

PRIMERGY RX2540 M1

System configurator and order-information guide

July 2015

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Change report

PRIMERGY Server

Instructions

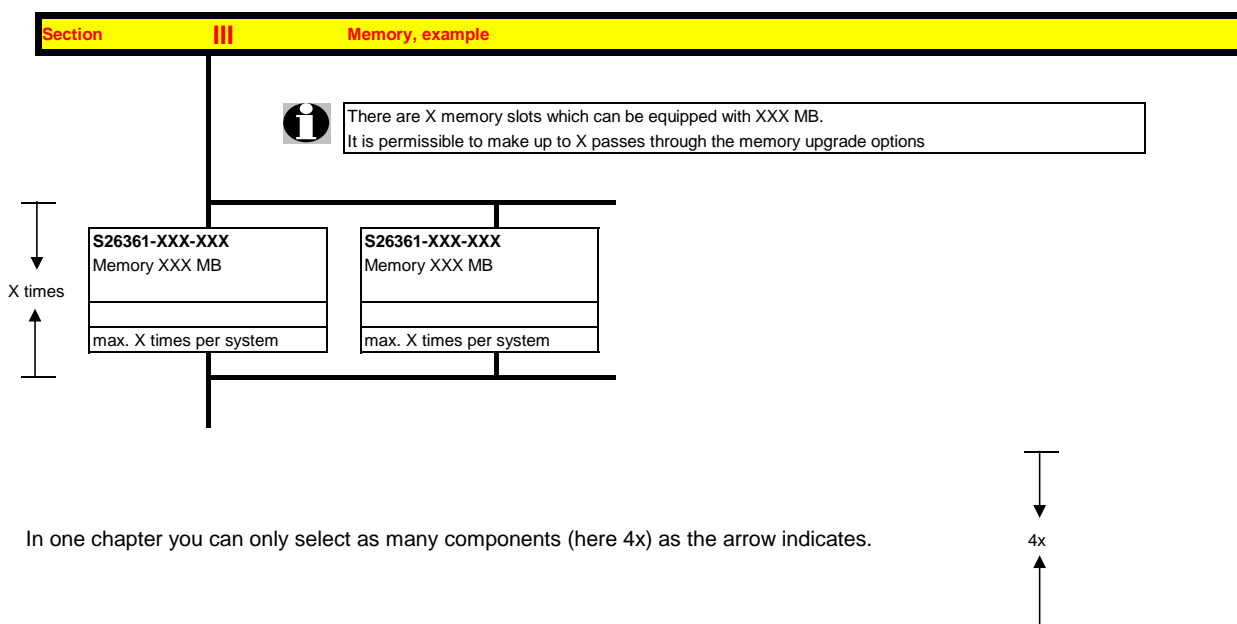
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect.

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:

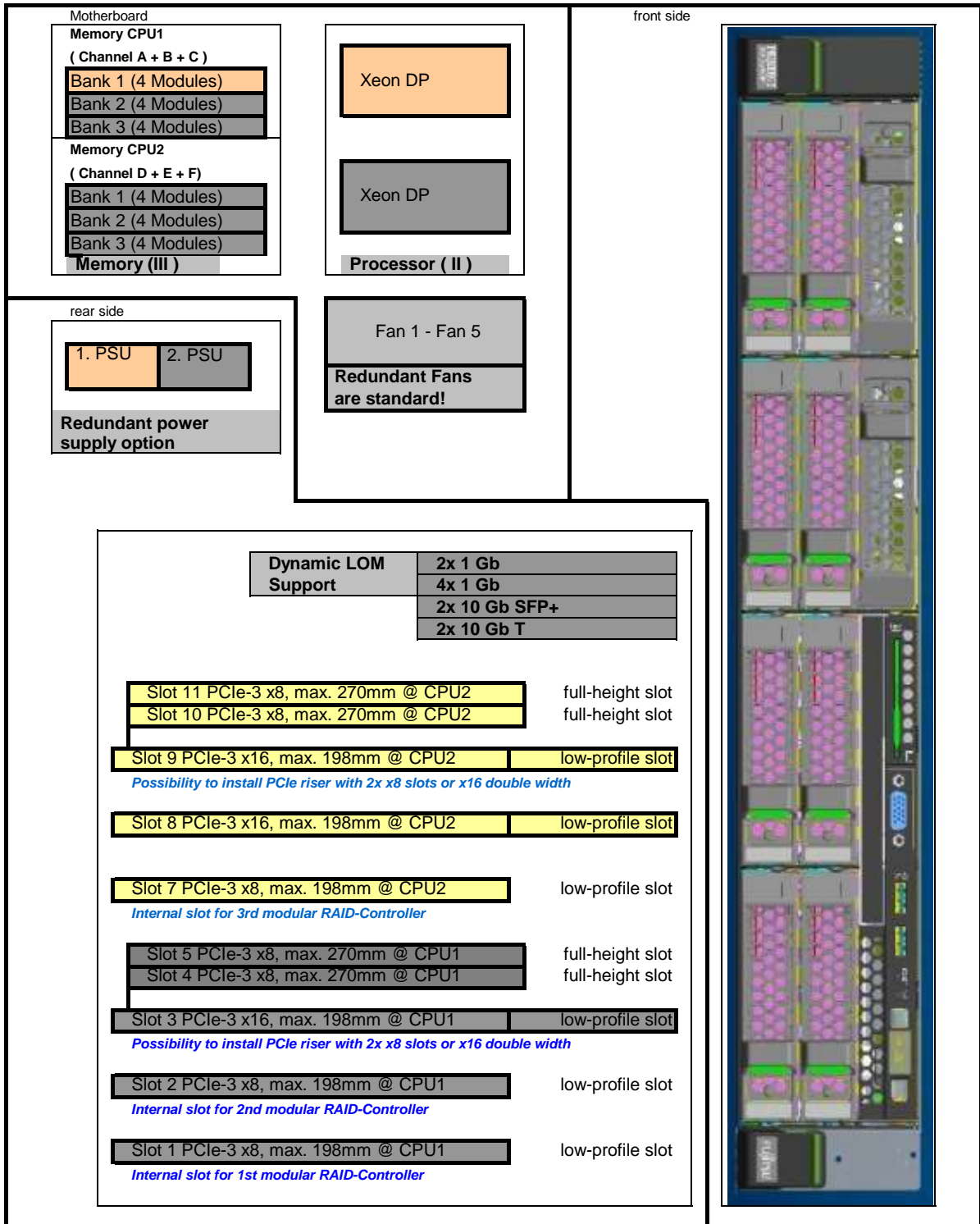
http://ts.fujitsu.com/products/standard_servers/inc (internet)

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 (detailed front configuration see section Va)



Key:

Included in basic unit

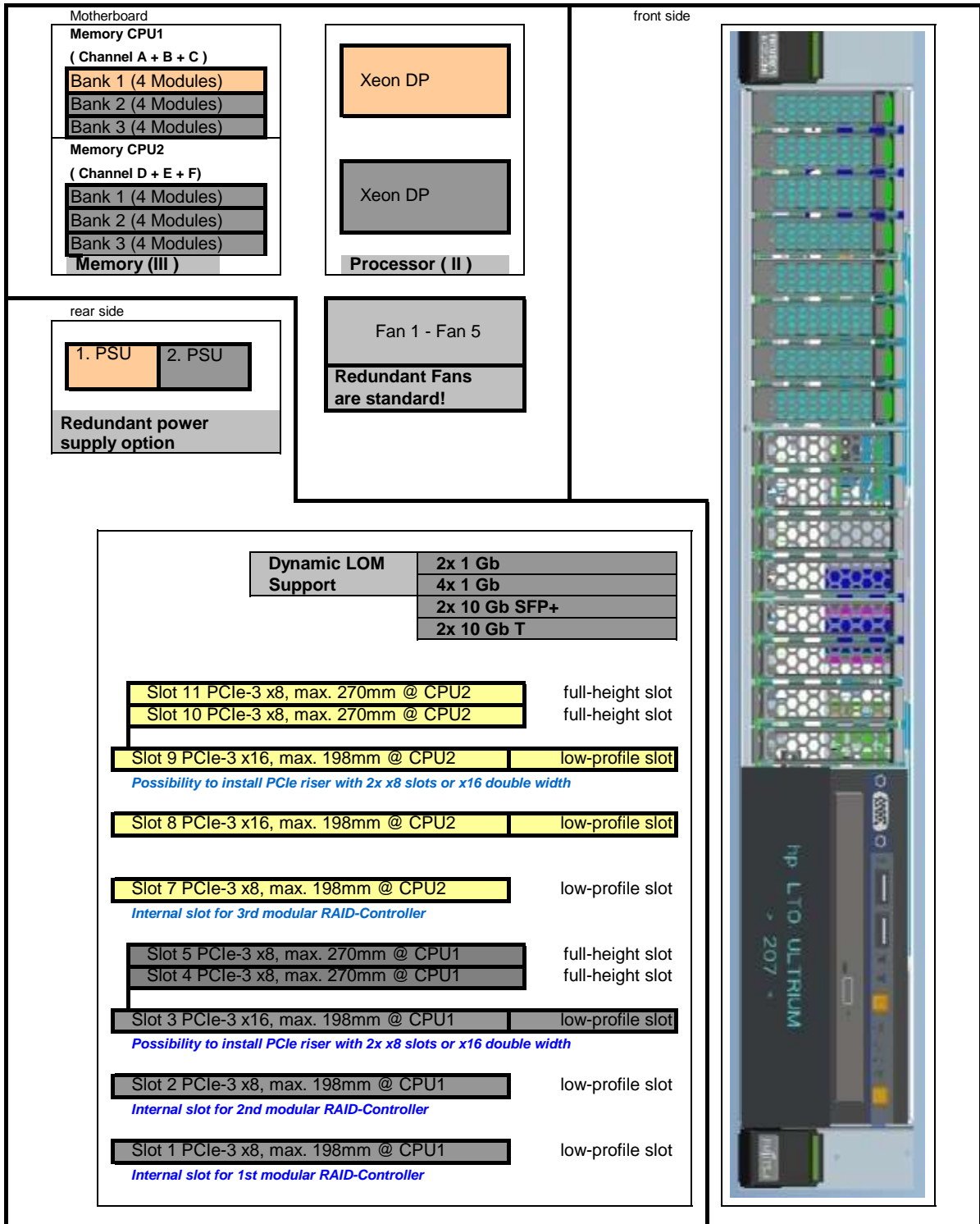
Option

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

Configuration diagram PRIMERGY RX2540 M1 SFF

System unit (I)

with up to 8x, 16x or 24x 2.5" Hard disk drives (detailed front configuration see section Va)



Key:

- Included in basic unit
- Option
- One CPU, one memory per CPU and one PSU has to be selected for an orderable basic unit.

