

PRIMERGY RX2520 M1

System configurator and order-information guide

April 2017

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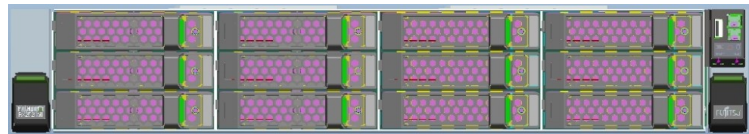
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PRIMERGY Server

Instructions

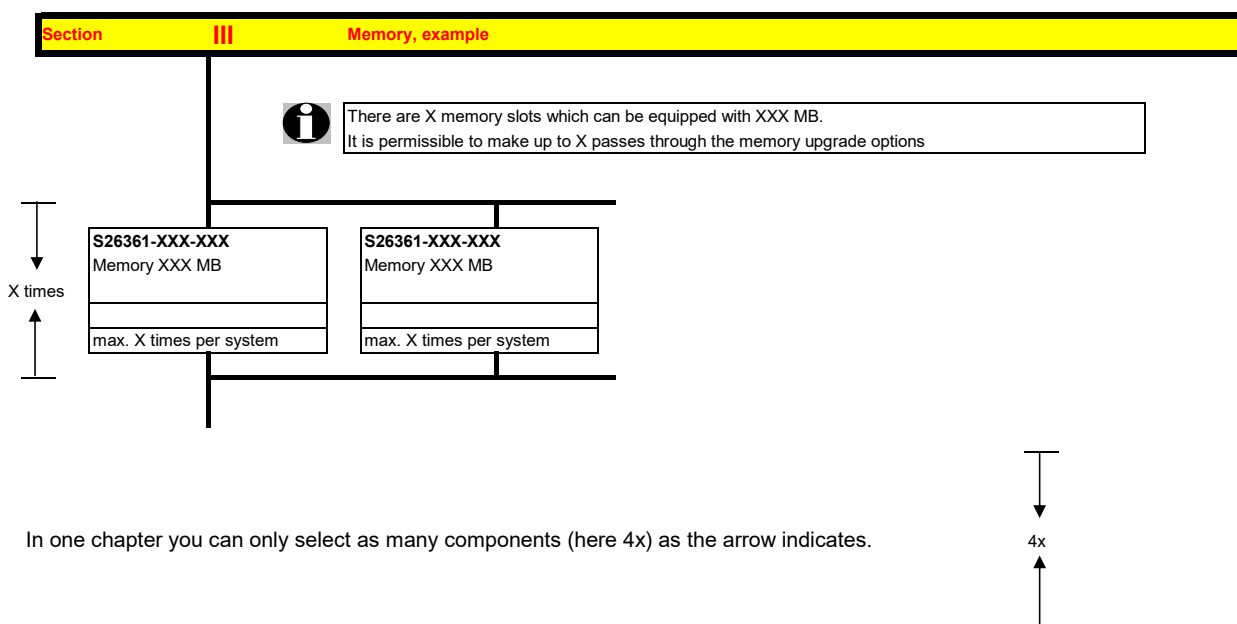
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect.

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:

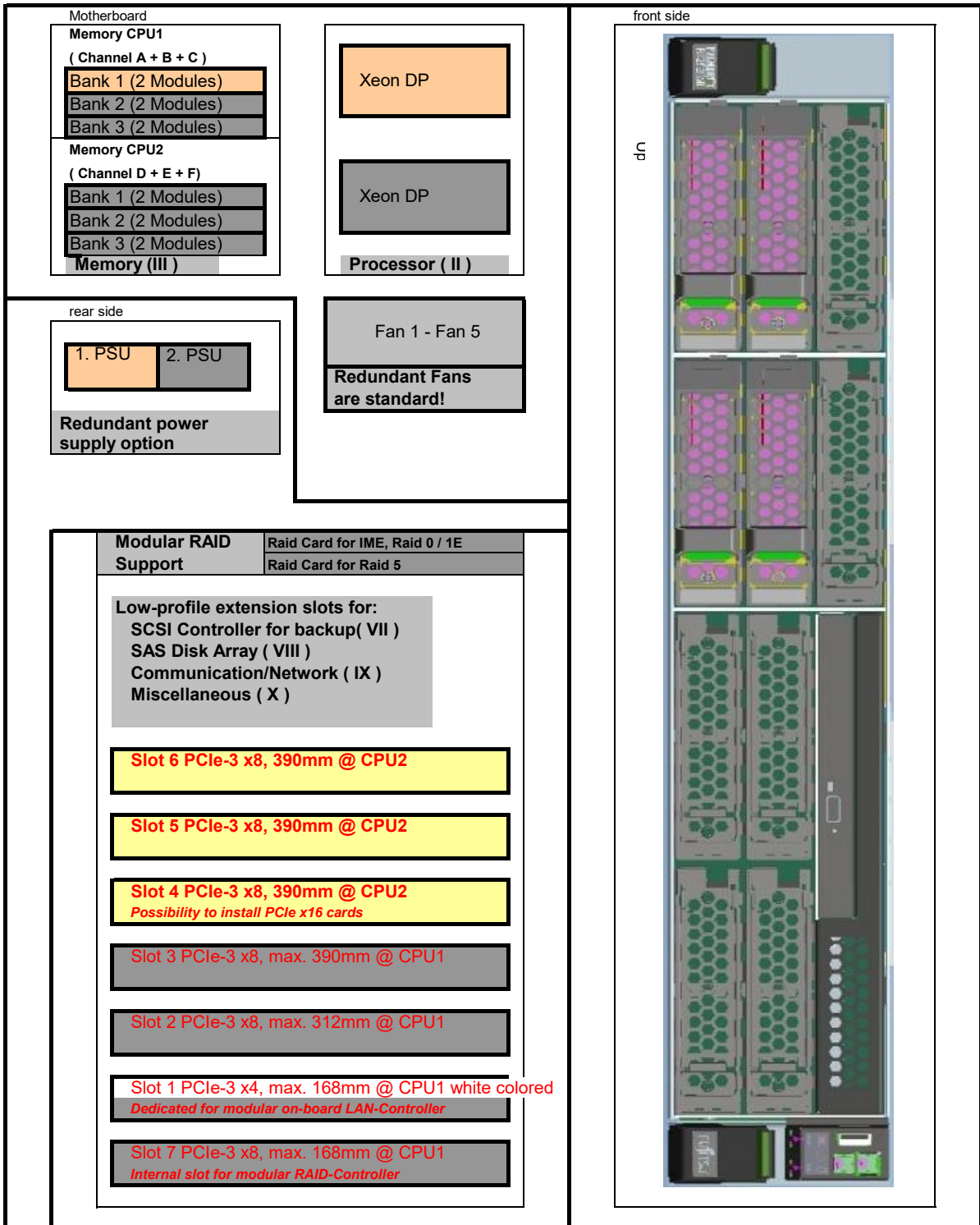
http://ts.fujitsu.com/products/standard_servers/inc (internet)

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

Configuration diagram PRIMERGY RX2520 M1

System unit (I)

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



Key:

