Federal Communications Commission (F.C.C) Statement

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Accessories: This device has been tested and found to comply with the limits of a Class B digital device; the accessories associated with this equipment are as follows:

1. Shielded serial cable. (Can be obtained from multiple retail outlets)
2. Shielded printer cable. (Can be obtained from multiple retail outlets)
3. Shielded video cable. (Can be obtained from multiple retail outlets)
4. Shielded power cord. (Provided by manufacturer)

These accessories are required to ensure compliance with FCC Rules. It is the responsibility of the user to provide and use these accessories properly.

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant of Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and radiates radio frequency energy and, if you did not installed and used in accordance with the instructions, may cause harmful interference in the radio communications. There is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference in the radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

1. Reorient / relocate the receiving antenna.
2. Increase the separation between the equipment and the receiver.
3. Connect the equipment into an outlet from a different circuit where the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Caution: Changes or modifications that is not expressly approved by the manufacturer could void the user's authority to operate the equipment.

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Canadian D.O.C. Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus to set out of the radio interference regulations of the Canadian Department of Communications.

Cet appareil numérique n'émet pas de bruits radioélectriques dépassant les limites appliquées aux appareils numériques de Class B préscrits dans le réglement du brouillage radioélectrique edict par le minister Des Communications du Canada.

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Introduction

System Overview

Congratulations on the purchase of your new system! This motherboard is designed to take advantage of the latest industry technology to provide you with the ultimate solution in data processing. In the tradition of its predecessors, this motherboard continues the commitment of reliability, performance and strives for full compliance and compatibility with industry software and hardware standards.

M7VIF Highlights:

- Contains on board I/O facilities, which include two serial ports, a parallel port, a PS/2 mouse port, a PS/2 keyboard port, audio ports, USB ports and a game port.
- Contains on board IDE facilities for IDE devices such as hard disks and CD-ROM Drives.
- Supports the AMD-Athlon™, Athlon ™ XP, Duron ™ processor, a leading edge processor which brings to you the latest technology in microarchitecture design, graphics performance, system bus design, cache architecture and much more.
- Complies with PC ATX form factor specifications.
- Supports popular operating systems such as Windows 95/98, Windows NT, Windows 2000, Windows ME, Windows XP, Novell, UNIX, LINUX and SCO UNIX.

1. Motherboard Description

1.1 Features

1.1.1 Hardware

CPU

- Single Socket-A for an AMD Athlon Family processor.
- Runing at 200 or 266 MHz Front Side Bus frequency.
- The AMD Athlon system bus supports the 200/266 MHz high-speed, split-transaction AMD Athlon system bus interface.

Speed

- Supports up to AMD Athlon™ XP 2000+ CPU core speeds.
- Supports up to AMD Athlon™ 1.4 GHz CPU core speeds.
- Supports up to AMD Duron™ 1.2 GHz CPU core speeds.
- The 33MHz 32 bit PCI 2.2 compliant.
- The 66MHz AGP 2.0 compliant interface supports 1x, 2x and 4x data transfer mode.
- High-speed memory --The VT8367 system controller is designed to support 200/266/333 MHz DDR SDRAM DIMMs.

Chipset

- Chipset – VIA VT8367 and VT8233A.
- Chipset – Winbond W83697HF.

DRAM Memory

- Supports 64MB/128MB/256MB/512MB/1GB DIMM modules (4).
- Supports DDR (Double Data Rate) Synchronous DRAM (2.5 V).
- Supports 6 banks up to 3Gb DRAMs for unbuffered DDR SDRAM module. (DIMM x 3pcs)
- Supports 8 banks up to 4Gb DRAMs for registered DDR Module (DIMMx4pcs)
- 200/266/333 MHz Bus Frequency.

Shadow RAM

- Motherboard is equipped with a memory controller providing shadow RAM and support for 8 bit ROM BIOS.

Green Functionality

- Supports Award BIOS™ power management functionality.
- Has a power down timer from 1 to 15 minutes.
- Wakes from power saving sleep mode with any keyboard or mouse activity.

BUS Slots

- (1) AGP slot.
- (1) CNR slot (Support Type B CNR only).
- (1) ACR slot
- (5) 32-bit PCI bus slots

Flash Memory

- Supports flash memory functionality.
- Supports ESCD functionality.

Built in IDE Facilities

- Supports four IDE hard disk drives.
- Supports PIO Mode 4, Master Mode, and high performance hard disk drives.
- Supports disk transfer rates up to 133 MB/second.
- Supports Ultra DMA 33, Ultra DMA 66, Ultra DMA 100, Ultra DMA 133 Bus Master Modes.
- Supports IDE interface with CD-ROM.
- Supports high capacity hard disk drives.
- Supports LBA mode.

Stereo AC 97 Digital Audio Codec

- Single chip audio CODEC with high S/N ratio (>90dB).
- 18-bit ADC and DAC resolution.
- Compliant with AC'97 2.2 specification.
- Meet performance requirements for audio on PC2001 systems.

- 18-bit stereo full-duplex CODEC with independent and variable sampling rate.
- 3D Stereo Enhancement.

I/O facilities

- One multi-mode Parallel Port capable of supporting the following specifications:

  Standard & Bidirection Parallel Port.

  Enhanced Parallel Port (EPP).

  Extended Capabilities Port (ECP).
- Supports two serial ports, 16550 UART.
- Supports Infrared Data Transmission using IrDA.
- Supports PS/2 mouse and PS/2 keyboard.
- Supports 360KB, 720KB, 1.2MB, 1.44MB, and 2.88MB floppy disk drives.

Universal Serial Bus V2.0

- Supports two back panel Universal Serial Bus Ports and two front panel Universal Serial Bus Ports.
- Supports 48 MHz USB.

Hardware Monitor Function

- Monitors CPU Fan Speed.
- Monitors System Voltage.
- CPU Temperature.
- System FAN.
- System Temperature.

Dimensions (ATX form-factor)

- 24.4cm x 30.5cm (WxL)

1.1.2 BIOS

- AWARD legal BIOS.
- Supports APM1.2.
- Supports USB Function.
- Supports ACPI.

1.1.3 Software

Operating System

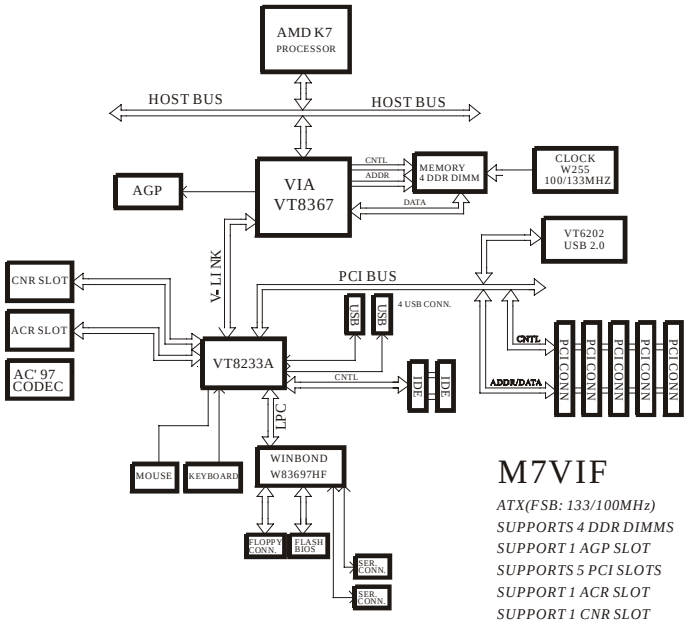
- Offers the highest performance for MS-DOS, Windows NT, Windows 2000, Windows 95/98, Windows ME, Windows XP, Novell, LINUX, UNIX, SCO UNIX etc.

1.1.4 Accessories

- HDD Cable.
- FDD Cable.
- Flash Memory Writer for BIOS Update.
- USB2/USB3 Cable (Optional).
- Rear I/O Panel for ATX Case (Optional).
- Fully Setup Driver CD.

1.2 Motherboard Installation

1.2.1 System Block Diagram

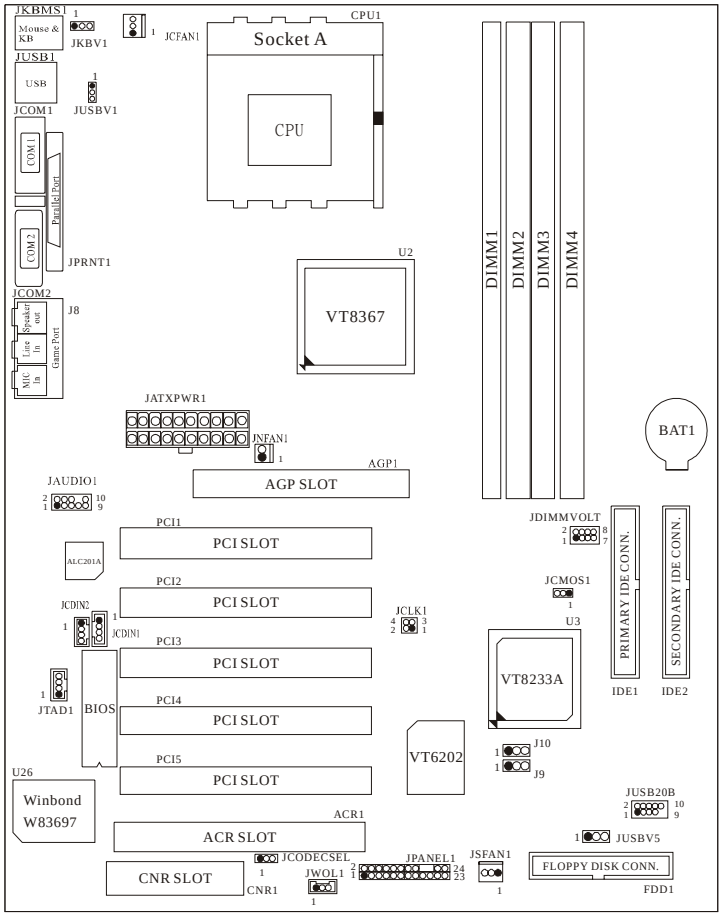


M7VIF

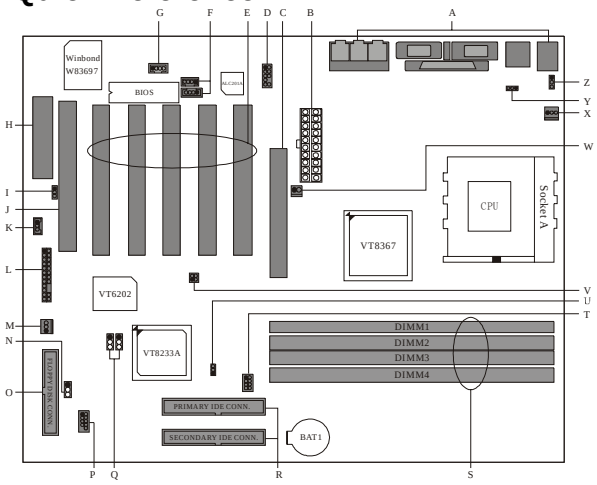
ATX(FSB: 133/100MHz)
SUPPORTS 4 DDR DIMMS
SUPPORT 1 AGP SLOT
SUPPORTS 5 PCI SLOTS
SUPPORT 1 ACR SLOT
SUPPORT 1 CNR SLOT
SUPPORT TELEPHONY

