

PRIMERGY RX300 S7

System configurator and order-information guide

April 2014

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PRIMERGY Server

Instructions

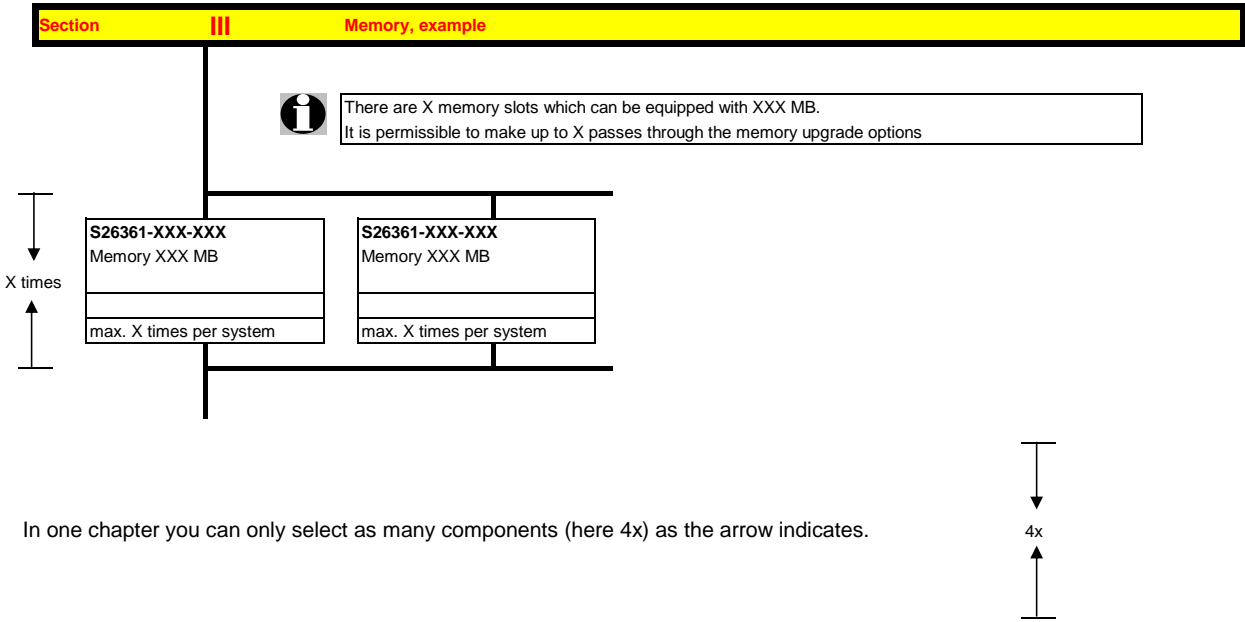
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect.

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:

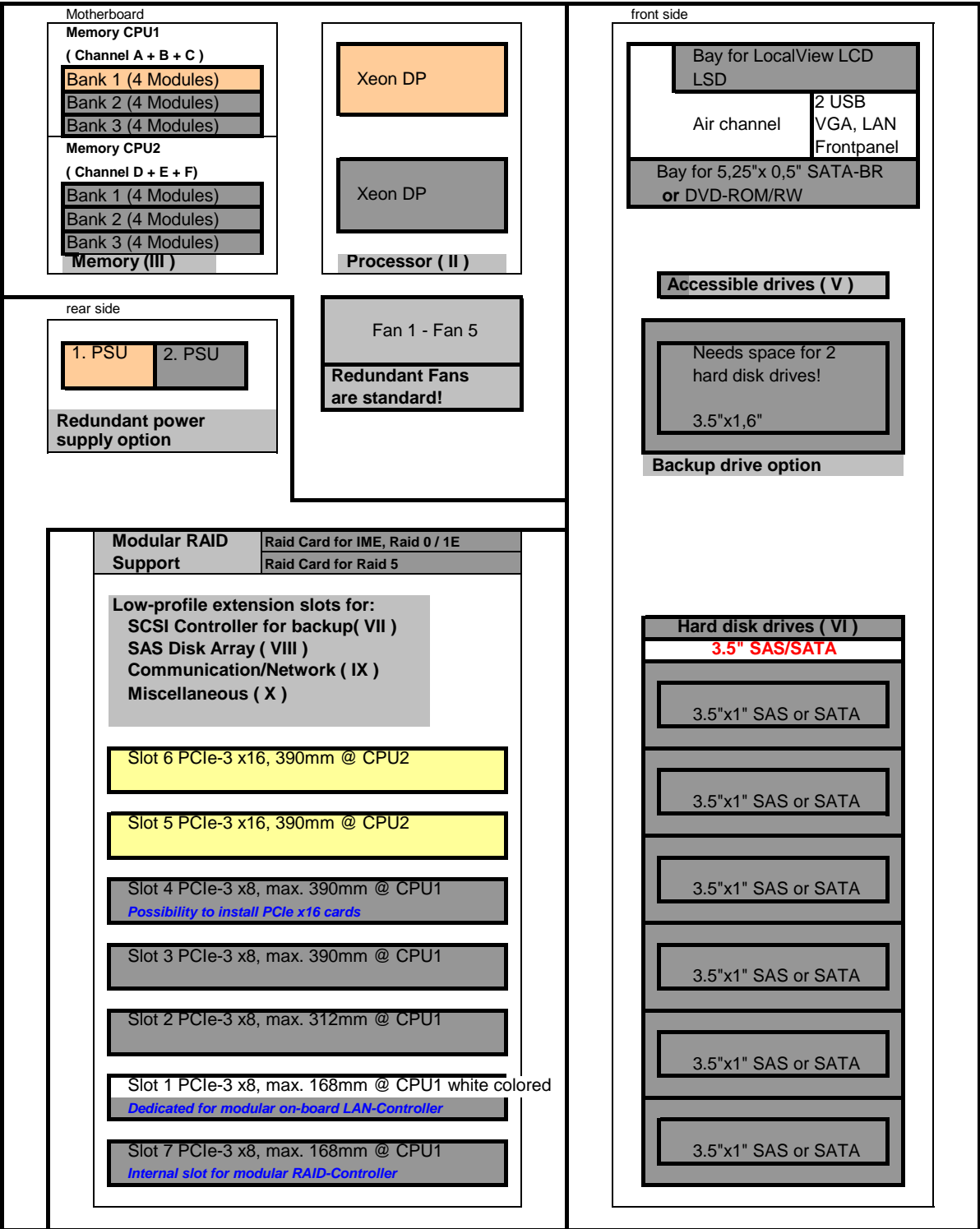
http://ts.fujitsu.com/products/standard_servers/inc (internet)

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

Configuration diagram PRIMERGY RX300 S7

System unit (I)

with up to 6x 3.5" Hard disk drives



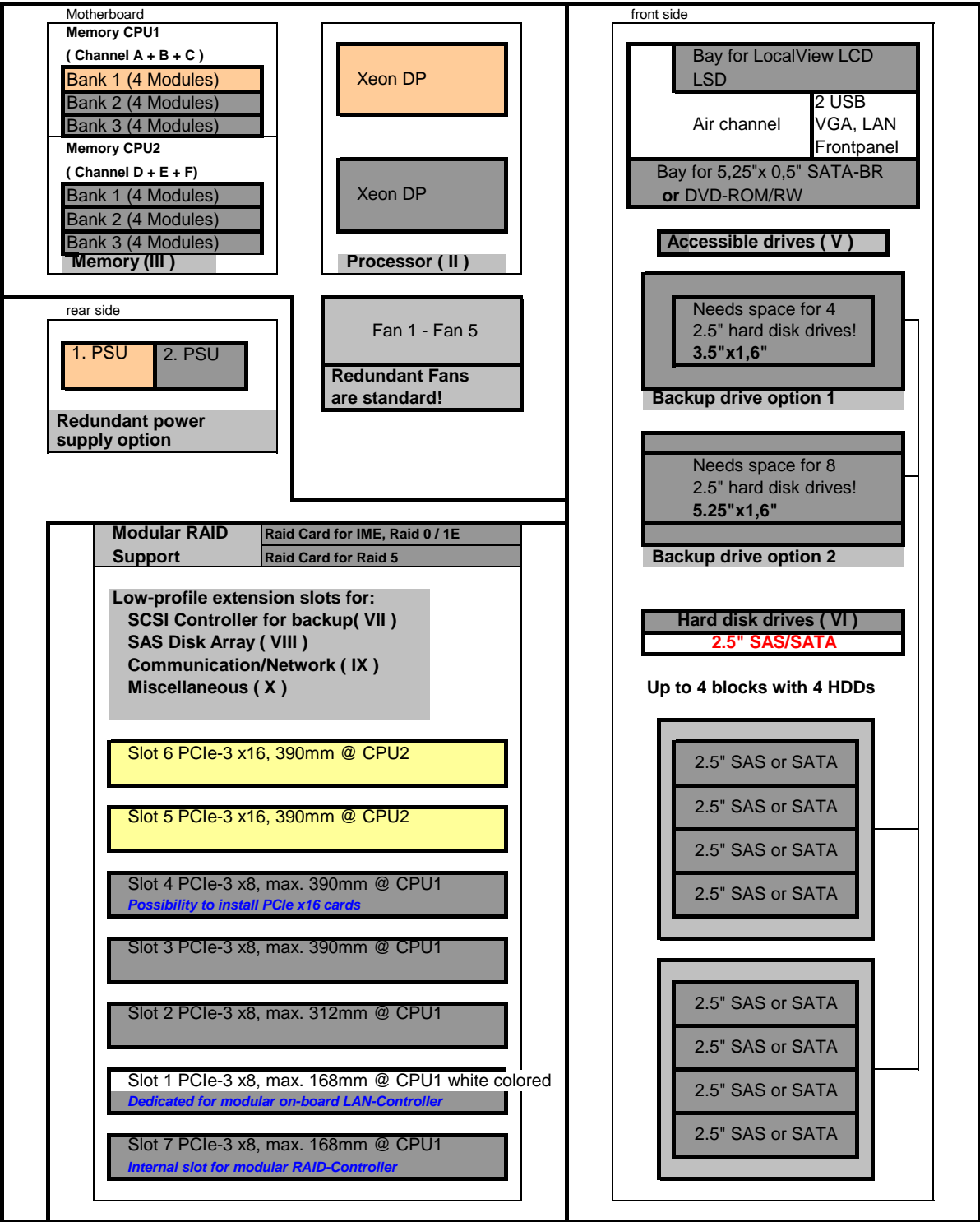
Key:

