AU11

MAINBOARD MANUAL

Handling Precautions

Warning:

1. Static electricity may cause damage to the integrated circuits on the motherboard. Before handling any motherboard outside of its protective packaging, ensure that there is no static electric charge in your body.
2. There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer.
3. Discard used batteries according to the manufacturer's instructions.
4. Never run the processor without the heatsink properly and firmly attached. PERMANENT DAMAGE WILL RESULT!

Observe the following basic precautions when handling the motherboard or other computer components:

■ Wear a static wrist strap which fits around your wrist and is connected to a natural earth ground.

■ Touch a grounded or anti-static surface or a metal fixture such as a water pipe.

■ Avoid contacting the components on add-on cards, motherboards, and modules with the *golden fingers* connectors plugged into the expansion slot. It is best to handle system components by their mounting brackets.

The above methods prevent static build-up and cause it to be discharged properly.

Trademark

All trademarks mentioned in this manual are registered properly of the respective owners.

Handling Precautions

This manual may not, in whole or in part, be photocopied, reproduced, transcribed, translated, or transmitted in whatever form without the written consent of the manufacturer, except for copies retained by the purchaser for personal archival purposes.

Table of Contents

Chapter 1   Overview

Chapter 2   Installation Procedures

Chapter 3   BIOS Setup

Overview

The new 1stMainboard® AU11™ is an ATX sized motherboard supporting the latest generation of AMD® Athlon™ and Duron™ processors at industry leading speeds.

By utilizing DDR (Double Data Rate) transfer rate the 100/133 MHz system bus effectively reaches Front Side Bus speeds of 200/266/333 MHz. The board provides users with an ATA133 data transaction for hard drives and has 3 PC1600/2100/2700/3200 184-pin DDR DIMMs for up to 3 GB.

The optional IEEE 1394 feature allows users to connect up to 63 devices to the serial bus on a computer system. The board is equipped with 2 dual channeled enhanced PCI bus master IDE connectors.

The board is based around the high performance nVidia nForce2-128 SPP (Crush 18D)™ as North Bridge and the MCP-T AGPset™ as South Bridge. Its AGP 4X/8X functions supported AGP v3.0 compliant and the most robust 3D games with software environments. The AGP slot allows 1.5 volt AGP card only and Maximum AGP interface bandwith 2.1 GB/s.

Package Checklist

If you discover any item below was damaged or lost, please contact your vendor.

- ☑ The mainboard
- ☑ This user manual
- ☑ FDD cable
- ☑ Drivers CD
- ☑ ATA-66/100 cable
- ☑ IEEE 1394 cable
- ☑ I/O shield
- ☑ USB cable
- ☑ Game port cable

IMPORTANT: AMD CPU HEAT SINK INSTALLATION

Be ware finish heat sink install. Before you boot system, please check the heat sink is complete contact with die of CPU.

The poor contact will bring about over heat, it may damage your processor.

It is strongly recommended that at least a 250-watt ATX power pupply be used for this motherboard. Make sure that your ATX power supply can supply at least 20 amperes on teh +5-Volt lead and 10mA on the +5-Volt standby lead (+5VSB). Your system may become unstable / unreliable and may experience difficulty in powering up if your power supply is inadequate.

The AU11 Mainboard

Integrated
I/O Connectors

nForce2 SPP-128
(North Bridge)

3 DDR SDRAM
Sockets

8X   6 PCI
AGP   Slots
Slot

2 IEEE
1394 Ports

nForce2
MCP-T
(South
Bridge)

Primary IDE/
Secondary IDE/
Floppy
Connector
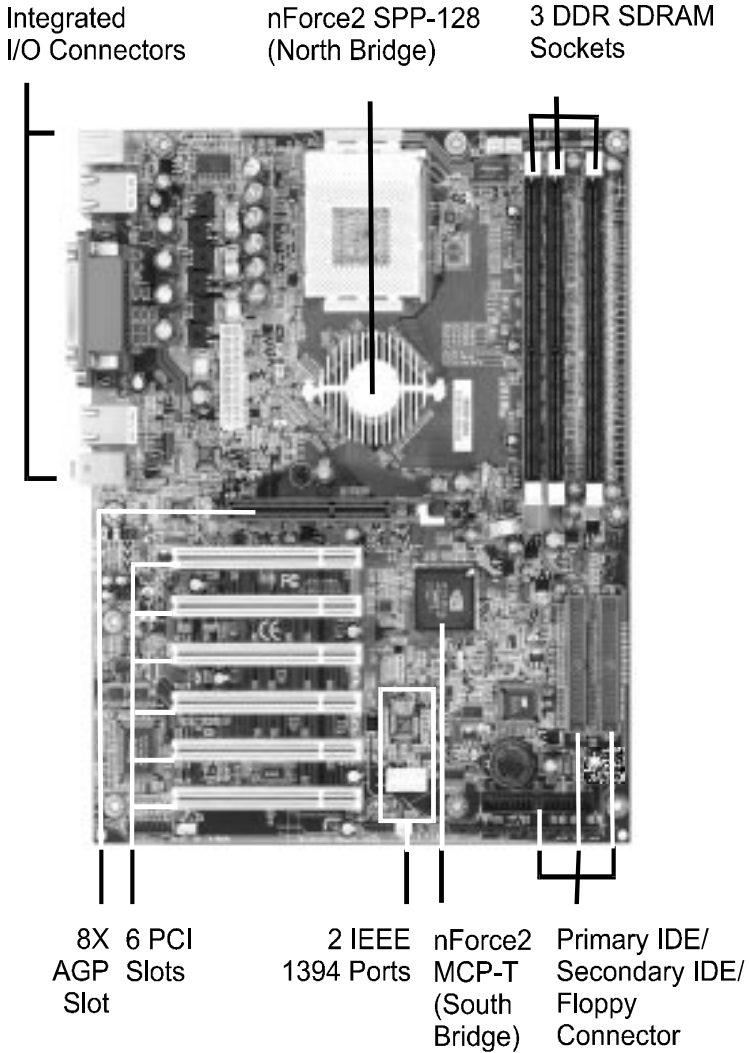
Main Features

■ **Processor Supported**

Supports 462-pin SocketA for AMD Athlon XP and Duron processors with 200/266/333MHz Front Side Bus

- Athlon XP (1500+ to 2800+) @ 266/333MHz Front Side Bus,

- Duron (800 to 1.3GHz) @ 200MHz Front Side Bus

■ **Chipset**

nVidia nForce2-128 SPP (Crush 18D) +MCP-T AGPset

■ **Main Memory**

Three 184-pin DDR DIMM sockets for 64-bit, Unbuffered, Single/ Double-side and Non-ECC DDR-200/266/333/400 DIMMs

◆ Supports 128-bit dual channel memory architecture

◆ Supports up to 3GB memory size

◆ Supports complete FSB/Memory and FSB/AGP Asynchronous scheme for over-clocking

■ **BIOS**

2Mb Flash EEPROM with Award BIOS

- ACPI v2.0 compliant

- S3 (Suspend to DRAM) sleep-state support

- SMBIOS (System Management BIOS) v2.2 compliant

- Supports Power failure recovery

- Capable to waked the computer up from specific states by LAN, Power switch, PME#, RTC alarm, USB, PS2 devices, Modem ring on COM#1...

■ **Onboard PCI Devices**

- ◆ 1394 --> Embedded 1394 controller with RTL8801B PHY for 2
  ports solution
  - IEEE-1394a compliant with up to 400Mbps bandwidth

- ◆ LAN --> Embedded 10/100Mbps Fast Ethernet controller with
  RTL8201BL PHY

- ◆ IDE --> Embedded IDE controller supports 2 IDE ports for up
  to 4 IDE devices
  - Supports ATA-133 with up to 133Mbps bandwidth

■ **Legacy IO Controller**

- ◆ Winbond W83627HF LPC IO controller with floppy, printer, game,
  serial and CIR/SIR interface

■ **Audio**

- ◆ Six channel audio with analog and digital output using ALC-650E
  AC97 CODEC
  - AC97 v2.2 compliant
  - In 2-CH mode, supports Mic-In (Pink), Line-In (Blue) and Line-
    Out (Green) at rear panel
  - In 6-CH mode, supports Center/Subwoofer (Pink), Rear out
    (Blue), Front out (Green) at rear panel
  - Supports CD-In, Aux-In and S/PDIF-In/out interface
  - Supports Line-out and Mic-In for front panel

■ **Peripheral Interfaces**

- ◆ PS/2 keyboard and mouse ports (at rear panel)

- ◆ One Parallel (printer) port (at rear panel)

- ◆ One RJ45 LAN connector (at rear panel) (Optional)

- ◆ Two Serial ports (at rear panel)

- ◆ One floppy drive interface

- ◆ One game port

■ **Front Panel Controller**

- ◆ Supports Reset & Soft-Off switches

- ◆ Supports HDD & Power LEDs

- ◆ Supports PC speaker

■ **Expansion Slots**

- ◆ One AGP slots supporting 1.5v x4/x8-AGP cards

   - AGP v3.0 compliant

- ◆ Six PCI bus sockets with Bus Master support

   - PCI v2.3 compliant

Installation Procedures

The mainboard has several user-adjustable jumpers on the board that allow you to configure your system to suit your requirements. This chapter contains information on the various jumper settings on your mainboard.

