GS-SR157L

1U 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.

Introduction

Welcome to Gigabyte GS-SR157L Rack mount Server System Installation Guide. The guide provides instructions for configuration hardware for the GS-SR157L your system.

This installation guide will assist 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.

Contents Packages

When opening the package, please ensure the system components are not damaged during the shipping. Using the following checklist to verify the contents. If any component is missing or damaged in the system, please contact your vendor immediately.

- ☑ Chassis
- ☑ Power Supply (Installed)
- ☑ FAN Duct x 1
- ☑ Standard Floppy Drive (Installed)
- ☑ Cables (RJ45)
- ☑ Case Handle Kit x 2

- ☑ GA-8ICXR Motherboard (Installed)
- ☑ GSMT User's Manual
- ☑ CPU Heat Sink x 1
- ☑ Silm type CD-ROM drive (Installed)
- ☑ GS-SR157L System Installation Guide
- ☑ Driver CD for motherboard driver & utility
- ☑ Driver CD for IPMI

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.

Chapter 1 Features Summary

Motherboard	•	GA-8ICXR
Processor Supported	•	Supports Intel® Pentium Prescot LGA 775 processor
	•	Intel® Prescot LGA 775 supports 800MHz FSB
	•	L2 cache on-die per processor from 1M
Chipset	•	Intel® MCH E7221 Chipset
	•	Intel® 6702 PXH-V
	•	Intel® ICH6R
System Memory:		
Memory Capacity	•	4 x DDR socket up to 4 GB
Memory Type	•	Un-buffered DDR 333/400
DIMM Size	•	Support 256MB, 512MB, and 1GB memory
Error Correction:	•	Single-bit Errors Correction, Multiple Bit Errors Detection
Expansion Slot	•	1 Butter-Fly Riser card supports 2 x 64/66~100MHz add-on cards (3.3V)
	•	1 x Low Profile PCI add-on card (Half-High/Half-Length)
	•	1 x Full-Size add-on card (Full-High/Half-Length)
ATA RAID controller	•	ICH6R
	•	Supports dual ports SATA RAID 0,1
Cooling Fans:	•	4 X System Fan
	•	1 X Power Fan
Integrated LANs:		
Controller	•	Dual Intel® 82541GI GbE
Feature	•	WOL
Integrated Graphics:		
Controller	•	Integrated, ATI Rage-XL
Graphics Memory	•	8MB SDRAM
Mass Storage System	•	2 x Internal SATA HDD
	•	1 x Standard Type FDD
	•	1 Slim Type CD-ROM
	•	Optional DVD Combo

Super I/O

Controller	•	ITE IT8712F-A Super I/O

Built-in I/O	•	1 x Serial port (COM)
	•	1 x USB 2.0 dual-port connector
	•	1 x VGA connector
	•	2 x RJ45 LAN ports
	•	P/S 2 Keyboard and Mouse Connectors
	•	1 x RJ45 on front for console redirection

System BIOS:

BIOS Type	•	Phoenix® BIOS, Multi-boot BBS 1.0 Compliant4Mb Flash Memory
Special Features	•	BIOS HW Monitoring reporting (The values monitored by HW Monitoring chipset)
	•	Console Redirection via COM ports
	•	Intel® Hyper Threading Support
	•	Resume after AC Back
	•	Wake On LAN
	•	ACPI 1.0 Compliant/ ACPI defined S1, S4, and S5

Server Management Functions: (Optional)

BMC Chip	•	NS IPMI 1.5 controller
Failure Detection	•	IPMI 1.5 specification of Server management
Event Logging	•	32KB Nonvolatile Memory to Log System Failure Events
Remote Management	•	Follow the IPMI 1.5 specification of Server management

Environment

Ambient Temperature	•	Operating Temperature: 5ºC to 35ºC
	•	Non-operating Temperature: 0ºC to 50ºC
Relative Humidity	•	10-80% operating Humidity at 30º C

Safety Regulations	•	FCC, CE, BSMI, CB, Win2000, 2003 WHQLIPMI 1.5 (Option)

System Dimention:	•	427.5mm x 521mm x 42.6 mm

Electrical Power Supply	•	Single Power Supply 250W

Chapter 2 System Overview
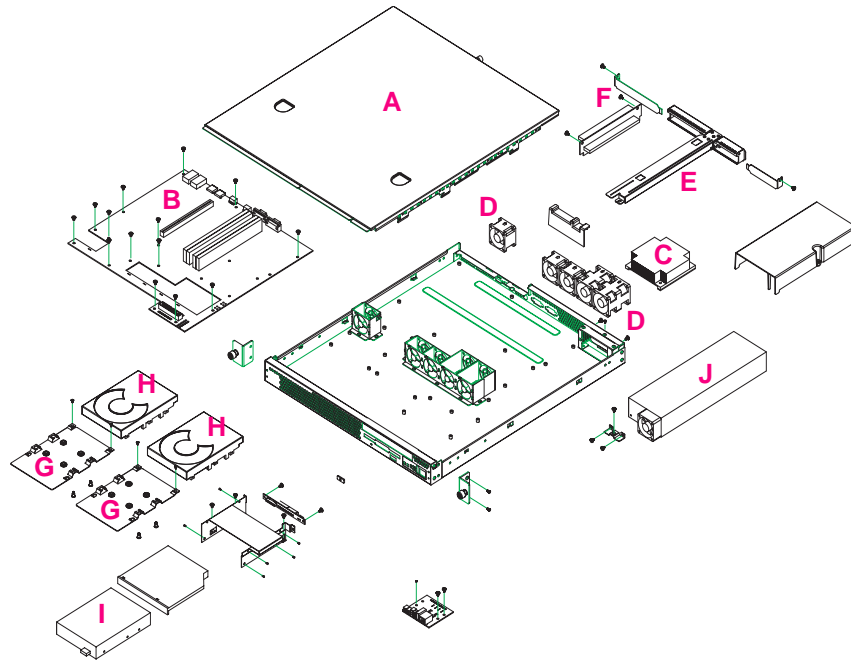
| A. Chassis Cover	F. ZCR Slot
B. Motehrboard - GA-8ICXR	G. HDD Plate
C. Heat Sink	H. HDD
D. System Fans	I. FDD
E. Riser Card Support	J. Power

Chapter 3 System Hardware Installation

⚠️ **CAUTION**

Please observe the safety information in chapter "Important Safety Information"
Do not expose the server to extreme environmental conditions. Protect it from dust, humidity, and heat.

Step 3-1: Chassis Removal and Installation

Step 1   Loosen the thumbscrew from the back of the server.
Step 2   Push down the indentation located at two sides of the chassis, and slide toward to remove the top cover.
Step 3   Reverse Step 1, and 2 to replace the chassis cover.
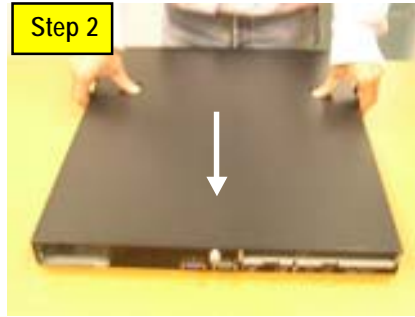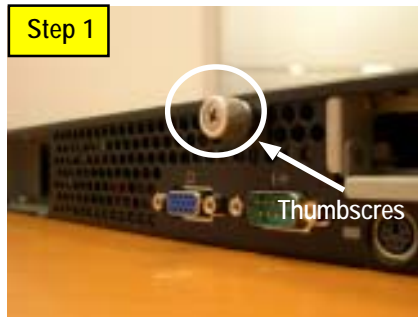
Note: Before installing CPU, you must remove the FAN duct. For FAN duct removal, please see Sub-section 3-7 "**FAN Duct Removal and Installtion**" for detail instruction.

Step 3-2: CPU Installation

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

Step 1   Gently lift the metal lever located on the CPU socket to the upper-right position.

Step 2   Remove the plastic covering on the CPU socket.

Step 3   Align the indented corner of the CPU with the triangle and gently insert the CPU into position.
(Grasping the CPU firmly between your thumb and forefinger, carefully place it into the socket
in a straight and downwards motion. Avoid twisting or bending motions that might cause
damage to the CPU during installation.)

Step 4   Once the CPU is properly inserted, please replace the plastic covering and push the metal
lever back into its original position.

