

PRIMERGY TX200 S6

System configurator and order-information guide

July 2013



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Change report



PRIMERGY Server

Instructions

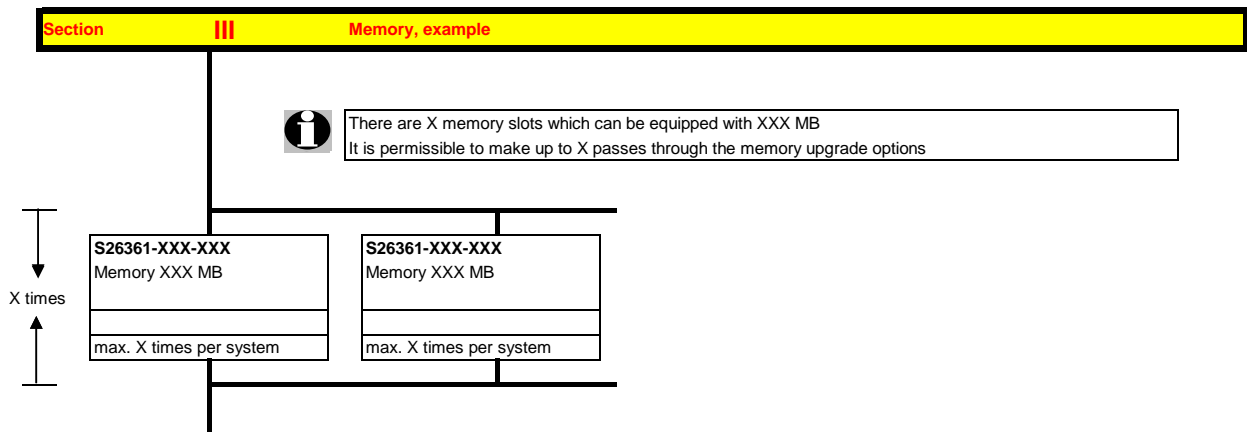
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect

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

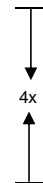
You can configure your individual PRIMERGY server in order to adjust your specific requirements.

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

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.



Further information in the internet see:

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

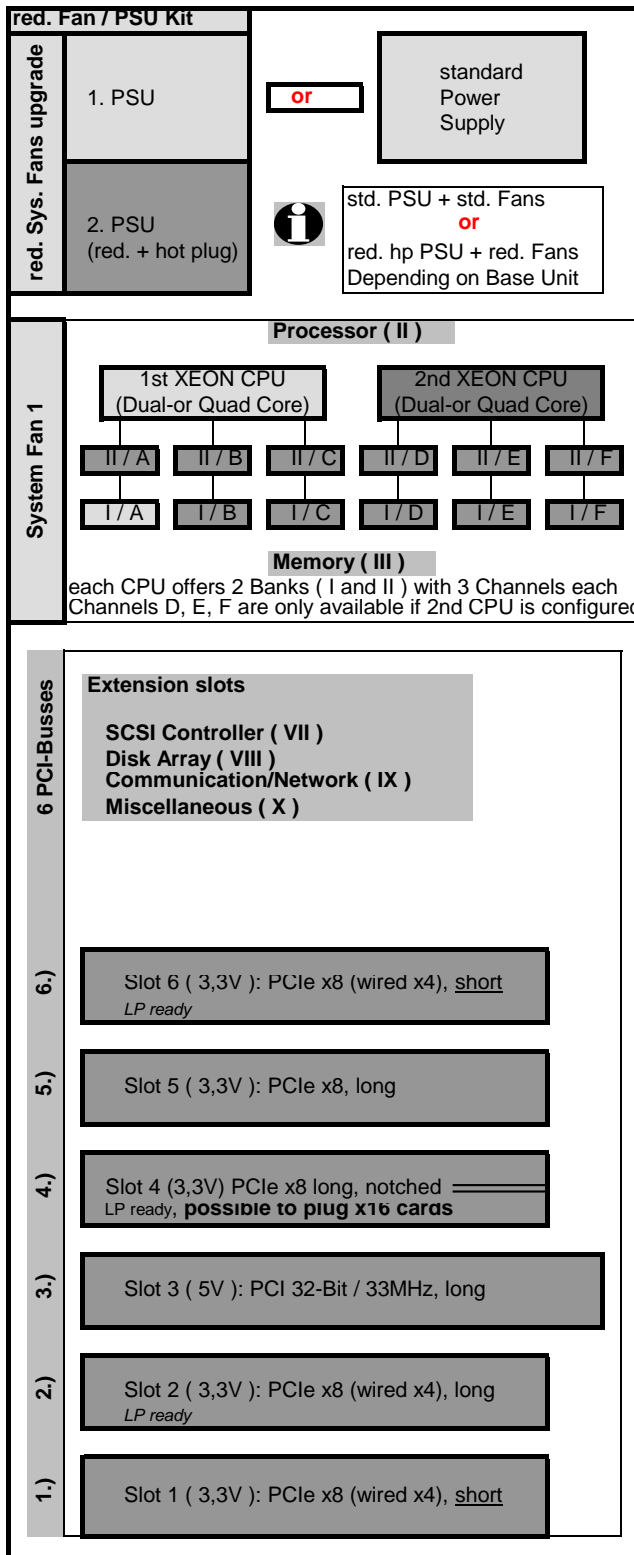
https://partners.ts.fujitsu.com/com/order-supply/configurators/primergy_config/current/Pages/default.aspx (extranet)

Prices and availability see price list and PC-/System-Architect.
 Subject to change and errors excepted.

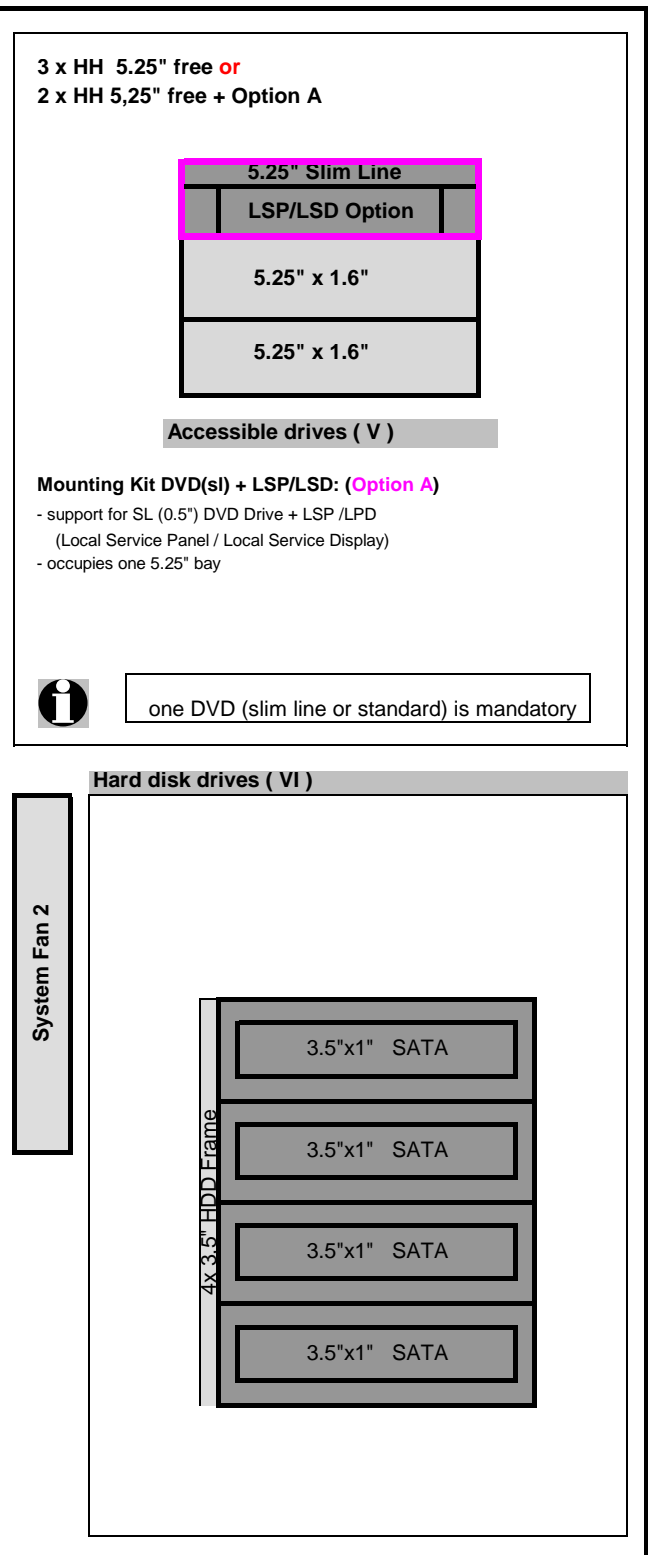
Configuration diagram PRIMERGY TX200 S6 SATA LFF (3.5") System Unit

System unit (I)

SIDE VIEW



FRONT VIEW



Key:

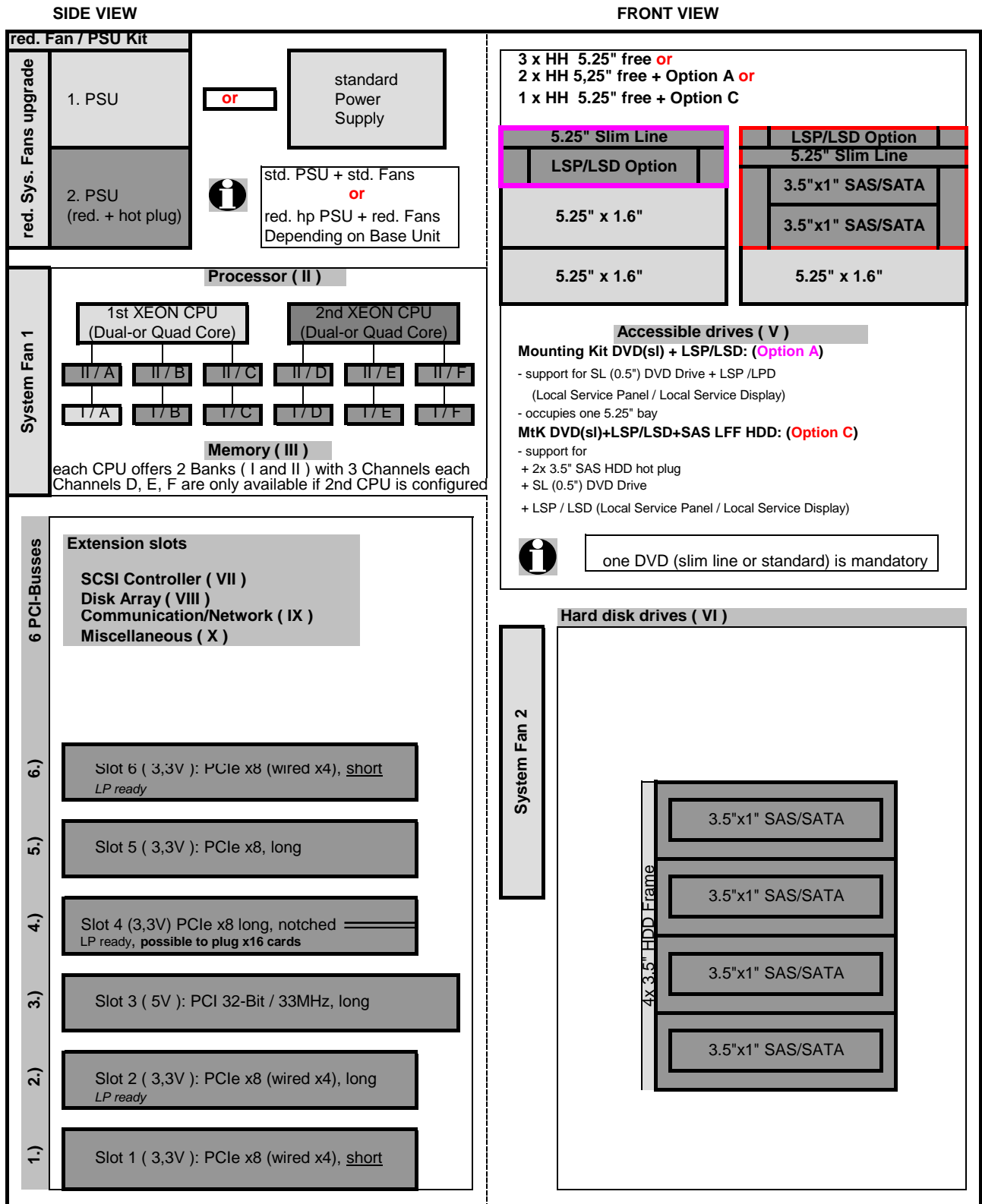
- Included in basic unit
- Option



A PCIe x16 card can be plugged in the notched slot 4
 A PCIe x4 card can also be plugged in a PCIe x8 slot
 A PCIe x8 card can also be plugged in a PCIe x8 (wired x4) slot
 PCI and PCI-X slots are mechanically not compatible to PCIe slots!

