

# **AA280**

## **VIA® KT333 Motherboard**

# *USER'S MANUAL*

**Athlon® Processor Motherboard**

**Rev. 1.0A**



## Revision History

Revision	Date	Description
1.0A		Revised version of AA280 motherboard user's manual

## Item Checklist

- 1 AA280 Motherboard**
- 1 Floppy Cable**
- 1 ATA Cable 66/100**
- 1 I/O Shield**
- 1 Heatsink Retention Module**
- 1 CD for Motherboard Driver**
- 1 AA280 Quick Installation Guide**
- 1 AA280 User Manual**

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## **Safety Instructions**

Follow these precautions when operating your computer.

1. Always unplug the power cord when inserting any add-on card or module inside the system.
2. Wear a grounding strap attached to a grounded device to avoid damage from static electricity. If one is not available, discharge static electricity by touching the metal case of a safely grounded object before working on the motherboard.
3. Place components on a level grounded antistatic pad or on the packaging that came with the components whenever the components are separated from the system.
4. Keep equipment away from moisture and humidity.
5. Hold all circuit boards by the edges. Do not bend circuit boards.
6. Keep this User's Manual for future reference.

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## Chapter 1 Introduction

### Motherboard Specifications

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Form Factor:

- Standard ATX 305 x 244 mm
- 

Processor:

- Supports single AMD® Athlon® processor
  - Processor Socket A
  - 100/133 MHz system bus
- 

Cache Memory:

- Processor integrated level-1 and level-2 cache
- 

System Memory:

- Three 184-pin DIMM sockets (90 degree, tin plated contact)
- Supports DDR (Double Data Rate) SDRAM at 200/266/333 MHz
- Supports 64/128/256/512 MB and 1 GB SDRAM devices
- Accommodates up to 3 GB memory
- Supports Suspend-to-RAM (STR) sleep state (ACPI S3)

**NOTE:** The motherboard only accommodates 2 DDR SDRAM 333 MHz memory modules.

---

PCI bus:

- PCI 2.2 compliant
  - PME# and 3.3V aux signals support power management
-

Onboard EIDE:

- Two PCI IDE ports support up to four devices
  - Supports Ultra-DMA 33/66/100/133, PIO up to mode 4
- 

Core Logic Chipset:

- Supports Socket A AMD Athlon processors
  - Supports DDR100/133/166 Mb/sec
  - V-link Southbridge chip provides support for UltraDMA-33/66/100 EIDE, four USB ports, 10/100 Fast Ethernet LAN controller, AC97/MC97 link, LPC, SMBus, and Power Management
  - Supports separately powered 3.3V (5V tolerant) interface to system memory and AGP
  - Modular power management and clock control for advanced system power management
  - AGP controller is compliant with AGP specification v2.0
  - AGP controller has support for Windows 95 OSR-2 VXD and an integrated Windows 2000/98 miniport driver
  - Advanced DDR DRAM controller supports DRAM interface synchronous with host CPU (100/133MHz) for most flexible configuration
  - DRAM controller allows DRAM interface to be faster than CPU by 33 MHz to allow use of 166 MHz memory with 133 MHz FSB and allows DRAM interface to be slower than CPU by 33 MHz to allow use of 100 MHz memory with 133 MHz FSB
  - DDR DRAM controller permits concurrent CPU, AGP, and V-link access
  - 1.8V core with mixed 1.2, 1.5, 1.8, 2.5 and 3.3 volt I/O CMOS technology
  - Complies with PCI 2.2 specification
  - Supports PIO mode 0 ~ 4 and Ultra DMA 33/66/100/133
  - Fast Ethernet MAC Controller
  - Complies with IEEE 802.3 and 802.3x standard
  - Supports full-duplex 10base-T, 100base-Tx, 1 MB/s and 10 MB/s Home Networking
-

Audio:

- Complies with AC '97 v2.2 specification
  - 18-bit stereo full-duplex CODEC with independent and variable sampling rate
  - Three Mini-DIN audio jacks (line-out, line-in, and mic-in)
  - Two audio headers, locking type: CD-in, Aux-in
- 

Onboard LAN (optional)

- LAN Chip: RTL8100B
  - Integrated Fast Ethernet MAC chip and transceiver in one chip
  - 10 Mbps and 100 Mbps operation
  - PCI local bus single-chip Fast Ethernet controller
  - Complies with PCI Revision 2.2
  - Supports ACPI, PCI power management
  - Complies with PC99 standard
  - Supports Wake-On-LAN function and remote wake-up
  - Supports auxiliary power-on internal reset
  - Half/full-duplex capability
- 

RAID (Optional)

- Supports Ultra ATA/100 drives and backward compatible with Ultra ATA/66/33 & EIDE drives
  - Supports UDMA 5/4/3/2/1/0, DMA 2/1/0, PIO 4/3/2/1/0 modes
  - Two independent IDE channels support up to four UDMA/100/66/33 or EIDE drives
  - Offers double sustained data transfer rate of attached drive (RAID 0, RAID 1)
  - Intelligent DMA Engine supports DMA disk drives with bus mastering
- 

Expansion Slots:

- One AGP Slot (2X/4X mode)
  - Five PCI Slots (including 1 shared PCI/CNR slot)
-

BIOS:

- Plug & Play BIOS (Award)
  - ACPI v2.0 – WfM 2.0 – SMBIOS v2.3 – DMI v2.1 – PC2001
  - Auto detect for: CPU Speed – AGP 4X – ATA-100
  - Wake-on PS/2 (KB, Mouse) & USB devices
  - Rapid Boot support
  - WOL, ASF support
  - Power management: ACPI S3, S4 support
- 

Onboard I/O:

- Low Pin Count (LPC) 3.3V interface
- Two serial ports – DB9 (16550 UART)
- One parallel port – DB25 with ECP/EPP support
- One PS/2 mouse connector
- One PS/2 keyboard connector
- Two PWM fan controlled output headers
- Four USB Ports: 2 ports on back panel, 2 ports via motherboard 2X5 header for front panel
- One game port
- One RJ-45 LAN port

**NOTE:** The RJ-45 LAN port is only present when the motherboard has the optional onboard LAN.

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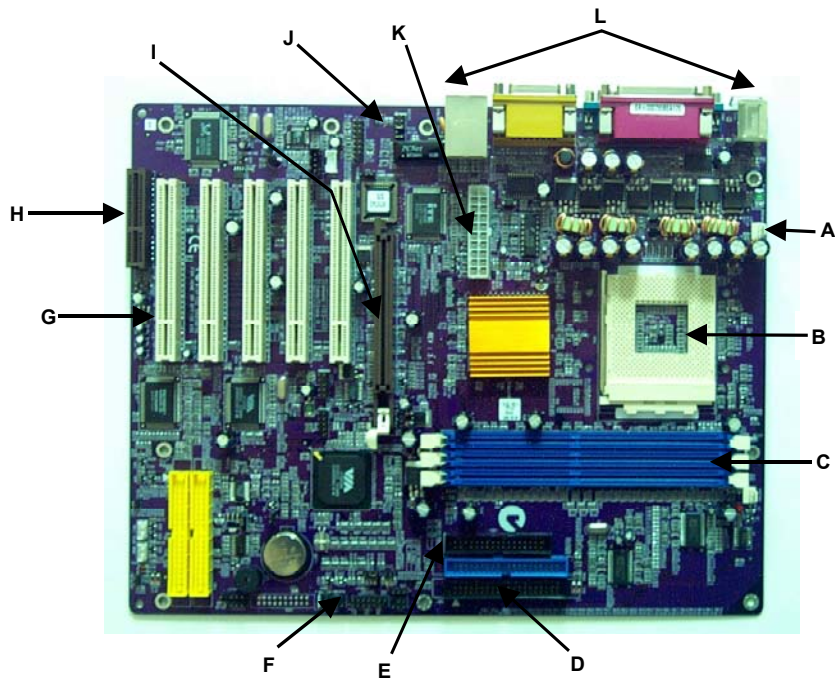
Additional Features:

