

PRIMERGY TX200 S7

System configurator and order-information guide

August 2014

Contents

Instructions

Configuration diagram

Configurator

- 0 System software
- I Basic unit
- II Processor
- III Memory
- IV Graphics
- V Accessible drives
- VI Hard disk drives
- VII External SAS or SCSI Disk Array
- VIII Internal Disk Array
- IX Fiberchannel
- X Communication/Network
- XI System Management Products (RemoteView)
- XII Miscellaneous
- XIII Country specific power cord



Change report

PRIMERGY Server

Instructions

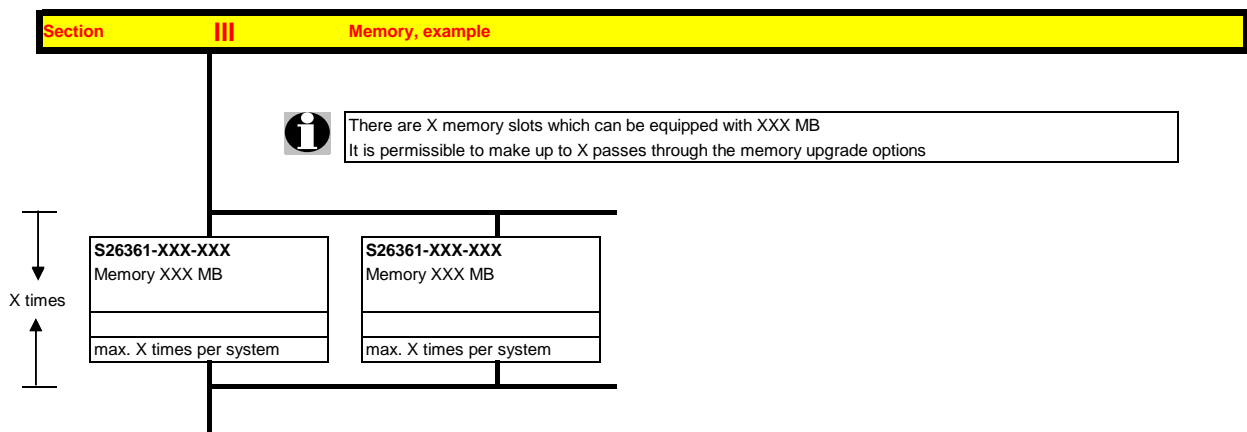
This document contains basic product and configuration information that will enable you to configure your system via PC-/System-Architect

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:

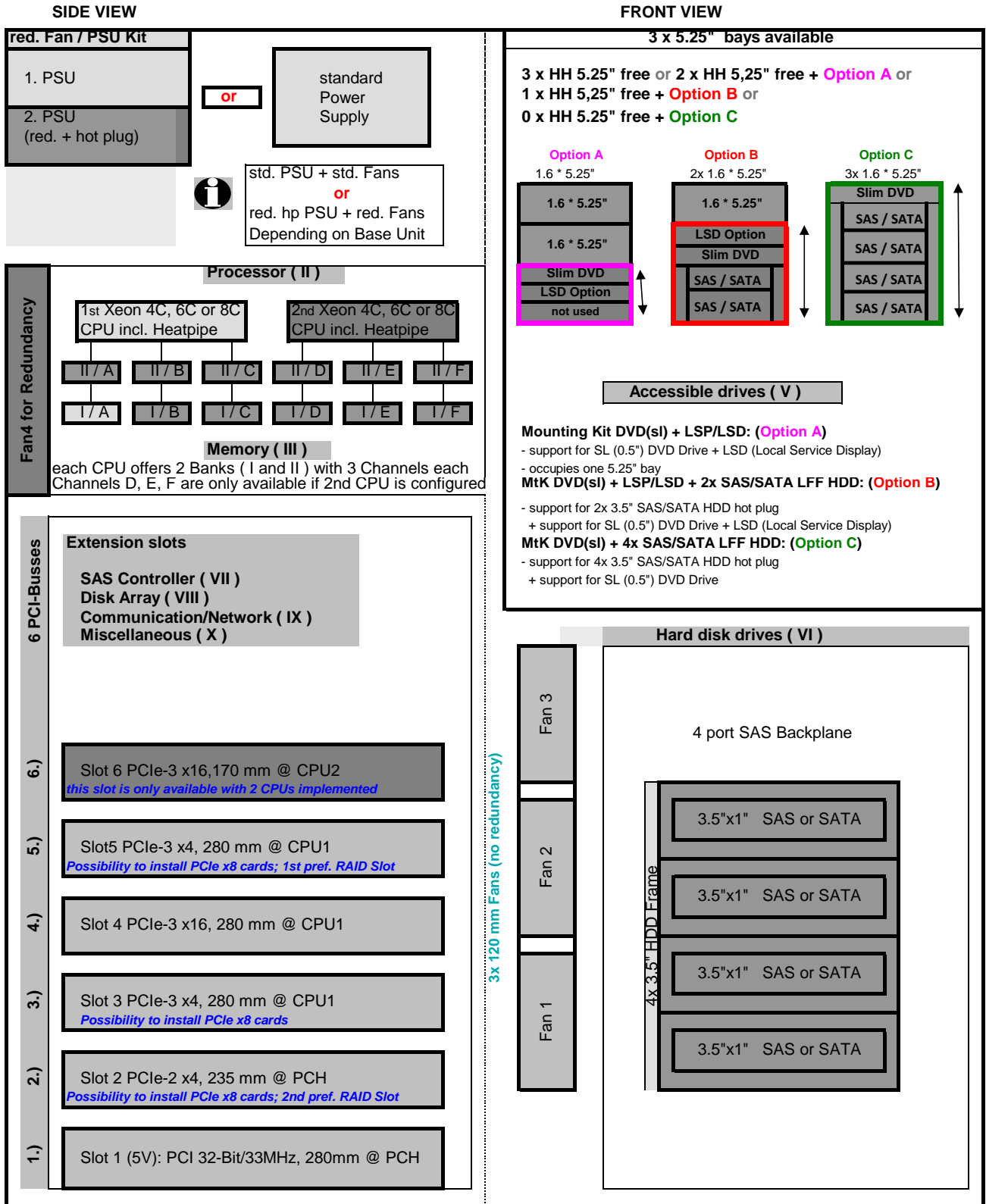
http://ts.fujitsu.com/products/standard_servers/index.html (internet)

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 S7 SATA LFF (3.5") System Unit

System unit (I)

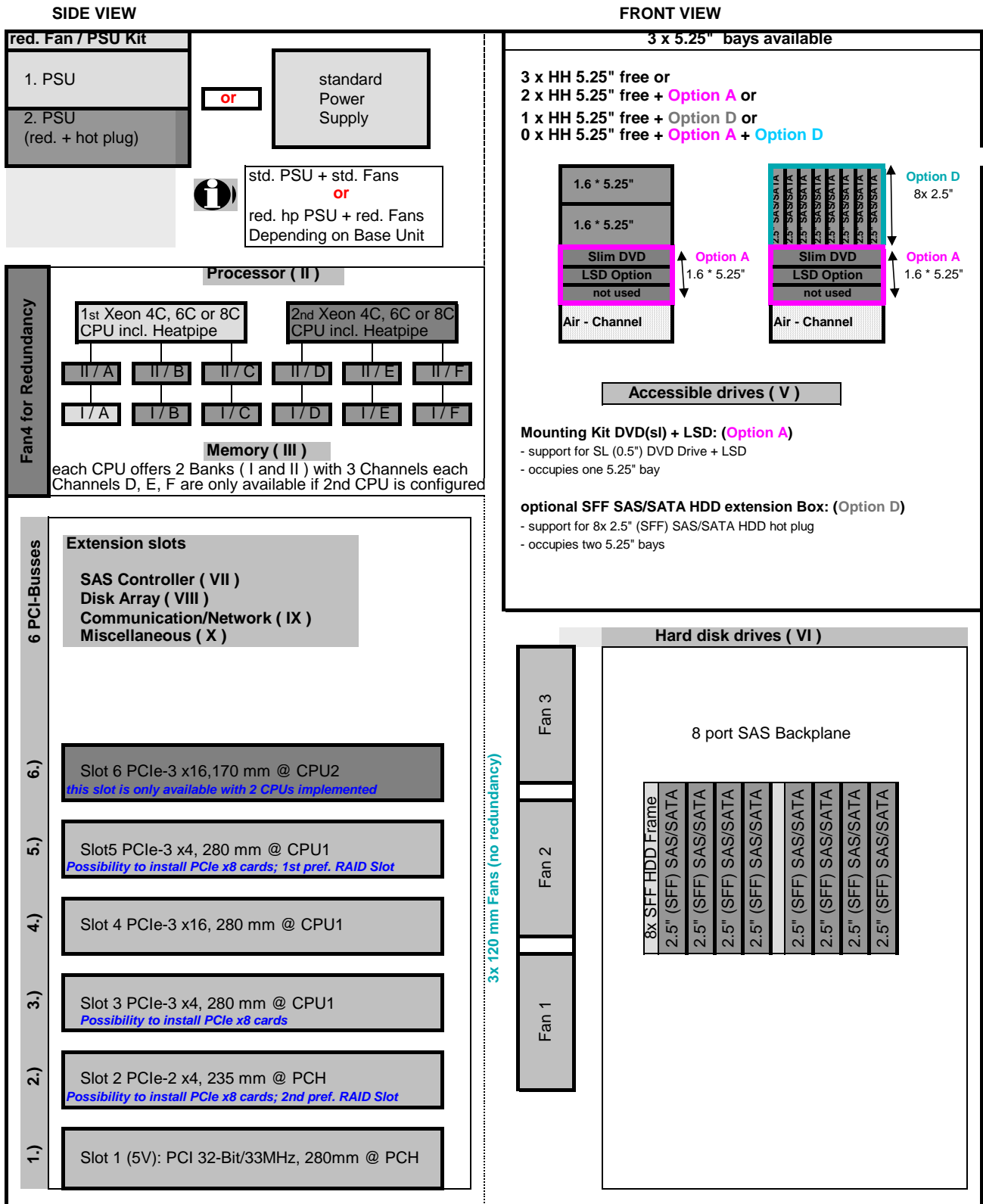


Key:

- Included in basic unit
- Option

Configuration diagram PRIMERGY TX200 S7 SFF (2.5") System Unit

System unit (I)



Key:

- Included in basic unit
- Option

Start PRIMERGY TX200 S7

SW Configurator 64 bit (EM64T / IA64)

with OEM-Software
for PRIMERGY Server

without OEM-Software
for PRIMERGY Server



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

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

VMware-Software

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

Citrix XenServer / Essentials for XenServer

- XenCenter Management Server for any server released for Windows 2000/XP/Vista and Server 2003/2008
- XenServer editions released for PRIMERGY except all mono PRIMERGY systems (see release matrix for details)

Microsoft Hyper-V Server and System Center for SME

- Microsoft System Center Virtual Machine Manager Workgroup Edition for any server released for Windows Server 2008 R2
- Microsoft System Center Essentials 2010 for any server released for Windows Server 2008 R2
- Microsoft Hyper-V Server 2008 R2 - Free Microsoft Web Download (not necessary for Windows Server 2008 R2 customers)

Microsoft - Windows Server 2008 R2 Server Licenses

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

Microsoft - Windows Small Business Server 2011

- Windows Small Business Server Standard 2011
- Windows Small Business Server 2011 Premium Add-on
- Windows Small Business Server Essentials 2011

Microsoft - Downgrade Media Only

- Windows Server 2008 Enterprise
- Windows Server 2008 Standard

Microsoft Windows Small Business Server 2011 Client Access Licenses

- Windows Small Business Server 2011 Standard I Premium Device CAL
- Windows Small Business Server 2011 Standard I Premium User CAL
- Windows Server 2008 Remote Desktop Services Device CAL
- Windows Server 2008 Remote Desktop Services User CAL

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

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

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

ServerView Resource Orchestrator VE*)
Virtual Edition (ROR VE) Resource management
Windows, Linux, VMware, Solaris Server
for PRIMERGY BX/RX/TX, PRIMEQUEST, SPARC

ServerView Resource Orchestrator CE*)
Cloud Edition (ROR CE) Resource orchestration
Windows, Linux, VMware Server
for PRIMERGY BX/RX/TX, PRIMEQUEST

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

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

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

Please consult the ROR VE release and ordering information in the Extranet under <https://partners.ts.fujitsu.com/products/software/resco/Pages/default.aspx>

*) Please consult the ROR CE release and ordering information in the Extranet under <https://partners.ts.fujitsu.com/products/software/ror/Pages/default.aspx>

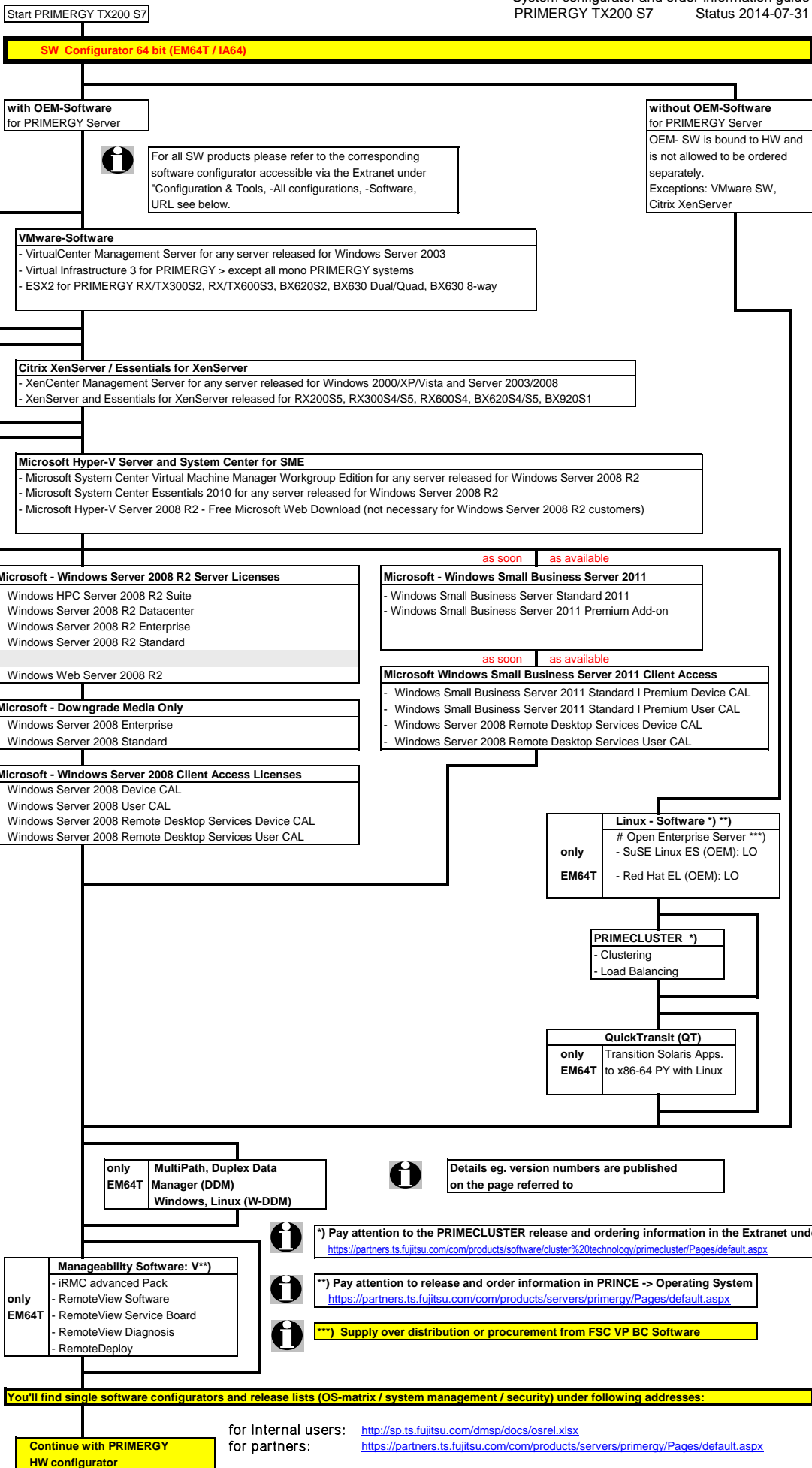
**) Pay attention to release and order information in PRINCE -> Operating System <https://partners.ts.fujitsu.com/products/servers/primergy/Pages/default.aspx>

