FUJITSU

PRIMERGY RX2540 M1

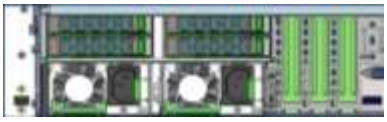
System configurator and order-information guide

October 2014

Contents

Available in November 2014

Available in February 2015



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PRIMERGY Server

Instructions

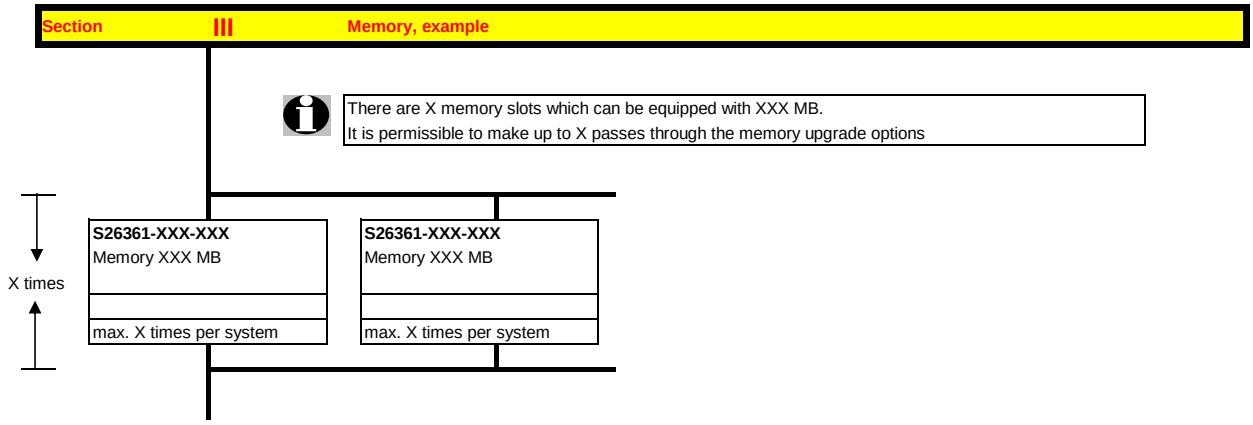
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect.

Only these tools will ensure a fast and proper configuration of your PRIMERGY server or your complete PRIMERGY Rack system.

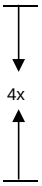
You can configure your individual PRIMERGY server in order to adjust your specific requirements.

The System configurator is divided into several chapters that are identical to the current price list and PC-/SystemArchitect.

Please follow the lines. If there is a junction, you can choose which way or component you would like to take. Go through the configurator by following the lines from the top to the bottom.



In one chapter you can only select as many components (here 4x) as the arrow indicates.



Please note that there are information symbols which indicate necessary information.

For further information see:

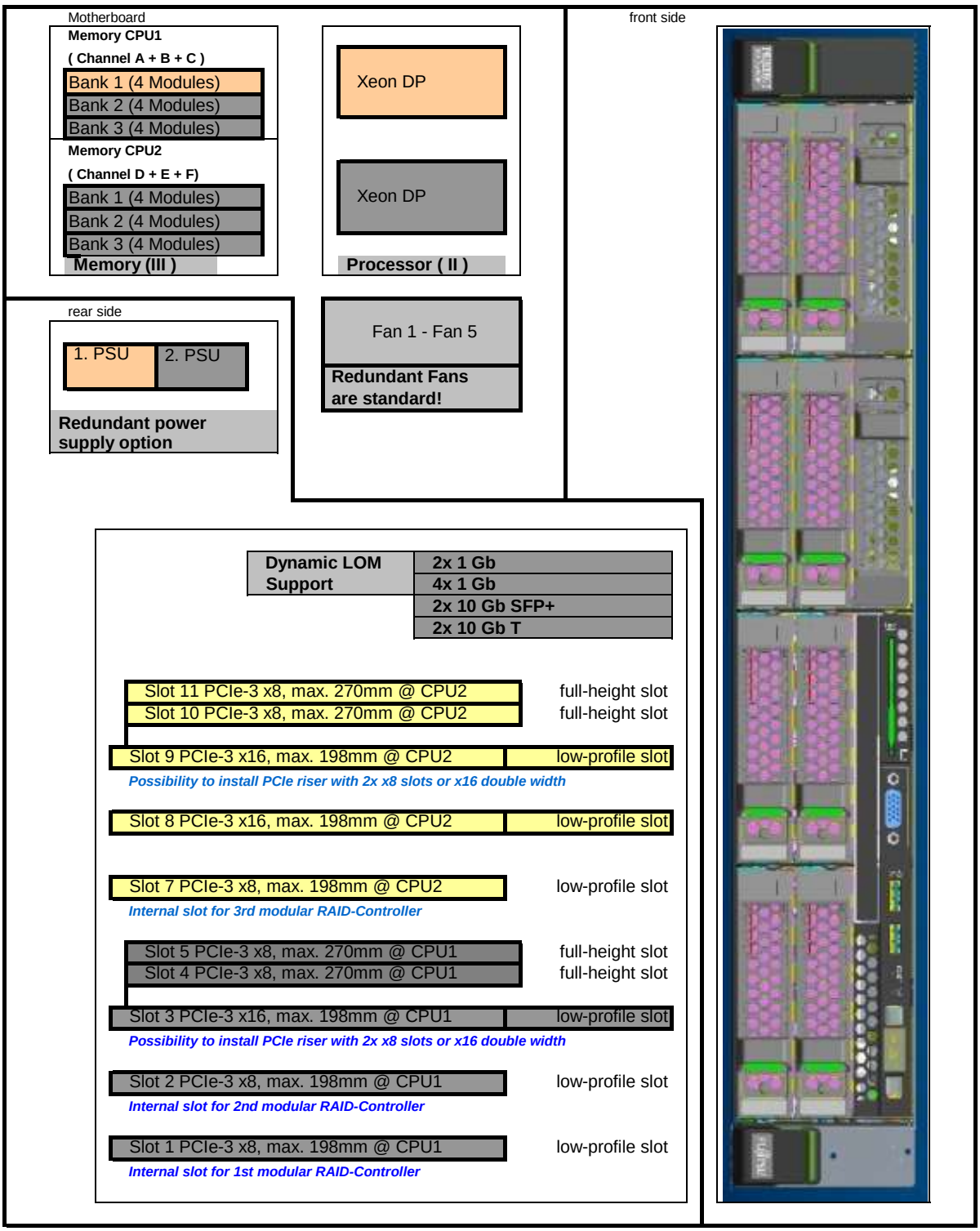
http://ts.fujitsu.com/products/standard_servers/inc (internet)

https://partners.ts.fujitsu.com/com/order-supply/configurators/primergy_config/current/Pages/default.aspx (extranet)

Configuration diagram PRIMERGY RX2540 M1 LFF

System unit (I)

with up to 4x, 8x or 12x 3.5" Hard disk drives



Key:

Included in basic unit Option

One **CPU**, one **memory** per CPU and one **PSU** has to be selected for an orderable basic unit.

Start PRIMERGY RX2540 M1

Section | **Basic unit**

System unit consisting of:
*** 2U Housing without power supply modules**
*** Basic units with:**
- 2 Hot-Plug Power Supply Bays
- 5 Fans (full redundancy)
- 12 memory DIMMs per CPU (max 768GB) => Total 24 DIMMs (max 1536GB) for two CPU`s as soon as available: max 3072GB per system with two CPU`s
*** SAS Backplanes for 4x, 8x or 12x 3.5" HD LFF or for 8, 16 or 24x 2.5" HD SFF or PCIe SFF backplanes (Feb. 2015) with cable connection to on-board, modular RAID Controller or PCIe Switch**

*** Drives/Bays**
- 4, 8 or 12 bays 1" for hot plug 3.5" HD (1" high) or 8, 16 or 24 bays for hot plug 2.5" HD (Feb. 2015)
- 1 bay SATA-DVD-RW 0,4" height (option, not for basic unit with 12x 3.5" HD and with 24 x 2,5" HD)
- 1 bay for 5.25" and 1.6" high Backup device, not possible for basic units with 3.5" HD and for basic unit with 24 x 2,5" HD

*** Integrated ServerView Diagnostics Technology (Diagnosis LED`s) for indication of internal failed components**

Systemboard D3289 with:
*** Up to two Xeon DP CPU`s (Socket-R3) with 2 serial QPI links (Quick Path Interconnect) and four memory channels per CPU**
First CPU has to be selected for an orderable basic unit,
*** Chipset Intel® C610 Series (codenamed Wellsburg)**

*** 6 PCI slots low profile:**
- 3x PCIe-3 x16 (2 slots are connected to CPU 2 and are useable with configured 2nd CPU only!)
- 2x PCIe-3 x8 (notched to install x16 cards, 1 slot is connected to CPU 2)
- 1x PCIe-3 x8 (may be used for modular RAID controller)
8 PCI slots are possible with PCIe riser card options (4x full height, please see Section VII, Nov. 2014)

*** 24 memory slots (each CPU 12 slots) DDR4 are available**
- Memory is divided into 12 DIMMs per CPU (4 channels with 3 slots per channel)
First Memory (one module) has to be selected for an orderable basic unit per CPU

*** Dynamic LOM**
Quad Port 1Gb/10Gb Emulex Controller XE104 (Skyhawk) on motherboard
up to Quad Port 1Gb or
Dual Port 10Gb NIC plus full CNA functionality with iSCSI-, FCoE- RDMA and UMC support
connectors (external interfaces) are added by different variants of DynamicLoM interface modules
The Service LAN-port can be switched alternatively to a standard LAN (port 1)

*** iRMC S4 (integrated Remote Management Controller) on-board server management controller with dedicated 10/100/1000 Service LAN-port and integrated graphics controller.**

*** Graphics Controller integrated in iRMC S4 (integrated Remote Management Controller):**
1600x1200x16bpp 60Hz, 1280x1024x16bpp 60Hz, 1024x768x32bpp 75Hz, 800x600x32bpp 85Hz, 640x480x32bpp 85Hz
(1280x1024x24bpp 60Hz only possible if local monitor or remote video redirection is off)

Interfaces at the rear:
* 1x RS-232-C (serial, 9 pins) (usable for BMC or OS or shared)
* 1x VGA (15 pins)
* 2x USB **3.0** (UHCI) with **5 GBit/s,** no USB wakeup
* 2x USB **2.0** (UHCI) with **480MBit/s,** no USB wakeup
* 2x or 4x LAN 1Gb RJ45 or 2x LAN 10 Gb SFP+ or RJ45, 1x Service-LAN RJ45

Interfaces on the front:
* 2x USB **3.0** (UHCI) with **5 GBit/s,** no USB wakeup (only 1x USB 2.0 for basic unit with 12x 3.5" HD and with 24 x 2,5" HD)
* 1x VGA (15 pins) as an option (not for basic unit with 12x 3.5" HD and with 24 x 2,5" HD)

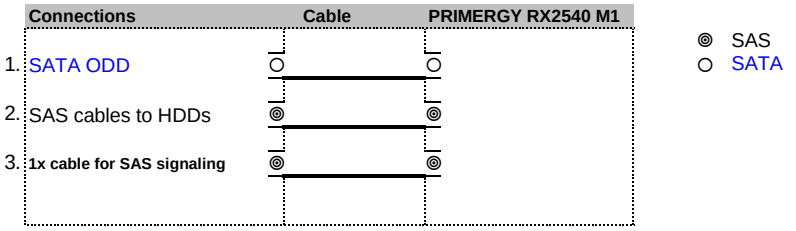
Interfaces internal:
* 1 port for UFM Module
* 1 port for backup device USB3.0 (USB 3.0 Type A Connector)
* 1x SATA 3Gbit interface for ODD
* 1x SATA 3GBit for DOM
* 8x SATA 3Gbit interface for 8 SATA HD (first release for 4 SATA HD only!)

Software:
*** ServerView Suite Software package incl. ServerStart, ServerBooks, Management Software and Updates**
*** Documentation engl. (multilingual on CD)**

A

A

Cables included in basic unit



Note: Rack Mounting kit and Power Cord for RX2540 M1 is not included in the basic unit and has to be configured separately

Rack version for 19" racks with No PSU included in Base Unit		
Basic unit is without CPU and Memory For an orderable basic unit one CPU = first CPU and one memory = first memory has to be selected		
Basic unit with		
3.5" HDD bays expandable	**S26361-K1495-V101**	
12x 3.5" HDD bays	**S26361-K1495-V112**	Available in November 2014
Basic unit with		
2.5" HDD bays expandable	**S26361-K1495-V401**	Available in February 2015
24x 2.5" HDD bays	**S26361-K1495-V424**	Available in February 2015

as soon as available

S26113-F575-E13	**S26113-F574-E13**	**S26113-F616-E10**	**S26113-F615-E10**
450W PSU module platinum	**800W** PSU module platinum	**1200W** PSU module platinum	**800W** PSU module titanium
1st or 2nd PSU for redundancy	1st or 2nd PSU for redundancy	1st or 2nd PSU for redundancy	1st or 2nd PSU for redundancy
94% efficiency (platinum)	94% efficiency (platinum)	94% efficiency (platinum)	96% efficiency (titanium)
		110V range: 1000W	110V range not supported
uses hot plug PSU slot	uses hot plug PSU slot	uses hot plug PSU slot	uses hot plug PSU slot
min. 1 / max. 2x per system	min. 1 / max. 2x per system	min. 1 / max. 2x per system	min. 1 / max. 2x per system

S26113-F574-E99 *
Power Supply Dummy
must be ordered if 1x PSU only
occupies one bay for hot plug power supply
max. 1x per system

For later redundancy upgrade the following kit is available:	
One 450W power supply module hot plug no power cable included!!!	**S26113-F575-L13**
One 800W power supply module hot plug no power cable included!!!	**S26113-F574-L13**
One 1200W power supply module hot plug no power cable included!!!	**S26113-F616-L10**
One 800W power supply module titanium no power cable included!!!	**S26113-F615-L10**
Please order appropriate power cord additionally:	
Powercord for rack, 4m, grey, IEC320 C13->C14 connector	**T26139-Y1968-L10**
Power Cord USA / Canada, 1.8m, grey	**T26139-Y1742-L10**