- Thermal sensor & CPU monitoring
  - NIC with integrated MBA boot (complete WOL support)
  - BIOS recovery & Boot-Block overwrite via jumper
  - Hardware Monitor Capability (SMsC LPC47M15x/LPC47M192)
- 

Other:

- Front panel I/O 2X7 header, key pin 7
  - Onboard buzzer
-

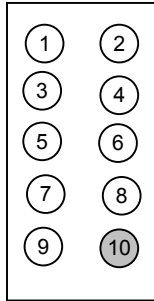
## AA280 Motherboard Layout



A	CPU Fan Connector	G	Expansion Slots
B	CPU Socket	H	CNR Slot
C	Memory Sockets	I	AGP Slot
D	IDE Connectors	J	Audio Connector
E	Floppy Connector	K	Power Supply Connector
F	Front Panel Connectors	L	Back Panel Connectors

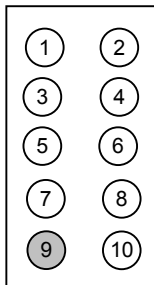
## USB and Front Panel Connector Pin Definition

### PANEL1



Pin	Signal Name	Pin	Signal Name
1	HD_LED_P	2	PWR_SLP
3	HD_LED_N	4	PWR_SLP
5	RST_SW_N	6	PWR_SW_P
7	RST_SW_P	8	PWR_SW_N
9	RSVD	10	KEY

### USB2



Pin	Signal Name	Pin	Signal Name
1	VCC	2	VCC
3	DATA0-	4	DATA1-
5	DATA0+	6	DATA1+
7	GROUND	8	GROUND
9	KEY	10	OC-

## Chapter 2 Hardware Installation Process

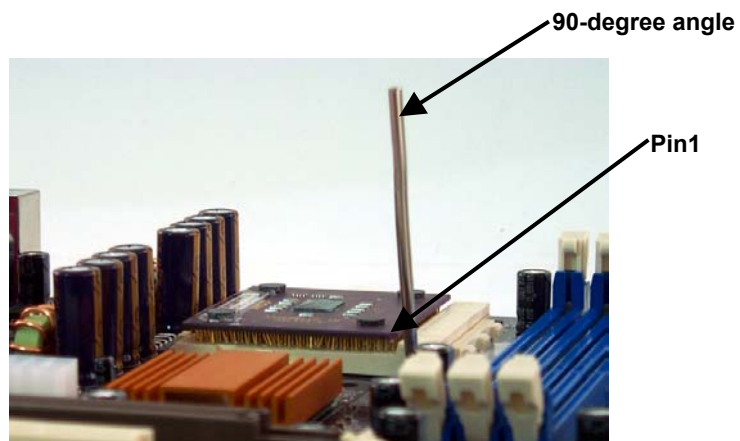
### Installing the Central Process Unit (CPU)

#### *CPU Installation*

1. Unlock the CPU socket by pulling the locking lever up to a 90-degree angle.
2. Position the CPU above the socket so that its **marked** corner (pin1) matches the corner near the base of the lever.
3. Place the CPU into the socket. (If you cannot insert the CPU easily, check its orientation and attempt to re-install it.)

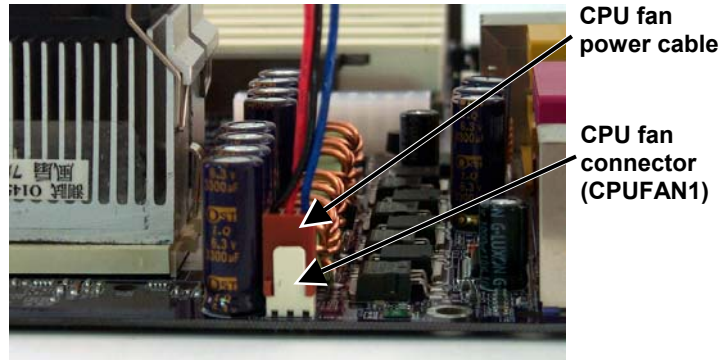
**Warning!** Do not force the CPU into the socket. Doing so will bend the CPU pins and damage the CPU.

4. Secure the CPU to the socket by lowering the lever and locking the lever in place.



### ***CPU Heat Sink Installation***

1. Read the related CPU heat sink user's manual for more detailed installation procedures.
2. Connect the CPU fan power cable to the CPU fan connector on the motherboard.

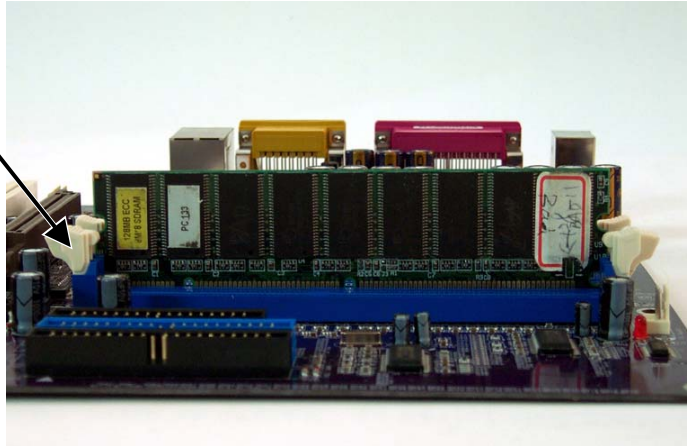




## Installing Memory Modules

1. Push the white retaining clips on the memory socket outwards.
2. Match the notches on the contact edge of the memory module to the ridge in the memory socket.
3. Insert the memory module vertically into place. When properly inserted, the white retaining clips move inward to lock in the module.
4. Repeat the installation process to add additional modules.

Retaining Clip

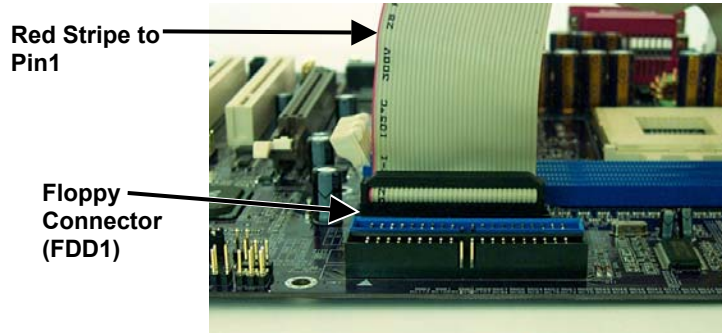


**Total Memory Sizes with Unbuffered SDRAM DIMM**

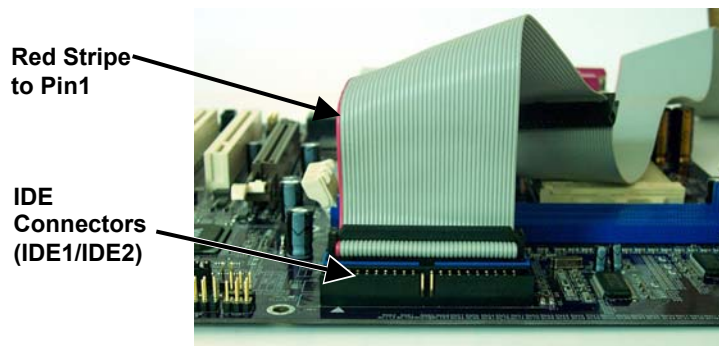
<b>DIMM Type</b>	<b>1 DIMMx64/x72</b>	<b>2 DIMMsx64/x72</b>	<b>3 DIMMsx64/x72</b>
64 Mbit (2Mx8x4 banks)	128 MBytes	256 MBytes	384 MBytes
64 Mbit (1Mx16x4 banks)	64 MBytes	128 MBytes	192 MBytes
128 Mbit (4Mx8x4 banks)	256 MBytes	512 MBytes	786 MBytes
128 Mbit (2Mx16x4 banks)	128 MBytes	256 MBytes	384 MBytes
256 Mbit (8Mx8x4 banks)	512 MBytes	1 GByte	1.5 GBytes
256 Mbit (4Mx16x4 banks)	256 MBytes	512 MBytes	768 Mbytes
512 Mbit (16Mx8x4 banks)	1 GByte	2 GBytes	3 GBytes
512 Mbit (8Mx16x4 banks)	512 MBytes	1 GByte	1.5 GBytes