Step 5   Close the lever, reverse step 1 & 2.
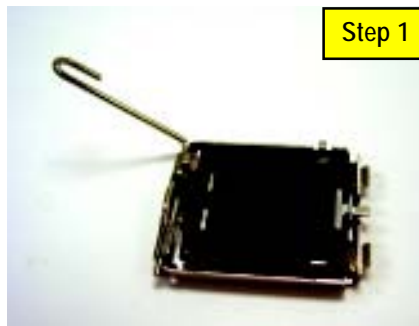
Step 3-3: Heat Sink Installation

Step 1   Place the Heat Sink on the CPU. Before putting the heat sink on the CPU, please well
remember to apply the thermal conductivity compound on the CPU.

Step 2   Seat the heat sink in the retention modules with the four screws. Installation completed.

Step 3-4: Memory Installation

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

2. Insert the DIMM memory module vertically into the DIMM slot. Then push it down.

3. Close the plastic clip at both edges of theDIMM slots to lock the DIMM module.

**4. When installing the DIMM into the DIMM module, we recommend to populate one DIMM in
Channel A module and one in Channel B module for best performance.
Please note that each logical DIMM must be made of two identical DIMMs having the same
device size on each and the same DIMM size.**

5. Reverse the installation steps when you wish to remove the DIMM module.
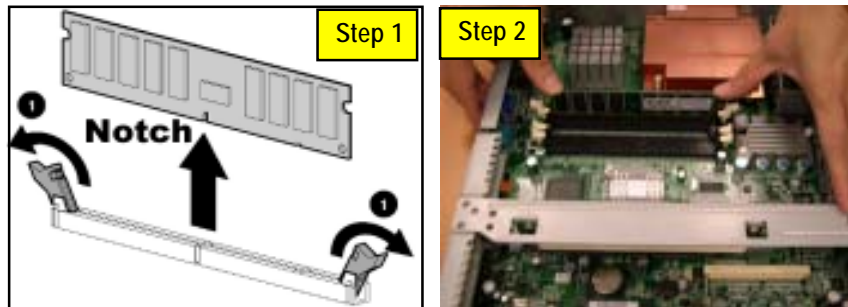
Step 3-5: PCI Expansion Card Installation

GS-SR157L provides expansion riser slots for one PCI-X full-height/full-length 64/66~100MHz; and one with PCI-X low-profile 64-Bit/66~100MHz. To install the peripheral, please go through the following steps.

Note!! Before installing the PCI expansion card, please check the card size limitation. Size limitation for PCI-X full-height/full-length is 228.5 mm x 91.5 mm; size limitation for Low-Profile Card : 167.5 mm x 56 mm .

Step 1   Loosen the riser bracket screws.

Step 2   Lift the riser bracket slightly, then pull it out from the server chassis.

Step 3   Align the expansion card with the guiding groove. Slide the expansion card into the slot until the card firmly seats.

Step 4   Align the riser bracket to the system module (see the arrow direction mark 1), and push it to locked position.

Step 5   Reverse Step 1 & 2 to lock the riser bracket firmly. Installation completed.

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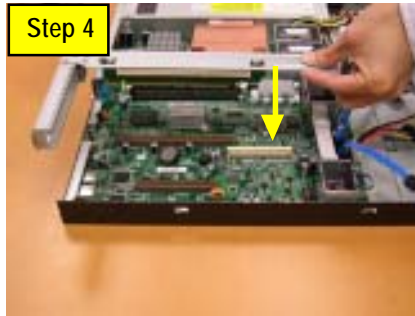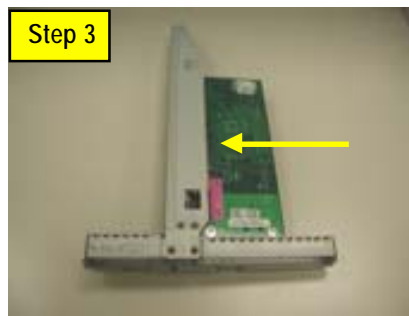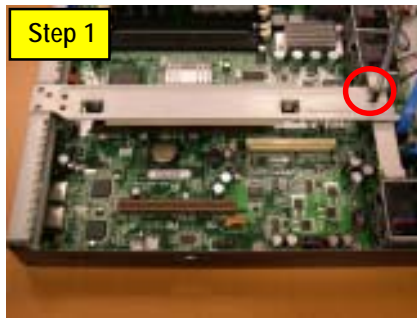
Step 3-6: Hard Disk Drive Installation

Step 1   Lossen the screws securing the hard drive plate.

Step 2   Slide toward to remove the hard drive plate from system.

Step 3   Place hard disk on the plate and lock hard drive with 4 screws.

Step 4   Replace the hard drive plate, slide the blank into the bay until it locks into place.Connect HDD
            power cable.

Step 5   Reverse step 1, 2, 3 and 4 to complete the HDD installtion.
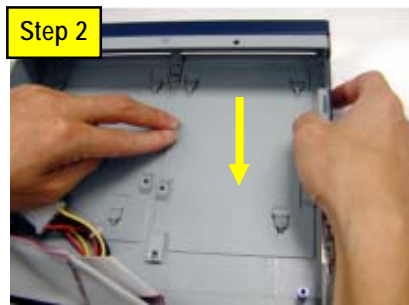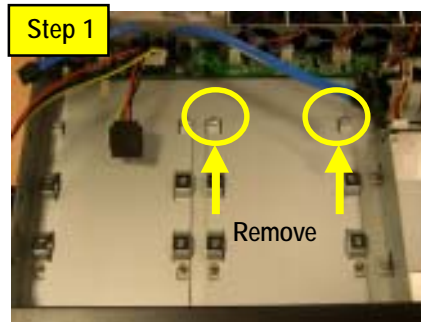
Step 3-7: FAN Duct Removal and Installation

Step 1   Pull up the screw-holder and lossen the thumbscrews. Lift up to remove the fan duct.

Step 2   For FAN Duct Installation, place the fan duct on the top of heat sinks. Fasten the screws to the
locked position and push down the screw-holders.
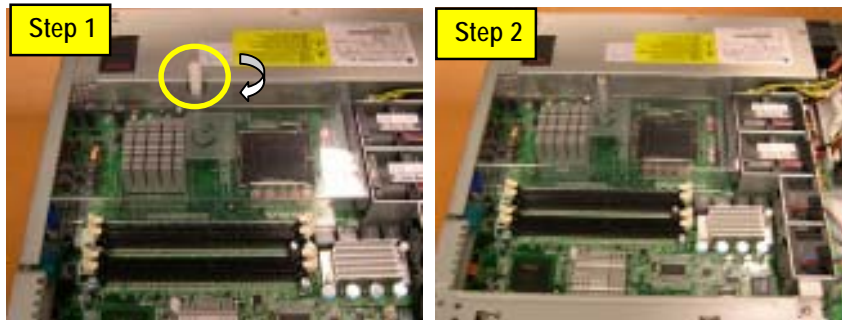
Chapter 4 Appearance of GS-SR157L

4-1: Front View of GS-SR157L
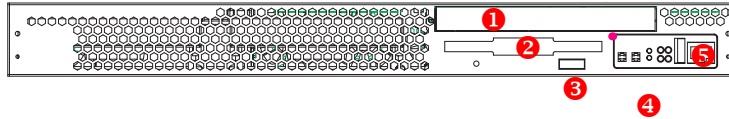
❶	Slim Type CD-ROM
❷	Standard Floopy
❸	USB Connector
❹	LEDs
❺	RJ45 (For Console Redirection)

4-2: Rear View of GS-SR157L
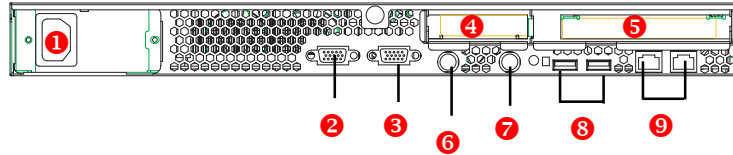
❶	Power
❷	VGA Port
❸	COM Port
❹	Low Profile Riser Slot
❺	Full-size/Full-length Riser Slot
❻	Keyboard Connector
❼	Mouse Connector
❽	USB Connectors
❾	LAN 1 & 2 Ports

