

# PRIMERGY R450

***System configurator and order-information guide***

**November 2003**

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Change report



**PRIMERGY Server**

# Instructions

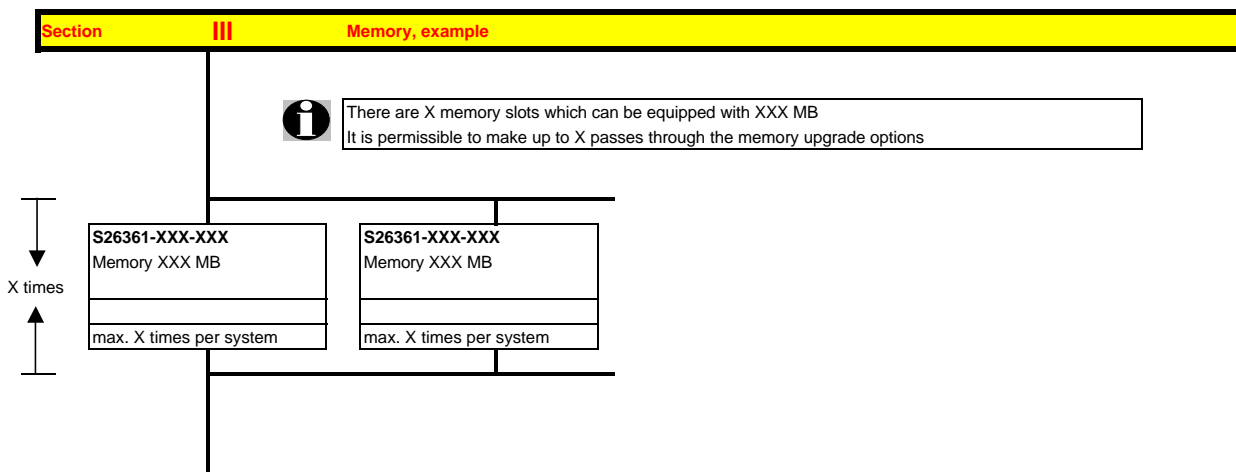
This document contains basic product and configuration information that will enable you to configure your system via PC-/ System-Architect.

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

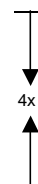
You can configure your individual PRIMERGY server in order to adjust your specific requirements.

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://www.primergy.com> (internet)

