

GS-SR112

Rackmount Server System Installation Guide

Contents

<u>1. SAFETY, CARE AND REGULATORY INFORMATION</u>	<u>1-1</u>
<u>2. INTRODUCTION</u>	<u>2-1</u>
2.1. PREFACE	2-1
2.2. FEATURES	2-1
<u>3. PACKAGE CONTENTS</u>	<u>3-1</u>
<u>4. SYSTEM INSTALLATION PROCEDURES</u>	<u>4-1</u>
4.1. CHASSIS REMOVAL	4-1
4.2. CPU INSTALLATION	4-2
4.3. HEAT SINK INSTALLATION	4-2
4.4. MEMORY INSTALLATION	4-3
4.5. PCI EXPANSION CARD INSTALLATION	4-3
4.6. AIR FLOW DUCT INSTALLATION	4-4
4.7. REINSTALL TOP COVER	4-6
4.8. SCSI ID SETTING	4-7
4.8.1. JUMPER SETTING FOR HDD1, HDD2 AND HDD3	4-7
4.9. DOCK HANDLES INSTALLATION	4-8
4.10. HARD DISK DRIVE INSTALLATION	4-8
4.11. APPEARANCE OF GS-SR112	4-9
4.11.1. FRONT VIEW OF THE GS-SR112	4-9
4.11.2. REAR VIEW OF THE GS-SR112	4-9
4.11.3. LED INDICATOR	4-10
4.12. CONNECTOR ICON DESCRIPTION	4-11

The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information contained herein.

Third-party brands and names are the property of their respective owners.

1. 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.

Precautions for Products 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.

**Precautions for Products With Modems, Telecommunications, or
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 présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté 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 present 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 /

European Community Directive Conformance Statement

This product is in conformity with the protection requirements of EC Council Low Voltage Directive (Safety) 73/23/EEC, EMC Directive 89/336/EEC on the approximation of the laws of the Member States relating to electro-magnetic compatibility.

R&TTE Directive (applicable to products fitted with European modems)

This modem does not require any physical and/or software additional switch settings from the User and is suitable for use only on telephone lines provided with Multi-Frequency Dialing facilities.

The equipment has been approved in accordance with Council Decision 99/5/EC on radio equipment and terminal telecommunication equipment and the mutual recognition of their conformity.

2. Introduction

2.1. Preface

This installation guide will assist you in installing all the essential components for rack mount server system. Keeping the guidebook with your server for referencing information.

In order to get the optimal usage of your server, please pay attention to the following tips:

- Go through the installation guide carefully before starting the system installation processes.
- Keep the system away from static and magnetic field.
- Do not apply any cleaning solutions directly to the system.

2.2. Features

The Gigabyte GS-SR112 is an ultra-thin rack-optimized server that offers superior performance and scalability to your networking system. It contains the several features that provide respective performance for your networking solutions. The key features of the server include:

Features	
Processor Supported	<ul style="list-style-type: none"> ● Supports Intel® Pentium 4 up to 2GHz above 400 MHz FSB
BIOS	<ul style="list-style-type: none"> ● Award BIOS on 4Mb flash RAM ● Multiple boot options ● User setting for hardware monitoring ● DMI 2.0 compliant ● Support PXE
Chipset	<ul style="list-style-type: none"> ● Intel Brookdale 845 MCH & ICH2
Memory Supported	<ul style="list-style-type: none"> ● 3*25 degree angle DIMM ● Supports up to 3GB PC100/133 SDRAM ● Supports ECC memory module
Mass Storage System	<ul style="list-style-type: none"> ● Five front-accessible shelves ● Three low-profile shelves for hot-swappable drives ● One slim type flexible FDD drive-One CD-ROM drive
SCSI Controller	<ul style="list-style-type: none"> ● Integrated dual channel Ultra 160 SCSI controller with 160 MB/s data transfer rate ● Built-in Adaptec 7899G
Intelligent Management	<ul style="list-style-type: none"> ● Gigabyte MMC Utility Tools provide proactive monitoring and altering plus easy troubleshooting to keep the server up and running. ● Enhances IPMI intelligent management function for user to integrate remote administration.

3. Package Contents

When you unpack your GS-SR112 Rackmount Server, check all the hardware components are presented in good condition. Go through the component contents list below to ensure that all the components and optional components are included. If anything is missing or damaged, contact your retailer as soon as possible.

