



**Iwill mP4G2 Series Motherboard
User's Manual**

mP4G2 Series Version 1.0





FCC Compliance Statement

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Move the equipment away from the receiver
- Plug the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/television technician for additional suggestions

You are cautioned that any change or modifications to the equipment not expressly approved by the party responsible for compliance could void Your authority to operate such equipment.

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

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1: Introduction

The mP4G2 Series motherboard is a high-performance personal computer motherboard that supports the Intel® Pentium® 4 processor. The motherboard accommodates 200/266 MHz DDR SDRAM (mP4G2) or 100 MHz SDRAM (mP4G2S) using two DIMM memory sockets. Two 32-bit PCI slots provide expansion flexibility.

The mP4G2 Series motherboard uses the latest Intel 845GV chipset (mP4G2) or 845GL chipset (mP4G2S) to integrate all system control functions.

Features of this motherboard include support for:

- Intel® Pentium® 4 processors
- Front Side Bus (FSB)
 - 100/133 MHz system bus (mP4G2)
 - 100 MHz system bus (mP4G2S)
- up to 2GB of PC1600/PC2100 DDR SDRAM (mP4G2) *or* PC133 SDRAM (mP4G2S)
- two 32-bit PCI/33 MHz slots
- on board Graphics
- two USB 2.0 external ports on rear panel and four USB 2.0 internal ports for the front panel

For a complete list of specifications, see Chapter 6, Specifications.

About This Manual

This manual's six chapters cover the following topics:

1. Introduction, provides a basic introduction to the motherboard and package contents.
2. Hardware Configuration, describes the motherboard layout, components, and configuration
3. Motherboard Installation, explains basic motherboard installation procedures.
4. BIOS Setup, describes the settings of the motherboard's BIOS.
5. Drivers and Utilities, explains how to use the bundled software drivers and utilities.
6. Specifications, lists the technical specifications of the motherboard.

Package Contents

The motherboard package should contain the following items:

- mP4G2 Series motherboard
- IDE connector cables
- Floppy Disk Drive connector cables
- Three spare Jumper caps
- Power Installer software & utilities disc
- User's Manual

Remove the motherboard from its anti-static bag and place it on a grounded or anti-static surface (component side up). Inspect the motherboard; if any items are damaged or missing, contact your vendor immediately.

2: Hardware Configuration

This chapter describes the motherboard layout and shows the location, function, and configuration of key components, including sockets, slots, connectors and jumpers as well as the external I/O ports. Before installing this motherboard read the following pages carefully for location and function of these items.

Components

The motherboard provides sockets, slots, and connectors for the installation of the CPU, memory, power supply, and PCI expansion cards.

Connectors

The motherboard's connectors let you attach IDE and FDD drives, CPU fan/heatsink, IR module, audio devices, and front panel features such as LEDs, speaker, and power switch.

Jumpers

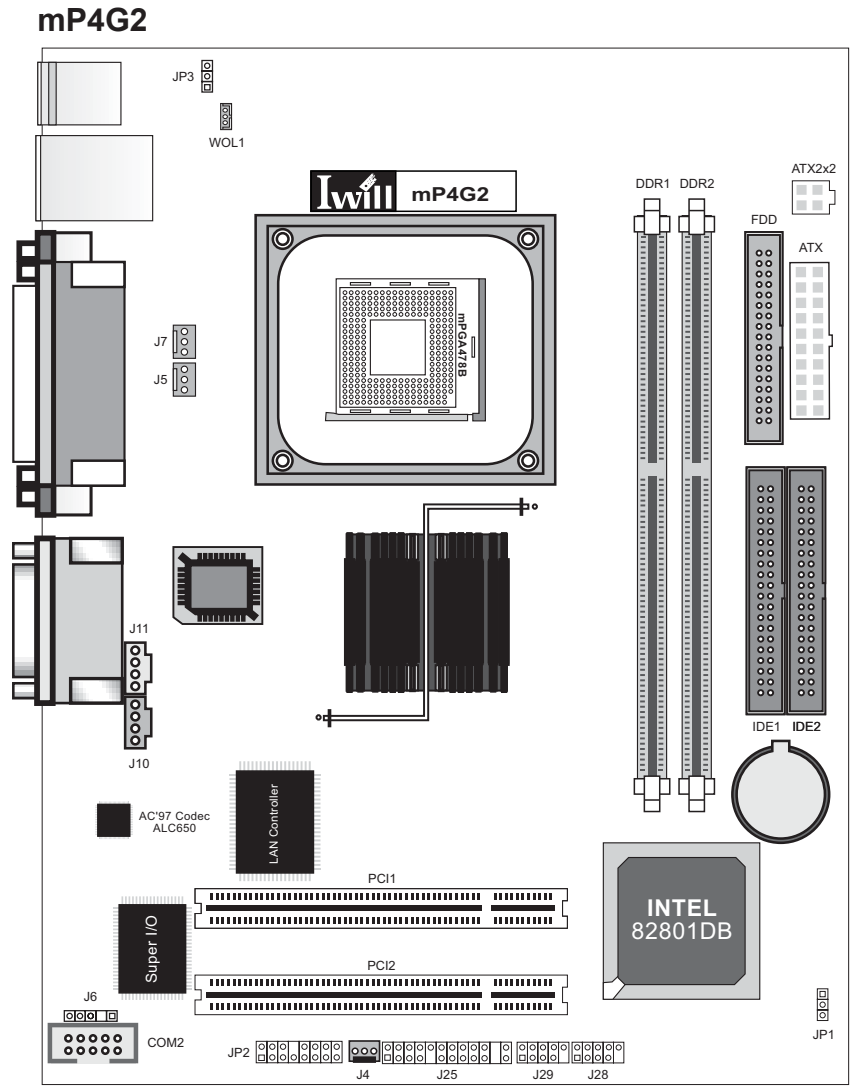
The motherboard's jumpers provide information to the operating system about installed options and system settings.

External I/O Ports

The external Input/Output ports let you connect external devices.

Motherboard Layout

The location of motherboard components is shown below.



Motherboard Layout Key

These components, connectors and jumpers are located in the motherboard layout graphic on the facing page.

Component	Function
CPU1	mPGA478 CPU socket
ATX, ATX 2x2	Power connectors for ATX power supply
DDR1, DDR2	DIMM memory sockets for DDR SDRAM modules (<i>mP4G2 version</i>)
SDR1, SDR2	DIMM memory sockets for SDRAM modules (<i>mP4G2S version</i>)
PCI1, PCI2	32_bit PCI expansion slots
Connectors	
IDE1, IDE2	IDE drive connectors
FDD	Floppy disk drive connector
J5	CPU cooling fan power connector
J7, J4	Housing cooling fan connectors
COM2	COM2 port bracket connector
J6	IR port module connector
JP2	Optional 6-Channel audio port bracket connector
J10	CD-In CD-ROM drive audio-in connector
J11	AUX-auxiliary audio-in connector
J25	Housing front panel feature connector
Jumpers	
JP3	PS/2 standby voltage
JP1	Clear CMOS jumper

JP1: Clear CMOS Jumper

This jumper switch, JP1, clears the CMOS Setup configuration that is stored in the real-time clock's CMOS memory. If configuration becomes corrupted, or if the CMOS settings are changed to an unsuitable configuration, the motherboard may not work properly. JP1 lets you delete the configuration data stored in CMOS memory and reset the CMOS to the Optimized Defaults.

Follow the procedure below to clear CMOS memory.