1.2.2 Layout of Motherboard

Model No.M7VIF



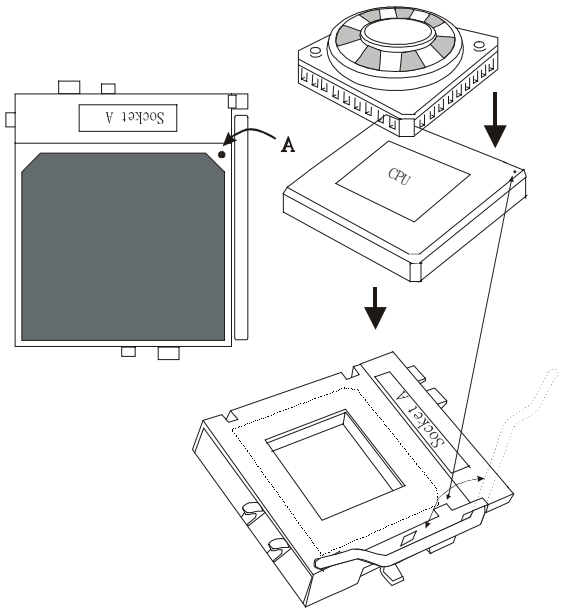
1.2.3 Quick Reference



A. Back Panel Connectors
B. ATX Power Connector (JATXPWR1)
C. AGP Slot (AGP1)
D. Front Audio Header (JAUDIO1)
E. PCI BUS Slots (PCI1-5)
F. CD Audio-In Header 1 / 2 (JCDIN 1 / 2)
G. Telephony Header (JTAD1)
H. CNR Slot (CNR1)
I. Codec Selection (JCODECSEL)
J. ACR Slot (ACR1)
K. Wake-On-LAN Header (JWOL1)
L. Front Panel Connector (JPANEL1)
M. System FAN Header (JSFAN1)
N. 5V / 5VSB Selection for USB (JUSBV5)
O. Floppy Disk Connector (FDD1)
P. Front USB Header (JUSB20B)
Q. USB Device Wake-Up (J9) (J10)
R. IDE Connectors (IDE1-2)
S. DIMMs (DIMM1-4)
T. DIMM Voltage Selection Header (JDIMMVOLT)
U. Clear CMOS (JCMOS1)
V. CPU Clock Selection (JCLK1)
W. North Bridge Fan Header (JNFAN1)
X. CPU FAN Header (JCFAN1)
Y. 5V / 5VSB Selection for USB (JUSBV1)
Z. 5V / 5VSB Selection for KB (JKBV1)

1.3 CPU Installation

1.3.1 CPU Installation Procedure: Socket A

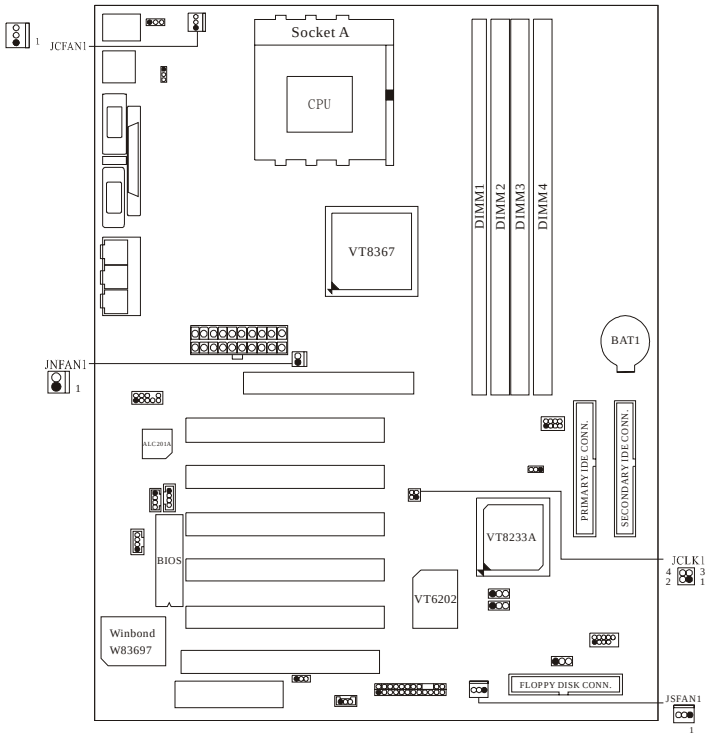


1. Pull the lever sideways away from the socket then raise the lever up to 90-degree angle.

2. Locate Pin A in the socket and look for the white dot or cut edge in the CPU. Match Pin A with the white dot/cut edge then insert the CPU.

3. Press the lever down.

4. Put the fan on the CPU by buckling it and then put the fan's powerport into the JCFAN1, then the installation will be completed.



1.3.2 Frequency Selection: JCLK1

CPU Clock	PIN 1-2	PIN 3-4
100.0MHz	OFF	OFF
133.3MHz	ON	ON

1.3.3 CPU Fan Header: JCFAN1

Pin No.	Assignment
1	Ground
2	+12V
3	Sense

1.3.4 System Fan Header: JSFAN1

Pin No.	Assignment
1	Ground
2	+12V
3	Sense

1.3.5 North Bridge Chipset Fan Header: JNFAN1

Pin No.	Assignment
1	Ground
2	+12V

1.4 RAM Module Installation

1.4.1 DIMM

DRAM Access Time: 2.5V Unbuffered/ Registered DDR SDRAM PC1600/ PC2100/ PC2700 Type required.

DRAM Type : 64MB/ 128MB/ 256MB/ 512MB/ 1GB DIMM Module (184 pin)

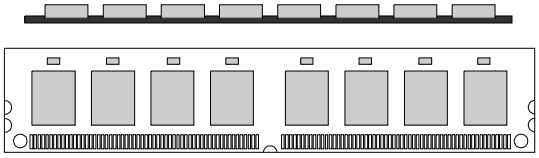
Total Memory Size

	Unbuffered			
Devices used on DIMM	**DIMM1 (2 Rows) x64**	**DIMM2 (2 Rows) x64**	**DIMM3 (2 Rows) x64**	**DIMM4 (2 Rows) x64**
64M (4Mx4x4banks)	256 M	256 M	256 M	256 M
64M (2Mx8x4banks)	128 M	128 M	128 M	128 M
64M (1Mx16x4banks)	64 M	64 M	64 M	64 M
128M (8Mx4x4banks	512 M	512 M	512 M	512 M
128M (4Mx8x4banks)	256 M	256 M	256 M	256 M
128M (2Mx16x4banks)	128 M	128 M	128 M	128 M
256M (16Mx4x4banks)	1 G	1 G	1 G	1 G
256M (8Mx8x4banks)	512 M	512 M	512 M	512 M
256M (4Mx16x4banks)	256 M	256 M	256 M	256 M
512M (16Mx8x4banks)	1 G	1 G	1 G	1 G
512M (8Mx16x4banks)	512 M	512 M	512 M	512 M
	Registered			

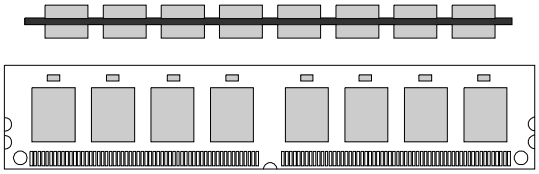
* This M7VIF motherboard does not support with parity DIMM.

*The list shown above for DRAM configuration is only for reference.

1.4.2 How to install a DIMM Module



Single Sided DIMM

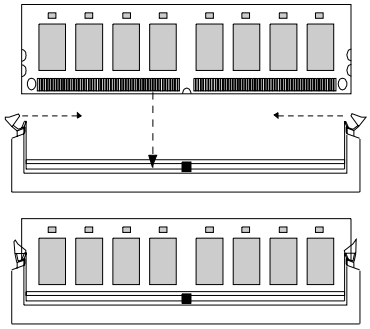


Double Sided DIMM

1. The DIMM socket has a " Plastic Safety Tab", and the DIMM memory module has an "Asymmetrical notch", so the DIMM memory module can only fit into the slot in one direction.

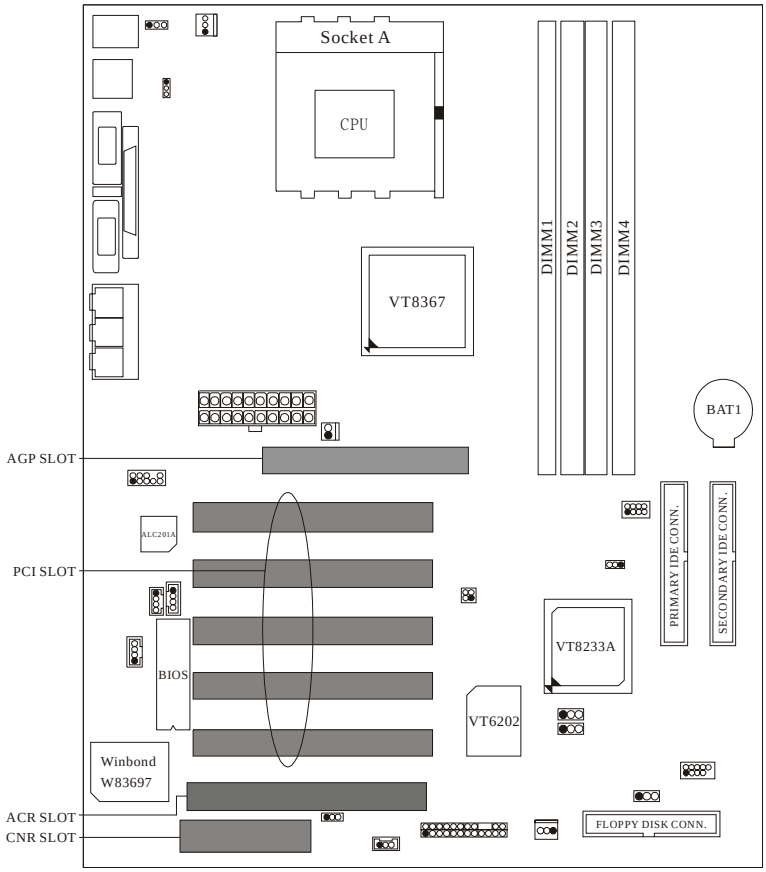
2. Push the tabs out. Insert the DIMM memory modules into the socket at a 90-degree angle, and then push down vertically so that it will fit into the place.

