FUJITSU

PRIMERGY RX300 S6

System configurator and order-information guide

July 2012

Contents

PRIMERGY Server

Instructions

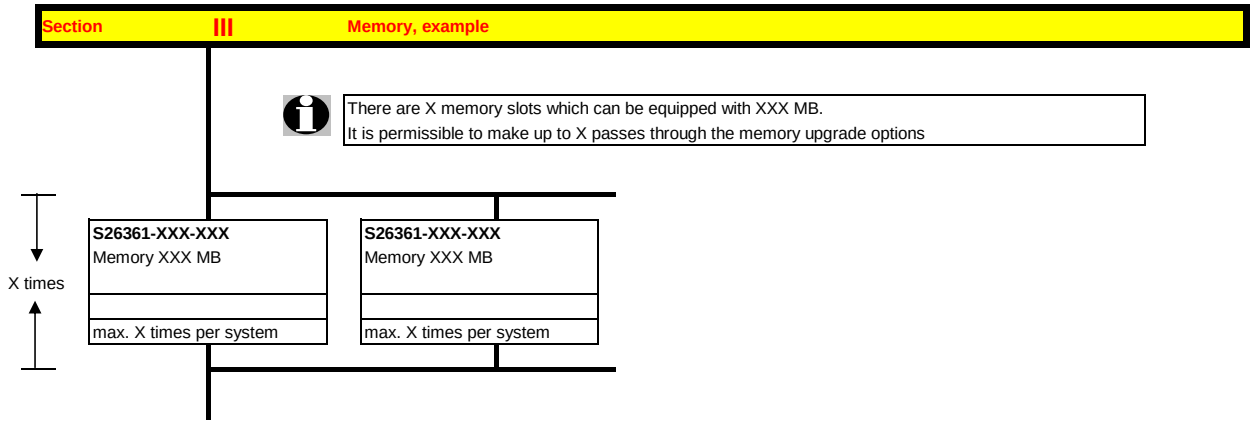
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect.

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

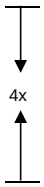
You can configure your individual PRIMERGY server in order to adjust your specific requirements.

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:

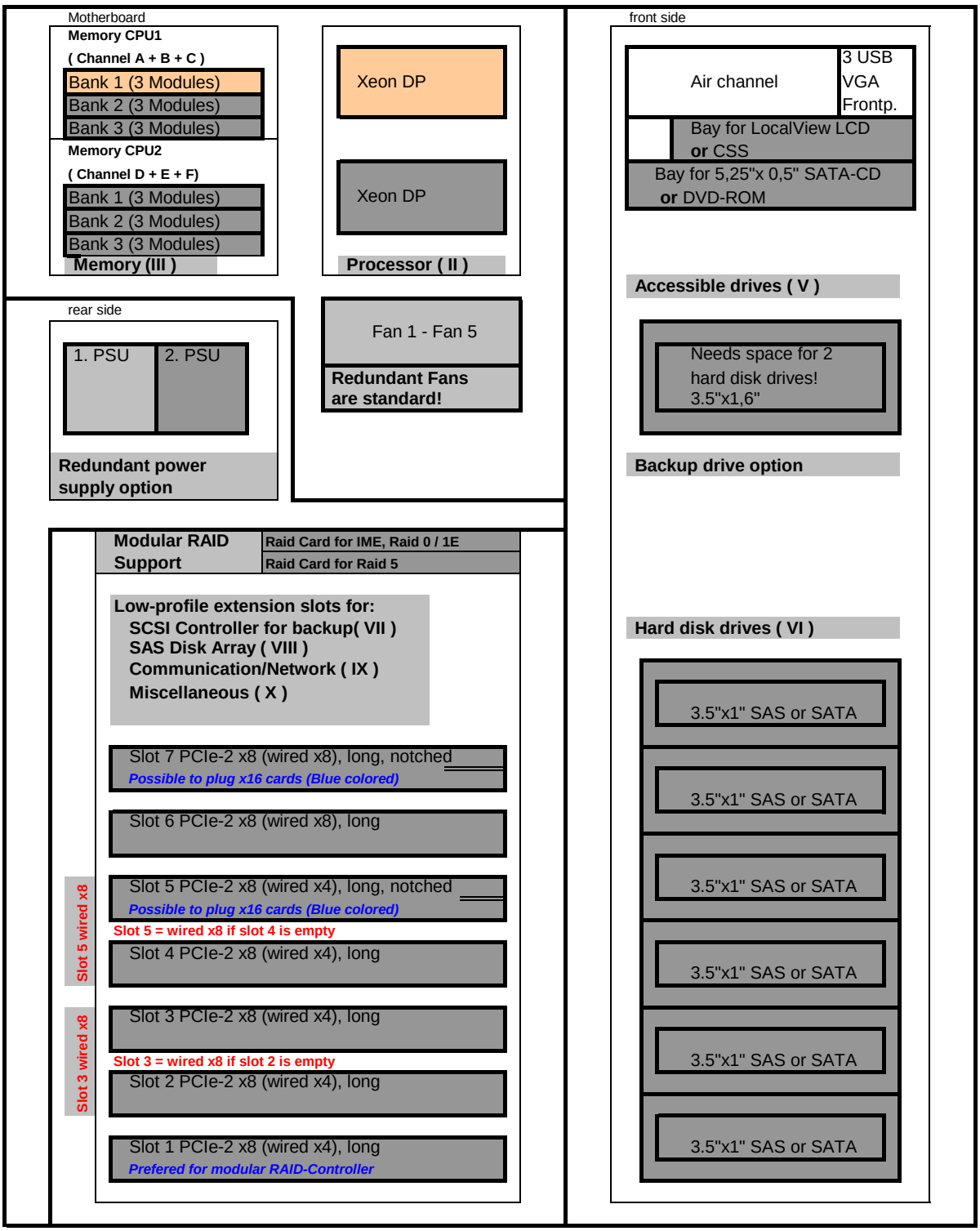
http://ts.fujitsu.com/products/standard_servers/inc (internet)

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

Configuration diagram PRIMERGY RX300 S6

System unit (I)

with 3.5" Hard disk drives



Key:

Included in basic unit

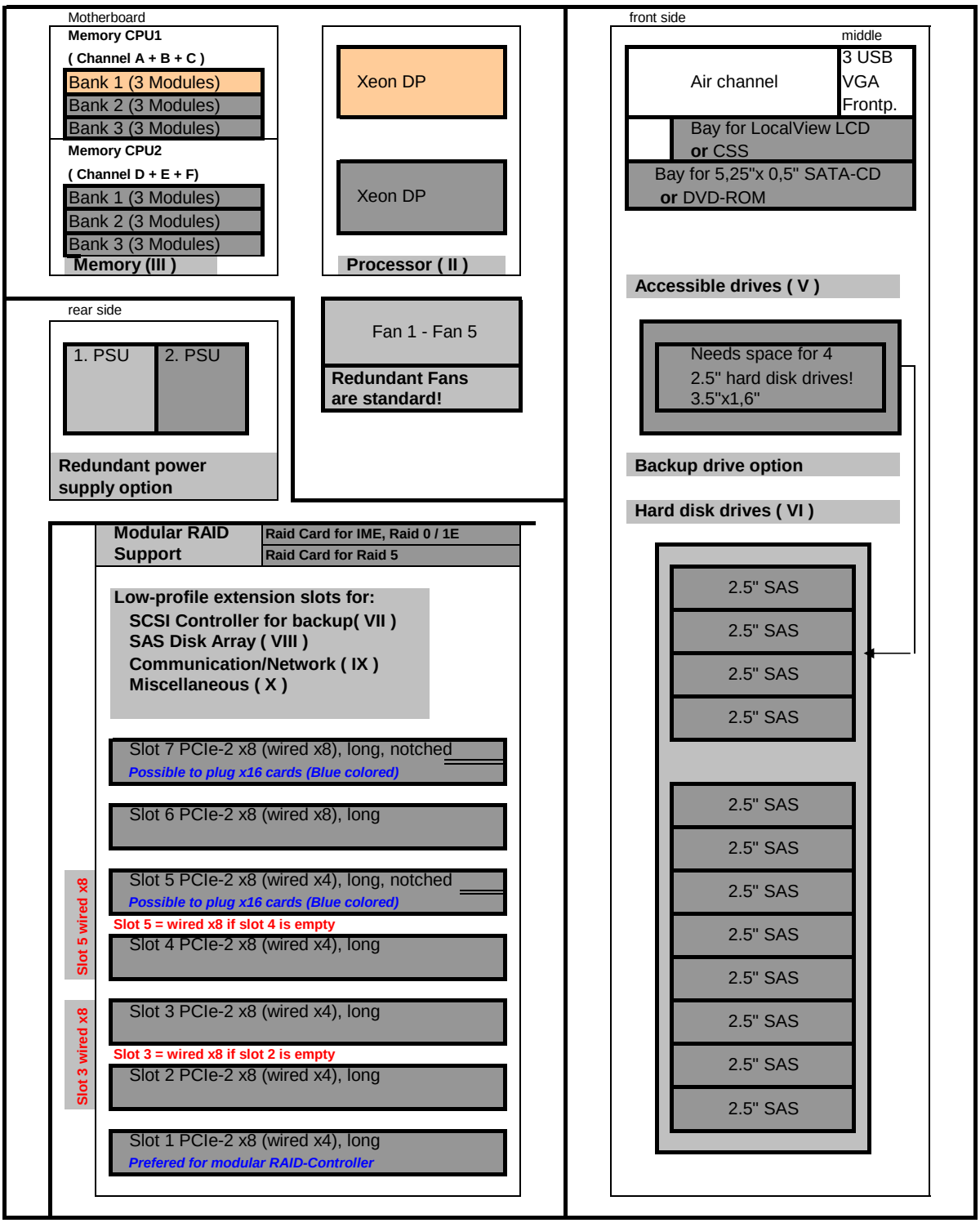
Option

One CPU (first CPU) and one memory per CPU (first memory) has to be selected for an orderable basic unit.

Configuration diagram PRIMERGY RX300 S6

System unit (I)

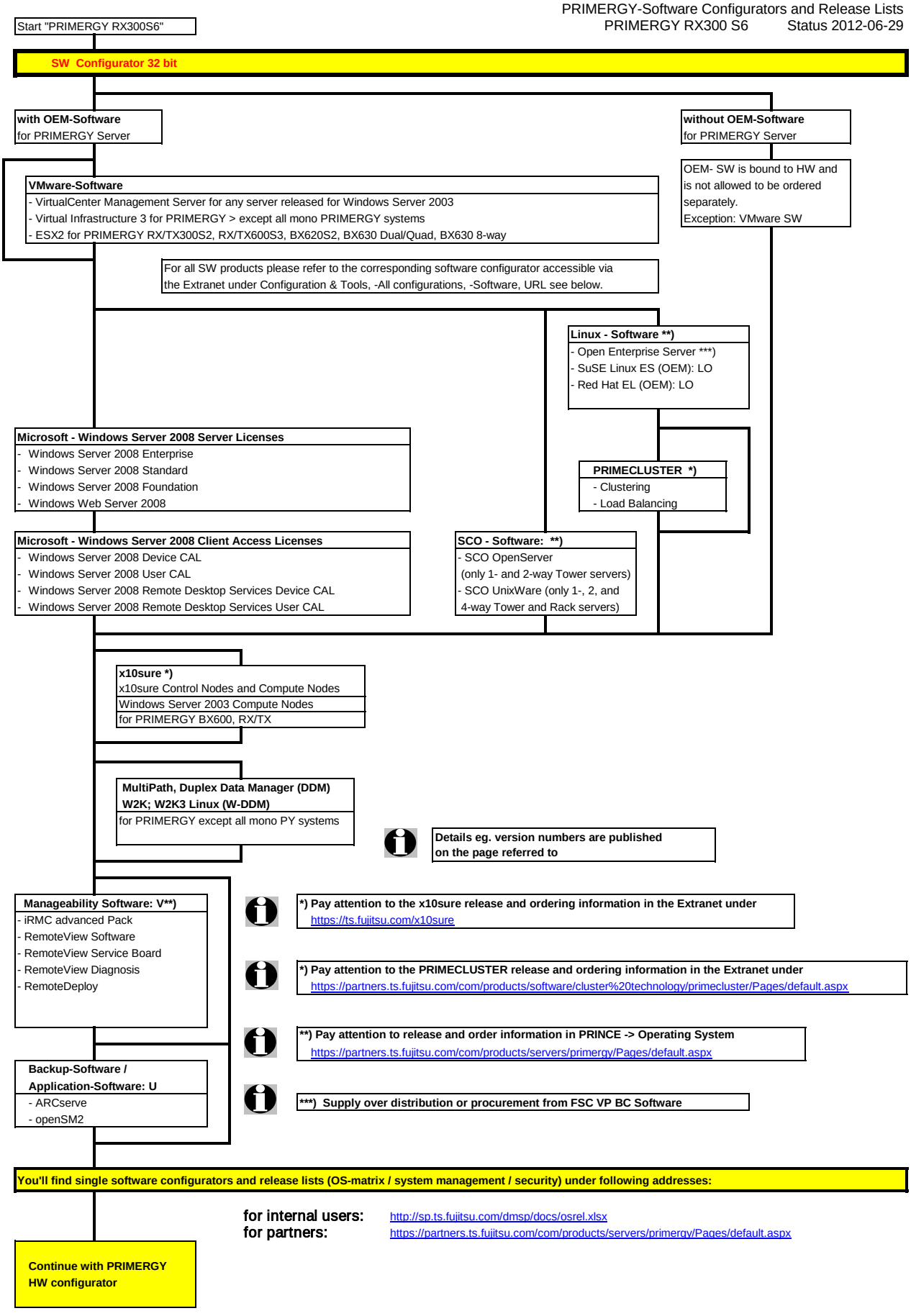
with 8 or 12 2.5" Hard disk drives



Key:

Included in basic unit Option

One CPU (first CPU) and one memory per CPU (first memory) has to be selected for an orderable basic unit.


