Motherboard 4PM266AM

Chapter 1
Motherboard 4PM266AM

1. 4PM266AM Specifications

1.1 Introduction

The 4PM266AM motherboard is an integration of Pentium 4 CPU in Socket 478 packaging and the North Bridge VIA P4M266A supporting 100/133MHz CPU clock and 400/533MHz Front Side Bus.

North Bridge P4M266A on board also supports DDR 266 and PC133 SDRAMs, while the South Bridge VT8235 provides stable supports of ULTRA ATA 100/133, AC'97 Audio playback and USB 2.0/1.1 interface.

The resulting architecture will provide an ideal multi-task environment to support operating systems such as MS-DOS, Windows, Windows NT , Windows ME, Windows 2000, Novell, OS/2, Windows 95/98, Windows 98SE, Windows XP, UNIX, Liunx, SCO UNIX etc. This user-friendly manual is to describe in detail how to install, configure and use this motherboard with drivers and BIOS setup illustrations.

This manual is a general reference of the first release of this motherboard which is subject to update without notice. If any difference is found between this manual and the motherboard you are using, please visit our Web Site provided on the cover of this manual.

1.2 Package Contents

- HDD UDMA66/100 Cable x1.
- FDD Cable.
- Flash Memory with BIOS
- Fully Setup Driver CD with built in utilities.
- User Manual.

1.3 Specifications and Features

CPU Processor

- Supporting 533/400MHz System Interface speed.
- Single Socket 478 for Intel P4™ 1.5 to 3.06GHz or higher*, and Intel Celeron 1.7 to 2.2GHz or higher*.
- Supporting Intel Netburst™ Micro-architecture.
- Supporting Intel Hyper-threading CPUs of 533MHz FSB.

*** The higher frequency CPU should be compatible with the motherboard specificiation and the motherboard latest BIOS version which will be released in our Web Site (url printed on the cover page).**

Chip

- VIA P4M266A North Bridge
- VIA VT8235 South Bridge

PCI

- Supporting 3 x PCI slots, 32-bit 33MHz PCI Bus speed.

Memory

- SDRAM module and DDR module cannot be supported simultaneously on board.
- Supporting 64/128/256/512/1G....MB DDR module in 2 slots
- Supporting Synchronous 266/200MHz DDR SDRAM
- Supporting a maximum memory size of 2GB of DDR SDRAM
- Supporting 64/128/256/512/1G....MB SDRAM module in 2 slots
- 533MHz FSB CPU only supporting PC133 SDRAM modules (or else system will not boot). 400MHz FSB CPU supporting PC100/133 SDRAM modules to start system.

Universal Serial Bus

- Supporting two on-board Universal Serial Bus(USB)Ports and two external Universal serial Bus(USB)Ports.
- Supporting USB 2.0/1.1

Award BIOS

| Supporting Plug & Play specification which detects the peripheral devices and expansion cards automatically
| Supporting CD-ROM, SCSI, LAN BOOT, Temperature sensor, LAN, Alarm Bus CLK setup
| Supporting Desktop Management Interface (DMI) function for recording mainboard specification

ATA 100/133 On Board

| Supporting PIO Mode 5, Master Mode, high performance hard disk drives.
| Supporting Ultra DMA 33/66/100/133 Bus Master Mode.
| Supporting 4xIDE devices, including CD-ROM, CD-R, CD-RW, LS-120 and high capacity hard disk drives with LBA mode

PCI-Based AC 97 Digital Audio Codec

| AC 97 Audio Codec, 2-channel Audio interface.
| 18-bit Stereo Full-Duplex Codec with up to 48 KHz sampling rate
| 4 Analog Line-level Stereo inputs for connection from Line, CD, Viedo and AUX
| 2 Analog Line-level Stereo inputs for speakerphone and PC beep

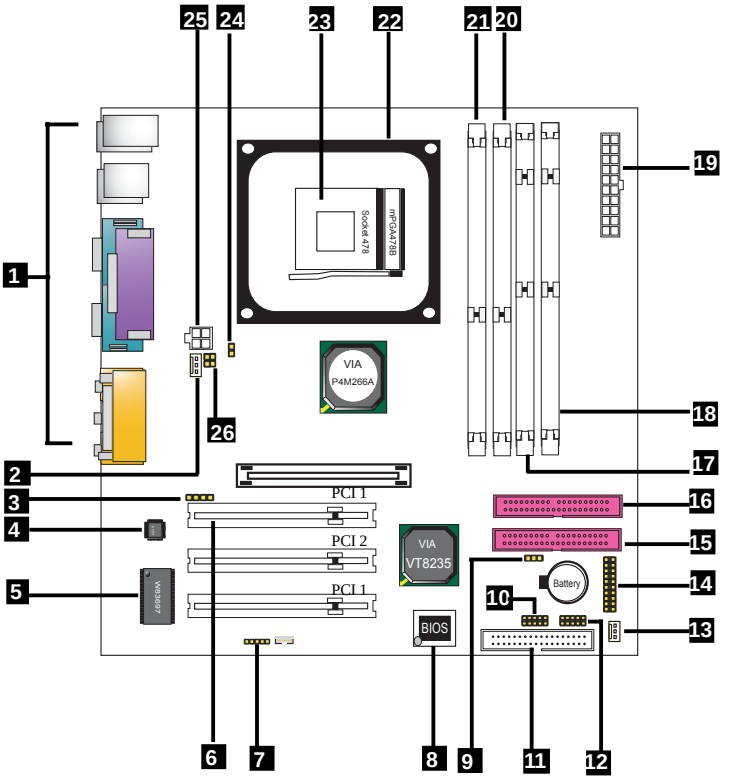
PC'99 Color-coded I/O Ports

| 2 USB ports, USB 2.0 compliant.
| 1 COM port; 1 Parallel port
| 1 PS/2 Mouse port; 1 PS/2 Keyboard port
| 1 Line-in; 1 Line-out; 1 Mic

Hardware Monitoring in Chip W83697HF

| Core voltage, CPU temperature and Fan speed monitoring

1.4 4PM266AM Layout Diagram



4PM266AM Component Layout :

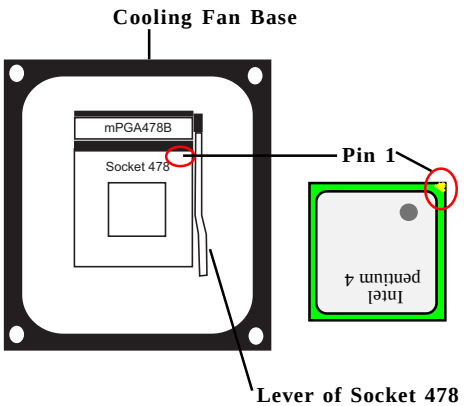
1. Back Panel: Back Panel I/O Connectors (Mouse, Keyboard, COM1, VGA, Printer, Mic in, Line in, Speaker-out, USB0/1)
2. FAN1: CPU Fan Connector
3. CD_IN2: CD Audio-in Connector
4. ALC101: AC'97 Audio Codec
5. W83697HF: Winbond I/O Chip
6. PCI 1/2/3: PCI Slot
7. IR: Connector for Infrared signal transmission/Reception
8. BIOS: Flash ROM with Award BIOS
9. JBAT1: Jumper fpr Clear CMOS Selection
10. USB2: USB Header for 2 external USB ports
11. FDD: Floppy Drive Connector
12. USB3: USB Header for 2 external USB ports
13. FAN2: System Fan Connector
14. Panel1: Front Panel Connectors
15. IDE2: ATA 133 Connector
16. IDE1: ATA 133 Connector
17. SDR1: SDRAM DIMM slot
18. SDR2: SDRAM DIMM slot
19. CN3: ATX Main Power Connector
20. DIMM2: DDR DIMM Slot
21. DIMM1: DDR DIMM Slot
22. P4 CPU Fan Base
23. Socket 478: Pentium 4 CPU Socket
24. J3: Jumper for CPU Clock Auto-detect Selection
25. CN2: +12V ATX Power Connector
26. J7: Jumper for CPU Clock 100/133 Selection

1.5 CPU and CPU Fan Installation

This motherboard is designed with Socket 478 for Intel P4™ processor.

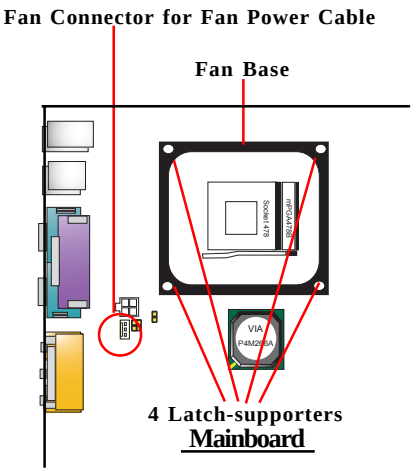
1.5.1 CPU Installation with Socket 478

1. Pull the lever sideways away from the socket then raise the lever to a 90-degree angle.
2. Locate Pin 1 in the socket Pin 1 of CPU is marked by the yellow corner or cut edge on the CPU. Match Pin 1 of Socket 478 and Pin 1 of CPU.
3. Pull up the lever of Socket 478 to let the CPU in and press the lever down to lock the CPU.
4. Make sure that Pin 1 of Socket 478 is matching with Pin 1 of CPU.
5. Make sure that all CPU pins are completely in socket before pressing down the socket lever.



