GA-5DXSL-RH

Xeon® 3000 Series Processor Motherboard

USER'S MANUAL

Xeon® 3000 Series Processor Motherboard
Rev. 1001

Table of Content

 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.

Installing the motherboard to the chassis…

If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit write or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning.

Chapter 1　GA-5DXSL-RH Motherboard Component

No.	Descriprion	No.	Descriprion
1	CPU	26	PCI4
2	Intel 3200 chipset	27	PCI-E3 (x1 bandwidth)
3	Intel ICH9R	28	PCI-E2 (x4 bandwidth)
4	ITE IT8718F-S	29	PCI-E1 (x8 bandwidth)
5	BIOS Flash ROM	30	DIMMA1
6	XGI Volari Z9s	31	DIMMA2
7	VGA Memory	32	DIMMB1
8	Broadcom BCM5721 GbE	33	DIMMB2
9	Intersil 6326 (PWM cintroller)	34	CPU fan cable connector
10	Floppy cable connector	35	Power fan cable connector
11	Front USB 1 cable connector	36	System fan cable connector
12	Front USB 2 cable connector	37	Front fan cable connector
13	COM2	38	Rear fan cable connector
14	SATA cable connector 0	39	I2C connector
15	SATA cable connector 1	40	PS/2port
16	SATA cable connector 2	41	USB port
17	SATA cable connector 3	42	COM port
18	SATA cable connector 4	43	VGA port
19	SATA cable connector 5	44	LAN port
20	Front Panel	45	24-pin ATX power connector
21	TPM connector	46	8-pin ATX power connector
22	IPMB2	47	Case open intrusion jumper
23	IPMB1	48	Clear CMOS jumper
24	IPMI BMC Mudole Slot	49	Battery
25	PCI5		
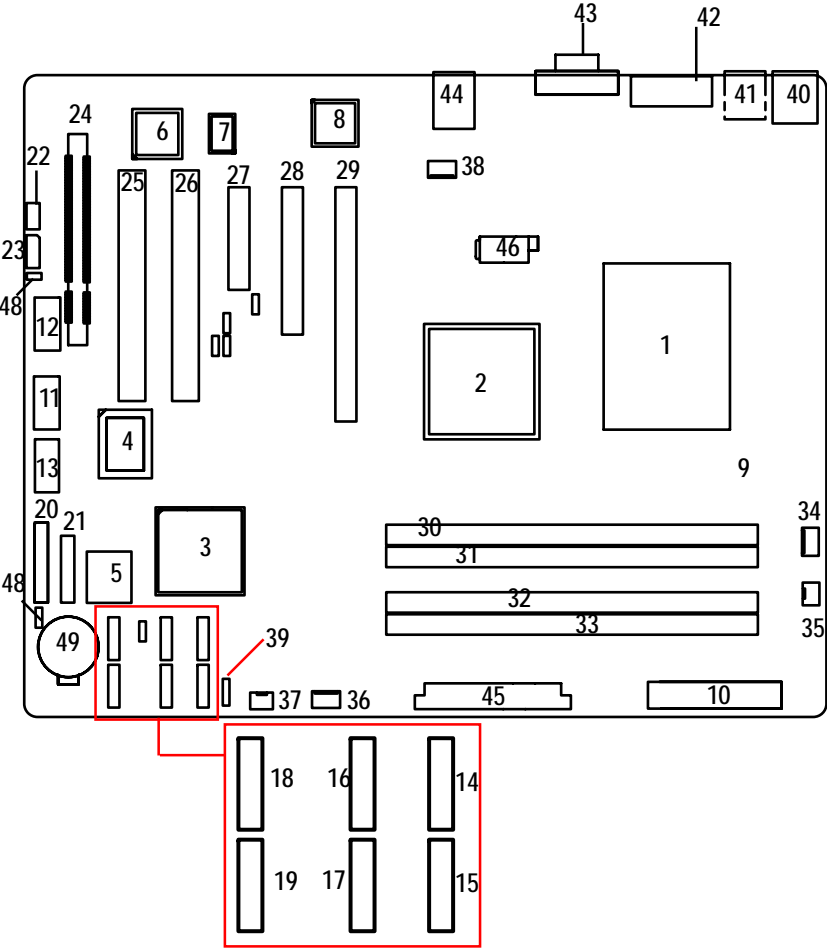
Chapter 2   Hardware Installation Process

2-1: Install Memory Module

GA-5DXSL-RH has 4 dual inline memory module (DIMM) sokcets. It supports Dual Channels Technology. The BIOS will automatically detects memory type and size during system boot. For detail DIMM installation, please refer to the following instructions.

Channel B

Channel A
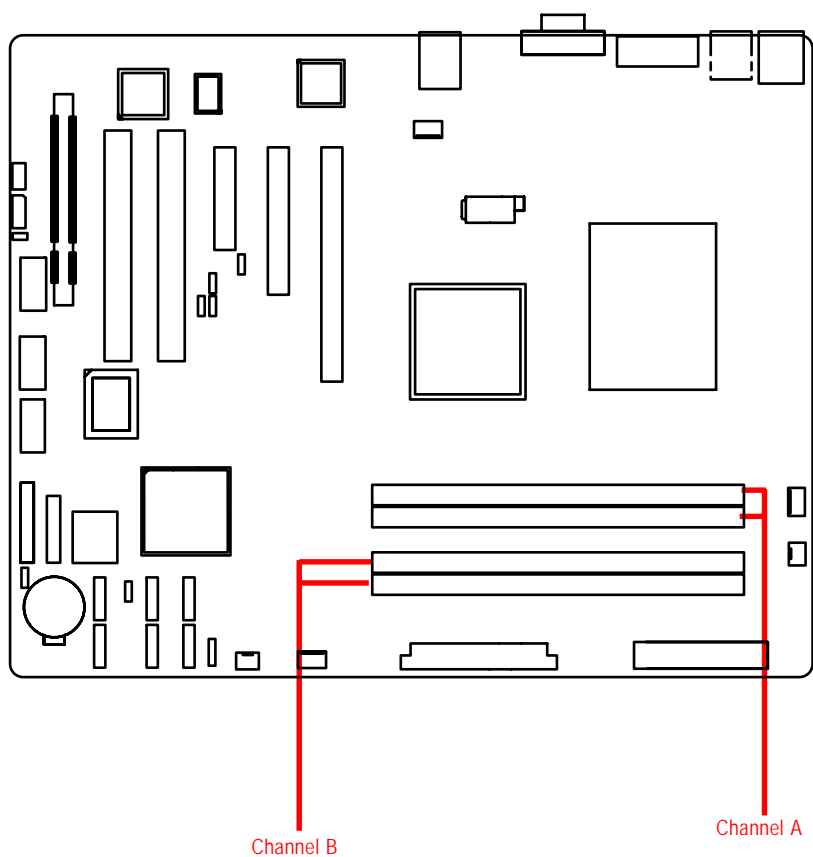
Table 1. Supported DIMM Module Type

Size	Organization	RAM Chips/DIMM
256MB	8MB x 8 x 4 bks	8
	16MB x 4 x 4bks	16
512MB	16MB x 8 x 4bks	8
	32MB x 4 x 4bks	16
1GB	32MB x 8 x 4bks	8
	64MB x 4 x 4bks	16

Installation Steps:

1. Unlock a DIMM socket by pressing the retaining clips outwards.
2. Aling a DIMM on the socket such that the notch on the DIMM exactly match the notch in the socket.
3. Firmly insert the DIMMinto the socket until the retaining clips snap back in place.
4. **When installing the memory into the DIMM socket, we recommend to populate the memory as a pair. One in Channel A module and one in Channel B module for best performance. Please populate DIMM starting from Channel A (Yellow slot). 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 if you want to remove the DIMM module.
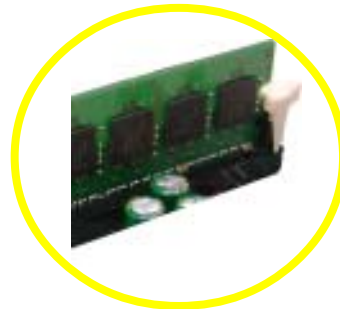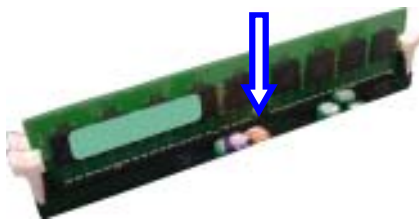
Locked Retaining Clip

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

2-2-1 : I/O Back Panel Introduction
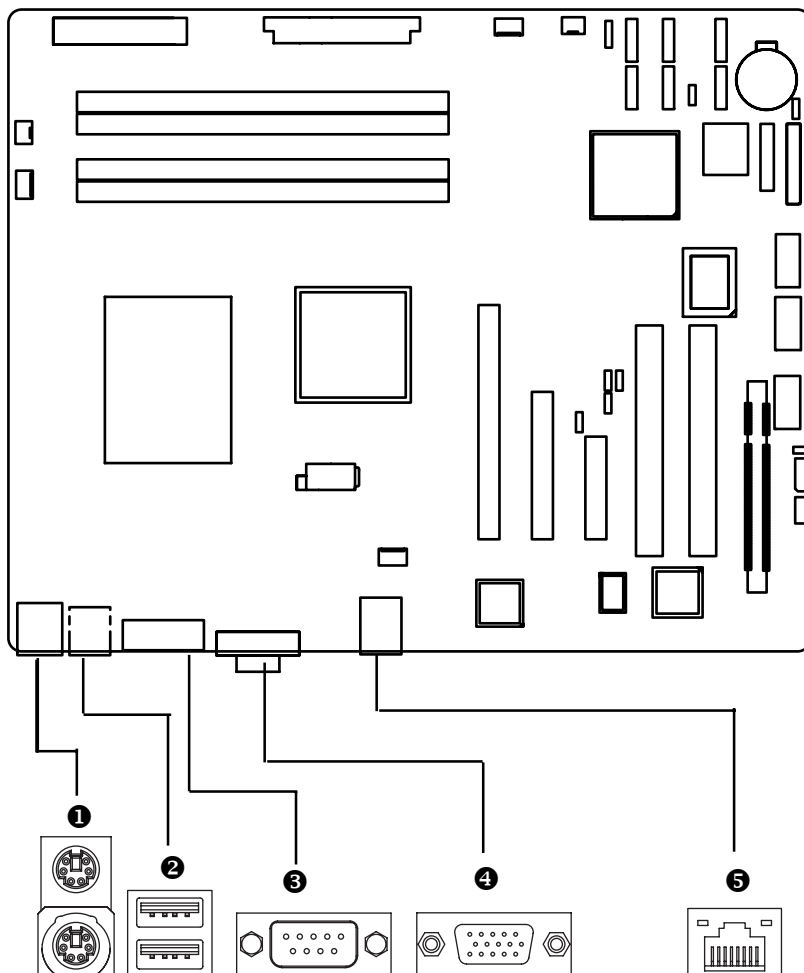
❶ **PS/2 Keyboard and PS/2 Mouse Connector**

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).