Start "PRIMERGY RX300S6"
SW Configurator 32 bit
with OEM-Software
for PRIMERGY Server
without OEM-Software
for PRIMERGY Server
OEM- SW is bound to HW and is not allowed to be ordered separately.
Exception: VMware SW
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
For all SW products please refer to the corresponding software configurator accessible via the Extranet under Configuration & Tools, -All configurations, -Software, URL see below.
Linux - Software **)
- Open Enterprise Server ***)
- SuSE Linux ES (OEM): LO
- Red Hat EL (OEM): LO
Microsoft - Windows Server 2008 Server Licenses
- Windows Server 2008 Enterprise
- Windows Server 2008 Standard
- Windows Server 2008 Foundation
- 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
SCO - Software: **)
- SCO OpenServer (only 1- and 2-way Tower servers)
- SCO UnixWare (only 1-, 2, and 4-way Tower and Rack servers)
x10sure *)
x10sure Control Nodes and Compute Nodes
Windows Server 2003 Compute Nodes
for PRIMERGY BX600, RX/TX
MultiPath, Duplex Data Manager (DDM) W2K; W2K3 Linux (W-DDM)
for PRIMERGY except all mono PY systems
Details eg. version numbers are published on the page referred to
Manageability Software: V**)
- iRMC advanced Pack
- RemoteView Software
- RemoteView Service Board
- RemoteView Diagnosis
- RemoteDeploy
*) Pay attention to the x10sure release and ordering information in the Extranet under
https://ts.fujitsu.com/x10sure
*) 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
Backup-Software / Application-Software: U
- ARCserve
- openSM2
***) 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:
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
Continue with PRIMERGY HW configurator

Start "PRIMERGY RX300S6"

SW Configurator 64 bit (EM64T / IA64)

with OEM-Software
for PRIMERGY Server

without OEM-Software
for PRIMERGY Server

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

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

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 Server 2008 R2 Datacenter
- Windows Server 2008 R2 Enterprise
- Windows Server 2008 R2 Standard
- Windows Server 2008 R2 Foundation
- Windows Web Server 2008 R2

Microsoft - Windows Server 2008 Server Licenses
- Windows Server 2008 Datacenter
- Windows Server 2008 Enterprise
- Windows Server 2008 Standard
- Windows Server 2008 Foundation
- Windows Web Server 2008

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

Linux - Software *) **)
only EM64T
Open Enterprise Server ***)
- SuSE Linux ES (OEM): LO
- Red Hat EL (OEM): LO

PRIMECLUSTER *)
- Clustering
- Load Balancing

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

Manageability Software: V)**
only EM64T
- 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:

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

Continue with PRIMERGY HW configurator

Start PRIMERGY RX300 S6

Section | **Basic unit**

System unit consisting of:
*** 2U Housing including one power supply module**
- hot plug Power supply unit with 1 PSU module and power cord rack 4m lenght (can be upgraded with one additional PSU module)

*** Fan unit with 5 hot plug system-fans redundant**

*** SAS Backplane for 6x 3.5" HD or SAS Backplane for 8 or 12x 2.5" HD with cable connection to modular RAID Controller**
-> 3 different basic units for 6x 3.5" HD or 8 or 12x 2.5" HD
*** 9 memory DIMMs per CPU (max 192GB) => Total 18 DIMMs (max 384GB) for two CPU`s**
*** Drives/Bays**
- 6 bays 1" for hot plug 3.5" HD (1" high) or 8 or 12 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 12x 2,5" HD
- 1 bay SATA-CD- or DVD-ROM 0,5" height (option)
- 1 bay for opt. CSS-Display or LocalView LC-Display

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

Systemboard D2619 with:
*** Up to two Xeon Dual/Quad/Six-Core or Turbo Quad/Six Core CPU`s (Westmere-EP, LGA 1366 socket) with serial QPI links (Quick Path Interconnect) and three memory channels per CPU**
First CPU has to be selected for an orderable basic unit,
*** Chipset Intel® 5520P (codenamed Tylersburg-EP or 36D)**

*** 7 PCI slots: - 2x PCIe-2 x8 (wired x8, notched, possible to plug x16 card)**
- 5x PCIe-2 x8 (wired x4)
From 4 PCIe-slots each two wired x4 slots can be combined to one wired x8 slot

*** 18 memory slots for max. 384GB (12x32GB) RAM DDR3 available**
- Memory is divided into 9 DIMMs per CPU (3 channels with 3 slots per channel)
- Max. 3x reg 1.5V or 2x reg. 1.35V quad ranked / unbuffered modules are possible per channel
First Memory (one module) has to be selected for an orderable basic unit per CPU
- Memory upgrade is possible module wise
- Memory mirrroring 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 Zoar on-board**
*** iRMC S2 (integrated Remote Management Controller) on-board server management controller with dedicated 10/100 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 S2 (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 RS-232-C (serial, 9 pins)
* 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:
* 3x USB **2.0** (UHCI) with **480MBit/s,** no USB wakeup
* 1x VGA (15 pins) as an option

Interfaces internal:
* 1x released internal USB Interfaces for backup device,
* 1x USB **2.0** (UHCI) with **480MBit/s** for dongle funcionality, no USB wakeup
* 2x SATA for internal devices

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

A

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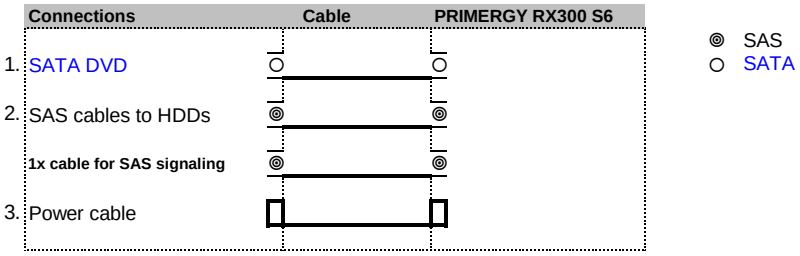
Cables included in basic unit



Rack version for 19'' racks with 1 hot plug Gold power supply module (Eff. 92%)	
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, Gold PSU**	**S26361-K1344-V101**
Basic unit with **8x 2,5" HDD bays, Gold PSU**	**S26361-K1344-V201**
Basic unit with **12x 2,5" HDD bays, Gold PSU**	**S26361-K1344-V301**
Carrier grade basic unit with **8x 2,5" HDD bays, -48V DC PSU**	**S26361-K1344-V801**

RX300 S6 Energy Star Family Certification possible

☆ NEBS level3 certification possible

NEBS level3 certification possible ☆

S26113-F555-E10
2nd Gold power supply 800W (hot plug) for redundancy
occupies one bay for hot plug power supply
max. 1x per system

S26113-F576-E50
2nd -48V DC power supply 800W (hot plug) for redundancy
occupies one bay for hot plug power supply
max. 1x per system

For later upgrade the following kit is available:

Gold power supply module 800W hot plug:	S26113-F555-L10
-48V DC power supply 800W hot plug:	S26113-F576-L50

S26361-F4000-E1 ☆
T-Handle Option
Two T-Handles for easier pull out of the rack
max. 1x per system

For later upgrade the following kit is available:

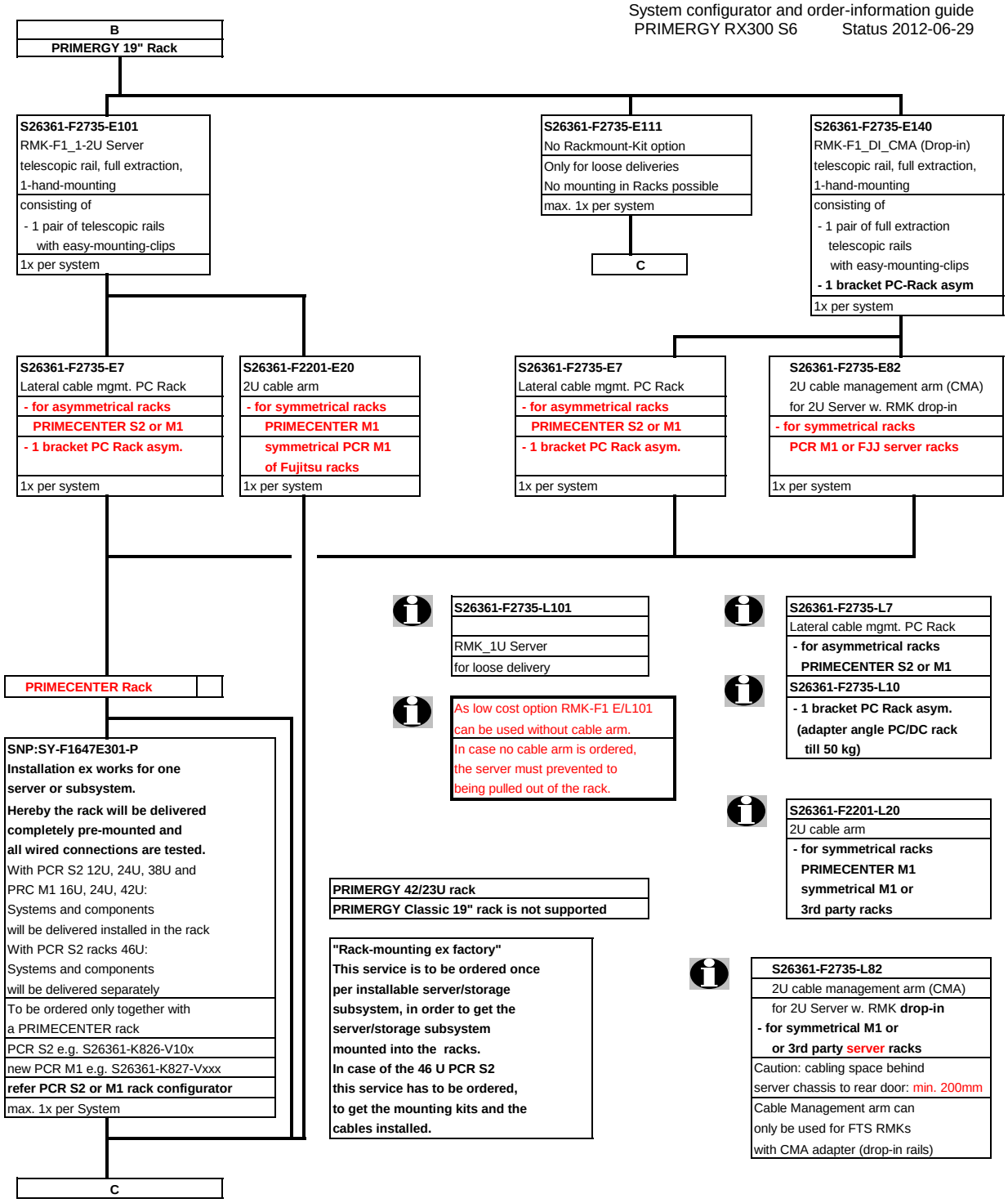
Two T-Handles Upgrade Option	S26361-F4000-L1

S26361-F3552-E1
TPM Module
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.

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

B


B
PRIMERGY 19" Rack
S26361-F2735-E101
RMK-F1_1-2U Server
telescopic rail, full extraction,
1-hand-mounting
consisting of
- 1 pair of telescopic rails
with easy-mounting-clips
1x per system
S26361-F2735-E111
No Rackmount-Kit option
Only for loose deliveries
No mounting in Racks possible
max. 1x per system
C
S26361-F2735-E140
RMK-F1_DI_CMA (Drop-in)
telescopic rail, full extraction,
1-hand-mounting
consisting of
- 1 pair of full extraction
telescopic rails
with easy-mounting-clips
- 1 bracket PC-Rack asym
1x per system
S26361-F2735-E7
Lateral cable mgmt. PC Rack
- for asymmetrical racks
PRIMECENTER S2 or M1
- 1 bracket PC Rack asym.
1x per system
S26361-F2201-E20
2U cable arm
- for symmetrical racks
PRIMECENTER M1
symmetrical PCR M1
of Fujitsu racks
1x per system
S26361-F2735-E7
Lateral cable mgmt. PC Rack
- for asymmetrical racks
PRIMECENTER S2 or M1
- 1 bracket PC Rack asym.
1x per system
S26361-F2735-E82
2U cable management arm (CMA)
for 2U Server w. RMK drop-in
- for symmetrical racks
PCR M1 or FJJ server racks
1x per system
S26361-F2735-L101
RMK_1U Server
for loose delivery
As low cost option RMK-F1 E/L101
can be used without cable arm.
In case no cable arm is ordered,
the server must prevented to
being pulled out of the rack.
S26361-F2735-L7
Lateral cable mgmt. PC Rack
- for asymmetrical racks
PRIMECENTER S2 or M1
S26361-F2735-L10
- 1 bracket PC Rack asym.
(adapter angle PC/DC rack
till 50 kg)
S26361-F2201-L20
2U cable arm
- for symmetrical racks
PRIMECENTER M1
symmetrical M1 or
3rd party racks
PRIMECENTER Rack
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 S2 12U, 24U, 38U and
PRC M1 16U, 24U, 42U:
Systems and components
will be delivered installed in the rack
With PCR S2 racks 46U:
Systems and components
will be delivered separately
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
PRIMERGY 42/23U rack
PRIMERGY Classic 19" rack is not supported
"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 the 46 U PCR S2
this service has to be ordered,
to get the mounting kits and the
cables installed.
S26361-F2735-L82
2U cable management arm (CMA)
for 2U Server w. RMK drop-in
- for symmetrical M1 or
or 3rd party server racks
Caution: cabling space behind
server chassis to rear door: min. 200mm
Cable Management arm can
only be used for FTS RMKs
with CMA adapter (drop-in rails)
C

