

# PRIMERGY RX200 S5

## *System configurator and order-information guide*

July 2010

### Contents

4x or 6x 2.5" Hot-plug HDD or SSD



8x 2.5" Hot-plug HDD or SSD



### Instructions

### Configuration diagram

### Configurator

- 0 System software
- I Basic unit
- II Processor
- III Memory
- IV Graphics
- V Accessible drives
- G-VI Drive Bay for 6x 2.5" HD Basic Unit
- G-VII Modular Raid 0/1, Raid5 for 4x 2.5" or 6x 2.5" SAS or SATA HD or SSD.  
On-board Controller for 4x 2.5" SATA HD`s
- G-VIII 4x or 6x 2.5" SAS / SATA Hard disk drives
- G-IX 4x 2.5" SATA HD or SSD
- H-VI Drive Bay for 8x 2.5" HD Basic Unit
- H-VII Modular Raid 0/1 and Raid5 Controller for 8x 2.5" SAS or SATA HD`s
- H-VIII 8x 2.5" SAS / SATA HD or SSD
- X External SAS Disk Array, SAS backup drives or SCSI peripheral devices
- XI Fibre-Channel controller
- XII Communication/Network
- XIII System Management Products (RemoteView)
- XIV Miscellaneous
- XV Country specific power cord

### Change report

## **PRIMERGY Server**

# Instructions

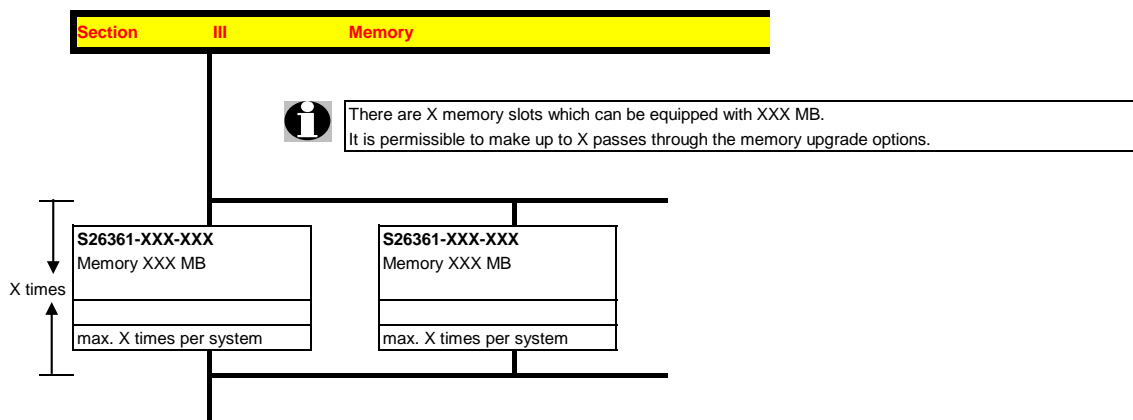
This document contains basic product and configuration information that will enable you to configure your system via PC-/SystemArchitect.

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

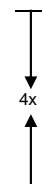
You can configure your individual PRIMERGY server in order to adjust your specific requirements.

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:**

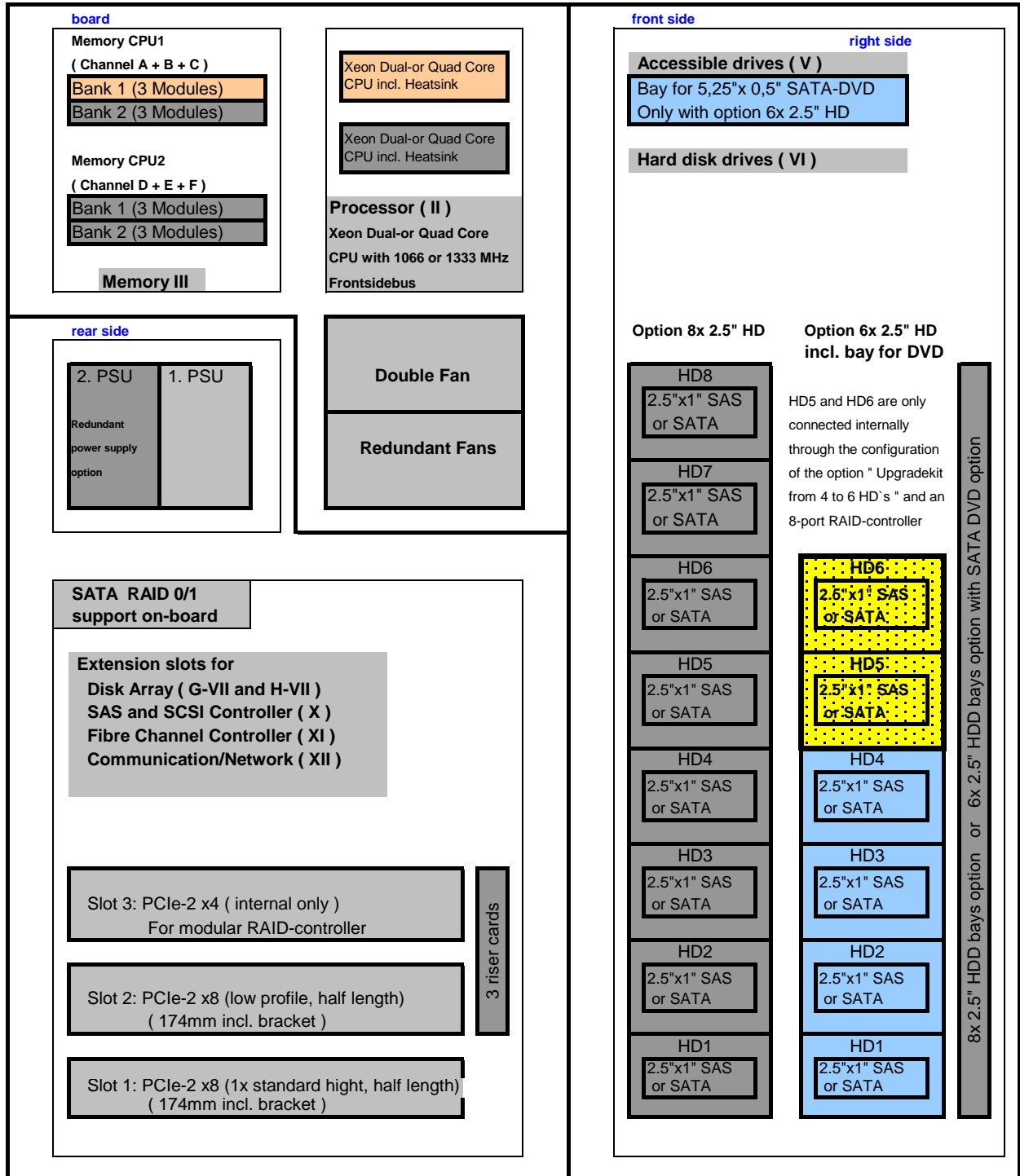
[http://ts.fujitsu.com/products/standard\\_servers/index.html](http://ts.fujitsu.com/products/standard_servers/index.html) (internet)

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

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

## Configuration diagram PRIMERGY RX200 S5

### System unit ( I )



Key:

Included in basic unit     or     = Option

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

Start PRIMERGY RX200 S5


**SW Configurator 32 bit**

**with OEM-Software**  
for PRIMERGY Server

**without OEM-Software**  
for PRIMERGY Server

**VMware-Software**  
- VCMS VirtualCenter Management Server  
- Virtual Infrastructure 3

OEM-SW is bound to HW and is not allowed to be ordered separately.  
Exception: VMware SW

 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 \*\*)**  
- Windows Server 2003 R2, Standard Edition  
Enterprise Edition  
! Web Edition, SP2/English  
- Additional loose Client-Access-Licenses (CALs) (not for Web Edition)

**PRIMECLUSTER \*)**  
- Clustering  
- Load Balancing


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

**DuplexDataManager & MultiPath**  
W2K3; Linux (RedHat 4 / SLES 9)

**Manageability Software: V\*\*)**  
- IRMC advanced Pack  
- RemoteDeploy  
- RemoteView SW  
- Altiris Server Deployment

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

**Backup-Software / Application-Software: U**  
- ARCserve  
- openSM2

 \*\*\*) 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:  
for partners:

**Continue with PRIMERGY HW configurator**

Start PRIMERGY RX200 S5


**SW Configurator EM64T**

with OEM-Software  
for PRIMERGY Server

without OEM-Software  
for PRIMERGY Server

**VMware-Software**  
 - VCMS VirtualCenter Management Server  
 - Virtual Infrastructure 3

OEM-SW is bound to HW and is not allowed to be ordered separately.  
 Exception: VMware SW


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

**only EM64T** **Microsoft - Software: W**  
 - Windows Server 2003 R2, Standard x64 Edition  
 - Windows Server 2003 R2, Enterprise x64 Edition  
 - Additional loose Client-Access-Lizenzen (CALs)

**only EM64T** **Linux - Software \*) \*\***  
 - SuSe Linux ES (OEM)  
 - SuSe Linux ES (support)  
 - Red Hat EL (OEM): LO  
 - Red Hat EL (Support): LS

