GS-SR222E
Rack Mount Server

System Installation Guide

Table of Content

Safety, Care and Regulatory Information

◗ Important safety information

Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.

* The product should be operated only from the type of power source indicated on the rating label.

* If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.

* The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.

* All product shipped with a three-wire electrical grounding-type plug only fits into a grounding-type power outlet. This is a safety feature. The equipment grounding should be in accordance with local and national electrical codes. The equipment operates safely when it is used in accordance with its marked electrical ratings and product usage instructions

* Do not use this product near water or a heat source.

* Set up the product on a stable work surface or so as to ensure stability of the system.

* Openings in the case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space around the system for ventilation when you set up your work area. Never insert objects of any kind into the ventilation openings.

* To avoid electrical shock, always unplug all power cables and modem cables from the wall outlets before removing covers.

* Allow the product to cool before removing covers or touching internal components.

◗ Precaution for Product with Laser Devices

Observe the following precautions for laser devices:

* Do not open the CD-ROM drive, make adjustments, or perform procedures on a laser device other than those specified in the product's documentation.

* Only authorized service technicians should repair laser devices.

◗ Precaution for Product with Modems, Telecommunications, ot Local Area Network Options

Observe the following guidelines when working with options:

* Do not connect or use a modem or telephone during a lightning storm. There may be a risk of electrical shock from lightning.

* To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

* Do not plug a modem or telephone cable into the network interface controller (NIC) receptacle.

* Disconnect the modem cable before opening a product enclosure, touching or installing internal components, or touching an uninsulated modem cable or jack.

* Do not use a telephone line to report a gas leak while you are in the vicinity of the leak.

♦ Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Neither the provider nor the manufacturer are responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

♦ FCC part 68 (applicable to products fitted with USA modems)

The modem complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

The FCC prohibits this equipment to be connected to party lines or coin-telephone service.

The FCC also requires the transmitter of a FAX transmission be properly identified (per FCC Rules Part 68, Sec. 68.381 (c) (3)).

/ for Canadian users only /

❧ Canadian Department of Communications Compliance Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de Classe B prescrites dans le reglement sur le brouillage radioelectrique edicte par Industrie Canada.

❧ DOC notice (for products fitted with an Industry Canada-compliant modem)

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user satisfaction.

Before installing this equipment, users ensure that it is permissible to be connected to the facilities of the local Telecommunications Company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions might not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if resent are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the sum of the Load Numbers of all the devices does not exceed 100.

/ for European users only /

CAUTION

❖ Danger of explosion if battery is incorrectly replaced.

❖ Replace only with the same or equivalent type recommended by the manufacturer.

❖ Dispose of used batteries according to the manufacturer's instructions.

WARNING!

Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not touch the IC chips, leads or connectors, or other components.
4. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.
5. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard.

Revision History

Revision	Revision Note	Date
1.0	Initial release of the GS-SR222E Rack Mount Server System Installation Guide.	Apr. 2003

Introduction

Welcome to the Gigabyte GS-SR222E Rack mount Server System Installation Guide. The guidebook provides instructions for configuration hardware for the GS-SR222E to your system.

This installation guide will assiste you in installing all the essential components for the sever system. For your protection, please read and undertand all of the safety and operating instructions regarding your Gigabyte Server and retain for future reference. The procedures in this guidebook assusme that your are a system or network administrator experienced in installing similar hardware.

Item Checklist

☑ Chassis
☑ The GA-8EGXDR-E motherboard
☑ Silm type Floppy drive (Installed)
☑ Two CPU Heat Sinks
☑ GA-8EGXDR-E user's manual

☑ Power Supply (Installed)
☑ Silm type CD-ROM drive (Installed)
☑ Six Hard Disk Drive Trays
☑ Driver CD for motherboard driver & utility
☑ SR222E System Installation Guide