3. The Mounting Holes and plastic tabs should fit over the edge and hold the DIMM memory modules in place.



1.5 Slots

The slots in this motherboard are designed to hold expansion cards and connect them to the system bus. Expansion slots are a mean of adding or enhancing the motherboard's features and capabilities. With these efficient facilities, you can increase the motherboard's capabilities by adding hardware that performs tasks that are not part of the basic system.



1.5.1 ACR (Advanced Communication Riser) Slot

The ACR specification is an open Industry Standard Architecture, and it defines a hardware scalable riser card interface, which supports audio and modem only.

1.5.2 AGP (Accelerated Graphics Port) Slot

Unlike the mouse ports, keyboard ports and printer ports, this motherboard does not have built in video facilities; and therefore, requires a video card for one of the expansion slots. Your monitor will attach directly to that video card. This motherboard supports video cards for PCI and ISA slots, but it is also equipped with an Accelerated Graphics Port (AGP). An AGP card will take advantage of AGP technology for improved video efficiency and performance, especially with 3D graphics.

1.5.3 CNR (Communication Network Riser) Slot

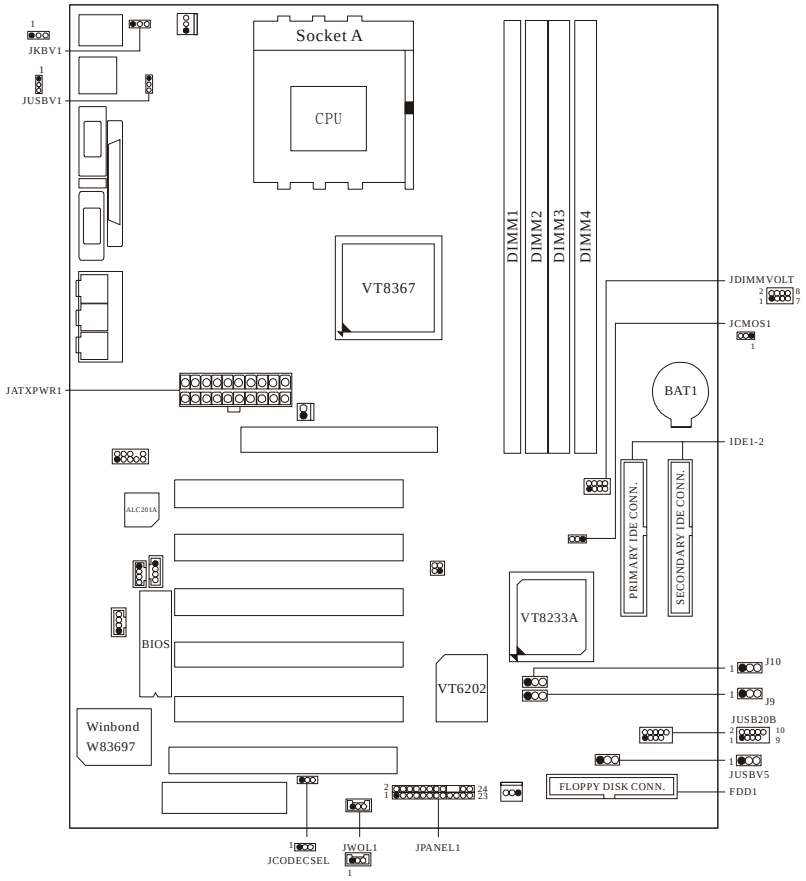
The CNR specification is an open Industry Standard Architecture, and it defines a hardware scalable riser card interface, which supports audio and modem only.

1.5.4 PCI (Peripheral Component Interconnect) Slots

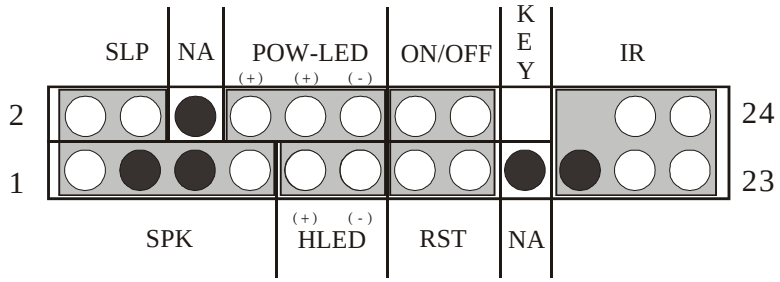
This motherboard is equipped with 5 standard PCI slots. PCI stands for Peripheral Component Interconnect, and it is a bus standard for expansion cards, which has supplanted the older ISA bus standard in most parts. This PCI slot is designated as 32 bits.

1.6 Connectors, Headers & Jumpers

The connectors, headers and jumpers introduced below provide you lots of capabilities such as power supply, front panel signal revelation, IDE hard disk connection, floppy disk connection, Wake On LAN function and USB connection. Noticeably, a jumper has two or more pins that can be covered by a plastic jumper cap, allowing you to select a different system options.



1.6.1 Front Panel Connector: JPANEL1



Pin No.	Assignment	Function	Pin No.	Assignment	Function
1	+5V	Speaker Connector	**2**	Sleep Control	Sleep Button
3	NA		**4**	Ground	
5	NA		**6**	NA	NA
7	Speaker		**8**	Power LED (+)	POWER LED
9	HDD LED (+)	Hard Drive LED	**10**	Power LED (+)	
11	HDD LED (-)		**12**	Power LED (-)	
13	Ground	Reset Button	**14**	Power Button	Power-on Button
15	Reset Control		**16**	Ground	
17	NA		**18**	KEY	
19	NA	IrDA Connector	**20**	KEY	IrDA Connector
21	VCC5		**22**	Ground	
23	IRTX		**24**	IRRX	

SPK (Speaker Connector)

An offboard speaker can be installed on the motherboard as a manufacturing option. It can be connected to the motherboard at the front panel connector. The speaker (onboard or offboard) provides error beep code information during the Power On Self-Test when the computer cannot use the video interface. The speaker is not connected to the audio subsystem and does not receive output from the audio subsystem.

RST (Reset Button)

This connector can be attached to a momentary SPST switch. This switch is usually open, and when it is closed, it will cause the motherboard to reset and run the POST (Power On Self Test).

POW-LED (Power LED Connector)

This connector can be attached to an LED on the front panel of a computer case. The LED will illuminate while the computer is powered on.

HLED (Hard Drive LED Connector)

This connector can be attached to an LED on the front panel of a computer case. The LED will flicker during disk activity where it is only applied to those IDE drives directly attached to the system board.

IR (Infrared Connector)

This connector is used to attach to an infrared sensing device. After the IrDA interface is configured, connectionless data transfer to and from portable devices such as laptops making PDAs is possible.

SLP (Sleep/Green Button)

This connector is used to conserve energy by powering down the monitor and the hard disk when is not in use. To configure this option, you need to connect a button from the front panel to this sleep button. Depressing the button will power down the monitor and the hard drives until the system is invoked by any keyboard activity, mouse activity, modem activity or when the sleep button is depressed again. APM (Advanced Power Management) must be enabled in the system BIOS and the APM driver must be loaded.

ON/OFF (Power Button)

This connector can be attached to a front panel power switch. The switch must pulled the Power Button pin to ground for at least 50 ms to signal the power supply to switch on or off. (The time required is due to internal debounce circuitry on the system board). At least two seconds must pass before the power supply will recognize another on/off signal.

1.6.2 ATX 20-pin Power Connector: JATXPWR1

This connector supports the power button on-board. Using the ATX power supply, function such as Soft Power Off, is supported on this motherboard. This power connector supports instant power-on functionality, which means that the system will boot up instantly when the power connector is inserted on the board.

PIN	Assignment	PIN	Assignment
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	Ground	13	Ground
4	5V	14	PS_ON
5	Ground	15	Ground
6	5V	16	Ground
7	Ground	17	Ground
8	PW_OK	18	-5V
9	5V_SB	19	5V
10	12V	20	5V

1.6.3 Hard Disk Connectors: IDE1/IDE2

The motherboard has a 32-bit Enhanced PCI IDE Controller that provides PIO Mode 0~4, Bus Master, and Ultra DMA 33, Ultra DMA 66,Ultra DMA 100, Ultra DMA 133 (only for VT8233A) functionality. It has two HDD connectors: IDE1 (primary) and IDE2 (secondary). You can connect up to four hard disk drives, a CD-ROM, a 120MB Floppy (reserved for future BIOS) and other devices to IDE1 and IDE2. These connectors support the IDE hard disk cable provided.

- **IDE1 (Primary IDE Connector)**

The first hard drive should always be connected to IDE1. IDE1 can connect a Master and a Slave drive. You must configure the second hard drive on IDE1 to Slave mode by setting the jumper accordingly.

- **IDE2 (Secondary IDE Connector)**

The IDE2 controller can also support a Master and a Slave drive. Its configuration is similar to IDE1. The second drive on this controller must be set to slave mode.

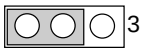
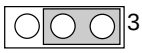
1.6.4 Floppy Disk Connector: FDD1

The motherboard provides a standard floppy disk connector (FDC) that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.

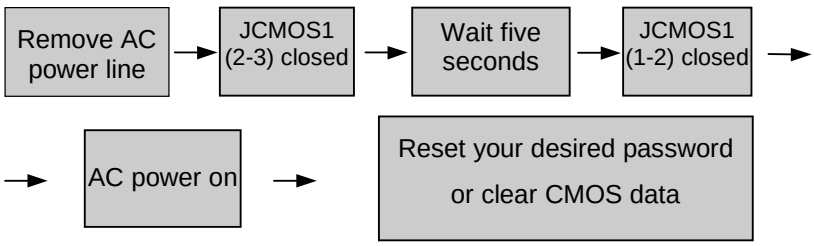
1.6.5 Wake On LAN Header: JWOL1

Pin No.	Assignment
1	5V SB
2	Ground
3	Wake up

1.6.6 Clear CMOS Jumper: JCMOS1

JCMOS1	Assignment
1  3 1-2 Closed	Normal Operation (default)
1  3 2-3 Closed	Clear CMOS Data

The following procedures are for resetting the BIOS password. It is important to follow these instructions closely.



1.6.7 CNR Codec Primary/Secondary Selection: JCODECSEL

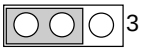
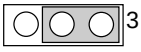
Pin No.	Assignment
1-2	On-board Primary Codec
2-3	CNR Primary Codec

1.6.8 DDR DIMM Voltage: JDIMMVOLT

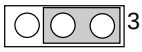
Pin	DDR DIMM Voltage
1-2	2.55V
3-4	2.65V (Default)
5-6	2.75V
7-8	2.85V

- If you meet the DDR DIMM compatible program, try to adjust the DDR Voltage to fix the compatible program.