- 1 Turn off and unplug the system and remove the system housing cover.
- 2 Set JP1 to the Clear CMOS position by placing the jumper cap over pins 2 and 3 for one minute.
- 3 Return the jumper cap to the Normal setting, pins 1 and 2.
- 4 Replace the system housing cover, plug in the system and power on.
- 5 Run the CMOS Setup Utility and load the Optimized Defaults. Make any custom settings you require. (See Chapter 4, BIOS Settings.)
- 6 Save the settings as you exit the program and restart your computer.



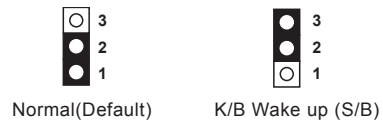
Normal(Default)



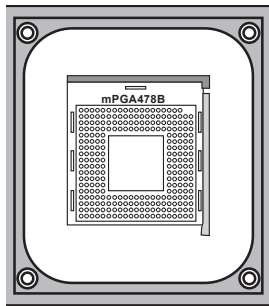
Clear CMOS

JP3: PS/2 Standby Voltage Jumper

This jumper switch, JP3, sets the USB port voltage status.

**CPU Socket & Cooling Fan / Heatsink Frame**

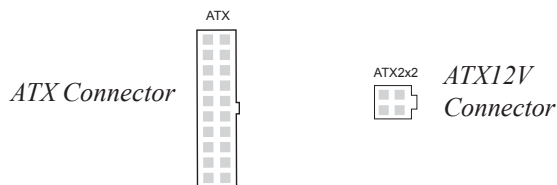
The mPGA478B CPU socket supports a 478-pin Intel Pentium 4 processor. The Pentium 4 CPU requires a cooling fan/heatsink, which attaches to the board using a retention mechanism mounting frame. See the section on installing the CPU in Chapter 3.



The mPGA478B CPU socket is located within a cooling fan/heatsink frame.

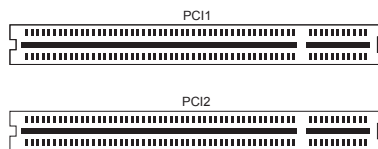
ATX Power Connectors

The two ATX power connectors let you attach the two leads from an ATX power supply to the motherboard. There is the standard 20-pin ATX connector plus a 4-pin ATX12V connector.



PCI Expansion Slots

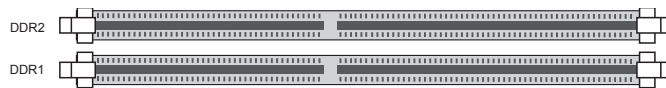
The PCI expansion slots let you install additional system hardware via add-on cards. There are two 32-bit, 33MHz slots that are compliant with PCI 2.1/2.2 on this motherboard. See the section on installing internal peripherals in Chapter 3.



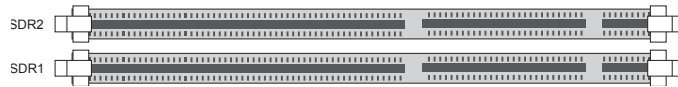
PCI Expansion Slots

System Memory Sockets

These DIMM system memory sockets support 200MHz (PC1600) or 266MHz (PC2100) DDR SDRAM system memory modules (*mP4G2*). The mP4G2S version of this motherboard supports PC133 SDRAM memory modules (*mP4G2S*). Note the difference in slots below. See the section on installing memory in Chapter 3.



DDR SDRAM system memory modules (mP4G2)



SDRAM system memory modules (mP4G2S)

Drive Connectors

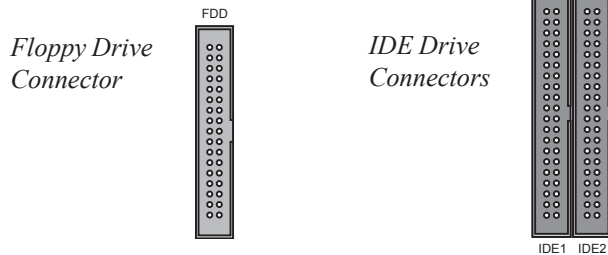
There are drive connectors on the motherboard for connecting IDE and floppy disk drives.

FDD: Floppy Disk Drive Connector

The connector FDD lets you attach one floppy disk drive to the motherboard using a standard FDD ribbon cable.

IDE1, IDE2: IDE Drive Connectors

The two IDE drive connectors are marked IDE1, the primary channel, and IDE2, the secondary channel. Each connector supports two drives, a Master and a Slave.

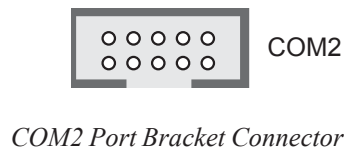


J5, J4, J7: CPU & System Fan Connectors

These 3-pin connectors provide power to the CPU cooling fan (J5) and to the Housing cooling fan (J4, J7). These connectors all support fan speed monitoring. A temperature monitor detects the CPU and internal system temperatures. You can set a system shutdown temperature in the PC Health section of the CMOS Setup Utility.

**COM2: COM2 Port Bracket Connector**

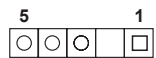
The COM2 Port Bracket Connector lets you add an additional serial port, to which you can connect peripherals such as serial modems and pointing devices. The COM2 port is configured in the CMOS Setup Utility, see Chapter 4.



J6: IR Connector

This connector, J6, lets you attach an Infrared (IR) port module. J6 supports both IrDA and ASKIR infrared port modules. Review the module's instructions for installation information. To use this feature you must configure the motherboard using the CMOS Setup Utility, see the Integrated Peripherals section of Chapter 4.

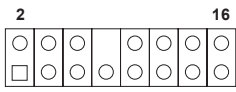
Pin	Assignment
1	Voltage 5V
2	Key
3	IR_RX
4	Ground
5	IR_TX



*J6: IR Port Module Connector
Pin Assignments*

JP2: 6-Channel audio port bracket connector

This connector, JP2, lets you attach the optional 6-channel audio port bracket. JP2 supports any of the three optional 6-channel port brackets, 6CH, 6CHG, and SuperAudio. The port bracket offers additional audio connections for a 5.1 speaker system.



Pin	Assignment	Pin	Assignment
1	+12V	2	NC
3	NC	4	SPDIFO
5	SPDIFI	6	GND
7	NC	8	SPGPIO
9	NC	10	NC
11	BASS	12	XREARR
13	GND	14	GND
15	CENTER	16	XREARL

*JP2: Connector
Pin Assignments*

J10, J11: CD-In & Aux Audio Connectors

These two audio connectors, J10 and J11, let you attach audio-in cables from internal peripherals, such as a CD-ROM or DVD-ROM drive. The connectors provide an audio input connection between a device and the integrated audio subsystem.