To set up your computer, you must complete the following steps:

Step 1 - **Set system jumpers**

Step 2 - **Install memory modules**

Step 3 - **Install the Central Processing Unit (CPU)**

Step 4 - **Install expansion cards**

Step 5 - **Connect ribbon cables, cabinet wires, and power supply**

Step 6 - **Set up BIOS software**

Step 7 - **Install supporting software tools**

**Chapter 2
Installation
Procedures**

WARNING: Excessive torque may damage the mainboard. When using an electric screwdriver on the mainboard, make sure that the torque is set to the allowable range of 5.0 ~ 8.0kg/cm.

Mainboard components contain very delicate Integrated Circuit (IC) chips. To prevent static electricity from harming any of the sensitive components, you should follow the following precautions whenever working on the computer:

1. Unplug the computer when working on the inside.
2. Hold components by the edges and try not to touch the IC chips, leads, or circuitry.
3. Wear an anti-static wrist strap which fits around the wrist.
4. Place components on a grounded anti-static pad or on the bag that came with the component whenever the components are separated from the system.

Quick Reference (from Page 2-2 to 2-4)

Mainboard Layout
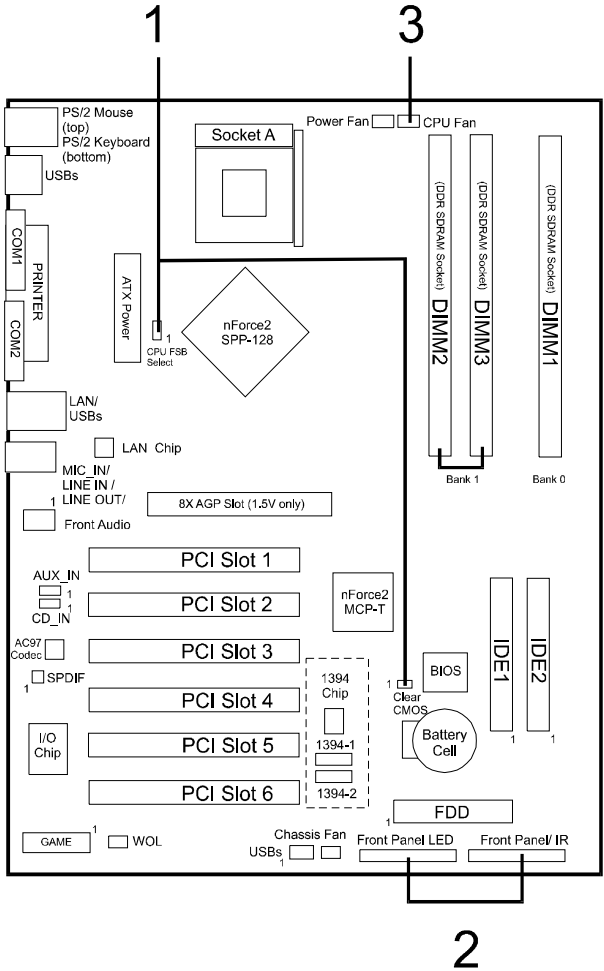
* When link to Line_Out jack, please use a speaker that with amplifier.

1). Clear CMOS, CPU FSB Freq. Select

**JCMOS
(Clear CMOS)**

1

1

**2-3:
Clear CMOS**

**1-2:
Normal
(Default)**

**JCLK
(CPU FSB Frequency Select)**

**Off:
100/133 MHz**

**ON:
133/166 MHz
(Default)**

2). Front Panel Block Cable Connection

J2
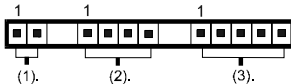
1   1   1

(1).   (2).   (3).

(1). Reset
Closed to
restart system

(2). Speaker
Connect to system
speaker
pin 1: Speaker
pin 2: N/C
pin 3: GND
pin 4: VCC

(3). Power LED
pin 1: VCC
pin 2: N/C
pin 3: VCC
pin 4: N/C
pin 5: GND

J3

1   +   +   1

(4).   (5). (6).   (7).

(4). IR
pin 1: VCC
pin 2: CIRRX
pin 3: IRRX
pin 4: GND
pin 5: IRTX
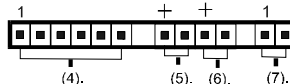
(5). HD LED
LED on when
onboard PCI
IDE Hard disks
are being
accessed

(6). Turbo LED

(7). Power Button

3). CPU Fan Installation

This connector is linked to the CPU fan. When the system is in some power saving mode, the CPU fan will turn off; when it reverts back to full on mode, the fan will turn back on. Without sufficient air circulation, the CPU may overheat resulting in damage to both the CPU and the mainboard.

Damage may occur to the mainboard and/or the CPU fan if these pins are used incorrectly. These are not jumpers, do not place jumper caps over these pins.

1). Set System Jumpers

NOTE: Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.

Clear CMOS: JCMOS

(1) Turn off your computer

(2) Place the jumper cap onto the pinpair 2-3 at least 6 seconds to clear CMOS

(3) Place the jumper cap onto the pinpair 1-2 to Normal

(4) Turn on your computer until CMOS checksum error appears

(5) Hold down the **Delete** key when boots

(6) Enter the BIOS Setup to re-enter user preferences, save it and exit.

1

**2-3:
Clear CMOS**

1

**1-2:
Normal
(Default)**

FSB Frequency Select: JCLK

This jumper allows you to select the front side bus frequency of the board.

Off:
100/133 MHz

ON:
133/166 MHz
(Default)
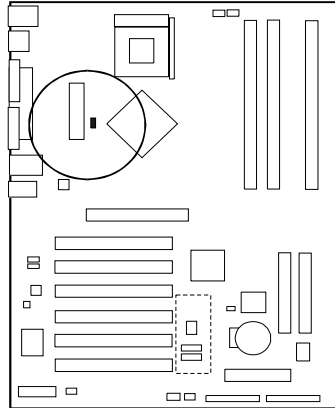
2). Install Memory Modules

Memory Layout

The mainboard accommodates three PC1600/2100/2700 184-pin DIMMs (Dual In-line Memory Modules):

- Supports up to 3.0GB of 200/266/333MHz DDR SDRAM

- Supports up 3 DDR DIMMs

- Supports 64/128/256/512MB, 1GB x8 & x16 DRAMs

- Supports 128-bit dual channel memory architecture

- Supports unbuffered non-ECC DIMMs

- Supports configurations defined in the JEDEC DDR DIMM spec.

Use DDR SDRAM (Double-Data-Rate Synchronous DRAM) modules only.

The figure and table below show several possible memory configurations.
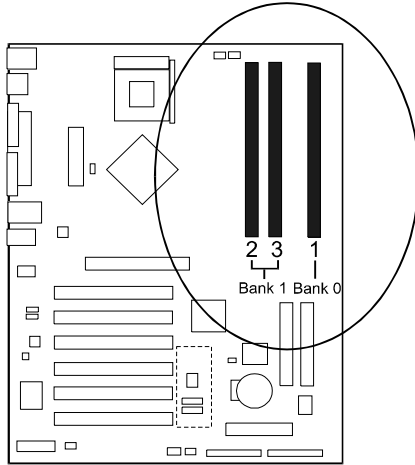
	1 DIMM (64-bit)			2 DIMMs (64-bit)	2 DIMMs (128-bit)		3 DIMMs (128-bit)
DIMM1	SS/DS				SS/DS	SS/DS	SS/DS
DIMM2		SS/DS		SS/DS	SS/DS		SS/DS
DIMM3			SS/DS	SS/DS		SS/DS	SS/DS

NOTE: DIMM2 and 3 shared same memory bus and DIMM1 is dedicated for 2nd channel memory bus

1-DIMM configuration: the DIMM can be located on either of DIMM1 to 3 in 64-bit mode

2-DIMMs configuration: the DIMMs can be located on DIMM2/3 and 3 and DIMM1 in 128-bit mode; and keeping these two DIMMs in same type and same size are preferrd

3-DIMMs configuration: located on all DIMM sockets in 128-bit mode

NOTE: Using non-comnpliant memory with higher bus speeds (overclocking) may serverely compromise the integrity of the systsem

DIMM Module Installation

DIMMs have 184 pins and one notch that matches with the DDR DIMM socket. DIMM modules are installed by placing the chip firmly into the socket and pressing straight down until the white clips close and the module fits tightly into the DIMM socket.

To remove the DIMM module press down the white clips and the module is released from the socket.

STR (Suspend To RAM) Function

This mainboard supports the STR (Suspend To RAM) power management scheme by maintaining the appropriate power states in the DDR SDRAM interface signals. The power source to the DDR SDRAM must be kept active during STR (ACPI S3). Advanced Configuration Power Interface (ACPI) provides many Energy Saving Features for operating systems that support Instant ON and QuickStart™ function.

 1. To enable the ACPI function and use the STR functionality to save system power, you are recommended to confirm the following requirements:

    a. Install ACPI qualified add-on cards (such as AGP, LAN, and modem cards).

    b. In BIOS under Power Management Setup, select *ACPI function: Enabled* and *ACPI Suspend Type: S3(STR)*.

    c. Install Windows®XP/2000/ME/98SE.

    d. Restart the system.

e. Open the Control Panel Power Management application, and click the Advanced tab. In the Power buttons section, select *Stand By* from the drop-down lists.

2. To enable the STR function, click the START button and choose Shut Down. In the Shut Down Windows dialog box, select the Stand By option to enter STR mode.

The following lists are the differences between STR power saving mode and Green (or Suspend) mode:

a. STR is the most advanced Power Management mode.

b. STR cuts all the power supplied to peripherals except to memory - max. power saving.

c. STR saves and keeps all on-screen data including any executed applications to DDR SDRAM.

d. In STR mode, you must push the power button (connected to the onboard J3 pin) or click your USB devices to wake up your system to the last display.