1.5.2 CPU Fan Installation with P4 Fan Base

1. P4 CPU Fan is typically designed with 4 latches and mounted with a thick heatsink. Please do not use other type of CPU fan which cannot match the P4 Fan base on board.
2. Install the P4 CPU fan into the Fan base in such a way that the 4 latches of the CPU Fan match with the 4 Supporters of the CPU Fan Base.
3. Press down the latches to lock CPU Fan to the Fan Base.
4. Then connect the Fan Power Cable to one of the Fan connectors on board.
5. Make sure that the Fan Power Cable is correctly connected to Fan Connector.



1.6 DDR / SDRAM Module Installation

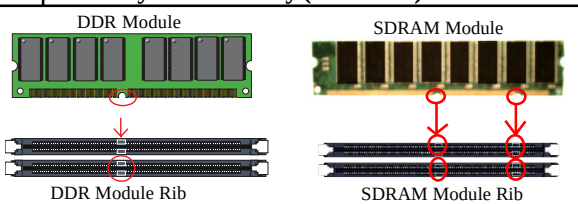
This motherboard supports a maximized 2GB DDR SDRAM or 2GB SDRAM memory modules, providing two184-pin unbuffered DDR slots and 2 SDRAM DIMM slots. All these slots support 64MB to 1GB DDR memory module.

Warning: SDRAM module and DDR module cannot be supported simultaneously on board.

DDR / SDRAM Memory Module Installation Procedures:

1. The DIMM slot has a "Plastic Safety Tab" and memory module notch", so the memory module can only fit into the slot in one direction.
2. Push the tabs out. Insert the memory modules into the slot at a 90-degree angle then push down the module vertically to fit it into place.
3. The Mounting Holes and plastic tabs should fit over the edge and hold the DDR memory modules in place.

Bank	Memory module
DIMM 1/ SDR1	64MB, 128MB, 256MB, 512MB, 1GB
	184 pin, 2.5V DDR SDRAM
DIMM 2/ SDR2	64MB, 128MB, 256MB, 512MB, 1GB
	184 pin , 2.5V DDR SDRAM
	Total System Memory (Max 2GB)

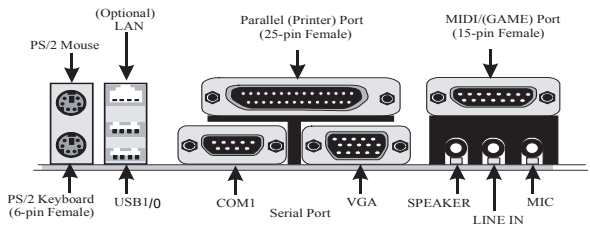


Warning: Be sure to turn off system power whenever to insert or remove a Memory Module. Otherwise, the power will damage the module or even the system.

1.7 Connectors & Jumpers Setting

1.7.1 Back Panel I/O Connectors

This motherboard provides the following back panel connectors:



1.7.1.1 PS/2 Mouse / Keyboard CONN:

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.

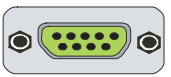
1.7.1.2 USB0/1

The motherboard provides a OHCI(Universal Host Controller Interface) & EHCI (Enhance Host Controller Interface)Universal Serial Bus Roots for connecting USB devices such as a keyboard, mouse and other USB devices.

USB Pin	Signal
1	+5V_SB
2	USBP0-(USBP1-/2-/3-)
3	USBP0+(USBP1+/2+/3+)
4	GND

1.7.1.3 Serial Interface Port: COM1

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. The serial port can also be used to connect computer systems together . If you like to transfer the contents of your hard disk to another system, it can be accomplished with serial port.

COM1 

1.7.1.4 Parallel Interface Port

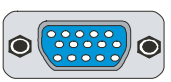
Unlike serial ports, parallel interface ports have been standardized and should not present any difficulty interfacing peripherals to your system. Sometimes called a Centronics port, the parallel port is almost exclusively used with printers. The parallel port on your system is a 25-pin, DB 25 connector.

1.7.1.5 Audio Ports

Speaker out is a connector for Speakers or Headphones. Line in is used for external CD player, Tape player, or other audio devices. Mic is a connector for the microphones.

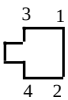
1.7.1.6 VGA Interface Connector: VGA(15 Pin)

This connector is for output to analog display devices. For example, connect this connector directly to a monitor for analog display.

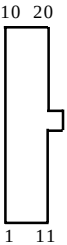
VGA Connector 

1.7.2 ATX Power Connectors: CN2/CN3

This connector supports the power button on-board. Using the ATX power supply, functions such as Modem Ring Wake-Up and Soft Power Off are 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.
ATX 4-pin power connector only support +12V voltage.



Pin CN2 Signal		Pin CN3 Signal	
1	GND	2	GND
3	+12V	4	+12V



Pin PW2 Signal		Pin PW2 Signal	
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	5V	14	PS-ON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	PW-OK	18	-5V
9	5V_SB	19	5V
10	12V	20	5V

Note:
When you set up P4 power supply, both PW1 and PW2 must be connected to power.

Important:
To switch on your power supply, please make sure:
1. Memory Module is properly installed.
2. Power supply setup is OK.

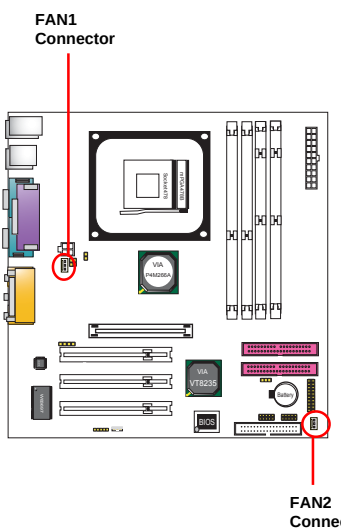
1.7.3 Floppy Disk Connector: FDD

This connector supports the provided floppy drive ribbon cable. After connecting the single end to the board, connect the two plugs on the other end to the floppy drives.

1.7.4 Hard Disk Connectors: IDE1/IDE2

These connectors are provided with IDE hard disk ribbon cable into the package . After connecting the end of cable with single connector to the mainboard, connect the other two connectors at the other end to your hard disk. If you install two hard disks, you must configure the second drive to Slave mode by setting its jumper settings. BIOS now supports SCSI device or IDE CD-ROM boot up (see "HDD Sequence SCSI/IDE First" & "Boot Sequence" in the BIOS Features Setup of the BIOS SOFTWARE).

1.7.5 Fan Connectors: FAN1/FAN2



CPU/System	Pin Definition
1	Sensor
2	+12VDC
3	Ground

1.7.6 CD Audio-In Connectors: CDIN2

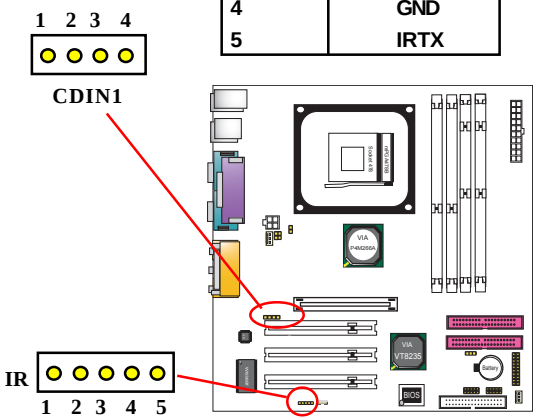
CDIN2 is a connector for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.

Pin CDIN2	Definition
1	CD-L
2	GND
3	GND
4	CD-R

1.7.7 IR infrared module: IR Connector

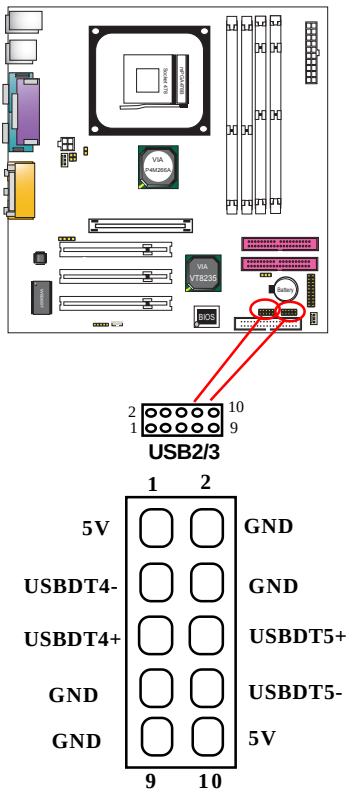
This connector supports the optional wireless transmission and reception infrared module. You must configure the setting through the BIOS setup to use the IR function.