4-3: Switch and LED Indicators Introduction
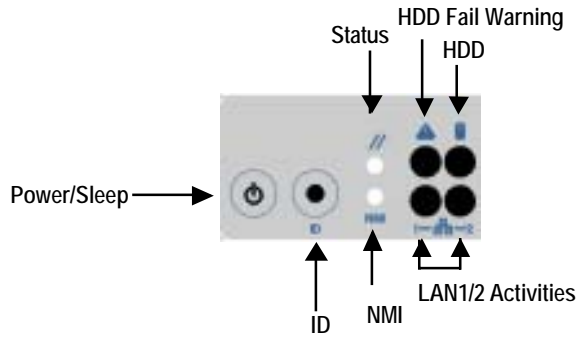
Name	Color	Condition	Description
Power	Green	On	Power On
	Green	Blink	Sleep (S1)
	--	Off	Power Off (S4/S5)
Status	Green	On	System Ready On/ Alarm
	Amber	Blink	System Ready but deqraded, CPU Failed, DIMM Killed.
	Amber	On	Critical Alarm: Critical Power Module Failure, Critical FANs Failure, Voltage (Power Supply) Critical Temperature and Voltage
	--	Off	System Not Ready/ Post error/NMI event/CPU or terminator missing
HDD	Green	Blink	Hard Disk Drive Access
	Amber	On	HDD Fault
	--	Off	No Access and No HDD Fault
LAN1 Activity	Green	On	LAN Link / No access
	Green	Blink	LAN access
	--	Off	Idle
LAN2 Activity	Green	On	LAN Link / No access
	Green	Blink	LAN access
	--	Off	Idle
Identification	Blue	Blink	Unit selected for identification
	--	Off	No identification

4-4: LAN LED Description

Name	Color	Condition	Description
LAN	Green	ON	LAN Link / no Access
Link/Activity	Green	BLINK	LAN Access
	-	OFF	Idle
GbE LAN	Yellow	ON	1Gbps connection
Speed	Yellow	BLINK	Port identification with 1Gbps connection
	Green	ON	100Mbps connection
	Green	BLINK	Port identification with 10 or 100Mbps connection
	-	OFF	10Mbps connection

4-5 : Connector Icon Description

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

Chapter 5 Motherboard Layout & Jumper Setting

5-1: GA-8ICXR Motherboard Layout
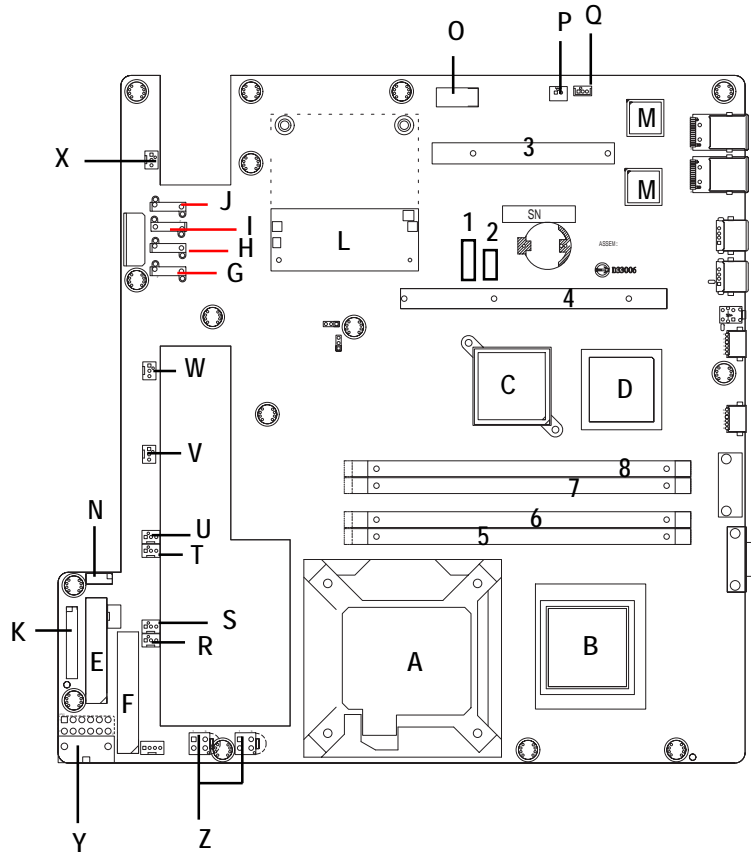
A	CPU LGA775	1	IPMB1
B	Intel MCH E7221	2	IPMB2
C	Intel 6702 PXH-V	3	PCI1
D	IntelICH6R	4	PCI_X1
E	FDD	5	DDR1
F	IDE1	6	DDR2
G	SATA1	7	DDR3
H	SATA2	8	DDR4
I	SATA3		
J	SATA4		
K	Front Panel		
L	IPMBI		
M	Intel 82541PI		
N	USB2		
O	COM2		
P	WOR		
Q	WOL		
R	FAN1		
S	FAN2		
T	FAN3		
U	FAN4		
V	FAN5		
W	FAN6		
X	FAN7		
Y	ATX1		
Z	ATX 12V		

5-2: Jumper Setting

CLR_CMOS ((Clear CMOS Function)

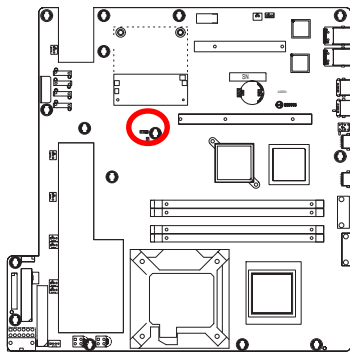You may clear the CMOS data to its default values by this jumper.
Default value doesn't include the "Shunter" to prevent from improper use this jumper.
To clear CMOS, temporarily short 1-2 pin.

1 [▪▪▪·]   1-2 close: Clear CMOS

1 [·▪▪▪]   2-3 close: Normal (Default value)

Chapter 6 BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

ENTERINGSETUP

Power ON the computer and press <F2> immediately will allow you to enter Setup.

CONTROLKEYS

<↑>	Move to previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Reserved
<F3>	Reserved
<F4>	Reserved
<F6>	Reserved
<F7>	Reserved
<F8>	Reserved
<F9>	Load the Optimized Defaults
<F10>	Save all the CMOS changes, only for Main Menu

GETTINGHELP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

● **Main**

This setup page includes all the items in standard compatible BIOS.

● **Advanced**

This setup page includes all the items of AMI special enhanced features.

(ex: Auto detect fan and temperature status, automatically configure hard disk parameters.)

● **Security**

Change, set, or disable password. It allows you to limit access the system and setup.

● **Server**

Server additional features enabled/disabled setup menus.

● **Boot**

This setup page include all the items of first boot function features.

● **Exit**

There are five options in this selection: Exit Saving Changes, Exit Discarding Changes, Load Optimal Defaults, Load Failsafe Defaults, and Discard Changes.

Main

Once you enter Phoenix BIOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.
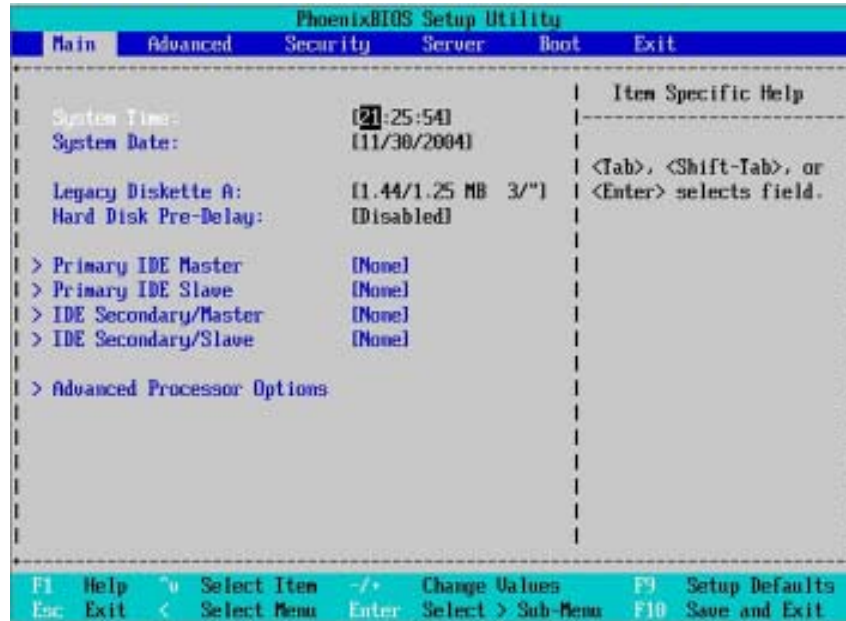

Figure 1: Main

☞ **System Time**

　　The time is calculated based on the 24-hour military time clock. Set the System Time (HH:MM:SS)

☞ **System Date**

　　Set the System Date. Note that the "Day" automatically changed after you set the date.