❷ **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.

❸ **Serial Port**

Modem can be connected to Serial port.

❹ **VGA Port**

Monitor can be connected to VGA port.

❺ **LAN Port**

The LAN port provides Internet connection of Gigabit Ethernet with data transfer speeds of 10/100/1000Mbps. This port supports IPMI 2.0.

LAN LED Description

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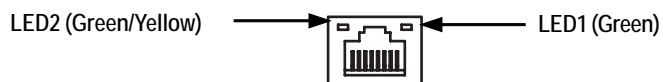
Name	Color	Condition	Description
LED1	Green	ON	LAN Link / no Access
	Green	BLINK	LAN Access
	-	OFF	Idle
LED2	-	OFF	10Mbps connection
	-	OFF	Port identification with 10 Mbps connection
	Green	ON	100Mbps connection
	Green	BLINK	Port identification with 100Mbps connection
	Yellow	ON	1Gbps connection
	Yellow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

2-3: Connectors Introduction & Jumper Setting

1. ATX1
2. ATX_12V1
3. FDD1
4. SATA0
5. SATA1
6. SATA2
7. SATA3
8. SATA4
9. SATA5
10. F_USB1
11. F_USB2
12. COM2
13. IPMB1
14. IPMB2

15. CPU_FAN
16. PSU_FAN1
17. SYS_FAN1
18. FRONT_FAN
19. REAR_FAN
20. F_Panel1
21. TPM_20
22. BAT1
23. JP1 (Clear CMOS jumper)
24. JP2_1 (Password jumper)
25. JP3_1 (BIOS recovery jumper)
26. JP4_1 (BOOT select strapsj jumper)
27. JP4_2 (BOOT select strapsj jumper)

1) ATX1 (Auxukiary Power Connector)

PIN No.	Definition
1	+3.3V
2	+3.3V
3	GND
4	+5V
5	GND
6	+5V
7	GND
8	POK
9	5VSB
10	+12V
11	+12V
12	+3.3V
13	+3.3V
14	-12V
15	GND
16	PSON
17	GND
18	GND
19	GND
20	-5V
21	+5V
22	+5V
23	+5V
24	GND
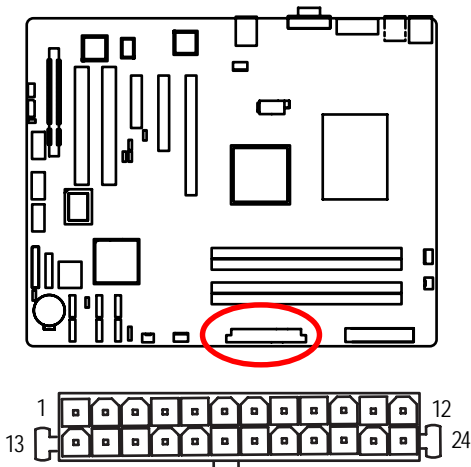
➢ AC power cord should only be connected to
your power supply unit after ATX power cable
and other related devices are firmly connected
to the mainboard.

2) ATX_12V1 (Auxukiary +12V Power Connector)
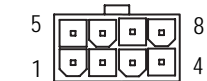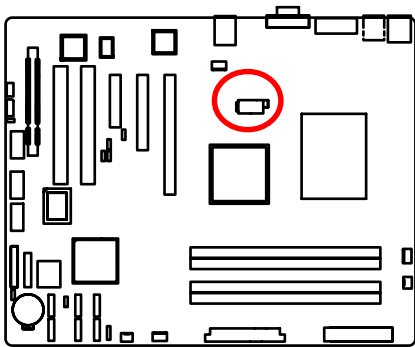
Pin No.	Definition
1	GND
2	GND
3	GND
4	GND
5	P12V_CPU
6	P12V_CPU
7	P12V_CPU
8	P12V_CPU

➢This connector (ATX +12V) is used only for
CPU Core Voltage.

3) FDD1 (Floppy cable connector)

Please connect the floppy drive ribbon cables to FDD. It supports 720K,1.2M,1.44M and 2.88Mbytes floppy disk types. The red stripe of the ribbon cable must be the same side with the Pin1.
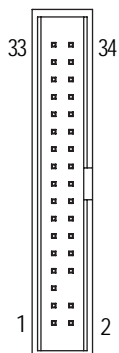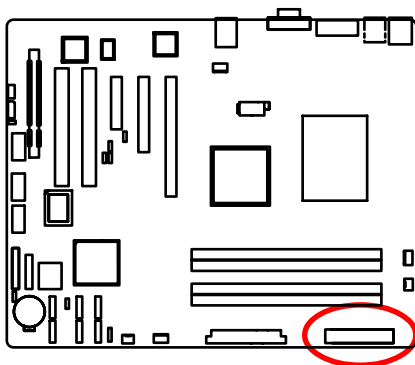
4/ 5/ 6/ 7/ 8/ 9) SATA 0~5 (Serial ATA cable connectors)

You can connect the Serial ATA device to this connector, it provides you high speed transfer rates (3.0Gb/s).
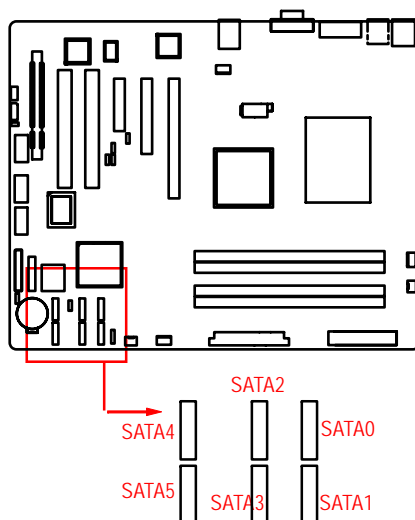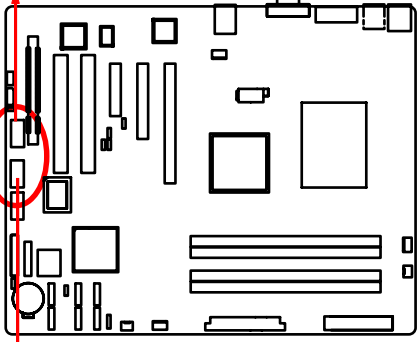
Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND
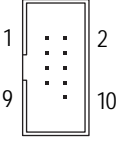
10/11) F_USB1/F-USB2 (Front USB cable connectors)

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.

F_USB2
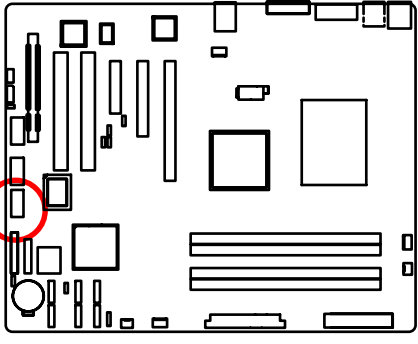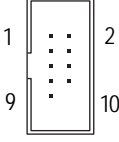
F_USB1

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

12) COM2 (Serial port connector)

Pin No.	Definition
1	DCD-
2	SIN2
3	SOUT2
4	DTR2-
5	GND
6	DSR2-
7	RTS2-
8	CTS2-
9	RI2-
10	NC

13

13) IPMB1
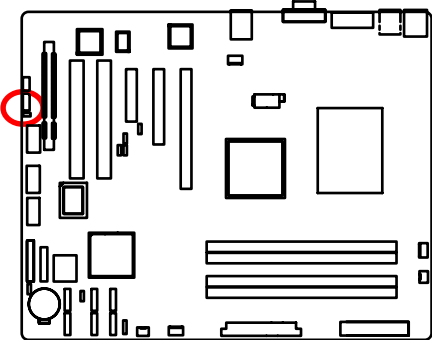
Pin No.	Definition
1	Clock
2	GND
3	Data

14) IPMB2
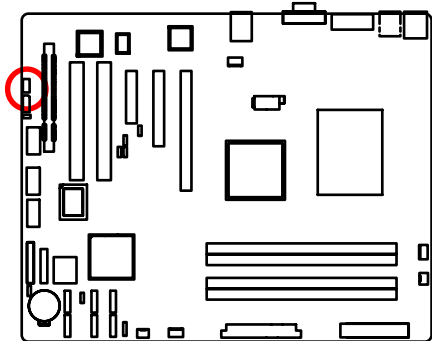
Pin No.	Definition
1	Data
2	GND
3	Clock
4	NC

15) CPU_FAN (CPU fan cable connector)

Please note, a proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating.The CPU fan connector supports Max. current up to 1A .

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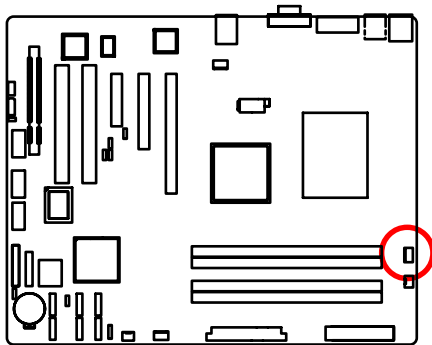
Pin No.	Definition
1	GND
2	12V
3	Sense
4	Control

16) PSU_FAN1 (Power fan cable connector)

This connector allows you to link with the cooling fan on the system case to lower the system temperature.

