Motherboard 7KT400A

Chapter 1
Motherboard 7KT400A

1. 7KT400A Specifications

1.1 Introduction

The 7KT400A motherboard is an integration of AMD Athlon/Duron CPU in Socket 462 packaging and the North Bridge VIA KT400A (VT8377A) supporting 100/133/166 MHz Front Side Bus.

North Bridge KT400A on board also supports DDR 200/266/333/400 SDRAMs, while the South Bridge VT8235 provides stable supports of ULTRA ATA 133, 6-channel 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.

1.2 Package Contents

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

1.3 Specifications and Features

CPU Processor

| Support 100/133/166 MHz System Interface speed
| Single Socket 462 for AMD ™ Athlon CPUs 700MHz~3000+ or higher*, and Duron CPUs 600 ~ 1400 MHz or higher*

*** The higher frequency CPU should be compatible with AMD CPU specificiation and the motherboard latest BIOS version which will be released in our Web Site.**

Chipset

| VIA KT400A North Bridge
| VIA VT8235 South Bridge

PCI

| Supports 5 x PCI slots, 32-bit 33MHz PCI Bus speed.

DDR SDRAM Memory

| Supporting 64/128/256/512/1G....MB DDR module in 3 slots
| Supporting 400/333/266/200MHz DDR SDRAM
| Supporting a maximum memory size of 3GB of DDR SDRAM

Universal Serial Bus

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

AGP

| Supporting 1 x AGP8X slot, V3.0 compliant.

WOL (Wake On LAN)

| Supporting system power-on by LAN Ring-up signal.

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 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 Processor

| AC 97 2.2 compatible Codec, 6-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

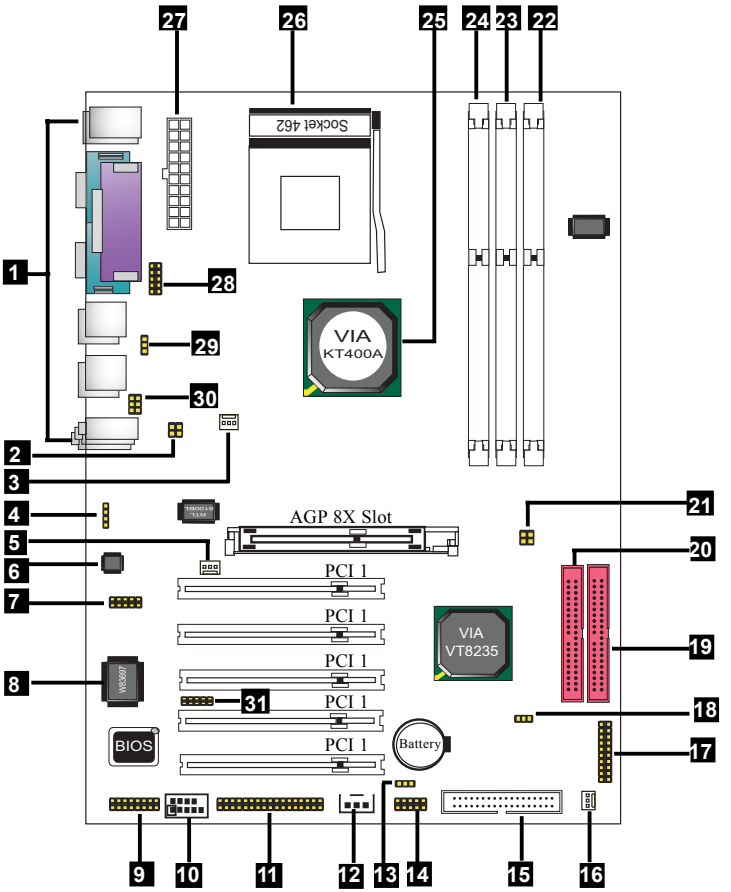
PC'99 Color-coded I/O Ports

| 6 USB ports, USB 2.0 compliant.
| 2 COM ports; 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 7KT400A Layout Diagram



7KT400A Component Layout :

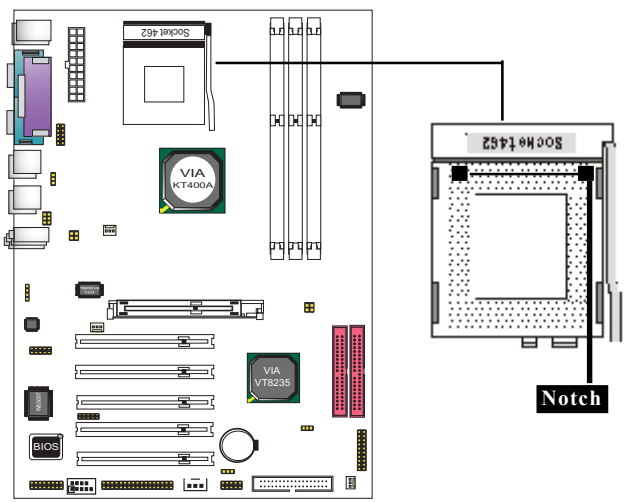
1. Back Panel: Back Panel I/O Connectors (Mouse, Keyboard, COM1, COM2, Printer, Mic in, Line in, Speaker-out, USB0/1/2/3)
2. J3: CPU clock Frequency Connector
3. CPUFAN1: CPU Fan Connector
4. VOIN1: CD Audio In Connector
5. FAN1: Cooling Fan Connector
6. ALC650: AC'97 Audio Codec
7. J6: Connector for 6-channel SP-DIF Audio (optional)
8. W83697HF: Winbond I/O chip
9. J1: Game Port/MIDI Connector
10. COM2 Header: Pin Header for an external COM Port
11. SP-J2: BIOS2 Connector
12. WOL: Wake-on LAN Connector
13. J4: USB4/5 Power Option
14. USB4/5: USB Header for 2 USB Ports
15. FDD: Floppy Drive Connector
16. SYSFAN1: System Cooling Fan Connector
17. Panel1: Front Panel Connector
18. Clear CMOS: Jumper for clearing CMOS
19. IDE2: IDE Connector
20. IDE1: IDE Connector
21. J5: CPU Clock Frequency Connector
22. DIM3: DDR SDRAM Slot
23. DIM2: DDR SDRAM Slot
24. DIM1: DDR SDRAM Slot
25. VIA KT400A: North Bridge
26. Socket 462: CPU socket for AMD CPUs
27. ATXPWR: ATX Main Power Connector
28. SP-J6: Printer Error LED Connector for Smart Panel Connection
29. J2: Jumper for USB0/1, 2/3 Power Option
30. JP1: Audio connector for Smart Panel connection
31. IR/CIR: IR/CIR Connector for Infrared Signal Transmission/Reception

1.5 CPU Installation

The motherboard operates with Socket 462 for AMD Athlon™ and Duron™ processor. The CPU should always have a Heat Sink and cooling fan attached to prevent overheating.

