

Preface

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Version 1.0a

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Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the 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 a residential installation. 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 harmful interference to radio or television 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.
- Increase the separation between the equipment and the receiver.
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

About the Manual

The manual consists of the following:

Chapter 1
Introducing the Mainboard

Describes features of the mainboard, and provides a shipping checklist.

Go to ⇒ page 1

Chapter 2
Installing the Mainboard

Describes installation of mainboard components.

Go to ⇒ page 7

Chapter 3
Using BIOS

Provides information on using the BIOS Setup Utility.

Go to ⇒ page 33

Chapter 4
Using the Mainboard Software

Describes the mainboard software.

Go to ⇒ page 61

Appendix A
Setting Jumpers

Provides a reference to the jumpers on the mainboard.

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Chapter 1

Introducing the Mainboard

Introduction

Congratulations on purchasing the P6STMT mainboard. The P6STMT mainboard is a Micro ATX mainboard that uses a 4-layer printed circuit board and measures 220 x 244 mm. The mainboard features a Socket 370 that accommodates Intel Celeron/Pentium III/Tualatin and VIA C3 processors supporting frontside bus (FSB) speeds up to 133 MHz.

The P6STMT incorporates the SiS630ET chipset, which includes integrated built-in video, audio, networking and communications capabilities, and features the AC 97 audio codec.

The mainboard delivers high-level performance with an integrated 4xAGP controller, which is compliant with the AGP 2.0 specification. Two Bus Master Ultra DMA (UDMA) ports that support four ATAPI (AT Attachment Packet Interface) devices. The IDE also supports PIO Mode 3 and 4, UDMA33/66/100 IDE, and an ATAPI CD-ROM.

Checklist

Compare the mainboard's package contents with the following checklists:

Standard Items

- One mainboard
- One diskette drive ribbon cable and bracket
- One IDE drive ribbon cable and bracket
- One auto-install software support CD
- This user's manual

Features

Processor	<p>The P6STMT mainboard uses a Socket 370 that has the following features:</p> <ul style="list-style-type: none">• Accommodates Intel FC-PGA Celeron CPUs that support an FSB of 66 MHz• Accommodates Intel Pentium III/Tualatin CPUs that support an FSB of 100 or 133 MHz• Accommodates VIA C3 processors that support an FSB of 100 or 133 MHz
Chipset	<p>The Silicon Integrated System SiS630ET chipset is based on an innovative and scalable architecture with proven reliability and performance. A few of the chipset's advanced features are:</p> <ul style="list-style-type: none">• Host interface controller supports 66/100/133 MHz front side bus frequency• DRAM controller supports up to 1 GB of SDRAM• AGP controller is AGP 2.0 compliant and supports a graphic window size up to 256 MB• PCI IDE controller supports PCI bus mastering, PIO modes 0~4, and UDMA 33/66/100• Two USB controllers double the bandwidth to 24 Mbps across four ports• Integrated AC 97 audio that supports full surround sound with up to 6 channels• Integrated LAN capability <p>Additional key features include support for four USB ports, an AC 97 link for audio and modem, hardware monitoring, and ACPI/OnNow power management.</p>
Memory	<p>The mainboard accommodates SDRAM up to 1 GB using two 3.3V unbuffered DIMM modules.</p>
AC' 97 Audio Codec	<p>The AC' 97 Audio codec is compliant with the AC' 97 2.1 specification, and supports 18-bit ADC (Analog Digital Converter) and DAC (Digital Analog Converter) resolution as well as 18-bit stereo full-duplex codec with independent and variable sampling rates. Further features include support for four analog line-level stereo inputs.</p>

Expansion Options	<p>The mainboard comes with the following expansion options:</p> <ul style="list-style-type: none"> • Three 32-bit PCI slots • One 8/16-bit ISA slot (optional) • An Audio Modem Riser (AMR) slot • Two IDE channels and a floppy disk drive interface <p>The P6STMT supports Ultra DMA bus mastering with transfer rates of 33/66/100 MB/sec.</p>
Integrated I/O	<p>The mainboard has a full set of I/O ports and connectors:</p> <ul style="list-style-type: none"> • Two PS/2 ports for mouse and keyboard • One LAN port (optional) • One serial port • One VGA port • One parallel port • One MIDI/game port • Two USB ports • Audio jacks for microphone, line-in and line-out
BIOS Firmware	<p>This mainboard uses Award BIOS that enables users to configure many system features including the following:</p> <ul style="list-style-type: none"> • Power management • Wake-up alarms • CPU parameters • CPU and memory timing <p>The firmware can also be used to set parameters for different processor clock speeds.</p>

Mainboard Components

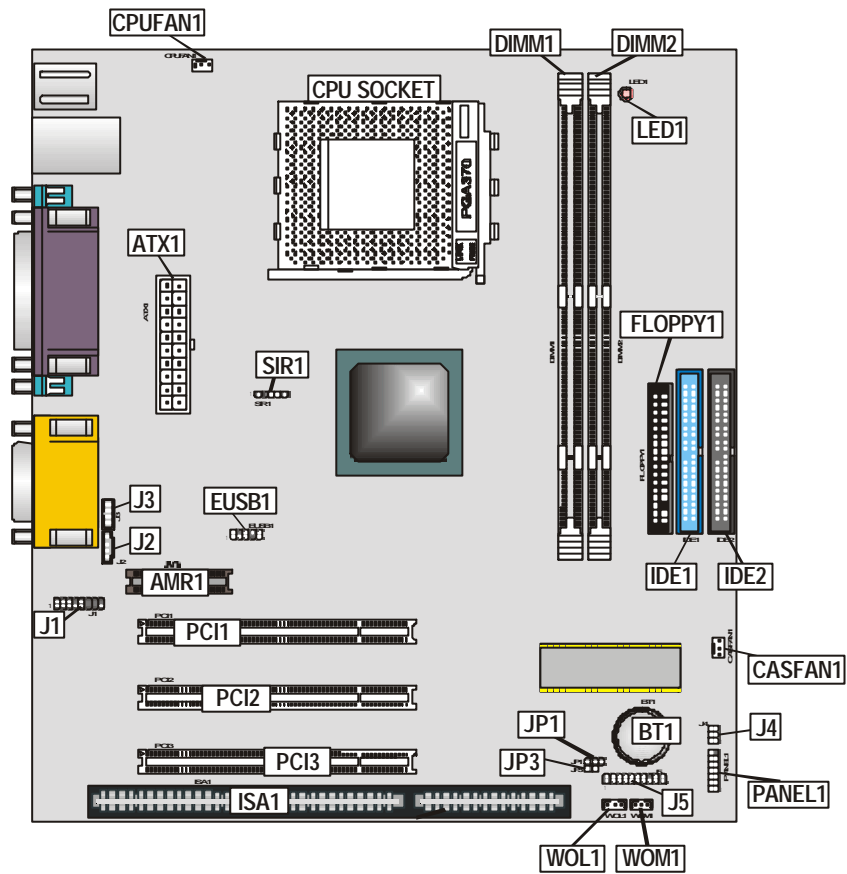


Table of Mainboard Components

Label	Component
AMR	Audio Modem Riser slot
ATX1	Power connector
BT1	Three volt realtime clock battery
CASFAN1	Auxiliary case cooling fan
CPU SOCKET	Socket 370 for Intel Celeron/ Pentium III/Tualatin and Cyrix processors
CPUFAN1	Cooling fan for CPU
DIMM1, DIMM2	Two 168-pin DIMM sockets
EUSB1	Front panel USB headers
FLOPPY1	Floppy disk drive connector
IDE 1	Primary IDE channel
IDE 2	Secondary IDE channel
ISA1	One 8/16-bit ISA slot
J1	Front audio header
J2	Secondary CD-in connector
J3	Primary CD-in connector
J4	Connector for case front panel switches and LED indicators.
J5	Smart Card Reader header
JP1	Clear BIOS jumper
JP3	BIOS flash protection jumper
LED1 ¹	Red 3.3V SB LED for SDRAM
PANEL1	Connector for case front panel switches and LED indicators
PCI1 ~ PCI3	Three 32-bit add-on card slots
SIR1	Serial infrared cable header
WOL1	Wake On LAN wakeup connector
WOM1	Wake On Modem wakeup connector

¹ The red indicator LED1 turns on if your system is still powered, at which time memory modules cannot be installed or uninstalled.

Choosing a Computer Case

There are many types of computer cases on the market. The mainboard complies with the specifications for the Micro ATX system case. Some features on the mainboard are implemented by cabling connectors on the mainboard to indicators and switches on the system case. Ensure that your case supports all the features required. The mainboard can support one or two floppy diskette drives and four enhanced IDE drives. Ensure that your case has sufficient power and space for all the drives that you intend to install.

Most cases have a choice of I/O templates in the rear panel. Make sure that the I/O template in the case matches the I/O ports installed on the rear edge of the mainboard.

This mainboard has a Micro ATX form factor of 220 x 244 mm. Choose a case that accommodates this form factor.

This concludes Chapter 1. The next chapter explains how to install the mainboard.