1.6.9 5V/ 5VSB Selection for USB: JUSBV1

JUSBV1	Assignment
1  3 1-2 Closed	5V
1  3 2-3 Closed	5V_SB

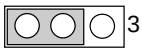
1.6.10 5V/ 5VSB Selection for KB: JKBV1

JKBV1	Assignment
 1-2 Closed	5V
 2-3 Closed	5V_SB

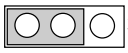
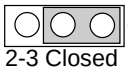
1.6.11 Front USB Header: JUSB20B

Pin	Assignment	Pin	Assignment
1	+5V	**2**	+5V
3	USBP2-	**4**	USBP3-
5	USBP2+	**6**	USBP3+
7	Ground	**8**	Ground
9	KEY	**10**	NC

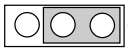
1.6.12 USB Device Wake-Up: J9

J9	Assignment
 1-2 Closed	Enabled
 2-3 Closed	Disabled

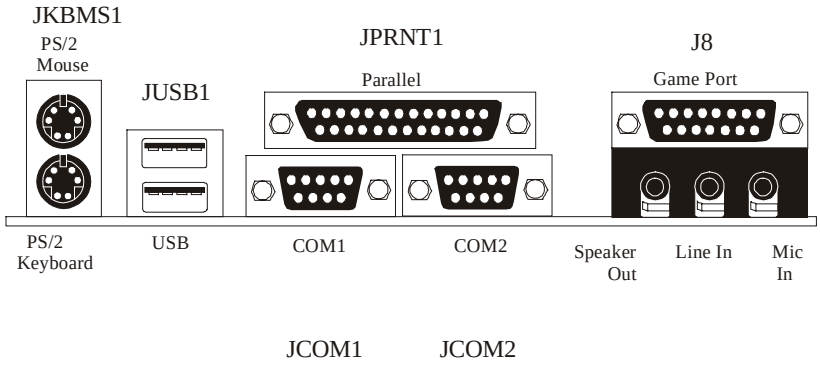
1.6.13 USB Device Wake-Up: J10

J10	Assignment
 1-2 Closed	Enabled
 2-3 Closed	Disabled

1.6.14 5V / 5VSB Selection for USB: JUSBV5

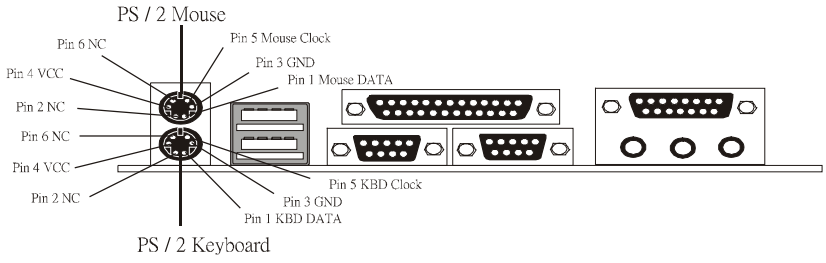
JUSBV5	Assignment
1-2 Closed	5V
 2-3 Closed	5V_SB

1.7 Peripheral Port



1.7.1 PS/2 Mouse / Keyboard Connector: JKBMS1

The motherboard provides a standard PS/2 mouse / Keyboard mini DIN connector for attaching a PS/2 mouse. You can plug a PS/2 mouse / Keyboard directly into this connector. The connector location and pin definition are shown below:

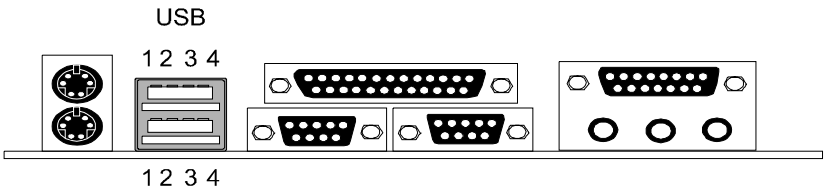


PS/2 Mouse / Keyboard Connectors

Pin	Assignment
1	Data
2	No connect
3	Ground
4	+5 V (fused)
5	Clock
6	No connect

1.7.2 USB Connector: JUSB1

The motherboard provides a **OHCI (Open Host Controller Interface) Universal Serial Bus Roots** for attaching USB devices such as: keyboard, mouse and other USB devices. You can plug the USB devices directly into this connector.



Stacked USB Connectors

Pin	Assignment
1	+5 V (fused)
2	USBP0- [USBP1-]
3	USBP0+ [USBP1+]
4	Ground

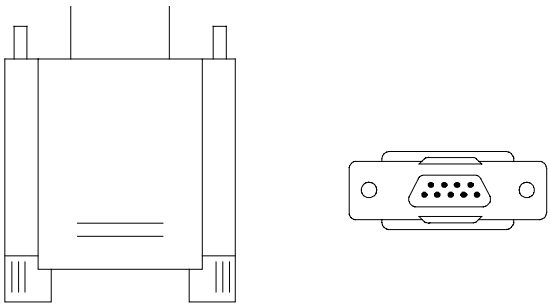
Signal names in brackets ([ ]) are for USB Port 1.

1.7.3 Serial and Parallel Interface Ports

This system is equipped with two serial ports and one parallel port. Both types of interface ports will be explained in this chapter.

1.7.3.1 The Serial Interface: JCOM1/ JCOM2

The serial interface port is sometimes referred to as an RS-232 port or an asynchronous communication port. Mice, printers, modems and other peripheral devices can be connected to a serial port, where it can also be used to connect your computer with another computer system. If you wish to transfer the contents of your hard disk to another system, it can be accomplished by using each machine's serial port.



The serial port on this system has two 9-pin connectors. Some older computer systems and peripherals used to be equipped with only one 25-pin connector. If you need to connect a 9-pin serial port to an older 25-pin serial port, you can purchase a 9-to-25 pin adapter.

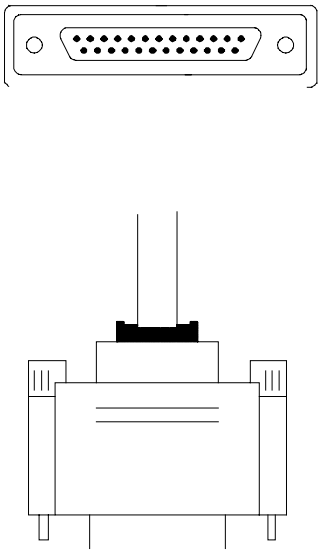
Connectivity

The serial ports can be used in many ways, and it may be necessary to become familiar with the pinout diagram. The following chart gives you the function of each pin on the 9-pin connector and some of the 25-pin connector. This information can be used when configuring certain software programs to work with the serial ports.

Signal	Name	DB9 PIN	DB25 PIN
DCD	Data Carrier Detect	1	8
RX	Receive Data	2	3
TX	Transmit Data	3	2
DTR	Data Terminal Ready	4	20
GND	Signal Ground	5	7
DSR	Data Set Ready	6	6
RTS	Request to Send	7	4
CTS	Clear to Send	8	5
RI	Ring Indicator	9	22

1.7.3.2 Parallel Interface Port: JPRNT1

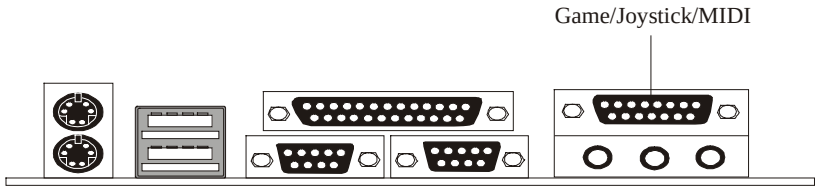
Unlike the serial ports, parallel interface port has been standardized, and it should not present any difficulty interfacing peripherals of your system. Sometimes called centronics port, the parallel port is almost exclusively used with printers. The parallel port on your system has a 25-pin, DB25 connector (see picture below). The pinout for the parallel port are shown in the table below.



Signal	Pin
-Strobe	1
Data 0	2
Data 1	3
Data 2	4
Data 3	5
Data 4	6
Data 5	7
Data 6	8
Data 7	9
-Ack	10
Busy	11
Paper Empty	12
+Select	13
-Auto FDXT	14
-Error	15
-Init	16
-SLCTN	17
Ground	18
Ground	19
Ground	20
Ground	21
Ground	22
Ground	23
Ground	24
Ground	25

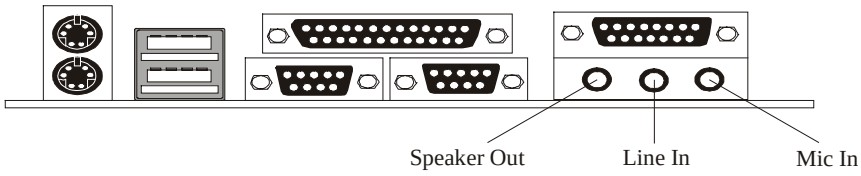
1.7.4 Game (Joystick/MIDI) Port Connector: J8

This connector allows you to connect a joystick or game pad for playing computer games. Also, you may play or edit professional music by connecting MIDI devices.

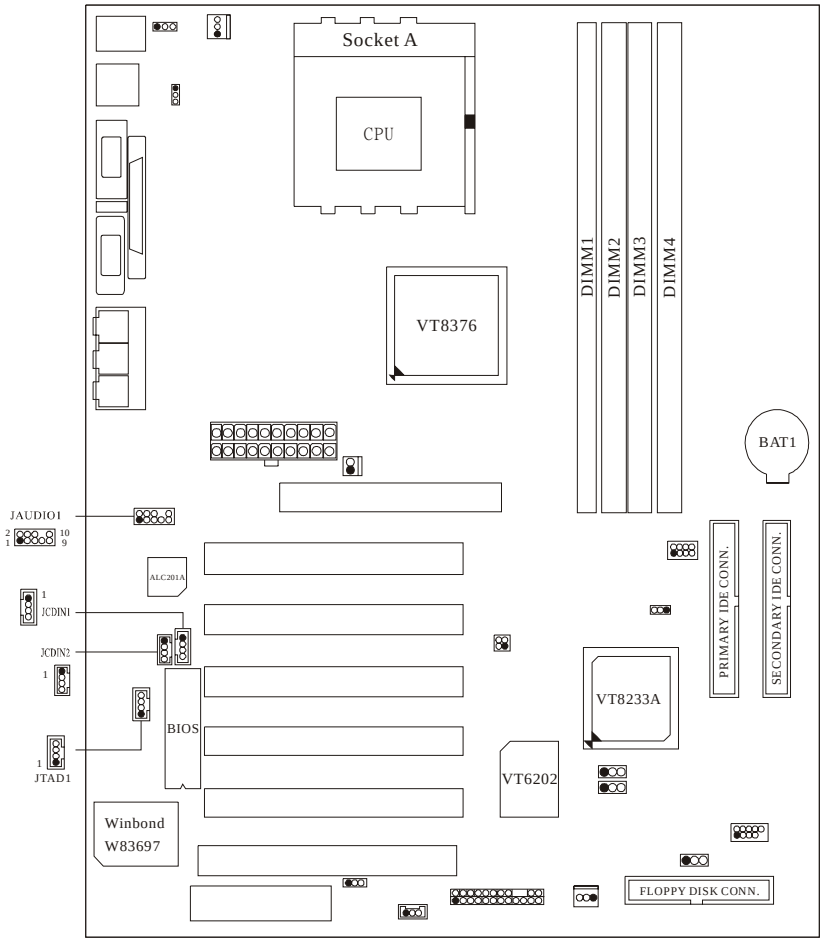


1.7.5 Audio Port Connectors: J8

Speaker Out is used to connect speakers or headphones for audio output.
Line In can be connected to the external CD player, Tape player or other audio devices for audio input.
Mic In is used to connect a microphone that allows you to input sounds and voices.