Section I 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
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
- 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)

* 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) **optional**
- * 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

Software:

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

A

Cables included in basic unit

| Connections | Cable | PRIMERGY RX2540 M1 |
|-------------------------------|-------|--------------------|
| 1. SATA ODD | | |
| 2. SAS cables to HDDs | | |
| 3. 1x cable for SAS signaling | | |

⊗ SAS
 ○ SATA

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 |
| 3.5" HDD bays exp long lifecycle | S26361-K1495-V102 planned |
| 12x 3.5" HDD bays | S26361-K1495-V112 |
| Basic unit with 2.5" HDD bays expandable | S26361-K1495-V401 |
| 2.5" HDD bays exp long lifecycle | S26361-K1495-V402 |
| 24x 2.5" HDD bays | S26361-K1495-V424 |

| | | | |
|---|---|---|---|
| S26113-F575-E13 450W PSU module platinum 1st or 2nd PSU for redundancy 94% efficiency (platinum) uses hot plug PSU slot min. 1 / max. 2x per system | S26113-F574-E13 800W PSU module platinum 1st or 2nd PSU for redundancy 94% efficiency (platinum) uses hot plug PSU slot min. 1 / max. 2x per system | S26113-F616-E10 1200W PSU module platinum 1st or 2nd PSU for redundancy 94% efficiency (platinum) 110V range: 1000W, <110V:900W uses hot plug PSU slot min. 1 / max. 2x per system | S26113-F615-E10 800W PSU module titanium 1st or 2nd PSU for redundancy 96% efficiency (titanium) 110V range not supported uses hot plug PSU slot 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 Power Cord USA / Canada, 1.8m, grey | | T26139-Y1968-L10 T26139-Y1742-L10 |

| |
|--|
| 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

B
PRIMECENTER Rack

S26361-F2735-E175
 Rack Mount Kit F1-C S7 LV
 for PCR M1 and 3rd party racks
 consisting of
 vario carrier **559-914mm**
 telescopic drop-in rails 781mm
 with quick release lever support
 with full extraction
 with CMA adapter
 1x per system

S26361-F2735-E111
 No Rackmount-Kit option
 Only for loose deliveries
 No mounting in racks possible
 max. 1x per system



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

C

S26361-F4530-E11
 Bracket 1U in asymmetrical racks

S26361-F4530-E10
 Mounting of RMK in symmetrical
 racks
 (no support brackets needed)

S26361-F2735-E71
 Lateral cable management
 for 2U servers or higher
 - for asymmetrical racks
PRIMECENTER S2 or M1
 - 1 bracket PC Rack asym.
 1x per system

S26361-F2735-E82
 Rack Cable Management Arm CMA 2U
 for 2U Server in racks
 - for symmetrical racks
M1 or 3rd party racks
Fujitsu racks
 1x per system

S26361-F2735-L175
 RMK-F1_DI_CMA_QRL_LV
 for PCR M1 and 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

SNP:SY-F1647E301-P
 Installation ex works for one
 server or subsystem.
 Hereby the rack will be delivered
 completely pre-mounted and
 all wired connections are tested.
 With PCR M1 16U, 24U, 42U:
 Systems and components
 will be delivered installed in the rack

To be ordered only together with
 a PRIMECENTER rack
 PCR S2 e.g. S26361-K826-V10x
 new PCR M1 e.g. S26361-K827-Vxxx
refer PCR S2 or M1 rack configurator
 max. 1x per System

"Rack-mounting ex factory"
 This service is to be ordered once
 per installable server/storage
 subsystem, in order to get the
 server/storage subsystem
 mounted into the racks.
 In case of not-installed server and subsystems
 this service has to be ordered,
 to get the mounting kits and the
 cables installed.

PRIMERGY Classic 19" rack is not supported

C

C

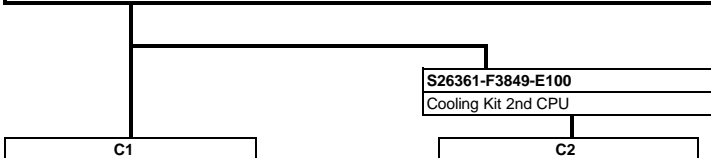
Section Processor

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 |
| 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 |



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



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-L443 | Xeon E5-2643v3 6C/12T 3.40GHz 20MB 9.6GT/s 2133MHz 135W | special release only |
| S26361-F3849-L450 | Xeon E5-2650v3 10C/20T 2.30GHz 25MB 9.6GT/s 2133MHz 105W | |
| S26361-F3849-L480 | Xeon E5-2680v3 12C/24T 2.50GHz 30MB 9.6GT/s 2133MHz 120W | special release only |
| S26361-F3849-L423 | Xeon E5-2623v3 4C/8T 3.00GHz 10MB 8.0GT/s 1866MHz 105W | |

D

D

Section III Memory



| |
|--|
| <p>- 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</p> <p>- The memory area is divided into 4 channels per CPU with 3 slots per channel</p> <p>- 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</p> |
| <p>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 reduced x4 organized memory modules</p> |
| <p>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.</p> |
| <p>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</p> |
| <p>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</p> |
| <p>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</p> |

E

E

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

1x per CPU

i 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 |

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

i 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

i 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 |

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 |

F

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 | Application |
|--------------------------|----------------------------|-------|--------------|---|
| | | x8 | LRDIMM 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 | | |
| | 1.2V | | | | | |
| | 1 | 2 | 3 | 1 | 2 | 3 |
| Voltage setting (BIOS) | DPC | DPC | DPC | DPC | DPC | DPC |
| CPU with 2133MHz DDR4 Bus | 2133 | 2133 | 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 |

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:

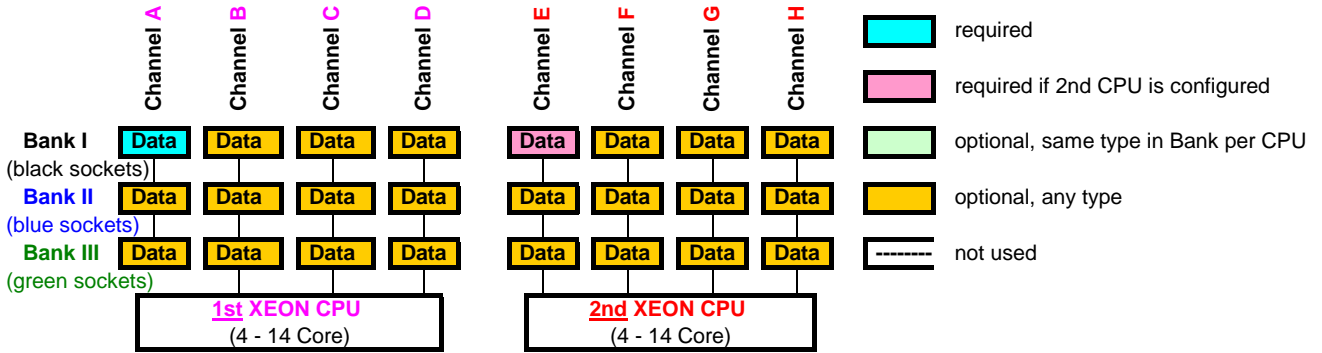
Bank I black sockets
Bank II blue sockets
Bank III green sockets

- A so called Bank consists 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

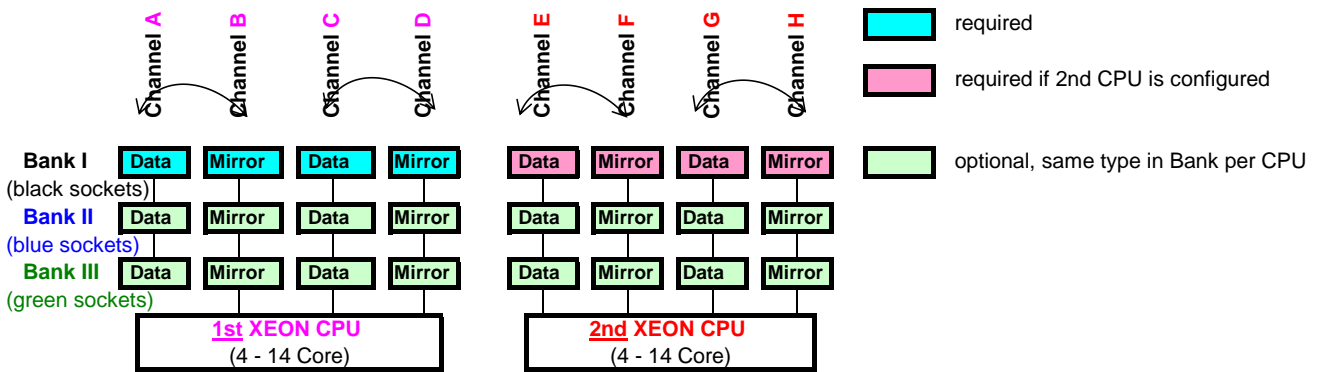
- See below and next page for a detailed descriptions of the memory configuration supported.