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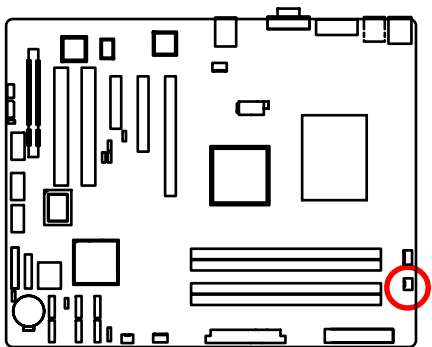
Pin No.	Definition
1	GND
2	+12V
3	Sense

17) SYS_FAN1 (System fan cable onnector)

This connector allows you to link with the cooling fan on the system case to lower the system temperature. These connectors are for system use only.
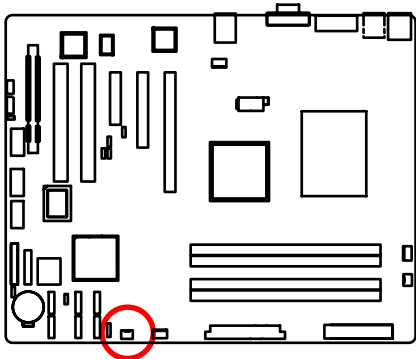
Pin No.	Definition
1	GND
2	+12V
3	Sense

18/ 19) FRONT_FAN/REAR_FAN (System fan cable onnector)

This connector allows you to link with the cooling fan on the system case to lower the system temperature. These connectors are for system use only.
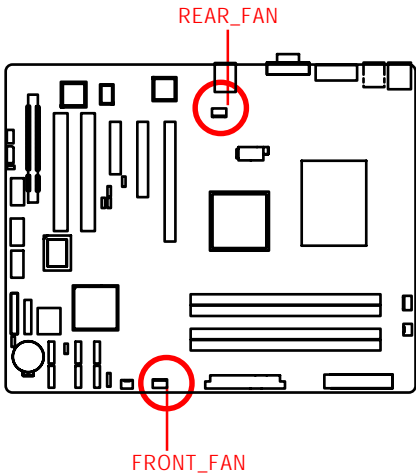
REAR_FAN

1 FRONT_FAN

1 REAR_FAN

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

FRONT_FAN

20) F_Panel (2X12 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.
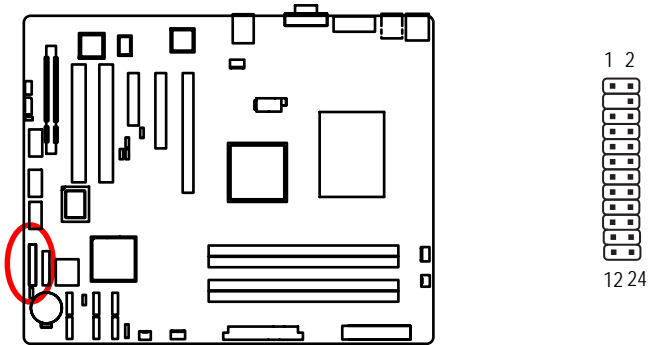
Pin No.	Signal Name	Description
1.	PWLED+	Power LED Signal anode (+)
2.	5VSB	P5V Stand By Power
3.	KEY	Pin Removed
4.	COOL FAULT_LED+	Cooling fault LED Signal anode (+)
5.	PWLED-	Power LED Signal cathode(-)
6.	COOL FAULT_LED-	Cooling fault LED Signal cathode(-)
7.	HD+	Hard Disk LED Signal anode (+)
8.	SYS_FAULT+	System Fan Fail LED Signal
9.	HD-	Hard Disk LED Signal cathode(-)
10.	SYS_FAULT-	System Status LED Signal
11.	PWB+	Power Button Signal anode (+)
12.	L1_ACT	LAN1 access LED Signal
13.	PWB+_GND	Power Button Ground
14.	L1_LNK-	LAN1 linked LED Signal cathode(-)
15.	RST_BTN-	Reset Button cathode(-)
16.	SENSOR_SDA	SMBus Data
17.	RST_BTN_GND	Reset Button Ground
18.	SENSOR_SCL	SMBus Clock
19.	ACPI SLEEP	No Connect
20.	CASE_OPEN-	Chassis intrusion Signal
21.	ACPI SLEEP-	No Connect
22.	L2_ACT	LAN2 access LED Signal
23.	NMI_SW-	NMI Switch cathode(-)
24.	L2_LNK-	LAN2 linked LED Signal cathode(-)

21) TPM_20 (TPM cable connector)

TPM, Trusted Platform Module offers facilities for secure generation of cryptographic keys, the ability to limit the use of keys (to either signing / verification or encryption / decryption). TPM chip is unique to a particular device, it is capable of performing platform authentication.
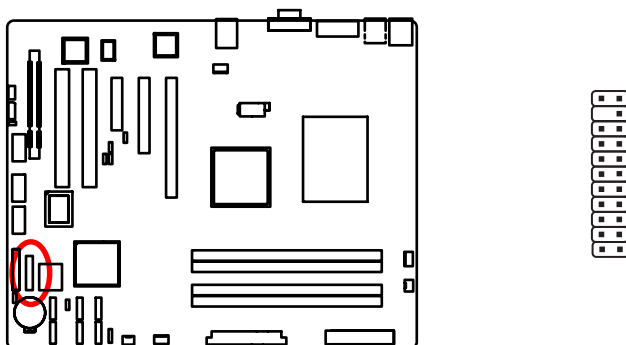
22) BAT1 (Battery)
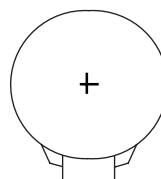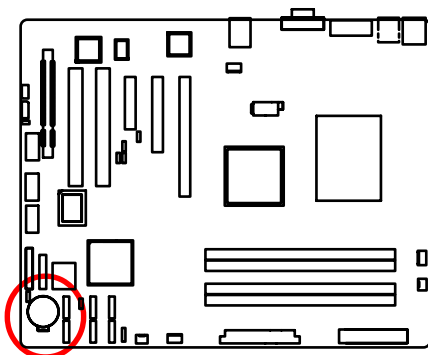
CAUTION

❖ 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.

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.

23) JP1 (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.
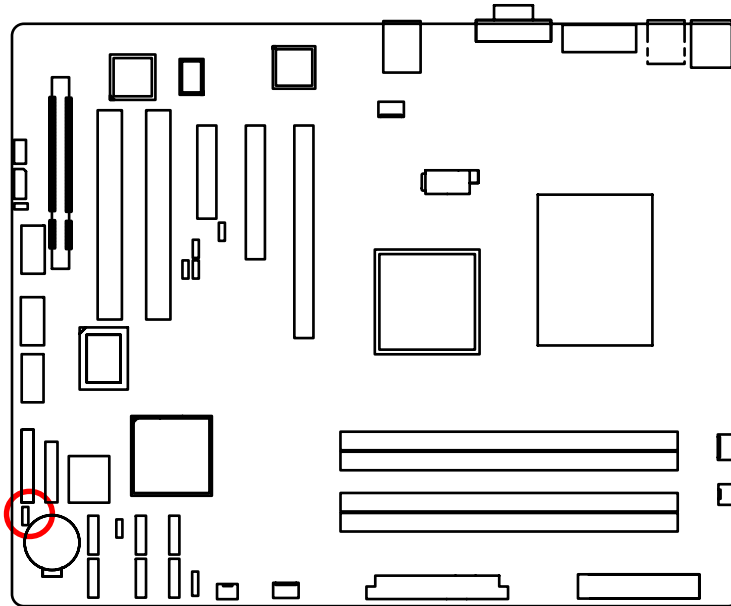
1 1-2 Close: Normal (Default setting)

1 2-3 Close: Clear CMOS

24) JP2_1 (Skip password jumper)
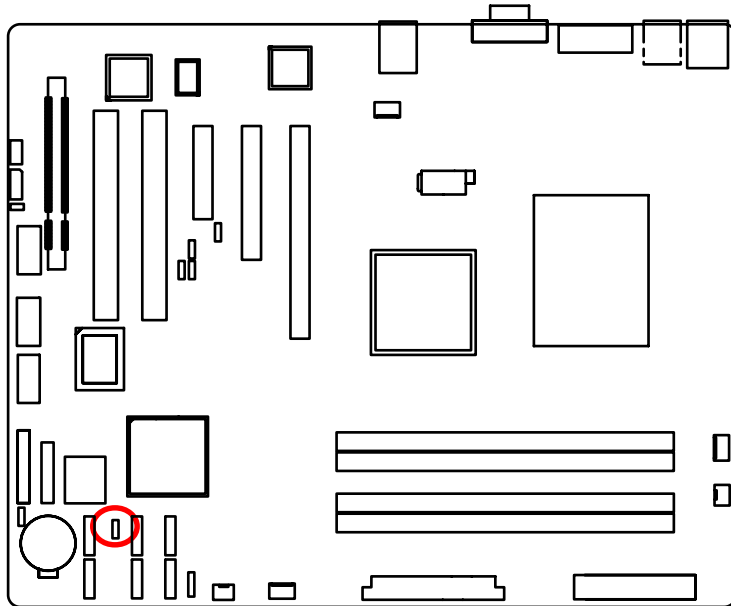
1 1-2 Close: Normal (Default setting)

1 2-3 Close: Skip Supervisor Password in BIOS setup menu

25) JP3_1 (BIOS recovery jumper)
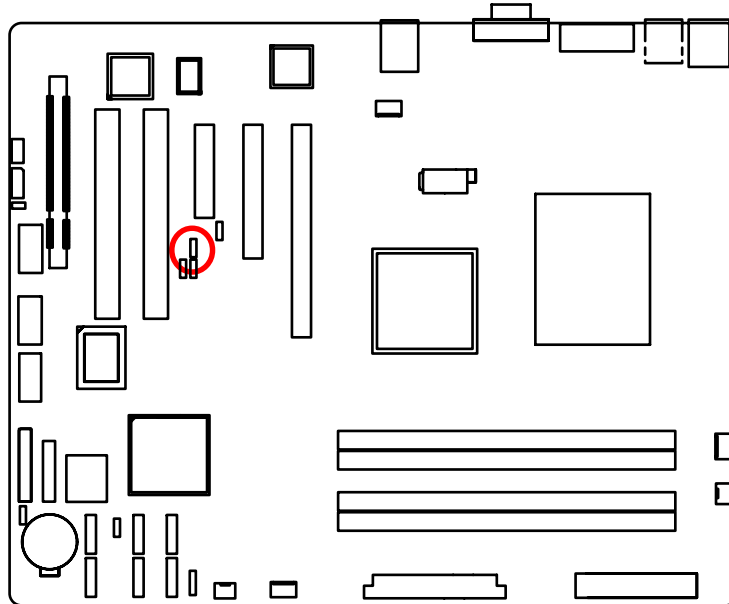
1 1-2 Close: Enable BIOS Recovery function.