J11



J11: Aux-Auxiliary Audio-in Connector



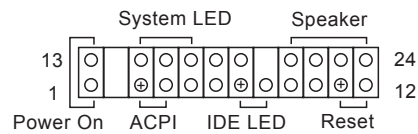
J10: CD-In Audio-in Connector

J10

J25: Front Panel Connector

This connector, J25, connects the following system housing front panel features:

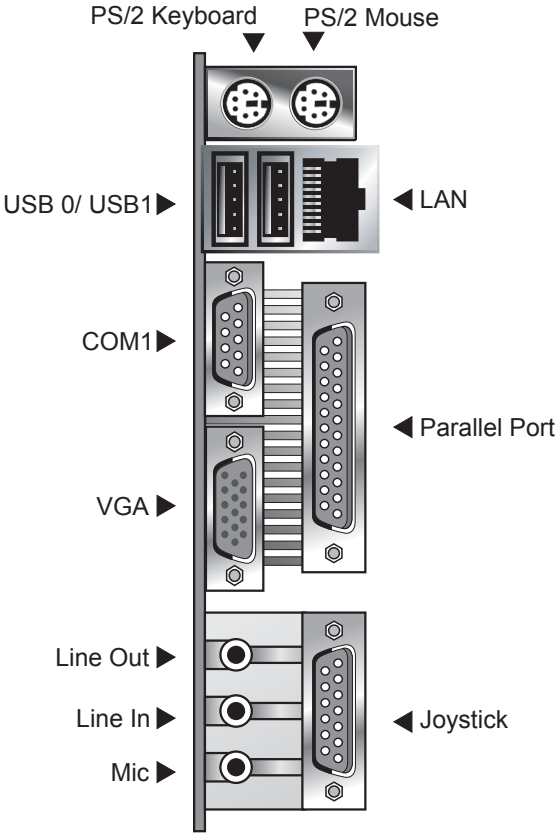
- Reset Switch (Reset in diagram)
- IDE device LED (IDE LED in diagram)
- ACPI Suspend LED (ACPI in diagram)
- Power Switch (Power On in diagram)
- System Activity LED (System LED in diagram)
- Housing-mounted Speaker (Speaker in diagram)



*J25: Front Panel Connector
Pin Assignments*

External I/O Ports

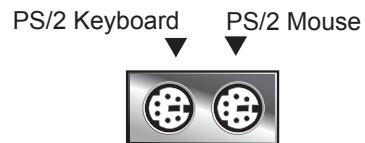
On the rear edge of the motherboard there are several external Input/Output ports. These ports are color-coded for easy identification.



External I/O Ports

PS/2 Ports

The PS/2 ports are for a system keyboard and mouse or other tracking device. It is recommended that you do not plug or unplug devices when the system is on.

**USB Ports**

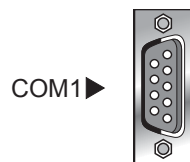
There are two high-speed USB 2.0 ports, USB 0 and USB 1, for connecting either USB 1.1 or 2.0 devices to the system. These ports are for "Type A" USB cable connectors. It does not matter if the system is on when you connect or disconnect USB devices.

**LAN Port**

The LAN Port is an RJ-45 connector for standard Cat 5 LAN cabling. The connector attaches to the onboard Realtek LAN controller. It does not matter if the system is on when connecting or disconnecting a LAN cable.

COM 1 Serial Port

The LAN Port is an RJ-45 connector for standard Cat 5 LAN cabling. The connector attaches to the onboard Realtek LAN controller. It does not matter if the system is on when connecting or disconnecting a LAN cable.



VGA Port

The LAN Port is an RJ-45 connector for standard Cat 5 LAN cabling. The connector attaches to the onboard Realtek LAN controller. It does not matter if the system is on when connecting or disconnecting a LAN cable.



Parallel Port

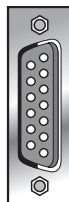
The LAN Port is an RJ-45 connector for standard Cat 5 LAN cabling. The connector attaches to the onboard Realtek LAN controller. It does not matter if the system is on when connecting or disconnecting a LAN cable.



◀ Parallel Port

Joystick Port

The LAN Port is an RJ-45 connector for standard Cat 5 LAN cabling. The connector attaches to the onboard Realtek LAN controller. It does not matter if the system is on when connecting or disconnecting a LAN cable.



◀ Joystick

Audio Jacks & Connectors

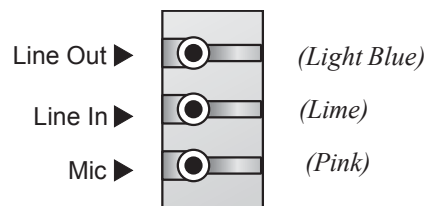
The audio jacks are for connecting external audio devices to the onboard audio subsystem. The three audio jacks are:

Line In: provides audio input connector for an external audio source.

Line Out: offers output to two stereo speakers, or the Front Left and Right speakers in a 5.1 speaker system

Mic: this jack is for plugging in a computer microphone.

The three audio jacks are color-coded as below.



3: Motherboard Installation

This chapter describes preparing and installing the motherboard, as well as installing and connecting other components.

Please review each of the following procedures before installing the motherboard.

Before You Install this Motherboard

Before placing and fastening the motherboard into a case you must first install a CPU and system memory modules. Please read the sections below and follow the instructions carefully.

Installing a CPU

The mP4G2 series motherboards support the Intel Pentium 4 processor. You must install both the Intel Pentium 4 and its cooling assembly carefully and in accordance with the procedures below. If you fail to follow these procedures, it could result in either improper operation or damage to the CPU or motherboard.

To install an Intel Pentium 4 processor on this motherboard you need to do the following:

1. Install a Pentium 4 processor in the mPGA478 socket.
2. Install the Heatsink/Retention Mechanism

In addition to the following instructions, please review the instructions that come with your boxed Intel Pentium 4.

Selecting a Processor

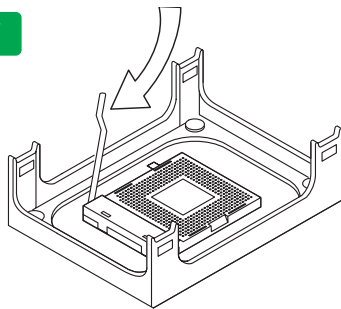
This motherboard supports all Intel Pentium 4 processors. The motherboard's BIOS automatically detects the required settings and configures the CMOS Setup Utility.

Installing the Processor

It is important to review all of the instructions before beginning the installation procedure. Carefully handle the processor by its edges, and take all precautions against electrostatic discharge. The boxed Intel Pentium 4 processor comes with a Heatsink and Thermal Interface Material applicator. Non-boxed processors follow the same procedures, but the accessories may have a different appearance. The following illustrations are a generic representation and may not show the components' exact appearance.

1. Unlock the socket by pressing the lever sideways, then lift it up to a vertical angle.

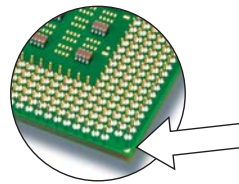
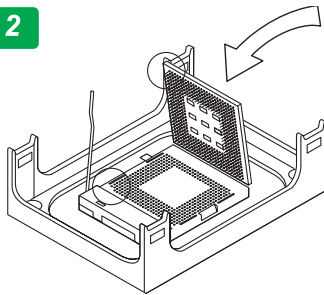
Step 1



Unlock the socket by pressing the lever sideways, then lift it up to a vertical angle

2. Position the CPU above the socket such that its marked corner matches the base of the socket lever.

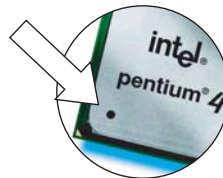
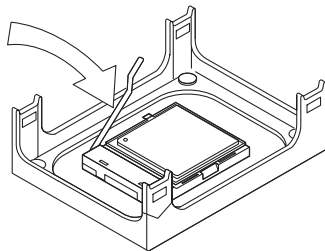
Step 2



Position the CPU above the socket such that its marked corner matches the base of the socket lever.

3. Press it firmly on the socket while you push down the socket lever to secure the CPU.

Step 3



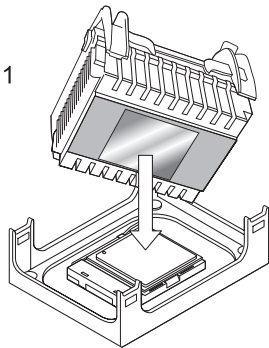
Press it firmly on the socket while you push down the socket lever to secure the CPU.

4. After installing the CPU you may need to apply the Thermal Interface Material (TIM) to the top of the installed CPU (Fig. 2). The TIM is supplied in an applicator with the boxed Pentium 4 processors. The TIM secures the Fan/Heatsink to the CPU. However, if the Fan/Heatsink already has a patch of TIM on its underside, you won't need to apply additional TIM to the CPU (Fig. 1).

