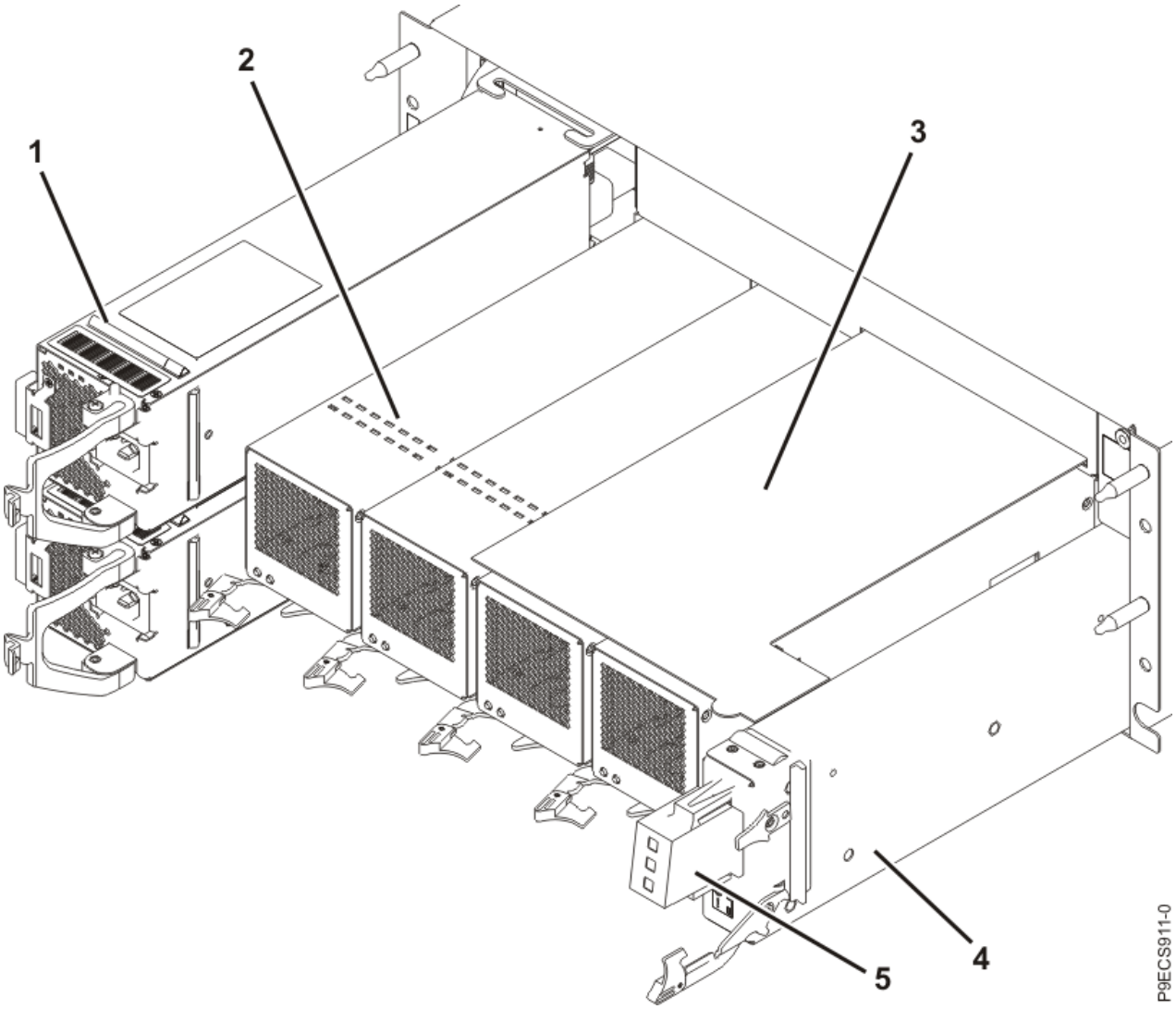

Table 55. System assembly part numbers

Index number	CCIN	Part number	Units	Description
1	51D3	00FX951	2	Power supply
2	50D0	00RP836	4	Fan
3			1	Front service card
4	50C7	00TK681	1	Chassis management card
5		00FV844	1	Chassis management card light-pipe assembly