1.7.6 Audio Subsystem



1.7.6.1 CD-ROM Audio-In Header: JCDIN1

Pin No.	Assignment
1	Left Channel Input
2	Ground
3	Ground
4	Right Channel Input

1.7.6.2 CD-ROM Audio-In Header: JCDIN2

Pin No.	Assignment
1	Left Channel Input
2	Ground
3	Right Channel Input
4	Ground

1.7.6.3 Front Panel Audio Header: JAUDIO1

Pin No.	Assignment	Pin No.	Assignment
1	Mic In	**2**	Ground
3	Mic Power	**4**	Audio Power
5	RT Line Out	**6**	RT Line Out
7	Reserved	**8**	Key
9	LFT Line Out	**10**	LFT Line Out

1.7.6.4 Telephony Audio Header: JTAD1

Pin No.	Assignment
1	MONO_IN
2	Ground
3	Ground
4	MONO_OUT

2. BIOS Setup

Introduction

This manual discussed Award™ Setup program built into the ROM BIOS. The Setup program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM so that it retains the Setup information when the power is turned off.

The Award BIOS™ installed in your computer system's ROM (Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports AMD-Athlon™ / Duron ™ processors input/output system. The BIOS provides critical low-level support for standard devices such as disk drives and serial/ parallel ports.

Adding important has customized the Award BIOS™, but nonstandard features such as virus and password protection as well as special support for detailed fine-tuning of the chipset controls the entire system.

The rest of this manual is intended to guide you through the process of configuring your system by using Setup.

Plug and Play Support

These AWARD BIOS supports the Plug and Play Version 1.0A specification. ESCD (Extended System Configuration Data) write is supported.

EPA Green PC Support

This AWARD BIOS supports Version 1.03 of the EPA Green PC specification.

APM Support

These AWARD BIOS supports Version 1.1&1.2 of the Advanced Power Management (APM) specification. Power management features are implemented via the System Management Interrupt (SMI). Sleep and Suspend power management modes are supported. This AWARD BIOS can manage power to the hard disk drives and video monitors.

PCI Bus Support

This AWARD BIOS also supports Version 2.1 of the Intel PCI (Peripheral Component Interconnect) local bus specification.

DRAM Support

DDR SDRAM (Double Data Rate Synchronous DRAM) is supported.

Supported CPUs

This AWARD BIOS supports the AMD Athlon™ / Duron ™ / Athlon XP ™ CPU.

Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PgUp> and <PgDn> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program by using the keyboard.

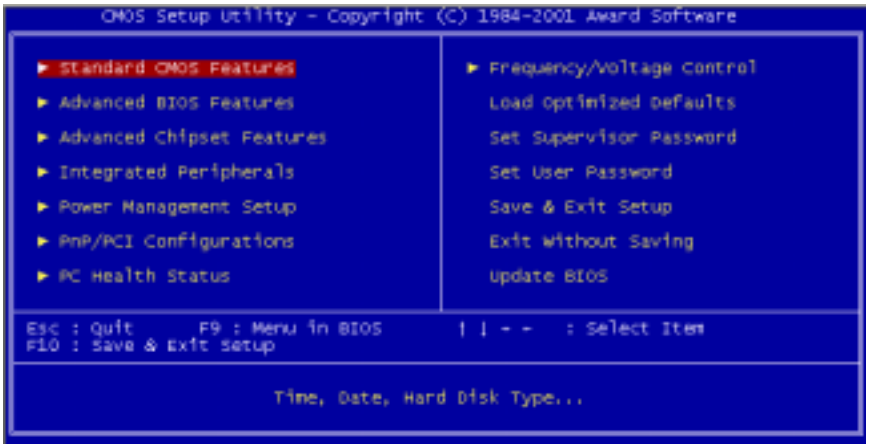
Keystroke	Function
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item on the left (menu bar)
Right arrow	Move to the item on the right (menu bar)
Esc	Main Menu: Quit without saving changes Submenus: Exit Current page to the next higher level menu
Move Enter	Move to the item you desired
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+ Key	Increase the numeric value or make changes
- Key	Decrease the numeric value or make changes
Esc key	Main Menu – Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu – Exit Current page and return to Main Menu
F1 key	General help on Setup navigation keys
F5 key	Load previous values from CMOS
F6 key	Load the fail-safe defaults from BIOS default table
F7 key	Load the optimized defaults
F10 key	Save all the CMOS changes and exit

2.1 Main Menu

Once you enter Award BIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

> ***!! WARNING !!***
>
> The information about BIOS defaults on manual (**Figure 1,2,3,4,5,6,7,8**) is just for reference; please refer to the BIOS installed on board, for update information.

■ **Figure 1. Main Menu**



Standard CMOS Features

This submenu contains industry standard configurable options.

Advanced BIOS Features

This submenu allows you to configure enhanced features of the BIOS.

Advanced Chipset Features

This submenu allows you to configure special chipset features.

Integrated Peripherals

This submenu allows you to configure certain IDE hard drive options and Programmed Input/ Output features.

Power Management Setup

This submenu allows you to configure the power management features.

PnP/PCI Configurations

This submenu allows you to configure certain "Plug and Play" and PCI options.

PC Health Status

This submenu allows you to monitor the hardware of your system.

Frequency/Voltage Control

This submenu allows you to change CPU Vcore Voltage and CPU/PCI clock. **(However, this function is strongly recommended not to use. Not properly change the voltage and clock may cause CPU or M/B damage!)**

Load Optimized Defaults

This selection allows you to reload the BIOS when the system is having problems particularly with the boot sequence. These configurations are factory settings optimized for this system. A confirmation message will be displayed before defaults are set.

Set Supervisor Password

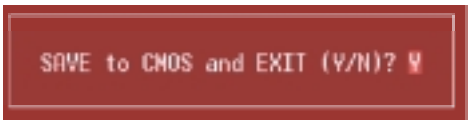
Setting the supervisor password will prohibit everyone except the supervisor from making changes using the CMOS Setup Utility. You will be prompted with to enter a password.

Set User Password

If the Supervisor Password is not set, then the User Password will function in the same way as the Supervisor Password. If the Supervisor Password is set and the User Password is set, the "User" will only be able to view configurations but will not be able to change them.

Save & Exit Setup

Save all configuration changes to CMOS(memory) and exit setup. Confirmation message will be displayed before proceeding.



Exit Without Saving

Abandon all changes made during the current session and exit setup. Confirmation message will be displayed before proceeding.

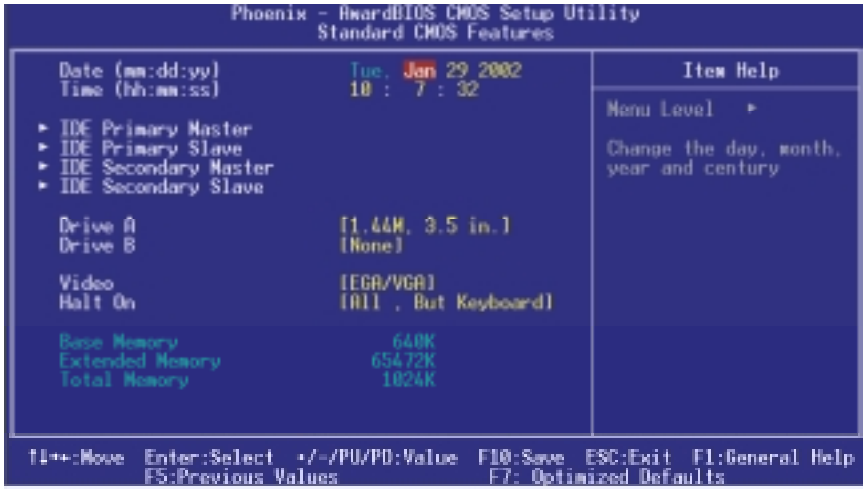
Upgrade BIOS

This submenu allows you to update bios.

2.2 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the<PgUp> or <PgDn> keys to select the value you want in each item.

■ **Figure 2. Standard CMOS Setup**



Main Menu Selections

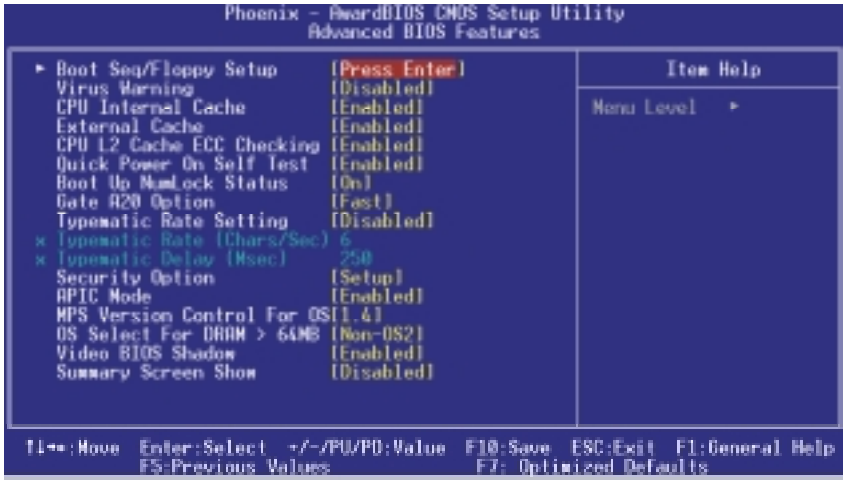
This table shows the selections that you can make on the Main Menu.

Item	Options	Description
Date	MM DD YYYY	Set the system date. Note that the 'Day' automatically changes when you set the date.
Time	HH MM SS	Set the system internal clock.
IDE Primary Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options
IDE Primary Slave	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Master	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Slave	Options are in its sub menu.	Press <Enter> to enter the sub menu of detailed options.
Drive A Drive B	360K, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in None	Select the type of floppy disk drive installed in your system.
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device.

Item	Options	Description
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/ Key	Select the situation in which you want the BIOS to stop the POST process and notify you.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of extended memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system.

2.3 Advanced BIOS Features

■ **Figure 3. Advanced BIOS Setup**



Boot Seq & Floppy Setup

This item allows you to setup boot seq & Floppy.

First/ Second/ Third/ Boot Other Device

These BIOS attempt to load the operating system from the devices in the sequence selected in these items.

The Choices: Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, LAN, Disabled, Enabled.

Swap Floppy Drive

For systems with two floppy drives, this option allows you to swap logical drive assignments.

The Choices: Disabled (default), Enabled.