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Section || Processor

There are 2 processor sockets available.
The first socket is always 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**
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		
Dual-Core CPU - 1x 64-bit Intel Xeon (4MB shared TLC = Third Level Cache) 800 MHz DDR3 Bus, 4,80 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon E5503 2C/2.00GHz/4M/4,80GT/s (80W)	**S26361-F3277-E200**	
Quad-Core CPU`s - 1x 64-bit Intel Xeon (4MB shared TLC = Third Level Cache) 800 MHz DDR3 Bus, 4,80 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon E5506 4C/2.13GHz/4M/4,8GT/s (80W)	**S26361-F3278-E213**	
Xeon E5507 4C/2.26GHz/4M/4,8GT/s (80W)	**S26361-F3278-E226**	
Xeon E5603 4C/1.60GHz/4M/4,80GT/s (80W)	**S26361-F3648-E160**	
Xeon E5606 4C/2.13GHz/8M/4,80GT/s (80W)	**S26361-F3648-E213**	
Xeon E5607 4C/2.26GHz/8M/4,80GT/s (80W)	**S26361-F3648-E226**	on special release
Turbo Quad-Core CPU`s - 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1066 MHz DDR3 Bus, 5,86 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon E5620 4C/2.40GHz/12M/5,86GT/s (80W)	**S26361-F3618-E240**	☆ NEBS level3 certification possible
Xeon E5630 4C/2.53GHz/12M/5,86GT/s (80W)	**S26361-F3618-E253**	
Xeon E5640 4C/2.66GHz/12M/5,86GT/s (80W)	**S26361-F3618-E266**	
Turbo Six-Core CPU`s - 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 5,86 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon E5645 6C/2.40GHz/12M/5,86GT/s (80W)	**S26361-F3633-E240**	☆
Xeon E5649 6C/2.53GHz/12M/5,86GT/s (80W)	**S26361-F3649-E253**	
Turbo Six-Core CPU`s - 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 6,40 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon X5650 6C/2.66GHz/12M/6,40GT/s (95W)	**S26361-F3619-E266**	
Xeon X5660 6C/2.80GHz/12M/6,40GT/s (95W)	**S26361-F3619-E280**	
Xeon X5670 6C/2.93GHz/12M/6,40GT/s (95W)	**S26361-F3619-E293**	
Xeon X5675 6C/3.06GHz/12M/6,40GT/s (95W)	**S26361-F3619-E306**	
Xeon X5680 6C/3.33GHz/12M/6,40GT/s (130W)	**S26361-F3619-E333**	
Xeon X5690 6C/3.46GHz/12M/6,40GT/s (130W)	**S26361-F3619-E346**	
Frequency Optimized Turbo Quad-Core CPU`s - 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 5,86 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon X5647 4C/2.93GHz/12M/5,86GT/s (130W)	**S26361-F3620-E293**	
Frequency Optimized Turbo Quad-Core CPU`s - 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 6,40 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon X5667 4C/3.06GHz/12M/6,40GT/s (95W)	**S26361-F3620-E306**	on special release
Xeon X5677 4C/3.46GHz/12M/6,40GT/s (130W)	**S26361-F3620-E346**	on special release
Xeon X5687 4C/3.60GHz/12M/6,40GT/s (130W)	**S26361-F3620-E360**	
Low Voltage Quad-Core CPU with max. 800MHz DDR3 speed - 1x 64-bit Intel Xeon (4MB shared TLC = Third Level Cache) 800 MHz DDR3 Bus, 4,80 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon L5609 4C/1.86GHz/12M/4.80GT/s (40W)	**S26361-F3621-E186**	
Low Voltage Turbo Quad/Six-Core CPU`s with max. DDR3 Bus Speed 1066MHz - 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1066 MHz DDR3 Bus, 5,86 GT/s QPI Bus and passive heat sink occupies socket for one CPU		
Xeon L5630 4C/2.13GHz/12M/5,86GT/s (40W)	**S26361-F3622-E213**	
Xeon L5640 6C/2.26GHz/12M/5.86GT/s (60W)	**S26361-F3622-E226**	

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**

D

D

Section III Memory

- There are 9 memory slots per CPU for max.
72GB (9x 8GB single / dual rank 1.5V RDIMM´s)
96GB (6x 16GB quad rank 1.5V RDIMMs)
12GB (6x 2GB UDIMMs)
=> max. 192GB for two CPU`s (96GB per CPU)
(For explanation of following terms refer to section "Memory Configurations"
- The memory area is divided into 3 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 and slot 3 belongs to memory bank 3
Systems with 3DPC (9 DIMMs / CPU) do not support mix of dual rank and quad rank modules

Registered and unbuffered memory modules can be selected
No mix of registered and unbuffered modules allowed.
DDR3 1066 and 1333MHz modules can be mixed, but run always with the slower speed.
With two DIMMs per channel, 1.5V DIMMs operate with 1333Mhz, 1.35V with 1066MHz as max., dep. on CPU
If 1.5V DIMMs and 1.35V (Low Voltage) DIMMs are mixed, DIMMs will run at 1.5V
SDDC (Chipkill) is supported only for registered memory modules.

1.) In the "Independent Channel Mode" is following configuration possible
- Each slot can optionally be equipped either with registered x4 organized DDR3 modules:
2GB **single rank**, 4GB and 8GB **dual rank, 16GB quad rank**
or with unbuffered x8 organized DDR3 modules: 2GB **dual rank**

2.) In the "Spare Channel Mode" is following configuration possible
- Each memory bank can optionally be equipped with 3x2GB **single rank**,
3x4GB and 3x8GB **dual rank or 3x 16GB quad rank** DDR3 modules.
Each slot of one bank has to be equipped with identical modules for spare channel mode
In channel A and B of CPU 1 or channel D and E of CPU 2 are always the active memory modules,
in channel C of CPU 1 and channel F of CPU 2 is always the spare module

No special order codes with UDIMMs are offered for this mode

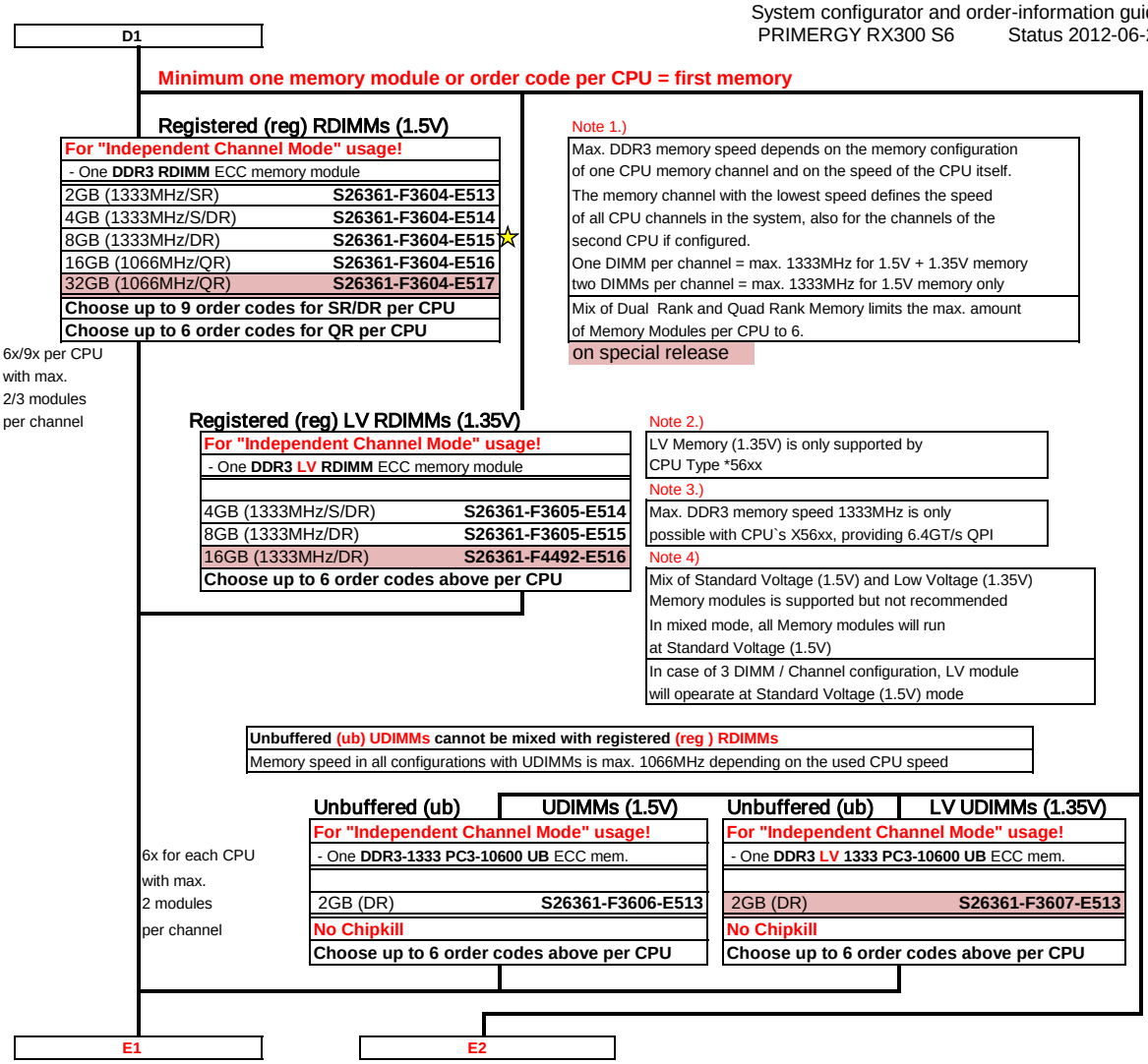
3.) In the "Mirrored Channel Mode" is following configuration possible
- Each memory bank can optionally be equipped with 2x2GB **single rank**,
2x4GB and 2x8GB **dual rank** or 2x16GB **quad rank** DDR3 modules.
In each memory bank channel A and B of CPU 1 or channel D and E of CPU 2 have to be equipped with identical modules for mirrored channel mode. Channel C of CPU 1 and channel F of CPU 2 is not equipped
In channel B is always the mirrored memory of channel A of CPU 1
In channel E is always the mirrored memory of channel D of CPU 2

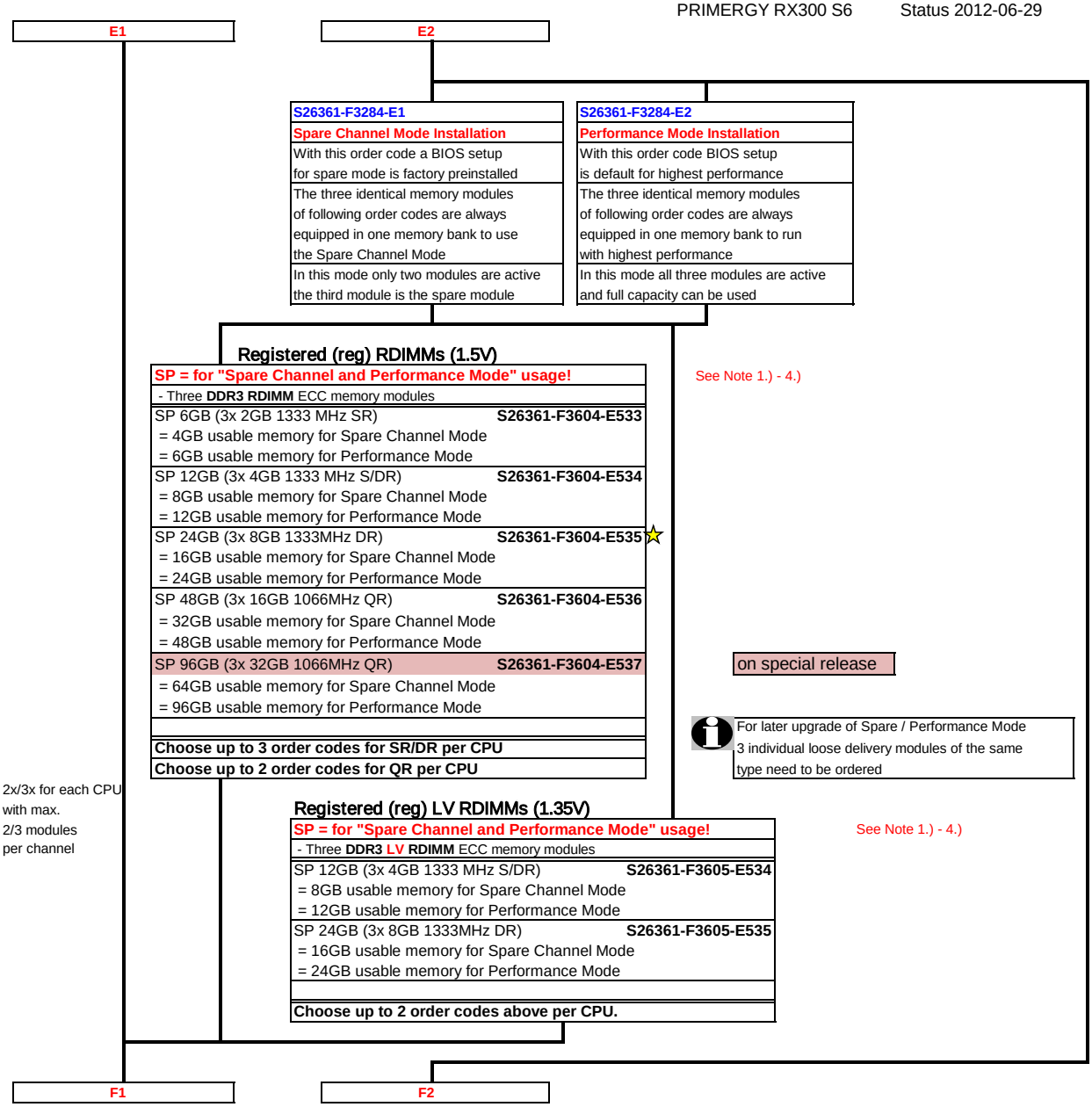
No special order codes with UDIMMs are offered for this mode

- For each CPU minimum 1 memory module has to be configured in Independent Channel Mode
(=> Additional memory extensions can still be configured up to eight times per CPU) **or**
one bank has to be equipped with two modules (channel A+B for CPU 1 or D+E for CPU 2) in Mirrored Channel Mode
(=> Additional memory extensions can still be configured up to two times per CPU) **or**
one bank has to be equipped with three modules (channel A+B+C for CPU 1 or D+E+F for CPU 2) in Spare Channel Mode or Performance Mode
(=> Additional memory extensions can still be configured up to two times per CPU)

For a description of memory configurations refer to section "Memory Configurations"