Included in basic unit

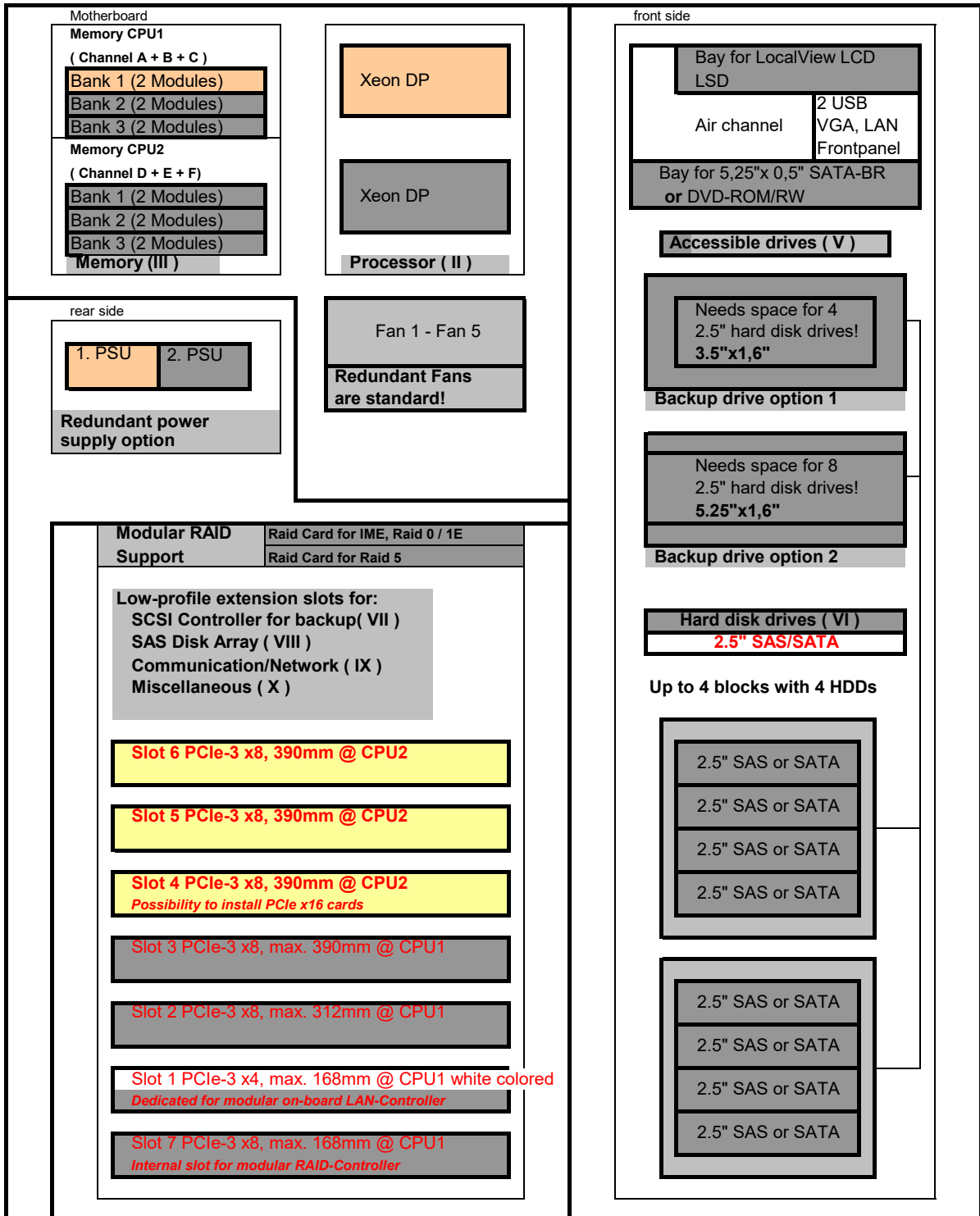
Option

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

Configuration diagram PRIMERGY RX2520 M1

System unit (I)

with up to 4, 8, 12 or 16x 2.5" 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.

Section

Basic unit

**System unit consisting of:**

- * 2U Housing without power supply modules
- * Basic units with:
 - 2 Hot-Plug Power Supply Bays
 - 4 Bays for fans: 2 + 1 fans (redundancy option), 2nd CPU requires additional fan!
note: 12x 3.5" HD basic unit contains always 5 fans!
 - 6 memory DIMMs per CPU => Total 12 DIMMs for two CPU's
- * SAS Backplane for 12x 3.5" HD, SAS Backplanes for 4, 8, 12 or 16x 2.5" HD or PCIe Backplanes for with cable connection to on-board, modular RAID Controller
- * Drives/Bays
 - 8 or 12 bays 1" for hot plug 3.5" HD (1" high) or 4, 8, 12 or 16 bays for hot plug 2.5" HD
 - 1 bay for 3.5" and 1.6" high Backup device, not possible for 3.5" HD basic units
or for basic unit with 12 or 16 x 2,5" HD
 - 1 bay for 5.25" and 1.6" high Backup device, not possible for basic units 3.5" HD
or for basic unit with 12 or 16 x 2,5" HD
 - 1 bay SATA-CD- or DVD-ROM 0,5" height (option), not possible for 12x 3.5" HD basic unit
 - 1 bay for opt. LocalView LC-Display, not possible for 3.5" HD basic units
- * Integrated ServerView Diagnostics Technology (Diagnosis LED's) for indication of internal failed components

Systemboard D3169 with:

- * Up to two Xeon DP CPU's (Socket-B2)
with 1 serial QPI link (Quick Path Interconnect) and three memory channels per CPU
First CPU has to be selected for an orderable basic unit,
- * Chipset Intel® C600 Series (codenamed Patsburg)
- * 7 PCI slots:
 - 3x PCIe-3 x8 (Slots are connected to CPU 2, useable with configured 2nd CPU only!)
 - all Gen 3
 - 2x PCIe-3 x8
 - 1x PCIe-3 x4 Gen 2 only
 - 1x PCIe-3 x8 (for internal modular RAID controller only)
- * 12 memory slots for max. 192 GB RAM DDR3 available
 - Memory is divided into 6 DIMMs per CPU (3 channels with 2 slots per channel)
 - Possible max. configurations are:

12x 16GB RDIMM (dual rank modules) = 192 GB	
12x 32GB LRDIMM (quad rank modules) = 384 GB	on project release only
12x 64GB LRDIMM (quad rank modules) = 768GB	on project release only
 - First Memory (one module) has to be selected for an orderable basic unit per CPU
 - Memory upgrade is possible module wise
- * Dual Port 10/100/1000 x4 PCI Express* Gigabit Ethernet Intel LAN controller Powerville on-board
- * iRMC S4 (integrated Remote Management Controller) on-board server management controller with dedicated 10/100/1000 Service LAN-port and integrated graphics controller.
The Service LAN-port can be switched alternatively on standard Gbit LAN port 1
- * 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)
- * 4x USB 2.0 (UHCI) with 480MBit/s, no USB wakeup
- * 2x LAN RJ45, 1x Service-LAN RJ45

Interfaces on the front:

- * 2x USB 2.0 (UHCI) with 480MBit/s, no USB wakeup
- * 1x VGA (15 pins) as an option
- * 1x Service-LAN RJ45 as an option

Interfaces internal:

- * 1x released internal USB Interfaces for backup devices,
- * 1x USB 2.0 (UHCI) with 480MBit/s for dongle functionality (uSSD memory), no USB wakeup
- * 1x SATA interface for DVD (only usable with 4x 2.5" HDD + DVD Option)
- * 4x SATA/SAS interface for 4 SATA/SAS HD's or SAS Backup device
- * 2x USB 2.0 ports for internal USB redirection connected to BMC

Software:

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

A

A

Cables included in basic unit

Connections	Cable	PRIMERGY RX2520 M1	
1. SATA DVD			
2. SAS cables to HDDs			
3. 1x cable for SAS signaling			

Note: Rack Mounting kit and Power Cord for RX2520 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	
8x 3.5" HDD bays	S26361-K1480-V101
12x 3.5" HDD bays	S26361-K1480-V112
Basic unit with	
2.5" HDD bays expandable	S26361-K1480-V401

Basic unit with 2.5" HDD bays is modular expandable with various modules for backup devices integration or up to 16x 2.5" HDDs. Details and pictures see Section Va: Possible configuration options for basic units

Full redundancy cannot be guaranteed for a max. config. with e.g. two 95W CPUs with 450W PSUs. In this case SysArch will generate a warning and Power Safeguard will throttle CPUs in case of a PSU failure. So, power consumption will be limited to 450W.

on project release			
S26113-F575-E12 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-E12 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-F609-E10 800W PSU module -48V DC gold 1st or 2nd PSU for redundancy 92% efficiency (gold) 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) 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-L12
One 800W power supply module hot plug no power cable included!!!	S26113-F574-L12
One 800W -48V DC PSU hot plug no power cable included!!!	S26113-F609-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
Power Cord -48V DC, 4m, black	T26139-Y4024-L10

on project release

as soon as available

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

S26361-F3667-E10
 Redundant fan upgrade kit
 2 + 1 fans (redundancy option)
 2nd CPU requires additional fan (comes automatically)
 max. 1x per system

Not possible for 12x 3.5" HD basic unit
It contains always 5 fans!

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 15kg
 necessary for mounting RMKs in
 asymmetrical PC racks

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
 Cable mgmt. arm for 2U server
 - for PCR M1 or 3rd party racks
 - for direct mounting at
 Rack Mount Kit w/ CMAAdapter
 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
 can only be used for RMKs
 with CMA adapter

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
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.