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

**only EM64T** **Manageability Software: V\*\***  
 - RemoteDeploy  
 - RemoteView SW  
 - IRMC advanced Pack

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

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

for internal users:  
 for partners:

**Continue with PRIMERGY HW configurator**

## Section

## Basic unit

**System unit consisting of:****\* 1U Housing including**

- hot plug Power supply unit with **one 770W PSU** module and power cord rack 4m length  
(can be upgraded with one additional PSU module)

**\* Fans**

- Redundant and hot plug system fans (6x)

**\* Drives / Bays**

- **6x 2.5" SAS / SATA HDD option or 8x 2.5" SAS / SATA HDD option**  
( Four bays are supported with the onboard SATA controller or with the 1064 modular RAID controller  
6 or 8 bays are supported with the 1068 and 1078 modular RAID controllers. )
- 1 bay SATA DVD-ROM 0,5" height (option)

**\* Integrated ServerView Diagnostics Technology for indication of internal failed components****Options:**

- \* **2nd hot plug power supply module 750W (PSU) for redundancy**
- \* **Two optional Rackmount kits**  
RMK-F1\_RX100-200-300 ( full extraction ) or  
RMK-ST\_RX100-200 ( partial extraction with lower cost )
- \* **6x 2.5" HD backplane kit with additional DVD option**
- \* **8x 2.5" HD backplane kit ( no DVD possible )**
- \* **- Optional modular RAID 0/1/1e controller with IME (Integrated Mirroring Enhanced) support**  
based on LSI 1064 / 1068 chipset or as alternative  
- optional modular RAID 5 controller based on LSI 1078 chipset
- \* **LED's in the front panel for indication of a failed CSS component ( Customer Self Service )**  
Simultaneously components are marked which can be replaced by the customer.  
This LEDs can be displayed during service even without mains connection.

**Systemboard D2786 with:**

- \* **Up to two Xeon Dual Core, Quad-Core or Turbo Quad Core CPU's ( Nehalem-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® 5500 (codenamed Tylersburg-24D = Tylersburg-EN)**
- \* **ICH10R Southbridge with onboard SATA-RAID 0/1 support**
- \* **3 PCIe slots**
  - 1x PCIe-2 x8 (standard and Low Profile cards) and 1x PCIe-2 x8 (Low Profile cards only)
  - 1x PCIe-2 x4 internal for modular RAID controller only
- \* **12 memory slots for max. 96GB with 8GB registered DDR3 RAM or max. 24GB with 2GB unbuffered DDR3 RAM available**
  - Memory is divided into 6 DIMMs per CPU ( 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,
  - Mirrored Channel Mode is supported with 2 identical modules in channel A+B CPU 1 or D+E CPU 2
  - Spare Channel Mode is supported with 3 identical modules in channel A+B+C CPU 1 or D+E+F CPU 2  
**(Spare Channel Mode as soon as released )**
  - SDDC (Chipkill) is supported only for registered memory modules,
- \* **4-port SATA controller on-board included in Intel Southbridge ICH10R for SATA Raid0/1,**  
Max. 4 SATA HD's are supported
- \* **One SATA port on-board for 1x DVD integrated in the Intel Southbridge ICH10R**
- \* **Dual Port 10/100/1000 x4 PCI Express\* Gigabit Ethernet Intel LAN controller 82575EB (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)

A

<p><b>Interfaces at the rear:</b></p> <ul style="list-style-type: none"> <li>* 1x RS-232-C (serial, 9 pins) (usable for BMC or OS or shared)</li> <li>* 1x VGA (15 pins): If Front-VGA is used, then Rear-VGA is disabled</li> <li>* 3x USB 2.0 ( UHCI ) with <b>480MBit/s</b>, no USB wakeup</li> <li>* 2x LAN RJ45, 1x Service-LAN RJ45</li> </ul>
<p><b>Interfaces on the front:</b></p> <ul style="list-style-type: none"> <li>* 3x USB 2.0 ( UHCI ) with <b>480MBit/s</b>, no USB wakeup</li> <li>* 1x VGA (15 pins): If Front-VGA is used, then Rear-VGA is disabled</li> </ul>
<p><b>Interfaces internal:</b></p> <ul style="list-style-type: none"> <li>* 1x USB 2.0 ( UHCI ) with <b>480MBit/s</b> for dongle functionality ( uSSD memory ), no USB wakeup</li> <li>* 1x SATA interface for DVD ( only usable with 6x 2.5" HDD + DVD Option )</li> <li>* 4x SATA interface for 4 SATA HD's ( only usable with 6x 2.5" HDD + DVD Option )</li> </ul>
<p><b>Cables:</b></p> <ol style="list-style-type: none"> <li>1. One SAS cable for up to 4 internal hot plug HDDs if the the <b>6x 2.5" HDD + DVD Option</b> is configured                      Second SAS cable is optional for port 5 and 6 if max 6 HD's are required</li> <li>2. Two SAS cables for up to 8 internal hot plug HDDs if the <b>8x 2.5" HDD Option</b> is configured</li> <li>3. Power cable</li> </ol>
<p><b>Software:</b></p> <ul style="list-style-type: none"> <li>- ServerView Suite Software package incl. ServerStart, ServerBooks, Management Software and Updates</li> <li>- Documentation engl. (multilingual on CD)</li> </ul>



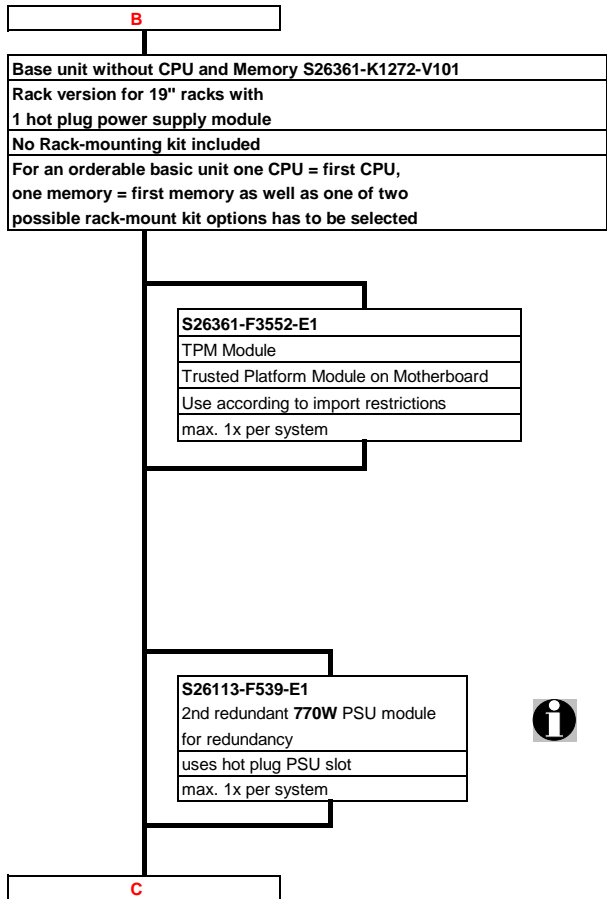
<p><b>Mounting kits for PRIMERGY RX200 S5</b></p> <ul style="list-style-type: none"> <li>- 1 pair of telescopic rails either full or partial extraction                      with partial extraction server can not be fully pulled out, but lower cost version of RMK</li> <li>- 1 Vario carrier DC-PC-3rd party Rack                      allows toolless adjustable in depth and easy mounting</li> </ul> <p><b>Mounting kit for mounting of servers in FSC 19" PRIMECENTER- racks and all server racks conforming to EIA standard EIA-310-D for 19" racks. Therefore the mounting kit is variable in depth from 704-790mm</b></p>
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**Cables included in basic unit**

Connections	Cable	PRIMERGY RX200 S5	Key:
1. SATA DVD		( optional )	⊙ SAS ○ SATA
2. 4-port SAS cable HDDs			
3. 4-port SAS cable HDDs		( optional )	
4. Power cable			

Conditions for SATA cable and one ore two 4-port SAS cables see description "Cables" above