Chapter 1 Introduction

Features Summary

Motherboard	• GA-8EGXDR-E
CPU	• Dual socket 604 for Intel® FC-PGA Xeon processor suopprts up to 2.8GB • Intel® Xeon 533MHz FSB
Chipset	• Serverworks CMIC-SL Northbridge • Serverworks CIOB-X 2 PCI-X Bridge • Serverworks CSB6 Southbridge
Memory	• 4 184-pin DDR DIMM sockets • Supports 4 ECC Register DIMM DDR 266 • Supports up to 4 GB DRAM (Max)
Integrated SCSI Controller	• Adaptec 7902W dual channel SCSI controller • 320MB/s date transfer rate
Network Interface	• Build-in Intel 82550PM 10/100 Fast Ethernet • Build in Intel RC82545EM 10/100/1000 Gigabit Ethernet Chipset (Server Adapter)
Intelligent Management	• Supports IPMI V1.0 /1.5 Interface(Optioal)
RAID Supported	• Supports LSI software IDE RAID 0,1,5 **(Optional)**
Mass Storage System	• 6 Hot-Swappable SCSI HDD • One slim type flexible FDD Drive • One silm type CD-ROM drive **(Optional)**
I/O Expansion Slots	• PCI-X 100MHz x 2 slots • PCI-X 64/66 MHz x 2 Slots • PCI 64/33 MHz x 1 Slot • PCI 32/33 MHz x 1Slot

Summary of Feature

Buiild-in I/O Ports	• One Floppy port (up to 2.88MB)
	• One Parallel port (EPP/ECP)
	• Two Serial ports
	• 4 USB ports Version 1.1
	• Two RJ45 LAN ports
	• PS/2 Keyboard and Mouse connectors
BIOS	• Licensed Award BIOS, 4Mb flash ROM
Power Supply	• Maximum 460W single/redundant(optional) Power Supply supported
Operating Temperature	• 41 to 95 degree F (5to 35 degreee C)

Chapter 2 System Hardware Installation

PLease remove the protective thin films (top and button) from the server when installing.

Step 2-1: Chassis Removal

Step 1   Come off the two thumbscrews from the back of the server.

Step 2   Standing at the front of the system. Then, slide the cover toward to open it. Top cover may be lifted straight up.

Step 3   After removing the top cover, you will see a plastic airflow duct over the CPU and Memory. Rise up the FAN duct to install other essential components.
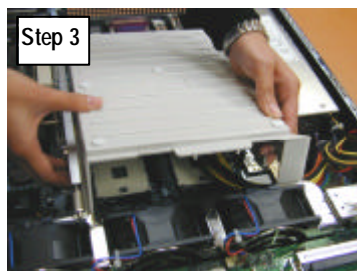
Step 2-2: CPU Installation

Please make sure the CPU type and speed that are supported by the motherboard.

Step 1   To install the CPU(s), lift up the bar that located next to the socket.
Step 2   The noticed corner should point toward the end of lever. The CPU will only fit in the orientation as shown.
Step 3   Then, align the CPU insert it into the socket.
Step 4   Push the lever back to the original position.
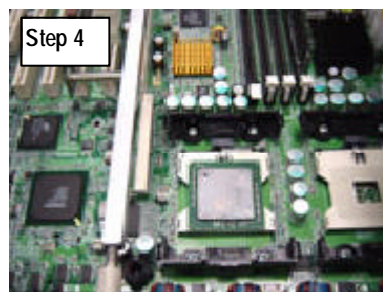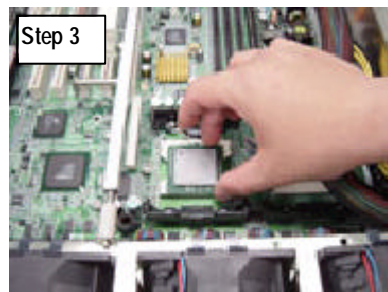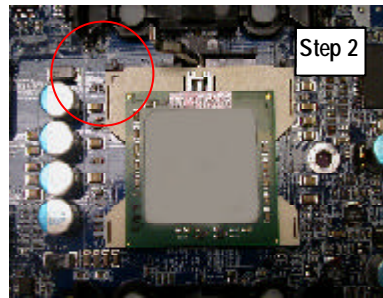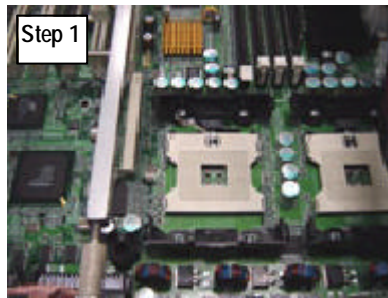
Step 2-3: Heat Sink Installation

There are for screw s hold the retention modules. Seat the heat sink firmly in the retention modules with the two cooler brackets.