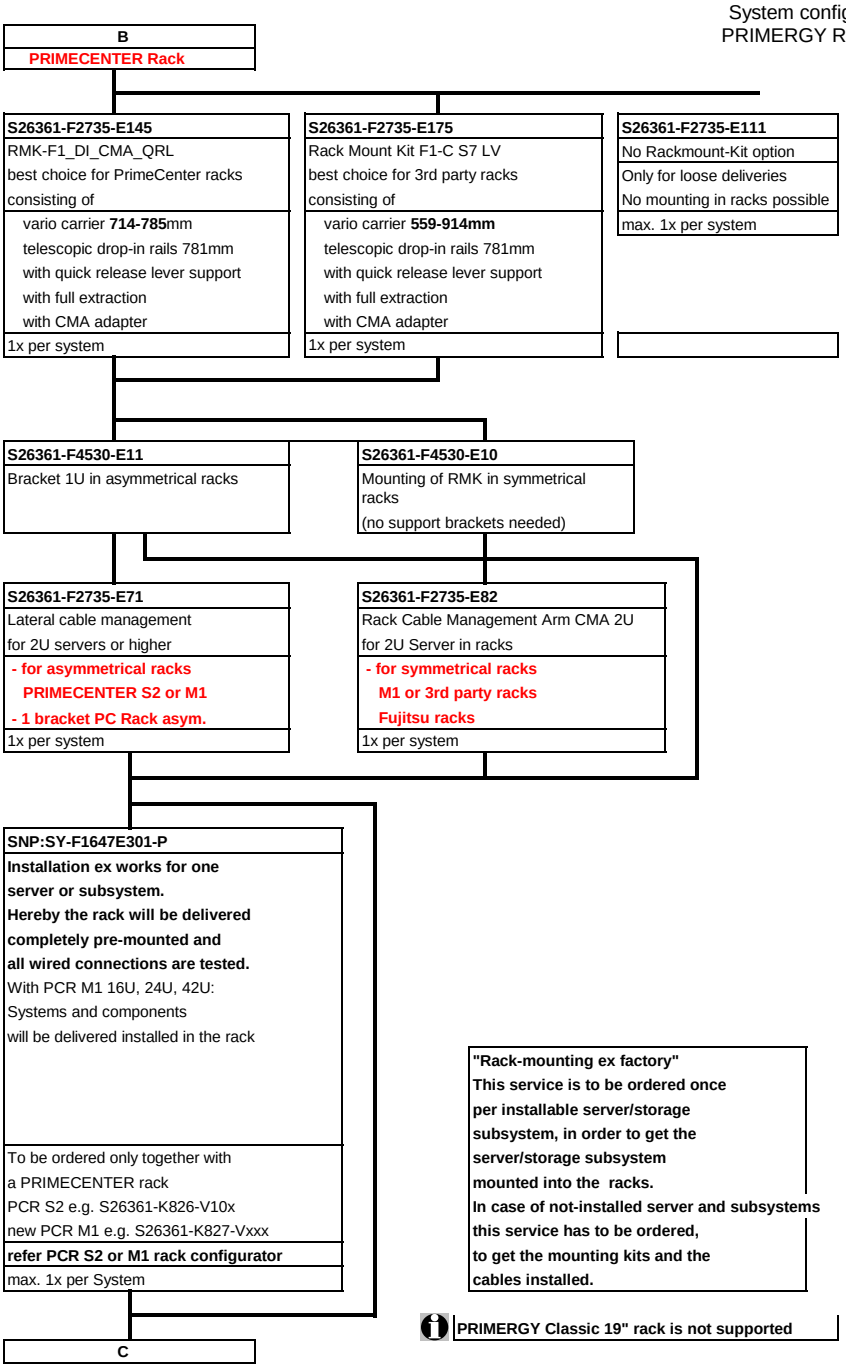
***For order completeness only**
Not shown in system architect
Version > V9.2

S26361-F3552-E6
TPM Module
Trusted Platform Module on Motherboard
Use according to import restrictions
max. 1x per system

S26361-F3552-L6
TPM Module add-on kit
for later integration (loose delivery)
Trusted Platform Module on Motherboard
Use according to import restrictions
max. 1x per system

Be aware of import restrictions!
Loose delivery for later integration possible for customer.

B



Further information for
rack mounting is available
within the
Corporate Partner Portal

All "L" no's for loose delivery

S26361-F2735-L10
Adapter angle PC/DC-Rack, till 50Kg
necessary for mounting RMKs in asymmetrical PC racks

S26361-F2735-L145
RMK-F1_DI_CMA_QRL
best choice for PrimeCenter racks
with CMA adapter

S26361-F2735-L175
RMK-F1_DI_CMA_QRL_LV
best choice for 3rd party racks
with CMA adapter

S26361-F2735-L176
RMK-F1_DI_QRL_LV
best choice for 3rd party racks
w/o CMA adapter

S26361-F2735-L7
Lateral cable management (optionally)
can only be mounted
in asymmetrical PRIMECENTER
S2 or new M1 racks in 1U above RMK

S26361-F2735-L82
Rack Cable Management Arm CMA 2U
for 2U Server in racks.

S26361-F2201-L20
Cable arm 2U PCR M1 S and 3rd p.-racks
for L176, has to be mounted above RMK

C

Section || Processor

There are 2 processor sockets available.
The first socket must always be equipped with the **first CPU** which can be selected via configurator
Two processors with different clock frequencies are not possible

Max. two CPU`s can be selected per basic unit	
One of following CPU´s can be selected once (only as first CPU) for an orderable basic unit	
Optional second CPU has to be the same type like the first CPU	
Xeon E5-2600v3 (R) Basic - 1x 64-bit Intel Xeon (15MB Smart Cache) 1600 MHz DDR4 Bus; 6.4 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2603v3 6C/6T 1.60GHz 15MB 6.4GT/s 1600MHz 85W	**S26361-F3849-E103**
Xeon E5-2609v3 6C/6T 1.90GHz 15MB 6.4GT/s 1600MHz 85W	**S26361-F3849-E109**
Xeon E5-2600v3 (R) Standard - 1x 64-bit Intel Xeon (15/20MB Smart Cache); Hyper-Threading (HT); 1866 MHz DDR4 Bus; 8.0 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2620v3 6C/12T 2.40GHz 15MB 8.0GT/s 1866MHz 85W	**S26361-F3849-E120**
Xeon E5-2630v3 8C/16T 2.40GHz 20MB 8.0GT/s 1866MHz 85W	**S26361-F3849-E130**
Xeon E5-2640v3 8C/16T 2.60GHz 20MB 8.0GT/s 1866MHz 90W	**S26361-F3849-E140**
Xeon E5-2600v3 (R) Advanced - 1x 64-bit Intel Xeon (25/30MB Smart Cache); Hyper-Threading (HT); 2133 MHz DDR4 Bus; 9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2650v3 10C/20T 2.30GHz 25MB 9.6GT/s 2133MHz 105W	**S26361-F3849-E150**
Xeon E5-2600v3 (R) Frequency Optimized - 1x 64-bit Intel Xeon (10-20MB Smart Cache); Hyper-Threading (HT); 1866 & 2133 MHz DDR4 Bus; 8.0 & 9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2623v3 4C/8T 3.00GHz 10MB 8.0GT/s 1866MHz 105W	**S26361-F3849-E123**

Max. DDR4 Bus Speed depends on:
- max. DDR4 Bus Speed from the CPU and
- max. DDR4 Memory Speed and
- max. memory modules on one memory channel

Loose CPU components are available under the following order code: S26361-F3849-L4xx *
*xx depends on the CPU type

Below CPU SKU's have to be ordered twice!
Single CPU configuration is only possible on Special Release Request.

Max. two CPU`s can be selected per basic unit	
One of following CPU´s has to be selected as first CPU for an orderable basic unit	
Second CPU has to be the same type like the first CPU (not optional!)	
Xeon E5-2600v3 (R) Advanced - 1x 64-bit Intel Xeon (25/30MB Smart Cache); Hyper-Threading (HT); 2133 MHz DDR4 Bus; 9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2660v3 10C/20T 2.60GHz 25MB 9.6GT/s 2133MHz 105W	**S26361-F3849-E160**
Xeon E5-2670v3 12C/24T 2.30GHz 30MB 9.6GT/s 2133MHz 120W	**S26361-F3849-E170**
Xeon E5-2680v3 12C/24T 2.50GHz 30MB 9.6GT/s 2133MHz 120W	**S26361-F3849-E180**
Xeon E5-2690v3 12C/24T 2.60GHz 30MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E190**
Xeon E5-2600v3 (R) Frequency Optimized - 1x 64-bit Intel Xeon (10-20MB Smart Cache); Hyper-Threading (HT); 1866 & 2133 MHz DDR4 Bus; 8.0 & 9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2637v3 4C/8T 3.50GHz 15MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E137**
Xeon E5-2643v3 6C/12T 3.40GHz 20MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E143**
Xeon E5-2667v3 8C/16T 3.20GHz 20MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E167**
Xeon E5-2600v3 (R) High Core Count - 1x 64-bit Intel Xeon (35-40MB Smart Cache); Hyper-Threading (HT); 2133 MHz DDR4 Bus; 9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2683v3 14C/28T 2.00GHz 35MB 9.6GT/s 2133MHz 120W	**S26361-F3849-E183**
Xeon E5-2695v3 14C/28T 2.30GHz 35MB 9.6GT/s 2133MHz 120W	**S26361-F3849-E195**
Xeon E5-2697v3 14C/28T 2.60GHz 35MB 9.6GT/s 2133MHz 145W	**S26361-F3849-E197**
Xeon E5-2698v3 16C/32T 2.30GHz 40MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E198**
Xeon E5-2699v3 18C/36T 2.30GHz 45MB 9.6GT/s 2133MHz 145W	**S26361-F3849-E199**
Xeon E5-2600v3 (R) Low Power - 1x 64-bit Intel Xeon (20/30MB Smart Cache); Hyper-Threading (HT); 1866/2133 MHz DDR4 Bus; 8.0/9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2630Lv3 8C/16T 1.80GHz 20MB 8.0GT/s 1866MHz 55W	**S26361-F3849-E131**
Xeon E5-2650Lv3 12C/24T 1.80GHz 30MB 9.6GT/s 2133MHz 65W	**S26361-F3849-E151**

S26361-F3849-E100
Cooling Kit 2nd CPU

C1

C2

C1

C2

One of following CPU´s has to be selected as second CPU	
Optional second CPU has to be the same type like the first CPU	
Xeon E5-2600v3 (R) Basic - 1x 64-bit Intel Xeon (15MB Smart Cache) 1600 MHz DDR4 Bus; 6.4 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2603v3 6C/6T 1.60GHz 15MB 6.4GT/s 1600MHz 85W	**S26361-F3849-E103**
Xeon E5-2609v3 6C/6T 1.90GHz 15MB 6.4GT/s 1600MHz 85W	**S26361-F3849-E109**
Xeon E5-2600v3 (R) Standard - 1x 64-bit Intel Xeon (15/20MB Smart Cache); Hyper-Threading (HT); 1866 MHz DDR4 Bus; 8.0 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2620v3 6C/12T 2.40GHz 15MB 8.0GT/s 1866MHz 85W	**S26361-F3849-E120**
Xeon E5-2630v3 8C/16T 2.40GHz 20MB 8.0GT/s 1866MHz 85W	**S26361-F3849-E130**
Xeon E5-2640v3 8C/16T 2.60GHz 20MB 8.0GT/s 1866MHz 90W	**S26361-F3849-E140**
Xeon E5-2600v3 (R) Advanced - 1x 64-bit Intel Xeon (25/30MB Smart Cache); Hyper-Threading (HT); 2133 MHz DDR4 Bus; 9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2650v3 10C/20T 2.30GHz 25MB 9.6GT/s 2133MHz 105W	**S26361-F3849-E150**
Xeon E5-2660v3 10C/20T 2.60GHz 25MB 9.6GT/s 2133MHz 105W	**S26361-F3849-E160**
Xeon E5-2670v3 12C/24T 2.30GHz 30MB 9.6GT/s 2133MHz 120W	**S26361-F3849-E170**
Xeon E5-2680v3 12C/24T 2.50GHz 30MB 9.6GT/s 2133MHz 120W	**S26361-F3849-E180**
Xeon E5-2690v3 12C/24T 2.60GHz 30MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E190**
Xeon E5-2600v3 (R) Frequency Optimized - 1x 64-bit Intel Xeon (10-20MB Smart Cache); Hyper-Threading (HT); 1866 & 2133 MHz DDR4 Bus; 8.0 & 9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2623v3 4C/8T 3.00GHz 10MB 8.0GT/s 1866MHz 105W	**S26361-F3849-E123**
Xeon E5-2637v3 4C/8T 3.50GHz 15MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E137**
Xeon E5-2643v3 6C/12T 3.40GHz 20MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E143**
Xeon E5-2667v3 8C/16T 3.20GHz 20MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E167**
Xeon E5-2600v3 (R) High Core Count - 1x 64-bit Intel Xeon (35-40MB Smart Cache); Hyper-Threading (HT); 2133 MHz DDR4 Bus; 9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2683v3 14C/28T 2.00GHz 35MB 9.6GT/s 2133MHz 120W	**S26361-F3849-E183**
Xeon E5-2695v3 14C/28T 2.30GHz 35MB 9.6GT/s 2133MHz 120W	**S26361-F3849-E195**
Xeon E5-2697v3 14C/28T 2.60GHz 35MB 9.6GT/s 2133MHz 145W	**S26361-F3849-E197**
Xeon E5-2698v3 16C/32T 2.30GHz 40MB 9.6GT/s 2133MHz 135W	**S26361-F3849-E198**
Xeon E5-2699v3 18C/36T 2.30GHz 45MB 9.6GT/s 2133MHz 145W	**S26361-F3849-E199**
Xeon E5-2600v3 (R) Low Power - 1x 64-bit Intel Xeon (20/30MB Smart Cache); Hyper-Threading (HT); 1866/2133 MHz DDR4 Bus; 8.0/9.6 GT/s QPI Bus occupies socket for one CPU	
Xeon E5-2630Lv3 8C/16T 1.80GHz 20MB 8.0GT/s 1866MHz 55W	**S26361-F3849-E131**
Xeon E5-2650Lv3 12C/24T 1.80GHz 30MB 9.6GT/s 2133MHz 65W	**S26361-F3849-E151**