1. Independent Channel Mode



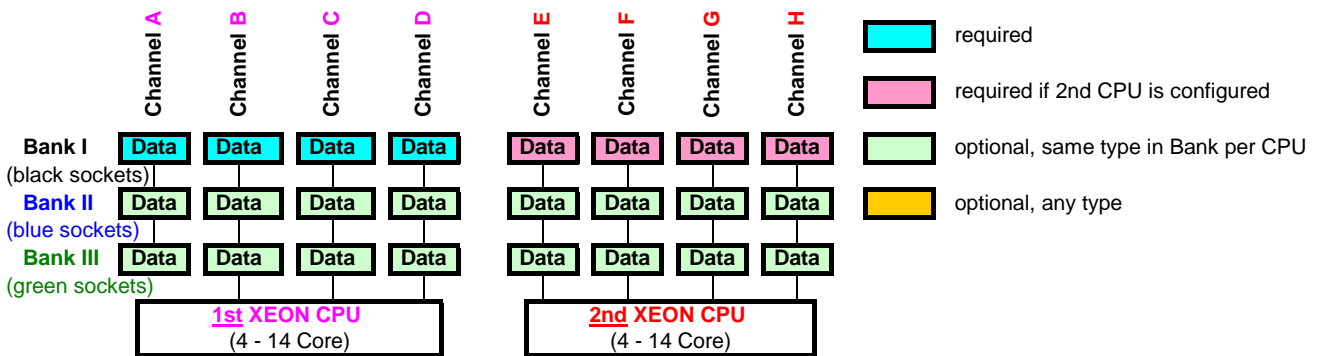
Independent Channel Mode allows all channels to be populated in any order
 Can run with differently rated DIMMs and use the settings of the slowest DIMM installed in the system

2. Mirrored Channel Mode



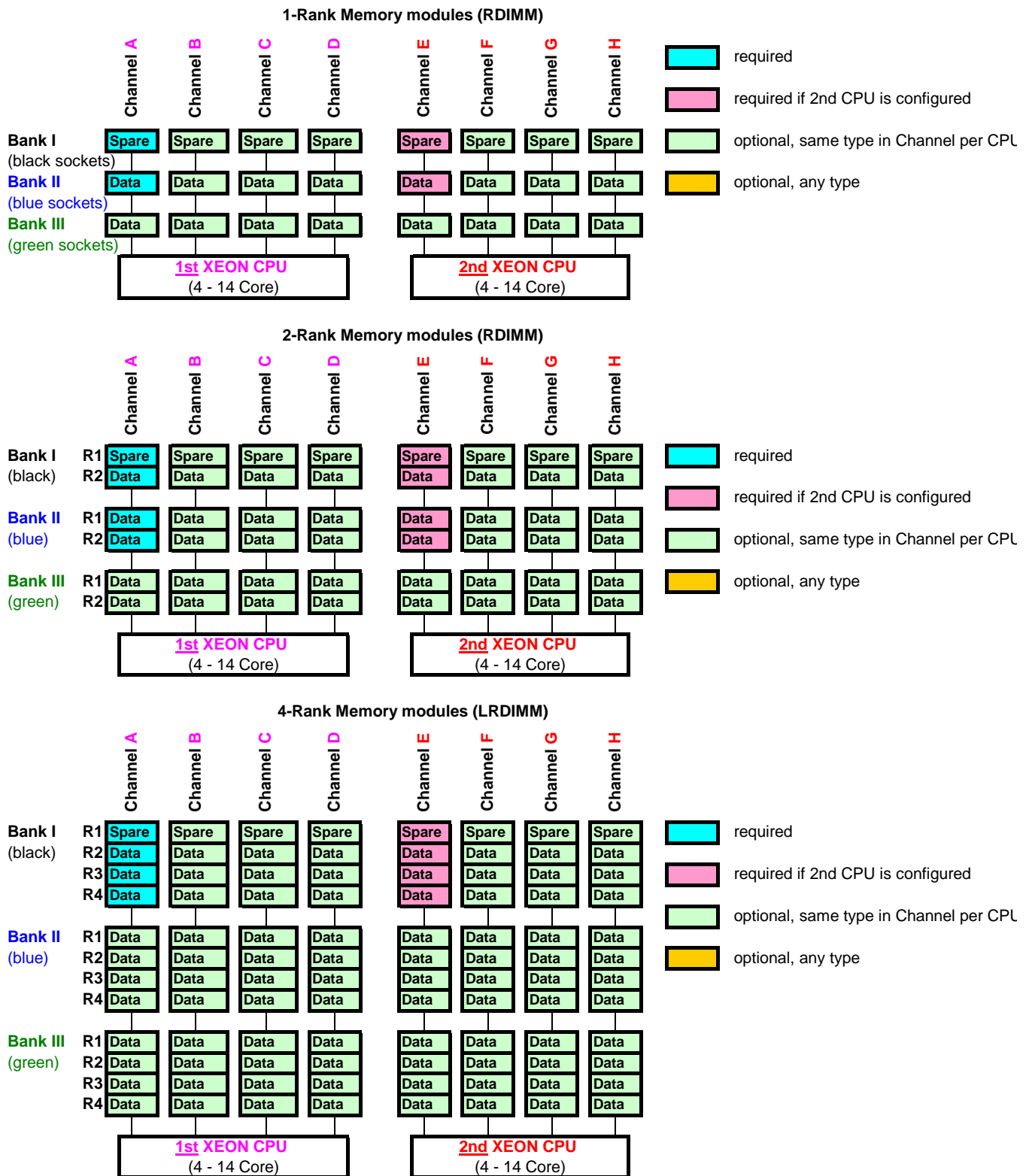
Mirrored Channel Mode requires identical modules on channel A,B, C, D (1st CPU) or channel E, F, G and H (2nd CPU)
 50% of the capacity is used for the mirror => the available memory for applications is only half of the installed memory
 If this mode is used, a multiple of 4 identical modules has to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



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

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

| | | |
|---|---|---|
| <p>Opt. Front VGA Please refer to Sys.Manag. XII</p> <p>Optional Front VGA only possible for onboard graphics</p> | <p>S26361-F2748-E538 PGRA CP NVS 1GB VGA PCIe x16</p> <p>NVIDIA NVS315 1024 MB PCIe-x16</p> <p>Connectors: 1x LFH 59 cable kit for 2x DVI or 2x VGA cable kits included</p> <p>Dual head + professional 2-D + 3-D supported for Windows OS native driver support for Linux OS full height bracket max. 1x per system</p> | <p>S26361-F2748-L538 PGRA CP NVS 1GB VGA PCIe x16 for loose delivery</p> |
|---|---|---|

PY VGA card can be installed in slot 3 (CPU1) or slot 8 (CPU2)

The high end optional NVIDIA NVS315 graphic card offers dual head operation and fully 3D video support.
The cables for either two times DVI-I or VGA connections are part of the delievery.
Remote Video direction via iRMC must be disabled.
This PCIe-x16 card can also be installed in slit PCIe-x4, x8 or standard x16 slot.
Only one card per server is allowed.

Note:
Max 8x 2.5" or 4x 3.5" HDD is possible with GRID K1/K2
No more restriction for CPUs!

NVIDIA GRID K1/K2 GPU pass through / vGPU

| | | |
|--|---|--|
| <p>S26361-F3846-E11 PY GRID K1/K2 Mounting Kit right max. 1x per system required</p> | <p>S26361-F3846-E12 PY GRID K1/K2 Mounting Kit left max. 1x per system required, needs 2nd CPU</p> | <p>S26361-F3846-L11/L12 PY GRID K1/K2 Mounting Kit right/left For later upgrade a service technician needed</p> |
| <p>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</p> | <p>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</p> | <p>S26361-F2222-L914 for later upgrade</p> <p>S26361-F2222-L924 for later upgrade</p> |

Supported for GPU pass through and vGPU (shared GPU) under Citrix XenServer 6.5 and XenDesktop. Workload depends on application. Ideal for virtualized GPU or shared GPU workload like "Power Users" or "Knowledge Workers", including "Designer" as full power graphic USER (GRID K2 only).
Supported for VMware ESXi 5.5 shared (vSGA) & dedicated (vDGA) virtual graphic support and Microsoft RemoteFX under Windows Server 2012 R2.
All guests OSES are supported if listed at OS vendors HCL.
NOT certified for CAD / CAM / CAX type of applications using dedicated GPU.

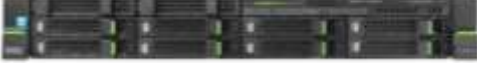
G

Section Va Possible configuration options for basic units

4 HDDs in Config 1 with ultraslim ODD



8 HDDs in Config 2 with ultraslim ODD



12x HDDs for -V112, no ODD possible



| | |
|---|-------------------|
| 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 |
| Config 2: Max. 8x 3.5" HDD S26361-F2495-E120 | |
| Available Upgrade kits for this configuration option: | |
| Upgrade kit to 12x 3.5" HDD | not possible! |
| 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 | |

8 HDDs in Config 4 with ODD and LTO



16 HDDs in Config 5/6 with ODD and LTO



add 4/8 PCIe SSD SFF in Config 7/8/9 with ODD/LTO



24 HDDs in Config 24, no ODD/LTO possible



| | | |
|--|--------------------|------------|
| Basic unit S26361-K1495-V401 with | | expandable |
| Config 4: 8x 2.5" HDD bays | S26361-F2495-E440 | |
| Available Upgrade kits for this configuration option: | | |
| Upgrade kit 4 to 16x 2.5" HDD | S26361-F2495-L445 | |
| Upgrade kit 4 to 24x 2.5" HDD | S26361-F2495-L442 | |
| Upgrade kit 4 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 | |
| Config 7: 4x PCIe-SSD SFF S26361-F2495-E470 | | |
| Available Upgrade kits for this configuration option: | | |
| Upgrade kit 7 to +8x 2.5" HDD | S26361-F2495-L478 | |
| Upgrade kit 7 to +4x 2.5" PCIe-SSD | on special release | |
| Config 8: 8x 2.5" + 4x PCIe-SSD SFF S26361-F2495-E480 | | |
| Config 9: 8x PCIe-SSD SFF on special release | | |
| Basic unit S26361-K1495-V424 with 24x 2.5" HDDs | | |
| Config 24: Up to 24x 2.5" HDD, no ODD/Backup | included | |
| Available Upgrade kits for this configuration option: | | |
| None | | |
| Includes all necessary bezels, cages, backplanes and cables | | |

rear 2.5" SAS/SATA HDD/SSD SFF
 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 SFF or PCIe-SSD SFF devices | |
| Note: Separate SAS-Controller or PCIe switch needed! | |
| Note: Consumes space for PCIe riser 2x x8 left | |
| max. 1x per system | |
| Includes all necessary bezels, cages, backplanes and cables | |