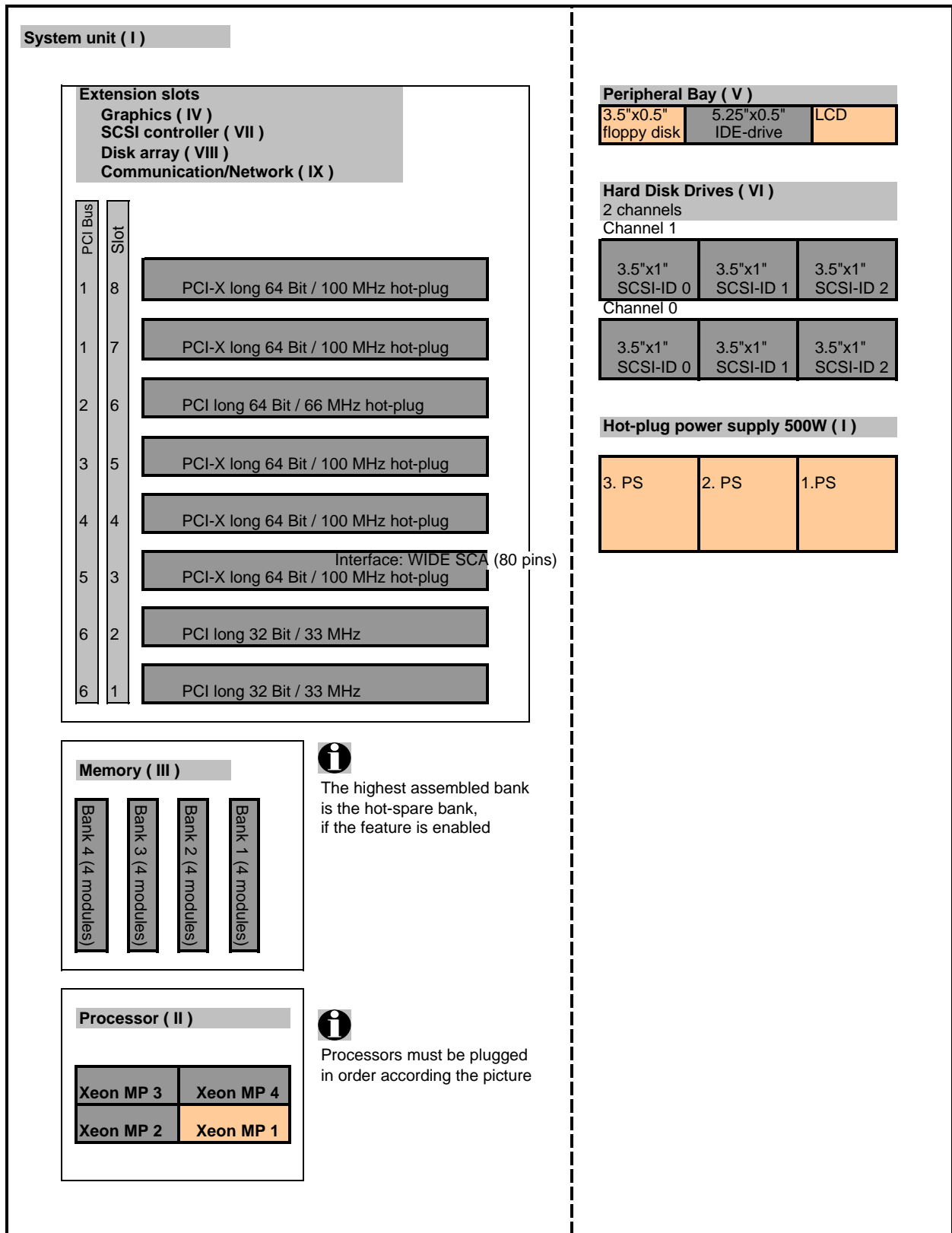
<http://extranet.fujitsu-siemens.com/primergy> (extranet)

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

## Configuration diagram PRIMERGY R450

### TOP VIEW

### FRONT VIEW



Start "PRIMERGY R450"

**SW Configurator**

**with OEM-Software**  
for PRIMERGY Server

**without OEM-Software**  
for PRIMERGY Server

**Vmware-Software**  
- ESX Server 1.5 (OEM)  
- ESX Server 2.0 (OEM)(planned)  
- Virtual SMP for ESX 2.0 (OEM)



Microsoft does not allow the use of OEM-software under ESX. Distributions-/ retailware is allowed.

Later use of OEM operating system software is not allowed, apart from OEM software by VMware and F5



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

**MS - Software: W \*\*)**  
- NT 4.0 Server  
- NT 4.0 Server Enterprise Edition  
- NT 4.0 Server Terminal Server Edition  
- Windows 2000 Server  
- Windows 2000 Advanced Server  
- Windows Server 2003, Standard Edition  
- Enterprise Edition

**Novell - Software: \*\*\*)**  
- NetWare 5.1  
- NetWare 6  
- NetWare 6.5 (planned)  
- NetWare Cluster Services 1.6 and  
- NetWare Cluster Services 1.7 (planned) with FibreCAT  
CX200, CX400, CX600

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

**Linux - Software: \*\*)**  
- SuSE Linux Enterprise Server: S  
- SuSE Professional Linux  
- Red Hat Enterprise Linux  
- Red Hat Professional Linux