C

C

Section Processor

i There are 2 processor sockets available.
 The first socket must always be equipped with the **first CPU** which can be selected via configurator
 It is also possible to upgrade a dual-processor system later on with a **second CPU**
2nd CPU requires additional fan which comes automatically when ordering 2nd CPU!
Two processors with different clock frequencies are not possible

C1

C2

i **8x3,5" HDD Base Unit** S26361-K1480-V101 **2,5" HDD Base Unit(s)** S26361-K1480-V401

i **12x3,5" HDD Base Unit** S26361-K1480-V112

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	
Optional second CPU has to be the same type like the first CPU	
Basic 4C CPUs	
- 1x 64-bit Intel Xeon (10MB shared TLC = Third Level Cache) 1333 MHz DDR3 Bus, 6,40 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2403v2 4C/4T 1.80GHz 10MB 6.40GT/s 1333MHz 80W	S26361-F3832-E180
Xeon E5-2407v2 4C/4T 2.40GHz 10MB 6.40GT/s 1333MHz 80W	S26361-F3832-E240
Standard Turbo 6/8C CPUs	
- 1x 64-bit Intel Xeon (15/20MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus, 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2420v2 6C/12T 2.20GHz 15MB 7.20GT/s 1600MHz 80W	S26361-F3833-E220
Xeon E5-2430v2 6C/12T 2.50GHz 15MB 7.20GT/s 1600MHz 80W	S26361-F3833-E250
Xeon E5-2440v2 8C/16T 1.90GHz 20MB 7.20GT/s 1600MHz 95W	S26361-F3833-E190
Advanced Turbo+ 8C/10C CPU	
- 1x 64-bit Intel Xeon (20MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus, 8,00 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2450v2 8C/16T 2.50GHz 20MB 8.00GT/s 1600MHz 95W	S26361-F3834-E250
Xeon E5-2470v2 10C/20T 2.40GHz 25MB 8.00GT/s 1600MHz 95W	S26361-F3834-E240
Low Power 6C CPU	
- 1x 64-bit Intel Xeon (15MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2430Lv2 6C/12T 2.40GHz 15MB 7.20GT/s 1600MHz 60W	S26361-F3835-E240
Xeon E5-2450Lv2 10C/20T 1.70GHz 25MB 8.00GT/s 1600MHz 60W	S26361-F3835-E170

D

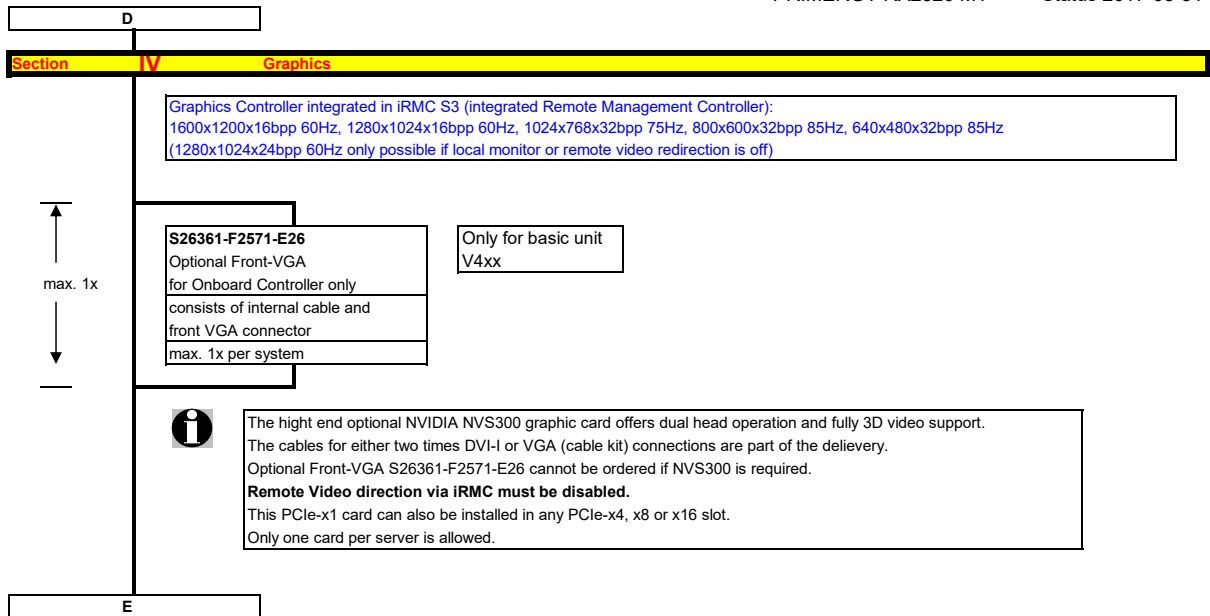
C2

**12x3.5" HDD Base Unit
 S26361-K1480-V112**

as soon as available

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	
Optional second CPU has to be the same type like the first CPU	
Basic 4C CPUs	
- 1x 64-bit Intel Xeon (10MB shared TLC = Third Level Cache) 1333 MHz DDR3 Bus, 6,40 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2403v2 4C/4T 1.80GHz 10MB 6.40GT/s 1333MHz 80W	S26361-F3832-E181
Xeon E5-2407v2 4C/4T 2.40GHz 10MB 6.40GT/s 1333MHz 80W	S26361-F3832-E241
Standard Turbo 6/8C CPUs	
- 1x 64-bit Intel Xeon (15/20MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus, 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2420v2 6C/12T 2.20GHz 15MB 7.20GT/s 1600MHz 80W	S26361-F3833-E221
Xeon E5-2430v2 6C/12T 2.50GHz 15MB 7.20GT/s 1600MHz 80W	S26361-F3833-E251
Xeon E5-2440v2 8C/16T 1.90GHz 20MB 7.20GT/s 1600MHz 95W	S26361-F3833-E191
Advanced Turbo+ 8C/10C CPU	
- 1x 64-bit Intel Xeon (20MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus, 8,00 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2450v2 8C/16T 2.50GHz 20MB 8.00GT/s 1600MHz 95W	S26361-F3834-E251
Xeon E5-2470v2 10C/20T 2.40GHz 25MB 8.00GT/s 1600MHz 95W	S26361-F3834-E241
Low Power 6C CPU	
- 1x 64-bit Intel Xeon (15MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2430Lv2 6C/12T 2.40GHz 15MB 7.20GT/s 1600MHz 60W	S26361-F3835-E241
Xeon E5-2450Lv2 10C/20T 1.70GHz 25MB 8.00GT/s 1600MHz 60W	S26361-F3835-E171

D



E

Section III Memory



- There are 6 memory slots per CPU for max.
96GB RDIMM (6x 16GB 2R)
currently up to 192GB for two CPUs (96GB per CPU), using RDIMM

- The memory area is divided into 3 channels per CPU with 2 slots per channel
- Slot 1 of each channel belongs to memory bank 1, the slot 2 belongs to memory bank 2.

Memory can be operated at 1.5V or 1.35V, even if the modules are of low voltage type.
Memory operating voltage can be set within BIOS (**1.5V is default** setting for max. speed).
In a 2 DIMMs per channel configuration the max memory speed is 1600 MHz (depending on CPU)
@1.35V the max memory speed is 1333MHz max
SDDC (Chipkill) is supported for registered x4 organized memory modules only

1.) In the "Independent Channel Mode" is following configuration 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)

2.) "Performance Mode" configuration
- In this configuration, the memory module population ex factory is spread across all channels.
The BIOS is set to the max. performance for memory.
Minimum configuration is: 3x identical modules

F

F

1x per CPU

<p>S26361-F3695-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</p>
<p>S26361-F3695-E2 Performance Mode Installation BIOS Setup factory preinstalled for max. Performance, LV memory might be set to 1.5V operation. 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 3 identical modules to be configured per CPU</p>



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

6x per CPU
 max. 2 mod.
 per channel

Registered Memory (RDIMM) with SDDC (chipkill) support	
- one DDR3 registered ECC mem. Module, 1.35V	
1600MHz supported with up to 2DPC (8 modules/CPU) @ 1.5V	
Choose up to 6 order codes per CPU	
4GB (1x4GB) 1Rx4 L DDR3-1600 R ECC	S26361-F3781-E514
8GB (1x8GB) 1Rx4 L DDR3-1600 R ECC	S26361-F3781-E515
16GB (1x16GB) 2Rx4 L DDR3-1600 R ECC	S26361-F3781-E516

Note 1.)