- 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 RX300 S7

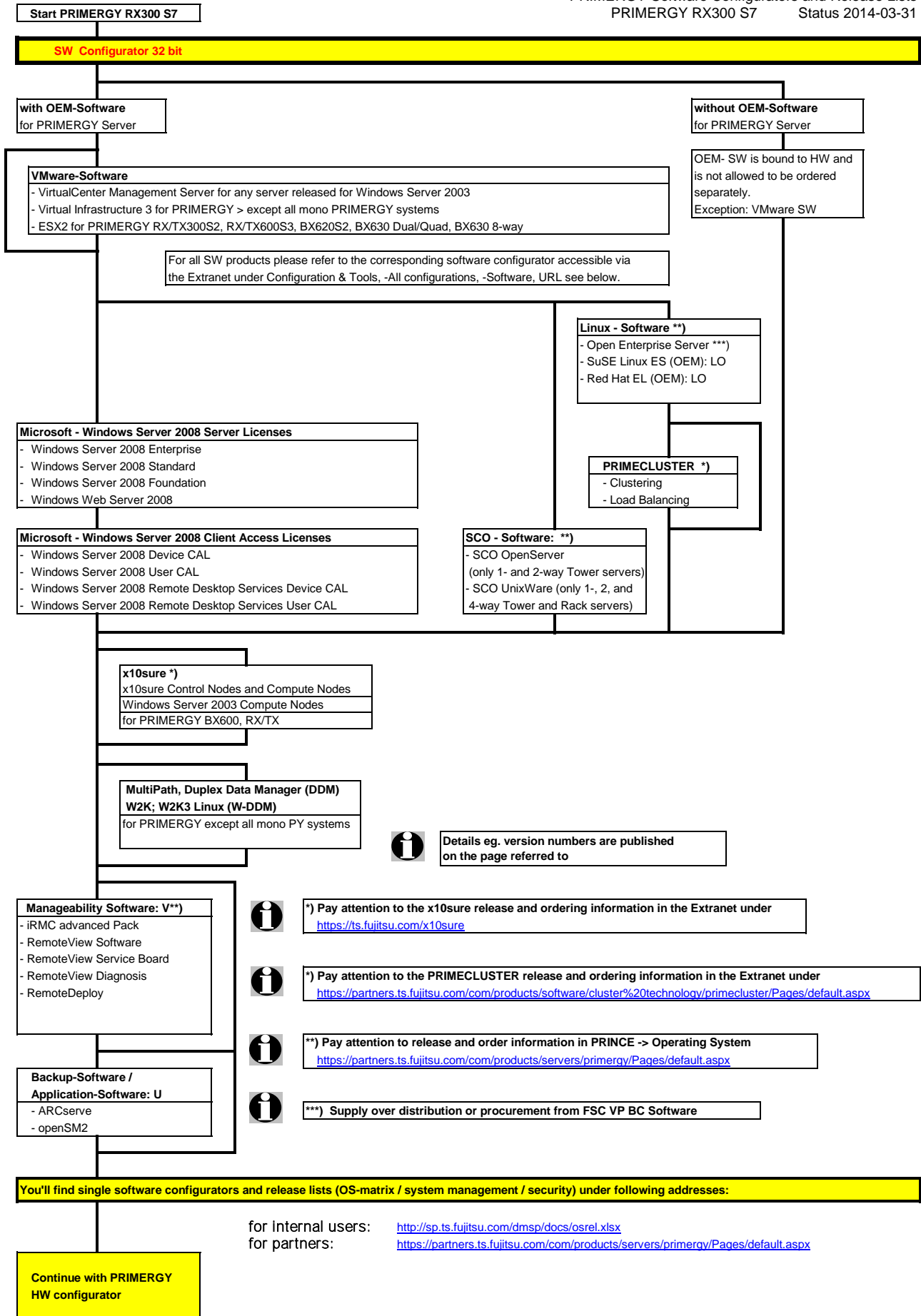
System unit (I)

with up to 4, 8, 12 or 16x 2.5" Hard disk drives



Key:

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



Start PRIMERGY RX300 S7

SW Configurator 64 bit (EM64T / IA64)

with OEM-Software for PRIMERGY Server

without OEM-Software for PRIMERGY Server



For all SW products please refer to the corresponding software configurator accessible via the Extranet under "Configuration & Tools, -All configurations, -Software, URL see below.

OEM- SW is bound to HW and is not allowed to be ordered separately.
 Exceptions: VMware SW, Citrix XenServer

VMware-Software

- VirtualCenter Management Server for any server released for Windows Server 2003
- Virtual Infrastructure 3 for PRIMERGY > except all mono PRIMERGY systems
- ESX2 for PRIMERGY RX/TX300S2, RX/TX600S3, BX620S2, BX630 Dual/Quad, BX630 8-way

Citrix XenServer / Essentials for XenServer

- XenCenter Management Server for any server released for Windows 2000/XP/Vista and Server 2003/2008
- XenServer and Essentials for XenServer released for RX200S5, RX300S4/S5, RX600S4, BX620S4/S5, BX920S1

Microsoft Hyper-V Server and System Center

- Microsoft System Center Virtual Machine Manager Workgroup Edition for any server released for Windows Server 2008 R2
- Microsoft System Center Essentials Management Suite for any server released for Windows Server 2008 SP2
- Microsoft Hyper-V Server 2008 R2

Microsoft - Windows Server 2008 R2 Server Licenses

- Windows HPC Server 2008 R2 Suite
- Windows Server 2008 R2 Datacenter
- Windows Server 2008 R2 Enterprise
- Windows Server 2008 R2 Standard
- Windows Web Server 2008 R2

Linux - Software *) **)
 # Open Enterprise Server ***)
 - SuSE Linux ES (OEM): LO
 - Red Hat EL (OEM): LO

Microsoft - Windows Server 2008 Server Licenses

- Windows Server 2008 Datacenter
- Windows Server 2008 Enterprise
- Windows Server 2008 Standard
- Windows Web Server 2008

PRIMECLUSTER *)

- Clustering
- Load Balancing

Microsoft - Windows Server 2008 Client Access Licenses

- Windows Server 2008 Device CAL
- Windows Server 2008 User CAL
- Windows Server 2008 Remote Desktop Services Device CAL
- Windows Server 2008 Remote Desktop Services User CAL

QuickTransit (QT)
 only EM64T Transition Solaris Apps. to x86-64 PY with Linux

only EM64T MultiPath, Duplex Data Manager (DDM)
 Windows, Linux (W-DDM)



Details eg. version numbers are published on the page referred to

only EM64T **Manageability Software: V**)**
 - iRMC advanced Pack
 - RemoteView Software
 - RemoteView Service Board
 - RemoteView Diagnosis
 - RemoteDeploy



*) Pay attention to the PRIMECLUSTER release and ordering information in the Extranet under <https://partners.ts.fujitsu.com/com/products/software/cluster%20technology/primecluster/Pages/default.aspx>



***) Pay attention to release and order information in PRINCE -> Operating System <https://partners.ts.fujitsu.com/com/products/servers/primergy/Pages/default.aspx>



****) Supply over distribution or procurement from FSC VP BC Software

You'll find single software configurators and release lists (OS-matrix / system management / security) under following addresses:

Continue with PRIMERGY HW configurator

for internal users: <http://sp.ts.fujitsu.com/dmsp/docs/osrel.xlsx>
 for partners: <https://partners.ts.fujitsu.com/com/products/servers/primergy/Pages/default.aspx>

Section

Basic unit



System unit consisting of:

* 2U Housing without power supply modules

* Basic units with:

- 2 Hot-Plug Power Supply Bays
- 5 Fans (full redundancy)

* SAS Backplane for 6x 3.5" HD or SAS Backplanes for 4, 8, 12 or 16x 2.5" HD with cable connection to on-board or modular RAID Controller

* Drives/Bays

- 6 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, consumes 2 bays for 3.5" HD for basic unit 6x 3.5" HD not possible 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 unit 6x 3.5" HD for basic unit with 12 or 16 x 2,5" HD
- 1 bay SATA-CD- or DVD-ROM 0,5" height (option)
- 1 bay for opt. LocalView LC-Display

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

Systemboard D2939 with:

* Up to two Xeon 4C, 6C & 8C CPU's (Socket-R)

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® C600 Series (codenamed Patsburg)

* 7 PCI slots: - 2x PCIe-3 x16 (both slots are connected to CPU 2 and are useable with configured 2nd CPU only!)
 - 4x PCIe-3 x8 (one notched to install x16 cards)
 - 1x PCIe-3 x8 (for internal modular RAID controller only)

* 24 memory slots for max. 768GB RAM DDR3 available

- Memory is divided into 12 DIMMs per CPU (4 channels with 3 slots per channel)

Possible max. configurations are:

24x 32GB LRDIMM (quad rank modules) = 768GB

24x 16GB RDIMM (dual rank modules) = 384GB

16x 8GB UDIMM (dual rank modules) = 128GB

First Memory (one module) has to be selected for an orderable basic unit per CPU

- Memory upgrade is possible module wise
- Memory mirroring is supported with 2 identical modules in channel A+B CPU 1 or D+E CPU 2
- Hot Spare Memory is supported with 3 identical modules in channel A+B+C CPU 1 or D+E+F CPU 2
- SDDC (Chipkill) is supported for memory modules,

* Dual Port 10/100/1000 x4 PCI Express* Gigabit Ethernet Intel LAN controller Powerville on-board

* iRMC S3 (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 S3 (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

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Cables included in basic unit

Connections	Cable	PRIMERGY RX300 S7
1 SATA DVD		
2 SAS cables to HDDs		
3 1x cable for SAS signaling		

⊗ SAS
 ○ SATA

Note: Rack Mounting kit and Power Cord for RX300S7 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	
6x 3.5" HDD bays fixed	S26361-K1373-V101
Basic unit with	
2.5" HDD bays expandable	S26361-K1373-V401
Basic unit with	
8x 2.5" HDD bays fixed	S26361-K1373-V201
Basic unit with	
12x 2.5" HDD bays fixed	S26361-K1373-V301

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 135W 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.

S26113-F575-E10
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-E10
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-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-L10
One 800W power supply module hot plug no power cable included!!!	S26113-F574-L10
One 800W -48V DC PSU hot plug no power cable included!!!	S26113-F609-L10



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

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

S26361-F3552-E1
TPM Module
Trusted Platform Module on Motherboard
Use according to import restrictions
max. 1x per system

S26361-F3552-L1
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-E145
RMK-F1_DI_CMA_QRL
best choice for PrimeCenter racks
consisting of
vario carrier **714-785mm**
telescopic drop-in rails 781mm
with quick release lever support
with full extraction
with CMA adapter
1x per system

S26361-F2735-E175
Rack Mount Kit F1-C S7 LV
best choice for 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
Mounting 1U or 2U server in **asymmetrical racks**
with 1U support bracket

S26361-F4530-E10
Mounting server in **symmetrical racks**
no support bracket needed



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

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

S26361-F2735-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-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

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.