**SCO - Software: \*\*)**  
- UnixWare 7

**CITRIX-Software für NT: W1**  
- Multiuser SW MetaFrame  
- LoadBalancing  
- additional User Lizenzen

**MultiPath, Duplex Data  
Manager for NT; W2K; Linux**

**easy Mirror for Linux  
NT 4, WIN 2000**

**FSC System Management  
Software: V**  
- RemoteView Software  
- RemoteView Service Board  
- RemoteView Diagnosis



\*) Pay attention to release information on datasheet under <http://www.primecluster.com>



\*\*\*) Pay attention to release and order information in PRINCE -> Operating System [http://vil.mch.fsc.net/vil/pc/vil/primergy/overview/prince/index\\_en.htm](http://vil.mch.fsc.net/vil/pc/vil/primergy/overview/prince/index_en.htm)

**Backup-Software: U**  
- ARCserve für NT



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

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

for internal users: [http://vil.mch.fsc.net/vil/oc/special/primergy/index\\_en.htm](http://vil.mch.fsc.net/vil/oc/special/primergy/index_en.htm)  
for partners: [http://vilpart.fujitsu-siemens.de/vil/oc/special/primergy/index\\_en.htm](http://vilpart.fujitsu-siemens.de/vil/oc/special/primergy/index_en.htm)

**Continue with PRIMERGY  
HW configurator**

**Start PRIMERGY R450**

**Section | Basic unit**

**Rack basic unit 4U including**  
1 x Xeon MP CPU  
2 channel

<b>S26361-K845-V200</b>	1,5GHz 1 MB TLC
<b>S26361-K845-V201</b>	1,9GHz 1 MB TLC
<b>S26361-K845-V202</b>	2 GHz 2 MB TLC



The PRIMERGY R450 basic unit comes with:

- 3 power supply module, hot-plug redundant
- 2 channel HD PBay with 3 HD bays each
- 1 floppy disk drive 1,44MB
- 2 hot-replace and redundant fans
- a CPU Board for up to 4x Xeon CPUs
- a Memory Board for 16 memory slots
- I/O section with
  - System Management Processor
  - Dual LVD/U3W-SCSI controller (Adaptec 7899)
  - VGA graphics 8 MB ATI
  - LAN 10/100 Mbit with RJ45 connector (Intel 82559)
  - 5 64bit / 100 MHz PCI-x slots, 1 64bit / 66 MHz slot, all hot-plug
  - 2 32bit / 33 MHz long PCI slots
- ServerStart packet incl. ServerBooks CD, ServerSupport CD and ServerView

**Mounting kit for PRIMERGY R450**

- 1 pair of telescopic rails (730-810mm)
- 1 pair of carrier rails
- 1 bracket PC-Rack
- 1 cable management PC-racks

**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 730-810mm**

**PRIMERGY PRIMECENTER- Rack**

**SNP:SY-F1647E301-P**  
**Installation ex works for one server or subsystem.**  
**Hereby the rack will be delivered completely pre-mounted and all wired connections are tested.**  
With racks 12U, 24U, 38U:  
Systems and components will be delivered installed in the rack  
With racks 46U:  
Systems and components will be delivered separately  
To be ordered only together with a PRIMERGY-PRIMECENTER rack  
e.g.:  
S26361-K826-V10x  
**refer configurator PC-Rack**  
max. 1x per System



**External Interfaces**  
2 x RS-232-C (serial, 9 pin)  
1x Centronics (paralle, 25 pin, EPP/ECP compatible)  
1 x keyboard (PS/2)  
1 x mouse (PS/2)  
1 x VGA (15 pin)  
1 x USB Frontside  
2 x USB Backside  
1 x RJ45 LAN

**External Interfaces for ServerManagement**  
1 x RS-232-C (serial, 9 pin)  
1 x RJ45 LAN  
1 x Power Jack



**"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 PRIMERGY racks. In case of the 46 U PRIMERGY Rack, this service has to be ordered, to get the mounting kits and the cables installed**



**important notice !**  
the mounting kit for PRIMERGY R450 is included the basic version and will be delivered with every R450