Chapter 2

Installing the Mainboard

Safety Precautions

Follow these safety precautions when installing the mainboard:

- Wear a grounding strap attached to a grounded device to avoid damage from static electricity.
- Discharge static electricity by touching the metal case of a safely grounded object before working on the mainboard.
- Leave components in the static-proof bags they came in.
- Hold all circuit boards by the edges. Do not bend circuit boards.

Quick Guide

This Quick Guide suggests the steps you can take to assemble your system with the mainboards.

The following table provides a reference for installing specific components:

Locating Mainboard Components	Go to page 4
Setting Jumpers	Go to page 9
Installing the Mainboard in a Case	Go to page 12
Installing Case Components	Go to page 13
Installing the CPU	Go to page 15
Installing Memory	Go to page 19
Installing an HDD and CD-ROM Drive	Go to page 21
Installing an FDD	Go to page 24
Installing Add-on Cards	Go to page 25
Connecting Options	Go to page 27
Connecting Peripheral (I/O) Devices	Go to page 29

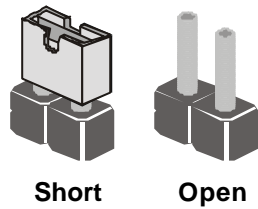
Note: The appendix provides a quick reference for jumper settings.

Checking Jumper Settings

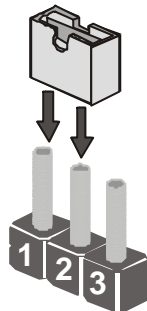
This section explains how to set jumpers for correct configuration of the mainboard.

Setting Jumpers

Use the mainboard jumpers to set system configuration options. Jumpers with more than one pin are numbered. When setting the jumpers, ensure that the jumper caps are placed on the correct pins.



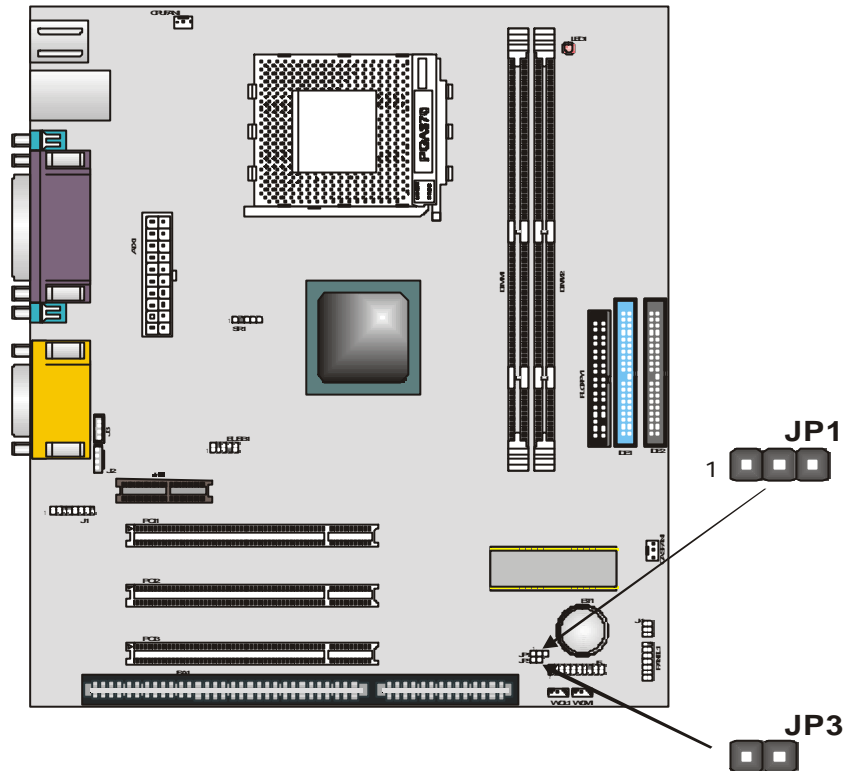
This illustration shows a 2-pin jumper. When the jumper cap is placed on both pins, the jumper is SHORT. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is OPEN.



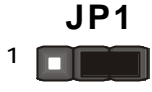

This illustration shows a 3-pin jumper. Pins 1 and 2 are SHORT.

Checking Jumper Settings

The following illustration shows the location of the mainboard jumpers. Pin 1 is labeled.



Jumper Settings

Jumper	Type	Description	Setting (default)
JP1	3-pin	Clear CMOS	1-2: Clear 2-3: <i>Normal</i> 
JP3	2-pin	BIOS flash protection	Short: Enable <i>Open: Disable</i> 

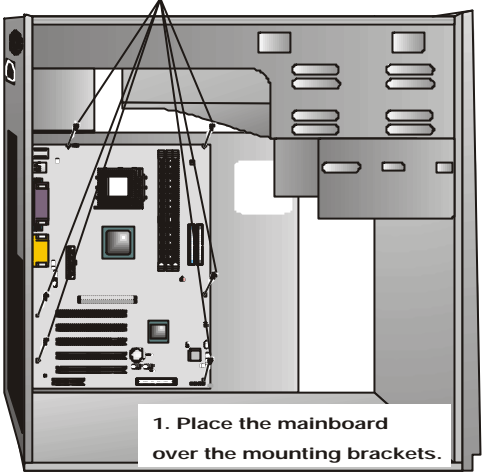
Jumper 1 – enables you to clear the BIOS. Follow these instructions:

1. Turn the system off.
2. Short pins 1 and 2 on jumper 1.
3. Return the jumper to the normal setting.
4. Turn the system on. The BIOS is returned to the default settings.

Jumper 3 – enables you to prevent the BIOS from being updated (flashed). Open the jumper if you are going to update your BIOS. After updating the BIOS, short the jumper to protect the BIOS from being flashed. For instructions on updating the BIOS refer to Chapter 3.

Installing the Mainboard in a Case

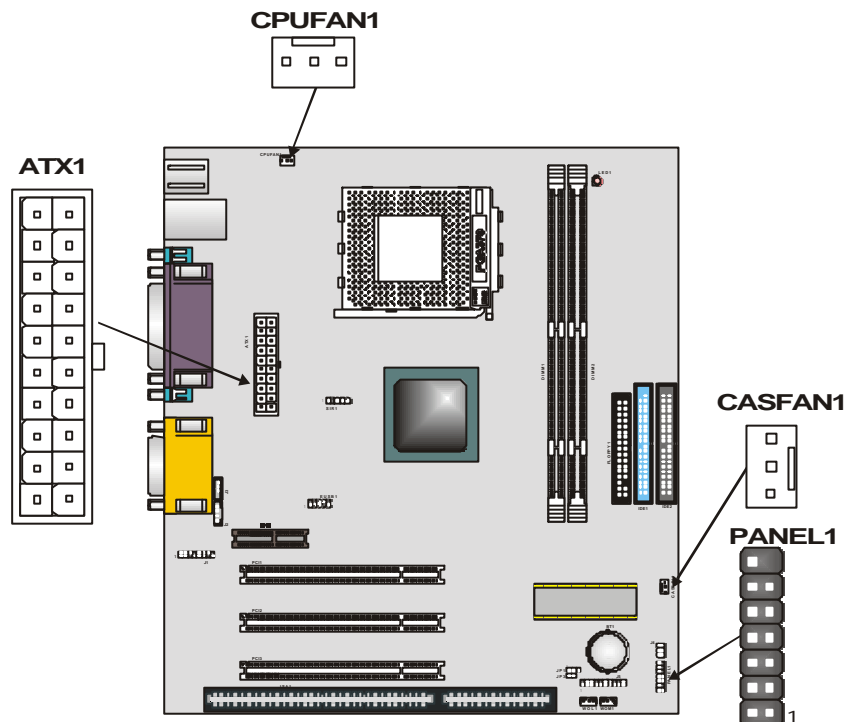
Refer to the following illustration and instructions for installing the mainboard in a case:

<p>This illustration shows an example of a mainboard being installed in a tower-type case:</p> <hr/> <p>Note: Do not over-tighten the screws as this can stress the mainboard.</p> <hr/> <p>Most system cases have mounting brackets installed in the case, which correspond to the holes in the mainboard. Place the mainboard over the mounting brackets and secure the mainboard onto the mounting brackets with screws.</p>	<p>2. Secure the mainboard with screws where appropriate.</p>  <p>1. Place the mainboard over the mounting brackets.</p>
--	---

Ensure that your case has an I/O template that supports the I/O ports and expansion slots on your mainboard.

Connecting Case Components

After you have installed the mainboard into a case, you can begin connecting the mainboard components. Refer to the following:



1. Connect the case power supply connector to ATX1.
2. Connect the CPU cooling fan cable to CPUFAN1.
3. Connect the case cooling fan connector to CASFAN1

The following page explains how to make panel connections.

The Panel Connector

The panel connector provides a standard set of switch and LED connectors commonly found on ATX or Micro ATX cases. Refer to the table below for information:

Device	Pins
Empty	13
Reset Switch	+12, -14
Power Switch	+9, -11
Speaker	+4, -6, -8, 10
Power LED	-3 (Y), -5 (G), +7
HDD LED	+1, -2

Note: The plus sign (+) indicates a pin which must be connected to a positive voltage.

