4PM266M

User's Manual Version 1.0

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Introduction

1. Motherboard Description

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Chapter 1

1.1 Introduction

The 4PM266M motherboard is designed for using Intel P4 Front Side Bus Frequency 400MHz CPU, which utilize the Socket-478 design and the memory size expandable to 2.0GB.

This motherboard use the latest VIA P4M266 chipset, appling 266MHz (Double Data Rate) Front Side Bus frequency and 266MHz memory interface delivers a clear upgrade path to the future generation of 266MHz processors, PC-1600/PC-2100 DDR SDRAM. The 4PM266M motherboard offers ULTRA ATA 100/133 to provide speedier HDD throughout that boosts overall system performance.

It is ideal for multi-tasking and fully supporting MS-DOS, Windows, Windows NT , Windows ME, Windows 2000, Novell, OS/2, Windows95/98, Windows 98SE, Windows XP, UNIX, Liunx , SCO UNIX etc. This manual also explains how to install the mainboard for operation, and how to setup your CMOS configuration with the BIOS setup program.

1.2 Package Contents

- HDD UDMA66/100 Cable.
- FDD Cable.
- Flash Memory written for BIOS update.
- USB2 Cable **(Optional)**.
- Fully Setup CD Driver built in utility(Ghost, Antivirus, Adobe Acrobat).
- Manual.

1.3 Features

CPU Processor
- 400MHz System Interface speed or higher.
- Single Socket 478 for Intel P4™ up to 2.2GHz or higher (Northwood Processor).
- Support Intel Netburst™ Micro-architecture.

Chipset
- VIA P4M266 North Bridge.
- VIA VT8233A South Bridge.

PCI/AGP Speed
- Supports 33MHz PCI Bus speed.
- Supports AGP 66 MHz for 2X/4X device.

DDR SDRAM Memory
- Supports 64/128/256/512....MB DDR module socket.
- Supports Synchronous DRAM(2.5V)
- Supports a maximum memory size of 2GB with DDR SDRAM.

Bus Slots
- Provide one AGP slot.
- Three 32-bit PCI bus.

Universal Serial Bus
- Supports two back Universal Serial Bus(USB)Ports and four front Universal serial Bus(USB)Ports.

WOL & WOM (Wake On LAN & Modem)
- Supports system power on from LAN & Modem ring up.

1.3 Features

Flash Memory

- Support 2MB flash memory.

BIOS

- The mainboard BIOS provides Plug & Play BIOS which detects the peripheral devices and expansion cards of the board automatically.
- BIOS support CD-ROM, SCSI, LAN BOOT, Temperature sensor, LAN, Modem, Alarm Bus CLK setup with BIOS.
- The mainboard provides a Desktop Management Interface (DMI) function which records your mainboard specifications.

IDE Built-in On Board

- Supports four IDE devices.
- Supports PIO Mode 5, Master Mode, high performance hard disk drives.
- Support Ultra DMA 33/66/100/133 Bus Master Mode.
- Supports IDE interface with CD-ROM.
- Supports high capacity hard disk drives.
- Support LBA mode.

PCI-Based AC 97 Digital Audio Processor

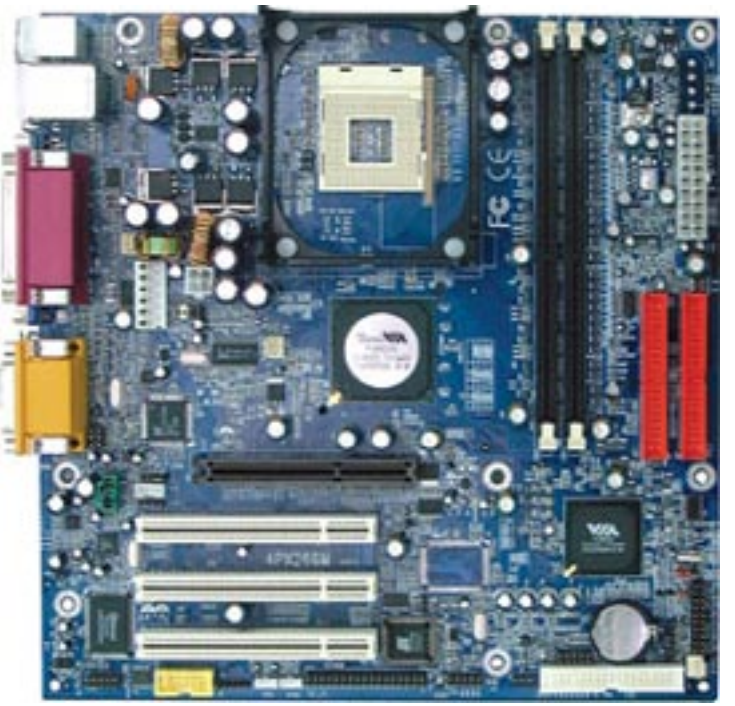
- AC 97 2.1 interface.
- 16 channels of high-quality sample rate conversion.
- 16x8 channel digital mixer.
- Stereo 10 band graphic equalizer.
- Sound Blaster and Sound Blaster Pro emulation.

VGA Share Memory Size: 2M-32M.

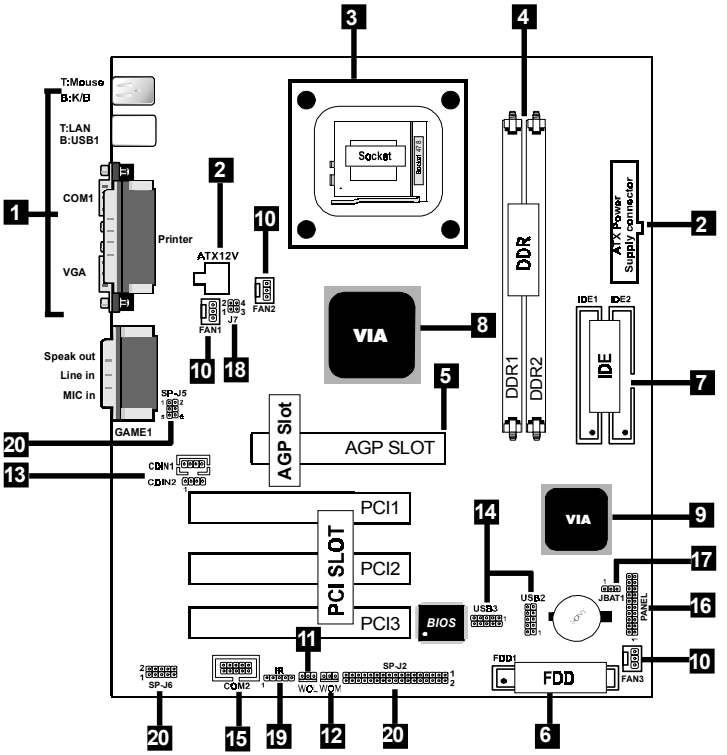
Integrate LAN

- Fast Ethernet Controller 10/100 Mbps.

1.4 4PM266M Motherboard Layout



1.4 4PM266M Layout



1. Back Panel I/O Connectors (Mouse, Keyboard, USB1, LAN, COM1, VGA, Printer, MIC in, Line in, Speaker out, Game stick)
2. ATX Power Connectors (CN2/CN3)
3. CPU Processor (Socket 478)
4. DDR SDRAM Sockets (DDR1/DDR2)

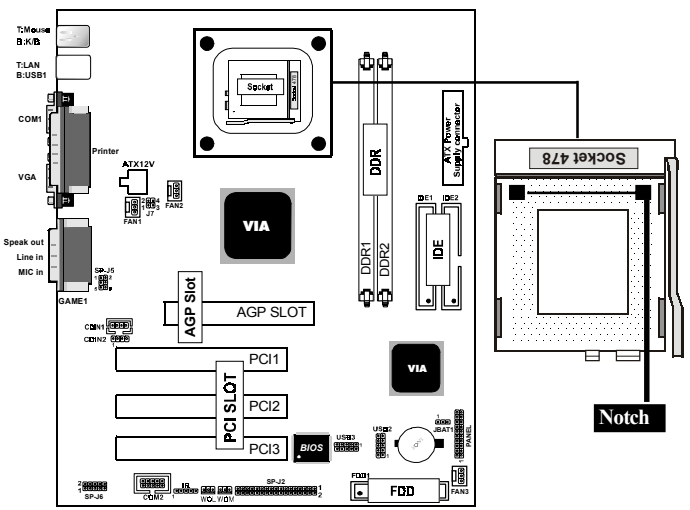
5. AGP Slot
6. Floppy Connector
7. IDE Connectors (IDE1/IDE2)
8. North Bridge (VIA PM266M)
9. South Bridge (VIA VT8233A)
10. Fan Connectors (FAN1/FAN2/FAN3)
11. Wake-On-LAN Connector (WOL)
12. Wake-On-Modem Connector (WOM)
13. CD Audio-In Connectors (CDIN1/CDIN2)
14. Front USB Port Connectors (USB2/3)
15. Front COM2 Port Connector
16. Front Panel Connector (PANEL)
17. CMOS Function Selection (JBAT1)
18. CPU Clock Frequency Setting (J7)
19. IR Connector
20. Smart Panel Function (SP-J2/SP-J6/SP-J5)(optional)

1.5 CPU Installtion

The motherboard operates with Socket 478 for Intel P4™ processor. The CPU should always has a Heat Sink and cooling fan attached to prevent overheating.

CPU Installation Procedures: 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 and look for the white dot or cut edge in the CPU. Match Pin 1 with the white dot or cut edge then insert the CPU.
3. Press the lever down to complete the installation.
4. **Make sure the spec of the heatsink 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.**



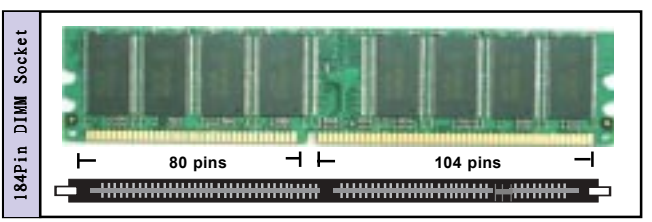
1.6 DDR SDRAM Installtion

The motherboard supports a maximized 2GB memory. It provides two 184-pin unbuffered DDR sockets. It supports 64MB to 1GB DDR memory module.

DDR DRAM 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.

Bank	Memory module
DDR 1	64MB, 128MB, 256MB, 512MB, 1GB
(Bank 0-1)	184 pin, 2.5V DDR SDRAM
DDR 2	64MB, 128MB, 256MB, 512MB, 1GB
(Bank 2-3)	184 pin , 2.5V DDR SDRAM
	Total System Memory (Max 2GB)



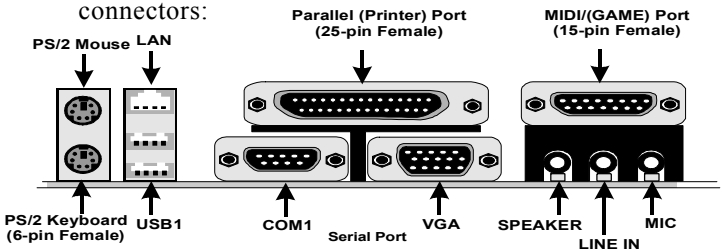
Note:

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

The 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.

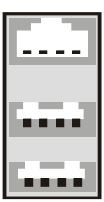
1.7.1.2 USB Port Connector: USB1

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

1.7.1.3 LAN Port Connector

This connector is standard RJ45 connetor for network connector.

RJ-45



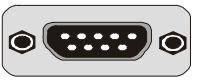
USB1

RJ-45	10/100M LAN Port
Pin	Signal
1	+5V_SB
2	USBP0-(USBP1-)
3	USBP0+(USBP1+)
4	GND

1.7.1.4 The Serial Interfaces: COM1

The serial interface port is sometimes refered 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 your computer system. If you like to transfer the contents of your hard disk to another system, it can be accomplished by serial port.

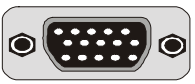
COM1/COM2



1.7.1.5 VGA Interface Connector:VGA(15 Pin)

This connector is for output to VGA-compatible devices.

VGA



1.7.1.6 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 has a 25-pin, DB 25 connector.

1.7.1.7 Joystick / Midi Connector

You can connect a joystick or game pad to this connector.

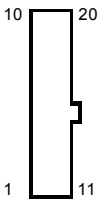
1.7.1.8 Audio Port Connectors

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



Pin CN3	Signal	Pin CN3	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:

1. Make sure that the ATX PIII power supply can take at least 1Amp load on the 5Volt standby lead (5VSB).
2. When you use P4 power supply, you must plug CN2 & CN3 power connector on your system.

Important:

Before you switch on your power supply, please make sure:
1. Memory Module installing is OK.
2. Power supply setting is OK.
3. AGP card for 2X or 4X device is OK.

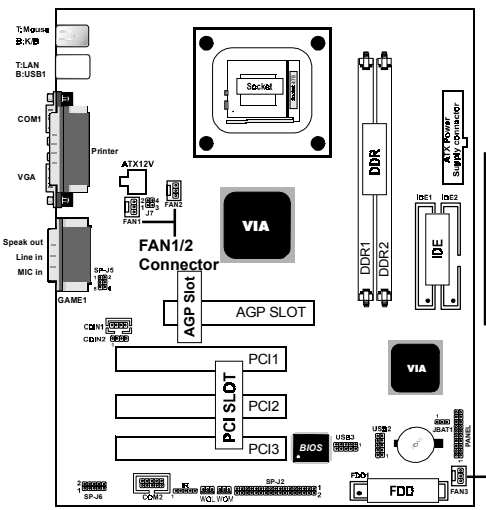
1.7.3 Floppy Disk Connector: FDC

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 support the provided IDE hard disk ribbon cable. After connecting the single end to the board, connect the two plugs 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) (Pin 20 is removed to prevent inserting in the wrong orientation when using ribbon cables with pin 20 plugged).

1.7.5 Fan Connectors: FAN1~3

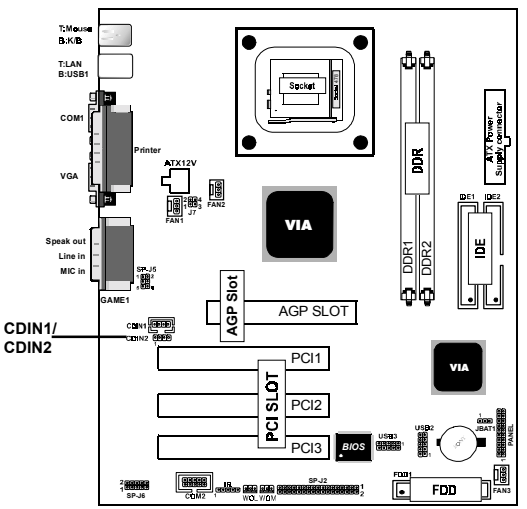


Pin Fan1~3	Definition
1	Signal
2	+12VDC
3	Ground

These connectors support cooling fans of 1Amp or less. Orientate the fans so that the heatsink fins allow airflow to go across the onboard heat sink(s) instead of the expansion slots. Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive, while the black should be ground. Connect the fan's plug to the board taking into consideration the polarity of the this connector.