## Connecting IDE and Floppy Disk Cables

**Connecting the floppy disk ribbon cable into the motherboard.** The side of the cable with the red stripe needs to be inserted into the Pin1 side of the floppy disk connector. Pin1 is marked with a white triangle.



**Connecting the IDE ribbon cable into the motherboard.** The side of the cable with the red stripe should be inserted into the Pin1 side of the IDE connector. Pin1 is marked with a white triangle.



**Note:** The motherboard has two IDE connectors. You can connect the IDE devices to either of these connectors.

## Connecting Floppy and IDE Drives

Follow these instructions to connect a floppy disk drive (FDD) and IDE drive to your motherboard.

### Floppy Disk Drive

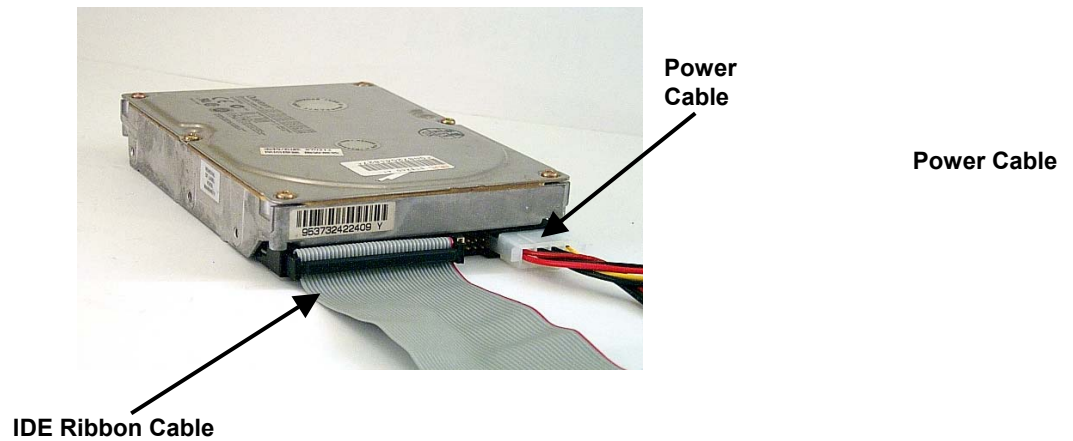
1. Mount the drive into the case.
2. Connect the floppy disk ribbon cable and power cable to the FDD.
3. Connect the FDD ribbon cable to the motherboard FDD connector FLOPPY1 (refer to the previous section "Connecting IDE and Floppy Disk Cables").



## Hard Disk Drive

**NOTE:** If installing two IDE devices on the same ribbon cable, one device is to be set as “master” and the second as “slave”. Refer to IDE device manual for master and slave settings.

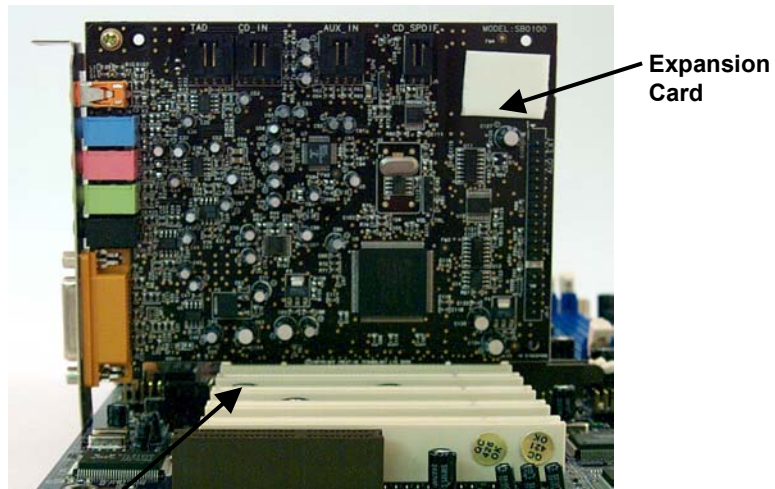
1. Mount the drive into the case.
2. Connect the IDE disk ribbon cable and power cable to the IDE device.
3. Connect the IDE ribbon cable to the motherboard IDE connector IDE1 or IDE2 (refer to the previous section “Connecting IDE and Floppy Disk Cables”).



**NOTE:** If you are installing a CD-ROM or DVD-ROM IDE device, connect the audio cable supplied with the device to CDIN1 or CDIN2.

## Installing Expansion Cards

1. Read the expansion card installation instructions before inserting the expansion card into the motherboard.
2. Remove the slot cover from the chassis case where the expansion card will be placed.
3. Press the expansion card firmly into the expansion slot of the motherboard.
4. Secure the card with the screw provided.
5. Repeat the procedure to add additional expansion cards.



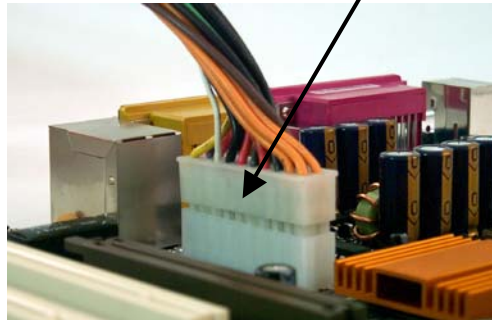
PCI Expansion Slots

## Connecting the Power Supply Cables

**NOTE:** This motherboard has two power connectors to support the Pentium 4 processor.

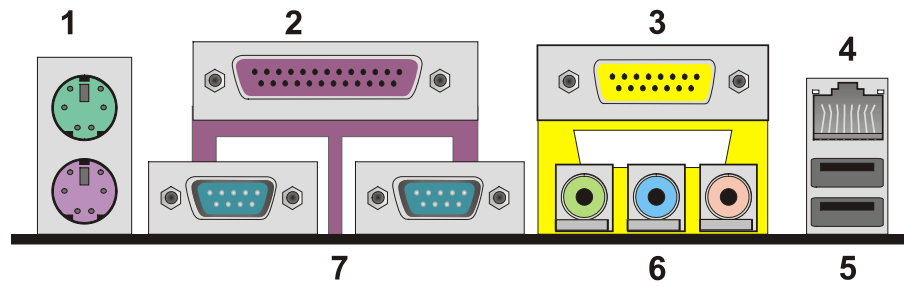
Connect the power connectors to the motherboard power connectors. The plastic clips on the connectors should lock into the plastic tabs on the motherboard connectors.

