

# **PRIMERGY<sup>®</sup>**

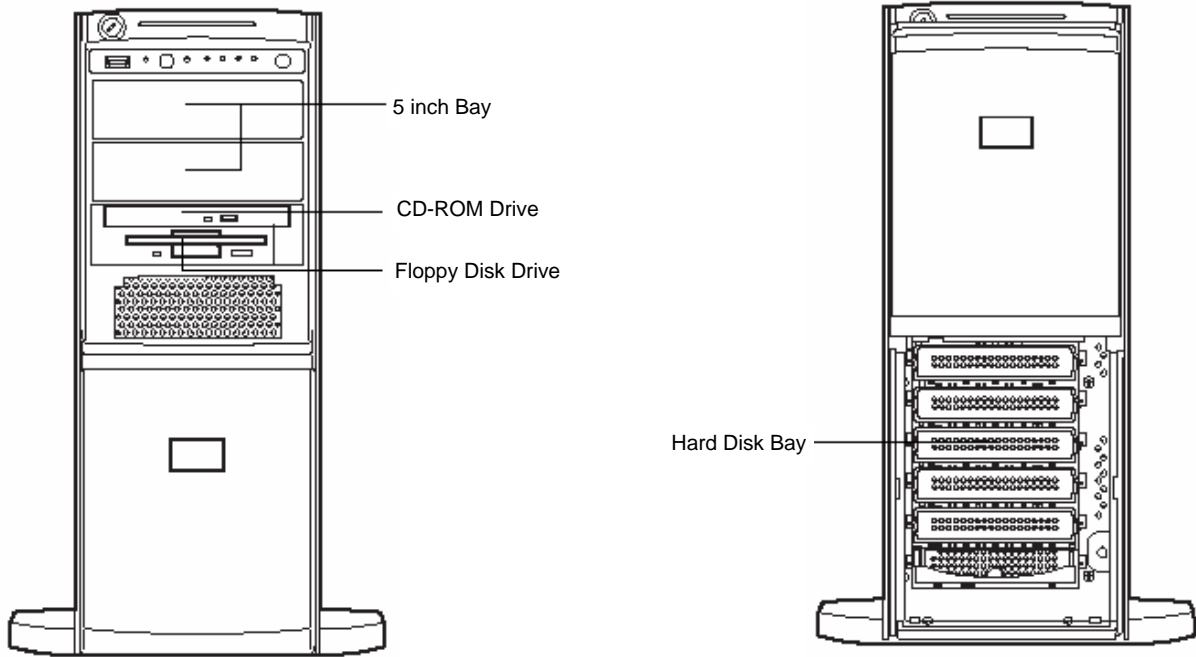
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System Configuration and order-information Guide

TX200 S2

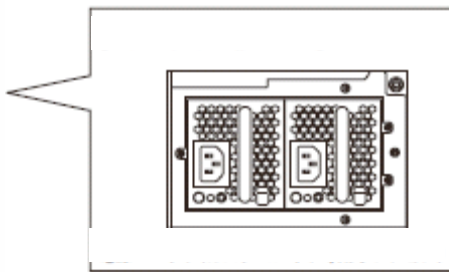
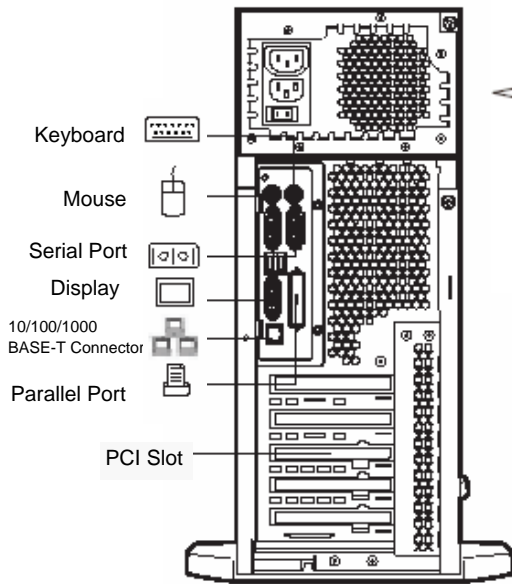
**September 2006**

**Front View**

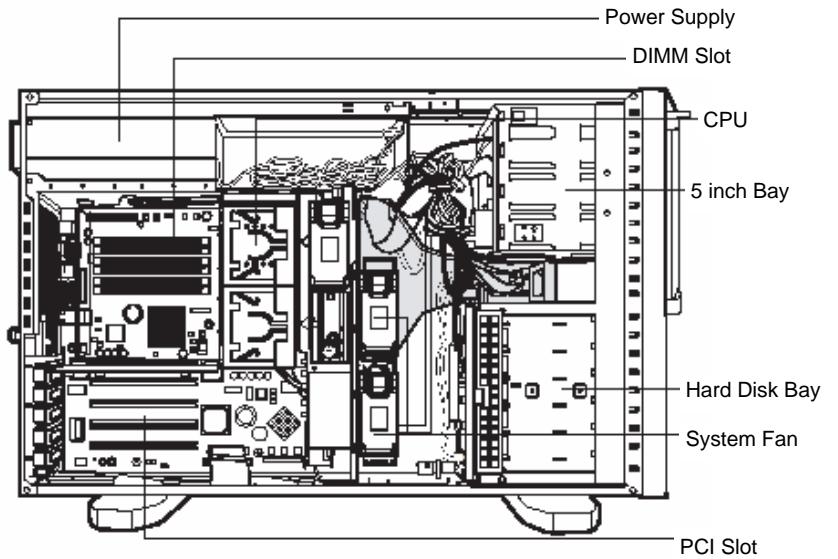


**Back View**

In case that Power Supply Conversion kit (PGBRSU103) is applied.



**Inside View**



Instruction

This document contains basic product and configuration information that will enable you to configure your system.

