GA-5YXS1-RH/GA-5YXS-RH
Xeon® Processor Motherboard

USER'S MANUAL

Xeon® Processor Motherboard
Rev. 1001

* The WEEE marking on the product indicates this product must not be disposed of with user's other household waste and must be handed over to a designated collection point for the recycling of waste electrical and electronic equipment!!

* The WEEE marking applies only in European Union's member states.

Table of Content

Item Checklist

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- ☑ Serial ATA cable x 4
- ☑ IDE (ATA133) cable x 1 / Floppy cable x 1
- ☑ I/O Shield Kit
- ☑ CD for motherboard driver & utility
- ☑ GA-5YXS-RH/GA-5YXS1-RH Quick Reference Guide

* The items listed above are for reference only, and are subject to change without notice.

Chapter 1 Introduction

1-1 Considerations Prior to Installation

Preparing Your Computer

The motherboard contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Thus, prior to installation, please follow the instructions below:

1. Please turn off the computer and unplug its power cord.
2. When handling the motherboard, avoid touching any metal leads or connectors.
3. It is best to wear an electrostatic discharge (ESD) cuff when handling electronic components (CPU, RAM).
4. Prior to installing the electronic components, please have these items on top of an antistatic pad or within a electrostatic shielding container.
5. Please verify that the power supply is switched off before unplugging the power supply connector from the motherboard.

Installation Notices

1. Prior to installation, please do not remove the stickers on the motherboard. These stickers are required for warranty validation.
2. Prior to the installation of the motherboard or any hardware, please first carefully read the information in the provided manual.
3. Before using the product, please verify that all cables and power connectors are connected.
4. To prevent damage to the motherboard, please do not allow screws to come in contact with the motherboard circuit or its components.
5. Please make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing.
6. Please do not place the computer system on an uneven surface.
7. Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user.
8. If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician.

Instances of Non-Warranty

1. Damage due to natural disaster, accident or human cause.
2. Damage as a result of violating the conditions recommended in the user manual.
3. Damage due to improper installation.
4. Damage due to use of uncertified components.
5. Damage due to use exceeding the permitted parameters.
6. Product determined to be an unofficial Gigabyte product.

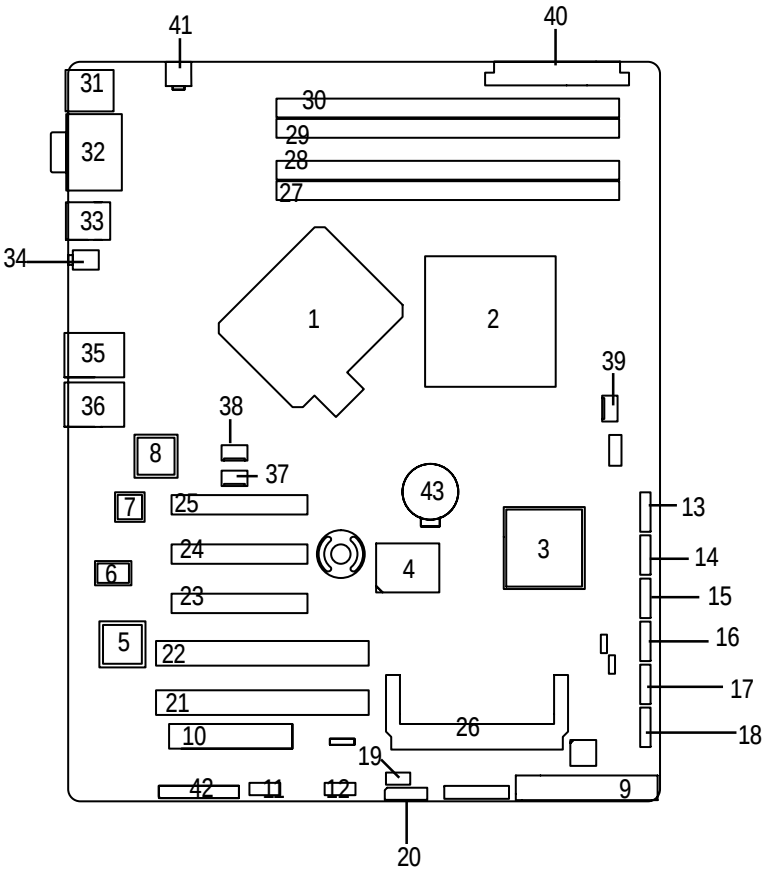
1-2 Features Summary

Form Factor	• 12" x 9.6" ATX form factor, 6 layers PCB.
CPU	• Supports single Intel® Xeon® processor • Intel Xeon® Dual-Core/Quad-Core processor in LGA 775 socket • Supports 800/1066/1333MHz FSB
Chipset	• Intel® 3200 Chipset • Intel® ICH9R
Memory	• 4 x DDR2 DIMM sockets • Supports up to 8GB 667/800 memory • Dual Channel memory bus • ECC Unbuffered DDR2 667/800 • Supports 1GB, 2GB memory
I/O Control	• ITE IT8718F-S Super I/O
Expansion Slots	• Supports 2 PCI slots 32-Bit/33MHz • Supports 1 PCI-Express x8 slot • Supports 2 PCI-Express x8 slots (x1 bandwidth)
SATA RAID Controller	• Built in LSI SW RAID 0/1/10
On-Board Graphic	• XGI Volari Z9s • 32MB DDR2
Internal Connector	• 1 x 24-pin ATX power connector • 1 x 4-pin ATX power connector • 1 x IDE connector • 1 x Floppy connector • 2 x USB 2.0 connectors for additional 4 ports by cable • 1 x front panel connecctor • 1 x CPU Fan connector • 2 x System Fan connecctor • 1 x IPMB connecctor • 1 x SMBus connecctor • 6 x SATA 3.0Gb/s connectors
Rear Panel I/O	• 2 x PS/2 ports • 1 x VGA port • 1 x COM port • 1 x ID Switch • 2 x LAN RJ45 ports
Hardware Monitor	• Enhanced features with DDR 1.8V, VCC3 (3.3V) , VCORE, CPU

Temperature, and	/System Temperature values viewing • CPU/System Fan Revolution Detect • CPU shutdown when overheat
On-Board LAN	• Intel® 82566DC & 82573LGbE controllers (GA-5YXS1-RH) • Intel® 82566DC & 82573VGbE controller (GA-5YXS-RH) • Supports dual Gigabit LAN ports • Supports WOL
BIOS	• Phoenix BIOS on 8Mb flash ROM • Support console redirection
Additional Features	• PS/2 Mouse wake up from S1 under Windows Operating System • External Modem wake up • Supports S1, S4, S5 under Windows Operating System • Wake on LAN (WOL) • Wake on Ring (WOR) • AC Recovery • Supports 4-pin Fan controller

1-3 GA-5YXS1-RH/GA-5YXS-RH Motherboard Components

1. CPU
2. Intel 3200
3. Intel ICH9R
4. ITE IT8718F-S
5. XGI Volari Z9s
6. VGA Memory
7. Intel 82566DC GbE
8. Intel 82573L GbE (GA-5YXS1-RH)
8. Intel 82573V GbE (GA-5YXS-RH)
9. IDE cable connector
10. Floppy cable connector
11. Front USB2 connector
12. Front USB3 connector
13. SATA1 cable connector
14. SATA2 cable connector
15. SATA3 cable connector
16. SATA4 cable connector
17. SATA5 cable connector
18. SATA6 cable connector
19. IPMB connector
20. SMBus connector
21. PCI_2 slot(32bit/33MHz)
22. PCI_1 slot(32bit/33MHz)
23. PCI-E x8 slot
24. PCI-E x8 Slot (x1 bandwidth)
25. PCI-E x8 Slot (x1 bandwidth)
26. IPMI BMC Module solt (optional)
27. DIMM1
28. DIMM2
29. DIMM3
30. DIMM4
31. PS/2 ports
32. VGA port/ COM port
33. USB ports
34. ID Switch
35. RJ45 LAN port
36. RJ45 LAN port
37. CPU fan cable connector
38. System fan cable connector
39. System fan cable connector
40. 24-pin ATX power connector
41. 8-pin ATX power connector
42. Front panel connector
43. Battery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Chapter 2 Hardware Installation Process

2-1 Installing Processor and CPU Haet Sink

CAUTION

Before installing the processor and cooling fan, adhere to the following cautions:

1. The processor will overheat without the heatsink and/or fan, resulting in permanent irreparable damage.
2. Never force the processor into the socket.
3. Apply thermal grease on the processor before placing cooling fan.
4. Please make sure the CPU type is supported by the motherboard.
5. If you do not match the CPU socket Pin 1 and CPU cut edge well, it may damage the CPU. Please change the insert orientation.

2-1-1: Installing CPU

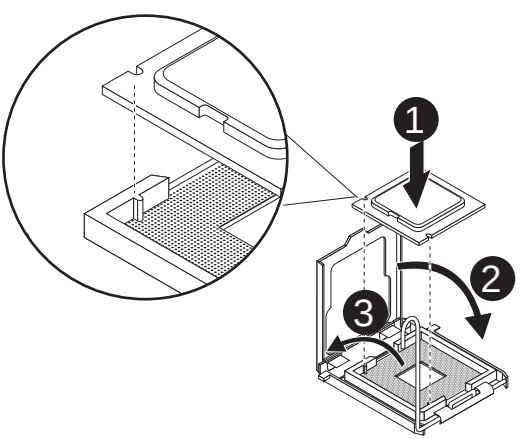
Step 1 Raise the metal locking lever on the socket.

Step 2 Remove the plastic covering on the CPU socket.

Step 3 Lift the metal cover.

Step 4 Insert the CPU with the correct orientation. The CPU only fits in one orientation.

Step 5 Once the CPU is properly placed, please replace the metal cover and push the metal lever back into locked position.