　　(Weekend: DD: MM: YY) (YY: 1099~2099)

☞ **Legacy Diskette A**

This category identifies the type of floppy disk drive A that has been installed in the computer.

▶ Disabled   Disable this device.

▶ 360KB, $5^{1/4}$ in. $3^{1/2}$ inch AT-type high-density drive; 360K byte capacity

▶ 1.2MB, $3^{1/2}$ in. $3^{1/2}$ inch AT-type high-density drive; 1.2M byte capacity

▶ 720K, $3^{1/2}$ in. $3^{1/2}$ inch double-sided drive; 720K byte capacity

▶ 1.44M, $3^{1/2}$ in. $3^{1/2}$ inch double-sided drive; 1.44M byte capacity.

▶ 2.88M, $3^{1/2}$ in. $3^{1/2}$ inch double-sided drive; 2.88M byte capacity.

☝ **Note**: The 1.25MB,$3^{1/2}$ reference a 1024 byte/sector Japanese media format. The 1.25MB,$3^{1/2}$ diskette requires 3-Mode floppy-disk drive.

☞ **Hard Disk Pre-Delay**

This item provides function for user to add a delay before the first access of a hard disk by BIOS. Some hard disks hang if accessed before they have initialized themselves. The delay ensures the hard disk initialized after powering up, prior to being accessed.

▶ Options   Disabled, 3 Seconds, 6 Seconds, 9 Seconds, 12 Seconds, 21 Seconds, 30Seconds. Default vaule is **Disabled**.

☞ **IDE Primary Master, Slave / Secondary Master, Slave, Parallel ATA**

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and manual type. Manual type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

▶ **TYPE**

1-39: Predefined types.

Users: Set parameters by User.

Auto: Set parameters automatically. (Default Vaules)

CD-ROM: Use for ATAPI CD-ROM drives or double click [Auto] to set all HDD parameters automatically.

ATAPI Removable: Removable disk drive is installed here.

▶ **Multi-Sector Transfer**

This field displays the information of Multi-Sector Transfer Mode.

Disabled: The data transfer from and to the device occurs one sector at a time.

Auto: The data transfer from and to the device occurs multiple sectors at a time if the device supports it.

▶ **LBA Mode**	This field shows if the device type in the specific IDE channel support LBA Mode.
▶ **32-Bit I/O**	Enable this function to max imize the IDE data transfer rate.
▶ **Transfer Mode**	This field shows the information of Teansfer Mode.
▶ **Ultra DMA Mode**	This filed displays the DMA mode of the device in the specific IDE channel.

Advanced Processor Options
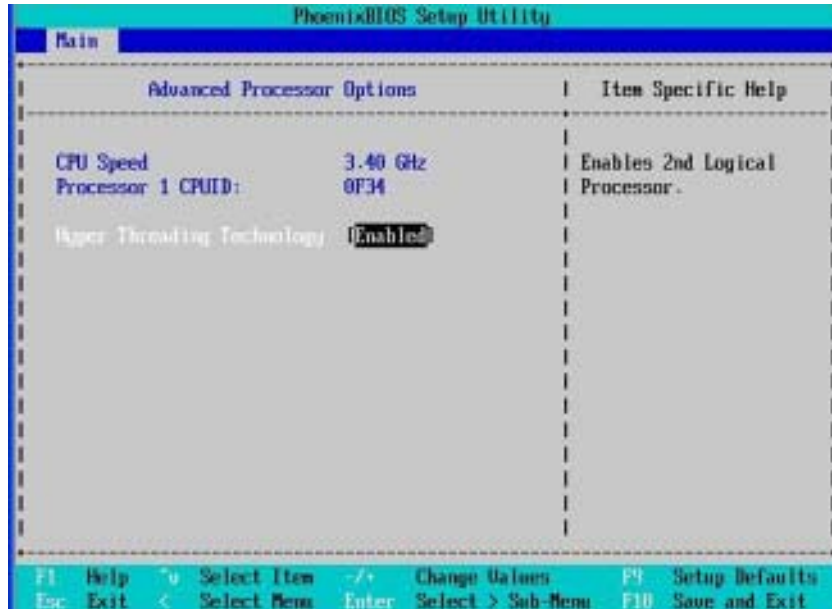
Figure 1-1: Advanced Processor Options

☞ **Advanced Processor Option**

This category includes the information of **CPU Speed**, **Processor ID**, **Processor L2 Cache**.

☞ **Hyper Threading Technology**

▸ Enabled   Enables Hyper-Threading Technology Feature when using Windows
                       XP and Linux 2.4x operating systems that are optimized for Hyper-
                       Threading technology. (Default value)
▸ Disabled   Disables Hyper-Threading Technology when using other operating
                       systems.

Advanced

About This Section: Advanced

With this section, allowing user to configure your system for basic operation. User can change the processor options, chipset configuration, PCI configuration and chipset control.
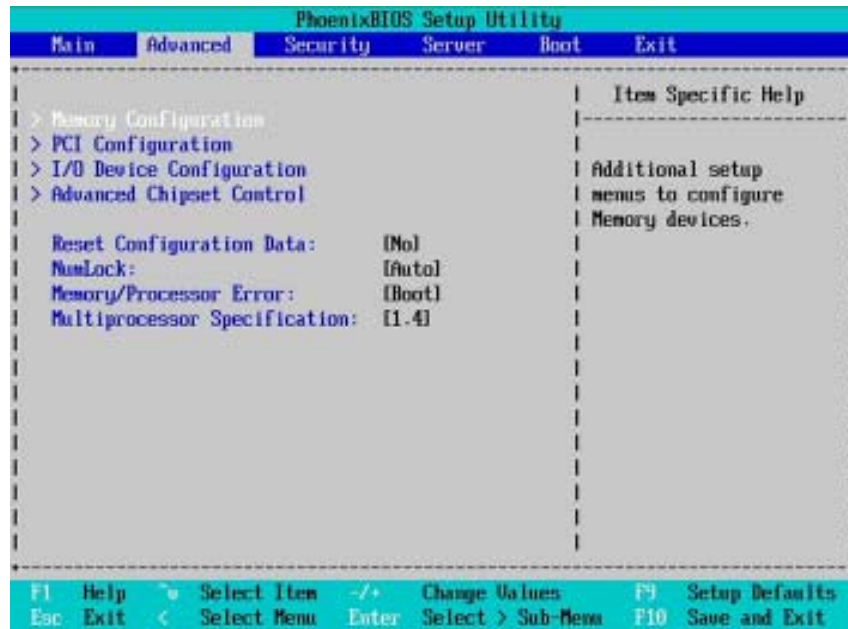

Figure 2: Advanced

Memory Configuration
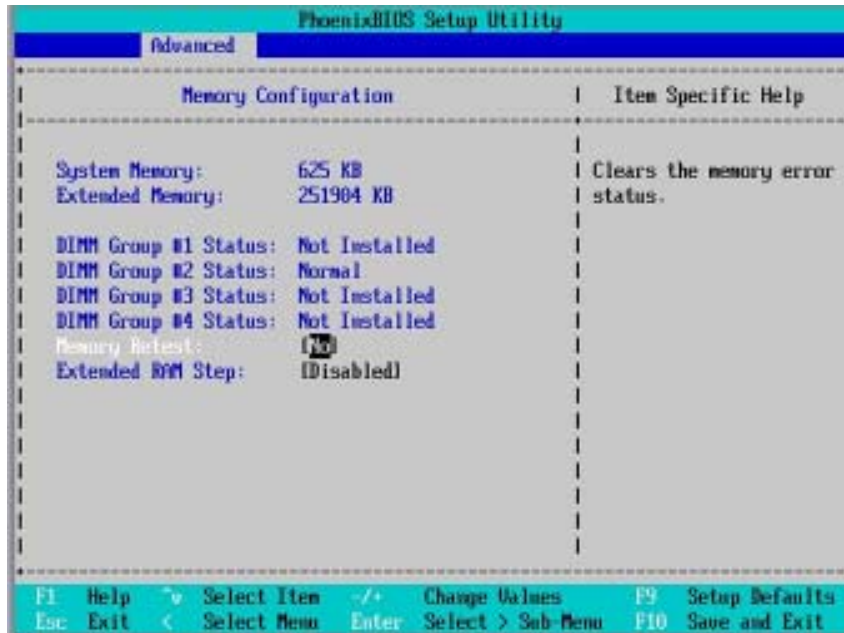
Figure 2-1: Memory Configuration

↺**System Memory/Extended Memory/DIMM Group 1,2,3,4 Status**

These category is display-only which is determined by POST (Power On Self Test) of the BIOS.