H

H

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

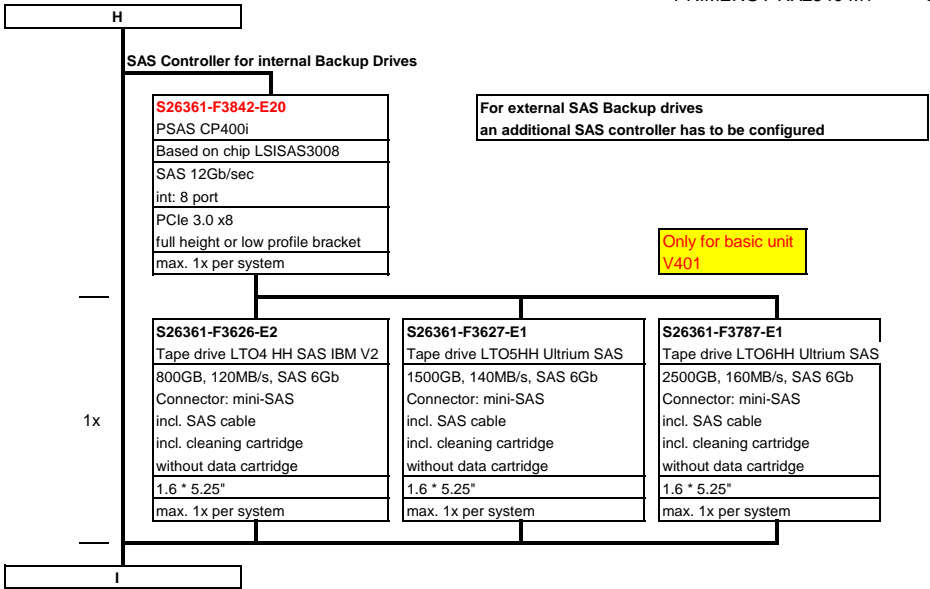
| | |
|--|-------------------|
| 1) USB DVD SM / Blu-Ray External SuperMulti Drive | S26341-F103-L126 |
| External Blu-Ray Drive | S26341-F103-L127 |
| 2) USB Memorybird: | |
| MyUSBS A910 8GB, MLC Flash | S26391-F6048-L208 |
| MyUSBS A910 16GB, MLC Flash | S26391-F6048-L216 |

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

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

| | | |
|--|---|--|
| <p>S26361-F3750-E4 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</p> | <p>Only for basic unit V401 as soon as available</p> | <p>RDX Drive is connected to on-board USB3</p> |
| | <p>Not possible for basic unit V1xx</p> | <p>i 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</p> <p>i 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!</p> |

H



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-Intensive 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, 512n | | S26361-F3815-E500 |
| 1TB 7200rpm,<9.0ms, 64MB Cache, 512n | | S26361-F3815-E100 |
| 2TB 7200rpm,<9.0ms, 64MB Cache, 512n | | S26361-F3815-E200 |
| 3TB 7200rpm,<9.0ms, 64MB Cache, 512n | | S26361-F3815-E300 |
| 4TB 7200rpm,<9.0ms, 64MB Cache, 512n | | S26361-F3815-E400 |
| 6TB 7200rpm,<9.0ms, 128MB Cache, 512e | | S26361-F3904-E600 |
| 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, 512n | | S26361-F5532-E530 |
| 450GB 15000rpm, <=3.1ms, 128MB Cache, 512n | | S26361-F5532-E545 |
| 600GB 15000rpm, <=3.1ms, 128MB Cache, 512n | | S26361-F5532-E560 |
| HDD SAS 6Gb/s 3.5" with hot plug/hot replace tray | | |
| 1TB 7200rpm,<9.0ms, 32MB Cache, 512n | | S26361-F3820-E100 |
| 2TB 7200rpm,<9.0ms, 32MB Cache, 512n | | S26361-F3820-E200 |
| 3TB 7200rpm,<9.0ms, 32MB Cache, 512n | | S26361-F3820-E300 |
| 4TB 7200rpm,<9.0ms, 32MB Cache, 512n | | 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 |
| 240GB, Enterprise (EP), Read-Intensive** | | S26361-F5530-E240 |
| 480GB, Enterprise (EP), Read-Intensive** | | S26361-F5530-E480 |
| 800GB, Enterprise (EP), Read-Intensive** | | S26361-F5530-E800 |
| | | |
| 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 | | |

J

Solid State Disk, Boot Drive, SATA DOM (SATADOM Port, AHCI)

| SSD SATA 6Gb/s DOM, Boot Device, non "hot plug/hot replace" | |
|---|-----------------------------------|
| 32GB, SATA DOM, 86 TBW (Seq. write) | S26361-F5522-E32 |
| 64GB, SATA DOM, 172 TBW (Seq. write) | S26361-F5522-E64 |
| 128GB, SATA DOM, 345 TBW (Seq. write) | S26361-F5522-E128 |
| SATADOM is designed for use as a boot drive with the Endurance Spec. above. | |
| Vmware is not supported. | |
| max. 1x per system | |

Note:
 Currently not possible with
 on-board SATA RAID Controller.

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 |
| 240GB, Enterprise (EP), Read-Intensive** | S26361-F5525-E240 |
| 480GB, Enterprise (EP), Read-Intensive** | S26361-F5525-E480 |
| 800GB, Enterprise (EP), Read-Intensive** | S26361-F5525-E800 |
| 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 |
| | |
| 300GB 10000rpm, <4,5ms, 32MB Cache, 512n | S26361-F3818-E130 |
| 600GB 10000rpm, <4,5ms, 32MB Cache, 512n | S26361-F3818-E160 |
| 900GB 10000rpm, <4,5ms, 32MB Cache, 512n | S26361-F3818-E190 |
| 1.2TB 10000rpm, <4,6ms, 64MB Cache, 512n | S26361-F3818-E112 |
| max. 8/16/24x per system | |
| HDD SAS 12Gb/s 2.5" with hot plug/hot replace tray | |
| 450GB, 10krpm, 128MB Cache, 512e | S26361-F5543-E145 |
| 600GB, 10krpm, 128MB Cache, 512e | S26361-F5543-E160 |
| 900GB, 10krpm, 128MB Cache, 512e | S26361-F5543-E190 |
| 1.2TB, 10krpm, 128MB Cache, 512e | S26361-F5543-E112 |
| 1.8TB, 10krpm, 128MB Cache, 512e | S26361-F5543-E118 |
| | |
| 300GB 15000rpm, <=3.1ms, 128MB Cache, 512n | S26361-F5531-E530 |
| 450GB 15000rpm, <=3.1ms, 128MB Cache, 512n | S26361-F5531-E545 |
| 600GB 15000rpm, <=3.1ms, 128MB Cache, 512n | S26361-F5531-E560 |
| max. 8/16/24x per system | |



HDD 512e
 512e drives are not supported with
 the current versions of vSphere and VSAN

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, 512n | S26361-F3816-E250 |
| 500GB 7.200rpm, <9,5ms, 64MB Cache, 512n | S26361-F3816-E500 |
| 1TB 7.200rpm, <9,5ms, 64MB Cache, 512n | S26361-F3816-E100 |
| max. 8/16/24x per system | |

K

K

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 8x 3.5" or 8x 2.5" SATA HDD configurations without PRAID xP4x0i

For every configuration with SAS 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



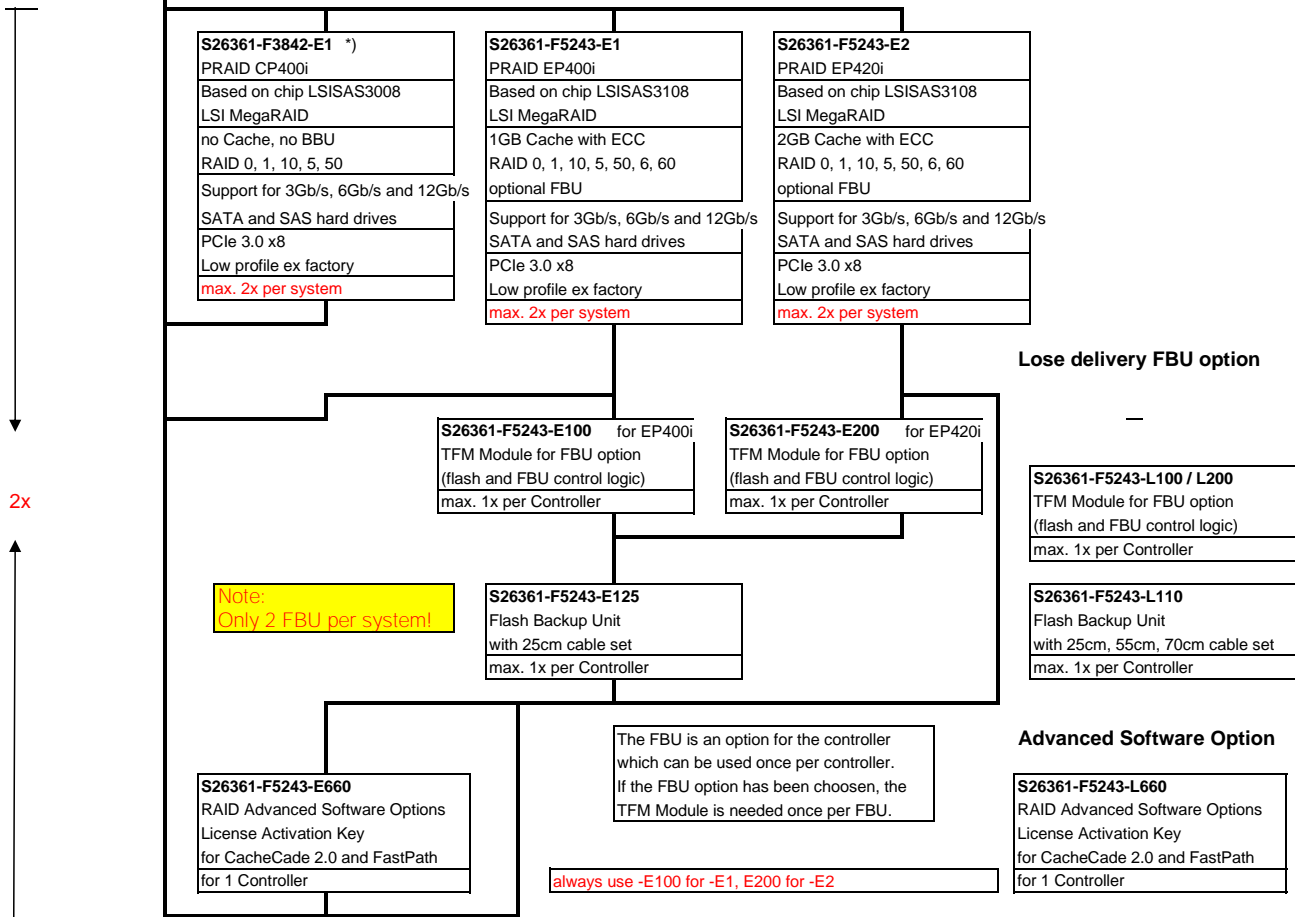
Modular Raid 5 controller for SAS/SATA

RAID levels 0, 1, 10, 5, 50, 6 and 60 are supported.