Max. DDR3 memory speed depends on the CPU type.



Load Reduced Memory (LRDIMM) with SDDC (chipkill) support	
- one DDR3 load reduced ECC mem. Module, 1.35V	
Choose up to 6 order codes per CPU	
32GB (1x32GB) 4Rx4 L DDR3-1600 LR ECC	
64GB (1x64GB) 8Rx4 L DDR3-1333 LR ECC	



on project release only
 on project release only

G

Memory Configuration PRIMERGY RX2520 M1

Each CPU offers 6 Slots for DDR3 Memory Modules organised in **2 Banks and 3 Channels**.

If you need more than 6 Slots you have to configure the 2nd CPU.

Depending on the amount of memory configured you can decide between 2 basic modes of operation (see explanation below).

Mode	Configuration	RDIMM	Application
		x4	
SDDC (chipkill) support	any	yes	detect multi-bit errors
Independant Channel Mode	1, 2 or 3 Modules per Bank	yes	offers max. flexibility, upgradeability, capacity use UDIMM modules for lowest cost
Performance Mode	3 identical Modules / Bank	yes	offers maximum performance and capacity

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

Capacity	Configuration	RDIMM	Notes
Min. Memory per CPU	1 Module / CPU	4GB	with one CPU
Max. Memory per CPU	6 Modules / CPU	96GB	with one CPU
Max. Memory per System	12 Modules / System	192GB	if second CPU is configured

Memory-Speed:

Max. DDR3 memory speed depends on the speed of the CPU

Real maximum memory-bus speed depending on CPU type and voltage setting (BIOS; default is 1.5V)

Mem. Speed provided by CPU	RDIMM 1600MHz			
	1.5V		1.35V	
Voltage setting (BIOS)				
DIMM per Channel (DPC)	1	2	1	2
CPU with 1600MHz DDR3 Bus	1600	1600	1333	1333
CPU with 1333MHz DDR3 Bus	1333	1333	1333	1333

Configuration hints:

- The memory sockets on the systemboard offer a color coding:

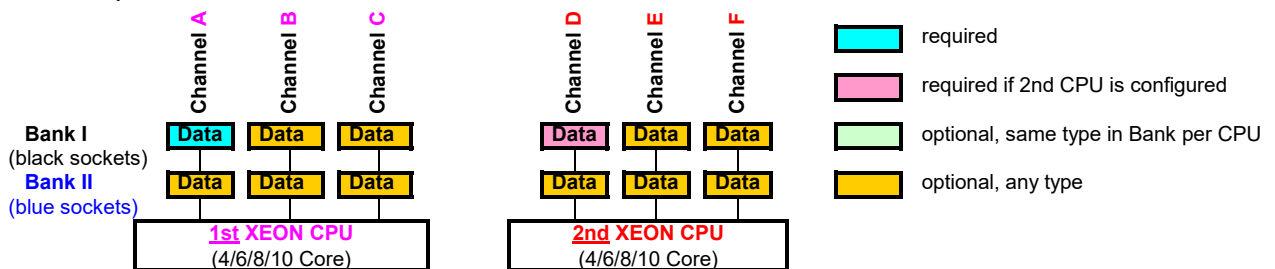
- Bank I** black sockets
- Bank II** blue sockets

- 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 3 memory modules connected to Channel A - F on the 1st/2nd CPU
- Bank II on CPU 1/2** up to 3 memory modules connected to Channel A - F on the 1st/2nd CPU

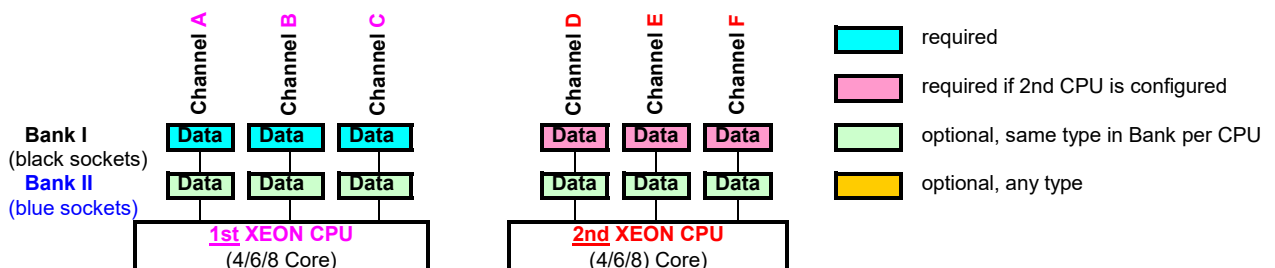
- See below and next page for a detailed descriptions of the memory configuration supported.

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

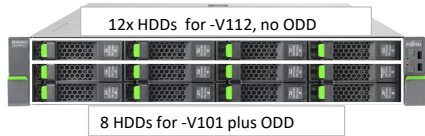
2. Performance Channel Mode



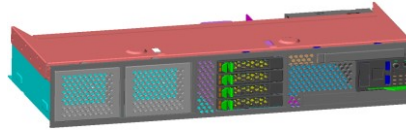
Performance Channel Mode requires identical modules on all channels of each Bank per CPU.
 If this mode is used, a multiple of 3 identical modules has to be ordered.

G

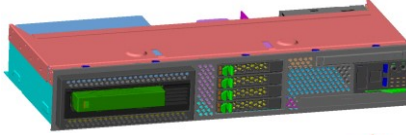
Section Va Possible configuration options for basic units



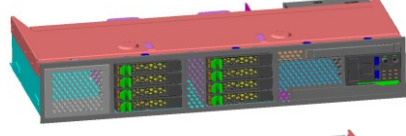
Basic unit S26361-K1480-V101 with 8x 3.5" HDDs
Basic unit S26361-K1480-V112 with 12x 3.5" HDDs
Available Upgrade kit for -V101:
Upgrade kit to 12x 3.5" HDD S26361-F1480-L119



Basic unit S26361-K1480-V401 with expandable
Config 2: 4x 2.5" HDD S26361-F1373-E420 *)
Available Upgrade kits for this configuration option:
Upgrade kit to 8x 2.5" HDD S26361-F1373-L424
Upgrade kit to 12x 2.5" HDD S26361-F1373-L427
Upgrade kit to 4x 2.5" HDD + LTO S26361-F1373-L423



Basic unit S26361-K1480-V401 with expandable
Config 3: 4x 2.5" HDD + LTO S26361-F1373-E430
Available Upgrade kits for this configuration option:
Upgrade kit to 8x 2.5" HDD S26361-F1373-L436



Basic unit S26361-K1480-V401 with expandable
Config 4: 8x 2.5" HDD bays S26361-F1480-E440
Available Upgrade kits for this fixed configuration:
Upgrade kit to 12x 2.5" HDD S26361-F1373-L247
Upgrade kit to 16x 2.5" HDD S26361-F1373-L248



Basic unit S26361-K1480-V401 with expandable
Config 5: 8x 2.5" HDD + 3.5" drive S26361-F1373-E450
No Upgrade kit available!



Basic unit S26361-K1480-V401 with expandable
Config 6: 8x 2.5" HDD + LTO S26361-F1373-E460
no ODD and LSD bay available!
No Upgrade kit available!