Step 1   Put the heat sink on the retention module.

Step 2   Hook one end of the cooler bracket to the CPU. Make sure middle part of bracket is clicked into the desired position.

Step 3   Then, hook the other end of the cooler bracket by gripping it to another side of retention module
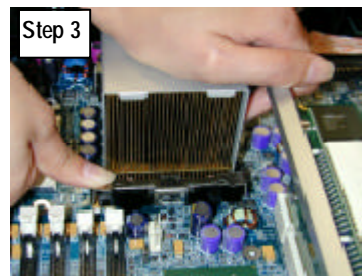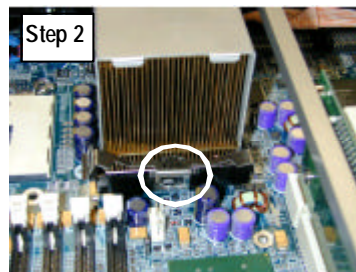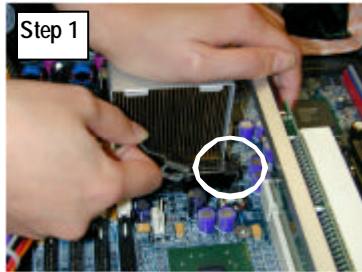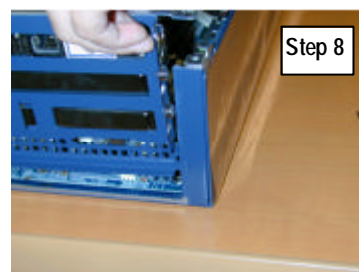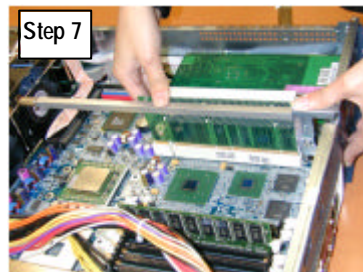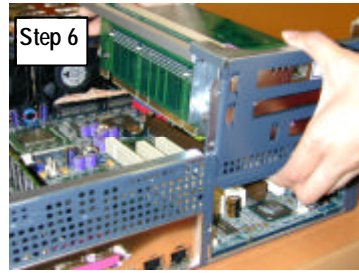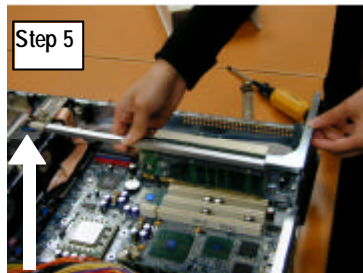
Step 2-4: Memory Installation

Step 1   The DIMM slot has a notch, the DIMM memory module only fit in one direction.

Step 2   Align the memory notch to the module and push the memory into the DIMM socket.

Step 3   Installation completed.
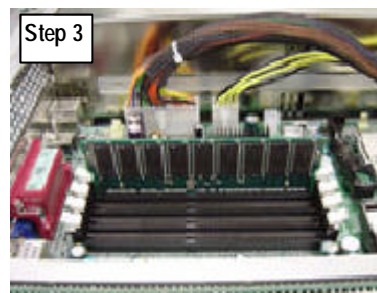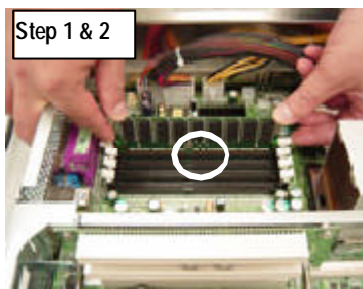
Step 2-5: PCI Expansion Card Installation

Step 1   Remove the screw on the top of the bracket.