1 2-3 Close: Normal (Default setting)

26/27) JP4_1/JP4_2 (Boot select straps jumper)

JP4_2

JP4_1
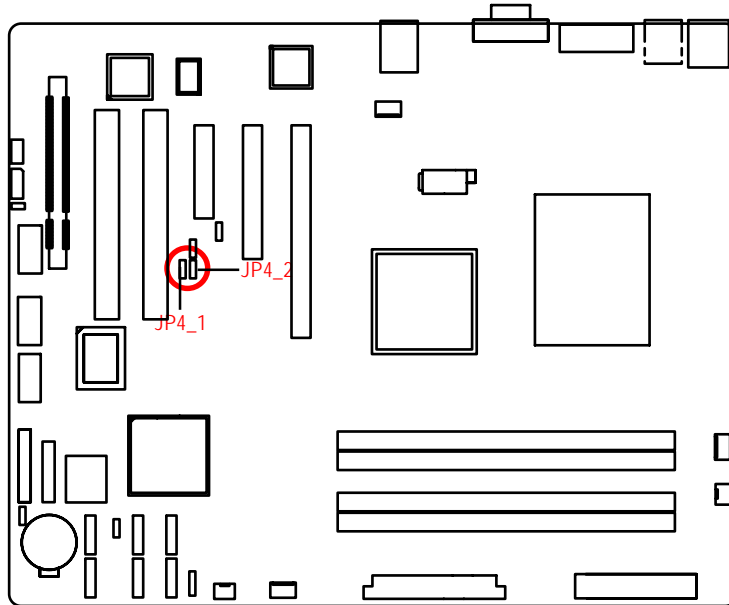
1 1-2 Close: Normal (Default setting)

1 2-3 Close: Enable Boot select straps.

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>.

● **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.

```
                Phoenix TrustedCore(tm) Setup Utility
   Main    Advanced    Security    Server    Boot    Exit
  ┌─────────────────────────────────────────┬─────────────────────────┐
  │                                           │   Item Specific Help    │
  │  System Time:        [20:58:40]           │                         │
  │  System Date:        [07/21/2007]         │                         │
  │                                           │  <Tab>, <Shift-Tab>, or │
  │  BIOS Version:       5DXSL-D3             │  <Enter> selects field. │
  │  BIOS Date:          09/28/07             │                         │
  │                                           │                         │
  │  Processor:                               │                         │
  │  CPU Type:           Intel(R) Core(TM)2 CPU│                        │
  │  CPU Speed:          2.13 GHz             │                         │
  │  CPU Count:          1                    │                         │
  │                                           │                         │
  │  Total Memory Size:  512 MB               │                         │
  │                                           │                         │
  │                                           │                         │
  │                                           │                         │
  └─────────────────────────────────────────┴─────────────────────────┘
   F1  Help  ^v  Select Item  -/+  Change Values   F9   Setup Defaults
   Esc Exit  <>  Select Menu  Enter Select > Sub-Menu F10  Save and Exit
```

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)

☞**BIOS Version**

   This item displays the information of **BIOS Version**.

☞ **BIOS Date**

This item identifies the BIOS refersh date.

☞ **Processor Information**

These following items display all information of current **CPU Type**, **CPU Speed**, and **CPU Count**. These items are display-only which is determined by POST (Power On Self Test) of the BIOS.

☞ **Total Memory Size**

This item identifies the total memory size.

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.
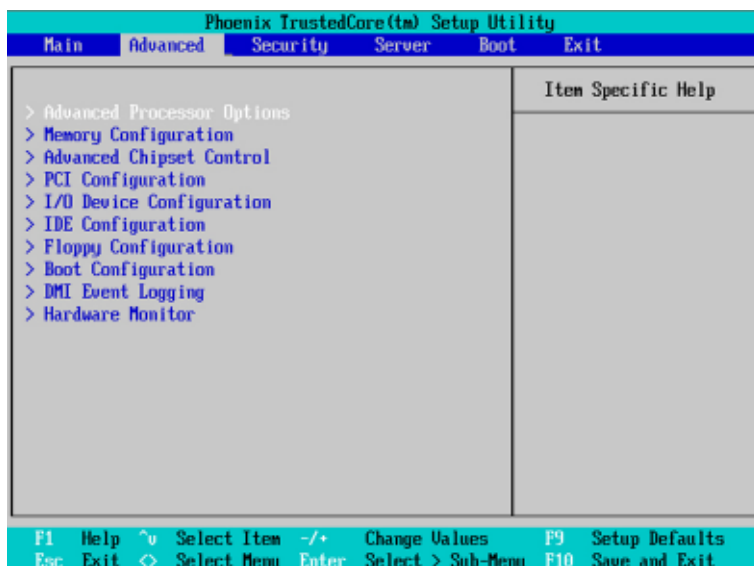
Figure 2: Advanced

Advanced Processor Options

```
              Phoenix TrustedCore(tm) Setup Utility
      Advanced

    Advanced Processor Options                      Item Specific Help

  CPU Type:                     Intel(R) Core      Select between TM1
  CPU Speed:                    2.13 GHz           and TM2
  Processor 1 CPUID:            06F5
  Processor 1 L2 Cache:         2048 kB

  Thermal Monitoring 2          [Enabled]
  C1 Enhanced Mode              [Enabled]
  Intel(R) Virtualization Technology [Disabled]
  No Execute Mode Mem Protection  [Enabled]
  PECI Interface:               [Enabled]
  Intel EIST Support            [Enabled]

  F1  Help   ^v Select Item  -/+   Change Values    F9   Setup Defaults
  Esc Exit   <> Select Menu  Enter Select > Sub-Menu F10  Save and Exit
```

Figure 2-1: Advanced Processor Options

☞ **Advanced Processor Option**

This category includes the information of **CPU Type**, **CPU Speed**, **Processor 1 CPUID**, and **Processor 1 L2 Cache**. Setup menu for **Thermal Management 2**, **C1 Enhanced Mode**, **C1 Enhanced Mode**, **Intel(R) Virtualization** Technology, **No Execute Mode Memory Protection**, **PECI Interface**, and **Intel EIST Support**.

☞ **Thermal Management 2**

Thermal Management 2 enhances the features of power reduction capability. When TM2 is enabled, it will reduce the frequency and VID which results in a saving of power consumption of processor.

▸ Enabled   Enabled Thermal Management 2. (Default setting)
▸ Disabled   Disables this function.

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.

▶Disabled   Disables C1 Enhanced Mode. (Default setting)

Intel (R) Virtualization Technology

Intel(R) Virtualization Technology will allow a platform to run multiple operating systems and applications in independent partitions. With virtualization, one computer system can function as multiple "virtual" systems. With processor and I/O enhancements to Intel's various platforms, Intel Virtualization Technology can improve the performance and robustness of today's software-only virtual machine solutions.

▶Enabled   Enabled VT Feature.

▶Disabled   Disables VT Feature. (Default setting)

No Execute Mode Mem. Protection

▶Enabled   Enable No Execute Mode Memory Protection function. (Default setting)

▶Disabled   Disables No Execute Mode Memory Protection function.

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

▶Disabled   Disable this function. (Default setting)

☞**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.

Memory Configuration

```
            Phoenix TrustedCore(tm) Setup Utility
        Advanced

        Memory Configuration              Item Specific Help

   System Memory:       633 kB         Clears the memory error
   Extended Memory:     510 MB         status.

   DIMM A1 Status:      512 MB
   DIMM A2 Status:      Not Installed
   DIMM B1 Status:      Not Installed
   DIMM B2 Status:      Not Installed

   Memory Retest:       [No]




   F1   Help   ^v  Select Item  -/+   Change Values   F9   Setup Defaults
   Esc  Exit   <>  Select Menu  Enter Select > Sub-Menu F10  Save and Exit
```

Figure 2-2: Memory Configuration

☞**System Memory/Extended Memory/DIMM Group A1,A2, B1, B2 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. Save the
                     changes and restart system. After rebooting system, the Memory
                     Reset item will set to 'No' automatically.
▸ No   Disable this function. (Default setting)

Advanced Chipset Control

```
            Phoenix TrustedCore(tm) Setup Utility
      Advanced

      Advanced Chipset Control              Item Specific Help

   Wake On LAN/PME     [Enabled]           Determines the action
   Wake On Ring        [Disabled]          of the system when a
   Wake On RTC Alarm   [Disabled]          LAN/PME wake up event
                                           occurs._




   F1   Help   ^v   Select Item  -/+   Change Values   F9   Setup Defaults
   Esc  Exit   <>   Select Menu   Enter Select > Sub-Menu F10 Save and Exit
```
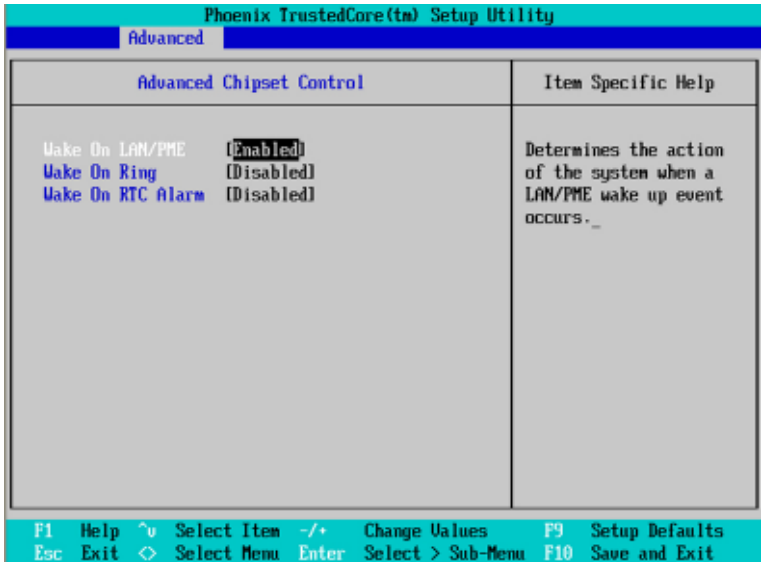
Figure 2-3: Advanced Chipset Control

☞**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 setting)
▸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.
▸Disabled   Disable this function. (Default setting)

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

☞**Wake On RTC Alarm**

When "RTC Alarm Resume" item is set to enabled, system will wakeup from RTC. (This item will be functionalized under ACPI OS)

➤Enabled   Enable alarm function to POWER ON system.