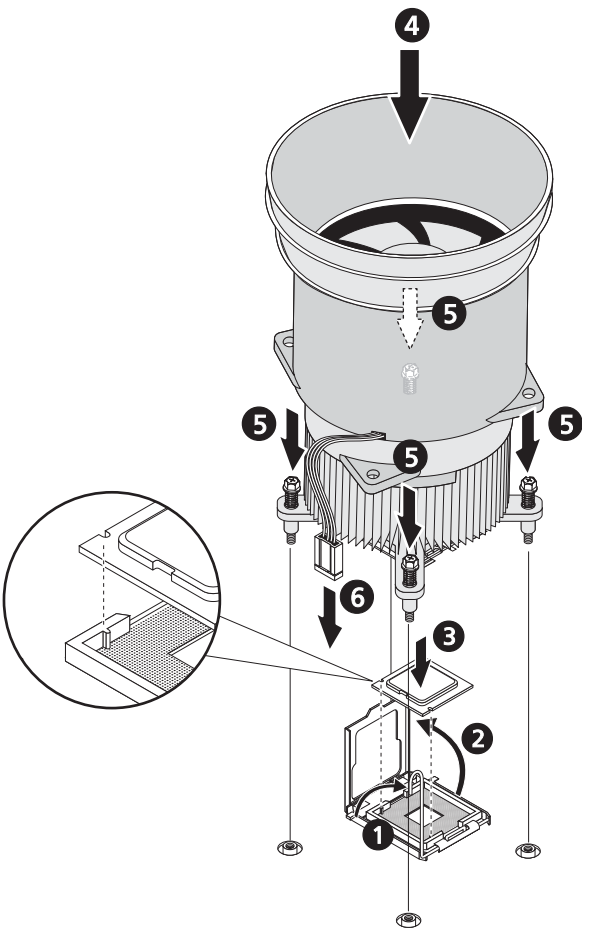
2-1-2: Installing Cooling Fan

Step 1 Attach the heat sink clip to the processor socket.

Step 2 Place the cooling fan on the heat sink.

Step 3 Secure the cooing fan with screws.

Step 4 Connect processor fan can cable to the processor fan connector



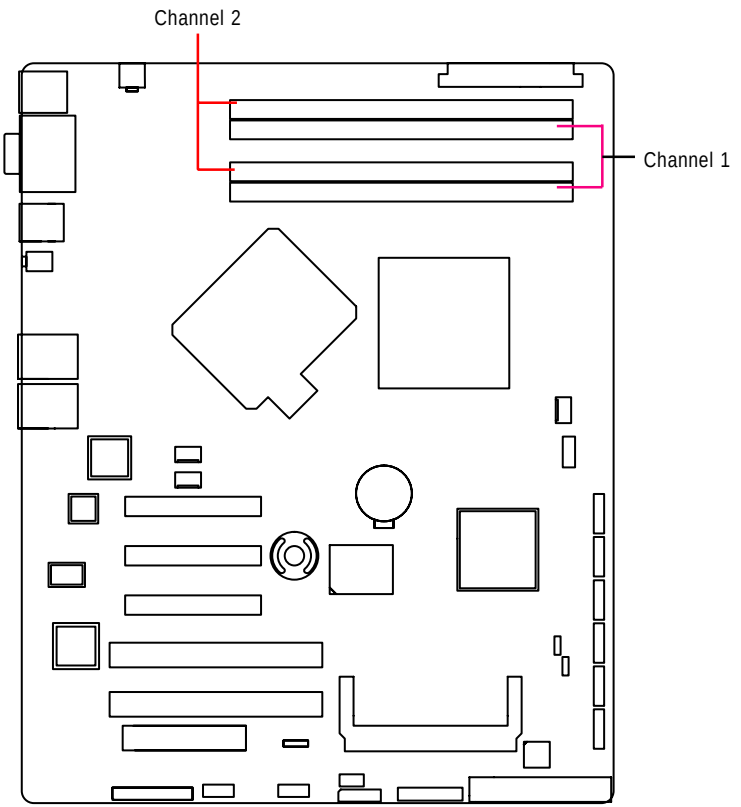
2-2 Install Memory Modules

CAUTION

Before installing the memory modules, please comply with the following conditions:

1. Please make sure that the memory used is supported by the motherboard. It is recommended that memory of similar capacity, specifications and brand be used.
2. Before installing or removing memory modules, please make sure that the computer power is switched off to prevent hardware damage.
3. Memory modules have a foolproof insertion design. A memory module can be installed in only one direction. If you are unable to insert the module, please switch the direction.

The motherboard supports DDR2 memory modules, whereby BIOS will automatically detect memory capacity and specifications. Memory modules are designed so that they can be inserted only in one direction. The memory capacity used can differ with each slot.

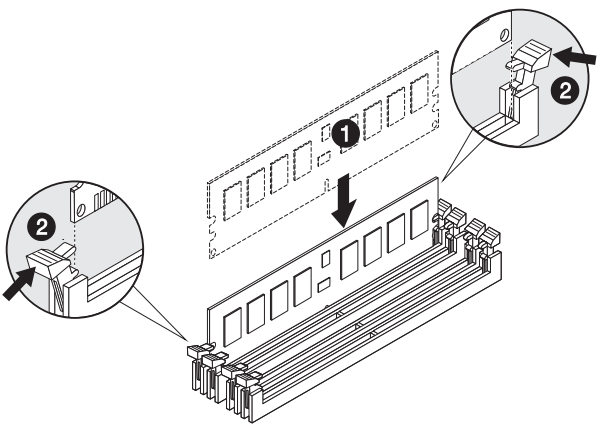


Installation Steps:

1. Unlock a DIMM socket by pressing the retaining clips outwards.Aling a DIMM on the socket such that the notch on the DIMM exactly match the notch in the socket.
2. Firmly insert the DIMMinto the socket until the retaining clips snap back in place.

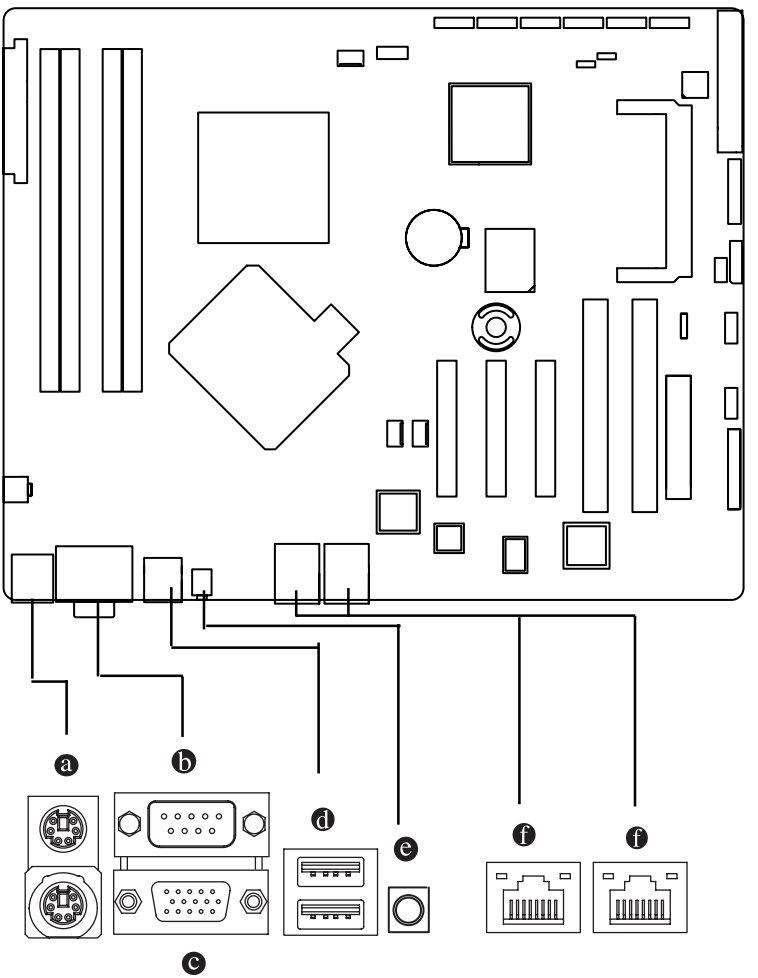
   NOTE!! We recommened you to populate the same device size on each socket and the same DIMM size.

4. Reverse the installation steps if you want to remove the DIMM module.



2-3 Connect ribbon cables, cabinet wires, and power supply

2-3-1 : I/O Back Panel Introduction



ⓐ PS/2 Keyboard and PS/2 Mouse Connector

To install a PS/2 port keyboard and mouse, plug the mouse to the upper port (green) and the keyboard to the lower port (purple).

ⓑ Serial Port

This connector supports 1 standard COM port, device like modem can be connected to Serial port.

ⓒ VGA Port

Connect the monitor cable to this port.

ⓓ USB Ports

Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, speaker...etc. have a standard USB interface.
Also make sure your OS supports USB controller. If your OS does not support USB controller, please contact OS vendor for possible patch or driver updated. For more information please contact your OS or device(s) vendors.

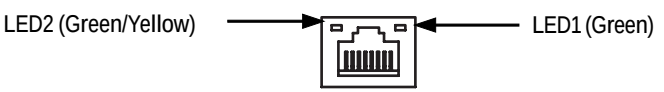
ⓔ ID Switch

This switch provide the function for indicating the locatation of specified motherboard insde the rack.

ⓕ LAN Port s

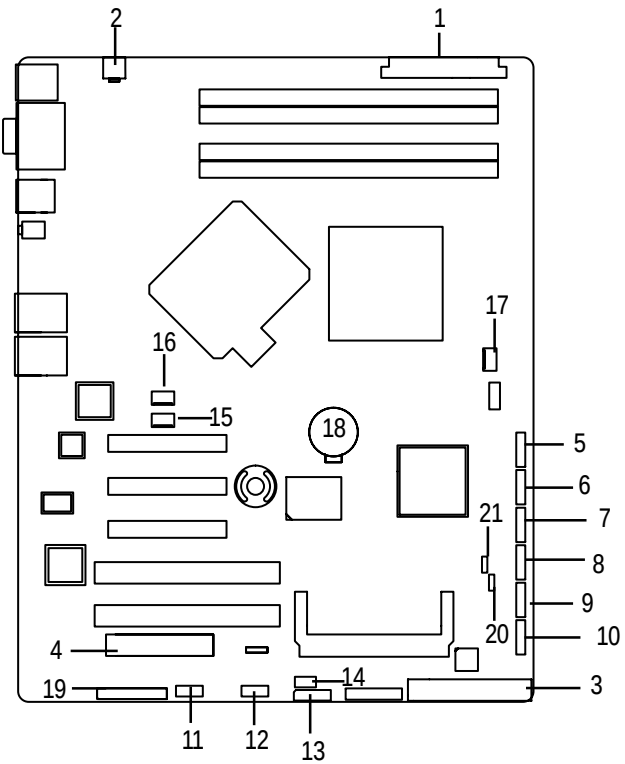
The LAN port provides Internet connection of Gigabit Ethernet with data transfer speeds of 10/100/1000Mbps.