**PRIMERGY 42/23U Rack**  
This kit can be ordered, if it is planned to mount the rack version in an already available FSC 42/23U rack  
**S26361-F1331-L141**  
Mounting kit for 42/23U rack  
- 1 pair of carrier rails  
- 1 pair of telescopic rails  
- 1 cable carrier  
max. 1x per system

**A**

A



There are 3 bays for hot-plug power supplies, each with 500W  
Each basic unit contains 3 modules and provides redundancy  
for a fully equipped system

**Section II Processor**



A mix of processors with different clock frequency and different On-Chip cache cannot be used  
The multi-processor system premises a multi-processor operating system  
Terminators are not necessary

up to  
3x

<b>S26361-F2817-E151</b> XEON MP 1,5GHz with 1 MB TLC on Chip, heat sink and "Easy retention"
occupies slot for one CPU
max. 3x per system

<b>S26361-F2817-E191</b> XEON MP 1,9GHz with 1 MB TLC on Chip, heat sink and "Easy retention"
occupies slot for one CPU
max. 3x per system

<b>S26361-F2817-E202</b> XEON MP 2GHz with 2MB TLC on Chip, heat sink and "Easy retention"
occupies slot for one CPU
max. 3x per system

**Section III Memory**



There are 16 memory slots available (4 banks, 4 modules each)  
They can optionally be equipped with 128 MB, 256 MB, 512 MB or 1GB registered DDR-RAM modules (PC1600)  
**The maximal extension is 16 GB with today available 1GB modules!**  
Any mix of modules within one memory bank is not allowed  
ECC with memory scrubbing and chipkill is standard  
Optional hot-spare memory functionality can be configured in the BIOS (redundant memory bank 3 + 1)

4x

<b>S26361-F2550-E542</b> Main memory 512MB PC1600 registered DDR RAM
consisting of 4 modules
occupies one bank
max. 4x per system