This RAID controller supports max. 24 HDDs combined with internal SAS expander

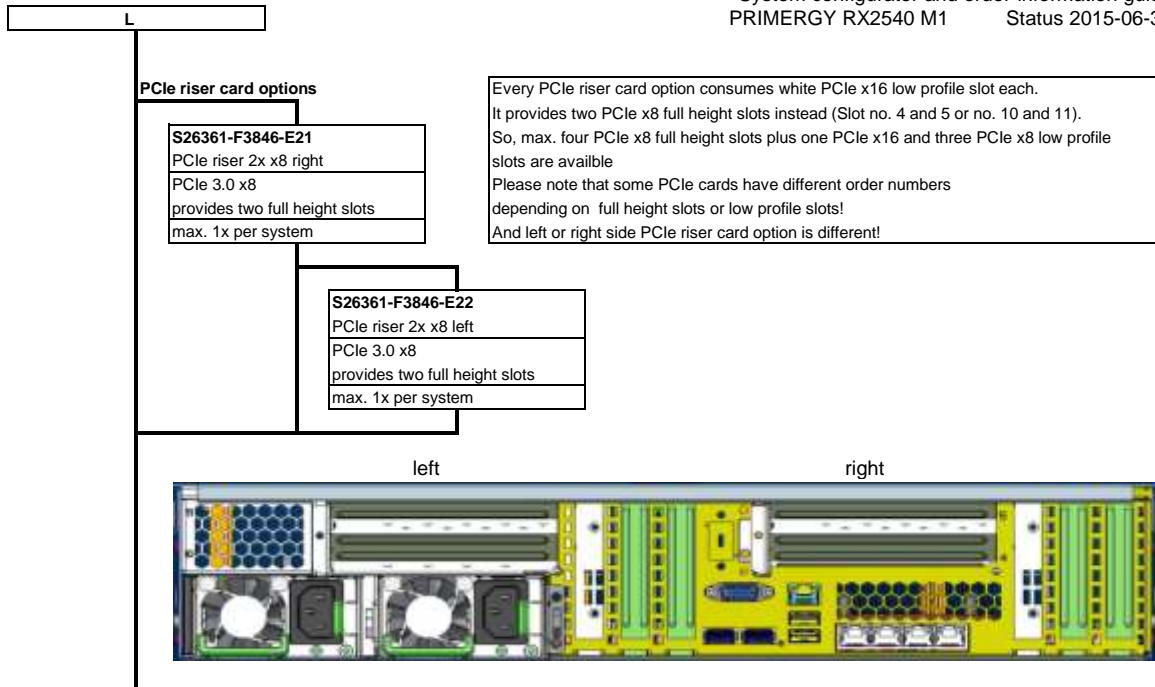
The FBU is an option for the controller which can be used once per controller. If the FBU option has been chosen, the TFM Module is needed once per FBU.

S26361-F3853-E10 Option REAR SAS/SATA HDD/SSD
 This option needs a separate (additional) PRAID xP4x0i controller!

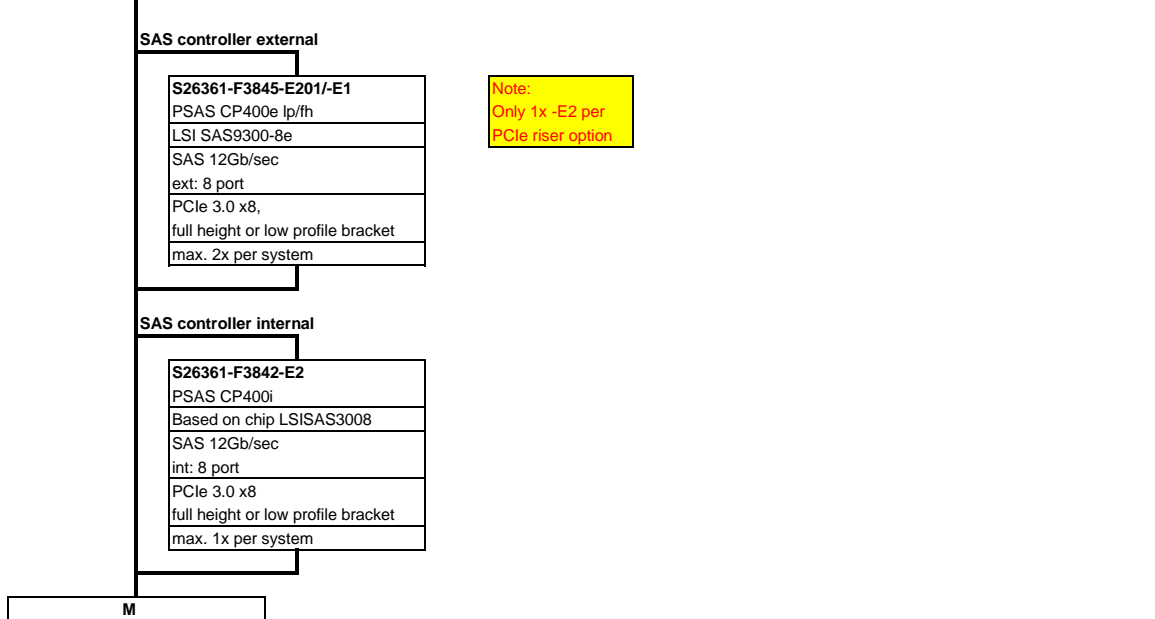


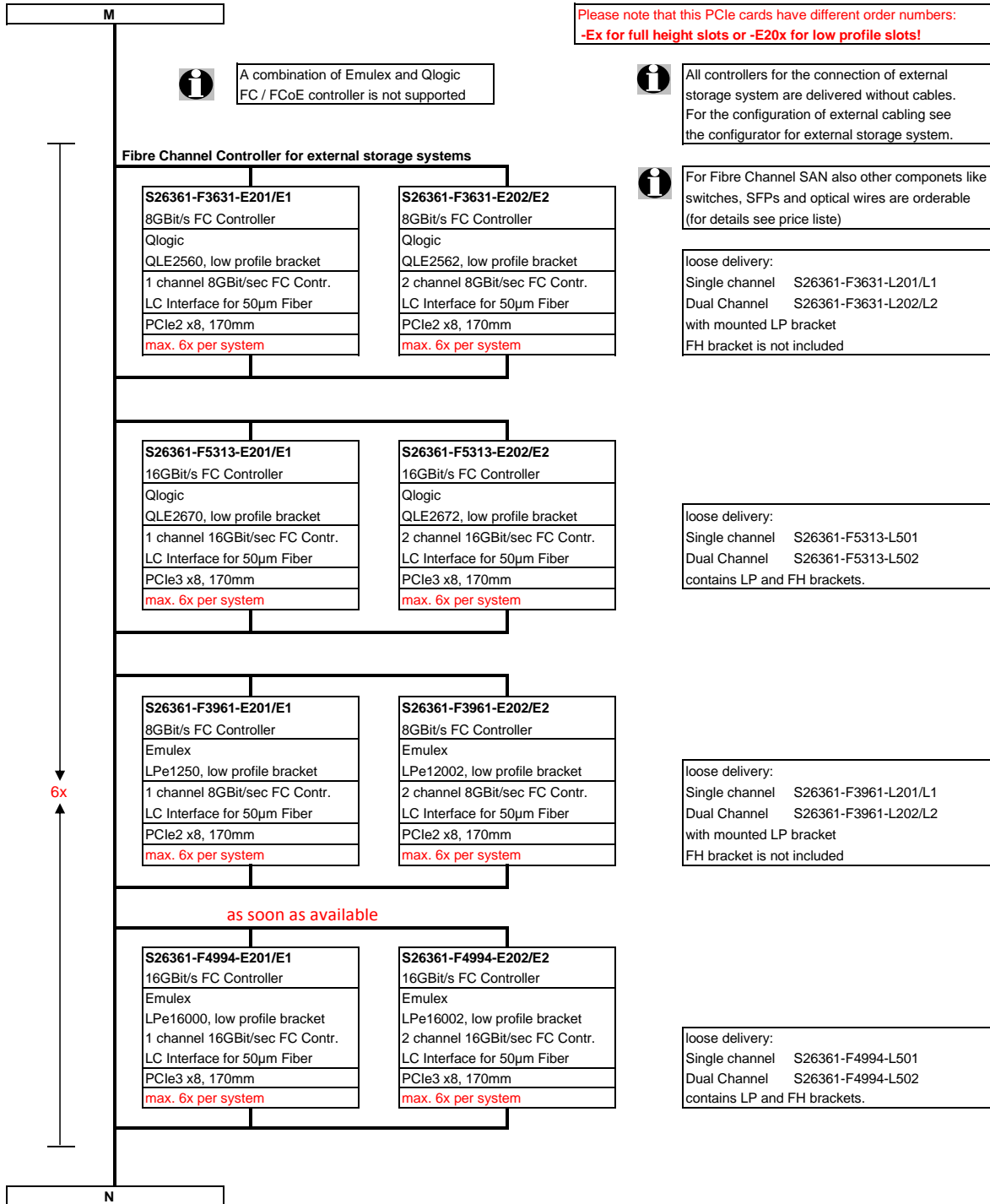
*) In V112: only together with S26361-F3853-E10 (Option REAR 2.5" SAS/SATA HDD/SSD)