IR1 Pin	Assignment
1	+5V
2	N/A
3	IRRX
4	GND
5	IRTX

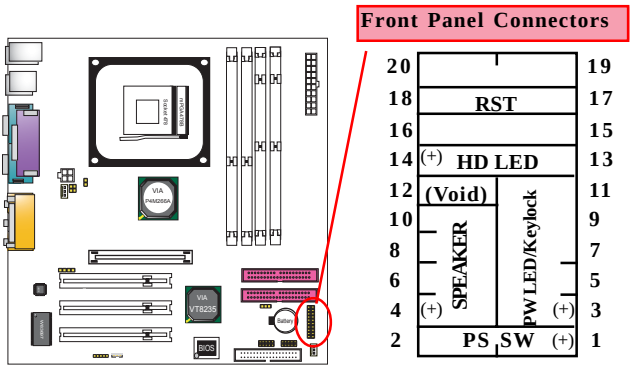


1.7.8 USB Pin Headers: USB2/3

USB2/3 is 2x5 Pin Header for support of two external USB ports each. Each USB pin header requires a USB cable for expansion of two USB ports. This optional USB cable is available from your motherboard dealer or vendor.



1.7.9 Front Panel Connectors: PANEL1



PSSW

The system power is controlled by a momentary switch connected to this lead. Pushing the button once will switch the system ON.

Power LED Lead (PW_LED)

The system power LED lights when the system power is on.

Speaker Connector (SPEAKER)

The speaker (onboard or offboard) provides error beep code information during the Power 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.

Hard Drive LED Connector (HD_LED)

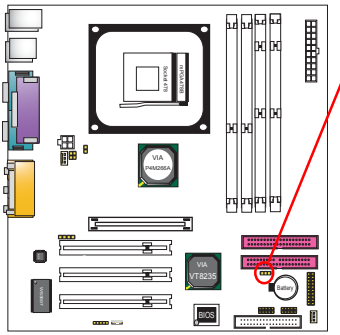
This connector supplies power to the cabinet IDE activity LED. Read and write activity by devices connected to the Primary or Secondary IDE connectors will cause the LED to light up.

Reset Switch Lead (RST)

The connector can be connected to a reset switch. Press this reset switch to restart system.

1.7.10 CMOS Function Selector: Clear_CMOS

When you have problem with booting system, you may clear CMOS to restore the optimum default BIOS data.

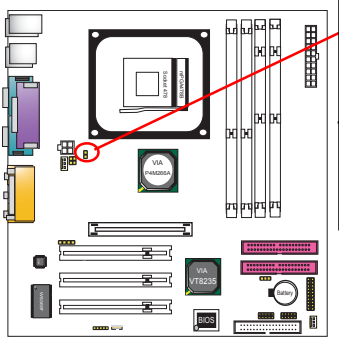


Jumper Clear CMOS	
1-2 closed 	Normal (Default)
2-3 closed 	Clear CMOS

1. Remove the Jumper cap of JBAT1 from 1-2.
2. After 1 or two seconds, set JBAT1 to 2-3 closed with the jumper cap.
3. After 1 or two seconds, restore the JBAT1 to 1-2 closed. Now, the CMOS RAM has restored to the optimum default setting.

1.7.11 CPU Clock Auto-detect Selector: J3

J3 is designed to detect the CPU clock.

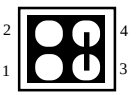
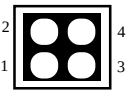


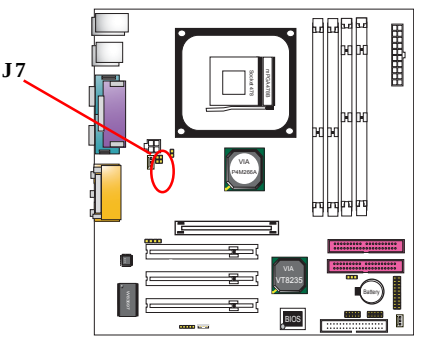
J3: CPU Clock Auto-detect Select	
1-2 closed 	100/133 Auto-detect Enabled (Default)
1-2 open 	100/133 Auto-detect Disabled

1.7.12 CPU Clock Frequency Selector: J7

J7 is designed to set the CPU Frequency on board. This motherboard support 133 MHz overclocking, while 100 MHz is default CPU clock..

When you want to set CPU clock by J7, you should disable the CPU Auto-detect function by setting J3 to 1-2 open.

J7 Setting		
CPU(MHz)	100 MHz (default)	133 MHz



Chapter 2
BIOS Setup

2. BIOS Setup

2.1 BIOS Support

This chapter discusses the Award BIOS Setup program built in the ROM BIOS. The Setup program allows the user to modify the basic system configuration. The modification is then stored in battery-backed RAM so that it can retain the setup information after the power is turned off. The Award BIOS installed in your computer system ROM (Read Only Memory)is a custom version of an industry standard BIOS. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports. This chapter is intended for guiding you through the process of configuring your system BIOS.

Plug and Play Support

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

EPA Green PC Support

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

PCI Bus Support

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

APM Support

This 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. Power to the hard disk drives and video monitors can be managed by this AWARD BIOS.

DRAM Support

DDR (Double Data Rate)/SDRAM are supported.

Setup Menu

In general, you use the arrow keys to highlight items of the Main BIOS Setup Menu, 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.

Note:

BIOS version 1.0 is for reference only. If there is a change in BIOS version, please use the actual version on the BIOS.

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 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

2.2 Main Menu

Once you enter AWARD BIOS CMOS Set up Utility, the Main Menu will appear on the screen and allows you to select from several setup function. Use the arrow keys to select the items and press<Enter> to enter the sub-menu.

> *Attention:*
> *The information about BIOS defaults in this manual is just for reference, please refer to the BIOS installed on board for default BIOS confirmation.*

Phoenix - AwardBIOS CMOS Setup Utility

▶ Standard CMOS Features	▶ Frequency/Voltage Control
▶ Advanced BIOS Features	Load Fail-safe Defaults
▶ Advanced Chipset Features	Load Optimized Defaults
▶ Integrated Peripherals	Set Supervisor Password
▶ Power Management Setup	Set User Password
▶ PNP/PCI Configurations	Save & Exit Setup
▶ PC Health Status	Exit without Saving

Esc : Quit F9: Menu in BIOS ↑↓ <– –>: Select Item
F10 : Save & Exit Setup

Time , Date , Hard Disk Type ...

Standard CMOS Features

This setup page includes all the items in standard compatible BIOS.

Advanced BIOS Features

This setup page includes all the items of the BIOS special enchanced features.

Advanced Chipset Features

This setup page includes all the items of the Chipset special enchanced features.

Integrated Peripherals

This selection page includes all the items of the IDE hard drive and Programmed Input/Output features.

Power Management Setup

This setup page includes all the items of the power manage ment features.

PnP/PCI Configurations

This setup page includes the user defined or default IRQ Setting.

PC Health Status

This page shows the hardware Monitor information of the system.

Frequency/Voltage Control

This setup page controls the CPU's clock and frequency ratio.

Load Fail-safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

These settings are for configuring a workable computer when something is wrong. If you cannot boot the computer successfully, select the BIOS Setup options and try to diagnose the problem after the computer boots. These settings do not provide optional performance.

Set Supervisor/User Password

Change, set, or, disable password. It allows you to limit access to the system and Setup, or just to Setup.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

2.3 Standard CMOS Features

This main option in the Standard CMOS Setup Menu is divided into 10 fields or items. Each field provides one or more setup choices. Use the arrow keys to highlight the field and then use the <PgUp> or <PgDn> keys to select the value or choice.

Phoenix - AwardBIOS CMOS Setup Utility

Standard CMOS Features

Date(mm:dd:yy)	Tue,Jun 6 2002	Item Help
Time (hh:mm:ss)	11:26:10	Menu Level
IDE Primary Master	None	
IDE Primary Slave		Change the day,
IDE Secondary Master		month,year
IDE Secondary Master	None	and century.
Drive A	1.44M,3.5 in	
Drive B	None	
Floppy 3 Mode Support	Disabled	
Video	EGA/VGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	65472K	
Total Memory	1024K	

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

Main Menu Selections

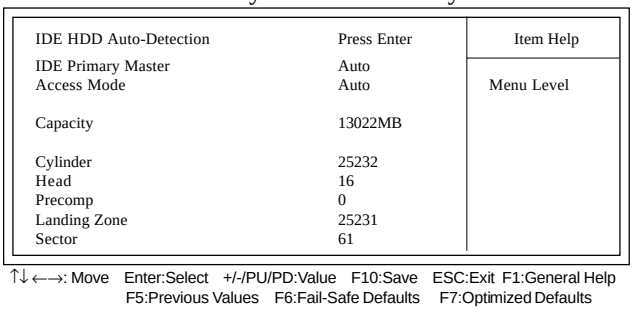
Item	Options	Description
Date (mm : dd :yy)	Month Day Year	Set the system,date. Note that the 'Day' automatically changes when you set the data.
Time (hh : mm : SS)	Hour Minute Second	Select the hour, minute and second of the time.
IDE Primary Master	Options are in its sub menu.	Press<Enter> to enter sub menu.
IDE Primary/ Slave	Options are in its sub menu.	Press<Enter> to enter sub menu.
IDE Second-ary Master	Options are in its sub menu.	Press<Enter> to enter sub menu.
IDE Second-ary Slave	Options are in its sub menu.	Press<Enter> to enter sub menu
Drive A Drive B	None 360K,5.25in, 1.2M,5.25in 720K,3.5M 1.44M,3.5in 2.88M,3.5in	Select the type of floppy disk drive installed in your system.
Floppy 3 Mode Support	Disabled Driver A Driver B Both	Disable or support the 3rd floppy mode in Drive A
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.
Base Memory	(640K)	The amount of conventional memory detected during boot up.
Extended Memory	(65472K)	The amount of conventional memory detected during boot up.
Total Memory	(1024K)	The total memory available in system.