Boot Up Floppy Seek

Enabling this option will test the floppy drives to determine if they have 40 or 80 tracks. Disabling this option reduces the time it takes to boot-up.

The Choices: Enabled (default), Disabled.

Virus Warning

The Choices: Disabled (default), Enabled.This option allows you to choose the VIRUS Warning feature that is used to protect the IDE Hard Disk boot sector. If this function is enabled and an attempt is made to write to the boot sector, BIOS will display a warning message on the screen and sound an alarm beep.

Disabled (default)	Virus protection is disabled.
Enabled	Virus protection is activated.

CPU Internal Cache

Depending on the CPU/chipset in use, you may be able to increase memory access time with this option.

Enabled (default)	Enable cache.
Disabled	Disable cache.

Extermal Cache

This option enables or disables "Level 2" secondary cache on the CPU, which may improve performance.

Enabled (default)	Enable cache.
Disabled	Disable cache.

CPU L2 Cache ECC Checking

This item allows you to enable/disable CPU L2 Cache ECC Checking.

The Choices: Enabled (default), Disabled.

Quick Power On Self Test

Enabling this option will cause an abridged version of the Power On Self-Test (POST) to execute after you power up the computer.

Enabled (default)	Enable quick POST.
Disabled	Normal POST.

Boot Up NumLock Status

Selects the NumLock. State after power on.

On (default)	Numpad is number keys.
Off	Numpad is arrow keys.

Gate A20 Option

Select if chipset or keyboard controller should control Gate A20.

Normal	A pin in the keyboard controller controls Gate A20.
Fast (default)	Lets chipset control Gate A20.

Typematic Rate Setting

When a key is held down, the keystroke will repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be configured.

Disabled (default)
Enabled

Typematic Rate (Chars/Sec)

Sets the rate at which a keystroke is repeated when you hold the key down.
The Choices: 6 (default)**,** 8,10,12,15,20,24,30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.

The Choices: 250 (default), 500,750,1000.

Security Option

This option will enable only individuals with passwords to bring the system online and/or to use the CMOS Setup Utility.

System	A password is required for the system to boot and is also required to access the Setup Utility.
Setup (default)	A password is required to access the Setup Utility only.

This will only apply if passwords are set from the Setup main menu.

APIC Mode

Selecting Enabled enables APIC device mode reporting from the BIOS to the operating system.

The Choices: Enabled (default), Disabled.

MPS Version Control For OS

The BIOS supports versions 1.1 and 1.4 of the Intel multiprocessor specification. Select the version supported by the operation system running on this computer.

The Choices: 1.4 (default), 1.1.

OS Select For DRAM > 64MB

A choice other than Non-OS2 is only used for OS2 systems with memory exceeding 64MB.

The Choices: Non-OS2 (default), OS2.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM for faster execution.

Enabled (default)	Optional ROM is enabled.
Disabled	Optional ROM is disabled.

Summary Screen Show

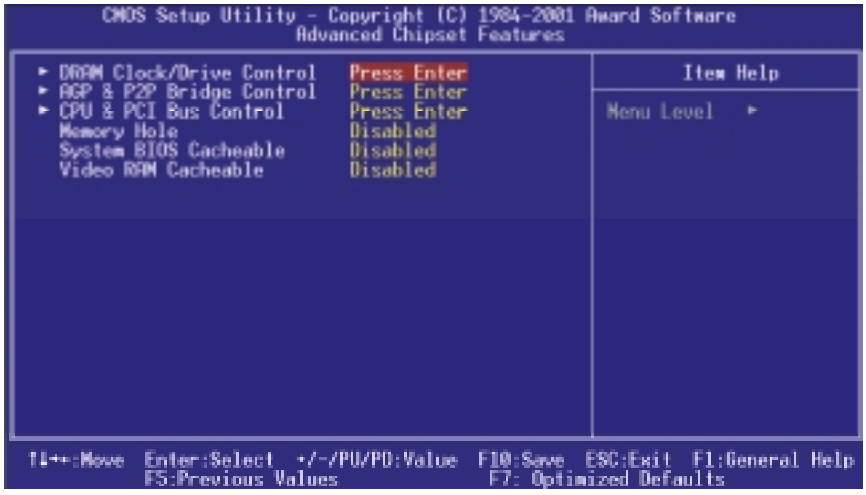
This item allows you to enable/disable the summary screen. Summary screen means system configuration and PCI device listing.

The choices: Enabled, **Disabled** (default).

2.4 Advanced Chipset Features

This submenu allows you to configure the specific features of the chipset installed on your system. This chipset manages bus speeds and access to system memory resources, such as DRAM and external cache. It also coordinates communications with the PCI bus. The default settings that came with your system have been optimized and therefore should not be changed unless you are suspicious that the settings have been changed incorrectly.

- **Figure 4. Advanced Chipset Setup**



DRAM Clock/Drive Control

To control the Clock/Drive. If you highlight the literal "Press Enter" next to the "DRAM Clock/Drive Control" label and then press the enter key, it will take you a submenu with the following options:

DRAM Clock
This item determines DRAM clock following 100MHz, 133MHz or By SPD.
The Choices: 100MHz, 133MHz, **By SPD** (default).

DRAM Timing
This item determines DRAM clock/ timing follow SPD or not.
The Choices: By SPD (default), Manual.

DRAM CAS Latency
When DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
The Choices: **2.5** (default), 2.

Bank Interleave
This item allows you to enable or disable the bank interleave feature.
The Choices: Disabled (default), 2 bank, 4 bank.

Precharge to Active (Trp)
This items allows you to specify the delay from precharge command to activate command.
The Choices: 2T, **3T** (default).

Active to Precharge
This items allows you to specify the minimum bank active time.
The Choices: **6T** (default), 5T.

Active to CMD (Trcd)
Use this item to specify the delay from the activation of a bank to the time that a read or write command is accepted.
The Choices: 2T, **3T** (default).

DRAM Queue Depth
This item permits to place the depths of the memory. The deeper the depth is, the better is this function.
The Choices: 4 level (default), 2 level, 3 level.

DRAM Command Rate
This item controls clock cycle that must occur between the last valid write operation and the next command.
The Choices: 1T Command (default), 2T Command.

AGP & P2P Bridge Control

If you highlight the literal "Press Enter" next to the "AGP & P2P Bridge Control" label and then press the enter key, it will take you a submenu with the following options:

AGP Aperture Size
Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.
The Choices: 64M (default), 256M, 128M, 32M, 16M, 8M, 4M.

AGP Mode
This item allows you to select the AGP Mode.
The Choices: 4X (default), 2X, 1X.

AGP Driving Control
By choosing "Auto" the system BIOS will the AGP output Buffer Drive strength P Ctrl by AGP Card. By choosing "Manual", it allows user to set AGP output Buffer Drive strength P Ctrl by manual.
The Choices: Auto (default), Manual.

AGP Driving Value
While AGP driving control item set to "Manual", it allows user to set AGP driving.
The Choices: DA (default).

AGP Fast Write
The Choices: Enabled, **Disabled** (default).

AGP Master 1 WS Write
When Enabled, writes to the AGP (Accelerated Graphics Port) are executed with one-wait states.
The Choices: Disabled (default), Enabled.

AGP Master 1 WS Read
When Enabled, read to the AGP (Accelerated Graphics Port) are executed with one wait states.
The Choices: Disabled (default), Enabled.

CPU & PCI Bus Control

If you highlight the literal "Press Enter" next to the "CPU & PCI Bus Control" label and then press the enter key, it will take you a submenu with the following options:

PCI1 Master 0 WS Write
When enabled, writes to the PCI bus are executed with zero-wait states.
The Choices: Enabled (default), Disabled.

PCI2 Master 0 WS Write
When enabled, writes to the AGP bus are executed with zero-wait states.
The Choices: Enabled (default), Disabled.

PCI1 Post Write
When Enabled, CPU writes are allowed to post on the PCI bus.
The Choices: Enabled (default), Disabled.

PCI2 Post Write
When Enabled, CPU writes are allowed to post on the AGP bus.
The Choices: Enabled (default), Disabled.

PCI Delay Transaction
The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification.
The Choices: Enabled, **Disabled** (default).

Memory Hole

When enabled, you can reserve an area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. Refer to the user documentation of the peripheral you are installing for more information.

The Choices: Disabled (default), 15M – 16M.

System BIOS Cacheable

Selecting the "Enabled" option allows caching of the system BIOS ROM at F0000h-FFFFFh, which can improve system performance. However, any programs writing to this area of memory will cause conflicts and result in system errors.

The Choices: Enabled**, Disabled** (default).

Video RAM Cacheable

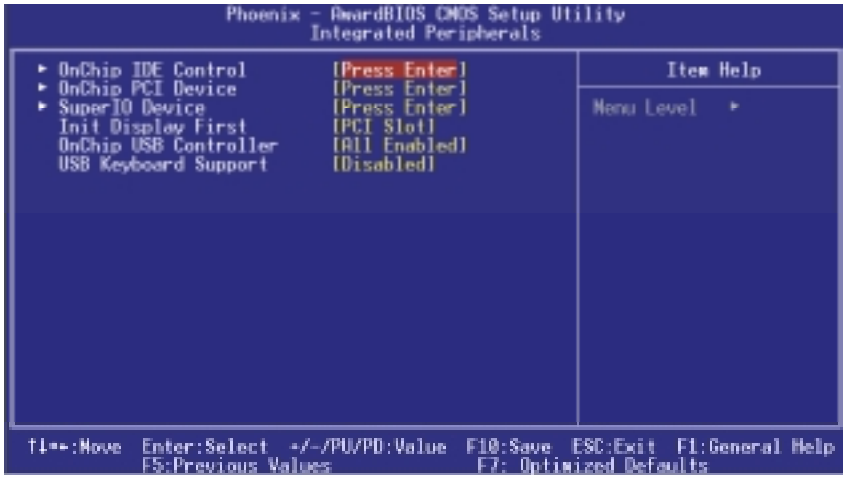
Enabling this option allows caching of the video RAM, resulting in better system

performance. However, if any program writes to this memory area, a system error may result.

The Choices: Enabled**, Disabled** (default).

2.5 Integrated Peripherals

- **Figure 5. Integrated Peripherals**



OnChip IDE Control

The chipset contains a PCI IDE interface with support for two IDE channels. Select "Enabled" to activate the first and / or second IDE interface. If you install a primary and / or secondary add-in IDE interface, select "Disabled" to deactivate an interface. If you highlight the literal "Press Enter" next to the "Onchip IDE Control" label and then press the enter key, it will take you a submenu with the following options:

On-Chip Primary / Secondary PCI IDE
The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.
The Choices: Enabled (default), Disabled.

IDE Prefetch Mode
The "onboard" IDE drive interfaces supports IDE prefetching for faster drive access. If the interface does not support prefetching. If you install

a primary and/or secondary add-in IDE interface, set this option to "Disabled".
The Choices: Enabled (default), Disabled.