System assembly, continued

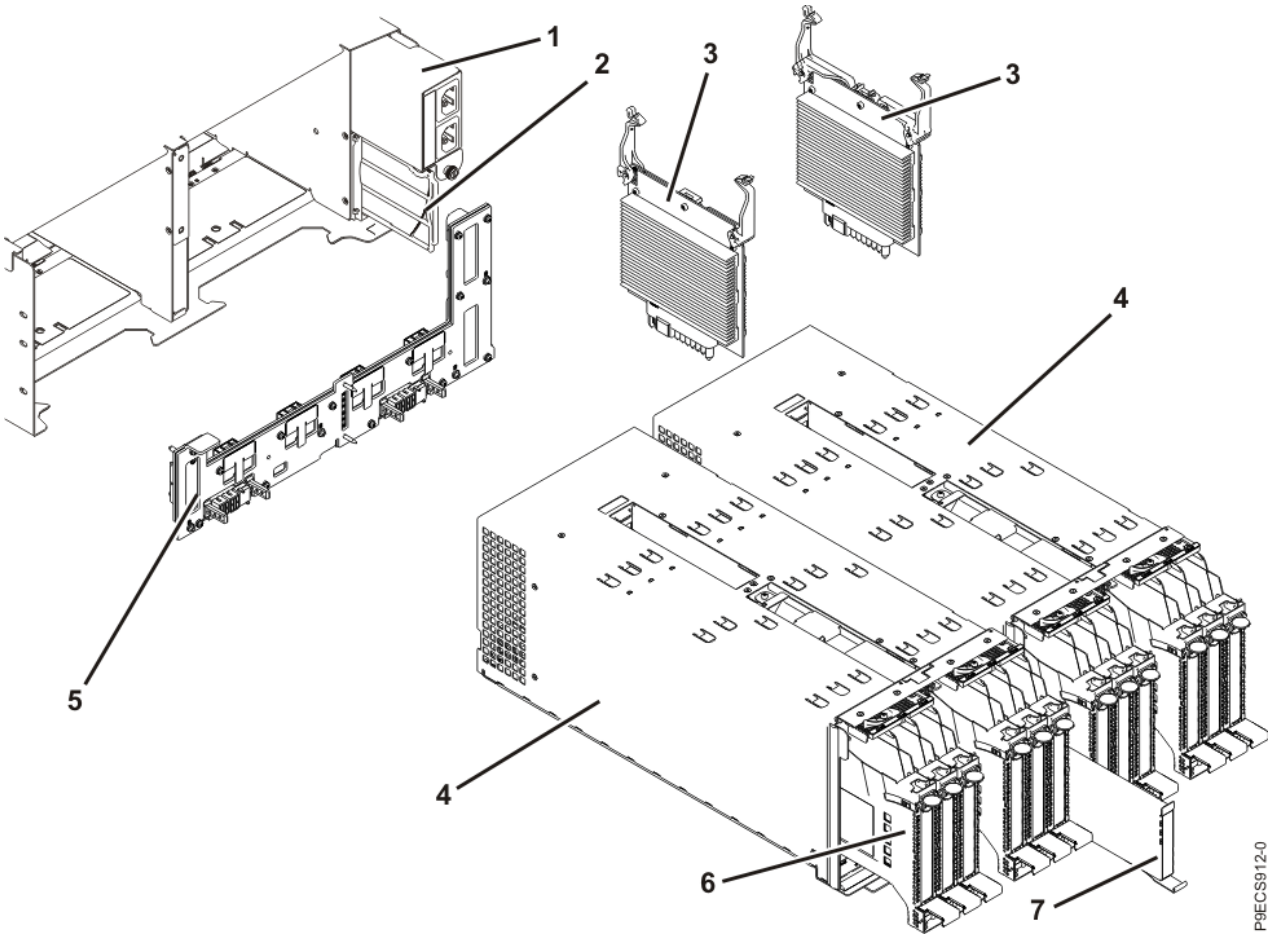

Table 56. System assembly part numbers

Index number	CCIN	Part number	Units	Description
1		41T9177	1	AC power conduit
2			1	Rear service booklet
3	50CF	00RP693	1 - 2	Voltage regulator module
4	50CB	00TK674	1 - 2	PCIe3 6-slot fanout module **Note:** The CCIN 50CB PCIe3 6-slot fanout module must be used with CCIN 2B1C, 2CE2, or 6B52 PCIe3 cable adapters.
4	50CD	02AE919	1 - 2	PCIe3 6-slot fanout module **Note:** The CCIN 50CD PCIe3 6-slot fanout module must be used with CCIN 2CF5, 58FF, or 6B53 PCIe3 cable adapters.
5	50C8	00LY054	1	Midplane
6		44V4768	1 - 12	Blind swap cassette for PCIe adapters. To find the part number of a PCIe adapter, use the CCIN or feature type of the adapter to find the FRU number in Adapter information by feature code.

Table 56. System assembly part numbers (continued)				
Index number	**CCIN**	**Part number**	**Units**	**Description**
6		46K6170	1 - 4	Blind swap cassette for PCIe Cryptographic Coprocessor. To find the part number of a PCIe adapter, use the CCIN or feature type of the adapter to find the FRU number in Adapter information by feature code.
7		41T9176	1	Light pipe conduit assembly

Table 57. Cables	
Description	**Part number**
2-meter active optical cable (AOC) for 9080-M9S only	• 78P3967* • 78P6567**
3-meter active optical cable (AOC) for 9008-22L, 9009-22A, 9009-41A, 9009-42A, 9040-MR9, 9223-22H, 9223-42H only	• 78P4418* • 78P6568**
10-meter active optical cable (AOC)	• 78P3776* • 78P6569**
20-meter active optical cable (AOC) for 9080-M9S only	• 78P4536* • 78P6570**
3-meter expansion drawer cable (copper) for 9008-22L, 9009-22A, 9009-41A, 9009-42A, 9040-MR9, 9223-22H, 9223-42H only	01KL050**
* Must be used with the CCIN 50CB PCIe3 6-slot fanout module. ** Can be used with either the CCIN 50CB or the CCIN 50CD PCIe3 6-slot fanout module.	

Table 58. Miscellaneous parts	
Description	**Part number**
External cables and cords	See Planning for cables.
Cable configuration	See Enclosures and expansion units.
Tailstock filler	39J0260
I/O module filler	00FX483

ESLL or ESLS storage enclosure system parts

Indexed drawings show system part numbers.