Configuration diagram PRIMERGY TX200 S6 SAS LFF (3.5") System Unit

System unit (I)



Key:

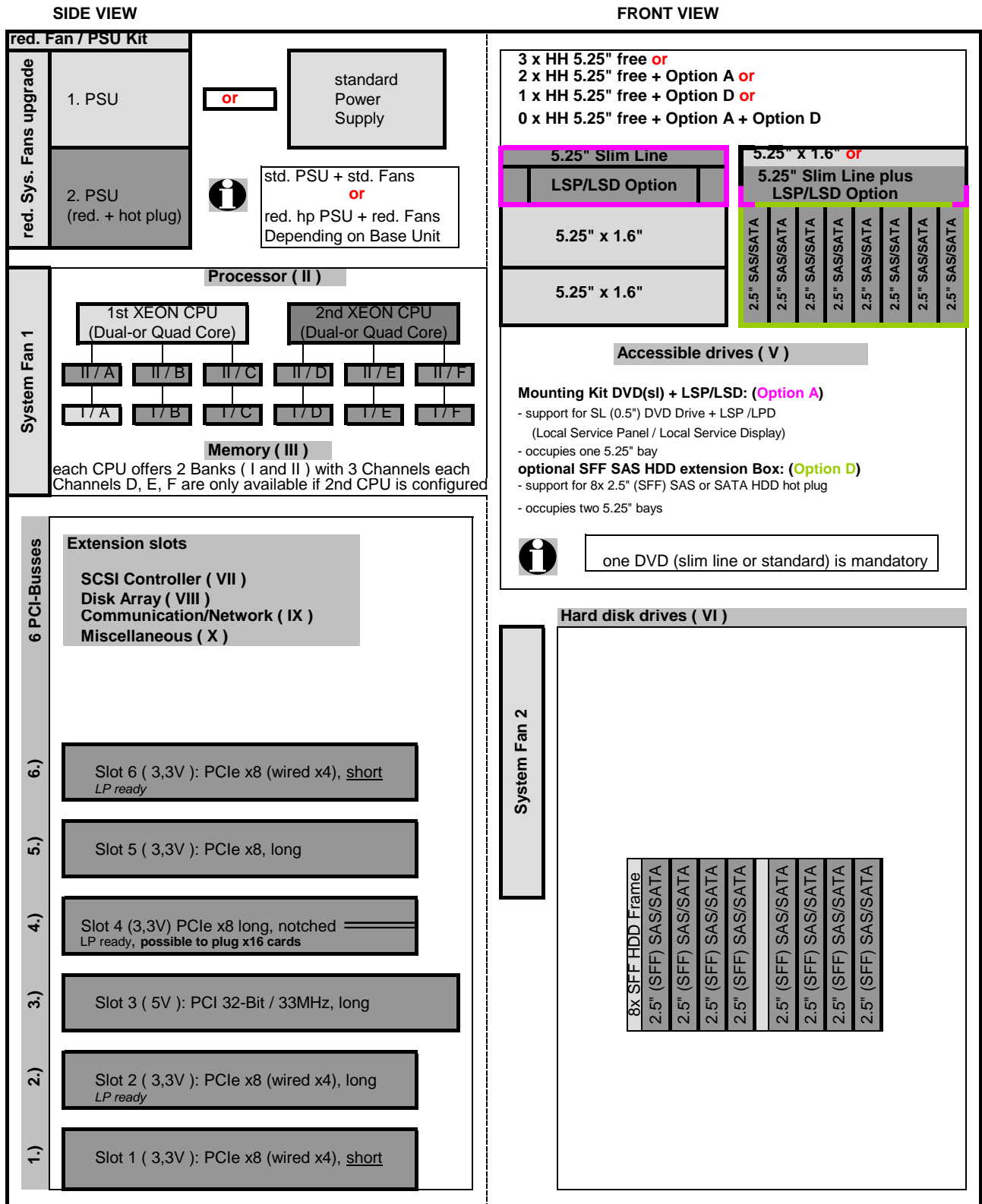
- Included in basic unit
- Option



- A PCIe x16 card can be plugged in the notched slot 4
- A PCIe x4 card can also be plugged in a PCIe x8 slot
- A PCIe x8 card can also be plugged in a PCIe x8 (wired x4) slot
- PCI and PCI-X slots are mechanically not compatible to PCIe slots!

Configuration diagram PRIMERGY TX200 S6 SAS SFF (2.5") System Unit

System unit (I)



Key:

- Included in basic unit
- Option



A PCIe x16 card can be plugged in the notched slot 4
 A PCIe x4 card can also be plugged in a PCIe x8 slot
 A PCIe x8 card can also be plugged in a PCIe x8 (wired x4) slot
 PCI and PCI-X slots are mechanically not compatible to PCIe slots!

Start PRIMERGY TX200 S6

SW - Configurator 32 bit

with OEM-Software
for PRIMERGY Server

i Usage of OEM SW from MS is not possible under VMware

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
- VCMS VirtualCenter Management Server
- Virtual Infrastructure 3

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

Microsoft - Software: W **)
- Small Business Server 2003
- Windows Server 2003 R2, Standard Edition
Enterprise Edition
! Web Edition, SP2/English

PRIMECLUSTER *)
- Clustering
- Load Balancing

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

CITRIX-Software for Windows: W-MF
- Multiuser SW MetaFrame
LoadBalancing
Additional User Lizenzen

MultiPath, Duplex Data Manager (DDM)
W2K; W2K3 Linux (W-DDM)

i Details eg. version numbers are published in the separate SW-Configurator

Manageability Software: V)**
- RemoteDeploy (as soon as available)
- Altiris Server Deployment
- iRMC advanced pack
- RemoteView Software

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

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

They 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/primerqy/Pages/default.aspx>

Continue with PRIMERGY HW configurator

Start PRIMERGY TX200 S6

SW Configurator EM64T / IA64

with OEM-Software
for PRIMERGY Server

Usage of OEM SW from MS is not possible under VMware

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
- VCMS VirtualCenter Management Server
- Virtual Infrastructure 3

For all SW products listed below please refer to the corresponding software configurator accessible via the Extranet under "PC Configurations, Configurator for PRIMERGY SW", URL see below.

only EM64T **Microsoft - Software: W**
- Windows Server 2003 R2, Standard x64 Edition
- Enterprise x64 Edition

only x86_64 **Linux - Software *) **)**
- SuSE Linux ES (OEM): LO
- SuSE Linux ES (Support): LS
- Red Hat EL (OEM): LO
- Red Hat EL (Support): LS

only EM64T **CITRIX-Software for Windows: W-MF**
- Presentation Server
- LoadBalancing
- Additional User Licences

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

Details eg. version numbers are published in the separate SW-Configurator

only EM64T **Manageability Software: V**)**
- RemoteDeploy (as soon as available)
- iRMC advanced pack
- RemoteView Software

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

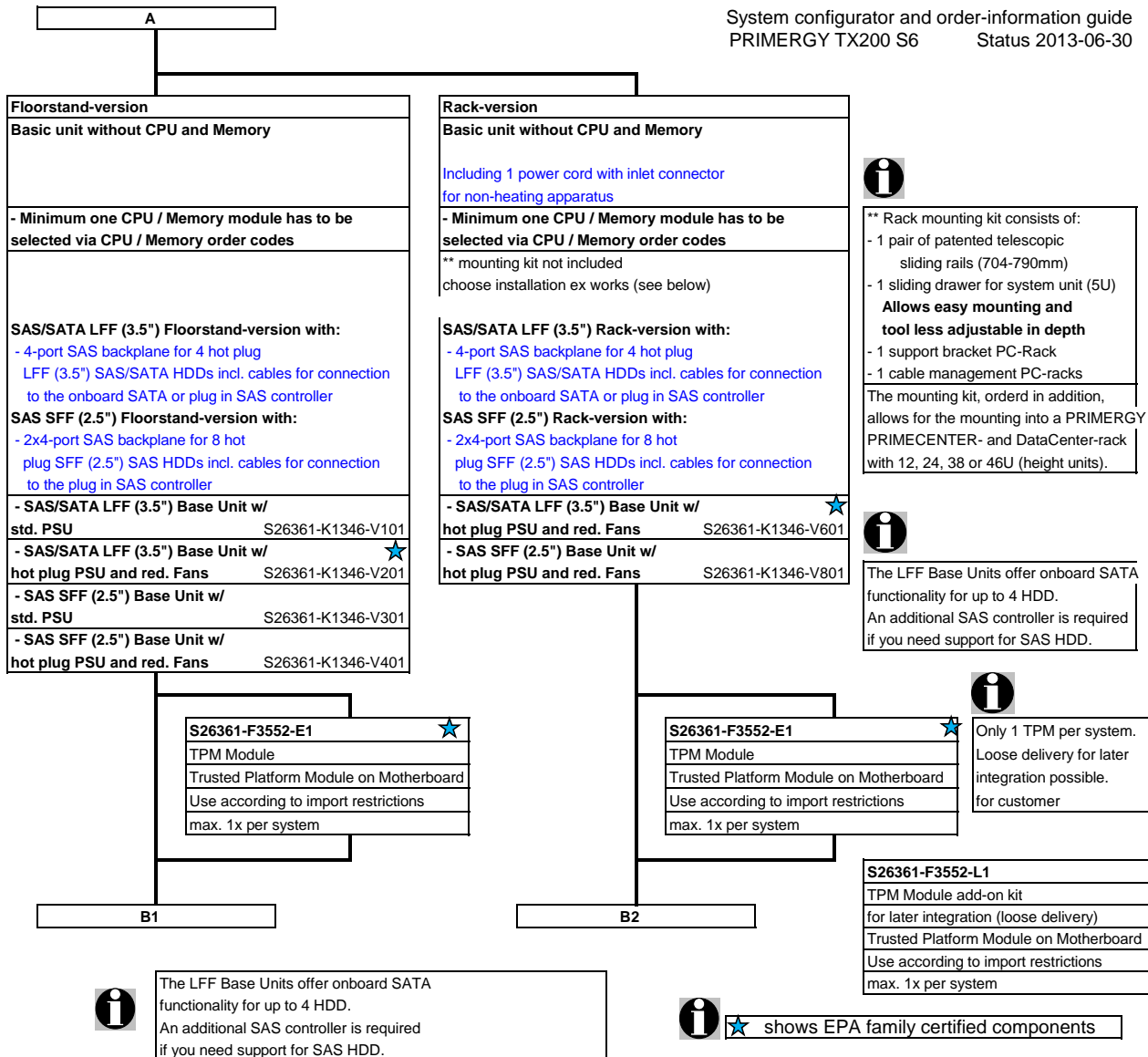
You'll find single software configurators and release lists (OS-matrix / system management / security) under following addresses:

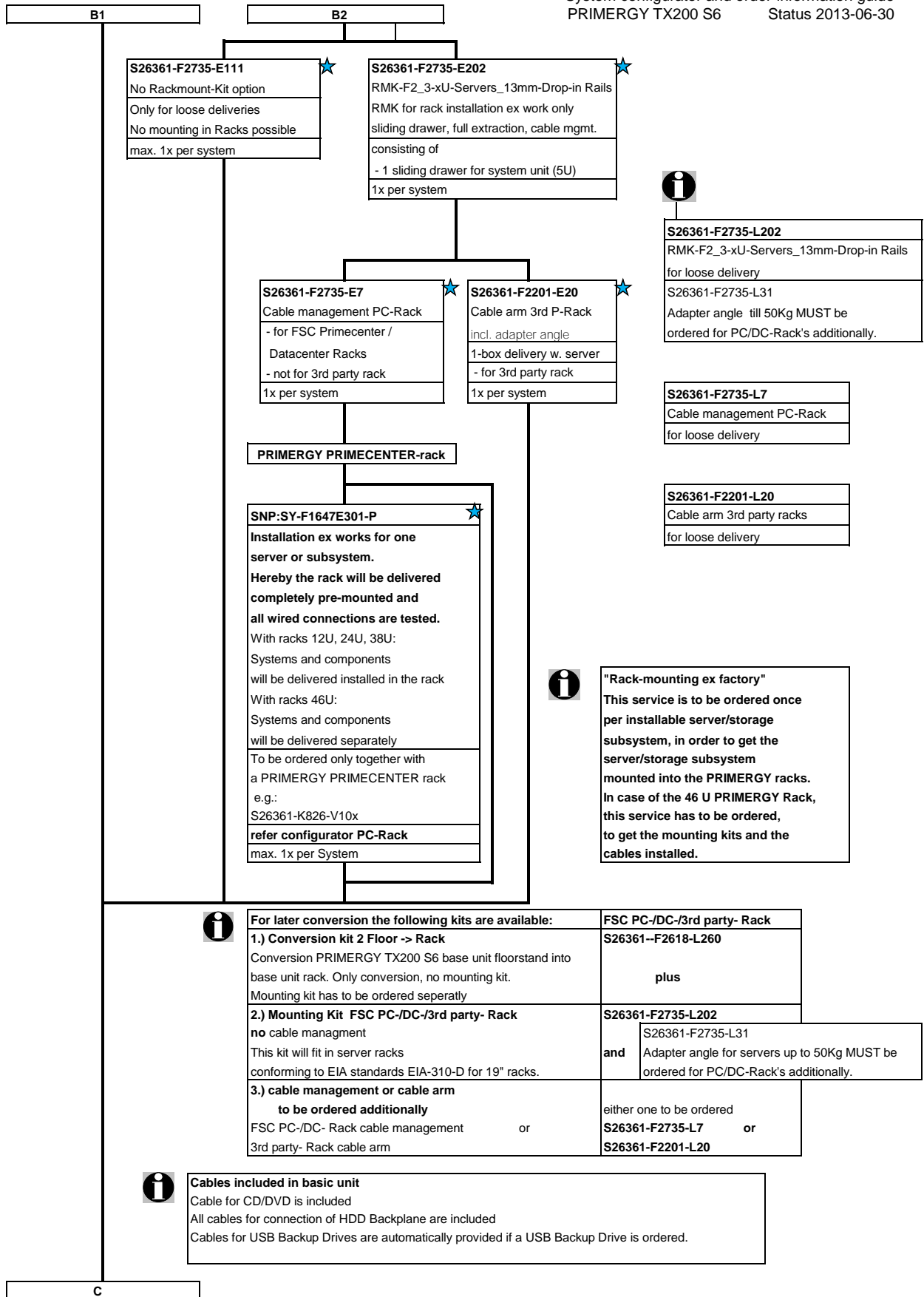
for internal users: <http://sp.ts.fujitsu.com/dmsp/docs/osrel.xlsx>
 for partners: <https://partners.ts.fujitsu.com/com/products/servers/primergy/Pages/default.aspx>

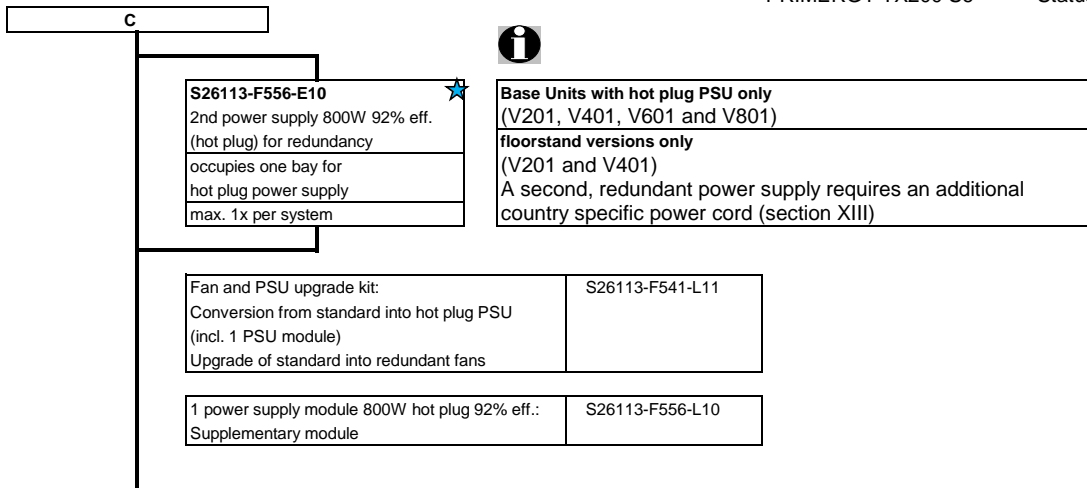
Continue with PRIMERGY HW configurator

**System unit, Rack and Floorstand, including:**

- * **Two lockable front covers in floorstand version**
Door #1 for accessible drive bays
Door #2 for hot plug HDD bays
Both doors may be locked or door #1 may be left open while door #2 is still locked
 - * **backplane with 4 (LFF) or 8 (SFF) bays for hot-plug HD's. Type depending on base unit:**
Type 1: 4x hot plug LFF (3.5") SAS/SATA HDD (SAS/SATA LFF base units only)
Type 2: 8x (2x4) hot plug SFF (2.5") SAS HDD (SAS SFF base units only)
 - * **PSU and Fan Type depending on base unit:**
Type 1: standard PSU and standard Fans (2 System Fans)
(V101 and V301 base units only)
Type 2: hot plug redundant PSU and redundant Fans (2 dual-fin System Fans)
(V201, V401, V601 and V801 base units only)
- for Type 1 base units there is an upgrade to hot plug redundant PSU and redundant Fans available
- * **3 bays 5.25" for accessible drives (half Height)**
Systemboard D2799 with:
 - * **Up to two Xeon Dual Core, Quad-Core, Turbo Quad Core or Turbo Six Core CPU's (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® 5500 (codenamed Tylersburg-24D = Tylersburg-EN)**
 - * **6 PCI slots:** 3x PCIe x8 (wired x4), 1x long
2x PCIe x8, 2x long, 1x notched, possible to plug a x16 card
1x 32Bit / PCI 33MHz, long (5V)
 - * **6 memory slots for max. 32GB with 4 x 8GB registered DDR3 RAM for Lynnfield CPU only or max. 12GB with 2GB unbuffered DDR3 RAM for Lynnfield and Havendale CPU available**
 - Memory is divided into 6 DIMMs(3 channels with 2 slots per channel)
 - Max. two registered modules or two unbuffered modules are possible per channel
 - No mix of registered and unbuffered modules is allowed
 - First Memory (one module) has to be selected for an orderable basic unit per CPU
 - Memory upgrade is possible module wise for the Independent Channel Mode or for the Performance Mode,
 - 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 only for registered memory modules,
 - * **6-port SATA controller on-board included in Intel Southbridge ICH10R for SATA Raid0/1, Max. 4 SATA HD's are supported**
Max. 2 SATA accessible drives are supported (DVD, Backup)
 - * **1 Gbit Ethernet LAN on board (Intel Hartwell) with ToE;**
iSCSI boot integrated in System BIOS as selectable option (as soon as available)
 - * **iRMC S2 (integrated Remote Management Controller) on-board server management controller with dedicated 10/100 Service LAN-port and integrated graphics controller (max. Resolution: 1600 x 1200 at 16 bpp)**
The Service LAN-port can be switched alternatively on standard Gbit LAN port
- Interfaces:**
- * 1x RS-232-C (serial, 9pin) (usable for BMC or OS or shared)
 - * 1x optional RS-232-C (serial, 9-pin) - occupies otherwise unused 7th PCI-slot
 - * 1x VGA (15 pin)
 - * 10x USB 2.0 (UHCI) with **480MBit/s** (4x external at the rear, 3x external at the frontside,
2x released internal USB Interfaces for backup devices, 1x internal for Memorystick or Dongle, no USB wakeup)
 - * 1x LAN RJ45, 1x Service-LAN RJ45
- *internal Cables:**
1. SATA cable for CD/DVD.
 2. Cable for HDD Backplane
 3. USB cable (if USB Backup is used)
- * **ServerView Suite Software package incl. ServerStart, ServerBooks, Management Software and Updates**
 - * **Documentation engl. (multilingual on CD)**







Section II Processor

i 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
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
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
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

on special release

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Section III Memory



- There are 6 memory slots for max. 48GB registered (reg) DDR3 RAM per CPU available with 8GB RDIMMs or max. 12GB unbuffered (ub) DDR3 RAM per CPU available with 2GB UDIMMs
 => max. 96GB registered or 24GB unbuffered RAM for two CPU's possible
 (For explanation of following terms refer to section "Memory Configurations"
 - The memory area is divided into 3 channels per CPU with 2 slots per channel
 - Slot 1 of each channel belongs to memory bank 1, the slot 2 belongs to memory bank 2

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 (SR), 4GB and 8GB Dual Rank (DR),
 or with unbuffered x8 organized DDR3 modules: 2GB, 4GB and 8GB

2.) In the "Spare Channel Mode" is following configuration possible
 - Each memory bank can optionally be equipped with 3x2GB single rank or 3x4GB and 3x8GB DR 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