1.7.6 CD Audio-In Connectors: CDIN1/CDIN2

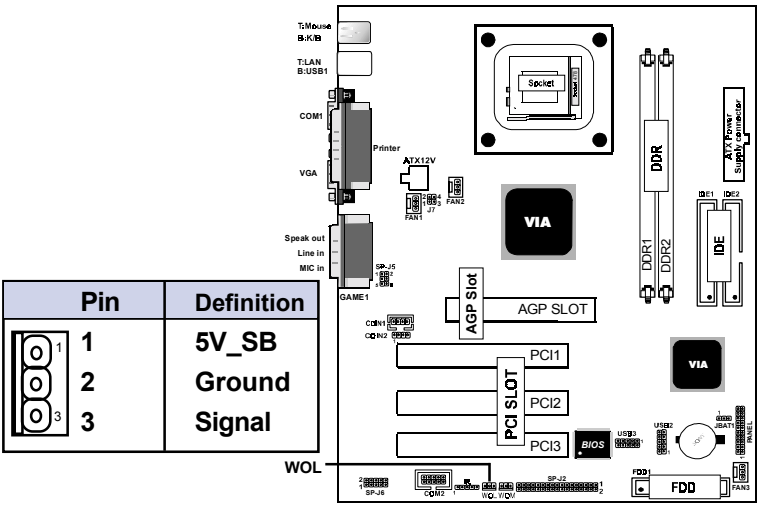
CDIN1/2 are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.



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

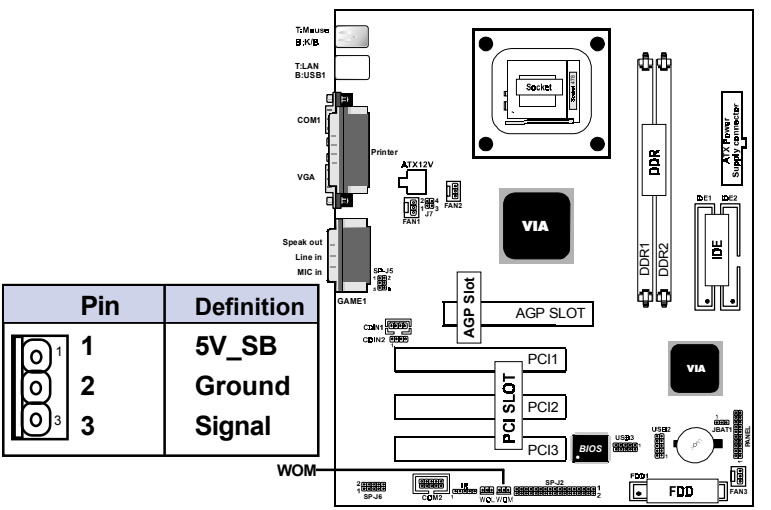
Pin CDIN2	Definition
1	GND
2	CD-L
3	GND
4	CD-R

1.7.7 Wake-On-LAN Connector: WOL



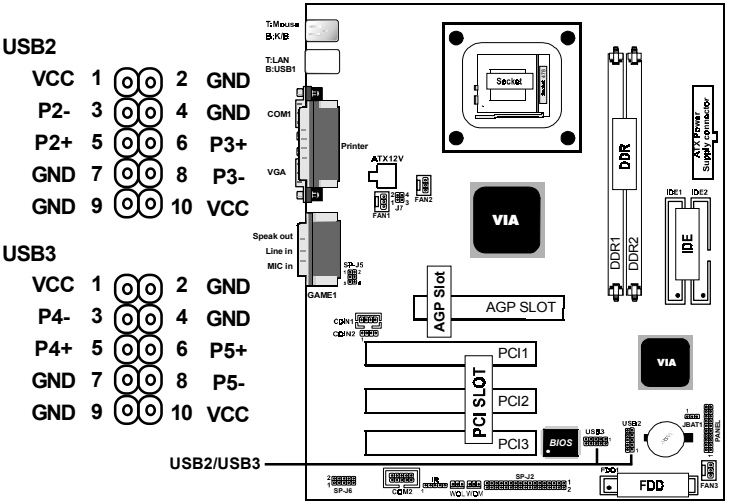
Pin	Definition
1	5V_SB
2	Ground
3	Signal

1.7.8 Wake-On-Modem Connector: WOM

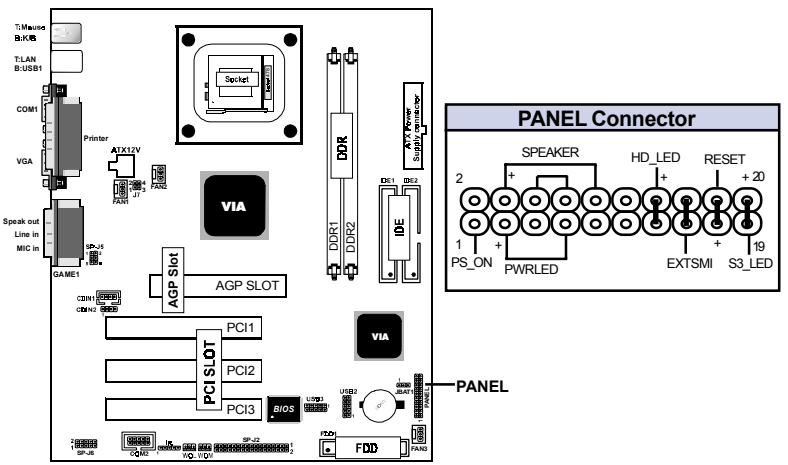


Pin	Definition
1	5V_SB
2	Ground
3	Signal

1.7.9 Front USB1/2 Port Connectors: USB2/USB3



1.7.10 Front Panel Connector: PANEL



ATX Power Switch (PS_ON)

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 (PWRLED)

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

Speaker Connector (SPEAK)

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 (EXTSMI) (Disabled)

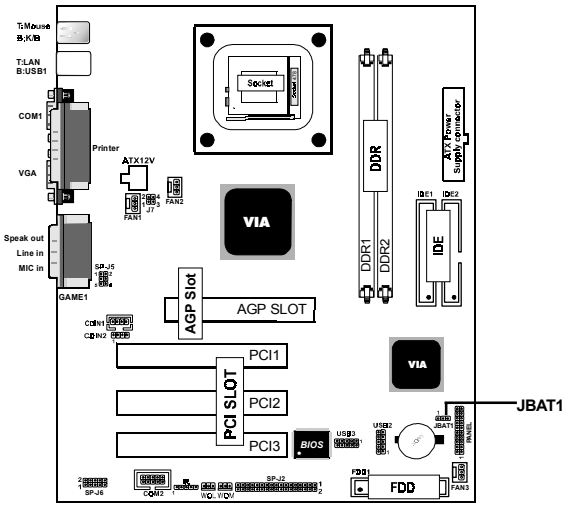
This allows the user to manually place the system into a suspend mode of Green mode. System activity will be instantly decreased to save electricity and expand the life of certain components when the system is not in use. This 2-pin connector (see the figure) connects to the case-mounted suspend switch. 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 on the default setting of Enable.

Reset Switch Lead (RESET)

The connector can be connected to a momentary SPST type switch that is normally open. When the switch is closed, the motherboard resets and runs the POST.

1.7.11 CMOS Function Selection: JBAT1

A battery be used to retain the mainboard configuration in CMOS RAM.



Pin	Definition
1-2	Normal (Default)
2-3	Clear CMOS

NOTE:

(Please follow the procedure below to clear CMOS data.)

(1)Remove the AC power line.

(2)JBAT1(2-3)Closed.

(3)Wait five seconds.

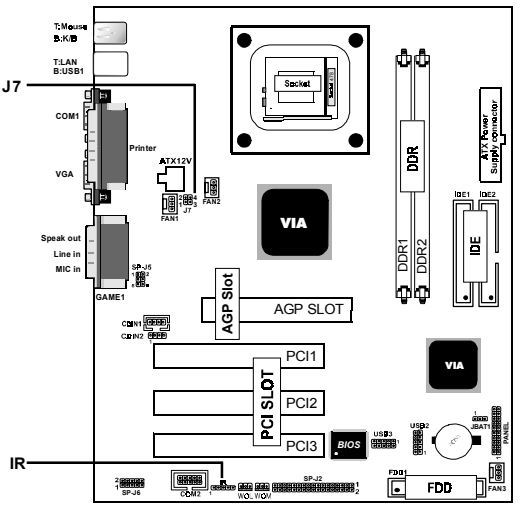
(4)JBAT1(1-2) Closed.

(5)AC Power on.

(6)Reset your desired password or clear CMOS data.

1.7.12 CPU Clock Frequency Setting: J7

Overclocking is operating a CPU/Processor beyond its specified frequency. J7 jumper is used for the CPU Front Side Bus Frequencies from 66MHz to 133MHz.



Pin J7	1-2	3-4	CPU(MHz)
ON	OFF	OFF	66MHz
	OFF	ON	100MHz
OFF	ON	ON	133MHz
	ON	OFF	200MHz

Note:

We don't recommend you overlocking, since it will make the CPU life short and get the risk of CPU damage.

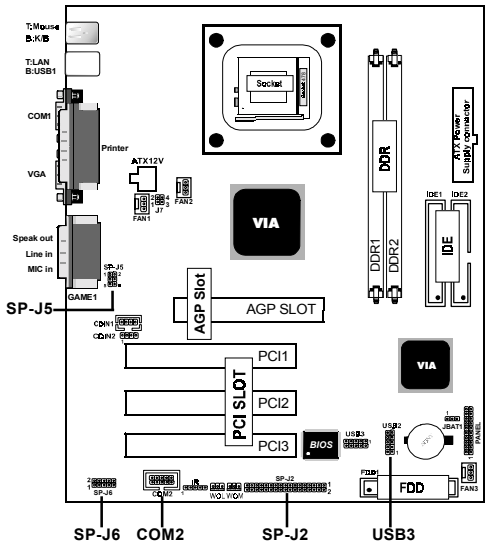
1.7.13 IR infrared module: IR

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

1.7.14 Smart Panel Function: SP-J1/SP-J6/SP-J5/SP-J7/ SP-J8 (optional)

Note:

The motherboard provides the pin leads for Smart Panel II. If you want POST Error Code or Smart Panel II function, please refer to Smart Panel II (SPM266M) manual.



The Smart Panel provides the following panel connectors:

1.7.14.1 Port 80 Debug Function: SP-J6

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

Pin SP-J6	Assignment	Pin SP-J6	Assignment
1	ERD4	2	ERD0
3	ERD5	4	ERD1
5	ERD6	6	ERD2
7	ERD7	8	ERD3
9	GND	10	NC

1.7.14.2 Second BIOS Connector: SP-J1

For Smart Panel connector(SP-J1) to M/B (SP-J1).

Pin SP-J1	Assignment	Pin SP-J1	Assignment
1	VCC3	2	+5V
3	PCI_RST#	4	33MHz
5	CLAD0	6	P66DET
7	CLAD1	8	S66DET
9	GND	10	GND
11	CLAD2	12	HINT
13	CLAD3	14	FWH_IDD1
15	CLAD4	16	VCC3

1.7.14.3 AUX Line Connector: SP-J5

For Smart Panel connector(SP-J5) to M/B (SP-J5).

Pin SP-J5	Assignment	Pin SP-J5	Assignment
1	LINE_OUT_L	2	LINE_OUT_R
3	LINE_IN_L	4	LINE_IN_R
5	MIC_IN_L	6	MIC_IN_R

1.7.14.4 Front COM2 Header Conn.: SP-J7

For Smart Panel connector(SP-J7) to M/B (COM2).

Pin SP-J7	Assignment	Pin SP-J7	Assignment
1	DCD	2	RX
3	TX	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

1.7.14.5 Front USB3,4 Header Conn.: SP-J8(USB2)

For Smart Panel connector(SP-J8) to M/B (USB3).

Pin SP-J8	Assignment	Pin SP-J8	Assignment
1	VCC	2	GND
3	P2-	4	GND
5	P2+	6	P3+
7	GND	8	P3-
9	GND	10	VCC

Chapter 2

Introduction

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

The Award BIOS installed in your computer system's ROM (Read Only Memory)is a custom version of an industry standard BIOS. This means that it supports Intel P4 Processor. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

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

Plug and Play Support

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

EPA Green PC Support

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

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
SDRAM (Synchronous DRAM) are supported.

Support CPU
This AWARD BIOS supports the Intel P4 Processor.

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

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

2.1 Main Menu

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

"WARNING"
The information about BIOS defaults on manual (Figure 1,2,3,4,5,6,7,8,9,10,11,12,13,14)is just for reference, please refer to the BIOS installed on the board for updated information.

◎ Figure 1. Main Menu

CMOS Setup Utility-Copyright (C) 1984-2001 Award Software

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 F10 : Save & Exit Setup	←→↑↓: Select Item
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 more likely to configure 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 Password

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

Set User Password

You can specify both a User and a Supervisor password. When you select either password option, you are prompted for a 1-6 character password. Enter the password and then retype the password when prompted.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

2.2 Standard CMOS Features

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

◎ Figure 2. Standard CMOS Features

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Standard CMOS Features

Date(mm:dd:yy)	Tue,Jun 6 2000	Item Help
Time (hh:mm:ss)	11:26:10	Menu Level
IDE Primary Master	None	
IDE Primary Slave		Change the day, month,year
IDE Secondary Master		
IDE Secondary Master	None	and century.
Drive A	1.44M,3.5 in	
Drive B	None	
Video	EGA/VGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	65472K	
Total	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

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

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

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

CMOS Setup Utility-Copyright (C) 1984-2001Award Software IDE Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master	Auto	
Access Mode	Auto	Menu Level
Capacity	13022MB	
Cylinder	25232	
Head	16	
Precomp	0	
Landing Zone	25231	
Sector	61	

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

2.3 Advanced BIOS Features

◎ Figure 3. Advanced BIOS Features

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Advanced BIOS Features

Virus Warning	Disabled	Item Help
CPU L1 & L2 Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	Menu Level
Quick Power On Self Test	Enabled	
First Boot Device	Floopy	Allows you to
Second Boot Device	HDD-0	choose the
Third Boot Device	LS120	VIRUS warning
Boot Other Device	Enabled	feature for IDE
Swap Floppy Drive	Disabled	Hard Disk boot
Boot Up Floppy Seek	Enabled	sector protection.
Boot Up NumLock Status	On	If this function
Typematic Rate Setting	Disabled	is enabled and
Typematic Rate (Chars/Sec)	6	someone attempts
Typematic Delay (Msec)	250	to write data into
Security Option	Setup	this area,BIOS
OS Select For DRAM	Non-OS2	will show a
Video BIOS Shadow	Enabled	warning message
Small Logo(EPA) Show	Disabled	on screen and
		alarm beep

←→↑↓: 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

This fields allow you to Enable or Disable the CPU'S "Level 1" & "Level 2" cache. Caching allows better performance.

Enabled (default)	Enabled cache.
Disabled	Disabled cache.

CPU L2 Cache ECC Checking

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

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 Enable, BIOS will shorten or skip some check items during POST.

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

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, Disabled.

Boot Other Device

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

Seek disk drives during boot up. Disabled speeds boot-up.

The Choices: Enabled(default), Disabled.

Boot Up NumLock Status

Select power on state for Numlock.

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

Typematic Rate Setting

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

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 limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered in prompt.
Setup (default)	The system will boot, but access to Setup will be denied if the correct password is not entered in prompt.

OS Select For DRAM

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

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

Video BIOS Shadow

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

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

C8000-CFFFF Shadow / D0000-DFFFF Shadow

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

Enabled	Optional ROM is Shadowed.
Disabled (default)	Optional ROM is not Shadowed.

Note: For C8000-DFFFF option-ROM on PCI BIOS, BIOS will automatically enable the shadow RAM. User does not have to select the item.