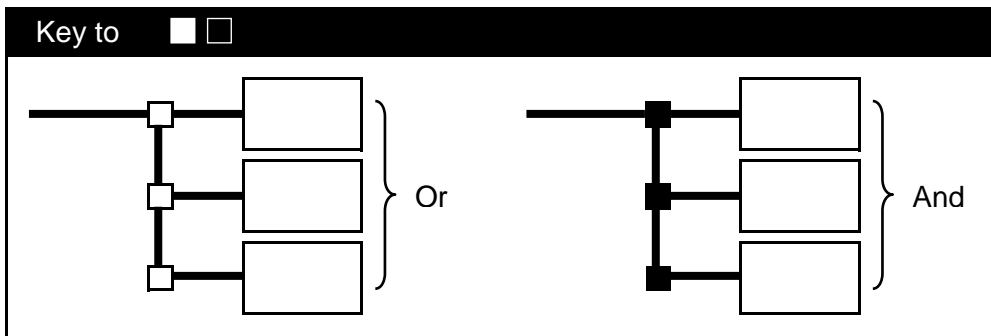
Only these tools will ensure a fast and proper configuration of your PRIMERGY server or your complete PRIMERGY Rack system.

You can configure your individual PRIMERGY servers in order to meet your specific requirements.

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.

The color of the junction means as follows.



**PRIMERGY TX200 S2**
**Data Sheet**

Type		Dual-Processor Tower Server
Base Unit		PGUT2023A3
CPU	Frequencies	64-bit Intel® Xeon® 3.80GHz <sup>6</sup> /3.40EGHz <sup>7</sup> /3.20EGHz <sup>8</sup> /3EGHz
	Second-Level-Cache	2MB
	Multi Processor	1 (Max. 2)
Front-Side-Bus		800MHz
Chipset		Intel® E7320
Memory	Standard	512MB (256MB ECC DDR SDRAM DIMM x 2) (SDDC(Single Device Data Correction) supported)
	Maximum *1	12GB (2GB ECC DDR SDRAM DIMM x 6)
Graphics Controller		ATI Rage XL, VRAM:8MB (PCI)
Resolution *2		640x480/800x600/1024x768/1280x1024 dot
Internal Bays 3.5 inch HDD	Number of bays	6 ( 9 by applying Internal HDD Unit Bay Conversion kit ) (hot plug)
	Available HDD (Ultra320) *3	73.4GB (PG-HDH71K) 10krpm, U320 SCSI 146.8GB (PG-HDH41K) 10krpm, U320 SCSI 300.0GB (PG-HDH31K) 10krpm, U320 SCSI 73.4GB (PG-HDH75K) 15krpm, U320 SCSI 146.8GB (PG-HDH45V) 15krpm, U320 SCSI
	Maximum *3	1.8TB ( 2.7TB by applying Internal HDD Unit Bay Conversion kit )
Internal Bays 5inch		3 (2 free bays) ( 1 (0 free bay) by applying Internal HDD Unit Bay Conversion kit )
CD-ROM		standard (Max 24 ATAPI)
PCI Slots	PCI-X (64bit/133MHz) (3.3V) *4	2 (2 x Full Size)
	PCI-X (64bit/100MHz) (3.3V) *4	2 (2 x Full Size)
	PCI (32bit/33MHz) (5.0V)	1 (1 x Full Size)
RAID Controller		optional
SCSI Controller		Ultra320 SCSI x 2ch
Internal FDD		3.5inch (1.44MB/720KB)
Network Controller (onboard)		1 port (1000 BASE-T/100 BASE-TX/10BASE-T)
Interfaces		CRT (Analog RGB), Serial Port x 2 (D-SUB 9pins), Parallel Port (D-SUB 25pins/optional) Keyboard (PS/2type Mini DIN 6pins), Mouse (PS/2type Mini DIN 6pins), USB x3 (ver. 2.0)
Server Management Software		ServerView (standard)
Power supply	Voltage	AC100V (50/60Hz) / 200V (50/60Hz) x1(max. 2)
	Power consumption	550W /1980kJ/h (max.)
	Redundant power supply	optional
Redundant Fan		optional
Dimensions (mm)		Pedestal: 174 (286 incl. protruding parts)(W) x 753 (D) x 474 (H) Rackmount: 483 (W) x 699 (750 incl. protruding parts)(D) x 177 (4U) (H)
Weight		Pedestal: 38kg (max.) / Rackmount: 40kg (max.)
Environmental Conditions		Temperature10-35°C / Humidity 20-80% (non condensing )
OS Support *5		Windows Server™2003, Standard Edition/Windows Server™2003, Enterprise Edition Windows Server™2003, Standard x64 Edition/Windows Server™2003, Enterprise x64 Edition Windows® 2000 Server/Windows® 2000 Advanced Server Red Hat Enterprise Linux ES (v.3 for x86)/Red Hat Enterprise Linux ES (v.4 for x86) Red Hat Enterprise Linux AS (v.3 for x86)/Red Hat Enterprise Linux AS (v.4 for x86) Red Hat Enterprise Linux ES (v.4 for EM64T)

\*1. Available memory capacity will be changed by the type of OS. Please find more details in Notes [Memory OS Compatibility List].

\*2. Resolution is determined by functions of the display monitor and OS.

\*3. HDD capacity is calculated according to the formulas 1GB=1000<sup>3</sup> byte and 1TB=1000<sup>4</sup> byte.

\*4. Frequency will be changed by the spec of PCI card and number of cards mounted.

\*5. Drivers for Linux are not attached. Please download and use drivers of the following URL.