↺**Memory Reset**

▸Yes   Select 'Yes', system will clear the memory error status.

▸No   Disable this function. (Default value)

↺**Extend RAM Step**

▸Enabled   Enable test extended memroy process.

▸Disabled   Disable this function. (Default value)

33

PCI Configuration

Figure 2-2: PCI Configuration

☞**Embedded Video Controller**

▸ **Onboard VGA Control**

▸▸Enabled   Enable onboard VGA device. (Default value)
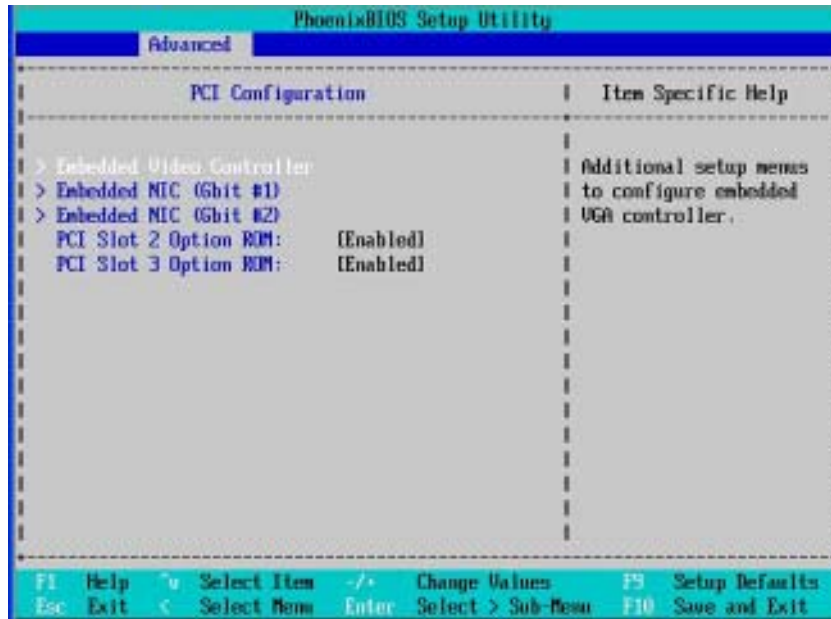
▸▸Disabled   Disable this function.

▸ **Pre-Allocated Memory Size**

Select the amount of pre-allocated graphics memory for use by the Internal Graphics Device.

▸▸Options   1MB, 8MB. Default value is **8MB**.

☞**Embedded NIC #1**

▶ **Onboard LAN1 Control**

▶▶Enabled   Enable onboard LAN1 device. (Default value)

▶▶Disabled   Disable this function.

▶ **Option ROM Scan**

▶▶Enabled   Enableing this item to initialize device expansion ROM.

▶▶Disabled   Disable this function. (Defualt value)

☞**Embedded NIC #2**

▶ **Onboard LAN2 Control**

▶▶Enabled   Enable onboard LAN2 device. (Default value)

▶▶Disabled   Disable this function.

▶ **Option ROM Scan**

▶▶Enabled   Enableing this item to initialize device expansion ROM.

▶▶Disabled   Disable this function. (Defualt value)

☞**PCI Slot 2/3 Option ROM**

▶▶Enabled   Enableing this item to initialize device expansion ROM.

                         (Defualt value)

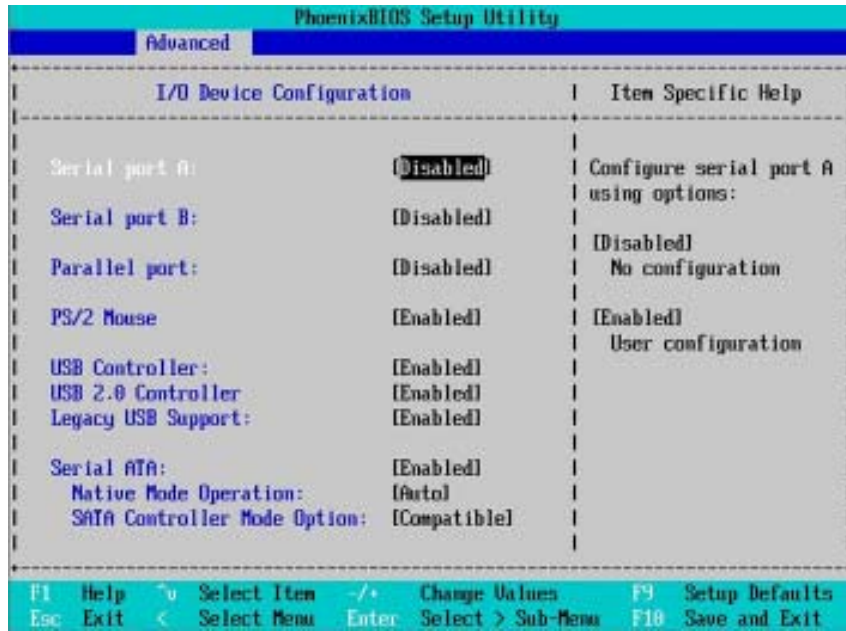▶▶Disabled   Disable this function.

I/O Device Configuration

Figure 2-3: I/O Device Configuration

☞Serial Port A

This allows users to configure serial prot A by using this option.

▸Disabled   Disable the configuration.

▸Enabled   Enable the configuration (Default value)

☞Serial Port B

This allows users to configure serial prot B by using this option.

▸Disabled   Disable the configuration.

▸Enabled   Enable the configuration (Default value)

☞Parallel Port

This allows users to configure parallel port by using this option.

▸Disabled   Disable the configuration.

▸Enabled   Enable the configuration. (Default value)

☞PS/2 Mouse

Set this option 'Enabled' to allow BIOS support for a PS/2 - type mouse.

▸Enabled   'Enabled' forces the PS/2 mouse port to be enabled regardless if a mouse is present. (Default value)

▸Disabled   'Disabled' prevents any installed PS/2 mouse from functioning, but frees up IRQ12.

☞USB Controller

This item allows users to enable or disable the USB device by setting item to the desired value.

▸Enabled   Enable USB controller. (Default value)

▸Options   Disbale this function.

☞USB 2.0 Controller

This item allows users to enable or disable the USB 2.0 device by setting item to the desired value.

▸Enabled   Enable USB 2.0 controller. (Default value)

▸Options   Disbale this function.

☞Legacy USB Support

This option allows user to function support for legacy USB.

▸Enabled   Enables support for legacy USB (Default Value)

▸Disabled   Disables support for legacy USB

☞Serial ATA

▸Enabled   Enables on-board serial ATA function. (Default Value)

▸Disabled   Disables on-board serial ATA function.

▸ Native Mode Operation

This option allows user to set the native mode for Serial ATA function.

▸Auto   Auto detected. (Default value)

▸Serial ATA Set Native mode to Serial ATA.

▸ SATA Controller Mode Option

▸Compatible Mode   SATA and PATA drives are auto-detected and placed in Legacy mode. (Default value)

▸Enhanced (non-AHCI) Mode SATA and PATA drives are auto-detected and placed in Native mode.

Note: Pre-Win2000 operating system do not work in Enhanced mode.

▶ **SATA AHCI Enable**

▸Enabled   Set this item to enable SATA AHCI function for WinXP-SP1+IAA

driver supports AHCI mode.

▸Disabled   Disabled this function.

▶ **SATA RAID Enable**

▸Enabled   Enabled SATA RAID function.