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



PRIMERGY Classic 19" rack is not supported

C

C

Section II Processor

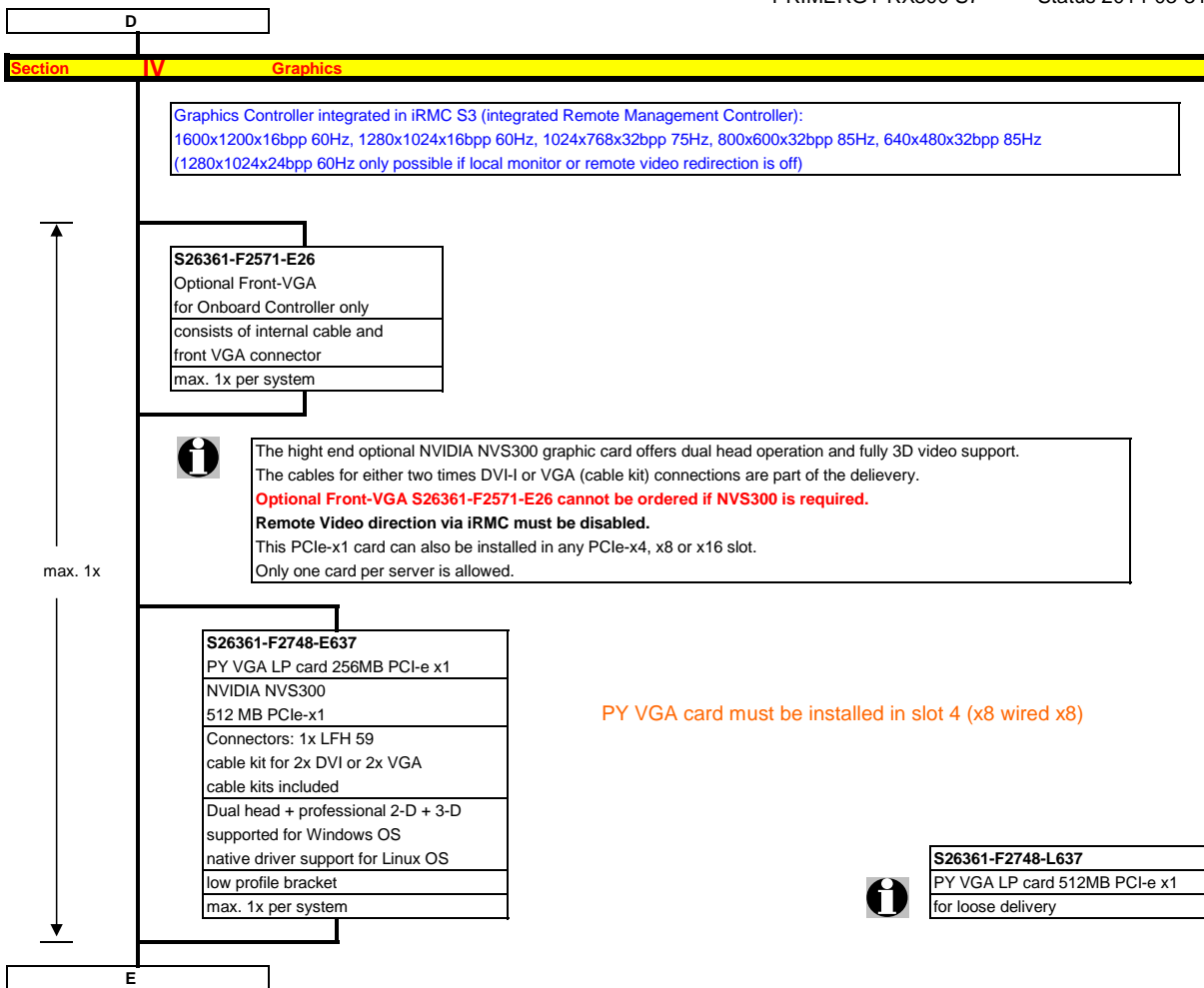
There are 2 processor sockets available.
 The first socket must always be equipped with the **first CPU** which can be selected via configurator
 It is also possible to upgrade a dual-processor system later on with a **second CPU**
Both PCIe-3 x16 slots are connected to CPU 2 and are useable with configured 2nd CPU only!
Two processors with different clock frequencies are not possible
 A multi-processor operating system is required for a dual-processor system.

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 CPU's	
- 1x 64-bit Intel Xeon (10MB Smart Cache) 1066 MHz DDR3 Bus; 6,40 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2603 4C/4T 1.80GHz 10MB 6.40GT/s 1066MHz 80W	S26361-F3685-E180
Xeon E5-2609 4C/4T 2.40GHz 10MB 6.40GT/s 1066MHz 80W	S26361-F3685-E240
Standard Turbo 6C CPU's	
- 1x 64-bit Intel Xeon (15MB Smart Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus; 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2620 6C/12T 2.00GHz 15MB 7.20GT/s 1333MHz 95W	S26361-F3676-E200
Xeon E5-2630 6C/12T 2.30GHz 15MB 7.20GT/s 1333MHz 95W	S26361-F3676-E230
Xeon E5-2640 6C/12T 2.50GHz 15MB 7.20GT/s 1333MHz 95W	S26361-F3676-E250
Advanced Turbo+ 8C CPU's	
- 1x 64-bit Intel Xeon (20MB Smart Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus; 8,00 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2650 8C/16T 2.00GHz 20MB 8.00GT/s 1600MHz 95W	S26361-F3686-E200
Xeon E5-2660 8C/16T 2.20GHz 20MB 8.00GT/s 1600MHz 95W	S26361-F3686-E220
Xeon E5-2665 8C/16T 2.40GHz 20MB 8.00GT/s 1600MHz 115W	S26361-F3686-E240
Xeon E5-2670 8C/16T 2.60GHz 20MB 8.00GT/s 1600MHz 115W	S26361-F3686-E260
Xeon E5-2680 8C/16T 2.70GHz 20MB 8.00GT/s 1600MHz 130W	S26361-F3686-E270
Xeon E5-2690 8C/16T 2.90GHz 20MB 8.00GT/s 1600MHz 135W	S26361-F3686-E290
Frequency Optimized Turbo 2C, 4C & 6C CPU's	
- 1x 64-bit Intel Xeon (5/10/15MB Smart Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus; 6,40/7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2637 2C/4T 3.00GHz 5MB 6.40GT/s 1600MHz 80W	S26361-F3687-E300
Xeon E5-2643 4C/8T 3.3GHz 10MB 6.40GT/s 1600MHz 130W	S26361-F3687-E330
Xeon E5-2667 6C/12T 2.90GHz 15MB 7.20GT/s 1600MHz 130W	S26361-F3687-E290
Low Power 4C/6C/8C CPU's	
- 1x 64-bit Intel Xeon (15/20MB Smart Cache); Hyper-Threading (HT); 1333/1600 MHz DDR3 Bus; 7,20/8,00 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2630L 6C/12T 2.00GHz 15MB 7.20GT/s 1333MHz 60W	S26361-F3688-E200
Xeon E5-2650L 8C/16T 1.80GHz 20MB 8.00GT/s 1600MHz 70W	S26361-F3688-E180

Note: Max. DDR3 Bus Speed depends on:
 - max. DDR3 Bus Speed from the CPU and
 - max. DDR3 Memory Speed and
 - max. memory modules on one memory channel

On special release only

D



E

Section III Memory



- **There are 12 memory slots per CPU for max.**
 384GB LRDIMM (12x 32GB 4R)
 192GB RDIMM (12x 16GB 2R)
 32GB UDIMM (8x 4GB)
=> max. 768GB for two CPU's (384GB per CPU), using LRDIMM

- The memory area is divided into 4 channels per CPU with 3 slots per channel
 - Slot 1 of each channel belongs to memory bank 1, the slot 2 belongs to memory bank 2, slot 3 belongs to memory bank 3

Registered, LR DIMMs and unbuffered memory modules can be selected
No mix of registered, load reduced and unbuffered modules allowed.
 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, following frequencies are supported:
 - 1.5V - 1600MHz max (depending on CPU, special memory modules)
 - 1.35V - 1333MHz max (depending on CPU)
 In a 3 DIMMs per channel configuration, memory will operate at 1.5V only.
SDDC (Chipkill) is supported for registered / load reduced 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)
No mix of registered, load reduced and unbuffered modules allowed.

2.) "Rank Sparing Mode" configuration
 - Within a memory channel, one rank is a spare of the other ranks.
 The Spare Rank is held in reserve and is not available as system memory
 For the effective memory capacity, please refer to the spreadsheet below.
 The BIOS is set to the rank sparing setting.
Minimum configuration is: 2x 1R, 2x 2R or 1x4R DDR3 module per channel
This mode is not supported by unbuffered memory modules

3.) "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: 4x identical modules

4.) In the "Mirrored Channel Mode" is following configuration possible
 - Each memory bank can optionally be equipped with 4x registered or load reduced or unbuffered DDR3 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: 4x identical modules
This mode is not supported by unbuffered memory modules

F

F

1x per CPU

<p>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</p>
<p>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. Supported for RDIMM / LRDIMM only. Requires min 2x 1R/2R or 1x 4R modules per CPU</p>
<p>S26361-F3694-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 4 identical modules to be configured per CPU</p>
<p>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 Supported for RDIMM / LRDIMM only. Multiple of 4 identical modules to be configured per CPU</p>



	Effective Memory capacity / Rank Sparing Mode, 1 Channel populated							
	UDIMM		RDIMM				LRDIMM	
	2GB 1R	2GB 2R	4GB 1R	8GB 2R	16GB 2R	16GB 4R	32GB 4R	
1DPC	na	na	na	na	na	12GB	24GB	
2DPC	na	na	4GB	12GB	24GB	28GB	56GB	
3DPC	na	na	8GB	20GB	40GB	40GB	80GB	



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

8/12x per CPU, max.
2/3 modules per channel

<p>Unbuffered Memory (UDIMM) no SDDC (chipkill) support - one DDR3 unbuffered ECC mem. Module, 1.35V Choose up to 8 order codes per CPU</p> <p>2GB (1x2GB) 1Rx8 L DDR3-1600 U ECC S26361-F3694-E513 4GB (1x4GB) 2Rx8 L DDR3-1600 U ECC S26361-F3694-E514</p>
<p>Registered Memory (RDIMM) no SDDC (chipkill) support - one DDR3 registered ECC mem. Module, 1.35V No mix with any other types of memory modules possible Choose up to 12x for 1R/2R or 8x for 4R per CPU For performance reasons, we do not recommend to configure more than 8 DIMMs per CPU</p> <p>4GB (1x4GB) 2Rx8 L DDR3-1600 R ECC S26361-F3695-E514</p>
<p>Registered Memory (RDIMM) with SDDC (chipkill) support - one DDR3 registered ECC mem. Module, 1.35V 1333MHz supported with up to 2DPC (8 modules/CPU) Choose up to 12 order codes per CPU</p> <p>4GB (1x4GB) 1Rx4 L DDR3-1333 R ECC S26361-F3696-E514 8GB (1x8GB) 2Rx4 L DDR3-1333 R ECC S26361-F3696-E515</p>
<p>Registered Memory (RDIMM) with SDDC (chipkill) support - one DDR3 registered ECC mem. Module, 1.35V 1600MHz supported with up to 2DPC (8 modules/CPU) at 1.5V Choose up to 12 order codes per CPU</p> <p>4GB (1x4GB) 1Rx4 L DDR3-1600 R ECC S26361-F3697-E514 8GB (1x8GB) 2Rx4 L DDR3-1600 R ECC S26361-F3697-E515 16GB (1x16GB) 2Rx4 L DDR3-1600 R ECC S26361-F3697-E516</p>
<p>Load Reduced Memory (LRDIMM) with SDDC (chipkill) support - one DDR3 load reduced ECC mem. Module, 1.35V Choose up to 12 order codes per CPU</p> <p>16GB (1x16GB) 4Rx4 L DDR3-1333 LR ECC S26361-F3698-E516 32GB (1x32GB) 4Rx4 L DDR3-1333 LR ECC S26361-F3698-E517</p>

Note 1.)