Small Logo(EPA) Show

The Choices: Disabled(default), Enabled.

2.4 Advanced Chipset Features

This section allows you to configure the system based on the specific 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 need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was lost while using your system.

◎ Figure 4. Advanced Chipset Features

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Advanced Chipset Features

DRAM Clock / Drive Control	Press Enter	Item Help
AGP & P2P Bridge Control	Press Enter	
CPU & PCI Bus Control	Press Enter	Menu Level
Memory Hole	Disabled	
System BIOS Cacheable	Disabled	
Video RAM Cacheable	Disabled	
Delay Prior to Thermal	16 min	
VGA Sharw Memory Size	32M	
VGA Engine Clock	143MHz	
FB Address Convertion	Disabled	
FB Page Close Prediction	Disabled	

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

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DRAM Clock / Drive Control

Current FSB Frequency		Item Help
Current DRAM Frequency		
DRAM Clock	By SPD	Menu Level
DRAM Timing	By SPD	
*SDRAM CAS Latency	2	
*Bank Interleave	Disabled	
*Precharge to Active(Trp)	3T	
*Active to Precharge(Tras)	6T	
*Active to CMD(Trcd)	3T	
DRAM Command Rate	2T Command	
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

DRAM Clock

This item determines DRAM Clock following the CPU host clock.

The Choices: By SPD(default), 100, 133.

DRAM Timing

The DRAM timing is controlled by the DRAM Timing Registers. The Timings programmed into this register are dependent on the system design.

The Choices: By SPD(default), Manual.

SDRAM CAS Latency

2 (default)	Set SDRAM latency Time to 2.
3	Set SDRAM latency Time to 3.

Bank Interleave

The Choices: Disabled(default), Enabled.

Active to Precharge

7T	Set DRAM Precharge in 7.
6T (default)	Set DRAM Precharge in 6.
5T	Set DRAM Precharge in 5.

DRAM Command Rate

The Choices: 2T Command(default), 1T Command.

CPU Read DRAM Mode

The Choices: Medium(default), Slow, Fast.

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AGP & P2P Bridge Control

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

Select the size of the Accelerated Graphic Port(AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycle that hit the aperture range are forwarded to the AGP without any translation.

The Choices: 64M(default), 32M, 16M, 8M, 4M, 128M.

AGP Mode

The Choices: 4X(default), 2X, 1X.

AGP Driving Control

By choosing “Auto” the system BIOS will enable the AGP output Buffer Drive strength that were defined by AGP Card. By choosing “Manual”, it allows user to set AGP output Buffer Drive strength by manual.

The Choices: Auto(default), Manual.

AGP Fast Write

The Choices: Disabled(default), Enabled.

AGP Master 1WS Write

When Enabled, write data to the AGP (Accelerated Graphic Port) that will be executed with one wait states.
The Choices: Disabled(default), Enabled.

AGP Master 1WS Read

When Enabled, read data to the AGP (Accelerated Graphic Port) that will be executed with one wait states.
The Choices: Disabled(default), Enabled.

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CPU & PCI Bus Control

CPU to PCI Write Buffer	Enabled	Item Help
PCI Master 0 WS Write	Enabled	
PCI Delay Transaction	Disabled	Menu Level

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

CPU to PCI Write Buffer

When this field is Enabled, write from the CPU to the PCI bus are buffered, to compensate for the speed differences between the CPU and the PCI bus. When Disabled, the are not buffered and the CPU must wait until the write is complete before starting another write cycle.
The Choices: Enabled(default), Disabled.

PCI Master 0 WS Write

When this field is Enabled, write data to the PCI bus are executed with zero wait states.
The Choices: Enabled(default), Disabled.

PCI Delay Transaction

The Choices: Disabled(default), Enabled.

Memory Hole

In order to improve performace, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB.
The Choices: Diasbled(default), 15M-16M.

System BIOS Cacheable

When enabled, the access to the system BIOS ROM address at F0000H-FFFFFFH is cached.
The Choices: Disabled(default), Enabled.

Video RAM Cacheable

Enabled	Enabled Video RAM Cacheable.
Disabled (default)	Disabled Video RAM Cacheable.

Delay Prior to Thermal

The Choices: 16 min(default), 4min, 8min, 32min.

VGA Share Memory Size

The item onchip VGA share memory size.
The Choices: 32M(default), 16M, 8M, 4M, 2M, Disabled.

VGA Engine Clock

The Choices: 143MHz(default), 133MHz, 120MHz.

2.5 Integrated Peripherals

◎ Figure 5. Integrated Peripherals

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Integrated Peripherals

VIA Onchip IDE Device	Press Enter	Item Help
VIA Onchip PCI Device	Press Enter	
Super IO Device	Press Enter	Menu Level
Init Display First	PCI Slot	
Onchip USB Connetor	All Enabled	
USB Keyboard Support	Disabled	
USB Mouse Support	Disabled	
IDE HDD Block Mode	Enabled	

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

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VIA Onchip IDE Device

On-Chip IDE Channel 0	Enabled	Item Help
On-Chip IDE Channel 1	Enabled	
IDE Prefetch Mode	Enabled	Menu Level
Primary Master PIO	Auto	
Primary Slave PIO	Auto	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
Secondary Master UDMA	Auto	
Secondary Slave UDMA	Auto	

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

On-Chip IDE Channel 0

Enabled (default) Enabled onboard 1st channel IDE port.

Disabled Disabled onboard 1st channel IDE port.

On-Chip IDE Channel 1

Enabled (default) Enabled onboard 2nd channel IDE port.

Disabled Disabled onboard 2nd channel IDE port.

IDE Prefetch Mode

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

Primary Master PIO(for onboard IDE 1st channel)

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4	Manually set the IDE Accessing mode.

Primary Slave PIO(for onboard IDE 2nd channel)

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4	Manually set the IDE Accessing mode.

Secondary Master PIO(for onboard IDE 1st channel)

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4	Manually set the IDE Accessing mode.

Secondary Slave PIO(for onboard IDE 2nd channel)

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4	Manually set the IDE Accessing mode.

Primary Master UDMA

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disabled.

Primary Slave UDMA

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disabled.

Secondary Master UDMA

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disabled.

Secondary Slave UDMA

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disabled.

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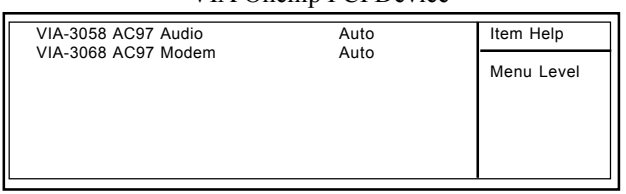
VIA Onchip PCI Device



VIA-3058 AC97 Audio

The default setting of this item utilizes an onboard sound chip for audio output. There is no need to buy and insert a sound card. If a sound card is installed, disable this item.
The Choices: Auto(default), Disabled

VIA-3068 AC97 Modem

The item allows you to control the onboard MC97 Modem controller.
The Choices: Auto(default), Disabled.

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Super IO Device

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	Menu Level
UART Mode Select	Normal	
RxD,TxD Active	Hi,Lo	
IR Transmission Delay	Enabled	
UR2 Duplex Mode	Half	
Use IR Pins	IR-Rx2Tx2	
Onboard Parallel Port	278/IRQ5	
Parallel Port Mode	SPP	
EPP Mode Type	EPP1.7	
ECP Mode Use DMA	3	
Game Port Address	201	
Midi Port Adress	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

Enabled (default)	Enabled onboard FDC Controller.
Disabled	Disabled onboard FDC Controller.

Onboard Serial Port1

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

The Choices: 3F8/IRQ4(default), Auto, (3F8/IRQ4), (3E8/IRQ4), (2E8/IRQ3), Disabled.

Onboard Serial Port 2

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

The Choices: 2F8/IRQ3(default), Auto, (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, SCR, ASKIR.

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.

Onboard Parallel Port

This item allows you to select the I/O address with which to access the onboard parallel port controller.
The Choices: 278/IRQ5(default), Disabled, 378/IRQ7, 3BC/IRQ7.

Parallel Port Mode

SPP (default)	Using Parallel port as Standard Parallel Port.
EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilites Port.
ECP/EPP	Using Parallel port as ECP/EPP mode.

Game Port Address

201 (default)	Set onboard game port to 201.
209	Set onboard game port to 209.
Disabled	Disabled.

Midi Port Address

Disabled	Disabled.
290	Set Midi Port address to 290.
300	Set Midi Port address to 300.
330 (default)	Set Midi Port address to 330.

0**Midi Port IRQ**

10 (default)	Set Midi Port IRQ to 10.
5	Set Midi Port IRQ to 5.

Init Display First

PCI Slot (default)	Set Init Display First to PCI Slot.
AGP	Set Init Display First to onboard AGP.

Onchip USB Connector

This should be enabled if your system has a USB installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

The Choices: All Enabled(default), All Disabled, 1&2 USB Port, 2&3 USB Port, 1&3 USB Port, 1 USB Port, 2 USB Port, 3 USB Port.

USB Keyboard Support

Select Enabled if your system contains a Universal Serial Bus(USB) controller and you have a USB keyboard.

The Choices: Disabled(default), Enabled.

USB Mouse Support

Select Enabled if your system contains a Universal Serial Bus(USB) controller and you have a USB mouse.

The Choices: Disabled(default), Enabled.

IDE HDD Block Mode

Enabled (default)	Enabled.
Disabled	Disabled.

2.6 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

◎ Figure 6. Power Management Setup

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Power Management Setup

ACPI Function	Enabled	Item Help
ACPI Suspend Type	S1(POS)	
Power Management Option	User Define	Menu Level
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 PWRBTN	Instant-Off	
Run VGABIOS if S3 Resume	Yes	
PWRON 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

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

ACPI Suspend Type

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

S1(POS) (default)	Power on Suspend.
S3(STR)	Suspend to RAM.
S1&S3	

Power Management Option

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

The Choices: User Define (default), Min Saving, Max Saving.

HDD Power Down

By default, this is "Disabled", meaning that no matter the mode of the rest of the system, the hard drive will remain ready. Otherwise, you have a range of choices from 1 to 15 minutes or Suspend. This means that you can select to have your hard disk drive be turned off after a selected number of minutes or when the rest or the system goes into a suspend mode.

The Choices: Disabled(default).

Suspend Mode

The **Suspend Mode** fields set the Period of time after each of these modes activates. At Max Saving, these modes activate sequentially (in the given order) after one minute; at Min Saving after one hour.

The Choices: Disabled(default).

Video Off Option

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

The Choices: Suspend->off(default), Always on.

Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank (default)	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.

DPMS Support Initial display power management signaling.

Modem Use IRQ

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

3(default)

4/5/7/9/10/11/NA

Soft-Off by PWRBTN

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

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

Run VGABIOS if S3 Resume

The Choices: Yes(default), No, Auto.

PWRON After PWR-Fail

This option will determine how the system will power on after a power failure.

The Choices: Off(default), On, Former-Sts.

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IRQ / Event Activity Detect

PS2KB Wakeup Select	Hot key	Item Help
PS2KB Wakeup From S3/S4/S5	Disabled	
USB Resume From S3/S4/S5	Disabled	Menu Level
VGA	OFF	
LPT & COM	LPT/COM	
HDD & FDD	ON	
PCI Master	OFF	
PowerOn by PCI Card	Disabled	
Modem Ring Resume	Disabled	
RTC Alarm Resume	Disabled	
Date (of Month)	0	
Resume Time (hh:mm:ss)	21 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

IRQs / Event Activity Monitoring

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

VGA

When set to On, any event occurring at a VGA port will awaken a system which has been powered down.

LPT & COM

When set to On, any event occurring at a COM(serial) / LPT (printer) port will awaken a system which has been powered down.

HDD & FDD

When set to On(default), any event occurring at a hard or floppy drive will awaken a system which has been powered down.

PCI Master

When set to On, any event occurring at a PCI port will awaken a system which has been powered down.

Modem Ring Resume

To use this function, you need a LAN add-on card which supports power on function. It should also support the wake-up on LAN jump. **The Choices: Disabled**(default).

RTC Alarm Resume

When "Enabled", you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

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IRQs Activity Monitoring

Primary INTR	ON	Item Help
IRQ 3 (COM2)	Disabled	
IRQ 4 (COM1)	Enabled	Menu Level
IRQ 5 (LPT2)	Enabled	
IRQ 6 (Flppy Disk)	Enabled	
IRQ 7 (LPT1)	Enabled	
IRQ 8 (RTC Alarm)	Disabled	
IRQ 9 (IRQ2 Redir)	Disabled	
IRQ 10 (Reserved)	Disabled	
IRQ 11 (Reserved)	Disabled	
IRQ 12 (PS2/Mouse)	Enabled	
IRQ 13 (Coprocessor)	Enabled	
IRQ 14 (Hard Disk)	Enabled	
IRQ 15 (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

IRQs Activity Monitoring

When set to On(default), any event occurring at Primary INTR will awaken a system which has been powered down.

The following is a list of IRQ, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. As above, the choices are On and Off. Off is the default. When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

2.7 PnP/PCI Configurations

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

◎ Figure 7. PnP/PCI Configurations

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PnP/PCI Configurations

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

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

PNP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Windows 95. When set to No, BIOS will initialize all the PnP cards. Therefore for non-PnP operating systems (DOS, Netware), this option must be set to No.

Reset Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and proceeds resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved at the system BIOS.
If Disabled (Default)is chosen, the system's 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 set to the "Disabled" mode.

IRQ3	assigned to: PCI PnP
IRQ4	assigned to: PCI PnP
IRQ5	assigned to: PCI PnP
IRQ6	assigned to: PCI PnP
IRQ7	assigned to: PCI PnP
IRQ8	assigned to: PCI PnP
IRQ9	assigned to: PCI PnP
IRQ10	assigned to: PCI PnP
IRQ11	assigned to: PCI PnP
IRQ12	assigned to: PCI PnP
IRQ13	assigned to: PCI PnP
IRQ14	assigned to: PCI PnP
IRQ15	assigned to: PCI PnP

The above settings will be shown on the screen only if "Manual" is chosen for the resources controlled by function.

Resources Controlled By

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

IRQ Resources

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 provide boot information and VGA compatibility.

Disabled (default)	Function Disabled.
Enabled	Function Enabled.

Assign IRQ For VGA

Lets the user choose which IRQ to assign for the VGA.

Assign IRQ For USB

Lets the user choose which IRQ to assign for the USB.

2.8 PC Health Status

◎ Figure 8. PC Health Status

CMOS Setup Utility-Copyright (C) 1984-2001 Award Software

PC Health Status

CPU Warning Temperature	Disabled	Item Help
Current System Temp.		
Current CPU Temperature		Menu Level
Current CPU Fan Speed		
Current System Fan Speed		
Vcore		
+3.3V		
+5V		
+12V		
-12V		
-5V		
VBAT(V)		
5VSB(V)		
Shutdown Temperature	Disabled	

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

Current Voltage(V) Vcore +12V / -12V / +-5V / +3.3V / 5VSB / VBAT

Detect system's voltage status automatically.

Current CPU / System Temperature(℃/℉)

This field displays the current CPU temperature,if your computer contains a monitoring system.

Current CPU Fan / System Fan Speed

These field displays the current speed of up to System Fans,if your computer contains a monitoring system.