D1


D1
Minimum one memory module or order code per CPU = first memory
Registered (reg) RDIMMs (1.5V)
For "Independent Channel Mode" usage!
- One DDR3 RDIMM ECC memory module
2GB (1333MHz/SR) S26361-F3604-E513
4GB (1333MHz/S/DR) S26361-F3604-E514
8GB (1333MHz/DR) S26361-F3604-E515
16GB (1066MHz/QR) S26361-F3604-E516
32GB (1066MHz/QR) S26361-F3604-E517
Choose up to 9 order codes for SR/DR per CPU
Choose up to 6 order codes for QR per CPU
6x/9x per CPU with max. 2/3 modules per channel
Note 1.)
Max. DDR3 memory speed depends on the memory configuration of one CPU memory channel and on the speed of the CPU itself.
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.
One DIMM per channel = max. 1333MHz for 1.5V + 1.35V memory
two DIMMs per channel = max. 1333MHz for 1.5V memory only
Mix of Dual Rank and Quad Rank Memory limits the max. amount of Memory Modules per CPU to 6.
on special release
Registered (reg) LV RDIMMs (1.35V)
For "Independent Channel Mode" usage!
- One DDR3 LV RDIMM ECC memory module
4GB (1333MHz/S/DR) S26361-F3605-E514
8GB (1333MHz/DR) S26361-F3605-E515
16GB (1333MHz/DR) S26361-F4492-E516
Choose up to 6 order codes above per CPU
Note 2.)
LV Memory (1.35V) is only supported by CPU Type *56xx
Note 3.)
Max. DDR3 memory speed 1333MHz is only possible with CPU`s X56xx, providing 6.4GT/s QPI
Note 4)
Mix of Standard Voltage (1.5V) and Low Voltage (1.35V) Memory modules is supported but not recommended
In mixed mode, all Memory modules will run at Standard Voltage (1.5V)
In case of 3 DIMM / Channel configuration, LV module will opearate at Standard Voltage (1.5V) mode
Unbuffered (ub) UDIMMs cannot be mixed with registered (reg) RDIMMs
Memory speed in all configurations with UDIMMs is max. 1066MHz depending on the used CPU speed
Unbuffered (ub) UDIMMs (1.5V)
For "Independent Channel Mode" usage!
- One DDR3-1333 PC3-10600 UB ECC mem.
2GB (DR) S26361-F3606-E513
No Chipkill
Choose up to 6 order codes above per CPU
Unbuffered (ub) LV UDIMMs (1.35V)
For "Independent Channel Mode" usage!
- One DDR3 LV 1333 PC3-10600 UB ECC mem.
2GB (DR) S26361-F3607-E513
No Chipkill
Choose up to 6 order codes above per CPU
6x for each CPU with max. 2 modules per channel
E1
E2


E1
E2
S26361-F3284-E1
Spare Channel Mode Installation
With this order code a BIOS setup for spare mode is factory preinstalled
The three identical memory modules of following order codes are always equipped in one memory bank to use the Spare Channel Mode
In this mode only two modules are active the third module is the spare module
S26361-F3284-E2
Performance Mode Installation
With this order code BIOS setup is default for highest performance
The three identical memory modules of following order codes are always equipped in one memory bank to run with highest performance
In this mode all three modules are active and full capacity can be used
Registered (reg) RDIMMs (1.5V)
SP = for "Spare Channel and Performance Mode" usage!
- Three DDR3 RDIMM ECC memory modules
SP 6GB (3x 2GB 1333 MHz SR) S26361-F3604-E533
= 4GB usable memory for Spare Channel Mode
= 6GB usable memory for Performance Mode
SP 12GB (3x 4GB 1333 MHz S/DR) S26361-F3604-E534
= 8GB usable memory for Spare Channel Mode
= 12GB usable memory for Performance Mode
SP 24GB (3x 8GB 1333MHz DR) S26361-F3604-E535
= 16GB usable memory for Spare Channel Mode
= 24GB usable memory for Performance Mode
SP 48GB (3x 16GB 1066MHz QR) S26361-F3604-E536
= 32GB usable memory for Spare Channel Mode
= 48GB usable memory for Performance Mode
SP 96GB (3x 32GB 1066MHz QR) S26361-F3604-E537
= 64GB usable memory for Spare Channel Mode
= 96GB usable memory for Performance Mode
Choose up to 3 order codes for SR/DR per CPU
Choose up to 2 order codes for QR per CPU
See Note 1.) - 4.)
on special release
For later upgrade of Spare / Performance Mode 3 individual loose delivery modules of the same type need to be ordered
2x/3x for each CPU with max. 2/3 modules per channel
Registered (reg) LV RDIMMs (1.35V)
SP = for "Spare Channel and Performance Mode" usage!
- Three DDR3 LV RDIMM ECC memory modules
SP 12GB (3x 4GB 1333 MHz S/DR) S26361-F3605-E534
= 8GB usable memory for Spare Channel Mode
= 12GB usable memory for Performance Mode
SP 24GB (3x 8GB 1333MHz DR) S26361-F3605-E535
= 16GB usable memory for Spare Channel Mode
= 24GB usable memory for Performance Mode
Choose up to 2 order codes above per CPU.
See Note 1.) - 4.)
F1
F2

F1

F2

S26361-F3284-E3

Mirrored Channel Mode Installation

With this order code a BIOS setup for Mirrored Channel Mode is factory preinstalled

The two identical memory modules of following order codes are always equipped in one memory bank to use the Mirrored Channel Mode

In this mode only one module contains active data, the second modul contains the mirrored data

Registered (reg) RDIMMs (1.5V)

See Note 1.) - 4.)

MM = for "Mirrored Channel Mode" usage!	
- Two **DDR3 RDIMMs** ECC memory modules	
MM 4GB (2x 2GB 1333MHz SR) = 2GB usable for Mirrored Channel Mode	**S26361-F3604-E523**
MM 8GB (2x 4GB 1333MHz S/DR) = 4GB usable for Mirrored Channel Mode	**S26361-F3604-E524**
MM 16GB (2x 8GB 1333MHz DR) = 8GB usable for Mirrored Channel Mode	**S26361-F3604-E525** ☆
MM 32GB (2x 16GB 1066MHz QR) = 16GB usable for Mirrored Channel Mode	**S26361-F3604-E526**
MM 64GB (2x 32GB 1066MHz QR) = 32GB usable for Mirrored Channel Mode	**S26361-F3604-E527**
Choose up to 3 order codes for SR/DR per CPU	
Choose up to 2 order codes for QR per CPU	

on special release

For later upgrade of Mirroring Mode 2 individual loose delivery modules of the same type need to be ordered

2/3x for each CPU with max. 2/3 modules per channel

Registered (reg) LV RDIMMs (1.35V)

See Note 1.) - 4.)

MM = for "Mirrored Channel Mode" usage!	
- Two **DDR3 LV RDIMM** ECC memory modules	
MM 8GB (2x 4GB 1333MHz S/DR) = 4GB usable for Mirrored Channel Mode	**S26361-F3605-E524**
MM 16GB (2x 8GB 1333MHz DR) = 8GB usable for Mirrored Channel Mode	**S26361-F3605-E525**
Choose up to 2 order codes per CPU	

Loose Delivery of memory modules (upgrade)		
- One **DDR3 RDIMM** ECC memory module, 1.5V		
2GB (1333MHz/SR)	**S26361-F3604-L513**	
4GB (1333MHz/SR)	**S26361-F3604-L510**	
8GB (1333MHz/DR)	**S26361-F3604-L515**	
16GB (1066MHz/QR)	**S26361-F3604-L516**	
32GB (1066MHz/QR)	**S26361-F3604-L517**	on special release
- One **DDR3 LV RDIMM** ECC memory module, 1.35V		
4GB (1333MHz/SR)	**S26361-F3605-L510**	
8GB (1333MHz/DR)	**S26361-F3605-L515**	
- One **DDR3 UDIMM** ECC memory module, 1.5V		
2GB (1333MHz/DR)	**S26361-F3606-L513**	
- One **DDR3 LV UDIMM** ECC memory module, 1.35V		
2GB (1333MHz/DR)	**S26361-F3607-L513**	on special release
For later upgrade of Mirroring / Spare / Performance Mode, 2 or 3 individual memory modules need to be ordered		

F3

F3

Section IV Graphics

Graphics Controller integrated in iRMC S2 (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)

S26361-F2571-E16
Optional Front-VGA
consists of internal cable and front VGA connector
max. 1x per system

Graphics Controller integrated in iRMC with 32 MB attached Memory with following resolution:
- 16 bit color with maximum resolution of 1600 x 1200
- 24 bit color with maximum resolution of 1280 x 1024
- 32 bit color with maximum resolution of 1152 x 864

This resolution is also available via iRMC advance video redirection.
NOTE: Only VESA-compliant graphics modes are supported

S26361-F2748-E637
PY VGA LP card 512MB PCI-e x1
NVIDIA NVS300
512 MB PCIe-x1
2x DVI or 2x VGA or
1x DVI plus 1x VGA
cables adapters included
Dual head + fully 3-D
supported for Windows OS
only native driver support for Linux OS
low profile bracket
max. 1x per system

The hight end optional NVIDIA NVS300 graphic card offers dual head operation and fully 3D video support.
The cables for either two times DVI or VGA connections are part of the delivery.
Remote Video direction via iRMC must be disabled.
This PCIe-x1 card can also be installed in any PCIe-x4, x8 or x16 slot.
Only one card per server is allowed.

PY VGA card must be installed in slot 4

S26361-F2748-L637
PY VGA LP card 512MB PCI-e x1
for loose delivery

G

Memory Configuration PRIMERGY RX300 S6

Each CPU offers **9 Slots** for DDR3 Memory Modules organised in **3 Banks and 3 Channels.**
If you need more than 9 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 4 different kinds of DDR3 Memory Modules available: UDIMM / UDIMM LV and RDIMM / RDIMM LV
UDIMM and RDIMM offer different functionality. Mix of UDIMM + RDIMM is not alloved.
Mixing of Standard + Low Voltage DIMM´s of the same type is allowed, but not recommendet (therefore not configurable ex works)
If 1.5V and 1.35V DIMMs are mixed, the DIMMs will run at 1.5V
Mixing of SR / DR and QR Memory Modules will limit the max. amount of modules per CPU to 6.

Mode	Configuration	UDIMM	RDIMM	Application
chip kill support	any	n.a.	yes	detect multi-bit errors
Independant Channel Mode	1, 2 or 3 Modules per Bank	x	x	offers max. flexibility, upgradeability, capacity use UDIMM modules for lowest cost
Mirrored Channel Mode	2 identical Modules / Bank	**)	x	offers maximum security
Performance Mode *)	3 identical Modules / Bank	**)	x	offers maximum performance and capacity
Spare Channel Mode *)	3 identical Modules / Bank	**)	x	balances security and capacity

*) = Performance Mode and Spare mode use different BIOS settings.
**) = technically possible but no Order Numbers available, use at your own risk
x = order codes available

Capacity	Configuration	UDIMM	RDIMM	RDIMM LV	Notes
Min. Memory per CPU	1 Module / CPU	1x2GB	1x2GB	1x 4GB	with one CPU
Max. Memory per CPU	6/9 Modules / CPU	6x2GB	6x16GB	6x 8GB	with one CPU
Max. Memory per System	12 Modules / System	24GB	192GB	96GB	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
One DIMM per channel = max. 1333MHz, two DIMMs per channel = max. 1333MHz for 1.5V / max. 1066 for 1.35V memory,
three DIMMs per channel = max. 800MHz.
The memory channel with the lowest speed defines the speed of all CPU channels in the system

DIMM Type	DIMM Slots per Channel	DIMMs populated per Channel	Memory Speed max (CPU dependent)	Ranks per DIMM
RDIMM 1.5V 1333Mhz	2 / 3	1	800, 1066, 1333	SR / DR
	2 / 3	1	800, 1066	QR
	2 / 3	2	800, 1066, 1333	Mix of SR + DR
	2 / 3	2	800	Mix of QR + SR / DR
	3	3	800	Mix of SR + DR
RDIMM LV / 1.35V 1333Mhz	2 / 3	1	800, 1066, 1333	SR / DR
	2 / 3	1	800, 1066	QR*
	2 / 3	2	800, 1066	Mix of SR + DR
	2 / 3	2	800	Mix of QR* + SR / DR
	3	3	800	Mix of SR + DR **
UDIMM 1.5V 1333Mhz	2 / 3	1	800, 1066, 1333	SR / DR
	2 / 3	2	800, 1066, 1333	Mix of SR + DR
UDIMM LV / 1.35V 1333Mhz	2 / 3	1	800, 1066, 1333	SR / DR
	2 / 3	2	800, 1066	Mix of SR + DR

* no memory modules released for this configuration
** lost LV-mode, memory will switch to 1,5V Vcc automatically