Component Contents List:

- Chassis
- Power Supply (Installed)
- GA-8IDXR Motherboard (Installed)
- Slim Type CD-ROM drive (Installed)
- Slim Type Floppy drive (Installed)
- Three Hard Disk Drive Trays for GS-SR112
- CPU Heat Sink
- Two Dock Handles, with tow screws
- Driver & Application CD
- Installation Guide

4. System Installation Procedures

Warning: Please remove the protective thin films (Top and Bottom) from the system when installing.

4.1. Chassis Removal

Step 1. Unscrew the two thumbscrews from the back of the system (Fig-1).

Step 2. Standing at the front of the system. Gently apply force to the indentures with your thumbs and push toward the rear of the chassis for about 3/4 of an inch. Top cover may be lifted straight up (Fig-2).



Figure 1

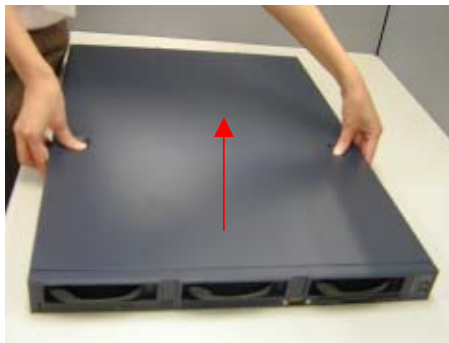


Figure 2

Step 3. After removing the top cover, you will see a plastic air duct over the CPU and Memory. Remove the air duct to install the CPU and Memory (Fig-3).



Figure 3

4.2. CPU Installation

To install Socket 478 CPU, Pull the lever out and lift it up. Then, insert Socket 478 CPU inside Socket, and push the lever back into the original position. (Fig-4 & Fig-5)



Figure 4



Figure 5

4.3. Heat Sink Installation

Step 1. Insert the Heat sink into the CPU socket 478.

Step 2. There are four square holes on the retention modules. Seat the heat sink firmly in the retention modules with the two heat sink clips. (Fig-6)

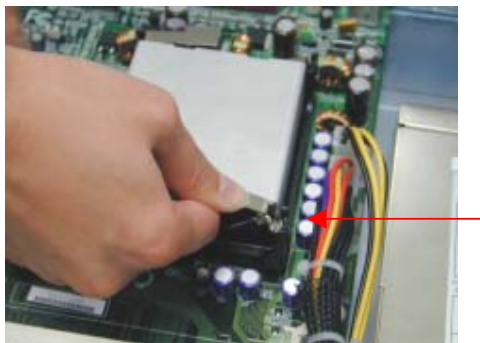


Figure 6

4.4. Memory Installation

The motherboard contains three slanted DIMM (Dual Inline Memory Module) sockets. The systems BIOS will auto detect the size of the memory. To install memory, simply push the memory modules into the DIMM sockets. (Fig-7)



Figure 7

4.5. PCI Expansion Card Installation

GS SR112 provides one expansion raiser slot for a peripheral card, 32Bit/33 MHz full length. To install the peripheral, please go through the following steps.

Step 1. There are two screws holding the raiser bracket. First, remove the screw on the top of the bracket, then, remove another screws located at the rear of the server. (Fig-8) (Fig-9).



Figure 8



Figure 9

Step 2. Carefully remove the PCI raiser bracket. (Fig-10).

Step 3. Install the card into place. Secure the card with screw. Make sure it is seated properly into PCI slot. (Fig-11)



Figure 10



Figure 11

Step 4. Replace the raiser bracket into the PCI slot on the motherboard (Fig-12).

Step 5. The card is seated properly into PCI slot. (Fig-13)



Figure 12



Figure 13

4.6. Air Flow Duct Installation

GS-SR112 is installed a new device which called Air Flow Duct. The main function of Air flow duct is to raise the capability of driving out excessive system heat (Especially the CPU Heat). In order to maintain the system operation smoothly, please note that CPU and RAM are installed in advance. Remember to install the air flow duct back into the system to ensure the consistency of system operation. To install the air flow duct properly, please take the following steps:

Step 1. Please insert the Air Flow Duct follow the arrow direction (Fig-14)

Step 2. After smoothly insert the Air Flow Duct, please pay attention to the stable clip circle on Fig-15. Ensure the air flow duct is firmly inserted in the Air Flow Stable Rack.