Installing Hardware

Installing the Processor

Caution: When installing a CPU heatsink and cooling fan make sure that you DO NOT scratch the mainboard or any of the surface-mount resistors with the clip of the cooling fan. If the clip of the cooling fan scrapes across the mainboard, you may cause serious damage to the mainboard or its components.

On most mainboards, there are small surface-mount resistors near the processor socket, which may be damaged if the cooling fan is carelessly installed.

Avoid using cooling fans with sharp edges on the fan casing and the clips. Also, install the cooling fan in a well-lit work area so that you can clearly see the mainboard and processor socket.

Before installing the Processor

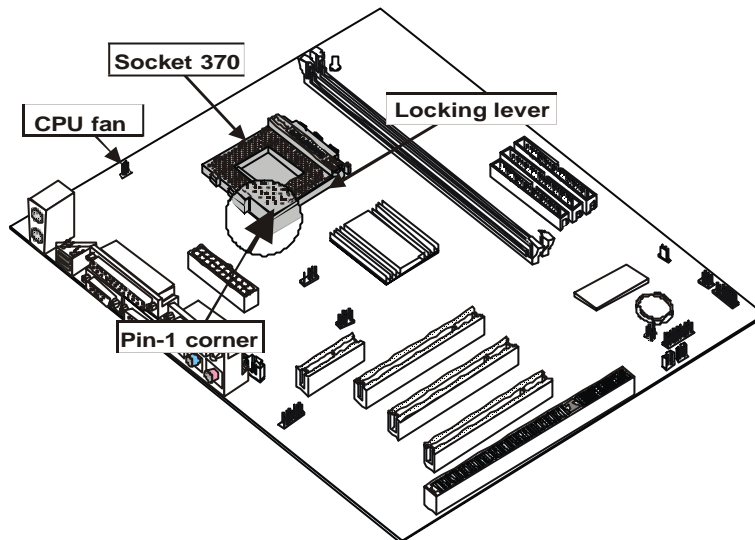
This mainboard automatically determines the CPU clock frequency and system bus frequency for the processor. You may be able to change these settings by making changes to jumpers on the mainboard, or changing the settings in the system Setup Utility. We strongly recommend that you do not overclock processors or other components to run faster than their rated speed.

Warning: Overclocking components can adversely affect the reliability of the system and introduce errors into your system. Overclocking can permanently damage the mainboard by generating excess heat in components that are run beyond the rated limits.

This mainboard has a Socket 370 processor socket. When choosing a processor, consider the performance requirements of the system. Performance is based on the processor design, the clock speed and system bus frequency of the processor, and the quantity of internal cache memory and external cache memory.

CPU Installation Procedure

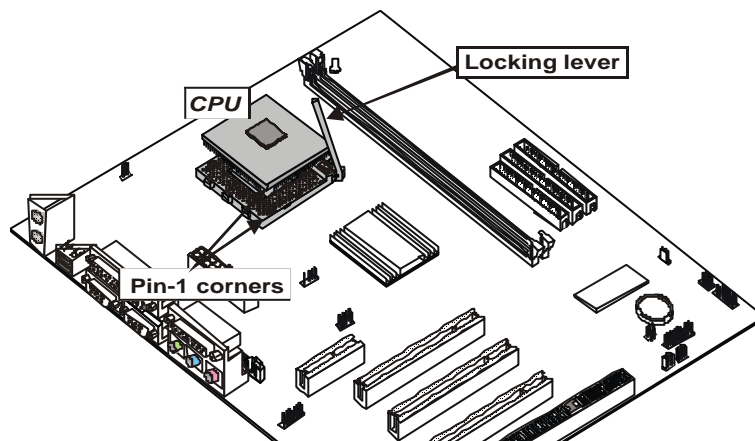
The following illustration shows CPU installation components:



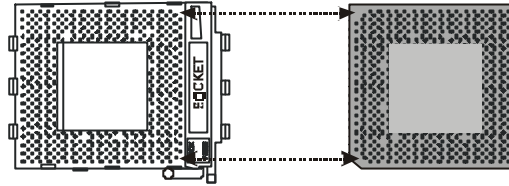
Note: The Pin-1 corner is empty on both the socket and the CPU.

Follow these instructions to install the CPU:

1. Pull the CPU socket locking lever away from the socket (A) to unhook it and raise the locking lever to the upright position (B).

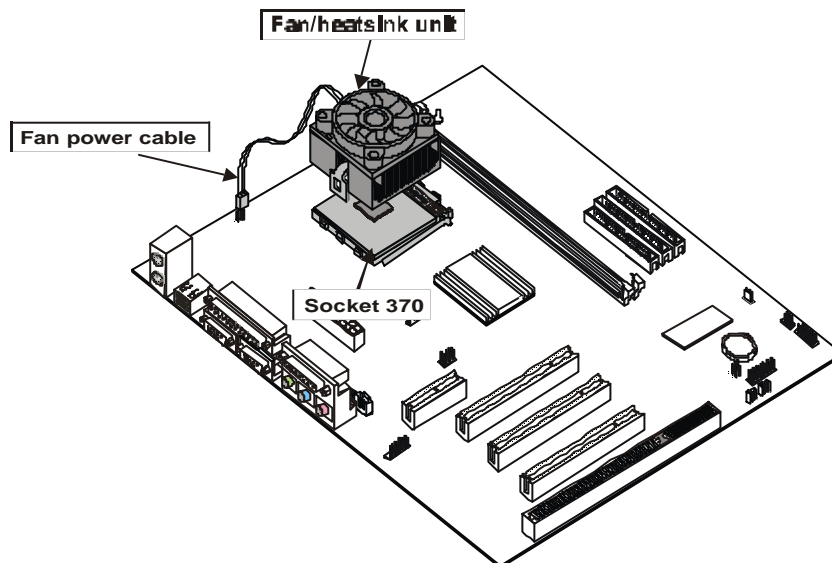


2. Match the pins on the underside of the CPU with the pin holes on the Socket 370. Two adjacent corners on the Socket are missing pin holes: two corresponding corners on the CPU are missing pins. Lower the CPU onto the socket accordingly.

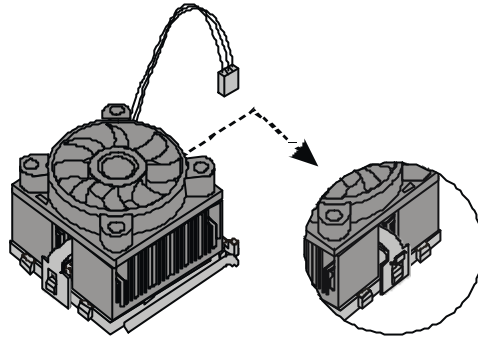


Note: The socket is designed to ZIF (Zero Insertion Force) specifications which means that the CPU pins should easily drop into the socket pin holes without any exertion or pressure on the CPU.

3. Swing the locking lever down and hook it under the latch on the edge of the socket.
4. Apply thermal grease to the top of the CPU. See your dealer for more information about thermal grease.
5. Lower the CPU fan/heatsink unit onto the CPU socket.

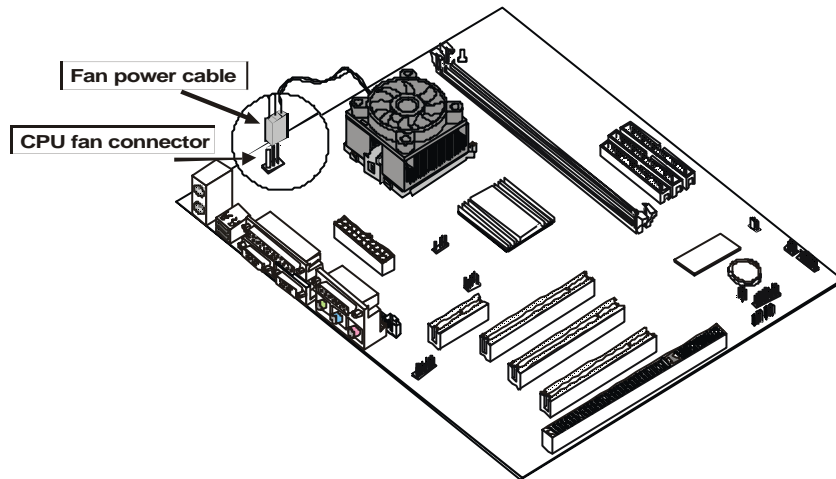


6. Secure the two retention clips on either side of the fan/heatsink unit onto the Socket 370 base.



*Fan/heatsink unit
secured to socket*

7. Connect the CPU fan power cable to the CPUFAN1 connector.



Note: The CPU fan/heatsink unit installation procedures may vary with the model of the fan/heatsink supplied. The form, size, and color of the fan/heatsink unit may also vary.