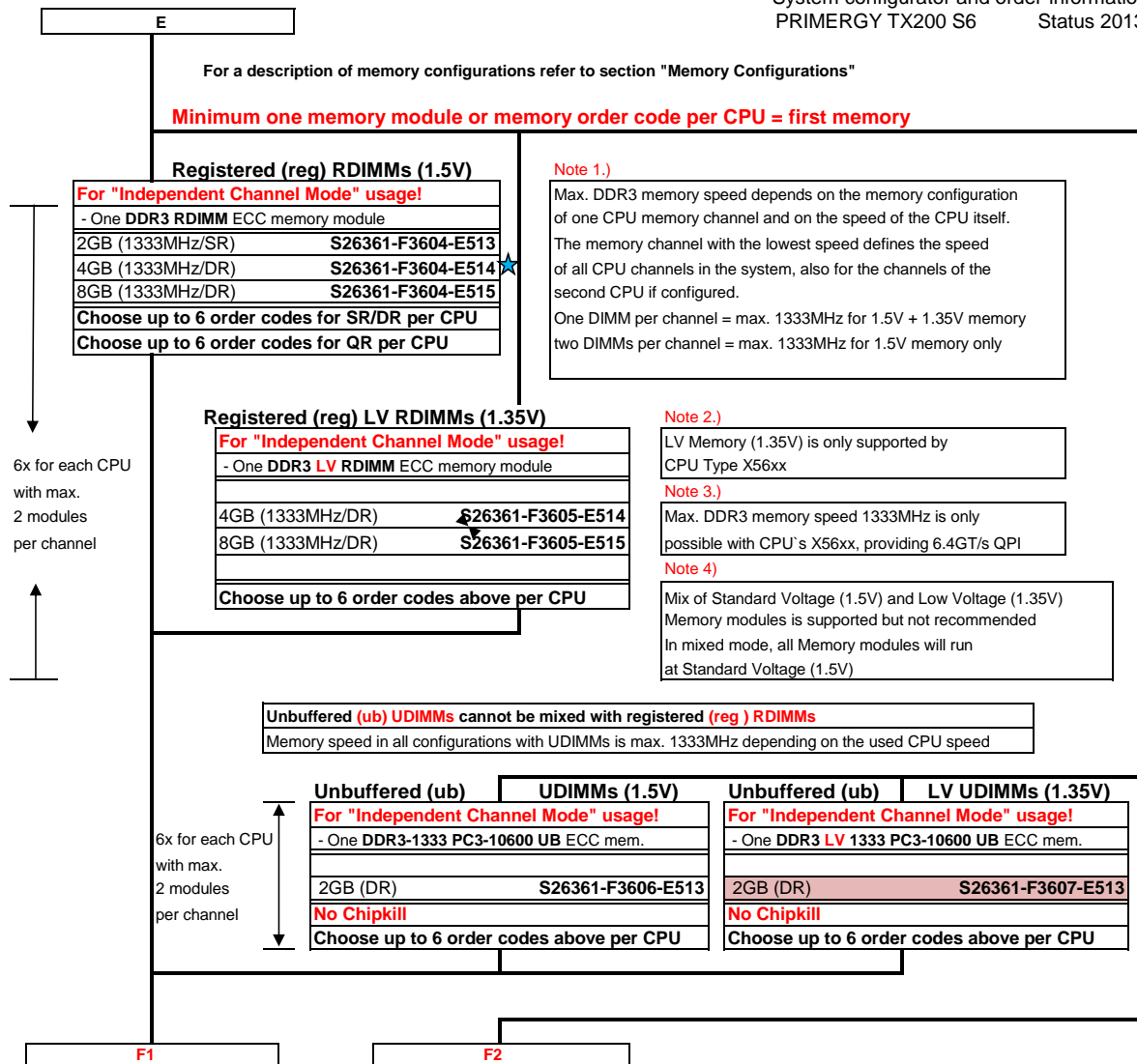


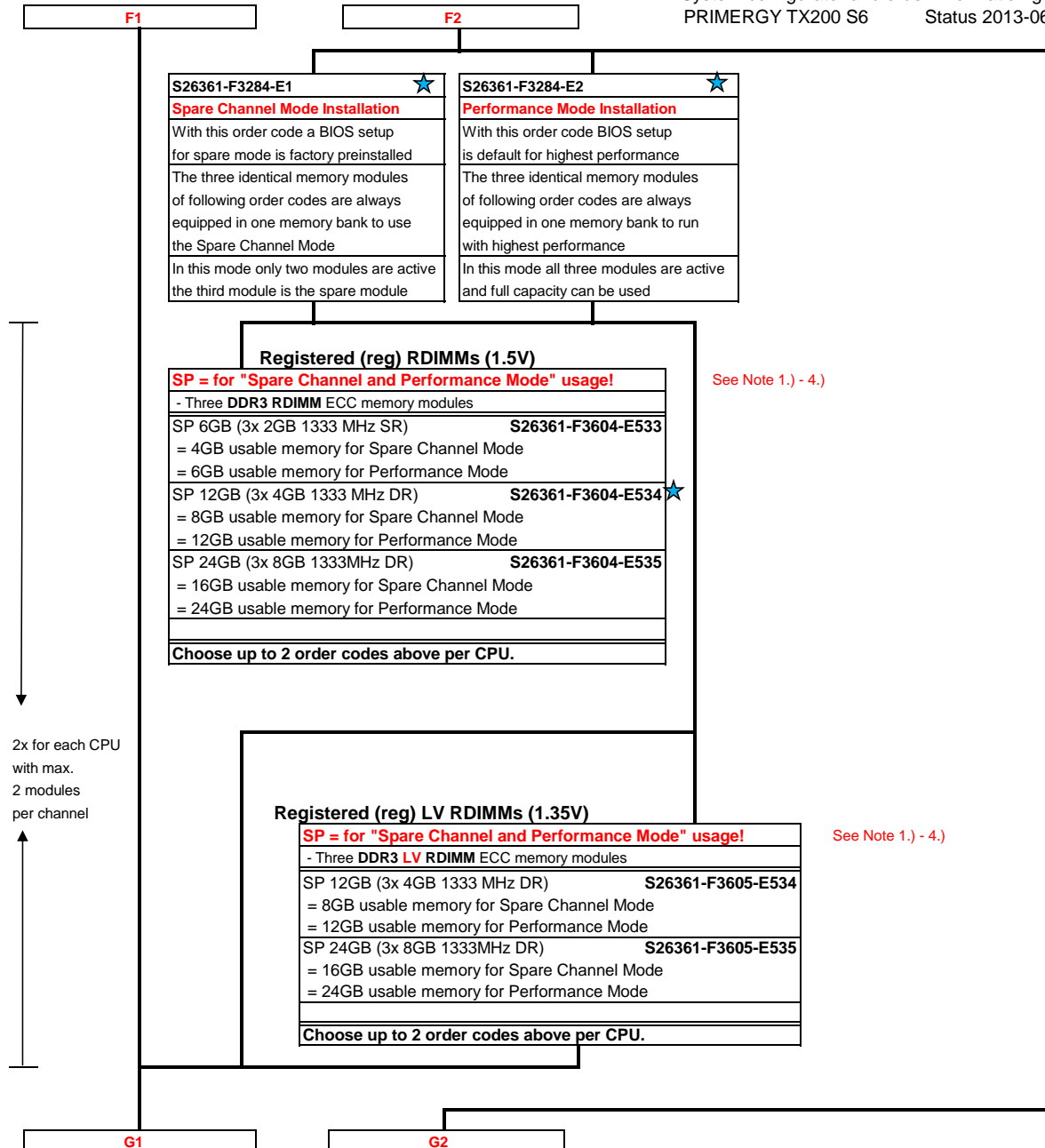
3.) In the "Mirrored Channel Mode" is following configuration possible
 - Each memory bank can optionally be equipped with 2x2GB single rank, 2x4GB or 2x8GB DR DDR3 modules.
In each memory bank channel A and B of CPU 1 or channel D and E of CPU 2 have to be equipped with identical modules for mirrored 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

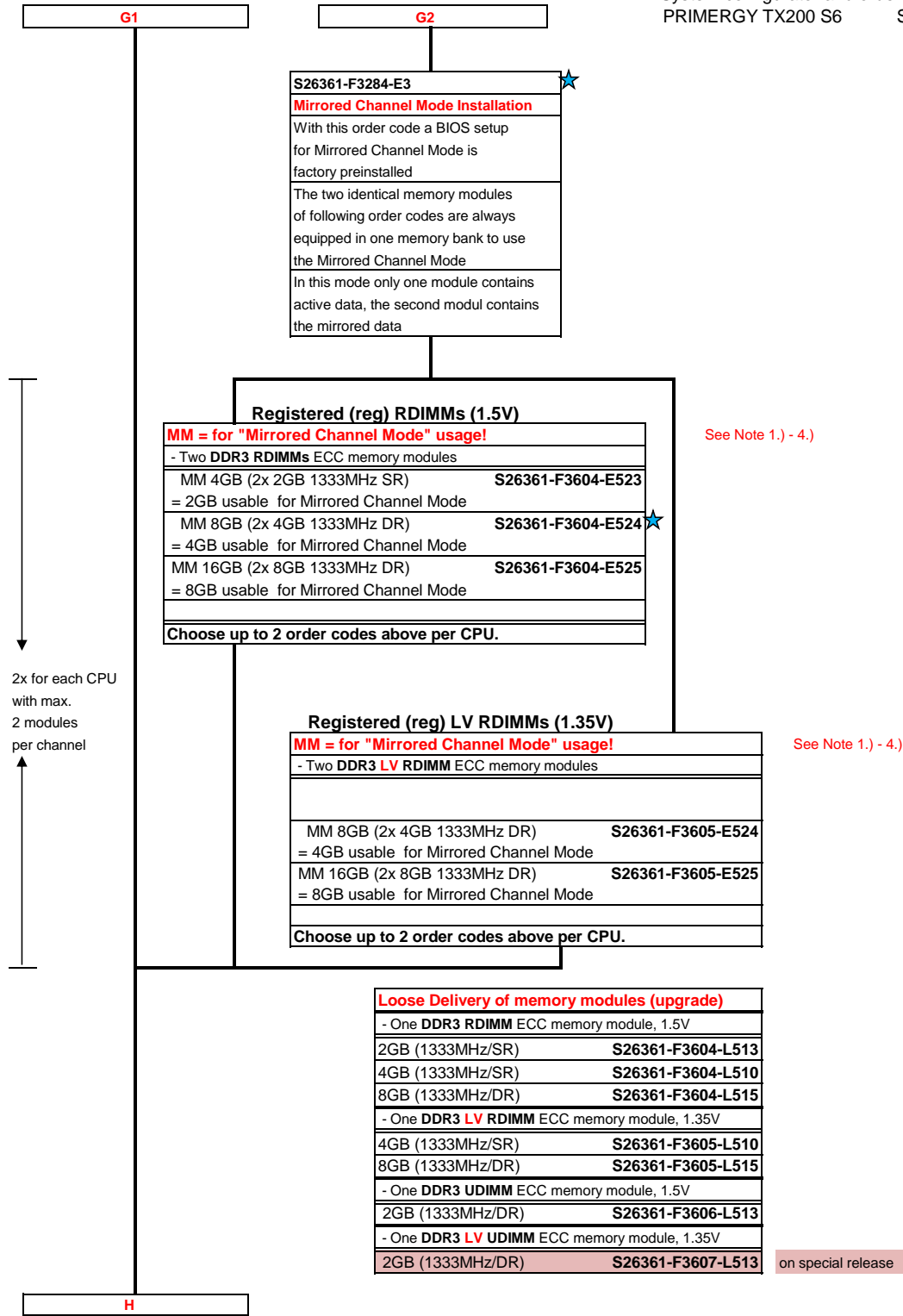
 No special order codes with UDIMMs are offered for this mode

- For each CPU minimum 1 memory module has to be configured In Independent Channel Mode
 (=> Additional memory extensions can still be configured up to five 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 one time 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 one time per CPU)

E







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)

MM = for "Mirrored Channel Mode" usage!

- Two **DDR3 RDIMMs** ECC memory modules

MM 4GB (2x 2GB 1333MHz SR)	S26361-F3604-E523
= 2GB usable for Mirrored Channel Mode	
MM 8GB (2x 4GB 1333MHz DR)	S26361-F3604-E524 ★
= 4GB usable for Mirrored Channel Mode	
MM 16GB (2x 8GB 1333MHz DR)	S26361-F3604-E525
= 8GB usable for Mirrored Channel Mode	

Choose up to 2 order codes above per CPU.

See Note 1.) - 4.)

Registered (reg) LV RDIMMs (1.35V)

MM = for "Mirrored Channel Mode" usage!