▸Disabled   Disable this function.
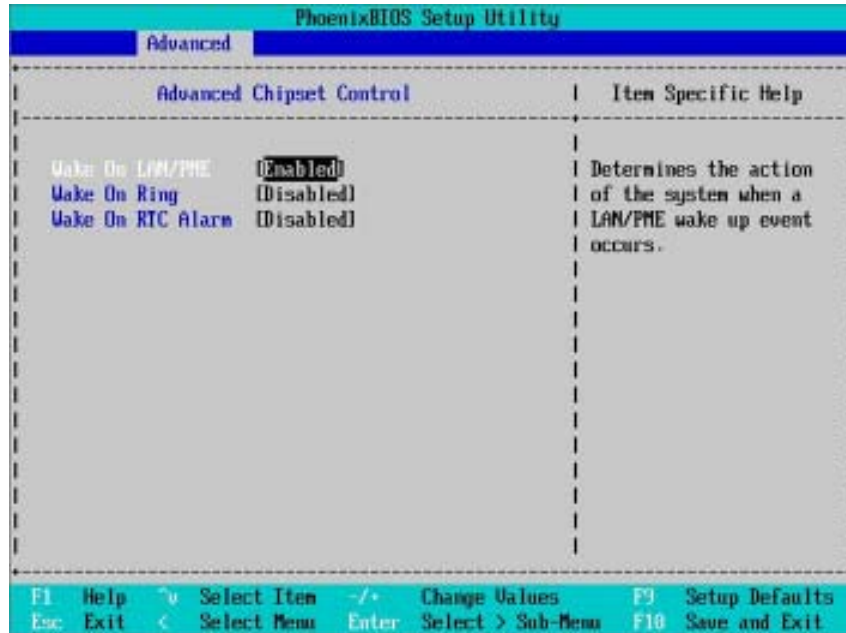
Advanced Chipset Control

Figure 2-4: Advanced Chipset Control

☞**Wake On LAN / PME**

This option allow user to determine the action of the system when a LAN/PME wake up event occurs.

▸Enabled   Enable Wake On LAN/PME. (Default value)

▸Disabled   Disable this function.

Note: This item must enabled if you're running under Windows operating system.

☞**Wake On Ring**

This option allow user to determine the action of the system power is off and the modem is ringing.

➠Enabled   Enable Wake On Ring. (Default value)

➠Disabled   Disable this function.

Note: This item must enabled if you're running under Windows operating system.

☞**Wake On RTC Alarm**

You can set "RTC Alarm Resume" item to enabled and key in Data/time to power on system.

➠Enabled   Enable alarm function to POWER ON system. (Default value)

➠Disabled   Disable this function.

Note: This item must enabled if you're running under Windows operating system.

☞**Reset Configuration Data**

➠Yes   Reset all configuration data.

➠No   Do not make any changes. (Default value)

☞**NumLock**

This option allows user to select power-on state for NumLock.

➠ On   Enable NumLock.

➠ Off   Disable this function.

☞Memory Processor Error

When Boot is selected, the system will attempt to boot after a memory or proocessor error occured.

➡ Boot   System attempts to boot if a memory or proocessor error cooured.

                         (Default value)

➡ Halt   System will stop if an error is detected during power up.

☞Multiprocessor Specification

This option allows user to configure the multiprocessor(MP) specification revision level. Some operating system will require 1.1 for compatibility reasons.

➡ 1.4   Support MPS Version 1.4 . (Default value)

➡ 1.1   Support M PS Version 1.1.
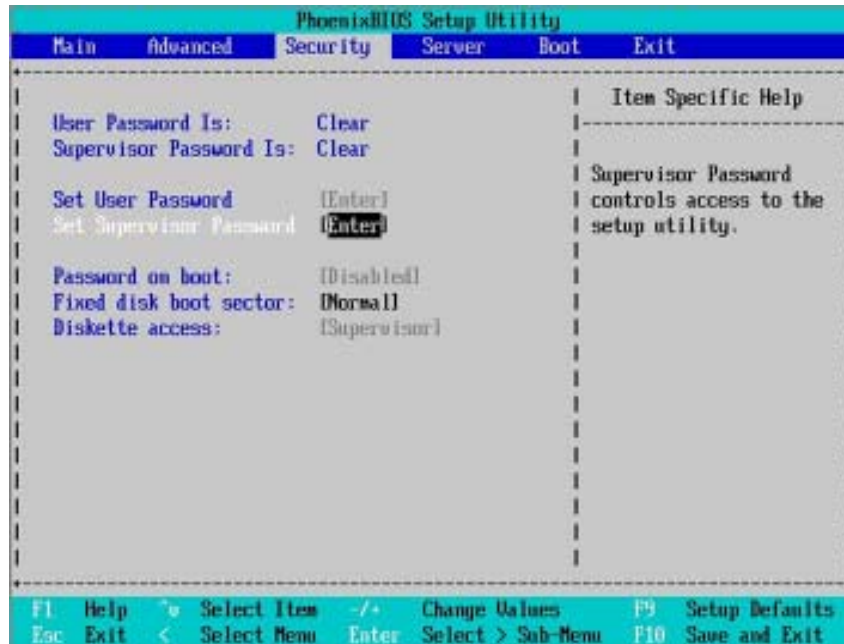
Security

Figure 3: Security

   ♪   About This Section: Security

In this section, user can set either supervisor or user passwords, or both for different level of password securities. In addition, user also can set the virus protection for boot sector.

☞Set Supervisor Password

You can install and change this options for the setup menus. Type the password up to 6 characters in lengh and press <Enter>. The password typed now will clear any previously entered password from the CMOS memory. You will be asked to confirm the entered password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a specified password or press <Enter> key to disable this option.

☞Set User Password

You can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

Type the password up to 6 characters in lengh and press <Enter>. The password typed now will clear any previously entered password from the CMOS memory. You will be asked to confirm the entered password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a specified password.

☞Password on boot

Password entering will be required when system on boot.

    ▸▸ Enabled   Requries entering password when system on boot.

    ▸▸ Disabled   Disable this function. (Default value)

☞Fixed disk boot sector

    ▸▸ Write Protect   Write protects boot sector on harddisk to protect against virus.

    ▸▸ Normal   Set the fixed disk boot sector at Normal state. (Default value)

☞Diskette access

Control access to diskette drives.

    ▸▸ User   Requires user's password to access floppy drives.

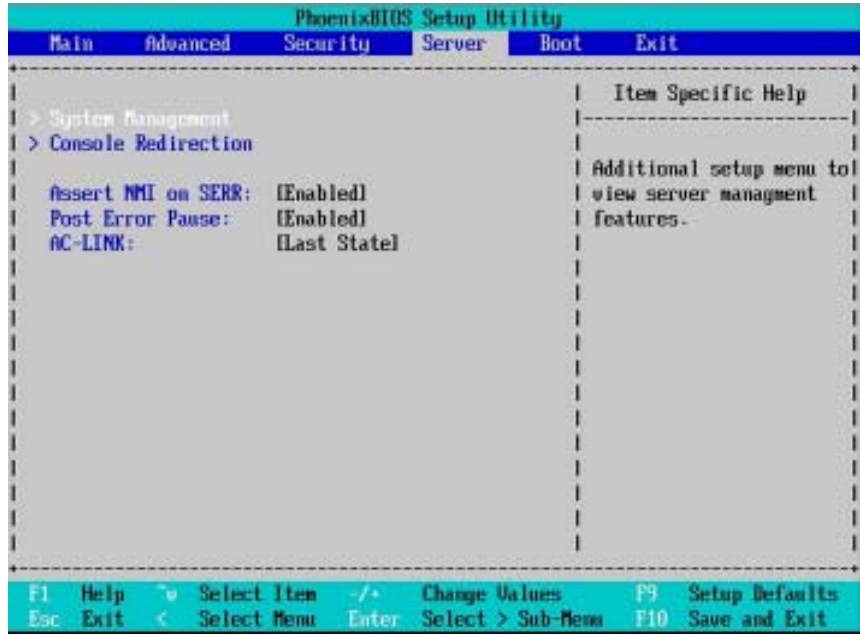   ▸▸ Supervisor   Requires supervisor's password to access floppy drives. (Default value)
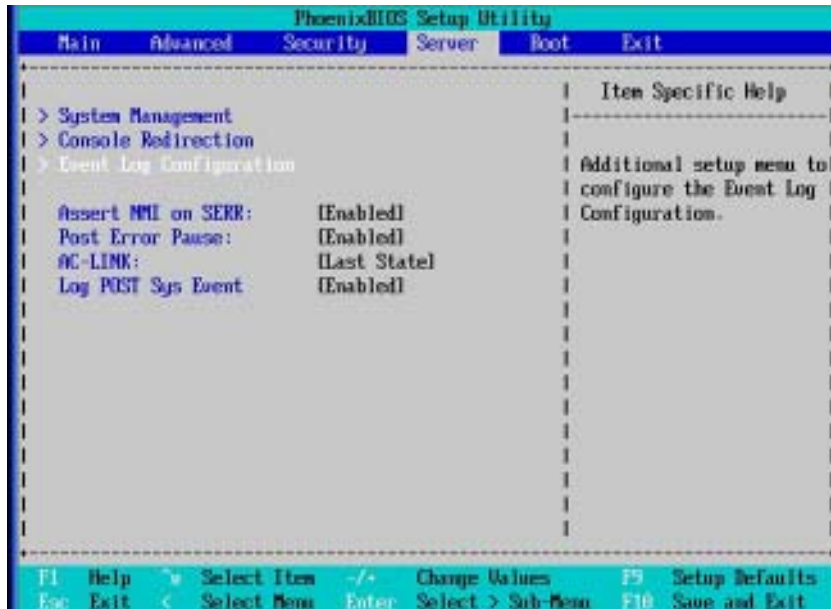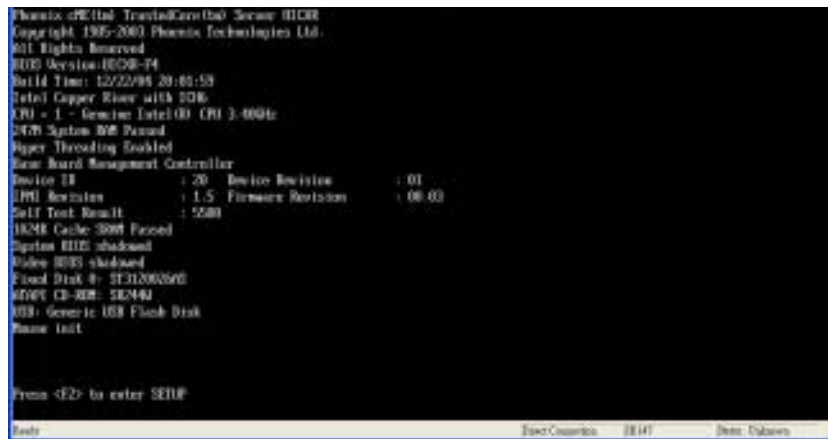
Server