B



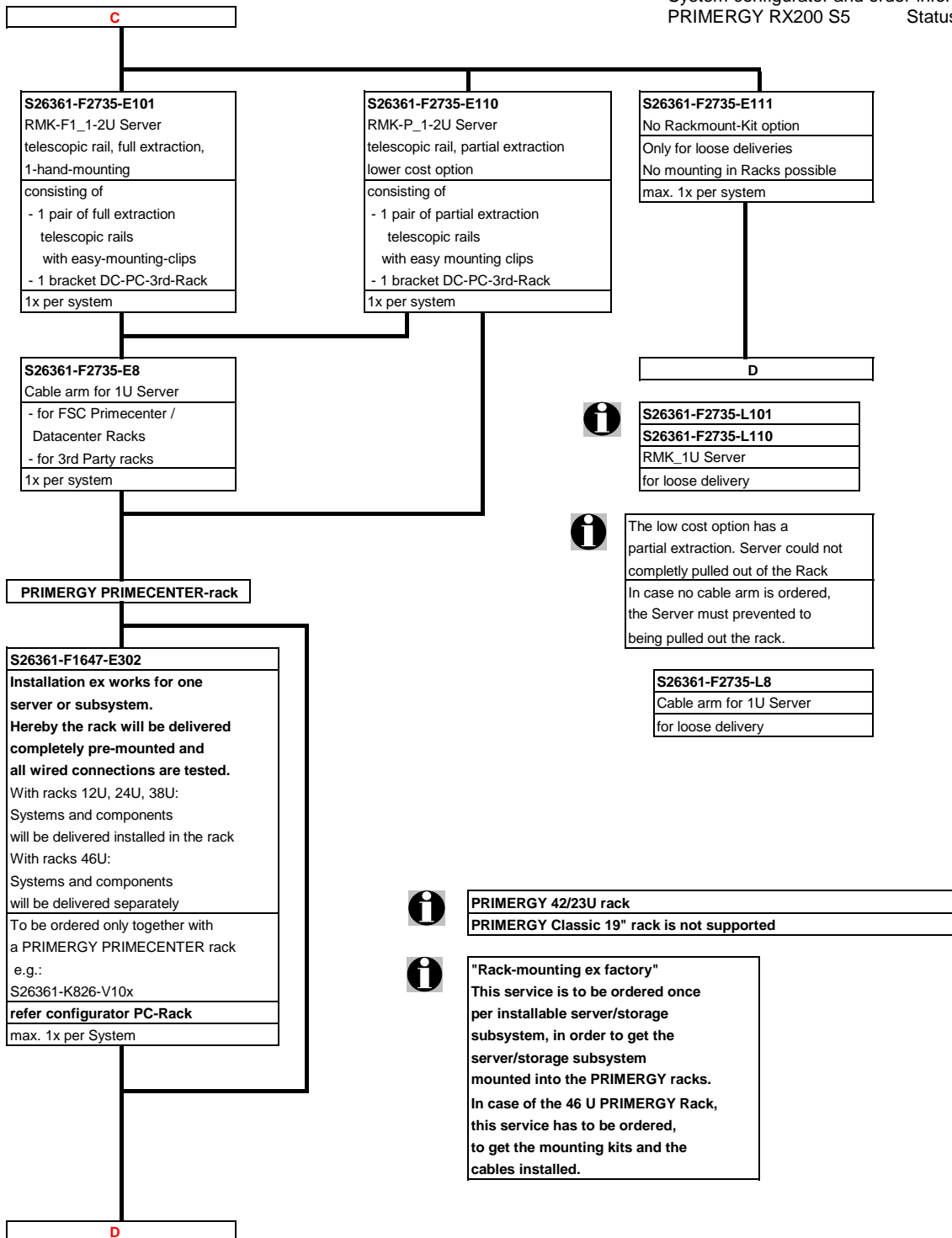
Be aware of import restrictions!  
 Only 1 TPM per system.  
 Loose delivery for later  
 integration possible for customer.

<b>S26361-F3552-L1</b>
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>For later redundancy upgrade the following kit is available:</b>	
One 770W power supply module hot plug incl. power cord	<b>S26113-F539-L1</b>





D

**Section II Processor**



There are 2 processor LGA1366 sockets available.  
 The first socket is always equipped with the **first CPU**  
 It is also possible to upgrade a dual-processor system later on with a **second CPU**  
 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. 1066MHz,  
 with two quad rank DIMMs or each mix with quad rank DIMMs per channel = 800MHz  
 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.  
 A multi-processor operating system is required for a dual-processor system.

<b>Max. two CPU's can be selected per basic unit</b>	
<b>One of following CPU's has to be selected as first CPU for an orderable basic unit</b>	
<b>Optional second CPU has to be the same type like the first CPU</b>	
<b>Dual-Core CPU with max. 800MHz DDR3 speed ( 4.8GT/s)</b> - 1x 64-bit Intel Xeon DP (4MB shared TLC = Third Level Cache ) with passive heat sink, occupies socket for one CPU	
<b>Xeon DP E5502 (1,86GHz/4M/4,8GT) / 80W</b>	<b>S26361-F3286-E186</b>
<b>Quad-Core CPU's with max. 800MHz DDR3 speed ( 4.8GT/s)</b> - 1x 64-bit Intel Xeon DP (4MB shared TLC = Third Level Cache ) and passive heat sink occupies socket for one CPU	
<b>Xeon DP E5504 (2,00GHz/4M/4,8GT) / 80W</b>	<b>S26361-F3287-E200</b>
<b>Xeon DP E5506 (2,13GHz/4M/4,8GT) / 80W</b>	<b>S26361-F3287-E213</b>
<b>Turbo Quad-Core CPU's with max. 1066MHz DDR3 speed ( 5.86GT/s)</b> - 1x 64-bit Intel Xeon DP (8MB shared TLC = Third Level Cache ); Hyper-Threading (HT) and passive heat sink occupies socket for one CPU	
<b>Xeon DP E5520 (2,26GHz/8M/5,86GT) / 80W</b>	<b>S26361-F3288-E226</b>
<b>Xeon DP E5530 (2,40GHz/8M/5,86GT) / 80W</b>	<b>S26361-F3288-E240</b>
<b>Xeon DP E5540 (2,53GHz/8M/5,86GT) / 80W</b>	<b>S26361-F3288-E253</b>
<b>Turbo Quad-Core CPU's with max. 1333MHz DDR3 speed ( 6.4GT/s)</b> - 1x 64-bit Intel Xeon DP (8MB shared TLC = Third Level Cache ); Hyper-Threading (HT) and passive heat sink occupies socket for one CPU	
<b>Xeon DP X5550 (2,66GHz/8M/6,4GT) / 95W</b>	<b>S26361-F3289-E266</b>
<b>Xeon DP X5560 (2,80GHz/8M/6,4GT) / 95W</b>	<b>S26361-F3289-E280</b>
<b>Xeon DP X5570 (2,93GHz/8M/6,4GT) / 95W</b>	<b>S26361-F3289-E293</b>
<b>Low Voltage Quad-Core CPU with max. 800MHz DDR3 speed ( 4.8GT/s)</b> - 1x 64-bit Intel Xeon DP (4MB shared TLC = Third Level Cache ) with passive heat sink occupies socket for one CPU	
<b>Xeon LV DP L5506 (2,13GHz/4M/4,8GT) / 60W</b>	<b>S26361-F3290-E213</b>
<b>Low Voltage Turbo Quad-Core CPU with max. 1066MHz DDR3 speed ( 5.86GT/s)</b> - 1x 64-bit Intel Xeon DP (8MB shared TLC = Third Level Cache ); Hyper-Threading (HT) and passive heat sink occupies socket for one CPU	
<b>Xeon LV DP L5520 (2,26GHz/8M/5,86GT) / 60W</b>	<b>S26361-F3290-E226</b>
<b>Xeon LV DP L5530 (2,40GHz/8M/5,86GT) / 60W</b>	<b>S26361-F3290-E240</b>

**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

E

E

**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 only 1066MHz is possible independent of the module speed.  
 SDDC (Chipkill) is supported only for registered memory modules.**