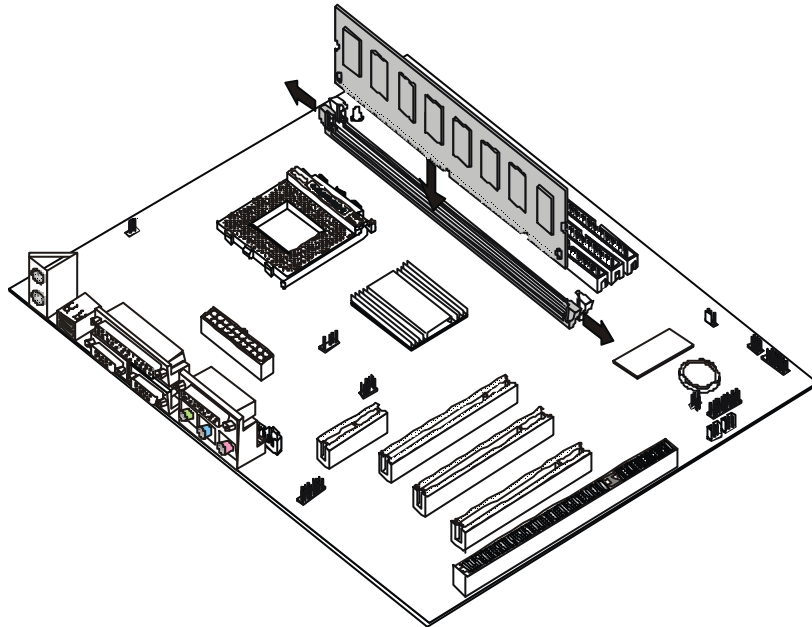
Installing Memory Modules

For this mainboard, you must use 168-pin 3.3V non-buffered Dual In-line Memory Modules (DIMMs). The memory chips must be standard or registered SDRAM (Synchronous Dynamic Random Access Memory).

The memory bus can run at 66 MHz, 100 MHz, or 133 MHz. If your processor operates over a 133 MHz FSB (frontside bus), you can install PC133 or PC100 memory modules that operate over a 133 or 100 MHz bus. If your processor operates over a 100 MHz frontside bus, you can install memory modules that operate over a 133 MHz, 100 MHz, or 66 MHz bus. If your processor operates over a 66 MHz frontside bus, you can only install memory modules that operate at 66 or 100 MHz.

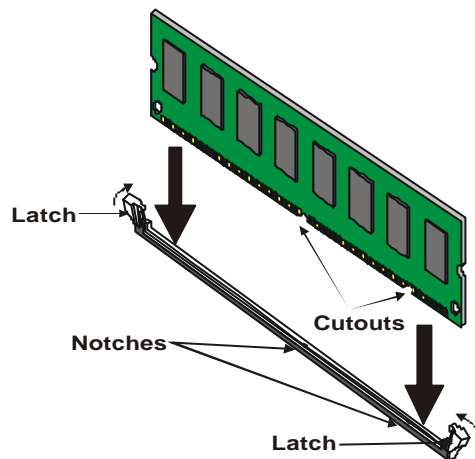
Installation Procedure

The mainboard accommodates two memory modules. You must install at least one module in either of the two slots. Each module can be installed with 32 MB to 512 MB of memory; total memory capacity is 1 GB.



Refer to the following to install the memory modules.

1. Push the latches on each side of the DIMM slot down.
2. Align the memory module with the slot. The DIMM slots are keyed with notches and the DIMMs are keyed with cutouts so that they can only be installed correctly.
3. Check that the cutouts on the DIMM module edge connector match the notches in the DIMM slot:



4. Install the DIMM module into the slot and press it firmly down until it seats correctly. The slot latches are levered upwards and latch on to the edges of the DIMM.
5. Install any remaining DIMM modules.

Installing a Hard Disk Drive/CD-ROM

This section describes how to install IDE devices such as a hard disk drive and a CD-ROM drive.

About IDE Devices

Your mainboard has a primary and secondary IDE channel interface (IDE1 and IDE2). An IDE ribbon cable supporting two IDE devices is bundled with the mainboard.

If you want to install more than two IDE devices, get a second IDE cable and you can add two more devices to the secondary IDE channel.

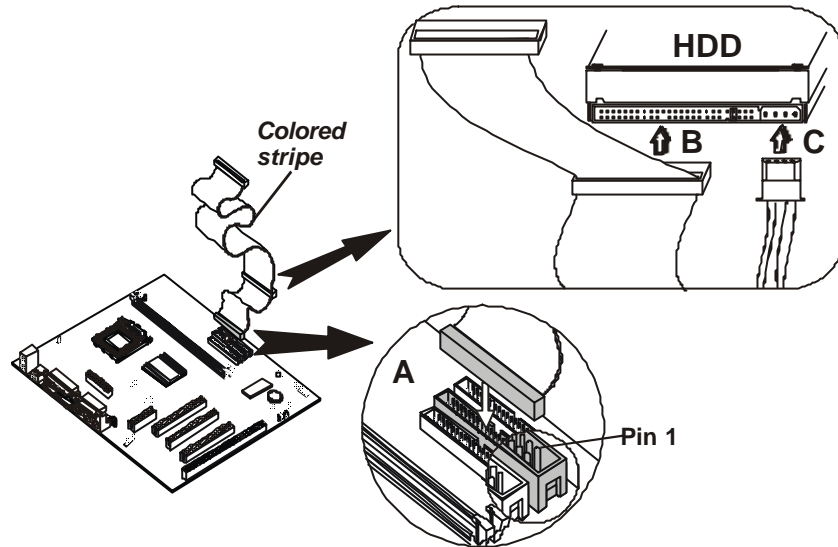
IDE devices have jumpers or switches that are used to set the IDE device as MASTER or SLAVE. Refer to the IDE device user's manual. When installing two IDE devices on one cable, ensure that one device is set to MASTER and the other device is set to SLAVE. The documentation of your IDE device explains how to do this.

About UltraDMA

This mainboard supports UltraDMA 33/66/100. UDMA is a technology that accelerates the performance of devices in the IDE channel. Install IDE devices that support UDMA and use IDE cables that support UDMA for better performance.

Installing a Hard Disk Drive

1. Install the hard disk drive into the drive cage in your system case.
2. Plug the IDE cable into IDE1 (A):



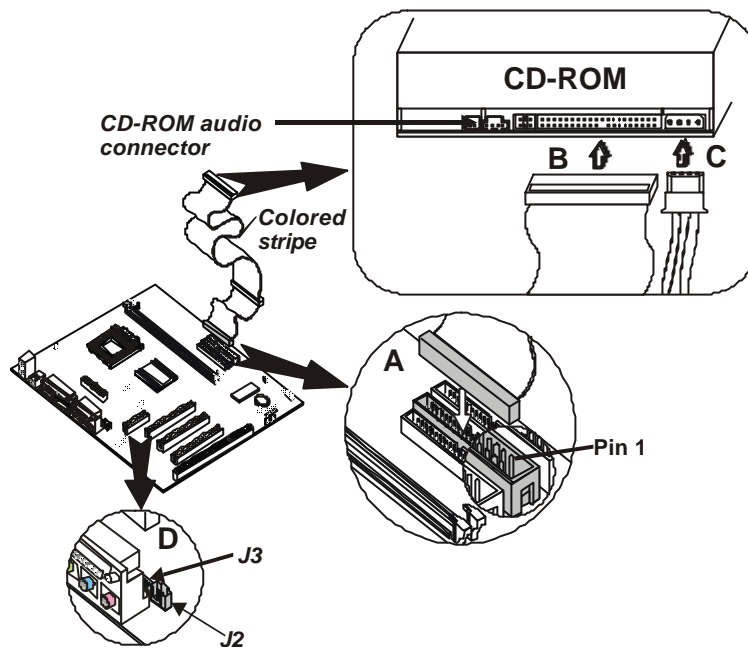
Note: Ribbon cable connectors are usually keyed so that they can only be installed correctly on the device connector. If the connector is not keyed, make sure that you match the pin-1 side of the cable connector with the pin-1 side of the device connector. Each connector has the pin-1 side clearly marked. The pin-1 side of each ribbon cable is always marked with a colored stripe on the cable.

3. Plug an IDE cable connector into the hard disk drive IDE connector (B). It doesn't matter which connector on the cable you use.
4. Plug a power cable from the case power supply into the power connector on the hard disk drive (C).

When you first start up your system, the BIOS should automatically detect your hard disk drive. If it doesn't, enter the Setup Utility and use the IDE Hard Disk Auto Detect feature to configure the hard disk drive that you have installed. See IDE HDD Auto-Detection on page 38 for more information.

Installing a CD-ROM/DVD Drive

1. Install the CD-ROM/DVD drive into the drive cage in your system case.
2. Plug the IDE cable into IDE1 (A). If you have already installed an HDD, use the other connector on the IDE cable.



Note: Ribbon cable connectors are usually keyed so that they can only be installed correctly on the device connector. If the connector is not keyed, make sure that you match the pin-1 side of the cable connector with the pin-1 side of the device connector. Each connector has the pin-1 side clearly marked. The pin-1 side of each ribbon cable is always marked with a colored stripe on the cable.