CPU Warning Temperature(℃)

Disabled (default)	Disabled.
50℃/122℉	Monitor CPU Temp.at 50℃/122℉.
53℃/127℉	Monitor CPU Temp.at 53℃/127℉.
56℃/133℉	Monitor CPU Temp.at 56℃/133℉
60℃/140℉	Monitor CPU Temp.at 60℃/140℉
63℃/145℉	Monitor CPU Temp.at 63℃/145℉
66℃/151℉	Monitor CPU Temp.at 66℃/151℉
70℃/158℉	Monitor CPU Temp.at 70℃/158℉

Shutdown Temperature(℃/℉)

Disabled(default)	Disabled.
60℃/140℉	Monitor CPU Temp.at 60℃/140℉, if Temp.>60℃/140℉ system will automatically power off.
65℃/149℉	Monitor CPU Temp.at 65℃/149℉, if Temp.>65℃/149℉ system will automatically power off.
70℃/158℉	Monitor CPU Temp.at 70℃/158℉, if Temp.>70℃/158℉ system will automatically power off.
75℃/167℉	Monitor CPU Temp.at 75℃/167℉, if Temp.>75℃/167℉ system will automatically power off.

2.9 Frequency / Voltage Control

◎ Figure 9. Frequency / Voltage Control

CMOS Setup Utility-Copyright (C) 1984-2001 Award Software

Frequency / Voltage Control

Default CPU Vcore	1.475V	Item Help
CPU Vcore Select	Default	
Auto Detect PCI CLK	Enabled	Menu Level
Spread Spectrum	Disabled	
CPU Clock	100MHz	
CPU Clock Ratio	24X	

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

CPU Vcore Select

This option is support CPU vcore select.
The Choices: Default, +0.025V~+0.275V, -0.025V~-0.1V.

Auto Detect PCI CLK

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

Spread Spectrum

This function is designed for the EMI test only.
The Choices: Disabled(default), Enabled.

CPU Clock

This item allows you to select the CPU Host Clock (CPU/ PCI).
The Choices: 100MHz(default)~165MHz.

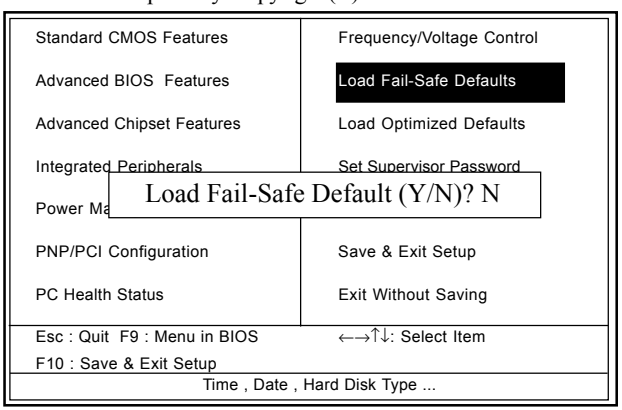
CPU Clock Ratio

This option will not be shown if you are using a CPU with the locked ratio.
The Choices: X8~X50.

2.10 Load Fail-Safe Defaults

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

◎ Figure 10. Load Fail-Safe Defaults

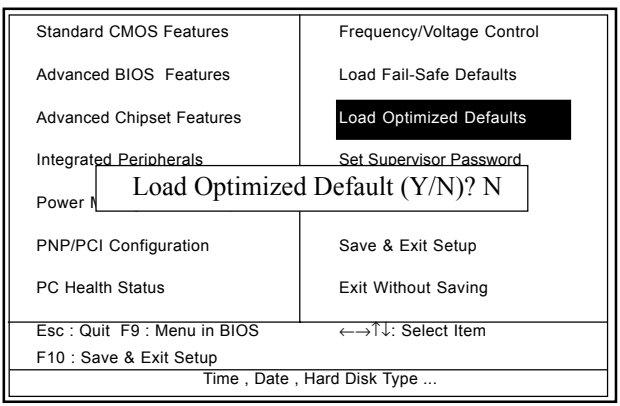


Pressing 'Y' loads the default values that are factory settings for optimal performance of system operations.

2.11 Load Optimized Defaults

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

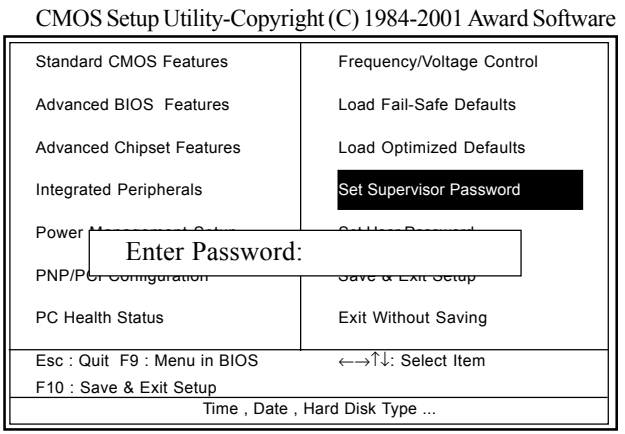
◎ Figure 11. Load Optimized Defaults



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

2.12 Set Supervisor / User Password

◎ Figure 12. 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

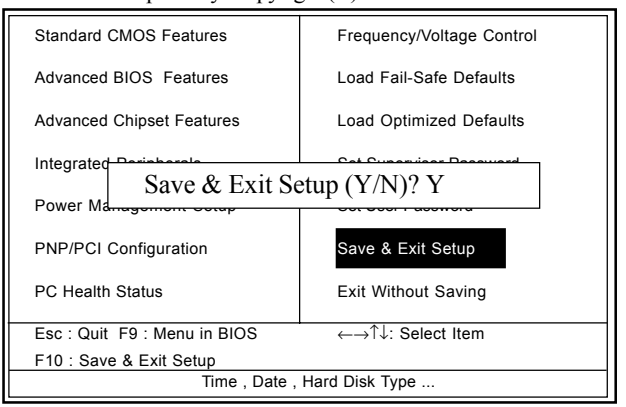
Type a password, up to eight characters, and press <Enter>. The password you type now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <ESC> to abort the selection and not enter a password. 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 and you can enter setup freely.

Password Disabled

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.

2.13 Save & Exit Setup

◎ **Figure 13. Save & Exit Setup**

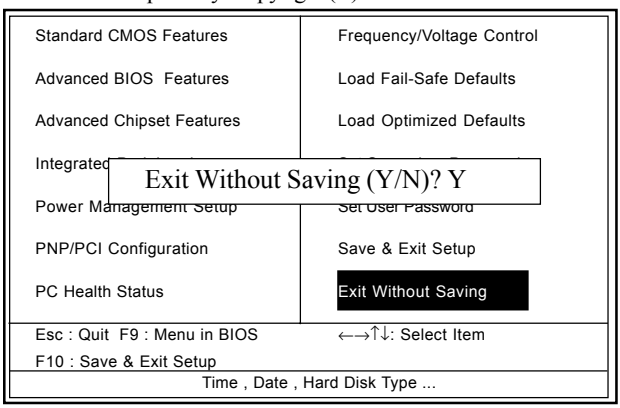


Typing “Y” will quit the Setup Utility and save the user setup value to RTC CMOS RAM.

Typing “N” will return to the Setup Utility.

2.14 Exit Without Saving

◎ **Figure 14. 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

There are motherboard drivers and utilities included in ACORP Bonus CD disc. You don't need to install all of them in order to boot your system. But after you finish the hardware installation, you have to install your operation system first (such as windows 98) before you can install any drivers or utilities. Please refer to your operation system installation guide.

***Note**: Please follow recommended procedure after install Windows ME and Windows XP.*

3.1 Auto-run Menu

You can use the auto-run menu of Bonus CD disc. Choose the utility or driver and select model name.

3.2 Installing VIA 4 in 1 Driver

You can install the VIA 4 in 1 driver (IDE Bus master (For Windows NT use), VIA ATAPI Vendor Support Driver, VIA AGP, IRQ Routing Driver (For Windows 98 use), VIA Registry (INF) Driver) from the Bonus Pack CD disc auto-run menu.

(1)
Click "Driver" Item.

(2)
Click
"Chipset" Item.

(3)
Click
"VIA Service Pack" Item.

(4)
Click "Next".

3.3 Installing Audio Driver

This motherboard comes with an AC97 CODEC and the sound controller is in VIA South Bridge chipset. You can find the audio driver from the Bonus Pack CD disc auto-run menu.

(1)
Click "Driver" Item.

(2)
Click "Audio" Item.

(3)
Click
"VT8233A" Item.

(4)
For Win NT
&Win 2000
&Win 9X_ME system.
Select your O.S. system.

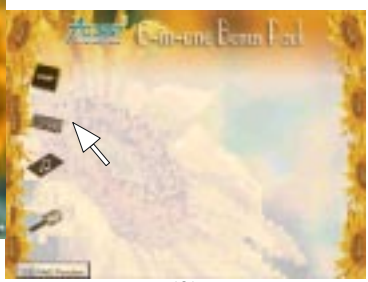
(5)
Click "Next".

(6)
Click "Finish".

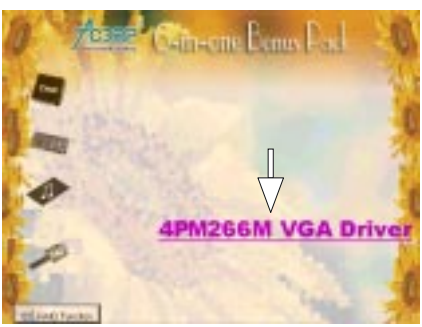
3.4 Installing VGA Driver

VIA PM266M chipset integrated a 2D/3D graphics acceleration.

(1)
Click "Driver" Item.



(2)
Click "VGA" Item.



(3)
Click "4PM266M" Item.

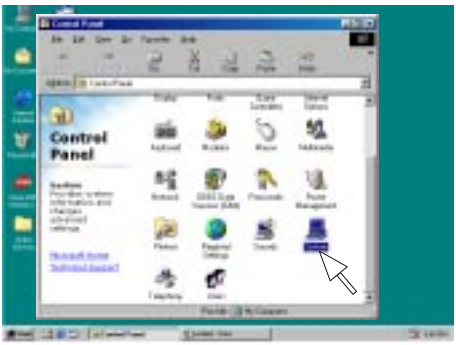
(4)
Click "Next" Item.

(5)
Click "Next" Item.

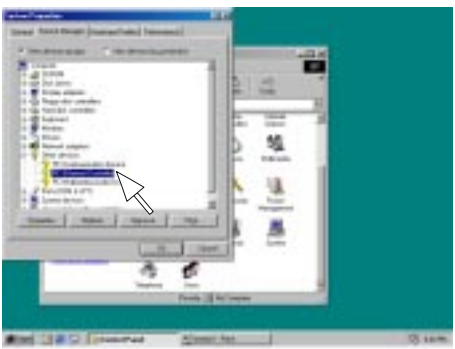
(6)
Click "OK".

3.5 Installing LAN Driver

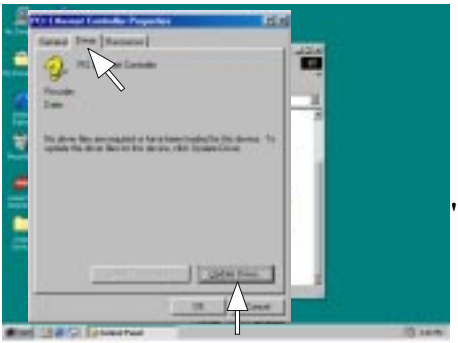
When your mainboard comes with the Realtek® RT8100 LAN controller, you must install the Realtek® LAN driver to support the LAN function. In some operating systems like Windows 98, Windows 200, Windows NT the provided CD will auto-run when you insert the CD disk into the CD-ROM drive.



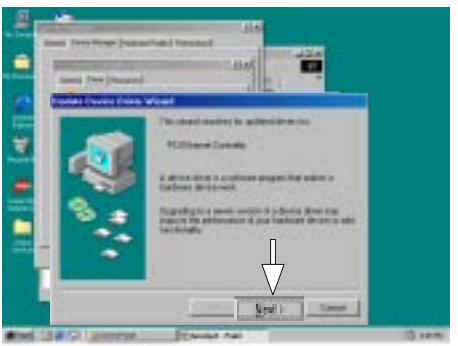
(1) Click "System" Item.



(2) Select "Other Devices" then Click "PCI Ethernet Controller" Item.

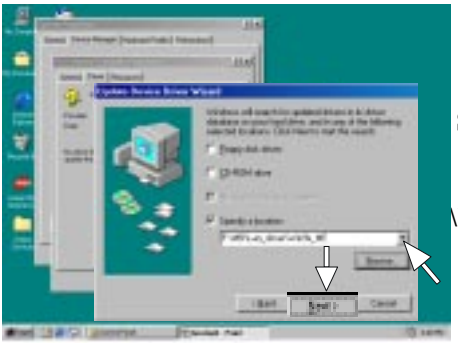


(3)
Select
"Driver"
then Click
"Update Driver" Item.

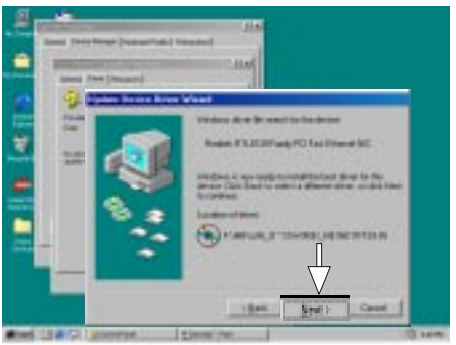


(4)
Click "Next" Item.

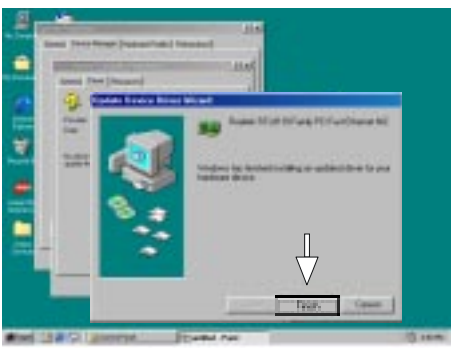
(5)
Click "Next" Item.



(6)
Selection your system environment follow path : \MB\LAN_driver\ then Click "Next" Item.



(7)
Click "Next" Item.



(8)
Click "Finish" Item.

4PM266M

User's Manual Version 1.0

Table of Contents

Introduction

1. Motherboard Description

Table of Contents

Chapter 1

1.1 Introduction

The 4PM266M motherboard is designed for using Intel P4 Front Side Bus Frequency 400MHz CPU, which utilize the Socket-478 design and the memory size expandable to 2.0GB.

This motherboard use the latest VIA P4M266 chipset, appling 266MHz (Double Data Rate) Front Side Bus frequency and 266MHz memory interface delivers a clear upgrade path to the future generation of 266MHz processors, PC-1600/PC-2100 DDR SDRAM. The 4PM266M motherboard offers ULTRA ATA 100/133 to provide speedier HDD throughout that boosts overall system performance.

It is ideal for multi-tasking and fully supporting MS-DOS, Windows, Windows NT , Windows ME, Windows 2000, Novell, OS/2, Windows95/98, Windows 98SE, Windows XP, UNIX, Liunx , SCO UNIX etc. This manual also explains how to install the mainboard for operation, and how to setup your CMOS configuration with the BIOS setup program.

1.2 Package Contents

- HDD UDMA66/100 Cable.
- FDD Cable.
- Flash Memory written for BIOS update.
- USB2 Cable **(Optional)**.
- Fully Setup CD Driver built in utility(Ghost, Antivirus, Adobe Acrobat).
- Manual.