Max. DDR3 memory speed depends on the memory configuration (No of mem modules per channe) 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



Mix of memory modules is only possible within the same group

new due to supply
new due to supply

G

Memory Configuration PRIMERGY RX300 S7

Each CPU offers 12 Slots for DDR3 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 3 different kinds of DDR3 Memory Modules available: UDIMM / RDIMM and LRDIMM

UDIMM / RDIMM / LRDIMM offer different functionality. Mix of UDIMM / RDIMM / LRDIMM is not allowed.

If 1.5V and 1.35V DIMMs are mixed, the DIMMs will run at 1.5V

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

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

Capacity	Configuration	UDIMM	RDIMM	LRDIMM	Notes
Min. Memory per CPU	1 Module / CPU	1x2GB	1x4GB	1x 16GB	with one CPU
Max. Memory per CPU	8/12 Modules / CPU	8x4GB	12x16GB	12x 32GB	with one CPU
Max. Memory per System	16/24 Modules / System	64GB	384GB	768GB	if second CPU is configured

Memory-Speed:

Max. DDR3 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)																	
	UDIMM 1600MHz						RDIMM 1600MHz						LRDIMM 1333MHz					
	1.5V [default]			1.35V			1.5V [default]			1.35V			1.5V [default]			1.35V		
Voltage setting (BIOS)	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC	DPC
CPU with 1600MHz DDR3 Bus	1333	1333	-	1066	1066	-	1600	1600	1066	1333	1333	-	1333	1333	1066	1066	1066	-
CPU with 1333MHz DDR3 Bus	1600	-	-	1333	-	-	1333	1333	1066	1333	1333	-	1333	1333	1066	1066	1066	-
CPU with 1066MHz DDR3 Bus	1066	1066	-	1066	1066	-	1066	1066	1066	1066	1066	-	1066	1066	1066	1066	1066	-

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

on special release
as soon as available

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:

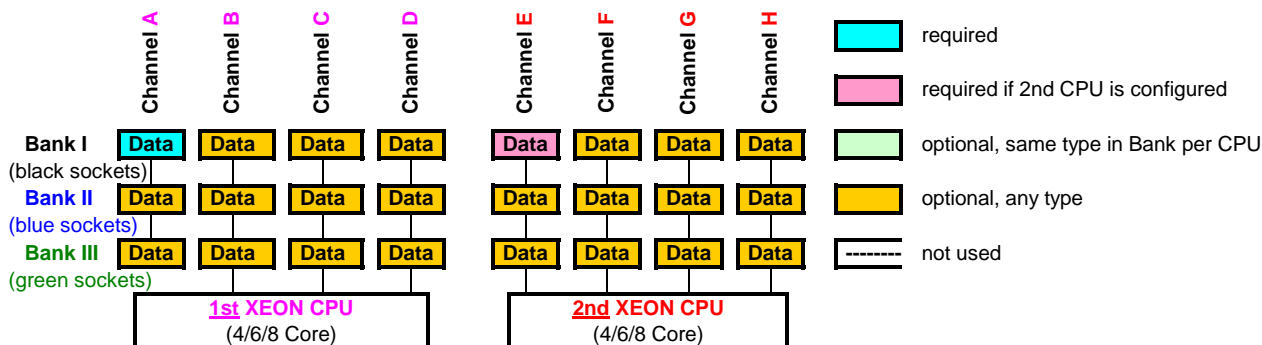
Bank I black sockets
Bank II blue sockets
Bank III green sockets

- 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 - E on the 1st/2nd CPU
Bank III on CPU 1/2 up to 4 memory modules connected to Channel A - E on the 1st/2nd CPU (can not be populated by UDIMM or 4R RDIMM memory modules)

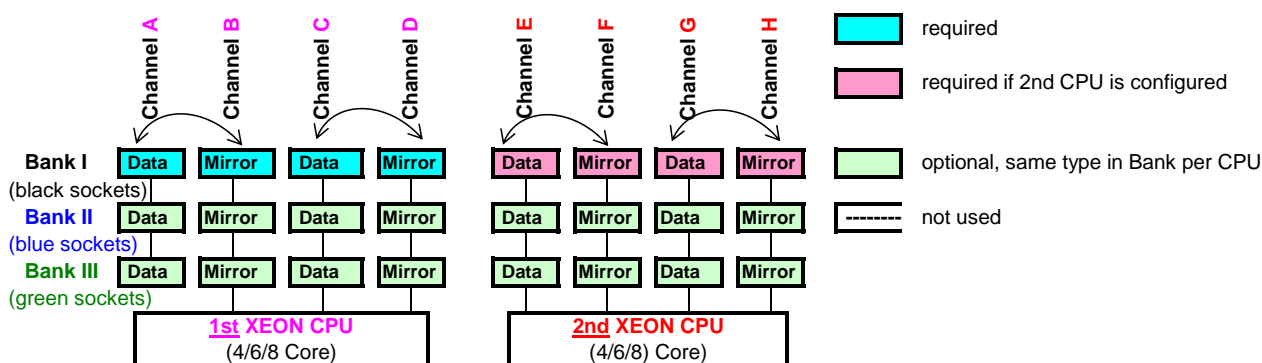
- See below and next page for a detailed descriptions of the memory configuration supported.

1. Independent Channel Mode



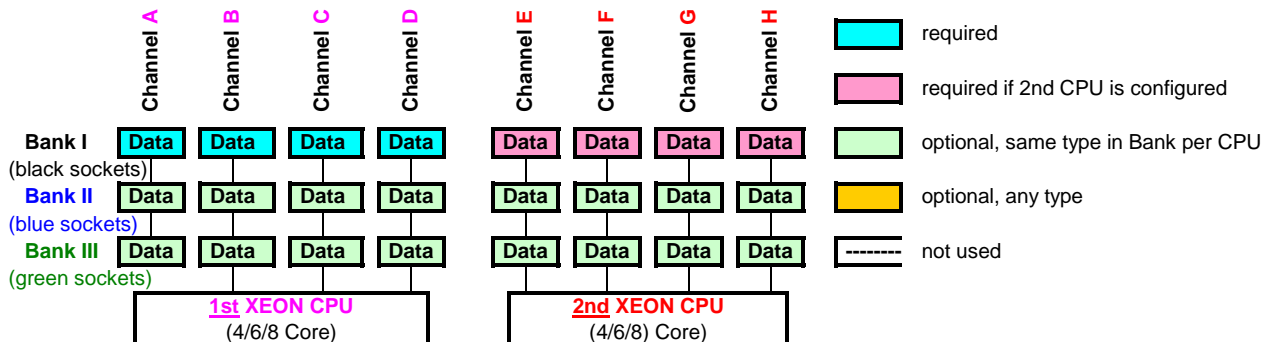
Independent Channel Mode allows all channels to be populated in any order
 Can run with differently rated DIMMs and use the settings of the slowest DIMM installed in the system

2. Mirrored Channel Mode



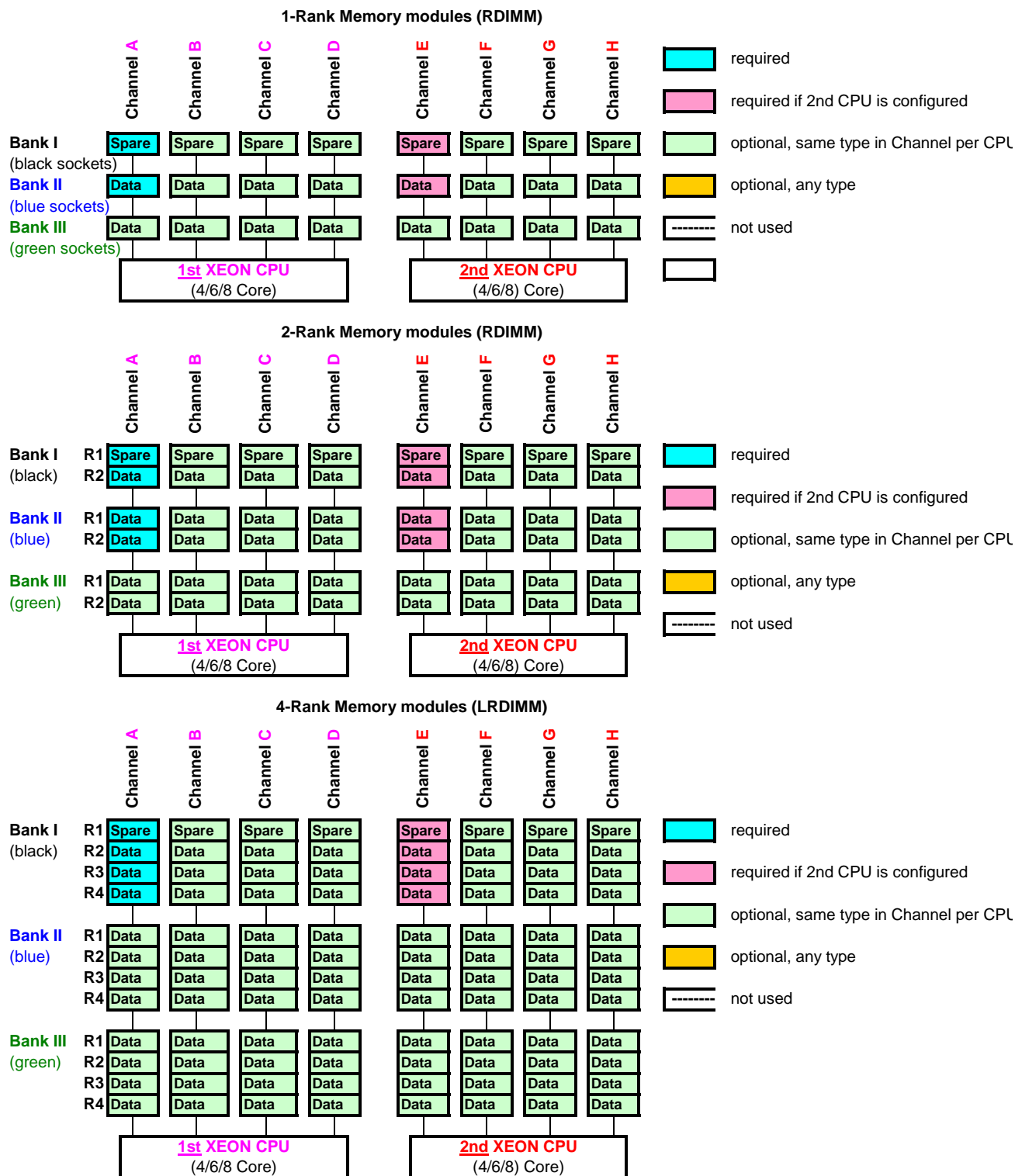
Mirrored Channel Mode requires identical modules on channel A,B, C, D (1st CPU) or channel E, F, G and H (2nd CPU)
 50% of the capacity is used for the mirror => the available memory for applications is only half of the installed memory
 If this mode is used, a multiple of 4 identical modules has to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

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Section V a Possible configuration options for basic units



Config 1: 6x or 4x 3.5" HDD + 3.5" DDS/RDX drive
Is fixed due to selection of basic unit with:
6x 3.5" HDD bays fixed S26361-K1373-V101



Basic unit S26361-K1373-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-K1373-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-K1373-V201 with
Config 4: 8x 2.5" HDD bays fixed S26361-K1373-V201
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-K1373-V401 with **expandable**
Config 5: 8x 2.5" HDD + 3.5" drive S26361-F1373-E450
No Upgrade kit available!