LAN LED Description



Name	Color	Condition	Description
LED1	Green	ON	LAN Link / no Access
	Green	BLINK	LAN Access
	-	OFF	Idle
LED2	-	OFF	10Mbps connection
	-	OFF	Port identification with 10 Mbps connection
	Green	ON	100Mbps connection
	Green	BLINK	Port identification with 100Mbps connection
	Yellow	ON	1Gbps connection
	Yellow	BLINK	Port identification with 1Gbps connection

2-4 Connectors Introduction & Jumper Setting



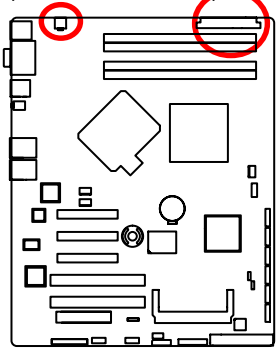
1. ATX2
2. ATX1
3. IDE1 (IDE cable connector)
4. FDC1 (Floppy cable connector)
5. SATA_1 (SATA cable connector)
6. SATA_2 (SATA cable connector)
7. SATA_3 (SATA cable connector)
8. SATA_4 (SATA cable connector)
9. SATA_5 (SATA cable connector)
10. SATA_6 (SATA cable connector)
11. USB2 (USB cable connector)
12. USB3 (USB cable connector)
13. HDDBPB1
14. IPMB1
15. FAN1 (CPU fan cable connector)
16. FAN2 (System fan cable connector)
17. FAN3 (System fan cable connector)
18. BAT1 (Battery)
19. F_Panel (Front Panel connector)
20. CLR_CMOS1
21. RECOVER1

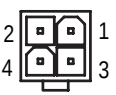
1/2) ATX2/1 (24-pin/4-pin ATX power connector)

With the use of the power connector, the power supply can supply enough stable power to all the components on the motherboard. Before connecting the power connector, please make sure that all components and devices are properly installed. Align the power connector with its proper location on the motherboard and connect tightly.

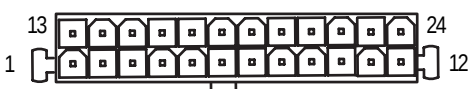
The ATX_12V power connector mainly supplies power to the CPU. If the ATX_12V power connector is not connected, the system will not start.

Caution! Please use a power supply that is able to support the system voltage requirements. It is recommended that a power supply that can withstand high power consumption be used (300W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable system or a system that is unable to start. If you use a power supply that provides a 24-pin ATX power connector, please remove the small cover on the power connector on the motherboard before plugging in the power cord; otherwise, please do not remove it.





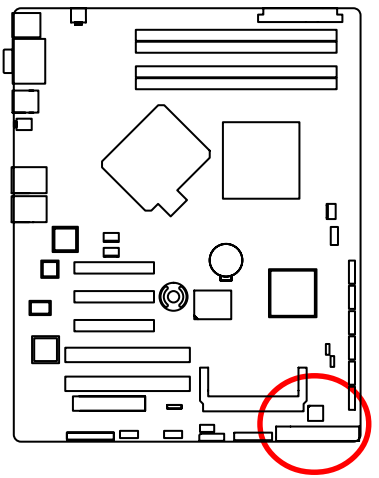
Pin No.	Definition
1	GND
2	GND
3	+12V
4	+12V

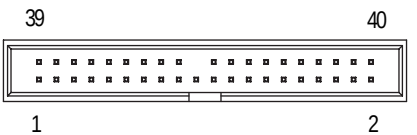


Pin No.	Definition	Pin No.	Definition
1	3.3V	13	3.3V
2	3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON(soft On/Off)
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	Power Good	20	-5V
9	5V SB(stand by +5V)	21	+5V
10	+12V	22	+5V
11	+12V(Only for 24-pin ATX)	23	+5V (Only for 24-pin ATX)
12	3.3V(Only for 24-pin ATX)	24	GND(Only for 24-pin ATX)

3) IDE1 (IDE cable connector)

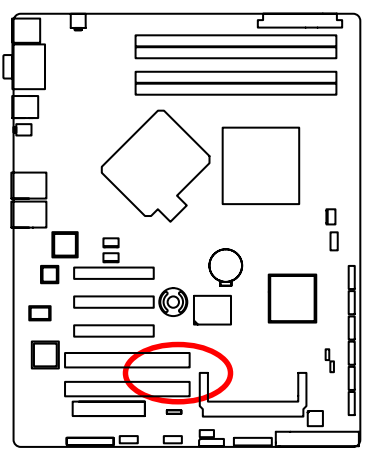
An IDE device connects to the computer via an IDE connector. One IDE connector can connect to one IDE cable, and the single IDE cable can then connect to two IDE devices (hard drive or optical drive). If you wish to connect two IDE devices, please set the jumper on one IDE device as Master and the other as Slave (for information on settings, please refer to the instructions located on the IDE device). Before attaching the IDE cable, please take note of the foolproof groove in the IDE connector.

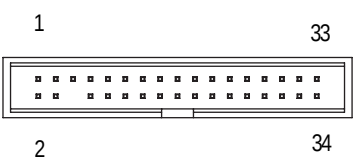




4) FDC1 (Floppy cable connector)

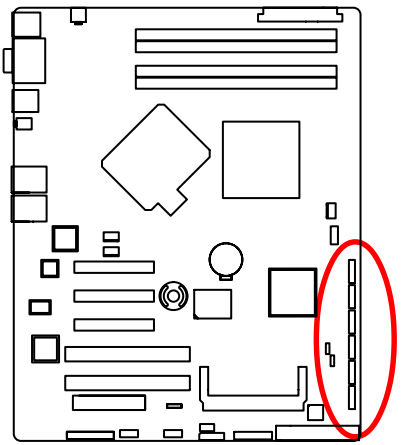
The FDD connector is used to connect the FDD cable while the other end of the cable connects to the FDD drive. The types of FDD drives supported are: 360 KB, 720 KB, 1.2 MB, 1.44 MB and 2.88 MB. Before attaching the FDD cable, please take note of the foolproof groove in the FDD connector.





5/ 6/ 7/ 89/10) SATA_ 1~6 (Serial ATA cable connectors)

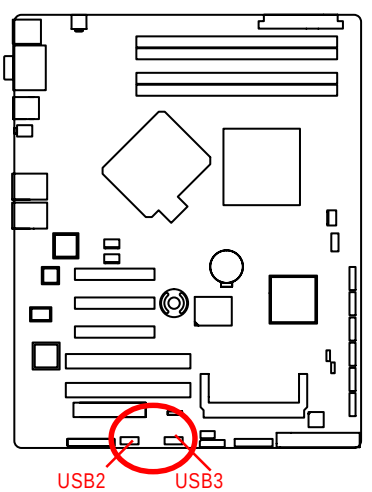
SATA 3Gb/s can provide up to 300 MB/s transfer rate. Please refer to the BIOS setting for the SATA 3Gb/s and install the proper driver in order to work properly.

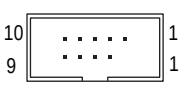


Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

11/ 12) USB2/USB3 (USB cable connectors)

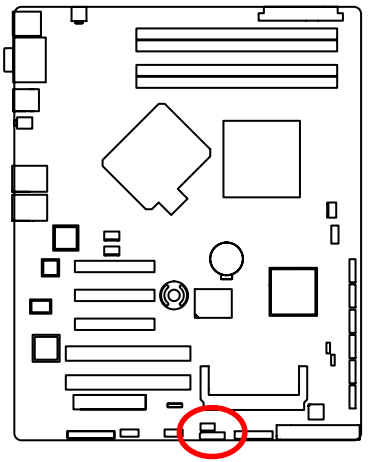
Be careful with the polarity of the front USB connector. Check the pin assignment carefully while you connect the front USB cable, incorrect connection between the cable and connector will make the device unable to work or even damage it. For optional front USB cable, please contact your local dealer.





Pin No.	Definition
1	No Pin
2	NC
3	GND
4	GND
5	USB Dx+
6	USB Dy+
7	USB DX-
8	USB DY-
9	VCC
10	VCC

13) HDDBPB1 (SMBUS connector for power supplyr)



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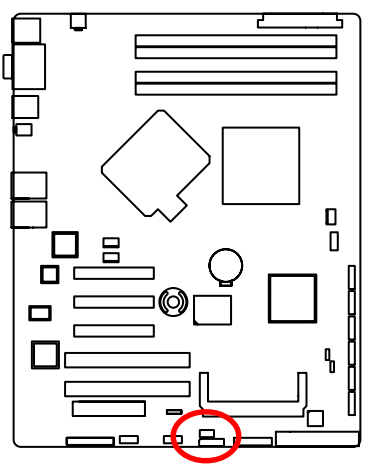
Pin No.	Definition
1	SCL
2	SDA
3	DETECT
4	HDD LED
5	INT
6	GND

14) IPMB1 (IPMB connector)



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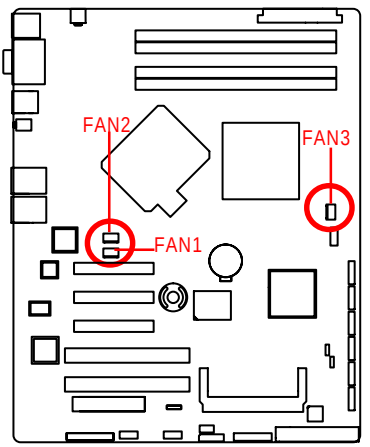
Pin No.	Definition
1	SCL
2	GND
3	SDA

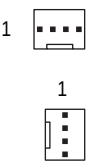
15/ 16/ 17) FAN1 (CPU fan / System fan cable connectors)

The cooler fan power connector supplies a +12V power voltage via a 3-pin/4-pin(CPU_FAN) power connector and possesses a foolproof connection design.