Step 4

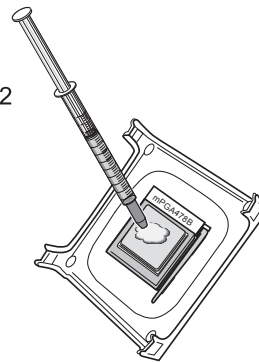
The heatsink may have thermal interface material attached to the bottom as shown in Fig.1, or you may need to apply the thermal interface material using a syringe as shown in Fig.2.

Fig.1



Be careful not to damage the thermal interface material.

Fig. 2



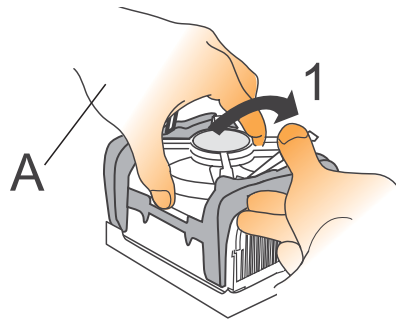
Using the enclosed syringe and apply all of the thermal interface material to the top of the processor

Installing the Fan/ Heatsink

To install the Fan/Heatsink assembly:

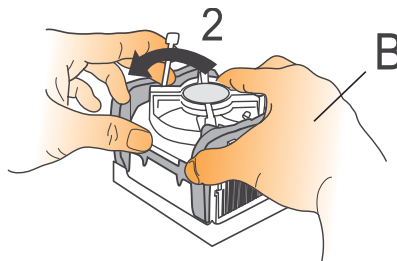
5. When installing the Fan/Heatsink and clip assembly it is important to make sure the Fan/Heatsink *does not* rotate or twist on the processor. Securing the Fan/Heatsink while closing the clip lever will ensure the thermal interface material (TIM) is not damaged and the processor will operate correctly. The TIM is attached to the heatsink.

Step 5



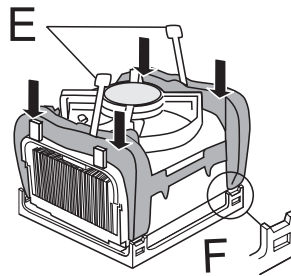
6. Make sure to close the clip levers one at a time. Close the clip lever (1), while holding the top-side of the Fan/Heatsink with your other hand (A). Close the clip lever (2) while holding the top-side of the Fan/Heatsink with your other hand (B).

Step 6



7. Align the Heatsink and clip assembly with the Retention Mechanism and place it on the processor. The Heatsink is symmetrical.

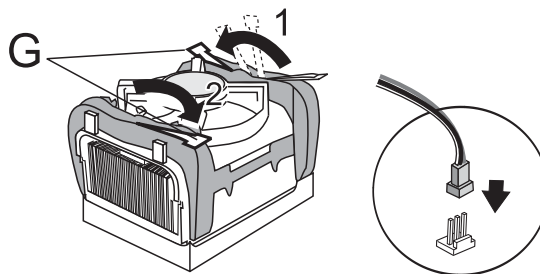
Step 7



8. With the clip levers in the up position (E), push down on all four clip frame corners to secure to the Retention Mechanism hooks (F). Close the clip levers (G). The levers require force to be completely closed.

Connect the processor fan cable connector to the motherboard header.

Step 8



Installing System Memory

Review this section carefully before installing the memory modules.

Memory Specifications

The mP4G2 series of motherboards has two DIMM module sockets that support either DDR SDRAM (*mP4G2*) or SDRAM (*mP4G2S*). See Chapter 2: Hardware Configuration. Memory specifications are:

DDR SDRAM (*mP4G2*)

- 200Mhz PC1600 or 266MHz PC2100 DDR SDRAM
- Unbuffered DDR SDRAM modules
- Maximum 2GB total system memory

-- or --

SDRAM (*mP4G2S*)

- PC133 SDRAM
- Unbuffered SDRAM modules
- Maximum 2GB total system memory

Memory configuration options are:

- Supports 64MB, 128MB, 256MB, 512MB modules
- Any capacity DIMM may be used in either socket as long as total memory is not greater than 2GB
- Modules of the same speed provide better performance

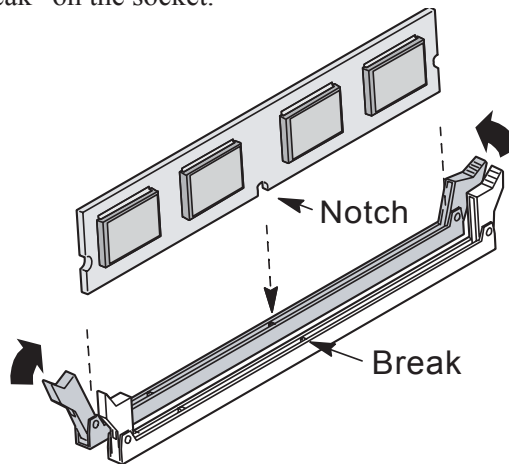
Installing Memory Modules

To install a memory module, you insert a module into its socket and secure it with the socket retaining arms. The modules are notched so that you cannot insert them incorrectly. The BIOS recognizes the installed memory and configures the CMOS Setup Utility automatically.

Installing Memory Modules

To install memory modules:

- 1 Unlock a DIMM socket by pressing the retaining clips outward.
- 2 Align the “notch” on the memory module to the “break” on the socket.



- 3 Firmly insert the module into the socket until the retaining clips snap back into place and the module is properly seated.
- 4 Make sure the memory module is locked on the socket with both retaining clips.

Installing the Motherboard in the Chassis

After installing the CPU and memory modules, you can install the motherboard in the system housing. There are many system housing designs and you should consult your system housing documentation for specific installation information.

Installing the Motherboard

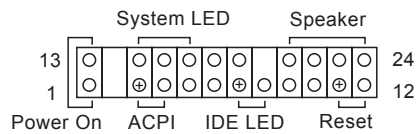
To install the motherboard into the chassis:

- 1 Review the housing documentation and prepare the required mounting hardware.
- 2 Identify the mounting holes on the board and confirm that the housing standoffs are suitably placed.
- 3 Install the included rear I/O panel shield in the housing's I/O panel opening, matching the ports on the board.
4. Insert the board in the housing and align the mounting holes to the standoffs on the housing's motherboard mounting plate. Check to make sure all rear I/O ports are aligned with the openings in the I/O panel shield.
5. Attach the board to the housing by inserting mounting screws in all the holes and tightening these screws using a Philips head screwdriver.

Connecting Front Panel Components

After installing the motherboard in the system housing, you should connect the front panel components to the Front Panel Connector, J25.

Check the figure below for pin assignments.



*J25: Front Panel Connector
Pin Assignments*

Completing System Configuration

After installing the motherboard in the system housing, you can connect or install the internal devices you need to complete the system. This will include attaching disk drives and connecting housing power supply connectors.

After replacing the system housing cover, you can connect external peripherals such as a monitor, a keyboard, and a pointing device.

Once you have completed final hardware installation, you can configure the CMOS Setup Utility and Drivers—see the following chapters—and install an operating system and support software—see related documentation.

4: BIOS Setup

After you have installed the motherboard and assembled the system hardware, you can power up the system.

The motherboard uses the most recent Award BIOS CMOS chip. The ROM setup instructions for configuring the motherboard's BIOS (Basic Input Output System) are contained on this chip. The CMOS Setup program lets you set system parameters, which are stored in nonvolatile CMOS RAM. This information is retained by battery backup when the system is powered off. The values stored in the CMOS configures the system each time the system is powered on.