Used CPU	Max. Memory-Bus speed depending on DIMMs / channel if following memory speed is used for specific CPU`s														
	UDIMM 1333 MHz 1.5V			UDIMM 1333 MHz LV / 1.35V			RDIMM 1333 MHz 1.5V			RDIMM 1333 MHz LV / 1.35V			RDIMM 1066 MHz (QR) 1.5V		
Populated Dimms / Channel	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Dual-Core CPU with max. 800MHz DDR3 speed (4.8GT/s)															
Xeon E5503 2C/2.00GHz/2M/4,80GT/s (80W)	800	800	-	800	800	-	800	800	800	800	800	-	800	800	-
Quad-Core CPU`s with max. 800MHz DDR3 speed (4.8GT/s)															
Xeon E5506 4C/2.13GHz/4M/4,8GT/s (80W)	800	800	-	800	800	-	800	800	800	800	800	-	800	800	-
Xeon E5507 4C/2.26GHz/4M/4,8GT/s (80W)	800	800	-	800	800	-	800	800	800	800	800	-	800	800	-
Turbo Quad-Core CPU`s with max. 1066MHz DDR3 speed (5.86GT/s)															
Xeon E5620 4C/2.40GHz/12M/5,86GT/s (80W)	1066	1066	-	1066	1066	-	1066	1066	800	1066	1066	-	1066	800	-
Xeon E5630 4C/2.53GHz/12M/5,86GT/s (80W)	1066	1066	-	1066	1066	-	1066	1066	800	1066	1066	-	1066	800	-
Xeon E5640 4C/2.66GHz/12M/5,86GT/s (80W)	1066	1066	-	1066	1066	-	1066	1066	800	1066	1066	-	1066	800	-
Turbo Six-Core CPU`s with max. 1333MHz DDR3 speed (5.86GT/s)															
Xeon E5645 6C/2.40GHz/12M/5,86GT/s (80W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-
Xeon E5649 6C/2.53GHz/12M/5,86GT/s (80W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-
Turbo Six-Core CPU`s with max. 1333MHz DDR3 speed (6.4GT/s)															
Xeon X5650 6C/2.66GHz/12M/6,40GT/s (95W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-
Xeon X5660 6C/2.80GHz/12M/6,40GT/s (95W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-
Xeon X5670 6C/2.93GHz/12M/6,40GT/s (95W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-
Xeon X5680 6C/3.33GHz/12M/6,40GT/s (130W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-
Frequency Optimized Turbo Quad-Core CPU`s with max. 1333MHz DDR3 speed (6.4GT/s)															
Xeon X5667 4C/3.06GHz/12M/6,40GT/s (95W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-
Xeon X5677 4C/3.46GHz/12M/6,40GT/s (130W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-
Low Voltage Quad-Core CPU with max. 1066MHz DDR3 speed (4.8GT/s)															
Xeon L5609 4C/1.86GHz/12M/4.80GT/s (40W)	1066	1066	-	1066	1066	-	1066	1066	800	1066	1066	-	1066	1066	-
Low Voltage Turbo Quad-Core CPU with max. 1066/1333MHz DDR3 speed (5.86GT/s)															
Xeon L5630 4C/2.13GHz/12M/5,86GT/s (40W)	1066	1066	-	1066	1066	-	1066	1066	800	1066	1066	-	1066	800	-
Xeon L5640 6C/2.40GHz/12M/5.86GT/s (60W)	1333	1333	-	1333	1066	-	1333	1333	800	1333	1066	-	1066	800	-

SR - Single Rank - 1Rx4
DR - Dual Rank - 2Rx4
QR - Quad Rank - 4Rx4

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

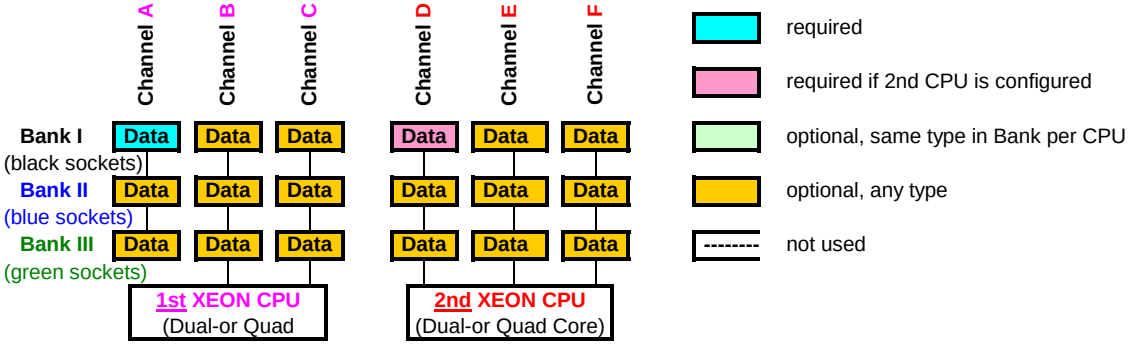
1333
1066
800
not supported
special release

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

- A so called Bank consits of 1 memory module on every Channel available on one CPU (examples see below)
  - **Bank I on CPU 1** up to 3 memory modules connected to Channel A, B and C on the first CPU
  - **Bank II on CPU 1** up to 3 memory modules connected to Channel A, B and C on the first CPU
  - **Bank III on CPU 1** up to 3 memory modules connected to Channel A, B and C on the first CPU
  - **Bank I on CPU 2** up to 3 memory modules connected to Channel D, E and F on the second CPU
  - **Bank II on CPU 2** up to 3 memory modules connected to Channel D, E and F on the second CPU
  - **Bank III on CPU 2** up to 3 memory modules connected to Channel D, E and F on the second CPU

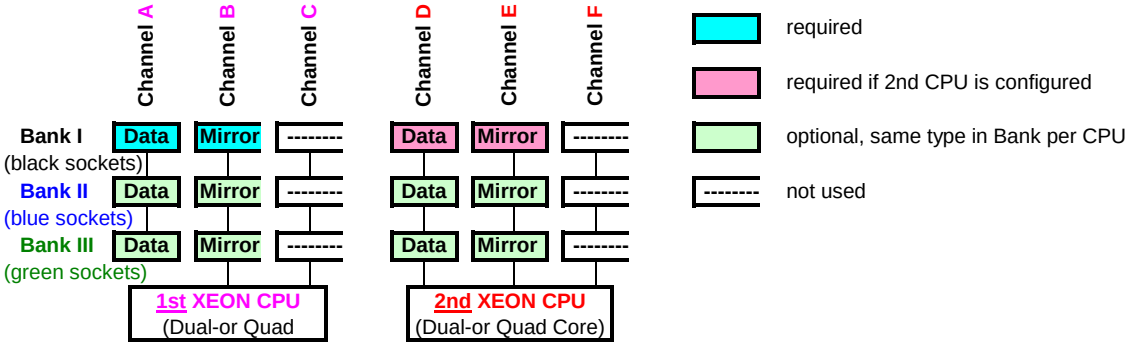
- See below and next page for a detailed descriptions of the memory configuration supported.

1. Independent Channel Mode



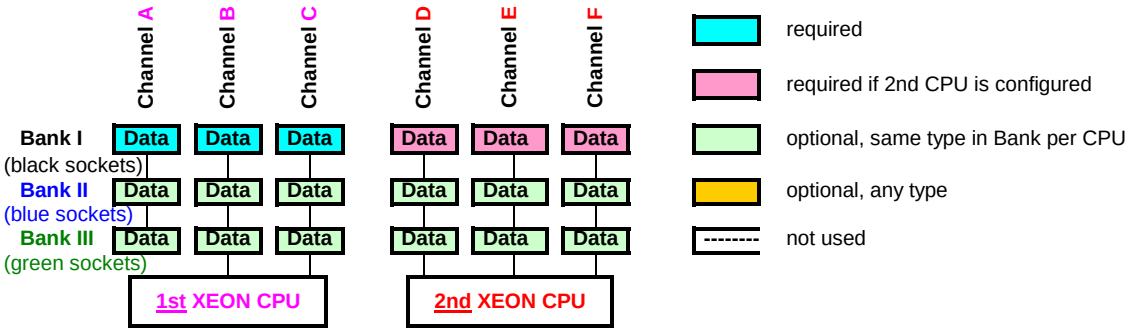
Independent Channel Mode allows all channels to be populated in any order
Can run with differently rated DIMMs and use the settings of the slowest DIMM within a channel

2. Mirrored Channel Mode



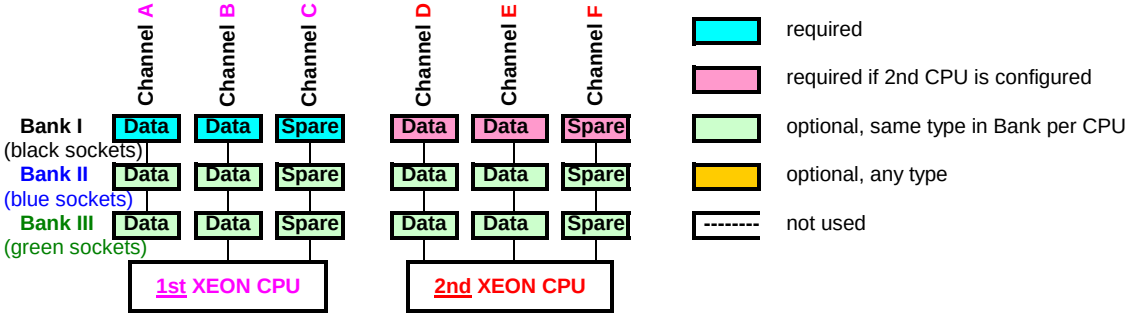
Mirrored Channel Mode requires identical modules on channel A and B (1st CPU) or channel D and E (2nd CPU)
50% of the capacity is used for the mirror => the available memory for applications is only half of the installed memory
Channel C (1st CPU) or channel F (2nd CPU) are not usable in Mirrored Channel Mode

3. Performance Channel Mode



Performance Channel Mode requires identical modules on all channels of each Bank per CPU

4. Spare Channel Mode



Spare Channel Mode requires identical modules on all channels of each Bank per CPU
one third of the capacity is used for the spare => the available memory for applications is two thirds of the installed memroy
Spare Channel Mode is supported using RDIMM memory modules

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Section V Accessible drives

Setup RX300 S6 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 (as soon as released)	S26341-F103-L119
External Blu-Ray Drive (as soon as released)	S26341-F103-L120
2) USB Memorybird:	
MyUSBS A910 8GB, MLC Flash	S26391-F6048-L208
MyUSBS A910 16GB, MLC Flash	S26391-F6048-L216

1x

S26361-F3531-E2
Blu-ray Combo slim SATA
6x BD-ROM, 16x DVD, 40x CD
BD DL and all CD/DVD formats
0.5 x 5.25", black bezel
max. 1x per system

S26361-F3269-E2
DVD-RW supermulti slim SATA
all formats, DUAL/DL, DVD-RAM
0.5 x 5.25", black bezel
max. 1x per system

S26361-F3641-E2
Blu-ray Triple Writer slim SATA
6x BD-RW, 8x DVD, 24x CD
BD DL and all CD/DVD formats
0.5 x 5.25"
max. 1x per system

1x

S26361-F3324-E7
Tape drive DDS Gen5 USB 3.5"
36GB, 3MB/s, USB 2.0
1.6 x 3.5", black bezel
within a tape cage
incl. description (Ger/US)
cleaning cartridge
occupies 2 x 1" hard disk bays
max. 1x per system

S26361-F3857-E7
RDX drive USB 3.5" internal
80-320GB, 25MB/s, USB 2.0
1.6 x 3.5", black bezel
within a tape cage
incl. description (Ger/US)
without RDX cartridges
occupies 2 x 1" hard disk bays
max. 1x per system

Only for basic unit V1xx

RDX cartridges must be ordered separately
RDX 160GB = S26361-F3857-L160
RDX 320GB = S26361-F3857-L320
RDX 500GB = S26361-F3857-L500
RDX 1TB = S26361-F3857-L600 *
10x RDX160 = S26361-F3857-L169
10x RDX320 = S26361-F3857-L329
* as soon as available

1x

S26361-F3324-E5
Tape drive DDS Gen5 USB 3.5"
36GB, 3MB/s, USB 2.0
Connector: USB "B"
with USB cable
incl. description (Ger/US)
cleaning cartridge
1.6 x 3.5", black bezel
max. 1x per system

S26361-F3857-E5
RDX drive USB 3.5" internal
80-320GB, 25MB/s, USB 2.0
Connector: USB "B"
with USB cable
incl. description (Ger/US)
without RDX cartridges
1.6 x 3.5", black bezel
max. 1x per system

Only for basic unit V2xx

RDX cartridges must be ordered separately
RDX 160GB = S26361-F3857-L160
RDX 320GB = S26361-F3857-L320
RDX 500GB = S26361-F3857-L500
RDX 1TB = S26361-F3857-L600 *
10x RDX160 = S26361-F3857-L169
10x RDX320 = S26361-F3857-L329
* as soon as available

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Section VI Hard disks drives

Modular Raid controller is connected to internal HDDs

For basic units V1xx up to 6 SAS 3.5" hard disks can be configured also in mixed configuration.

If the option **"Tape drive"** is configured only 4 bays for hard disks are available

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

6x /
4x with tape for
basic unit V1xx

S26361-F3293-E250
HD 250GB 7.2krpm 3.5"
7200rpm,<9.0 ms, 8MB Cache
ECO SATA 3Gb/s
hot plug/hot replace tray
max. 6x (or 4x) per system

SAS 6Gb/s 3.5" with hot plug/hot replace tray

300GB 10000rpm,<4,5ms, 8MB Cache	S26361-F4005-E530
450GB 10000rpm,<4,5ms, 8MB Cache	S26361-F4005-E545
600GB 10000rpm,<4,5ms, 8MB Cache	S26361-F4005-E560

max. 6x (or 4x) per system

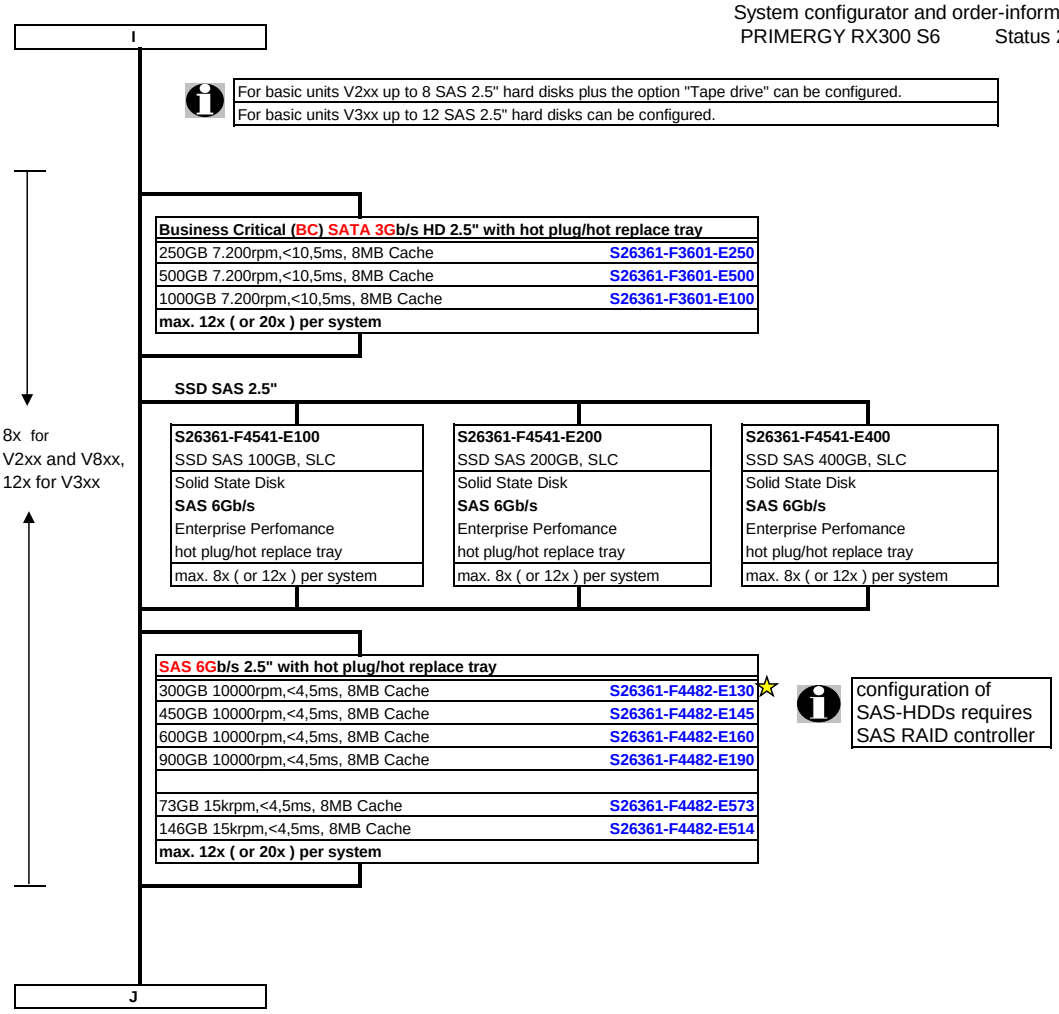
S26361-F3291-E514
HD 146GB 15krpm 3.5"
15.000rpm,<4ms, 8MB Cache
SAS 3Gb/s
hot plug/hot replace tray
max. 6x (or 4x) per system