IDE Primary / Secondary Master / Slave PIO
The IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the IDE devices that the onboard IDE interface supports. Modes 0 through 4 provides successively increased performance. In Auto mode, the system automatically determines the best mode for each device.
The Choices: Auto (default), Mode0, Mode1, Mode2, Mode3, Mode4.

IDE Primary / Secondary Master / Slave UDMA
Ultra DMA/100 functionality can be implemented if it is supported by the IDE hard drives in your system. As well, your operating environment requires 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/100, select Auto to enable BIOS support.
The Choices: Auto (default), Disabled.

IDE HDD Block Mode
Block mode is also called block transfer, multiple commands, or multiple sector read / write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read / write per sector where the drive can support.
The Choices: Enabled (default), Disabled.

OnChip PCI Device

If you highlight the literal "Press Enter" next to the "OnChip PCI Device" label and then press the enter key, it will take you a submenu with the following options:

VIA-3058 AC97 Audio
This option allows you to control the onboard AC97 audio.
The Choices: Auto (default), Disabled.

VIA-3068 MC97 Modem
This option allows you to control the onboard MC97 modem.

The Choices: Auto (default), Disabled.

Onboard Lan Boot ROM

This item allows you to decide whether to invoke the boot ROM of the onboard LAN chip.
The Choices: Enabled (default), Disabled.

Super IO Device

If you highlight the literal "Press Enter" next to the "Super IO Device" label and then press the enter key, it will take you a submenu with the following options:

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 install and FDC or the system has no floppy drive, select Disabled in this field.
The Choices: Enabled (default), Disabled.

Onboard Serial Port 1

Select an address and corresponding interrupt for the first and second serial ports.
The Choices: Disabled, **3F8/IRQ4** (default), 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto.

Onboard Serial Port 2

Select an address and corresponding interrupt for the first and second serial ports.
The Choices: Disabled, **2F8/IRQ3** (default), 3F8/IRQ4, 3E8/IRQ4, 2E8/IRQ3, Auto.

UART Mode Select

This item allows you to determine which Infra Red (IR) function of onboard I/O chip.
The Choices: Normal (default), AS KIR, IrDA.

RxD, TxD Active

This item allows you to determine which Infrared (IR) function of onboard I/O chip.
The Choices: Hi / Lo (default), Hi / Hi, Lo / Hi, Lo / Lo.

IR Transmission Delay
This item allows you to enable/disable IR transmission delay.
The Choices: Enabled (default), Disabled.

UR2 Duplex Mode
Select the value required by the IR device connected to the IR port. Full-duplex mode permits simultaneous two-direction transmission. Half-duplex mode permits transmission in one direction only at a time.
The Choices: Half (default), Full.

Use IR Pins
Consult your IR peripheral documentation to select the correct setting of the TxD and RxD signals.
The Choices: IR-Rx2Tx2 (default), RxD2, TxD2.

Onboard Parallel Port
This item allows you to determine access onboard parallel port controller with which I/O Address.
The Choices: 378/IRQ7 (default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode
The default value is SPP.
The Choices:

SPP(default)	Using Parallel port as Standard Printer Port.
EPP	Using Parallel Port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port.
ECP+EPP	Using Parallel port as ECP & EPP mode.

EPP Mode Select
Select EPP port type 1.7 or 1.9.
The Choices: EPP 1.7(default), EPP1.9.

ECP Mode Use DMA
Select a DMA Channel for the port.
The Choices: 3 (default), 1.

Game Port Address
Game Port I/O Address.

The Choices: 201 (default), 209, Disabled.

Midi Port Address
Midi Port Base I/O Address.
The Choices: 330 (default), 300, 290**,** Disabled.

Midi Port IRQ
This determines the IRQ in which the Midi Port can use.
The Choices: 5, **10** (default).

Init Display First

With systems that have multiple video cards, this option determines whether the primary display uses a PCI Slot or an AGP Slot.

The Choices: PCI Slot (default), AGP.

OnChip USB Controller

This option should be enabled if your system has a USB installed on the system board. You will need to disable this feature if you add a higher performance controller.

The Choices: All Enabled (default), All Disabled, 1 USB Port, 2 USB Port.

USB Keyboard Support

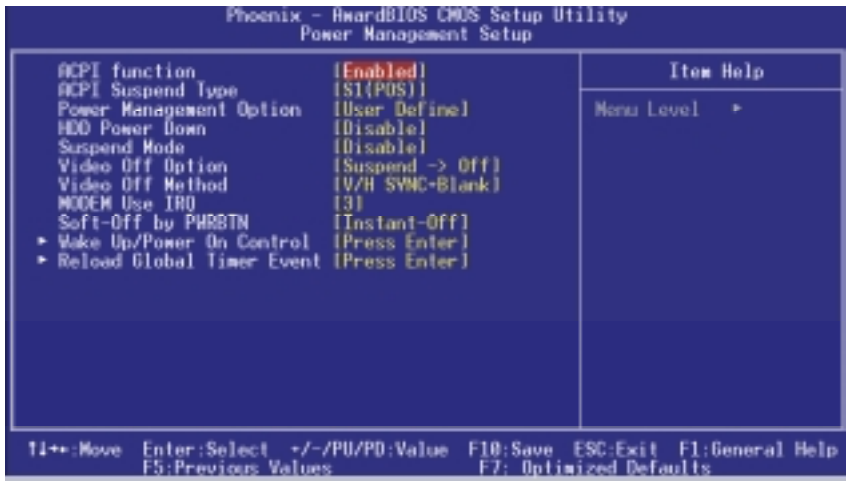
Enables support for USB attached keyboards.

The Choices: Disabled (default), Enabled.

2.6 Power Management Setup

The Power Management Setup Menu allows you to configure your system to utilize energy conservation and power up/power down features.

■ **Figure 6. Power Management Setup**



ACPI function

This item displays the status of the Advanced Configuration and Power Management (ACPI).

The Choices: Enabled (default), Disabled.

ACPI Suspend Type

The item allows you to select the suspend type under the ACPI operating system.

The Choices: S1 (POS) (default) Power on Suspend
S3 (STR) Suspend to RAM

Power Management Option

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:
1. HDD Power Down.
2. Suspend Mode.

There are four options of Power Management, three of which have fixed mode settings

Min. Power Saving

Minimum power management.
Suspend Mode = 1 hr.
HDD Power Down = 15 min

Max. Power Saving

Maximum power management only available for sl CPU's.
Suspend Mode = 1 min.
HDD Power Down = 1 min.

User Defined (default)

Allow you to set each mode individually.
When not disabled, each of the ranges is from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

HDD Power Down

When enabled, the hard disk drive will power down and after a set time of system inactivity. All other devices remain active.

The Choices: Disabled (default), 1 Min, 2 Min, 3 Min, 4 Min, 5 Min, 6 Min, 7 Min, 8 Min, 9 Min, 10 Min, 11 Min, 12 Min, 13 Min, 14 Min, 15Min.

.

Suspend Mode

The item allows you to select the suspend type under ACPI operating system.

The Choices: Disabled (default), 1 Min, 2 Min, 4 Min, 6 Min, 8 Min, 10 Min, 20 Min, 30 Min, 40 Min, 1 Hour.

Video Off Option

This field determines when to activate the video off feature for monitor power management.

The Choices: Suspend→Off (default), Always on.

Video Off Method

This option determines the manner in which the monitor is goes blank.

V/H SYNC+Blank (default)

This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen

This option only writes blanks to the video buffer.

DPMS Support

Initial display power management signaling.

Modem Use IRQ

This determines the IRQ, which can be applied in MODEM use.

3 (default)
4 / 5 / 7 / 9 / 10 / 11 / NA

Soft-Off by PWRBTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung."

The Choices: Delay 4 Sec, **Instant-Off** (default).

Wake Up on LAN/Ring

If you highlight the literal "Press Enter" next to the "Wake Up on LAN/Ring" label and then press enter key, it will take you to a submenu with the following options:

Power On by PCI card

When you select Enabled, a PME signal from PCI card returns the system to Full On state.

The Choices: Disabled (default), Enabled.

Wake Up on LAN/Ring

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

The Choices: Disabled (default), Enabled.

RTC Alarm Resume

This function is for setting date and time for your computer to boot up. During Disabled, you cannot use this function. During Enabled, Choose the Date and Time Alarm:

Date (of Month) Alarm You can choose which month the system will boot up.

Time (hh:mm:ss) Alarm You can choose shat hour, minute and second the system will boot up.

Note: *If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.*

Reload Global Timer Events

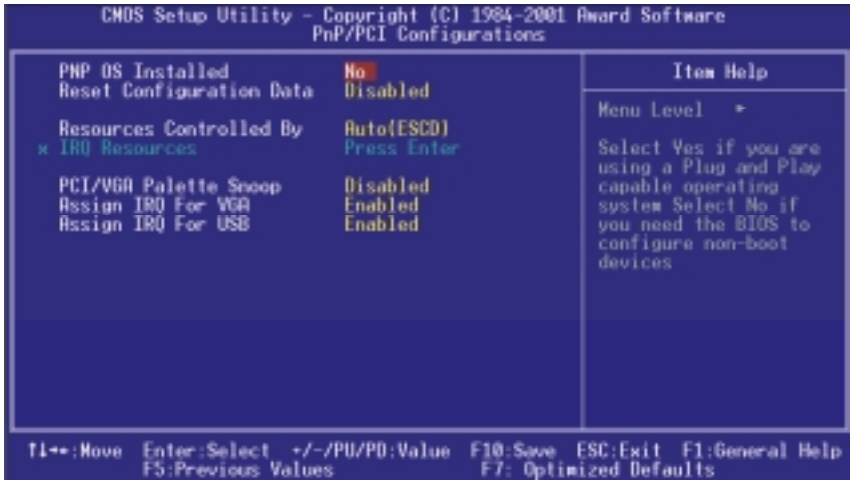
Reload Global Timer Events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything, which occurs to a device, which is configured as *Enabled*, even when the system is in a power down mode.

Primary IDE 0/1
Secondary IDE 0/1
FDD, COM, LPT Port
PCI PIRQ [A-D]#

2.7 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system, which allows I/O devices to operate at speeds nearing the speed of the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

- **Figure 7. PnP/PCI Configurations**



PNP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for the boot sequence (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Window™ 95. When set to NO, BIOS will initialize all the PnP cards. For non-PnP operating systems (DOS, Netware™), this option must set to NO.

The Choices: No (default), Yes.

Reset Configuration Data

The system BIOS supports the PnP feature, which requires the system to record which resources are assigned and protects resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved in the system BIOS. If the Disabled (default) option is chosen, the system's ESCD will update only when the new configuration varies from the last one. If the Enabled option is chosen, the system is forced to update ESCDs and then is automatically set to the "Disabled" mode.