Running the CMOS Setup Utility

The CMOS Setup Utility does not depend on an operating system to run. You run the utility by typing the Del or Delete key before the operating system boots up. The CMOS Main screen will appear. You navigate the CMOS Setup Utility using keyboard commands that are listed at the bottom of each screen. Help is available at any time by pressing the F1 key.

Once you have fully configured the CMOS Setup Utility you will rarely if ever need to configure it again.

Entering Setup

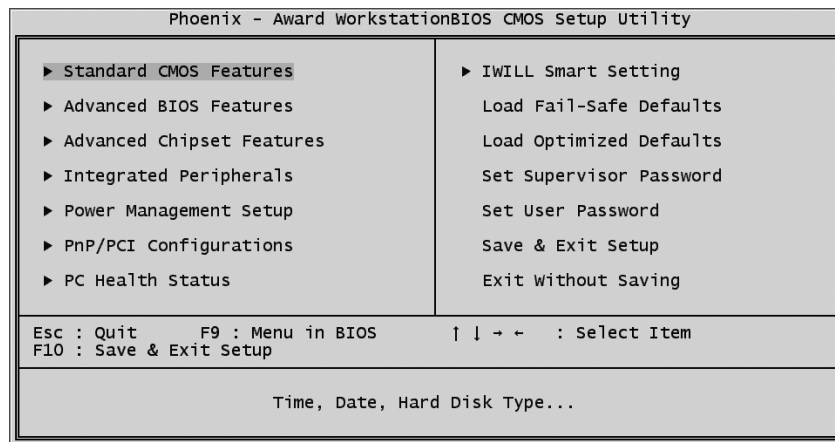
Each time the system is turned on, the BIOS performs Power-On Self Test (POST) routines. These routines run through a series of diagnostic checks. If an error occurs, it is reported in one of two ways:

1. A series of beeps, if the error is encountered before the display is initialized.
2. An error message is shown on the screen, if the display is initialized.

After the POST routines are performed, the following message appears:

“Press DEL to enter SETUP”

Press the key to enter the Award BIOS Setup program, and the main screen appears:

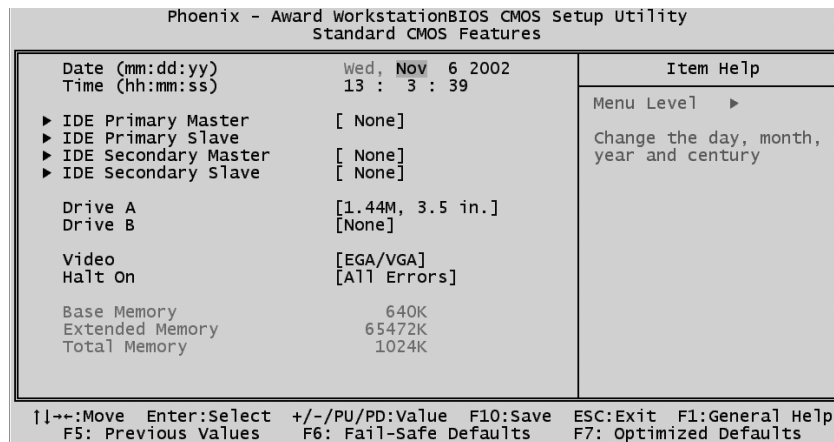


CMOS Setup Main Screen

Use the arrow keys to select items. A description of each selection follows.

Standard CMOS Features

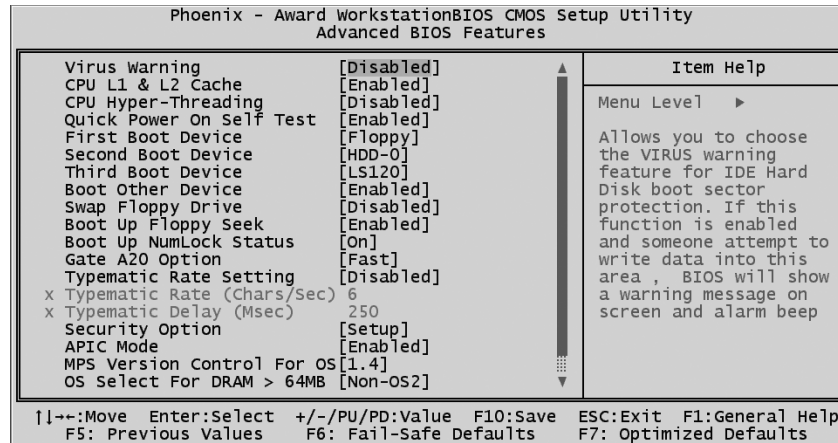
The Standard CMOS Features screen lets you reset time and date settings to suit your location. The IDE devices are autodetected, but you can change these settings manually if necessary. The floppy drive settings and other settings are standard defaults, that you can also change if necessary.



Standard CMOS Features Screen

Advanced BIOS Features

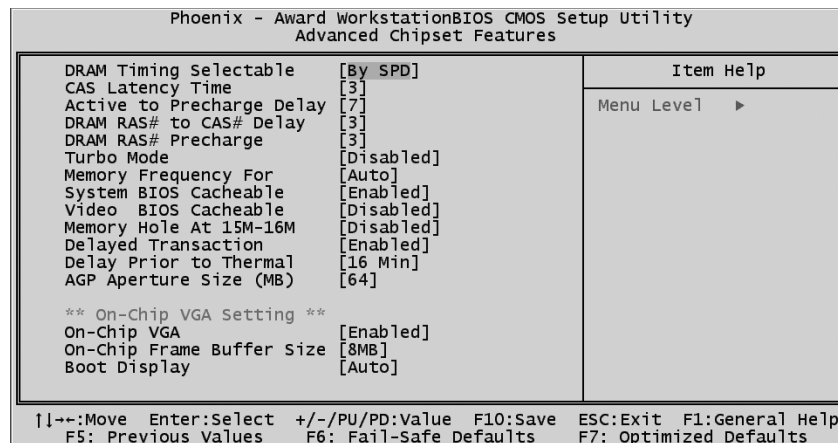
The Advanced BIOS Features screen configures boot options such as boot devices, boot order, various boot configurations and other power functions. Unless you fully understand the function of these settings, it is better to leave the default settings.



Advanced BIOS Features Screen

Advanced Chipset Features

The Advanced Chipset Features screen configures the chipset, BIOS caching and the AGP. Unless you fully understand the function of these settings, it is recommended that you do not change the default settings.



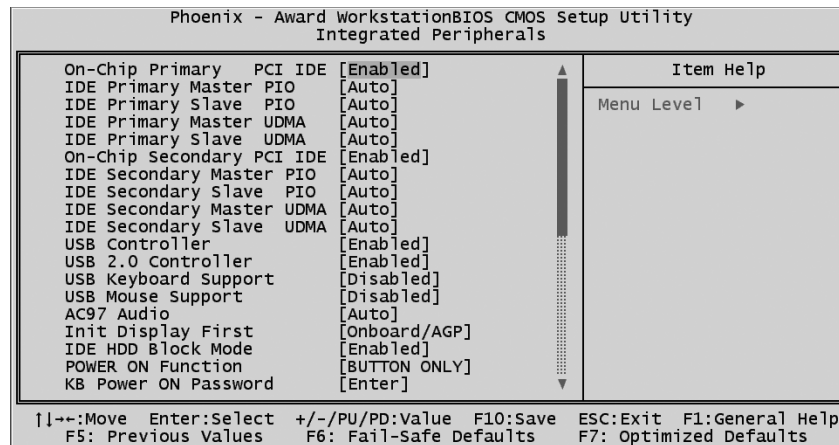
Advanced Chipset Features Screen

Integrated Peripherals Screen

The Integrated Peripherals screen configures the peripheral features integrated onto the motherboard. The settings on this screen are all optimized defaults. The IDE settings are autodetected and the port settings are standard settings.