➤Disabled   Disable this function. (Default setting)

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

PCI Configuration

```
            Phoenix TrustedCore(tm) Setup Utility
        Advanced

        PCI Configuration                      Item Specific Help

    PCI Slot 1 Option ROM:    [Enabled]       Initialize device
    PCI Slot 2 Option ROM:    [Enabled]       expansion ROM
    PCI Slot 3 Option ROM:    [Enabled]
    PCI Slot 4 Option ROM:    [Enabled]
    PCI Slot 5 Option ROM:    [Enabled]
    Onboard LAN1 Control      [Enabled]
    LAN1 Option ROM Scan:     [Enabled]
    Onboard VGA Control       [Enabled]




    F1   Help   ^v  Select Item  -/+   Change Values      F9   Setup Defaults
    Esc  Exit   <>  Select Menu   Enter  Select > Sub-Menu  F10  Save and Exit
```

Figure 2-4: PCI Configuration

☞ **PCI Slot 1/2/3/4 Option ROM**

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

                                      (Defualt setting)

    ▶▶ Disabled   Disable this function.

☞ **LAN1 Option ROM Scan**

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

                                      (Defualt setting)

    ▶▶ Disabled   Disable this function.

☞ **Onboard VGA Control**

    ▶▶ Enabled   Enable the onboad VGA device. (Defualt setting)

    ▶▶ Disabled   Disable this function.

I/O Device Configuration
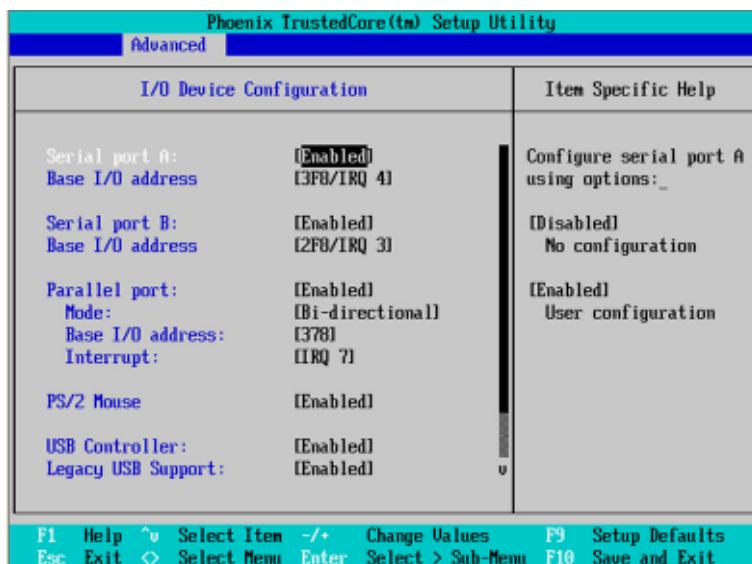
Figure 2-5: I/O Device Configuration

☞ **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   Set IO address to 3F8.   (Default setting)

▸▸ 2F8   Set IO address to 2F8.

▸▸ 3E8   Set IO address to 3E8.

▸▸ 2E8   Set IO address to 2E8.

☞ **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   Set IO address to 3F8.

▸▸2F8   Set IO address to 2F8. (Default setting)

▸▸3E8   Set IO address to 3E8.

▸▸2E8   Set IO address to 2E8.

☞ **Parallel Port**

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

▸▸Enabled   Enable the configuration.

▸▸Disabled   Disable the configuration. (Default setting)

▸ **Mode**

This option allows user to set Parallel Port transfer mode.

▸▸Bi-directional   Use this setting to support bi-directional transfers on the parallel port. (Default setting)

▸▸ EPP   Using Parallel port as Enhanced Parallel Port.

▸▸ ECP   Using Parallel port as Extended Capabilities Port.

▸ **Base I/O Address**

▸▸378   Set IO address to 378

▸▸278   Set IO address to 278.

▶ **Iterrupt**

▶▶IRQ5   Set Interrupt as IRQ5. (Default setting)

▶▶IRQ7   Set Interrupt as IRQ7. (Default setting)

☞**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 setting)

▶▶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 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.

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```
                Phoenix TrustedCore(tm) Setup Utility
      Advanced

         I/O Device Configuration              Item Specific Help

                                          ^   Enhanced AHCI:
  Parallel port:         [Enabled]            WinXP-SP1+IAA driver
    Mode:                [Bi-directional]     supports AHCI mode.
    Base I/O address:    [378]
    Interrupt:           [IRQ 7]

  PS/2 Mouse             [Enabled]

  USB Controller:        [Enabled]
  Legacy USB Support:    [Enabled]

  Serial ATA:            [Enabled]
    Native Mode Operation: [Auto]
     SATA RAID Enable     [Disabled]
     SATA AHCI Enable     [Disabled]

  F1  Help  ^v  Select Item  -/+  Change Values    F9   Setup Defaults
  Esc Exit  <>  Select Menu  Enter Select > Sub-Menu F10  Save and Exit
```

☞ **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   Enabled SATA RAID function.

▸▸ Disabled   Disable 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. (Default setting)

IDE Configuration


```
                Phoenix TrustedCore(tm) Setup Utility
        Advanced

        SATA Port 1            [None]              Item Specific Help

   Type:                       [Auto]          User = you enter
                                               parameters of hard-disk
   Multi-Sector Transfers:  [Disabled]         drive installed at this
   LBA Mode Control:        [Disabled]         connection.
   32 Bit I/O:              [Disabled]         Auto = autotypes
   Transfer Mode:           [Standard]         hard-disk drive
   Ultra DMA Mode:          [Disabled]         installed here.
                                               CD-ROM = a CD-ROM drive
                                               is installed here.
                                               ATAPI Removable =
                                               removable disk drive is
                                               installed here.



   F1  Help  ^v  Select Item  -/+   Change Values    F9  Setup Defaults
   Esc Exit  <>  Select Menu  Enter Select > Sub-Menu F10 Save and Exit
```

Figure 2-6: IDE Configuration

☞ SATA Port 1/2/3/4/5/6

The category identifies the types of hard disk from drive 1 to 6 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.

Floppy Configuration

```
               Phoenix TrustedCore(tm) Setup Utility
         Advanced

         Floppy Configuration              │    Item Specific Help

   Legacy Diskette A:  [1.44/1.25 MB  3 1/2]     Selects floppy type.
                                                 Note that 1.25 MB 3½"
                                                 references a 1024 byte/
                                                 sector Japanese media
                                                 format. The 1.25 MB,
                                                 3½" diskette requires
                                                 a 3-Mode floppy-disk
                                                 drive.




   F1   Help   ^v  Select Item  -/+   Change Values    F9    Setup Defaults
   Esc  Exit   <>  Select Menu  Enter  Select > Sub-Menu  F10   Save and Exit
```

Figure 2-7: Floppy Configuration

✆ 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.

Boot Configuration

```
                Phoenix TrustedCore(tm) Setup Utility
        Advanced

            Boot Configuration                    Item Specific Help

    Boot-time Diagnostic Screen:    [Disabled]    Display the diagnostic
    Multiprocessor Specification:   [1.4]         screen during boot
    Post Error Pause:               [Enabled]
    AC-LINK:                        [Last State]
    NumLock:                        [On]
    Security Mode for PWR/RST button [Disabled]


    F1   Help  ^v  Select Item   -/+   Change Values    F9   Setup Defaults
    Esc  Exit  <>  Select Menu   Enter Select > Sub-Menu F10  Save and Exit
```

Figure 2-8: Boot Configuration

☞**Boot time Diagnostic Screen**

> When this item is enabled, system will shows Diagnostic status when system boot.
>
> ▶Enabled   Display the diagnostic screen during system boot.
>
> ▶Disabled   Disable this function. (Default setting)

☞**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)

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    ▸ 1.1   Support M PS Version 1.1.

☞ 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.

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

☞NumLock

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

▸▸ On   Enable NumLock. (Default setting)

▸▸ Off   Disable this function.

☞Security Mode for PWR/RST button

▸▸ Enabled   Enable security mode for power and reset buttons.

▸▸ Disabled   Disable this function. (Default setting)

DMI Event Logging

```
                Phoenix TrustedCore(tm) Setup Utility
          Advanced

           DMI Event Logging                    Item Specific Help

        Event log validity      Valid          View the contents of
        Event log capacity      Space Available the DMI event log.

        View DMI event log      [Enter]
        Event Logging           [Enabled]

        Mark DMI events as read  [Enter]
        Clear all Event Logs:    [No]



        F1  Help  ^v  Select Item  -/+   Change Values    F9   Setup Defaults
        Esc Exit  <>  Select Menu  Enter Select > Sub-Menu F10  Save and Exit
```

Figure 2-9: DMI Event Logging

☞ **Event log vaildity/Event log capacity**

These two items display the current status of Event log vaildity and Event log capacity.

☞ **View DMI event log**

Press **[Enter]** to view DMI event log.

☞ **Event Logging**

➤ Enabled   Select Enabled to allow logging of DMI events. (Default setting)
➤ Disabled   Disable this function.

☞Mark DMI as read

Press [Enter] to mark all DMI events in the event log as read.

☞Clear all Event Logs

▸ Yes   Clear all event logs.

▸ No   Disable this function. (Default setting)

Hardware Monitor


```
                Phoenix TrustedCore(tm) Setup Utility
          Advanced

              Hardware Monitor                    Item Specific Help

   CPU Temperature      48 C/ 118F                Voltage Monitor
   System Temperature   36 C/ 096F
 > Voltage Monitor
 > Fan Monitor