IRQ-3	assigned to: PCI / ISA PnP
IRQ-4	assigned to: PCI / ISA PnP
IRQ-5	assigned to: PCI / ISA PnP
IRQ-7	assigned to: PCI / ISA PnP
IRQ-9	assigned to: PCI / ISA PnP
IRQ-10	assigned to: PCI / ISA PnP
IRQ-11	assigned to: PCI / ISA PnP
IRQ-12	assigned to: PCI / ISA PnP
IRQ-14	assigned to: PCI / ISA PnP
IRQ-15	assigned to: PCI / ISA PnP
DMA-0	assigned to: PCI / ISA PnP
DMA-1	assigned to: PCI / ISA PnP
DMA-3	assigned to: PCI / ISA PnP
DMA-5	assigned to: PCI / ISA PnP
DMA-6	assigned to: PCI / ISA PnP
DMA-7	assigned to: PCI / ISA PnP

The above settings will be shown on the screen only if "Manual" is chosen for the resources controlled by function.
Legacy is the term, which signifies that a resource is assigned to the ISA Bus and provides non-PnP ISA add-on cards. PCI / ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

The Choices: Disabled (default), Enabled.

Resources Controlled By

By Choosing "**Auto**" (default), the system BIOS will detect the system resources and automatically assign the relative IRQ and DMA channel for each peripheral.
By Choosing "Manual", the user will need to assign IRQ & DMA for add-on cards. Be sure that there are no IRQ/DMA and I/O port conflicts.

IRQ Resources

This submenu will allow you to assign each system interrupt a type, depending on the type of device using the interrupt. When you press the "Press Enter" tag, you will be directed to a submenu that will allow you to configure the system interrupts. This is only configurable when "Resources Controlled By" is set to "Manual".

PCI / VGA Palette Snoop

Choose Disabled or Enabled. Some graphic controllers that are not VGA compatible take the output from a VGA controller and map it to their display as a way to provide boot information and VGA compatibility.

However, the color information coming from the VGA controller is drawn from the palette table inside the VGA controller to generate the proper colors, and the graphic controller needs to know what is in the palette of the VGA controller. To do this, the non-VGA graphic controller watches for the Write access to the VGA palette and registers the snoop data. In PCI based systems, where the VGA controller is on the PCI bus and a non-VGA graphic controller is on an ISA bus, the Write Access to the palette will not show up on the ISA bus if the PCI VGA controller responds to the Write.

In this case, the PCI VGA controller should not respond to the Write, it should only snoop the data and permit the access to be forwarded to the ISA bus. The non-VGA ISA graphic controller can then snoop the data on the ISA bus. Unless you have the above situation, you should disable this option.

The Choices: Disabled (default) Disables the function.
Enabled Enables the function.

Assign IRQ For VGA

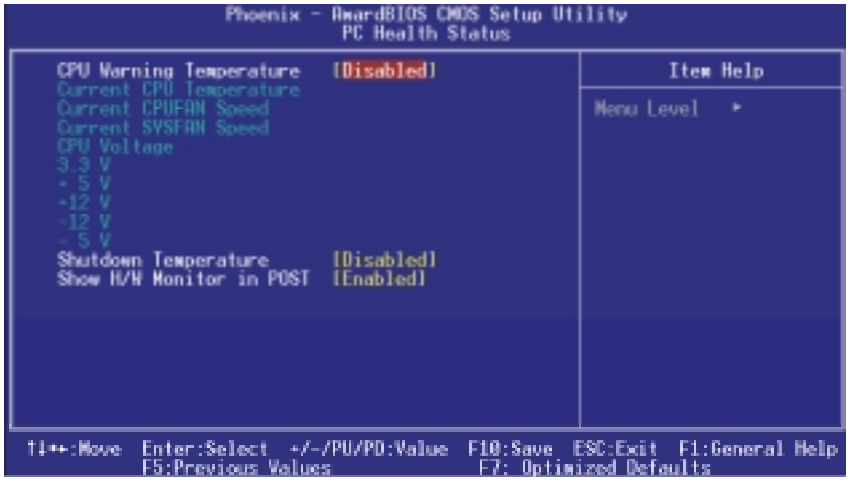
This item allows the users to choose which IRQ to assign for the VGA.
The Choices: Enabled (default), Disabled.

Assign IRQ For USB

This item allows the users to choose which IRQ to assign for the USB.
The Choices: Enabled (default), Disabled.

2.8 PC Health Status

■ **Figure 8. PC Health Status**



CPU Warning Temperature

The item will prevent CPU from overheating.
The Choices: Disabled (default), $50^{O}C/122^{O}F$, $53^{O}C/127^{O}F$, $56^{O}C/133^{O}F$, $60^{O}C/140^{O}F$, $63^{O}C/145^{O}F$, $66^{O}C/151^{O}F$, $70^{O}C/158^{O}F$.

Current CPU Temperature

This field displays the current temperature of the CPU.

Current CPUFAN Speed

This field displays the current speed of CPU fan.

Current SYSFAN Speed

This field displays the current speed SYSTEM fan.

CPU Voltage 3.3V, +5V, +12V, -12V, -5V

Detect the system's voltage status automatically.

Shutdown Temperature

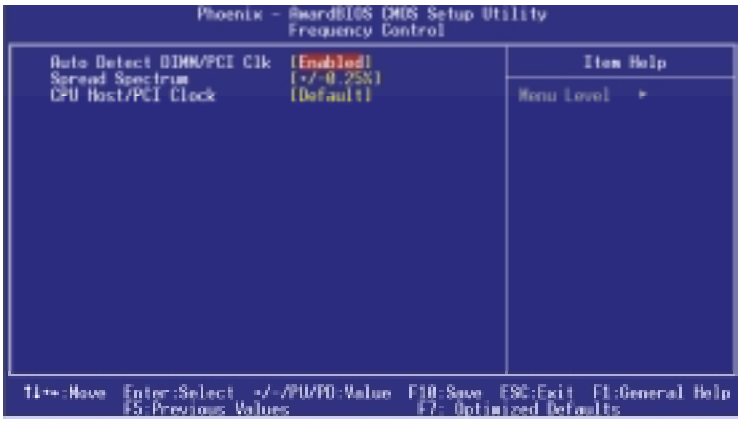
This item allows you to set up the CPU shutdown Temperature. This item only effective under Windows 98 ACPI mode.
The Choices: Disabled (default), $60^{O}C/140^{O}F$, $65^{O}C/149^{O}F$, $70^{O}C/158^{O}F$, $75^{O}C/167^{O}F$.

Show H/W Monitor in POST

If your computer contains a monitoring system, it will show PC health status during POST stage. The item offers several delay time for you to choose.
The Choices: None, 1sec, 2sec, **3 sec** (default).

2.9 Frequency/Voltage Control

■ **Frequency/Voltage Control**



Auto Detect DIMM/PCI Clk

This item allows you to enable / disable auto Detect DIMM/PCI Clock.
The Choices: Enabled (default), Disabled.

Spread Spectrum

This item allows you to enable / disable spectrum for all clock.
The Choices: +/-0.25% (default), -0.5%, +/-0.5%M +/-0.38%, Disabled.

CPU Host / PCI Clock

This item allows you to select CPU Host Clock (CPU / PCI).

If unfortunately, the system's frequency that you are selected is not functioning, there are two methods of booting-up the system.
Method 1: Clear the COMS data by setting the JCOMS1 ((2-3) closed)) as "ON" status. All the CMOS data will be loaded as defaults setting.
Method 2: Press the <Insert> key and Power button simultaneously, after that keep-on pressing the <Insert> key until the power-on screen showed. This action will boot-up the system according to FSB of the processor.
※ It's strongly recommended to set CPU Vcore and clock in default setting. If the CPU Vcore and clock are not in default setting, it may cause CPU or M/B damage.

3. Trouble Shooting

PROBLEM

No power to the system at all. Power light does not illuminate, fan inside power supply does not turn on. Indicator light on keyboard does not turn on.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Power cable is unplugged.	Visually inspect power cable.	Make sure power cable is securely plugged in.
Defective power cable.	Visually inspect the cable; try another cable.	Replace cable.
Power supply failure.	Power cable and wall socket are OK, but system is still dead.	Contact technical support.
Faulty wall outlet; circuit breaker or fuse blown.	Plug in device known to work in socket and test	Use different socket, repair outlet, reset circuit breaker or replace fuse.

PROBLEM

System inoperative. Keyboard lights are on, power indicator lights are lit, hard drive is spinning.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Memory DIMM is partially dislodged from the slot on the motherboard.	Turn off computer. Take cover off system unit. Check the DIMM to ensure it is securely seated in the slot.	Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.

PROBLEM

System does not boot from hard disk drive, can be booted from CD-ROM drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Connector between hard drive and system board unplugged.	When attempting to run the FDISK utility you get a message, INVALID DRIVE SPECIFICATION.	Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup.
Damaged hard disk or disk controller.	Format hard disk; if unable to do so the hard disk may be defective.	Contact technical support.
Hard disk directory or FAT is scrambled.	Run the FDISK program, format the hard drive. Copy data that was backed up onto hard drive.	Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.

PROBLEM

System only boots from CD-ROM. Hard disk can be read and applications can be used but booting from hard disk is impossible.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Hard Disk boot program has been destroyed.	A number of causes could be behind this.	Back up data and applications files. Reformat the hard drive. Re-install applications and data using backup disks.

PROBLEM

Error message reading "SECTOR NOT FOUND" or other error messages not allowing certain data to be retrieved.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
A number of causes could be behind this.	Use a file by file backup instead of an image backup to backup the hard disk.	Back up any salvageable data. Then low level format, partition, and high level format the hard drive. Re-install all saved data when completed.

PROBLEM

Screen message says "Invalid Configuration" or "CMOS Failure."

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Incorrect information entered into the configuration (setup) program.	Check the configuration program. Replace any incorrect information.	Review system's equipment . Make sure correct information is in setup.

PROBLEM

Screen is blank.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
No power to monitor.		Check the power connectors to monitor and to system. Make sure monitor is connected to display card.
Monitor not connected to computer.		See instructions above.

PROBLEM

No screen.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Memory problem.		Reboot computer. Reinstall memory, make sure that all memory modules are installed in correct sockets.
Computer virus.		Use anti-virus programs to detect and clean viruses.

PROBLEM

Screen goes blank periodically.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Screen saver is enabled.		Disable screen saver.

PROBLEM

Keyboard failure.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Keyboard is disconnected.		Reconnect keyboard. Check keys again, if no improvement replace keyboard.

PROBLEM

No color on screen.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Faulty Monitor.		If possible, connect monitor to another system. If no color replace monitor.
CMOS incorrectly set up.		Call technical support.

PROBLEM

C: drive failure.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Hard drive cable not connected properly.		Check hard drive cable.

PROBLEM

Cannot boot system after installing second hard drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Master/slave jumpers not set correctly.		Set master/slave jumpers correctly.
Hard drives not compatible / different manufacturers.		Run SETUP program and select correct drive types. Call drive manufacturers for compatibility with other drives.

PROBLEM

Missing operating system on hard drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
CMOS setup has been changed.		Run setup and select correct drive type.

PROBLEM

Certain keys do not function.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Keys jammed or defective.		Replace keyboard.

2/4/2002