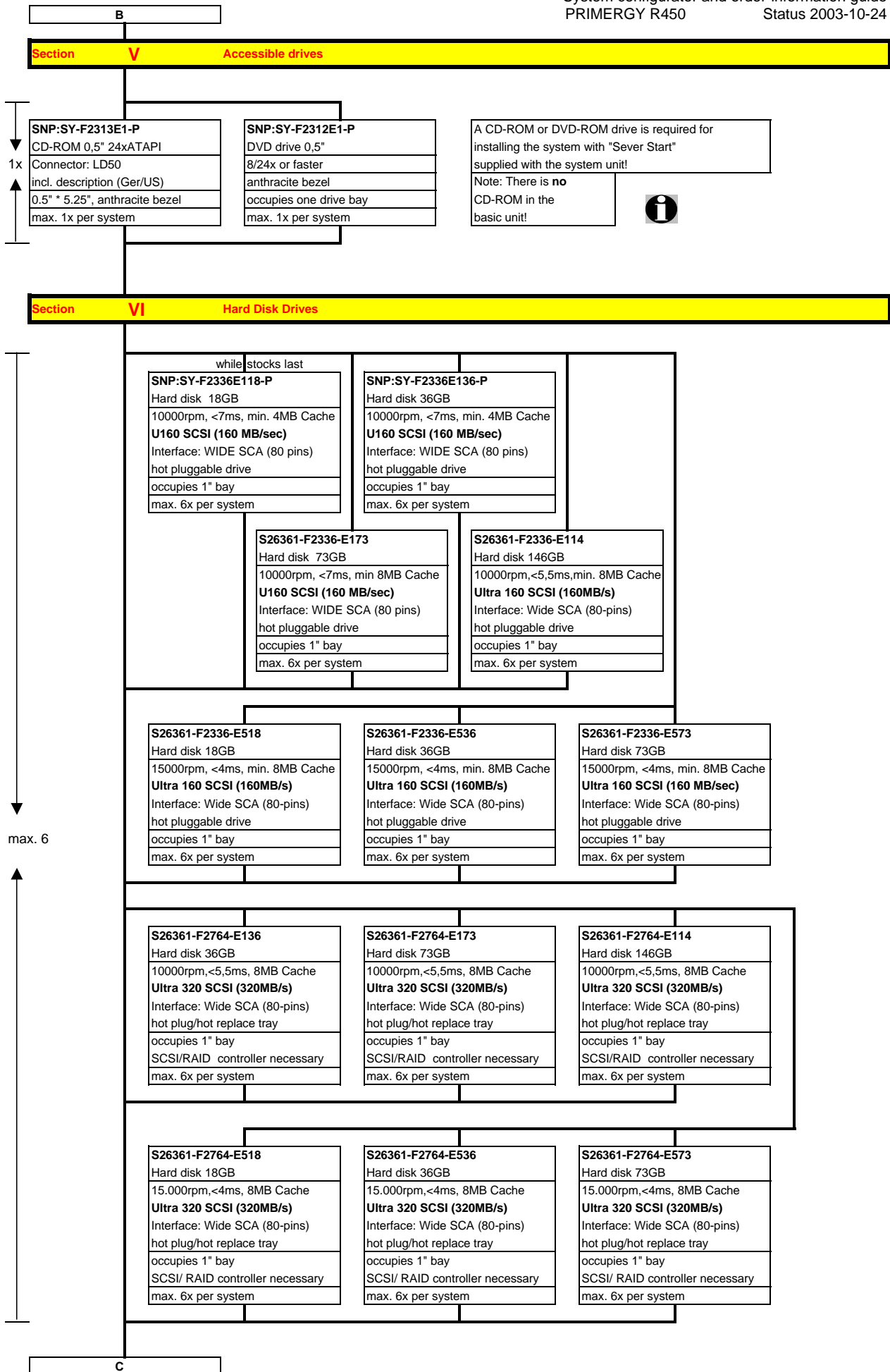
<b>S26361-F2550-E543</b> Main memory 1024MB PC1600 registered DDR RAM
consisting of 4 modules
occupies one bank
max. 4x per system

<b>S26361-F2550-E544</b> Main memory 2048MB PC1600 registered DDR RAM
consisting of 4 modules
occupies one bank
max. 4x per system

<b>S26361-F2550-E545</b> Main memory 4096MB PC1600 registered DDR RAM
consisting of 4 modules
occupies one bank
max. 4x per system

**Section IV Graphics**

B



C

**Section VII SCSI/Fibre-channel controller**

**A. on-board SCSI Controller for internal hard disks**

**2-channel U160-SCSI controller on-board; included as standard**  
 The following cabling is standard, if no Disk Array Controller is used  
 1. **Channel A** of the U160 controller is connected to the 1st backplane for 3 HDs  
 2. **Channel B** of the U160 controller is connected to the 2nd backplane for 3 HDs

**S26361-F2287-E15**  
 External on-board SCSI Interface  
 Cable and external connector interface  
 max. 2x per system for external

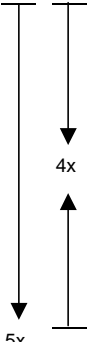
This interface is only configurable if a RAID Controller besides the 0-channel RAID Controller is used  
 See section Disk Array Controller

**B. SCSI - controller for external hard disk extensions and external peripheral devices.**

while stocks last  
**SNP:SY-F1722E1-P**  
 SCSI Controller UW, DE  
 Adaptec 2944UW (HBA)  
 1 channel differential-ended  
 max. 40MB/s; without cable  
 32/33 PCI, min. 170mm  
 int: LD50 + HD68, ext: HD68(S)  
 SW:  
 max. 2x per system

**S26361-F2399-E1**  
 SCSI U160 Controller  
 Adaptec SCSI card 29160  
 1 channel: LVD+Fast/Ultra (decoup.)  
 LVD con. for HD, without cable  
 Fast/Ultra con. access. drives  
 64/66 (32/33) PCI, min. 180mm  
 int: Fast 50-pin or Ultra HD68 + LVD HD68; ext: HD68(LVD)  
 SW:  
 max. 2x per system