 F1   Help  ^v  Select Item  -/+   Change Values   F9   Setup Defaults
 Esc  Exit  <>  Select Menu  Enter  Select > Sub-Menu  F10  Save and Exit
```
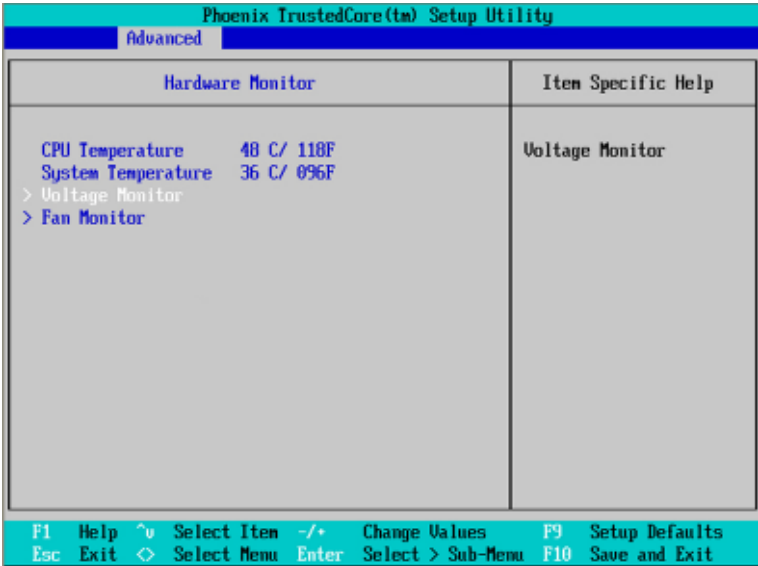
Figure 2-10: Hardware Monitor

```
                 Phoenix TrustedCore(tm) Setup Utility
            Advanced

          Voltage Monitor _                  Item Specific Help

    DDR1V8   3.008 V                       All items on this menu
    VCC3     3.312 V                       cannot be modified in
    VCORE    1.200 V                       user mode.  If any
    12V2     12.19 V                       items require changes,
    5V       5.95 V                        please consult your
                                           system Supervisor.




    F1   Help  ^v  Select Item  -/+   Change Values   F9   Setup Defaults
    Esc  Exit  <>  Select Menu  Enter Select > Sub-Menu  F10  Save and Exit
```

Figure 2-10-1: Voltage Monitor

```
                 Phoenix TrustedCore(tm) Setup Utility
            Advanced

            Fan Monitor                    Item Specific Help

    REAR_FAN    N/A                        All items on this menu
    FRONT_FAN   N/A                        cannot be modified in
    CPU_FAN     4591 RPM                   user mode.  If any
                                           items require changes,
                                           please consult your
                                           system Supervisor.




    F1   Help  ^v  Select Item  -/+   Change Values   F9   Setup Defaults
    Esc  Exit  <>  Select Menu  Enter Select > Sub-Menu  F10  Save and Exit
```

Figure 2-10-2: Fan Monitor

⌐ **CPU / System Temperature**

▸ Display the current CPU temperature and system temperature.

⌐ **Voltage Monitor: DDR1V8, VCC3, VCORE, 12V2, 5V**

▸ Detect system's voltage status automatically.

⌐ **FAN Monitor: REAR FAN/ FRONT FAN/ CPU FAN**

▸ Display the current front fanspeed, rear fan speed, and CPU fan speed.

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.

```
                   Phoenix TrustedCore(tm) Setup Utility
   Main     Advanced    Security    Server    Boot     Exit

                                               Item Specific Help
   Supervisor Password Is:   Clear
   User Password Is:         Clear
                                            Supervisor Password
   Set Supervisor Password   [Enter]        controls access to the
   Set User Password         [Enter]        setup utility.

   Password on boot:         [Disabled]






   F1   Help  ^v  Select Item  -/+   Change Values    F9   Setup Defaults
   Esc  Exit  <>  Select Menu   Enter  Select > Sub-Menu  F10  Save and Exit
```

Figure 3: Security

☞**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 setting)

Server
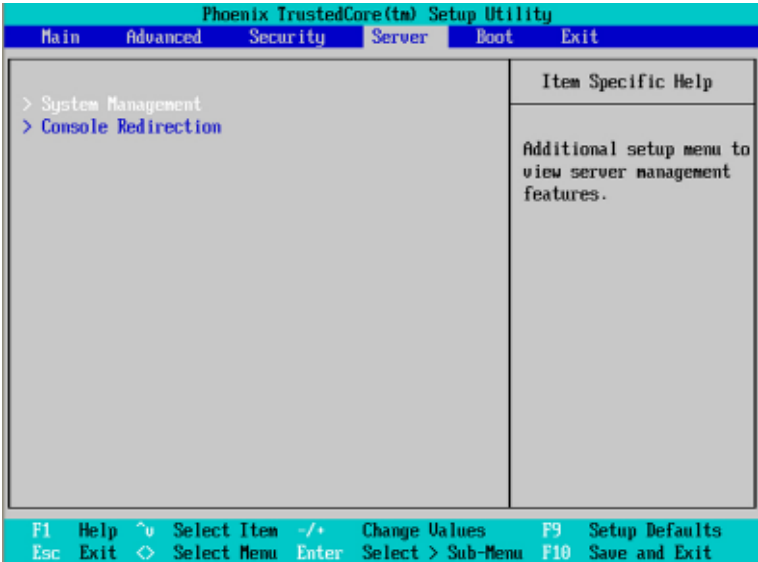
Figure 4: Server

System Management

```
                Phoenix TrustedCore(tm) Setup Utility
                                   Server

         System Management                     Item Specific Help

   BIOS Version:         5DXSL-D3              Clear Case Open Status
   Product Name          Altos G330 Mk2
   System Version        Revision A0
   System S/N            012345678901234567890123
   Main Board ID         5DXSL
   Main Board S/N        987654321098765432109876
   LAN1 MAC Address      00 00 00 00 00 00 FF FF
   LAN2 MAC Address      FF FF FF FF FF FF FF FF

   Clear Case Open Status:  [Enter]



   F1   Help   ^v   Select Item  -/+   Change Values   F9   Setup Defaults
   Esc  Exit   <>   Select Menu  Enter Execute Command  F10  Save and Exit
```

Figure 4-1: System Management

☞ **Server Management**

This category allows user to view the server management features. Including information of
BIOS Version, **Product Name**, **System Version**, **System Serial Number**, **Main Board
ID**, **Main Board Serial Number**, and, **LAN1/2 MAC Address**. All items in this menu
cannot be modified, display only.

☞ **Clear Case Open Status**

Press [Enter] to clear the Case Open Status.

Console Redirection
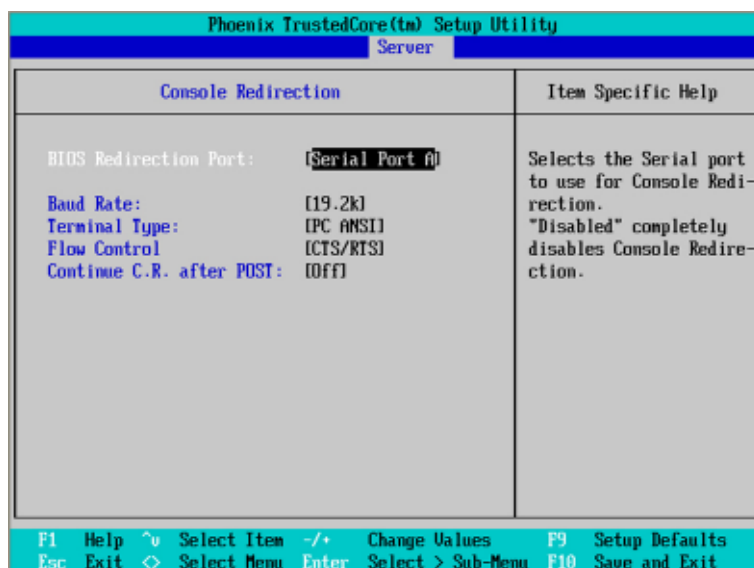
Figure 4-2: Console Redirection

☞ **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)

☞ **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 setting)

Boot
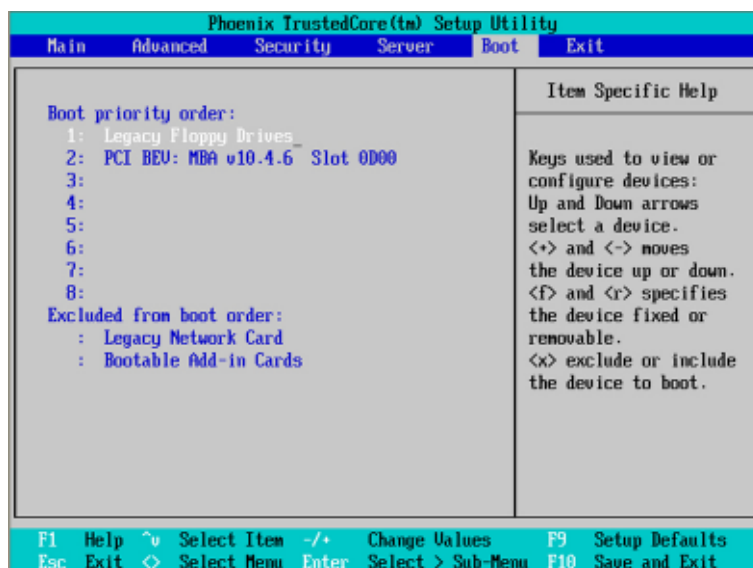
Figure 5: Boot

☞ 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.
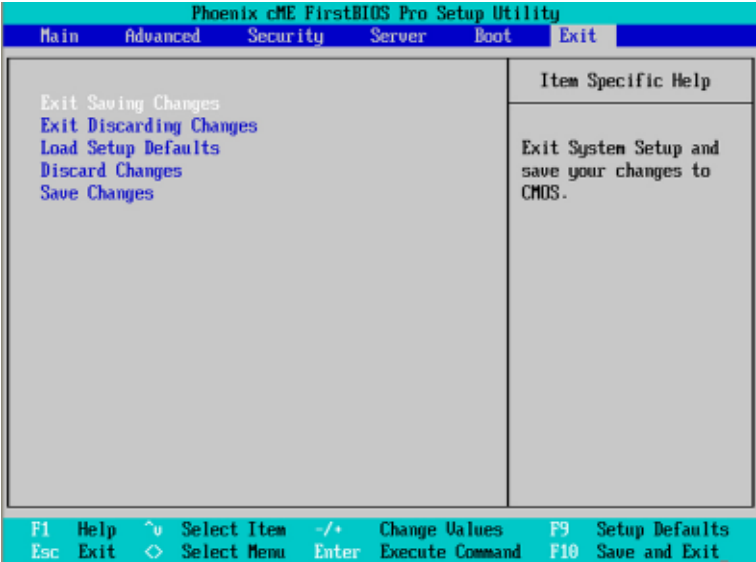
Exit

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.
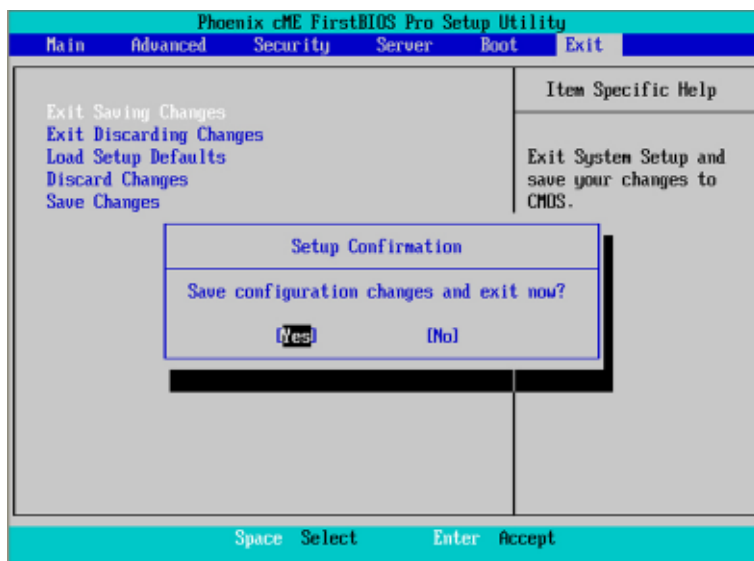
☞ Exit Discarding Changes

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:
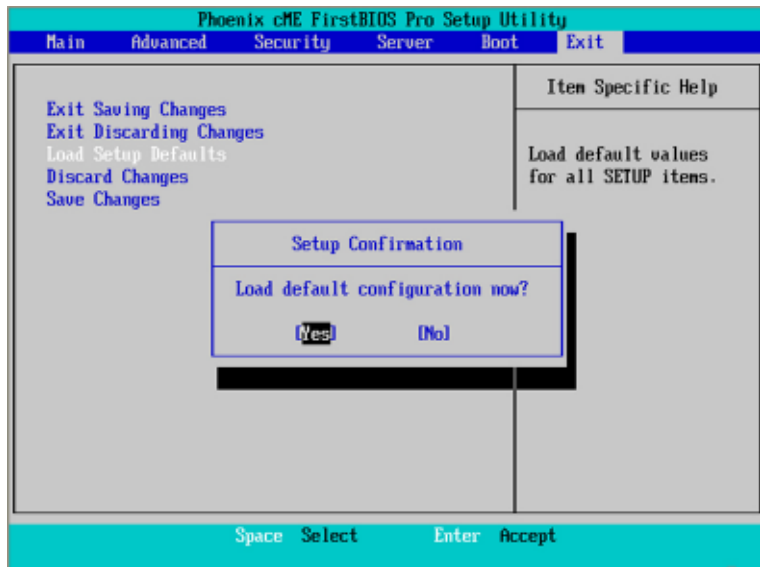
☞Discard Changes

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:

```
                  Phoenix cME FirstBIOS Pro Setup Utility
    Main     Advanced    Security    Server    Boot    Exit

                                                   Item Specific Help
       Exit Saving Changes
       Exit Discarding Changes
       Load Setup Defaults                        Load previous values
       Discard Changes                            from CMOS for all SETUP
       Save Changes                               items.

                     ┌─────────────────────────────┐
                     │      Setup Confirmation      │
                     │                              │
                     │ Load previous configuration now? │
                     │                              │
                     │      [Yes]         [No]      │
                     └─────────────────────────────┘



                     Space   Select      Enter   Accept
```
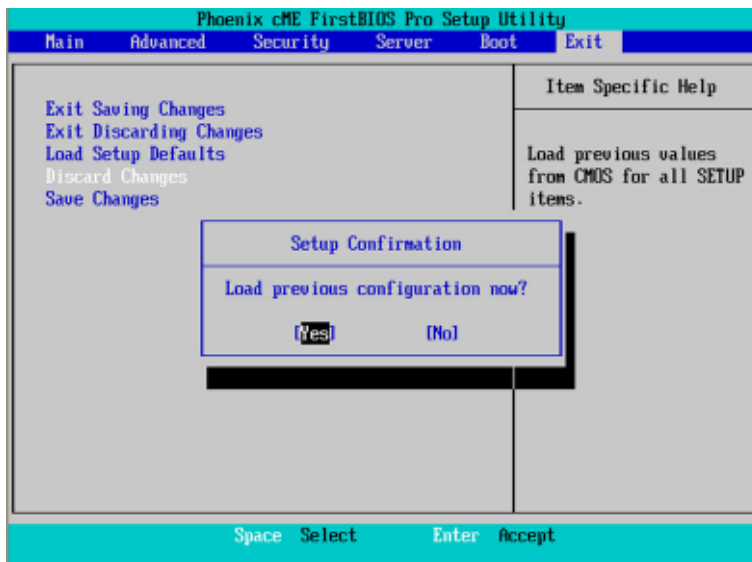
☞**Save Changes**

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:

```
                 Phoenix cME FirstBIOS Pro Setup Utility
    Main    Advanced    Security    Server    Boot    Exit

                                                Item Specific Help
    Exit Saving Changes
    Exit Discarding Changes
    Load Setup Defaults                         Save Setup Data to
    Discard Changes                             CMOS.
    Save Changes

                  Setup Confirmation

               Save configuration changes now?

                     [Yes]        [No]


                  Space  Select        Enter  Accept
```
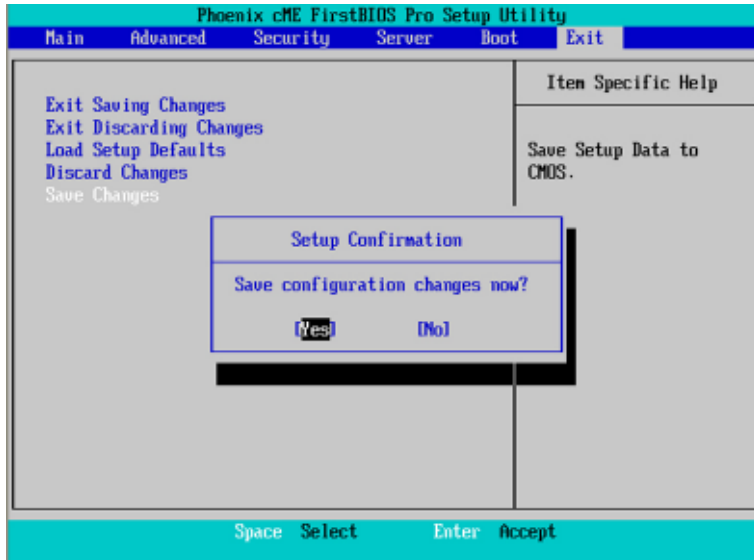
Press [Yes] to save setup daya to CMOS.

Chapter 4 INTEL RAID BIOS Configuration

Configuring the Intel RAID BIOS

The Intel RAID BIOS setup lets you choose the RAID array type and which hard drives you want to make part of the array.

Entering the RAID BIOS Setup

1. After rebooting your computer, wait until you see the RAID software prompting you to press Ctrl + I. The RAID prompt appears as part of the system POST and boot process prior to loading the OS. You have a few seconds to press Ctrl + I before the window disappears.

```
Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5
Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.

RAID Volumes :
None Defined.

Physical Disks :
Port    Driver Model        Serial #                    Size       Type/Status(Vol ID)
0       ST3120026AS         3JT354CP                    111.7GB    Non-RAID Disk
1       ST3120026AS         3JT329JX                    111.7GB    Non-RAID Disk

Press <CTRL - I>  to enter Configuration Utility
```
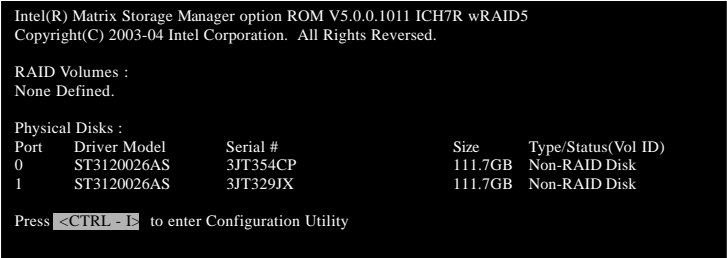
Press Ctrl + I. The Intel RAID Utility - Create RAID Volume window appears (as illustrated below).

```
                Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5
                        Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.
                                          [ MAIN MENU ]
                                    1. Create RAID Volume
                                    2. Delete RAID Volume
                                    3. Reset Disks to Non-RAID
                                    4. Exit

                                 [ DISK/VOLUME INFORMATION ]
        RAID Volumes :
        None Defined.

        Physical Disks :
        Port    Driver Model        Serial #                    Size       Type/Status(Vol ID)
        0       ST3120026AS         3JT329JX                    111.7GB    Non-RAID Disk
        1       ST3120026AS         3JT354CP                    111.7GB    Non-RAID Disk


            [↑↓]-Select                    [ESC]-Exit                     [ENTER]-Select Menu
```

Create RAID Volume

Press **Enter** under **Create RAID Volume** to set up RAID.

```
┌─────────────────────────────────────────────────────────────────┐
│      Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5    │
│           Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.     │
├══════════════════[ CREATE VOLUME MENU ]══════════════════┤
│                   Name :   RAID_Volume0                           │
│              RAID Level :   RAID0(Stripe)                         │
│                  Disks :   Select Disks                           │
│              Strip Size :   128KB                                 │
│               Capacity :   223.5 GB                               │
│                            Create Volume                          │
├═══════════════════════[ HELP ]═══════════════════════┤
│                                                                   │
│        Enter a string between 1 and 16 characters in length that can be used │
│        to uniquely identify the RAID volume.  This name is case sensitive and │
│                    can not contain special characters.            │
│                                                                   │
├───────────────────────────────────────────────────────────────┤
│   [↑↓]-Change      [TAB]-Next      [ESC]-Previous Menu      [ENTER]-Select │
└─────────────────────────────────────────────────────────────────┘
```

After entering the Create Volume Menu, you can set disk name with 1~16 letters (letters cannot be special characters) under **Name** item.
After setting disk name, press **Enter** to select **RAID Level**.