Step 2   Remove another two screws located at the rear of the server.

Step 3   Then, remove the riser card bracket as the stable clip circle pointed.

Step 4   Detach the riser card bracket with both hands.

Step 5   Install the card into place. There are tow standoff copper pillars holding the riser card. Secure the riser card with screws. Make sure it is seated properly into the PCI slot.

Step 6   Replace the riser bracket into the PCI slot on the motherboard.

Step 7   Push down the bracket firmly.

Step 8   Replace the PCI riser bracket into server system.

Step 9   Tighten the bracket with riser card firming screw.

Step 5

Step 6

Step 7

Step 8

Step 9
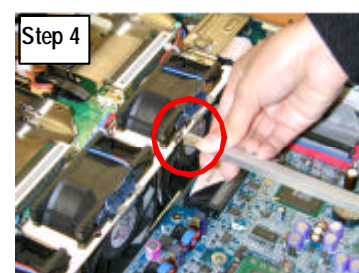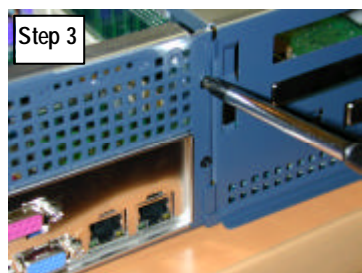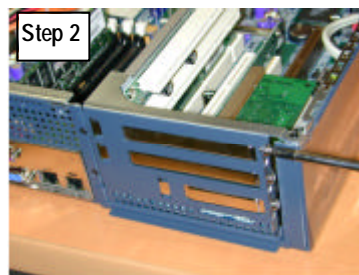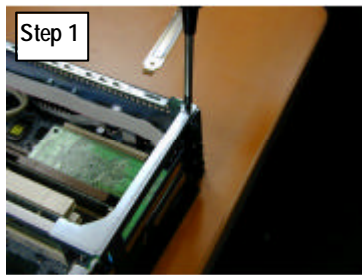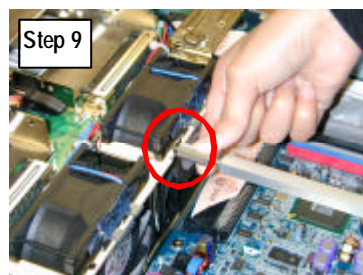
Step 2-6: FAN Duct Installation

⚠️ **CAUTION** The main function of FAN duct is to increase the capability of driving out excessive system heat. In order to maintain the hardware system operating smoothly, please note that te CPU and memory are installed in advanced. Remember to replace the fan duct into the system to secure the consistency of system operation.

Step 1   There are two holes located on the system module.

Step 2   There are two stable racks on the fan duct.

Step 3   Place the fan duct in the system; make sure that two table racks are aligned corrrectly into system module.

Step 4   The fan duct should be flat and completely placed into the system. when the top cover is placed, please be aware of the power supply headrer and the motherboard should be completely palced under the fan duct. Otherwise th top cover may not be able to close tight.
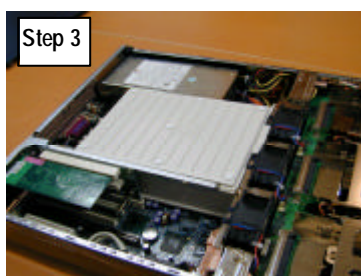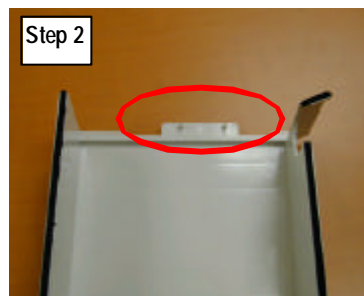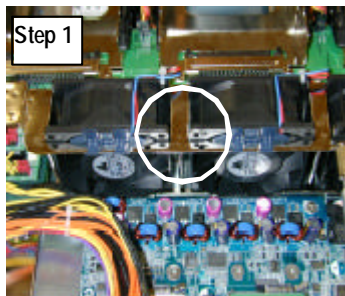
## Step 2-7: Hard Disk Drive Installation

Step 1   Pull out the Hard Disk tray.