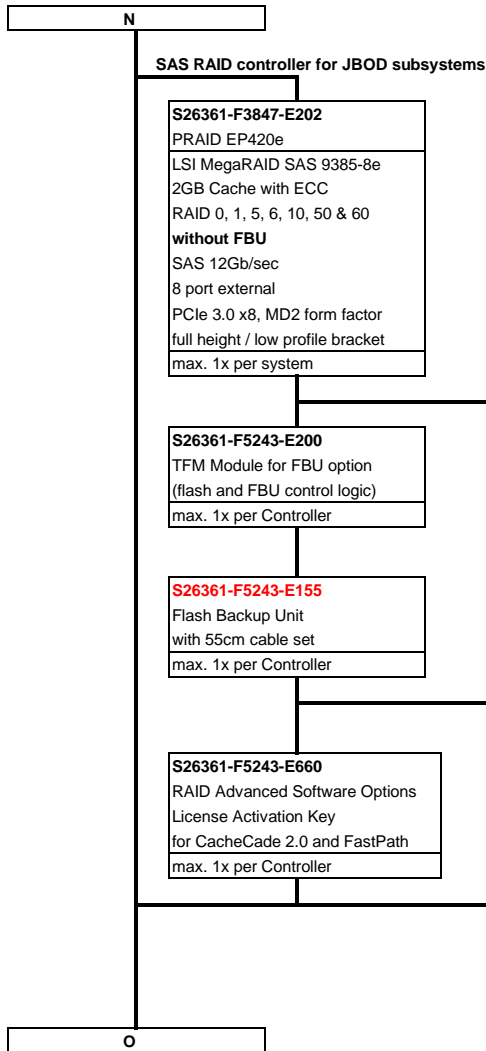
L



SAS-/SCSI-/ Fibre-Channel Controller







Lose delivery

| |
|-----------------------------------|
| S26361-F3847-L502 |
| PRAID EP420e |
| 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 |
| Customer configurable |

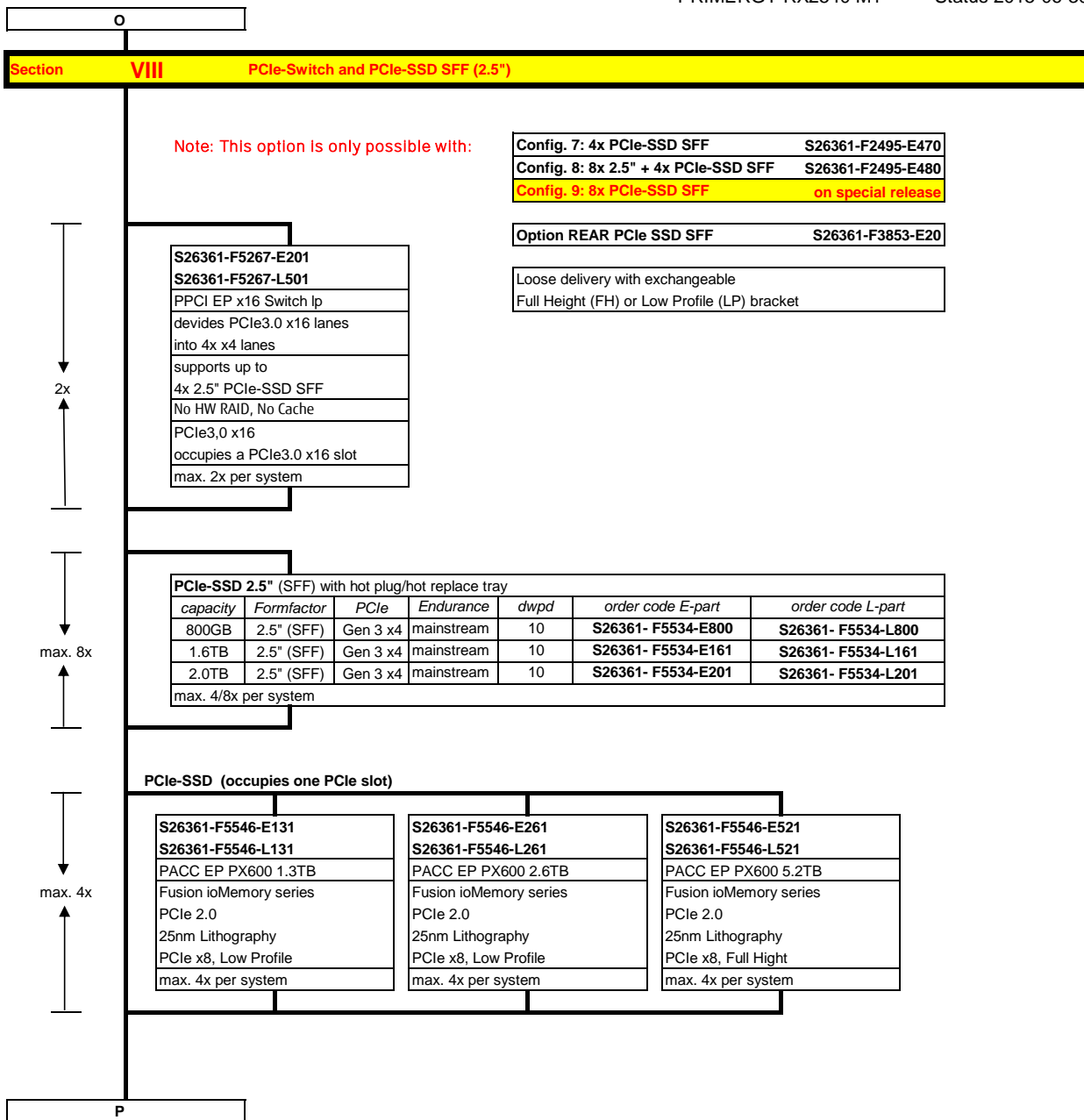
| |
|-------------------------------|
| S26361-F5243-L200 |
| TFM Module for FBU option |
| (flash and FBU control logic) |
| max. 1x per Controller |

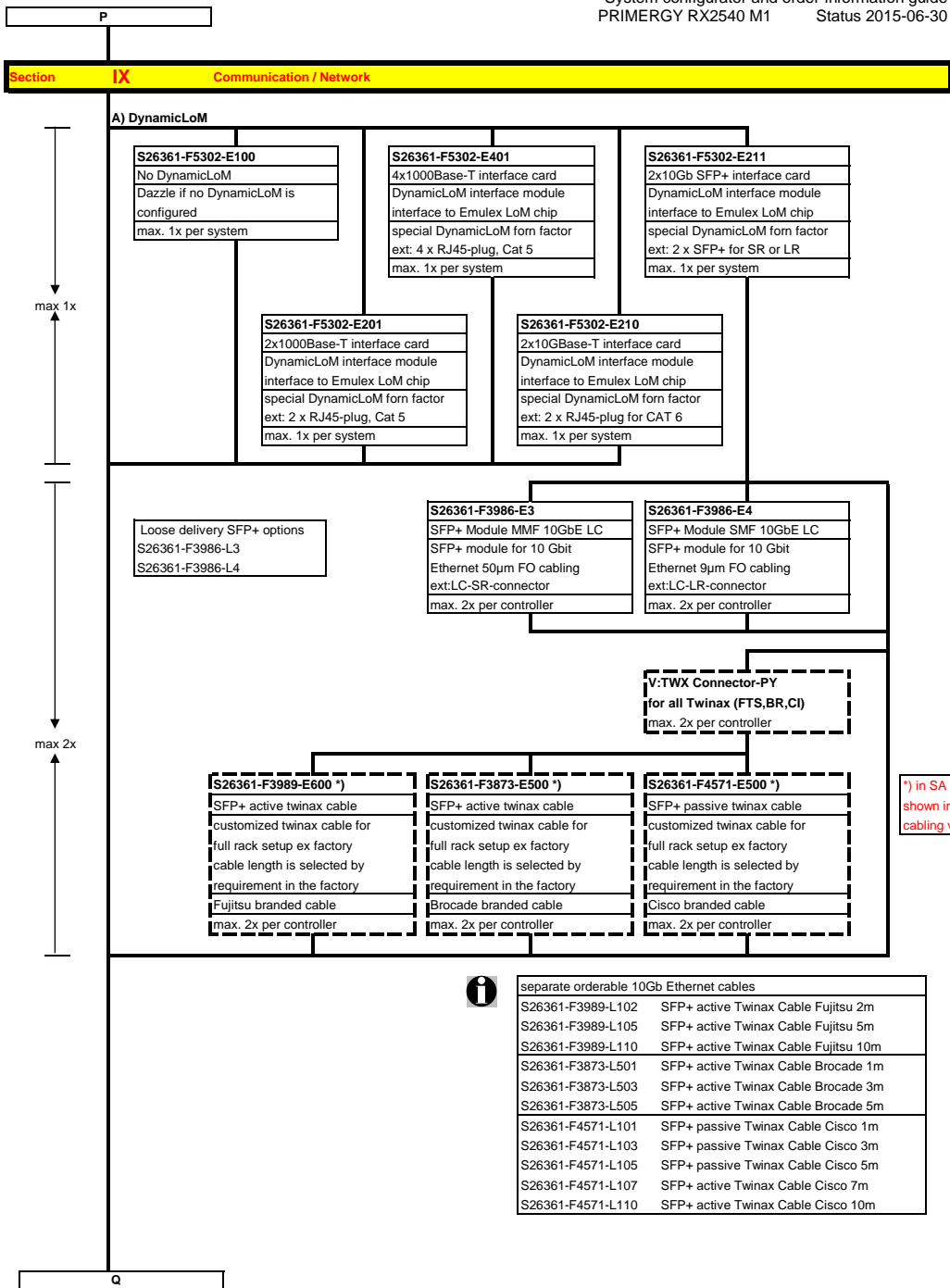
Lose delivery FBU option

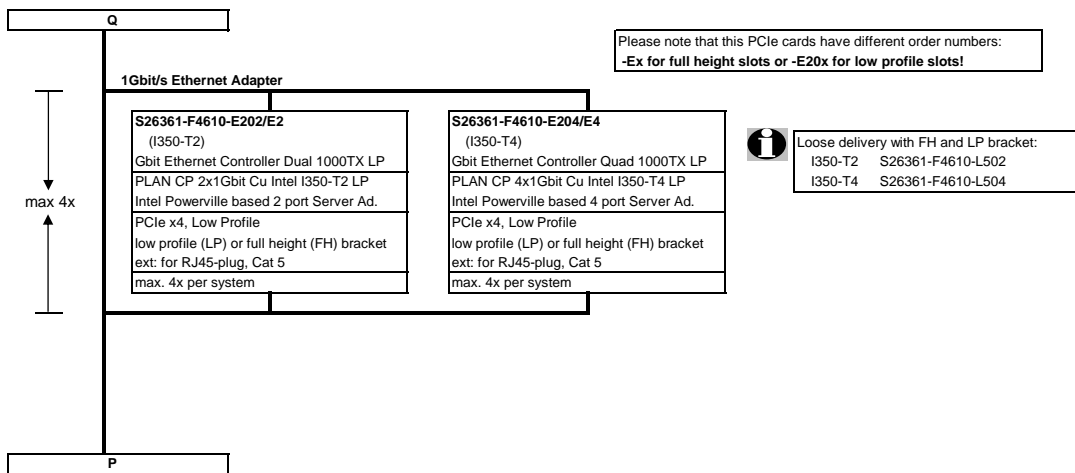
| |
|---------------------------|
| S26361-F5243-L110 |
| Flash Backup Unit |
| with 25, 55, 70 cable set |
| max. 1x per Controller |