Basic unit S26361-K1373-V401 with **expandable**
Config 6: 8x 2.5" HDD + LTO S26361-F1373-E460
no ODD and LSD bay available!
No Upgrade kit available!



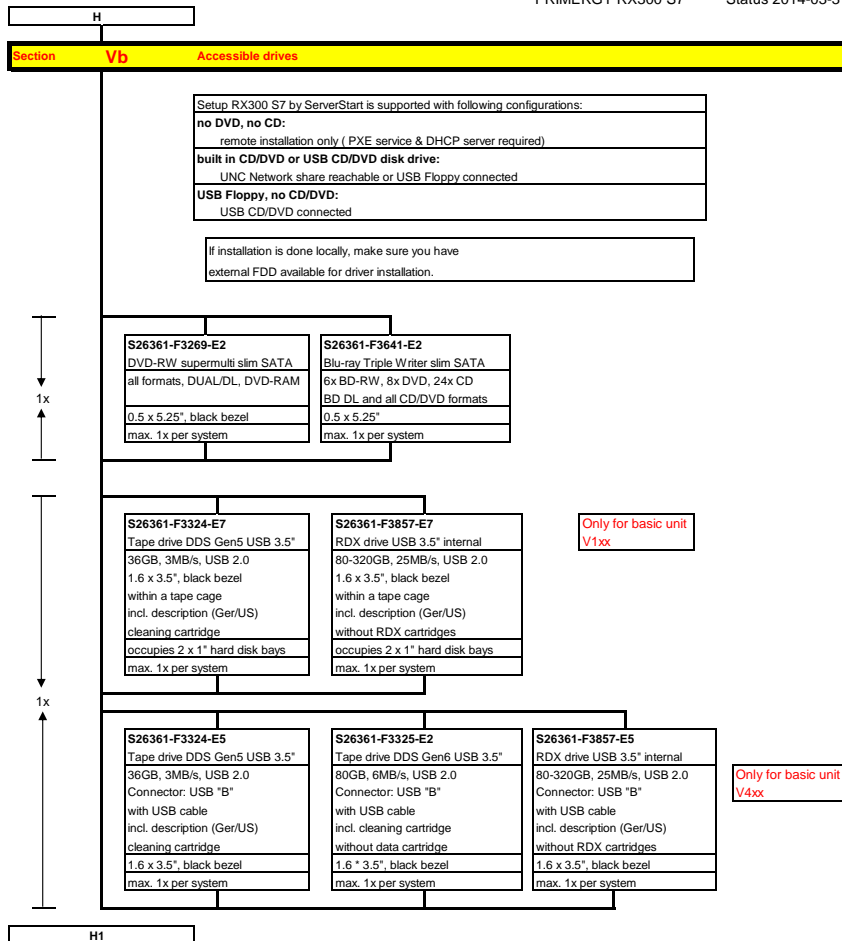
Basic unit S26361-K1373-V301 with
Config 7: 12x 2.5" HDD bays fixed S26361-K1373-V301
Available Upgrade kits for this fixed configuration:
Upgrade kit to 16x 2.5" HDD S26361-F1373-L378

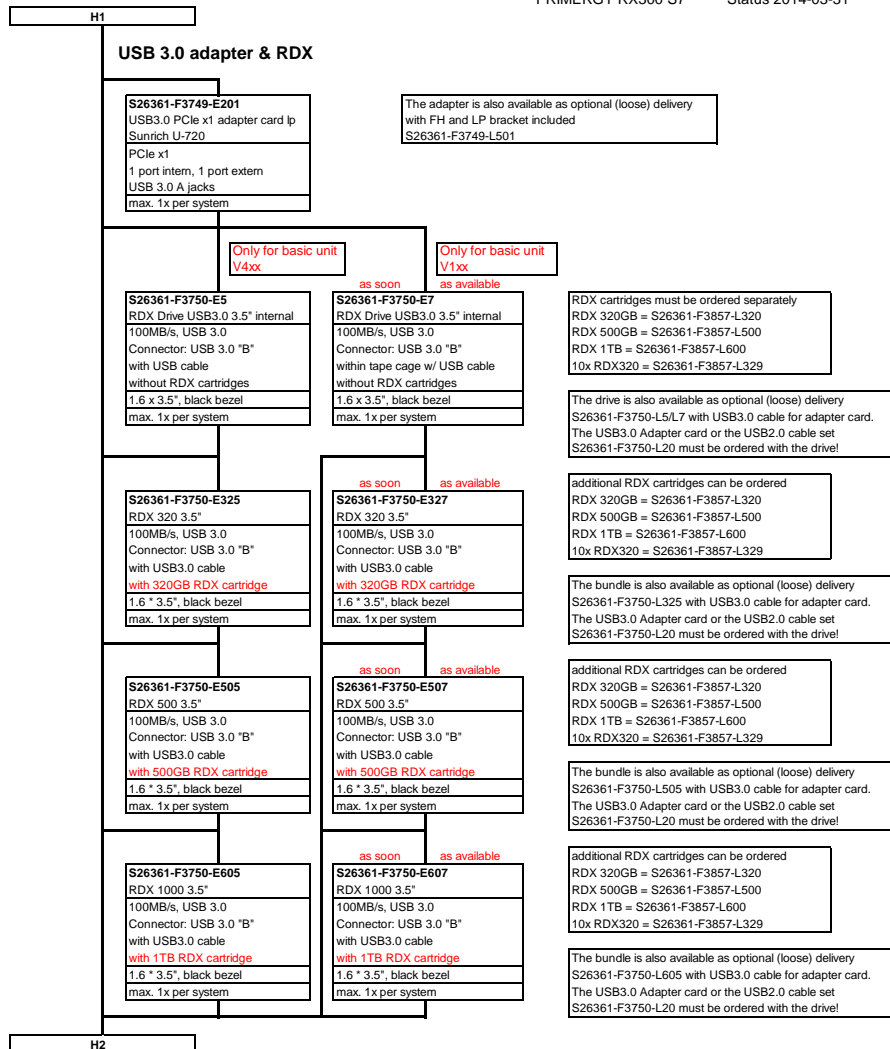


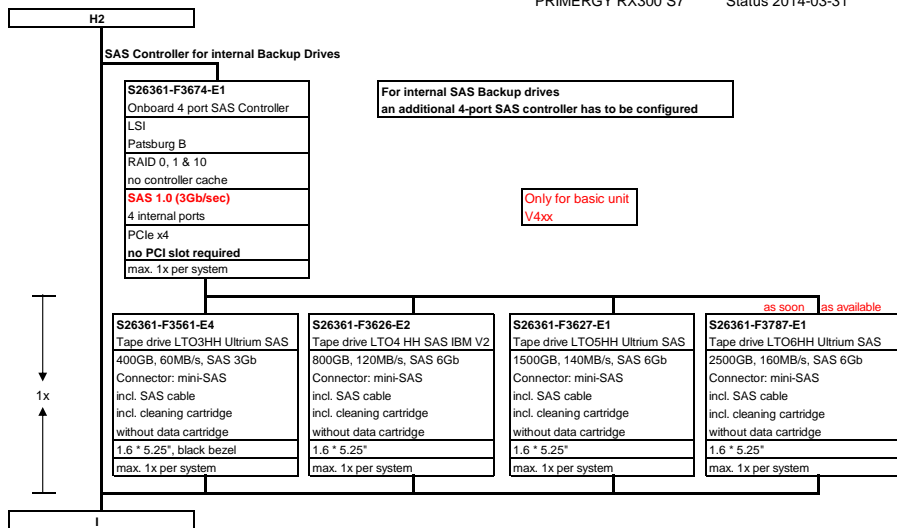
Basic unit S26361-K1373-V401 with **expandable**
Config 8: 16x 2.5" HDD S26361-F1373-E480
no ODD and LSD bay available!
No Upgrade kit available!
Includes all necessary bezels, cages, backplanes and cables