3). Install the CPU

CAUTION:
1. The heat sink and fan you installed must be approved by AMD.
2. The mainboard must be placed on a solid place to avoid shaking while install the heat sink and fan on the board.
3. The heat sink must be contact with the CPU top tightly.
4. Never run the processor without the heat sink properly and firmly attached. PERMANENT DAMAGE WILL RESULT!

The AMD CPU module resides in the socket on the board. Please follow the steps introduced below to complete the CPU installation.
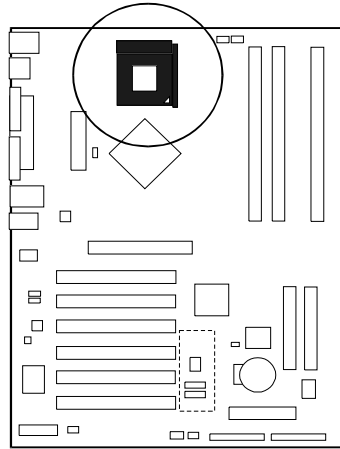
Step 1

Open the socket by raising the actuation lever.

Step 2

Insert the processor.

Ensure proper pin 1 orientation by aligning the FC-PGA corner marking with the socket corner closest to the actuation arm tip. The pin field is keyed to prevent mis-oriented insertion.

Do not force processor into socket. If it does not go in easily, check for mis-orientation and debris.

Make sure the processor is fully inserted into the socket on all sides.

Step 3

Close the socket by lowering and locking the actuation lever.

Step 4

Thermal compound and qualified heatsink recommended by AMD are a must to avoid CPU overheat damage. For more information about installing your CPU, please refer to the AMD website article Socket A AMD processor and Heatsink Installation Guide http://www.amd.com/products/cpg/athlon/pdf/23986.pdf.

CPU Overheating Protection

This board has CPU Overheating Protection when the temperature of CPU is overheating. This board supports automatically shutdown (to remove power) circuit when the CPU has reached the temperature of approximately 110ºC. Meanwhile the speaker will sustained beep and the system will not be to power on. This protection is designed by hardware, you do not need to do the BIOS setup.

To power on your system normally, we recommend you to confirm the following steps:

Step1: Unplug in the ATX power core (or turn off ATX power supply switch).

Step2: Please wait the beep to stop then plug in the ATX power core again (or turn on ATX power switch) to turn on your system.

NOTE: The CPU Overheating Protection will function only when CPU has thermal diode design.

4). Install Expansion Cards

This section describes how to connect an expansion card to one of your system expansion slots. Expansion cards are printed circuit boards that, when connected to the mainboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities. The mainboard features one AGP and six PCI bus expansion slots.
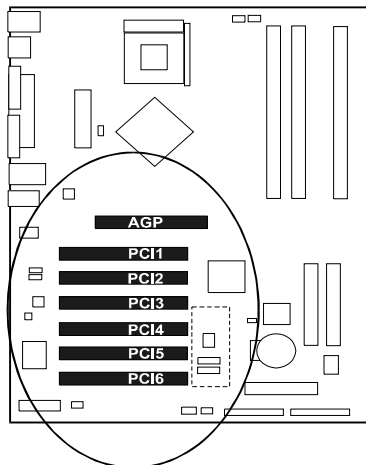
CAUTION: Make sure to unplug the power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both the mainboard and expansion cards.
Always observe static electricity precautions.
Please read Handling Precautions at the start of this manual.

To install an expansion card, follow the steps below:

1. Remove the computer chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the computer chassis. Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the computer chassis. Keep the slot cover mounting screw nearby.
3. Holding the edge of the peripheral card, carefully align the edge connector with the expansion slot.
4. Push the card firmly into the slot. Push down on one end of the expansion card, then the other. Use this rocking motion until the addon card is firmly seated inside the expansion slot.
5. Secure the board with the mounting screw removed in Step 2. Make sure that the card has been placed evenly and completely into the expansion slot.
6. Replace the computer system cover.
7. Setup the BIOS if necessary.
8. Install the necessary software drivers for the expansion card.

**Chapter 2
Installation
Procedures**

5). Connect Devices

Floppy Diskette Drive Connector

This connector provides the connection with your floppy disk drive.
The red stripe of the ribbon cable must be the same side with the Pin 1.
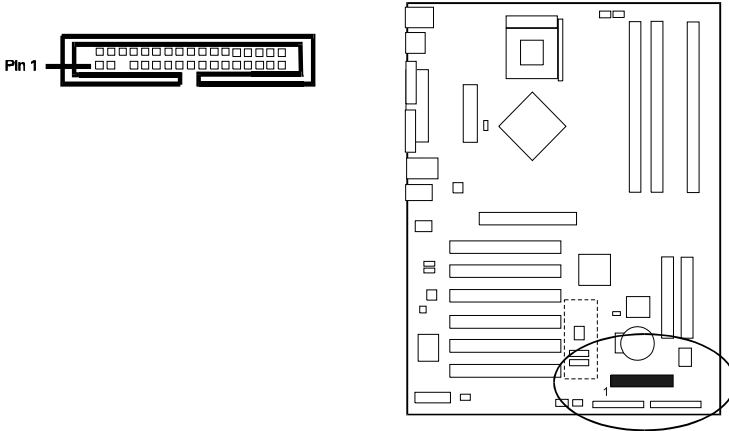
IDE Device Connectors

The two connectors, PRIMARY and SECONDARY, are used for your IDE hard
disk drives, CD drives, LS-120 drives, or IDE ZIP drives. The red stripe of the
ribbon cable must be the same side with the Pin 1.
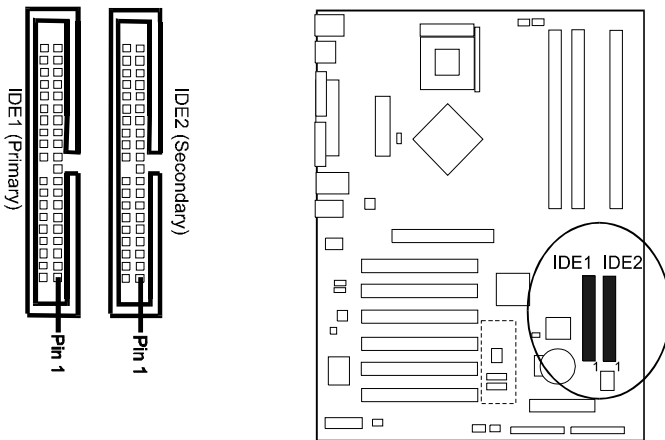
Game/MIDI Connector

This pinheader is used to connect with some types of game joysticks or game pads. Connect MIDI devices for playing or editing audio.
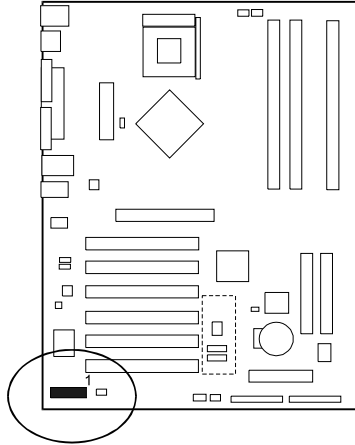
Fan Connectors

The two connectors, FAN1 (CPU Fan), FAN3 (Chassis Fan) are linked to the CPU fan, case fan, respectively. FAN2 (Power Fan) is connnected with power supply.

POWER FAN   CPU FAN

CHASSIS FAN

Sensor
+12V Signal

Pin 1

GND
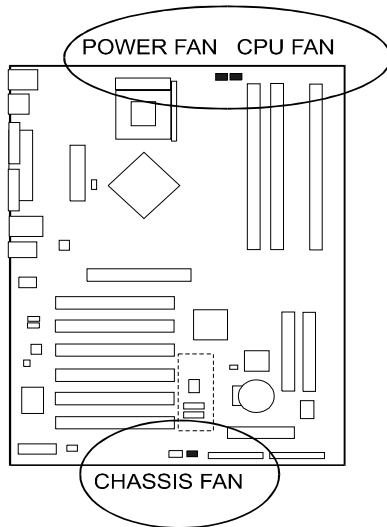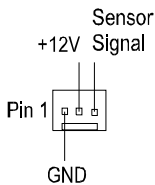
Wake-On-Lan Connector

This 3-pin connector is reserved for an NIC (Network Interface Card) to wake the system from power saving mode.