Most coolers are designed with color-coded power connector wires. A red power connector wire indicates a positive connection and requires a +12V power voltage. The black connector wire is the ground wire (GND).

Remember to connect the CPU/system fan cable to the CPU_FAN/SYS_FAN connector to prevent CPU damage or system hanging caused by overheating.





Pin No.	Definition
1	GND
2	12V
3	Sense
4	Control

18) BAT1 (Battery)

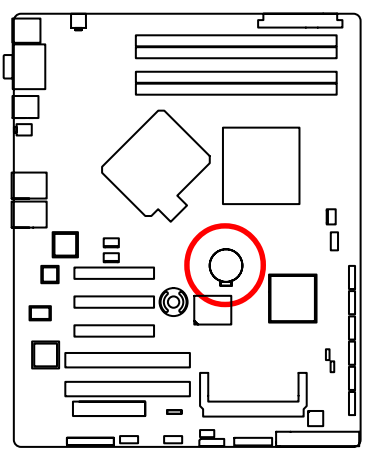
If you want to erase CMOS...

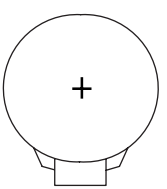
1.Turn OFF the computer and unplug the power cord.

2.Remove the battery, wait for 30 second.

3.Re-install the battery.

4.Plug the power cord and turn ON the computer.



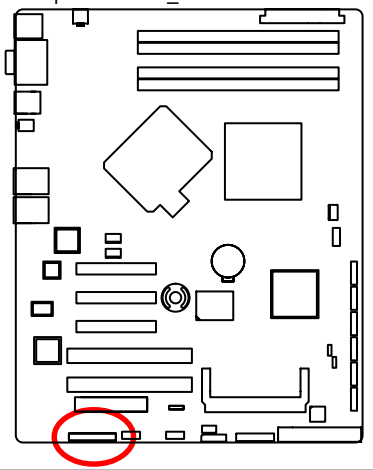


CAUTION

- 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.

16) F_Panel (2X13 Pins Front Panel connector)

Please connect the power LED, PC speaker, reset switch and power switch of your chassis front panel to the F_PANEL connector according to the pin assignment above.

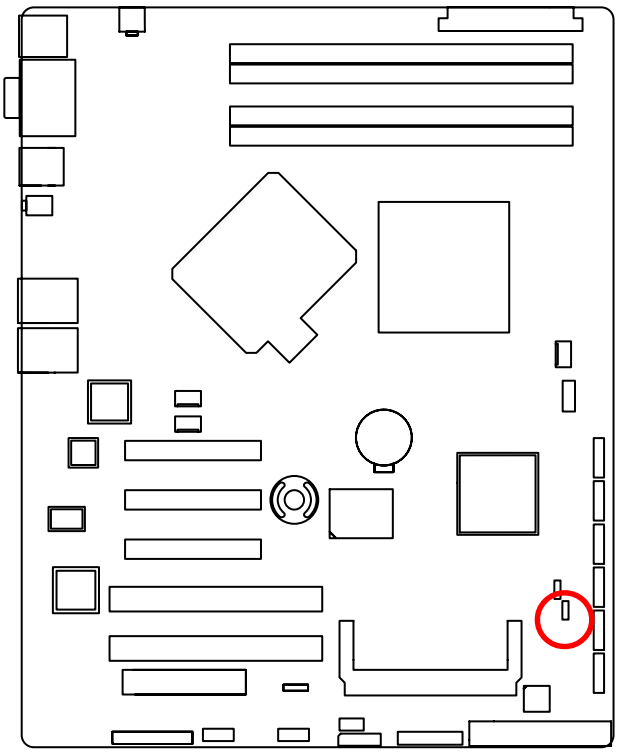


Pin No.	Signal Name	Description
1.	FP_PWR_LED	Power LED Signal
2.	P_5V_AUX	P5V Stand By Power
3.	Pin reomoved	Pin removed
4.	ID_LED-	ID LED Signal cathode(-)
5.	FP_PWR_LED-	Power LED Signal cathode(-)
6.	FP_ERR_LED-	Error LED Signal cathode(-)
7.	FP_HD_LED+	Hard Disk LED Signal anode (+)
8.	FP_SYSRDY_LED+	System Fan Fail LED Signal anode (+)
9.	GND	Ground
10.	FP_SYSRDY_LED-	System Fan Fail LED Signal cathode(-)
11.	BMC_MBMC_PWRBTN-	No connect
12.	P_3V3_AUX	P3.3V Stand By Power
13.	GND	Ground
14.	LANA_ACT-	LAN1 access LED Signal cathode(-)
15.	FP_RSTBTN-	Reset button cathode(-)
16.	SENSOR_SMBDAT1	SMBusData
17.	GND	LAN access LED Signal anode (+)
18.	SENSOR_SMBCLK1	SMBusClock
19.	FP_ID_SW-	ID Switch Signal cathode(-)
20.	CASEOPEN	Chassis intrusion Signal
21.	FP_SPKR-	External speaker Signal cathode(-)
22.	P_3V3_AUX	P3.3V Stand By Power
23.	FP_BUZ_STOP-	Buzzer stop Signal cathode(-)
24.	LANB_ACT-	LAN2 access LED Signal cathode(-)
25.	P_3V3_AUX	P3.3V Stand By Power
26.	NC	No connect

20) CLR_CMOS1 (Clear CMOS jumper)

You may clear the CMOS data to restore its default values by this jumper.

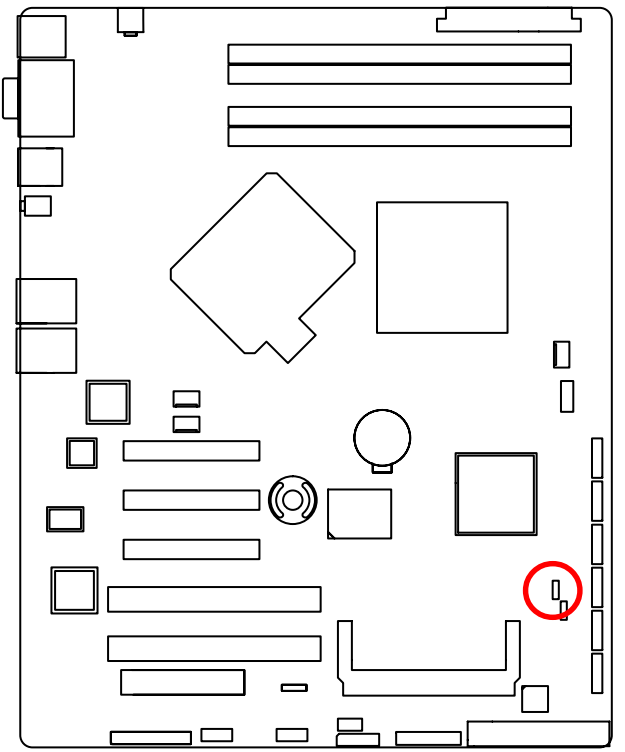
Default value doesn't include the "Shunter" to prevent from improper use this jumper. To clear CMOS, temporarily short 2-3 pin.



1 1-2 Close: Normal operation (Default setting)

1 2-3 Close: Clear CMOS

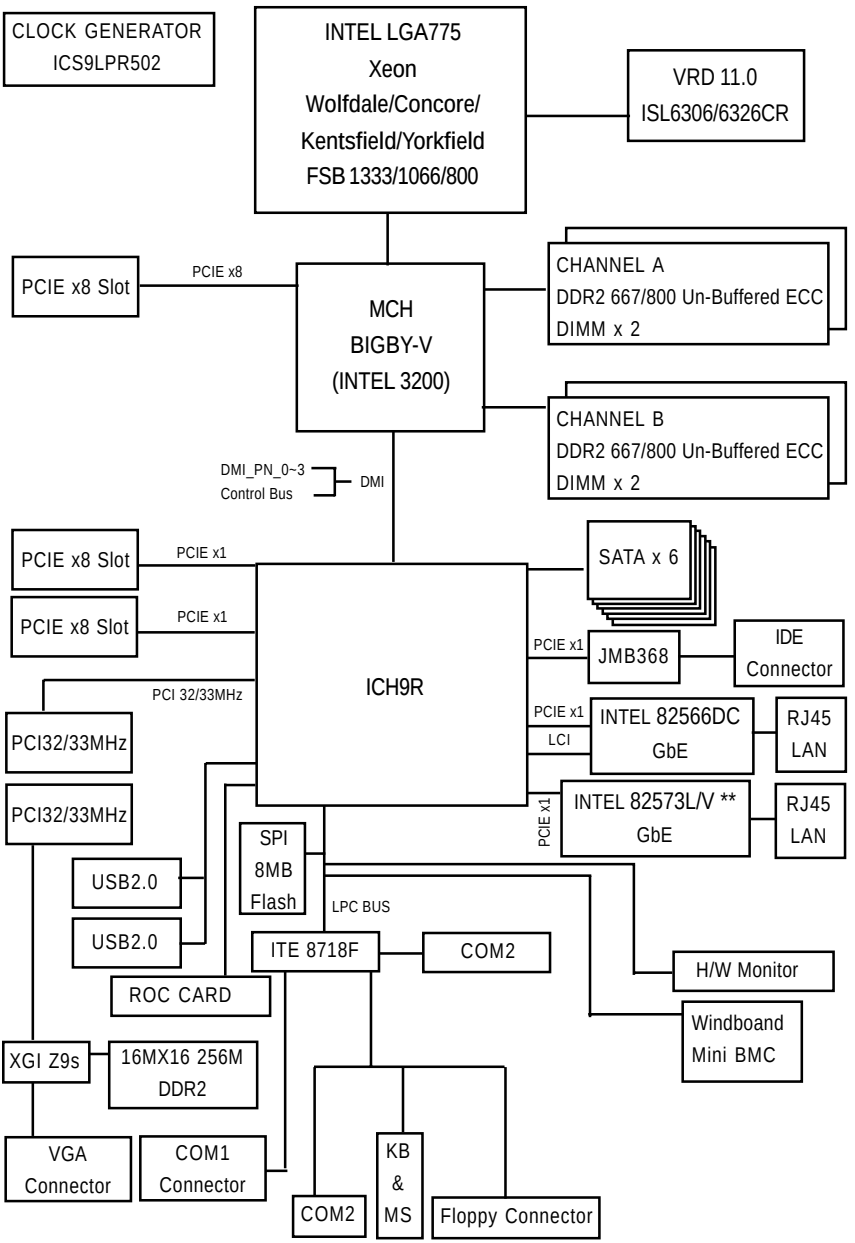
21) RECCOVERY1 (BIOS recovery jumper)



1  1-2 Close: Enable BIOS Recovery function.