Separate orderable CPU upgrade kits	
S26361-F3849-L403	Xeon E5-2603v3 6C/6T 1.60GHz 15MB 6.4GT/s 1600MHz 85W
S26361-F3849-L409	Xeon E5-2609v3 6C/6T 1.90GHz 15MB 6.4GT/s 1600MHz 85W
S26361-F3849-L420	Xeon E5-2620v3 6C/12T 2.40GHz 15MB 8.0GT/s 1866MHz 85W
S26361-F3849-L430	Xeon E5-2630v3 8C/16T 2.40GHz 20MB 8.0GT/s 1866MHz 85W
S26361-F3849-L440	Xeon E5-2640v3 8C/16T 2.60GHz 20MB 8.0GT/s 1866MHz 90W
S26361-F3849-L450	Xeon E5-2650v3 10C/20T 2.30GHz 25MB 9.6GT/s 2133MHz 105W
S26361-F3849-L423	Xeon E5-2623v3 4C/8T 3.00GHz 10MB 8.0GT/s 1866MHz 105W

D

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Section III Memory

- **There are 12 memory slots per CPU for max.**
  768GB LRDIMM (12x 64GB 4R)
  384GB RDIMM (12x 32GB 2R)
  => max. 1.536GB for two CPUs (768GB per CPU), using LRDIMM
- The memory area is divided into 4 channels per CPU with 3 slots per channel
- Slot 1 of each channel belongs to memory bank 1, the slot 2 belongs to memory bank 2, slot 3 belongs to memory bank 3

Registered and Load Reduced DIMMs can be selected
No mix of registered and load reduced modules is allowed.
Memory will be operated at 1.2V.
Depending on the CPU following memory speeds will be reached:
In a single DIMM per channel configuration 2133MHz will be supported
This is also valid for a dual LRDIMM configurations (2166MHz)
In a dual RDIMM configuration 1866MHz will be supported
All 3DPC configurations support 1600MHz
SDDC (Chipkill) is supported for registered and load redueced x4 organized memory modules

1.) In the "Independent Channel Mode" the following configuration is possible
Channels can be populated in any order in Independent Channel Mode. All four channels may be populated in any order and have no matching requirements. All channels must run at the same interface frequency but individual channels may run at different DIMM timings (RAS latency, CAS latency, and so forth)
No mix of registered and load reduced modules is allowed.

2.) "Rank Sparing Mode" configuration
Within a memory channel, one rank is a spare of the other ranks.
The Spare Rank is held in reserve and is not available as system memory
For the effective memory capacity, please refer to the spreadsheet below.
The BIOS is set to the rank sparing setting.
Minimum configuration is: 2x 1R, 2x 2R or 1x4R DDR4 module per channel

3.) "Performance Mode" configuration
In this configuration, the memory module population ex factory is spread across all channels.
The BIOS is set to the maximum performance for memory.
Minimum configuration is four identical modules per CPU

4.) "Mirrored Channel Mode" configuration
Each memory bank can optionally be equipped with four registered or load reduced DDR4 modules
In each memory bank channel A and B / C and D of CPU 1 or channel E and F / G and H of CPU 2 have to be equipped with identical modules for mirrored channel mode.
In channel B / D is always the mirrored memory of channel A / B of CPU 1
In channel F / H is always the mirrored memory of channel E / G of CPU 2
Minimum configuration is four identical modules per CPU

E

E

1x per CPU

S26361-F3694-E10 Independent Mode
Independent Channel Mode allows all channels to be populated in any order. No specific Memory RAS features are defined
Requires min 1 memory Module per CPU

S26361-F3694-E1 Rank Sparing Mode Installation
BIOS Setup factory preinstalled to this mode. One Rank is spare of other ranks on the same channel. Spare Rank is not shown in System Memory.
For effective capacity within a channel, please have a look below.
Requires min 2x 1R/2R or 1x 4R modules per CPU

S26361-F3694-E2 Performance Mode Installation
BIOS Setup factory preinstalled for maximum Performance, Four identical memory modules
will be equipped in one memory bank to achieve highest memory performance. All four modules are active and full capacity can be used.
Multiple of 4 identical modules to be configured per CPU

S26361-F3694-E3 Mirrored Channel Mode Installation
BIOS Setup factory preinstalled to this mode. Four identical memory modules are always equipped in one memory bank to use the
Mirrored channel Mode. Only two modules contain active data, the remain two modules contain mirrored data
Multiple of 4 identical modules to be configured per CPU

Effective Memory capacity / Rank Sparing Mode, 1 Channel populated

	RDIMM			LRDIMM	
	8GB 1R	16GB 2R	32GB 2R	32GB 4R	64GB 4R
1DPC				24GB	48GB
2DPC	8GB	24GB	48GB	56GB	112GB
3DPC	16GB	40GB	80GB	88GB	176GB

Minimum one memory module or order code per CPU = first memory

Note 1)
Max. DDR4 memory speed depends on the memory configuration
(No of mem modules per channel) as well as on the CPU type.
The memory channel with the lowest speed defines the speed
of all CPU channels in the system, also for the channels of the
second CPU if configured.
For real memory speed (depending on memory type / population),
please check the spreadsheet "Memory speed" below

Note 2)
Mix of memory modules is only possible within the same group

12x per CPU, max. 3 modules per channel

Registered Memory (RDIMM) with SDDC (chipkill) support		
- one DDR4 registered ECC memory Module, 1.2V		
Choose up to 12 order codes per CPU		
8GB (1x8GB) 1Rx4 DDR4-2133 R ECC	S26361-F3843-E514	
16GB (1x16GB) 2Rx4 DDR4-2133 R ECC	S26361-F3843-E516	
32GB (1x32GB) 2Rx4 DDR4-2133 R ECC	S26361-F3843-E517	as soon as available
Registered Memory (RDIMM) no SDDC (chipkill) support		
- one DDR4 registered ECC memory Module, 1.2V		
Choose up to 12 order codes per CPU		
8GB (1x8GB) 2Rx8 DDR4-2133 R ECC	S26361-F3843-E515	
Load Reduced Memory (LRDIMM) with SDDC (chipkill) support		
- one DDR4 load reduced ECC memory Module, 1.2V		
Choose up to 12 order codes per CPU		
32GB (1x32GB) 4Rx4 DDR4-2133 LR ECC	S26361-F3844-E517	
64GB (1x64GB) 4Rx4 DDR4-2133 LR ECC	S26361-F3844-E518	as soon as available

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Memory Configuration PRIMERGY RX2540 M1

Each CPU offers 12 **Slots** for DDR4 Memory Modules organised in **3 Banks and 4 Channels.**
If you need more than 12 Slots you have to configure the 2nd CPU.
Depending on the amount of memory configured you can decide between 4 basic modes of operation (see explanation below).

There are 2 different kinds of DDR4 Memory Modules available: RDIMM and LRDIMM
Mix of RDIMM and LRDIMM is not allowed.

Mode	Configuration	RDIMM	RDIMM / LRDIMM	Application
		x8	x4	
SDDC (chipkill) support	any	no	yes	detect multi-bit errors
Independant Channel Mode	1, 2 or 3 Modules per Bank	yes	yes	offers max. flexibility, upgradeability, capacity
Mirrored Channel Mode *)	4 identical Modules / Bank	no	yes	offers maximum security
Performance Mode	4 identical Modules / Bank	yes	yes	offers maximum performance and capacity
Rank Sparing Mode *)	min. 2 Ranks / Channel	no	yes	balances security and capacity

*) For the delivery ex works the system will be prepared with dedicated BIOS setting.

Capacity	Configuration	RDIMM	LRDIMM	Notes
Min. Memory per CPU	1 Module / CPU	1x8GB	1x32GB	with one CPU
Max. Memory per CPU	12 Modules / CPU	12x32GB	12x64GB	with one CPU
Max. Memory per System	24 Modules / System	768GB	1536GB	if second CPU is configured

Memory-Speed:
Max. DDR4 memory speed depends on the memory configuration on one memory channel and the speed of the CPU
The memory channel with the lowest speed defines the speed of all CPU channels in the system

Mem. Speed provided by CPU	Real maximum memory-bus speed depending on CPU type, memory configuration (DPC) and voltage setting (BIOS)					
	RDIMM 2133MHz			LRDIMM 2133MHz		
Voltage setting (BIOS)	1.2V			1.2V		
	1 DPC	2 DPC	3 DPC	1 DPC	2 DPC	3 DPC
CPU with 2133MHz DDR4 Bus	2133	1866	1600	2133	2133	1600
CPU with 1866MHz DDR4 Bus	1866	1866	1600	1866	1866	1600
CPU with 1600MHz DDR4 Bus	1600	1600	1600	1600	1600	1600

2133MHz under test; available in 11/2014

1R - Single Rank 4R - Quad Rank
2R - Dual Rank 8R - Eight Rank

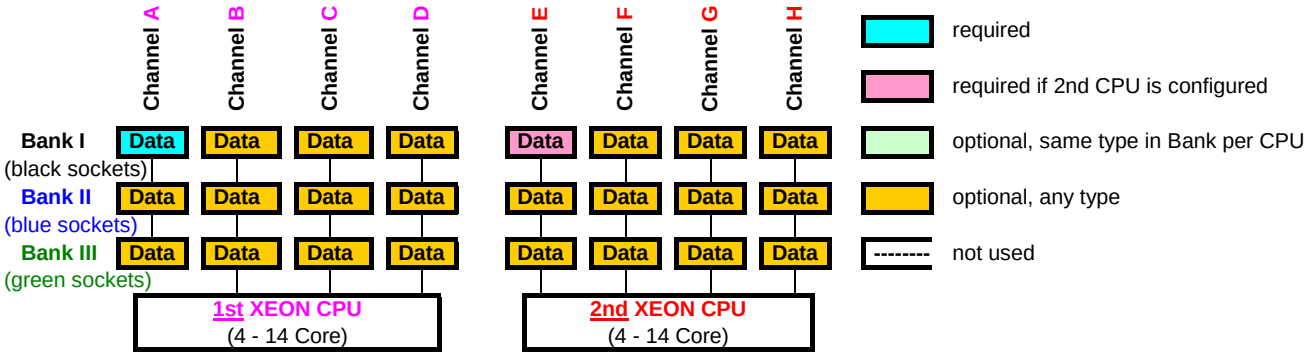
1DPC = 1 DIMM per Channel
2DPC = 2 DIMM per Channel
3DPC = 3 DIMM per Channel

Configuration hints:

- The memory sockets on the systemboard offer a color coding:
  Bank I black sockets
  Bank II blue sockets
  Bank III green sockets

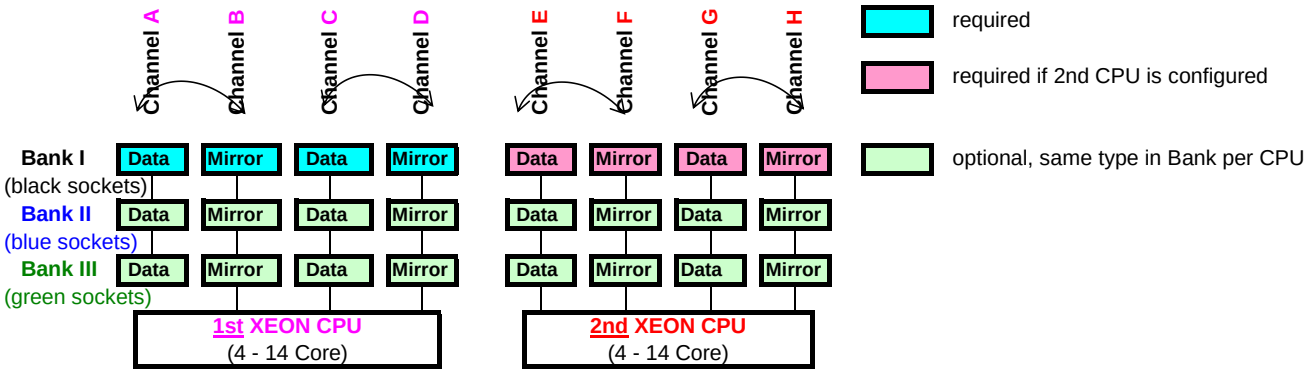
- A so called Bank consits of 1 memory module on every Channel available on one CPU (examples see below)
  Bank I on CPU 1/2 up to 4 memory modules connected to Channel A - H on the 1st/2nd CPU
  Bank II on CPU 1/2 up to 4 memory modules connected to Channel A - H on the 1st/2nd CPU
  Bank III on CPU 1/2 up to 4 memory modules connected to Channel A - H on the 1st/2nd CPU
- See below and next page for a detailed descriptions of the memory configuration supported.

1. Independent Channel Mode



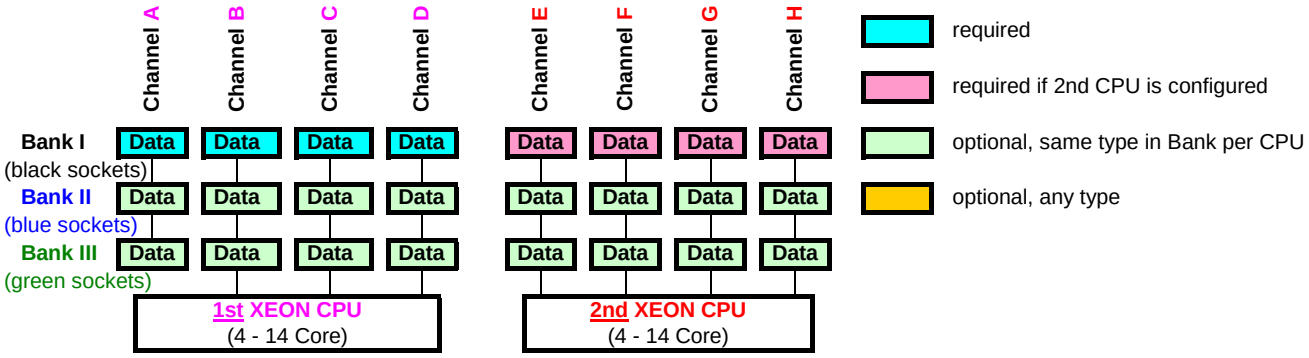
Independent Channel Mode allows all channels to be populated in any order
Can run with differently rated DIMMs and use the settings of the slowest DIMM installed in the system

2. Mirrored Channel Mode



Mirrored Channel Mode requires identical modules on channel A,B, C, D (1st CPU) or channel E, F, G and H (2nd CPU)
50% of the capacity is used for the mirror => the available memory for applications is only half of the installed memory
If this mode is used, a multiple of 4 identical modules has to be ordered.