1.3 Features

CPU Processor
- 400MHz System Interface speed or higher.
- Single Socket 478 for Intel P4™ up to 2.2GHz or higher (Northwood Processor).
- Support Intel Netburst™ Micro-architecture.

Chipset
- VIA P4M266 North Bridge.
- VIA VT8233A South Bridge.

PCI/AGP Speed
- Supports 33MHz PCI Bus speed.
- Supports AGP 66 MHz for 2X/4X device.

DDR SDRAM Memory
- Supports 64/128/256/512....MB DDR module socket.
- Supports Synchronous DRAM(2.5V)
- Supports a maximum memory size of 2GB with DDR SDRAM.

Bus Slots
- Provide one AGP slot.
- Three 32-bit PCI bus.

Universal Serial Bus
- Supports two back Universal Serial Bus(USB)Ports and four front Universal serial Bus(USB)Ports.

WOL & WOM (Wake On LAN & Modem)
- Supports system power on from LAN & Modem ring up.

1.3 Features

Flash Memory

- Support 2MB flash memory.

BIOS

- The mainboard BIOS provides Plug & Play BIOS which detects the peripheral devices and expansion cards of the board automatically.
- BIOS support CD-ROM, SCSI, LAN BOOT, Temperature sensor, LAN, Modem, Alarm Bus CLK setup with BIOS.
- The mainboard provides a Desktop Management Interface (DMI) function which records your mainboard specifications.

IDE Built-in On Board

- Supports four IDE devices.
- Supports PIO Mode 5, Master Mode, high performance hard disk drives.
- Support Ultra DMA 33/66/100/133 Bus Master Mode.
- Supports IDE interface with CD-ROM.
- Supports high capacity hard disk drives.
- Support LBA mode.

PCI-Based AC 97 Digital Audio Processor

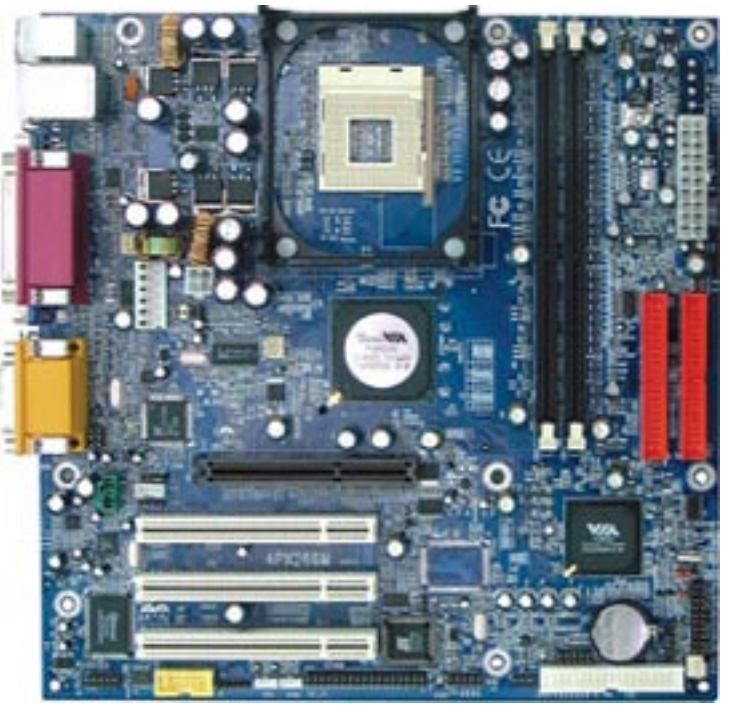
- AC 97 2.1 interface.
- 16 channels of high-quality sample rate conversion.
- 16x8 channel digital mixer.
- Stereo 10 band graphic equalizer.
- Sound Blaster and Sound Blaster Pro emulation.

VGA Share Memory Size: 2M-32M.

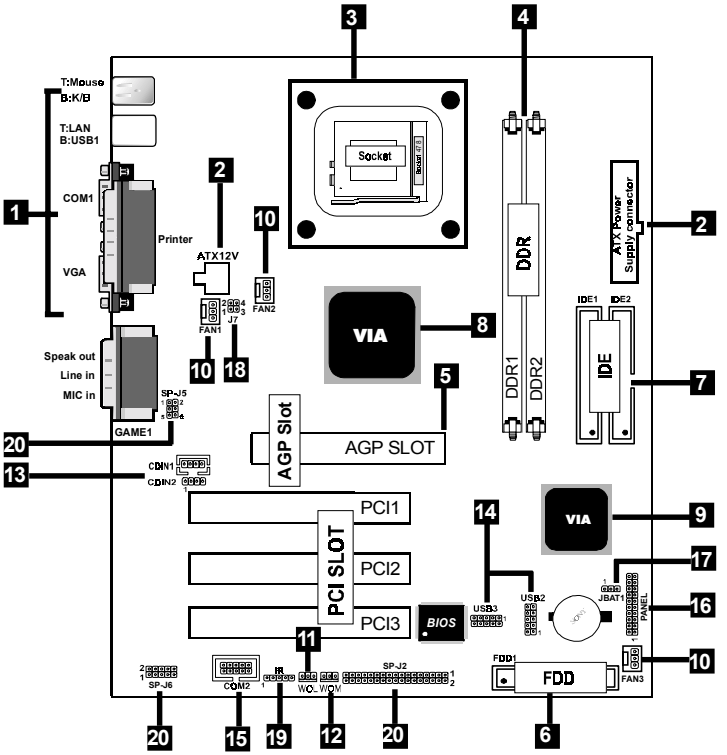
Integrate LAN

- Fast Ethernet Controller 10/100 Mbps.

1.4 4PM266M Motherboard Layout



1.4 4PM266M Layout



1. Back Panel I/O Connectors (Mouse, Keyboard, USB1, LAN, COM1, VGA, Printer, MIC in, Line in, Speaker out, Game stick)
2. ATX Power Connectors (CN2/CN3)
3. CPU Processor (Socket 478)
4. DDR SDRAM Sockets (DDR1/DDR2)

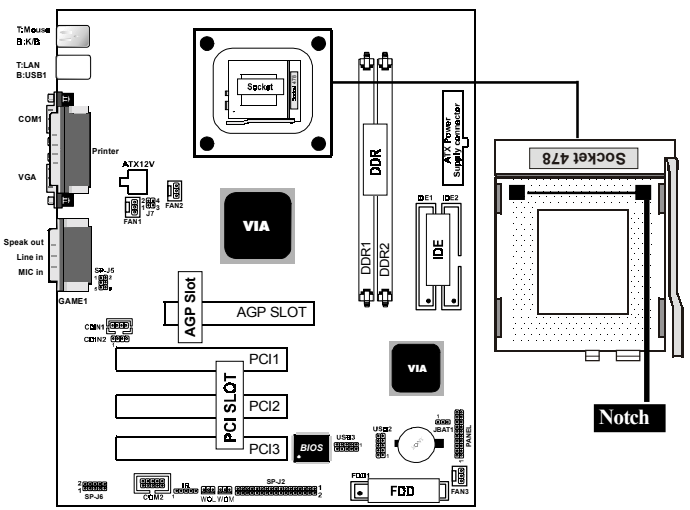
5. AGP Slot
6. Floppy Connector
7. IDE Connectors (IDE1/IDE2)
8. North Bridge (VIA PM266M)
9. South Bridge (VIA VT8233A)
10. Fan Connectors (FAN1/FAN2/FAN3)
11. Wake-On-LAN Connector (WOL)
12. Wake-On-Modem Connector (WOM)
13. CD Audio-In Connectors (CDIN1/CDIN2)
14. Front USB Port Connectors (USB2/3)
15. Front COM2 Port Connector
16. Front Panel Connector (PANEL)
17. CMOS Function Selection (JBAT1)
18. CPU Clock Frequency Setting (J7)
19. IR Connector
20. Smart Panel Function (SP-J2/SP-J6/SP-J5)(optional)

1.5 CPU Installtion

The motherboard operates with Socket 478 for Intel P4™ processor. The CPU should always has a Heat Sink and cooling fan attached to prevent overheating.

CPU Installation Procedures: 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 and look for the white dot or cut edge in the CPU. Match Pin 1 with the white dot or cut edge then insert the CPU.
3. Press the lever down to complete the installation.
4. **Make sure the spec of the heatsink 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.**



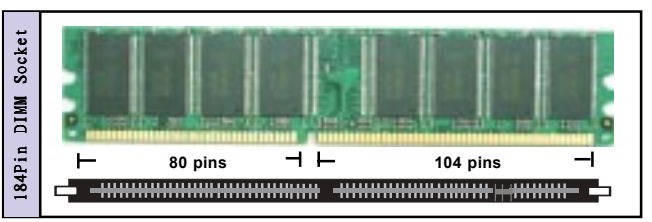
1.6 DDR SDRAM Installtion

The motherboard supports a maximized 2GB memory. It provides two 184-pin unbuffered DDR sockets. It supports 64MB to 1GB DDR memory module.

DDR DRAM 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.

Bank	Memory module
DDR 1	64MB, 128MB, 256MB, 512MB, 1GB
(Bank 0-1)	184 pin, 2.5V DDR SDRAM
DDR 2	64MB, 128MB, 256MB, 512MB, 1GB
(Bank 2-3)	184 pin , 2.5V DDR SDRAM
	Total System Memory (Max 2GB)



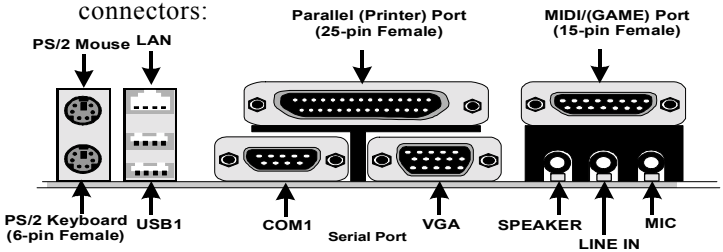
Note:

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

The 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.

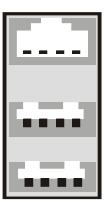
1.7.1.2 USB Port Connector: USB1

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

1.7.1.3 LAN Port Connector

This connector is standard RJ45 connetor for network connector.

RJ-45



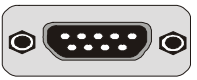
USB1

RJ-45	10/100M LAN Port
Pin	Signal
1	+5V_SB
2	USBP0-(USBP1-)
3	USBP0+(USBP1+)
4	GND

1.7.1.4 The Serial Interfaces: COM1

The serial interface port is sometimes refered 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 your computer system. If you like to transfer the contents of your hard disk to another system, it can be accomplished by serial port.

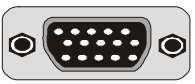
COM1/COM2



1.7.1.5 VGA Interface Connector:VGA(15 Pin)

This connector is for output to VGA-compatible devices.

VGA



1.7.1.6 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 has a 25-pin, DB 25 connector.

1.7.1.7 Joystick / Midi Connector

You can connect a joystick or game pad to this connector.

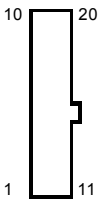
1.7.1.8 Audio Port Connectors

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



Pin CN3	Signal	Pin CN3	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:

1. Make sure that the ATX PIII power supply can take at least 1Amp load on the 5Volt standby lead (5VSB).
2. When you use P4 power supply, you must plug CN2 & CN3 power connector on your system.

Important:

Before you switch on your power supply, please make sure:
1. Memory Module installing is OK.
2. Power supply setting is OK.
3. AGP card for 2X or 4X device is OK.

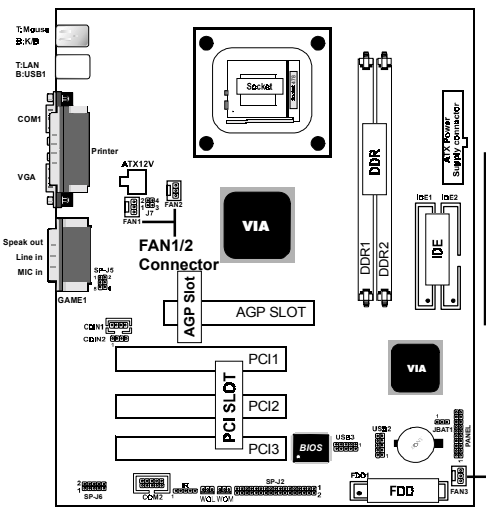
1.7.3 Floppy Disk Connector: FDC

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 support the provided IDE hard disk ribbon cable. After connecting the single end to the board, connect the two plugs 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) (Pin 20 is removed to prevent inserting in the wrong orientation when using ribbon cables with pin 20 plugged).

1.7.5 Fan Connectors: FAN1~3

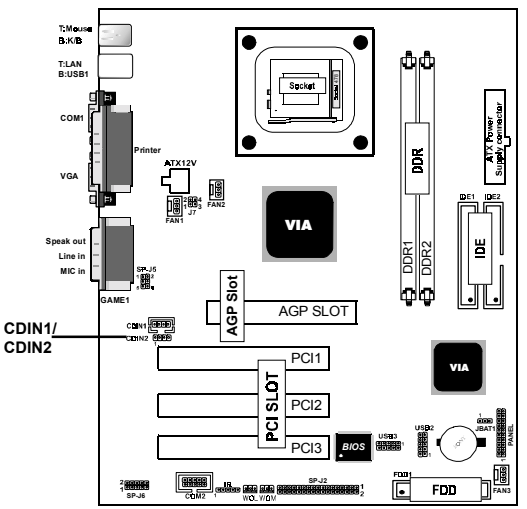


Pin Fan1~3	Definition
1	Signal
2	+12VDC
3	Ground

These connectors support cooling fans of 1Amp or less. Orientate the fans so that the heatsink fins allow airflow to go across the onboard heat sink(s) instead of the expansion slots. Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive, while the black should be ground. Connect the fan's plug to the board taking into consideration the polarity of the this connector.

1.7.6 CD Audio-In Connectors: CDIN1/CDIN2

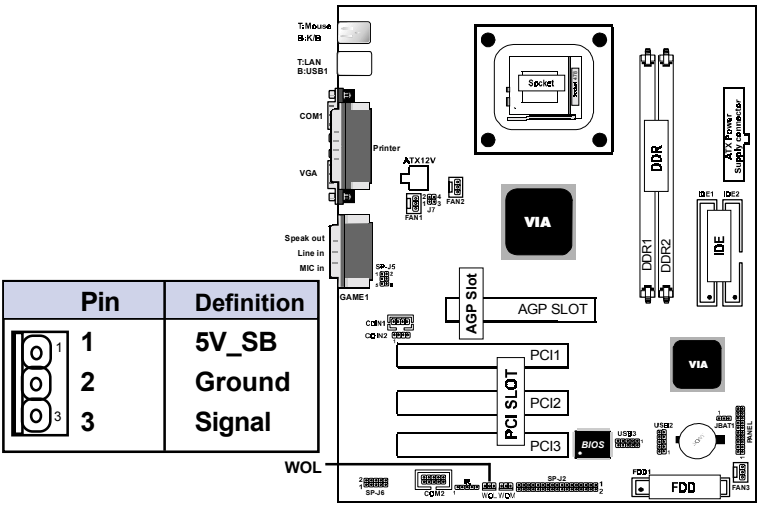
CDIN1/2 are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.