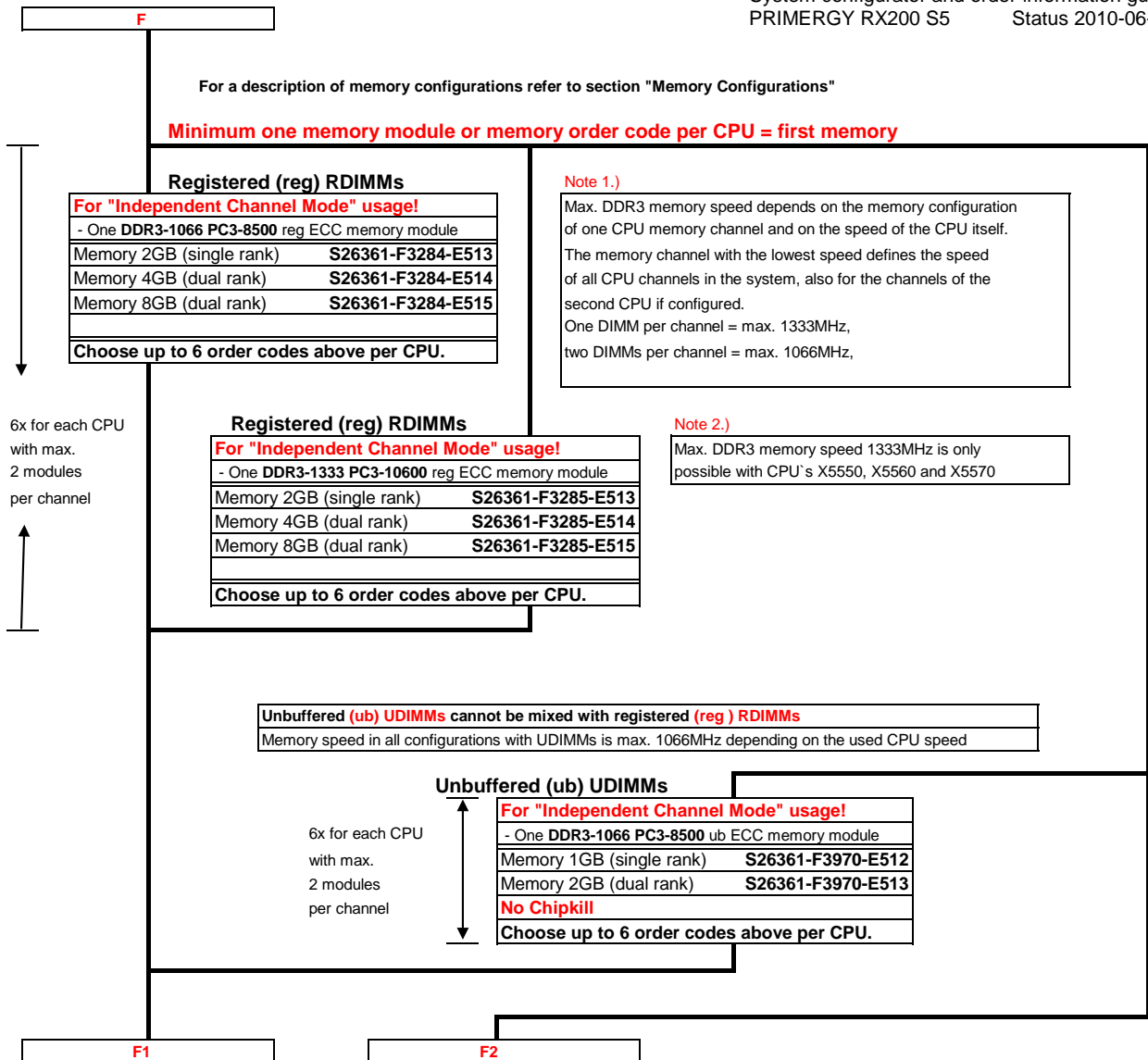
**1.) In the "Independent Channel Mode" is following configuration possible**  
 - Each slot can optionally be equipped either with registered x4 organized DDR3 modules:  
 2GB **single rank**, 4GB and 8GB **dual rank**,  
 or with unbuffered x8 organized DDR3 modules: 1GB **single rank** and 2GB **dual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

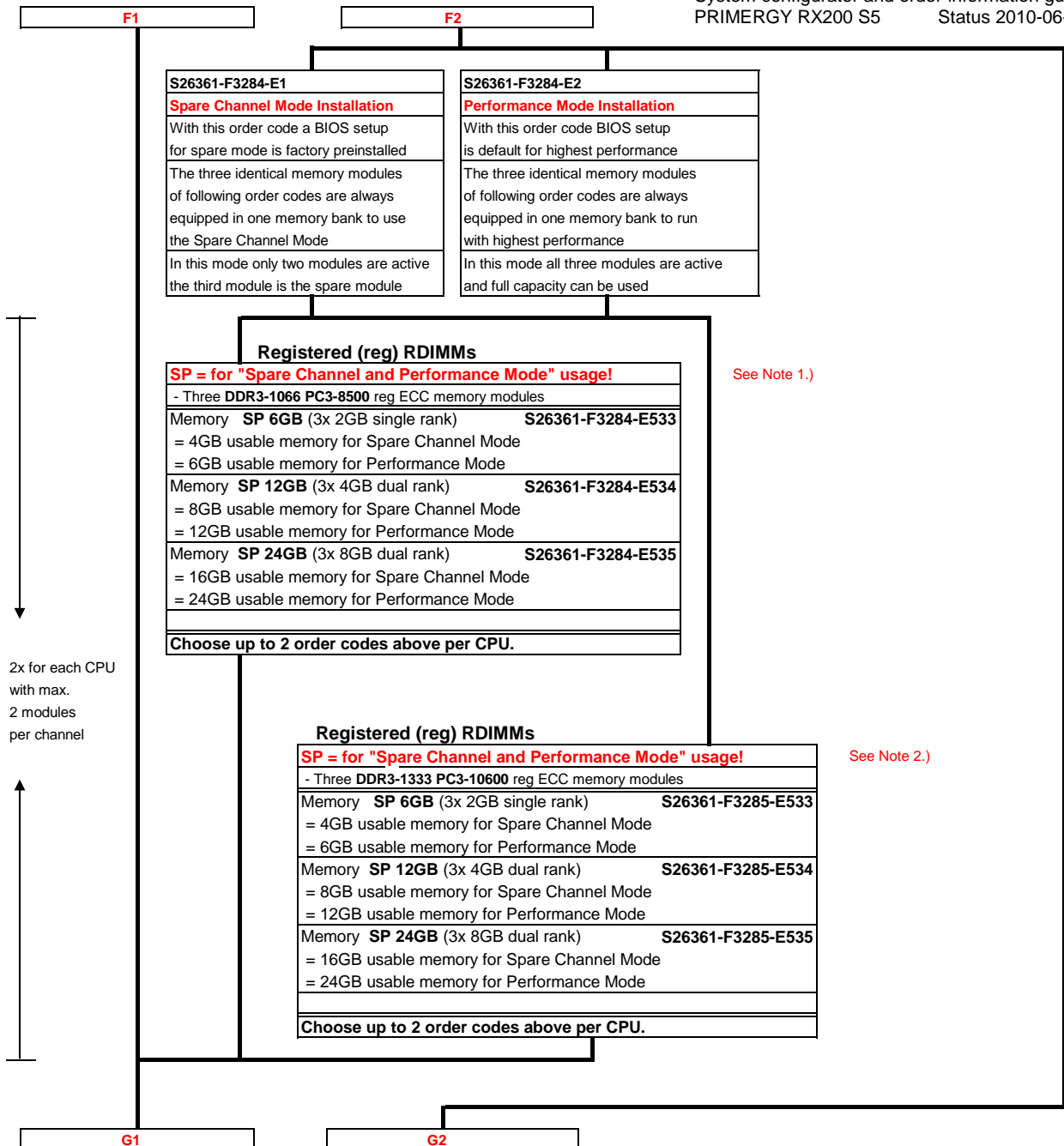
**2.) In the "Spare Channel Mode" is following configuration possible**  
 - Each memory bank can optionally be equipped with 3x2GB **single rank**,  
 3x4GB and 3x8GB **dual rank** DDR3 modules.  
**Each slot of one bank has to be equipped with identical modules for spare channel mode**  
 In channel 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

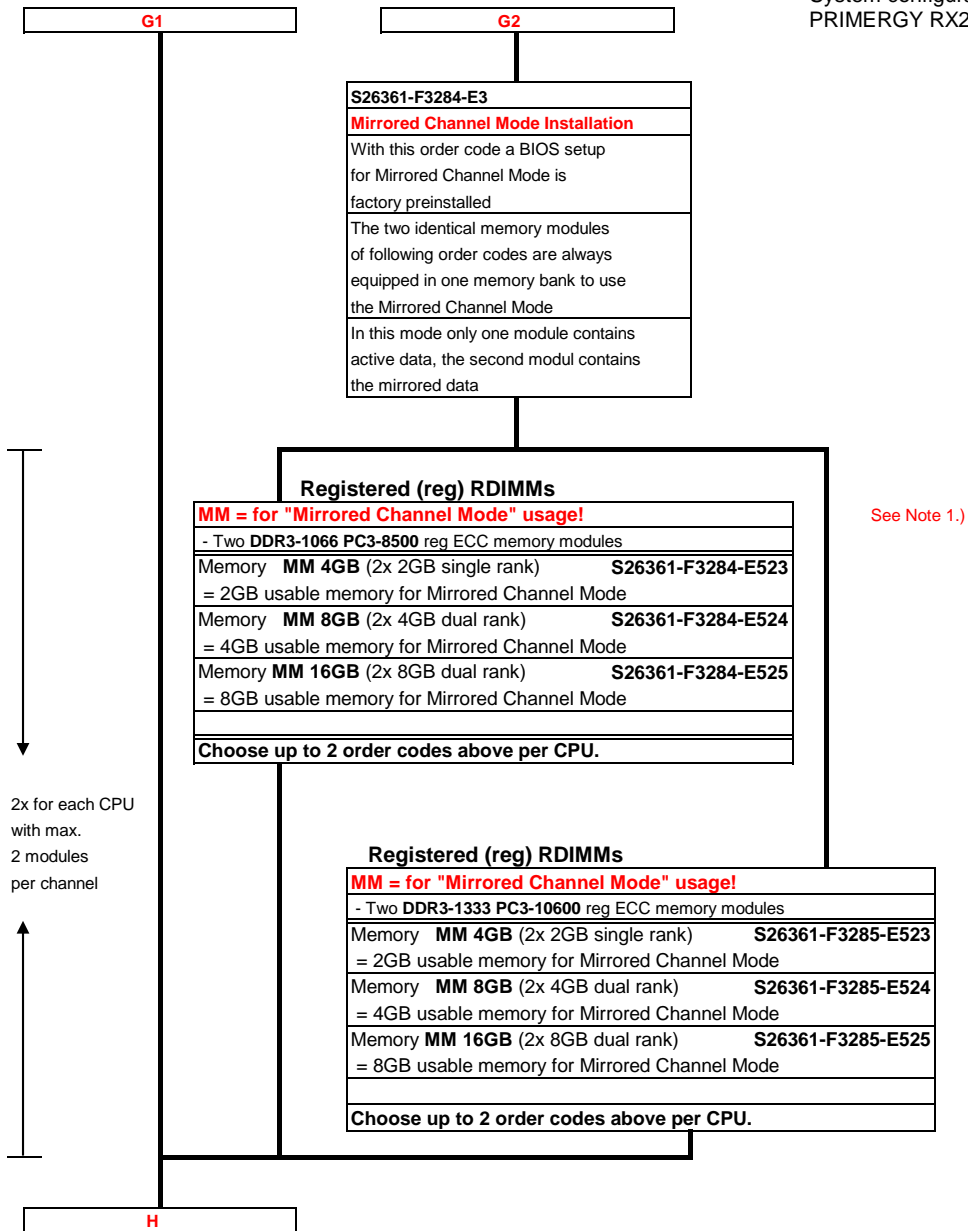
**3.) In the "Mirrored Channel Mode" is following configuration possible**  
 - Each memory bank can optionally be equipped with 2x2GB **single rank**,  
 2x4GB and 2x8GB **dual rank** DDR3 modules.  
**In each memory bank channel A and B of CPU 1 or channel D and E of CPU 2 have to be equipped with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