ESLL final assembly

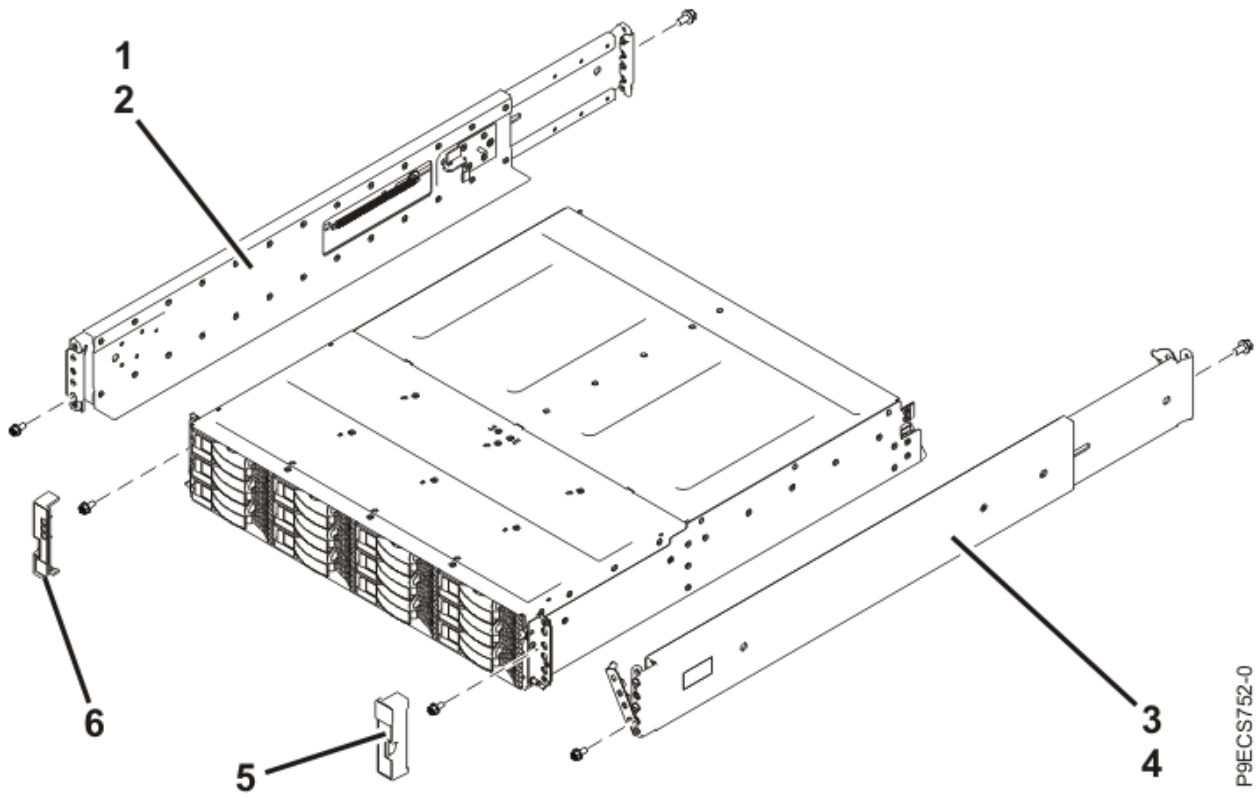

Table 59. ESLL final assembly part numbers

Index	CCIN	Part number	Units	Description
1		00RY309	1	Rail kit (left slide rail assembly)
2			2	Attaching screw for the left slide rail assembly
3		00RY309	1	Rail kit (right slide rail assembly)
4			2	Attaching screw for the right slide rail assembly
5		00Y2436	1	Right bezel
6		01DH721	1	Left bezel