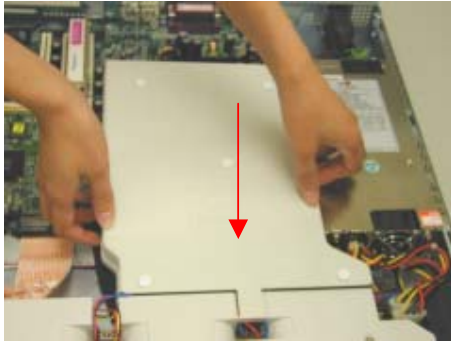


Figure 14

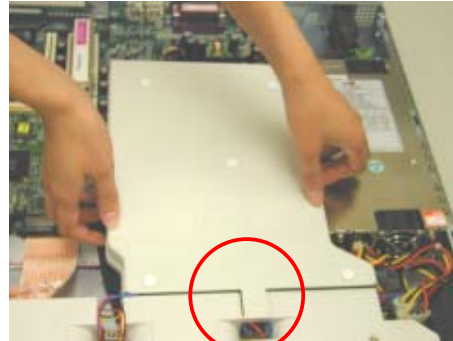


Figure 15

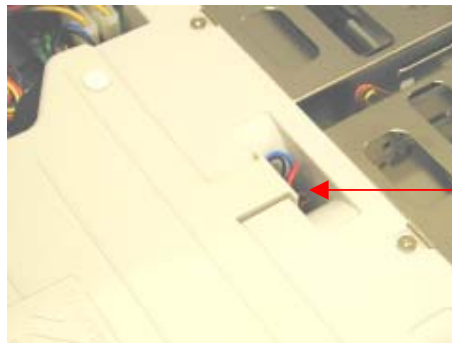


Figure 16

Step 3. Fig-16 indicates Air Flow Duct should be flat and completely inserted into the system. When the upper case is placed, please be aware that the Power Supply header and the motherboard should be completely inserted under the duct cover. Otherwise the upper case might not be able to close tightly.



Attention: There are pressures from both front and back end; therefore the slight pop up at middle is nature.

4.7. Reinstall Top Cover

When complete the installation of the entire essential components (from subsection 4.1 to 4.6), replace the plastic air duct. This will secure the air flow is inside the chassis. Failure to do so may cause CPU and Memory over heat.

Replace the top cover, insuring that the thumbscrews are tightened.
(Fig-17)



Figure 17

4.8. SCSI ID Setting

The SCSI ID is shown in Fig-18. If there occurs an abnormal SCSI hard disk drive behavior (e.g. does not detect the hard disk drive properly), please make sure that HDD1, HDD2 AND HDD 3 have different IDs.

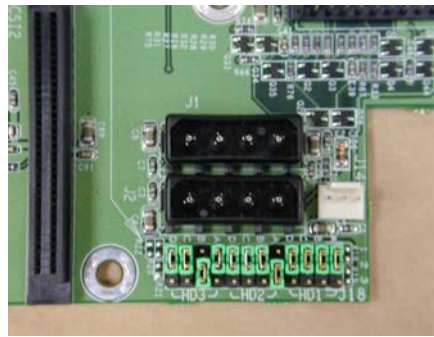


Figure 18

4.8.1. Jumper Setting For HDD1, HDD2 and HDD3

ID \ Jumper	D	C	B	A
0	ON	ON	ON	ON
1	ON	ON	ON	OFF
2	ON	ON	OFF	ON
3	ON	ON	OFF	OFF
4	ON	OFF	ON	ON
5	ON	OFF	ON	OFF
6	ON	OFF	OFF	ON
7	ON	OFF	OFF	OFF
8	OFF	ON	ON	ON
9	OFF	ON	ON	OFF
A	OFF	ON	OFF	ON
B	OFF	ON	OFF	OFF
C	OFF	OFF	ON	ON
D	OFF	OFF	ON	OFF
E	OFF	OFF	OFF	ON
F	OFF	OFF	OFF	OFF

ON(Jumper Close):1-2

OFF(Jumper Open):2-3

4.9. Dock Handles Installation

Remove the dock handles from the package. Put two on each side of the chassis, secure with screws provided (Fig-19).



Figure 19

4.10. Hard Disk Drive Installation

Step 1. Pull the hard disk drive tray handle and remove the tray from the chassis (Fig-20). Insert 80-pin SCA SCSI hard disk drive into the tray. Secure each hard disk drive with screws (Fig-21).