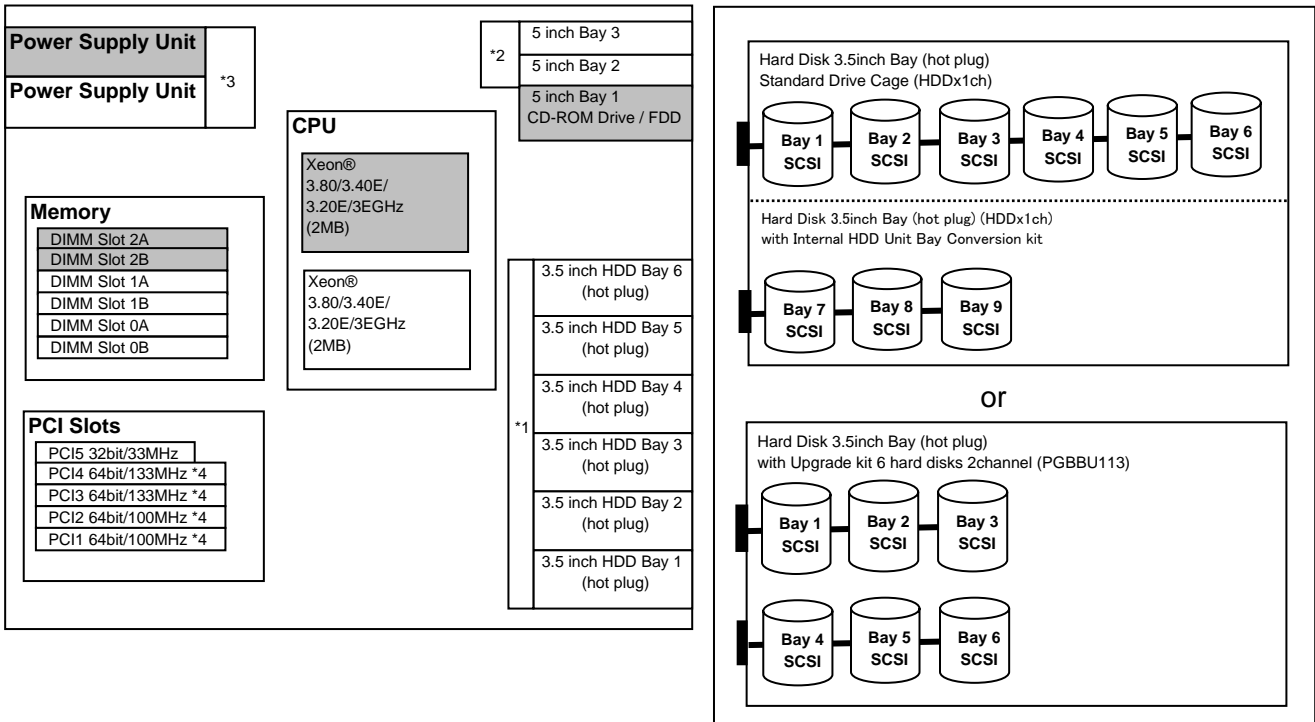
<http://www.fujitsu.com/global/services/computing/server/ia/driver/>

\*6. CPU Conversion kit: Xeon(3.0GHz/2MB) -> Xeon(3.8GHz/2MB)(PGBFU33D) is available for upgrading to 64-bit Intel® Xeon® 3.80GHz.

\*7. CPU Conversion kit: Xeon(3.0GHz/2MB) -> Xeon(3.4GHz/2MB)(PGBFU33C) is available for upgrading to 64-bit Intel® Xeon® 3.40EGHz.

\*8. CPU Conversion kit: Xeon(3.0GHz/2MB) -> Xeon(3.2GHz/2MB)(PGBFU233) is available for upgrading to 64-bit Intel® Xeon® 3.20EGHz.

**Configuration Diagram**



- \*1. Upgrade kit 6 hard disks 2 channel (2x3)(PGBBU113) is available for upgrading 3.5inchHDD Bay from 6Bay/1ch to 6Bay/2ch.
- \*2: By applying Internal HDD Unit Bay Conversion kit (PG-BC102), 5 inch bay x 2 can be converted to 3.5 inch x 3.
- In the case Upgrade kit 6 hard disks 2 channel (2x3) (PGBBU113) is applied, Internal HDD Unit Bay Conversion kit (PG-BC102) can not be used.
- \*3. Power Supply Conversion kit(PGBRSU103) is available for changing Power Supply x1, FAN x2 to Redundant Power Supply x2, FAN x4.
- \*4. Frequency will be changed by the spec of PCI card and number of cards mounted.
- \*Components installed as standard configuration marked in grey.

**Mountable I/O Options**

Mount Priority	Mountable Cards	Bus	PCI Slot Priority					Max No. of Mount	Remarks		
			1	2	3	4	5				
			PCI-X				PCI				
			64bit/100MHz*1		64bit/133MHz*1		32bit/33MHz				
Full Height											
3.3V				5.0V							
High ↑ ↓ Low	Remote Service Board	PG-RSB103 / PGBRSB103	-	-	-	-	-	1	1	1	
	RAID Ctrl 0-Channel 128MB	PG-140D1 / PGB140D1	PCI-X/64bit	1	-	-	-	-	-	1	Internal array
	RAID Ctrl 2-Channel 128MB w/BBU	PGB142E3B	PCI/64bit	1	-	-	-	-	-	1	Internal array for CTO
		PG-142E3	PCI/64bit	1	2	3	4	-	-	2	Internal / External array
	SCSI Ctrl U160	PG-128 / PGB128	PCI/64bit	1	2	3	4	-	-	2	Internal / External SCSI Controller
	Fibre Channel Controller	PG-FC107 / PGBFC107	PCI-X/64bit	3	4	1	2	-	-	2	
	Eth. Ctrl 1000-BASE-T Cu	PG-1892 / PGB1892	PCI-X/64bit	3	4	1	2	-	-	4	
	Eth. Ctrl 1000-BASE-SX Fibre LC	PG-1882	PCI-X/64bit	3	4	1	2	-	-	2	
	Eth. Ctrl 1000-BASE-T Cu	PG-1852 / PGB1852	PCI/32bit	2	3	4	5	1	3	4	No AFT/ALB support
Eth. Ctrl 2x1000-BASE-T Cu	PG-1862	PCI-X/64bit	3	4	1	2	-	-	2		

\*-: cannot be applied  
\*1. Frequency will be changed by the spec of PCI card and number of cards mounted.