1  2-3 Close: Normal operation(Default setting)

2-5 Block Diagram



**INTEL 82573L GbE for GA-5YXS1-RH; INTEL 82573V GbE for GA-5YXS-RH

Chapter 3 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>.

Select the Load Setup Defaults item in the BIOS Exit Setup menu when somehow the system is not stable as usual. This action makes the system reset to the default settings for stability.

- **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 optionsin 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.

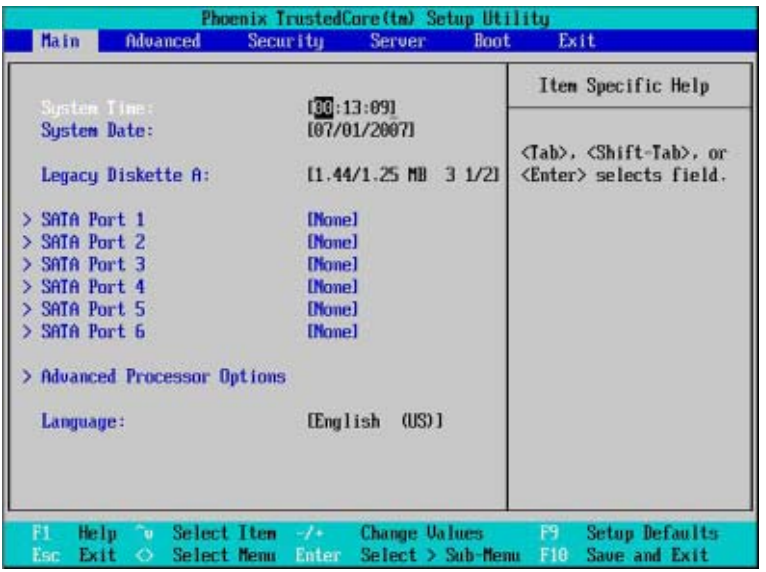


Figure 1: Main

☞ 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)

☞ SATA Port 1/2/3/4/5/6

The category identifies the types of Serial SATA hard disk from drive 1 to 6 that has been installed in the computer. System 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.

Hard drive information should be labled on the outside device casing. Enter the appropriate option based on this information.

▸▸ TYPE

1-39: Predefined types.

Users: Set parameters by User.

Auto: Set parameters automatically. (Default setting)

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

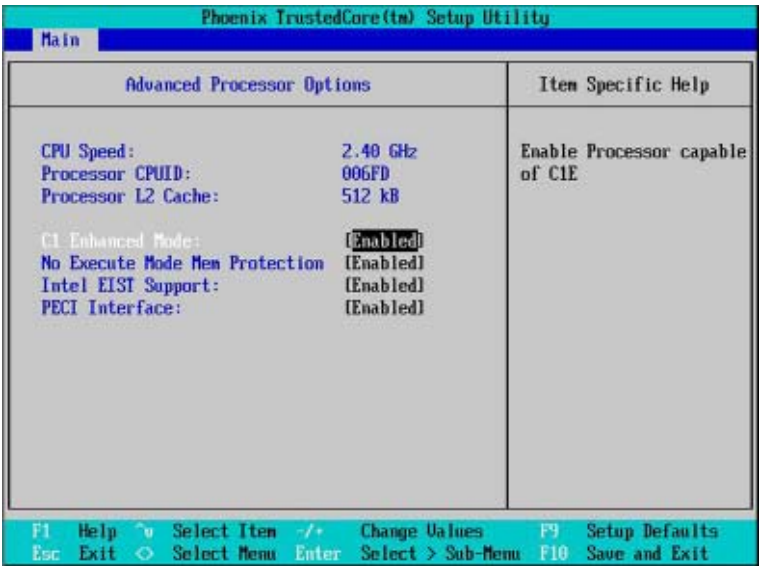


Figure 1-1: Advanced Processor Option

☞Advanced Processor Option

This category includes the information of CPU Speed, Processor CPUID and Processor L2 Cache. Setup menu for C1 Enhanced Mode, No Execute Mode Memory Protection, Intel EIST Support, and PECI Interface.

☞C1 Enhanced Mode

With enabling C1 Enhanced Mode, all loical processors in the physical processor have entered the C1 state, the processor will reduce the core clock frequency to system bus ratio and VID.

▸▸Enabled	Enabled C1 Enhanced Mode. (Default setting)
▸▸Disabled	Disables C1 Enhanced Mode.

☞No Execute Mode Mem. Protection

▸▸Enabled	Enable No Execute Mode Memory Protection function. (Default setting)
▸▸Disabled	Disables No Execute Mode Memory Protection function.

☞Intel EIST Support

Select the Power Management desired:

⏩Enabled	C states and GV1/GV3 are enabled. (Default setting)
⏩C States Only	GV1/GV3 are disabled.
⏩GV1/GV3 Only	C states are disabled.
⏩Disabled	C states and GV1/GV3 are disabled.

☞PECI Interface

The Platform Environmental Control Interface (PECI Interface) is designed specifically to convey system management information from the processor. It is a proprietary single wire bus between the processor and the chipset or other health monitoring device. Data from the Digital Thermal Sensors are processed and stored in a processor register (MSR) which is queried through the Platform Environment Control Interface (PECI).

⏩Enabled	Enable PECI Interface. (Default setting)
⏩Disabled	Disable this function.

Advanced

About This Section: Advanced

With this section, allowing user to configure your system for basic operation. User can change the Memory Configuration, PCI Configuration, I/O Configuration, Advanced Chipset Control and Hardware Monitor.

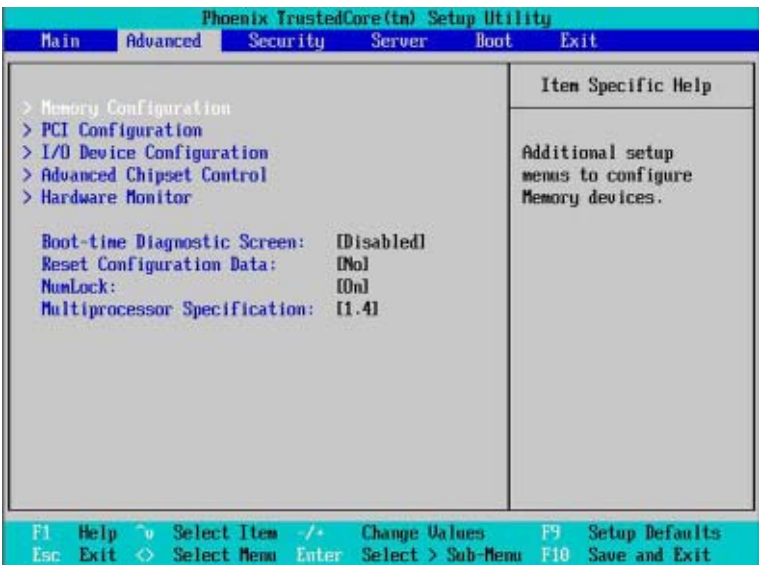


Figure 2: Advanced

Memory Configuration

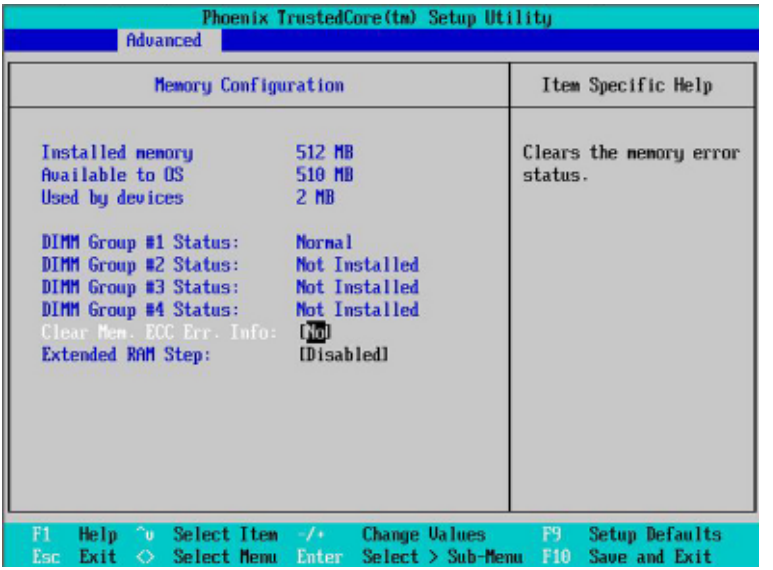


Figure 2-1: Memory Configuration

☞ Installed Memory/Available to OS/Used by devices/ DIMM Group 1,2,3,4 Status

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

☞Clear Mem. ECC Err Info

▸▸Yes	Clear the memory status.
▸▸No	Disable this function. (Default setting)

☞Extended RAM Step

▸▸Enabled	Enable test extended memroy process.
▸▸Disabled	Disable this function. (Default setting)

PCI Configuration

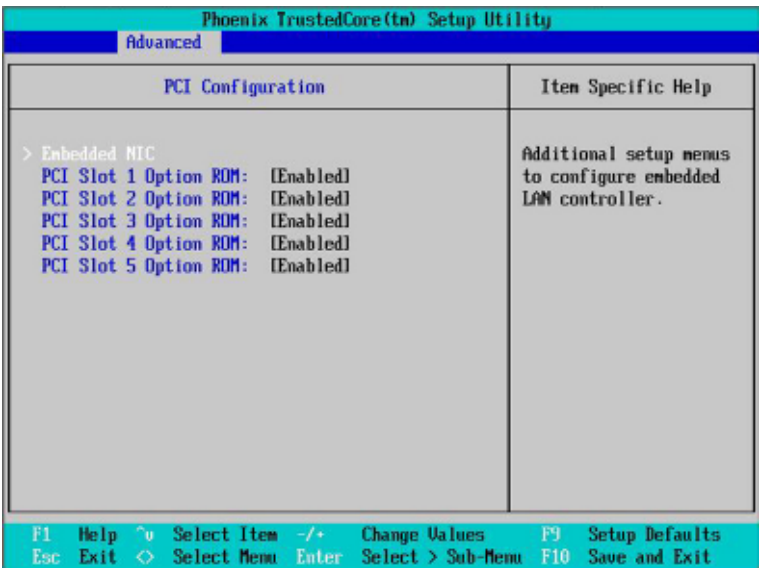


Figure 2-2: PCI Configuration

☞Embedded NIC

▶▶Onboard LAN1 Control

▶▶Enabled	Enable onboard LAN device. (Default setting)
▶▶Disabled	Disable this function.