ESLS final assembly

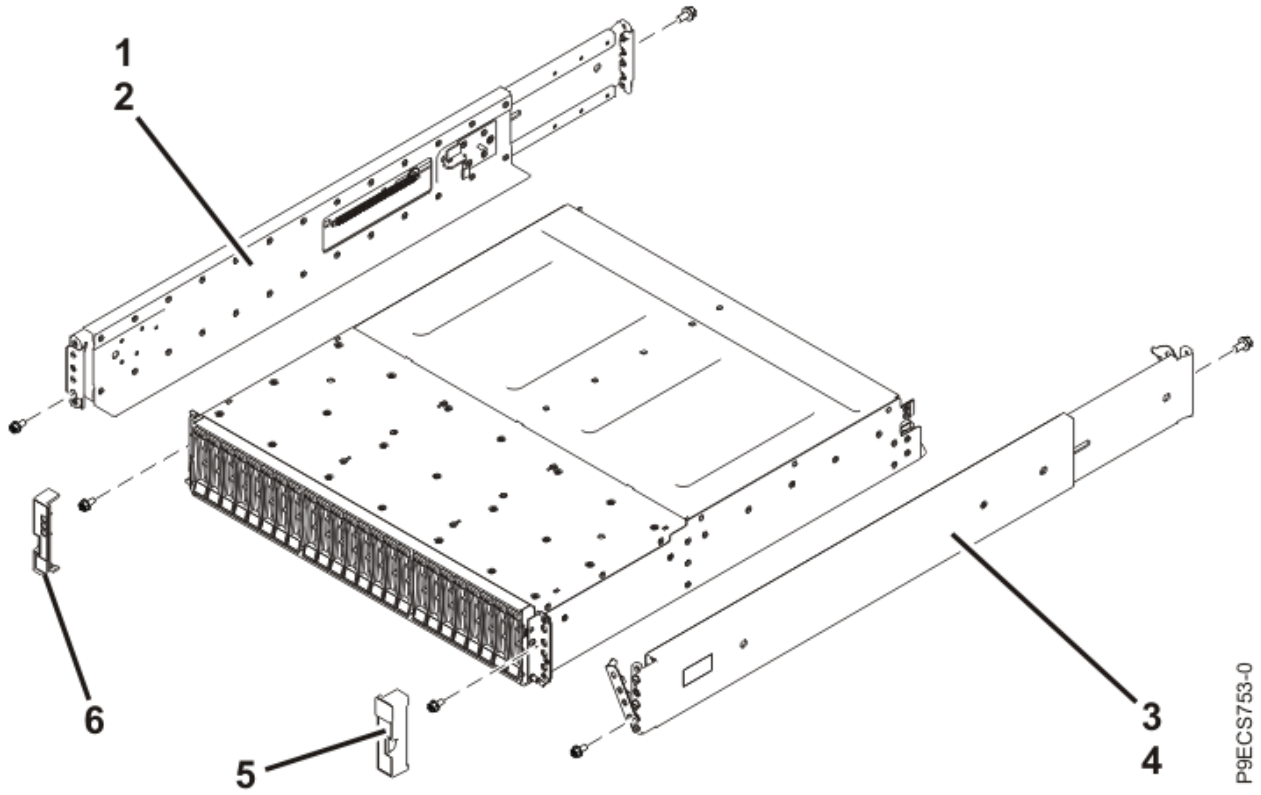

Table 60. ESLS final assembly part numbers				
Index	**CCIN**	**Part number**	**Units**	**Description**
1		00RY309	1	Rail kit (left slide rail assembly)
2			2	Attaching screw for the left slide rail assembly
3		00RY309	1	Rail kit (right slide rail assembly)
4			2	Attaching screw for the right slide rail assembly
5		00Y2512	1	Right bezel
6		01DH721	1	Left bezel

ESLL storage enclosure assembly

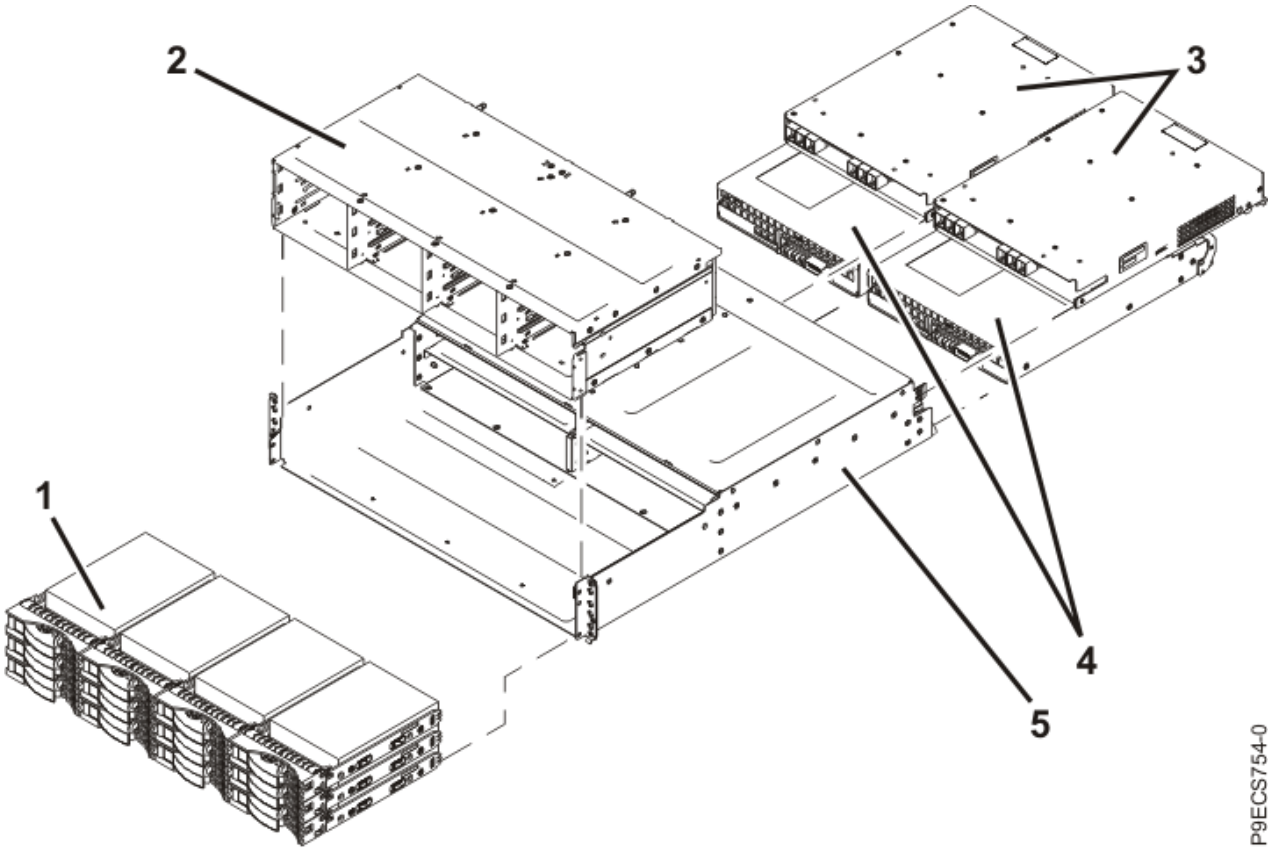

Table 61. ESLL storage enclosure assembly part numbers				
Index	**CCIN**	**Part number**	**Units**	**Description**
1			1 – 12	Large form factor drive. See Disk drive and solid-state drive system parts.
2		64P8446	1	Midplane assembly
3		01DH720	2	Enclosure Services Manager (ESM)
4		01AC404	2	Power supply
5			1	Enclosure chassis