Figure 4: Server

Please note that when the main board is inserted the IPMI card, the Server menu will show as below:

When IPMI cardi is installed, screen will display the information of the card during system boots.

☞ **Event Log Confuguration**
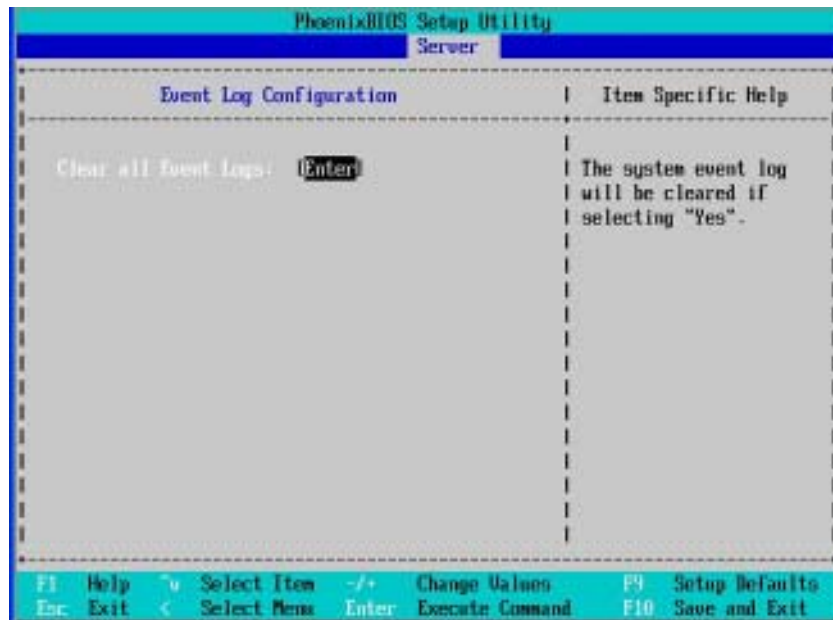
This option contains additional setup menu to configure the Event Log Configuration.

▶ **Clear all Event Logs**

▸Enter   The system event log will be cleared if pressing Enter.

☞ **Log Post System Event**

▸Enabled   Enable Log Post System Event.

▸Disabled   Disable this option.

System Management

Figure 4-1: System Management
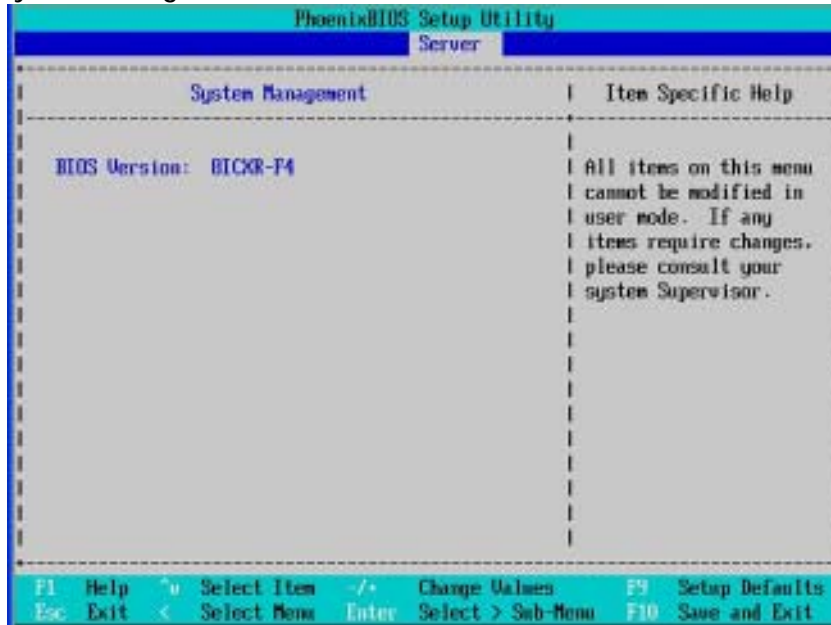
☞**Server Management**

This category allows user to view the server management features. Including information of **BIOS Version**. All items in this menu cannot be modified in user's mode. If any items require changes, please consult your system supervisor.

Console Redirection
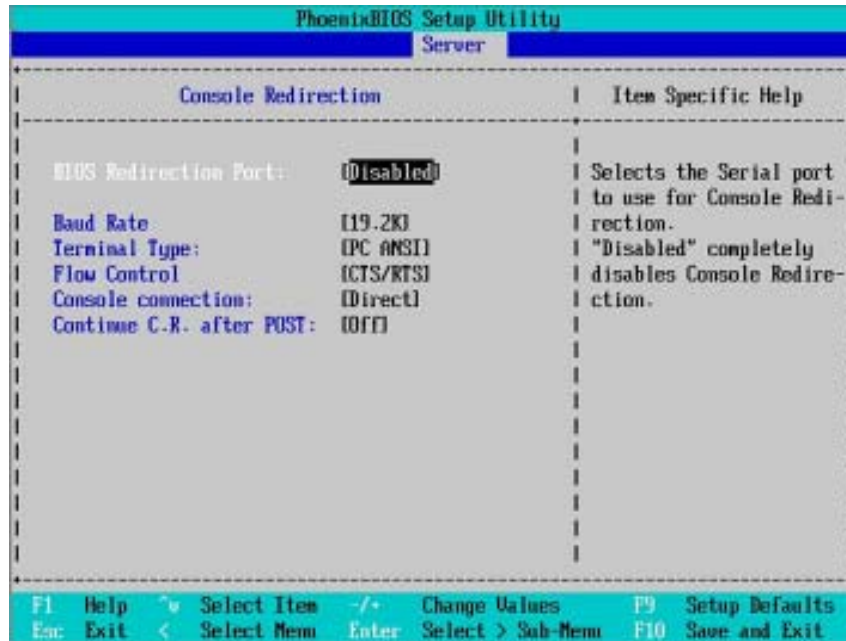
Figure 4-2: Console Redirection

☞ **BIOS Redirection Port**

    If this option is set to enabled, it will use a port on the motherboard.

    ▸On-board COMA   Use COMA as he COM port address.

    ▸Disabled   Disable this function. (Default value)

    Note: Tower has COMA and COMB.

☞ **Baud Rate**

    This option allows user to set the specified baud rate.

    ▸Options   300, 1200, 2400, 9600, 19.2K, 38.4K, 57.6K, 115.2K.

☞ **Terminal Type**

This option allows user to select the specified terminal type. This is defined by IEEE.

➤Options   VT100, VT100 8bit, PC-ANSI 7bit, VT100+, VT-UTF8

☞ **Flow Control**

This option provide user to enable the flow control function.