▶▶LAN1 Option ROM

▶▶Enabled	Enableing this item to initialize device expansion ROM.
▶▶Disabled	Disable this function. (Defualt setting)

▶▶Onboard LAN2 Control

▶▶Enabled	Enable onboard LAN device. (Default setting)
▶▶Disabled	Disable this function.

▶▶LAN2 Option ROM

▶▶Enabled	Enableing this item to initialize device expansion ROM.
▶▶Disabled	Disable this function. (Defualt setting)

☞PCI Slot 1/2/3/4/5 Option ROM

⏩ Enabled	Enableing this item to initialize device expansion ROM. (Defualt setting)
⏩ Disabled	Disable this function.

I/O Device Configuration

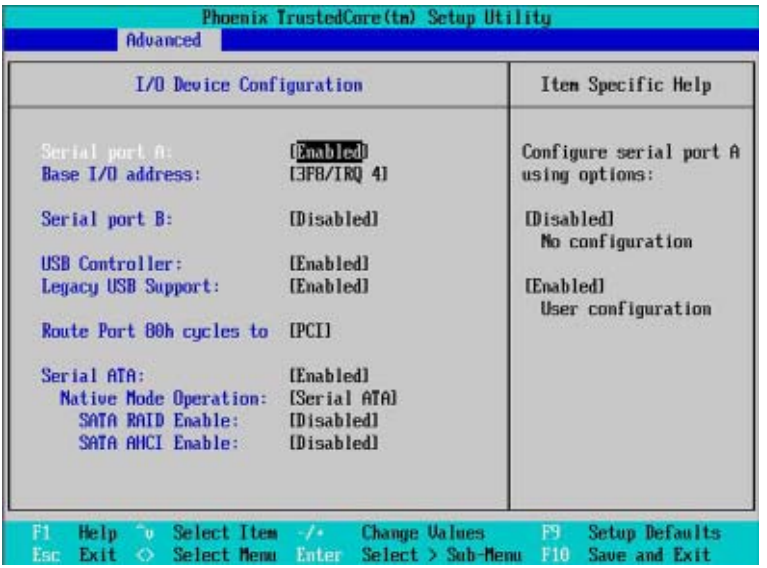


Figure 2-3: I/O Device Configuration

☞ Serial Port A

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

- ▸▸ Enabled — Enable the configuration (Default setting)
- ▸▸ Disabled — Disable the configuration.

▸▸ Base I/O Address/IRQ

- ▸▸ 3F8/IRQ4 — Set IO address to 3F8/IRQ4. (Default setting)
- ▸▸ 2F8/IRQ3 — Set IO address to 2F8/IRQ3.
- ▸▸ 3E8/IRQ4 — Set IO address to 3E8/IRQ4.
- ▸▸ 2E8/IRQ3 — Set IO address to 2E8/IRQ3.

☞Serial Port B

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

- ▸▸ Enabled — Enable the configuration
- ▸▸ Disabled — Disable the configuration.(Default setting)

▶▶ Base I/O Address/IRQ

▶▶ 3F8/IRQ4 Set IO address to 3F8/IRQ4.

▶▶ 2F8/IRQ3 Set IO address to 2F8/IRQ3. (Default setting)

▶▶ 3E8/IRQ4 Set IO address to 3E8/IRQ4.

▶▶ 2E8/IRQ3 Set IO address to 2E8/IRQ3.

☞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 setting)

▶▶ Disabled Disbale this function.

☞ Legacy USB Support

This option allows user to function support for legacy USB.

▶▶ Enabled Enables support for legacy USB. (Default setting)

▶▶ Disabled Disables support for legacy USB.

☞Route Port 80h cycles to

Set route port 80h cycles to either PCI or LPC bus.

▶▶ PCI Set Route Port 80h I/O cycles to the PCI bus. (Default setting)

▶▶ LPC Set Route Port 80h I/O cycles to the LPC bus.

☞ Serial ATA

▶▶ Enabled Enables on-board serial ATA function. (Default setting)

▶▶ 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 setting)

▶▶ Serial ATA Set Native mode to Serial ATA.

▶▶ SATA RAID Enable

▶▶ Enabled Set this item to enable and configure SATA RAID function.

▶▶ Disabled Disabled this function. (Default setting)

▶▶ 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. (Default setting)

Advanced Chipset Control

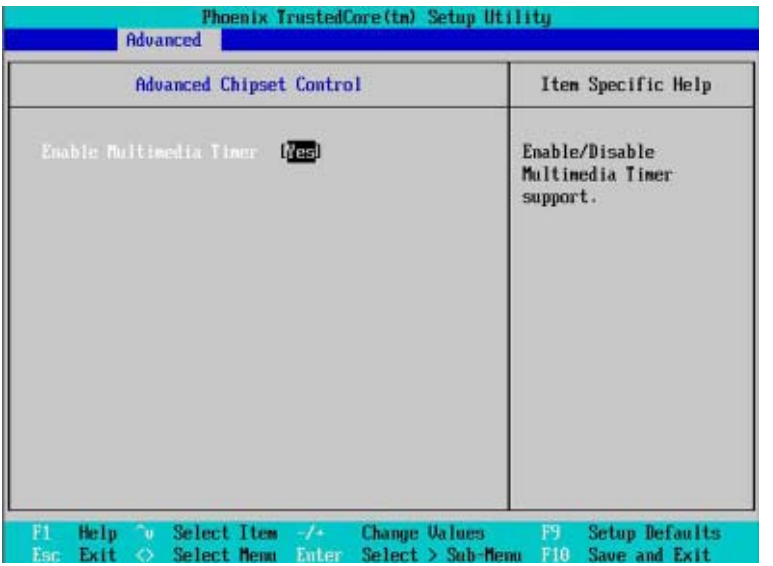


Figure 2-4: Advanced Chipset Control

☞Enable Multimedia Timer

- ▸▸Yes — Enable Multimedia Timer support. (Default setting)
- ▸▸No — Disable this function.

Hardware Monitor

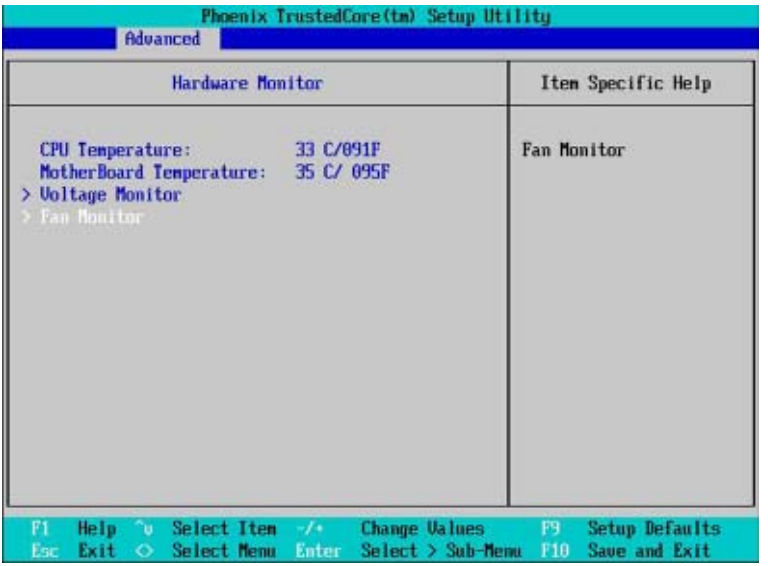


Figure 2-5: Hardware Monitor

☞ **CPU / Motherboard Temperature**

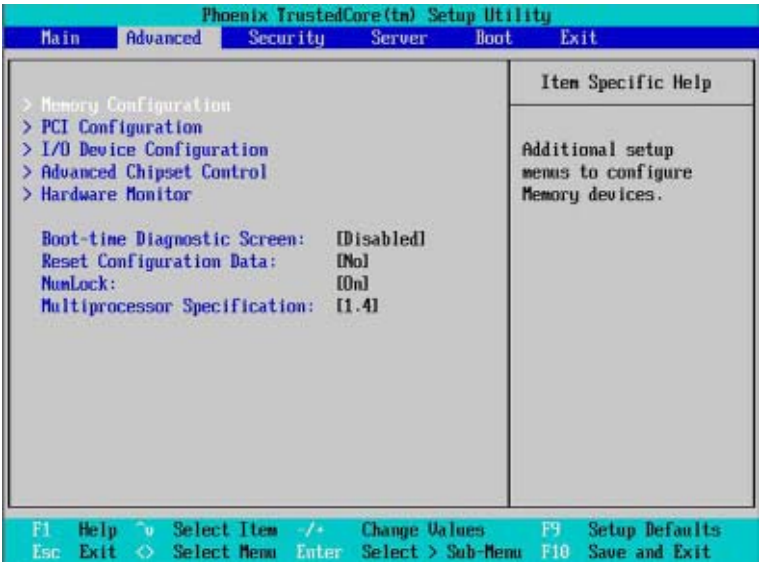
▸▸Display the current CPU temperature, Motherboard, and Ambient temperature.