F







**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)

## Memory Configuration PRIMERGY RX200 S5

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 and RDIMM offer different functionality.

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 Channel Mode use different BIOS settings. ( **Spare Channel Mode as soon as released** )

\*\* ) = technically possible but no Order Numbers available, use at your own risk

x = order codes available

Capacity	Configuration	UDIMM	RDIMM	Notes
Min. Memory per CPU	1 Module / CPU	1GB	2GB	with one CPU
Max. Memory per CPU	6 Modules / CPU	12GB	48GB	with one CPU
Max. Memory per System	12 Modules / System	24GB	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. 1066MHz, three DIMMs per channel = max. 800MHz,  
The memory channel with the lowest speed defines the speed of all CPU channels in the system,

Used CPU	Max. Memory-Bus speed depending on DIMMs / channel if following memory speed is used for specific CPU's					
	1066MHz ( 1DIMM )	1066MHz ( 2 DIMMs )	1066MHz ( 3 DIMMs )	1333MHz ( 1 DIMM )	1333MHz ( 2 DIMMs )	1333MHz ( 3 DIMMs )
<b>Dual-Core CPU</b> with max. 800MHz DDR3 speed ( 4.8GT/s)						
Xeon DP E5502 (1,86GHz/4M/4,8GT) / 80W	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz
<b>Quad-Core CPU's</b> with max. 800MHz DDR3 speed ( 4.8GT/s)						
Xeon DP E5504 (2,00GHz/4M/4,8GT) / 80W	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz
Xeon DP E5506 (2,13GHz/4M/4,8GT) / 80W	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz
<b>Turbo Quad-Core CPU's</b> with max. 1066MHz DDR3 speed ( 5.86GT/s)						
Xeon DP E5520 (2,26GHz/8M/5,86GT) / 80W	1066 MHz	1066 MHz	800 MHz	1066 MHz	1066 MHz	800 MHz
Xeon DP E5540 (2,53GHz/8M/5,86GT) / 80W	1066 MHz	1066 MHz	800 MHz	1066 MHz	1066 MHz	800 MHz
<b>Turbo Quad-Core CPU's</b> with max. 1333MHz DDR3 speed ( 6.4GT/s)						
Xeon DP X5550 (2,66GHz/8M/6,4GT) / 95W	1066 MHz	1066 MHz	800 MHz	1333 MHz	1066 MHz	800 MHz
Xeon DP X5570 (2,93GHz/8M/6,4GT) / 95W	1066 MHz	1066 MHz	800 MHz	1333 MHz	1066 MHz	800 MHz
<b>Low Voltage Quad-Core CPU</b> with max. 800MHz DDR3 speed ( 4.8GT/s)						
Xeon LV DP L5506 (2,13GHz/4M/4,8GT) / 60W	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz	800 MHz
<b>Low Voltage Turbo Quad-Core CPU</b> with max. 1066MHz DDR3 speed ( 5.86GT/s)						
Xeon LV DP L5520 (2,26GHz/8M/5,86GT) / 60W	1066 MHz	1066 MHz	800 MHz	1066 MHz	1066 MHz	800 MHz

### Configuration hints:

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

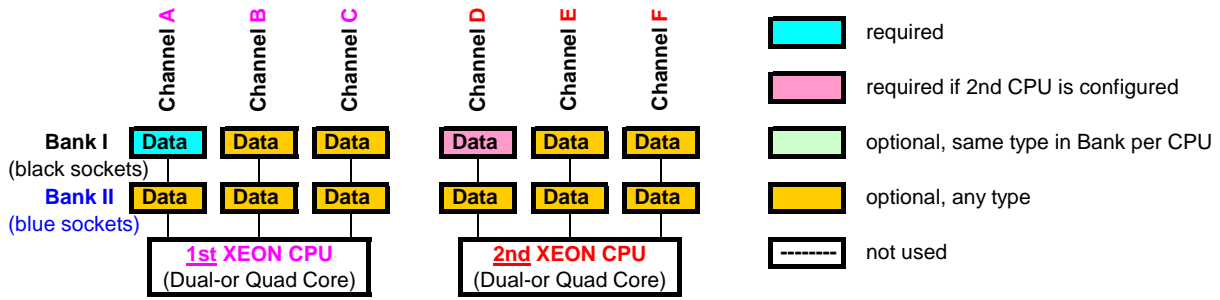
- Bank I** black sockets
- Bank II** blue sockets ( or white latch )

- 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

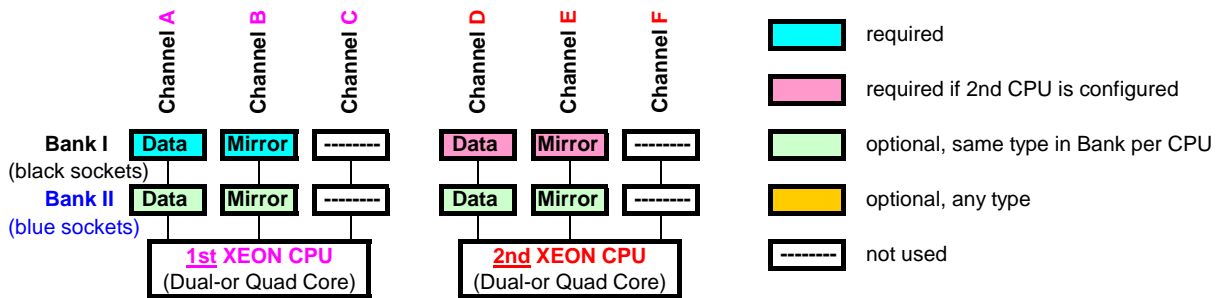
- See below (next page) for a detailed descriptions of the memory configuration supported.

### 1. Independent Channel Mode



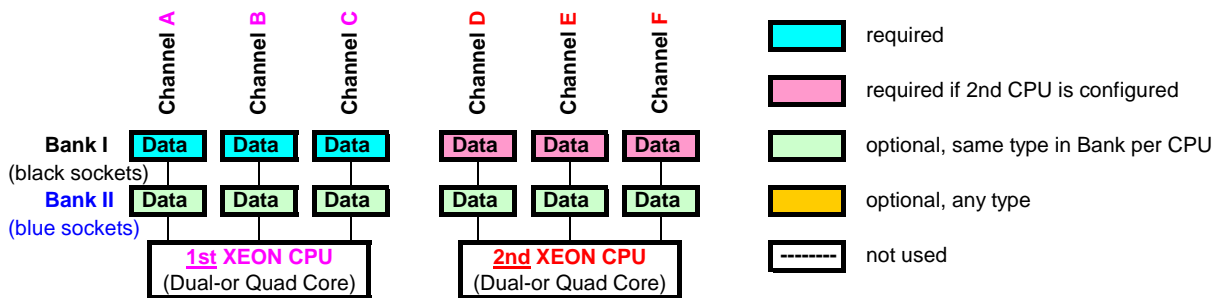
Independent Channel Mode allows all channels to be populated in any order  
 Can run with differently rated DIMMs and use the settings of the slowest DIMM installed in the system  
 Independent Channel Mode is supported using UDIMM or RDIMM memory modules