Step 2   Place hard disk into the hard disk tray. Secure hard disk in the hard disk tray with screws. For security reason, you should tighten all screws into the pointed position.

Step 3   Hold the hard disk drive handle at open position, replace the tray into chassis.

Step 4   Push the hard disk tray handle to the closed position.
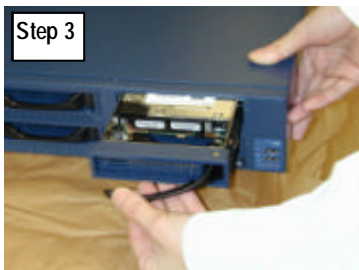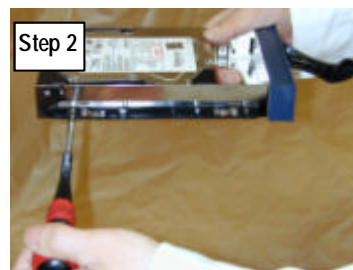
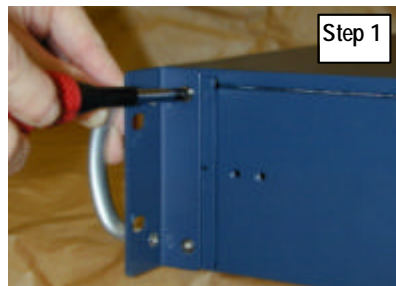### Step 2-8: Reinstall Top Cover

Step 1   Close the cover in un-lock position. Slide it toward to screw-lock position. Fasten the three
          screws at the rear edge of the cover.
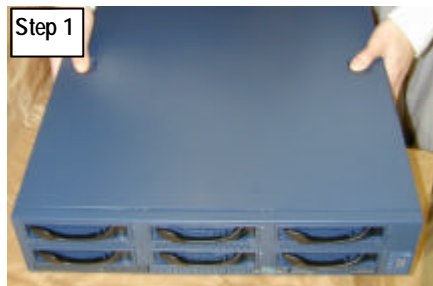
Step 2-9: Dock Handle Installation

Step 1   Put two duck handle on each side of the chassis. Secure them with screws as package
          provided.

Step 2-10: SCSI ID Setting

Step 1   To adjust the SCSI ID setting, please remove the screws and module follow the arrow direction shown as Figure 1.

Step 2   The SCSI ID is shown in the following table. If there occurs an abnormal SCSI hard disk drive behavior (e.g. system does not detect the hard disk drive properly), please make sure that the each HDD has different ID.

HD1(red) / HD2(Yellow) /HD3(Green)
Jumper : ABCD /ABCD /ABCD
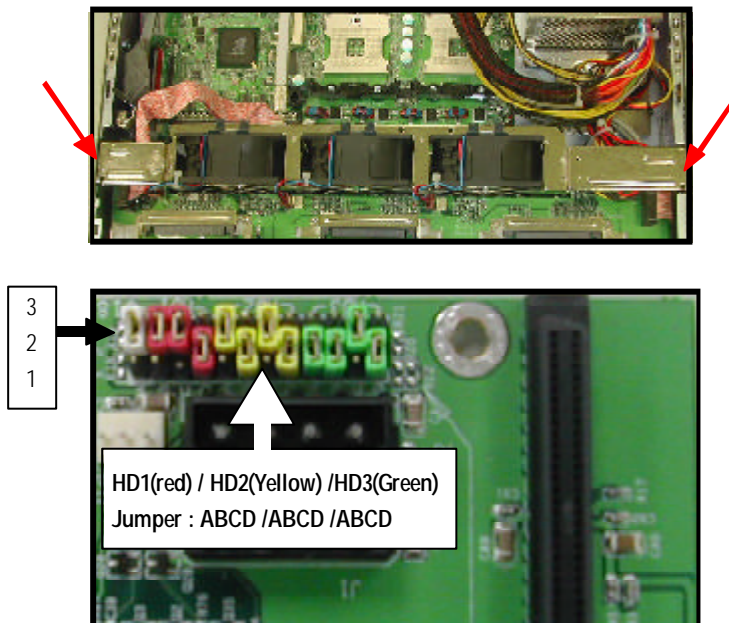
## Jumper Setting For HD1, HD2, and HD3