Business Critical (BC) SATA 3Gb/s HD 3.5" with hot plug/hot replace tray

250GB 7.200rpm,<9,0ms, 8MB Cache	S26361-F3294-E250 ☆
500GB 7.200rpm,<9,0ms, 8MB Cache	S26361-F3294-E500 ☆
1000GB 7.200rpm,<9,0ms, 8MB Cache	S26361-F3294-E100 ☆
2000GB 7.200rpm,<9,0ms, 8MB Cache	S26361-F3294-E200 ☆

max. 6x (or 4x) per system

I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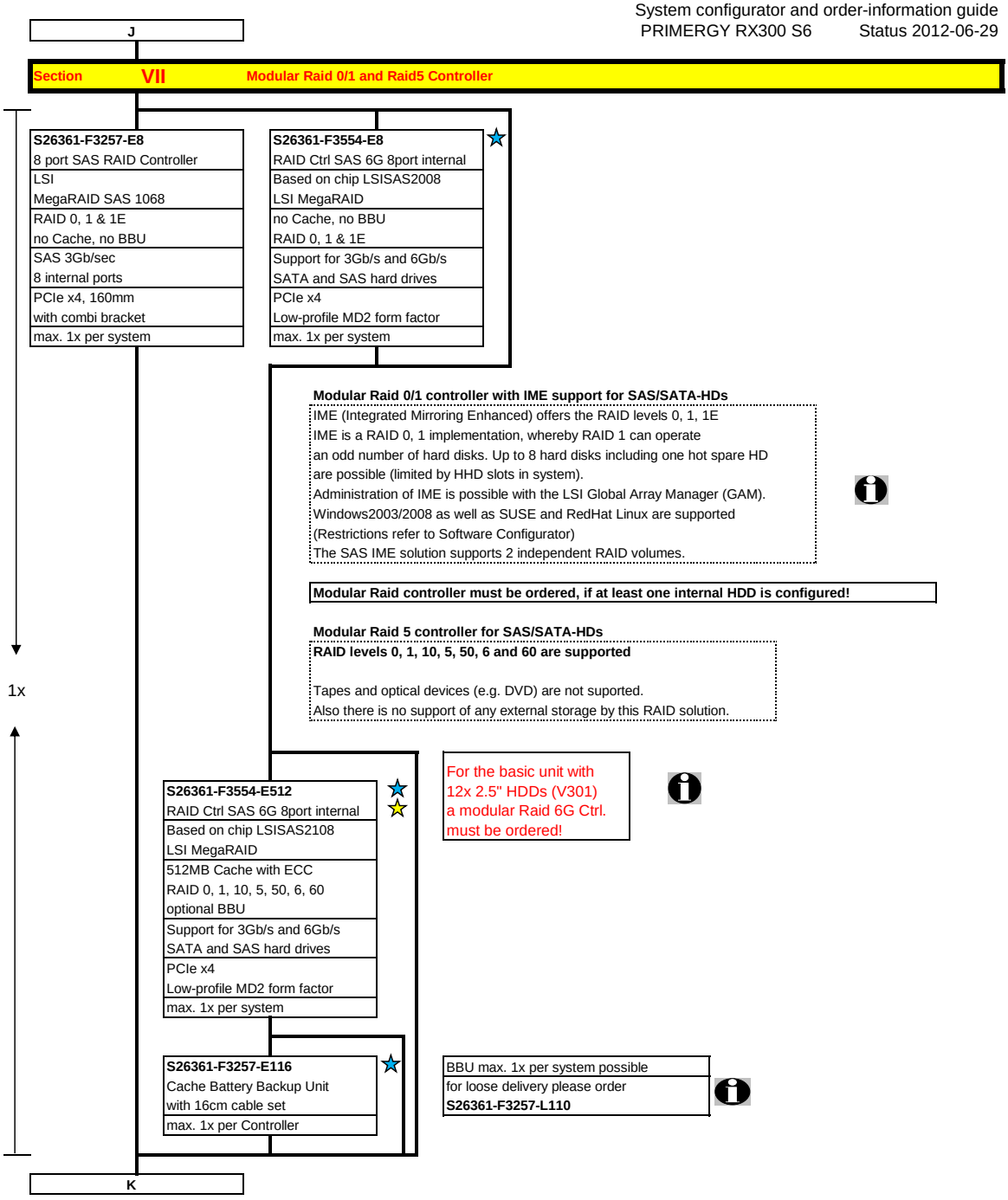
For basic units V2xx up to 8 SAS 2.5" hard disks plus the option "Tape drive" can be configured.
For basic units V3xx up to 12 SAS 2.5" hard disks can be configured.
Business Critical (BC) SATA 3Gb/s HD 2.5" with hot plug/hot replace tray
250GB 7.200rpm,<10,5ms, 8MB Cache S26361-F3601-E250
500GB 7.200rpm,<10,5ms, 8MB Cache S26361-F3601-E500
1000GB 7.200rpm,<10,5ms, 8MB Cache S26361-F3601-E100
max. 12x (or 20x) per system
SSD SAS 2.5"
8x for V2xx and V8xx, 12x for V3xx
S26361-F4541-E100
SSD SAS 100GB, SLC
Solid State Disk
SAS 6Gb/s
Enterprise Perfomance
hot plug/hot replace tray
max. 8x (or 12x) per system
S26361-F4541-E200
SSD SAS 200GB, SLC
Solid State Disk
SAS 6Gb/s
Enterprise Perfomance
hot plug/hot replace tray
max. 8x (or 12x) per system
S26361-F4541-E400
SSD SAS 400GB, SLC
Solid State Disk
SAS 6Gb/s
Enterprise Perfomance
hot plug/hot replace tray
max. 8x (or 12x) per system
SAS 6Gb/s 2.5" with hot plug/hot replace tray
300GB 10000rpm,<4,5ms, 8MB Cache S26361-F4482-E130
450GB 10000rpm,<4,5ms, 8MB Cache S26361-F4482-E145
600GB 10000rpm,<4,5ms, 8MB Cache S26361-F4482-E160
900GB 10000rpm,<4,5ms, 8MB Cache S26361-F4482-E190
73GB 15krpm,<4,5ms, 8MB Cache S26361-F4482-E573
146GB 15krpm,<4,5ms, 8MB Cache S26361-F4482-E514
max. 12x (or 20x) per system
configuration of SAS-HDDs requires SAS RAID controller
J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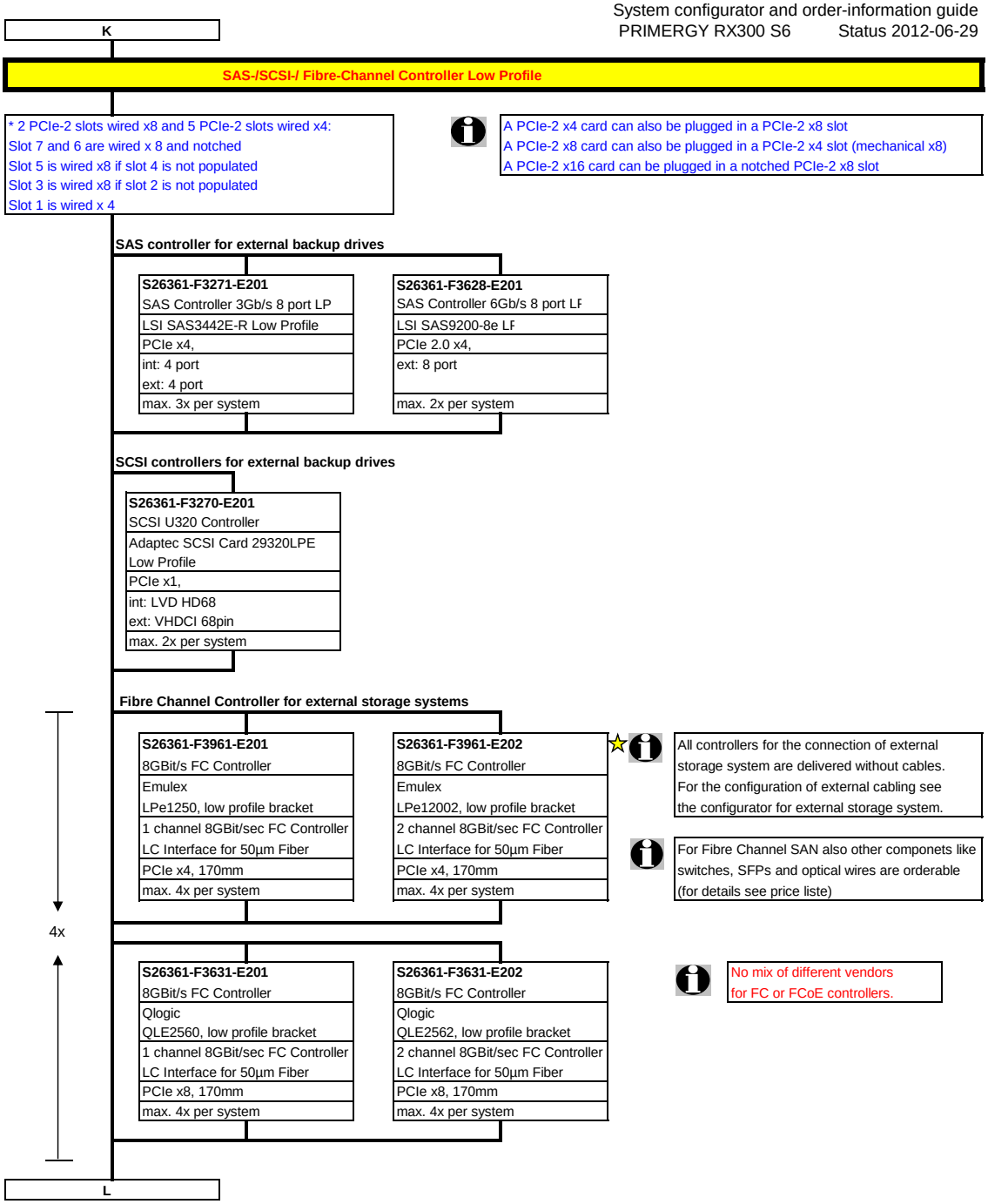
Section VII Modular Raid 0/1 and Raid5 Controller
S26361-F3257-E8
8 port SAS RAID Controller
LSI
MegaRAID SAS 1068
RAID 0, 1 & 1E
no Cache, no BBU
SAS 3Gb/sec
8 internal ports
PCIe x4, 160mm
with combi bracket
max. 1x per system
S26361-F3554-E8
RAID Ctrl SAS 6G 8port internal
Based on chip LSISAS2008
LSI MegaRAID
no Cache, no BBU
RAID 0, 1 & 1E
Support for 3Gb/s and 6Gb/s
SATA and SAS hard drives
PCIe x4
Low-profile MD2 form factor
max. 1x per system
Modular Raid 0/1 controller with IME support for SAS/SATA-HDs
IME (Integrated Mirroring Enhanced) offers the RAID levels 0, 1, 1E
IME is a RAID 0, 1 implementation, whereby RAID 1 can operate
an odd number of hard disks. Up to 8 hard disks including one hot spare HD
are possible (limited by HHD slots in system).
Administration of IME is possible with the LSI Global Array Manager (GAM).
Windows2003/2008 as well as SUSE and RedHat Linux are supported
(Restrictions refer to Software Configurator)
The SAS IME solution supports 2 independent RAID volumes.
Modular Raid controller must be ordered, if at least one internal HDD is configured!
Modular Raid 5 controller for SAS/SATA-HDs
RAID levels 0, 1, 10, 5, 50, 6 and 60 are supported
Tapes and optical devices (e.g. DVD) are not suported.
Also there is no support of any external storage by this RAID solution.
1x
S26361-F3554-E512
RAID Ctrl SAS 6G 8port internal
Based on chip LSISAS2108
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 x4
Low-profile MD2 form factor
max. 1x per system
For the basic unit with
12x 2.5" HDDs (V301)
a modular Raid 6G Ctrl.
must be ordered!
S26361-F3257-E116
Cache Battery Backup Unit
with 16cm cable set
max. 1x per Controller
BBU max. 1x per system possible
for loose delivery please order
S26361-F3257-L110
K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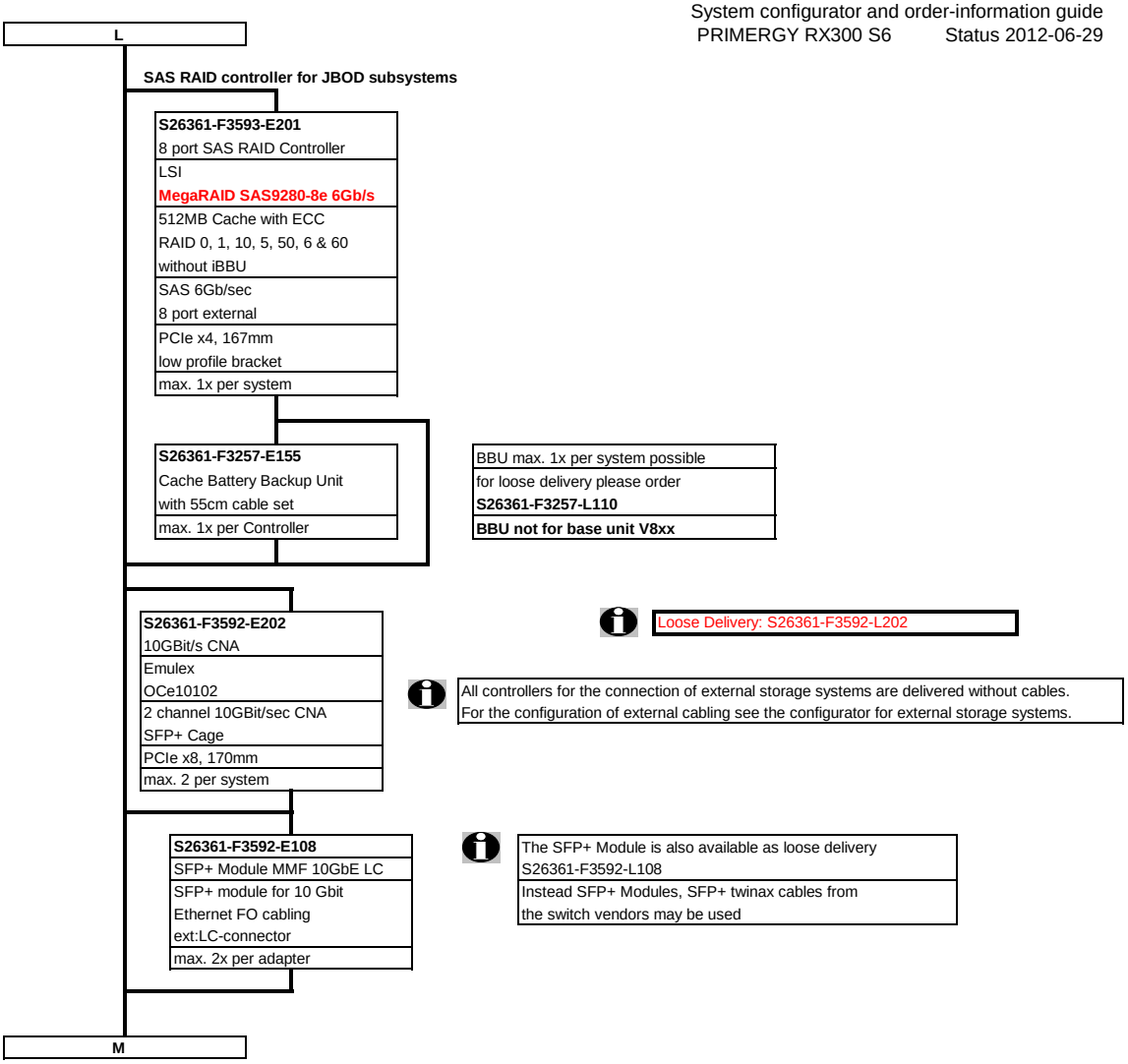
SAS-/SCSI-/ Fibre-Channel Controller Low Profile
* 2 PCIe-2 slots wired x8 and 5 PCIe-2 slots wired x4:
Slot 7 and 6 are wired x 8 and notched
Slot 5 is wired x8 if slot 4 is not populated
Slot 3 is wired x8 if slot 2 is not populated
Slot 1 is wired x 4
A PCIe-2 x4 card can also be plugged in a PCIe-2 x8 slot
A PCIe-2 x8 card can also be plugged in a PCIe-2 x4 slot (mechanical x8)
A PCIe-2 x16 card can be plugged in a notched PCIe-2 x8 slot
SAS controller for external backup drives
S26361-F3271-E201
SAS Controller 3Gb/s 8 port LP
LSI SAS3442E-R Low Profile
PCIe x4,
int: 4 port
ext: 4 port
max. 3x per system
S26361-F3628-E201
SAS Controller 6Gb/s 8 port LF
LSI SAS9200-8e LF
PCIe 2.0 x4,
ext: 8 port
max. 2x per system
SCSI controllers for external backup drives
S26361-F3270-E201
SCSI U320 Controller
Adaptec SCSI Card 29320LPE
Low Profile
PCIe x1,
int: LVD HD68
ext: VHDCI 68pin
max. 2x per system
Fibre Channel Controller for external storage systems
S26361-F3961-E201
8GBit/s FC Controller
Emulex
LPe1250, low profile bracket
1 channel 8GBit/sec FC Controller
LC Interface for 50µm Fiber
PCIe x4, 170mm
max. 4x per system
S26361-F3961-E202
8GBit/s FC Controller
Emulex
LPe12002, low profile bracket
2 channel 8GBit/sec FC Controller
LC Interface for 50µm Fiber
PCIe x4, 170mm
max. 4x per system
All controllers for the connection of external storage system are delivered without cables.
For the configuration of external cabling see the configurator for external storage system.
For Fibre Channel SAN also other componets like switches, SFPs and optical wires are orderable (for details see price liste)
4x
S26361-F3631-E201
8GBit/s FC Controller
Qlogic
QLE2560, low profile bracket
1 channel 8GBit/sec FC Controller
LC Interface for 50µm Fiber
PCIe x8, 170mm
max. 4x per system
S26361-F3631-E202
8GBit/s FC Controller
Qlogic
QLE2562, low profile bracket
2 channel 8GBit/sec FC Controller
LC Interface for 50µm Fiber
PCIe x8, 170mm
max. 4x per system
No mix of different vendors
for FC or FCoE controllers.
L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SAS RAID controller for JBOD subsystems
S26361-F3593-E201
8 port SAS RAID Controller
LSI
MegaRAID SAS9280-8e 6Gb/s
512MB Cache with ECC
RAID 0, 1, 10, 5, 50, 6 & 60
without iBBU
SAS 6Gb/sec
8 port external
PCIe x4, 167mm
low profile bracket
max. 1x per system
S26361-F3257-E155
Cache Battery Backup Unit
with 55cm cable set
max. 1x per Controller
BBU max. 1x per system possible
for loose delivery please order
S26361-F3257-L110
BBU not for base unit V8xx
S26361-F3592-E202
10GBit/s CNA
Emulex
OCe10102
2 channel 10GBit/sec CNA
SFP+ Cage
PCIe x8, 170mm
max. 2 per system
Loose Delivery: S26361-F3592-L202
All controllers for the connection of external storage systems are delivered without cables.
For the configuration of external cabling see the configurator for external storage systems.
S26361-F3592-E108
SFP+ Module MMF 10GbE LC
SFP+ module for 10 Gbit
Ethernet FO cabling
ext:LC-connector
max. 2x per adapter
The SFP+ Module is also available as loose delivery
S26361-F3592-L108
Instead SFP+ Modules, SFP+ twinax cables from
the switch vendors may be used
M