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

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

Continue with PRIMERGY HW configurator

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

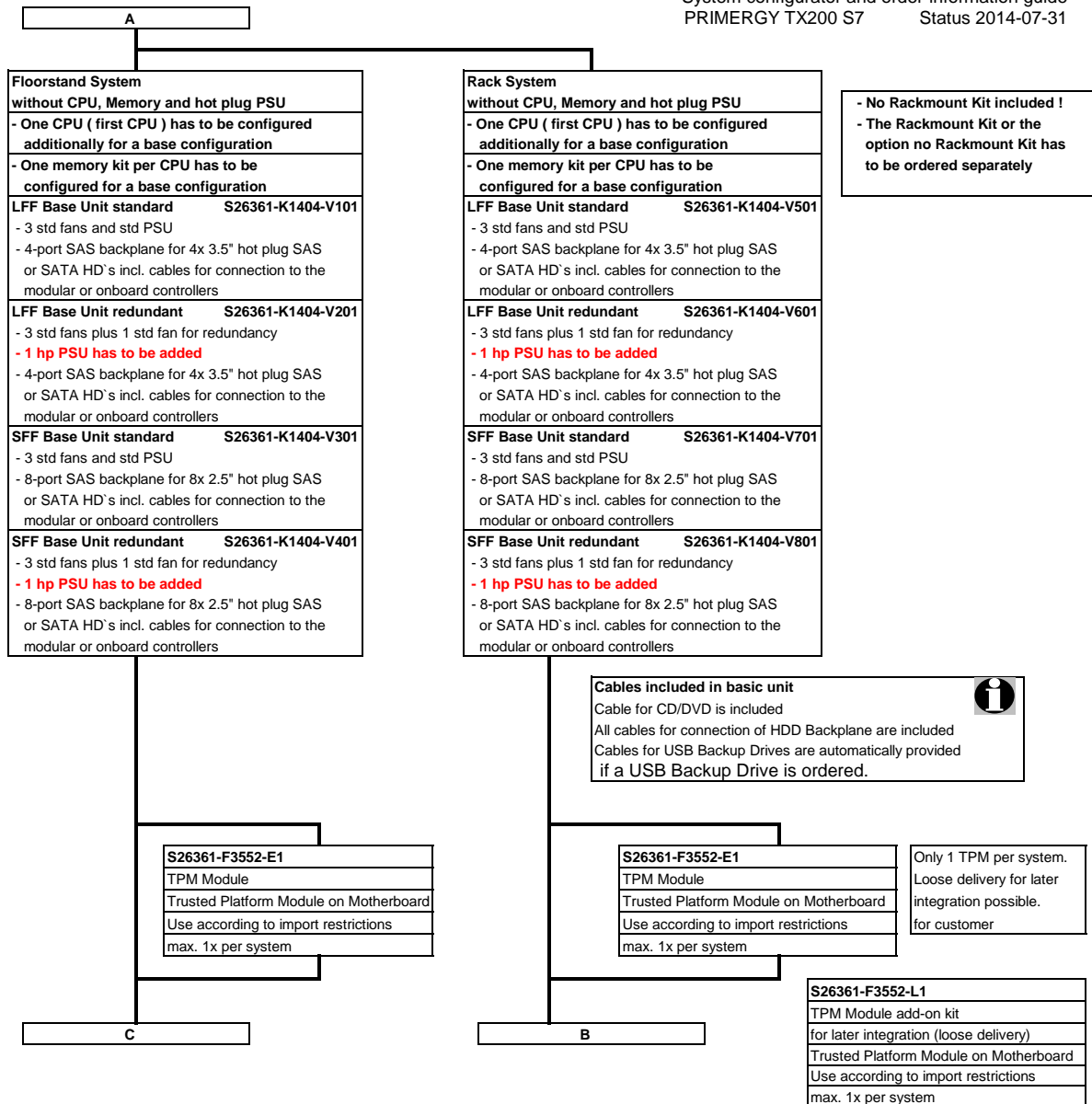


Section I Basic unit

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 (3 System Fans)
(V101 and V301, V501 and V701 base units)
Type 2: without PSU (450W or 800W must be added), but 1 additional fan for redundancy
(V201, V401, V601 and V801 base units)
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 D3099 with:
- * **Up to two Xeon 4C, 6C & 8C CPU's (Socket-B2)**
with 1 serial QPI link (Quick Path Interconnect) and 3 memory channels per CPU
First CPU has to be selected for an orderable basic unit,
- * **Chipset Intel® C600 Series (codenamed Patsburg)**
- * **6 PCI slots:**
 - 2x PCIe-3 x16
 - 2x PCIe-3 x4 (mechanically x8)
 - 1x PCIe-2 x4 (mechanically x8)
 - 1x PCI 32/33
- 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 B+C CPU 1 or E+F 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 Patsburg A for SATA Raid0/1,**
optional Southbridge Patsburg B with 4 ports for SAS RAID 0/1
Max. 4 SATA / SAS HD's are supported
Max. 2 SATA accessible drives are supported (DVD, Backup)
- * **2x1 Gbit Ethernet LAN on board (Intel Hartwell);**
iSCSI boot integrated in System BIOS as selectable option
- * **iRMC S3 (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 VGA (15 pin)
- * 9x USB 2.0 (UHCl) with 480MBit/s (4x external at the rear, 2x external at the frontside, 3x internal for backup or UFM)
- * 2x 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)**

A



B
PRIMECENTER Rack

S26361-F2735-E285
 RMK-F2_DI_CMA_QRL_LV
 telescopic drop-in rail, full extr.
 1-hand-mounting
 RMK - 1 pair consisting of
 - vario carrier length variable
 with quick release lever support
 - telescopic drop-in rails
 with CMA adapter
 1x per system

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

C

S26361-F4530-E12
 Bracket 2U in asymmetrical racks

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

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

S26361-F2735-E82
 2U cable management arm (CMA)
 for 2U server or higher
 - for symmetrical racks
 M1 or 3rd party racks
 Fujitsu racks
 1x per system

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

C



Rack Mount Kit F2-C S7 LV
 length variable (559mm- 860mm)
 for loose delivery
 with CMA adapter
S26361-F2735-L285
 without CMA adapter
S26361-F2735-L286



Sideways cable management arm
 for mounting in asymmetrical FJ racks.
 Has to be mounted above the RMK.
S26361-F2735-L7
 Support bracket 3U S26361-F2735-L31
 has to be ordered for loose delivery
S26361-F2735-L31



Cable Management Arm (CMA) can
 only be used for FTS RMKs with
 CMA adapter



S26361-F2735-L82
 Cable management arm for 2U Server
 or higher for loose delivery
 can only be mounted at RMK with
 CMA adapter
 for loose delivery

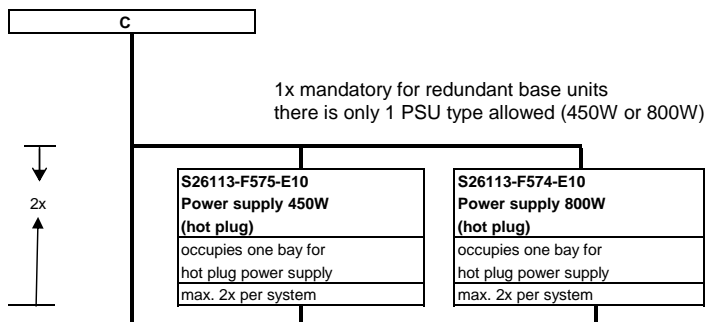


"Rack-mounting ex factory"
 This service is to be ordered once
 per installable server/storage
 subsystem, in order to get the
 server/storage subsystem
 mounted into the racks.
 In case of the 46 U PCR S2
 this service has to be ordered,
 to get the mounting kits and the
 cables installed.

PRIMERGY Classic 19" rack is not supported



For later conversion the following kits are available:	
1.) Conversion kit 2 Floor -> Rack Conversion PRIMERGY TX200 S7 base unit floorstand into base unit rack. Only conversion, no mounting kit. Mounting kit has to be ordered separately.	S26361-F1729-L260



***For order completeness only**
 Will be added automatically with
 System Architect Version ≥ V9.3

i For redundant Base Units only
 (V201, V401, V601 and V801)

i For redundant floorstand versions only
 (V201 and V401)
 A second, redundant power supply requires an additional
 country specific power cord (section XIII)

For later upgrades the following kits are available:	
1 power supply module 450W hot plug: Supplementary module	S26113-F575-L10
1 power supply module 800W hot plug: Supplementary module	S26113-F574-L10
Attention: There is no power cable included!	

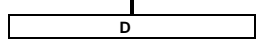
Std to Redundant Upgrade Kit consisting of a redundant PSU cage and backplane AND a 4th fan for fan redundancy Does not contain any PSU module	S26361-F3699-L1
---	-----------------

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	
Basic 4C CPU's	
- 1x 64-bit Intel Xeon (10MB shared TLC = Third Level Cache) 1066 MHz DDR3 Bus, 6,40 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2403 4C/4T 1.80GHz 10MB 6.40GT/s 1066MHz 80W	S26361-F3684-E180
Xeon E5-2407 4C/4T 2.20GHz 10MB 6.40GT/s 1066MHz 80W	S26361-F3684-E220
Standard Turbo 6C CPU's	
- 1x 64-bit Intel Xeon (15MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2420 6C/12T 1.90GHz 15MB 7.20GT/s 1333MHz 95W	S26361-F3723-E190
Xeon E5-2430 6C/12T 2.20GHz 15MB 7.20GT/s 1333MHz 95W	S26361-F3723-E220
Xeon E5-2440 6C/12T 2.40GHz 15MB 7.20GT/s 1333MHz 95W	S26361-F3723-E240
Advanced Turbo+ 8C CPU	
- 1x 64-bit Intel Xeon (20MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1600 MHz DDR3 Bus, 8,00 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2450 8C/16T 2.10GHz 20MB 8.00GT/s 1600MHz 95W	S26361-F3724-E210
Xeon E5-2470 8C/16T 2.30GHz 20MB 8.00GT/s 1600MHz 95W	S26361-F3724-E230
Low Power 6C CPU	
- 1x 64-bit Intel Xeon (15MB shared TLC = Third Level Cache); Hyper-Threading (HT); 1333 MHz DDR3 Bus, 7,20 GT/s QPI Bus and passive heat sink occupies socket for one CPU	
Xeon E5-2430L 6C/12T 2.00GHz 15MB 7.20GT/s 1333MHz 60W	S26361-F3725-E200

i **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

Section III Memory



<p>- There are 6 memory slots per CPU for max. 96GB RDIMM (6x 16GB 2R) 24GB UDIMM (6x 4GB) => max. 192GB for two CPU's (96GB per CPU), using RDIMM</p> <p>- The memory area is divided into 3 channels per CPU with 2 slots per channel</p> <p>- Slot 1 of each channel belongs to memory bank 1, the slot 2 belongs to memory bank 2.</p>
<p>Registered and unbuffered memory modules can be selected No mix of registered and unbuffered modules allowed.</p> <p>Memory can be operated at 1.5V or 1.35V, even if the modules are of low voltage type. Memory operating voltage can be set within BIOS (1.5V is default setting for max. speed). In a 2 DIMMs per channel configuration, following frequencies are supported:</p> <ul style="list-style-type: none"> - 1.5V - 1600MHz max (depending on CPU, special memory modules) - 1.35V - 1333MHz max (depending on CPU) <p>SDDC (Chipkill) is supported for registered x4 organized memory modules only</p>
<p>1.) In the "Independent Channel Mode" is following configuration possible</p> <p>Channels can be populated in any order in Independent Channel Mode. All 3 channels may be populated in any order and have no matching requirements. All channels must run at the same interface frequency but individual channels may run at different DIMM timings (RAS latency, CAS latency, and so forth)</p> <p>No mix of registered and unbuffered modules allowed.</p>
<p>2.) "Rank Sparing Mode" configuration</p> <ul style="list-style-type: none"> - Within a memory channel, one rank is a spare of the other ranks. The Spare Rank is held in reserve and is not available as system memory For the effective memory capacity, please refer to the spreadsheet below. The BIOS is set to the rank sparing setting. <p>Minimum configuration is: 2x 1R, 2x 2R or 1x4R DDR3 module per channel This mode is not supported by x8 organized memory modules</p>
<p>3.) "Performance Mode" configuration</p> <ul style="list-style-type: none"> - In this configuration, the memory module population ex factory is spread across all channels. The BIOS is set to the max. performance for memory. <p>Minimum configuration is: 3x identical modules</p>
<p>4.) In the "Mirrored Channel Mode" is following configuration possible</p> <ul style="list-style-type: none"> - Each memory bank can optionally be equipped with 2x registered memory modules <p>In each memory bank channel B and C of CPU 1 or channel E and F of CPU 2 have to be equipped with identical modules for mirrored channel mode.</p> <p>In channel C is always the mirrored memory of channel B of CPU 1 In channel F is always the mirrored memory of channel E of CPU 2</p> <p>Minimum configuration is: 2x identical modules This mode is not supported by x8 organized memory modules</p>