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

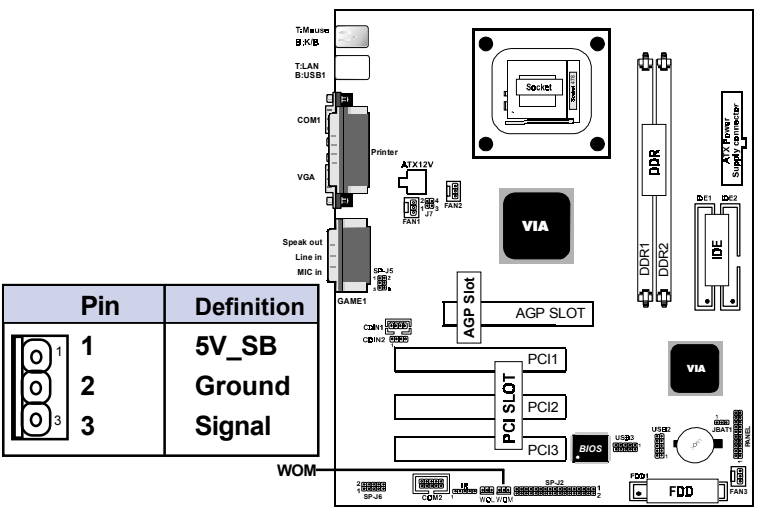
Pin CDIN2	Definition
1	GND
2	CD-L
3	GND
4	CD-R

1.7.7 Wake-On-LAN Connector: WOL



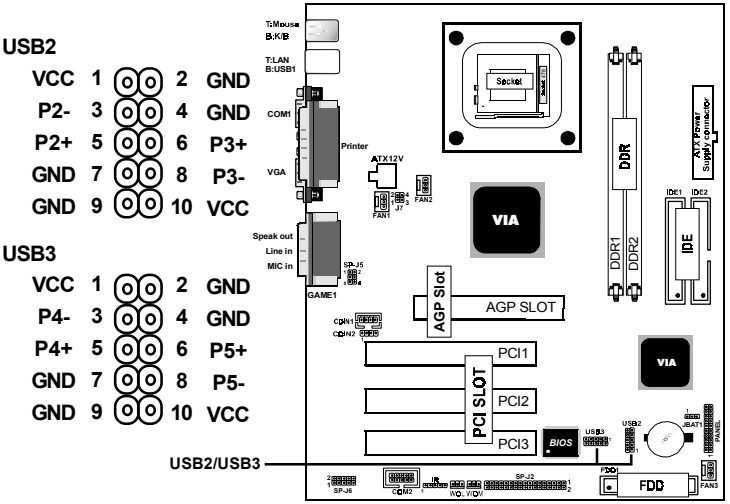
Pin	Definition
1	5V_SB
2	Ground
3	Signal

1.7.8 Wake-On-Modem Connector: WOM

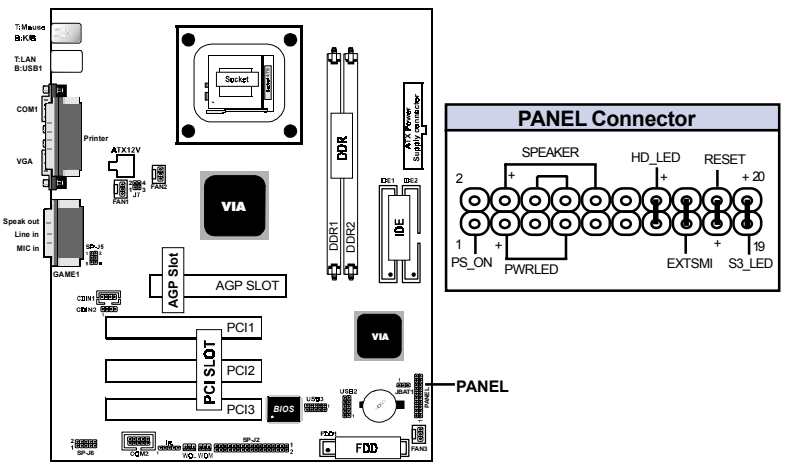


Pin	Definition
1	5V_SB
2	Ground
3	Signal

1.7.9 Front USB1/2 Port Connectors: USB2/USB3



1.7.10 Front Panel Connector: PANEL



ATX Power Switch (PS_ON)

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 (PWRLED)

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

Speaker Connector (SPEAK)

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 (EXTSMI) (Disabled)

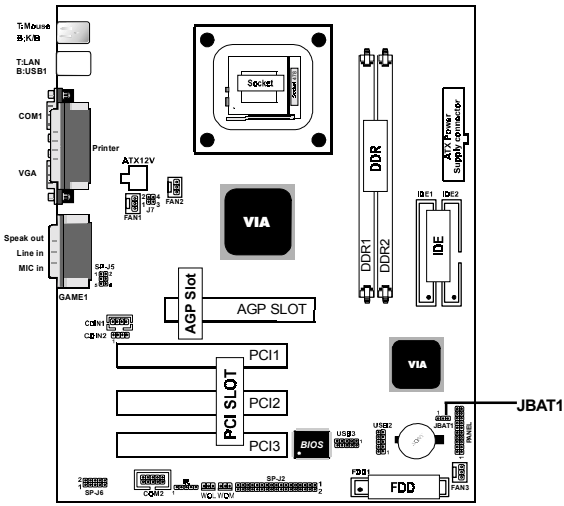
This allows the user to manually place the system into a suspend mode of Green mode. System activity will be instantly decreased to save electricity and expand the life of certain components when the system is not in use. This 2-pin connector (see the figure) connects to the case-mounted suspend switch. 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 on the default setting of Enable.

Reset Switch Lead (RESET)

The connector can be connected to a momentary SPST type switch that is normally open. When the switch is closed, the motherboard resets and runs the POST.

1.7.11 CMOS Function Selection: JBAT1

A battery be used to retain the mainboard configuration in CMOS RAM.



Pin	Definition
1-2	Normal (Default)
2-3	Clear CMOS

NOTE:

(Please follow the procedure below to clear CMOS data.)

(1)Remove the AC power line.

(2)JBAT1(2-3)Closed.

(3)Wait five seconds.

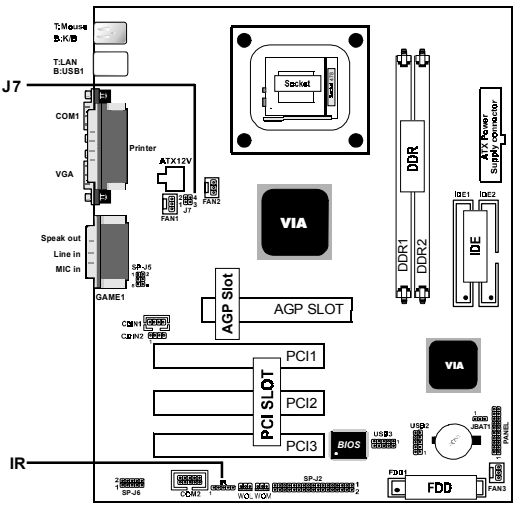
(4)JBAT1(1-2) Closed.

(5)AC Power on.

(6)Reset your desired password or clear CMOS data.

1.7.12 CPU Clock Frequency Setting: J7

Overclocking is operating a CPU/Processor beyond its specified frequency. J7 jumper is used for the CPU Front Side Bus Frequencies from 66MHz to 133MHz.



Pin J7	1-2	3-4	CPU(MHz)
ON	OFF	OFF	66MHz
	OFF	ON	100MHz
OFF	ON	ON	133MHz
	ON	OFF	200MHz

Note:

We don't recommend you overlocking, since it will make the CPU life short and get the risk of CPU damage.

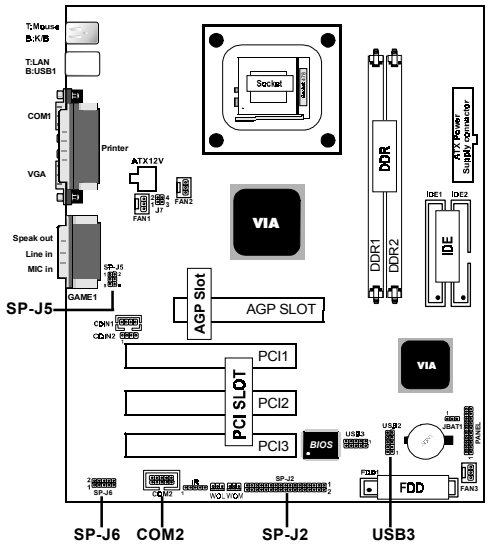
1.7.13 IR infrared module: IR

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

1.7.14 Smart Panel Function: SP-J1/SP-J6/SP-J5/SP-J7/ SP-J8 (optional)

Note:

The motherboard provides the pin leads for Smart Panel II. If you want POST Error Code or Smart Panel II function, please refer to Smart Panel II (SPM266M) manual.



The Smart Panel provides the following panel connectors:

1.7.14.1 Port 80 Debug Function: SP-J6

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

Pin SP-J6	Assignment	Pin SP-J6	Assignment
1	ERD4	2	ERD0
3	ERD5	4	ERD1
5	ERD6	6	ERD2
7	ERD7	8	ERD3
9	GND	10	NC

1.7.14.2 Second BIOS Connector: SP-J1

For Smart Panel connector(SP-J1) to M/B (SP-J1).

Pin SP-J1	Assignment	Pin SP-J1	Assignment
1	VCC3	2	+5V
3	PCI_RST#	4	33MHz
5	CLAD0	6	P66DET
7	CLAD1	8	S66DET
9	GND	10	GND
11	CLAD2	12	HINT
13	CLAD3	14	FWH_IDD1
15	CLAD4	16	VCC3

1.7.14.3 AUX Line Connector: SP-J5

For Smart Panel connector(SP-J5) to M/B (SP-J5).

Pin SP-J5	Assignment	Pin SP-J5	Assignment
1	LINE_OUT_L	2	LINE_OUT_R
3	LINE_IN_L	4	LINE_IN_R
5	MIC_IN_L	6	MIC_IN_R

1.7.14.4 Front COM2 Header Conn.: SP-J7

For Smart Panel connector(SP-J7) to M/B (COM2).

Pin SP-J7	Assignment	Pin SP-J7	Assignment
1	DCD	2	RX
3	TX	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

1.7.14.5 Front USB3,4 Header Conn.: SP-J8(USB2)

For Smart Panel connector(SP-J8) to M/B (USB3).

Pin SP-J8	Assignment	Pin SP-J8	Assignment
1	VCC	2	GND
3	P2-	4	GND
5	P2+	6	P3+
7	GND	8	P3-
9	GND	10	VCC

Chapter 2

Introduction

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

The Award BIOS installed in your computer system's ROM (Read Only Memory)is a custom version of an industry standard BIOS. This means that it supports Intel P4 Processor. The BIOS provides critical low-level support for standard devices such as disk drives and serial and parallel ports.

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

Plug and Play Support

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

EPA Green PC Support

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

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
SDRAM (Synchronous DRAM) are supported.

Support CPU
This AWARD BIOS supports the Intel P4 Processor.

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

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

2.1 Main Menu

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

"WARNING"
The information about BIOS defaults on manual (Figure 1,2,3,4,5,6,7,8,9,10,11,12,13,14)is just for reference, please refer to the BIOS installed on the board for updated information.

◎ Figure 1. Main Menu

CMOS Setup Utility-Copyright (C) 1984-2001 Award Software

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 F10 : Save & Exit Setup	←→↑↓: Select Item
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 more likely to configure 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 Password

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

Set User Password

You can specify both a User and a Supervisor password. When you select either password option, you are prompted for a 1-6 character password. Enter the password and then retype the password when prompted.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

2.2 Standard CMOS Features

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

◎ Figure 2. Standard CMOS Features

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Standard CMOS Features

Date(mm:dd:yy)	Tue,Jun 6 2000	Item Help
Time (hh:mm:ss)	11:26:10	Menu Level
IDE Primary Master	None	
IDE Primary Slave		Change the day, month,year
IDE Secondary Master		
IDE Secondary Master	None	and century.
Drive A	1.44M,3.5 in	
Drive B	None	
Video	EGA/VGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	65472K	
Total	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

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

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

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

CMOS Setup Utility-Copyright (C) 1984-2001Award Software IDE Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master	Auto	
Access Mode	Auto	Menu Level
Capacity	13022MB	
Cylinder	25232	
Head	16	
Precomp	0	
Landing Zone	25231	
Sector	61	

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

2.3 Advanced BIOS Features

◎ Figure 3. Advanced BIOS Features

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Advanced BIOS Features

Virus Warning	Disabled	Item Help
CPU L1 & L2 Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	Menu Level
Quick Power On Self Test	Enabled	
First Boot Device	Floopy	Allows you to
Second Boot Device	HDD-0	choose the
Third Boot Device	LS120	VIRUS warning
Boot Other Device	Enabled	feature for IDE
Swap Floppy Drive	Disabled	Hard Disk boot
Boot Up Floppy Seek	Enabled	sector protection.
Boot Up NumLock Status	On	If this function
Typematic Rate Setting	Disabled	is enabled and
Typematic Rate (Chars/Sec)	6	someone attempts
Typematic Delay (Msec)	250	to write data into
Security Option	Setup	this area,BIOS
OS Select For DRAM	Non-OS2	will show a
Video BIOS Shadow	Enabled	warning message
Small Logo(EPA) Show	Disabled	on screen and
		alarm beep

←→↑↓: 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

This fields allow you to Enable or Disable the CPU'S "Level 1" & "Level 2" cache. Caching allows better performance.

Enabled (default)	Enabled cache.
Disabled	Disabled cache.

CPU L2 Cache ECC Checking

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

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 Enable, BIOS will shorten or skip some check items during POST.

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

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, Disabled.

Boot Other Device

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

Seek disk drives during boot up. Disabled speeds boot-up.

The Choices: Enabled(default), Disabled.

Boot Up NumLock Status

Select power on state for Numlock.

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

Typematic Rate Setting

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

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 limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered in prompt.
Setup (default)	The system will boot, but access to Setup will be denied if the correct password is not entered in prompt.

OS Select For DRAM

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

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

Video BIOS Shadow

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

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

C8000-CFFFF Shadow / D0000-DFFFF Shadow

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

Enabled	Optional ROM is Shadowed.
Disabled (default)	Optional ROM is not Shadowed.

Note: For C8000-DFFFF option-ROM on PCI BIOS, BIOS will automatically enable the shadow RAM. User does not have to select the item.

Small Logo(EPA) Show

The Choices: Disabled(default), Enabled.

2.4 Advanced Chipset Features

This section allows you to configure the system based on the specific 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 need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was lost while using your system.

◎ Figure 4. Advanced Chipset Features

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Advanced Chipset Features

DRAM Clock / Drive Control	Press Enter	Item Help
AGP & P2P Bridge Control	Press Enter	
CPU & PCI Bus Control	Press Enter	Menu Level
Memory Hole	Disabled	
System BIOS Cacheable	Disabled	
Video RAM Cacheable	Disabled	
Delay Prior to Thermal	16 min	
VGA Sharw Memory Size	32M	
VGA Engine Clock	143MHz	
FB Address Convertion	Disabled	
FB Page Close Prediction	Disabled	

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

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DRAM Clock / Drive Control

Current FSB Frequency		Item Help
Current DRAM Frequency		
DRAM Clock	By SPD	Menu Level
DRAM Timing	By SPD	
*SDRAM CAS Latency	2	
*Bank Interleave	Disabled	
*Precharge to Active(Trp)	3T	
*Active to Precharge(Tras)	6T	
*Active to CMD(Trcd)	3T	
DRAM Command Rate	2T Command	
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

DRAM Clock

This item determines DRAM Clock following the CPU host clock.

The Choices: By SPD(default), 100, 133.