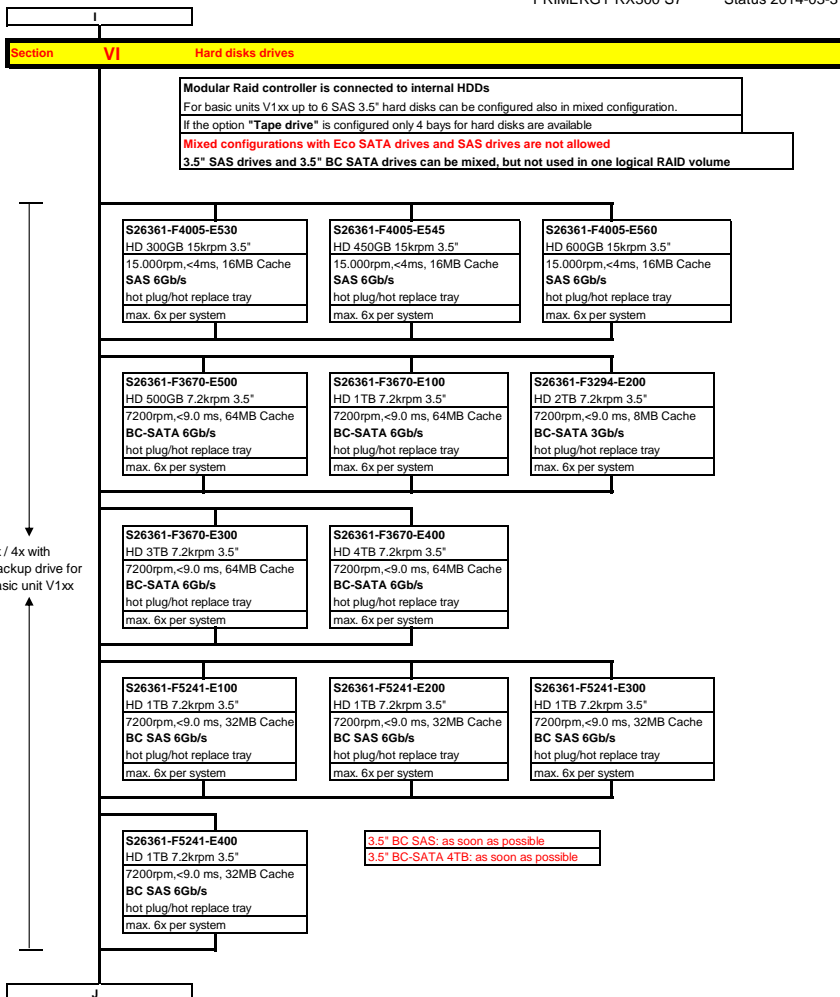
H

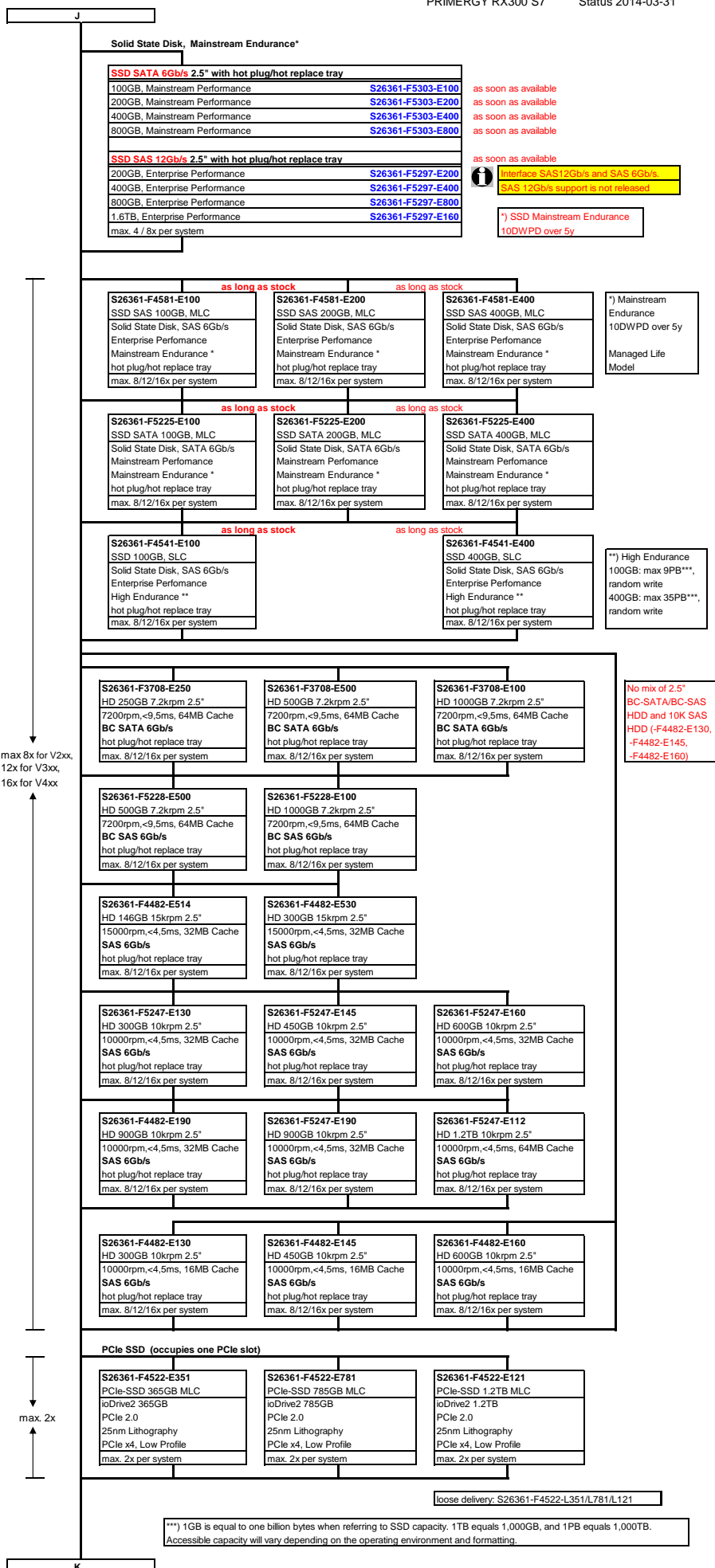
*) this is the only one noHDD configuration opportunity without needed RAID controller











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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

For more than 4 hard disks or 6 Gb/sec 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. 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.

1x

		as long as available	as soon as available																																															
<table border="1"> <tr> <td>S26361-F3554-E8</td> </tr> <tr> <td>RAID Ctrl SAS 6G 8port internal</td> </tr> <tr> <td>Based on chip LSI SAS2008</td> </tr> <tr> <td>LSI MegaRAID</td> </tr> <tr> <td>no Cache, no BBU</td> </tr> <tr> <td>RAID 0, 1 & 10</td> </tr> <tr> <td>Support for 3Gb/s and 6Gb/s</td> </tr> <tr> <td>SATA and SAS hard drives</td> </tr> <tr> <td>PCIe x8</td> </tr> <tr> <td>Low-profile MD2 form factor</td> </tr> <tr> <td>max. 1x per system</td> </tr> </table>	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	<table border="1"> <tr> <td>S26361-F3554-E512</td> </tr> <tr> <td>RAID Ctrl SAS 6G 8port internal</td> </tr> <tr> <td>Based on chip LSI SAS2108</td> </tr> <tr> <td>LSI MegaRAID</td> </tr> <tr> <td>512MB Cache with ECC</td> </tr> <tr> <td>RAID 0, 1, 10, 5, 50, 6, 60</td> </tr> <tr> <td>optional BBU</td> </tr> <tr> <td>Support for 3Gb/s and 6Gb/s</td> </tr> <tr> <td>SATA and SAS hard drives</td> </tr> <tr> <td>PCIe x8</td> </tr> <tr> <td>Low-profile MD2 form factor</td> </tr> <tr> <td>max. 1x per system</td> </tr> </table>	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	optional BBU	Support for 3Gb/s and 6Gb/s	SATA and SAS hard drives	PCIe x8	Low-profile MD2 form factor	max. 1x per system	<table border="1"> <tr> <td>S26361-F3669-E1</td> </tr> <tr> <td>RAID Ctrl SAS 6G 8port internal</td> </tr> <tr> <td>Based on chip LSI SAS2208</td> </tr> <tr> <td>LSI MegaRAID</td> </tr> <tr> <td>1GB Cache with ECC</td> </tr> <tr> <td>RAID 0, 1, 10, 5, 50, 6, 60</td> </tr> <tr> <td>optional FBU</td> </tr> <tr> <td>Support for 3Gb/s and 6Gb/s</td> </tr> <tr> <td>SATA and SAS hard drives</td> </tr> <tr> <td>PCIe x8</td> </tr> <tr> <td>Low-profile MD2 form factor</td> </tr> <tr> <td>max. 1x per system</td> </tr> </table>	S26361-F3669-E1	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 x8	Low-profile MD2 form factor	max. 1x per system	<table border="1"> <tr> <td>S26361-F3669-E3</td> </tr> <tr> <td>RAID Ctrl SAS 6G 8port internal</td> </tr> <tr> <td>Based on chip LSI SAS2208</td> </tr> <tr> <td>LSI MegaRAID</td> </tr> <tr> <td>1GB Cache with ECC</td> </tr> <tr> <td>RAID 0, 1, 10, 5, 50, 6, 60</td> </tr> <tr> <td>optional FBU</td> </tr> <tr> <td>Support for 3Gb/s and 6Gb/s</td> </tr> <tr> <td>SATA and SAS hard drives</td> </tr> <tr> <td>PCIe 3.0 x8</td> </tr> <tr> <td>Low-profile MD2 form factor</td> </tr> <tr> <td>max. 1x per system</td> </tr> </table>	S26361-F3669-E3	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
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Low-profile MD2 form factor																																																		
max. 1x per system																																																		