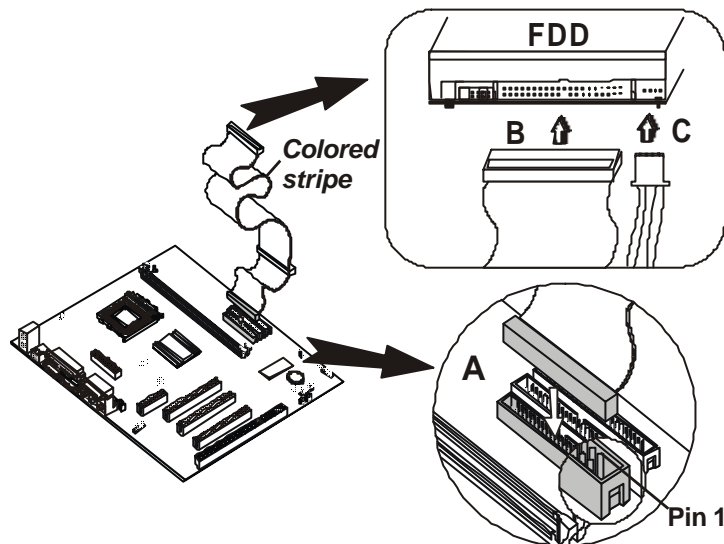
3. Plug an IDE cable connector into the CD-ROM/DVD drive IDE connector (B). It doesn't matter which connector on the cable you use.
4. Plug a power cable from the case power supply into the power connector on the CD-ROM/DVD drive (C).
5. Use the audio cable provided with the CD-ROM/DVD drive to connect to the mainboard CD-in connector CDIN1 or CDIN2 (D).

When you first start up your system, the BIOS should automatically detect your CD-ROM/DVD drive. If it doesn't, enter the Setup Utility and configure the CD-ROM/DVD drive that you have installed. See IDE Primary/Secondary Master/Slave (Auto) on page 38 for more information.

Installing a Floppy Diskette Drive

The mainboard has a floppy diskette drive (FDD) interface and ships with a diskette drive ribbon cable that supports one or two floppy diskette drives. You can install a 5.25-inch drive and a 3.5-inch drive with various capacities. The floppy diskette drive cable has one type of connector for a 5.25-inch drive and another type of connector for a 3.5-inch drive.

1. Install the FDD into the drive cage in your system case.
2. Plug the FDD cable into FLOPPY1 (A):



Note: Ribbon cable connectors are usually keyed so that they can only be installed correctly on the device connector. If the connector is not keyed, make sure that you match the pin-1 side of the cable connector with the pin-1 side of the device connector. Each connector has the pin-1 side clearly marked. The pin-1 side of each ribbon cable is always marked with a colored stripe on the cable.

3. Plug the correct connector on the FDD cable for the 5.25-inch or 3.5-inch drive into the FDD connector (B).
4. Plug a power cable from the case power supply into the power connector on the FDD.

When you first start up your system, go immediately to the Setup Utility to configure the floppy diskette drives that you have installed. See Standard CMOS Features on page 37 for more information.

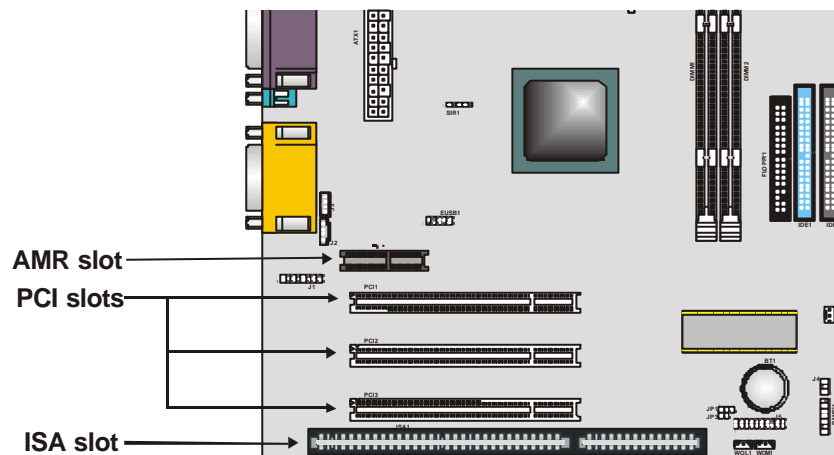
Installing Add-on Cards

This mainboard has three 32-bit PCI (Peripheral Components Interconnect) expansion slots, one 8/16-bit ISA (Industry Standard Architecture) slot, and one Audio Modem Riser (AMR) slot.

AMR Slot This slot is used to insert Audio Modem Riser cards including Modem and Audio functions.

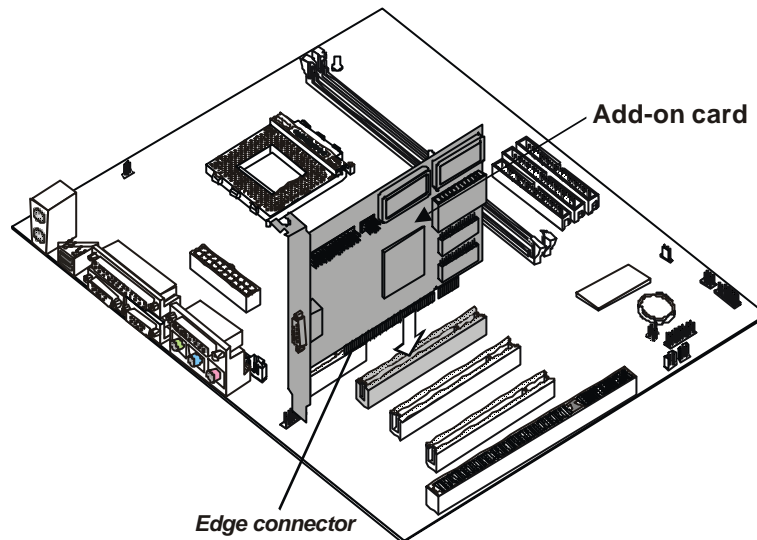
PCI Slots PCI slots are used to install expansion cards that have the 32-bit PCI interface.

ISA Slot (optional) The ISA slot is used to install legacy cards that have an 8/16-bit interface.



Note: Before installing an add-on card, check the documentation for the card carefully. If the card is not Plug and Play, you may have to manually configure the card before installation.

1. Remove a blanking plate from the system case corresponding to the slot you are going to use.
2. Install the edge connector of the add-on card into the expansion slot. Ensure that the edge connector is correctly seated in the slot.

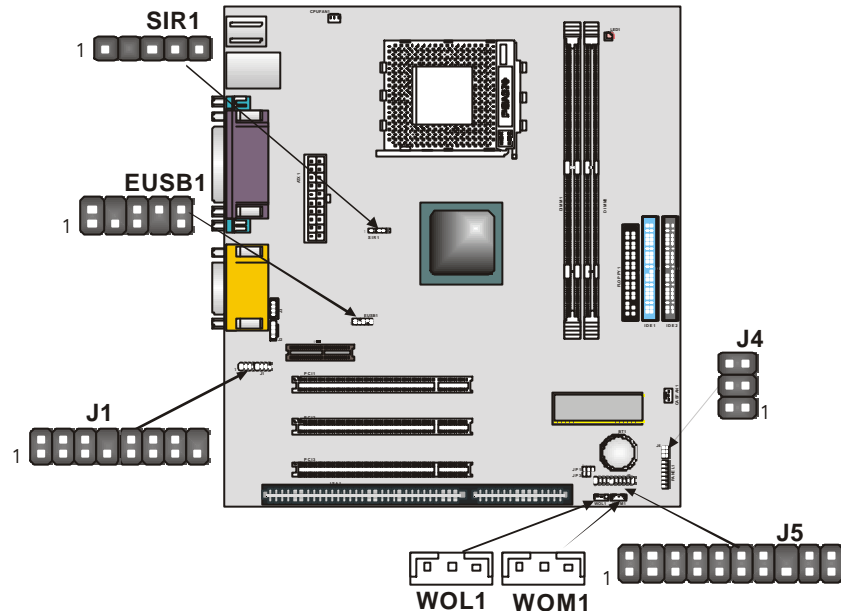


3. Secure the metal bracket of the card to the system case with a screw.

Note: For some add-on cards, for example graphics adapters and network adapters, you have to install drivers and software before you can begin using the add-on card.

Connecting Optional Devices

Refer to the following for information on connecting the mainboard's optional devices:



SIR1: Serial infrared port

The mainboard supports a Serial Infrared (SIR) data port. Infrared ports allow the wireless exchange of information between your computer and similarly equipped devices such as printers, laptops, Personal Digital Assistants (PDAs), and other computers.

Pin	Signal Name
1	VCC
2	KEY
3	IRRX
4	GROUND
5	IRTX

EUSB1: USB port 3, 4

The mainboard has two USB ports installed on the rear edge I/O port array. Additionally, some computer cases have USB ports at the front of the case. If you have this kind of case, use auxiliary USB connectors USB2 to connect the front-mounted ports to the mainboard.