Connection Table

Form factor conversion  
(Pedestal to Rackmount)

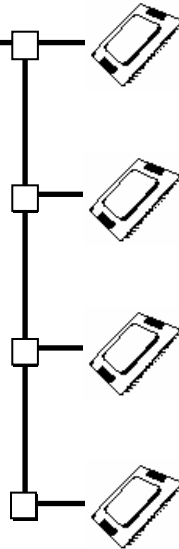


Rack Conversion kit for TX200S2  
(Pedestal to Rackmount (4U))  
PG-R1CK18  
PGBR1CK18 (for CTO)  
(Note: When this CTO option (PGBR1CK18) is ordered,  
neither keyboard nor mouse will be attached to the base unit)

CPU

CPU Slot

Max: 2 CPU

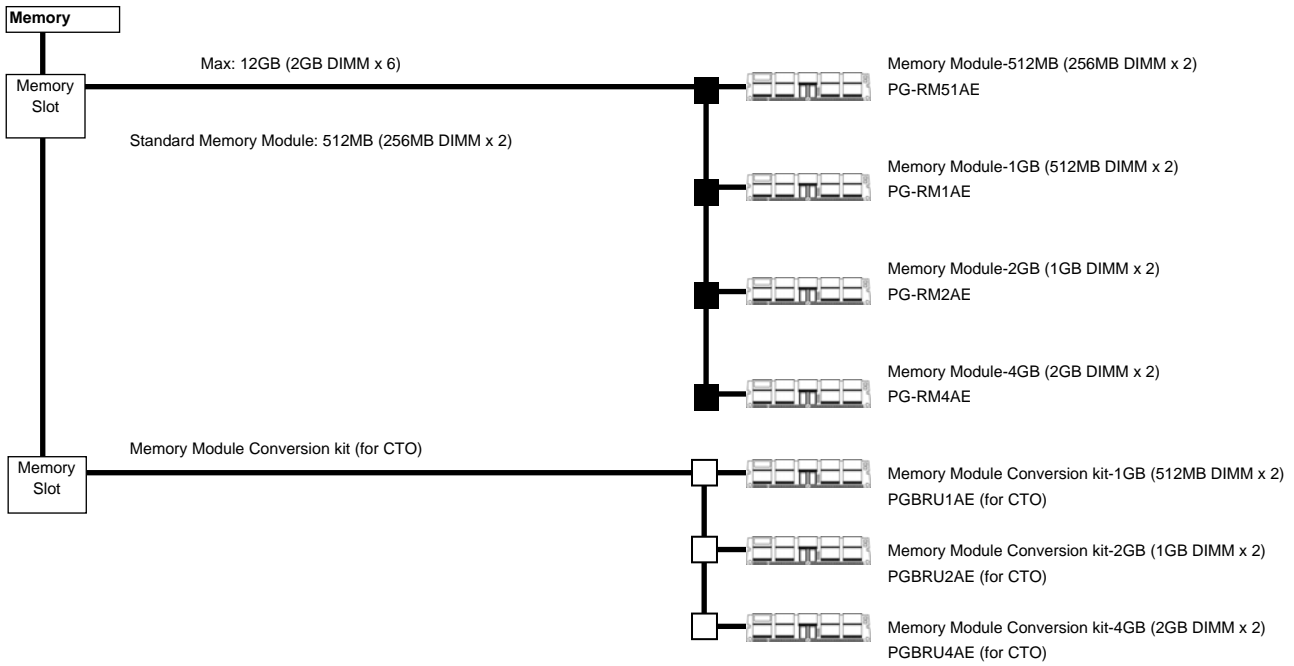


- Processor Xeon 3.0GHz/2MB  
PG-FG232  
PGBFG232 (for CTO)  
\*. This option is available when the processor of the base unit is Processor Xeon 3.0GHz/2MB.
- Processor Xeon 3.2GHz/2MB  
PG-FG233  
PGBFG233 (for CTO)  
\*. This option is available when CPU Conversion Kit: Xeon (3.0GHz/2MB)→Xeon(3.2GHz/2MB) (PGBFU233) is applied.
- Processor Xeon 3.4GHz/2MB  
PG-FG33C  
PGBFG33C (for CTO)  
\*. This option is available when CPU Conversion Kit: Xeon (3.0GHz/2MB)→Xeon(3.4GHz/2MB) (PGBFU33C) is applied.
- Processor Xeon 3.8GHz/2MB  
PG-FG33D  
PGBFG33D (for CTO)  
\*. This option is available when CPU Conversion Kit: Xeon (3.0GHz/2MB)→Xeon(3.8GHz/2MB) (PGBFU33D) is applied.

\*CPU Conversion Kit (available only for a Configure to Order (CTO) option; no separate shipment is possible)

Type	Product ID	
CPU Conversion Kit: Xeon (3.0GHz/2MB) →Xeon(3.2GHz/2MB) (for CTO)	PGBFU233	64-bit Intel® Xeon® 3EGHz → 64-bit Intel® Xeon® 3.20EGHz Convert the CPU installed as standard in the base unit to the other. (Note: This option can be ordered only as coupled with the base unit. A separate shipment is not possible.)
CPU Conversion Kit: Xeon (3.0GHz/2MB) →Xeon(3.4GHz/2MB) (for CTO)	PGBFU33C	64-bit Intel® Xeon® 3EGHz → 64-bit Intel® Xeon® 3.40EGHz Convert the CPU installed as standard in the base unit to the other. (Note: This option can be ordered only as coupled with the base unit. A separate shipment is not possible.)
CPU Conversion Kit: Xeon (3.0GHz/2MB) →Xeon(3.8GHz/2MB) (for CTO)	PGBFU33D	64-bit Intel® Xeon® 3EGHz → 64-bit Intel® Xeon® 3.80GHz Convert the CPU installed as standard in the base unit to the other. (Note: This option can be ordered only as coupled with the base unit. A separate shipment is not possible.)