**Power Supply Connectors**

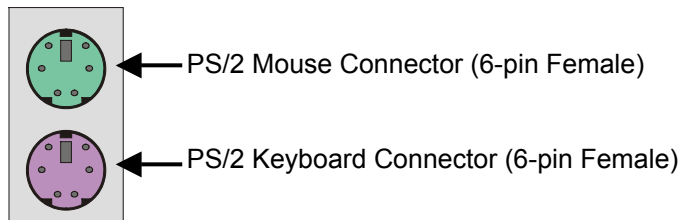


**NOTE:** The ATX power connectors are keyed for proper insertion.

## I/O Back Panel Introduction

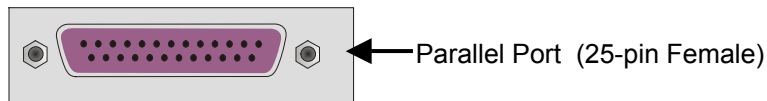


### (1) PS/2 Keyboard and PS/2 Mouse Connector



This connector supports a standard PS/2 keyboard and PS/2 mouse.

### (2) Parallel Port



Devices such as a printer can be connected to the parallel port.



**(3) Game Port**



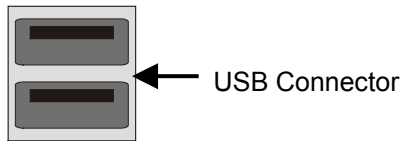
This connector supports a joystick, MIDI keyboard, and other related audio devices.

**(4) RJ-45 LAN Connector**



Connect an RJ-45 jack to this connector to access a network.

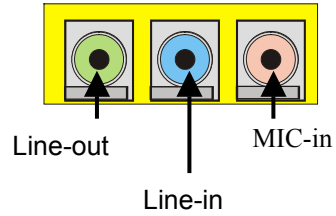
**(5) USB Connector**



Before connecting a device to the USB connectors, determine if the device has a standard USB interface.

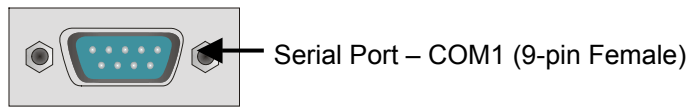
Make sure your computer Operating System (OS) supports the USB controller. Contact your OS or device vendor for more information.

## (6) Audio Connectors



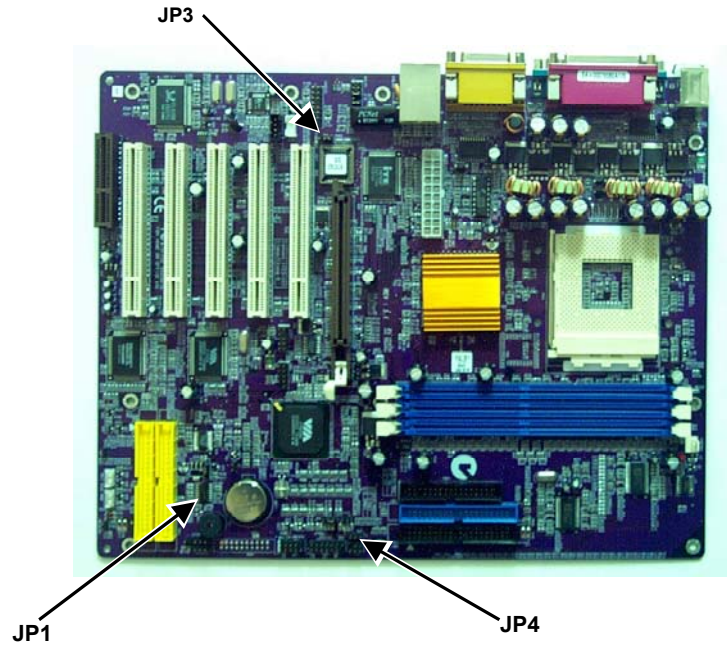
Once the onboard audio driver has been installed, speakers can be connected to the line-out jack, audio devices (such as a stereo or tape player) to the line-in jack, and a microphone to the MIC-in jack.

## (7) Serial Connector



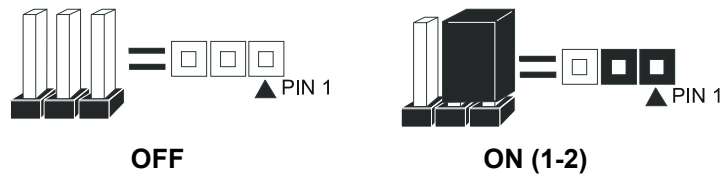
Devices such as a mouse or modem can be connected to the serial ports. The serial ports are identified by the system as COM1/3 and COM2/4.

## Jumper Introduction





## Jumper Settings

The following graphic shows a jumper without a cover and with a cover.





**JP1: Clear CMOS**

This jumper allows you to clear the CMOS.

JP1	Jumper setting	Description
1-2		Normal operation
2-3		Clear content of CMOS



**JP3: BIOS Protect**

This jumper allows you to protect the BIOS from being accidentally updated.

JP3	Jumper setting	Description
1-2		Write protect disable
2-3		Write protect enable

**JP4: CPU Frequency**

This jumper allows you to select the CPU frontside bus frequency.

JP4	Jumper setting	Description
1-2		100 MHz
2-3		133 MHz

## Case Components

After you have installed the mainboard into a case, you can begin connecting the mainboard components.

### ***CPUFAN1: Cooling Fan for CPU***

Connect the CPU cooling fan cable to this header.

Pin	Signal Name
1	GROUND
2	+12V
3	SENSE

### ***CASFAN1: Auxiliary Case Cooling Fan***

Connect the case cooling fan connector to this header.


Pin	Signal Name
1	GROUND
2	+12V
3	SENSE

### ***SJ1: Single Color LED Header***

This header allows the user to install a LED indicator to indicate when the computer is in Suspend to RAM (STR) mode or normal mode.

Pin	Signal Name
1	SUSLED
2	SUSLED
3	5VSB

ACPI LED function:

 SJ1	S0	S1	S3	S4/S5
	Light	Blinking	Blinking	Dark

***SPEAKER1: Speaker connector***

Connect the internal speaker connector to this header.

Pin	Signal Name
1	SIGNAL
2	KEY
3	GND
4	VCC

**Connecting Optional Devices**

Refer to the following for information on connecting the mainboard's optional devices:

***AUDIO1: Front panel MIC/Speaker Out header***

This header allows the user to install auxiliary front-oriented microphone and lineout ports for easier access.

Pin	Signal Name	Pin	Signal Name
1	AUD_MIC	2	AUD_GND
3	AUD_BIAS	4	AUD_VCC
5	AUD_F_R	6	AUD_RET_R
7	REVD	8	KEY
9	AUD_F_L	10	AUD_RET_L

***WOL1/WOM1: Wake on LAN/Wake on Modem***

If you have installed a LAN card, use the cable provided with the card to plug into the mainboard WOL1 connector. This enables the Wake On LAN (WOL) feature. When your system is in a power saving mode, any LAN signal automatically resumes the system.

Pin	Signal Name
1	5VSB
2	GROUND
3	SENSE

If you have installed a modem, use the cable provided with the modem to plug into the mainboard WOM1 connector. This enables the Wake On Modem (WOM1) feature. When your system is in a power saving mode, any modem signal automatically resumes the system.

### ***SIR1: Serial Infrared Port***

The mainboard supports a Serial Infrared (SIR) data port. Infrared ports allow the wireless exchange of information between your computer and similarly equipped devices such as printers, laptops, Personal Digital Assistants (PDAs), and other computers.