**i** Controller for the connection of a EMC Symmetrix (only available as option)  
 Supported only in Microsoft Windows NT and Windows 2000 operating systems



**C. Fibre Channel controller for subsystems and SAN**

while stocks last  
**SNP:SY-F2244E1-P**  
 1Gbit/s FC Controller  
 Qlogic  
 QLA 2200  
 1 Channel 1Gbit/sec FC Controller  
 CU (copper) Interface  
 incl. SW and description (Ger/US)  
 PCI 64Bit / 66MHz, 175mm  
 3.3V and 5V tolerant signaling  
 max. 4x per system

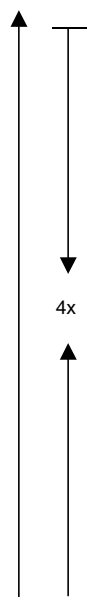
while stocks last  
**SNP:SY-F2244E2-P**  
 1Gbit/s FC Controller  
 Qlogic  
 QLA 2200F, full height bracket  
 1 Channel 1Gbit/sec FC Controller  
 MMF (Multimode Fibre) Interface  
 incl. SW and description (Ger/US)  
 PCI 64Bit / 66MHz, 175mm  
 3.3V and 5V tolerant signaling  
 max. 4x per system

**S26361-F2843-E1**  
 2Gbit/s FC Controller  
 Emulex  
 LP9802  
 1 Channel 2Gbit/sec FC Controller  
 LC Interface for 50um Fiber  
 PCI 64Bit / 133MHz, 170mm  
 3.3V and 5V tolerant signaling  
 max. 4x per system

while stocks last  
**S26361-F2624-E1**  
 2Gbit/s FC Controller  
 Emulex  
 LP9002L  
 1 Channel 2Gbit/sec FC Controller  
 LC Interface for 50um Fibre  
 PCI 64Bit / 66MHz, 170mm  
 3.3V and 5V tolerant signaling  
 max. 4x per system

**i** suitable for 64Bit/66MHz PCI-Slot

**Attention**  
 2Gbit/s FC Controller require other interface connectors for the optical cables than 1Gbit/s fibre channel.



**SNP:SY-F1826L1-P**  
**FC Ctrl for EMC2 Attachment**  
 Emulex LP8000  
 1 channel 100MB/s  
 MMF (Multimode Fibre) Interface  
 Connector: Duplex SC  
 without cable, order separately  
 incl. SW a. description (Ger/US)  
 PCI 64Bit/33MHz controller  
 max. 4x per system

**i** Supported only in Microsoft Windows NT and Windows 2000 operating systems.

**i** Controller for the connection of a EMC Symmetrix, FibreCAT (only available as option)

**i** There are other components such as switches, GBICs or cables which can be ordered for fibre channel SAN attachments. (see price list)

**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

to be continued on next page

D



D

**Section VIII Disk Array**

**D. 0-channel Ultra RAID Controller**

The following cabling is standard, if any Disk Array Controller is used

1. Channel A of the RAID Controller is connected to the 1st backplane for 3 HDs
2. Channel B of the RAID Controller is connected to the 2nd backplane for 3 HDs

**S26361-F2728-E48**  
Zero-channel RAID Controller  
Adaptec  
2000 S  
48MB SDRAM ECC Cache  
in combination with on-board  
U160 SCSI Controller  
without cable  
incl. SW and description (Ger/US)  
64/66 PCI Controller  
3.3V signaling  
max. 1x per system

**i** zero-channel RAID Controller Adaptec 2000S is always to be installed in slot 6

**S26361-F2385-E32**  
2-channel RAID Controller U160  
Adaptec  
3200 S  
32MB SDRAM ECC Cache  
BBU optional  
connector: int. 2x HD68;  
ext. 2x VHDCI  
without cable  
incl. SW and description (Ger/US)  
64/33 PCI Controller, 330mm  
3.3V and 5V tolerant signaling  
max. 4x per system

The cables for the connection of the RAID Controller to the disks in the system are included within the basic unit.  
  