To use a USB keyboard or mouse you need to enable the settings on this screen. Onboard audio and LAN features can be disabled from this screen if desired.

Scroll to the lower portion of this screen using the arrow keys. If installing an IR port module, check the module instructions and set the UART Mode Select line to the required IR setting. You can change the parallel port, and the Game and MIDI settings as needed. The SCR Port Address refers to Smartcard reader settings, the MS/SD Port Address refers to Memory Stick and Secure Digital memory card reader settings. Use the default settings unless required otherwise.



Integrated Peripherals Screen

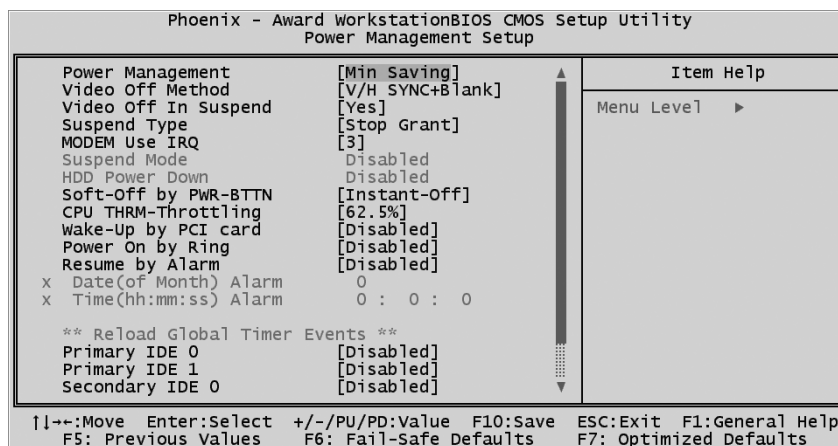
Power Management Setup Screen

The Power Management Setup screen configures power management settings. The settings on this screen are all optimized defaults. Windows ACPI power management overrides most of these settings.

There are Minimum and Maximum configurations available in addition to the User Defined defaults. In User Defined mode you can customize all settings.

The Soft-Off by PWR-BTTN item controls the system housing power button function. The default setting, Instant-Off, turns the system on and off when you press the button. The alternate setting, Delay 4 Sec., requires you press the power button for more than four seconds before the system powers off.

The Resume by Alarm settings lets you set a date and time for the system to turn on or wake up.



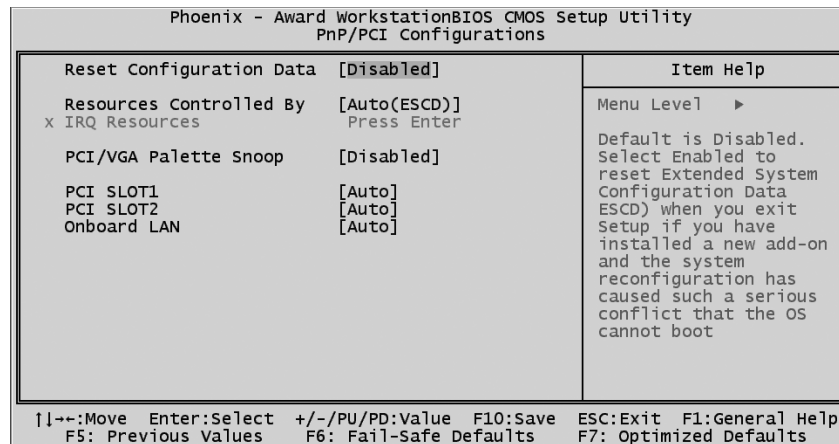
Power Management Screen

PnP/PCI Configurations

The PnP/PCI Configurations screen configures Plug and Play and other PCI bus settings. The default is for BIOS control of these functions.

Set Reset Configuration Data to Enabled if a problem occurs after installing an expansion card. This rewrites the ESCD.

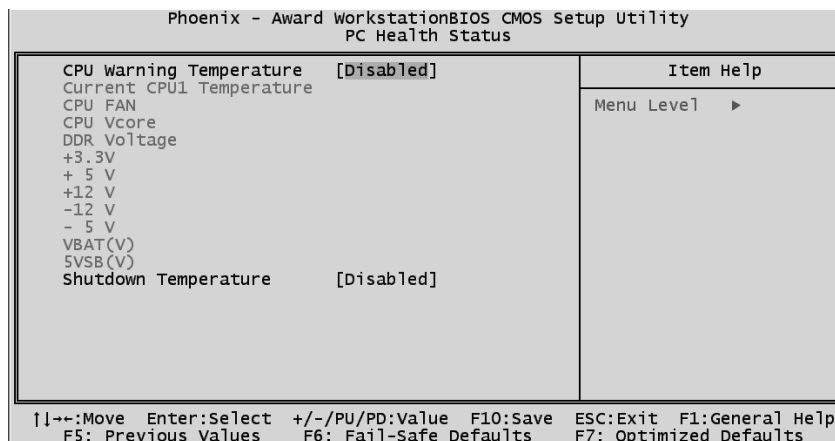
If a PCI display card has a problem displaying a screen image at startup, then configure the PCI/VGA Palette Snoop item.



PnP/PCI Configurations Screen

PC Health Status

The PC Health Status screen displays system information such as CPU cooling fan speed and various voltage levels. This information is autodetected.



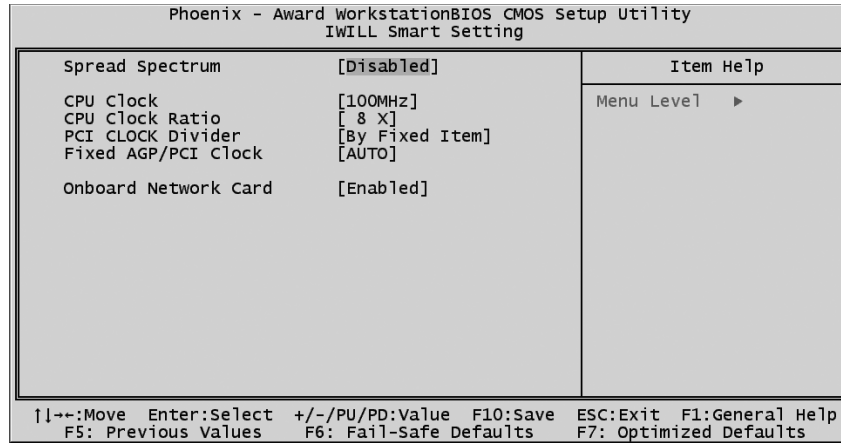
PC Health Status Screen

IWILL Smart Setting

The IWILL Smart Setting screen configures CPU settings and enables the onboard ATA-133 and Serial-ATA controllers. The default settings for the CPU and PCI Clock are autodetected. You should not change these autodetected settings. Configuring CPU settings that are different than Intel specifications can damage the Intel CPU and void the CPU warranty.

Enable the Spread Spectrum setting to reduce interference generated by the board circuitry.