ESLS storage enclosure assembly

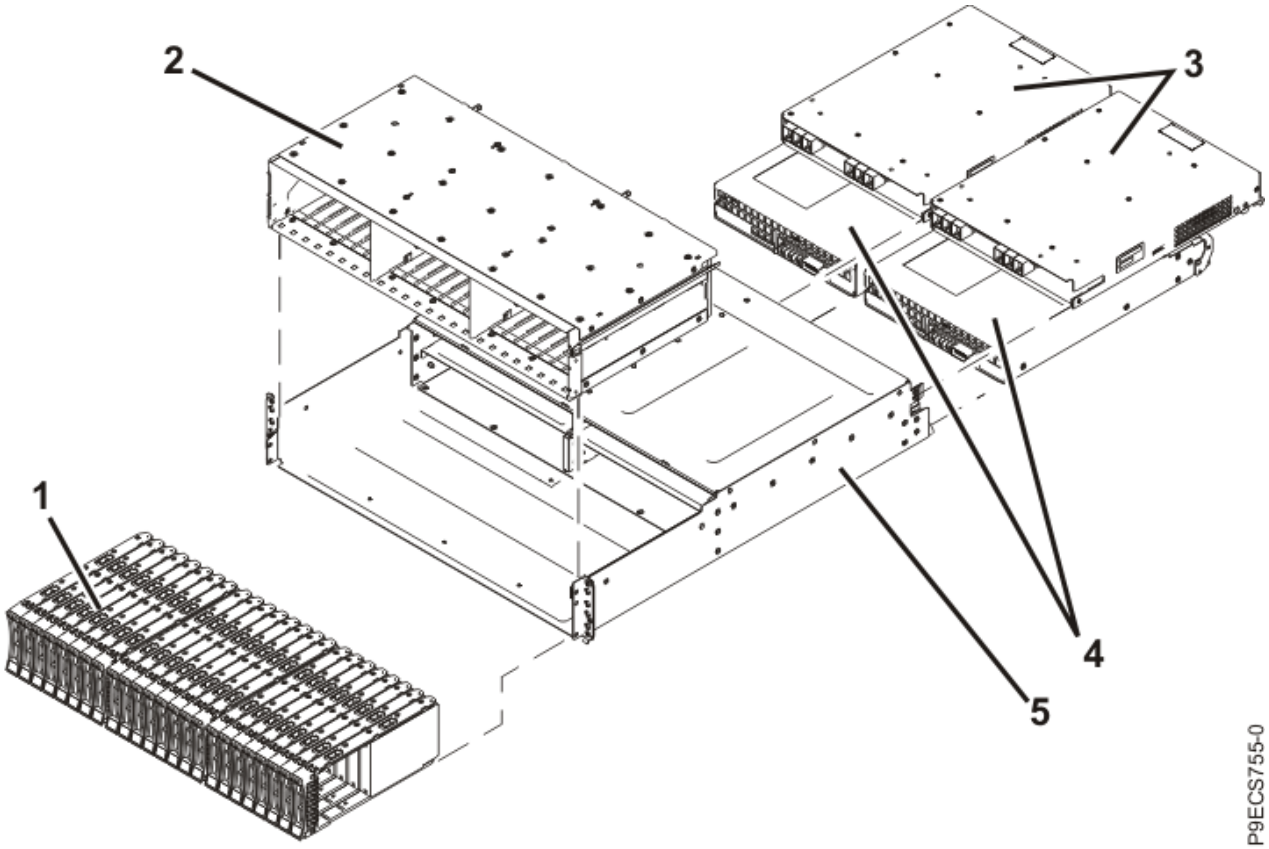

Table 62. ESLS storage enclosure assembly part numbers				
Index	**CCIN**	**Part number**	**Units**	**Description**
1			1 – 24	Small form factor drive. See Disk drive and solid-state drive system parts.
2		64P8447	1	Midplane assembly
3		01DH720	2	Enclosure Services Manager (ESM)
4		01AC404	2	Power supply
5			1	Enclosure chassis

Table 63. Cables	
Description	**Part number**
3-meter SAS X12 narrow connector cable	01AF504
4.5-meter optical SAS X12 narrow connector cable	78P4918
10-meter optical SAS X12 narrow connector cable	78P4919
1.5-meter SAS YO12 narrow connector cable	01AF502
3-meter SAS YO12 narrow connector cable	01AF503
4.5-meter optical SAS YO12 narrow connector cable	78P4920

Table 63. Cables (continued)	
Description	**Part number**
10-meter optical SAS YO12 narrow connector cable	78P4921
.6 meter SAS AA12 narrow connector cable	01AF505
1.5-meter SAS AA12 narrow connector cable	01AF506
3-meter SAS AA12 narrow connector cable	01AF507
4.5-meter optical SAS AA12 narrow connector cable	78P4917

Table 64. Miscellaneous parts	
Description	**Part number**
External cables and cords	See Planning for cables.
Cable configuration	See Enclosures and expansion units.
Disk drive filler (ESLL)	42R7992
Disk drive filler (ESLS)	45W8680

Disk drive and solid-state drive system parts

Disk drive and solid-state drive system parts information.