- Two **DDR3 LV RDIMM** ECC memory modules

MM 8GB (2x 4GB 1333MHz DR)	S26361-F3605-E524
= 4GB usable for Mirrored Channel Mode	
MM 16GB (2x 8GB 1333MHz DR)	S26361-F3605-E525
= 8GB usable for Mirrored Channel Mode	

Choose up to 2 order codes above per CPU.

See Note 1.) - 4.)

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

- 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
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- One **DDR3 LV UDIMM** ECC memory module, 1.35V

2GB (1333MHz/DR)	S26361-F3607-L513
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on special release

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

Memory Configuration PRIMERGY TX200 S6

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

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

Depending on the amount of memory configured you can decide between 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 allowed.

Mixing of Standard + Low Voltage DIMM's of the same type is allowed, but not recommended (therefore not configurable ex works)

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

Mode	Configuration	UDIMM	RDIMM	Application
chip kill support	any	n.a.	yes	detect multi-bit errors
Independent 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 Channel 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 2GB	with one CPU
Max. Memory per CPU	6 Modules / CPU	6x2GB	6x8GB	6x 8GB	with one CPU
Max. Memory per System	12 Modules / System	24GB	96GB	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
RDIMM LV / 1.35V 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
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

Configuration hints:

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

Bank I black sockets

Bank II blue sockets (or white latch)

- A so called Bank consists 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

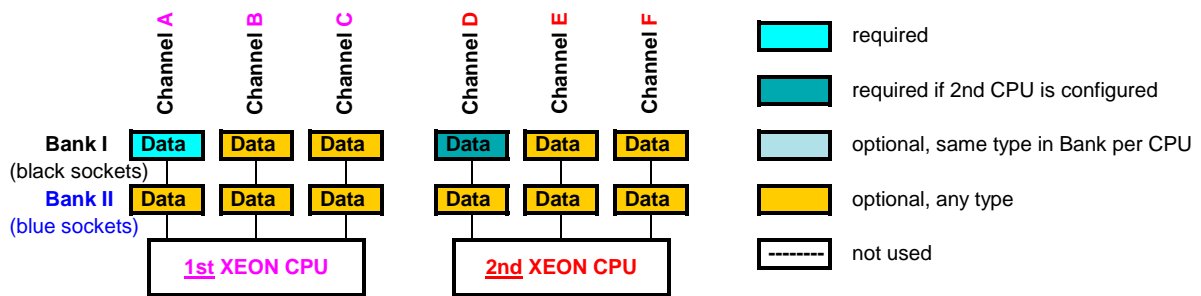
Bank II on CPU 1 up to 3 memory modules connected to Channel A, B and C on the first CPU

Bank 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

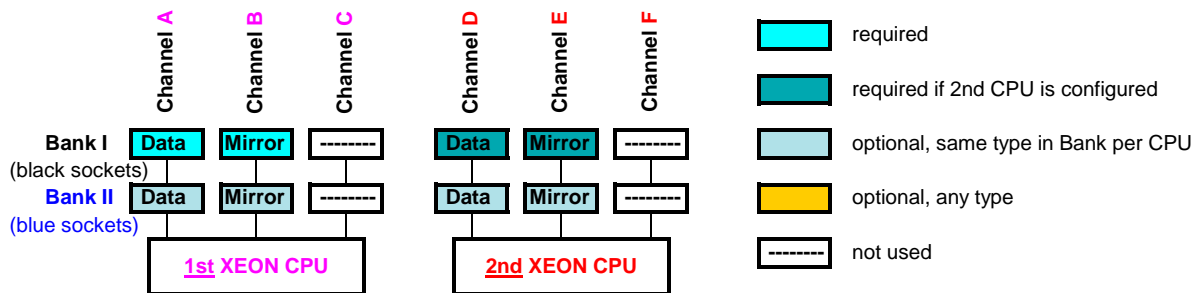
- See below (next page) for a detailed descriptions of the memory configuration supported.

1. Independent Channel Mode



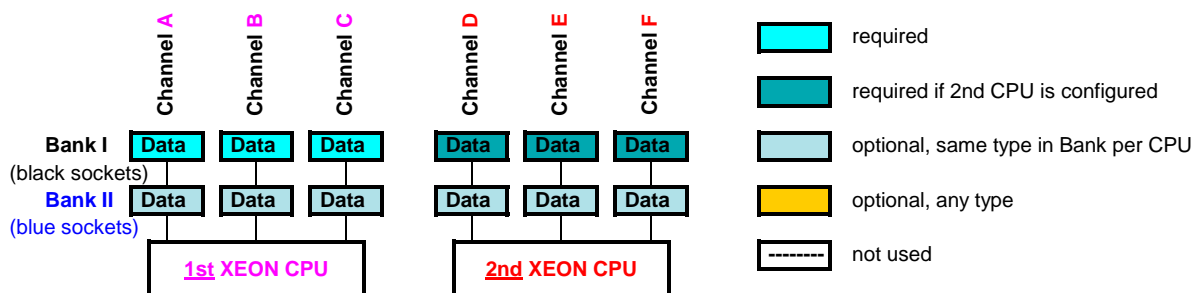
Independent Channel Mode allows all channels to be populated in any order
 Can run with differently rated DIMMs and use the settings of the slowest DIMM installed in the system
 Independent Channel Mode is supported using UDIMM or RDIMM memory modules

2. Mirrored Channel Mode



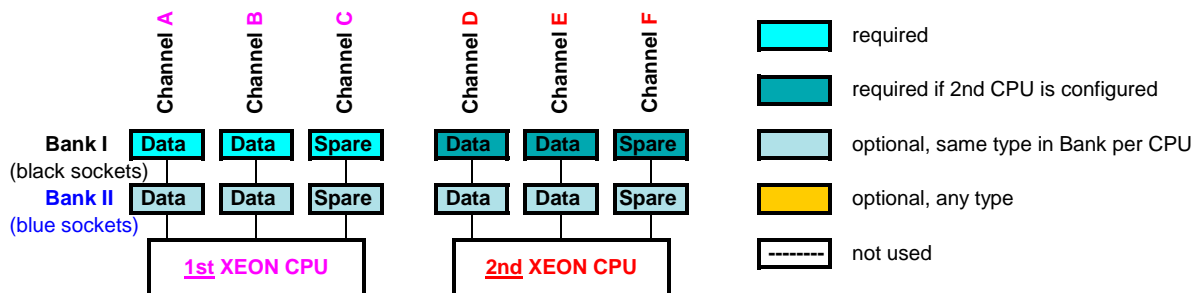
Mirrored Channel Mode requires identical modules on channel A and B (1st CPU) or channel D and E (2nd CPU)
 50% of the capacity is used for the mirror => the available memory for applications is only half of the installed memory
 channel C (1st CPU) or channel F (2nd CPU) are not usable in Mirrored Channel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

3. Performance Channel Mode



Performance Channel Mode requires identical modules on all channels of each Bank per CPU
 Performance Channel Mode is supported using RDIMM memory modules

4. Spare Channel Mode (As soon as released)



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 memory
 Spare Channel Mode is supported using RDIMM memory modules

Section IV Grafik

**Graphics controller integrated in iRMC2 (integrated Remote Management Controller)
(max. Resolution: 1600 x 1200 at 16bpp)**

S26361-F2748-E537
PY VGA LP card 512MB PCI-e x1
NVIDIA NVS300
512 MB PCI-e-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
full high bracket
max. 1x per system

The high 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 PCI-e-x1 card can also be installed in any PCI-e-x4, x8 or x16 slot.
Only one card per server is allowed.

PY VGA card must be installed in slot 6

S26361-F2748-L537
PY VGA LP card 512MB PCI-e x1
for loose delivery

Section V Accessible drives

There are 3 bays (1.6" x 5.25") for accessible drives.
An HDD extension box can be configured (cf. Conf. Diagram SAS SFF or SAS LFF)
(occupies 2x 5,25") providing 2x LFF (3.5") or 8x SFF (2.5") bays for hot plug HDDs.

S26361-F2826-E204
Mounting Kit DVD(sl) + LSP/LSD
Occupies one 5.25" x 1.6" bays
in the accessible bay area
Offers bays for:
- 1x LSP/LSD option
- 1x 0.5" * 5.25" SATA DVD
max. 1x per system

S26361-F2826-E104 ★
Mounting Kit DVD(sl) +
LSP/LSD + SAS/SATA LFF HDD
Occ. two 5.25" x 1.6" bays
in the accessible bay area
Offers bays for:
- 1x LSD/LSP option
- 1x 0.5" * 5.25" SATA DVD
- 2x 1" * 3.5" SAS/SATA HD's
One 0.5" * 3.5" satin black bezel
for LSD/LSP bay
One 0.5" * 5.25" satin black bezel
for 0.5" * 5.25" DVD bay
Two 1" * 3,25" satin black bezels
for SAS/SATA HDD bays
max. 1 per system

With the mounting Kit
S26361-F2826-E104
an additional SAS
controller is necessary

S26361-F2557-E202
Local Service Panel incl. ad.
Customer Self Service
LSP module incl. adapter
0.5" x 5.25"
max. 1x per System

S26361-F2557-E105
Local Service Display incl. ad.
Customer Self Service
LSD module incl. adapter
0.5" x 5.25"
max. 1x per System

see Conf. diagram
Option C

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

see Conf. diagram
Option A

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
only W2K, W3K and Linux
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

S26361-F3266-E2 ★
DVD-ROM HH SATA
16x DVD 48x CD
1.6 x 5.25", black bezel
max. 1x per system

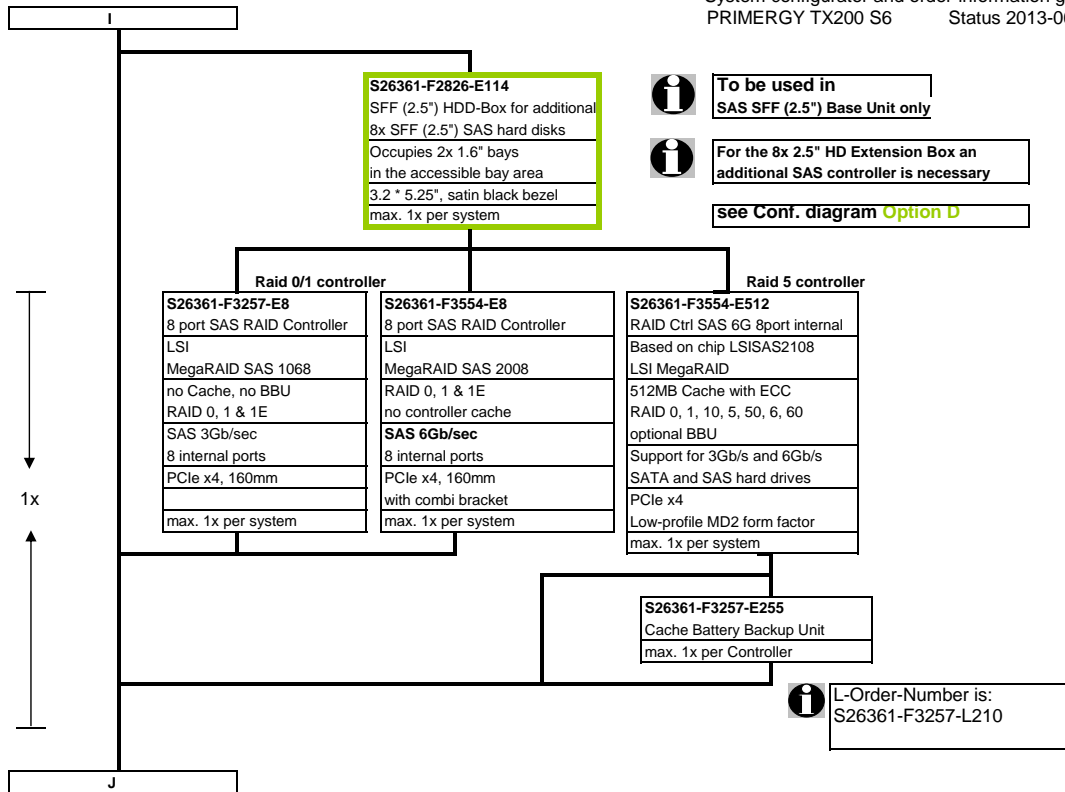
S26361-F3267-E2 ★
DVD-RW supermulti HH SATA
all formats, DUAL/DL, DVD-RAM
only W2K, W3K and Linux
1.6 x 5.25", black bezel
max. 1x per system