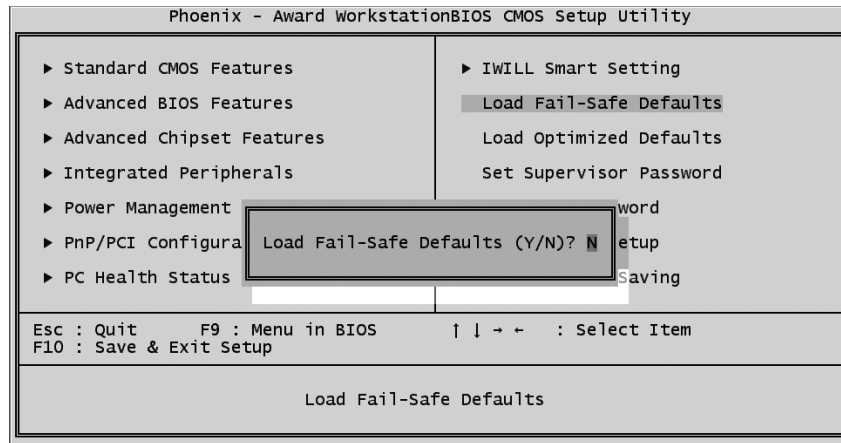
Note: The PCI Clock Divider item is not present in this screen on the mP4GS version of this motherboard.



IWILL Smart Setting Screen

Load Fail-Safe Defaults

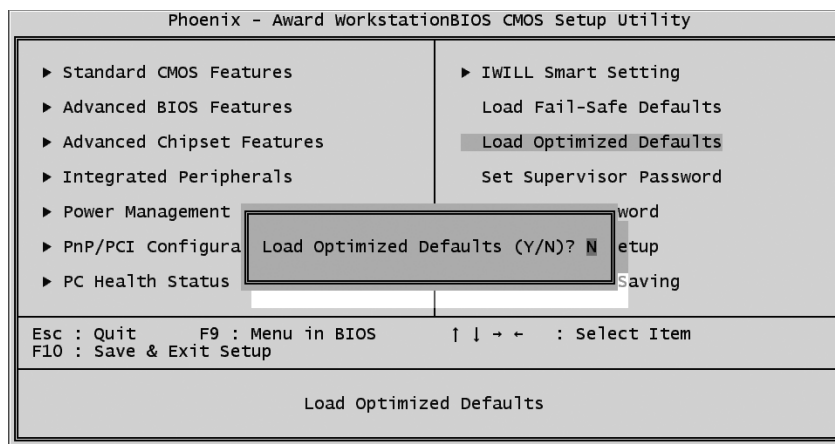
Selecting “Y” for this item loads the minimum set of configuration settings. The Fail-Safe Defaults let the system start for troubleshooting of hardware problems.



Load Fail-Safe Defaults

Load Optimized Defaults

Selecting “Y” after choosing this item loads the optimized set of default settings. Use these default settings if the configuration is corrupted or if a mistake is made in the configuration. You should also load these settings after performing the Clear CMOS procedure.



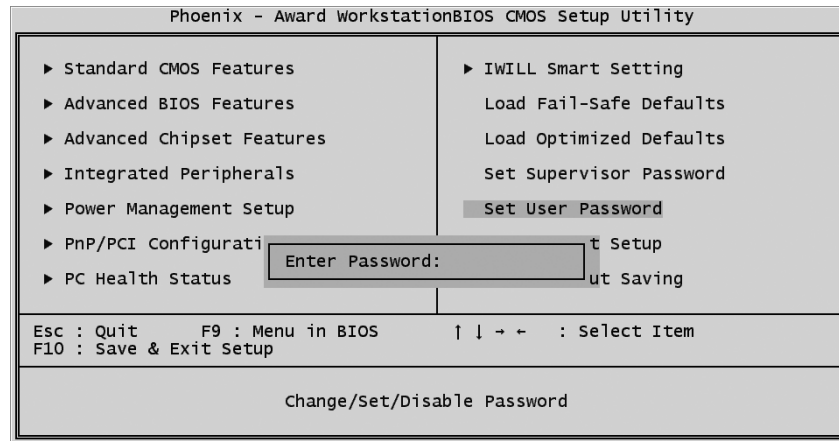
Load Optimized Defaults

Setting Supervisor/User Password

The Set Supervisor/User Password items let you set passwords for system access. The Supervisor password prevents access to the CMOS Setup Utility, the User password prevents access to the entire system.

Set a password as follows:

- 1 Choose either Set Supervisor Password item or the Set User Password item in the main screen and press Enter. A password dialog box appears.



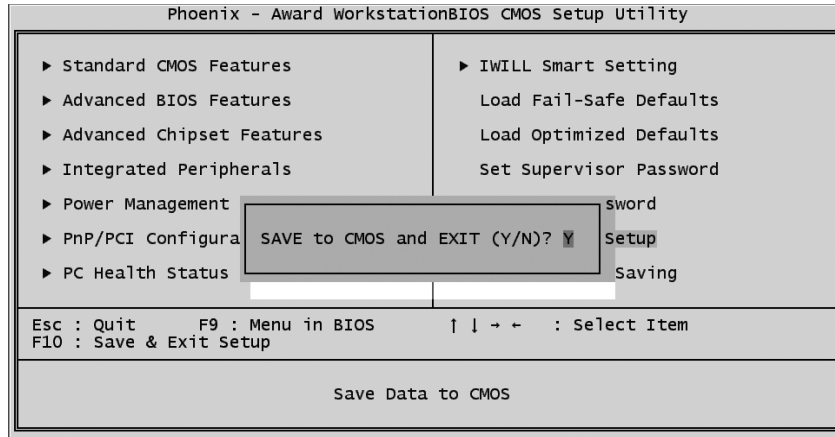
Set User Password

2. To enter a new password type in the password using no more than eight characters or numbers and press Enter. Note that passwords are case sensitive. To delete a password, press enter when the password dialog box appears.
3. A dialog box asks you to confirm the new password by typing it in a second time. Type the password again and press Enter, or just press Enter if you are deleting a password. The password is then recorded.

After bringing up the password dialog box you decide not to set a password, press the Enter key, not the Esc key, to exit the password dialog box.

Save & Exit Setup

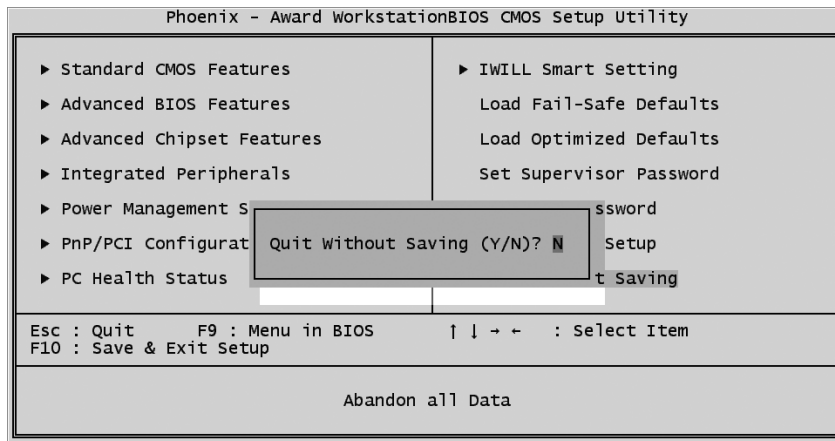
Entering “Y” and pressing Enter saves the current utility configuration as a new record, exits the utility and restarts the system using the saved configuration record.



Save & Exit Setup

Exit Without Saving

This item lets you exit the utility and restart the system without changing the saved configuration record.



Exit Without Saving

5: Drivers and Utilities

The mP4G2 Series motherboard comes bundled with a Power Installer CD-ROM disc that includes driver and utility software. This chapter describes installing and using this software.

Running the Power Installer Disc

The Power Installer CD-ROM install interface runs under Microsoft Windows 9X, NT 4.0, 2000, or XP. After inserting the disc into your CD-ROM drive the install interface loads automatically. If it does not load, run the Power Installer directly from the disc by running Setup.