CPU Installation Procedures for Socket 462

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 and look for the white dot or cut edge in the CPU. Match Pin 1 with the white dot/cut edge then insert the CPU.
3. Press the lever down to complete the installation.
4. Make sure the spec of the cooling fan is good enough.
5. Please lock the fan on CPU very carefully, or you will damage the resistor array even circuit line on the mainboard.

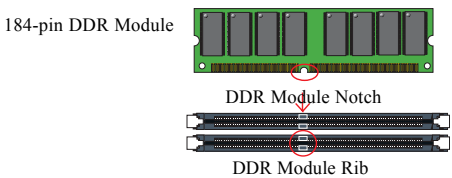


1.6 DDR SDRAM Installation

The motherboard supports a maximized 3GB memory. It provides three 184-pin unbuffered DDR sockets and each supports 64MB to 1GB DDR memory module.

DDR SDRAM Installation Procedures:

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

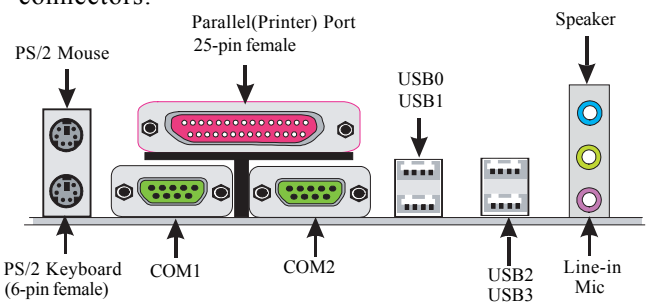


Note:
When you plug or unplug DDR module, you must check your power supply is OFF.

1.7 Connectors & Jumpers Setting

1.7.1 Back Panel I/O Connectors

This motherboard provides the following back panel connectors:

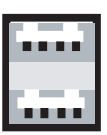


1.7.1.1 PS/2 Mouse / Keyboard CONN:

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 USB0/1/2/3

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.



USB0/1/2/3

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: COM1/2

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.

1.7.1.4 Parallel Interface Port

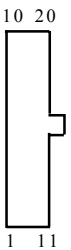
Unlike serial ports, parallel interface ports have been standardized and should not present any difficulty interfacing peripherals to your system. Sometimes called a Centronics port, the parallel port is almost exclusively used with printers. The parallel port on your system is a 25-pin, DB 25 connector.

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.

1.7.2 ATX Main Power Connectors: ATXPWR

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	Signal	Pin	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.

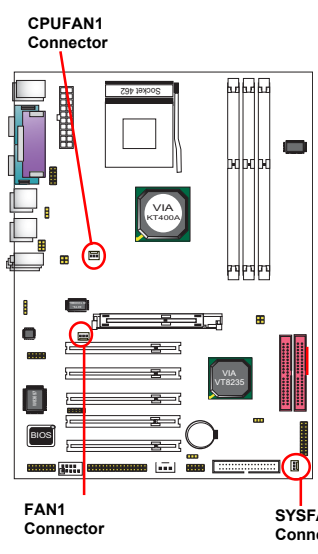
1.7.3 Floppy Disk Connector: FDD

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/CPUFAN/SYSFAN



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

FAN1	Pin Definition
1	Ground
2	+12VDC
3	Ground

1.7.6 CD Audio-In Connectors: CDIN1

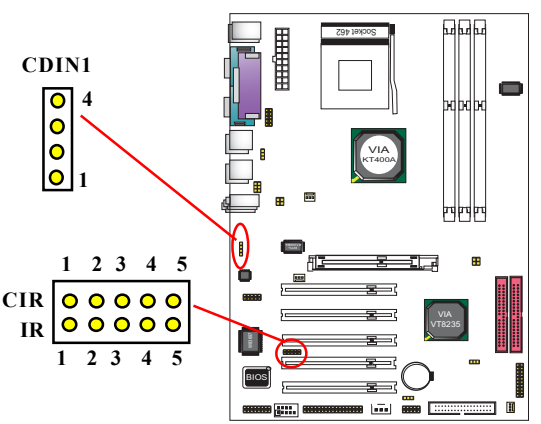
CDIN1 and CDIN2 are the connectors for CD-Audio Input signal. Please connect them to CD-ROM CD-Audio output connector. CDIN1 and CDIN2 have the same pin assignment but different pin pitch.

Pin CDIN1	Definition
1	CD-L
2	GND
3	GND
4	CD-R

1.7.7 IR infrared module: IR/CIR Connector

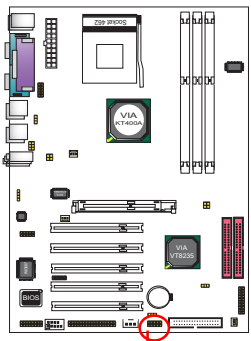
This connector supports the optional wireless transmission and reception infrared module. You must configure the setting through the BIOS setup to use the IR function.

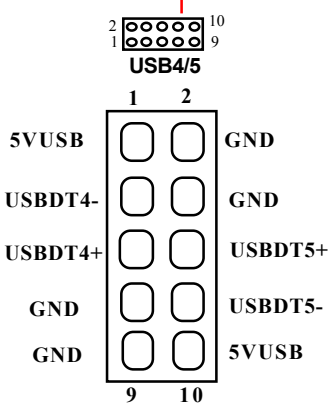
IR1 Pin	Assignment
1	+5V
2	N/A
3	IRRX
4	GND
5	IRTX



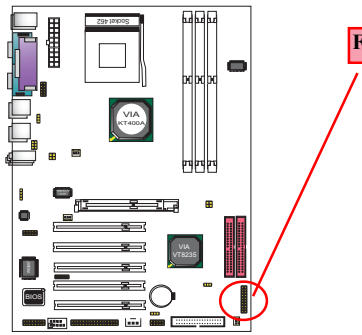
1.7.8 USB Pin Header: USB4/5

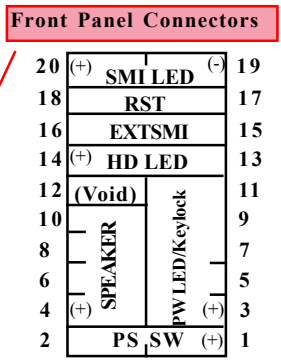
USB4/5 is 2x5 Pin Headers for support of external USB ports. Each USB pin header requires a USB cable for expansion of two USB ports. This optional USB cable is available from your motherboard dealer or vendor.