D1

D1

1x per CPU ↓ ↑	S26361-F3694-E10 Independent Mode Independent Channel Mode allows all channels to be populated in any order. No specific Memory RAS features are defined Requires min 1 memory Module per CPU
	S26361-F3695-E1 Rank Sparing Mode Installation BIOS Setup factory preinstalled to this mode. One Rank is spare of other ranks on the same channel. Spare Rank is not shown in System Memory. For effective capacity within a channel, please have a look below. Supported for RDIMM only. Requires min 2x 1R/2R or 1x 4R modules per CPU
	S26361-F3695-E2 Performance Mode Installation BIOS Setup factory preinstalled for max. Performance, LV memory might be set to 1.5V operation. 3 identical memory modules will be equipped in one memory bank to achieve highest memory performance. All 3 modules are active and full capacity can be used. Multiple of 3 identical modules to be configured per CPU
	S26361-F3695-E3 Mirrored Channel Mode Installation BIOS Setup factory preinstalled to this mode. 2 identical memory modules are always equipped in one memory bank to use the Mirrored channel Mode. Only two modules contain active data, the remain two modules contain mirrored data Supported for RDIMM only. Multiple of 2 identical modules to be configured per CPU



Effective Memory capacity / Rank Sparing Mode, 1 Channel populated						
	UDIMM		RDIMM			
	2GB 1R	2GB 2R	4GB 1R	8GB 2R	16GB 2R	
1DPC	na	na	na	na	na	
2DPC	na	na	4GB	12GB	24GB	



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

6x per CPU, max. 2 modules per channel ↓ ↑	Unbuffered Memory (UDIMM) no SDDC (chipkill) support - one DDR3 unbuffered ECC mem. Module, 1.35V Choose up to 6 order codes per CPU
	2GB (1x2GB) 1Rx8 L DDR3-1600 U ECC S26361-F3694-E513 4GB (1x4GB) 2Rx8 L DDR3-1600 U ECC S26361-F3694-E514
	Registered Memory (RDIMM) with SDDC (chipkill) support - one DDR3 registered ECC mem. Module, 1.35V 1600MHz supported with up to 2DPC (8 modules/CPU) at 1.5V Choose up to 6 order codes per CPU
	4GB (1x4GB) 1Rx4 L DDR3-1600 R ECC S26361-F3697-E514 8GB (1x8GB) 2Rx4 L DDR3-1600 R ECC S26361-F3697-E515 16GB (1x16GB) 2Rx4 L DDR3-1600 R ECC S26361-F3697-E516

Note 1.)

Max. DDR3 memory speed depends on the memory configuration (No of mem modules per channe) as well as on the CPU type. The memory channel with the lowest speed defines the speed of all CPU channels in the system, also for the channels of the second CPU if configured. For real memory speed (depending on memory type / population),



Mix of memory modules is only possible within the same group

H

Memory Configuration PRIMERGY TX200 S7

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 2 different kinds of DDR3 Memory Modules available: UDIMM and RDIMM

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

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

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

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

Capacity	Configuration	UDIMM	RDIMM	Notes
Min. Memory per CPU	1 Module / CPU	1x2GB	1x4GB	with one CPU
Max. Memory per CPU	4/6 Modules / CPU	6x4GB	6x16GB	with one CPU
Max. Memory per System	8/12 Modules / System	48GB	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

The memory channel with the lowest speed defines the speed of all CPU channels in the system

Mem. Speed provided by CPU	Real maximum memory-bus speed depending on CPU type, memory configuration (DPC) and voltage setting (BIOS)										
	UDIMM 1600MHz					RDIMM 1600MHz					
	1.5V [default]		1.35V			1.5V [default]		1.35V			
Voltage setting (BIOS)	1	2		1	2		1	2	3	1	2
	DPC	DPC		DPC	DPC		DPC	DPC	DPC	DPC	DPC
CPU with 1600MHz DDR3 Bus	1333	1066		1333	1066		1600	1600	-	1333	1333
CPU with 1333MHz DDR3 Bus	1333	1333		1066	1066		1333	1333	-	1333	1333
CPU with 1066MHz DDR3 Bus	1066	1066		1066	1066		1066	1066	-	1066	1066

1R - Single Rank

2R - Dual Rank

1DPC = 1 DIMM per Channel

2DPC = 2 DIMM per Channel

Configuration hints:

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

Bank I black sockets

Bank II blue sockets

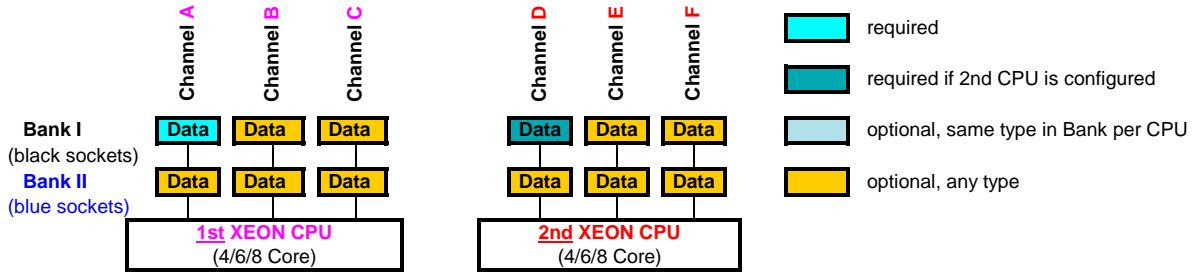
- A so called Bank consists of 1 memory module on every Channel available on one CPU (examples see below)

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

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

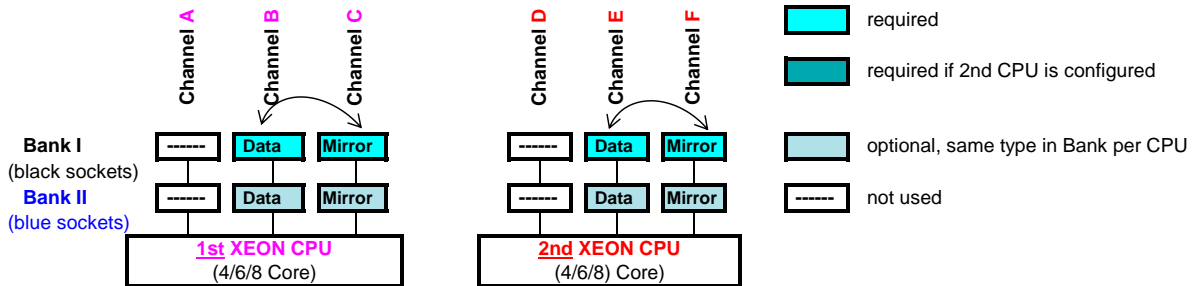
- See below and next page for a detailed descriptions of the memory configuration supported.

1. Independent Channel Mode



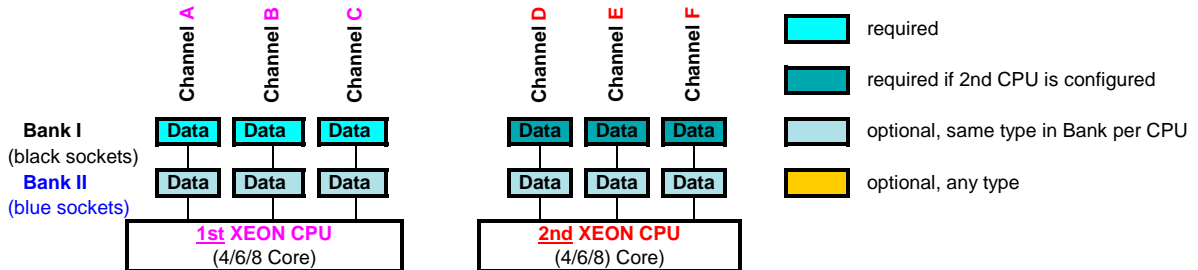
Independent Channel Mode allows all channels to be populated in any order
 Can run with differently rated DIMMs and use the settings of the slowest DIMM installed in the system