### 2. Mirrored Channel Mode



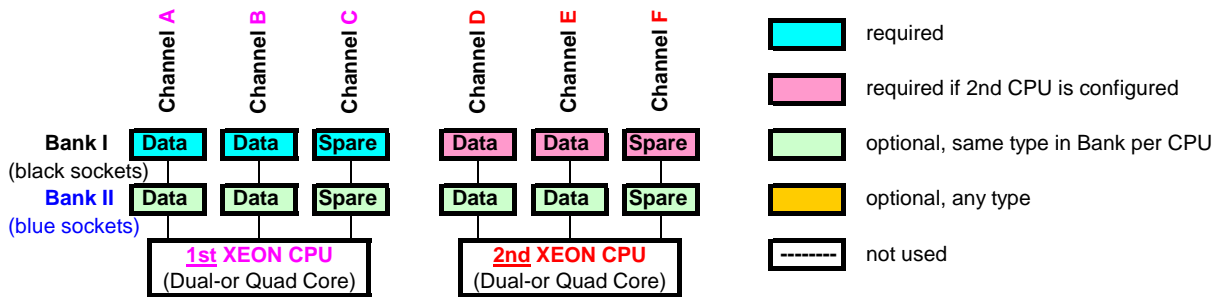
Mirrored Channel Mode requires identical modules on channel A and B (1st CPU) or channel D and E (2nd CPU)  
 50% of the capacity is used for the mirror => the available memory for applications is only half of the installed memory  
 channel C (1st CPU) or channel F (2nd CPU) are not usable in Mirrored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




I

**Section V Accessible drives**


	Setup RX200 S5 by <b>ServerStart</b> is supported with following configurations:
	<b>no Floppy, no DVD, no CD:</b> remote installation only ( PXE service & DHCP server required)
	<b>built in CD/DVD or USB CD/DVD, no Floppy disk drive:</b> UNC Network share reachable or USB Floppy connected
	<b>USB Floppy, no CD/DVD:</b> 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-L82
	External Blu-Ray Drive (as soon as released)	S26341-F103-L83
	2) USB Keyboard: KBPC PX D, professional keyboard	S26381-K340-V120
3) USB Mouse: Optical Wheel Mouse Tilt USB/PS2	S26381-K415-L100	
4) USB Memorybird:		
Memorybird P 4GB, SLC flash	S26391-F6047-L104	
MyUSBS A910 8GB, MLC Flash	S26391-F6048-L208	

1x  
↓  
↑

<p><b>S26361-F3531-E2</b>                  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</p>	<p><b>S26361-F3269-E2</b>                  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</p>
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 **Configurations with CD /DVD are only possible with the 6x 2.5" HDD + DVD Option**  
 With onboard SATA controller are max. 4x SATA HD's and one DVD possible.

**J**  
 Modular Disk Array + 6x 2.5" HD's

**K**  
 Modular Disk Array + 8x 2.5" HD's

J

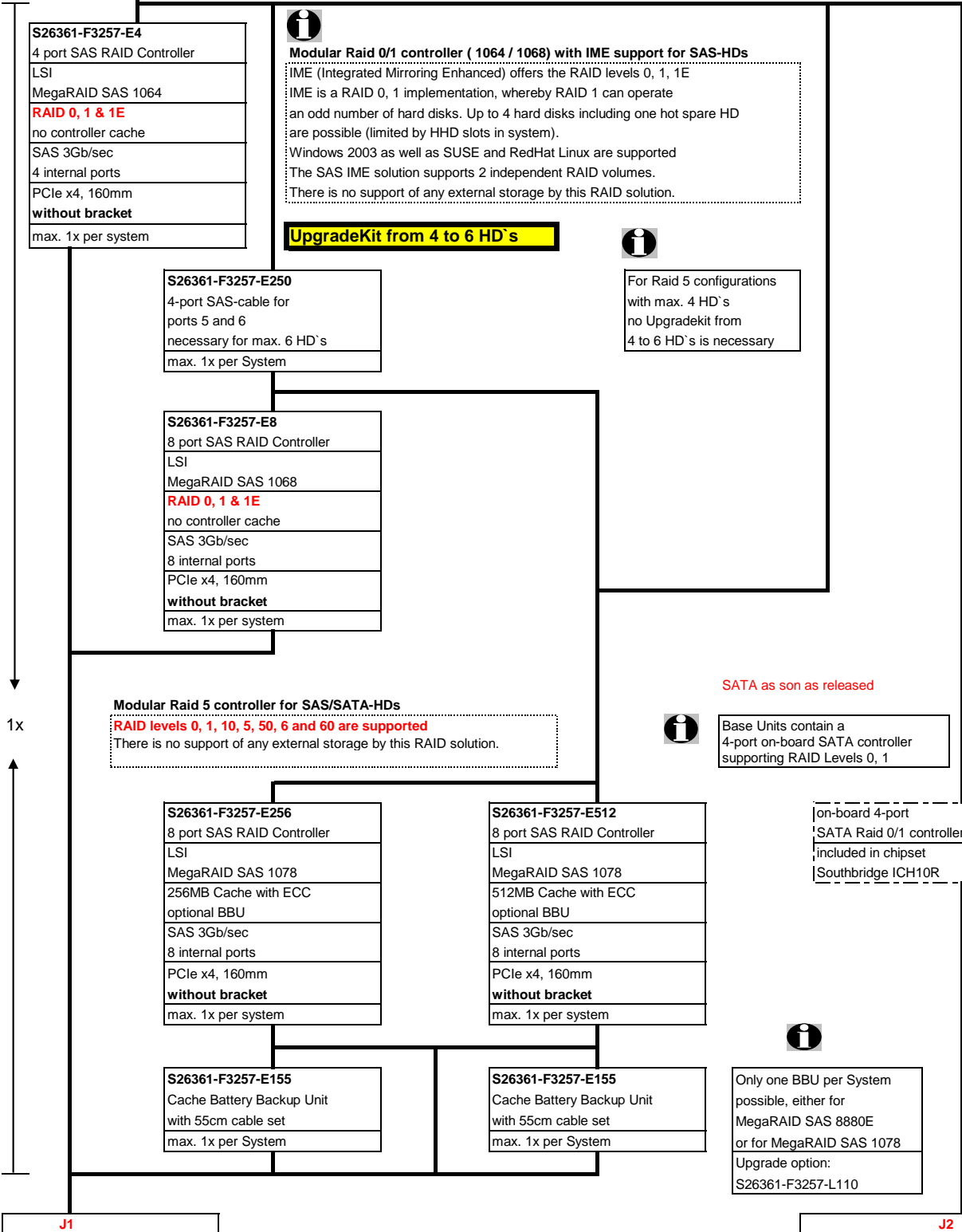
**Section G-VI Drive Bay for 6x 2.5" HD Basic Unit**

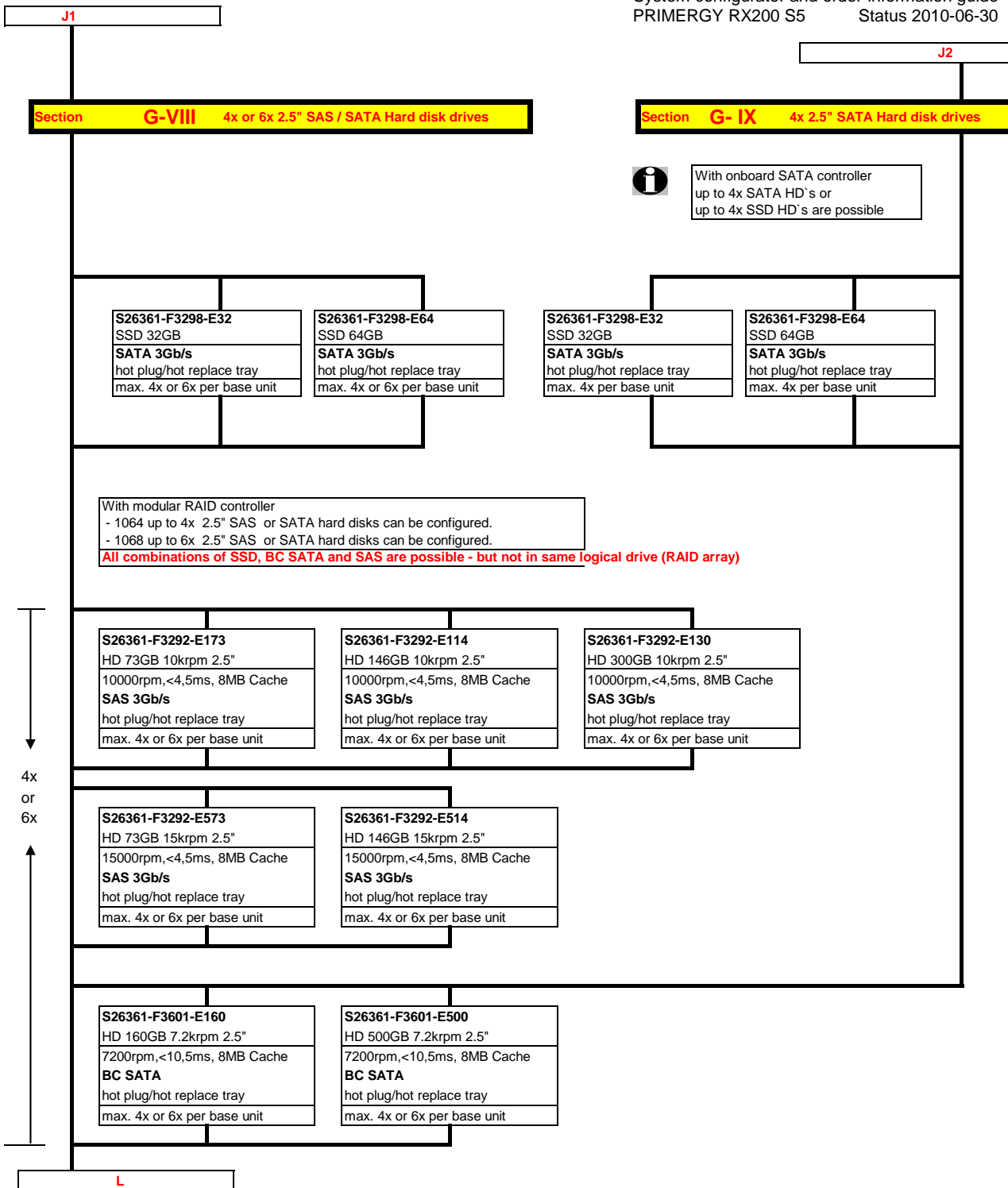
**S26361-F3317-E600**  
 6x 2.5" HDD + DVD Option  
 Drive Bay with up to 6x 2.5" slots  
 plus one bay for DVD