Drivers and Utilities Screen

This screen has five selections. Choose a selection to open its respective screen, which are described below. The **User's Manual** selection opens the motherboard documentation.

Choose **Exit** to leave this screen.



Drivers and Utilities Screen

Drivers Installation Screen

Click **Driver Installation** in the Drivers and Utilities screen and the Driver Installation screen appears. Choose drivers in sequence to open their respective install programs. Select the installation guides to review installation information. When you are finished click **Exit** to leave this screen.



Drivers Installation Screen

Software Utility Screen

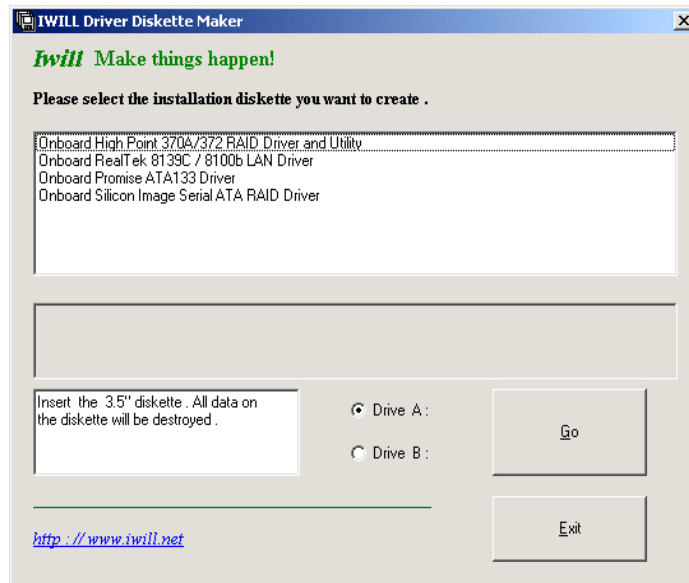
Click **Software Utility** in the Drivers and Utilities screen and the Software Utility screen appears. To install the **Adobe Acrobat Reader** or **McAfee Anti-Virus** software packages, click on the item you wish to install and follow the instructions. Clicking on the **Hardware Monitor Utility** lets you install a program that gives access to information detected by the Winbond hardware monitor.



Software Utility Screen

Make Driver Screen

Click **Make Driver** in the Drivers and Utilities screen and the Make Driver utility screen appears. This utility gives you a convenient way to make driver floppy disks. You can use this utility to make driver disks for the Highpoint RAID driver and utility, the onboard Realtek audio subsystem driver, the ATA-133 IDE driver and the Serial-ATA RAID driver.



Make Driver Screen



6: Specifications

Technical specifications for the mP4G2 series of motherboards are listed below.

mP4G2 Motherboard

Processor

Single processor for Intel 478 Pentium 4
System Bus: 100MHz/133MHz
Auto detects CPU type, external clock and multiplier.
CPU external clock adjustment at 1MHz/step by BIOS.

CPU Power

Follows VRM 9.0 spec
VRD design
Three phases

Memory

PC1600/PC2100 DDR SDRAM
Un-buffered DDR SDRAM
2 DIMMs up to 2GB

Chipset

North Bridge : Intel 845GV
South Bridge : ICH4
Winbond Super I/O : W83627HF

Graphics

On board Graphics

PCI

2.1/2.2 Compliant

LAN

RealTek 8100 LAN on board

RJ-45 connector

USB 2.0

Two USB 2.0 external port on the rear panel

Four USB 2.0 internal port by pin header for front panel

Audio

AC'97

Low cost

One audio connector at rear panel to support LINE IN/
LINE OUT/MIC IN and Game port

One 4-pin CD-ROM Audio In header

One 4-pin AUX header

General I/O

Two IDE connector (Bus Master with Enhanced) to
support Ultra DMA 33/ATA66/ATA100 IDE drives and
ATAPI compliant devices

One Floppy Controller for up to two drives

One UART connector

One 25pin ECP/EPP Parallel Port

One PS/2 Keyboard

One PS/2 Mouse

One internal SMBus connector

One internal WOM connector

BIOS

Award BIOS

2Mb Flash ROM
Flash write Protection for BIOS
Support ACPI S1, S3
BIOS feature set
BIOS setup features
Auto configuration for IDE hard disk type
Multiple boot options

Power Supply

ATX12V

System Management

Winbond hardware monitor
One 3-pin CPU Fan headers
Three 3-pin Chassis Fan headers
One CPU temperature sensor
Seven Voltage monitoring (Vcore, +1.5V, +2.5V, +3.3V, +5V, +12V, Battery, 5VSTB)
One 3-pin Chassis intrusion header

Form Factor

Micro ATX
Stacked PS/2 Mouse/Keyboard ports
Stacked 2 USB2.0 ports with one RJ-45 connector
Stacked one Serial, one Graphics and one Parallel ports
Stacked Audio Line-in, Line-out , Microphone and Game port

Other

Support AC power failure

Spec

1. ACPI 1.1
2. PC2001
3. PCI 2.2
4. APM 1.2
5. SMBIOS 2.3
6. BIOS boot Spec. 1.01
7. WfM 2.0
8. DMI 2.0

4 Layer

Certification

WHQL

1. Windows 2000

Approval

FCC class B

CE mark 89/336/ECC(EMV) and acc. To EU

mP4G2S Motherboard**Processor**

Single processor for Intel 478 Pentium 4
System Bus: 100MHz/133MHz
Auto detects CPU type, external clock and multiplier.
CPU external clock adjustment at 1MHz/step by BIOS.

CPU Power

Follows VRM 9.0 spec
VRD design
Three phases

Memory

PC133 SDRAM
Un-buffered SDRAM
2 DIMMs up to 2GB

Chipset

North Bridge : Intel 845GL
South Bridge : ICH4
Winbond Super I/O : W83627HF

Graphics

On board Graphics

PCI

Two 32-bit PCI/33MHz slots
2.1/2.2 Compliant

LAN

RealTek 8100 LAN on board
RJ-45 connector

USB 2.0

Two USB 2.0 external port on the rear panel
Four USB 2.0 internal port by pin header for front panel

Audio

AC'97
Low cost
One audio connector at rear panel to support LINE IN/
LINE OUT/MIC IN and Game port
One 4-pin CD-ROM Audio In header
One 4-pin AUX header

General I/O

Two IDE connector (Bus Master with Enhanced) to
support Ultra DMA 33/ATA66/ATA100 IDE drives and
ATAPI compliant devices
One Floppy Controller for up to two drives
One UART connector
One 25pin ECP/EPP Parallel Port
One PS/2 Keyboard
One PS/2 Mouse
One internal SMBus connector
One internal WOM connector

BIOS

Award BIOS
2Mb Flash ROM
Flash write Protection for BIOS
Support ACPI S1, S3
BIOS feature set
BIOS setup features
Auto configuration for IDE hard disk type
Multiple boot options

Power Supply

ATX12V

System Management

Winbond hardware monitor

One 3-pin CPU Fan headers

Three 3-pin Chassis Fan headers

One CPU temperature sensor

Seven Voltage monitoring (Vcore, +1.5V, +2.5V, +3.3V, +5V, +12V, Battery, 5VSTB)

One 3-pin Chassis intrusion header

Form Factor

Micro ATX

Stacked PS/2 Mouse/Keyboard ports

Stacked 2 USB2.0 ports with one RJ-45 connector

Stacked one Serial, one Graphics and one Parallel ports

Stacked Audio Line-in, Line-out, Microphone and

Game port

Other

Support AC power failure

Spec

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2. PC2001
3. PCI 2.2
4. APM 1.2
5. SMBIOS 2.3
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4 Layer

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