IDE Primary(Master/Slave)/Secondary(Master/Slave)

Press Enter on these items to show the following sub-menu:

Primary Master/Secondary



IDE HDD Auto-Detection

Press Enter on this item to let BIOS auto-detect your Hard Disk and show all the Primary Hard Disk Parameters (Capacity, Cylinder, Head, Precomp, Landing Zone, Sector) on the menu.

IDE Primary(Master/Slave) / Secondary(Master/Slave)

This item allows you to detect the Hard Disk in 3 ways.

The Choices: Auto: BIOS Auto-detect HDD;
None: No Hard Disk detected;
Manual: Manually detect HDD

Access Mode

This item allows you to select the Access mode to the Hard Disk..

The Choices:

CHS: Select the Cylinder, Head, Sector addressing mode to access Hard Disk;

LBA: Select the Logical Block Addressing mode to access Hard Disk.

Large: Select Large Mode to access Hard Disk;

Auto: Allow BIOS to auto-access Hard Disk;

Capacity

Showing the capacity of Hard Disk in MB.

Cylinder

Showing the number of cylinder in the Hard Disk.

Head

Showing the number of heads in the Hard Disk.

Precomp

The number of Pre-compensation.

Landing Zone

Number of Landing zone in the Hard Disk.

Sector

The number of Sector in the Hard Disk.

2.4 Advanced BIOS Features

Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features

		Item Help
Virus Warning	Disabled	
CPU L1 & L2 Cache	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floopy	
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	
Typematic Rate Setting	Disabled	
X Typematic Rate (Chars/Sec)	6	
X Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM >64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
Video BIOS Shadow	Enabled	
EPA / (H/W Monitor) Show	H/W Monitor	

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

Virus Warning

This option 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.

The Choices:

Disabled(default), Enabled.

CPU L1 & L2 Cache

Allows you to Enable or Disable the CPU's L1/ L2 cache to provide better performance.

The choices: Enabled (default); Disabled

Quick Power On Self Test

This category speeds up Power on self-Test(POST) after you power up the computer. If it is set to Enabled, BIOS will shorten or skip some check items during POST.

The choices:

Enabled(default); Disabled

First/Secondary/Third Boot Device

This BIOS attempts 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, USB-FDD, USB-Zip, USB-CDROM, USB-HDD, Disabled.

Boot Other Device

Allows user to set booting from other devices.

The Choices:

Enabled(default), Disabled.

Swap Floppy Drive

If the system has two floppy drives, you can swap the logical drive name assignments.

The Choices:

Disabled(default), Enabled.

Boot Up Floppy Seek

If enabled, this item allows BIOS to test floppy drives to determine whether they have 40 or 80 tracks.

The Choices:

Disabled(default), Enabled.

Boot Up NumLock Status

Select power on state for Numlock..

The Choices

On (default): Numpad is number keys;

Off: Numpad is arrow keys;

Gate A20 Option

Select if chipset or keyboard controller should control Gate A20.

The choices:

Normal: A pin in the keyboard controller controls Gate A20.

Fast (default): Lets chipset control Gate A20.

Typematic Rate Setting

Allows user to adjust the key stroke repeat rate.

The choices:

Enabled: Enabled this option to adjust the keystroke repeat rate; Disabled (default): Enabled.

Typematic Rate (Char/Sec)

Range between 6**(default)** and 30 characters per second. This option controls the speed of repeating keystrokes.

Typematic Delay (Msec)

This option sets the time interval for displaying the first and the second characters.

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

Security Option

This category allows you to determine whether to use password access the system and Setup,or just Setup.

The choices:

System: To access system and BIOS Setup with correct password.

Setup (default): To access BIOS Setup with correct password.

OS Select For DRAM >64MB

Select the operating system that is running with greater than 64MB of RAM on the system.

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

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

Allows user to choose the Self-monitoring Analysis and Reporting Technology for Hard Disk Drive.

The choices: Disabled(default); Enabled

Video BIOS Shadow

Use this item to enable/disable the Video BIOS Shadow function.

The Choices: Enabled; Disabled

EPA / (H/W Monitor) Show

Use this item to show on the initial screen the logo of EPA or H/W Monitor .

The Choices: H/W Monitor; EPA Logo

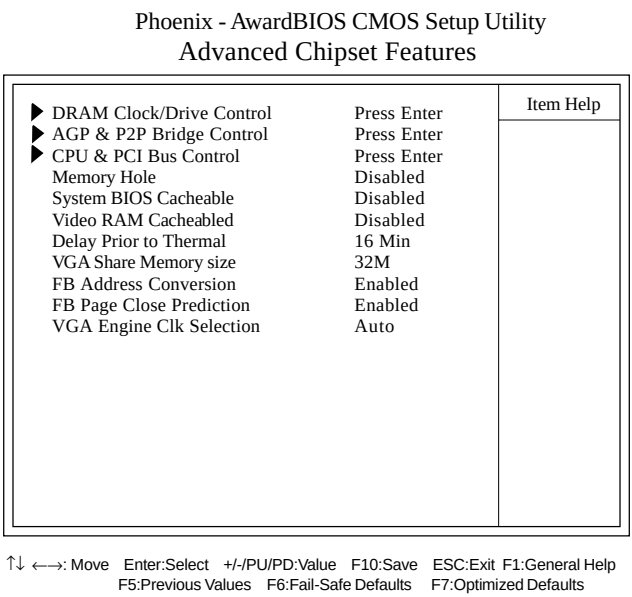
EPA / (H/W Monitor) Show

Use this item to enable/disable the Environmental Protection Association (EPA) / Hardware Monitor) logo on initiating screen..

The choices: H/W Monitor; EPA Logo

2.5 Advanced Chipset Features

This section allows you to configure the system based features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and external cache. It also coordinates communications of the PCI bus. It must be stated that these items should never be altered. The default settings are set up to provide the best operating conditions for your system. The time you might need to make any changes would be if you discover that data is lost while using your system.



DRAM Clock/Drive Control

Press Enter on this item to open the Sub-menu as shown below:

Phoenix - AwardBIOS CMOS Setup Utility
DRAM Clock/Drive Control

		Item Help
Current FSB Frequency	100MHz	
Current DRAM Frequency	100MHz	
DRAM Clock	By SPD	
DRAM Timing	By SPD	
SDRAM CAS Latency	2	
x Bank Interleave	Disabled	
x Precharge to Active(Trp)	3T	
x Active to Precharge(Tras)	6T	
x Active to CMD(Trcd)	3T	
x DRAM Command Rate	2T Command	
DRAM Burst Len	4	
CPU read DRAM Mode	Medium	

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

Current FSB Frequency
This item shows the current FSB Frequency

Current DRAM Frequency
This item shows the current DRAM Frequency

DRAM Clock
This item is to set the DRAM clock..
The Choices: By SPD; 100 MHz; 133 MHz

DRAM Timing
This item is to set the DRAM transaction timing.
The Choices: Manual; By SPD

SDRAM CAS Latency
When DRAM Timing is set Manual, use this item to set the DRAM CAS Latency tine. .
The Choices: 2; 2.5; 3

x Bank Interleave
When DRAM Timing is set Manual, use this item to set the DRAM Bank Interleave.
The Choices: Disabled; 2 Bank; 4 Bank

x Precharge to Active(Trp)
When DRAM Timing is set Manual, use this item to set the DRAM Precharge to Active(Trp) cycle.
The Choices: 2T; 3T

x Active to Precharge(Tras)
When DRAM Timing is set Manual, use this item to set the DRAM Active to Precharge(Tras) cycle.
The Choices: 6T; 5T

x Active to CMD(Trcd)
When DRAM Timing is set Manual, use this item to set the DRAM Active to CMD(Trcd) cycle.
The Choices: 3T; 2T

x DRAM Command Rate
Use this item to set the DRAM Command Rate.
The Choices: 2T Command; 1T command

DRAM Burst Len
Use this item to set the DRAM Burst cycle Length.
The Choices: 4; 8

CPU Read DRAM Mode
Use this item to select the mode of CPU Read DRAM.
The Choices: Medium; Slow; Fast

AGP & P2P Bridge Control

Press Enter on this item to open the Sub-menu as shown below:

Phoenix - AwardBIOS CMOS Setup Utility
AGP & P2P Bridge Control

		Item Help
AGP Aperture Size	64M	
AGP Mode	4X	
AGP Driving Control	Auto	
x AGP Driving Value	DA	
AGP Fast Write	Disabled	
AGP Master 1 WS Write	Disabled	
AGP Master 1 WS Read	Disabled	

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

AGP Aperture Size

This item is to set the AGP Aperture memory size.

The Choices: 256M; 128M; 64M; 32M; 16M; 8M; 4M

AGP Mode

This item is to set the AGP mode.

The Choices: 4X; 2X; 1X

AGP Driving Control

This item is to set the AGP Driving Control mode.