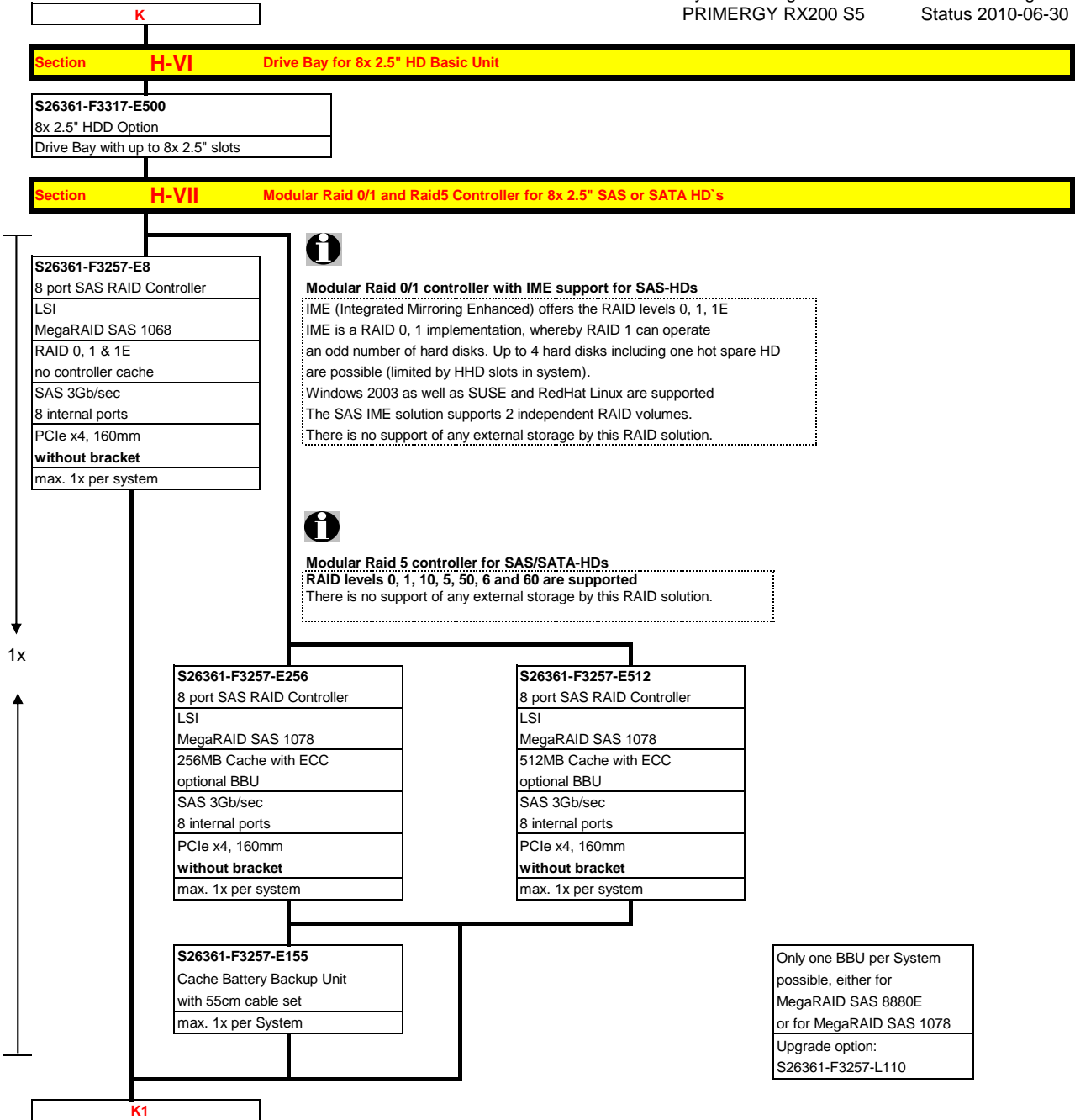
With this 6x 2.5" HDD + DVD Option only 4 ports are electrically connected to e.g. a 4 port SAS controller or the on-board 4-port SATA Raid 0/1 controller. In order to connect HD5 and HD6 additionally, the **UpgradeKit from 4 to 6 HD's** and a 8-port SAS controller is necessary

**S26361-F3317-L500**  
 8x 2.5" HDD Upgrade Option  
 Upgrade to a Drive Bay with up to 8x 2.5" slots

**Section G-VII Modular Raid 0/1, Raid5 for 4x 2.5" or 6x 2.5" SAS or SATA HD's. On-board Controller for 4x 2.5" SATA HD's**

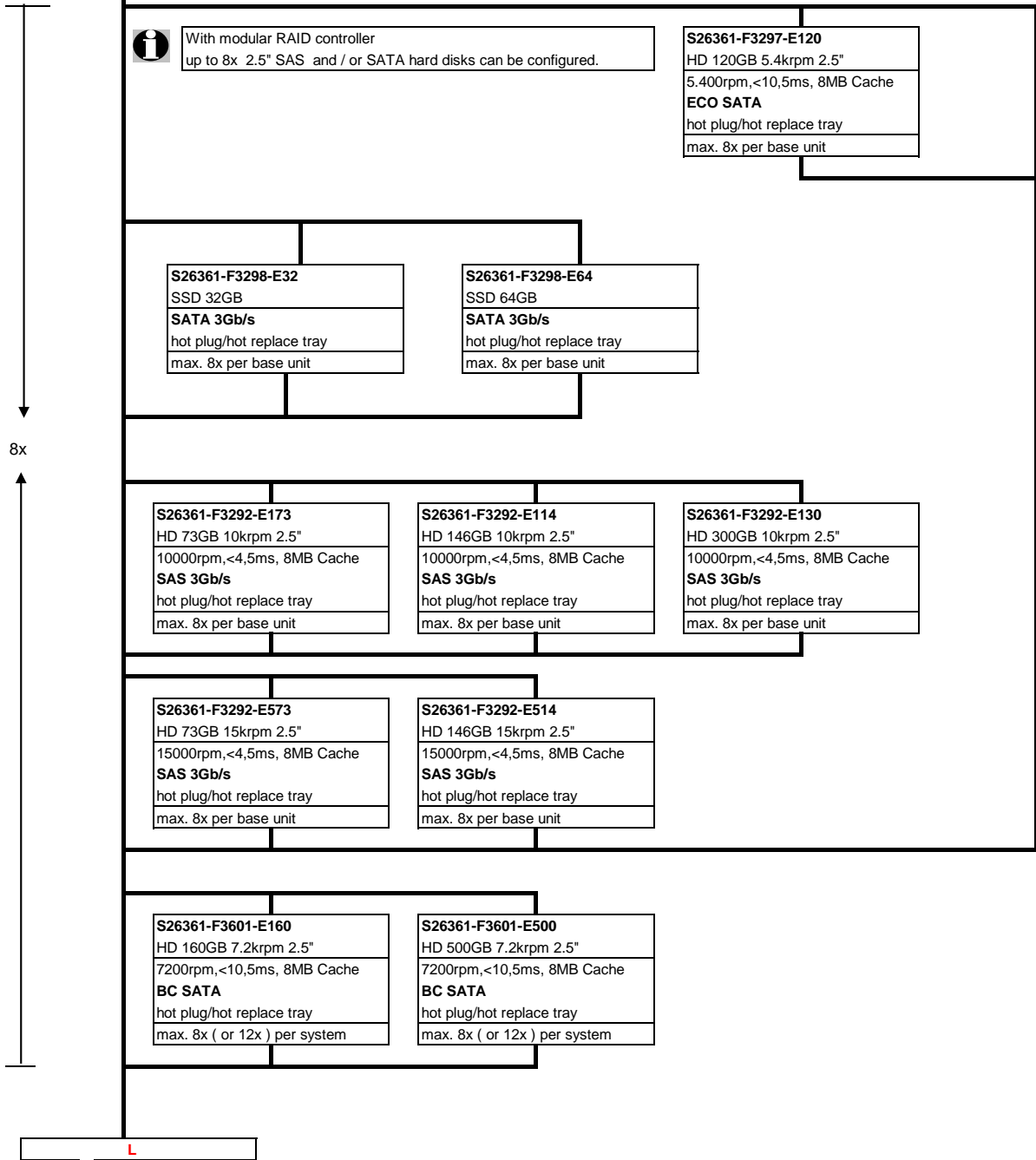






K1

**Section H-VIII 8x 2.5" SAS / SATA Hard disk drives**



L

**Section X External SAS Disk Array, SAS backup drives or SCSI peripheral devices**

External 4-port SAS-controller for external SAS Disk Array

<b>S26361-F3890-E201</b>
8 port SAS RAID Controller
LSI
MegaRAID SAS8880E
512MB Cache with ECC
RAID 0, 1, 10, 5, 50, 6 & 60
<b>without iBBU</b>
SAS 3Gb/sec
8 port external
PCIe x4, 167mm
low profile bracket
max. 1x per system