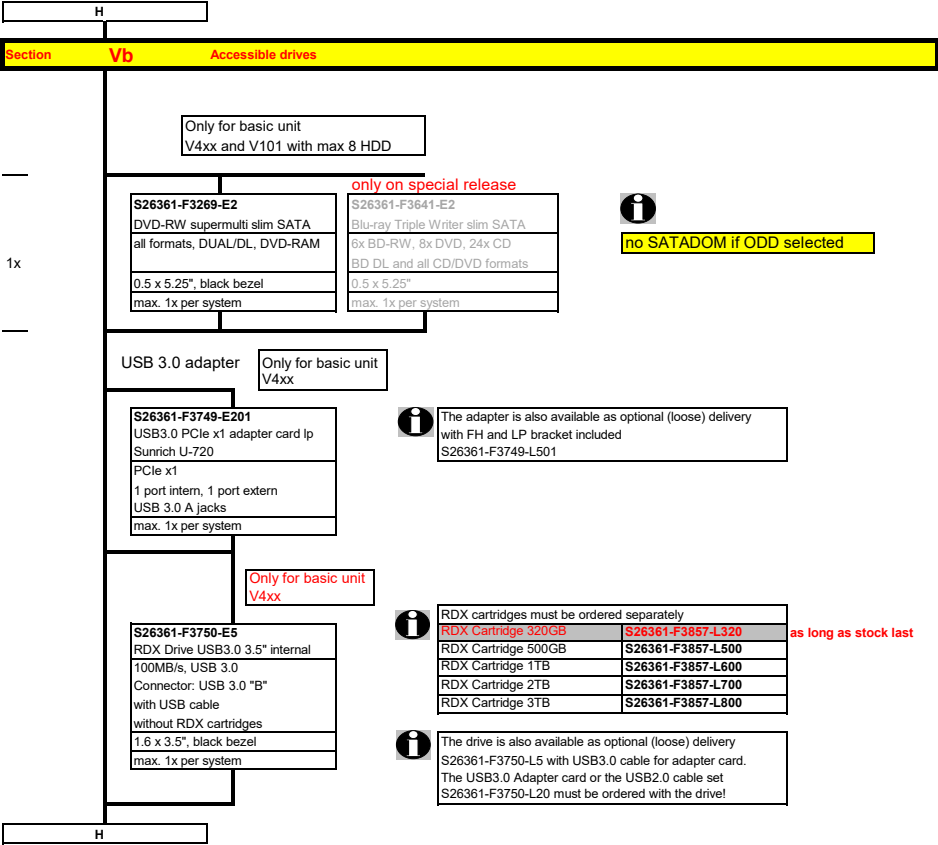
Basic unit S26361-K1480-V401 with expandable
Config 7: 12x 2.5" HDD bays S26361-F1480-E470
Available Upgrade kits for this configurations:
Upgrade kit to 16x 2.5" HDD S26361-F1373-L378

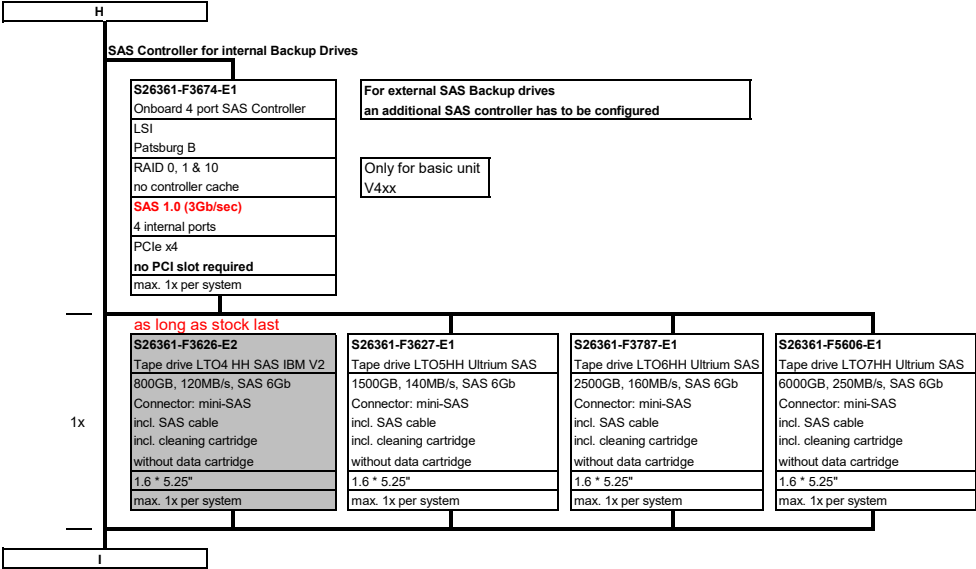


Basic unit S26361-K1480-V401 with expandable
Config 8: 16x 2.5" HDD S26361-F1373-E480
no ODD and LSD bay available!
No Upgrade kit available!
Includes all necessary bezels, cages, backplanes and cables

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*) these are the only HDD/SSD configuration opportunity without needed RAID controller





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Section VI Hard disks drives

Modular Raid controller is connected to internal HDDs
For basic unit V101 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)
Mixed configurations with Eco SATA drives and SAS drives are not allowed
3.5" SAS drives and 3.5" BC SATA drives can be mixed, but not used in one logical RAID volume
Hard Disk Sector Format
512n HDD or HDD without sector size information: 512 byte sectors on the drive media.
512e (e=emulation) HDD: 4K physical sectors on the drive media with 512 byte logical configuration.
512e drives are not supported with VMware 6.0 or earlier.
Warranty
SSD and SATA DOM have a built-in Wear-Out indicator. In this case the warranty for such a component, as an exception to the system warranty, is restricted to the time period until the indicator reaches the exhaust level.
When using SSDs with VMware ESXi, select the SSDs that meet the endurance requirement described in KB2145210. <https://kb.vmware.com/kb/2145210>

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

SATA Disk Drive 3.5" 8/10TB HDDs not released with PSAS CP400i (S26361-F3842-E2)

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
4TB 7200rpm, <9.0ms, 64MB Cache	S26361-F3815-E400
6TB 7200rpm, <9.0ms, 128MB Cache, 512e	S26361-F3904-E600
8TB 7200rpm, 256MB Cache, 512e	S26361-F3904-E800
10TB 7200rpm, 256MB Cache, 512e	S26361-F3904-E100
max. 8x or 12x per System	

Please order additionally either/or:
Config 1: Max. 8x 3.5" HDD [S26361-F1480-E101](#)
Config 9: Up to 12x 3.5" HDD [S26361-F1480-E109](#)

SAS Disk Drive 3.5" 8/10TB HDDs not released with PSAS CP400i (S26361-F3842-E2)

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
4TB 7200rpm, <9.0ms, 32MB Cache	S26361-F3820-E400
SAS 6Gb/s 2.5" HDD with 3.5" hot plug/hot replace tray	
300GB 15000rpm, <3ms, 64MB Cache,	S26361-F5521-E530
450GB 15000rpm, <3ms, 64MB Cache	S26361-F5521-E545
600GB 15000rpm, <3ms, 64MB Cache	S26361-F5521-E560
SAS 12Gb/s 2.5" HDD with 3.5" hot plug/hot replace tray	
300GB 10000rpm 128MB Cache, 512n	S26361-F5568-E130
600GB 10000rpm 128MB Cache, 512n	S26361-F5568-E160
1.2TB 10000rpm 128MB Cache, 512n	S26361-F5568-E112
1.8TB 10000rpm 128MB Cache, 512e	S26361-F5569-E118
8TB 7200rpm, 256MB Cache, 512e	S26361-F5571-E800
10TB 7200rpm, 256MB Cache, 512e	S26361-F5571-E100
max. 8x or 12x per System	

Solid State Disk 3.5", Mixed-Use Endurance

SSD SATA 6Gb/s, 2.5" SSD within 3.5" hot plug/hot replace tray (H-P)	
240GB, Enterprise (EP), 3DWPD (5y)	S26361-F5589-E240
480GB, Enterprise (EP), 3DWPD (5y)	S26361-F5589-E480
960GB, Enterprise (EP), 3DWPD (5y)	S26361-F5589-E960
1.92TB, Enterprise (EP), 3DWPD (5y)	S26361-F5589-E192
max. 8x or 12x per System	