Pin	Signal Name	Pin	Signal Name
1	USBVCC	2	GROUND
3	-DATA1	4	GROUND
5	+DATA1	6	+DATA3
7	GROUND	8	-DATA3
9	GROUND	10	USBVCC

J1: Front panel audio header

This header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access.

Pin	Signal Name	Pin	Signal Name
1	LINEOUT R	2	LINEOUT (L)
3	AGND	4	AGND
5	GROUND	6	GROUND
7	+12V	8	EMPTY
9	MICROPHONE	10	GROUND (MIC)
11	FRONT LINE OUT (R)	12	LINE NEXT (R)
13	FRONT LINE OUT (L)	14	LINE NEXT (L)
15	GROUND	16	EMPTY

J4: Front panel header

This is the auxiliary header for front panel switches and connectors.

Pin	Signal Name	Pin	Signal Name
1	GREEN LED	2	GREEN LED
3	SMI SWITCH	4	SMI SWITCH
5	KEYLOCK	6	KEYLOCK

WOL1/WOM: Wake On LAN/Wake On Modem

If you have installed a LAN card, use the cable provided with the card to plug into the mainboard WOL1 connector. This enables the Wake On LAN (WOL) feature. When your system is in a power-saving mode, any LAN signal automatically resumes the system. You must enable this item using the Power Management page of the Setup Utility.

Pin	Signal Name
1	5VSB
2	GROUND
3	SENSE

If you have installed a modem, use the cable provided with the modem to plug into the mainboard WOM1 connector. This enables the Wake On Modem (WOM) feature.

When your system is in a power-saving mode, any modem signal automatically resumes the system. You must enable this item using the Power Management page of the Setup Utility. See Chapter 3 for more information.

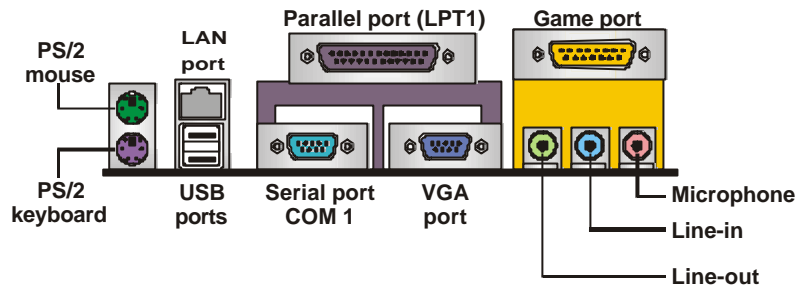
J5: Smart Card Reader header

This header enables you to attach a Smart Card Reader to read data from a Smart Card. A Smart Card is a credit card with a built-in microprocessor and memory used for identification or financial transactions. You can use the reader to transfer data to and from your computer.

Pin	Signal Name	Pin	Signal Name
1	PCICLK	2	VCC3
3	SIRQ	4	VCC3
5	LFRAME#	6	SB6V
7	LDRQ#	8	SB6V
9	LAD0	10	SB6V
11	LAD1	12	SB6V
13	LAD2	14	SB6V
15	LAD3	16	KEYPIN
17	PCIRST#	18	VCC
19	PME#	20	VCC

Connecting I/O Devices

The backplane of the mainboard has the following I/O ports:



- | | |
|----------------------|--|
| PS/2 Mouse | Use the upper PS/2 port to connect a PS/2 pointing device. |
| PS/2 Keyboard | Use the lower PS/2 port to connect a PS/2 keyboard. |
| USB Ports | Use the USB ports to connect USB devices. |
| LPT1 | Use LPT1 to connect printers or other parallel communications devices. |
| COM1 | Use the COM port to connect serial devices such as mice or fax/modems. COM1 is identified by the system as COM1/3. |
| VGA Port | Use the VGA port to connect an external monitor. |
| Game Port | Use the game port to connect a joystick or a MIDI device. |
| Audio Ports | Use the three audio ports to connect audio devices. The left side jack is for a stereo line-out signal. The middle jack is for a stereo line-in signal. The right side jack is for a microphone. |

External Connector Color Coding

Many connectors now use standard colors as shown in the table below.

Connector	Color
Analog VGA	Blue
Audio line-in	Light blue
Audio line-out	Lime
Digital monitor/flat panel	White
IEEE 1394	Grey
Microphone	Pink
MIDI/game	Gold
Parallel	Burgundy
PS/2-compatible keyboard	Purple
PS/2-compatible mouse	Green
Serial	Teal or Turquoise
Speaker out/subwoofer	Orange
Right-to-left speaker	Brown
USB	Black
Video out	Yellow
SCSI, network, telephone, modem	None

This concludes Chapter 2. The next chapter covers the BIOS.

—Notes—

Chapter 3

Using BIOS

About the Setup Utility

The computer uses the latest Award BIOS with support for Windows Plug and Play. The CMOS chip on the mainboard contains the ROM setup instructions for configuring the mainboard BIOS.

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides you with options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you stored in CMOS.

The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives, and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options.

This chapter provides explanations for Setup Utility options.

The Standard Configuration

A standard configuration has already been set in the Setup Utility. However, we recommend that you read this chapter in case you need to make any changes in the future.

This Setup Utility should be used:

- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

Updating the BIOS

You can download and install updated BIOS for this mainboard from the manufacturer's Web site. New BIOS provides support for new peripherals, improvements in performance, or fixes for known bugs. Install new BIOS as follows:

1. If your mainboard has a BIOS protection jumper, change the setting to allow BIOS flashing. (Refer to Appendix A for jumper settings.)
2. If your mainboard has an item called Firmware Write Protect in Advanced BIOS features, disable it. (Firmware Write Protect prevents BIOS from being overwritten.)
3. Create a bootable system disk. (Refer to Windows online help for information on creating a bootable system disk.)
4. Download the Flash Utility and new BIOS file from the manufacturer's Web site. Copy these files to the system diskette you created in Step 3.
5. Turn off your computer and insert the system diskette in your computer's diskette drive. (You might need to run the Setup Utility and change the boot priority items on the Advanced BIOS Features Setup page, to force your computer to boot from the floppy diskette drive first.)
6. At the A:\ prompt, type the Flash Utility program name and press <Enter>. You see a screen similar to the following:

FLASH MEMORY WRITER V7.33	
(C) Award Software 1999 All Rights Reserved	
For (MAINBOARD NAME)	DATE: 10/26/2000
Flash Type	
File Name to Program :	<input type="text"/>
Error Message	

7. Type the filename of the new BIOS in the "File Name to Program" text box. Follow the onscreen directions to update the mainboard BIOS.
8. When the installation is complete, remove the floppy diskette from the diskette drive and restart your computer. If your mainboard has a Flash BIOS jumper, reset the jumper to protect the newly installed BIOS from being overwritten.

Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle ►) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

In this manual, default values are enclosed in parenthesis. Submenu items are denoted by a triangle ►.

Standard CMOS Features

This option displays basic information about your system.

CMOS Setup Utility – Copyright (C) 1984 – 2000 Award Software
Standard CMOS Features

Date (mm:dd:yy)	Tue, July 11 2001	Item Help
Time (hh:mm:ss)	12 : 8 : 59	Menu Level ►
► IDE Primary Master		Change the day, month, year and century.
► IDE Primary Slave		
► IDE Secondary Master		
► IDE Secondary Slave		
Drive A	[1.44M, 3.5 in.]	
Drive B	[None]	
Floppy 3 Mode Support	[Disabled]	
Video	[EGA/VGA]	
Halt On	[All Errors]	
Base Memory	640K	
Extended Memory	31744K	
Total Memory	32768K	

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

Date and Time

The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

► IDE Devices (None)

Your computer has two IDE channels (Primary and Secondary) and each channel can be installed with one or two devices (Master and Slave). Use these items to configure each device on the IDE channel.

Press <Enter> to display the IDE submenu:

CMOS Setup Utility – Copyright © 1984 – 2000 Award Software
IDE Primary Master

	Press Enter	Item Help
IDE HDD Auto-Detection	Press Enter	
IDE Primary Master Access Mode	[Auto]	Menu Level ►►
Capacity	0 MB	To auto-detect the HDD's size, head . . . on this channel
Cylinder	0	
Head	0	
Precomp	0	
Landing Zone	0	
Sector	0	

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

IDE HDD Auto-Detection

Press <Enter> while this item is highlighted to prompt the Setup Utility to automatically detect and configure an IDE device on the IDE channel.

Note: If you are setting up a new hard disk drive that supports LBA mode, more than one line will appear in the parameter box. Choose the line that lists LBA for an LBA drive.

IDE Primary/Secondary Master/Slave (Auto)

Leave this item at Auto to enable the system to automatically detect and configure IDE devices on the channel. If it fails to find a device, change the value to Manual and then manually configure the drive by entering the characteristics of the drive in the items described below.

Refer to your drive's documentation or look on the drive casing if you need to obtain this information. If no device is installed, change the value to None.

Note: Before attempting to configure a hard disk drive, ensure that you have the configuration information supplied by the manufacturer of your hard drive. Incorrect settings can result in your system not recognizing the installed hard disk.