2. Mirrored Channel Mode



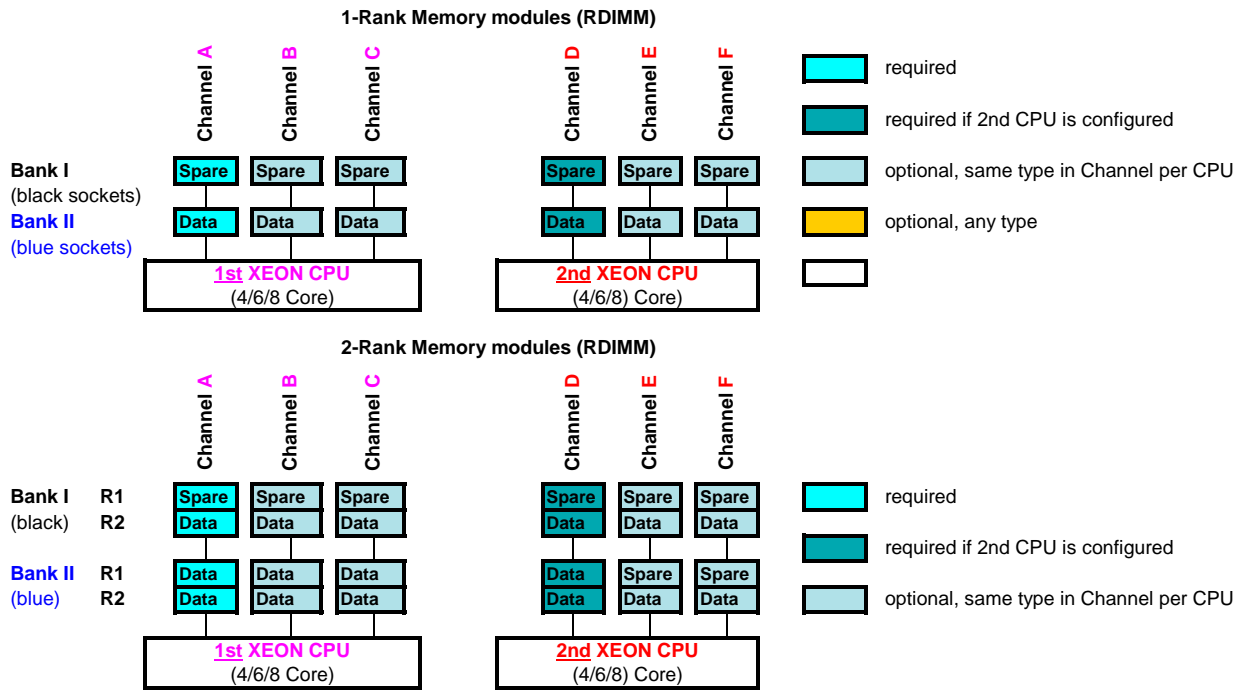
Mirrored Channel Mode requires identical modules on channel B / C (1st CPU) or channel E / F (2nd CPU)
 50% of the capacity is used for the mirror => the available memory for applications is only half of the installed memory
 If this mode is used, a multiple of 2 identical modules has to be ordered.

3. Performance Channel Mode



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

4. Rank Sparing Mode



Rank Sparing Mode requires identical modules (same capacity and technology) within the same channel.
 The available memory for applications will vary depending on configuration. Please refer to the spreadsheet above
 "Effective Memory capacity with active Rank Sparing Mode". Population rule for Rank sparing mode is to achieve max.
 available memory.

H

Section IV Grafik

S26361-F2748-E537
PY VGA card 512MB PCI-e x1
NVIDIA NVS300
512 MB PCI-e-x1
Connectors: 1x LFH 59
cable kit for 2x DVI or 2x VGA
cable kits included
Dual head + professional 2-D + 3-D
supported for Windows OS
native driver support for Linux OS
full height 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-I or VGA (cable kit) 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.

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

Section V Accessible drives

There are 3 bays (1.6" x 5.25") for accessible drives usable for all or for LFF related base units.
 For all SFF base units there is an additional bay; please refer to section VI hard disk drives SFF HDDs

see Conf. Diagram **Option A** occupies 1 accessible bay for all base units

see Conf. Diagram **Option B** occupies 2 accessible bays only 3.5" HDD base units

see Conf. Diagram **Option C** occupies all 3 bays only 3.5" HDD base units

S26361-F2826-E205
Mounting Kit DVD(sl) + LSP/LSD
Occupies one 5.25" x 1.6" bay in the accessible bay area
Offers bays for:
- 1x Local Sv. Display option
- 1x 0.5 * 5.25" SATA DVD
max. 1x per system

S26361-F2826-E106
Mounting Kit DVD(sl) + LSP/LSD + SAS LFF HDD
Occ. two 5.25" x 1.6" bays in the accessible bay area
Offers bays for:
- 1x Local Sv. Display option
- 1x 0.5 * 5.25" SATA DVD
- 2x 3.5" SAS/SATA HDD's
One 0.5 * 3.5" satin black bezel for Local Sv. Display 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 HDD bays
max. 1 per system

S26361-F2826-E436
Mounting Kit DVD(sl) + SAS LFF HDD
Occupies all 5.25" x 1.6" bays in the accessible bay area
Offers bays for:
- 1x 0.5 * 5.25" SATA DVD
- 4x 3.5" SAS/SATA HDD's
Two 1 * 3,25" satin black bezels for SAS HDD bays
max. 1x per system

For the mounting kits **Option B** or **C** **S26361-F2826-E106** or **-E436** a PCI based modular RAID controller is necessary!
 see Section VIII!

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

S26361-F2557-E106
Local Service Display incl. Install. kit
Customer Self Service
LSD module incl. mounting kit
0.5" x 5.25"
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-F3641-E4
Blu-ray Triple Writer slim SATA
4x BD-RW, 16x DVD, 40x CD
BD DL and all CD/DVD formats
1.6 x 5.25", black bezel
0.5" drive with mounting frame
max. 1x per system

I


I

S26361-F3325-E4
 Tape drive DDS Gen6 USB 5.25"
 80GB, 6MB/s, USB 2.0
 Connector: USB "B"
 with USB cable
 incl. cleaning cartridge
 without data cartridge
 1.6 * 5.25", black bezel
 max. 1x per system


 data cartridges must be ordered separately

USB 3.0 adapter and RDX USB3.0 drive


S26361-F3749-E1
 USB3.0 PCIe x1 adapter card
 Sunrich U-720
 PCIe x1
 1 port intern, 1 port extern
 USB 3.0 A jacks
 max. 1x per system


 The adapter is also available as optional (loose) delivery with FH and LP bracket included
 S26361-F3749-L501

S26361-F3750-E4
 RDX Drive USB3.0 5.25" internal
 100MB/s, USB 3.0
 Connector: USB 3.0 "B"
 with USB cable
 without RDX cartridges
 1.6 * 5.25", black bezel
 max. 1x per system


 RDX cartridges must be ordered separately
 RDX 320GB = S26361-F3857-L320
 RDX 500GB = S26361-F3857-L500
 RDX 1TB = S26361-F3857-L600
 10x RDX320 = S26361-F3857-L329


S26361-F3750-E324
 RDX 320 5.25"
 100MB/s, USB 3.0
 Connector: USB 3.0 "B"
 with USB3.0 cable
 with 320GB RDX cartridge
 1.6 * 5.25", black bezel
 max. 1x per system

 additional RDX cartridges can be ordered
 RDX 320GB = S26361-F3857-L320
 RDX 500GB = S26361-F3857-L500
 RDX 1TB = S26361-F3857-L600
 10x RDX320 = S26361-F3857-L329


 The bundle is also available as optional (loose) delivery
 S26361-F3750-L324 with USB3.0 cable for adapter card.
 The USB3.0 Adapter card or the USB2.0 cable set
 S26361-F3750-L20 must be ordered with the drive!


S26361-F3750-E504
 RDX 500 5.25"
 100MB/s, USB 3.0
 Connector: USB 3.0 "B"
 with USB3.0 cable
 with 500GB RDX cartridge
 1.6 * 5.25", black bezel
 max. 1x per system

 additional RDX cartridges can be ordered
 RDX 320GB = S26361-F3857-L320
 RDX 500GB = S26361-F3857-L500
 RDX 1TB = S26361-F3857-L600
 10x RDX320 = S26361-F3857-L329

 The bundle is also available as optional (loose) delivery
 S26361-F3750-L504 with USB3.0 cable for adapter card.
 The USB3.0 Adapter card or the USB2.0 cable set
 S26361-F3750-L20 must be ordered with the drive!

S26361-F3750-E604
 RDX 1000 5.25"
 100MB/s, USB 3.0
 Connector: USB 3.0 "B"
 with USB3.0 cable
 with 1TB RDX cartridge
 1.6 * 5.25", black bezel
 max. 1x per system

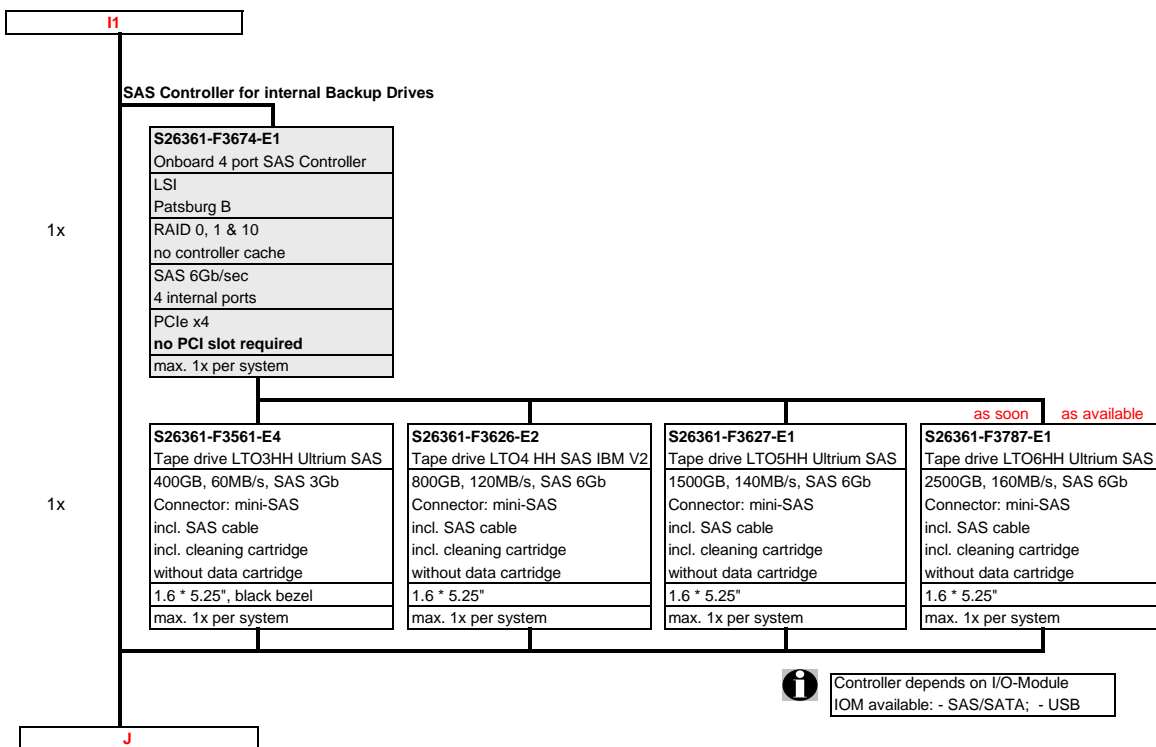
 additional RDX cartridges can be ordered
 RDX 320GB = S26361-F3857-L320
 RDX 500GB = S26361-F3857-L500
 RDX 1TB = S26361-F3857-L600
 10x RDX320 = S26361-F3857-L329

 The bundle is also available as optional (loose) delivery
 S26361-F3750-L604 with USB3.0 cable for adapter card.
 The USB3.0 Adapter card or the USB2.0 cable set
 S26361-F3750-L20 must be ordered with the drive!