# PRIMERGY TX200 S2



\*. Notes on installing memory

1. Memory is installed by pairs of DIMMs of the same capacity. Installation of one DIMM or a mixed-capacity pair is impossible.
2. Memory banks should be occupied in the following order:  
2A,2B (Bank2) -> 1A,1B (Bank1) -> 0A,0B (Bank0)

(Available Memory Area)

Mounted Memory	Available Memory Area
~3.0GB	Same as the size of mounted memory
3.5~12.0GB	Size of Mounted Memory minus "0.1-0.8GB"

(Note: "0.1-0.8GB" which is being used for PCI resource management depends on the type and the number of installed memory modules.

**Connecting Internal HDD and Internal Backup Devices**

Onboard SCSI	Ultra320 A	HDD
	Ultra320 B	HDD, Backup Device (Wide/Narrow)

If you would like to order internal HDDs and internal backup devices, please order optional cards/cables according to the following table.

Type of HDD connection			Internal Backup Devices PRIMERGY TX200 S2	
Connection	Drive Cage	Interface		Wide ("1) / Connection ("2)
SCSI	Standard Drive Cage (6bays/1ch)	Onboard SCSI (ChA)		Onboard SCSI (ChB) SCSI Cable (PG-CBLS023) ("3)
	When Internal HDD Unit Bay Conversion kit (PG-BC102) is applied. (+3bays/1ch)	Onboard SCSI (ChA/B)		- (not connect)
	When Upgrade kit 6 hard disks 2 channel (2x3) (PGBBU113) is applied. (6bays/2ch)	Onboard SCSI (ChA/B)		SCSI Card (PG-128) SCSI Cable (PG-CBLS023) ("3)
RAID	Standard Drive Cage (6bays/1ch)	RAID Ctrl 0-Channel 128MB (PG-140D1/PGB140D1) (Onboard SCSI (ChA) )	When Tape Drv LTO2 Ultrium2 200GB (PG-LT201) or Tape Drv LTO3 Ultrium3/Ultrium2 400GB (PG-LT301) is mounted.	SCSI Card (PG-128) SCSI Cable (PG-CBLS023) ("3)
			When Tape Drv LTO2 Ultrium2 200GB (PG-LT201) and Tape Drv LTO3 Ultrium3/Ultrium2 400GB (PG-LT301) are not mounted.	Onboard SCSI (ChB) SCSI Cable (PG-CBLS023) ("3)
		RAID Ctrl 2-Channel 128MB w/ BBU (PG-142E3/PGB142E3/PGB142E3B) (Ch0)	Onboard SCSI (ChB) SCSI Cable (PG-CBLS023) ("3)	
	When Internal HDD Unit Bay Conversion kit (PG-BC102) is applied. (+3bays/1ch)	RAID Ctrl 0-Channel 128MB (PG-140D1/PGB140D1) (Onboard SCSI (ChA/B) )	- (not connect)	
		RAID Ctrl 2-Channel 128MB w/ BBU (PG-142E3/PGB142E3/PGB142E3B) (Ch0/1)	- (not connect)	
	When Upgrade kit 6 hard disks 2 channel (2x3) (PGBBU113) is applied. (6bays/2ch)	RAID Ctrl 0-Channel 128MB (PG-140D1/PGB140D1) (Onboard SCSI (ChA/B) )	SCSI Card (PG-128) SCSI Cable (PG-CBLS023) ("3)	
		RAID Ctrl 2-Channel 128MB w/ BBU (PG-142E3/PGB142E3/PGB142E3B) (Ch0/1)	Onboard SCSI (ChB) SCSI Cable (PG-CBLS023) ("3)	

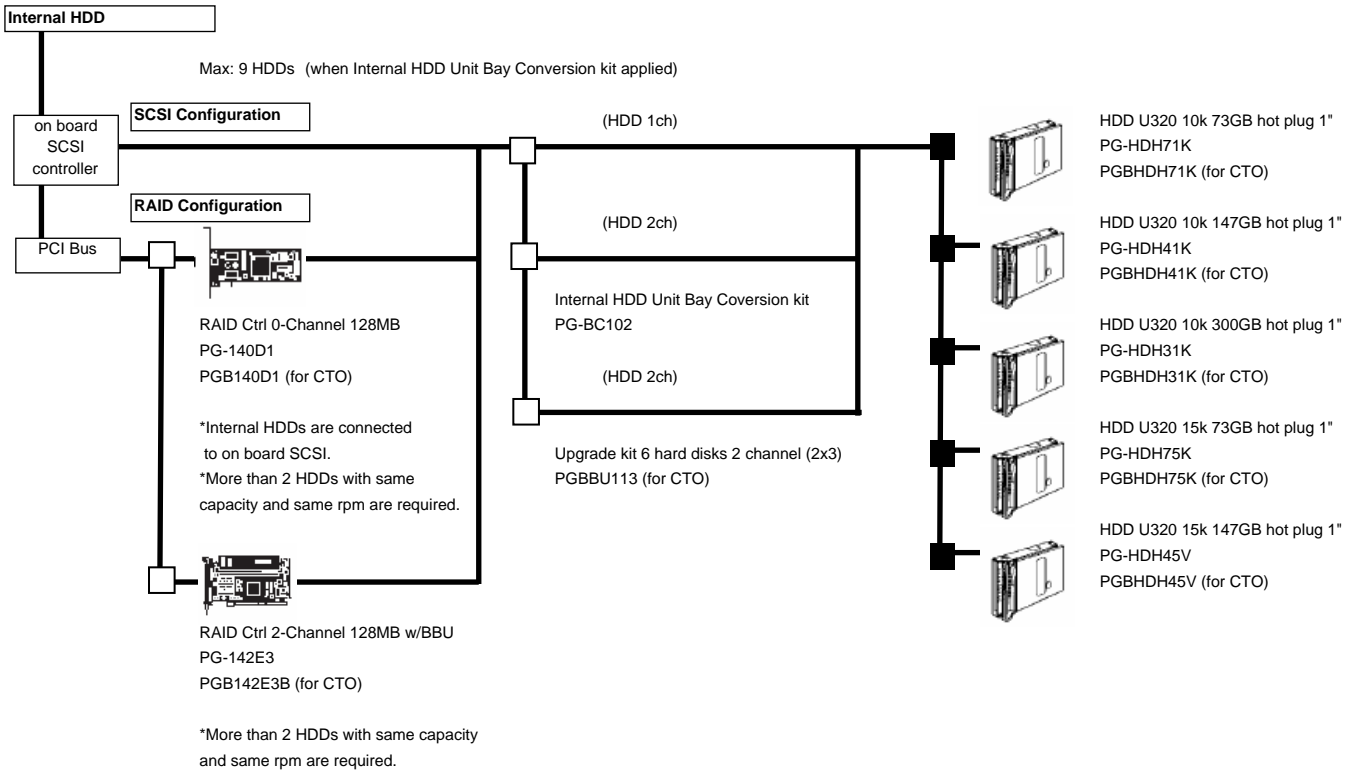
("1) Wide Backup Devices: PG-DT501/PGBDT501C/PG-LT301/PG-LT201/PGBLT201C/PG-VX201