GND PME

Pin 1

+5V Standby

WOL
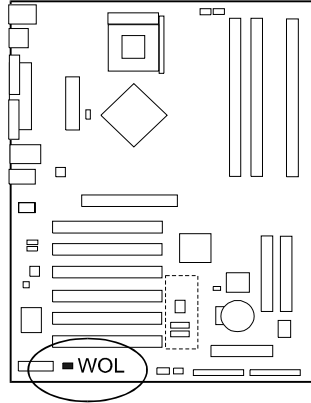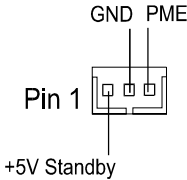
Power Connector

The 20-pin male block connector is connected to the ATX power supply. The plug from the power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned.
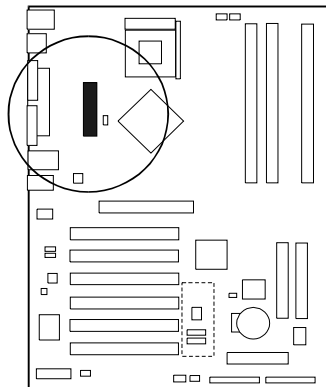
CD Audio-In Connectors

The connectors, CD_IN and AUX_IN, are for CD-ROM drive audio analog input use.
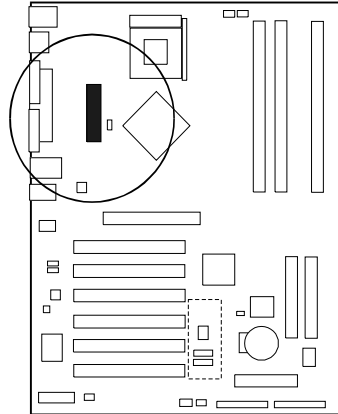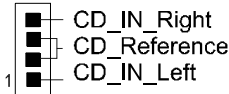
Sony/Philips Digital Interface Connector

This SPDIF connector is the digital link between the mainboard and your audio devices, such as CD player, sampler or DAT recorder. It allows the digital transmission of audio data in SPDIF format.
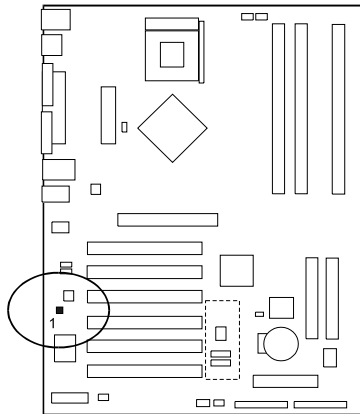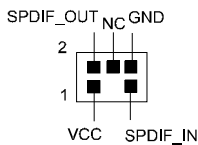
IEEE 1394 Connectors

400Mbps 1394a (FireWire) Connectors1394-1 and 1394-2 enable you to con-nect two IEEE 1394 ports for use with external devices that conform to the IEEE 1394 specification.
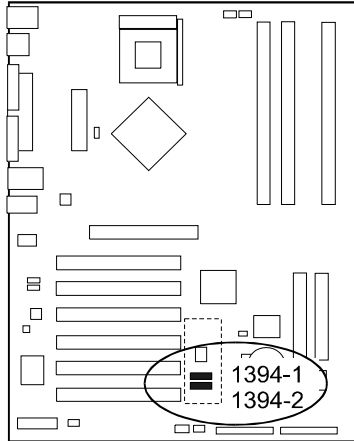
Front Panel Block and IR Connector

This 2 connectors include the connectors for linking with reset button, speaker, Power LED, IR, IDE LED, turbo LED, power button on the front panel of the system case. Please identify polarities of plug wires for the case speaker and LEDs. Please ask vendor about this information when you buy them and install the system by yourself. The plug wires polarities of these buttons will not affect the function.

J2

(1).   (2).   (3).

(1). Reset
Closed to
restart system

(2). Speaker
Connect to system
speaker
pin 1: Speaker
pin 2: N/C
pin 3: GND
pin 4: VCC

(3). Power LED
pin 1: VCC
pin 2: N/C
pin 3: VCC
pin 4: N/C
pin 5: GND

J3

(4).   (5). (6).   (7).

(4). IR
pin 1: VCC
pin 2: CIRRX
pin 3: IRRX
pin 4: GND
pin 5: IRTX

(5). HD LED
LED on when
onboard PCI
IDE Hard disks
are being
accessed

(6). Turbo LED

(7). Power Button

J2   J3
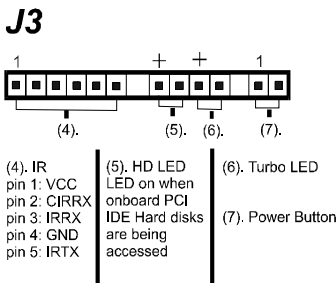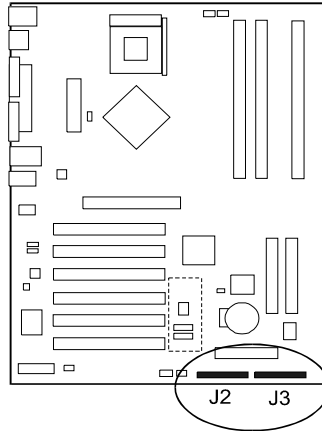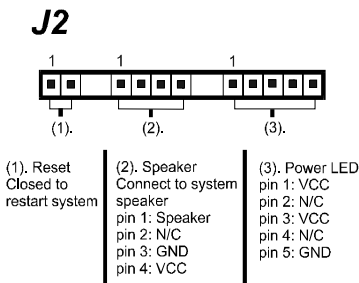
(1) Reset Switch is connected to the reset button. Push this switch to reboot the system instead of turning the power button off and on.

(2) Speaker is a pinheader for connecting to speaker.

(3) Power Button is connected with power button. Push this switch allows the system to be turned on and off rather than using the power supply button.

(4) IR is a pinheader that is used for linking with your ID device to allow transmission of data to another system that also supports the IR feature.

(5) IDE LED is connected to the IDE device indicator. This LED will blink when the hard disk drives are activated.

(6) Turbo LED is connected to the turbo speed indicator.

(7) Power On/Off

This is connected to the power button on the case. Using the Soft-Off by Pwr-BTTN feature, you can choose either Instant Off (turns system off immediately), or 4 sec delay (push the button for 4 seconds before the system turns off). When the system is in 4 sec delay mode, suspend mode is enabled by pushing the button momentarily.

PS/2 Keyboard and Mouse Connector

These two 6-pin female (PS/2 keyboard is purple color and PS/2 mouse is green color) connectors are used for your PS/2 keyboard and PS/2 mouse.
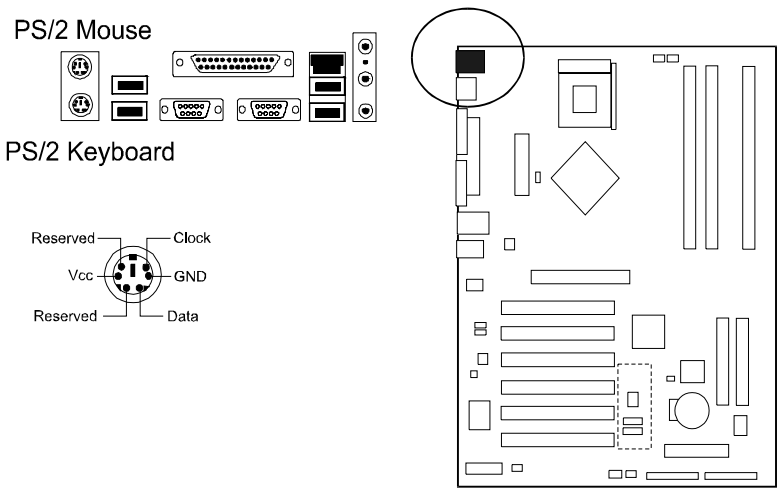
CAUTION:
Please make sure the USB cable has the same pin assignment. The different pin assignment may be caused damage of system. If you need the USB cable, please contact our retailer. Please make sure the USB cable has the same pin assignment. The different pin assignment may be caused damage of system.If you need the USB cable, please contact our retailer.

Universal Serial Bus Connectors

These four black connectors integrated on the edge of the board are used for linking with USB2.0 peripheral devices. This board also provides a connector USB3 for linking with the two extra USB2.0 ports (pinheader). They can link with front panels of some system cases.
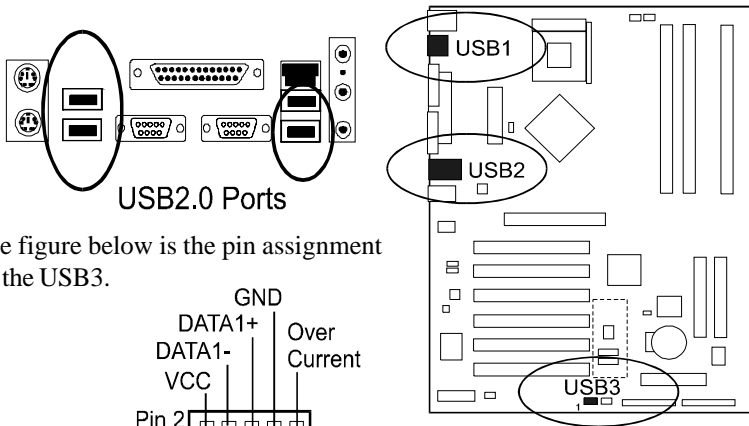
USB2.0 Ports

The figure below is the pin assignment of the USB3.
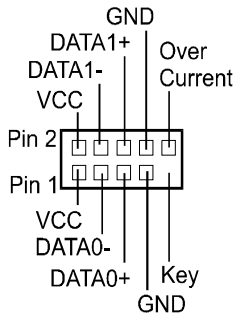
Printer Connector

This 25-pin D-Sub female burgundy-colored connector is attached to your printer.

Parallel Port
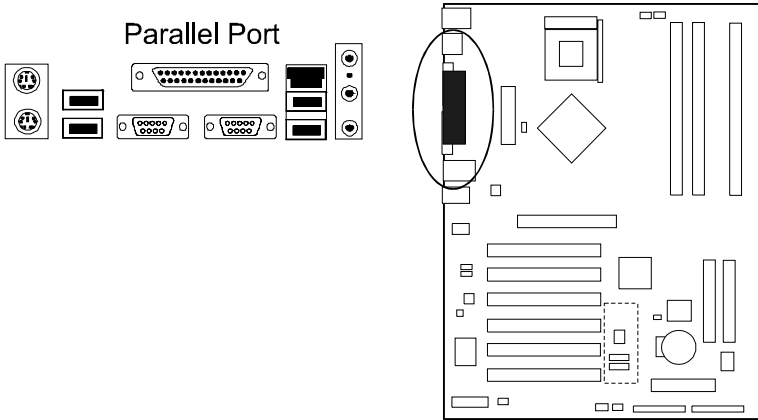
Audio I/O Jacks

LINE_OUT (lime) can be connected to headphones or preferably powered speakers. LINE_IN (light blue) allows tape players or other audio sources to be recorded by your computer or played through the LINE_OUT. MIC_IN (pink) allows microphones to be connected for audio input.