Pin	Signal Name	Pin	Signal Name
1	Reserved	2	Cut away
3	VCC	4	Ground
5	IRTX	6	IRRX

## Chapter 2 Award® BIOS Setup

### Entering the Setup Utility

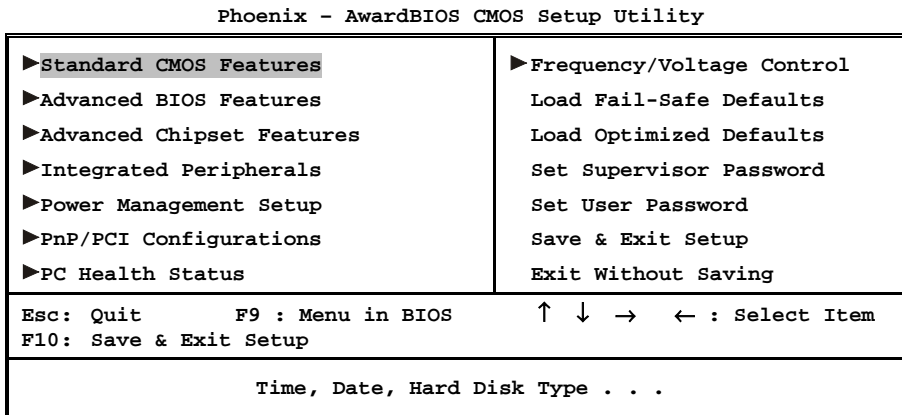
When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

***Press DEL to enter SETUP***

Pressing the delete key  accesses the BIOS Setup Utility:

### The Main Menu

The Main menu allows you to select and modify your computer system. To navigate through the menu, use the arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.





## Standard CMOS Features Setup

This option displays basic information about your system. Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

Phoenix - AwardBIOS CMOS Setup Utility  
Standard CMOS Features

Date (mm:dd:yy)	Tue, July 11 2002	Item Help
Time (hh:mm:ss)	12 : 8 : 59	
▶ IDE Primary Master	[None}	Menu Level ▶
▶ IDE Primary Slave	[None}	Change the day, month, year and century.
▶ IDE Secondary Master	[None}	
▶ IDE Secondary Slave	[None}	
Drive A	[1.44M, 3.5 in.]	
Drive B	[None]	
Video	[EGA/VGA]	
Halt On	[All Errors]	
Base Memory	640K	
Extended Memory	31744K	
Total Memory	32768K	

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

## Advanced BIOS Features Setup

This option displays advanced information about your system. Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

Phoenix - AwardBIOS CMOS Setup Utility  
Advanced BIOS Features

		Item Help
CPU Internal Cache	[Enabled]	Menu Level ► Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and alarm beep
External Cache	[Enabled]	
CPU L2 Cache ECC Checking	[Enabled]	
Processor Number Feature	[Enabled]	
Quick Power On Self Test	[Enabled]	
First Boot Device	[Floppy]	
Second Boot Device	[HDD-0]	
Third Boot Device	[CD-ROM]	
Boot Other Device	[Enabled]	
Swap Floppy Drive	[Disabled]	
Boot Up Floppy Seek	[Disabled]	
Boot Up NumLock Status	[On]	
Gate A20 Option	[Fast]	
ATA 66/100 IDE Cable Msg	[Disabled]	
Typematic Rate Setting	[Disabled]	
x Typematic Rate (Chars/Sec)	6	
x Typematic Delay (Msec)	250	
Security Option	[Setup]	

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

### CPU Internal Cache CPU Internal Cache

All processors that can be installed in this mainboard use internal level 1 (L1) cache memory to improve performance. Leave this item at the default value for better performance.

### External Cache

Most processors that can be installed in this system use external level 2 (L2) cache memory to improve performance. Leave this item at the default value for better performance.

### CPU L2 Cache ECC Checking

This item enables or disables ECC (Error Correction Code) error checking on the CPU cache memory. We recommend that you leave this item at the default value.

**Processor Number Feature**

Some new processors are installed with a unique processor number. This number may be used for verification in Internet transactions and e-commerce. If you prefer not to use or distribute the unique processor number, disable this item to suppress the processor number.

**Quick Power On Self Test**

Enable this item to shorten the power on testing (POST) and have your system start up faster. You might like to enable this item after you are confident that your system hardware is operating smoothly.

**First/Second/Third Boot Device**

Use these three items to select the priority and order of the devices that your system searches for an operating system at start-up time.

**Boot Other Device**

When enabled, the system searches all other possible locations for an operating system if it fails to find one in the devices specified under the First, Second, and Third boot devices.

**Swap Floppy Drive**

If you have two floppy diskette drives in your system, this item allows you to swap the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.

**Boot Up Floppy Seek**

If this item is enabled, it checks the size of the floppy disk drives at start-up time. You don't need to enable this item unless you have a legacy diskette drive with 360K capacity.

**Boot Up NumLock Status**

This item defines if the keyboard Num Lock key is active when your system is started.

**Gate A20 Option**

This item defines how the system handles legacy software that was written for an earlier generation of processors. Leave this item at the default value.

**ATA 66/100 IDE Cable Msg**

Enables or disables the ATA 66/100 IDE Cable Msg. This message will appear during reboot when you use 40-pin cable on your 66/100 hard disks.

**Typematic Rate Setting**

If this item is enabled, you can use the following two items to set the typematic rate and the typematic delay settings for your keyboard.

**Typematic Rate (Chars/Sec):** Use this item to define how many characters per second are generated by a held-down key.

**Typematic Delay (Msec):** Use this item to define how many milliseconds must elapse before a held-down key begins generating repeat characters.

#### **Security Option**

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required when a user tries to enter the Setup Utility.

#### **OS Select For DRAM > 64 MB**

This item is only required if you have installed more than 64 MB of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default.

#### **HDD S.M.A.R.T Capability**

The S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) system is a diagnostics technology that monitors and predicts device performance. S.M.A.R.T. software resides on both the disk drive and the host computer.

The disk drive software monitors the internal performance of the motors, media, heads, and electronics of the drive. The host software monitors the overall reliability status of the drive. If a device failure is predicted, the host software, through the Client WORKS S.M.A.R.T applet, warns the user of the impending condition and advises appropriate action to protect the data.

#### **Report No FDD For WIN95**

If you are running a system with no floppy drive and using Windows 95, select Yes for this item to ensure compatibility with the Windows 95 logo certification. Otherwise, select No.

#### **Video BIOS Shadow**

This function, when enabled allows VGA BIOS to be copied to the system DRAM for enhanced performance.

#### **Small Logo (EPA) Show**

Determines whether or not the EPA logo appears during boot up.

## Advanced Chipset Features Option

These items define critical timing parameters of the motherboard. You should leave the items on this page at their default values unless you are very familiar with the technical specifications of your system hardware. If you change the values incorrectly, you may introduce fatal errors or recurring instability into your system.

Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

Phoenix - AwardBIOS CMOS Setup Utility  
Advanced Chipset Features

<ul style="list-style-type: none"> <li>▶ DRAM Clock/Drive Control [Press Enter]</li> <li>▶ AGP &amp; P2P Bridge Control [Press Enter]</li> <li>▶ CPU &amp; PCI Bus Control [Press Enter]</li> <li style="padding-left: 20px;">Memory Hole [Disabled]</li> <li style="padding-left: 20px;">System BIOS Cacheable [Disabled]</li> <li style="padding-left: 20px;">Video RAM Cacheable [Disabled]</li> </ul>	<p style="text-align: center;">Item Help</p> <hr/> <p>Menu Level ▶</p>
---	--

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

### Memory Hole

This item is used to reserve memory space for ISA expansion cards that require it.

**System BIOS/Video RAM Cacheable**

These items allow the video and system to be cached in memory for faster execution. Leave these items at the default value for better performance.