("2) Backup Devices which occupy 2 bays: PG-LT301

("3) If you order internal backup devices by CTO, SCSI cable is attached with backup devices.



# PRIMERGY TX200 S2



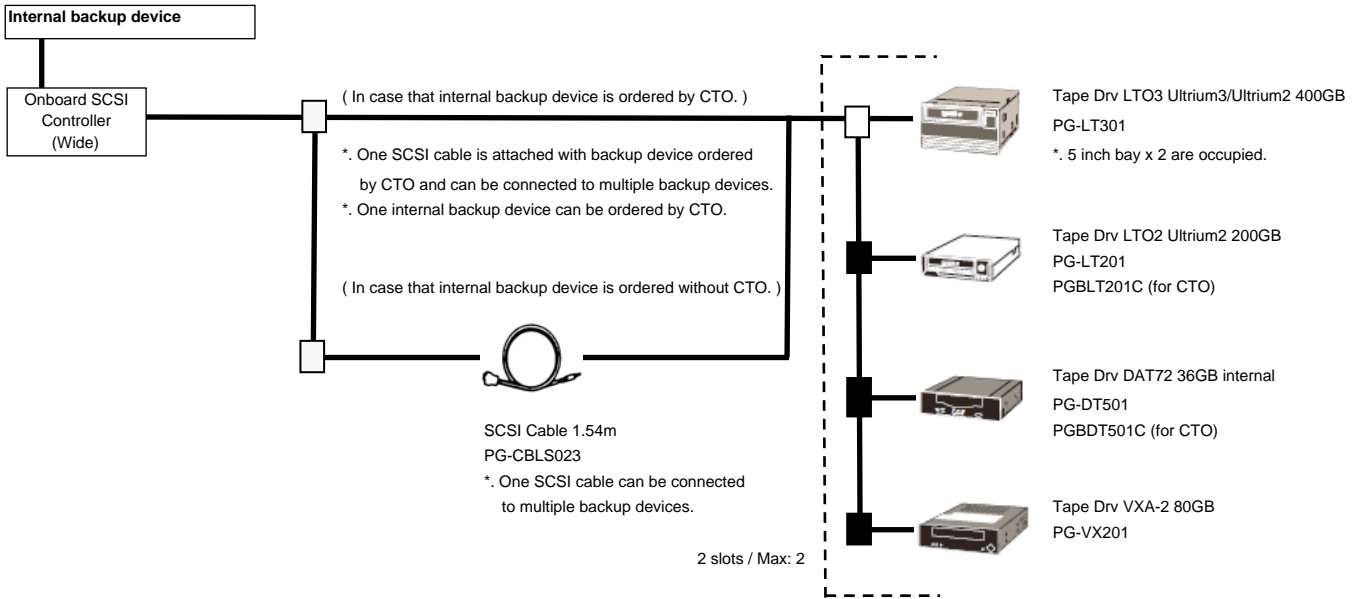
If you would like to order internal backup devices, please refer to the following table and find out connection pattern. And please order backup devices, necessary SCSI cards/SCSI cables according to the figure of the relevant pattern.

Type of HDD connection	SCSI Array controller card	Upgrade kit 6 hard disks 2 channel (2x3) PGBBU113 (for CTO)	Connection pattern of Internal Backup Devices
RAID	PG-140D1 / PGB140D1	not applied	refer to (3)
	PG-140D1 / PGB140D1	applied	refer to (4)
SCSI	PG-142E3 / PGB142E3B	applied / not applied	refer to (1)
	PG-142E3 / PGB142E3B	not applied	refer to (1)
SCSI	PG-142E3 / PGB142E3B	applied	refer to (2)
	PG-142E3 / PGB142E3B	not applied	refer to (2)

\* When internal HDD Unit Bay Conversion kit (PG-BC102) is applied, internal backup devices can not be mounted on 5 inch bays.