Jumper ID	A	B	C	D
0	1 - 2	1 - 2	1 - 2	1 - 2
1	2 - 3	1 - 2	1 - 2	1 - 2
2	1 - 2	2 - 3	1 - 2	1 - 2
3	2 - 3	2 - 3	1 - 2	1 - 2
4	1 - 2	1 - 2	2 - 3	1 - 2
5	2 - 3	1 - 2	2 - 3	1 - 2
6	1 - 2	2 - 3	2 - 3	1 - 2
7	2 - 3	2 - 3	2 - 3	1 - 2
8	2 - 3	1 - 2	1 - 2	1 - 2
9	2 - 3	1 - 2	1 - 2	1 - 2
1 0	1 - 2	2 - 3	1 - 2	2 - 3
1 1	2 - 3	2 - 3	1 - 2	2 - 3
1 2	1 - 2	1 - 2	2 - 3	2 - 3
1 3	2 - 3	1 - 2	2 - 3	2 - 3
1 4	1 - 2	2 - 3	2 - 3	2 - 3
1 5	2 - 3	2 - 3	2 - 3	2 - 3

Default

H D	Jumper ID	A	B	C	D
H D 1	1	2 - 3	1 - 2	1 - 2	1 - 2
H D 2	2	1 - 2	2 - 3	1 - 2	1 - 2
H D 3	3	2 - 3	2 - 3	1 - 2	1 - 2
H D 4	4	1 - 2	1 - 2	2 - 3	1 - 2
H D 5	5	2 - 3	1 - 2	2 - 3	1 - 2
H D 6	6	1 - 2	2 - 3	2 - 3	1 - 2

Step 2-11: Dual LAN Card Installation (Optional Device)

Step 1   Remove the screw on the top of the bracket.

Step 2   Remove another two screws located at the rear of the server.

Step 3   Then, remove the riser card bracket as the stable clip circle pointed.

Step 4   Detach the riser card bracket with both hands.

Step 5   Install the card into place. Make sure it is seated properly into the PCI slot.

Step 6   Replace the riser bracket into the PCI slot on the motherboard.

Step 7   Replace the PCI riser bracket into server system.

Step 8   Tighten the bracket with riser card firming screw.

Step 5

Step 6

Step 7

Step 8
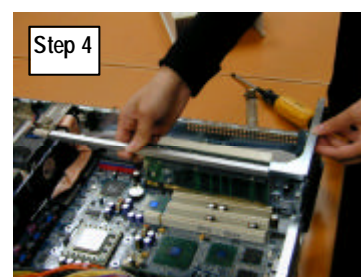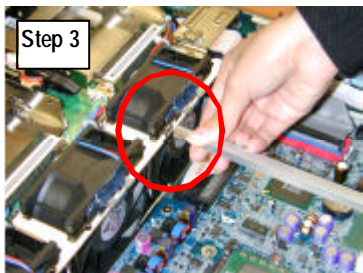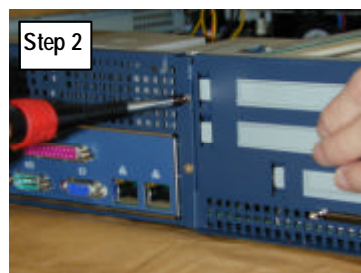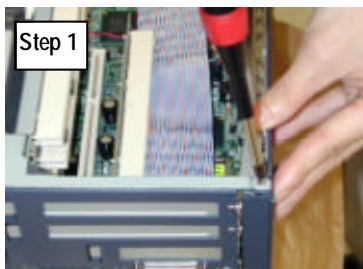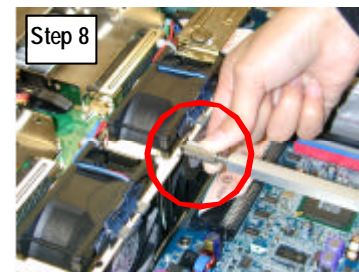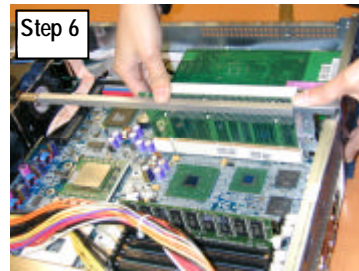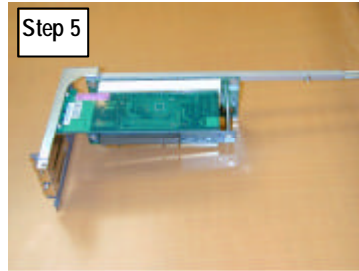
Chapter 3 Appearance of GS-SR222E