The cables of the connection from the subsystems (SX30 / S60) to the RAID Controllers, see configurator SX30 / S60

**S26361-F2569-E64**  
2-channel RAID Controller U160  
Mylex / LSI  
AcceleRAID 352 (Leopard)  
64MB SDRAM ECC Cache  
BBU optional  
Connector: internal 2x HD68;  
external: 2x VHDCI  
without cable  
incl. SW and description (Ger/US)  
64/33 PCI Controller, 330mm  
3.3V and 5V tolerant signaling  
max. 4x per system

**S26361-F2569-E10**  
RAID Ctrl, Battery Backup Unit  
max. 1x per Controller

**S26361-F2386-E32**  
RAID Ctrl, Cache Upgrade 32MB  
32 MB SDRAM ECC Cache  
max. 1x per Controller

**S26361-F2386-E10**  
RAID Ctrl, Battery Backup Unit  
max. 1x per Controller

**S26361-F2190-E128**  
4-channel RAID Controller U160  
Mylex / LSI  
eXtremeRAID 2000 (Big Apple)  
128MB SDRAM ECC Cache  
BBU  
connector: internal: 2x HD 68;  
external: 4x VHDCI  
incl. SW and description (G/USA)  
64/33 PCI Controller, 330 mm  
3.3V and 5V tolerant signaling  
max. 4x per system

4x

4x

Max. 8 controllers in basic unit

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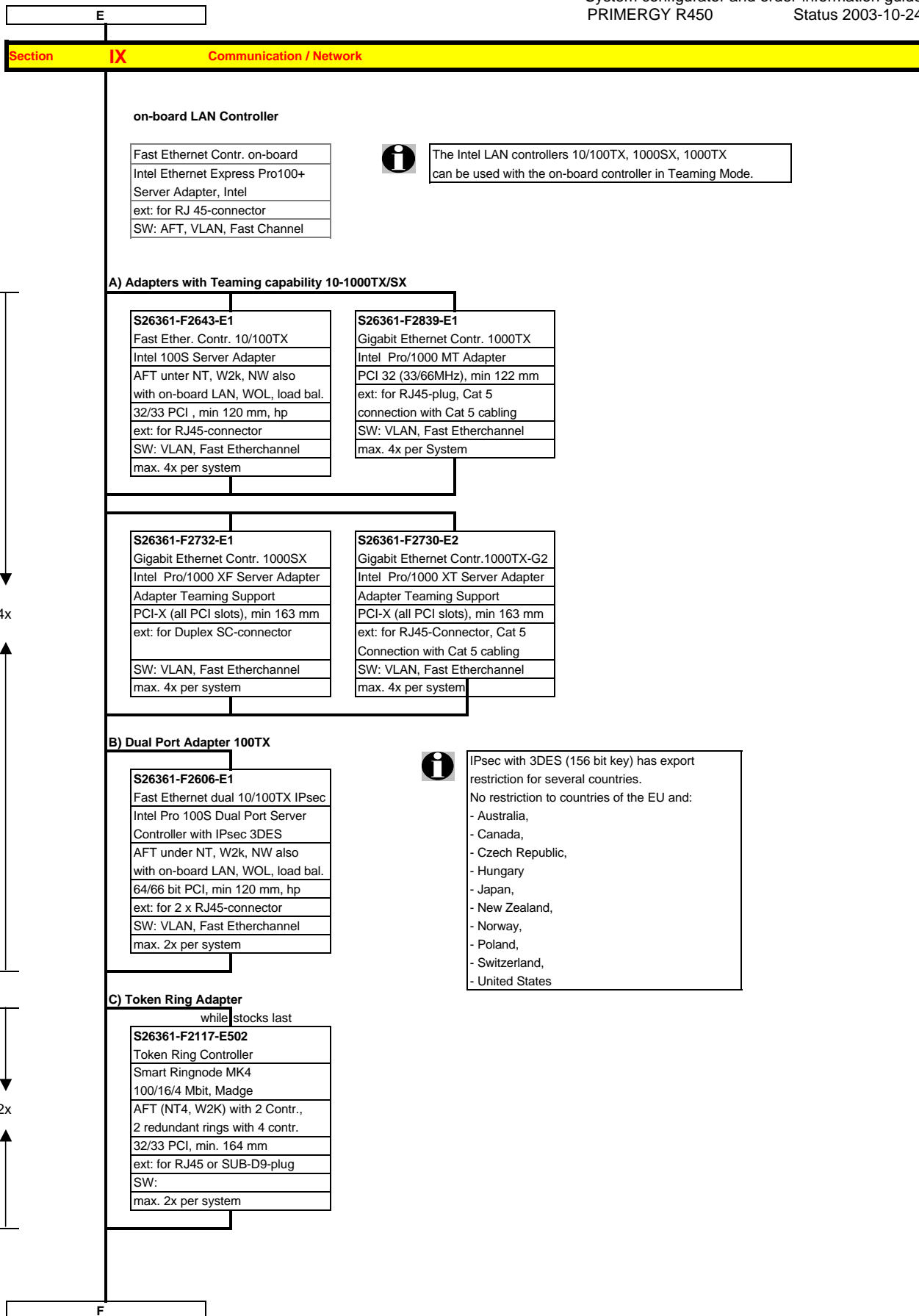
as soon as available