➤None   Not supported.

➤XON/OFF   Software control.

➤CTS/RTS   Hardware control. (Default value)

☞ **Console Connect**

This field indicates whether the console is connected directly to the system or a modem is used to connect.

➤Direct   Console is connected directly to the system. (Default)

➤Disabled   Console is connected via the modem.

☞ **Continue C.R. after POST**

This option allows user to enable console redirection after O.S has loaded.

➤On   Enable console redirection after O.S has loaded.

➤Off   Disable this function. (Default value)

☞ Assert NMI on SERR

If thisoption is set to enabled, PCI bus system error (SERR) is enabled and is routed to NMI.

➡ Enabled   Enable Assert NMI on SERR. (Default value)

➡ Disabled   Disable this function.

☞ Post Error Pause

If this item is set to enabled, the system will wai for user intervention on critical POST errors. If this item is disabled, the system will boot with no inten=rvention if possible.

➡ Enabled   Enable Post Error Pause. (Default value)

➡ Disabled   Disable this function.

☞AC-LINK

This option provides user to set the mode of operation if an AC / power loss occurs.

➡ Power On   System power state when AC cord is re-plugged.

➡ Stay Off   Do not power on system when AC power is back.

➡ Last State   Set system to the last sate when AC power is removed. Do not power on system when AC power is back. (Default value)
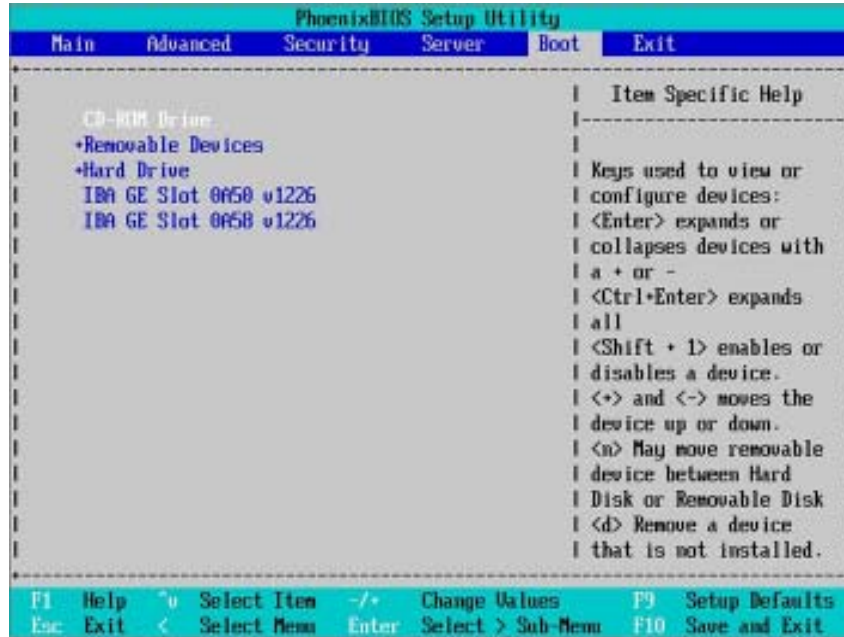
Boot

Figure 5: Boot

♦ About This Section: Boot

The "Boot" menu allows user to select among four possible types of boot devices listed using the up and down arrow keys. By applying <+> and <Space> key, you can promote devices and by using the <-> key, you can demote devices. Promotion or demotion of devices alerts the priority that the system uses to search for boot device on system power on.

☞ Boot Device Priority

▶ Removable Device / Hard Drive / CD-ROM Drive/

These three fields determines which type of device the system attempt to boot from after **PhoenixBIOS Post** completed. Specifies the boot sequence from the available devices. If the first device is not a bootable device, the system will seek for next available device.
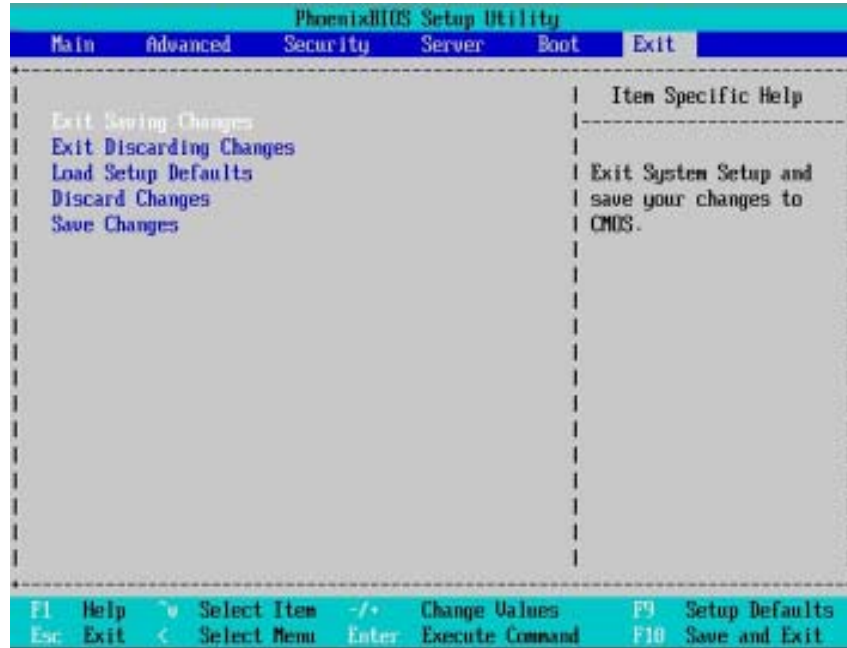
Exit

Figure 6: Exit

🔥 About This Section: Exit

Once you have changed all of the set values in the BIOS setup, you should save your chnages and exit BIOS setup program. Select **"Exit"** from the menu bar, to display the following sub-menu.

- ☞ Exit Saving Changes
- ☞ Exit Discarding Changes
- ☞ Load Settup Default
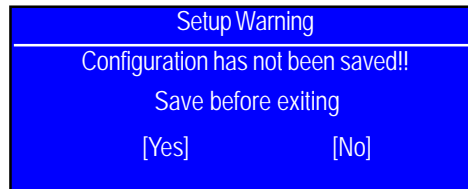- ☞ Discard Change
- ☞ Save Changes

☞ Exit Saving Changes

This option allows user to exit system setup with saving the changes.

Press <Enter> on this item to ask for the following confirmation message:

Pressing 'Y' to store all the present setting values tha user made in this time into CMOS.

Therefore, whenyou boot up your computer next time, the BIOS will

re-configure your system according data in CMOS.

```
          Setup Confirmation
    Load previous configuration now?
        [Yes]          [No]
```
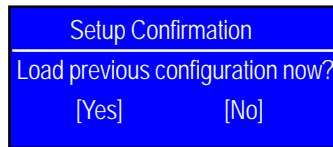
☞ Exit Discarding Changes

This option allows user to exit system setup without changing any

previous settings values in CMOS. The previous selection remain in effect.

This will exit the Setup Utility and restart your compuetr when selecting this option.

Press <Enter> on this item to ask for confirmation message.

```
            Setup Warning
    Configuration has not been saved!!
          Save before exiting
        [Yes]            [No]
```
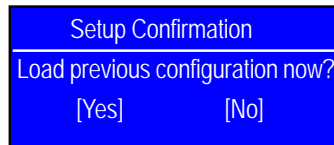
☞ Load Settup Default

This option allows user to load default values for all setup items.

When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:

```
          Setup Confirmation
    Load previous configuration now?
        [Yes]          [No]
```
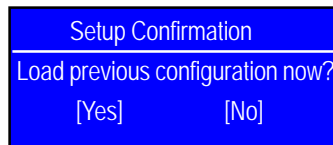
☞**Discard Changes**

This option allows user to load previos values from CMOS for all setup item.

When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:

> Setup Confirmation
> Load previous configuration now?
> [Yes]   [No]

☞**Save Changes**

This option allows user to save setup dat ato CMOS.

When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:

> Setup Confirmation
> Load previous configuration now?
> [Yes]   [No]
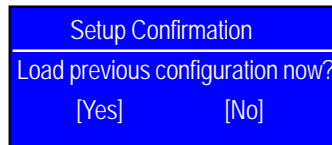
Press [Yes] to save setup daya to CMOS.

Chapter 7 Appendix

7-1: 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

Acronyms	Meaning
I/O	Input / Output
IOAPIC	Input Output Advanced Programmable Input Controller
ISA	Industry Standard Architecture
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