For internal SAS Backup drives
 the onboard 4-port SAS controller "Patsburg B" has to be configured
 Patsburg B is not available for SLES10!




II




Section VI Hard disks drives

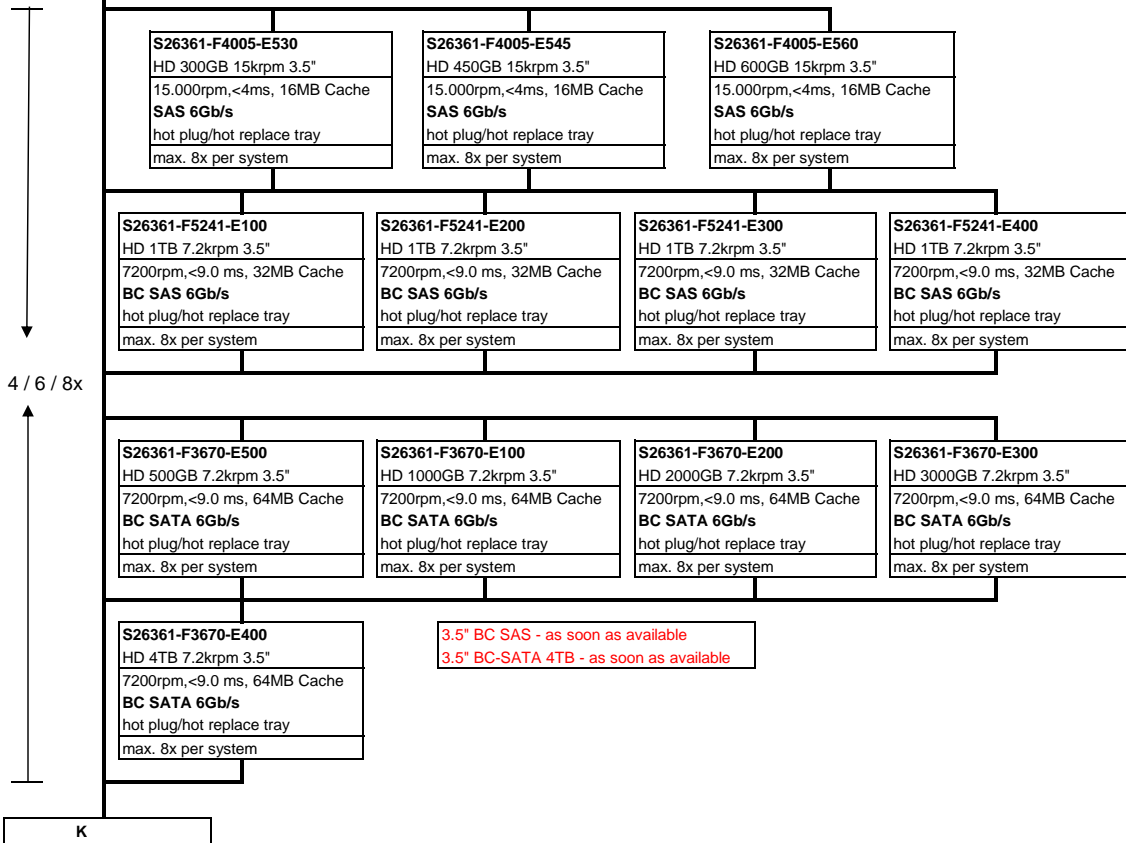
SAS RAID Controller for up to 4 SAS HDDs

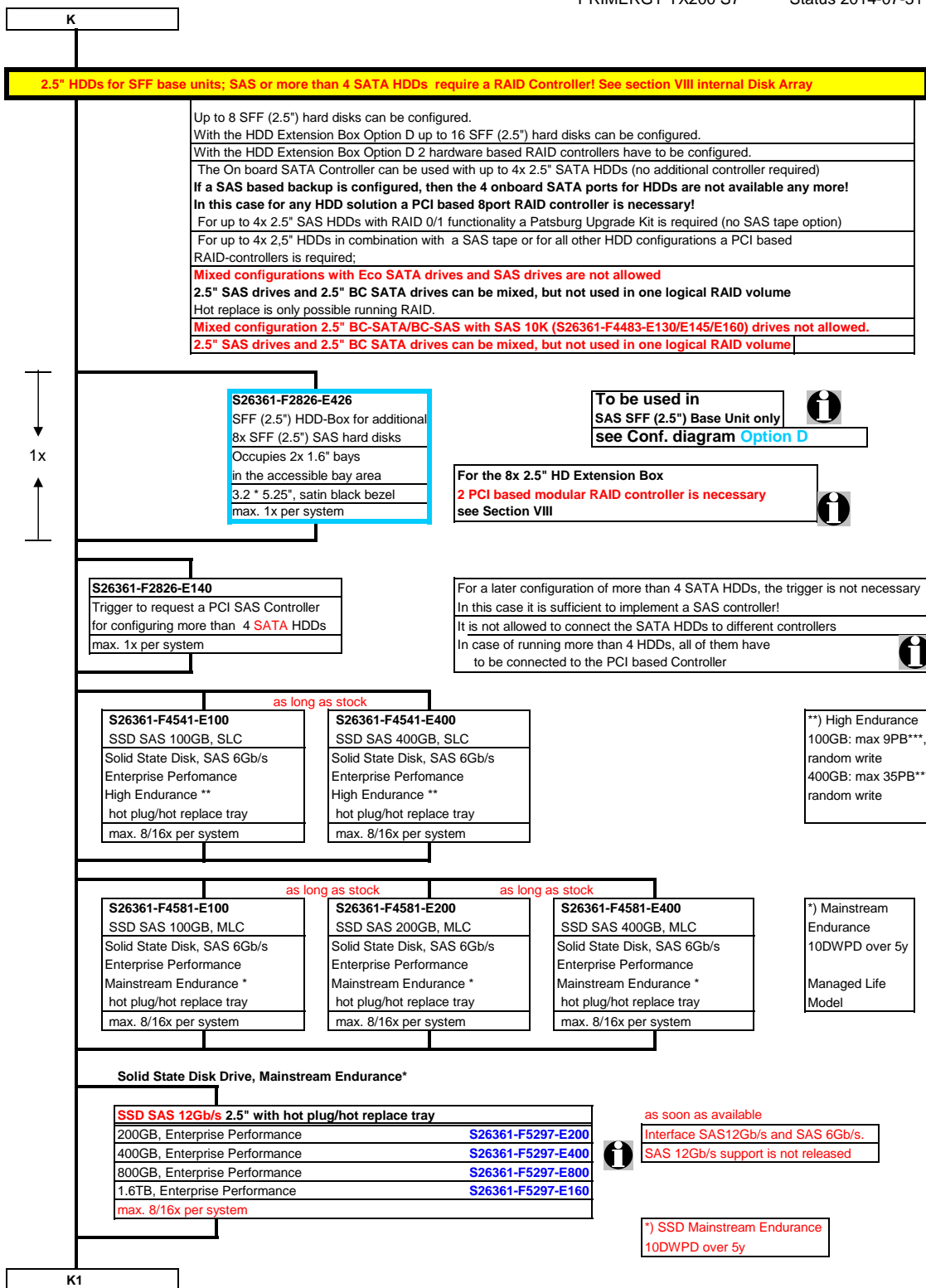
S26361-F3674-E1
Onboard 4 port SAS Controller
LSI
Patsburg B replaces 4 onb. SATA ports
RAID 0, 1 & 10
no controller cache
SAS 6Gb/sec
4 internal ports
PCIe x4
no PCI slot required
max. 1x per system

If the onboard 4 port SATA or SAS Controller is used for HDD, it is not possible to implement a LTO drive later 

3.5" HDDs for LFF base units; SAS or more than 4 SATA HDDs require a RAID Controller! See section VIII internal Disk Array