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Section VIII Communication / Network

Dual Port GBit on-board LAN Controller

Gigabit Ethernet Controller on-board
Dual Port GBit LAN controller
Intel 82575EB (Zoar) *
ext: for RJ 45-connector
SW: AFT, VLAN, Fast Channel

Teaming: Failover, Load Balancing
The Intel LAN Controllers 1000TX and 1000SX
can be used with the on-board controller in Teaming Mode.
Two onboard LAN ports can likewise educate a team.

* Supporting iSCSI boot (also diskless) by system BIOS and native iSCSI initiators

* 2 PCIe-2 slots wired x8 and 5 PCIe-2 slots wired x4:
Slot 7 and 6 are wired x 8 and notched
Slot 5 is wired x8 if slot 4 is not populated
Slot 3 is wired x8 if slot 2 is not populated
Slot 1 is wired x 4

A PCIe-2 x4 card can also be plugged in a PCIe-2 x8 slot
A PCIe-2 x8 card can also be plugged in a PCIe-2 x4 slot (mechanical x8)
A PCIe-2 x16 card can be plugged in a notched PCIe-2 x8 slot

PCI-Express Adapter 1000TX/SX

S26361-F3516-E201 (Shelter Island)	**S26361-F3241-E201 (Glyndon)**	**S26361-F3242-E201 (Sheepshead Bay)**
Gigabit Ethernet Controller 1000TX LP	Gigabit Ethernet Contr. 1000TX	Gigabit Ethernet Contr. 1000SX
Eth Ctrl 1x1Gbit PCI-e Gigabit CT DT Cu LP	Eth Ctrl 1x1Gbit PCI-e Pro/1000PT Cu L	Eth Ctrl 1x1Gbit PCI-e Pro/1000PF LC LP
Intel® Gigabit CT Desktop Adapter	Intel PRO/1000 PT Server Adaptor	Intel PRO/1000 PF Server Adapter
PCIe x1	PCIe x1	PCIe x4
ext: for RJ45-connector, Cat 5	ext: for RJ45-connector, Cat 5	ext:LC-connector
max. 4x per system	max.4x per system	max.4x per system

2-Port Copper PCIe Adapter 1000TX

S26361-F3610-E202 (Kawela dual)
Gigabit Ethernet Controller Dual 1000TX LP
Eth Ctrl 2x1Gbit PCIe x4 KN Cu lp
Intel Kawela based 2 port Server Adapter
PCIe x4, Low Profile
ext: for RJ45-plug, Cat 5
max. 4x per system

Loose Delivery: S26361-F3610-L502

4x

Quad Port PCIe Adapter 1000TX

S26361-F3611-E201 (Barton Hills Quad) ☆
Gigabit Ethernet Controller Quad 1000TX LP
Eth Ctrl 4x1Gbit PCIe x4 BH Cu lp
Intel Barton Hills based 4 Port Server Ad.
PCIe x4, low profile
ext: for RJ45-plug, Cat 5
max. 4x per system