The Choices: Auto; Manual

x AGP Driving Value
When AGP Driving Control is set manual, use this item to set the AGP Driving address value.
The Choices: 00 ~ FF in 1h stepping

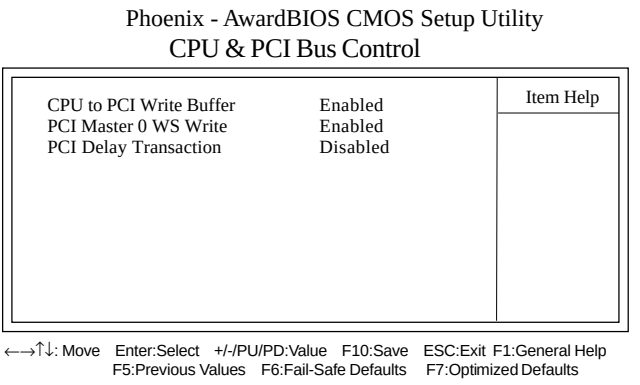
AGP Fast Write
This item is to enable / disable the AGP Fast Write function.
The Choices: Enabled; Disabled

AGP Master 1 WS Write
This item is to enable / disable the AGP Master 1 WS Write function.
The Choices: Enabled; Disabled

AGP Master 1 WS Read
This item is to enable / disable the AGP Master 1 WS Read function.
The Choices: Enabled; Disabled

CPU & PCI Bus Control

Press Enter on this item to open the Sub-menu as shown below:



CPU to PCI Write Buffer

This item is to enable / disable the CPU to PCI Write Buffer.

The Choices: Enabled; Disabled

PCI Master 0 WS Write

This item is to enable / disable the PCI Master 0 Wait State Write function.

The Choices: Enabled; Disabled

PCI Delay Transaction

This item is to Enable / disable the PCI Delay Transaction.

The Choices: Enabled; Disabled

Memory Hole
Use this item to enable or disable the Memory Hole.
The Choices: Disabled; 15M ~ 16M

System BIOS Cacheable
Use this item to enable / disable the System BIOS Cacheable function.
The choices: Enabled; Disabled

Video RAM Cacheabled
Use this item to enable / disable the Video BIOS Cacheable function.
The choices: Enabled; Disabled

Delay Prior to Thermal
Use this item to select the delay time prior to thermal control.
The Choices: 4 Min; 8 Min; 16 Min; 32 Min

VGA Share Memory Size
Use this item select the memory size shared by VGA.
The choices: 8M; 16M; 32M; Disabled

FB Address Conversion
Use this item to enable / disable the FB Address Conversion function.
The choices: Enabled; Disabled

FB Page Close Prediction

Use this item to enable or disable the FB Page Close Prediction function.

The Choices: Enabled; Disabled

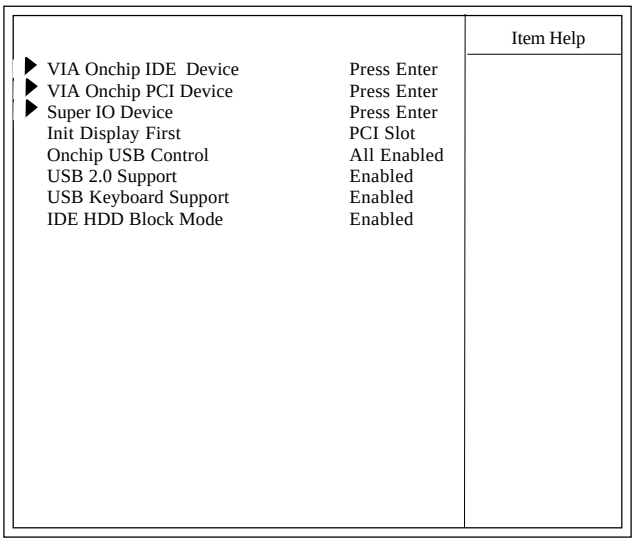
VGA Engine Clk Select

Use this item to select the VGA Engine Clock.

The choices: 120MHz; 133MHz; Auto

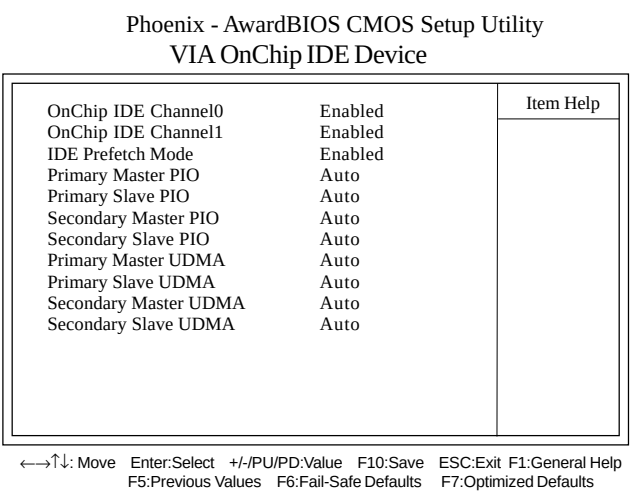
2.6 Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals



▶VIA OnChip IDE Device

Press Enter on this item to open the Sub-menu as shown below:



OnChip IDE Channel0

This item is to enable / disable the IDE Primary Master/Slave channel.

The choices: Enabled; Disabled

OnChip IDE Channel1

This item is to enable / disable the IDE Secondary Master/Slave channel.

The choices: Enabled; Disabled

IDE Prefetch Mode

This item is to enable / disable the IDE Prefetch Mode. If enabled, data will be prefetched into buffer during data access.

The choices: Enabled; Disabled

Primary Master/Slave PIO

If OnChip IDE Channel is enabled, this item is to select the IDE Primary Master/Slave PIO mode (Programmed Input Output Mode). Mode4 is the fastest mode.

The choices: Auto; Mode0; Mode1; Mode2; Mode3; Mode4

Secondary Master/Slave PIO

If OnChip IDE Channel1 is enabled, this item is to select the IDE Secondary Master/Slave PIO mode (Programmed Input Output Mode). Mode4 is the fastest mode.

The choices: Auto; Mode0; Mode1; Mode2; Mode3; Mode4

Primary Master/Slave UDMA

If OnChip IDE Channel0 is enabled, this item is to select the IDE Primary Master/Slave UDMA mode (Ultra Direct Memory Access Mode).

The choices: Auto; Disabled

Secondary Master/Slave UDMA

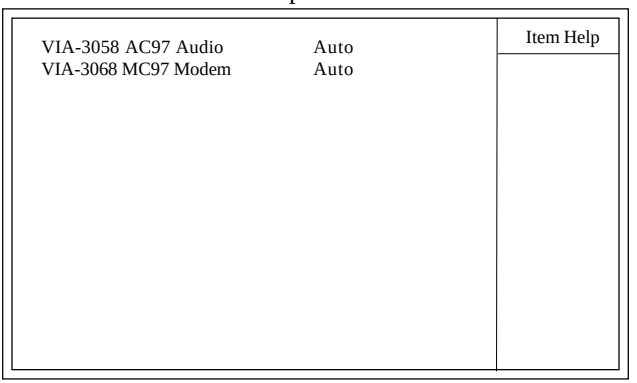
If OnChip IDE Channel0 is enabled, this item is to select the IDE Secondary Master/Slave UDMA mode (Ultra Direct Memory Access Mode).

The choices: Auto; Disabled

▶VIA OnChip PCI Device

Press Enter on this item to open the Sub-menu as shown below:

Phoenix - AwardBIOS CMOS Setup Utility
VIA OnChip PCI Device



VIA-3058 AC97 Audio

This item is to autodetect or disable the VIA AC'97 Audio.
The choices: Auto; Disabled

VIA-3068 MC97 Modem

This item is to autodetect or disable the VIA MC'97 Modem.
The choices: Auto; Disabled

▶Super IO Device

Press Enter on this item to open the Sub-menu as shown below:

Phoenix - AwardBIOS CMOS Setup Utility
VIA OnChip IDE Device

		Item Help
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
RxD, TxD Active	Hi, Lo	
IR Transmission Delay	Enabled	
UR2 Duplex Mode	Half	
Use IR Pins	IR-Rx2Tx2	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	ECP	
EPP Mode Select	EPP1.7	
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

Onboard FDC Controller

The choices: Enabled; Disbled

Onboard Serial Port 1/2

Select an address and corresponding interrupt for the first and second serial ports.

The Choices: Auto; 3F8/IRQ4; 2F8/IRQ3; 3E8/IRQ4;2E8/ IRQ3; Disabled.

UART Mode Select
This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.
The Choices: Normal(default), IrDA, ASKIR.

RxD' TxD Active
This item allows you to select the high /Low status of the RxD, TxD Active mode.
The Choices: Hi,Lo; Lo,Hi; Lo,Lo; Hi,Hi

IR Transmission delay
This item allows you to enable / disable the IR Transmission Delay function.
The Choices: Enabled; Disabled

UR2 Duplex Mode
This item allows you to select which Infra Red(IR) function of the onboard I/O chip you wish to use.
The Choices: Half (default), Full.

Use IR Pins
This item allows you to select the IR Pins.
The Choices: IR-Rx2Tx2; RxD2, TxD2

Onboard Parallel Port
This item allows you to select the Onboard Parallel Port .
The Choices: 378/IRQ7; 278/IRQ5; 3BC/IRQ7; Disabled

Parallel Port Mode
The choices are for Parallel Port Mode select:
SPP: Using Parallel port as Standard Parallel Port;
EPP: Using Parallel port as Enhanced Parallel Port;
ECP: Using Parallel port as ExtendedCapabilites Port;
ECP+EPP Using Parallel port as ECP+EPP mode;
Normal;

EPP Mode Select
The Choices: EPP1.7; EPP1.9

ECP Mode Use DMA
The Choices: 3, 1.