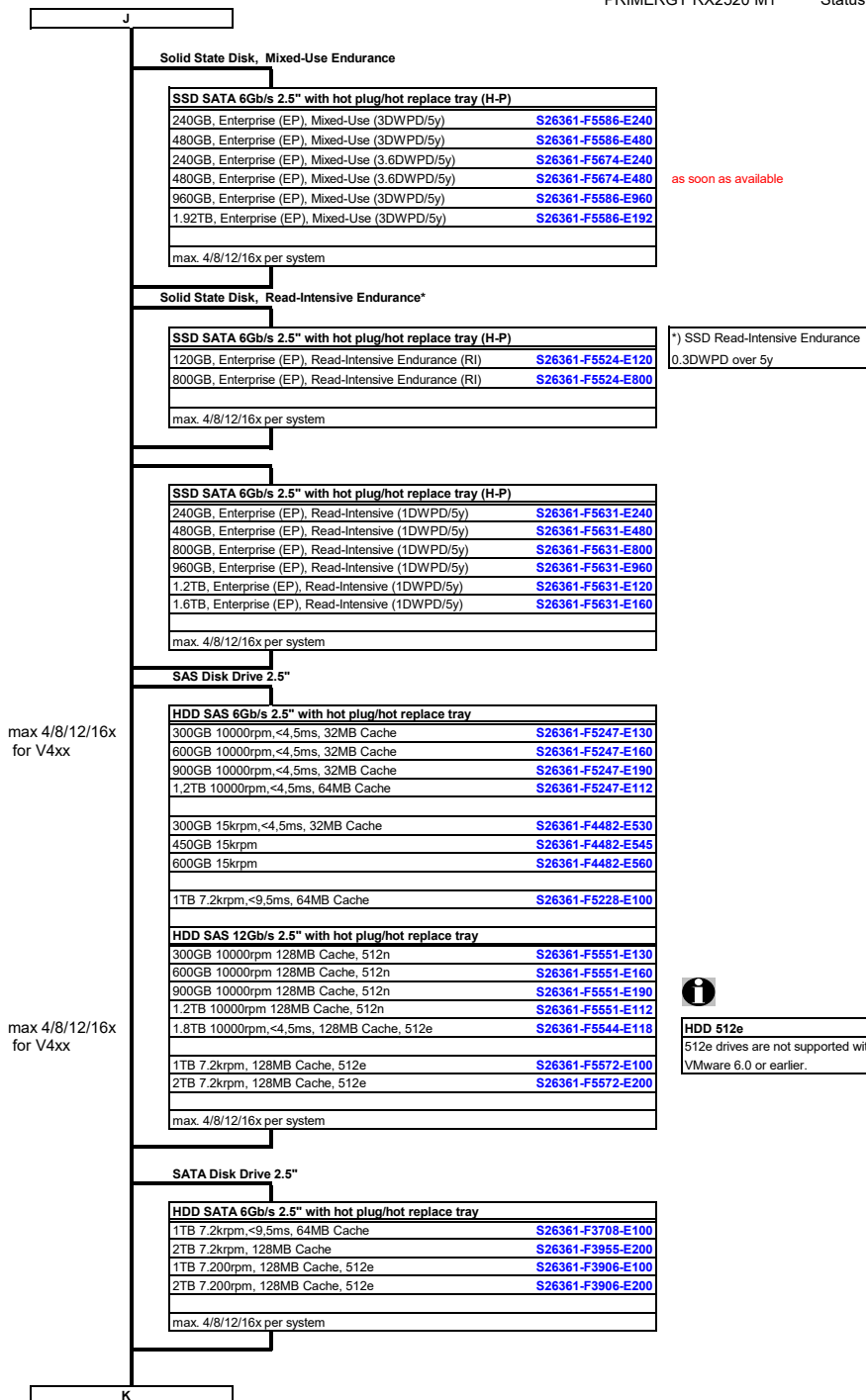
Solid State Disk 3.5", Read-Intensive Endurance*

SSD SATA 6Gb/s 2.5" within 3.5" hot plug/hot replace tray (H-P)	
120GB, Enterprise (EP), Read-Intensive Endurance (RI)	S26361-F5530-E120
800GB, Enterprise (EP), Read-Intensive Endurance (RI)	S26361-F5530-E800
max. 8x or 12x per System	

*) SSD Read-Intensive Endurance 0.3DWPD over 5y

SSD SATA 6Gb/s, 2.5" SSD within 3.5" hot plug/hot replace tray (H-P)	
240GB, Enterprise (EP), 1DWPD (5y)	S26361-F5630-E240
480GB, Enterprise (EP), 1DWPD (5y)	S26361-F5630-E480
800GB, Enterprise (EP), 1DWPD (5y)	S26361-F5630-E800
960GB, Enterprise (EP), 1DWPD (5y)	S26361-F5630-E960
1.2TB, Enterprise (EP), 1DWPD (5y)	S26361-F5630-E120
1.6TB, Enterprise (EP), 1DWPD (5y)	S26361-F5630-E160
max. 8x or 12x per System	

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Solid State Disk, Mixed-Use Endurance

SSD SATA 6Gb/s 2.5" with hot plug/hot replace tray (H-P)	
240GB, Enterprise (EP), Mixed-Use (3DWPD/5y)	S26361-F5586-E240
480GB, Enterprise (EP), Mixed-Use (3DWPD/5y)	S26361-F5586-E480
240GB, Enterprise (EP), Mixed-Use (3.6DWPD/5y)	S26361-F5674-E240
480GB, Enterprise (EP), Mixed-Use (3.6DWPD/5y)	S26361-F5674-E480
960GB, Enterprise (EP), Mixed-Use (3DWPD/5y)	S26361-F5586-E960
1.92TB, Enterprise (EP), Mixed-Use (3DWPD/5y)	S26361-F5586-E192
max. 4/8/12/16x per system	

as soon as available

Solid State Disk, Read-Intensive Endurance*

SSD SATA 6Gb/s 2.5" with hot plug/hot replace tray (H-P)	
120GB, Enterprise (EP), Read-Intensive Endurance (RI)	S26361-F5524-E120
800GB, Enterprise (EP), Read-Intensive Endurance (RI)	S26361-F5524-E800
max. 4/8/12/16x per system	

*) SSD Read-Intensive Endurance
0.3DWPD over 5y

SSD SATA 6Gb/s 2.5" with hot plug/hot replace tray (H-P)	
240GB, Enterprise (EP), Read-Intensive (1DWPD/5y)	S26361-F5631-E240
480GB, Enterprise (EP), Read-Intensive (1DWPD/5y)	S26361-F5631-E480
800GB, Enterprise (EP), Read-Intensive (1DWPD/5y)	S26361-F5631-E800
960GB, Enterprise (EP), Read-Intensive (1DWPD/5y)	S26361-F5631-E960
1.2TB, Enterprise (EP), Read-Intensive (1DWPD/5y)	S26361-F5631-E120
1.6TB, Enterprise (EP), Read-Intensive (1DWPD/5y)	S26361-F5631-E160
max. 4/8/12/16x per system	

SAS Disk Drive 2.5"

HDD SAS 6Gb/s 2.5" with hot plug/hot replace tray	
300GB 10000rpm, <4,5ms, 32MB Cache	S26361-F5247-E130
600GB 10000rpm, <4,5ms, 32MB Cache	S26361-F5247-E160
900GB 10000rpm, <4,5ms, 32MB Cache	S26361-F5247-E190
1,2TB 10000rpm, <4,5ms, 64MB Cache	S26361-F5247-E112
300GB 15krpm, <4,5ms, 32MB Cache	S26361-F4482-E530
450GB 15krpm	S26361-F4482-E545
600GB 15krpm	S26361-F4482-E560
1TB 7.2krpm, <9,5ms, 64MB Cache	S26361-F5228-E100

max 4/8/12/16x
for V4xx

HDD SAS 12Gb/s 2.5" with hot plug/hot replace tray	
300GB 10000rpm 128MB Cache, 512n	S26361-F5551-E130
600GB 10000rpm 128MB Cache, 512n	S26361-F5551-E160
900GB 10000rpm 128MB Cache, 512n	S26361-F5551-E190
1.2TB 10000rpm 128MB Cache, 512n	S26361-F5551-E112
1.8TB 10000rpm, <4,5ms, 128MB Cache, 512e	S26361-F5544-E118
1TB 7.2krpm, 128MB Cache, 512e	S26361-F5572-E100
2TB 7.2krpm, 128MB Cache, 512e	S26361-F5572-E200
max. 4/8/12/16x per system	

max 4/8/12/16x
for V4xx



HDD 512e
512e drives are not supported with
VMware 6.0 or earlier.