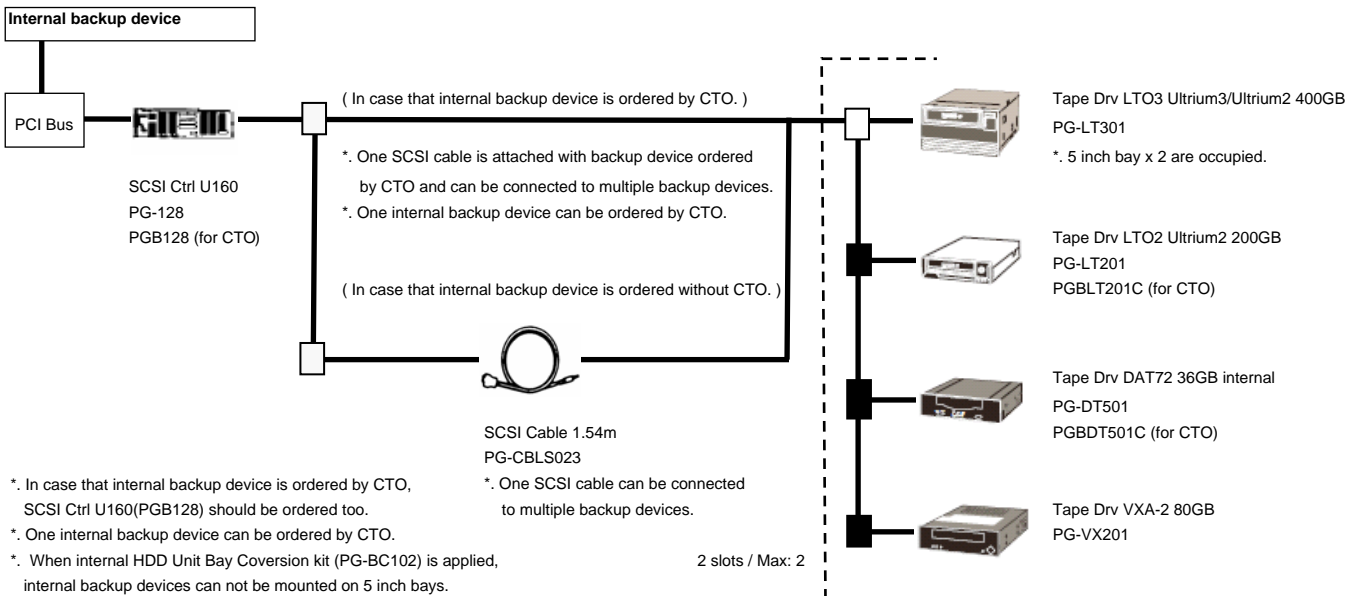
**PRIMERGY TX200 S2**

**(1) HDD SCSI Connection without applying Upgrade kit 6 hard disks 2 channel (2x3) (PGBBU113) / HDD RAID Connection with applying RAID Ctrl 2-Channel 128MB w/BBU (PG-142E3)**



- \*. One internal backup device can be ordered by CTO.
- \*. When internal HDD Unit Bay Conversion kit (PG-BC102) is applied, internal backup devices can not be mounted on 5 inch bays.

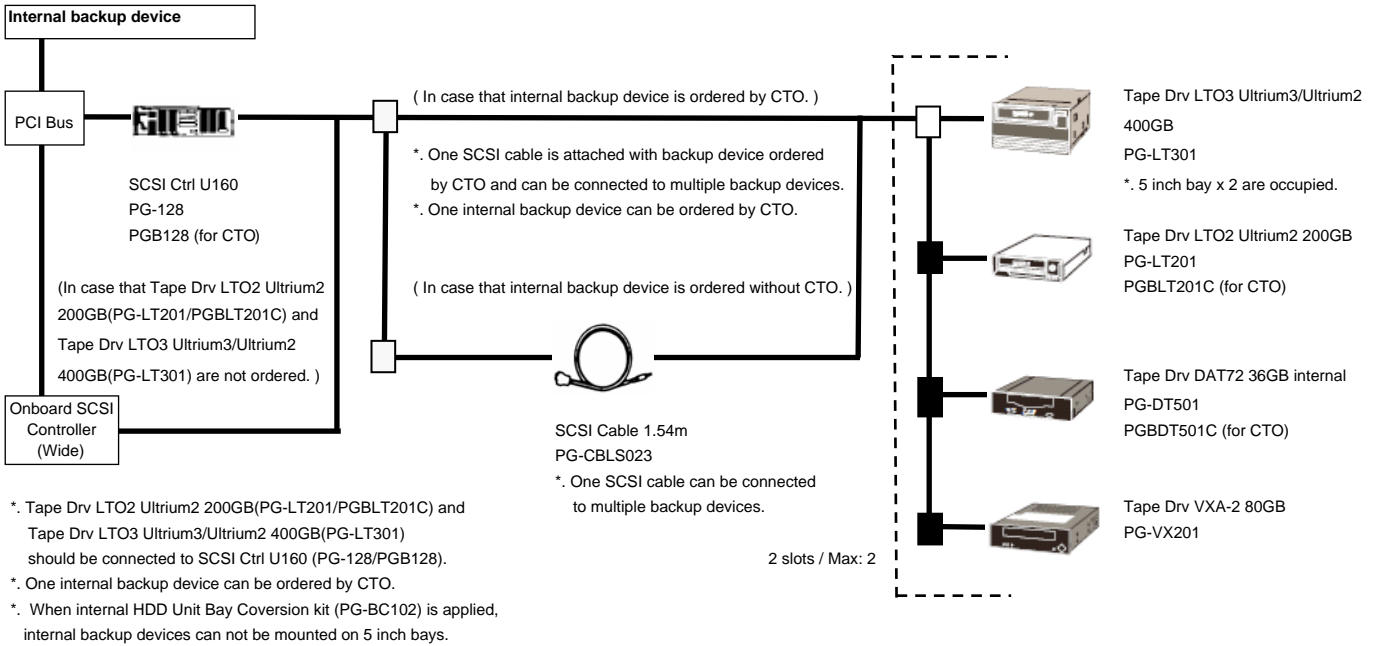
**(2) HDD SCSI Connection with applying Upgrade kit 6 hard disks 2 channel (2x3) (PGBBU113)**