Line_out
Line_in
Mic_in

MIC_IN (Top)/
LINE_IN (Middle)/
LINE_OUT (Bottom)
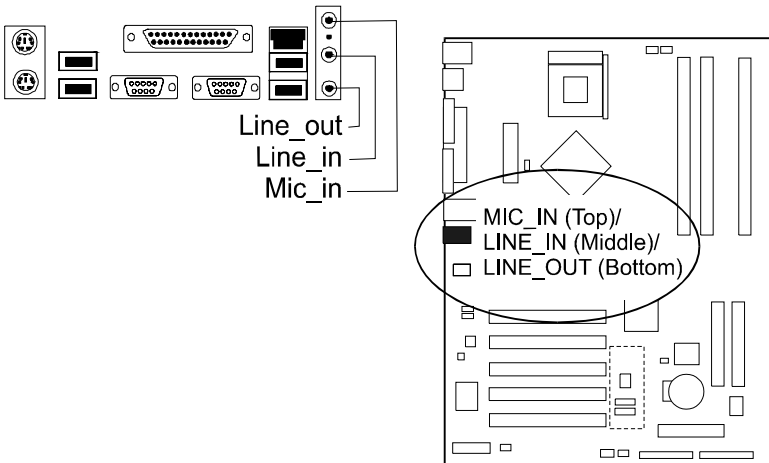
Front Panel Audio Connector

When the jumpers are removed and this connector is used for front panel audio. The type of front panel line-out phone jack is normal close. Without phone plug inserted, the rear panel audio is enabled. With phone plug inserted, the rear panel audio is disabled.
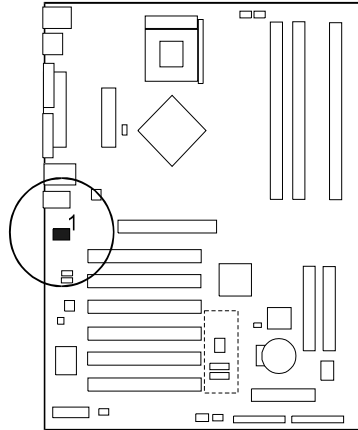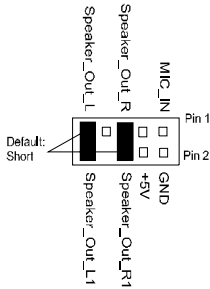
Settings

Pins (5-6) & (9-10) Short (default): Only the Onboard Rear Audio Speaker can be used.

Pins (5-6) & (9-10) Open: Only Front Panel Audio Speaker can be used.

NOTE: In 2-Channel audio mode, Mic-In is shared for both front panel and rear panel. In 6-Channel audio mode, the Mic-In is dedicated for front panel used, and rear panel Mic-In function will switch to Center and subwoofer support.

Serial Port Connectors

COM1 (9-pin D-sub male connector with teal color) and COM2 (9-pin D-sub teal male connector with teal color) allow you to connect with your devices that use serial ports, such as a serial mouse or an external modem.
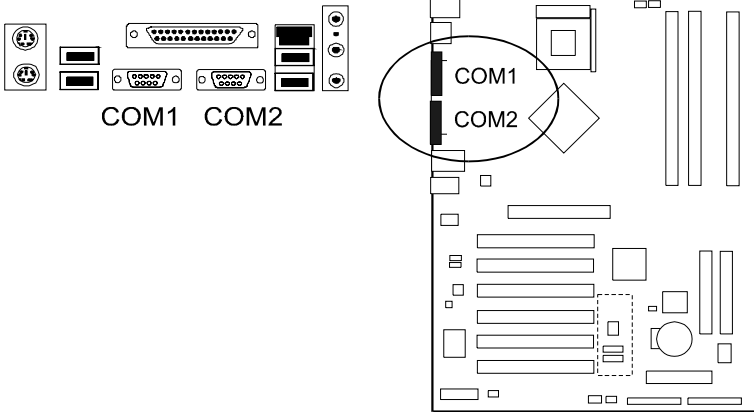
LAN Connector

The RJ45 LAN jack is used for the LAN cable plug.
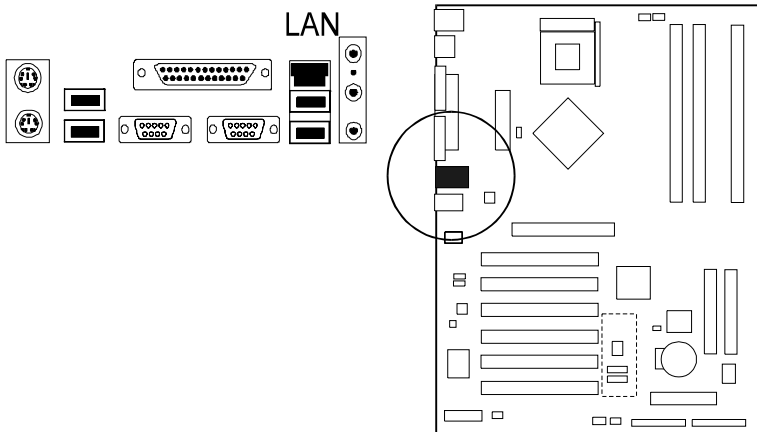
BIOS Setup

The mainboard comes with the chip that Award BIOS that contains the ROM Setup information of your system. (This chip serves as an interface between the processor and the rest of the mainboard components.) This section explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

CMOS Setup Utility

```
┌─────────────────────────────────────────────────────────────┐
│                                                               │
│  ┌─────────────────────────────┬─────────────────────────┐   │
│  │ ► Standard CMOS Features     │ ► Power BIOS Features    │   │
│  │ ► Advanced BIOS Features     │   Load Fail-Safe Defaults│   │
│  │ ► Advanced Chipset Features  │   Load Optimized Defaults│   │
│  │ ► Integrated Peripherals     │   Set Supervisor Password│   │
│  │ ► Power Management Setup      │   Set User Password      │   │
│  │ ► PnP/PCI Configurations      │   Save & Exit Setup      │   │
│  │ ► PC Health Status            │   Exit Without Saving    │   │
│  │                              │                         │   │
│  ├─────────────────────────────┴─────────────────────────┤   │
│  │ Esc :  Quit                    ↑ ↓ → ← : Select Item    │   │
│  │ F10 :  Save & Exit Setup                                │   │
│  ├─────────────────────────────────────────────────────────┤   │
│  │            Time, Date, Hard Disk Type ...               │   │
│  └─────────────────────────────────────────────────────────┘   │
│                                                               │
└─────────────────────────────────────────────────────────────┘
```

The Setup utility program allows updates to the mainboard configuration settings. The BIOS setup values will be saved in the CMOS. It is executed when the user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. Use the arrow keys to select and press **Enter** to run the selected program.

Standard CMOS Setup

```
        Phoenix - Award WorkstationBIOS CMOS Setup Utility
                    Standard CMOS Features

  Date  (mm:dd:yy)    Mon, Nov 18   2002          Item Help
  Time  (hh:mm:ss)    18 :  3 : 57
                                            Menu Level  ►
► IDE Primary Master
► IDE Primary Slave                         Change the day, month,
► IDE Secondary Master                      year and century
► IDE Secondary Slave

  Drive A             [1.44M,  3.5 in.]
  Drive B             [None]
  Floppy 3 Mode Support [Disabled]

  Video               [EGA/VGA]
  Halt On             [All Errors]

  Base Memory          640K
  Extended Memory      48128K
  Total Memory         49152K

↑↓→← : Move  Enter : Select  +/-/PU/PD:Value  F10 : Save  ESC : Exit F1 : General Help
       F5 : Previous Values      F6 : Fail-Safe Defaults    F7 : Optimized Defaults
```

The Standard CMOS Setup screen is displayed above. Each item may have one or more option settings. The system BIOS automatically detects memory size, thus no changes are necessary. Use the arrow keys to highlight the item and then use **PgUp** or **PgDn** keys to select the value you want in each item.

Date

To set the date, highlight the *Date* field and then press **Page Up/Page Down** or **+/-** keys to set the current date. Follow the month, day and year format.

Time

To set the time, highlight the *Time* field and then press **Page Up/Page Down** or **+/-** keys to set the current time. Follow the hour, minute, and second format.

Hard Disks

This field records the specifications for all non-SCSI hard drives installed in the system. The onboard PCI IDE connectors provide Primary and Secondary channels for connecting up to four IDE hard disks or other IDE devices. Each channel can support up to two hard disks, the first of which is the *Master* and the second is the *Slave*.

Hard Disk Configurations

Capacity:	The hard disk size. The unit is Bytes.
Cylinder:	The cylinder number of the hard disk.
Head:	The read/write head number of hard disk.
Precomp:	The cylinder number at which the disk drive changes the write current.
Landing Zone:	The cylinder number that the disk drive heads (read/write) are seated when the disk drive is parked.
Sector:	The sector number of each track defined on the hard disk.

Drive A / Drive B

This field records the types of floppy drives installed in the system. To enter the configuration value for a particular drive, highlight its corresponding field and then select the drive type using the **left-** or **right-arrow** key.

Floppy 3 Mode Support

This is a Japanese standard floppy type drive. The standard stores 1.2MB in a 3.5 inch diskette.

Video

Set this field to the type of video display card installed in the system.