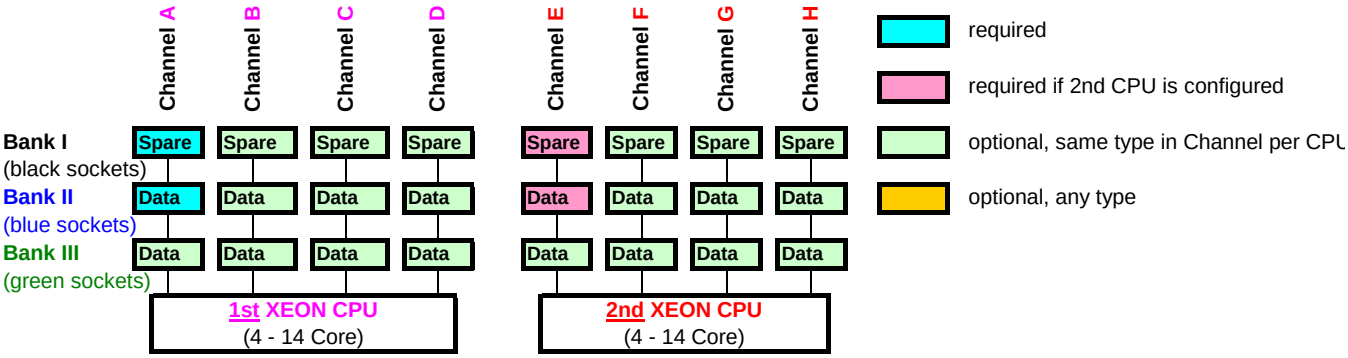
3. Performance Channel Mode



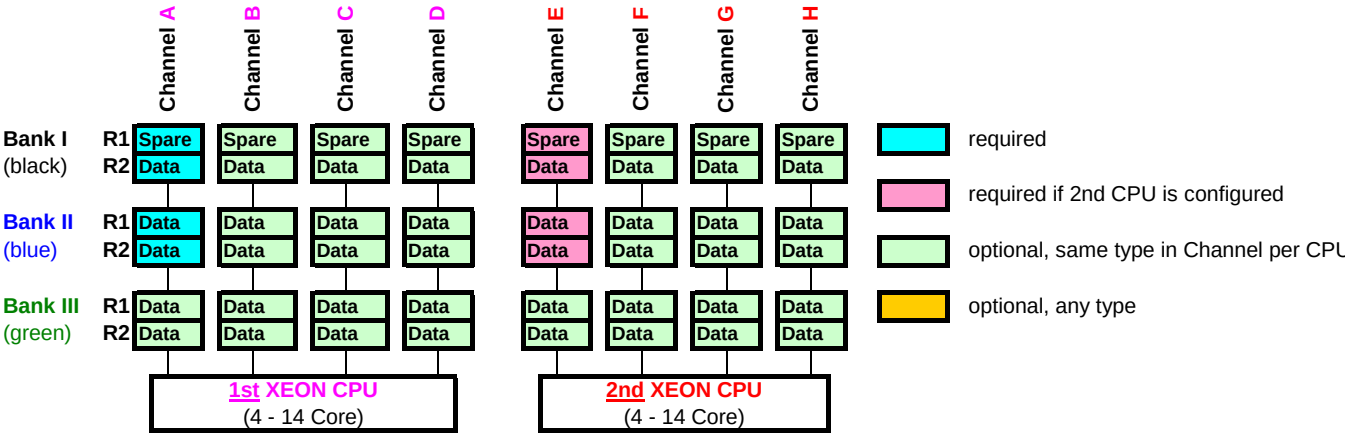
Performance Channel Mode requires identical modules on all channels of each Bank per CPU.
If this mode is used, a multiple of 4 identical modules has to be ordered.

4. Rank Sparing Mode

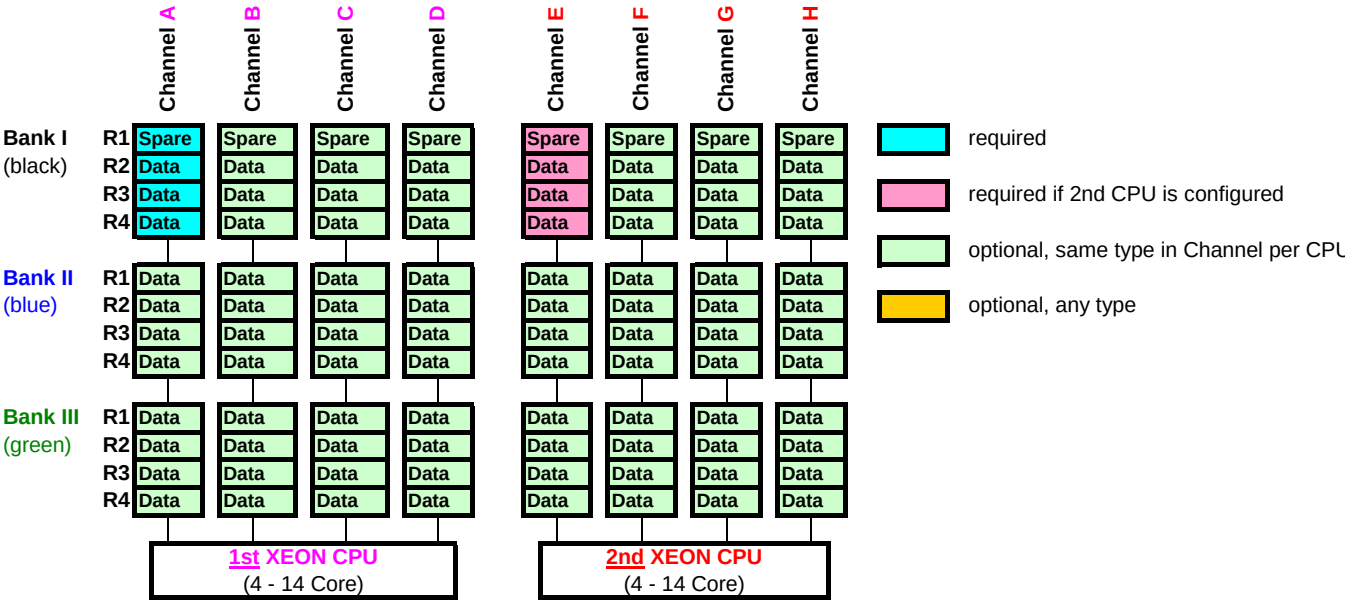
1-Rank Memory modules (RDIMM)



2-Rank Memory modules (RDIMM)



4-Rank Memory modules (LRDIMM)



Rank Sparing Mode requires identical modules (same capacity and technology) within the same channel.
The available memory for applications will vary depending on configuration. Please refer to the spreadsheet above "Effective Memory capacity with active Rank Sparing Mode". Population rule for Rank sparing mode is to achieve max. available memory, e.g. 6 DIMMs will be spread across two channels, each with 3DPC

F

Section IV -- Graphics & GPGPU & Co-Processors

Graphics Controller integrated in iRMC S4 (integrated Remote Management Controller) with following resolutions:
1920x1200x16bpp, 1920x1080x16bpp, 1600x1200x16bpp, 1680x1050x16bpp, 1440x900x16bpp, 1152x864x16bpp, 1280x1024x32bpp, 1024x768x32bpp, 800x600x32bpp, 640x480x32bpp

Opt. Front VGA
Please refer to Sys.Manag. XII

Optional Front VGA only possible for onboard graphics

as soon as available

S26361-F2748-E637
PY VGA card 512MB PCI-e x1
NVIDIA NVS300 512 MB PCIe-x1
Connectors: 1x LFH 59 cable kit for 2x DVI or 2x VGA
supports dual head operation (2D & 3D); For Windows OS & native driver support for Linux. Low profile bracket
max. 1x per system

The optional NVIDIA NVS300 graphic card offers dual head operation and 3D video support. The cables for either two times DVI-I or VGA (cable kit) connections are part of the delivery. Remote Video redirection via iRMC must be disabled. This PCIe-x1 card can also be installed in any PCIe-x4, x8 or x16 slot.

S26361-F2748-L637
PY VGA card 512MB PCI-e x1 for later upgrade

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NVIDIA GRID K1/K2 GPU pass through / vGPU

Mounting Kit consumes PCIe x16 low profile slot.

as soon as available

S26361-F3846-E11
PY GRID K1/K2 Mounting Kit right
max. 1x per system required

S26361-F3846-L11/L12
PY GRID K1/K2 Mounting Kit right/left
For later upgrade a service technician needed

1x

S26361-F3846-E12
PY GRID K1/K2 Mounting Kit left
max. 1x per system required, needs 2nd CPU

S26361-F2222-L914
for later upgrade

S26361-F2222-L924
for later upgrade

2x

S26361-F2222-E914
PY NVIDIA GRID K1 VDI card
NVIDIA GRID K1 Card with 728 graphic cores & 18GB DDR3 RAM. PCIe Gen3
power cables from PSU need to be ordered separately. 800W PSU is recommended
PCIe *16 (Gen2) - double width - occupies space for two PCIe slots, Full height bracket
max. 2x per system

S26361-F2222-E924
PY NVIDIA GRID K2 VDI card
NVIDIA GRID K2 Card with 3.072 graphic cores & 8GB DDR5 RAM. PCIe Gen3
power cables from PSU need to be ordered separately. 800W PSU is recommended
PCIe *16 (Gen2) - double width - occupies space for two PCIe slots, Full height bracket
max. 2x per system

Supported for GPU pass through and vGPU (shared GPU) under Citrix XenServer 6.2 and XenDesktop only. Workload depends on application. Ideal for virtualized GPU or shared GPU workload like "Power Users" or "Knowlegde Workers", including "Designer" as full power graphic USER.
All Citrix XenServer guests are supported.
NOT certified for CAD / CAM / CAX type of applications using dedicated GPU.
Support of other virtualized operating systems refer releases.
VMware vSGA & vDGA and Microsoft RemoteFX will be released as well.

G

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Section Va Possible configuration options for basic units

4 HDDs in Config 1 with ultraslim ODD

Config 1, 2 or 3: Up to 4x, 8x or 12x 3.5" HDD (LFF)	
Basic unit S26361-K1495-V101	expandable
Config 1: Max. 4x 3.5" HDD	included
Available Upgrade kits for this configuration option:	
Upgrade kit to 8x 3.5" HDD	S26361-F2495-L112

8 HDDs in Config 2 with ultraslim ODD

Config 2: Max. 8x 3.5" HDD	S26361-F2495-E120
Available Upgrade kits for this configuration option:	
Upgrade kit to 12x 3.5" HDD	S26361-F2495-L123

12x HDDs for -V112, no ODD

Available in November 2014

Basic unit S26361-K1495-V112 with 12x 3.5" HDDs	
Config 3: Up to 12x 3.5" HDD, no ODD	included
Available Upgrade kits for this configuration option:	
None	

Available in February 2015

SFF 8x, 16x

Basic unit S26361-K1495-V401 with	expandable
Config. 4: 8x 2.5" HDD bays	S26361-F1495-E440
Available Upgrade kits for this configuration option:	
Upgrade kit to 16x 2.5" HDD	S26361-F2495-L445
Upgrade kit 4 to 24x 2.5" HDD	S26361-F2495-L442
Upgrade kit to + 4x PCIe SDD SFF	S26361-F2495-L448

Config. 5: 16x 2.5" HDD bays	S26361-F2495-E450
Config. 6: 16x 2.5" HDD @ Dual RAID	S26361-F2495-E452
Available Upgrade kits for this configuration option:	
Upgrade kit 5 to 24x 2.5" HDD	S26361-F2495-L452

2.5" PCIe-SSD SFF

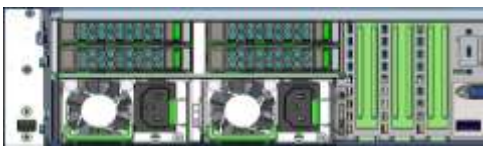
Config. 7: 4x PCIe-SSD SFF	S26361-F2495-E470
Config. 8: 8x 2.5" + 4x PCIe-SSD SFF	S26361-F2495-E480
Config. 9: 8x PCIe-SSD SFF	S26361-F2495-E490
Available Upgrade kits for this configuration option:	
Upgrade kit to + 8x 2.5" HDD	S26361-F2495-L478
Upgrade kit to + 4x 2.5" PCIe-SSD SFF	S26361-F2495-L479

SFF 24x

Basic unit S26361-K1495-V424 with 24x 2.5" HDDs	
Config 24: Up to 24x 2.5" HDD, no ODD/Backup	included
Config. 16: 16+8x 2.5" HDD @ Dual RAID	S26361-F2495-E424
Available Upgrade kits for this configuration option:	
None	
Includes all necessary bezels, cages, backplanes and cables	

Available in February 2015

rear SFF SAS/SATA HDD/SSD
rear 2.5" PCIe-SSD SFF



Modular REAR SFF HDD/SSD options are possible for every basic unit, so V1xx as well as V4xx are expandable	
S26361-F3853-E10	Option REAR SAS/SATA HDD/SSD
S26361-F3853-E20	Option REAR PCIe SSD SFF
Available Upgrade kits for this configuration option:	
S26361-F3853-L10	Upgrade REAR SAS/SATA HDD/SSD
S26361-F3853-L20	Upgrade REAR PCIe SSD SFF
Provides 4 rear hot-plug bays for SAS/SATA HDD/SSD or PCIe-SSD SFF devices	
Note: Separate SAS-Controller or PCIe switch needed in slot 6	
Note: Consumes space for PCIe riser 2x x8 left	
max. 1x per system	
Includes all necessary bezels, cages, backplanes and cables	

HDD/SSD configurations without RAID controller are possible on special release

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Section Vb Accessible drives

Setup RX2540 M1 by ServerStart is supported with following configurations:
no DVD, no CD:
remote installation only (PXE service & DHCP server required)
built in CD/DVD or USB CD/DVD disk drive:
UNC Network share reachable or USB Floppy connected
USB Floppy, no CD/DVD:
USB CD/DVD connected

If installation is done locally, make sure you have external FDD available for driver installation.