Game Port Address
The choices are for setting Game Port Address:
201 (default); 209; Disabled

MIDI Port Address
The choices are for setting MIDI Port Address:
290:300; 330 (default); Disabled.

MIDI Port IRQ
The choices are for setting MIDI Port IRQ:
10 (default): 5

Init Display First
Use this item to select the initial Display as the first display.
The choices: PCI Slot; AGP

OnChip USB Controller
Use this item to enable/disable the USB ports.
The choices: All disabled; All enabled; 1&2 USB ports; 2&3 USB ports; 1&3 USB ports; 1 USB port; 2 USB port; 3 USB port

USB 2.0 Support
Use this item to enable or disable the USB 2.0 support.
The Choices: Enabled (default); Disabled

USB Keyboard Support
Use this item to enable / disable the USB Keyboard support.
The choices: Disabled; Enabled

IDE HDD Block Mode
Use this item to enable / disable the IDE HDD Block Mode (Multi-sector Mode).
The choices: Disabled; Enabled

2.7 Power Management Setup

Phoenix - AwardBIOS CMOS Setup Utility

Power Management Setup

ACPI Function	Enabled	Item Help
Power Management Option	User Define	
HDD Power Down	Disabled	
Suspend Mode	Disabled	
Video Off Option	Suspend -> Off	
Video Off Method	V/H SYNC+Blank	
MODEM Use IRQ	3	
Soft-off by PWR-BTTN	Instant-off	
Power After PWR-Fail	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

The choices are for enabling or disabling the Advanced Configuration and Power Management (ACPI).

Power Management Option

The choices are for setting the Power management mode: User Define (default); Min Saving; Max Saving.

HDD Power Down

The Choices are for enabling or disabling the HDD Power Down function.

Disabled(default); 1Min~15 Min in 1 minute stepping

Suspend Mode

The Choices are for setting the length of suspend:

Disabled(default); 1Min~1hour.

Video Off Option

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

The Choices: Always on; Suspend->off

Video Off Method

The choices are for determining the manner in which the monitor is blanked.

The choices:

V/H SYNC+Blank: Turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen: 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.

The choices: 3; 4; 5; 7; 9; 10; 11; NA

Soft-Off by PWRBTN

Use this item to select the Soft-Off by Power Button mode.

The Choices: Instant-Off; Delay 4 Sec.

PWRON After PWR-Fail

Use this item to set the Power On mode after Power Fail:

The choices: Off; On; .

▶IRQ/Event Activity Detect
Press Enter on this item to open the Sub-menu as shown below:

Phoenix - AwardBIOS CMOS Setup Utility
VIA OnChip IDE Device

		Item Help
VGA	Off	
LPT & COM	LPT/COM	
HDD & FDD	On	
PCI Master	Off	
Power On by PS2KB Select	Hot Key	
Power On by PS2KB	Disabled	
Power On by PS2MS	Disabled	
Power On by USB	Disabled	
Power On By PME	Disabled	
Power On By WOL/ Ring	Disabled	
RTC Alarm Resume	Disabled	
X Date (of Month) Alarm	0	
X Time(hh:mm:ss) Alarm	0 : 0 : 0	
▶ IRQs Activity Monitoring	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

VGA
Use this item to turn On or off the VGA.
The Choices: On; Off

LPT & COM
Use this item to select the LPT / COM support.
The Choices: LPT; COM; LPT/COM; None

HDD & FDD
Use this item to turn On or off the HDD / FDD
The Choices: On; Off

PCI Master
Use this item to turn On or off the PCI Master.
The Choices: On; Off

Power On by PS2KB Select
Use this item to select the PS/2 KB Power On mode.
The choices: Hot Key; Password

Power On by PS2KB
If PS2KB Power On is set to Hot Key, use this item to select Hot Key.
The choices: Ctrl+1~12; Disabled; Any Key; Wake; Power

Power On by PS2MS
Use this item to enable / disable the PS2 Mouse Power On function.
The choices: Enabled; Disabled

Power On by USB
Use this item to enable / disable the USB Power On function.
The Choices: Enabled; Disabled

Power On By PME
Use this item to enable/disable the Power On by PME function.

Power On By WOL/Ring
Use this item to enable/disable the Power On by WOL/Ring function.

RTC Alarm Resume
Use this item to enable/disable the RTC Alarm Resume function.
Date: If RTC Alarm Resume is enabled, set the date with this item.
Time: If RTC Alarm Resume is enabled, set the time with this item.

▶IRQs Activity Monitoring

Press Enter on this item to open the Sub-menu as shown below:

Phoenix - AwardBIOS CMOS Setup Utility
VIA OnChip IDE Device

		Item Help
Primary INTR	On	
IRQ3 (COM 2)	Disabled	
IRQ4 (COM 1)	Enabled	
IRQ5 (LPT 2)	Enabled	
IRQ6 (Floppy Disk)	Enabled	
IRQ7 (LPT 1)	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

Primary INTR

Use this item to enable / disable the Primary Interrupt setup.
The choices: Enabled; Disabled

IRQ3 (COM 2)

Use this item to enable / disable the IRQ3 for COM 2.
The choices: Enabled; Disabled

IRQ4 (COM 1)

Use this item to enable / disable the IRQ4 for COM 1.
The choices: Enabled; Disabled

IRQ5 (LPT 2)

Use this item to enable / disable the IRQ5 for LPT 2.
The choices: Enabled; Disabled

IRQ6 (Floppy Disk)

Use this item to enable / disable the IRQ6 for Floppy Disk.
The choices: Enabled; Disabled

IRQ7 (LPT1)
Use this item to enable / disable the IRQ7 for Floppy Disk.
The choices: Enabled; Disabled

IRQ8 (RTC Alarm)
Use this item to enable / disable the IRQ8 for RTC Alarm.
The choices: Enabled; Disabled

IRQ9 (IRQ2 Redir)
Use this item to enable / disable the IRQ2 redirect.
The choices: Enabled; Disabled

IRQ10 (Reserved)
Use this item to enable / disable the reserved IRQ10.
The choices: Enabled; Disabled

IRQ11 (Reserved)
Use this item to enable / disable the reserved IRQ11.
The choices: Enabled; Disabled

IRQ12 (PS/2 Mouse)
Use this item to enable / disable the IRQ12 for PS/2 Mouse.
The choices: Enabled; Disabled

IRQ13 (Coprocessor)
Use this item to enable / disable the IRQ13 for Coprocessor.
The choices: Enabled; Disabled

IRQ14 (Hard Disk)
Use this item to enable / disable the IRQ14 for hard disk.
The choices: Enabled; Disabled

IRQ15 (Reserved)
Use this item to enable / disable the reserved IRQ15.
The choices: Enabled; Disabled

2.8 PnP/PCI Configurations

This section describes configuration of 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 when communicating with the components on board. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

Phoenix - AwardBIOS CMOS Setup Utility

PnP/PCI Configurations

		Item Help
Reset Configuration Data	Disabled	
Resources Controlled by	Auto(ESCD)	
x IRQ Resources	Press Enter	
PCI/VGA Pallete Snoop	Disabled	

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

Reset Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and proceeds to get rid of resource conflict. Every peripheral device has a node, which is called ESCD (Extended System Configuration Data. This node records which resources are assigned to it. If Disabled (Default) is chosen, the system ESCD will update only when the new configuration varies from the last one. If Enabled is chosen, the system is forced to update ESCDs and then is automatically reset to the "Disabled" mode.

Resources Controlled By

By Choosing "Auto(ESCD)" , 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 no IRQ/DMA and I/O port conflict exists.

X IRQ Resources :

Press Enter to configure the following Submenus

IRQ Resources

		Item Help
IRQ-3 assigned to	: PCI Device	
IRQ-4 assigned to	: PCI Device	
IRQ-5 assigned to	: PCI Device	
IRQ-7 assigned to	: PCI Device	
IRQ-9 assigned to	: PCI Device	
IRQ-10 assigned to	: PCI Device	
IRQ-11 assigned to	: PCI Device	
IRQ-12 assigned to	: PCI Device	
IRQ-14 assigned to	: PCI Device	
IRQ-15 assigned to	: PCI Device	

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

IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

PCI / VGA Palette Snoop

Choose Disabled or Enabled. Some graphic controllers which are not VGA compatible take the output from a VGA controller and map it to their display as a way to provideboot 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, 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 graphi 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); Enabled

2.9 PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility

PC Health Status

	Item Help
System Temperature CPU Temperature FAN 1 Speed FAN 2 Speed Vcore Vcc 3.3V Vcc 5.0V Vcc 12.V Vbat	

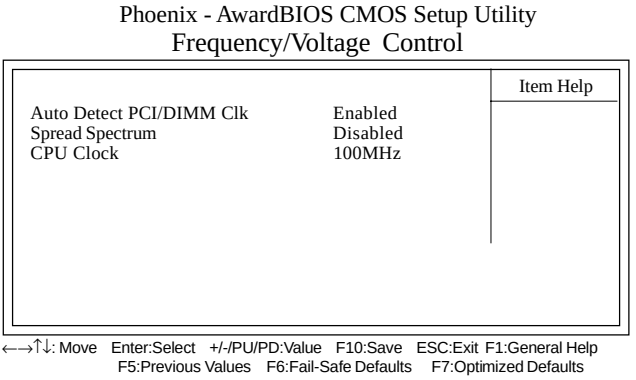
←→↑↓: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

CPU/System Temp
This item shows the current CPU/System temperature.