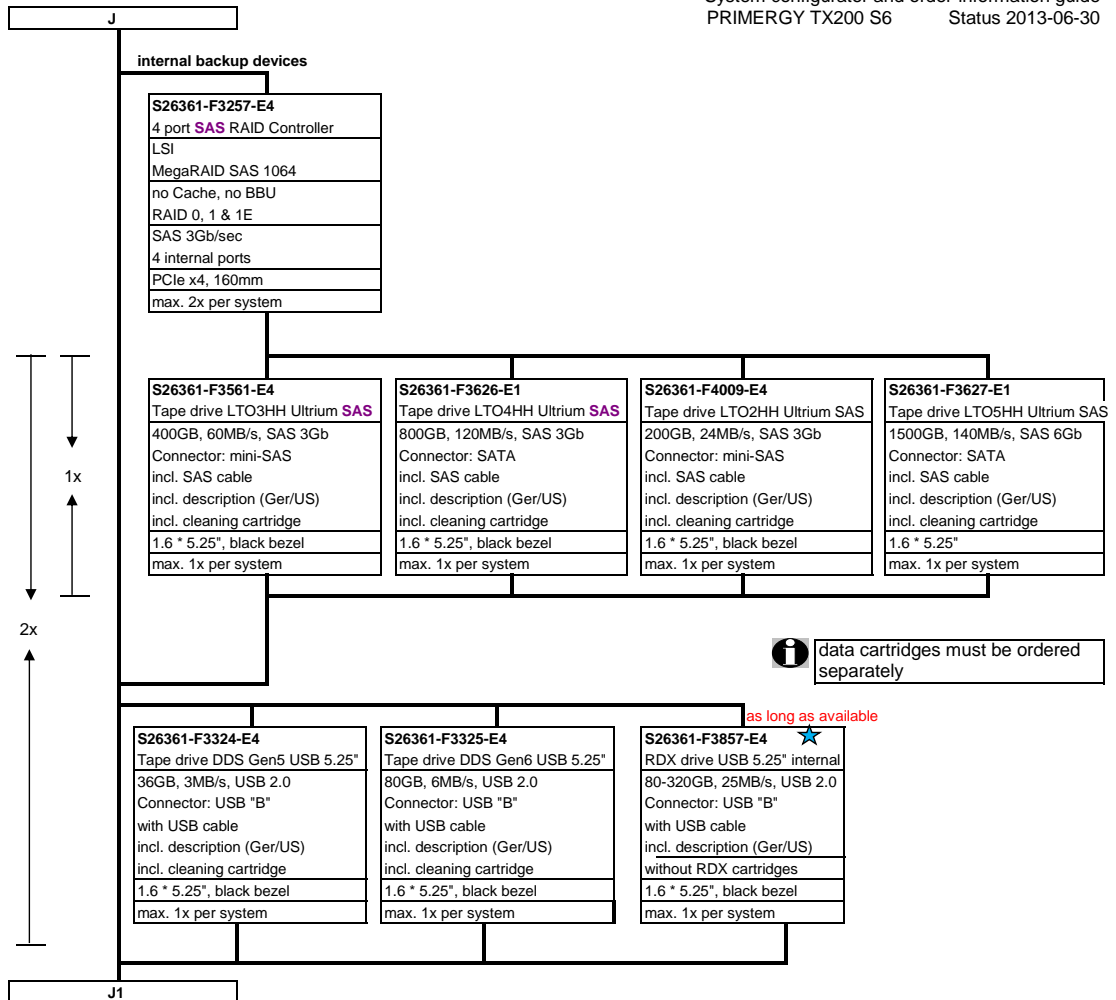
S26361-F3530-E2 ★
Blu-ray Combo HH SATA
6x BD-ROM, 16x DVD, 40x CD
BD DL and all CD/DVD formats
1.6 x 5.25", black bezel
max. 1x per system

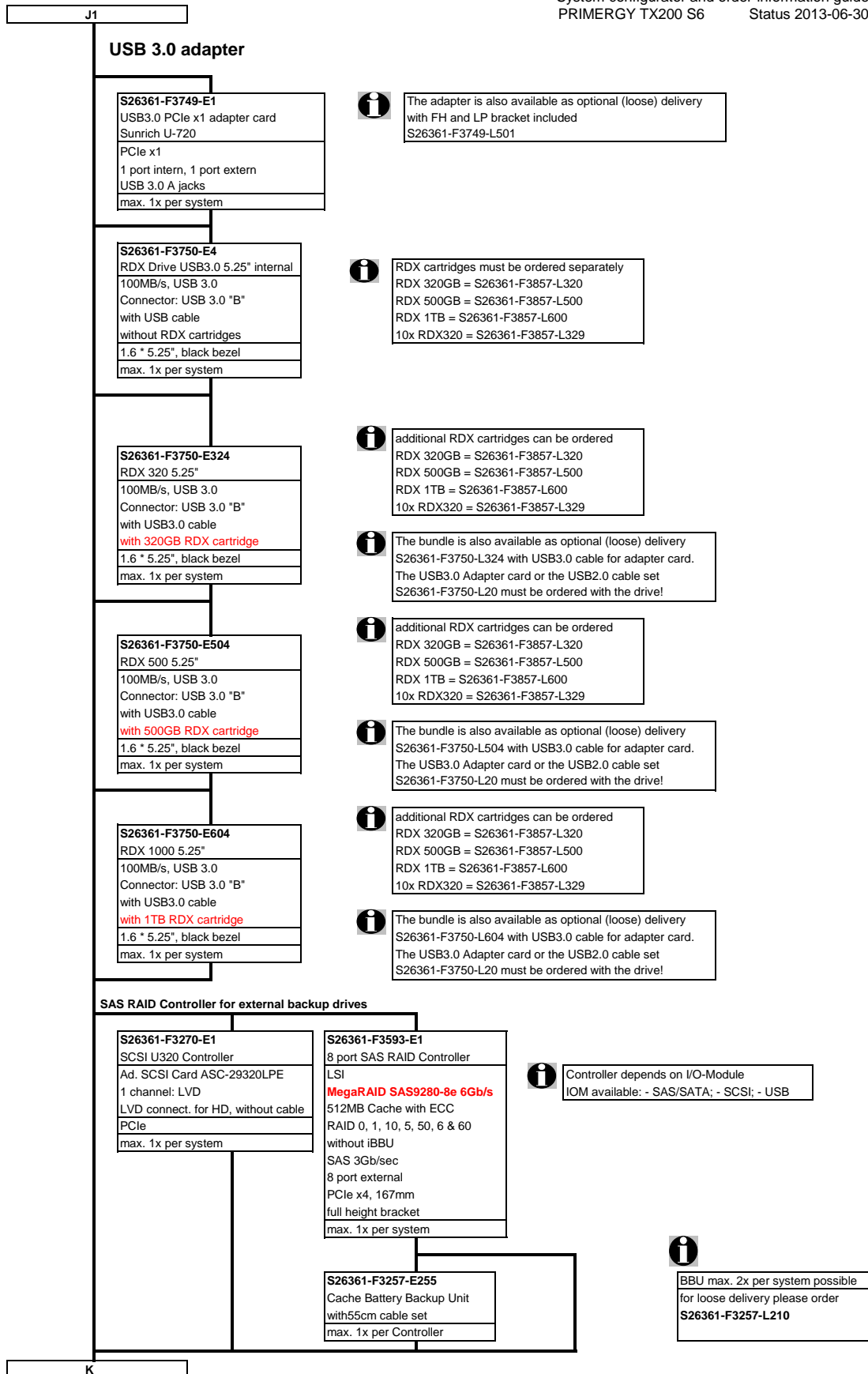
S26361-F3585-E2 ★
Blu-ray Triple Writer HH SATA
4x BD-RW, 16x DVD, 40x CD
BD DL und alle CD/DVD Formate
1,6 x 5,25", Front schwarz
max. 1x pro System

Following USB Components are available

1) USB DVD SM / Blu-Ray External SuperMulti Drive (as soon as released) External Blu-Ray Drive (as soon as released)	
2) USB Keyboard: KBPC PX D, professional keyboard	S26381-K340-V120
4) USB Memorybird: MyUSBS A910 8GB	S26391-F6048-L208
MyUSBS A910 16GB	S26391-F6048-L216







K

Section VI Hard disks drives

SAS/SATA LFF (3.5") Base Units: SAS HDDs Require SAS Controller! see section VIII internal Disk Array

i There is a 6 port SATA controller in the Base Unit.
 Up to 4 SATA LFF (3.5") hard disks can be configured.

If you need SAS, you can choose between two types of 8 port SAS controller to enable the Base Unit.
 Up to 4 SAS or SATA LFF (3.5") hard disks can be configured.
 If LFF SAS HDD Extension Box, Option C is used up to 6 SAS or SATA LFF (3.5") hard disks can be configured.
Note: For more than four SATA LFF (3.5") hard disks you need a 8 port SAS controller
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

i Hot replace is only possible running RAID.

Business Critical (BC) SATA 3Gb/s HD 3.5" with hot plug/hot replace tray	
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. 4x (or 6x) per system	

S26361-F3293-E250 HD 250GB 7.2krpm 3.5" 7200rpm,<9.0 ms, 16MB Cache ECO SATA 3Gb/s hot plug/hot replace tray max. 4x (or 6x) per system	S26361-F3700-E500 HD500GB 7.2krpm 3.5" 7200rpm,<9.0 ms, 16MB Cache ECO SATA 3Gb/s hot plug/hot replace tray max. 4x (or 6x) per system
--	---

L

4/6x

SAS 6Gb/s 3.5" with hot plug/hot replace tray	
300GB 10000rpm,<4,5ms, 16MB Cache	S26361-F4005-E530
450GB 10000rpm,<4,5ms, 16MB Cache	S26361-F4005-E545
600GB 10000rpm,<4,5ms, 16MB Cache	S26361-F4005-E560
max. 4x (or 6x) per system	

L

SAS / SATA SFF (2.5") Base Units: SAS HDDs Require SAS Controller! see section VIII internal Disk Array

i you can choose between 3 types of 8 port SAS controller for the Base Unit. Up to 8 SAS SFF (2.5") hard disks can be configured as standard. Using the SFF SAS HDD Extension Box, Option D up to 16 SAS SFF (2.5") hard disks can be configured. To use SFF SAS HDD Extension Box, Option D:
- **make sure to configure the same type of controller for all Backplanes**
Hot replace is only possible running RAID.
Configurations with Eco SATA can only be mixed with BC-SATA HDD type
2.5" SAS drives and 2.5" BC SATA drives can be mixed, but not used in one logical RAID volume

Controller for 1 to 8 SAS SFF (2.5") HDD

S26361-F3257-E8 8 port SAS RAID Controller LSI MegaRAID SAS 1068 no Cache, no BBU RAID 0, 1 & 1E SAS 3Gb/sec 8 internal ports PCIe x4, 160mm max. 1x per system	S26361-F3554-E8 8 port SAS RAID Controller LSI MegaRAID SAS 2008 RAID 0, 1 & 1E no controller cache SAS 6Gb/sec 8 internal ports PCIe x4, 160mm with combi bracket max. 1x per system	S26361-F3554-E512 RAID Ctrl SAS 6G 8port internal Based on chip LSI SAS 2108 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
--	--	---

i The "SFF HDD extension" Box" requires a MegaRAID SAS Controller!