Following USB Components are available	
1) USB DVD SM / Blu-Ray	
External SuperMulti Drive	S26341-F103-L126
External Blu-Ray Drive	S26341-F103-L127
2) USB Memorybird:	
MyUSBS A910 8GB, MLC Flash	S26391-F6048-L208
MyUSBS A910 16GB, MLC Flash	S26391-F6048-L216

Only for basic unit V401 with max 16 HDDs and V101 with max 8 HDD

1x

S26361-F3778-E1	**S26361-F3641-E6** (as soon as available)	**S26361-F3718-E2**
DVD-RW supermulti ultraslim	Blu-ray Triple Writer ultraslim SATA	DVD-ROM ultraslim SATA
SATA	6x BD-RW, 8x DVD, 24x CD	16x DVD 48x CD
8x DVD 24x CD	BD DL and all CD/DVD formats	
9.5mm x 5.25", black bezel	9.5mm x 5.25", black bezel	9.5mm x 5.25", black bezel
max. 1x per system	max. 1x per system	max. 1x per system

Only for basic unit V401 (as soon as available)

Not possible for basic unit V1xx

RDX Drive is connected to on-board USB3

S26361-F3750-E5
RDX Drive USB3.0 3.5" internal
100MB/s, USB 3.0
Connector: USB 3.0 "B"
with USB cable
without RDX cartridges
1.6 x 3.5", black bezel
max. 1x per system

RDX cartridges must be ordered separately
RDX 320GB = S26361-F3857-L320
RDX 500GB = S26361-F3857-L500
RDX 1TB = S26361-F3857-L600
10x RDX320 = S26361-F3857-L329

The drive is also available as optional (loose) delivery
S26361-F3750-L5/L7 with USB3.0 cable for adapter card.
The USB3.0 Adapter card or the USB2.0 cable set
S26361-F3750-L20 must be ordered with the drive!

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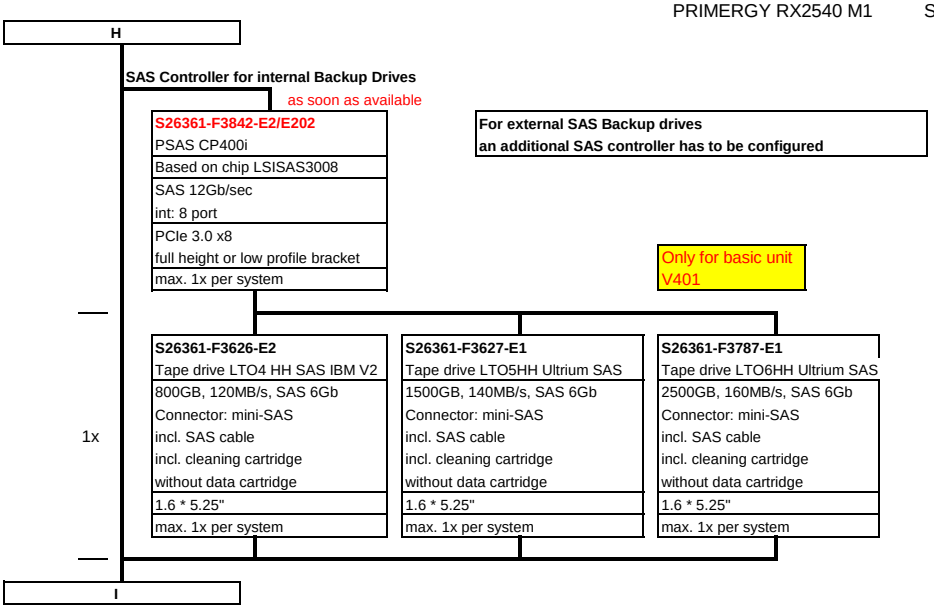
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SAS Controller for internal Backup Drives
as soon as available
S26361-F3842-E2/E202
PSAS CP400i
Based on chip LSISAS3008
SAS 12Gb/sec
int: 8 port
PCIe 3.0 x8
full height or low profile bracket
max. 1x per system
For external SAS Backup drives
an additional SAS controller has to be configured
Only for basic unit
V401
1x
S26361-F3626-E2
Tape drive LTO4 HH SAS IBM V2
800GB, 120MB/s, SAS 6Gb
Connector: mini-SAS
incl. SAS cable
incl. cleaning cartridge
without data cartridge
1.6 * 5.25"
max. 1x per system
S26361-F3627-E1
Tape drive LTO5HH Ultrium SAS
1500GB, 140MB/s, SAS 6Gb
Connector: mini-SAS
incl. SAS cable
incl. cleaning cartridge
without data cartridge
1.6 * 5.25"
max. 1x per system
S26361-F3787-E1
Tape drive LTO6HH Ultrium SAS
2500GB, 160MB/s, SAS 6Gb
Connector: mini-SAS
incl. SAS cable
incl. cleaning cartridge
without data cartridge
1.6 * 5.25"
max. 1x per system
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Section VI Hard disks drives

Modular Raid controller is connected to internal HDDs
For basic unit V112 up to 12 SAS 3.5" hard disks can be configured also in mixed configuration.
The option "Tape drive" is not possible for 3.5" Version (V1xx)
SAS and SATA drives can be mixed, but not used in one logical RAID volume
SAS drives requires SAS Controller
Support of SAS12G requires SAS12G Controller
SAS12G drives are SAS6G compatible
***) SSD Mainstream Endurance 10DWPD over 5y**
****) SSD Read-Intesive Endurance 0.3DWPD over 5y**

4x, 8x or 12x with SAS expander for basic unit V1xx

SATA Disk Drive 3.5"

HDD SATA 6Gb/s 3.5" with hot plug/hot replace tray	
500GB 7200rpm,<9,0ms, 64MB Cache	**S26361-F3815-E500**
1TB 7200rpm,<9,0ms, 64MB Cache	**S26361-F3815-E100**
2TB 7200rpm,<9,0ms, 64MB Cache	**S26361-F3815-E200**
3TB 7200rpm,<9,0ms, 64MB Cache	**S26361-F3815-E300**
4TB 7200rpm,<9,0ms, 64MB Cache	**S26361-F3815-E400**
max. 4x, 8x or 12x per System	

Please order additionally either/or:

Config 1: Max. 4x 3.5" HDD	V101
Config 2: Up to 8x 3.5" HDD	
Config 3: Up to 12x 3.5" HDD	V112

SAS Disk Drive 3.5"

HDD SAS 12Gb/s, 2.5" HDD within 3.5" hot plug/hot replace tray	
300GB 15000rpm, <=3.1ms, 128MB Cache	**S26361-F5532-E530**
450GB 15000rpm, <=3.1ms, 128MB Cache	**S26361-F5532-E545**
600GB 15000rpm, <=3.1ms, 128MB Cache	**S26361-F5532-E560**
HDD SAS 6Gb/s 3.5" with hot plug/hot replace tray	
1TB 7200rpm,<9,0ms, 32MB Cache	**S26361-F3820-E100**
2TB 7200rpm,<9,0ms, 32MB Cache	**S26361-F3820-E200**
3TB 7200rpm,<9,0ms, 32MB Cache	**S26361-F3820-E300**
4TB 7200rpm,<9,0ms, 32MB Cache	**S26361-F3820-E400**
max. 4x, 8x or 12x per System	

Solide State Disk, 3.5"

SSD SATA 6Gb/s, 2.5" SSD within 3.5" hot plug/hot replace tray (H-P)		
120GB, Enterprise (EP), Read-Intensive**	**S26361-F5530-E120**	as soon as available
240GB, Enterprise (EP), Read-Intensive**	**S26361-F5530-E240**	as soon as available
480GB, Enterprise (EP), Read-Intensive**	**S26361-F5530-E480**	as soon as available
800GB, Enterprise (EP), Read-Intensive**	**S26361-F5530-E800**	as soon as available
100GB, Enterprise (EP), Mainstream Endurance (ME)*	**S26361-F5289-E100**	
200GB, Enterprise (EP), Mainstream Endurance (ME)*	**S26361-F5289-E200**	
400GB, Enterprise (EP), Mainstream Endurance (ME)*	**S26361-F5289-E400**	
800GB, Enterprise (EP), Mainstream Endurance (ME)*	**S26361-F5289-E800**	
SSD SAS 12Gb/s, 2.5" SSD within 3.5" hot plug/hot replace tray (H-P)		
200GB, Enterprise (EP), Mainstream Endurance (ME)*	**S26361-F5320-E200**	
400GB, Enterprise (EP), Mainstream Endurance (ME)*	**S26361-F5320-E200**	
800GB, Enterprise (EP), Mainstream Endurance (ME)*	**S26361-F5320-E800**	
1.6TB, Enterprise (EP), Mainstream Endurance (ME)*	**S26361-F5320-E160**	
max. 4x, 8x or 12x per System		

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Solid State Disk, SATA DOM

SSD SATA 6Gb/s DOM, non "hot plug/hot replace"		
32GB, SATA DOM	S26361-F5522-E32	as soon as available
64GB, SATA DOM	S26361-F5522-E64	as soon as available
128GB, SATA DOM	S26361-F5522-E128	as soon as available
max. 1x per system		

Solid State Disk 2.5", SATA 6G Read-Intensive**

SSD SATA 6Gb/s 2.5" with hot plug/hot replace tray (H-P)		
120GB, Enterprise (EP), Read-Intensive**	S26361-F5525-E120	as soon as available
240GB, Enterprise (EP), Read-Intensive**	S26361-F5525-E240	as soon as available
480GB, Enterprise (EP), Read-Intensive**	S26361-F5525-E480	as soon as available
800GB, Enterprise (EP), Read-Intensive**	S26361-F5525-E800	as soon as available
max. 8/16/24x per system		

Solid State Disk 2.5", SATA 6G Mainstream*

SSD SATA 6Gb/s 2.5" with hot plug/hot replace tray (H-P)	
100GB, Enterprise (EP), Mainstream Endurance (ME)*	S26361-F3821-E100
200GB, Enterprise (EP), Mainstream Endurance (ME)*	S26361-F3821-E200
400GB, Enterprise (EP), Mainstream Endurance (ME)*	S26361-F3821-E400
800GB, Enterprise (EP), Mainstream Endurance (ME)*	S26361-F3821-E800
max. 8/16/24x per system	

Solid State Disk 2.5", SAS 12G Mainstream*

SSD SAS 12Gb/s 2.5" with hot plug/hot replace tray (H-P)	
200GB, Enterprise (EP), Mainstream Endurance (ME)*	S26361-F5298-E200
400GB, Enterprise (EP), Mainstream Endurance (ME)*	S26361-F5298-E400
800GB, Enterprise (EP), Mainstream Endurance (ME)*	S26361-F5298-E800
1.6TB, Enterprise (EP), Mainstream Endurance (ME)*	S26361-F5298-E160
max. 8/16/24x per system	

SAS Disk Drive 2.5"

HDD SAS 6Gb/s 2.5" with hot plug/hot replace tray		
500GB 7.200rpm,<9,5ms, 64MB Cache	S26361-F3817-E500	
1TB 7.200rpm,<9,5ms, 64MB Cache	S26361-F3817-E100	
max. 8/16/24x per system		
HDD SAS 12Gb/s 2.5" with hot plug/hot replace tray		
450GB, 10krpm	S26361-Fxxxx-E145	as soon as available
600GB, 10krpm	S26361-Fxxxx-E160	as soon as available
900GB, 10krpm	S26361-Fxxxx-E190	as soon as available
1.2TB, 10krpm	S26361-Fxxxx-E112	as soon as available
1.8TB, 10krpm	S26361-Fxxxx-E118	as soon as available
300GB, 15krpm	S26361-F5531-E530	as soon as available
450GB, 15krpm	S26361-F5531-E545	as soon as available
600GB, 15krpm	S26361-F5531-E560	as soon as available

max 8/16/24x for V4xx

SATA Disk Drive 2.5"

HDD SATA 6Gb/s 2.5" with hot plug/hot replace tray	
250GB 7.200rpm,<9,5ms, 64MB Cache	S26361-F3816-E250
500GB 7.200rpm,<9,5ms, 64MB Cache	S26361-F3816-E500
1TB 7.200rpm,<9,5ms, 64MB Cache	S26361-F3816-E100
max. 8/16/24x per system	

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Section VII Modular Raid 0/1, Raid5 for SAS or SATA HD`s. On-board Controller for max. 8x SATA HD`s

On board SATA Controller (Wellsburg) with 6 Gb/sec can be used for up to 4x 3.5" SATA HDD configurations with special release

For every configuration with hard disks or SSDs one of the following modular RAID-controllers is required

Modular Raid 0/1 controller with IME support for SAS/SATA
This RAID controller supports max. 8 HDDs on internal SAS ports

Modular Raid 5 controller for SAS/SATA
RAID levels 0, 1, 10, 5, 50, 6 and 60 are supported.
This RAID controller supports max. 24 HDDs combined with internal SAS expander

The FBU is an option for the controller which can be used once per controller. If the FBU option has been choosen, the TFM Module is needed once per FBU.

as soon as available

S26361-F3842-E1
PRAID CP400i
Based on chip LSISAS3008
LSI MegaRAID
no Cache, no BBU
RAID 0, 1 & 1E RAID5, 50 tbd
Support for 3Gb/s, 6Gb/s and 12Gb/s SATA and SAS hard drives
PCIe 3.0 x8
Low profile ex factory
max. 1x per system

S26361-F5243-E1
PRAID EP400i
Based on chip LSISAS3108
LSI MegaRAID
1GB Cache with ECC
RAID 0, 1, 10, 5, 50, 6, 60
optional FBU
Support for 3Gb/s, 6Gb/s and 12Gb/s SATA and SAS hard drives
PCIe 3.0 x8
Low profile ex factory
max. 2x per system

as soon as available

S26361-F5243-E2
PRAID EP420i
Based on chip LSISAS3108
LSI MegaRAID
2GB Cache with ECC
RAID 0, 1, 10, 5, 50, 6, 60
optional FBU
Support for 3Gb/s, 6Gb/s and 12Gb/s SATA and SAS hard drives
PCIe 3.0 x8
Low profile ex factory
max. 2x per system

Lose delivery FBU optior

2x

as soon as available

S26361-F5243-E100 for EP400i
TFM Module for FBU option
(flash and FBU control logic)
max. 1x per Controller

S26361-F5243-E200 for EP420i
TFM Module for FBU option
(flash and FBU control logic)
max. 1x per Controller