Table 65. System unit disk drive parts		
CCIN	**Part number**	**Description**
59E0	00E9906	283 GB 15K RPM (528 block size) small form factor SAS disk drive (IBM i)
59E1	00E9966	283 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
5B41	01LU575	283 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59E0	00E9912	300 GB 15K RPM (528 block size) small form factor SAS disk drive (AIX and Linux)
59E1	00E9972	300 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
5B41	01LU579	300 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59D0	00E9894	571 GB 10K RPM (528 block size) small form factor SAS disk drive (IBM i)
59D3	00E9951	571 GB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59E5	00E9968	571 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
5B45	01LU576	571 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
5B47	01LU584	571 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)

Table 65. System unit disk drive parts (continued)		
CCIN	**Part number**	**Description**
59D0	00E9900	600 GB 10K RPM (528 block size) small form factor SAS disk drive (AIX and Linux)
59D3	00E9959	600 GB 10K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59E5	00E9974	600 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
5B45	01LU580	600 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
5B47	01LU588	600 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59DB	00E9953	1.14 TB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59DB	00E9961	1.2 TB 10K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59DE	00E9954	1.71 TB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59DE	00E9962	1.8 TB 10K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)

Table 66. System unit solid-state drive parts		
CCIN	**Part number**	**Description**
5B13	00LY333, 00LY603, 01LU868, or 02YC570*	387 GB (4224 block size) small form factor solid-state SAS drive
5B19	00LY324, 00LY577, 01LU863, or 02YC565*	387 GB (528 block size) small form factor solid-state SAS drive
5B14	00LY334, 00LY604, 01LU869, or 02YC571*	775 GB (4224 block size) small form factor solid-state SAS drive
5B1A	00LY325, 00LY578, 01LU864, or 02YC566*	775 GB (528 block size) small form factor solid-state SAS drive
5B2B	00LY559, 01LU805, 01LU902, 02YC595, or 02YC646*	931 GB (4224 block size) small form factor solid-state SAS drive
5B15	00LY335, 00LY605, 01LU933, 01LU870, or 02YC572*	1551 GB (4224 block size) small form factor solid-state SAS drive
5B20	00LY374, 00LY560, 01LU806, 01LU903, 02YC596, or 02YC647*	1860 GB (4224 block size) small form factor read intensive solid-state SAS drive **Note:** Replacement of the read intensive solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about read intensive SSDs, see Read intensive SSDs.

Table 66. System unit solid-state drive parts (continued)		
CCIN	**Part number**	**Description**
5B2C	00LY561, 01LU818, 01LU904, 02YC597, or 02YC648*	3720 GB (4224 block size) small form factor solid-state SAS drive
5B2E	01LU807, 01LU905, 02YC598, or 02YC649*	7450 GB (4224 block size) small form factor read intensive solid-state SAS drive **Note:** Replacement of the read intensive solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about read intensive SSDs, see Read intensive SSDs.
* Order the same part number as the drive that you are replacing.		

Table 67. 5887 disk drive parts		
CCIN	**Part number**	**Description**
19B1	74Y6497	283 GB 15K RPM (528 block size) small form factor SAS disk drive (IBM i)
59C9	00E8681	283 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
5B43	01LU583	283 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
19B1	74Y6498	300 GB 15K RPM (512 block size) small form factor SAS disk drive (AIX and Linux)
59C9	00E8687	300 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
5B43	01LU587	300 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
19B3	74Y4899	571 GB 10K RPM (528 block size) small form factor SAS disk drive (IBM i)
59D2	00E9935	571 GB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59CF	00E8660	571 GB 15K RPM (528 block size) small form factor SAS disk drive (IBM i)
59CC	00E8683	571 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
5B47	01LU584	571 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
19B3	74Y4901	600 GB 10K RPM (512 block size) small form factor SAS disk drive (AIX and Linux)
59D2	00E9943	600 GB 10K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59CF	00E8665	600 GB 15K RPM (512 block size) small form factor SAS disk drive (AIX and Linux)

Table 67. 5887 disk drive parts (continued)

CCIN	Part number	Description
59CC	00E8689	600 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
5B47	01LU588	600 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59CD	00E8623	1.14 TB 10K RPM (528 block size) small form factor SAS disk drive (IBM i)
59DA	00E9937	1.14 TB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59CD	00E8631	1.2 TB 10K RPM (512 block size) small form factor SAS disk drive (AIX and Linux)
59DA	00E9945	1.2 TB (4224 block size) 10K RPM small form factor SAS disk drive (AIX and Linux)
59DD	00E9938	1.71 TB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59DD	00E9946	1.8 TB 10K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)

Table 68. 5887 solid-state drive parts

CCIN	Part number	Description
59E8	00E8710	387 GB (4224 block size) small form factor solid-state SAS drive
5B10	00LY336 or 00LY621*	387 GB (4224 block size) small form factor solid-state SAS drive
5B16	00LY327 or 00LY589*	387 GB (528 block size) small form factor solid-state SAS drive
59C3	00E8713	775 GB (4224 block size) small form factor solid-state SAS drive
5B11	00LY337 or 00LY622*	775 GB (4224 block size) small form factor solid-state SAS drive
5B17	00LY328 or 01LU623*	775 GB (528 block size) small form factor solid-state SAS drive
5B12	00LY338 or 00LY623*	1551 GB (4224 block size) small form factor solid-state SAS drive
5B21	00LY373 or 00LY554*	1860 GB (4224 block size) small form factor read intensive solid-state SAS drive **Note:** Replacement of the read intensive solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about read intensive SSDs, see Read intensive SSDs.
* Order the same part number as the drive that you are replacing.		