DRAM Timing

The DRAM timing is controlled by the DRAM Timing Registers. The Timings programmed into this register are dependent on the system design.

The Choices: By SPD(default), Manual.

SDRAM CAS Latency

2 (default)	Set SDRAM latency Time to 2.
3	Set SDRAM latency Time to 3.

Bank Interleave

The Choices: Disabled(default), Enabled.

Active to Precharge

7T	Set DRAM Precharge in 7.
6T (default)	Set DRAM Precharge in 6.
5T	Set DRAM Precharge in 5.

DRAM Command Rate

The Choices: 2T Command(default), 1T Command.

CPU Read DRAM Mode

The Choices: Medium(default), Slow, Fast.

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AGP & P2P Bridge Control

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

Select the size of the Accelerated Graphic Port(AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycle that hit the aperture range are forwarded to the AGP without any translation.

The Choices: 64M(default), 32M, 16M, 8M, 4M, 128M.

AGP Mode

The Choices: 4X(default), 2X, 1X.

AGP Driving Control

By choosing “Auto” the system BIOS will enable the AGP output Buffer Drive strength that were defined by AGP Card. By choosing “Manual”, it allows user to set AGP output Buffer Drive strength by manual.

The Choices: Auto(default), Manual.

AGP Fast Write

The Choices: Disabled(default), Enabled.

AGP Master 1WS Write

When Enabled, write data to the AGP (Accelerated Graphic Port) that will be executed with one wait states.
The Choices: Disabled(default), Enabled.

AGP Master 1WS Read

When Enabled, read data to the AGP (Accelerated Graphic Port) that will be executed with one wait states.
The Choices: Disabled(default), Enabled.

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CPU & PCI Bus Control

CPU to PCI Write Buffer	Enabled	Item Help
PCI Master 0 WS Write	Enabled	
PCI Delay Transaction	Disabled	Menu Level

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

CPU to PCI Write Buffer

When this field is Enabled, write from the CPU to the PCI bus are buffered, to compensate for the speed differences between the CPU and the PCI bus. When Disabled, the are not buffered and the CPU must wait until the write is complete before starting another write cycle.
The Choices: Enabled(default), Disabled.

PCI Master 0 WS Write

When this field is Enabled, write data to the PCI bus are executed with zero wait states.
The Choices: Enabled(default), Disabled.

PCI Delay Transaction

The Choices: Disabled(default), Enabled.

Memory Hole

In order to improve performace, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB.
The Choices: Diasbled(default), 15M-16M.

System BIOS Cacheable

When enabled, the access to the system BIOS ROM address at F0000H-FFFFFFH is cached.
The Choices: Disabled(default), Enabled.

Video RAM Cacheable

Enabled	Enabled Video RAM Cacheable.
Disabled (default)	Disabled Video RAM Cacheable.

Delay Prior to Thermal

The Choices: 16 min(default), 4min, 8min, 32min.

VGA Share Memory Size

The item onchip VGA share memory size.
The Choices: 32M(default), 16M, 8M, 4M, 2M, Disabled.

VGA Engine Clock

The Choices: 143MHz(default), 133MHz, 120MHz.

2.5 Integrated Peripherals

◎ Figure 5. Integrated Peripherals

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Integrated Peripherals

VIA Onchip IDE Device	Press Enter	Item Help
VIA Onchip PCI Device	Press Enter	
Super IO Device	Press Enter	Menu Level
Init Display First	PCI Slot	
Onchip USB Connetor	All Enabled	
USB Keyboard Support	Disabled	
USB Mouse Support	Disabled	
IDE HDD Block Mode	Enabled	

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

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VIA Onchip IDE Device

On-Chip IDE Channel 0	Enabled	Item Help
On-Chip IDE Channel 1	Enabled	
IDE Prefetch Mode	Enabled	Menu Level
Primary Master PIO	Auto	
Primary Slave PIO	Auto	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
Secondary Master UDMA	Auto	
Secondary Slave UDMA	Auto	

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

On-Chip IDE Channel 0

Enabled (default) Enabled onboard 1st channel IDE port.

Disabled Disabled onboard 1st channel IDE port.

On-Chip IDE Channel 1

Enabled (default) Enabled onboard 2nd channel IDE port.

Disabled Disabled onboard 2nd channel IDE port.

IDE Prefetch Mode

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

Primary Master PIO(for onboard IDE 1st channel)

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4	Manually set the IDE Accessing mode.

Primary Slave PIO(for onboard IDE 2nd channel)

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4	Manually set the IDE Accessing mode.

Secondary Master PIO(for onboard IDE 1st channel)

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4	Manually set the IDE Accessing mode.

Secondary Slave PIO(for onboard IDE 2nd channel)

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Mode 0~4	Manually set the IDE Accessing mode.

Primary Master UDMA

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disabled.

Primary Slave UDMA

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disabled.

Secondary Master UDMA

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disabled.

Secondary Slave UDMA

Auto (default)	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disabled.

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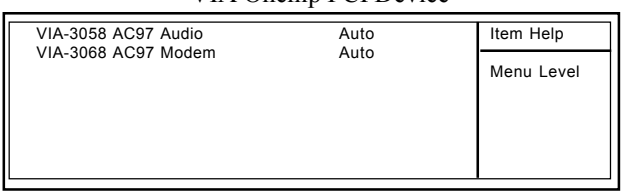
VIA Onchip PCI Device



VIA-3058 AC97 Audio

The default setting of this item utilizes an onboard sound chip for audio output. There is no need to buy and insert a sound card. If a sound card is installed, disable this item.
The Choices: Auto(default), Disabled

VIA-3068 AC97 Modem

The item allows you to control the onboard MC97 Modem controller.
The Choices: Auto(default), Disabled.

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Super IO Device

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	Menu Level
UART Mode Select	Normal	
RxD,TxD Active	Hi,Lo	
IR Transmission Delay	Enabled	
UR2 Duplex Mode	Half	
Use IR Pins	IR-Rx2Tx2	
Onboard Parallel Port	278/IRQ5	
Parallel Port Mode	SPP	
EPP Mode Type	EPP1.7	
ECP Mode Use DMA	3	
Game Port Address	201	
Midi Port Adress	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

Enabled (default)	Enabled onboard FDC Controller.
Disabled	Disabled onboard FDC Controller.

Onboard Serial Port1

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

The Choices: 3F8/IRQ4(default), Auto, (3F8/IRQ4), (3E8/IRQ4), (2E8/IRQ3), Disabled.

Onboard Serial Port 2

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

The Choices: 2F8/IRQ3(default), Auto, (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, SCR, ASKIR.

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.

Onboard Parallel Port

This item allows you to select the I/O address with which to access the onboard parallel port controller.
The Choices: 278/IRQ5(default), Disabled, 378/IRQ7, 3BC/IRQ7.

Parallel Port Mode

SPP (default)	Using Parallel port as Standard Parallel Port.
EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilites Port.
ECP/EPP	Using Parallel port as ECP/EPP mode.

Game Port Address

201 (default)	Set onboard game port to 201.
209	Set onboard game port to 209.
Disabled	Disabled.

Midi Port Address

Disabled	Disabled.
290	Set Midi Port address to 290.
300	Set Midi Port address to 300.
330 (default)	Set Midi Port address to 330.

0**Midi Port IRQ**

10 (default)	Set Midi Port IRQ to 10.
5	Set Midi Port IRQ to 5.

Init Display First

PCI Slot (default)	Set Init Display First to PCI Slot.
AGP	Set Init Display First to onboard AGP.

Onchip USB Connector

This should be enabled if your system has a USB installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

The Choices: All Enabled(default), All Disabled, 1&2 USB Port, 2&3 USB Port, 1&3 USB Port, 1 USB Port, 2 USB Port, 3 USB Port.

USB Keyboard Support

Select Enabled if your system contains a Universal Serial Bus(USB) controller and you have a USB keyboard.

The Choices: Disabled(default), Enabled.

USB Mouse Support

Select Enabled if your system contains a Universal Serial Bus(USB) controller and you have a USB mouse.

The Choices: Disabled(default), Enabled.

IDE HDD Block Mode

Enabled (default)	Enabled.
Disabled	Disabled.

2.6 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

◎ Figure 6. Power Management Setup

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Power Management Setup

ACPI Function	Enabled	Item Help
ACPI Suspend Type	S1(POS)	
Power Management Option	User Define	Menu Level
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 PWRBTN	Instant-Off	
Run VGABIOS if S3 Resume	Yes	
PWRON 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

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

ACPI Suspend Type

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

S1(POS) (default)	Power on Suspend.
S3(STR)	Suspend to RAM.
S1&S3	

Power Management Option

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

The Choices: User Define (default), Min Saving, Max Saving.

HDD Power Down

By default, this is "Disabled", meaning that no matter the mode of the rest of the system, the hard drive will remain ready. Otherwise, you have a range of choices from 1 to 15 minutes or Suspend. This means that you can select to have your hard disk drive be turned off after a selected number of minutes or when the rest or the system goes into a suspend mode.

The Choices: Disabled(default).

Suspend Mode

The **Suspend Mode** fields set the Period of time after each of these modes activates. At Max Saving, these modes activate sequentially (in the given order) after one minute; at Min Saving after one hour.

The Choices: Disabled(default).

Video Off Option

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

The Choices: Suspend->off(default), Always on.

Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank (default)	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.

DPMS Support Initial display power management signaling.

Modem Use IRQ

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

3(default)

4/5/7/9/10/11/NA

Soft-Off by PWRBTN

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

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

Run VGABIOS if S3 Resume

The Choices: Yes(default), No, Auto.

PWRON After PWR-Fail

This option will determine how the system will power on after a power failure.

The Choices: Off(default), On, Former-Sts.

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IRQ / Event Activity Detect

PS2KB Wakeup Select	Hot key	Item Help
PS2KB Wakeup From S3/S4/S5	Disabled	
USB Resume From S3/S4/S5	Disabled	Menu Level
VGA	OFF	
LPT & COM	LPT/COM	
HDD & FDD	ON	
PCI Master	OFF	
PowerOn by PCI Card	Disabled	
Modem Ring Resume	Disabled	
RTC Alarm Resume	Disabled	
Date (of Month)	0	
Resume Time (hh:mm:ss)	21 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

IRQs / Event Activity Monitoring

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

VGA

When set to On, any event occurring at a VGA port will awaken a system which has been powered down.

LPT & COM

When set to On, any event occurring at a COM(serial) / LPT (printer) port will awaken a system which has been powered down.

HDD & FDD

When set to On(default), any event occurring at a hard or floppy drive will awaken a system which has been powered down.

PCI Master

When set to On, any event occurring at a PCI port will awaken a system which has been powered down.

Modem Ring Resume

To use this function, you need a LAN add-on card which supports power on function. It should also support the wake-up on LAN jump. **The Choices: Disabled**(default).

RTC Alarm Resume

When "Enabled", you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

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IRQs Activity Monitoring

Primary INTR	ON	Item Help
IRQ 3 (COM2)	Disabled	
IRQ 4 (COM1)	Enabled	Menu Level
IRQ 5 (LPT2)	Enabled	
IRQ 6 (Flppy Disk)	Enabled	
IRQ 7 (LPT1)	Enabled	
IRQ 8 (RTC Alarm)	Disabled	
IRQ 9 (IRQ2 Redir)	Disabled	
IRQ 10 (Reserved)	Disabled	
IRQ 11 (Reserved)	Disabled	
IRQ 12 (PS2/Mouse)	Enabled	
IRQ 13 (Coprocessor)	Enabled	
IRQ 14 (Hard Disk)	Enabled	
IRQ 15 (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

IRQs Activity Monitoring

When set to On(default), any event occurring at Primary INTR will awaken a system which has been powered down.

The following is a list of IRQ, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. As above, the choices are On and Off. Off is the default. When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

2.7 PnP/PCI Configurations

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

◎ Figure 7. PnP/PCI Configurations

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PnP/PCI Configurations

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

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

PNP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Windows 95. When set to No, BIOS will initialize all the PnP cards. Therefore for non-PnP operating systems (DOS, Netware), this option must be set to No.

Reset Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and proceeds resources from conflict. Every peripheral device has a node, which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCD to the memory locations. These locations (4K) are reserved at the system BIOS.
If Disabled (Default)is chosen, the system's 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 set to the "Disabled" mode.

IRQ3	assigned to: PCI PnP
IRQ4	assigned to: PCI PnP
IRQ5	assigned to: PCI PnP
IRQ6	assigned to: PCI PnP
IRQ7	assigned to: PCI PnP
IRQ8	assigned to: PCI PnP
IRQ9	assigned to: PCI PnP
IRQ10	assigned to: PCI PnP
IRQ11	assigned to: PCI PnP
IRQ12	assigned to: PCI PnP
IRQ13	assigned to: PCI PnP
IRQ14	assigned to: PCI PnP
IRQ15	assigned to: PCI PnP

The above settings will be shown on the screen only if "Manual" is chosen for the resources controlled by function.

Resources Controlled By

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

IRQ Resources

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 provide boot information and VGA compatibility.

Disabled (default)	Function Disabled.
Enabled	Function Enabled.

Assign IRQ For VGA

Lets the user choose which IRQ to assign for the VGA.

Assign IRQ For USB

Lets the user choose which IRQ to assign for the USB.

2.8 PC Health Status

◎ Figure 8. PC Health Status

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PC Health Status

CPU Warning Temperature	Disabled	Item Help
Current System Temp.		
Current CPU Temperature		Menu Level
Current CPU Fan Speed		
Current System Fan Speed		
Vcore		
+3.3V		
+5V		
+12V		
-12V		
-5V		
VBAT(V)		
5VSB(V)		
Shutdown Temperature	Disabled	

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

Current Voltage(V) Vcore +12V / -12V / +-5V / +3.3V / 5VSB / VBAT

Detect system's voltage status automatically.

Current CPU / System Temperature(℃/℉)

This field displays the current CPU temperature,if your computer contains a monitoring system.

Current CPU Fan / System Fan Speed

These field displays the current speed of up to System Fans,if your computer contains a monitoring system.

CPU Warning Temperature(℃)

Disabled (default)	Disabled.
50℃/122℉	Monitor CPU Temp.at 50℃/122℉.
53℃/127℉	Monitor CPU Temp.at 53℃/127℉.
56℃/133℉	Monitor CPU Temp.at 56℃/133℉
60℃/140℉	Monitor CPU Temp.at 60℃/140℉
63℃/145℉	Monitor CPU Temp.at 63℃/145℉
66℃/151℉	Monitor CPU Temp.at 66℃/151℉
70℃/158℉	Monitor CPU Temp.at 70℃/158℉

Shutdown Temperature(℃/℉)

Disabled(default)	Disabled.
60℃/140℉	Monitor CPU Temp.at 60℃/140℉, if Temp.>60℃/140℉ system will automatically power off.
65℃/149℉	Monitor CPU Temp.at 65℃/149℉, if Temp.>65℃/149℉ system will automatically power off.
70℃/158℉	Monitor CPU Temp.at 70℃/158℉, if Temp.>70℃/158℉ system will automatically power off.
75℃/167℉	Monitor CPU Temp.at 75℃/167℉, if Temp.>75℃/167℉ system will automatically power off.

2.9 Frequency / Voltage Control

◎ Figure 9. Frequency / Voltage Control

CMOS Setup Utility-Copyright (C) 1984-2001 Award Software

Frequency / Voltage Control

Default CPU Vcore	1.475V	Item Help
CPU Vcore Select	Default	
Auto Detect PCI CLK	Enabled	Menu Level
Spread Spectrum	Disabled	
CPU Clock	100MHz	
CPU Clock Ratio	24X	

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

CPU Vcore Select

This option is support CPU vcore select.
The Choices: Default, +0.025V~+0.275V, -0.025V~-0.1V.