S26361-F5243-L100 / L200
TFM Module for FBU option
(flash and FBU control logic)
max. 1x per Controller

S26361-F5243-E125
Flash Backup Unit
with 25cm cable set
max. 1x per Controller

S26361-F5243-L110
Flash Backup Unit
with 25cm, 55cm, 70cm cable set
max. 1x per Controller

PRAID EP4x0i only
as soon as available

S26361-F5243-E660
RAID Advanced Software Options
License Activation Key
for CacheCade 2.0 and FastPath
for 1 Controller

The FBU is an option for the controller which can be used once per controller. If the FBU option has been choosen, the TFM Module is needed once per FBU.

always use -E100 for -E1, E200 for -E2

Advanced Software Optic

S26361-F5243-L660
RAID Advanced Software Options
License Activation Key
for CacheCade 2.0 and FastPath
for 1 Controller

L

L

PCIe riser card options

as soon as available

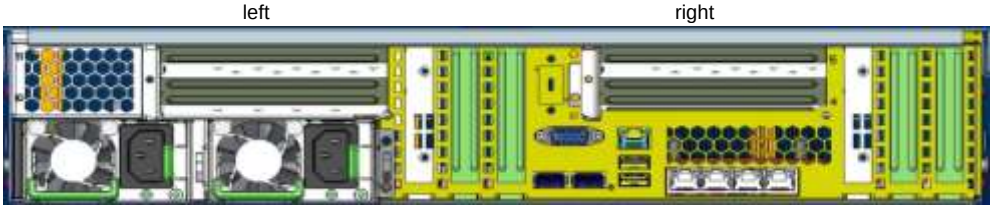
S26361-F3846-E21
PCIe riser 2x x8 right
PCIe 3.0 x8 provides two full height slots
max. 1x per system

as soon as available

S26361-F3846-E22
PCIe riser 2x x8 left
PCIe 3.0 x8 provides two full height slots
max. 1x per system

Every PCIe riser card option consumes white PCIe x16 low profile slot each.
It provides two PCIe x8 full height slots instead (Slot no. 4 and 5 or no. 10 and 11).
So, max. four PCIe x8 full height slots plus one PCIe x16 and three PCIe x8 low profile slots are availble
Please note that some PCIe cards have different order numbers depending on full height slots or low profile slots!
And left or right side PCIe riser card option is different!

left right



SAS-/SCSI-/ Fibre-Channel Controller Low Profile

SAS controller

as soon as available

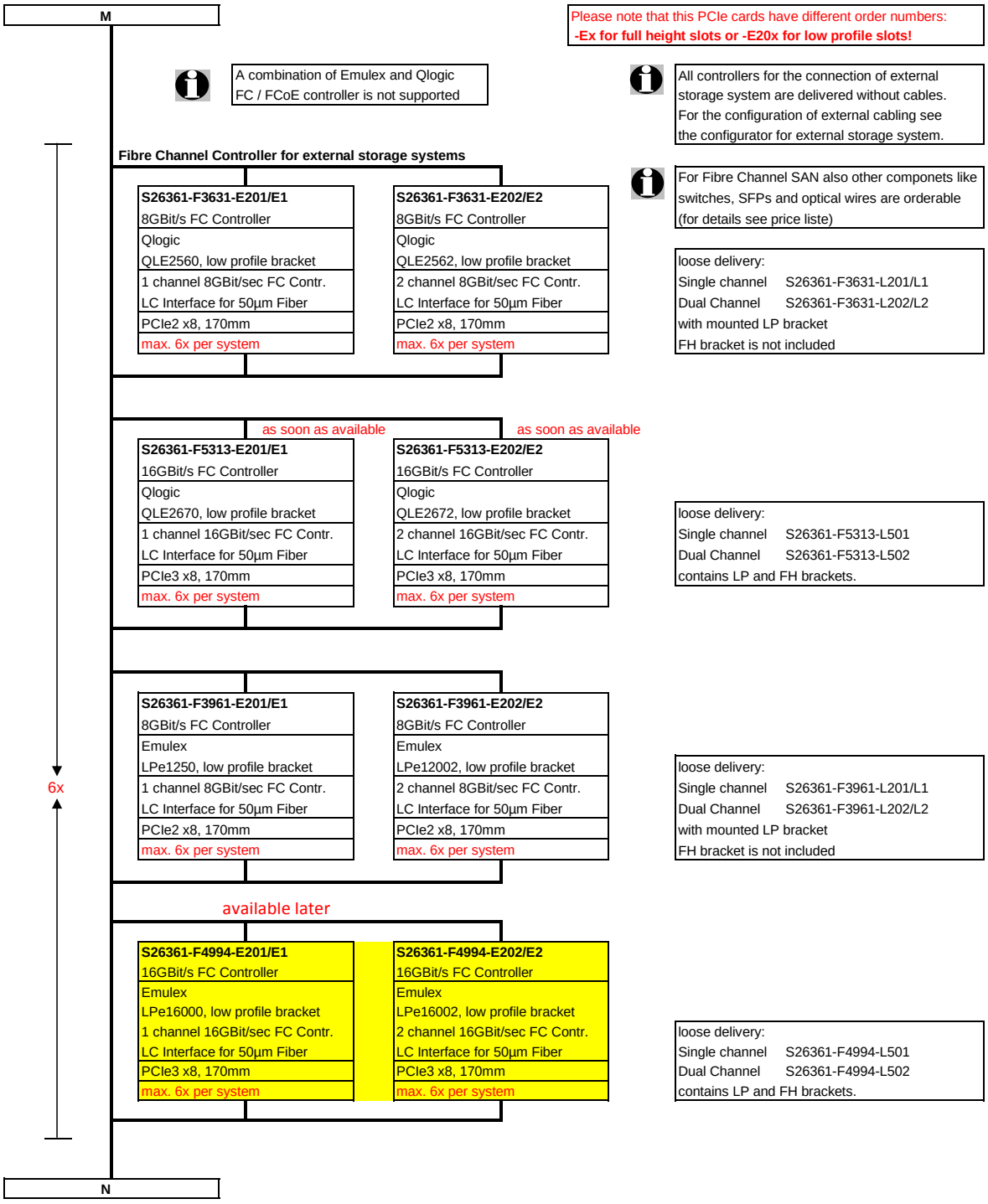
S26361-F3845-E201/-E1
PSAS CP400e lp/fh
LSI SAS9300-8e
SAS 12Gb/sec ext: 8 port
PCIe 3.0 x8, full height or low profile bracket
max. 2x per system