1.7.9 Front Panel Connectors: PANEL1





(Void)

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.

SMI Suspend Switch Lead

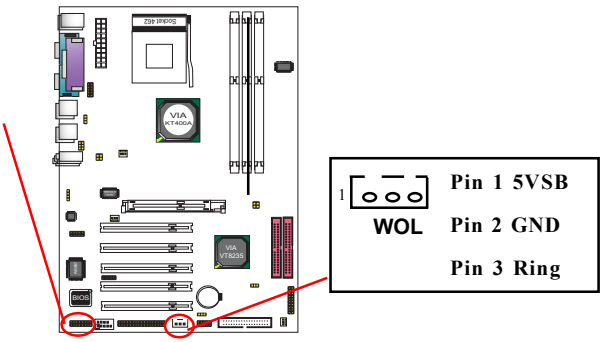
This allows the user to manually place the system into the Suspend Green mode . System activity will be instantly decreased to save electricity and expand the life of certain components when the system is not in use. This 2-pin connector (see the figure) connects to the case-mounted suspend switch. If you do not have a switch for the connector, you may use the "Turbo Switch" instead since it does not have a function. If you want to use this connector, the "Suspend Switch" in the Power Management Setup of the BIOS SOFTWARE section should be enabled.

Reset Switch Lead (RST)

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

1.7.10 Wake On LAN Connector: WOL

WOL connector is designed to connect to connect to PCI LAN card for waking up system by Ring signal sent in .



1.7.11 Game/MIDI Connector: J1

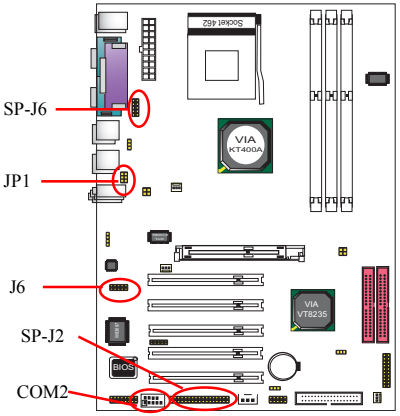
J1 connector is designed to support a Gsae Port or MIDI Port .

J1: Game/MIDI Connector

2 16
1 15

PIN1 Vcc	PIN2 Vcc
PIN3 JOYABTNO	PIN4 JOYBBTNO
PIN5 JOYAX_C	PIN6 JOYBX_C
PIN7 GNDB	PIN8 MDTX_C
PIN9 GNDB	PIN10 JOYBY_C
PIN11 JOYAY_C	PIN12 JOYBBTN1
PIN13 JOYABTN1	PIN14 MDRX_C
PIN15 VCC	PIN16 N/A

1.7.12 Smart Panel Connectors (optional):



The motherboard provides the pin leads COM2, JP1, SP-J6 and SP-J2 for Smart Panel connection. If you want POST Error Code or Smart Panel function, please refer to Smart Panel manual.

1.7.12.1 Front COM2 Header Connector: COM2

For Smart Panel Serial connector to M/B COM2.

COM2 Pin Assignment		COM2 Pin Assignment	
1	RIN12	2	RIN32
3	DOUT22	4	DOUT32
5	GND	6	RIN22
7	DOUT12	8	RIN42
9	-XR12		

1.7.12.2 Audio/Mic Auto Connector: JP1

For Smart Panel connector to M/B JP1.

Pin Assignment		Pin Assignment	
1	FRONT_OUTL_L	2	FRONT_OUTL_R
3	MIC1_L	4	MIC2_R
5	LINE_IN_L	6	LINE_IN_R

1.7.12.3 SPII Printer Error LED Port: SP-J6

For Smart Panel connector ERR1 to M/B SP-J6.

Pin	Assignment	Pin	Assignment
1	ERD4	2	ERD0
3	ERD5	4	ERD1
5	ERD6	6	ERD2
7	ERD7	8	ERD3
9	GND	10	NC

1.7.12.4 Second BIOS Connector: SP-J2

For Smart Panel connector SP-J2 to M/B SP-J2.

Pin	Assignment	Pin	Assignment
1	XD0	2	+5V
3	XD1	4	SA0
5	XD2	6	SA1
7	XD3	8	SA2
9	XD4	10	SA3
11	XD5	12	SA4
13	XD6	14	SA5
15	XD7	16	SA6
17	GND	18	DISABLE
19	-ROMCS	20	SA7
21	-MBMR	22	SA8
23	-MBMW	24	SA9
25	SA18	26	SA10
27	SA17	28	SA11
29	SA16	30	SA12
31	SA15	32	SA13
33	GND	34	SA14

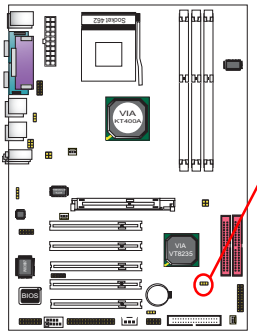
1.7.12.5 6-channel SP-DIF Audio Connector: J6

J6 is designed to support the 6-channel SP-DIF Audio Connector, and this is an optional funtion.

Pin	Assignment	Pin	Assignment
1	AVDD5V	2	Center
3	NC	4	Lef-out
5	SPDIFI	6	GND-Aud
7	SPDIFO	8	Sur-out-L
9	GND	10	Sur-out-R

1.7.13 CMOS Function Selector: Clear_CMOS

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

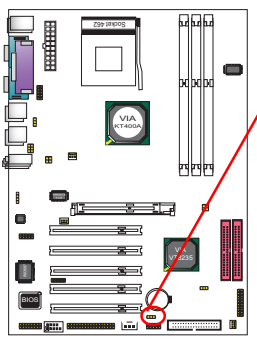


Jumper Clear CMOS	
1-2 closed 	Normal (Default)
2-3 closed 	Clear CMOS

1. Remove the Jumper cap of JP3 from 1-2.
2. After 1 or two seconds, set JP3 to 2-3 closed with the jumper cap.
3. After 1 or two seconds, restore the JP3 to 1-2 closed.
   Now, the CMOS RAM has restored to the optimum default setting.