S26361-F3257-E255
Cache Battery Backup Unit
max. 1x per Controller

i BBU or BBU max 2x per system for loose delivery please order **S26361-F3257-L210**

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-E1000
max. 8x (or 16x) per system	

ECO SATA 3Gb/s HD 2.5" with hot plug/hot replace tray	
160GB 5.400rpm,<10,5ms, 8MB Cache	S26361-F3297-E160
320GB 5.400rpm,<10,5ms, 8MB Cache	S26361-F3297-E320
500GB 5.400rpm,<10,5ms, 8MB Cache	S26361-F3297-E500
max. 8x (or 16x) per system	

i Mix of ECO SATA with SAS HDDs is not possible !

M

SSD SAS 2.5"

S26361-F4541-E100 SSD SAS 100GB, SLC Solid State Disk, SAS 6Gb/s Enterprise Performance High Endurance** hot plug/hot replace tray max. 8x (or 16x) per system	S26361-F4541-E400 SSD SAS 400GB, SLC Solid State Disk, SAS 6Gb/s Enterprise Performance High Endurance** hot plug/hot replace tray max. 8x (or 16x) per system
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i **) High Endurance
100GB: max 9PB***, random write
400GB: max 35PB***, random write

SSD SAS MLC	
100GB, Enterprise Perf., Mainstream Endurance*	S26361-F4581-E400
200GB, Enterprise Perf., Mainstream Endurance*	S26361-F4581-E400
400GB, Enterprise Perf., Mainstream Endurance*	S26361-F4581-E400
max. 8x (or 16x) per system	

i *) Mainstream Endurance
10DWPD over 5y
Managed Life Model

SSD SATA MLC	
200GB, Mainstream Perf., Mainstream Endurance*	S26361-F5225-E200
400GB, Mainstream Perf., Mainstream Endurance*	S26361-F5225-E400
max. 8x (or 16x) per system	

SAS 6Gb/s 2.5" with hot plug/hot replace tray	
300GB 10000rpm,<4,5ms, 16MB Cache	S26361-F4482-E130
450GB 10000rpm,<4,5ms, 16MB Cache	S26361-F4482-E145
600GB 10000rpm,<4,5ms, 16MB Cache	S26361-F4482-E160
900GB 10000rpm,<4,5ms, 32MB Cache	S26361-F4482-E190
146GB 15krpm,<4,5ms, 32MB Cache	S26361-F4482-E514
300GB 15krpm,<4,5ms, 32MB Cache	S26361-F4482-E514
max. 8x (or 16x) per system	

i configuration of SAS-HDDs requires SAS RAID controller

***) 1GB is equal to one billion bytes when referring to SSD capacity. 1TB equals 1,000GB, and 1PB equals 1,000TB. Accessible capacity will vary depending on the operating environment and formatting.

2x

8x / 16x

M

M

Section VII External SAS Disk Array

SAS RAID controller for JBOD subsystems

S26361-F3593-E1
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 3Gb/sec
8 port external
PCIe x4, 167mm
full height bracket
max. 1x per system

S26361-F3257-E255
Cache Battery Backup Unit
with 55cm cable set
max. 1x per Controller

i BBU max. 2x per system possible
 for loose delivery please order
S26361-F3257-L210

SAS-controller for external backup Drives

S26361-F3271-E1
SAS Controller 3Gb/s 8 port
LSI SAS3442E-R
PCIe x4,
int: 4 port
ext: 4 port
max. 2x per system

S26361-F3628-E1
SAS Controller 6Gb/s 8 port
LSI SAS9200-8e
PCIe 2.0 x4,
ext: 8 port
max. 2x per system

N

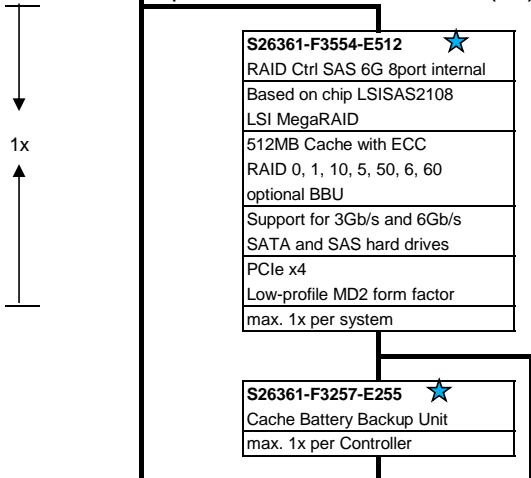
N

Section VIII internal Disk Array

SATA Configuration

i SATA Base Units contain a 6-port on-board SATA controller supporting RAID Levels 0, 1, 10
 RAID 5 requires an additional Controller

optional RAID 5-Controller for 1 to 4 LFF (3.5") SATA HDD

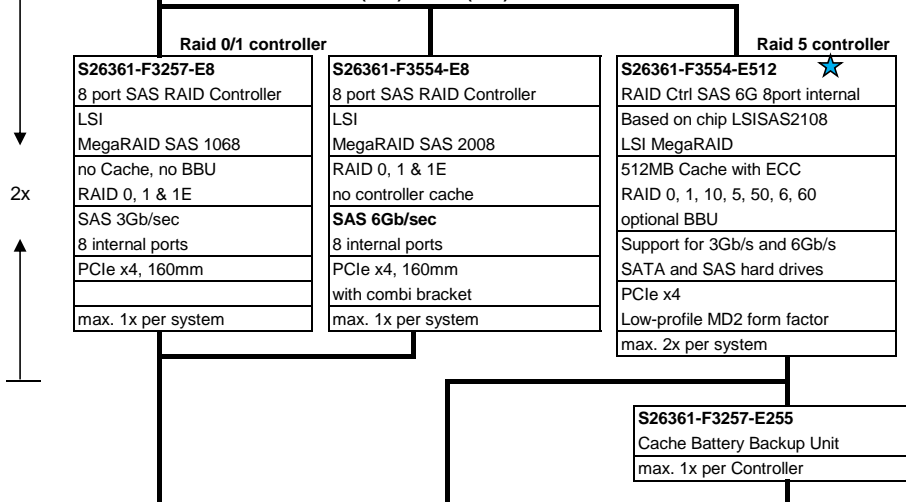


i iBBU or BBU max 2x per system possible
 for loose delivery please order
 S26361-F3257-L210

SAS Configuration

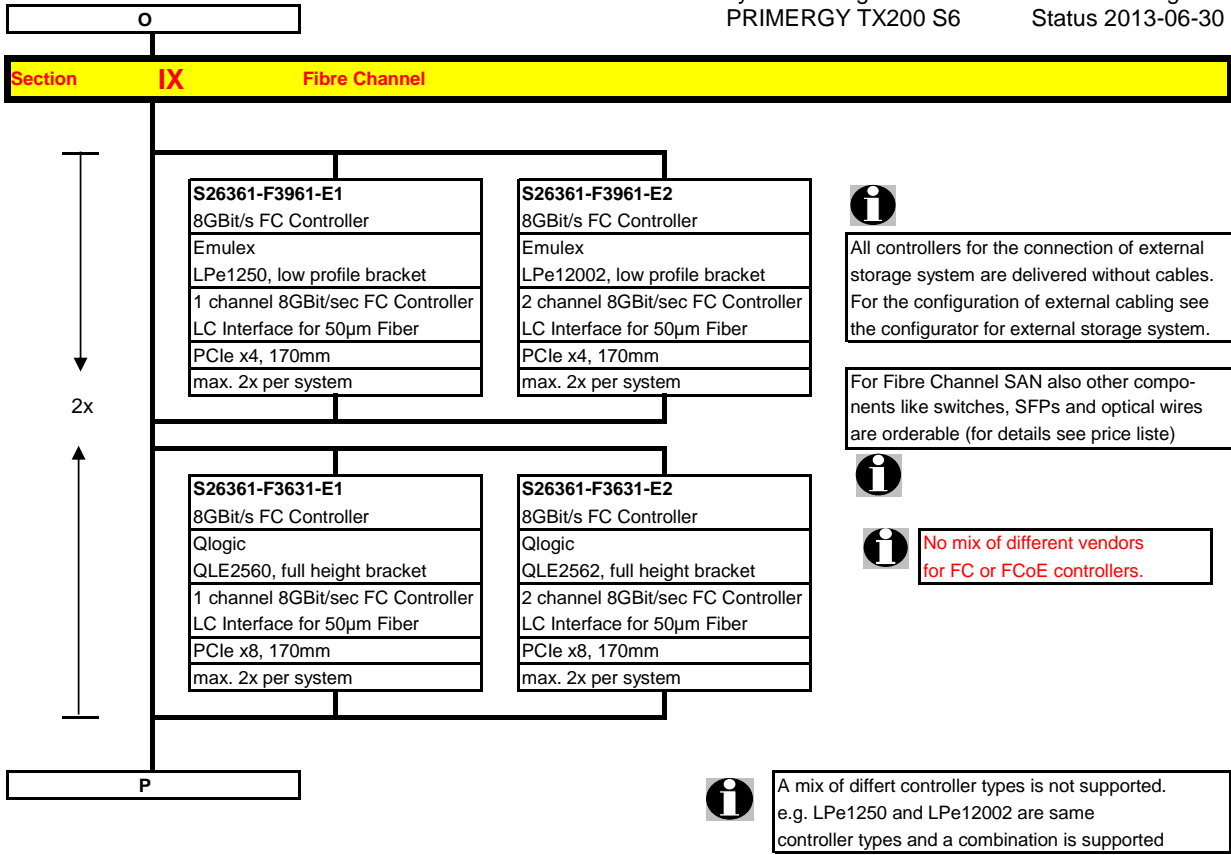
i you can choose between 3 types of 8 port SAS controller for the Base Unit:
 if you want to use SAS harddisks one Controller is required

Controller for 1 to 8 LFF (3.5") or SFF (2.5") SAS HDD



i L-Order-Number is:
 S26361-F3257-L210

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Section X Communication / Network

1x on-board LAN Controller

Fast Ethernet Controller on-board
1 Gbit Intel Hartwell
Server Adapter with TOE
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.