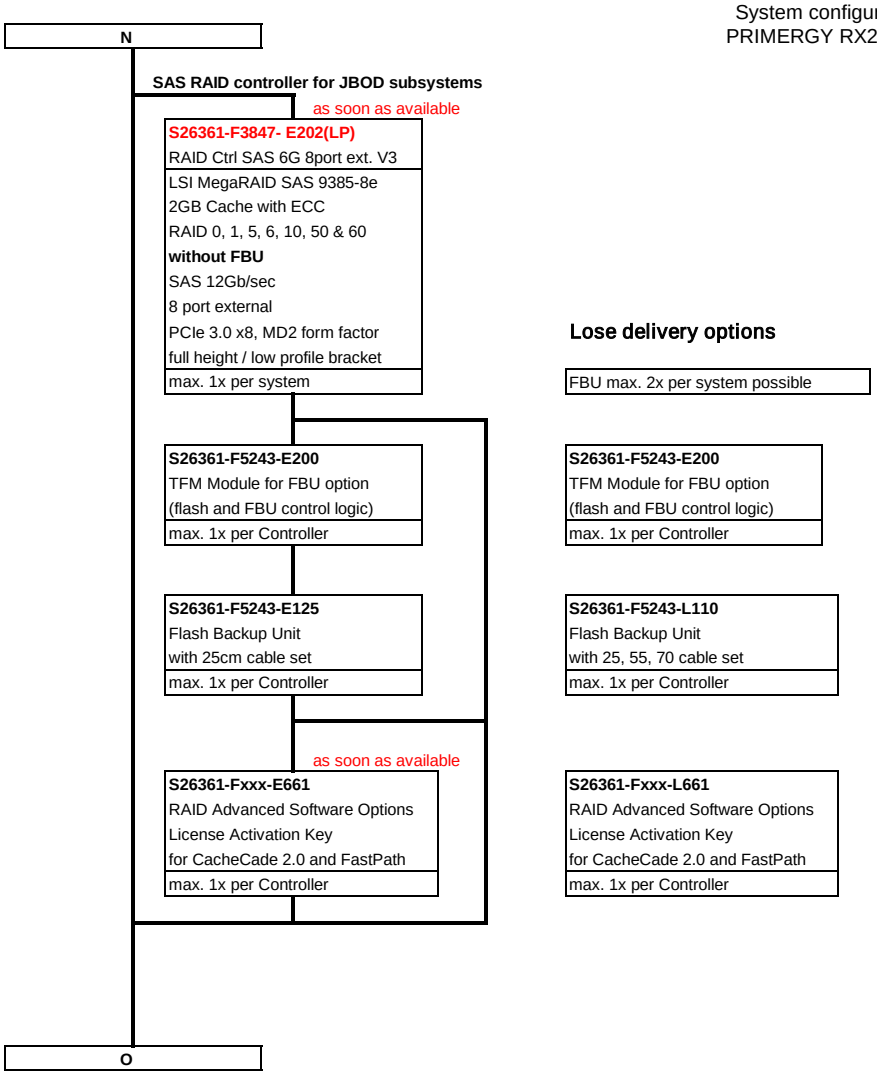
SAS controller

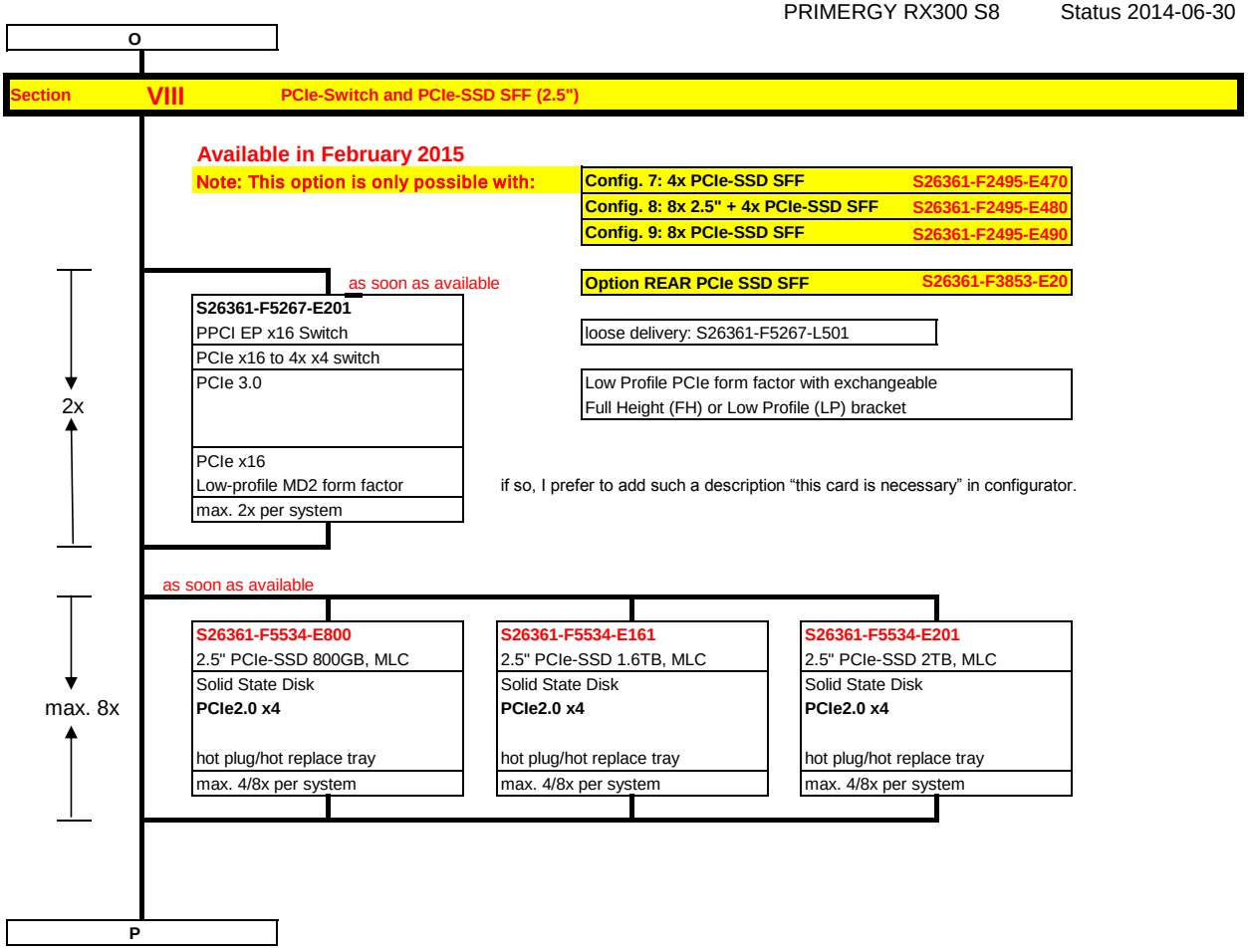
as soon as available

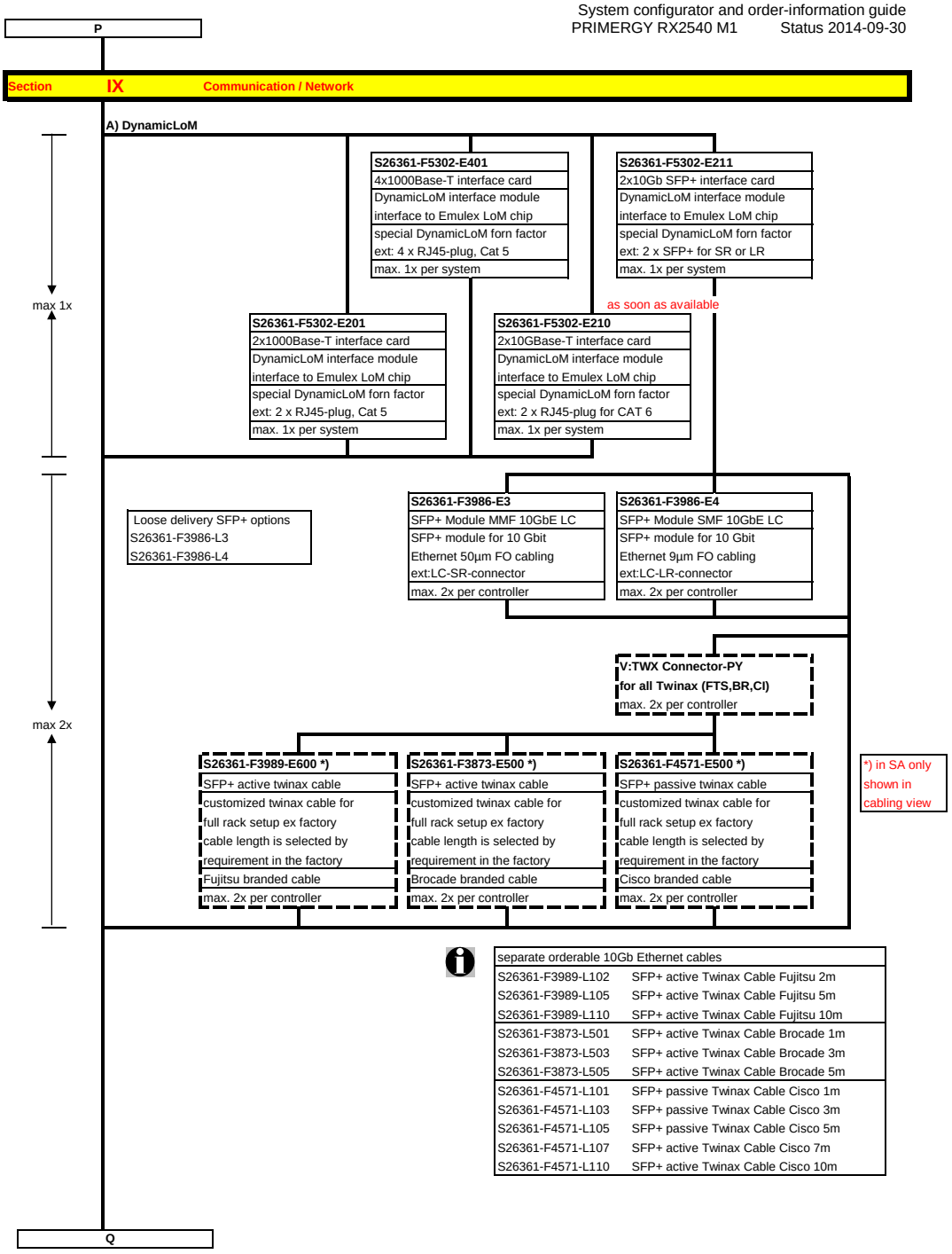
S26361-F3842-E2/E202
PSAS CP400i
Based on chip LSISAS3008
SAS 12Gb/sec int: 8 port
PCIe 3.0 x8 full height or low profile bracket
max. 1x per system

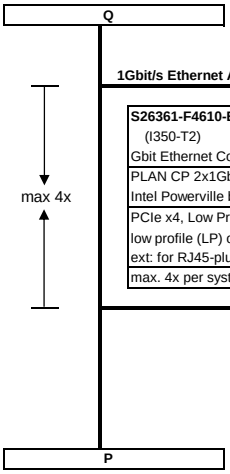
M


M
Please note that this PCIe cards have different order numbers:
-Ex for full height slots or -E20x for low profile slots!
A combination of Emulex and Qlogic
FC / FCoE controller is not supported
All controllers for the connection of external
storage system are delivered without cables.
For the configuration of external cabling see
the configurator for external storage system.
Fibre Channel Controller for external storage systems
For Fibre Channel SAN also other componets like
switches, SFPs and optical wires are orderable
(for details see price liste)
S26361-F3631-E201/E1
8GBit/s FC Controller
Qlogic
QLE2560, low profile bracket
1 channel 8GBit/sec FC Contr.
LC Interface for 50µm Fiber
PCIe2 x8, 170mm
max. 6x per system
S26361-F3631-E202/E2
8GBit/s FC Controller
Qlogic
QLE2562, low profile bracket
2 channel 8GBit/sec FC Contr.
LC Interface for 50µm Fiber
PCIe2 x8, 170mm
max. 6x per system
loose delivery:
Single channel S26361-F3631-L201/L1
Dual Channel S26361-F3631-L202/L2
with mounted LP bracket
FH bracket is not included
as soon as available
as soon as available
S26361-F5313-E201/E1
16GBit/s FC Controller
Qlogic
QLE2670, low profile bracket
1 channel 16GBit/sec FC Contr.
LC Interface for 50µm Fiber
PCIe3 x8, 170mm
max. 6x per system
S26361-F5313-E202/E2
16GBit/s FC Controller
Qlogic
QLE2672, low profile bracket
2 channel 16GBit/sec FC Contr.
LC Interface for 50µm Fiber
PCIe3 x8, 170mm
max. 6x per system
loose delivery:
Single channel S26361-F5313-L501
Dual Channel S26361-F5313-L502
contains LP and FH brackets.
6x
S26361-F3961-E201/E1
8GBit/s FC Controller
Emulex
LPe1250, low profile bracket
1 channel 8GBit/sec FC Contr.
LC Interface for 50µm Fiber
PCIe2 x8, 170mm
max. 6x per system
S26361-F3961-E202/E2
8GBit/s FC Controller
Emulex
LPe12002, low profile bracket
2 channel 8GBit/sec FC Contr.
LC Interface for 50µm Fiber
PCIe2 x8, 170mm
max. 6x per system
loose delivery:
Single channel S26361-F3961-L201/L1
Dual Channel S26361-F3961-L202/L2
with mounted LP bracket
FH bracket is not included
available later
S26361-F4994-E201/E1
16GBit/s FC Controller
Emulex
LPe16000, low profile bracket
1 channel 16GBit/sec FC Contr.
LC Interface for 50µm Fiber
PCIe3 x8, 170mm
max. 6x per system
S26361-F4994-E202/E2
16GBit/s FC Controller
Emulex
LPe16002, low profile bracket
2 channel 16GBit/sec FC Contr.
LC Interface for 50µm Fiber
PCIe3 x8, 170mm
max. 6x per system
loose delivery:
Single channel S26361-F4994-L501
Dual Channel S26361-F4994-L502
contains LP and FH brackets.
N


N
SAS RAID controller for JBOD subsystems
as soon as available
S26361-F3847- E202(LP)
RAID Ctrl SAS 6G 8port ext. V3
LSI MegaRAID SAS 9385-8e
2GB Cache with ECC
RAID 0, 1, 5, 6, 10, 50 & 60
without FBU
SAS 12Gb/sec
8 port external
PCIe 3.0 x8, MD2 form factor
full height / low profile bracket
max. 1x per system
Lose delivery options
FBU max. 2x per system possible
S26361-F5243-E200
TFM Module for FBU option
(flash and FBU control logic)
max. 1x per Controller
S26361-F5243-E200
TFM Module for FBU option
(flash and FBU control logic)
max. 1x per Controller
S26361-F5243-E125
Flash Backup Unit
with 25cm cable set
max. 1x per Controller
S26361-F5243-L110
Flash Backup Unit
with 25, 55, 70 cable set
max. 1x per Controller
as soon as available
S26361-Fxxx-E661
RAID Advanced Software Options
License Activation Key
for CacheCade 2.0 and FastPath
max. 1x per Controller
S26361-Fxxx-L661
RAID Advanced Software Options
License Activation Key
for CacheCade 2.0 and FastPath
max. 1x per Controller
O


O
Section VIII PCIe-Switch and PCIe-SSD SFF (2.5")
Available in February 2015
Note: This option is only possible with:
Config. 7: 4x PCIe-SSD SFF S26361-F2495-E470
Config. 8: 8x 2.5" + 4x PCIe-SSD SFF S26361-F2495-E480
Config. 9: 8x PCIe-SSD SFF S26361-F2495-E490
as soon as available
Option REAR PCIe SSD SFF S26361-F3853-E20
S26361-F5267-E201
PPCI EP x16 Switch
PCIe x16 to 4x x4 switch
PCIe 3.0
PCIe x16
Low-profile MD2 form factor
max. 2x per system
loose delivery: S26361-F5267-L501
Low Profile PCIe form factor with exchangeable
Full Height (FH) or Low Profile (LP) bracket
2x
if so, I prefer to add such a description “this card is necessary” in configurator.
as soon as available
S26361-F5534-E800
2.5" PCIe-SSD 800GB, MLC
Solid State Disk
PCIe2.0 x4
hot plug/hot replace tray
max. 4/8x per system
S26361-F5534-E161
2.5" PCIe-SSD 1.6TB, MLC
Solid State Disk
PCIe2.0 x4
hot plug/hot replace tray
max. 4/8x per system
S26361-F5534-E201
2.5" PCIe-SSD 2TB, MLC
Solid State Disk
PCIe2.0 x4
hot plug/hot replace tray
max. 4/8x per system
max. 8x
P


P
Section IX Communication / Network
A) DynamicLoM
max 1x
S26361-F5302-E401
4x1000Base-T interface card
DynamicLoM interface module
interface to Emulex LoM chip
special DynamicLoM forn factor
ext: 4 x RJ45-plug, Cat 5
max. 1x per system
S26361-F5302-E211
2x10Gb SFP+ interface card
DynamicLoM interface module
interface to Emulex LoM chip
special DynamicLoM forn factor
ext: 2 x SFP+ for SR or LR
max. 1x per system
as soon as available
S26361-F5302-E201
2x1000Base-T interface card
DynamicLoM interface module
interface to Emulex LoM chip
special DynamicLoM forn factor
ext: 2 x RJ45-plug, Cat 5
max. 1x per system
S26361-F5302-E210
2x10GBase-T interface card
DynamicLoM interface module
interface to Emulex LoM chip
special DynamicLoM forn factor
ext: 2 x RJ45-plug for CAT 6
max. 1x per system
Loose delivery SFP+ options
S26361-F3986-L3
S26361-F3986-L4
S26361-F3986-E3
SFP+ Module MMF 10GbE LC
SFP+ module for 10 Gbit
Ethernet 50µm FO cabling
ext:LC-SR-connector
max. 2x per controller
S26361-F3986-E4
SFP+ Module SMF 10GbE LC
SFP+ module for 10 Gbit
Ethernet 9µm FO cabling
ext:LC-LR-connector
max. 2x per controller
V:TWX Connector-PY
for all Twinax (FTS,BR,CI)
max. 2x per controller
max 2x
S26361-F3989-E600 *)
SFP+ active twinax cable
customized twinax cable for
full rack setup ex factory
cable length is selected by
requirement in the factory
Fujitsu branded cable
max. 2x per controller
S26361-F3873-E500 *)
SFP+ active twinax cable
customized twinax cable for
full rack setup ex factory
cable length is selected by
requirement in the factory
Brocade branded cable
max. 2x per controller
S26361-F4571-E500 *)
SFP+ passive twinax cable
customized twinax cable for
full rack setup ex factory
cable length is selected by
requirement in the factory
Cisco branded cable
max. 2x per controller
*) in SA only
shown in
cabling view
separate orderable 10Gb Ethernet cables
S26361-F3989-L102 SFP+ active Twinax Cable Fujitsu 2m
S26361-F3989-L105 SFP+ active Twinax Cable Fujitsu 5m
S26361-F3989-L110 SFP+ active Twinax Cable Fujitsu 10m
S26361-F3873-L501 SFP+ active Twinax Cable Brocade 1m
S26361-F3873-L503 SFP+ active Twinax Cable Brocade 3m
S26361-F3873-L505 SFP+ active Twinax Cable Brocade 5m
S26361-F4571-L101 SFP+ passive Twinax Cable Cisco 1m
S26361-F4571-L103 SFP+ passive Twinax Cable Cisco 3m
S26361-F4571-L105 SFP+ passive Twinax Cable Cisco 5m
S26361-F4571-L107 SFP+ active Twinax Cable Cisco 7m
S26361-F4571-L110 SFP+ active Twinax Cable Cisco 10m
Q



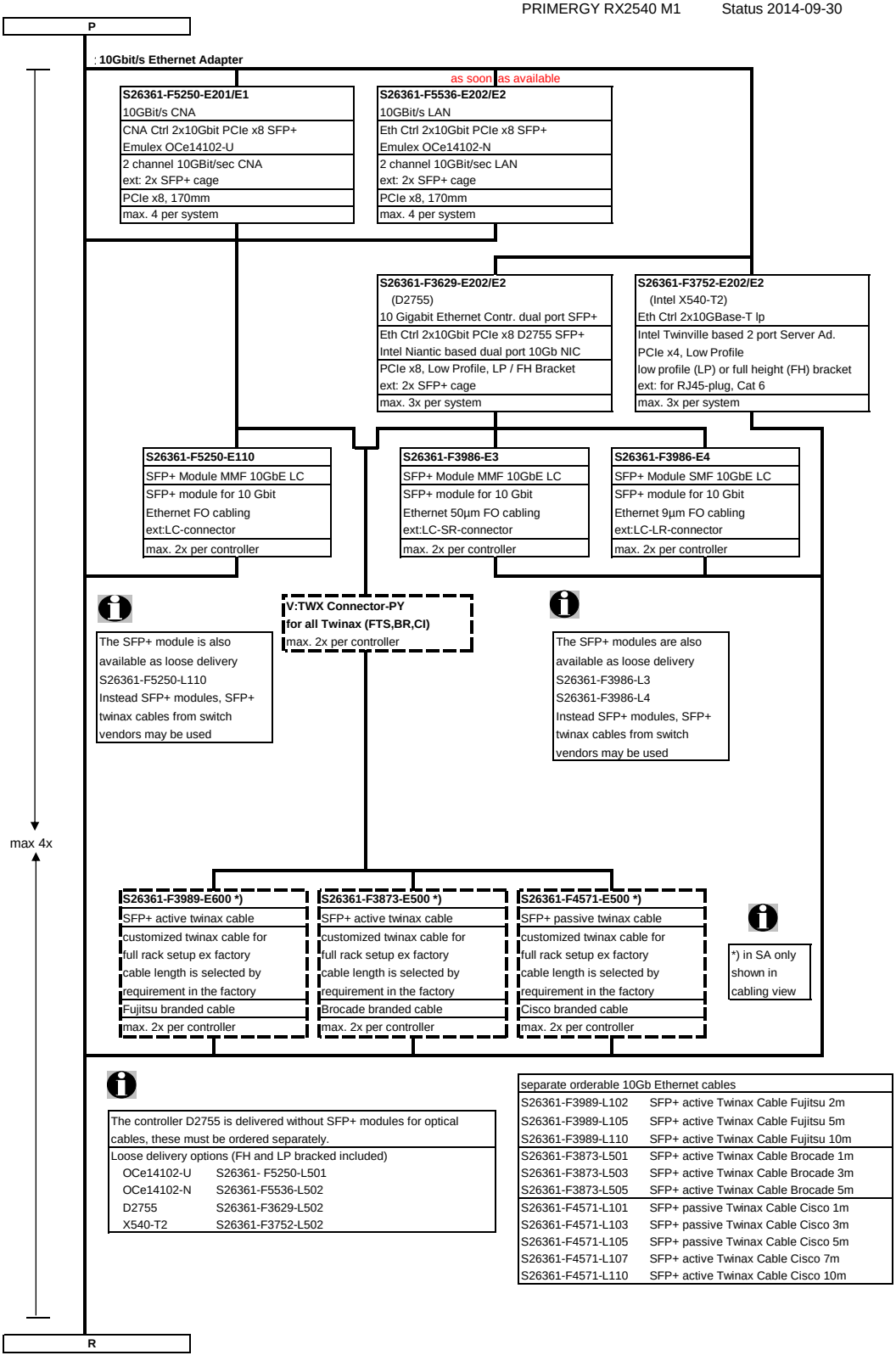
Please note that this PCIe cards have different order numbers:
-Ex for full height slots or -E20x for low profile slots!