Access Mode

This item defines ways that can be used to access IDE hard disks such as LBA (Large Block Addressing). Leave this value at Auto and the system will automatically decide the fastest way to access the hard disk drive.

Press <Esc> to return to the Standard CMOS Features page.

Drive A/Drive B (1.44M, 3.5 in./None)

These items define the characteristics of any diskette drive attached to the system. You can connect one or two diskette drives.

Floppy 3 Mode Support (Disabled)

Floppy 3 mode refers to a 3.5-inch diskette with a capacity of 1.2 MB. Floppy 3 mode is sometimes used in Japan.

Video (EGA/VGA)

This item defines the video mode of the system. This main-board has a built-in VGA graphics system; you must leave this item at the default value.

Halt On (All Errors)

This item defines the operation of the system POST (Power On Self Test) routine. You can use this item to select which types of errors in the POST are sufficient to halt the system.

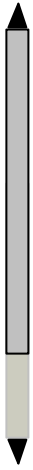
Base Memory, Extended Memory, and Total Memory

These items are automatically detected by the system at start up time. These are display-only fields. You cannot make changes to these fields.

Advanced BIOS Setup Option

This option displays advanced information about your system.

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Advanced BIOS Features

Anti-Virus Protection	Disabled		Item Help
CPU Internal Cache	Enabled		Menu Level ▶
External Cache	Enabled		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
CPU L2 Cache ECC Checking	Enabled		
Processor Number Feature	Enabled		
Quick Power On Self Test	Enabled		
First Boot Device	Floppy		
Second Boot Device	HDD-0		
Third Boot Device	LS120		
Boot Other Device	Enabled		
Swap Floppy Drive	Disabled		
Boot Up Floppy Seek	Enabled		
Boot Up NumLock Status	On		
Gate A20 Option	Fast		
ATA 66/100 IDE Cable Msg.	Enabled		
Typematic Rate Setting	Disabled		
x Typematic Rate (Chars/Sec)	6		
x Typematic Delay (Msec)	250		
Security Option	Setup		

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

Anti-Virus Protection (Disabled)

When enabled, this item provides protection against viruses that try to write to the boot sector and partition table of your hard disk drive. You need to disable this item when installing an operating system. We recommend that you enable this item as soon as you have installed an operating system.

Note: For complete protection against viruses, install virus software in your operating system and update the virus definitions regularly.

CPU Internal Cache CPU Internal Cache (Enabled)

All processors that can be installed in this mainboard use internal level 1 (L1) cache memory to improve performance. Leave this item at the default value for better performance.

External Cache (Enabled)

Most processors that can be installed in this system use external level 2 (L2) cache memory to improve performance. Leave this item at the default value for better performance.

CPU L2 Cache ECC Checking (Enabled)

This item enables or disables ECC (Error Correction Code) error checking on the CPU cache memory. We recommend that you leave this item at the default value.

Processor Number Feature (Enabled)

Some new processors are installed with a unique processor number. This number may be used for verification in Internet transactions and e-commerce. If you prefer not to use or distribute the unique processor number, disable this item to suppress the processor number.

Quick Power On Self Test (Enabled)

Enable this item to shorten the power on testing (POST) and have your system start up faster. You might like to enable this item after you are confident that your system hardware is operating smoothly.

First/Second/Third Boot Device (Floppy/HDD-0/LS120)

Use these three items to select the priority and order of the devices that your system searches for an operating system at start-up time.

Boot Other Device (Enabled)

When enabled, the system searches all other possible locations for an operating system if it fails to find one in the devices specified under the First, Second, and Third boot devices.

Swap Floppy Drive (Disabled)

If you have two floppy diskette drives in your system, this item allows you to swap the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.

Boot Up Floppy Seek (Enabled)

If this item is enabled, it checks the size of the floppy disk drives at start-up time. You don't need to enable this item unless you have a legacy diskette drive with 360K capacity.

Boot Up NumLock Status (On)

This item defines if the keyboard Num Lock key is active when your system is started.

Gate A20 Option (Fast)

This item defines how the system handles legacy software that was written for an earlier generation of processors. Leave this item at the default value.

ATA 66/100 IDE Cable Msg. (Enabled)

Enables or disables the ATA 66/100 IDE cable message. This message appears during boot when you are using a 40-pin cable on your ATA 66/100 hard disk.

Typematic Rate Setting (Disabled)

If this item is enabled, you can use the following two items to set the typematic rate and the typematic delay settings for your keyboard.

- **Typematic Rate (Chars/Sec):** Use this item to define how many characters per second are generated by a held-down key.
- **Typematic Delay (Msec):** Use this item to define how many milliseconds must elapse before a held-down key begins generating repeat characters.

Security Option (Setup)

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required when a user tries to enter the Setup Utility.

OS Select For DRAM > 64 MB (Non-OS2)

This item is only required if you have installed more than 64 MB of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default.

HDD S.M.A.R.T Capability (Disabled)

The S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) system is a diagnostics technology that monitors and predicts device performance. S.M.A.R.T. software resides on both the disk drive and the host computer.

The disk drive software monitors the internal performance of the motors, media, heads, and electronics of the drive. The host software monitors the overall reliability status of the drive. If a device failure is predicted, the host software, through the Client WORKS S.M.A.R.T applet, warns the user of the impending condition and advises appropriate action to protect the data.

Report No FDD For WIN95 (Yes)

If you are running a system with no floppy drive and using Windows 95, select Yes for this item to ensure compatibility with the Windows 95 logo certification. Otherwise, select No.

Video BIOS Shadow (Enabled)

Enable this item to copy the video BIOS to shadow RAM for improved performance.

Advanced Chipset Features Option

These items define critical timing parameters of the main-board. You should leave the items on this page at their default values unless you are very familiar with the technical specifications of your system hardware. If you change the values incorrectly, you may introduce fatal errors or recurring instability into your system.

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Advanced Chipset Features

Auto Configuration	Auto	Item Help
SDRAM RAS Active Time	6T	
SDRAM RAS Precharge Time	3T	
RAS to CAS Delay	3T	
Dram Background Command	Delay 1T	
LD-Off Dram RD/WR Cycles	Delay 1T	
Write Recovery Time	1T	
VCM REF To ACT/REF Delay	9T	
VCM ACCT – ACT/REF Delay	8T	
Early CKE Delay 1T Cntrl	Normal	
Early CKE Delay Adjust	1ns	
Mem Command Output Timer	Delay 1T	
SDRAM/VCM CAS Latency	3T	
SDRCLK Control	+2.0 ns	
SDRCLK Control CS#/CKE	+2.0 ns	
SDRCLK Control MA/SRAS	+2.0 ns	
SDRCLK Control DQM/MD	+2.0 ns	
EGMRCLK Control	+1.5 ns	
EGMWCLK Control	+2.5 ns	

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

Auto Configuration (Auto)

Auto Configuration installs preset default values for some of the timing parameters for RAM memory. We recommend that you leave these items at the default value Auto.

SDRAM Timing and Wait State Parameters

These items set the timing and wait states for SDRAM memory. We recommend that you leave these items at the default value:

- SDRAM RAS Active Time Default: 6T
- SDRAM RAS Precharge Time Default: 3T
- RAS-to-CAS Delay Default: 3T
- DRAM Background Command Default: Delay 1T
- LD-Off DRAM RD/WR Cycles Default: Delay 1T
- Write Recovery Time Default: 1T

- VCM REF To ACT/REF Delay Default: 9T
- VCM ACCT – ACT/REF Delay Default: 8T
- Early CKE Delay 1T Cntrl Default: Normal
- Early CKE Delay Adjust Default: 1ns
- Mem Command Output Time Default: Delay 1T
- SDRAM/VCM CAS Latency Default: 3T

CPU Access Parameters

These items set timing parameters for the CPU access. We recommend that you leave these items at the default value:

- SDRCLK Control Default: +2.0 ns
- SDRCLK Control CS#/CKE Default: +2.0 ns
- SDRCLK Control MA/SRAS Default: +2.0 ns
- SDRCLK Control DQM/MD Default: +2.0 ns
- EGMCLK Control Default: +1.5 ns
- EGMWCLK Control Default: +2.5 ns

System BIOS Cacheable (Enabled)

Video BIOS Cacheable (Enabled)

These items allow the video and/or system to be cached in memory for faster execution. We recommend that you leave these items at the default value.

Memory Hole at 15M-16M (Disabled)

This item can be used to reserve memory space for some ISA expansion cards that require it.

AGP Aperture Size (64MB)

This item defines the size of the aperture if you use an AGP graphics adapter. It refers to a section of the PCI memory address range used for graphics memory.

Graphic Window WR Combin (Enabled)

Use this item to enable or disable CPU support for WR Combin feature.

Concurrent Function(MEM) (Enabled)

Concurrent Function(PCI) (Enabled)

Use these items to enable or disable concurrent memory/PCI and CPU action.

CPU Pipeline Control (Enabled)

This item sets a timing parameter for CPU access. Since the CPU timing is determined by the system hardware, you can set this item to Disabled.

PCI Delay Transaction (Enabled)

If the chipset has an embedded 32-bit write buffer to support delay transaction cycles, you can enable this item to provide compliance with PCI Ver. 2.1 specifications. We recommend that you leave this item at the default value.