Halt On

This field determines which types of errors will cause the system to halt.

**Chapter 3
BIOS Setup**

Advanced BIOS Features

```
         Phoenix - Award WorkstationBIOS CMOS Setup Utility
                      Advanced BIOS Features

   BIOS Guardian              [Enabled]          ▲        Item Help
   Virus Warning              [Disabled]
   CPU Internal Cache         [Enabled]             Menu Level  ►
   External Cache             [Enabled]
   Quick Power On Self Test   [Enabled]             Enabled to avoid virus
   First Boot Device          [Floppy]              infect your BIOS. You
   Second Boot Device         [CDROM]               will need to disable
   Third Boot Device          [HDD-0]               to update BIOS.
   Boot Other Device          [Enabled]
   Swap Floppy Drive          [Disabled]
   Boot Up Floppy Seek        [Enabled]
   Boot Up NumLock Status     [On]
   Gate A20 Option            [Fast]
   Typematic Rate Setting     [Disabled]
 x Typematic Rate (Chars/Sec) 6
 x Typematic Delay (Msec)      250
   Security Option            [Setup]
   APIC Mode                  [Enabled]
   MPS Version Control For OS  [1.4]              ▼

 ↑↓→← Move  Enter : Select  +/-/PU/PD:Value  F10 : Save  ESC : Exit  F1 : General Help
      F5 : Previous Values      F6 : Fail-Safe Defaults     F7 : Optimized Defaults
```

BIOS Guardian

It allows the system to prevent computer viruses. Users will need to disable it to update BIOS. The options are: Enabled, Disabled.

NOTE: Please disable this BIOS feature about BIOS Guardian before you start to reflash BIOS.

BIOS Guardian and Reflash BIOS

BIOS Guardian by default is enabled, thus effectively acts as a firewall against viruses that can attack the BIOS while the system is running. It must be disabled before reflash BIOS.

The steps below show you how to off and on BIOS Guardian when reflash BIOS:

1. Press **Del** key while booting. Go to *CMOS Setup Utility* menu.
2. Go to *Advanced BIOS Features* submenu.
3. Set the feature *BIOS Guardian* at Disabled.
4. Save the setting and exit. The system restarts.
5. POST screen holds. A message about BIOS Guardian shows.
6. Press Space bar.
7. Reflash BIOS. Restart the system after complete it.

8. POST screen holds. A message about BIOS Guardian shows.
9. Press **G** key. The feature BIOS Guardian will be enabled again.

Virus Warning

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk drive when booting up.
The options are: Enabled, Disabled.

CPU Internal Cache

This controls the status of the processor internal cache area.
The options are: Enabled, Disabled.

External Cache

This controls the status of the external (L2) cache area.
The options are: Enabled, Disabled.

Quick Power On Self Test

When enabled, allows the BIOS to bypass the extensive memory test.
The options are: Enabled, Disabled.

First/Second/Third Boot Device

This feature allows user to select the boot device priority.
The options are: Floppy, LS120, Hard Disk, CDROM, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN, Disabled.

Boot Other Device

This feature allows user to select the boot device priority.
The options are: Enabled, Disabled.

Swap Floppy Drive

Allows you to switch the order in which the operating system accesses the floppy drives during boot up.
The options are: Enabled, Disabled.

Boot Up Floppy Seek

When enabled, assigns the BIOS to perform floppy diskette drive tests by issuing the time-consuming seek commands.
The options are: Enabled, Disabled.

Boot Up Numlock Status

When set to On, allows the BIOS to automatically enable the Num Lock Function when the system boots up. The options are: On, Off.

Gate A20 Option

When set at Fast, allows a faster access response under Protected mode. The options are: Fast, Normal.

Typematic Rate Setting

The term typematic means that when a keyboard key is held down, the character is repeatedly entered until the key is released.
The options are: Disabled, Enabled.

Typematic Rate (Chars/Sec)

This feature is available only if the above item, Typematic Rate Setting, is set at Enabled. Sets the rate of a character repeat when the key is held down. The options are: 6, 8, 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

This feature is available only if the item, Typematic Rate Setting, is set at Enabled. Sets the delay time before a character is repeated.
The options are: 250, 500, 750, 1000 millisecond.

Security Option

This category allows you to limit access to the System and Setup, or just to Setup. **System**: The system will not boot and the access to Setup will be denied if the correct password is not entered at the prompt. **Setup**: The system will boot; but the access to Setup will be denied if the incorrect password is not entered at the prompt. The options: Setup, System.

APIC Mode

Allows you to decide if the system enters the APIC (Advanced Programmable Interrupt Controller) mode or not for more IRQs can be released. The options are: Enabled, Disabled.

MPS Version Control For OS

When two CPUs onboard (not this board) this feature allows you to select MPS (Multi-Processor Spec.) version control for OS when logo test executes. The options are: 1.1, 1.4.

OS Select For DRAM > 64MB

If your operating system (OS) is OS/2, select the option OS2. Otherwise, stay with the default setting Non-OS2.The options are: Non-OS2, OS2.

Full Screen LOGO Show

It decides whether or not the full screen logo is shown during system booting up. The options are: Enabled, Disabled.

Small Logo (EPA) Show

If the BIOS combined a bit map file internal, this option lets users determine it showing or not at screen top-Right corner.
The options are: Enabled, Disabled.

Advanced Chipset Features


```
Phoenix - Award WorkstationBIOS CMOS Setup Utility
              Advanced Chipset Features

   System Performance        [Optimal]    │      Item Help
   CPU Clock Ratio           [Default]    │
   FSB Frequency             [100 MHz]    │  Menu Level  ►
   CPU Interface             [Optimal]    │
   Memory Frequency          [By SPD]     │  [Optimal] - Use the
   Resulting Frequency                    │  most stable settings.
   Memory Timings            [Optimal]    │
 X T(RAS)                     7           │  [Aggressive] - Use
 X T(RCD)                     1           │  overclocked settings
 X T(RP)                      1           │  for higher performance
 X CAS Latency                2.5         │  but with higher risk
   FSB Spread Spectrum       [Disabled]   │  of instability.
   AGP Spread Spectrum       [Disabled]   │
   Frame Buffer Size         [32M]        │  [Expert] - Allows
   AGP Aperture Size         [32M]        │  full customization of
   AGP Frequency             [Auto]       │  performance options.
   AGP 8X Support            [Enabled]    │  Recommended for
   AGP Fast Write Capability [Enabled]    │  experts only.
   CPU Thermal-Throttling    [50.0%]      │

↑↓→← Move  Enter : Select  +/-/PU/PD:Value  F10 : Save  ESC : Exit  F1 : General Help
     F5 : Previous Values    F6 : Fail-Safe Defaults    F7 : Optimized Defaults
```

System Performance

This item will help you to configure your system performance.
Options: Optimal, Aggressive, Expert.

CPU Clock Ratio

Use this item to select a multiplier for the system frontside bus (FSB) frequency. The value of the multiplier must be set so that:

Multiplier x Frontside Bus Frequency = CPU Clock Speed

For example, if you have a processor that is rated to run at 450 MHz and the system is running a frontside bus frequency of 100 MHz, you should select a multiplier of 4.5 so that:

4.5 (Multiplier) x 100 MHz (frontside bus) = 450 MHz (CPU clock)

FSB Frequency

Enables you to set the CPU frontside bus speed. Enables you to subtle tuning FSB.

CPU Interface

Allows you to set CPU/FSB parameters for CPU most stable or overclocked.
Options: Optimal, Aggressive.

Memory Frequency

Enables you to select the memory frequency.

Options: By SPD, 50%, 60%, 66%, 75%, 80%, 85%, Sync, 120%, 125%, 133%, 150%, 166%, 200%.

Memory Timings

For setting DRAM Timing.

Options: Optimal, Aggressive, Expert.

T (RAS)

This item specifies the number of clock cycles needed after a bank active command before a precharge can occur (sets the minimum RAS pulse width.).

Options: 1 ~ 15.

T (RCD)

This item sets the timing parameters for the system memory such as the CAS (Column Address Strobe) and RAS (Row Address Strobe).

Options: 1 ~ 7.

T (RP)

This item refers to the number of cycles required to return data to its original location to close the bank or the number of cycles required to page memory before the next bank activate command can be issued.

Options: 1 ~ 7.

CAS Latency

Enables you to select the CAS latency time. The value is set at the factory depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM.

Options: 2.0, 2.5, 3.0.

FSB Spread Spectrum

This item can significantly reduce the EMI (ElectroMagnetic Interference) generated by the CPU.

Options: Disabled, 0.50%, 1.00%.

AGP Spread Spectrum

This item can significantly reduce the EMI (ElectroMagnetic Interference) generated by the AGP.
Options: Disabled, 0.50%, 1.00%.

Frame Buffer Size

This item allows you to select the main memory frame buffer size of AGP.
Options: 8MB, 16MB, 32MB, 64MB, 128MB, Disabled.

AGP Aperture Size (MB)

This item defines the size of the aperture if you use an AGP graphics adapter. It refers to a section of the PCI memory address range used for graphics memory. The default is 64 MB.
Options: 32, 64, 128, 256, 512 MB.

AGP Frequency

This item allows you to select the AGP frequency.
Options: Auto, 90MHz, 93MHz, 95MHz, 97MHz, 100MHz, 50MHz ~87MHz in 1MHz increments.

AGP 8X Support

Enables AGP 8X supports.
Options: Disabled, Enabled.

AGP Fast Write Capability

Enables Fast Write protocol for AGP cards.
Options: Disabled, Enabled.