```
┌─────────────────────────────────────────────────────────────────┐
│      Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5    │
│           Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.     │
├══════════════════[ CREATE VOLUME MENU ]══════════════════┤
│                   Name :   RAID_Volume0                           │
│              RAID Level :   RAID0(Stripe)                         │
│                  Disks :   Select Disks                           │
│              Strip Size :   128KB                                 │
│               Capacity :   223.5 GB                               │
│                            Create Volume                          │
├═══════════════════════[ HELP ]═══════════════════════┤
│             Choose the RAID level best suited to your usage model. │
│       RAID0-   Data striped across multiple physical drives for performance. │
│       RAID1-   Data mirrored across multiple physical drives for redundancy. │
│       RAID0+1- Striped volume whose segments are RAID 1 volumes. Requires │
│                four hard drives. Functionally equivalent to RAID 0+1. │
│       RAID5-   Data and parity striped across three or more physical drives │
│                for performance and redundancy.                    │
│   [↑↓]-Change      [TAB]-Next      [ESC]-Previous Menu      [ENTER]-Select │
└─────────────────────────────────────────────────────────────────┘
```

There are four RAID levels: RAID0(Stripe), RAID1(Mirror), RAID 0+1 (Striping + Mirroring) and RAID5. After selecting the RAID level, press **Enter** to select **Strip Size**.

The KB is a unit of Strip Size. You can set disk block size with this item.

The disk block size can be set from 4KB to 128KB. After you set disk block size, press **Enter** to set disk **Capacity**.

```
┌─────────────────────────────────────────────────────────────────┐
│  Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5 │
│      Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.   │
├════════════════════[ CREATE VOLUME MENU ]════════════════════════┤
│              Name :   RAID_Volume0                                │
│        RAID Level :   RAID0(Stripe)                               │
│            Disks :    Select Disks                                │
│        Strip Size :   128KB                                       │
│          Capacity :   223.5 GB                                    │
│                       Create Volume                               │
├══════════════════════════[ HELP ]════════════════════════════════┤
│                                                                   │
│              The following are typical values:                    │
│                  RAID 0 -   128KB                                 │
│                  RAID 1 -   64KB                                  │
│                  RAID 5 -   64KB                                  │
│                                                                   │
│                                                                   │
│                                                                   │
└───────────────────────────────────────────────────────────────────┘
│  [↑↓]-Change      [TAB]-Next      [ESC]-Previous Menu   [ENTER]-Select │
```

```
┌─────────────────────────────────────────────────────────────────┐
│  Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5 │
│      Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.   │
├════════════════════[ CREATE VOLUME MENU ]════════════════════════┤
│              Name :   RAID_Volume0                                │
│        RAID Level :   RAID0(Stripe)                               │
│            Disks :    Select Disks                                │
│        Strip Size :   128KB                                       │
│          Capacity :   223.5 GB                                    │
│                       Create Volume                               │
├══════════════════════════[ HELP ]════════════════════════════════┤
│                                                                   │
│          Enter the volume capacity. The default value indicates the │
│          maximum volume capacity using the selected disks.  If less │
│          than the maximum capacity is chosen, creation of a second  │
│          volume is needed to utilize the remaining space.         │
│                                                                   │
│                                                                   │
└───────────────────────────────────────────────────────────────────┘
│  [↑↓]-Change      [TAB]-Next      [ESC]-Previous Menu   [ENTER]-Select │
```

Press **Enter** to enter **Create Volume** after setting disk capacity.

Press **Enter** under the **Create Volume** item.

```
┌──────────────────────────────────────────────────────────────┐
│       Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5      │
│           Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.        │
│═══════════════════════[ CREATE VOLUME MENU ]═══════════════════════│
│              Name :   RAID_Volume0                                │
│        RAID Level :   RAID0(Stripe)                               │
│             Disks :   Select Disks                                │
│        Strip Size :   128KB                                       │
│          Capacity :   223.5 GB                                    │
│                       Create Volume                               │
│                                                                   │
│══════════════════════════[ HELP ]════════════════════════════════│
│                                                                   │
│                                                                   │
│               Press "ENTER" to Create the specified volume        │
│                                                                   │
│                                                                   │
│                                                                   │
│  [↑↓]-Change        [TAB]-Next        [ESC]-Previous Menu      [ENTER]-Select  │
└──────────────────────────────────────────────────────────────┘
```
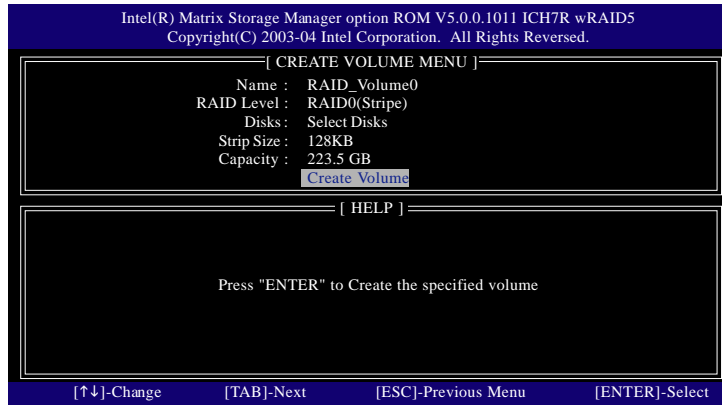
An alert bar will be displayed warning you that all data on selected disks will be lost. Please press **Y** to complete the set-up of RAID.

```
┌──────────────────────────────────────────────────────────────┐
│       Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5      │
│           Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.        │
│═══════════════════════[ CREATE VOLUME MENU ]═══════════════════════│
│              Name :   RAID_Volume0                                │
│        RAID Level :   RAID0(Stripe)                               │
│             Disks :   Select Disks                                │
│        Strip Size :   128KB                                       │
│          Capacity :   223.5 GB                                    │
│      WARNING : ALL DATA ON SELECTED DISKS WILL BE LOST.           │
│                                                                   │
│      Are you sure you want to creat this volume? (Y/N) :          │
│                                                                   │
│               Press "ENTER" to Create the specified volume        │
│                                                                   │
│                                                                   │
│                                                                   │
│  [↑↓]-Change        [TAB]-Next        [ESC]-Previous Menu      [ENTER]-Select  │
└──────────────────────────────────────────────────────────────┘
```

After the completion, you will see the detailed information about the RAID, such as RAID level, disk block size, disk name and disk capacity, etc.

```
Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5
          Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.
                        ══ [ MAIN MENU ] ══
                          1. Create RAID Volume
                          2. Delete RAID Volume
                          3. Reset Disks to Non-RAID
                          4. Exit

            ══════════[ DISK/VOLUME INFORMATION ]══════════
    RAID Volumes :
    ID    Name                  Level         Strip     Size     Status
    Bootable
    0     RAID_Volume0    RAID(Stripe)    128KB     223.5GB  Normal   Yes

    Physical Disks :
    Port  Driver Model    Serial #                    Size     Type/Status(Vol ID)
    0     ST3120026AS    3JT329JX               111.7GB  Member Disk(0)
    1     ST3120026AS    3JT354CP               111.7GB  Member Disk(0)

        [↑↓]-Select              [ESC]-Exit              [ENTER]-Select Menu
```
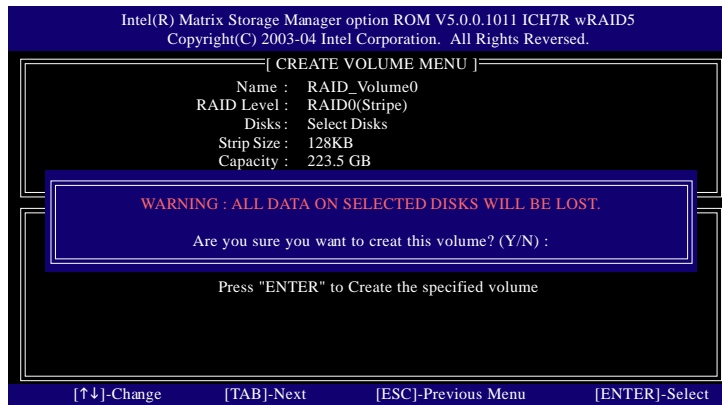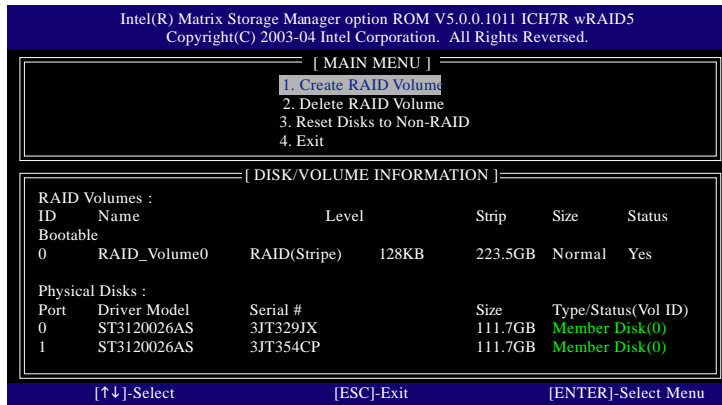
Delete RAID Volume

If you want to delete a RAID volume, please select the **Delete RAID Volume** option. Press **Enter** key and follow the instructions on the screen.

```
Intel(R) Matrix Storage Manager option ROM V5.0.0.1011 ICH7R wRAID5
          Copyright(C) 2003-04 Intel Corporation.  All Rights Reversed.
                        ══ [ MAIN MENU ] ══
                          1. Create RAID Volume
                          2. Delete RAID Volume
                          3. Reset Disks to Non-RAID
                          4. Exit

            ══════════[ DISK/VOLUME INFORMATION ]══════════
    RAID Volumes :
    ID    Name                  Level         Strip     Size     Status
    Bootable
    0     RAID_Volume0    RAID(Stripe)    128KB     223.5GB  Normal   Yes

    Physical Disks :
    Port  Driver Model    Serial #                    Size     Type/Status(Vol ID)
    0     ST3120026AS    3JT329JX               111.7GB  Member Disk(0)
    1     ST3120026AS    3JT354CP               111.7GB  Member Disk(0)

        [↑↓]-Select              [ESC]-Exit              [ENTER]-Select Menu
```