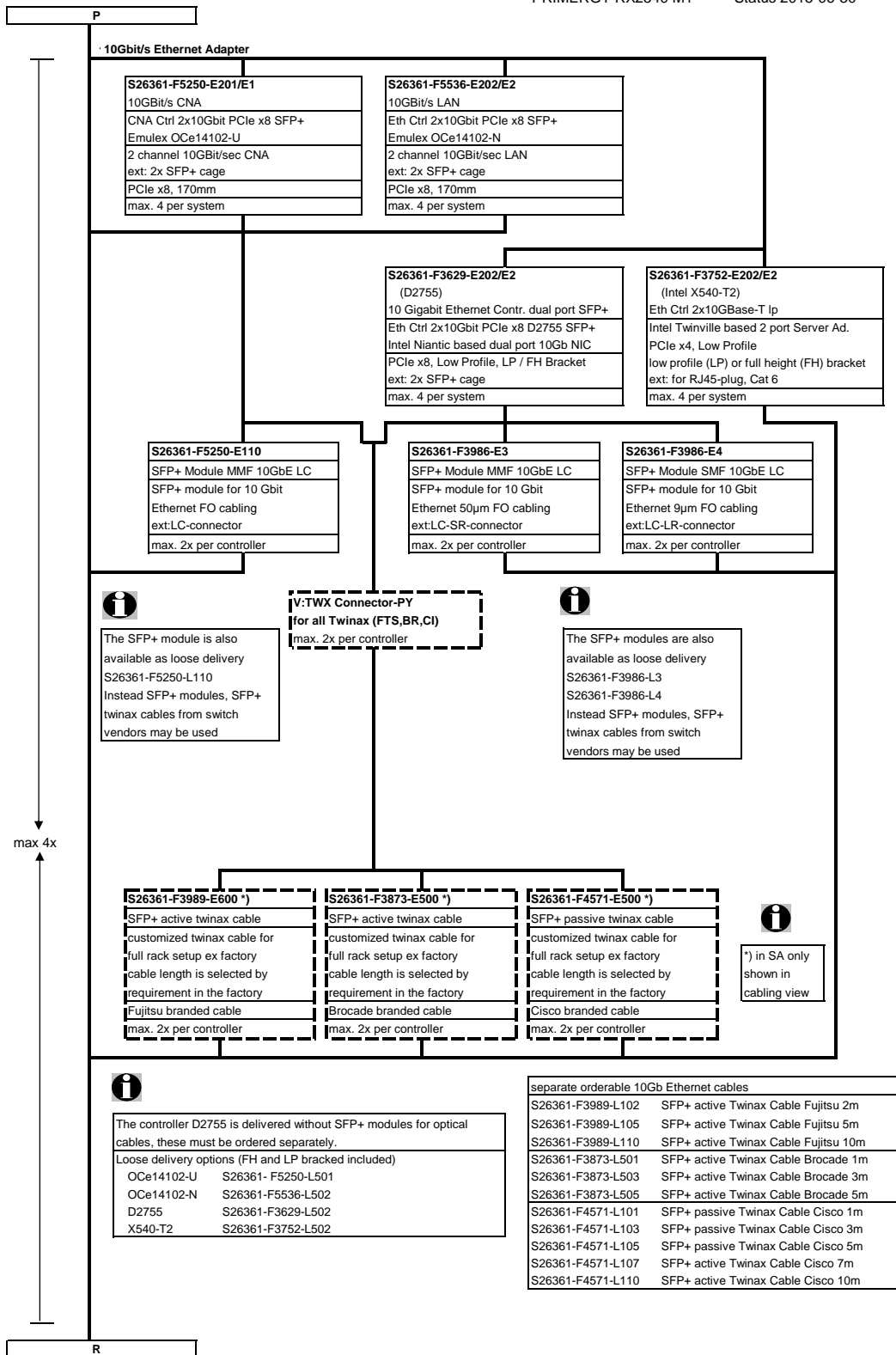
Advanced Software Option

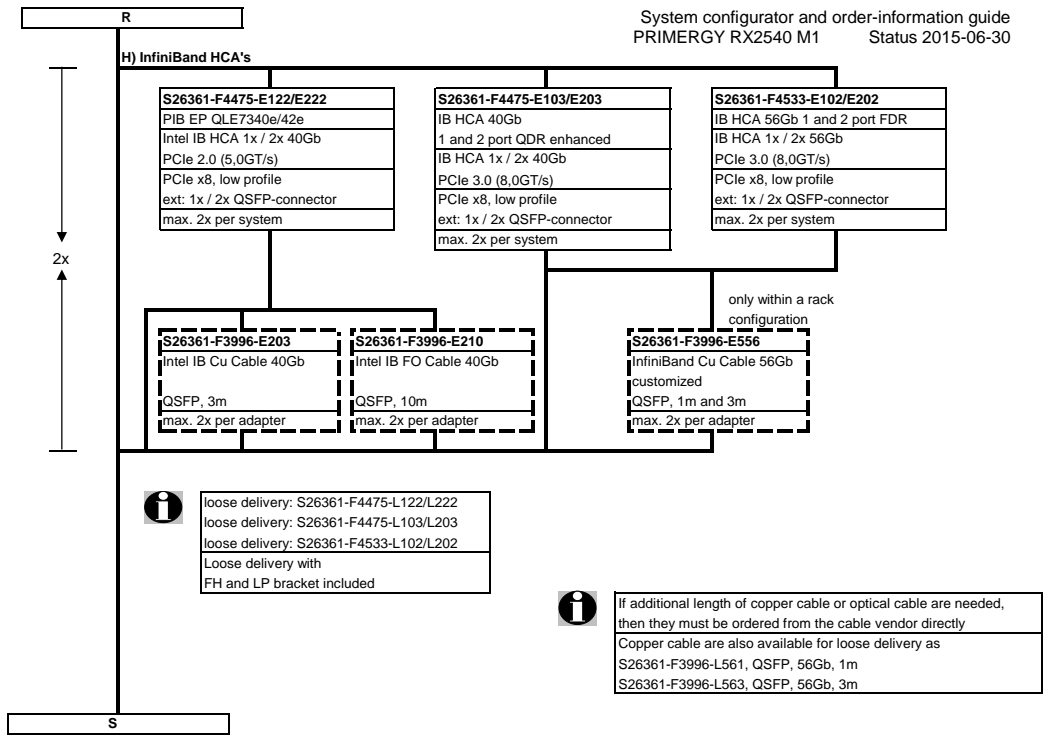
| |
|--------------------------------|
| S26361-F5243-L660 |
| RAID Advanced Software Options |
| License Activation Key |
| for CacheCade 2.0 and FastPath |
| for 1 Controller |











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

OOB-HDD monitoring by iRMC S4:
 the OOB-HDD cable will be installed in production automatically
 Exception: RAID Ctrl SAS 6G 1GB (D3116C), PRAID EP4x0i, PRAID CP400i,
 these controllers support OOB-RAID, which includes OOB-HDD without cable



HDD OOB monitoring by iRMC
 Loose delivery
 S26361-F1420-L310

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



Front 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 loose with the shipment
 For suitable peripherals for this product, please refer to SystemArchitect

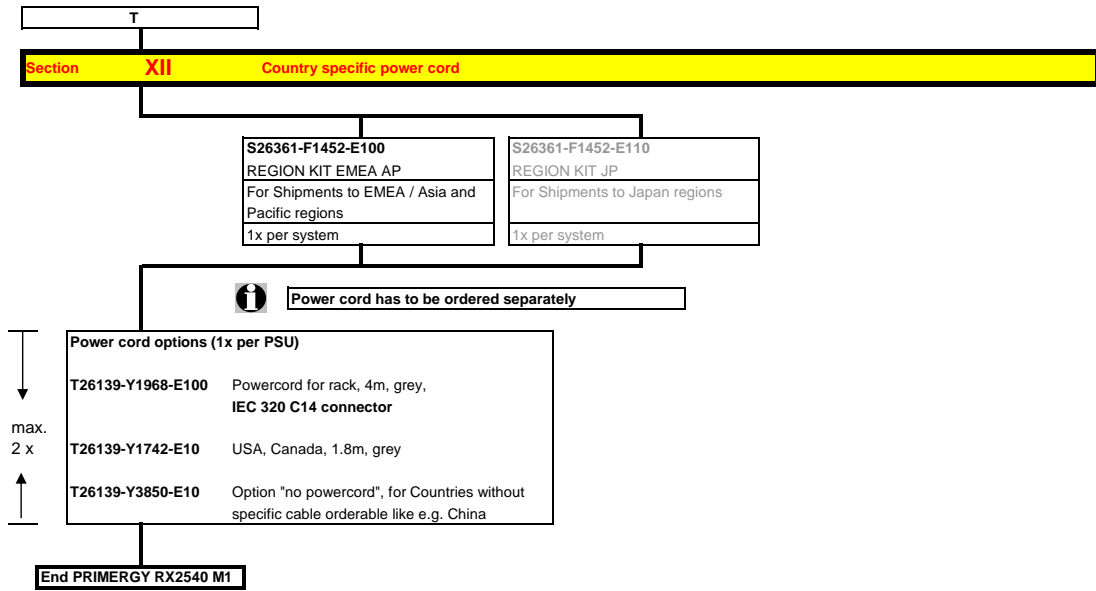
S26361-F3776-E101
Cool-safe® Advanced Thermal Design
 Restricts configuration to make
 5-40° possible
 Feature is enabled and fixed ex factory
 max. 1x per system