Figure 20



Figure 21

Step 2. After securing the hard disk drive with the screws, hold the hard drive handle at open position, place the tray into chassis (Fig-22) and push the hard disk drive tray handle to the closed position. (Fig-23)



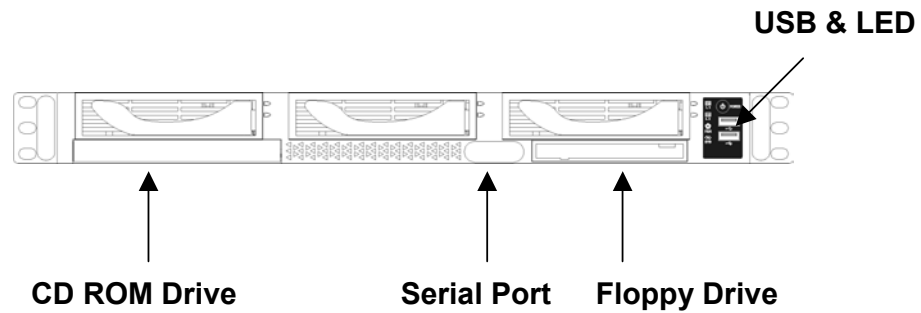
Figure 22



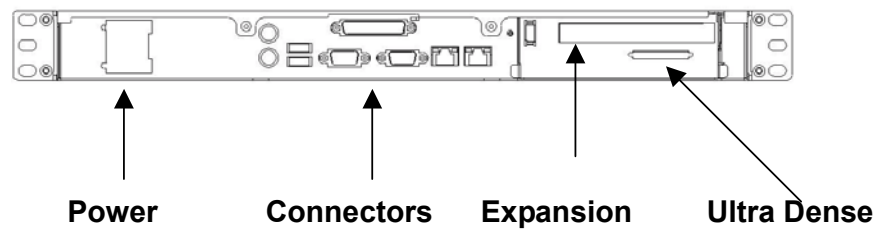
Figure 23

4.11. Appearance of GS-SR112

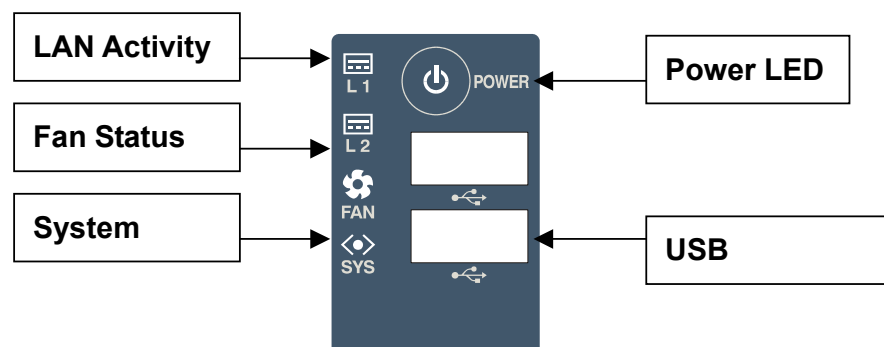
4.11.1. Front View of the GS-SR112



4.11.2. Rear View of the GS-SR112

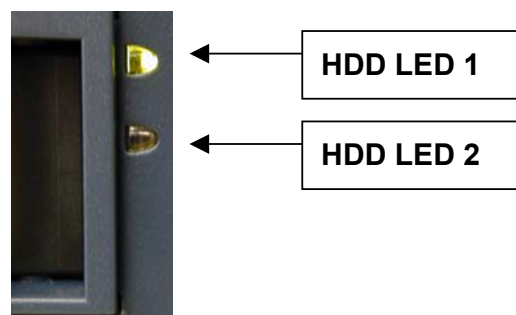


4.11.3. LED Indicator










- Power LED:** Green – Online
Off – Offline
- LAN Activity:** Green – Online
Off – Offline
Flashing-LAN Acting
- Fan Status** Orange – Operational
Off – Malfunction

HDD Power LED:



- HDD LED1 – Off:** No Hard Drive installed
- HDD LED1 – Green:** HDD installed
- HDD LED2 – Flashing:** HDD acting

4.12. Connector Icon Description

Suggested icons	Description
	Keyboard
	VGA
	Mouse
	LAN
	Parallel Port
	Serial Port
	USB