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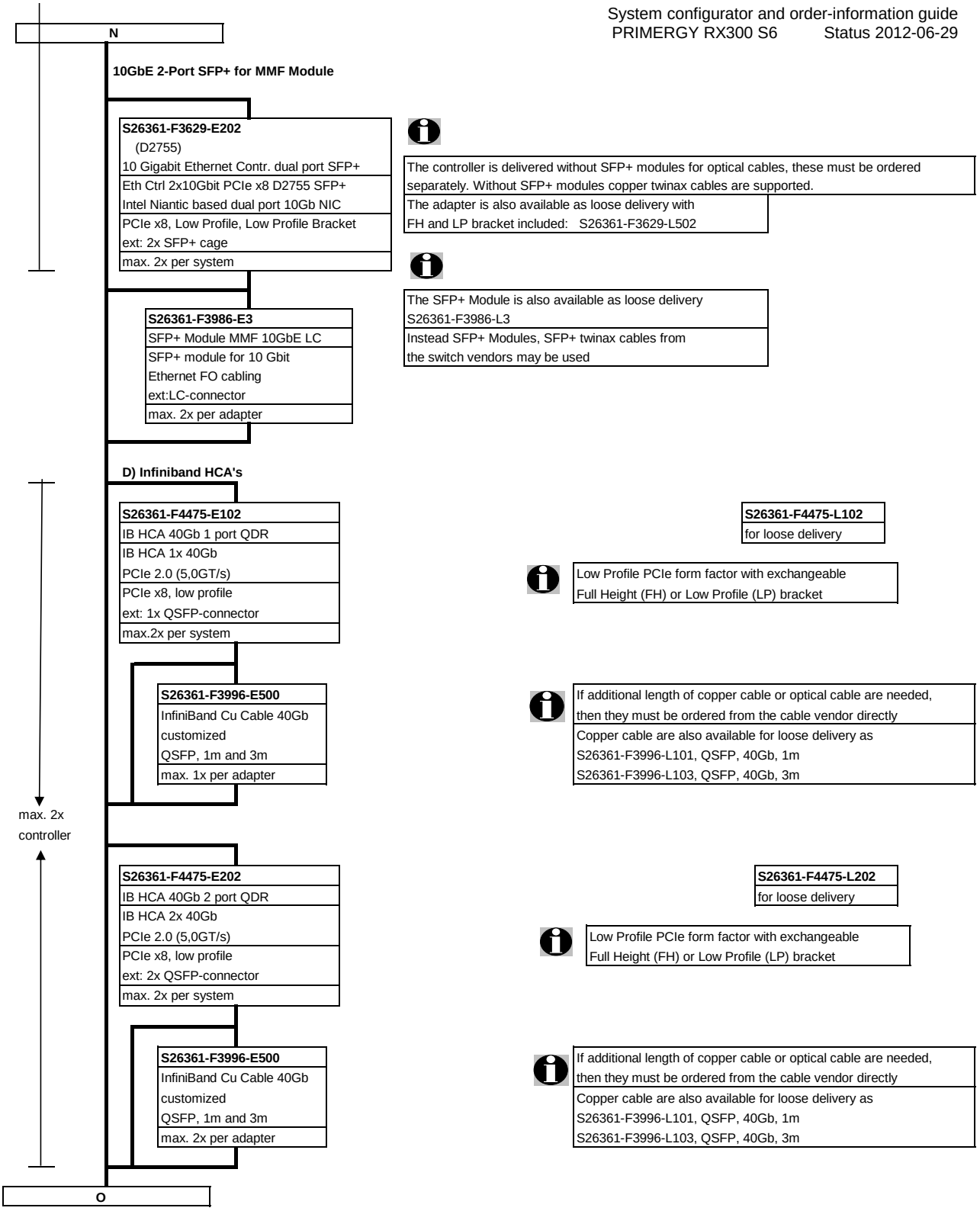
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10GbE 2-Port SFP+ for MMF Module
S26361-F3629-E202
(D2755)
10 Gigabit Ethernet Contr. dual port SFP+
Eth Ctrl 2x10Gbit PCIe x8 D2755 SFP+
Intel Niantic based dual port 10Gb NIC
PCIe x8, Low Profile, Low Profile Bracket
ext: 2x SFP+ cage
max. 2x per system
The controller is delivered without SFP+ modules for optical cables, these must be ordered separately. Without SFP+ modules copper twinax cables are supported.
The adapter is also available as loose delivery with FH and LP bracket included: S26361-F3629-L502
S26361-F3986-E3
SFP+ Module MMF 10GbE LC
SFP+ module for 10 Gbit Ethernet FO cabling
ext:LC-connector
max. 2x per adapter
The SFP+ Module is also available as loose delivery S26361-F3986-L3
Instead SFP+ Modules, SFP+ twinax cables from the switch vendors may be used
D) Infiniband HCA's
S26361-F4475-E102
IB HCA 40Gb 1 port QDR
IB HCA 1x 40Gb
PCIe 2.0 (5,0GT/s)
PCIe x8, low profile
ext: 1x QSFP-connector
max.2x per system
S26361-F4475-L102
for loose delivery
Low Profile PCIe form factor with exchangeable Full Height (FH) or Low Profile (LP) bracket
S26361-F3996-E500
InfiniBand Cu Cable 40Gb
customized
QSFP, 1m and 3m
max. 1x per adapter
If additional length of copper cable or optical cable are needed, then they must be ordered from the cable vendor directly
Copper cable are also available for loose delivery as
S26361-F3996-L101, QSFP, 40Gb, 1m
S26361-F3996-L103, QSFP, 40Gb, 3m
max. 2x
controller
S26361-F4475-E202
IB HCA 40Gb 2 port QDR
IB HCA 2x 40Gb
PCIe 2.0 (5,0GT/s)
PCIe x8, low profile
ext: 2x QSFP-connector
max. 2x per system
S26361-F4475-L202
for loose delivery
Low Profile PCIe form factor with exchangeable Full Height (FH) or Low Profile (LP) bracket
S26361-F3996-E500
InfiniBand Cu Cable 40Gb
customized
QSFP, 1m and 3m
max. 2x per adapter
If additional length of copper cable or optical cable are needed, then they must be ordered from the cable vendor directly
Copper cable are also available for loose delivery as
S26361-F3996-L101, QSFP, 40Gb, 1m
S26361-F3996-L103, QSFP, 40Gb, 3m
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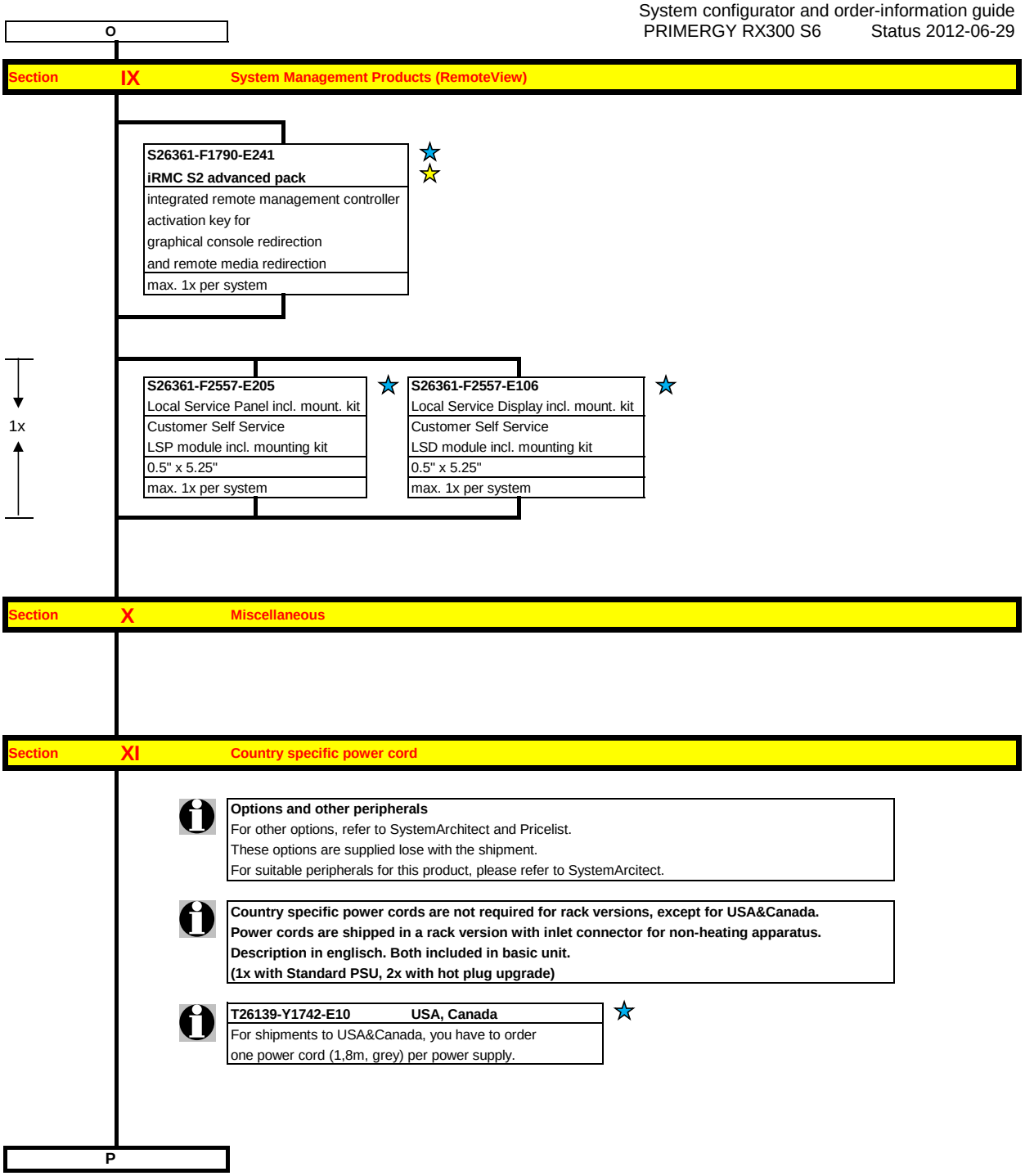
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Section IX System Management Products (RemoteView)
S26361-F1790-E241
iRMC S2 advanced pack
integrated remote management controller
activation key for
graphical console redirection
and remote media redirection
max. 1x per system
1x
S26361-F2557-E205
Local Service Panel incl. mount. kit
Customer Self Service
LSP module incl. mounting kit
0.5" x 5.25"
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
Section X Miscellaneous
Section XI Country specific power cord
Options and other peripherals
For other options, refer to SystemArchitect and Pricelist.
These options are supplied lose with the shipment.
For suitable peripherals for this product, please refer to SystemArcitect.
Country specific power cords are not required for rack versions, except for USA&Canada.
Power cords are shipped in a rack version with inlet connector for non-heating apparatus.
Description in englisch. Both included in basic unit.
(1x with Standard PSU, 2x with hot plug upgrade)
T26139-Y1742-E10 USA, Canada
For shipments to USA&Canada, you have to order
one power cord (1,8m, grey) per power supply.
P

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Section XVI Energy Star

S26361-F3301-E501
RX300 S6 E-Star Fam1
Limits configuration in accordance with Energy Star requirements
max. 1x per system

The following order components out of the specific sections are allowed together with RX300 S6 E-Star Fam1:

☆ Marked with blue star!

Turbo Quad-Core CPU`s	
- 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1066 MHz DDR3 Bus, 5,86 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5620 4C/2.40GHz/12M/5,86GT/s (80W)	**S26361-F3618-E240**
Xeon E5630 4C/2.53GHz/12M/5,86GT/s (80W)	**S26361-F3618-E253**
Xeon E5640 4C/2.66GHz/12M/5,86GT/s (80W)	**S26361-F3618-E266**
Always 2x per system (only one CPU is out of Energy Star specification)	

Registered (reg) RDIMMs (1.5V)	
4GB (1333MHz/SR)	**S26361-F3604-E514**
min. 2 / max. 18x per system	
SP 12GB (3x 4GB 1333 MHz SR)	**S26361-F3604-E534**
MM 8GB (2x 4GB 1333MHz SR)	**S26361-F3604-E524**
min. 2 / max. 6x per system	

4GBit/s Fibre Channel Controller	
Emulex LPe11002	**S26361-F3306-E202**
min. 0 / max. 2x per system	

Gigabit Ethernet Controller	
Gigabit Ethernet Controller Quad 1000TX	**S26361-F3462-E201**
min. 0 / max. 3x per system	
Eth Ctrl 2x10Gbit PCIe x8 XF SR LC	**S26361-F3505-E201**
min. 0 / max. 1x per system	

Raid Controller	
RAID Ctrl SAS 6G 8port internal (Raid 0, 1 &1E)	**S26361-F3554-E8**
RAID Ctrl SAS 6G 8port internal (RAID 0, 1, 10, 5, 50, 6, 60)	**S26361-F3554-E512**
min. 0 / max. 1x per system	

ODD	
DVD-RW supermulti slim SATA	**S26361-F3269-E2**
Blu-ray Combo slim SATA	**S26361-F3531-E2**
min. 0 / max. 1x per system	

Hard Disk Drives 3.5" SAS	
HD 300GB 15krpm 3.5"	**S26361-F4005-E530**
HD 450GB 15krpm 3.5"	**S26361-F4005-E545**
HD 600GB 15krpm 3.5"	**S26361-F4005-E560**
HD 146GB 15krpm 3.5"	**S26361-F3291-E514**
min. 0 / max. 2x per system	

PSU	
800W PSU module / 92% eff	**S26113-F555-E10**
min. 1 / max. 2x per system	

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Section XVI NEBS level3 Certification

S26361-F4511-E1
RX300S6 NEBS level3 Certification
Limits configuration in accordance with NEBS requirements
max. 1x per system

The following order components out of the specific sections are allowed together with RX300S6 NEBS level3 Certification:

☆ Marked with yellow star!

Turbo Quad-Core CPU`s
- 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1066 MHz DDR3 Bus, 5,86 GT/s QPI Bus and passive heat sink occupies socket for one CPU

Xeon E5620 4C/2.40GHz/12M/5,86GT/s (80W)	**S26361-F3618-E240**

Turbo Six-Core CPU`s
- 1x 64-bit Intel Xeon (12MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 5,86 GT/s QPI Bus and passive heat sink occupies socket for one CPU

Xeon E5645 6C/2.40GHz/12M/5,86GT/s (80W)	**S26361-F3633-E240**
min. 1 / max. 2x per system	

Registered (reg) RDIMMs (1.5V)

8GB (1333MHz/SR)	**S26361-F3604-E515**
min. 1 / max. 18x per system	
SP 24GB (3x 8GB 1333 MHz SR)	**S26361-F3604-E535**
MM 16GB (2x 8GB 1333MHz SR)	**S26361-F3604-E525**
min. 1 / max. 6x per system	

8GBit/s Fibre Channel Controller

Emulex 8Gb/s 2 channel LPe12002 MMF LC LP	**S26361-F3961-E202**
min. 0 / max. 2x per system	

Gigabit Ethernet Controller

Eth Ctrl 4x1Gbit PCIe x4 D2745 Cu lp	**S26361-F3611-E201**
min. 0 / max. 2x per system	

Raid Controller

RAID Ctrl SAS 6G 8port internal (RAID 0, 1, 10, 5, 50, 6, 60)	**S26361-F3554-E512**
min. 0 / max. 1x per system	

ODD

no ODD allowed!

Hard Disk Drives 2.5" SAS

HD SAS 6G 300GB 10K HOT PLUG 2.5" EP	**S26361-F4482-E130**
min. 0 / max. 8x per system	

PSU

2nd -48V DC power supply 800W	**S26113-F576-E50**
min. 1 / max. 2x per system	

End PRIMERGY RX300 S6

Change Report

Date	Order number	Changes
2012-01-30	S26361-F3641-E2	new Blue-ray Triple Writer added
2011-12-21	S26361-F4482-E114	SAS HD 6G 144GB - no longer available
2011-11-25	S26361-F4492-E516	New 16GB 2R 1333 memory module on status 35
2011-10-30	S26361-F4541-Ex00	new SAS SSD with 100, 200, 400 GB added - as soon as available
2011-10-01	S26361-F3601-E250	new BC SATA HD - now available
2011-10-01	S26361-F3298-E64	64 GB SSD - no longer available
2011-08-19	S26361-F2735-E140/E82	New RMK/Cablemanagement added
2011-07-29	S26361-F4482-E190	new 6Gb SAS-HD 900GB - as soon as available
2011-05-06	S26361-F3604-E5x7	32GB DDR3 Qud Rank Modules added
2011-05-03	S26361-F3610-E202/L502	Formal change from E201 / L501
2011-03-31	S26361-F3629-E202	10 Gigabit Ethernet controller added
2011-02-21		Corrected notched slots in configuration diagram
2011-01-18	S26361-F3648-E160	Memory Speed for CPU L5609 corrected
2011-01-10	S26361-F3648-E160	Westmere-EP Refresh CPUs added
2010-11-18	S26361-F3628-E201	Ctrl SAS 6G 8port external added
2010-11-16	S26361-F4511-E1 ☆	NEBS level3 certification restrictions implemented
2010-11-16	S26113-F576-E50/L50	-48V DC power supply 800W added
2010-11-16	S26361-K1344-V801	Carrier grade basic unit added, NEBS level3 certification possible
2010-09-08		Additional hints for Spare / Performance / Mirrored Mode field upgrade
2010-07-09	S26361-F4482-Exxx	New HD SAS xxxGB 10k/15krpm 2.5"
2010-07-09	S26361-F3301-E501 ☆	EPA Energy Star family certification restrictions implemented
2010-05-04	S26361-F3633-E240	Additional CPU for RX300 S6 NEBS System (long delivery guarantied)
2010-04-06	S26361-F3601-E160/500	new BC-SATA HD drives - now available
2010-03-29	S26361-F3257-E170	BBU for Cougar and WaSat changed into F3257-E116 and E155
2010-03-01		First Release