CPU THRM-Throttling

This item sets the percentage of time that the CPU is idled if CPU throttling is initiated by excess heat. The default setting is 50%.
Options: 12.5%, 25.0%, 37.5%, 50.0%, 62.5%, 75.0%, 87.5%.

System BIOS Cacheable

This item allows the system to be cached in memory for faster execution.
The default is Enabled.
Options: Disabled, Enabled.

Video RAM Cacheable

This option allows the CPU to cache read/writes of the video RAM. The default is Enabled. Options: Disabled, Enabled.

Integrated Peripherals

```
          Phoenix - Award WorkstationBIOS CMOS Setup Utility
                        Integrated Peripherals
 ┌─────────────────────────────────────────┬─────────────────────┐
 │ OnChip IDE Channel0       [Enabled]   ▲  │      Item Help      │
 │ Primary Master    PIO     [Auto]         │                     │
 │ Primary Slave     PIO     [Auto]         │ Menu Level    ►     │
 │ Primary Master    UDMA    [Auto]         │                     │
 │ Primary Slave     UDMA    [Auto]         │                     │
 │ OnChip IDE Channel1       [Enabled]      │                     │
 │ Secondary Master  PIO     [Auto]         │                     │
 │ Secondary Slave   PIO     [Auto]         │                     │
 │ Secondary Master  UDMA    [Auto]         │                     │
 │ Secondary Slave   UDMA    [Auto]         │                     │
 │ IDE Prefetch Mode         [Enabled]      │                     │
 │ Init Display First        [PCI Slot]     │                     │
 │ OnChip USB                [V1.1+V2.0]    │                     │
 │ USB Keyboard Support      [Disabled]     │                     │
 │ AC97 Audio                [Auto]         │                     │
 │ MAC Lan(nVIDIA)           [Auto]         │                     │
 │ Machine MAC(NV) Address   [Disabled]     │                     │
 │ X MAC(NV) Address Input    Press Enter   │                     │
 │ MAC Lan (3COM)            [Auto]      ▼  │                     │
 ├─────────────────────────────────────────┴─────────────────────┤
 │ ↑↓→  Move  Enter : Select  +/-/PU/PD:Value  F10 : Save  ESC : Exit  F1 : General Help │
 │      F5 : Previous Values     F6 : Fail-Safe Defaults    F7 : Optimized Defaults      │
 └───────────────────────────────────────────────────────────────┘
```

NOTE:
If you do not use the Onboard IDE connector, then you will need to set Onboard Primary PCI IDE: Disabled and Onboard Secondary PCI IDE: Disabled
The Onboard PCI IDE cable should be equal to or less than 18 inches (45 cm.).

OnChip Primary IDE Channel0

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled (default) to activate each channel separately. Options: Enabled, Disabled.

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device. The default is Auto.
Options: Auto, Mode 0 ~ 4.

IDE Primary/Secondary Master/Slave UDMA

This allows you to select the mode of operation for the Ultra DMA-33/66/ 100/133 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA-33/66/100/133, select Auto to enable UDMA mode by BIOS or you can select mode by manual.
Options: Auto, Disabled.

IDE Prefetch Mode

Selecting Enabled reduces latency between each drive read/write cycle, but may cause instability in IDE subsystems that cannot support such fast performance. If you are getting disk drive errors, try setting this value to Disabled. This field does not appear when the Internal PCI/IDE field, above, is Disabled.
Options: Enabled, Disabled.

Init Display First

If two video cards are used (1 AGP and 1 PCI) this specifies which one will be the primary display adapter. The default is PCI Slot.
Options: PCI Slot, AGP.

Onchip USB

Enables the USB controllers.
Options: Disabled, V1.1+V2.0, V1.1.

USB Keyboard Support

Your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard. The default is Auto detect.
Options: Enabled, Disabled.

AC97 Audio

This item allows you to decide to auto or disable the chipset family to support AC97 Audio. The function setting AC97 Audio Codec states.
The system default is Auto. Options: Auto, Disabled.

MAC Lan (nVIDIA)

Enables the onboard LAN feature.
Options: Auto, Disabled.

Machine MAC (NV) Address
Machine MAC (NV) addrress selection.
Options: Enabled, Disabled.

MAC (NV) Address Input
Allows you to input the MAC (NV) address.

MAC Lan (3COM)
Enables the onboard LAN feature.
Options: Auto, Disabled.

OnChip 1394
Enables the onboard IEEE 1394 feature.
Options: Auto, Disabled.

1394 GUID
Enables the 1394 GUID.
Options: Enabled, Disabled.

1394 GUID Input
Allows you to input the 1394 GUID.

IDE HDD Block Mode
IDE Block Mode allows the controller to access blocks of sectors rather
than a single sector at a time. The default is Enabled.
Options: Enabled, Disabled.

Keyboard Power ON Password
Press Enter to create a password that is required when you use the key-
board to power on the system. You must set the POWER ON Function to
Password to be prompted for a password at power on.

Hot Key Power ON
Enables you to set a hot key combination to be used for powering on the
system. The default is Ctrl-F1. Options: Ctrl-F1 ~ Ctrl F12.

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled in this field.
Options: Enabled, Disabled.

Onboard Serial Port 1/2

Select an address and corresponding interrupt for the first and second serial ports. Options: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

UART Mode Select

This filed allows the users to configure what IR mode the 2nd serial port should use. The default is Normal. Options: Normal, IrDA and ASKIR.

RxD, TxD Active

This field configures the receive and transmit signals generated from the IR port. The default is Hi Lo (when UART Mode Select is not set to Normal). Options: Hi Hi, Hi Lo, Lo Hi, and Lo Lo.

IR Transmission delay

This item allows you to enabled/disable IR transmission delay.
Options: Enabled, Disabled.

UR2 Duplex Mode

This item allows you to select IR half/full duplex function.
Options: Half, Full.

Use IR Pins

This item allows you to select IR transmission routes, one is RxD2, TxD2 (COMPort) and the other is IR-Rx2Tx2.
Options: IR-Rx2Tx2, RxD2, TxD2.

Onboard Parallel Port

This field allows the user to configure the LPT port.
Options: 378/IRQ7, 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode

This field allows the user to select the parallel port mode.
Options: SPP, EPP, ECP, ECP+EPP.

EPP Mode Select

This item allows you to determine the IR transfer mode of onboard I/O chip. Options: EPP1.9, EPP1.7.

ECP Mode USE DMA

This field allows the user to select DMA1 or DMA3 for the ECP mode.
Options: DMA1, DMA3.

PWRON After PWR-Fail

This item enables your computer to automatically restart or return to its last operating status after power returns from a power failure.
Off: The system stays off after a power failure.
Former-Sts: The system returns to the state it was in just prior to the power failure.

Game Port Address

Select an address for the Game port.
Options: 201, 209, Disabled.

Midi Port Address

Select an address for the Midi port.
Options: 290, 300, 330, Disabled.

Midi Port IRQ

Select an interrupt for the Midi port.
Options: 5, 10.

Power Management Setup
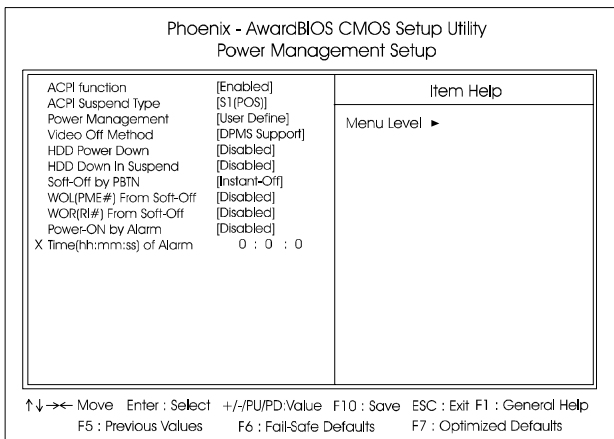
ACPI Suspend Type

This item allows you to select S1(POS) or S3(STR) function. When set to S3(STR) or S1&S3 the following two fields become available.
Options: S1(POS), S3(STR), S1&S3.

Power Management

Use this to select your Power Management selection. **Max. saving**: Maximum power savings. Inactivity period is 1 minute in each mode. **Min. saving**: Minimum power savings. Inactivity period is 1 hour in each mode. **User define**: Allows user to define PM Timers parameters to control power saving mode.

Video Off Method

This option allows you to select how the video will be disabled by the power management. **V/H Sync + Blank**: System turns off vertical and horizontal synchronization ports and writes blanks to the video buffer.
DPMS Support: Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards Association (VESA). Use the software supplied for your video subsystem to select video power management values. **Blank Screen**: System only writes blanks to the video buffer.

HDD Power Down

When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.
Options: Disabled, 1 ~ 15 Min.

HDD Down In Suspend

Lets you enable the HDD to power off in suspend mode.
Options: Enabled, Disabled.

Soft-Off by PBTN

Use this to select your soft-off function. The default is Instant Off.
Instant Off: Turns off the system instantly. **Delay 4 Second** : Turns off the system after a 4 second delay. If momentary press of button, the system will go into Suspend Mode. Press the power button again to make system back to work.

WOL (PME#) From Soft-Off

An input signal form PME on the PCI card awakens the system from a soft off state. Options: Enabled, Disabled.

WOR (RI#) From Soft-Off

An input signal form RI on the PCI card awakens the system from a soft off state. Options: Enabled, Disabled.

USB Resume from S3/S4

This item allows you to wake-up the system by USB device when you save the computer power at S3/S4. Options: Enabled, Disabled.

Power-On by Alarm

When enabled, you can set the date and time in the following two fields. Any event occurring at the specified date or time awakens the system from power savings mode.