SATA Disk Drive 2.5"

HDD SATA 6Gb/s 2.5" with hot plug/hot replace tray	
1TB 7.2krpm, <9,5ms, 64MB Cache	S26361-F3708-E100
2TB 7.2krpm, 128MB Cache	S26361-F3955-E200
1TB 7.200rpm, 128MB Cache, 512e	S26361-F3906-E100
2TB 7.200rpm, 128MB Cache, 512e	S26361-F3906-E200
max. 4/8/12/16x per system	

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Section VII Modular Raid 0/1, Raid5 for SAS or SATA HD's. On-board Controller for max. 4x 2.5" SATA or SAS HD's

On board SATA Controller with 3 Gb/sec and up to 4x 2.5" SATA HDDs (no additional controller required)
 For up to 4x 2.5" SAS HDDs with RAID 0/1 functionality a Patsburg Upgrade Kit is required
 For all other HDD configurations a modular RAID-controller is required

Following optional onboard SAS RAID can be selected for 4x2.5" HDDs or one SAS Tape device

S26361-F3674-E1
Onboard 4 port SAS Controller
LSI
Patsburg B
RAID 0, 1 & 10
no controller cache
SAS 1.0 (3Gb/sec)
4 internal ports
PCIe x4
no PCI slot required
max. 1x per system

Only for basic unit V4xx

Use PSAS CP400i for Software Defined Storage like Windows Storage Spaces (Part of Windows Server 2012) instead of HW-RAID Controllers below

S26361-F3842-E2
PSAS CP400i
LSI SAS3008
8 ports 3, 6 & 12Gb/s
SAS/SATA HDD/ SSD
requires 1x FH PCIe 3.0 x8
RAID 0,1
No Cache
max. 1 per system

i loose delivery: S26361-F3842-L502

i loose delivery for FJJ only (bulk 20 units): S26361-F3842-L902

For more than 4 hard disks or 6 Gb/sec one of the following modular RAID-controllers is required

i **Modular Raid 0/1/5 controller for SAS/SATA S26361-F3554-E8, S26361-F3842-E1**
 This RAID controller supports max. 8 HDDs on internal SAS ports

i **Modular Raid 5/50, 6/60 controller for SAS/SATA S26361-F3554-E512, S26361-F3669-E4**
RAID levels 0, 1, 10, 5, 50, 6 and 60 are supported.
 This RAID controller supports max. 16 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-F3554-E8
RAID Ctrl SAS 6G 8port internal
Based on chip LSI SAS2008
LSI MegaRAID
no Cache, no BBU
RAID 0, 1 & 10
Support for 3Gb/s and 6Gb/s
SATA and SAS hard drives
PCIe x8
Low-profile MD2 form factor
max. 1x per system

S26361-F3842-E1
PRAID CP400i 8port internal
Based on chip LSI SAS3008
no Cache
RAID 0, 1, 10, 1E, 5, 50
8 ports 3, 6 & 12Gb/s
SAS/SATA HDD/ SSD
PCIe 3.0 x8
Low / High profile ex factory
max. 1x per system

S26361-F3554-E512
RAID Ctrl SAS 6G 8port internal
Based on chip LSI SAS2108
LSI MegaRAID
512MB Cache with ECC
RAID 0, 1, 10, 5, 50, 6, 60
no BBU support
Support for 3Gb/s and 6Gb/s
SATA and SAS hard drives
PCIe x8
Low-profile MD2 form factor
max. 1x per system

S26361-F3669-E4
RAID Ctrl SAS 6G 8port internal
Based on chip LSI SAS2208
LSI MegaRAID
1GB Cache with ECC
RAID 0, 1, 10, 5, 50, 6, 60
optional FBU
Support for 3Gb/s and 6Gb/s
SATA and SAS hard drives
PCIe 3.0 x8
Low-profile MD2 form factor
max. 1x per system

fastpath is included in controller FW

S26361-F3669-E670
RAID Advanced SW Option
CacheCade int. License Activation
Key for CacheCade 2.0
max. 1x per Controller

1x

S26361-F3669-L100
TFM Module for FBU option
max. 1x per Controller

S26361-F3669-E100
TFM Module for FBU option (flash and FBU control logic)
max. 1x per Controller

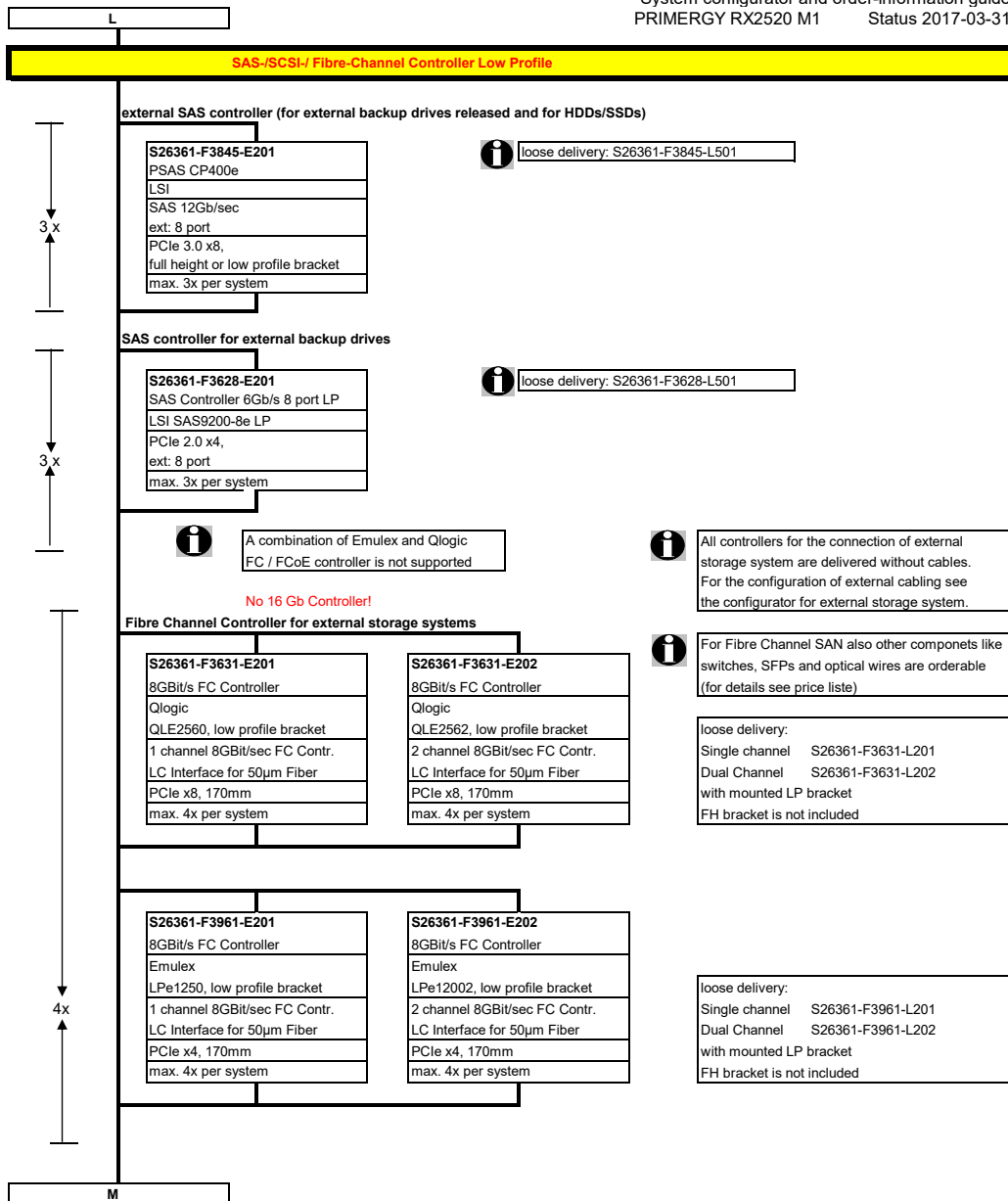
RAID Advanced Software free of charge test licence available: PRIMERGY-PM