Auto Detect PCI CLK

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

Spread Spectrum

This function is designed for the EMI test only.
The Choices: Disabled(default), Enabled.

CPU Clock

This item allows you to select the CPU Host Clock (CPU/ PCI).
The Choices: 100MHz(default)~165MHz.

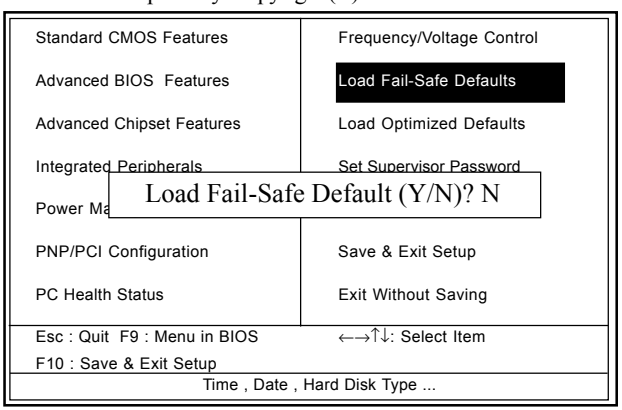
CPU Clock Ratio

This option will not be shown if you are using a CPU with the locked ratio.
The Choices: X8~X50.

2.10 Load Fail-Safe Defaults

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

◎ Figure 10. Load Fail-Safe Defaults

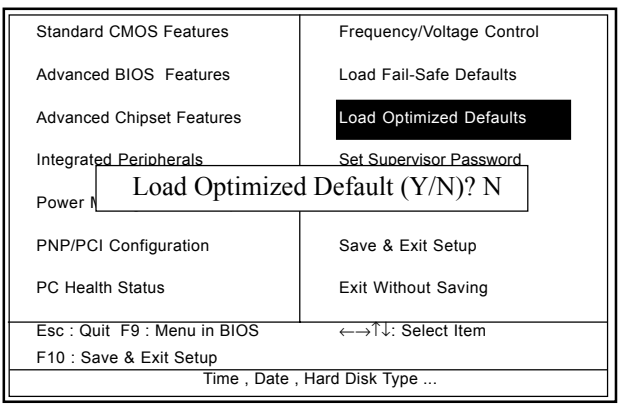


Pressing 'Y' loads the default values that are factory settings for optimal performance of system operations.

2.11 Load Optimized Defaults

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

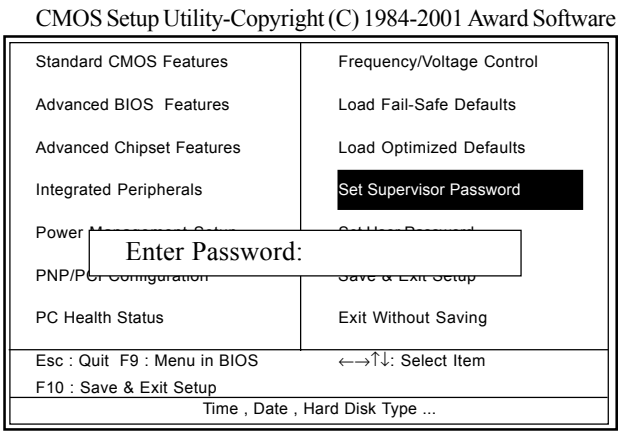
◎ Figure 11. Load Optimized Defaults



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

2.12 Set Supervisor / User Password

◎ Figure 12. 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

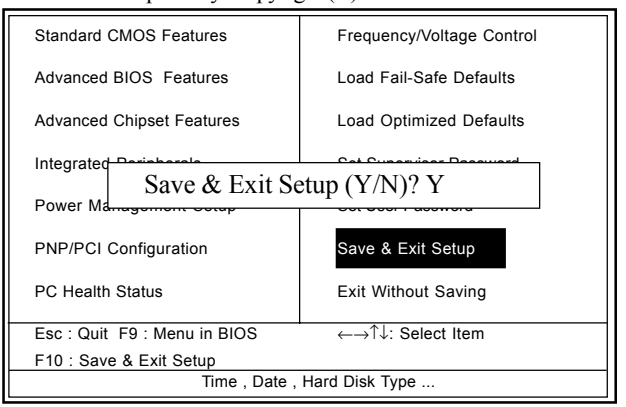
Type a password, up to eight characters, and press <Enter>. The password you type now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <ESC> to abort the selection and not enter a password. 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 and you can enter setup freely.

Password Disabled

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.

2.13 Save & Exit Setup

◎ **Figure 13. Save & Exit Setup**

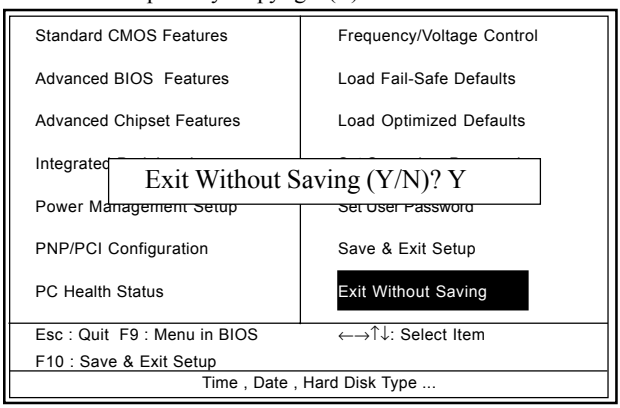


Typing “Y” will quit the Setup Utility and save the user setup value to RTC CMOS RAM.

Typing “N” will return to the Setup Utility.

2.14 Exit Without Saving

◎ **Figure 14. 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

There are motherboard drivers and utilities included in ACORP Bonus CD disc. You don't need to install all of them in order to boot your system. But after you finish the hardware installation, you have to install your operation system first (such as windows 98) before you can install any drivers or utilities. Please refer to your operation system installation guide.

***Note**: Please follow recommended procedure after install Windows ME and Windows XP.*

3.1 Auto-run Menu

You can use the auto-run menu of Bonus CD disc. Choose the utility or driver and select model name.

3.2 Installing VIA 4 in 1 Driver

You can install the VIA 4 in 1 driver (IDE Bus master (For Windows NT use), VIA ATAPI Vendor Support Driver, VIA AGP, IRQ Routing Driver (For Windows 98 use), VIA Registry (INF) Driver) from the Bonus Pack CD disc auto-run menu.

(1)
Click "Driver" Item.

(2)
Click
"Chipset" Item.

(3)
Click
"VIA Service Pack" Item.

(4)
Click "Next".

3.3 Installing Audio Driver

This motherboard comes with an AC97 CODEC and the sound controller is in VIA South Bridge chipset. You can find the audio driver from the Bonus Pack CD disc auto-run menu.

(1)
Click "Driver" Item.

(2)
Click "Audio" Item.

(3)
Click
"VT8233A" Item.

(4)
For Win NT
&Win 2000
&Win 9X_ME system.
Select your O.S. system.

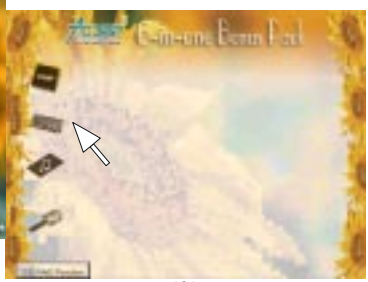
(5)
Click "Next".

(6)
Click "Finish".

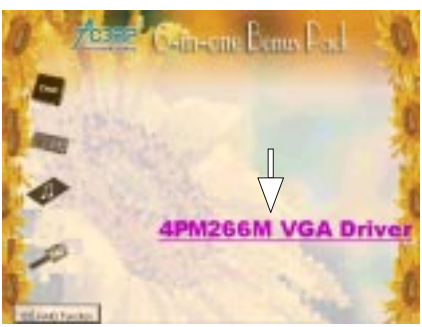
3.4 Installing VGA Driver

VIA PM266M chipset integrated a 2D/3D graphics acceleration.

(1)
Click "Driver" Item.



(2)
Click "VGA" Item.



(3)
Click "4PM266M" Item.

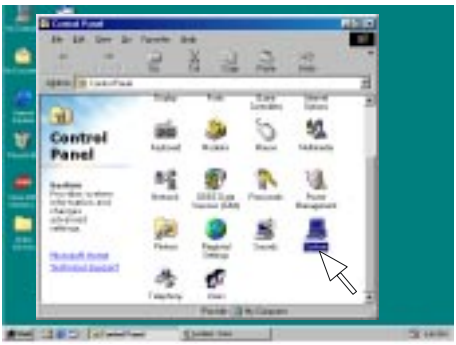
(4)
Click "Next" Item.

(5)
Click "Next" Item.

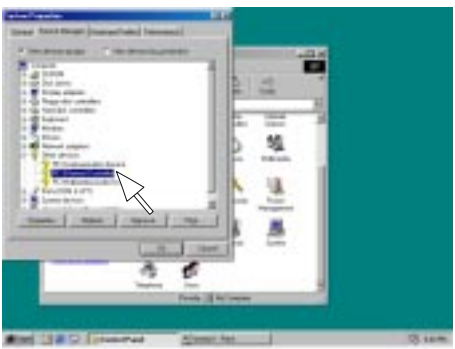
(6)
Click "OK".

3.5 Installing LAN Driver

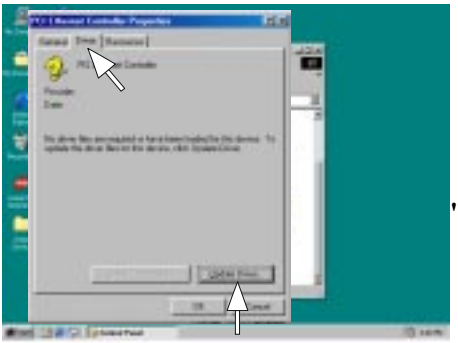
When your mainboard comes with the Realtek® RT8100 LAN controller, you must install the Realtek® LAN driver to support the LAN function. In some operating systems like Windows 98, Windows 200, Windows NT the provided CD will auto-run when you insert the CD disk into the CD-ROM drive.



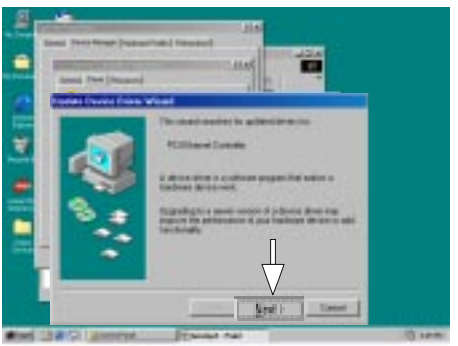
(1) Click "System" Item.



(2) Select "Other Devices" then Click "PCI Ethernet Controller" Item.

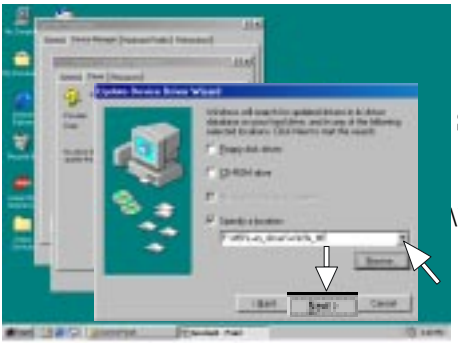


(3)
Select
"Driver"
then Click
"Update Driver" Item.

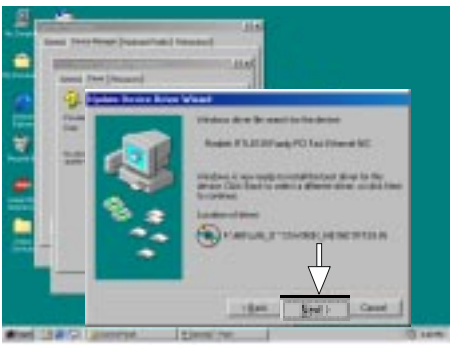


(4)
Click "Next" Item.

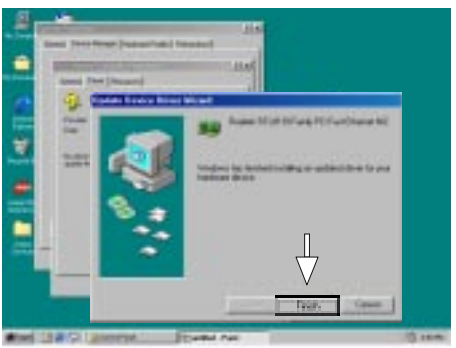
(5)
Click "Next" Item.



(6)
Selection your system environment follow path : \MB\LAN_driver\ then Click "Next" Item.

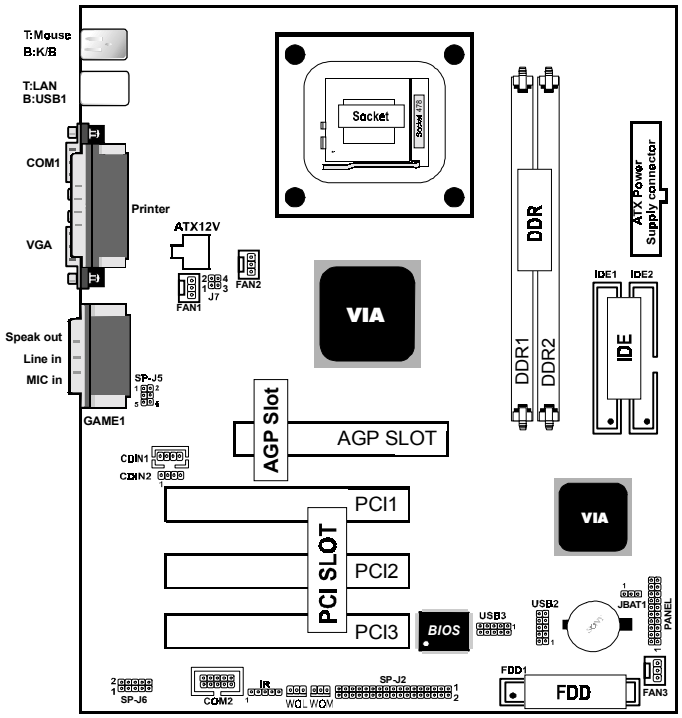


(7)
Click "Next" Item.



(8)
Click "Finish" Item.

The 4PM266M Jumper Setting Summary



CPU Clock Frequency Setting: J7

Pin J7	1-2	3-4	CPU(MHz)
ON	OFF	OFF	66MHz
	OFF	ON	100MHz
OFF	ON	ON	133MHz
	ON	OFF	200MHz

CMOS Function Selection: JBAT1

Pin JP7	Definition
1-2	Normal (Default)
2-3	Clear CMOS

Fan Connectors: Fan1/2/3

Pin	Assignment
1	Signal
2	+12VDC
3	Ground

Wake-On LAN Header: WOL

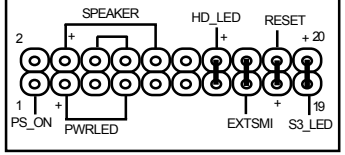
Pin	Assignment
1	5V_SB
2	Ground
3	Signal

Wake-On Modem Header: WOM

Pin	Assignment
1	5V_SB
2	Ground
3	Signal

Panel Connector

PANEL Connector



CD Audio-In Connectors: CDIN1/CDIN2

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

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