S26361-F3257-E216
Cache Battery Backup Unit
max. 1x per Controller



Lose delivery FBU option

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

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

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

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

Advanced Software Option

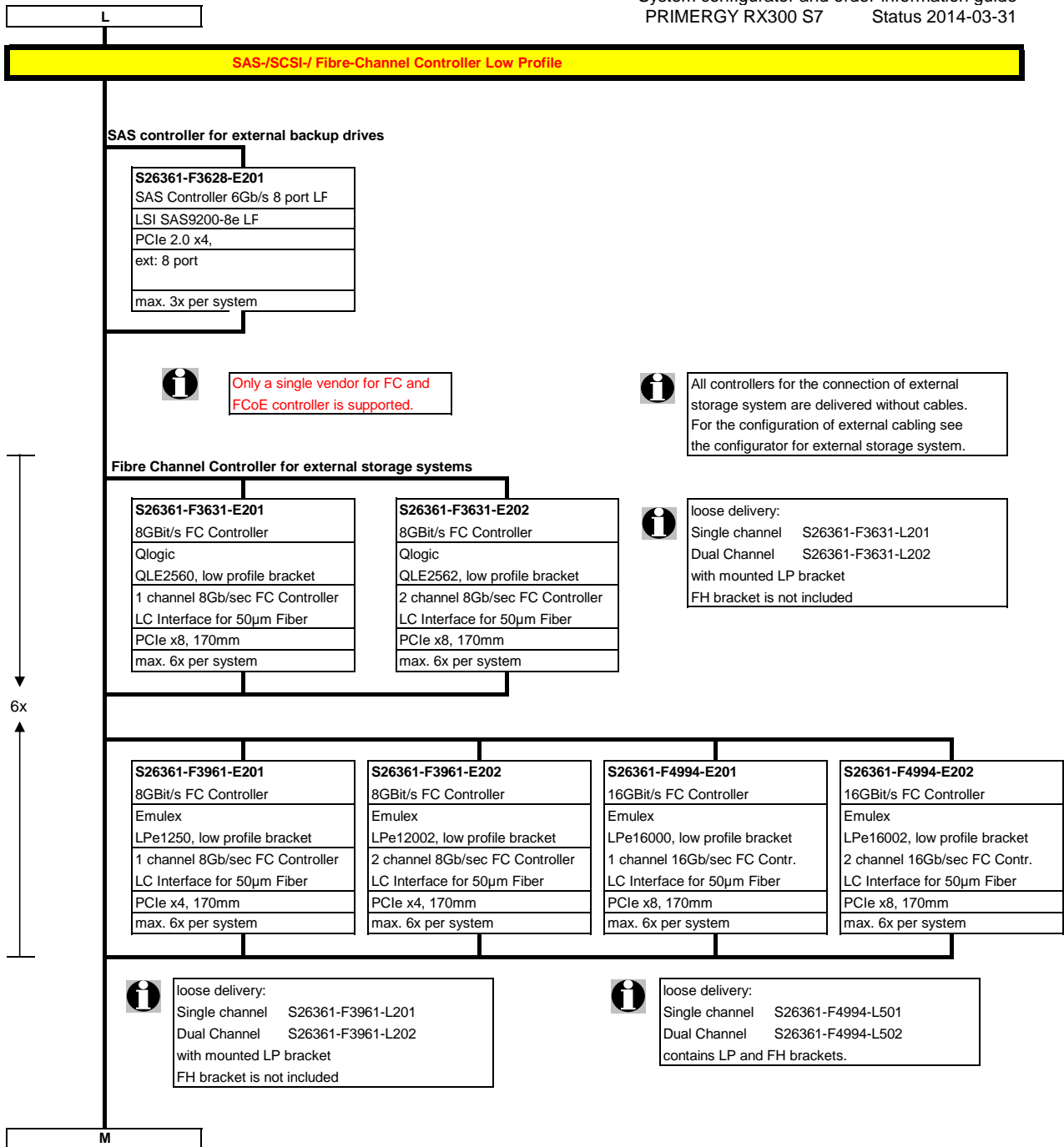
as soon as available

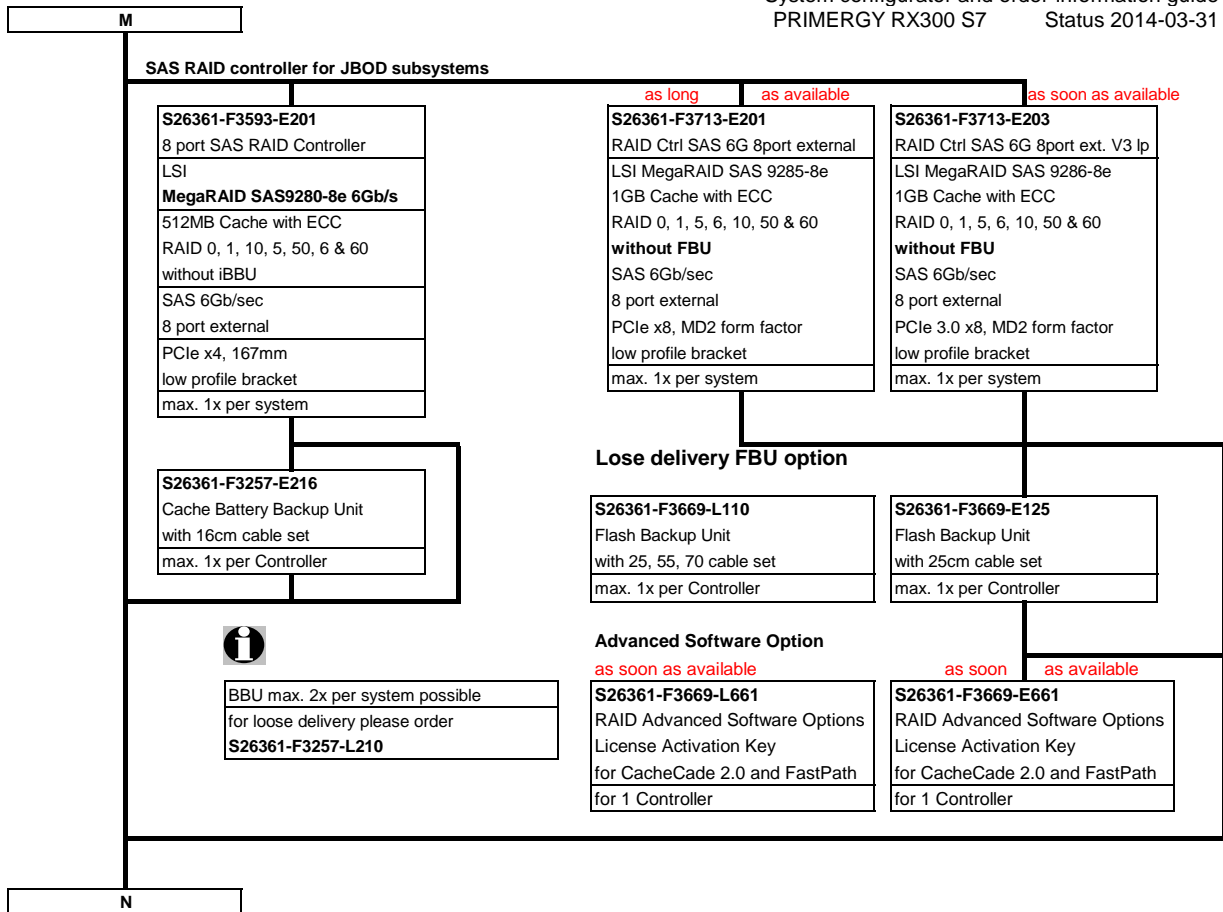
S26361-F3669-L660
RAID Advanced Software Options License Activation Key for CacheCade 2.0 and FastPath for 1 Controller

as soon as available

S26361-F3669-E660
RAID Advanced Software Options License Activation Key for CacheCade 2.0 and FastPath for 1 Controller

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Section VIII Communication / Network

2x Gigabit (Dualport) Ethernet Contr. on-board.
Intel LAN I350 (Powerville)
ext: 2x RJ 45 connector



Modular On-Board LAN is a flexible extension of a cost-optimized Motherboard with basic 2x Gbit LAN on-board.
5 different Upgrade-Kits are offered, which occupies a dedicated PCIe slot and can be ordered once per system.
If a modular LAN Controller is installed, max. 3 additional LAN controllers are possible!

Modular On-Board LAN Adapter

S26361-F4610-E802
Upgrade-Kit to 4x 1Gb LAN on-board LP
PLAN CP 2x1Gbit Cu Intel I350-T2 LP
Intel Powerville based 2 port Server Ad.
PCIe x4, Low Profile
ext: for RJ45-plug, Cat 5
max. 1x per system

S26361-F4610-E804
Upgrade-Kit to 6x 1Gb LAN on-board LP
PLAN CP 4x1Gbit Cu Intel I350-T4 LP
Intel Powerville based 4 port Server Ad.
PCIe x4, Low Profile
ext: for RJ45-plug, Cat 5
max. 1x per system

S26361-F3629-E702
Upgrade-Kit to 2xGbit+2x10Gbit LOM
Eth Ctrl 2x10Gbit PCIe x8 D2755 SFP+
Intel Niantic based dual port 10Gb NIC
PCIe x8, Low Profile, Low Profile Bracket
ext: 2x SFP+ cage
max. 1x per system

S26361-F3740-E701
Upgrade-Kit to 4x Gbit LAN on-board
Eth Ctrl 2x1Gbit PCIe x4 D3035 Cu
Intel Powerville based 2 port Server Ad.
PCIe x4, Low Profile
ext: for RJ45-plug, Cat 5
max. 1x per system

S26361-F3739-E701
Upgrade-Kit to 6x Gbit LAN on-board
Eth Ctrl 4x1Gbit PCIe x4 D3045 Cu
Intel Powerville based 4 port Server Ad.
PCIe x4, Low Profile
ext: for RJ45-plug, Cat 5
max. 1x per system

S26361-F3610-E702
Upgrade-Kit to 4x Gbit LAN on-board
Eth Ctrl 2x1Gbit PCIe x4 D2735-2 Cu
Intel Kawela based 2 port Server Adap.
PCIe x4, Low Profile
ext: for RJ45-plug, Cat 5
max. 1x per system

S26361-F3986-E3
SFP+ Module MMF 10GbE LC
SFP+ module for 10 Gbit
Ethernet 50µm FO cabling
ext:LC-connector
max. 2x per adapter

S26361-F3986-E4
SFP+ Module SMF 10GbE LC
SFP+ module for 10 Gbit
Ethernet 9µm FO cabling
ext:LC-connector
max. 2x per adapter

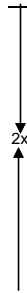
S26361-F3629-E750
Shared 10Gb Management LAN
Install and configure Management LAN on 10Gb Shared LAN port
max. 1x per 10Gb upgrade kit

i The 10Gb upgrade kit is delivered without SFP+ modules for optical cables, these must be ordered separately. Without SFP+ modules copper twinax cables are supported

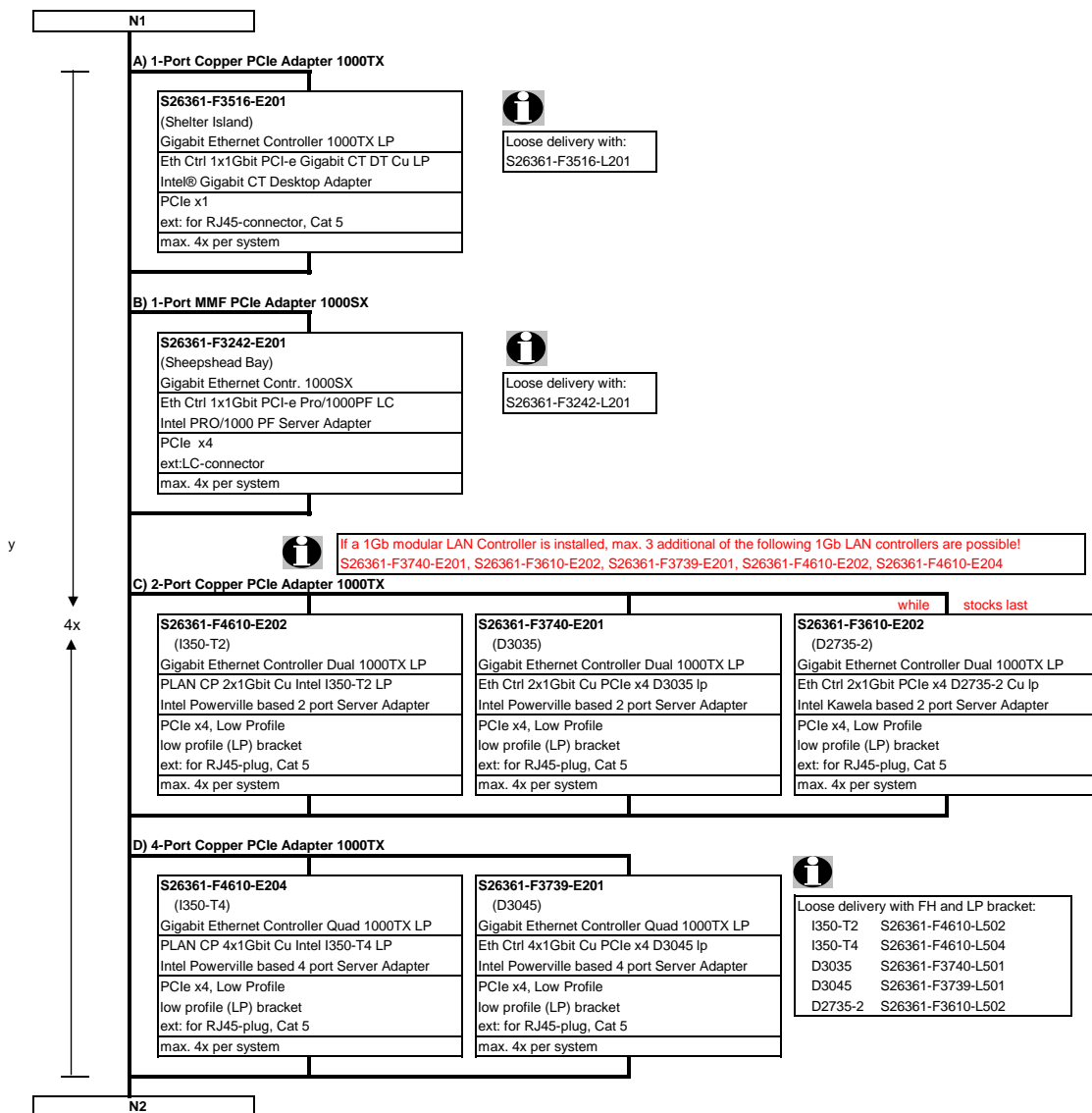
i The SFP+ Module is also available as loose delivery S26361-F3986-L3 / L4