**DRAM Clock/Drive Control Setup**

Scroll to this item and press <Enter> to view the following screen:

Phoenix - AwardBIOS CMOS Setup Utility  
DRAM Clock/Drive Control

Current FSB Frequency Current DRAM Frequency	Item Help
DRAM Clock [By SPD]	Menu Level ▶
DRAM Timing [Manual]	
DRAM CAS Latency [2.5]	
Bank Interleave [4 Bank]	
Precharge to Active(Trp) [3T]	
Active to Precharge(Tras) [6T]	
Active to CMD(Trcd) [3T]	
DRAM Burst Length [4]	
DRAM Queue Depth [4 Level]	
DRAM Command Rate [2T Command]	

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

Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

**Current FSB Frequency**

This item displays the frontside bus (FSB) frequency. This is a display-only item. You cannot make changes to this field.

**Current DRAM Frequency**

This item displays the memory (DRAM) frequency. This is a display-only item. You cannot make changes to this field.

**DRAM Clock**

This item enables you to manually set the DRAM Clock. We recommend that you leave this item at the default value.

**DRAM Timing**

Set this By SPD to enable the system to automatically set the SDRAM timing by SPD (Serial Presence Detect). SPD is an EEPROM chip on the DIMM module that stores information about the memory chips it contains, including size, speed, voltage, row and column addresses, and manufacturer. If you disable this item, you can use the following three items to manually set the timing parameters for the system memory

**SDRAM CAS Latency**

Enables you to select the CAS latency time in HCLKs of 2/2 or 3/3. 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 or the installed CPU. The options are "2" and "3" default.

**Bank Interleave**

Enable this item to increase memory speed. When enabled, separate memory banks are set for odd and even addresses and the next byte of memory can be accessed while the current byte is being refreshed.

**Precharge to Active**

This item is used to designate the minimum Row Precharge time of the SDRAM devices on the module.

DRAM must continually be refreshed or it will lose its data. Normally, DRAM is refreshed entirely as the result of a single request. This option allows you to determine the number of CPU clocks allocated for the Row Address Strobe (RAS) to accumulate its charge before the DRAM is refreshed. If insufficient time is allowed, refresh may be incomplete and data lost.

**Active to Precharge**

This item specifies the number of clock cycles needed after a bank active command before a precharge can occur.

**Active to CMD**

This item specifies the minimum required delay between activation of different rows.

**DRAM Burst Len**

This item describes which burst lengths are supported by the devices on the mainboard. 1 level can provide faster performance but may result in instability whereas 8 level gives the most stable but slowest performance.

**DRAM Queue Depth**

This item sets the depth of the DRAM queue used for CPU's cache.

**DRAM Command Rate**

This item enables you to specify the waiting time for the CPU to issue the next command after issuing the command to the DDR memory. We recommend that you leave this item at the default value.

Press <Esc> to return to the Advanced Chipset Features page.

**AGP & P2P Bridge Control Setup**

Scroll to this item and press <Enter> to view the following screen:

Phoenix - AwardBIOS CMOS Setup Utility  
AGP & P2P Bridge Control

<p>AGP Aperture Size            [125 MB]</p> <p>AGP Mode                    [4X]</p> <p>AGP Driving Control        [Auto]</p> <p>x AGP Driving Value         DA</p> <p>AGP Fast Write             [Disabled]</p> <p>AGP Master 1 WS Write     [Disabled]</p> <p>AGP Master WS Read        [Disabled]</p>	<p style="text-align: center;">Item Help</p> <hr/> <p>Menu Level            ►</p>
--	---

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

Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

**AGP Aperture Size**

This item defines the size of the aperture if you use an AGP graphics adapter. The AGP aperture refers to a section of the PCI memory address range used for graphics memory. We recommend that you leave this item at the default value.



**AGP Mode**

This item allows you to enable or disable the caching of display data for the processor video memory. Enabling AGP-4X Mode can greatly improve the display speed. Disable this item if your graphics display card does not support this feature.

**AGP Driving Control**

This item is used to signal driving current on AGP cards to auto or manual. Some AGP cards need stronger than normal driving current in order to operate. We recommend that you set this item to the default.

**AGP Driving Value:** When AGP Driving Control is set to Manual, use this item to set the AGP current driving value.

**AGP Fast Write**

This item lets you enable or disable the caching of display data for the video memory of the processor. Enabling this item can greatly improve the display speed. Disable this item if your graphics display card does not support this feature.

**AGP Master 1 WS Write**

This implements a single delay when writing to the AGP Bus. By default, two-wait states are used by the system, providing greater stability.

**AGP Master 1 WS Read**

This implements a single delay when reading to the AGP Bus. By default, two-wait states are used by the system, allowing for greater stability.

*Press <Esc> to return to the Advanced Chipset Features page.*

## CPU & PCI Bus Control Setup

Scroll to this item and press <Enter> to view the following screen:

Phoenix - AwardBIOS CMOS Setup Utility		Item Help
CPU & PCI Bus Control		
PCI1 Master 0 WS Write	[Enabled]	
PCI2 Master 0 WS Write	[Enabled]	
PCI1 Post Write	[Enabled]	Menu Level ▶
PCI2 Post Write	[Enabled]	
PCI Delay Transaction	[Disabled]	

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

Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

### PCI 1/2 Master 0 WS Write

When enabled, writes to the PCI bus are executed with zero wait states, providing faster data transfer.

### PCI 1/2 Post Write

When enabled, writes from the CPU to PCU bus are buffered, to compensate for the speed differences between the CPU and PCI bus. When disabled, the writes are not buffered and the CPU must wait until the write is complete before starting another write cycle.

### PCI Delay Transaction

The mainboard's chipset has an embedded 32-bit post write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

## Integrated Peripherals Option

These items define the operation of peripheral components on the system's input/output ports. Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

Phoenix - AwardBIOS CMOS Setup Utility  
Integrated Peripherals

▶ VIA OnChip IDE Device	[Press Enter]	Item Help
▶ VIA OnChip PCI Device	[Press Enter]	
▶ VIA Super I/O Device	[Press Enter]	Menu Level ▶
Init Display First	[PCI Slot]	
OnChip USB Controller	[All Enabled]	
USB keyboard Support	[Disabled]	
IDE HDD Block Mode	[Enabled]	

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

### Init Display First

Use this item to specify whether your graphics adapter is installed in one of the PCI slots or is integrated on the mainboard.

### OnChip USB Controller

Enable this item if you plan to use the Universal Serial Bus ports on this mainboard.

### USB Keyboard Support

Enable this item if you plan to use a keyboard connected through the USB port in a legacy operating system (such as DOS) that does not support Plug and Play.

**IDE HDD Block Mode**

Enable this field if your IDE hard drive supports block mode. Block mode enables BIOS to automatically detect the optimal number of block read and writes per sector that the drive can support and improves the speed of access to IDE devices.

**PWRON After PWR-Fail**

This item determines the power state after a power failure. Set this item to On to enable your computer to automatically restart after a power failure.

**VIA OnChip IDE Device**

Scroll to this item and press <Enter> to view the following screen:

Phoenix - AwardBIOS CMOS Setup Utility  
VIA OnChip IDE Device

OnChip IDE Channel0 [Enabled]	Item Help
OnChip IDE Channel1 [Enabled]	
IDE Prefetch Mode [Enabled]	Menu Level ▶▶
Primary Master PIO [Auto]	
Primary Slave PIO [Auto]	
Secondary Master PIO [Auto]	
Secondary Slave PIO [Auto]	
Primary Master UDMA [Auto]	
Primary Slave UDMA [Auto]	
Secondary Master UDMA [Auto]	
Secondary Slave UDMA [Auto]	

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

Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

**On-Chip IDE Channel 0/1**

Use these items to enable or disable the PCI IDE channels that are integrated on the main-board.

**IDE Prefetch Mode**

The onboard IDE drive interface supports IDE prefetching, for faster drive access. If you install a primary and secondary add-in IDE interface, set this field to Disabled if the interface does not support prefetching.