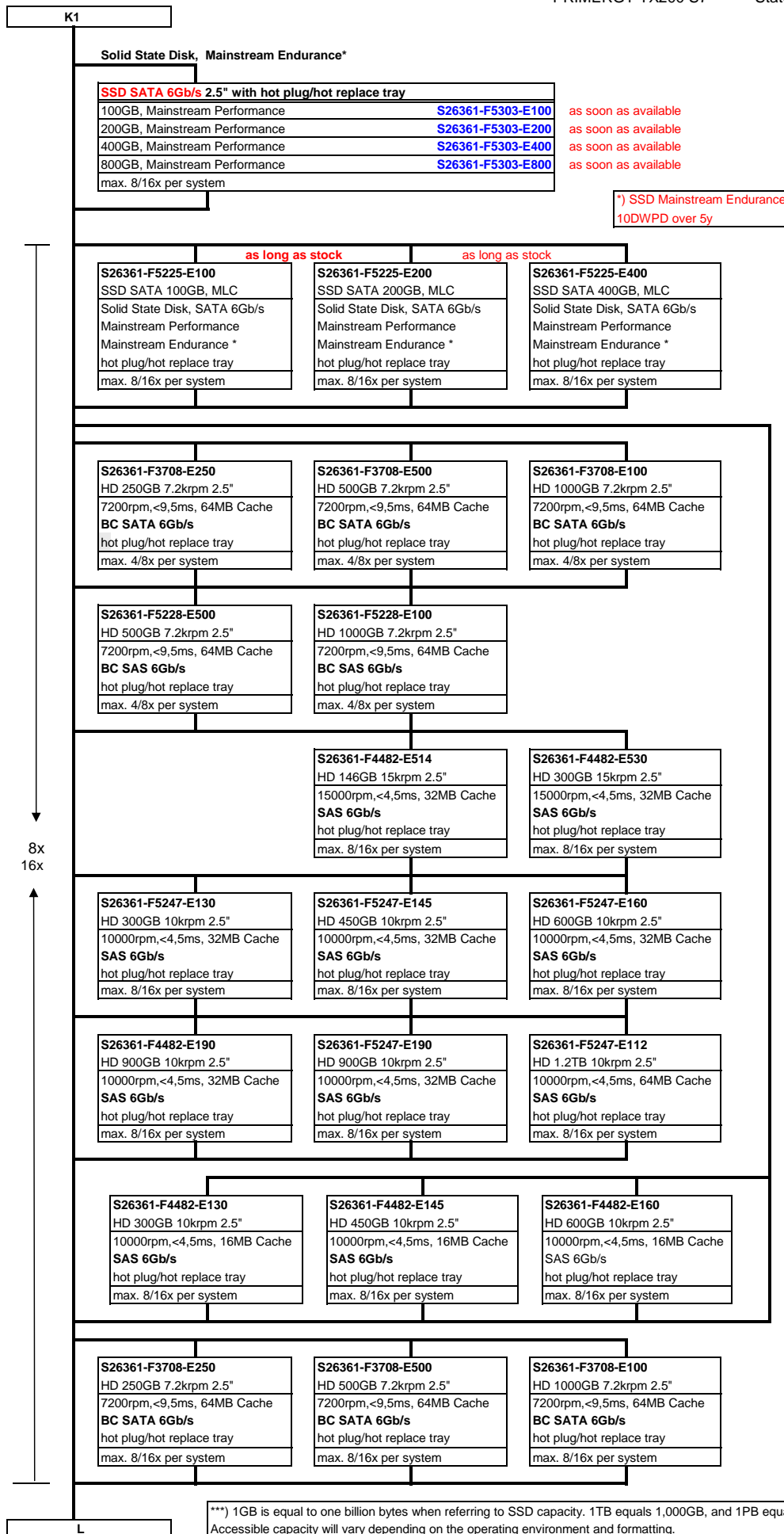
Up to 4 LFF (3.5") hard disks can be configured into the base unit
With the HDD Extension Box Option B up to 6 LFF (3.5") hard disks can be configured, with Option C up to 8 HDDs.
The on board SATA Controller can be used with up to 4x 3.5" SATA HDDs (no additional controller required), BUT:
If a LTO backup drive is configured, then the 4 onboard SATA ports for HDDs are not available!
In this case for any HDD solution a PCI based 8port RAID controller is necessary!
For up to 4x 3.5" SAS HDDs without SAS Tape a Patsburg SAS RAID controller is available
For up to 4x 3.5" SAS HDDs in combination with a SAS tape or fr all other HDD configurations a 8port PCIcontroller is required
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
Hot replace is only possible running RAID. 

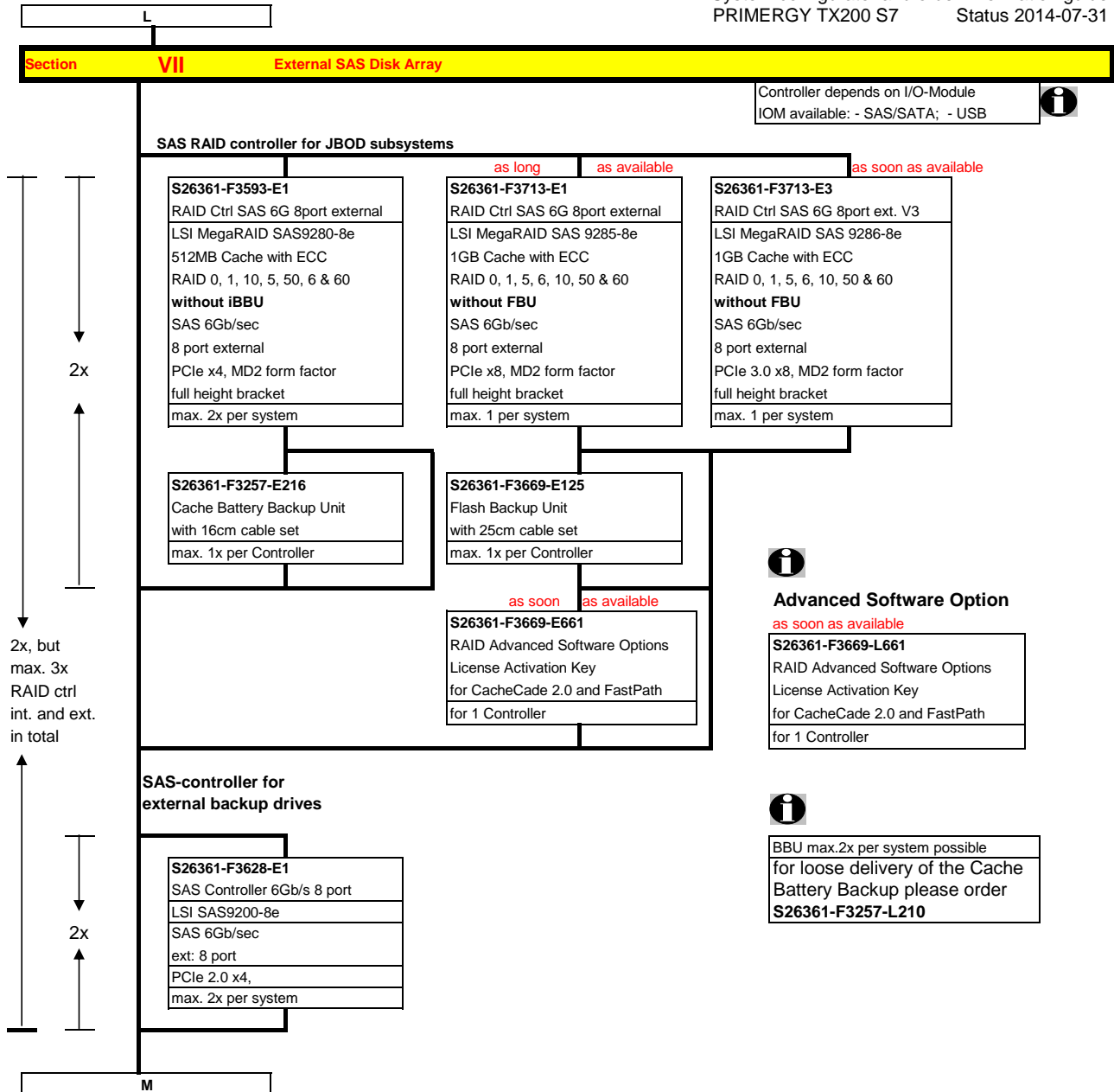




K

K1





M

Section VIII internal Disk Array

All Base Units contain a 6-port on-board SATA controller supporting RAID Levels 0, 1, 10
 If a SAS Backup drive is configured, then the 4 SATA HDD boards are not available any more
 If no SAS Backup drive is configured, then there is an optional SAS onboard controller available for up to 4 SAS HDDs
 For more than 4 HDDs or for any HDD in combination with a SAS tape
 it is necessary to select an 8 port PCI based RAID0/1 or RAID5 controller!



SAS RAID Controller for up to 4 SAS HDDs

S26361-F3674-E1
Onboard 4 port SAS Controller
LSI
Patsburg B replaces 4 onb. SATA ports
RAID 0, 1 & 10
no controller cache
SAS 6Gb/sec
4 internal ports
PCIe x4
no PCI slot required
max. 1x per system



A mix of onboard RAID and HW RAID is not allowed!

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

1x for LFF base
 2x for SFF, but
 max. 3x
 RAID ctrl
 int. and ext.
 in total

S26361-F3554-E8 RAID Ctrl SAS 6G 8port int. Based on chip LSI SAS2008 LSI MegaRAID no Cache, no BBU RAID 0, 1 & 1E Sup. for 3Gb/s and 6Gb/s SATA and SAS HDs PCIe x8 Low-prof. MD2 form factor max. 1x / 2x per system	S26361-F3554-E512 RAID Ctrl SAS 6G 8port internal Based on chip LSI SAS2108 LSI MegaRAID 512MB Cache with ECC RAID 0, 1, 10, 5, 50, 6, 60 optional BBU Support for 3Gb/s and 6Gb/s SATA and SAS hard drives PCIe x8 Low-profile MD2 form factor max. 1x / 2x per system	S26361-F3669-E1 RAID Ctrl SAS 6G 8port internal Based on chip LSI SAS2208 LSI MegaRAID 1GB Cache with ECC RAID 0, 1, 10, 5, 50, 6, 60 optional FBU Support for 3Gb/s and 6Gb/s SATA and SAS hard drives PCIe x8 Low-profile MD2 form factor max. 1x / 2x per system	S26361-F3669-E3 RAID Ctrl SAS 6G 8port internal Based on chip LSI SAS2208 LSI MegaRAID 1GB Cache with ECC RAID 0, 1, 10, 5, 50, 6, 60 optional FBU Support for 3Gb/s and 6Gb/s SATA and SAS hard drives PCIe 3.0 x8 Low-profile MD2 form factor max. 1x per system
---	---	---	--

S26361-F3257-E216 Cache Battery Backup Unit max. 1x per Controller	S26361-F3669-E100 TFM Module for FBU option max. 1x per Controller
L-Order-Number is: S26361-F3257-L210	S26361-F3669-E125 Flash Backup Unit with 25cm cable set max. 1x per Controller
Advanced Software Option as soon as available S26361-F3669-L660 RAID Advanced Software Options License Activation Key for CacheCade 2.0 and FastPath for 1 Controller	S26361-F3669-E660 RAID Advanced Software Options License Activation Key for CacheCade 2.0 and FastPath for 1 Controller



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

for loose delivery of TFM & FBU please order:



S26361-F3669-L100 TFM Module for FBU option max. 1x per Controller
S26361-F3669-L110 Flash Backup Unit with 25cm, 55cm, 70cm cable set max. 1x per Controller

N

O

Section IX Fibre Channel

i No mix and match of different FC Controllers possible.

i 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.