A) PCI-Express Adapter 1000TX/SX

S26361-F3241-E1 Gigabit Ethernet Contr. 1000TX Eth Ctrl 1x1Gbit PCI-e Pro/1000PT Cu Intel PRO/1000 PT Server Adapter PCIe x1 ext: for RJ45-connector, Cat 5 max. 2x per system	S26361-F3242-E1 Gigabit Ethernet Contr. 1000SX Eth Ctrl 1x1Gbit PCI-e Pro/1000PF LC Intel PRO/1000 PF Server Adapter PCIe x4 ext:LC-connector max. 2x per system	S26361-F3516-E1 Gigabit Ethernet Controller 1000TX Eth. Ctrl 1x1Gbit PCIe PRO/1000PT Cu Intel Shelter Iland (Hartwell) PCIe x4 ext: for RJ45-plug, Cat 5 max. 2x per system
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B) Dual Port PCI-Express Adapter 1000TX

S26361-F3740-E1 (D3035) Gigabit Ethernet Controller Dual 1000TX Eth Ctrl 2x1Gbit Cu PCIe x4 D3035 Intel Powerville based 2 port Server Adapter PCIe x4, Low Profile full height (FH) bracket ext: for RJ45-plug, Cat 5 max. 2x per system
--



Loose delivery with
 FH and LP bracket included:
 S26361-F3740-L501

C) Quad Port PCIe Adapter 1000TX

S26361-F3739-E1 (D3045) Gigabit Ethernet Controller Quad 1000TX Eth Ctrl 4x1Gbit Cu PCIe x4 D3045 Intel Powerville based 4 port Server Adapter PCIe x4, Low Profile full height (FH) bracket ext: for RJ45-plug, Cat 5 max. 2x per system
--



Loose delivery with
 FH and LP bracket included:
 S26361-F3739-L501

D) 10GbE 2-Port SFP+ for MMF Module

S26361-F3629-E2 (D2755) 10 Gigabit Ethernet Contr. dual port SFP+ Eth Ctrl 2x10Gbit PCIe x8 D2755 SFP+ Intel Niantic based dual port 10Gb NIC PCIe x8, Low Profile, Full Height 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

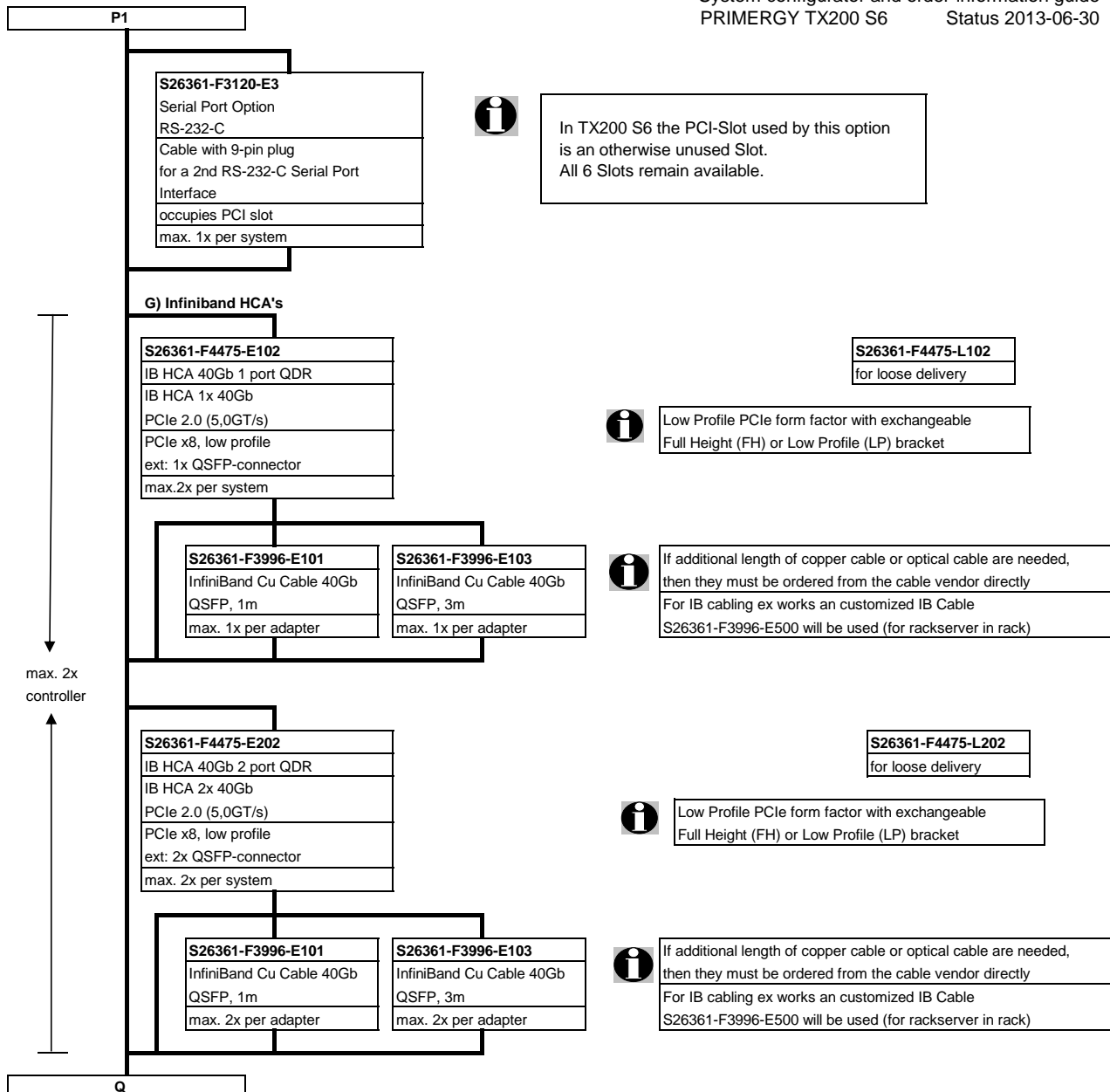
S26361-F3986-E3 SFP+ Module MMF 10GbE LC SFP+ module for 10 Gbit Ethernet FO cabling ext:LC-connector max. 2x per adapter



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



P1



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Section XI System Management Produkts (RemoteView)

S26361-F1790-E241
iRMC2 advanced pack
integrated remote management controller
activation key for
graphical console redirection
and remote media redirection
max. 1x per system

S26361-F1790-E221
RemoteView Software V5.0
Installation and configuration of
RemoteView Web and LAN FrontEnd
BMC-Manager, RTDS and FreeDOS
Online manuals

Section XII Miscellaneous

R

R

Section XIII Country specific power cord

S26361-F3301-E120
 CCC Certification for China



Since the beginning of this year the specifications for the approval and production monitoring for China (CCC) have become stricter. This is why the CCC certification label must in future be ordered separately



A power cord has to be ordered for country specific floorstand versions:
 - once per basic unit and additional a second power cord
 - if an additional hot plug, redundant power supply modul is ordered

PRIMERGY TX200 S6 Floorstand

PRIMERGY TX200 S6 19" Rack

Power cord for floorstand versions for following countries:
 1.8m, grey

max.2x

T26139-Y1740-E10	D, A, B, F, NL, FIN, N, S, E, P, RUS, TR
T26139-Y1742-E10	USA, Canada
T26139-Y1744-E10	UK, IR
T26139-Y1745-E10	Italy
T26139-Y1746-E10	Denmark
T26139-Y3850-E10	Option "no powercord", for Countries without specific cable orderable like e.g. China



Country specific power cords are not required for rack versions.
 Power cords are shipped in all rack versions with inlet connector for non-heating apparatus. (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.

option for floorstand

USB keyboards for floorstand versions for following countries:

USB standard keyboard KB400			USB professional Keyboard KBPC PX ECO	
S26381-K550-E170	KB500 CH	Switzerland	S26381-K341-E170	KBPC PX ECO CH
S26381-K550-E104	KB500 CZ SK	Czech/Slovak	S26381-K341-E104	KBPC PX ECO CZ/SK
S26381-K550-E120	KB500 D	Germany	S26381-K341-E120	KBPC PX ECO D
S26381-K550-E180	KB500 E	Spain	S26381-K341-E180	KBPC PX ECO E
S26381-K550-E140	KB500 F	France	S26381-K341-E140	KBPC PX ECO F
S26381-K550-E165	KB500 GB	United Kingdom	S26381-K341-E165	KBPC PX ECO GB
S26381-K550-E185	KB500 I	Italy	S26381-K341-E185	KBPC PX ECO I
S26381-K550-E155	KB500 S FIN	Sweden / Finland	S26381-K341-E154	KBPC PX ECO S/FIN
S26381-K550-E110	KB500 USA	USA / international	S26381-K341-E110	KBPC PX ECO US

Optional Mouse
 S26381-K431-E100 Mouse M480 black
 S26381-K431-E101 Mouse M480 grey

Power cord for optional monitor connection for the following countries:
 1.8m, grey

T26139-Y1740-L10	D, A, B, F, NL, FIN, N, S, E, P, RUS, TR
T26139-Y1742-L10	US, CDN
T26139-Y1744-L10	UK, IR
T26139-Y1745-L10	Italy
T26139-Y1746-L10	Denmark



For connection of a monitor to the system an additional country specific power cord has to be ordered as option.



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.

End PRIMERGY TX200 S6

Section XIV Energy Star

S26361-F3301-E201
 TX200 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 TX200 S6 E-Star Fam1:



SATA/SAS LFF (3.5") Base Unit with hot plug PSU and redundant Fans	S26361-K1346-V201
	S26361-K1346-V601

Turbo Quad-Core CPU's	
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)	
8GB (1333MHz/DR)	S26361-F3604-E514
max. 12x per system	
Spare Channel Mode Installation	S26361-F3284-E1
Performance Mode Installation	S26361-F3284-E2
SP 12GB (3x 4GB 1333 MHz DR)	S26361-F3604-E534
2x per system	
Mirrored Channel Mode Installation	S26361-F3284-E3
MM 8GB (2x 4GB 1333MHz DR)	S26361-F3604-E524
2x per system	

DVD & tape Drives	
DVD Drives	
Blu-ray Combo slim SATA	S26361-F3531-E2
DVD-RW supermulti slim SATA	S26361-F3269-E2
DVD-ROM HH SATA	S26361-F3266-E2
DVD-RW supermulti HH SATA	S26361-F3267-E2
Blu-ray Combo HH SATA	S26361-F3530-E2
Blu-ray Triple Writer HH SATA	S26361-F3585-E2
RDX drive USB 5.25" internal	S26361-F3857-E4
max. 1x per system	

4Gbit/s Fibre Channel Controller	
Emulex LPe1150 MMF LC	S26361-F3306-E1
max. 1x per system	

Mounting Kit + content	
Mounting Kit DVD (sl) + LSP/LSD + SAS LFF HDD	S26361-F3294-E500
Local Service Display	S26361-F2557-E106
min. 1x, max. 6x per system	

RAID Controller	
RAID Ctrl. SAS 6G 5/6 512 MB (D2616)	S26361-F3554-E512
max. 2x per system	

Hard Disk Drives 3.5" SATA	
HD 500GB 7.2krpm 3.5"	S26361-F3294-E500
HD 750GB 7.2krpm 3.5"	S26361-F3294-E750
HD 1000GB 7.2krpm 3.5"	S26361-F3294-E100
HD 2000GB 7.2krpm 3.5"	S26361-F3294-E200
min. 1x, max. 6x per system	

Change Report

Date	Order number	Changes
2013-03-14		HDD/SSD Description updated
2013-05-21	*F4582*, *F5225*	SSD added
2013-03-14	S26361-F3750-E324/504/E604	RDX & Cartridge bundles added
2012-11-22	F3749-E4 and F3750-E4	"as soon as available" removed
2012-11-22	S26361-F3857-E4	"as long as available" added
2012-10-08	S26361-F3749-Ex	Added RDX Drive
2012-10-08	S26361-F3750-Ex	Added USB3.0 Adapter
2012-09-28	S26361-F4541-E200	EOL SSD SAS 200GB SLC
2012-02-28	S26361-F3301-E120	add CCC Certification
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
2011-10-30	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
2011-05-03	S26361-F3610-E2/L502	Formal change from E1 / L501
2011-04-07	S26361-F2735-L202	Adapter angle ...L31 must be ordered for asym. PC/DC racks additionally
2011-03-31	S26361-F3629-E2	10 Gigabit Ethernet controller added
2011-01-10	S26361-F3648-E160	Westmere-EP Refresh CPUs added
2010-12-30	S26361-F3585-E2	Blu-ray Triple Writer HH SATA - now available
2010-11-18	S26361-F3628-E1	Ctrl SAS 6G 8port external added
2010-08-10	S26361-F2826-E104	Mounting kit needs SAS controller within LFF SAS base unit (3.5")
2010-08-01	S26361-F3611-E1	New Quad LAN GbE controller - as soon as available
2010-08-01	S26361-F3610-E1	New Dual LAN GbE controller - as soon as available
2010-07-01	S26361-F3627-E1	LTO5 tape added
2010-06-23	S26381-K431-E101	Added Mouse M480 grey
2010-06-23		Keyboard Update
2010-06-01		First release