1.7.14 USB4/5 Wake-up Selector: J4

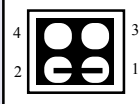
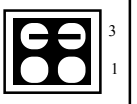
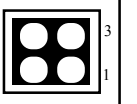
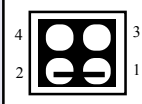
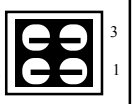
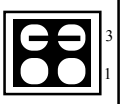
JP4 is designed to select the USB1 wake up function of system from ACPI S3 Suspend Mode.

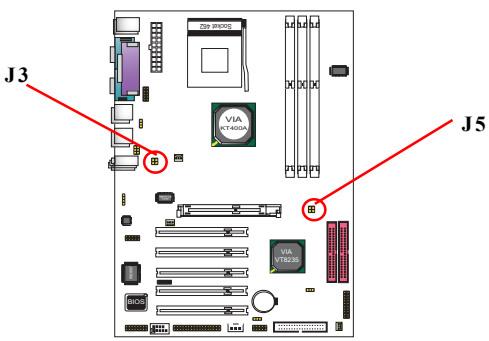


J4: USB4/5 Wake-up Select	
1-2 closed 	Disabled (Default)
2-3 closed 	Enabled

1.7.15 CPU Clock Frequency Selector: J3 & J5

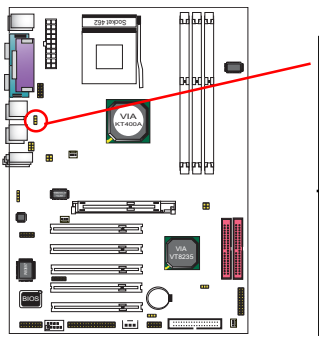
J3 & J5 are designed to detect the CPU Frequency on board. This motherboard support 100/133/166 MHz , while 133 MHz is default CPU clock.

J3 Setting			
J5 Setting			
CPU(MHz)	166 MHz	100 MHz	133 MHz (default)



1.7.16 Ports USB0/1, 2/3 Wake-up Selector : J2

J2 is designed to select the USB1 wake up function of system from ACPI S3 Suspend Mode.



J2: USB0/1,2/3 Wake-up Select	
1-2 closed 	Disabled (Default)
2-3 closed 	Enabled

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) 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

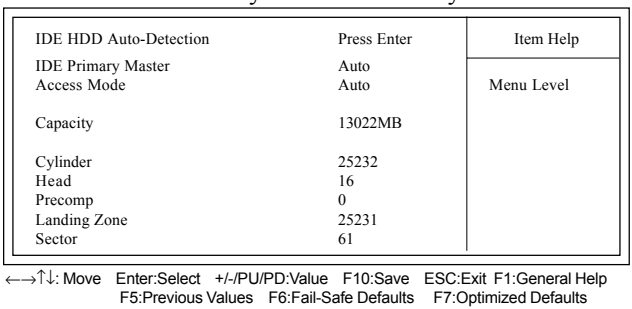
Item	Options	Description
Date (mm : dd :yy)	Month Day Year	Set the system,date. Note that the 'Day' automatically changes when you set the data.
Time (hh : mm : SS)	Hour Minute Second	Select the hour, minute and second of the time.
IDE Primary Master	Options are in its sub menu.	Press<Enter> to enter 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	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

Virus Warning	Disabled	Item Help
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	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 Internal / External Cache

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

The choices:

Enabled(default); Disabled

CPU L2 Cache ECC Checking

Allows you to Enable or Disable the CPU L2 cache ECC Checking function.

The choices:

Enabled; 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

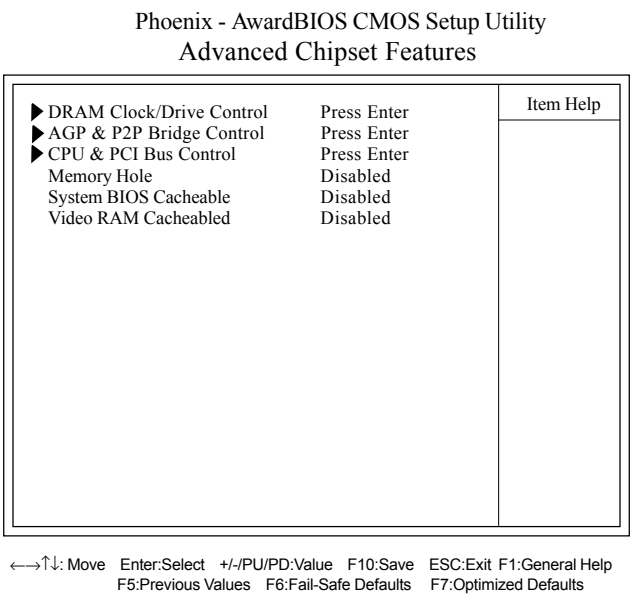
EPA / (H/W Monitor) Show

Use this item to 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	Auto By SPD	
x DRAM CAS Latency	2.5	
x Bank Interleave	Disabled	
x Precharge to Active(Trp)	3T	
x Tras Non-DDR400/DDR400	7T	
x Active to CMD(Trcd)	3T	
DRAM Burst Length	4	
DRAM Command Rate	2T Command	
Write Recovery Time	3T	

←→↑↓: 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; 166 MHz; 200 MHz

DRAM Timing
This item is to set the DRAM transaction timing.
The Choices: Auto by SPD; Turbo; Ultra; Manual

x DRAM CAS Latency
When DRAM Timing is set Manual, use this item to set the DRAM CAS Latency tine. .
The Choices: 1.5; 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 Tras Non-DDR400/DDR400
When DRAM Timing is set Manual, use this item to set the Tras Non-DDR400/DDR400 cycle.
The Choices: 7T; 10T