**S26361-F2752-E128**  
2-channel RAID Controller U320  
Adaptec  
2200S  
128MB SDRAM ECC Cache  
BBU optional  
plug: internal 2x HD68;  
external: 2x VHDCI  
without cable  
incl. SW and description (Ger/US)  
64/66 PCI controller, 180mm  
3.3V and 5V tolerant signaling  
max. 4x per system

**S26361-F2752-E10**  
Cache Battery Backup Unit  
max. 1x per controller

**i** The fitting connection cables can be found in the configurator "external storage systems"


E



F

**Section X System Management Products (RemoteView)**

**S26361-F1790-E219**  
**RemoteView Software V3.10**  
 remote maintenance software, manual

 without graphical console redirection


**S26361-F2116-E8**  
**RemoteView Diagnosis**  
 IDE Chipdisk  
 at the on-board IDE-Controller  
 occupies 1\* IDE slot  
 max. 1x pro System

**RemoteView external Power Supply**  
**S26361-F2425-L300**  
 incl. power cord (with cold device- and Euro plug)


**S26361-F2425-E220**  
 RemoteView Battery Backup Unit  
 for on-board  
 System Management Processor  
 max. 1x per system


**Section XI Miscellaneous**


**S26361-F1652-L4**  
 Modem external 56kbps (V.90)  
 MultiTech  
 MT5643ZBA-Global  
 international approval  
 incl. 2m Telephon cord RJ11/RJ11  
 Adapter Plug RJ11/TAE  
 Serial Interface cable DB25m / DB9f  
 AC-Adapter w. German Power Cord  
 occupies one COM port  
 max. 1x per system  
**needed for RemoteView**

 In connection with rack configurations the install variant of the modem (S26361-F1652-E4) has to be ordered (see rack configurator)

**Section XII National accessories packs**

 **Options and other peripherals**  
 For other options, refer to separate "Product specific options"  
 These options are supplied lose with the shipment  
 For suitable peripherals for this product, please refer to the section "Peripherals/communication"

 **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, 3x with hot plug upgrade)**

 **T26139-Y1742-L10 USA, Canada**  
 For shipments to USA&Canada, you have to order one power cord (1,8m, grey) per power supply.

End PRIMERGY R450



## Free Manuals Download Website

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