<b>S26361-F3890-E230</b>
8 port SAS RAID Controller
LSI
MegaRAID SAS8880E
512MB Cache with ECC
RAID 0, 1, 10, 5, 50, 6 & 60
<b>with iBBU</b>
SAS 3Gb/sec
8 port external
PCIe x4, 167mm
low profile bracket
max. 1x per system



Only one BBU per System possible, either for MegaRAID SAS 8880E or for MegaRAID SAS 1078 for loose delivery please order **S26361-F3890-L501** Contr. w/o BBU **S26361-F3890-L13** optional BBU

SAS-controller for external backup drives

<b>S26361-F3271-E201</b>
SAS Controller 3Gb/s 8 port LP
LSI SAS3442E-R Low Profile
PCIe x4,
int: 4 port
ext: 4 port
max. 2x per system

2x

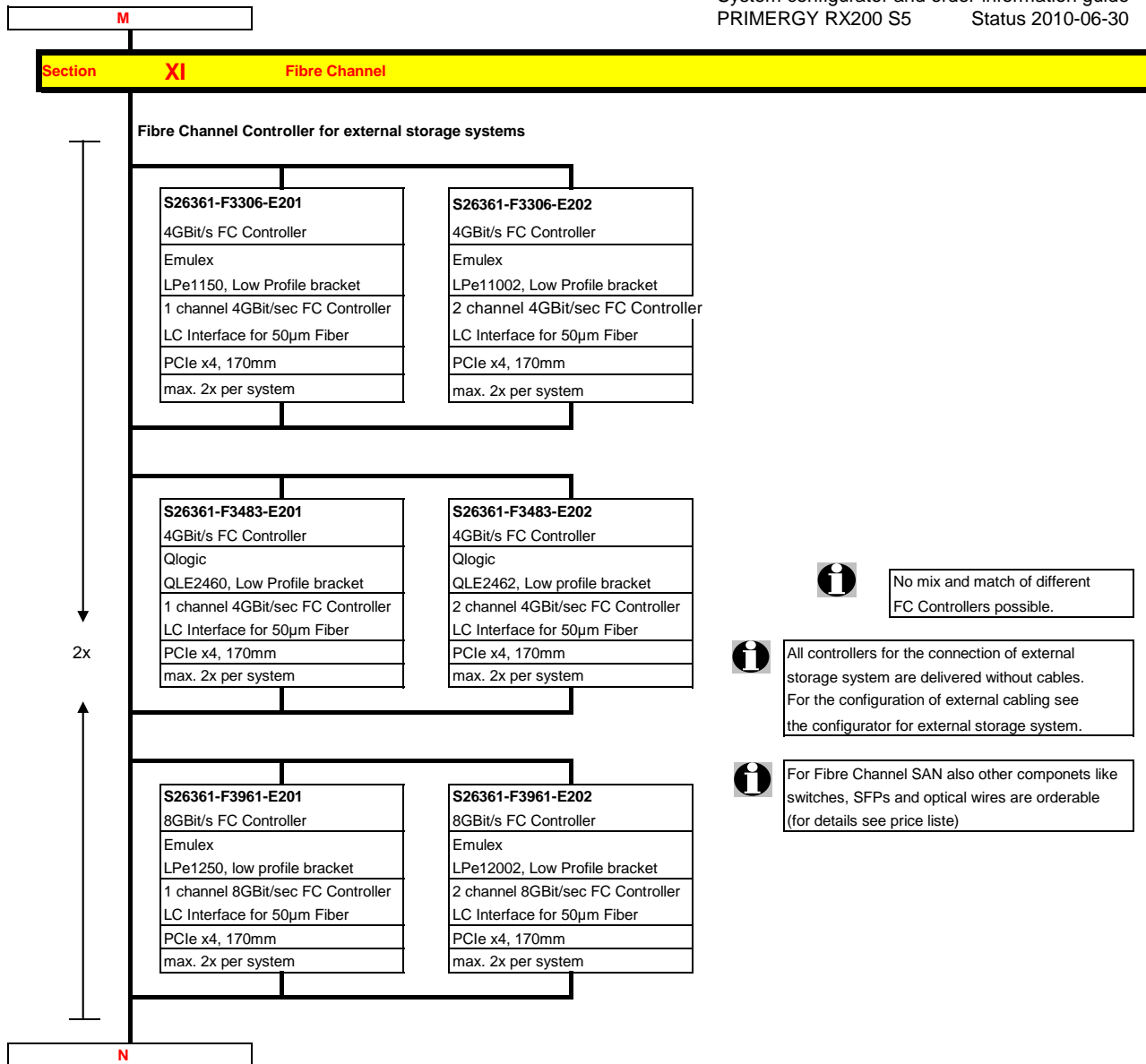
SCSI-controller for external drives and peripheral devices

<b>S26361-F3270-E201</b>
SCSI U320 Controller
Adaptec SCSI Card 29320LPE
PCIe x1,
int: LVD HD68
ext: VHDCI 68pin
max. 2x per system



Only released for SX10. All contr. for the connection of external storage systems are delivered without cables. For the configuration of external cabling see configurator

M



No mix and match of different FC Controllers possible.

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)

N

**Section XII Communication / Network**

**2x 1Gbit 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.

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

2 slots PCIe x8 ( wired x8 ) available



A PCIe x1 or x4 card can also be plugged in a PCIe x8 slot



**A) 1-Port Copper PCIe Adapter 1000TX**

**S26361-F3516-E201 ( Shelter Island )**  
 Gigabit Ethernet Controller 1000TX LP  
 Eth Ctrl 1x1Gbit PCI-e Gigabit CT DT Cu LP  
 Intel® Gigabit CT Desktop Adapter  
 PCIe x1  
 ext: for RJ45-connector, Cat 5  
 max. 2x per system

**S26361-F3241-E201 ( Glyndon )**  
 Gigabit Ethernet Contr. 1000TX  
 Eth Ctrl 1x1Gbit PCI-e Pro/1000PT Cu  
 Intel PRO/1000 PT Server Adaptor  
 PCIe x1  
 ext: for RJ45-connector, Cat 5  
 max. 2x per system

**B) 1-Port MMF PCIe Adapter 1000SX**

**S26361-F3242-E201 ( Sheephead Bay )**  
 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

**C) 2-Port Copper PCIe Adapter 1000TX**

**S26361-F3228-E201 ( Redwater )**  
 Gigabit Ethernet Controller Dual 1000TX  
 Eth. Ctrl 2x1Gbit PCIe PRO/1000PT Cu  
 Intel Pro/1000PT dual Server Adapter  
 PCIe x4  
 ext: for RJ45-plug, Cat 5  
 max. 2x per system

**D) 4-Port Copper PCIe Adapter 1000TX**

**S26361-F3462-E201 ( Kirkwood 2 )**  
 Gigabit Ethernet Controller Quad 1000TX  
 Eth. Ctrl 4x1Gbit PCIe PRO/1000PT Cu  
 Intel Pro/1000PT quad Server Adapter  
 PCIe x4  
 ext: for RJ45-plug, Cat 5  
 max. 2x per system

**E) 2-Port MMF PCIe Adapter 1000SX**

**S26361-F3505-E201**  
 ( Green Fountain SR )  
 10 Gigabit Ethernet Controller dual port LC lp  
 Eth Ctrl 2x10Gbit PCIe x8 XF SR LC lp  
 Intel 10 Gigabit XF SR Dual Port Server Ad.  
 PCIe x8, low profile  
 ext: LC-connector  
 max. 1x per system

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**Section XIII 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


iRMC S2 (integrated Remote Management Controller) onboard 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

**Section XIV 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.

**Section XV Country specific power cord**

 **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 english. 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.

**End PRIMERGY RX200 S5**

## Change Report

Date	Order number	Changes
2010-04-06	S26361-F3601-E160/500	new BC-SATA HD drives - now available
2009-10-01	S26361-F3299-E32/64	new SSD HD drives - as soon as available
2009-06-30	S26361-F3284-E1	Spare Channel Mode Installation - now available
2009-06-17		Added E5530 and X5560 CPU
2009-03-31		First Release