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

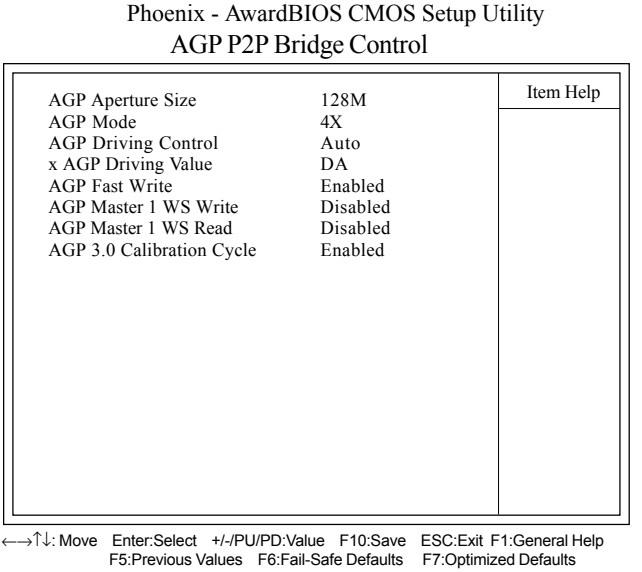
DRAM Burst Length
Use this item to set the DRAM Burst cycle Length.
The Choices: 4; 8

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

Write Recovery Time
Use this item to set the Write Recovery Time.
The Choices: 3T; 2T

AGP P2P Bridge Control

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



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: 8X; 4X; 2X; 1X

AGP Driving Control

This item is to set the AGP Driving Control mode.

The Choices: Auto; Manual

x AGP Driving Time
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

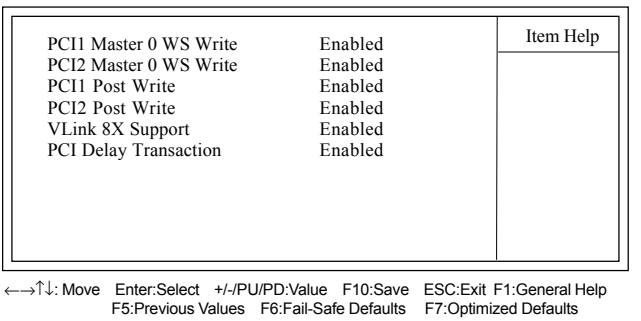
AGP Master 1 WS Write
This item is to enable / disable the AGP Master 1 WS Write function.
The Choices: Enabled; Disabled

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

AGP 3.0 Calibration Cycle
This item is to enable / disable the AGP 3.0 Calibration Cycle function.
The Choices: Enabled ; Disabled

CPU & PCI Bus Control

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



PCI1/2 Master 0 WS Write

This item is to enable / disable the PCI1/2 Master 0 Wait State Write function.

The Choices: Enabled; Disabled

PCI1/2 Post Write

This item is to enable / disable the PCI1/2 POST Write function.

The Choices: Enabled; Disabled

VLink 8X Support

This item is to Enable / disable the VLink 8X Support.

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

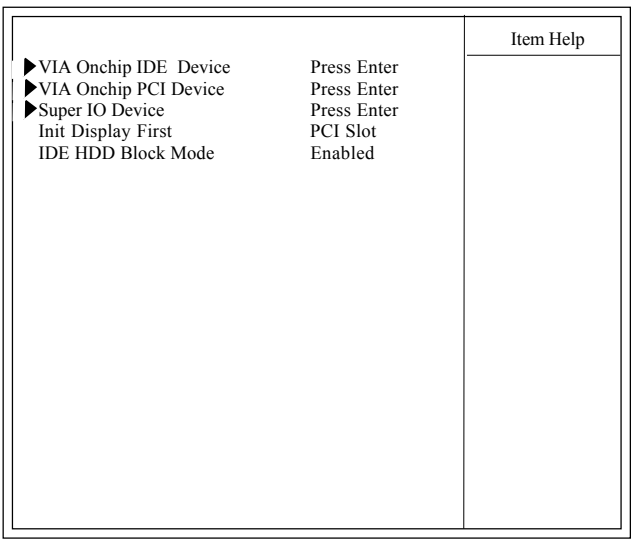
Use this item to enable / disable the Video BIOS Cacheable function.

The choices: Enabled; Disabled

2.6 Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility

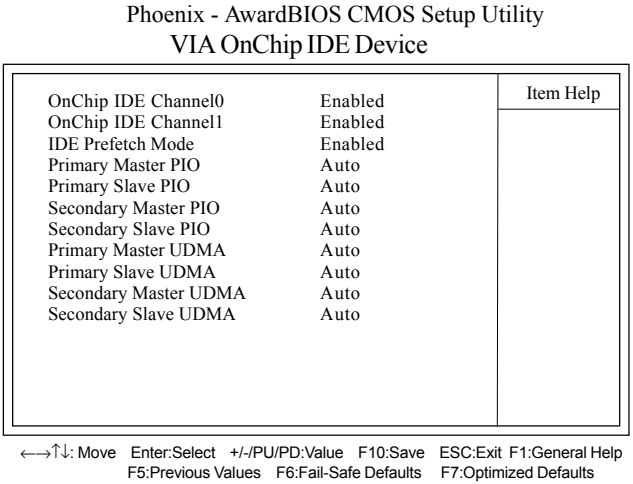
Integrated Peripherals



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

▶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

		Item Help
USB 2.0 Support	Enabled	
VIA-3058 AC97 Audio	Auto	
VIA-3068 MC97 Modem	Auto	
Onchip USB Controller	All Disabled	
USB Keyboard Support	Enabled	

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

USB 2.0 Support

This item is to enable/disable the USB 2.0 device support..

The choices: Enabled; Disabled

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

Onchip USB Controller

This item is to select the USB ports supported by Onchip USB Controller..

The choices: All Enabled; All Disabled;
1&2 USB Ports; 1&3 USB Ports;
1 USB Port

USB Keyboard Support

This item is to enable/disable the USB Keyboard function..

The choices: Enabled; 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

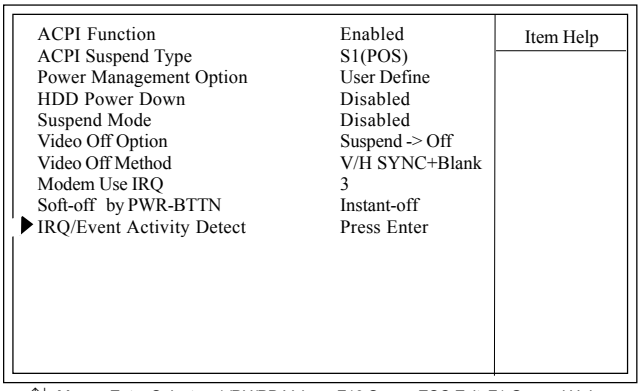
Init Display First
Use this item to select the initial Display as the first display.
The choices: PCI Slot; AGP

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

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

ACPI Suspend Type

The choices are for setting the suspend type under ACPI operating system.