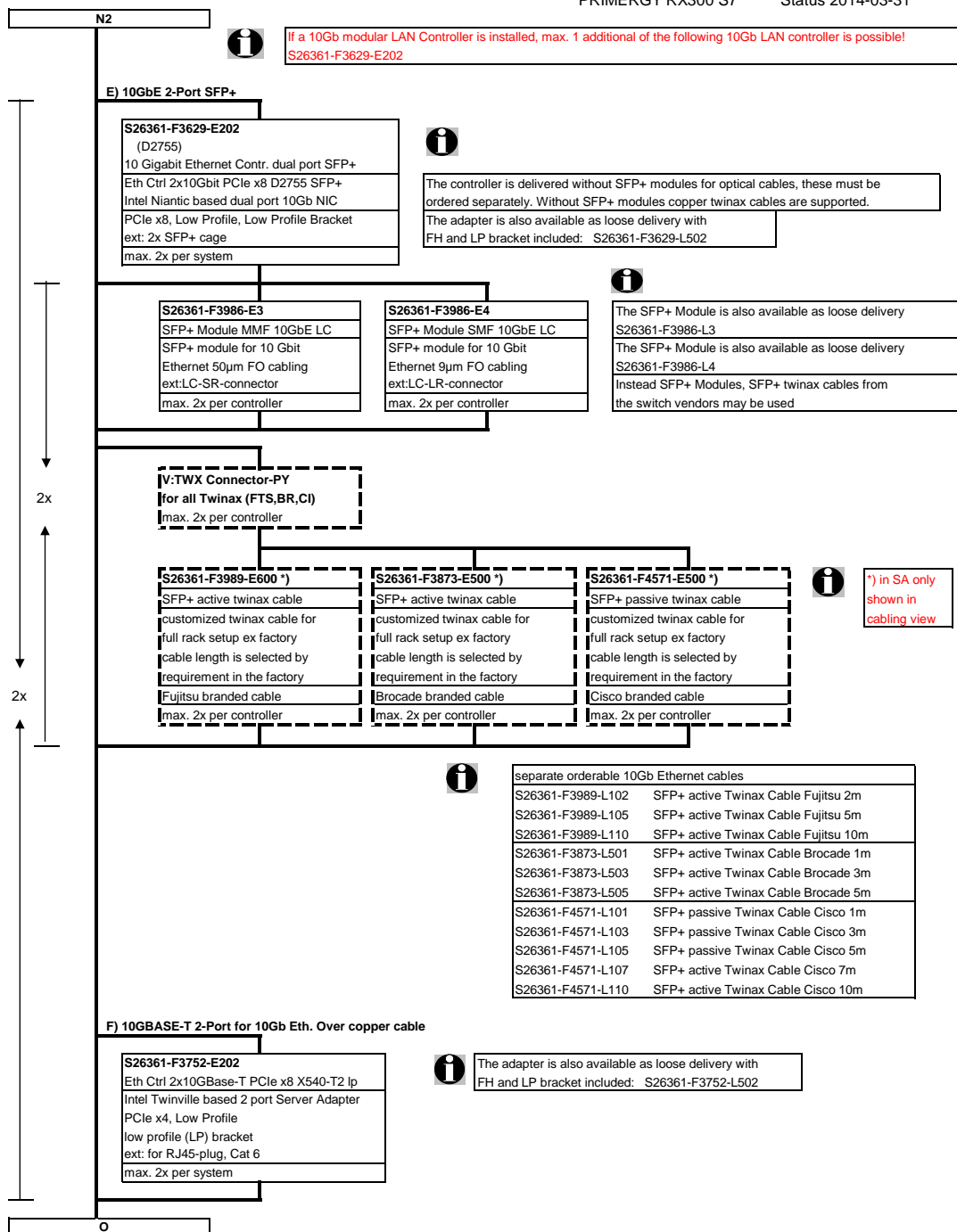
i Instead SFP+ Modules, SFP+ twinax cables from the switch vendors may be used
For cabling of D2755 please refer to chapter 10GbE 2-Port SFP+ for MMF Module

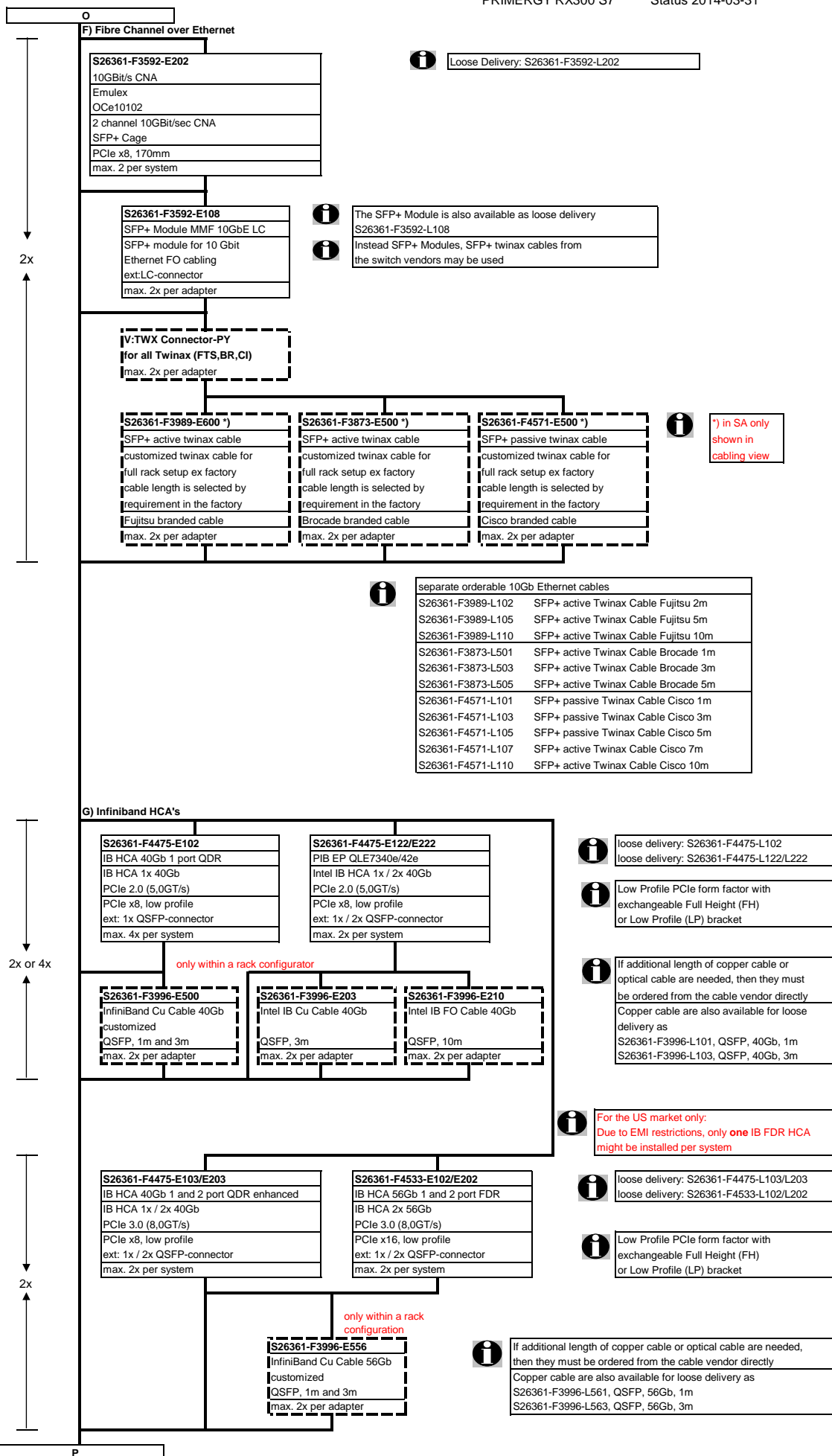
i This is an option if Shared Management LAN over the 10Gb port is required instead Management LAN over 1Gb



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Section IX System Management Products (RemoteView)

iRMC S3 (integrated Remote Management Controller) onboard server management Controller with dedicated 10/100/1000 Service LAN-port and integrated graphics. Optional 10/100 Service LAN-port on front panel. The Service LAN-port can be switched alternatively on standard Gbit LAN port



S26361-F1790-E242
iRMC S3 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

S26361-F2571-E27
Maintenance LAN
 Front management LAN Port
 In combination with iRMC adv. pack
 For local maintenance / console redirection, Integrated in front (operating panel)
 max. 1x per system

Section X Miscellaneous

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

S26361-F3776-E1
ENABLING LOW NOISE MODE RX300
 Restricts configuration to make LNM possible
 LNM is enabled ex factory
 max. 1x per system



Configuration restrictions in LNM for RX300:
 Max 2x CPU with max 80W allowed!
 Max 8x memory DIMMs allowed!
 Modular RAID card only (S26361-F3554-E8/E512 or S26361-F3669-E1)
 No other PCIe cards are allowed!
 LNM can be enabled later, as long as the configuration restrictions are fulfilled
 When adding not compatible components later, LNM will be switched off automatically

Section XI Country specific power cord

S26361-F1452-E100
REGION KIT APAC/EMEA/India
 For Shipments to Asia pacific, EMEA or India regions
 1x per system

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

S26361-F1452-E130
REGION KIT America
 For Shipments to America
 1x per system

Power cord has to be ordered separately

Power cord options (1x per PSU)

max. 2 x

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

End PRIMERGY RX300 S7