☞ **Voltage Monitor: DDR1V8, VCC3, VCORE, 0V9, 5V**

▸▸Detect system's voltage status automatically.

☞ **FAN Monitor: CPU FAN/ Front FAN/ System FAN (RPM)**

▸▸Display the current System 1/2 and CPU fan speed.



☞Boot -time Diagnostic

When this item is enabled, system will shows Diagnostic status when system boot.

- ▸▸Enabled — Enable Boot-time Diagnostic.
- ▸▸Disabled — Disable this function. (Default setting)

☞Reset Configuration Data

- ▸▸Yes — Reset all configuration data.
- ▸▸No — Do not make any changes. (Default setting)

☞NumLock

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

- ▸▸On — Enable NumLock.
- ▸▸Off — Disable this function.

☞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 setting)
- ▸▸1.1 — Support M PS Version 1.1.

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.

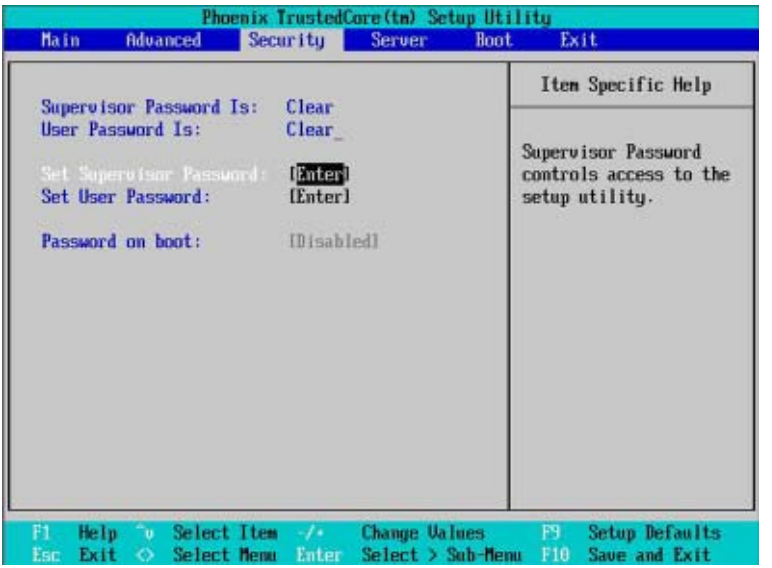


Figure 3: Security

☞ 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.

☞ 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.

☞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 setting)

Server

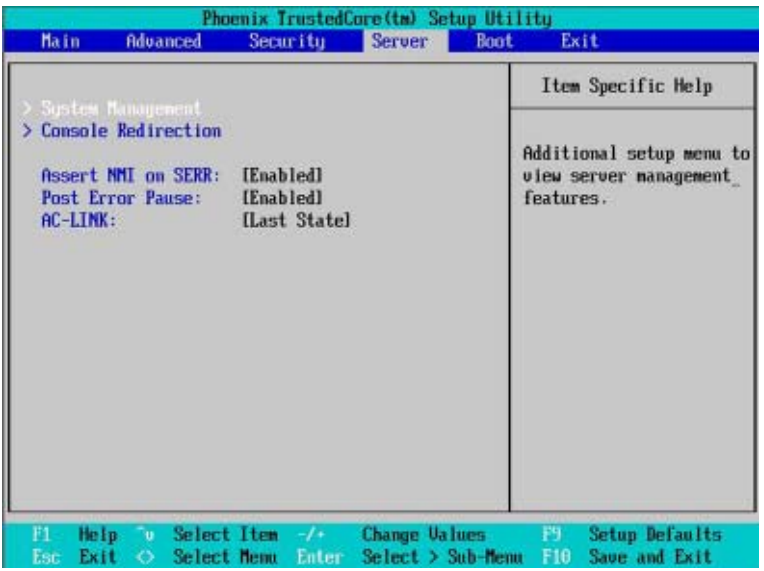


Figure 4: Server

System Management

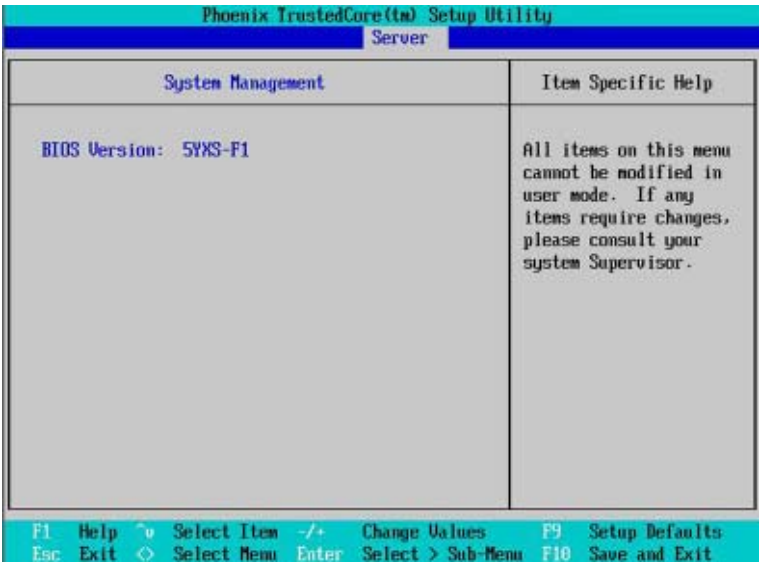


Figure 4-1: System Management

☞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

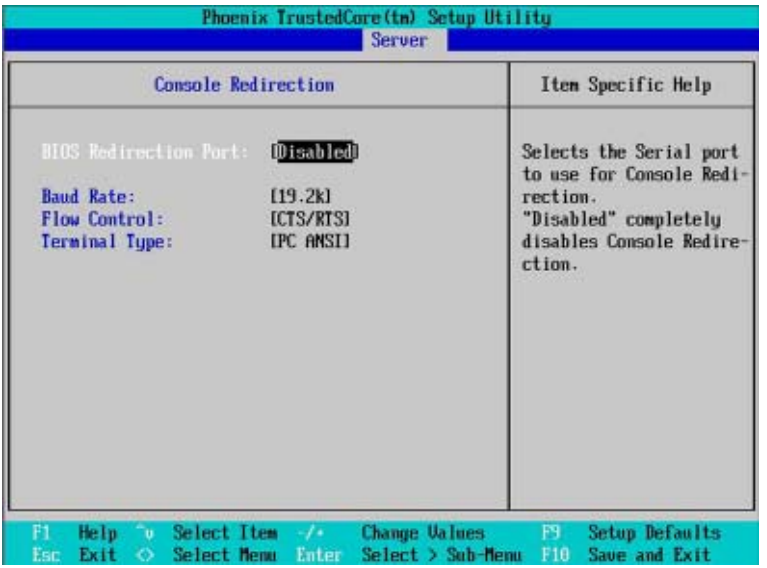


Figure 4-2: Console Redirection

☞BIOS Redirection Port

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

- ▸▸Serial Port A — Use Serial Port A as he COM port address.
- ▸▸Serial Port B — Use Serial Port B as he COM port address.
- ▸▸Disabled — Disable this function. (Default setting)

☞ 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

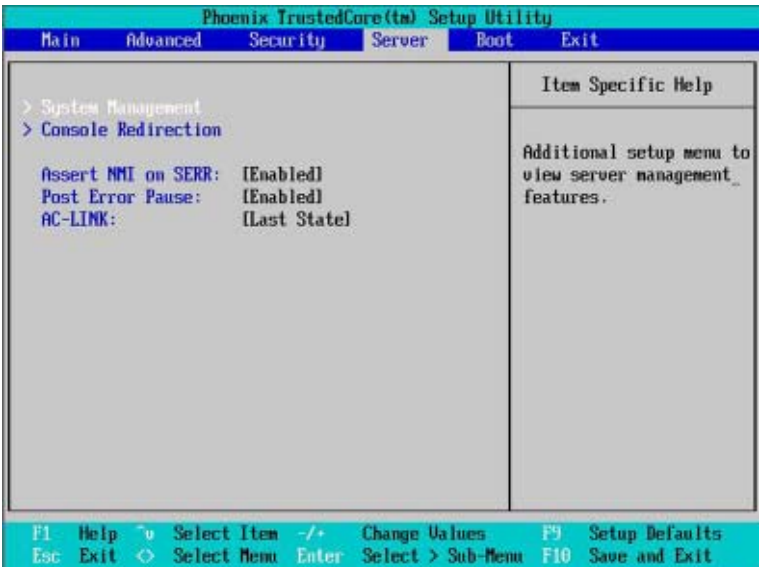
This option provide user to enable the flow control function.

⏩None	Not supported.
⏩XON/OFF	Software control.
⏩CTS/RTS	Hardware control. (Default setting)

☞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



☞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 setting)
- ▸▸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 intervention if possible.

- ▸▸Enabled — Enable Post Error Pause. (Default setting)
- ▸▸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. (Default setting)
- ▸▸Last State — Set system to the last sate when AC power is removed. Do not power on system when AC power is back.

Boot

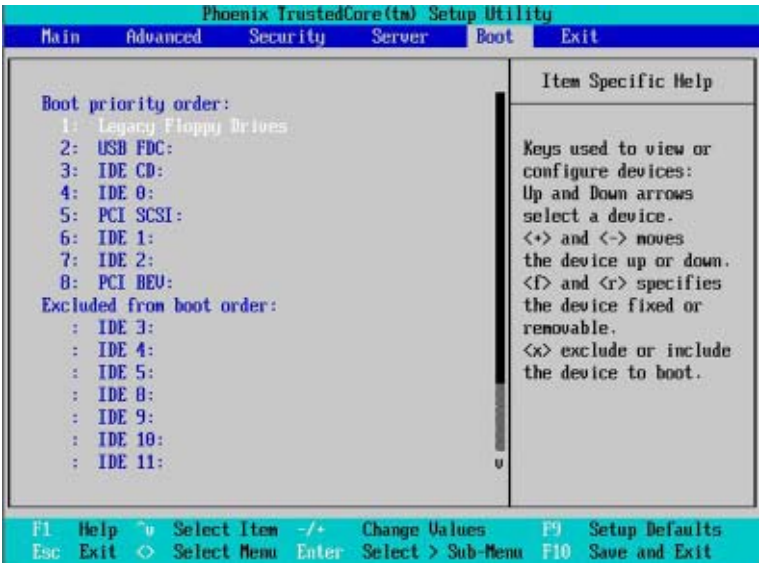


Figure 5: Boot

☞Boot Priority Order

This field 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.