Fibre Channel Controller for external storage systems

i For Fibre Channel SAN also other componets like switches, SFPs and optical wires are orderable (for details see price list)

S26361-F3631-E1
8GBit/s FC Controller
Qlogic
QLE2560, full height bracket
1 channel 8GBit/sec FC Controller
LC Interface for 50µm Fiber
PCIe x8, 170mm
max.2x per system

S26361-F3631-E2
8GBit/s FC Controller
Qlogic
QLE2562, full height bracket
2 channel 8GBit/sec FC Controller
LC Interface for 50µm Fiber
PCIe x8, 170mm
max. 2x per system

2x

S26361-F3961-E1
8GBit/s FC Controller
Emulex
LPe1250, full height bracket
1 channel 8GBit/sec FC Controller
LC Interface for 50µm Fiber
PCIe x4, 170mm
max. 2x per system

S26361-F3961-E2
8GBit/s FC Controller
Emulex
LPe12002, full height bracket
2 channel 8GBit/sec FC Controller
LC Interface for 50µm Fiber
PCIe x4, 170mm
max. 2x per system

i 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.

i For Fibre Channel SAN also other componets like switches, SFPs and optical wires are orderable (for details see price list)

P

P

Section X Communication / Network

2x1Gb on-board LAN Controller

- Fast Ethernet Controller on-board
- 2x 1 Gbit Intel Hartwell
- Server Adapter
- 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.

1Gbit/s Ethernet Adapter

2x

S26361-F4610-E2 (I350-T2)
Gbit Ethernet Controller Dual 1000TX
PLAN CP 2x1Gbit Cu Intel I350-T2
Intel Powerville based 2 port Server Ad.
PCIe x4, Low Profile
full height (FH) bracket
ext: for RJ45-plug, Cat 5
max. 2x per system

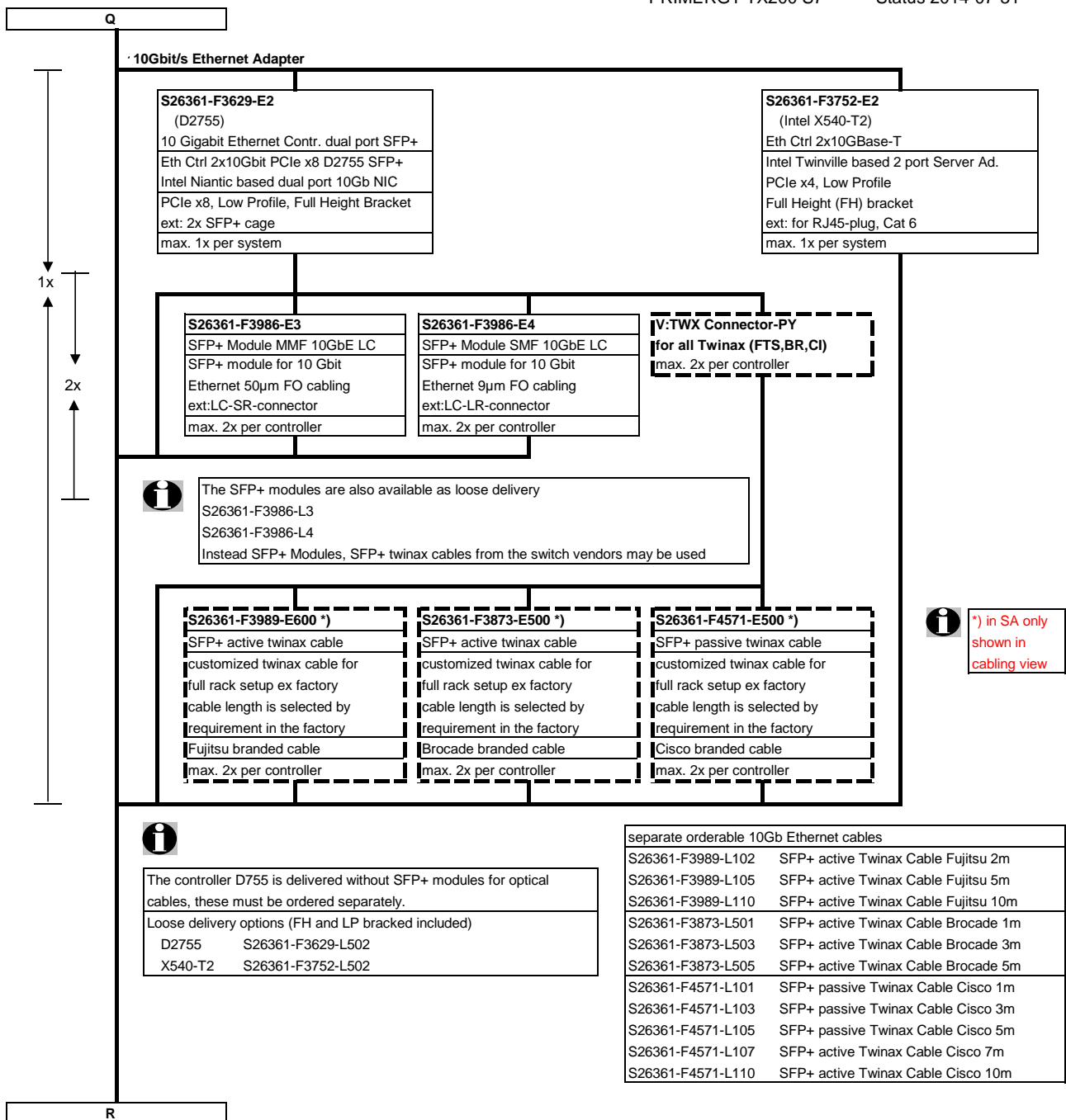
S26361-F4610-E4 (I350-T4)
Gbit Ethernet Controller Quad 1000TX
PLAN CP 4x1Gbit Cu Intel I350-T4
Intel Powerville based 4 port Server Ad.
PCIe x4, Low Profile
full height (FH) bracket
ext: for RJ45-plug, Cat 5
max. 2x per system

S26361-F3516-E1 (Shelter Island)
Gigabit Ethernet Controller 1000TX
Eth Ctrl 1x1Gbit PCI-e Gigabit CT DT Cu
Intel® Gigabit CT Desktop Adapter
PCIe x1
ext: for RJ45-connector, Cat 5
max. 2x per system



Loose delivery with FH and LP bracket:
 I350-T2 S26361-F4610-L502
 I350-T4 S26361-F4610-L504
 Loose delivery with FH bracket:
 Shelter Island S26361-F3516-L1

Q



q

Section XI System Management Produkts (RemoteView)

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

S26361-F1790-E242 iRMC S3 advanced pack
 integrated remote management controller activation key for graphical console redirection and remote media redirection
 max. 1x per system

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

Section XII Miscellaneous

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

S26361-F3776-E2 ENABLING LOW NOISE MODE TX200
 Restricts configuration to make LNM possible
 LNM is enabled ex factory
 max. 1x per system

Configuration restrictions in LNM for TX200:
 Max 4x 3.5" SATA HDDs are allowed! No SAS or 2.5" HDDs!
 Max 1x PSUs is allowed! No redundant PSU!
 No redundant fans are allowed!
 No PCIe cards are allowed!
 LNM can be enabled later, as long as the configuration restrictions are fulfilled
 When adding not compatible components later, LNM will be switched off automatically

Section XIII Country specific Options

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

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

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

S26361-F3301-E123 Certification for India

For shipments to India mandatory!

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

PRIMERGY TX200 S7 Floorstand

PRIMERGY TX200 S7 19" Rack

Hint: No country specific powercord configurable with Certification for India

Power cord options (1x per PSU)
 1.8m, grey

T26139-Y1740-E10	D, A, B, F, NL, FIN, N, S, E, P, RUS, TR
T26139-Y1742-E10	USA, Canada
T26139-Y1743-E10	Switzerland
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

Power cord options (1x per PSU)

T26139-Y1968-E100	Powercord for rack, 4m, grey, IEC 320 C14 connector
T26139-Y1742-E10	USA, Canada, 1.8m, grey
T26139-Y3850-E10	Option "no powercord", for Countries without specific cable orderable like e.g. China

max.2x

Option for Floorstand

USB keyboards for floorstand versions for following countries:

USB standard Keyboard KB520		USB professional Keyboard KBPC PX ECO
S26381-K520-E170	Switzerland	S26381-K341-E170
S26381-K520-E104	Czech/Slovak	S26381-K341-E104
S26381-K520-E120	Germany	S26381-K341-E120
S26381-K520-E180	Spain	S26381-K341-E180
S26381-K520-E140	France	S26381-K341-E140
S26381-K520-E165	United Kingdom	S26381-K341-E165
S26381-K520-E185	Italy	S26381-K341-E185
S26381-K520-E154	Sweden / Finland	S26381-K341-E154
S26381-K520-E102	USA / international	S26381-K341-E110

option for floorstand

Optional Mouse
 S26381-K457-E100 Mouse M510 black
 S26381-K457-E101 Mouse M510 grey

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.

End PRIMERGY TX200 S7 floor