Table 69. ESLS disk drive parts		
CCIN	**Part number**	**Description**
59C9	00E8681	283 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
19B1	74Y6498	300 GB 15K RPM (512 block size) small form factor SAS disk drive (Linux)
5B43	01LU583	283 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59C9	00E8687	300 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
5B43	01LU587	300 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59D2	00E9935	571 GB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59CC	00E8683	571 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
5B47	01LU584	571 GB 15K RPM (4224 block size) small form factor SAS disk drive (IBM i)
19B3	74Y4901	600 GB 10K RPM (512 block size) small form factor SAS disk drive (Linux)
59D2	00E9943	600 GB 10K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59CC	00E8689	600 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
5B47	01LU588	600 GB 15K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)
59DA	00E9937	1.14 TB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59DA	00E9945	1.2 TB (4224 block size) 10K RPM small form factor SAS disk drive (AIX and Linux)
59DD	00E9938	1.71 TB 10K RPM (4224 block size) small form factor SAS disk drive (IBM i)
59DD	00E9946	1.8 TB 10K RPM (4224 block size) small form factor SAS disk drive (AIX and Linux)

Table 70. ESLS solid-state drive parts		
CCIN	**Part number**	**Description**
5B16	00LY327, 00LY589, 01LU861, or 02YC563*	387 GB (528 block size) small form factor solid-state SAS drive (Linux)
59E8	00E8710	387 GB (4224 block size) small form factor solid-state SAS drive

Table 70. ESLS solid-state drive parts (continued)		
CCIN	**Part number**	**Description**
5B10	00LY336, 00LY621, 01LU865, or 02YC567*	387 GB (4224 block size) small form factor solid-state SAS drive
5B17	00LY328, 01LU623, 01LU862, or 02YC564*	775 GB (528 block size) small form factor solid-state SAS drive (Linux)
59C3	00E8713	775 GB (4224 block size) small form factor solid-state SAS drive
5B11	00LY337, 00LY622, 01LU866, or 02YC568*	775 GB (4224 block size) small form factor solid-state SAS drive
5B29	00LY553, 01LU802, 01LU898, 02YC591, or 02YC642*	931 GB (4224 block size) small form factor solid-state SAS drive
5B12	00LY338, 00LY623, 01LU867, or 02YC569*	1551 GB (4224 block size) small form factor solid-state SAS drive
5B21	00LY373, 00LY554, 01LU803, 01LU899, 02YC592, or 02YC643*	1860 GB (4224 block size) small form factor read intensive solid-state SAS drive **Note:** Replacement of the read intensive solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about read intensive SSDs, see Read intensive SSDs.
5B2D	00LY555, 01LU817, 01LU900, 02YC593, or 02YC644*	3720 GB (4224 block size) small form factor solid-state SAS drive **Note:** Replacement of the read intensive solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about read intensive SSDs, see Read intensive SSDs.
5B2F	01LU804, 01LU901, 02YC594, or 02YC645*	7450 GB (4224 block size) small form factor read intensive solid-state SAS drive **Note:** Replacement of the read intensive solid-state drive (SSD) might not be covered by the system's level of service entitlement, depending on the terms and conditions of the system. For more information about read intensive SSDs, see Read intensive SSDs.
* Order the same part number as the drive that you are replacing.		

Table 71. ESLL disk drive parts		
CCIN	**Part number**	**Description**
19B1	74Y6498	300 GB 15K RPM (512 block size) small form factor SAS disk drive (Linux)
19B3	74Y4901	600 GB 10K RPM (512 block size) small form factor SAS disk drive (Linux)
5B1D, 5B48	00LY299	4 TB 7.2K RPM (4224 block size) large form factor SAS disk drive (AIX and Linux)
5B1F, 5B49	00LY301	8 TB 7.2K RPM (4224 block size) large form factor SAS disk drive (AIX and Linux)

Table 72. ESLL solid-state drive parts		
CCIN	**Part number**	**Description**
5B16	00LY327, 00LY589, 01LU861, or 02YC563	387 GB (528 block size) small form factor solid-state SAS drive (Linux)
5B17	00LY328, 01LU623, 01LU862, or 02YC564	775 GB (528 block size) small form factor solid-state SAS drive (Linux)

Keyboard parts

Keyboard parts information.

Table 73. Keyboard parts	
Description	**Part number**
Keyboard, Arabic	10N9442
Keyboard, Belgium, and UK	10N9427
Keyboard, Brazilian Portuguese	10N9421
Keyboard, Bulgaria	10N9430
Keyboard, China	10N9424
Keyboard, Czechoslovakian	10N9439
Keyboard, Danish	10N9429
Keyboard, Dutch	10N9433
Keyboard, French	10N9415
Keyboard, French Canadian	10N9425
Keyboard, German/Austrian	10N9417
Keyboard, Greek	10N9435
Keyboard, Hebrew	10N9436

Table 73. Keyboard parts (continued)	
Description	**Part number**
Keyboard, Hungarian	10N9422
Keyboard, Italian	10N9416
Keyboard, Japanese	10N9420
Keyboard, Korea	10N9423
Keyboard, Latin American (Spanish)	10N9441
Keyboard, Norwegian	10N9432
Keyboard, Portuguese	10N9434
Keyboard, Polish	10N9437
Keyboard, Russian	10N9444
Keyboard, Slovak	10N9438
Keyboard, Slovenia	10N9445
Keyboard, Spanish	10N9419
Keyboard, Sweden, and Finland	10N9428
Keyboard, Swiss, French, and German	10N9431
Keyboard, Thailand	10N9443
Keyboard, Turkish	10N9440
Keyboard, UK English	10N9418
Keyboard, US English	10N9414
Keyboard, US or Europe	10N9446

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- Operations that use a screen reader

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Keyboard navigation

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Interface information

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The IBM Power Systems servers web user interface relies on cascading style sheets to render content properly and to provide a usable experience. The application provides an equivalent way for low-vision users to use system display settings, including high-contrast mode. You can control font size by using the device or web browser settings.