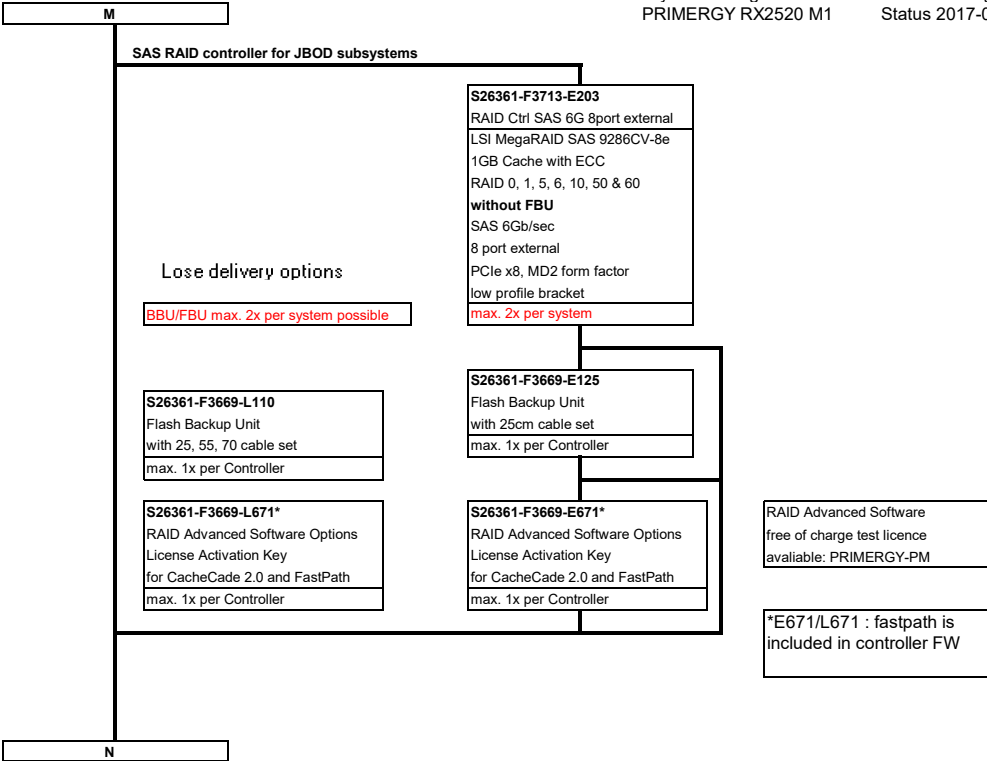
S26361-F3669-L110
Flash Backup Unit with 25cm, 55cm, 70cm cable set
max. 1x per Controller

S26361-F3669-E125
Flash Backup Unit with 25cm cable set
max. 1x per Controller

I For later system upgrades with RAID controller (if the onboard SATA 6G RAID which has a SAS2.0 connector was originally selected), depending on configuration the following cables with SAS3.0 connector are required:
12x 3.5": 2x S26361-F3210-L307; **8x 3.5"**: 2x S26361-F3210-L307;
4x 2.5" (with/without LTO): S26361-F3210-L318; **8x 2.5"**: 2x S26361-F3210-L318;
8x 2.5" with LTO: S26361-F3210-L318 and -L301; **8x 2.5" with RDX**: S26361-F3210-L318 and -L314.

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Section VIII Communication / Network

2x Gigabit (Dualport) Ethernet Contr.
 onboard
 Intel LAN I210 (Springville)
 ext: 2x RJ 45 connector

1Gbit/s Ethernet Adapter

max 5x

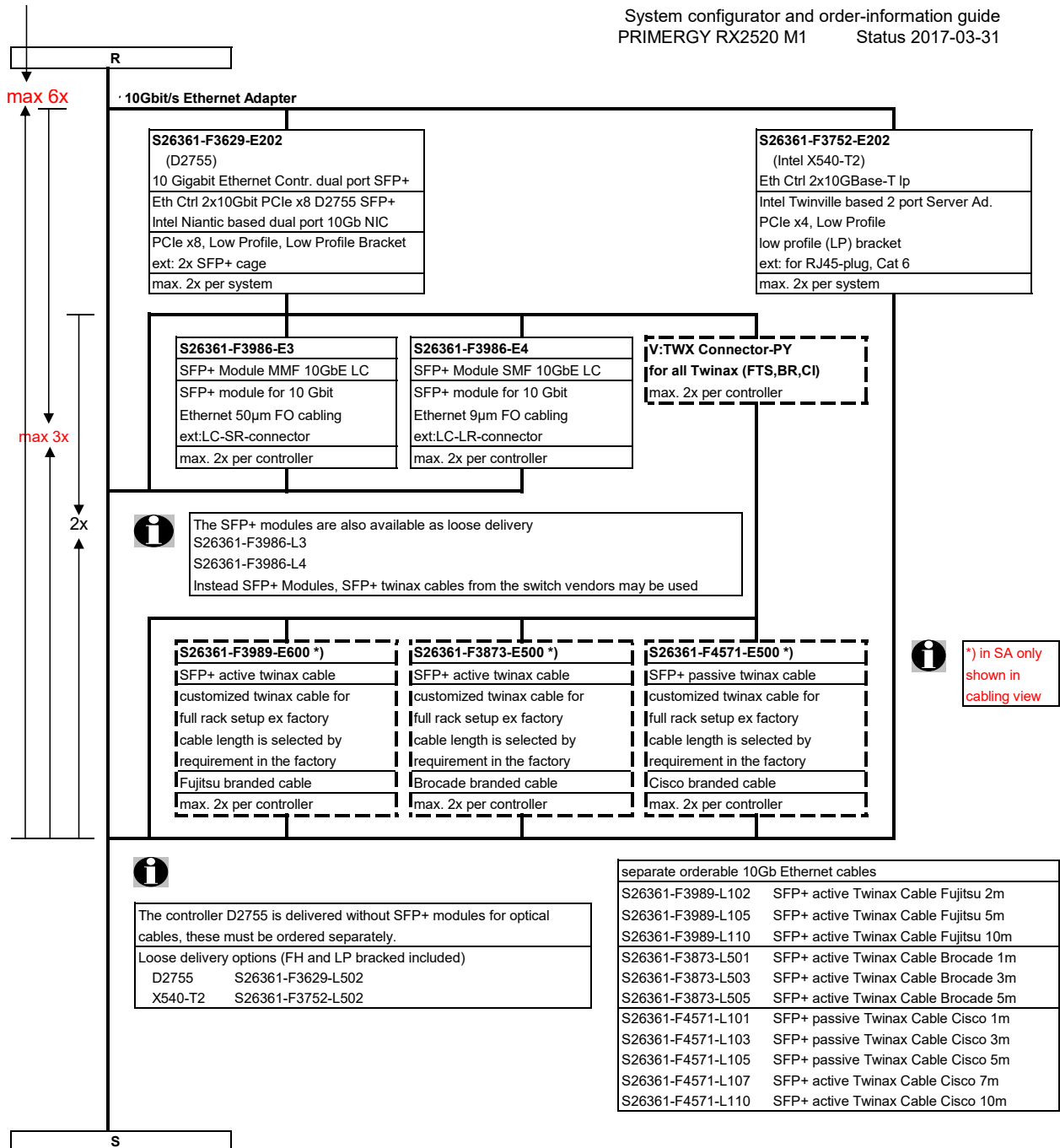
S26361-F4610-E202 (I350-T2)
Gbit Ethernet Controller Dual 1000TX LP
PLAN CP 2x1Gbit Cu Intel I350-T2 LP
Intel Powerville based 2 port Server Ad.
PCIe x4, Low Profile
low profile (LP) bracket
ext: for RJ45-plug, Cat 5
max. 5x per system

S26361-F4610-E204 (I350-T4)
Gbit Ethernet Controller Quad 1000TX LP
PLAN CP 4x1Gbit Cu Intel I350-T4 LP
Intel Powerville based 4 port Server Ad.
PCIe x4, Low Profile
low profile (LP) bracket
ext: for RJ45-plug, Cat 5
max. 5x per system



Loose delivery with FH and LP bracket:
 I350-T2 S26361-F4610-L502
 I350-T4 S26361-F4610-L504

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Section XI 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

Only for basic unit V4xx

Section XII Miscellaneous

i **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 RX2520 M1
 related L-numbers as well restricted



no tape drives

Tape drive LTO4 HH SAS IBM V2	S26361-F3626-E2	Only for basic unit V4xx
Tape drive LTO5HH Ultrium SAS	S26361-F3627-E1	
Tape drive LTO6HH Ultrium SAS	S26361-F3787-E1	

Section XIII 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

S26361-F1452-E140
REGION KIT Europe
 1x per system

i **Power cord has to be ordered separately**

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-Y4024-E10	for -48V DC PSU only, 4m, black
T26139-Y3850-E10	Option "no powercord", for Countries without specific cable orderable like e.g. China

max. 2 x

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Section XVI CCC exclusions

S26361-F3301-E120
CCC Certification for China
Limits configuration in accordance
with CCC exclusions
max. 1x per system

**The following order components out of the specific sections
are NOT allowed together with CCC Certification for China:** 

800W PSU module titanium	S26113-F615-E10
Cable powercord rack, 4m, grey	T26139-Y1968-E100
Leitung Netzanschluss (USA), 1,8m, black	T26139-Y1742-E10
TPM Modul	S26361-F3552-E1

End PRIMERGY RX2520 M1