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

| | |
|---------------------------------------|--------------------------|
| no basic unit with 12x LFF | |
| 12x 3.5" HDD bays | S26361-K1495-V112 |
| not these CPUs | |
| Intel Xeon E5-2637v3 4C/8T 3.50 GHz | S26361-F3849-E137 |
| Intel Xeon E5-2643v3 6C/12T 3.40 GHz | S26361-F3849-E143 |
| Intel Xeon E5-2667v3 8C/16T 3.20 GHz | S26361-F3849-E167 |
| Intel Xeon E5-2697v3 14C/28T 2.60 GHz | S26361-F3849-E197 |
| Intel Xeon E5-2699v3 18C/36T 2.30 GHz | S26361-F3849-E199 |
| no Grid cards | |
| PGRA CP NVIDIA GRID K1 | S26361-F2222-E914 |
| PGRA CP NVIDIA GRID K2 | S26361-F2222-E924 |
| 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 |

T



System configurator and order-information guide
PRIMERGY RX2540 M1 Status 2015-06-30

| Group | Description | order code | Status LLC |
|-----------|--|-------------------|------------|
| Base unit | 2.5" HDD bays exp long lifecycle | S26361-K1495-V402 | agreed |
| Base unit | 3.5" HDD bays exp long lifecycle | S26361-K1495-V102 | planned |
| Base unit | 12x 3.5" HDD bays | S26361-K1495-V112 | NO |
| Base unit | 2.5" HDD bays expandable | S26361-K1495-V401 | NO |
| Base unit | 24x 2.5" HDD bays | S26361-K1495-V424 | NO |
| Configs | Config. 4: 8x 2.5" HDD bays | S26361-F1495-E440 | agreed |
| Configs | Config. 5: 16x 2.5" HDD bays | S26361-F2495-E450 | agreed |
| Configs | Config. 6: 16x 2.5" HDD @ Dual RAID | S26361-F2495-E452 | agreed |
| Configs | Riserkarte PCIe 2x x8 rechts | S26361-F3846-E21 | agreed |
| CPU | Intel Xeon E5-2603v3 6C/6T 1.60 GHz | S26361-F3849-E103 | NO |
| CPU | Intel Xeon E5-2609v3 6C/6T 1.90 GHz | S26361-F3849-E109 | agreed |
| CPU | Intel Xeon E5-2620v3 6C/12T 2.40 GHz | S26361-F3849-E120 | agreed |
| CPU | Intel Xeon E5-2640v3 8C/16T 2.60 GHz | S26361-F3849-E140 | agreed |
| CPU | Intel Xeon E5-2660v3 10C/20T 2.60 GHz | S26361-F3849-E160 | NO |
| CPU | Intel Xeon E5-2667v3 8C/16T 3.20 GHz | S26361-F3849-E167 | NO |
| CPU | Intel Xeon E5-2670v3 12C/24T 2.30 GHz | S26361-F3849-E170 | NO |
| CPU | Intel Xeon E5-2680v3 12C/24T 2.50 GHz | S26361-F3849-E180 | agreed |
| CPU | Intel Xeon E5-2695v3 14C/28T 2.30 GHz | S26361-F3849-E195 | agreed |
| CPU | Intel Xeon E5-2697v3 14C/28T 2.60 GHz | S26361-F3849-E197 | NO |
| CPU | Intel Xeon E5-2637v3 4C/8T 3.50 GHz | S26361-F3849-E137 | NO |
| CPU | Intel Xeon E5-2698v3 16C/32T 2.30 GHz | S26361-F3849-E198 | NO |
| CPU | Kühlösung für 2te CPU | S26361-F3849-E100 | agreed |
| RAM | 4 GB (1x4 GB) DDR4-2133 R ECC | | NO |
| RAM | 8GB (1x8GB) 1Rx4 DDR4-2133 R ECC | S26361-F3843-E514 | NO |
| RAM | 16GB (1x16GB) 2Rx4 DDR4-2133 R ECC | S26361-F3843-E516 | agreed |
| RAM | 16GB (1x16GB) 2Rx4 DDR4-2133 R ECC | S26361-F3843-E516 | agreed |
| RAM | 32GB (1x32GB) 4Rx4 DDR4-2133 LR ECC | S26361-F3844-E517 | agreed |
| RAM | Independent Mode Installation | S26361-F3694-E10 | agreed |
| RAM | Performance Mode Installation | S26361-F3694-E2 | agreed |
| FC | FC Ctrl 8Gb/s 2 Kanal LPe12002 MMF LC LP | S26361-F3961-E202 | agreed |
| FC | PFC EP LPe16002 LP | S26361-F4994-E202 | agreed |
| GFX | Front VGA | S26361-F1420-E130 | agreed |
| HDD | HD SAS 12G 600GB 15K HOT PL 3.5" EP | S26361-F5532-E560 | NO |
| HDD | 4TB 7200rpm, <9,0ms, 64MB Cache, 512e | S26361-F3904-E400 | planned |
| HDD | HD SAS 12G 1.2TB 10K HOT PL 2.5" EP | S26361-F5543-E112 | agreed |
| HDD | HD SAS 12G 300GB 15K HOT PL 2.5" EP | S26361-F5531-E530 | NO |
| HDD | HD SAS 12G 600GB 15K HOT PL 2.5" EP | S26361-F5531-E560 | NO |
| HDD | HD SAS 12G 900GB 10K HOT PL 2.5" EP | S26361-F5543-E190 | agreed |
| HDD | HD SAS 12G 900GB 15K HOT PL 2.5" EP | | NO |
| HDD | SSD SATA 6G 120GB ReadIntensive 3.5" H-P | S26361-F5530-E120 | NO |
| HDD | SSD SAS 12G 400GB High Endurance 2.5" H-P EP | | agreed |
| HDD | SSD SAS 12G 400GB Main 2.5" H-P EP | S26361-F5298-E400 | agreed |
| HDD | SSD SAS 12G 800GB High endurance 2.5" H-P EP | | NO |
| HDD | SSD SAS 12G 800GB Main 2.5" H-P EP | S26361-F5298-E800 | agreed |

System configurator and order-information guide
PRIMERGY RX2540 M1 Status 2015-06-30

| | | | |
|-------------|---|-------------------|----------------|
| RAID | PRAID CP400i | S26361-F3842-E1 | agreed |
| RAID | PRAID EP400i | S26361-F5243-E1 | agreed |
| RAID | PRAID EP420i | S26361-F5243-E2 | agreed |
| RAID | RAID Ctrl FBU Option mit 25cm Kabel | S26361-F5243-E125 | agreed |
| RAID | RAID Ctrl FBU Option mit 70cm Kabel | S26361-F5243-E170 | agreed |
| RAID | TFM Modul für FBU auf PRAID EP400i | S26361-F5243-E100 | agreed |
| RAID | TFM Modul für FBU auf PRAID EP420i | S26361-F5243-E200 | agreed |
| LAN | Eth Ctrl 2x10Gbit PCIe x8 D2755 SFP+ Ip | S26361-F3629-E202 | agreed |
| LAN | LAN Dummy | S26361-F5302-E100 | agreed |
| LAN | PCNA EP OCe14102 2x 10Gb LP | S26361-F5250-E201 | agreed |
| LAN | PLAN CP 2x1Gbit Cu Intel I350-T2 LP | S26361-F4610-E202 | agreed |
| LAN | PLAN CP 2x1Gbit Cu Intel I350-T24 LP | S26361-F4610-E204 | agreed |
| LAN | PLAN EM 2x10Gb SFP interface card | S26361-F5302-E211 | agreed |
| LAN | PLAN EM 2x1Gb T OC114000-LOM interface | S26361-F5302-E201 | agreed |
| LAN | PLAN CP 4x1Gbit Cu Intel I350-T4 | S26361-F4610-E4 | agreed |
| ODD | DVD-RW supermulti ultraslim SATA | S26361-F3778-E1 | agreed |
| ODD | DVD ROM Ulltraslim | S26361-F3718-E2 | agreed |
| others | Cool-safe® Advanced Thermal Design | S26361-F3776-E101 | agreed |
| PSU | Leitung Netzanschluss Rack, 4m, grau | T26139-Y1968-E100 | agreed |
| PSU | Modular PSU 450W platinum hp | S26113-F575-E13 | agreed |
| PSU | Modulare SV 800W platinum hp | S26113-F574-E13 | agreed |
| PSU | Power cable Rack, 4m, grey | T26139-Y1968-E100 | agreed |
| PSU | Stromversorgung Blende | S26113-F574-E99 | agreed |
| Rack | Rack Mount Kit F1 CMA QRL LV | S26361-F2735-E175 | agreed |
| Rack | Tragewinkel 1HE in asymmetrische Racks | S26361-F4530-E11 | agreed |
| Rack | Kabelgmt. seittl. für asym. PC Racks M1 | S26361-F2735-E71 | agreed |
| Rack | Einbau in symmetrische Racks | S26361-F4530-E10 | agreed |
| Region | Region-Kit APAC/EMEA/Indien | S26361-F1452-E100 | agreed |
| TPM | TPM Module | S26361-F3552-E6 | agreed |
| SMM | iRMC S4 advanced pack | S26361-F1790-E243 | freeze in 2018 |
| PCIe switch | PPCI EP x16 Switch | S26361-F5267-E201 | NO |
| PCIe SSD | 2.5" PCIe-SSD 1.6TB, MLC | S26361-F5534-E161 | NO |
| PCIe SSD | 2.5" PCIe-SSD 2TB, MLC | S26361-F5534-E201 | NO |