Time (hh:mm:ss) Alarm

If an ATX power supply is installed and when RTC Alarm Resume is Enabled, this feature allows you to set the time of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled. The options are: hh (*hour*) - 0, 1, 2,.., 23; mm (*minute*) - 0, 1, 2,..,59; ss (*second*) - 0, 1, 2,..,59.

PnP/PCI Configurations

```
                Phoenix - AwardBIOS CMOS Setup Utility
                         PnP/PCI Configurations
  ┌──────────────────────────────────────┬──────────────────────────┐
  │ Reset Configuration Data  [Disabled]  │        Item Help         │
  │                                       │                          │
  │ Resources Controlled By   [Auto (ESCD)]│ Menu Level  ►            │
  │ x IRQ Resources            Press Enter │                          │
  │                                       │ Default is Disabled.     │
  │ PCI/VGA Palette Snoop     [Disabled]  │ Select Enabled to        │
  │ Assign IRQ For VGA        [Enabled]   │ reset Extended System    │
  │                                       │ Configuration Data       │
  │                                       │ ESCD) when you exit      │
  │                                       │ Setup if you have        │
  │                                       │ installed a new add-on   │
  │                                       │ and the system           │
  │                                       │ reconfiguration has      │
  │                                       │ caused that a serious    │
  │                                       │ conflict that the OS     │
  │                                       │ cannot boot              │
  │                                       │                          │
  ├──────────────────────────────────────┴──────────────────────────┤
  │ ↑↓→← Move  Enter : Select  +/-/PU/PD:Value  F10 : Save  ESC : Exit  F1 : General Help │
  │     F5 : Previous Values     F6 : Fail-Safe Defaults    F7 : Optimized Defaults       │
  └──────────────────────────────────────────────────────────────────┘
```

WARNING: Conflicting IRQ may cause the system to not find certain devices.

PNP OS Installed

Do you have a PNP OS installed on your system. The default is No.
Options: Yes, No.

Reset Configuration Data

This setting allows you to clear ESCD data. The default is Disabled
Disabled: Normal Setting.
Enabled: If you have plugged in some Legacy cards to the system and they were recorded into ESCD (Extended System Configuration Data), you can set this field to Enabled in order to clear ESCD.

Resources Controlled By

Determines what controls system PNP/PCI resources.
Manual: PNP Card resources are controlled manually. The *IRQ Resources* field becomes available and you can set which IRQ-X and DMA-X are assigned to PCI/ISA PNP or Legacy ISA Cards.
Auto: If your ISA card and PCI cards are all PNP cards, BIOS assigns the interrupt resource automatically.

Interrupt requests are shared as shown below:

	INT A	INT B	INT C	INT D
AGP Slot				v
Slot 1			v	
Slot 2				v
Slot 3	v			
Slot 4		v		
Slot 5			v	
Slot 6				v

IMPORTANT!
If using PCI cards on shared slots, make sure that the drivers
support *Shared IRQ* or that the cards do not need IRQ assign-
ments. Conflicts will arise between the two PCI groups that will
make the system unstable or cards inoperable.

PCI/VGA Palette Snoop

This item is designed to overcome problems that can be caused by some
nonstandard VGA cards. This board includes a built-in VGA system that
does not require palette snooping so you must leave this item disabled.
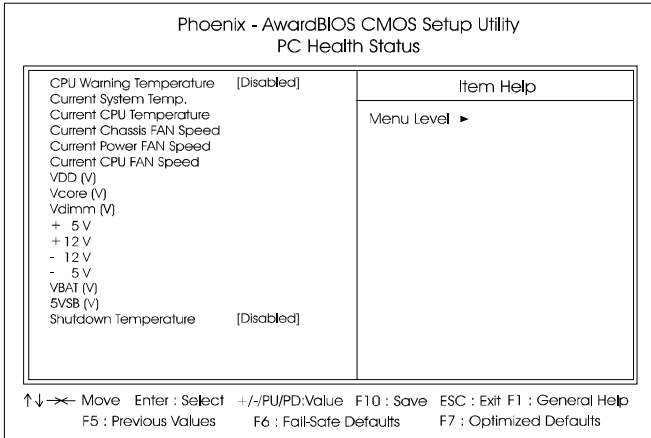Options: Enabled, Disabled.

Assign IRQ For VGA

This item allows BIOS to assign whether IRQ is with VGA or not. If you
have not connect the VGA device. Can release the IRQ for other device.
The default is Enabled. Options: Enabled, Disabled.

PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility
PC Health Status

```
CPU Warning Temperature    [Disabled]        Item Help
Current System Temp.
Current CPU Temperature               Menu Level  ▶
Current Chassis FAN Speed
Current Power FAN Speed
Current CPU FAN Speed
VDD (V)
Vcore (V)
Vdimm (V)
+  5 V
+ 12 V
-  12 V
-   5 V
VBAT (V)
5VSB (V)
Shutdown Temperature       [Disabled]
```

↑↓→← Move   Enter : Select   +/-/PU/PD:Value   F10 : Save   ESC : Exit F1 : General Help
F5 : Previous Values   F6 : Fail-Safe Defaults   F7 : Optimized Defaults

CPU Warning Temperature
Sets the temperature at which the computer will respond to an overheating CPU. The default is Disabled.
Options: Disabled, 50°C/122°F ~ 70°C/158°F.

Current System Temp.
Displays the current system temperature.

Current CPU Temperature
Displays the current CPU temperature.

Current Chassis/Power/CPU FAN Speed
Displays the current speed of the chassis, power, and CPU fan speed in RPMs.

Vdd
The voltage level of chipset.

Vcore
The voltage level of the CPU(Vcore).
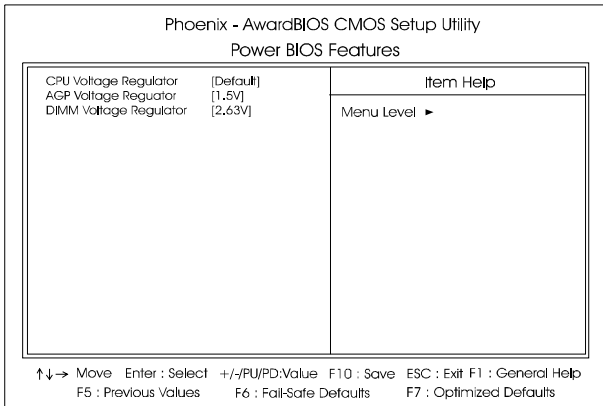
Vdimm

The voltage level of the DRAM.

+ 5V, +12V, -12V, -15V, VBAT(V), 5VSB(V)

The voltage level of the switching power supply.

Shutdown Temperature

This is the temperature that the computer will turn off the power to combat the effects of an overheating system. (requires ACPI to be enabled in Power Management BIOS and ACPI compliant operating system.) Options available are 60ºC/140ºF to 75ºC/167ºF in increments of 5ºC.

Power BIOS Features

```
              Phoenix - AwardBIOS CMOS Setup Utility
                      Power BIOS Features

  CPU Voltage Regulator    [Default]           Item Help
  AGP Voltage Regurator    [1.5V]
  DIMM Voltage Regulator   [2.63V]        Menu Level  ►




  ↑↓→  Move   Enter : Select  +/-/PU/PD:Value  F10 : Save  ESC : Exit  F1 : General Help
       F5 : Previous Values       F6 : Fail-Safe Defaults    F7 : Optimized Defaults
```

In the following items, Default Voltage indicates the original factory value, and New Voltage indicates the value that you assign.

CPU Voltage Regulator

This item allows you to set the CPU Vcore voltage.
Options: 1.400V to 2.200V in 0.025V increments. We recommend that you leave this at the default value.

AGP Voltage Regulator

This item allows you to set the AGP slot voltage.

Options: 1.5V to +1.8V in 1V increments. We recommend that you leave this at the default value.

DIMM Voltage Regulator

This item allows you to set the DIMM slot voltage.

Options: 2.50V, 2.63V, 2.77V, 2.90V. We recommend that you leave this at the default value.

Load Fail-Safe Defaults

When you press <Enter> on this item you get a confirmation dialog box:

Load Fail-Safe Defaults (Y/N) ? N

Pressing **Y** loads the BIOS default values for the most stable, minimal-performance system operations.

Load Optimized Defaults

When you press <Enter> on this item you get a confirmation dialog box:

Load Optimized Defaults (Y/N) ? N

Pressing **Y** loads the default values that are factory settings for optimal performance system operations.

Supervisor/User Password

These items are used to install a password. A Supervisor password takes precedence over a User password, and the Supervisor limits the activities of a User. You can set either a supervisor or user password, or both of them:

Supervisor password: authorized to enter and change the options of the setup menus.

User password: authorized to enter, but not authorized to change the options of the setup menus.

When you select Set User/Supervisor Password, the following message appears prompting you to type a password:

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now clears any previously entered password from CMOS memory. You will be prompted to confirm the password. Type the password and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable a password, press <Enter> when you are prompted to enter the password.

A message will confirm the password is disabled:

PASSWORD DISABLED.

Once the password is disabled, the system will boot and you can enter Setup freely. When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration. Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This prevents unauthorized use of your computer.

You determine when the password is required within the **BIOS Features Setup menu Security** option. If the Security option is set to *System*, the password will be required both at boot and at entry to Setup. If set to *Setup*, prompting only occurs when trying to enter Setup.

Save and Exit Setup

Pressing <Enter> on this item asks for confirmation:

Save to CMOS and EXIT (Y/N)? Y

Pressing **Y** stores the selections made in the menus in CMOS - a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.