**IDE Primary/Secondary Master/Slave PIO**

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE devices. Choose Auto to let the system auto detect which PIO mode is best, or select a PIO mode from 0-4.

**IDE Primary/Secondary Master/Slave UDMA**

Each IDE channel supports a master device and a slave device. This mainboard supports UltraDMA technology, which provides faster access to IDE devices.

If you install a device that supports UltraDMA, change the appropriate item on this list to Auto. You may have to install the UltraDMA driver supplied with this mainboard in order to use an UltraDMA device.

*Press <Esc> to return to the Integrated Peripherals screen.*

**VIA OnChip PCI Device**

Scroll to this item and press <Enter> to view the following screen:

Phoenix - AwardBIOS CMOS Setup Utility  
VIA OnChip PCI Device

OnChip AC97 Audio	[Auto]	Item Help
VIA-3068 MC97 Modem	[Enabled]	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

Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

**OnChip AC97 Audio**

Enables and disables the onboard audio chip. Disable this item if you are going to install a PCI audio add-in card.

**VIA-3068 MC97 Modem**

Enables and disables the onboard modem. Disable this item if you are going to install an external modem.

Press <Esc> to return to the Integrated Peripherals screen.

**VIA SuperIO Device**

Scroll to this item and press <Enter> to view the following screen:

Phoenix - AwardBIOS CMOS Setup Utility  
 VIA SuperIO Device

Onboard FDC Controller	[Enabled]	Item Help
Onboard Serial Port 1	[3F8/IRQ4]	
Onboard Serial Port 2	[2F8/IRQ3]	Menu Level ▶▶
UART Mode Select	[Normal]	
UR2 Duplex Mode	[Half]	
Onboard Parallel Port	[378/IRQ7]	
Parallel Port Mode	[ECP]	
ECP Mode Use DMA	[3]	
Game Port Address	[201]	
Midi Port Address	[330]	
Midi Port IRQ	[10]	

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

Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

**Onboard FDC Controller**

This option enables the onboard floppy disk drive controller.

**Onboard Serial Port 1**

This option is used to assign the I/O address and interrupt request (IRQ) for the onboard serial port 1 (COM1).

**Onboard Serial Port 2**

This option is used to assign the I/O address and interrupt request (IRQ) for the onboard serial port 2 (COM2).

**UART Mode Select**

This field is available if the Onboard Serial Port 2 field is set to any option but Disabled. UART Mode Select enables you to select the infrared communication protocol: Normal (default), IrDA, or ASKIR. IrDA is an infrared communication protocol with a maximum baud rate up to 115.2K bps. ASKIR is Sharp's infrared communication protocol with a maximum baud rate up to 57.6K bps.

**UR2 Duplex Mode**

This field is available when UART 2 Mode is set to either ASKIR or IrDA. This item enables you to determine the infrared function of the onboard infrared chip. The options are Full and Half (default).

Full-duplex means that you can transmit and send information simultaneously. Half-duplex is the transmission of data in both directions, but only one direction at a time.

**Onboard Parallel Port**

This option is used to assign the I/O address and interrupt request (IRQ) for the onboard parallel port.

**Parallel Port Mode**

Enables you to set the data transfer protocol for your parallel port. There are four options: SPP (Standard Parallel Port), EPP (Enhanced Parallel Port), ECP (Extended Capabilities Port) and ECP+EPP.

SPP allows data output only. Extended Capabilities Port (ECP) and Enhanced Parallel Port (EPP) are bi-directional modes, allowing both data input and output. ECP and EPP modes are only supported with EPP- and ECP-aware peripherals.

**ECP Mode Use DMA**

When the onboard parallel port is set to ECP mode, the parallel port can use DMA 3 or DMA 1.

**Game Port Address**

This item sets the I/O address for the game port.

**Midi Port Address**

This item sets the I/O address for the Midi function.

**Midi Port IRQ**

This item sets the interrupt request for the Midi function.

**Power Management Setup Option**

These items setup power management options for the motherboard. Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

Phoenix - AwardBIOS CMOS Setup Utility  
Power Management Setup

ACPI function	[Enabled]	Item Help
ACPI Suspend Type	[S1(POS)]	
Power Management Option	[User Define]	Menu Level ▶
HDD Power Down	[Disable]	
Suspend Mode	[Disable]	
Video Off Option	[Suspend --> Off]	
Video Off Method	[DPMS Support]	
MODEM Use IRQ	[3]	
Soft-Off by PWRBTN	[Instant-Off]	
AC Resume Function	[Always Off]	
▶ IRQ/Event Activity Detect	[Press Enter]	

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

**ACPI Function**

This mainboard supports ACPI (Advanced Configuration and Power management Interface). Use this item to enable or disable the ACPI feature.

**Note:** ACPI is a power management specification that makes hardware status information available to the operating system. ACPI enables a PC to turn its peripherals on and off for im-



proved power management. It also allows the PC to be turned on and off by external devices, so that mouse or keyboard activity wakes up the computer.

**ACPI Suspend Type**

Use this item to define how your system suspends. In the default, S1(POS), the suspend mode is equivalent to a software power down. If you select S3 (STR), the suspend mode is a suspend to RAM - the system shuts down with the exception of a refresh current to the system memory.

**Power Management Option**

This item acts like a master switch for the power-saving modes and hard disk timeouts. If this item is set to Max Saving, power-saving modes occur after a short timeout. If this item is set to Min Saving, power-saving modes occur after a longer timeout. If the item is set to User Define, you can insert your own timeouts for the power-saving modes.

**HDD Power Down**

The IDE hard drive will spin down if it is not accessed within a specified length of time. Options are from 1 Min to 15 Min and Disable.

**Suspend Mode**

The CPU clock will be stopped and the video signal will be suspended if no Power Management events occur for a specified length of time. Full power function will return when a Power Management event is detected. Options are from 1 Min to 1 Hour and Disable.

**Video Off Option**

This option defines if the video is powered down when the system is put into suspend mode.

**Video Off Method**

This item defines how the video is powered down to save power. This item is set to DPMS (Display Power Management Software) by default.

**MODEM Use IRQ**

If you want an incoming call on a modem to automatically resume the system from a power-saving mode, use this item to specify the interrupt request line (IRQ) that is used by the modem. You might have to connect the fax/modem to the mainboard Wake On Modem connector for this feature to work.

**Soft-Off by PWRBTN**

Under ACPI (Advanced Configuration and Power management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake Up Alarms. This item lets you install a software power down that is controlled by the power button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec. then you have to hold the power button down for four seconds to cause a software power down.

**AC Resume Function**

This sets the power state after a shutdown due to an unexpected interrupt of AC power.

**IRQ/Event Activity Detect**

Scroll to this item and press <Enter> to view the following screen:

Phoenix - AwardBIOS CMOS Setup Utility  
IRQ/Event Activity Detect

<pre> PS2KB Wakeup from S3/S4/S5 [Disabled] USB Resume from S3         [Disabled] VGA                         [OFF] LPT &amp; COM                   [LPT/COM] HDD &amp; FDD                   [ON] PCI Master                  [OFF] PowerOn by PCI Card        [Enabled] WOL/WOM Resume             [Disabled] RTC Alarm Resume           [Disabled] x Date (of Month)          4 x Resume Time (hh:mm:ss)   0 0 0   IRQs Activity Monitoring [Press Enter]                 </pre>	<p style="text-align: center;">Item Help</p> <hr/> <p>Menu Level   ▶▶</p>
---	---

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

**PS/2 KB WakeUp from S3/S4/S5**

This option allows you to set hot key combination to turn on the system.

**USB Resume from S3**

When set to Enabled, the system power will resume the system from a power saving mode if there is any USB port activity.