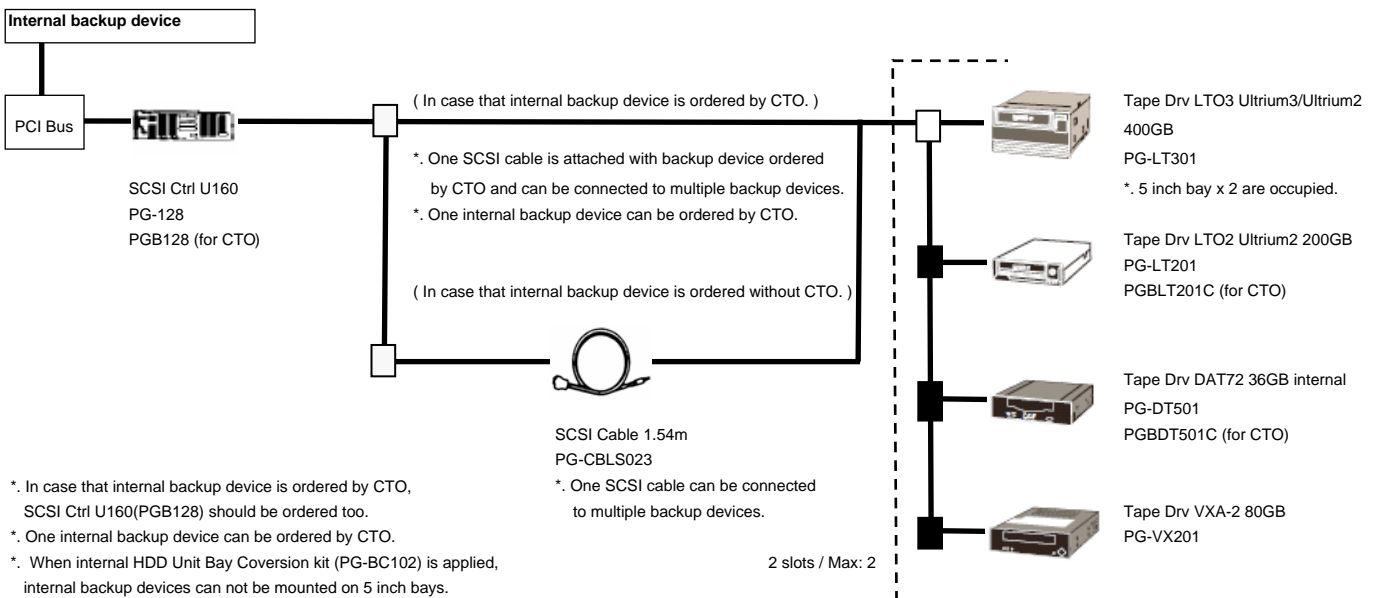
- \*. In case that internal backup device is ordered by CTO, SCSI Ctrl U160(PGB128) should be ordered too.
- \*. One internal backup device can be ordered by CTO.
- \*. When internal HDD Unit Bay Conversion kit (PG-BC102) is applied, internal backup devices can not be mounted on 5 inch bays.

**PRIMERGY TX200 S2**

**(3) HDD RAID Connection with applying RAID Ctrl 0-Channel 128MB (PG-140D1) without applying Upgrade kit 6 hard disks 2 channel (2x3) (PGBBU113)**



**(4) HDD RAID Connection with applying RAID Ctrl 0-Channel 128MB (PG-140D1) with applying Upgrade kit 6 hard disks 2 channel (2x3) (PGBBU113)**

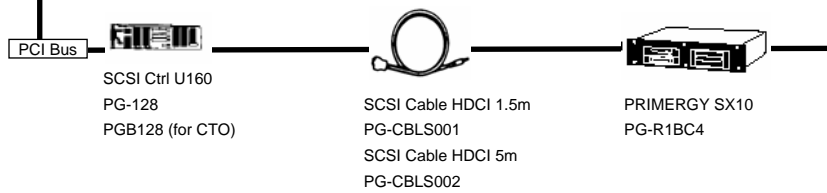


\* DVD-RAM drive supports Read function, but does not support Write function.

# PRIMERGY TX200 S2

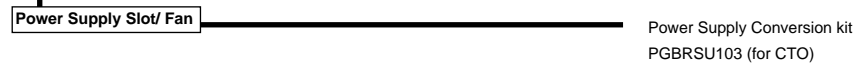
## Internal backup device (PRIMERGY SX10)

\*PRIMERGY SX10 is available for rack install type.



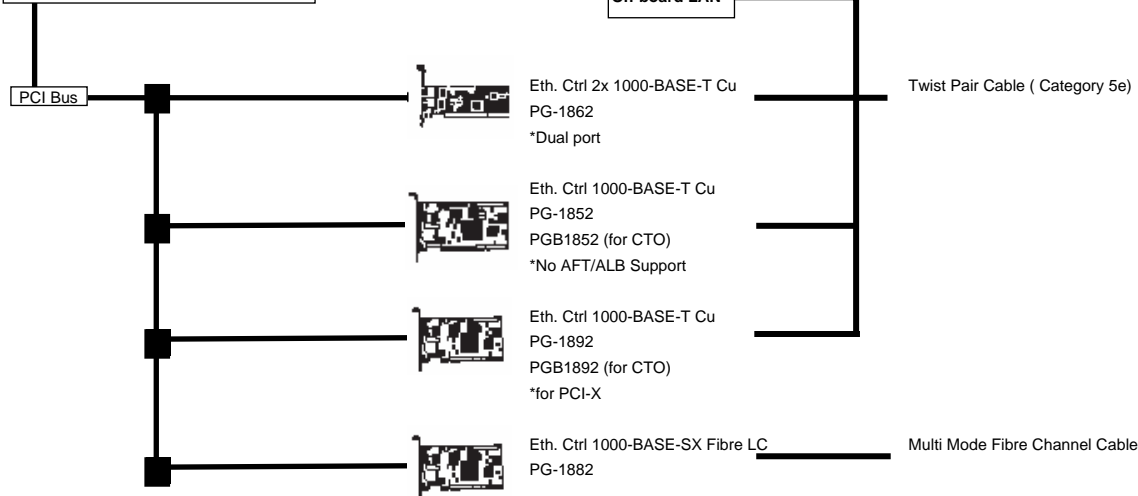
\*Please find more information on the internal backup devices for PRIMERGY SX10 in Rackmount[Internal Backup Devices with PRIMERGY SX10]

## Power Supply Units/ Fan (CTO only)

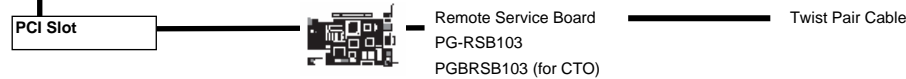


## LAN Card (Standard PCI Slot)

## On-board LAN



## Server Management Card



## Parallel Port Option



Specifications are subject to change without notice. For the latest detailed information, contact your local representative.

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Global Business Development & Marketing

Business Strategy & Planning

System Products

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