S1(POS) (default): Power on Suspend.

S3(STR): Suspend to RAM.

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.

▶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 PS/2 KB Select	PS/2 KB	
Power On by PS/2 KB	Disabled	
Power On by PS/2 MS	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 PS/2 KB Select
Use this item to select the PS/2 KB Wake up mode.
The choices: Hot Key; Password

Power On by PS/2 KB
If PS2KB Wakeup 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 PS/2 MS
Use this item to enable / disable the PS2 Mouse Wake up.
The choices: Enabled; Disabled

Power On by USB
Use this item to enable / disable the USB KB/MS Wake up.
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)	Disabled	
IRQ5 (LPT 2)	Disabled	
IRQ6 (Floppy Disk)	Disabled	
IRQ7 (LPT 1)	Disabled	
IRQ8 (RTC Alarm)	Disabled	
IRQ9 (IRQ2 Redir)	Disabled	
IRQ10 (Reserved)	Disabled	
IRQ11 (Reserved)	Disabled	
IRQ12 (PS/2 Mouse)	Enabled	
IRQ13 (Coprocessor)	Disabled	
IRQ14 (Hard Disk)	Disabled	
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	( )	
CPUFAN 1 Speed	( )	
SYSFAN 2 Speed	( )	
Vcore	( )	
Vcc 3.3V	( )	
Vcc 5.0V	( )	
Vcc 12.V	( )	
Vbat	( )	
Vsb 5.0V	( )	

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

System/CPU Temp

This item shows the current System/CPU temperature.

CPUFAN1/SYSFAN2 Speed

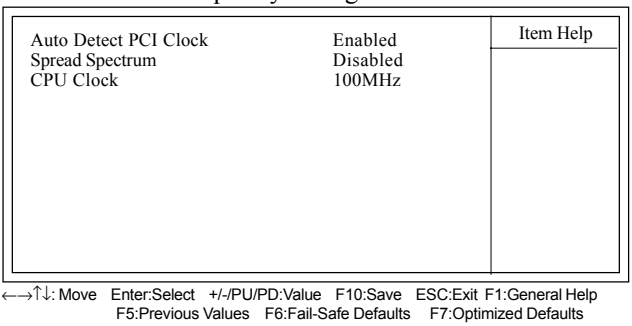
This item shows the CPU/System fan speed running on board.

Vcc 3.3V/5.0V/12V/Vbat/Vsb 5.0

These items show the respective voltage running on board.

2.10 Frequency/Voltage Control

Phoenix - AwardBIOS CMOS Setup Utility
Frequency/Voltage Control



Auto Detect PCI CLK

This item allows you to enable/disable auto detect PCI CLOCK.
The Choices: Disabled; Enabled

Spread Spectrum

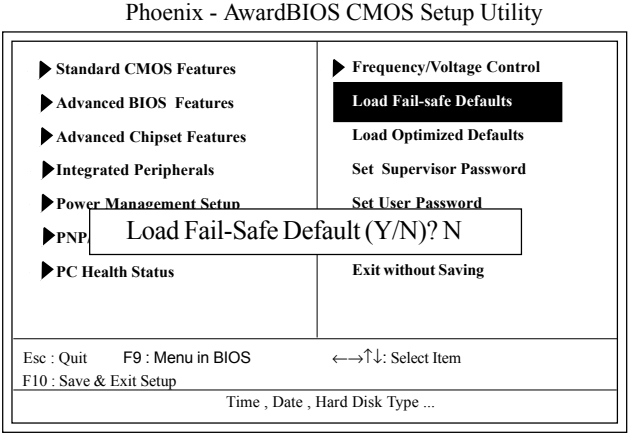
Allows you to enable / disable the Spread Spectrum function.
The Choices: Disabled; Enabled

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

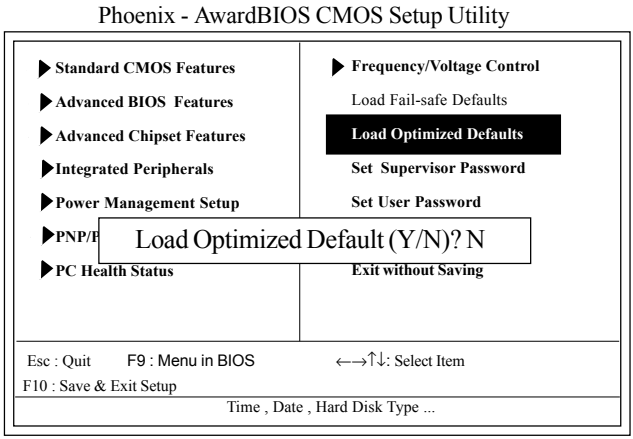
When you press <Enter> on this item, you get a confirmation dialog box with a message similar to below:



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

2.12 Load Optimized Defaults

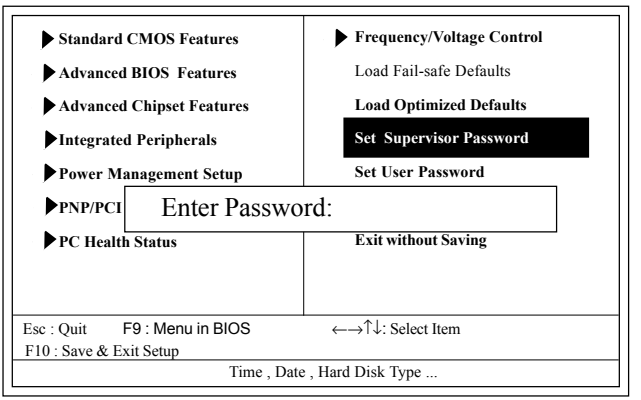
When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:



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

2.13 Set Supervisor / User Password

Phoenix - AwardBIOS CMOS Setup Utility



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

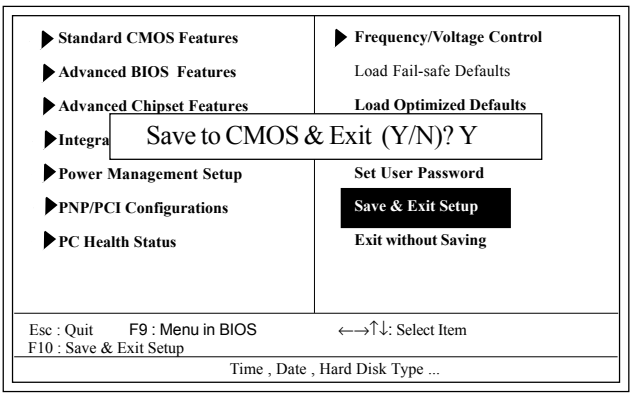
Enter Password (for Supervisor/User)

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

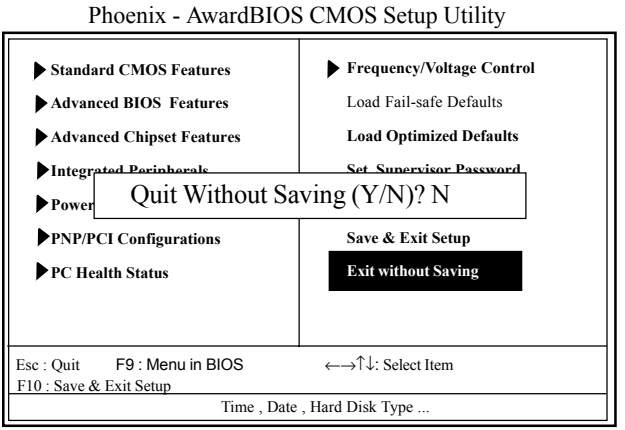
If you select "System" at the Security Option of BIOS Features Setup Menu, you will be prompted for the password every time when the system is rebooted, or any time when you try to enter Setup. If you select "Setup" at the Security Option of BIOS Features Setup Menu, you will be prompted only when you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

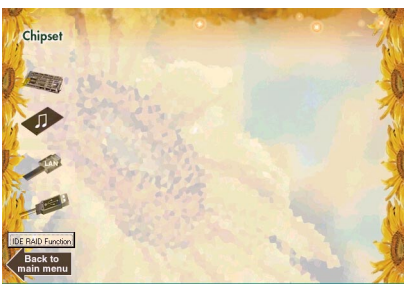
3.1 Auto-run Menu

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

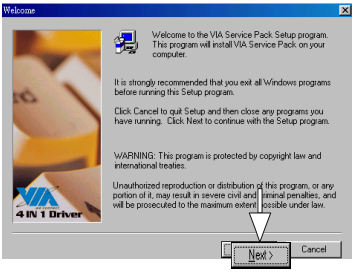
Enter the item "Chipset" of the Autorun program and install the VIA Service Pack. Follow the illustrations below :

(1)
Click "Driver" Item.

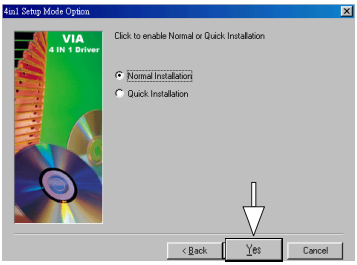


(2)
Click "Chipset" Item.

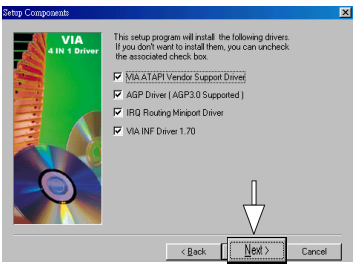
(3)
Click "VIA service Pack" Item.



(4)
Click "Next".



(5)
Click "Yes".



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

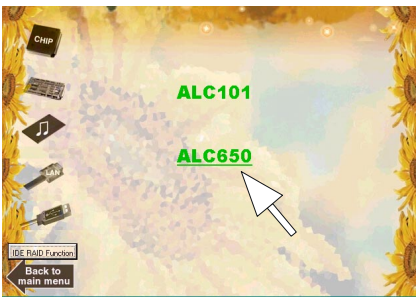
(7)
The Setup Program will install all items until the Restart screen appears. Click "OK" to restart system.

3.3 Installing Audio Driver

This motherboard comes with an AC97 CODEC V2.2, 6-channel compatible. You can find the Audio driver from this Auto-run menu.

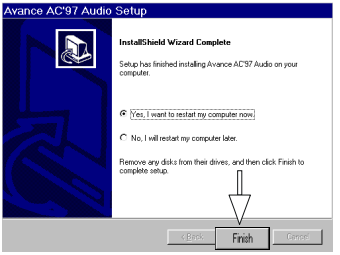
(1)
Click "Driver" Item.

(2)
Click "Audio" Item.



(3)
Click "ALC650" Item.

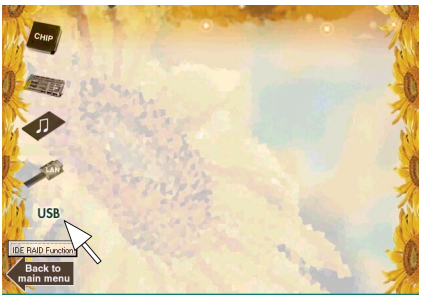
(4)
Click "Next".



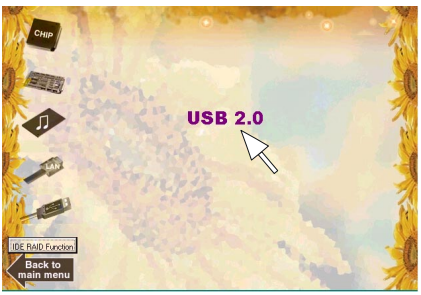
(5)
Click "Finish".

3.4 Installing USB 2.0 Driver

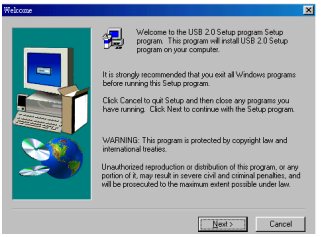
(1)
Click the "Driver " item.



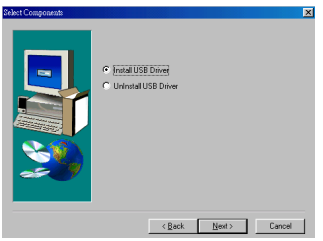
(2)
Click the "USB " item.



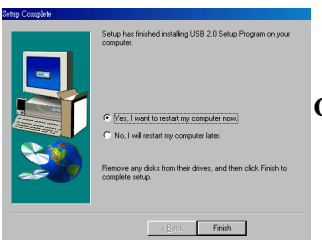
(3)
Click the "USB2.0 " item.