The IBM Power Systems servers web user interface includes WAI-ARIA navigational landmarks that you can use to quickly navigate to functional areas in the application.

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Germany Notice

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2014/30/EU zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaatenund hält die Grenzwerte der EN 55022 / EN 55032 Klasse A ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung von IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung von IBM gesteckt/eingebaut werden.

EN 55032 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden:

"Warnung: Dieses ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funk-Störungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen zu ergreifen und dafür aufzukommen."

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem “Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)“. Dies ist die Umsetzung der EU-Richtlinie 2014/30/EU in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC Richtlinie 2014/30/EU) für Geräte der Klasse A

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:
International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
Tel: 914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:
IBM Deutschland GmbH
Technical Relations Europe, Abteilung M456
IBM-Allee 1, 71139 Ehningen, Germany
Tel: +49 (0) 800 225 5426
email: HalloIBM@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 / EN 55032 Klasse A.

Japan Electronics and Information Technology Industries Association (JEITA) Notice

（一社）電子情報技術産業協会　高調波電流抑制対策実施
要領に基づく定格入力電力値：Knowledge Centerの各製品の
仕様ページ参照

This statement applies to products less than or equal to 20 A per phase.

高調波電流規格 JIS C 61000-3-2 適合品

This statement applies to products greater than 20 A, single phase.

高調波電流規格 JIS C 61000-3-2 準用品

本装置は、「高圧又は特別高圧で受電する需要家の高調波抑制対策ガイドライン」対象機器（高調波発生機器）です。
• 回路分類 ：6（単相、ＰＦＣ回路付）
• 換算係数 ：0

This statement applies to products greater than 20 A per phase, three-phase.

高調波電流規格 JIS C 61000-3-2 準用品

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VCCI－A

Korea Notice

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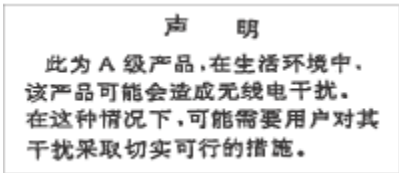
People's Republic of China Notice



Russia Notice

ВНИМАНИЕ! Настоящее изделие относится к классу А.
В жилых помещениях оно может создавать
радиопомехи, для снижения которых необходимы
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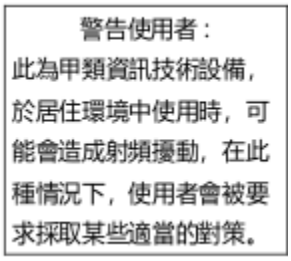
Taiwan Notice



IBM Taiwan Contact Information:

台灣IBM 產品服務聯絡方式：
台灣國際商業機器股份有限公司
台北市松仁路7號3樓
電話：0800-016-888

United States Federal Communications Commission (FCC) Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM-authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party:
International Business Machines Corporation
New Orchard Road
Armonk, NY 10504
Contact for FCC compliance information only: fccinfo@us.ibm.com

Class B Notices

The following Class B statements apply to features designated as electromagnetic compatibility (EMC) Class B in the feature installation information.

When attaching a monitor to the equipment, you must use the designated monitor cable and any interference suppression devices supplied with the monitor.

Canada Notice

CAN ICES-3 (B)/NMB-3(B)

European Community and Morocco Notice

This product is in conformity with the protection requirements of Directive 2014/30/EU of the European Parliament and of the Council on the harmonization of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

German Notice

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse B EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2014/30/EU zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaatenund hält die Grenzwerte der EN 55022/ EN 55032 Klasse B ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der IBM empfohlene Kabel angeschlossen werden. IBM übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung von IBM verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung von IBM gesteckt/eingebaut werden.

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem “Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)“. Dies ist die Umsetzung der EU-Richtlinie 2014/30/EU in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC Richtlinie 2014/30/EU) für Geräte der Klasse B

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:
International Business Machines Corp.
New Orchard Road
Armonk, New York 10504
Tel: 914-499-1900

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:
IBM Deutschland GmbH
Technical Relations Europe, Abteilung M456
IBM-Allee 1, 71139 Ehningen, Germany

Tel: +49 (0) 800 225 5426
email: HalloIBM@de.ibm.com

Generelle Informationen:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55032 Klasse B

Japan Electronics and Information Technology Industries Association (JEITA) Notice

（一社）電子情報技術産業協会　高調波電流抑制対策実施
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高調波電流規格　JIS C 61000-3-2 準用品

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高調波電流規格　JIS C 61000-3-2 準用品

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Taiwan Notice

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台北市松仁路7號3樓
電話：0800-016-888

United States Federal Communications Commission (FCC) Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM-authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM-authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party:

International Business Machines Corporation
New Orchard Road
Armonk, New York 10504
Contact for FCC compliance information only: fccinfo@us.ibm.com

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