3-1: Front View of GS-SR222E
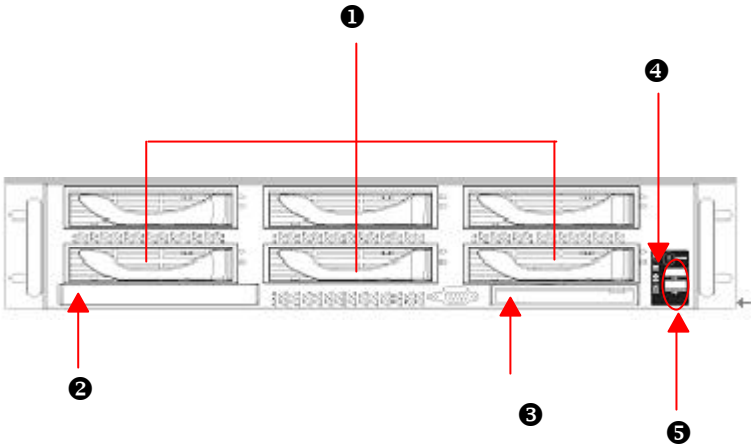
No	Description
❶	Six Hot-Swappable SCSI HDD
❷	Slim Type CD-ROM
❸	Slim Type FDD
❹	LED
❺	USB Connectors

3-2: Rear View of GS-SR222E
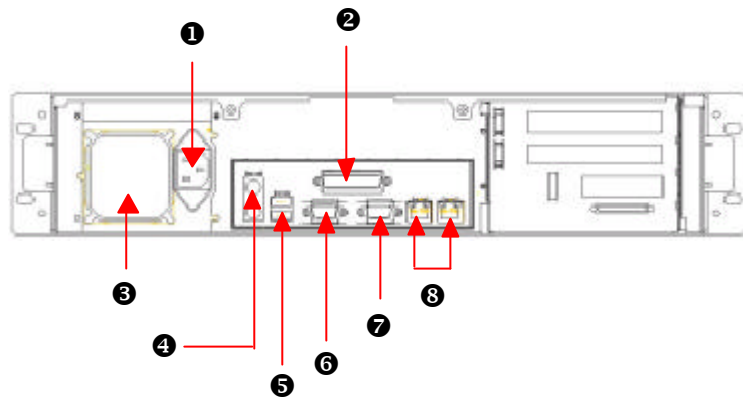
N o	D e s c r i p t i o n
❶	P o w e r
❷	P a r a l l e l p o r t
❸	S y s t e m C o o l i n g F A N
❹	P S / 2 c o n n e c t o r s
❺	U S B c o n n e c t o r s
❻	C O M p o r t
❼	V G A p o r t
❽	L A N p o r t s