FAN1/2/ Speed
This item shows the fan speed running on board.

Vcore/Vcc 3.3V/5.0V/12V/Vbat
These items show the respective voltage running on board.

2.10 Frequency/Voltage Control



Auto Detect PCI/DIMM CLK

This item allows you to enable/disable auto detect DIMM/PCI CLOCK.

The Choices: Disabled; Enabled

Spread Spectrum

Allows you to enable / disable the Spread Spectrum function.

The Choices: Disabled; Enabled

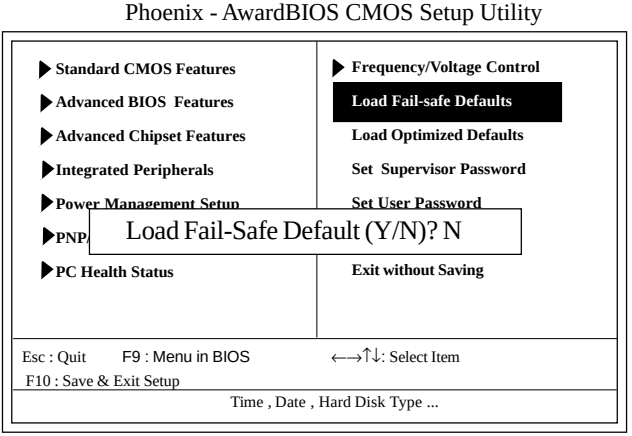
CPU Clock

Allows you to set the CPU clock for next boot..

The Choices: 100MHz ~200MHz in 1MHz stepping

2.11 Load Fail-Safe Defaults

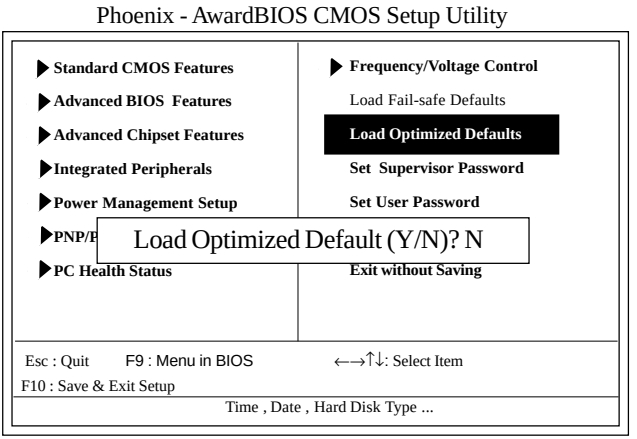
When you press <Enter> on this item, you get a confirmation dialog box with a message similar to below:



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

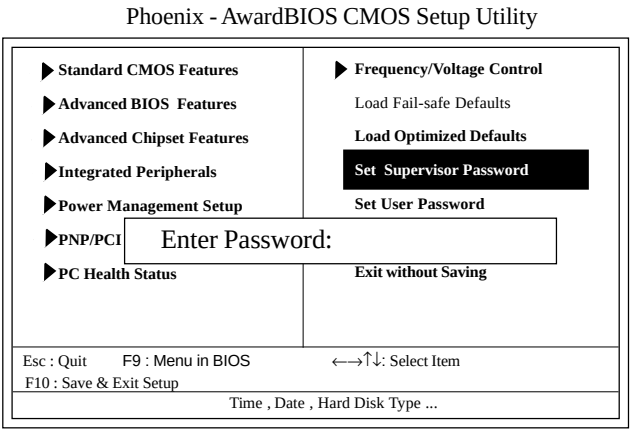
2.12 Load Optimized Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:



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

2.13 Set Supervisor / User Password



When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

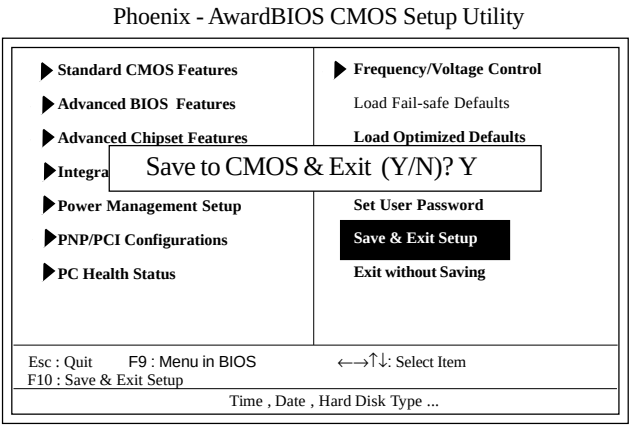
Enter Password (for Supervisor/User)

Type a password, up to eight characters, and press <Enter>.The password you type now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <ESC> to abort the selection and not enter a password. To disable the password, just press <Enter> when you are prompted to enter a password. A message will confirm that you wish to disable the password. Once the password is disabled, the system will boot without asking user to enter a password.

Password for System or BIOS Setup

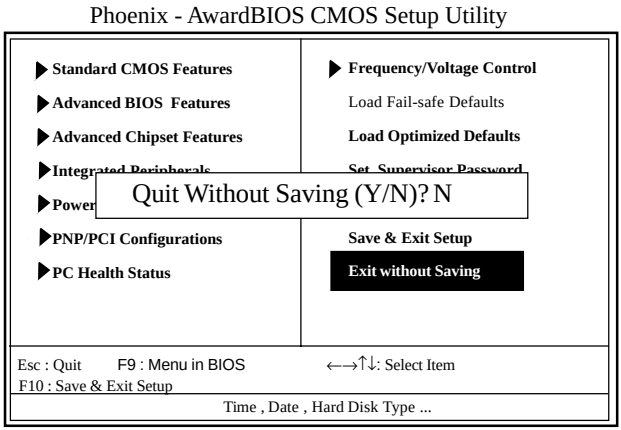
If you select “System” at the Security Option of BIOS Features Setup Menu, you will be prompted for the password every time when the system is rebooted, or any time when you try to enter Setup. If you select “Setup” at the Security Option of BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

2.14 Save & Exit Setup



Typing “Y” will quit the Setup Utility and save the user setup value to RTC CMOS RAM.
Typing “N” will return to the Setup Utility.

2.15 Exit Without Saving



Typing “Y” will quit the Setup Utility without saving to RTC CMOS RAM.
Typing “N” will return to the Setup Utility.

Chapter 3
Drivers & Utilities

3. Drivers & Utilities

There are motherboard drivers and utilities included in the disc attached in this motherboard package. You don't have to install all of them for booting your system. But after you have finished the hardware installation, you have to install an operation system (such as windows XP) before you are able to install any drivers or utilities.

Note: Please be aware of the different Procedures for installing drivers for Windows 98/ME/XP/2000 .

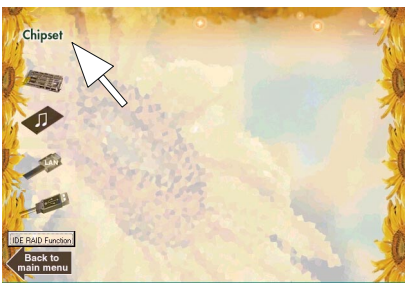
3.1 Auto-run Menu

You can use the auto-run menu in the driver CD attached in the motherboard package. Then choose the utility or driver and select model name. The autorun starting screen looks like below:

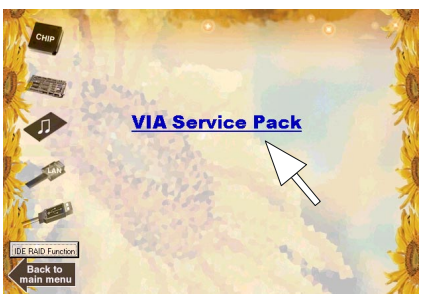
3.2 Installing VIA Service Pack

Enter the item "Chipset" of the Autorun program and install the VIA Service Pack. Follow the illustrations below :

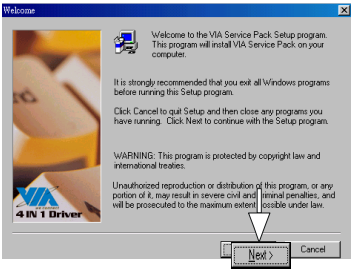
(1)
Click "Driver" Item.



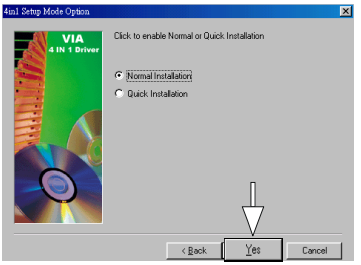
(2)
Click "Chipset" Item.