Key used to view ot configure devices:

Up and Down arrows select a device.

<+> and <-> moves the device up or down.

<f> and <r> specifies the device fixed or removable.

<x> exclude or include the device to boot.

<1-4> Loads default boot secquence.

Exit

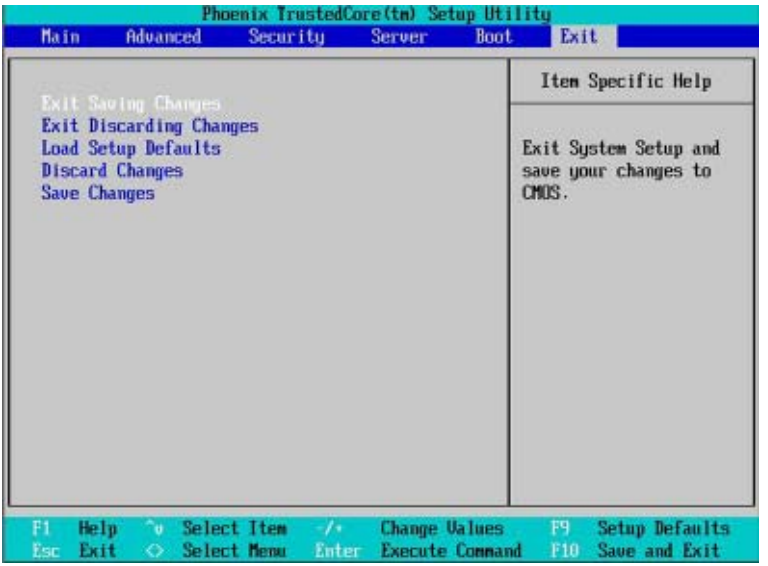


Figure 6: Exit

About This Section: Exit

Once you have changed all of the set values in the BIOS setup, you should save your changes 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

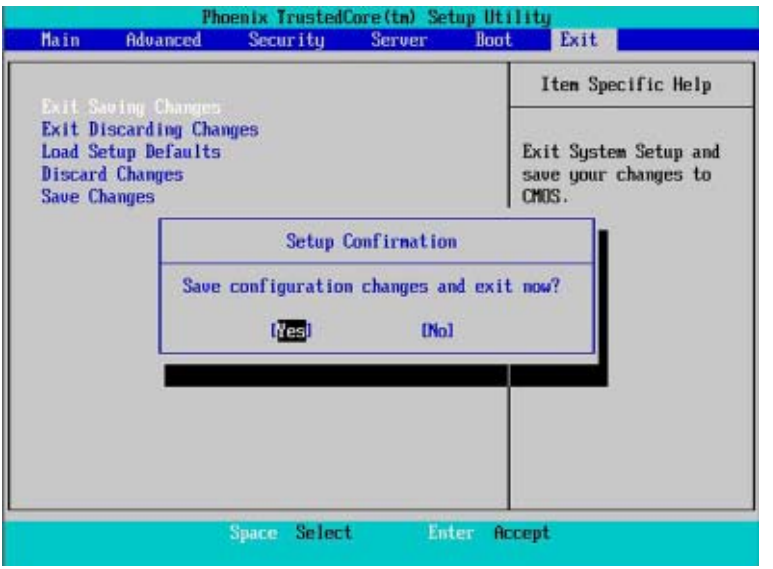
This option allows user to exit system setup with saving the changes.

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

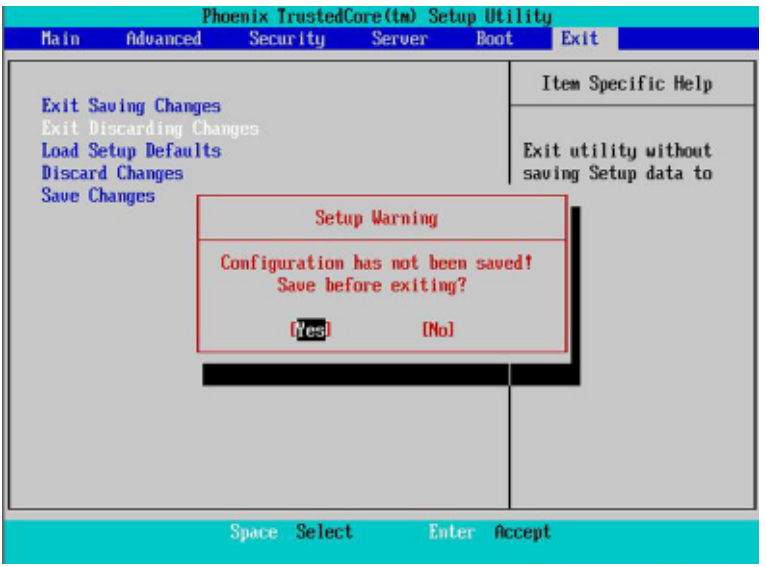
re-configure your system according data in CMOS.



☞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.

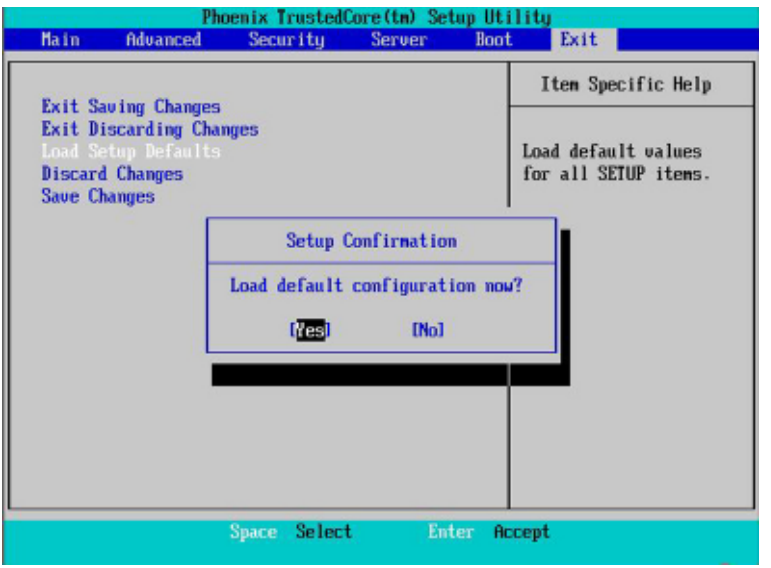
This will exit the Setup Utility and restart your compuetr when selecting this option.



☞Load Settup Default

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

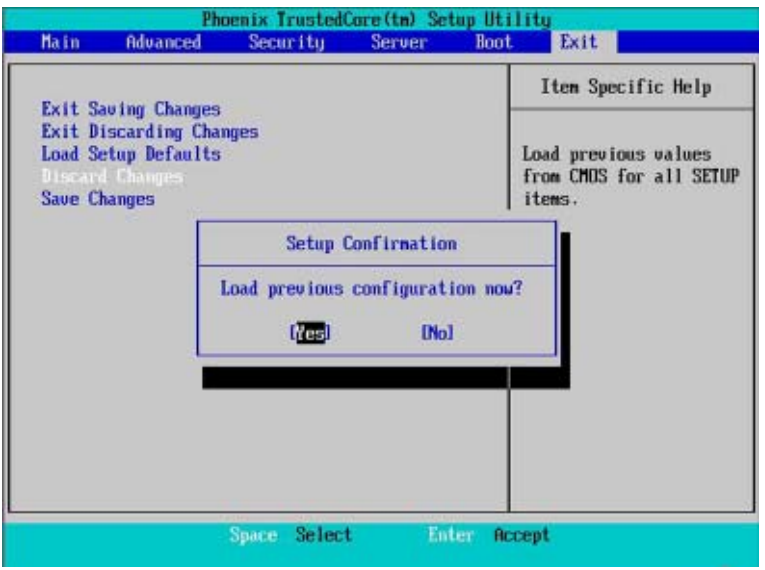
When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:



☞Discard Changes

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

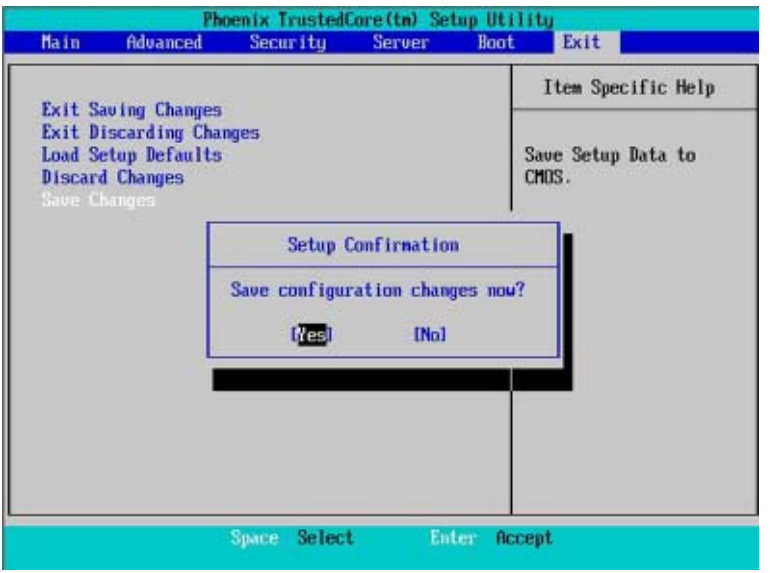
When you press <Enter> on this item, you will get a confirmation dialog box with a message as below:



☞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:



Press [Yes] to save setup daya to CMOS.