3-3: Switch and LED Indicators

LAN 1 LED   L 1   (power) POWER   **Power LED**

LAN 2 LED   L 2   **USB Connectors**

FAN Status LED   FAN

System Status LED   SYS   **USB Connectors**
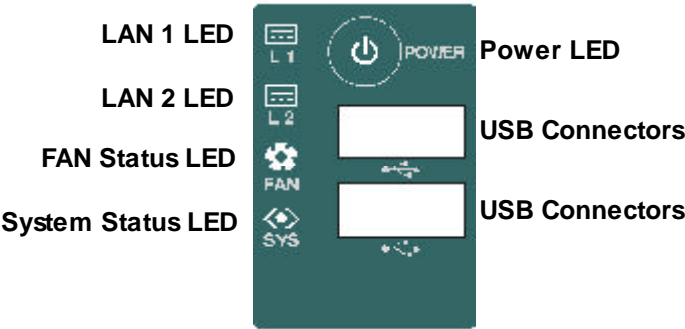
Description

	Acting	**Color**	**Status**
Power LED	On	Green	System power on
	Off	N/A	System power off
LAN LED	On	Green	LAN online
	Off	N/A	LAN offline
	Blink	Green	LAN acting
FAN LED	On	Amber	Fan fail
	Off	N/A	Fan acting
System LED	N/A	N/A	No definition

3-4: HDD LED Description

HDD LED 1

HDD LED 2

	Acting	Color	Status	Condition
HDD LED 1	Off	N/A	No HDD installed	Non-RAID
HDD LED 1	On	Green	HDD installed	RAID
HDD LED 2	Off	N/A	HDD idle	Non-RAID
HDD LED 2	Blink	Green	HDD acting	Non-RAID
HDD LED 1	Off	N/A	No HDD installed/ RAID fail or Rebuild	RAID
HDD LED 1	On	Green	HDD installed	RAID
HDD LED 2	Off	N/A	HDD idle	RAID
HDD LED 2	Blink	Green	HDD acting	RAID
HDD LED 2	On	Amber	RAID fail under OS or no HDD	RAID
HDD LED 2	Blink	Amber	HDD RAID rebuild or system booting	RAID

Chapter 4 Appendix

4-1: Connector Icon Description

Suggest Icon	Description
	Keyboard
	VGA
	Mouse
	LAN
	Parallel Port
	Serial Port
	USB

4-2: Acronyms

Acronyms	Meaning
ACPI	Advanced Configuration and Power Interface
APM	Advanced Power Management
AGP	Accelerated Graphics Port
AMR	Audio Modem Riser
ACR	Advanced Communications Riser
BBS	BIOS Boot Specification
BIOS	Basic Input / Output System
CPU	Central Processing Unit
CMOS	Complementary Metal Oxide Semiconductor
CRIMM	Continuity RIMM
CNR	Communication and Networking Riser
DMA	Direct Memory Access
DMI	Desktop Management Interface
DIMM	Dual Inline Memory Module
DRM	Dual Retention Mechanism
DRAM	Dynamic Random Access Memory
DDR	Double Data Rate
ECP	Extended Capabilities Port
ESCD	Extended System Configuration Data
ECC	Error Checking and Correcting
EMC	Electromagnetic Compatibility
EPP	Enhanced Parallel Port
ESD	Electrostatic Discharge
FDD	Floppy Disk Device
FSB	Front Side Bus
HDD	Hard Disk Device
IDE	Integrated Dual Channel Enhanced
IRQ	Interrupt Request
I/O	Input / Output
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture

Acronyms	Meaning
LAN	Local Area Network
LBA	Logical Block Addressing
LED	Light Emitting Diode
MHz	Megahertz
MIDI	Musical Instrument Digital Interface
MTH	Memory Translator Hub
MPT	Memory Protocol Translator
NIC	Network Interface Card
OS	Operating System
OEM	Original Equipment Manufacturer
PAC	PCI A.G.P. Controller
POST	Power-On Self Test
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
SCI	Special Circumstance Instructions
SECC	Single Edge Contact Cartridge
SRAM	Static Random Access Memory
SMP	Symmetric Multi-Processing
SMI	System Management Interrupt
USB	Universal Serial Bus
VID	Voltage ID
ZCR	Zero Channel RAID