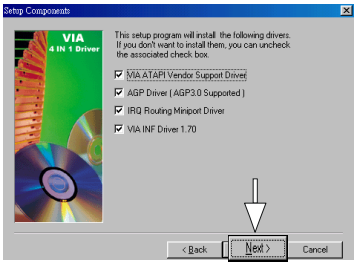
(3)
Click "VIA service Pack" Item.



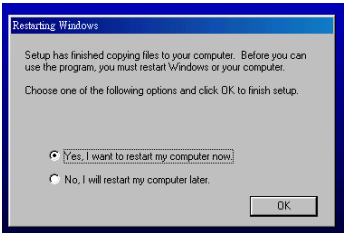
(4)
Click "Next".



(5)
Click "Yes".



(6)
Tick all four items and click "Next".



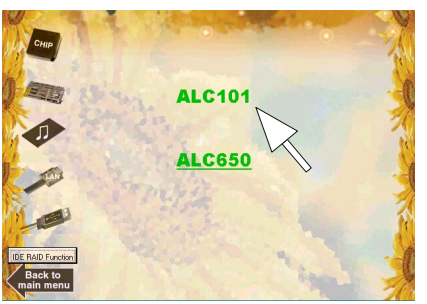
(7)
The Setup Program will install all items until the Restart screen appears. Click "OK" to restart system.

3.3 Installing Audio Driver

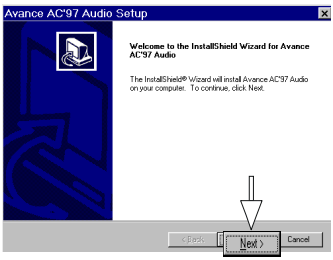
This motherboard comes with an AC97 CODEC. You can find the Audio driver from the Driver CD.

(1)
Click "Driver" Item.

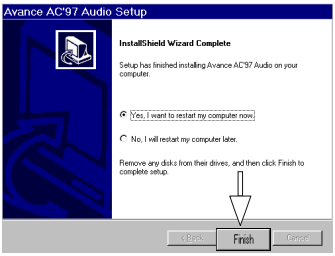
(2)
Click "Audio" Item.



(3)
Click



(4)
Click "Next".

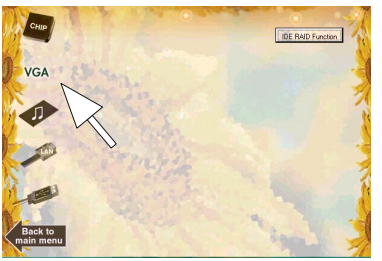


(5)
Click "Finish".

3.4 Installing VGA Drivers

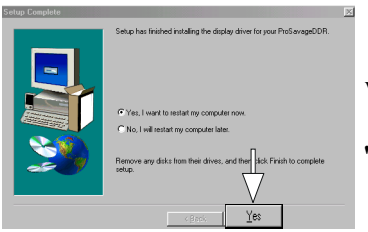
Enter the item "VGA" of the Autorun program and install the VGA Drivers for Win9X/NT/2000/XP. Follow the illustrations below

(1)
Click "Driver" Item.



(2)
Click "VGA" Item and in the next screen click the "4PM266AM" item to continue.

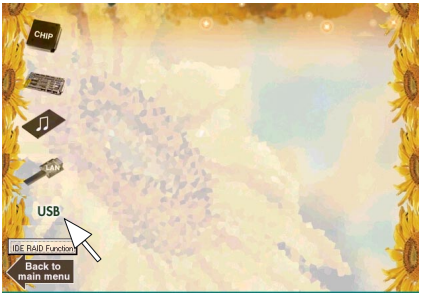
(3)
Click the operating system you are running to continue.



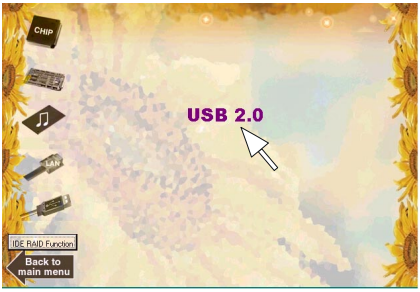
(4)
When you are prompted to restart system, click "Finish" to restart system and complete installation.

3.5 Installing USB 2.0 Driver

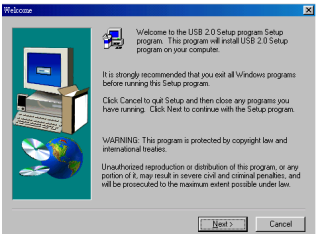
(1)
Click the "Driver " item.



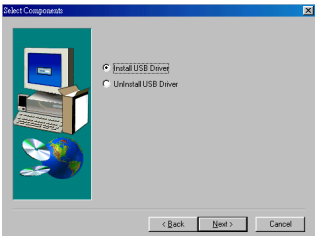
(2)
Click the "USB " item.



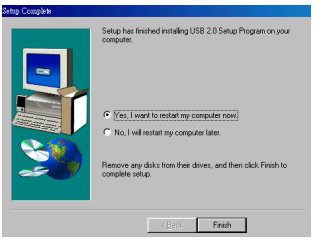
(3)
Click the "USB2.0 " item.



(4)
Click the "Next " item.



(2)
Tick "Install USB Driver" and click the "Next " item.



(6)
Click the "Finish " item to restart system.

3.6 Installing LAN Drivers

LAN drivers should be installed into your operating system manually. Follow the following instructions to install LAN driver for your operating system:

3.6.1 Installing LAN driver on Win 98

```
Install Realtek RTL8100 PCI Fast Ethernet NIC Windows 98 Driver Manually

1. Right click the "My Computer" icon on the desktop window.
   When the menu appears click "Properties" item.

   Or you can also press the "Start" button. Move highlight bar to "Settings"
   and select "Control Panel". Double click on the "System" icon.

2. Select "Device Manager" page.

3. View "Other devices" question mark.

4. View " PCI Ethernet Controller" question mark.

5. Double click on "PCI Ethernet Controller",or select "PCI Ethernet Controller"
   then click the "Properties" item.

6. Please select [General] page to reinstall driver or select [Driver] page to
   update driver.

7. Follow the instruction to insert your Windows CD or ACORP support CD to install
   the driver.
   (Driver Location {CD-ROM Drive}:\MB\Lan_driver\RTL8100\Win9X_ME)
```

3.6.2 Installing LAN driver on Win Me

```
Install Realtek RTL8100 PCI Fast Ethernet NIC Windows ME Driver Manually

1. Right click the "My Computer" icon on the desktop window.
   When the menu appears click "Properties" item.

   Or you can also press the "Start" button. Move highlight bar to "Settings" and
   select "Control Panel". Double click on the "System" icon.

2. Select "Device Manager" page.

3. View "Other devices" question mark.

4. View " PCI Ethernet Controller" question mark.

5. Double click on "PCI Ethernet Controller",or select "PCI Ethernet Controller"
   then click the "Properties" item.

6. Please select [General] page to reinstall driver or select [Driver] page to update
   driver.

7. Follow the instruction to insert your Windows CD or ACORP support CD to install the
   driver. (Driver Location {CD-ROM Drive}:\MB\Lan_driver\RTL8100\Win9X_ME)
```

3.6.3 Installing LAN driver on Win 2K

Install Realtek RTL8100 PCI Fast Ethernet NIC Windows 2000 Driver Manually

1. Right click the "My Computer" icon on the desktop window.
   When the menu appears click "Properties" item.

   Or you can also press the "Start" button. Move highlight bar to "Settings" and
   select "Control Panel". Double click on the "System" icon.

2. Select "Hardware" page and then click [Device Manager] button.

3. View device by type and find "Network adapters" node.

4. Right click the "Realtek RTL8139(A)-based PCI Fast Ethernet Adapter" node.

5. When the menu appears, click the "Properties" item.

6. Please select [Driver] page and click "Update Driver..." button.

7. When the "Upgrade Device Driver Wizard" window appears, click Next to continue.

8. Select "Search for a suitable driver for my device(recommended)" option and click Next.
   Choose "Specify a location" check box and then click Next.

   or you can also select "Display a list of the known drivers for this device so that
   I can choose a specific driver" option and click Next. Click "Have Disk..." button.

9. Type or browse the path {CD-ROM Drive}:\MB\Lan_driver\RTL8100\Win2000 to the driver.

10. Follow the instruction to complete the installation.

3.6.4 Installing LAN driver on Win XP

Install Realtek RTL8100 PCI Fast Ethernet NIC Windows XP Driver Manually

1.Click the "Start" button .

2. Right click the "My Computer" icon .
   When the menu appears click "Properties" item.

3. Select "Hardware" page and then click [Device Manager] button.

4. View device by type and find "Network adapters" node.

5. Right click the "Realtek RTL8139(C)-based PCI Fast Ethernet Adapter" node.

6. When the menu appears, click the "Properties" item.

7. Please select [Driver] page and click "Update Driver..." button.

8. When the "Upgrade Device Driver Wizard" window appears, click Next to continue.

9. Select "Search for a suitable driver for my device(recommended)" option and click Next.
   Choose "Specify a location" check box and then click Next.

   or you can also select "Display a list of the known drivers for this device so that
   I can choose a specific driver" option and click Next. Click "Have Disk..." button.

10. Type or browse the path {CD-ROM Drive}:\MB\Lan_driver\RTL8100\WinXP to the driver.

11. Follow the instruction to complete the installation.