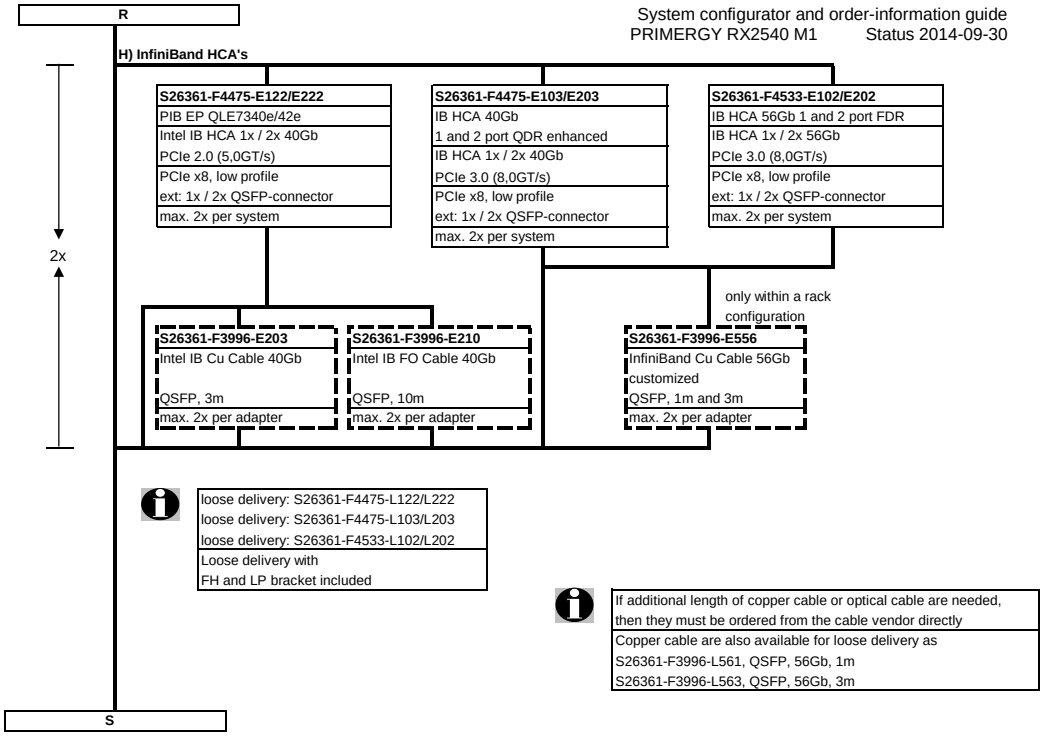
1Gbit/s Ethernet Adapter

S26361-F4610-E202/E2 (I350-T2)	**S26361-F4610-E204/E4** (I350-T4)
Gbit Ethernet Controller Dual 1000TX LP	Gbit Ethernet Controller Quad 1000TX LP
PLAN CP 2x1Gbit Cu Intel I350-T2 LP	PLAN CP 4x1Gbit Cu Intel I350-T4 LP
Intel Powerville based 2 port Server Ad.	Intel Powerville based 4 port Server Ad.
PCIe x4, Low Profile	PCIe x4, Low Profile
low profile (LP) or full height (FH) bracket	low profile (LP) or full height (FH) bracket
ext: for RJ45-plug, Cat 5	ext: for RJ45-plug, Cat 5
max. 4x per system	max. 4x per system

Loose delivery with FH and LP bracket:

I350-T2	S26361-F4610-L502
I350-T4	S26361-F4610-L504


P
: 10Gbit/s Ethernet Adapter
as soon as available
S26361-F5250-E201/E1
10GBit/s CNA
CNA Ctrl 2x10Gbit PCIe x8 SFP+
Emulex OCe14102-U
2 channel 10GBit/sec CNA
ext: 2x SFP+ cage
PCIe x8, 170mm
max. 4 per system
S26361-F5536-E202/E2
10GBit/s LAN
Eth Ctrl 2x10Gbit PCIe x8 SFP+
Emulex OCe14102-N
2 channel 10GBit/sec LAN
ext: 2x SFP+ cage
PCIe x8, 170mm
max. 4 per system
S26361-F3629-E202/E2
(D2755)
10 Gigabit Ethernet Contr. dual port SFP+
Eth Ctrl 2x10Gbit PCIe x8 D2755 SFP+
Intel Niantic based dual port 10Gb NIC
PCIe x8, Low Profile, LP / FH Bracket
ext: 2x SFP+ cage
max. 3x per system
S26361-F3752-E202/E2
(Intel X540-T2)
Eth Ctrl 2x10GBase-T lp
Intel Twinville based 2 port Server Ad.
PCIe x4, Low Profile
low profile (LP) or full height (FH) bracket
ext: for RJ45-plug, Cat 6
max. 3x per system
S26361-F5250-E110
SFP+ Module MMF 10GbE LC
SFP+ module for 10 Gbit
Ethernet FO cabling
ext:LC-connector
max. 2x per controller
S26361-F3986-E3
SFP+ Module MMF 10GbE LC
SFP+ module for 10 Gbit
Ethernet 50µm FO cabling
ext:LC-SR-connector
max. 2x per controller
S26361-F3986-E4
SFP+ Module SMF 10GbE LC
SFP+ module for 10 Gbit
Ethernet 9µm FO cabling
ext:LC-LR-connector
max. 2x per controller
The SFP+ module is also
available as loose delivery
S26361-F5250-L110
Instead SFP+ modules, SFP+
twinax cables from switch
vendors may be used
V:TWX Connector-PY
for all Twinax (FTS,BR,CI)
max. 2x per controller
The SFP+ modules are also
available as loose delivery
S26361-F3986-L3
S26361-F3986-L4
Instead SFP+ modules, SFP+
twinax cables from switch
vendors may be used
max 4x
S26361-F3989-E600 *)
SFP+ active twinax cable
customized twinax cable for
full rack setup ex factory
cable length is selected by
requirement in the factory
Fujitsu branded cable
max. 2x per controller
S26361-F3873-E500 *)
SFP+ active twinax cable
customized twinax cable for
full rack setup ex factory
cable length is selected by
requirement in the factory
Brocade branded cable
max. 2x per controller
S26361-F4571-E500 *)
SFP+ passive twinax cable
customized twinax cable for
full rack setup ex factory
cable length is selected by
requirement in the factory
Cisco branded cable
max. 2x per controller
*) in SA only
shown in
cabling view
The controller D2755 is delivered without SFP+ modules for optical
cables, these must be ordered separately.
Loose delivery options (FH and LP bracked included)
OCe14102-U S26361- F5250-L501
OCe14102-N S26361-F5536-L502
D2755 S26361-F3629-L502
X540-T2 S26361-F3752-L502
separate orderable 10Gb Ethernet cables
S26361-F3989-L102 SFP+ active Twinax Cable Fujitsu 2m
S26361-F3989-L105 SFP+ active Twinax Cable Fujitsu 5m
S26361-F3989-L110 SFP+ active Twinax Cable Fujitsu 10m
S26361-F3873-L501 SFP+ active Twinax Cable Brocade 1m
S26361-F3873-L503 SFP+ active Twinax Cable Brocade 3m
S26361-F3873-L505 SFP+ active Twinax Cable Brocade 5m
S26361-F4571-L101 SFP+ passive Twinax Cable Cisco 1m
S26361-F4571-L103 SFP+ passive Twinax Cable Cisco 3m
S26361-F4571-L105 SFP+ passive Twinax Cable Cisco 5m
S26361-F4571-L107 SFP+ active Twinax Cable Cisco 7m
S26361-F4571-L110 SFP+ active Twinax Cable Cisco 10m
R


R
H) InfiniBand HCA's
2x
S26361-F4475-E122/E222
PIB EP QLE7340e/42e
Intel IB HCA 1x / 2x 40Gb
PCIe 2.0 (5,0GT/s)
PCIe x8, low profile
ext: 1x / 2x QSFP-connector
max. 2x per system
S26361-F4475-E103/E203
IB HCA 40Gb
1 and 2 port QDR enhanced
IB HCA 1x / 2x 40Gb
PCIe 3.0 (8,0GT/s)
PCIe x8, low profile
ext: 1x / 2x QSFP-connector
max. 2x per system
S26361-F4533-E102/E202
IB HCA 56Gb 1 and 2 port FDR
IB HCA 1x / 2x 56Gb
PCIe 3.0 (8,0GT/s)
PCIe x8, low profile
ext: 1x / 2x QSFP-connector
max. 2x per system
only within a rack configuration
S26361-F3996-E203
Intel IB Cu Cable 40Gb
QSFP, 3m
max. 2x per adapter
S26361-F3996-E210
Intel IB FO Cable 40Gb
QSFP, 10m
max. 2x per adapter
S26361-F3996-E556
InfiniBand Cu Cable 56Gb
customized
QSFP, 1m and 3m
max. 2x per adapter
loose delivery: S26361-F4475-L122/L222
loose delivery: S26361-F4475-L103/L203
loose delivery: S26361-F4533-L102/L202
Loose delivery with
FH and LP bracket included
If additional length of copper cable or optical cable are needed,
then they must be ordered from the cable vendor directly
Copper cable are also available for loose delivery as
S26361-F3996-L561, QSFP, 56Gb, 1m
S26361-F3996-L563, QSFP, 56Gb, 3m
S

S

Section X System Management Products (RemoteView)

iRMC S4 (integrated Remote Management Controller) onboard server management Controller with dedicated 10/100/1000 Service LAN-port and integrated graphics.

S26361-F1790-E243
iRMC S4 advanced pack
integrated remote management controller
activation key for
graphical console redirection
and remote media redirection
max. 1x per system

S26361-F2557-E106 ???
Local Service Display incl. mount. kit
Customer Self Service
LSD module incl. mounting kit
0.5" x 5.25"
max. 1x per system

Available in February 2015

S26361-F1420-E130
Opt. Front VGA
max. 1x per system

Font VGA for IRMC Graphic only
- not for discrete Graphic -
- not for 12x 3.5" and 24x 2.5" HDD

Loose delivery
Opt. front VGA
S26361-F1420-L130

Section XI Miscellaneous

S26361-F3120-E40
Serial Port Option
RS-232-C
Cable with 9-pin plug
for a RS-232-C Serial Port
Interface
does NOT occupy PCI slot
max. 1x per system

Options and other peripherals
For other options, refer to SystemArchitect and Pricelist
These options are supplied lose with the shipment
For suitable peripherals for this product, please refer to SystemArcitect

as soon as available

S26361-F3776-E101
Cool-safe® Advanced Thermal Design
Restricts configuration to make
5-40° possible
Feature is enabled and fixed ex factory
max. 1x per system

Cool-safe ATD configuration restrictions for RX2540 M1:
related L-numbers as well restricted

no tape drives

Tape drive LTO4 HH SAS IBM V2	S26361-F3626-E2
Tape drive LTO5HH Ultrium SAS	S26361-F3627-E1
Tape drive LTO6HH Ultrium SAS	S26361-F3787-E1

tbd

Section XII Country specific power cord

S26361-F1452-E100
REGION KIT EMEA AP
For Shipments to EMEA / Asia and Pacific regions
1x per system

S26361-F1452-E110
REGION KIT JP
For Shipments to Japan regions
1x per system

Power cord has to be ordered separately

max. 2 x

Power cord options (1x per PSU)

T26139-Y1968-E100	Powercord for rack, 4m, grey, **IEC 320 C14 connector**
T26139-Y1742-E10	USA, Canada, 1.8m, grey
T26139-Y3850-E10	Option "no powercord", for Countries without specific cable orderable like e.g. China

End PRIMERGY RX2540 M1

Change Report

Date	Order number	Changes
2014-09-29		2DPC RDIMM configuration @ 2.133MHz available in 11/2014 (remark added)
2014-09-25	FC Controller 16000/16002	release later
2014-09-12		GRID Cards, Mixed configurations of GRID K1 & K2 supported as well
2014-09-08	S26361-F5522-E*	SATADOM order number corrected from *F5222* to *F5522*
2014-09-08	S26361-F5531-E*	Added 2.5" SAS 12G 15Krpm 300GB, 450GB, 600GB HDD
2014-09-08	S26361-F3816-E250	Added 2.5" BC-SATA 250GB HDD
2014-09-05		HDD/SSD configurations without RAID controller are possible on special release only
2014-09-05	S26361-F3718-E2	DVD-ROM ultraslim SATA added
2014-09-05	S26361-F3641-E6	Blu-ray Triple Writer ultraslim SATA added
2014-09-02	S26361-F5536-E202/E2	added Emulex OCe14102-N 10Gb LAN
2014-09-02	S26361-F3516-E201/E1	deleted Gigabit Ethernet Controller 1000TX LP
2014-09-01		First Release