**VGA**

When set to On, the system power will resume the system from a power saving mode if there is any VGA activity.

**LPT & COM**

When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the serial ports, or the parallel port.

**HDD & FDD**

When this item is enabled, the system will restart the power-saving timeout counters when any activity is detected on the hard disk drive or the floppy diskette drive.

**PCI Master**

When set to Off, any PCI device set as the Master will not power on the system.

**PowerOn by PCI Card**

Use this item to enable PCI activity to wakeup the system from a power saving mode.

**WOL/WOM Resume**

Use this item to enable LAN or modem activity to wakeup the system from a power saving mode.

**RTC Alarm Resume**

When set to Enabled, additional fields become available and you can set the date (day of the month), hour, minute and second to turn on your system. When set to 0 (zero) for the day of the month, the alarm will power on your system every day at the specified time.

## IRQs Activity Monitoring

Scroll to this item and press <Enter> to view the following screen:

Phoenix - AwardBIOS CMOS Setup Utility  
IRQs Activity Monitoring

		Item Help
Primary INTR	[ON]	
IRQ3 (COM 2)	[Enabled]	
IRQ4 (COM 1)	[Enabled]	Menu Level ▶▶▶
IRQ5 (LPT 2)	[Enabled]	
IRQ6 (Floppy Disk)	[Enabled]	
IRQ7 (LPT1)	[Enabled]	
IRQ8 (RTC Alarm)	[Disabled]	
IRQ9 (IRQ2 Redir)	[Disabled]	
IRQ10 (Reserved)	[Disabled]	
IRQ11 (Reserved)	[Disabled]	
IRQ12 (PS/2 Mouse)	[Enabled]	
IRQ13 (Coprocessor)	[Enabled]	
IRQ14 (Hard Disk)	[Enabled]	
IRQ15 (Reserved)	[Disabled]	

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

Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

This screen enables you to set IRQs that will resume the system from a power saving mode.

Set any IRQ to Enabled to allow activity at the IRQ to wake up the system from a power saving mode.

*Press <Esc> to return to the previous screen.*

## PNP/PCI Configuration Option

These options configure how PnP (Plug and Play) and PCI expansion cards operate in your system. Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

Phoenix - AwardBIOS CMOS Setup Utility  
PnP/PCI Configurations

<p>PNP OS Installed [No]</p> <p>Reset Configuration Data [Disabled]</p> <p>Resources Controlled by [Auto(ESCD)]</p> <p>x IRQ Resources Press Enter</p> <p>PCI/VGA Palette Snoop [Disabled]</p> <p>Assign IRQ For VGA [Enabled]</p> <p>Assign IRQ For USB [Enabled]</p>	<p>Item Help</p> <hr/> <p>Menu Level ►</p> <p>Select Yes if you are using a Plug and Play capable operating system Select No if you need the BIOS to configure non-boot devices</p>
--	---

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

### PNP OS Installed

Setting this option to Yes allows the PnP OS (instead of BIOS) to assign the system resources such as IRQ and I/O address to the ISA PnP device. The default setting is No.

### Reset Configuration Data

If you enable this item and restart the system, any Plug and Play configuration data stored in the BIOS setup is cleared from memory. New updated data is created.

### Resources Controlled By

You should leave this item at the default Auto (ESCD). Under this setting, the system dynamically allocates resources to plug and play devices as they are required.

If you cannot get a legacy ISA (Industry Standard Architecture) expansion card to work properly, you might be able to solve the problem by changing this item to Manual, and then opening up the IRQ Resources and Memory Resources sub-menus.

In the IRQ Resources sub-menu, if you change any of the IRQ assignments to Legacy ISA, then that Interrupt Request Line is reserved for a legacy ISA expansion card. Press <Esc> to close the IRQ Resources sub-menu.

In the Memory Resources sub menu, use the first item Reserved Memory Base to set the start address of the memory you want to reserve for the ISA expansion card. Use the second item Reserved Memory Length to set the amount of reserved memory. Press <Esc> to close the Memory Resources sub-menu.

### **PCI/VGA Palette Snoop**

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

### **Assign IRQ for VGA/USB**

Names the interrupt request (IRQ) line assigned to the USB/VGA (if any) on your system. Activity of the selected IRQ always awakens the system.

## PC Health Status Option

On motherboards that support hardware monitoring, this item lets you monitor the parameters for critical voltages, critical temperatures, and fan speeds.

Phoenix - AwardBIOS CMOS Setup Utility  
PC Health Status

Shutdown Temperature      [Disabled] CPU V-CORE + 2.5V + 3.3V + 5V + 12V Voltage Battery Current System Temp Current CPU Temp CPUFAN1 CASFAN1	Item Help <hr/> 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

### Shutdown Temperature

Enables you to set the maximum temperature the system can reach before powering down.

### System Component Characteristics

These fields provide you with information about the systems current operating status. You cannot make changes to these fields.

## Frequency/Voltage Control

This item enables you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system. Use the arrow keys to navigate through the menu and use the <PgUp> and <PgDn> to select the desired value for each item.

Phoenix - AwardBIOS CMOS Setup Utility  
Frequency/Voltage Control

Auto Detect DIMM/PCI Clk	[Enabled]	Item Help
Spread Spectrum	[Enabled]	
CPU Host/PCI Clock	[Default]	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

### Auto Detect DIMM/PCI Clk

When this item is enabled, BIOS will disable the clock signal of free DIMM and PCI slots.

### Spread Spectrum

If you enable spread spectrum, it can significantly reduce the EMI (Electro-Magnetic Interference) generated by the system.

### CPU Host Clock (CPU/PCI)

This item is used for overclocking only.



## **Load Fail-Safe Defaults Option**

This option opens a dialog box that lets you install fail-safe defaults for all appropriate items in the Setup Utility:

Press <Y> and then <Enter> to install the defaults. Press <N> and then <Enter> to not install the defaults. The fail-safe defaults place no great demands on the system and are generally stable. If your system is not functioning correctly, try installing the fail-safe defaults as a first step in getting your system working properly again. If you only want to install fail-safe defaults for a specific option, select and display that option, and then press <F6>.

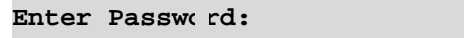
## **Load Optimized Defaults Option**

This option opens a dialog box that lets you install optimized defaults for all appropriate items in the Setup Utility. Press <Y> and then <Enter> to install the defaults. Press <N> and then <Enter> to not install the defaults. The optimized defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option, and then press <F7>.

## Set Password Option

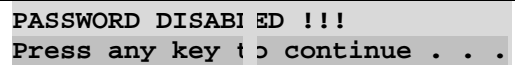
This item can be used to install a password. To install a password, follow these steps:

1. Highlight the item Set Password on the main menu and press <Enter>.
2. The password dialog box appears.



```
Enter Password:
```

3. If you are installing a new password, type in the password. You cannot use more than eight characters or numbers. The Set Password item differentiates between upper and lower case characters. Press <Enter> after you have typed in the password. If you are deleting a password that is already installed press <Enter> when the password dialog box appears. You see a message that indicates that the password has been disabled.



```
PASSWORD DISABLED !!!  
Press any key to continue . . .
```

4. Press any key. You are prompted to confirm the password:



```
Confirm Password:
```

5. Type the password again and press <Enter>, or press <Enter> if you are deleting a password that is already installed.
6. If you typed the password correctly, the password will be installed.

## Save & Exit Setup Option

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. When the Save and Exit dialog box appears, press <Y> to save and exit, or press <N> to return to the main menu:

## Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Exit Without Saving dialog box appears, press <Y> to discard changes and exit, or press <N> to return to the main menu.

**Note:** If you have made settings that you do not want to save, use the "Exit Without Saving" item and press <Y> to discard any changes you have made.