(4)
Click the "Next " item.



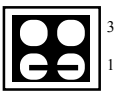
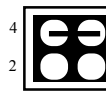
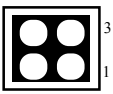
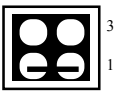
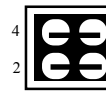
(2)
Tick "Install USB Driver" and click the "Next " item.



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

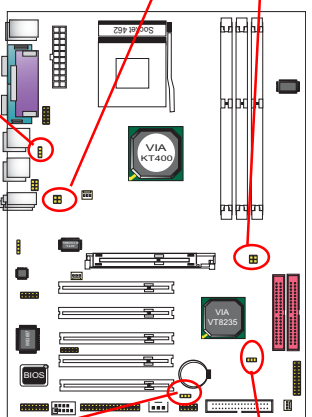
Appendices

Appendix I Quick Jumper Setup

J3 Setting				**J3**
J5 Setting				**J5**
CPU(MHz)	166 MHz	100 MHz	133 MHz (default)	

J2: USB0/1, 2/3 Wake-up Selector

1-2 closed 	Disabled (Default)
2-3 closed 	Enabled



JP4: USB4/5 Wake-up Selector

1-2 	Disabled (default)
2-3 	Enabled

Jumper Clear CMOS

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

Appendix II Mainboard Test Report

M/B Compatibility Test

A. CPU Compatibility Test

Nucleus	Model	CLK	Voltage	Bus Speed	CPU S.P.E.C	Stepping	RESET 10 Time	PW On/Off 10 Time	CC WS 2002 Test
ATHLON XP	3000+	2166	1.65	166			PASS	PASS	39.5
ATHLON XP	2800+	2083	1.65	166			PASS	PASS	28.5
ATHLON XP	2700+	2166	1.65	166			PASS	PASS	35.4
ATHLON XP	2600+	2083	1.65	166			PASS	PASS	36.8
ATHLON XP	2600+	2133	1.65	133			PASS	PASS	37.3
ATHLON XP	2500+	1833	1.65	166			PASS	PASS	35.2
ATHLON XP	2400+	2000	1.65	166			PASS	PASS	35.7
ATHLON XP	2200+	1800	1.75	133			PASS	PASS	31.6
ATHLON XP	2100+	1733	1.75	133			PASS	PASS	32.6
ATHLON XP	2000+	1666	1.75	133			PASS	PASS	32.4
ATHLON XP	1800+	1500	1.75	133			PASS	PASS	31
ATHLON XP	1700+	1466	1.75	133			PASS	PASS	23.3
ATHLON XP	1600+	1400	1.75	133			PASS	PASS	27.9
ATHLON XP	1500+	1333	1.75	133			PASS	PASS	28.9
MORGAN	1300	1300	1.75	100			PASS	PASS	23.4
MORGAN	1200	1200	1.75	100			PASS	PASS	23.5
MORGAN	1000	1000	1.75	100			PASS	PASS	21.1
ATHLON	1400	1400	1.75	133			PASS	PASS	22.4
ATHLON	1333	1333	1.75	133			PASS	PASS	27.3
ATHLON	1200	1200	1.75	133			PASS	PASS	24.4
ATHLON	1133	1133	1.75	133			PASS	PASS	24.9
ATHLON	1000	1000	1.75	133			PASS	PASS	23
DURON	950	950	1.65	100			PASS	PASS	17.6
DURON	800	800	1.65	100			PASS	PASS	17.6
DURON	750	750	1.65	100			PASS	PASS	16.3

B. Memory Compatibility Test

Module Vender	IC_Vender	IC_Serial Numbers	CAPACITY	SIDE	DRAM CLK	Location	Memtest 1.04	WS 2001 Business
Transcend	SAMSUNG	K4H560838C-TCB3	512M	D	333	DIMM 1,2,3	PASS	55.9
TwinMos	WINBOND	W942508AH-6	512M	D	333	DIMM 1,2,3	PASS	54.8
Kingmax	KINGMAX	KDL684T4A2A-05	256M	D	333	DIMM 1,2,3	PASS	41.9
Apacer	Infineon	hyb25d256800at-7	256M	D	266	DIMM 1,2,3	PASS	43.8
China	Hynix	HY5DU56822AT-H	512M	D	266	DIMM 1,2,3	PASS	44
Retail	NANYA	NT5DS16M8AT-7K	512M	D	266	DIMM 1,2,3	PASS	45.2
Weblink	ELIXIR	N2DS12880AT-75B	256M	D	266	DIMM 1,2,3	PASS	55.8
Kingmax	KINGMAX	KDL684T4AA-50	256M	D	400	DIMM 1,2	PASS	64.1
Adata	WINBOND	W942508BH-5	512M	D	400	DIMM 1,2	PASS	54.8
Adata	SAMSUNG	K4H560838D-TCC4	512M	D	400	DIMM 1,2	PASS	60.1
Transcend	SAMSUNG	K4H560838C-TCB3	512M	D	333	DIMM 1,2	PASS	66.9
TwinMos	WINBOND	W942508AH-6	512M	D	333	DIMM 1,2	PASS	68.3
Kingmax	KINGMAX	KDL684T4A2A-05	256M	D	333	DIMM 1,2	PASS	40.4
Apacer	Infineon	hyb25d256800at-7	256M	D	266	DIMM 1,2	PASS	52.5
China	Hynix	HY5DU56822AT-H	512M	D	266	DIMM 1,2	PASS	23.5
Retail	NANYA	NT5DS16M8AT-7K	512M	D	266	DIMM 1,2	PASS	17.6
Weblink	ELIXIR	N2DS12880AT-75B	256M	D	266	DIMM 1,2	PASS	41.9
Kingmax	KINGMAX	KDL684T4AA-50	256M	D	400	DIMM 2,3	PASS	55
Adata	WINBOND	W942508BH-5	512M	D	400	DIMM 2,3	PASS	59.7
Adata	SAMSUNG	K4H560838D-TCC4	512M	D	400	DIMM 2,3	PASS	55.2
Transcend	SAMSUNG	K4H560838C-TCB3	512M	D	333	DIMM 2,3	PASS	66.2
TwinMos	WINBOND	W942508AH-6	512M	D	333	DIMM 2,3	PASS	66