Press <Esc> to return to the previous screen.

Integrated Peripherals Option

These items define the operation of peripheral components on the system's input/output ports.

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Integrated Peripherals

Internal PCI/IDE		Both		Item Help
IDE Primary Master	PIO	Auto		Menu Level ▶
IDE Primary Slave	PIO	Auto		
IDE Secondary Master	PIO	Auto		
IDE Secondary Slave	PIO	Auto		
Primary Master	UltraDMA	Auto		
Primary Slave	UltraDMA	Auto		
Secondary Master	UltraDMA	Auto		
Secondary Slave	UltraDMA	Auto		
IDE Burst Mode		Enabled		
SiS-7018 AC97 Audio		Enabled		
SiS-7013 S/W Modem		Enabled		
USB Controller		Enabled		
USB Keyboard Support		Disabled		
Onboard LAN		Enabled		
Onboard HDD Block Mode		Enabled		
Onboard FDC Controller		Enabled		
Onboard Serial Port 1		3F8/IRQ4		

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

Internal PCI/IDE (Both)

Use this item to enable or disable the PCI IDE channels that are integrated on this mainboard.

IDE Primary/Secondary Master/Slave PIO (Auto)

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE devices. You can choose Auto, to let the system auto detect which PIO mode is best, or you can install a PIO mode from 0-4.

IDE Primary/Secondary Master/Slave UDMA (Auto)

Each IDE channel supports a master device and a slave device. This mainboard supports UltraDMA. UltraDMA technology provides faster access to IDE devices.

If you install a device that supports UltraDMA, change the appropriate item on this list to Auto. You may have to install the UltraDMA driver supplied with this mainboard in order to use an UltraDMA device.

IDE Burst Mode (Enabled)

When set to "Enabled," every write transaction goes to the write buffer. "Burstable" transactions then burst on the PCI bus and "nonburstable" transaction do not. The options are "Enabled," and "Disabled."

SiS-7018 AC97 Audio (Auto)

SiS-7013 S/W Modem (Auto)

Configures the onboard SiS AC 97 audio codec and S/W modem function. We recommend that you leave this at the default value.

USB Controller (Enabled)

This item enables the onboard USB controller, so you can connect USB devices to the standard two USB ports on the board.

USB Keyboard Support (Disabled)

This item enables the use of a USB keyboard.

Onboard LAN (Enabled)

This item enables the integrated Ethernet capabilities. Your mainboard might have an optional integrated PCI LAN (network adapter), use this item to enable or disable it.

IDE HDD Block Mode (Enabled)

Enable this field if your IDE hard drive supports block mode. Block mode enables BIOS to automatically detect the optimal number of block read and writes per sector that the drive can support and can improve the speed of access to IDE devices.

Onboard FDC Controller (Enabled)

This option enables the onboard floppy disk drive controller.

Onboard Serial Port 1 (3F8/IRQ4)

This item lets you disable the built-in serial port 1, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

UART 2 Mode Controller (Disabled)

When enabled, this item activates the onboard infrared feature and sets the second serial UART to support the infrared module connector on the mainboard. Enabling this field disables the onboard COM2 connector.

UART Mode Select (IrDA)

UR2 Duplex Mode (Half)

These items define the operation of serial port 1. In the Normal setting, serial port 1 is assigned to the external COM1 connector. If you have installed an optional infrared port, you must change the setting of this item to one of the Infrared settings (usually IrDA or FIR). These settings will disable the external COM2 serial port connector and assign the resources to the infrared device.

If you have selected an IR mode, use the following item *UR2 Duplex Mode* to define if the IR port is full duplex or half duplex.

Onboard Parallel Port (3F8/IRQ7)

This item lets you disable the built-in parallel port, or enable it by assigning an I/O address and an Interrupt Request Line (IRQ).

**Parallel Port Mode (ECP)
ECP Mode Use DMA (3)**

This item defines the operation of the parallel port. As a default, it is set to SPP (standard parallel port). If you are connected to a parallel device that supports the higher-performance EPP (enhanced parallel port) or the ECP (extended capabilities port) make the appropriate changes to this item. If you have changed the parallel port to ECP mode, use the following item *ECP Mode Use DMA* to assign a DMA channel to the port.

Game Port Address (201)

Enables you to set the game port address.

MIDI Port Address (330)

MIDI Port IRQ (10)

Enables you to set the MIDI port address and IRQ.

Init Display First (PCI Slot)

Use this item to define if your graphics adapter is installed in one of the PCI slots or select Onboard if you have a graphics system integrated on the mainboard.

System Share Memory Size (8 MB)

This item defines the amount of system memory that will be shared and uses as video memory.

Extended Graphics Memory

This item displays the size of the extended A-DIMM memory used by the Video system for frame buffering.

Press <Esc> to return to the previous screen.

Power Management Setup Option

This option lets you control system power management. The system has various power-saving modes including powering down the hard disk, turning off the video, suspending to RAM, and software power down that allows the system to be automatically resumed by certain events.

The power-saving modes can be controlled by timeouts. If the system is inactive for a time, the timeouts begin counting. If the inactivity continues so that the timeout period elapses, the system enters a power-saving mode. If any item in the list of Reload Global Timer Events is Enabled, then any activity on that item will reset the timeout counters to zero.

If the system is suspended or has been powered down by software, it can be resumed by a wake up call that is generated by incoming traffic to a modem, a LAN card, a PCI card, or a fixed alarm on the system realtime clock,

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Power Management Setup

		Item Help
ACPI Suspend Type	S1(POS)	
Video Off Option	Susp,Stby --> Off	
Video Off Method	DPMS Supported	Menu Level ▶
Switch Function	Break/Wake	
MODEM Use IRQ	3	
Hot Key Function As	Disable	
HDD Off After	Disable	
Power Button Override	Instant Off	
IRQ [3-7, 9-15], NMI	Enabled	
IRQ 8 Break Suspend	Disabled	
RING/WOL/WOM WakeUp/PwrOn	Disabled	
PCI PME WakeUp/PwrOn	Enabled	
KB Power ON Password	Enter	
Power Up by Alarm	Disabled	
x Month Alarm	NA	
x Day of Month Alarm	0	
x Time (hh:mm:ss) Alarm	0 0 0	

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

ACPI Suspend Type (S1 (POS))

Use this item to define how your system suspends. In the default, S1(POS), the suspend mode is equivalent to a software power down. If you select S3 (STR), the suspend mode is a suspend to RAM – the system shuts down with the exception of a refresh current to the system memory.

Video Off Option (Suspend --> Off)

This option defines if the video is powered down when the system is put into suspend mode.

Video Off Method (DPMS Supported)

This item defines how the video is powered down to save power. This item is set to DPMS (Display Power Management Software) by default.

Switch Function (Break/Wake)

This item defines if pressing the power switch will cause the system to wake up from suspend or standby mode.

MODEM Use IRQ (3)

If you want an incoming call on a modem to automatically resume the system from a power-saving mode, use this item to specify the interrupt request line (IRQ) that is used by the modem.

You might have to connect the fax/modem to the mainboard Wake On Modem connector for this feature to work.

Hot Key Function As (Disable)

This item defines the function of an auxiliary power hot key on the system keyboard. Your keyboard must feature such a hot key for this function to work. When enabled, It can be set to power off or suspend the system.

HDD Off After (Disable)

You can set this item to a selection of timeouts from 1 to 15 minutes. The hard disk drive will power down if the selected timeout passes without any activity on the hard disk.

Power Button Override (Instant Off)

Under ACPI (Advanced Configuration and Power management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake Up Alarms. This item lets you install a software power down that is controlled by the normal power button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec. Then you have to hold the power button down for four seconds to cause a software power down.

IRQ [3-7,9-15], NMI (Enabled)

You can set this item to enabled if you want the system to wake up from suspend or standby mode when activity is detected on a device using any of these IRQ addresses.

IRQ 8 Break Suspend (Disabled)

You can set this item to enabled if you want the system to wake up from suspend mode when activity is detected on a device using IRQ 8.

Ring/WOL/WOM WakeUp/PwrOn (Disabled)

If this item is enabled, it allows the system to resume from a software powerdown or a power-saving mode whenever there is an incoming call to an installed fax/modem or network adapter. You might have to connect the fax/modem and /or network adapter to a mainboard Wake On Modem and Wake On LAN connector for this feature to work.

PCI PME WakeUp/PwrOn (Enabled)

If this item is enabled, it allows the system to wakeup from power saving mode when there is any activity on the PCI slots.

KB Power ON Password (Enter)

This item can be used to prompt the user for a password when the system power is resumed by keyboard action.

Power Up by Alarm (Disabled)

If this item is Enabled, it allows you to set a date and time alarm that will automatically resume the system from a software power down. When you enable this feature, new setup items appear to let you set the alarm. Date (of Month) Alarm lets you select a day from 1 to 31. Time Alarm lets you select a time for the alarm in hours, minutes, and seconds.

PNP/PCI Configuration Option

These options configure how PnP (Plug and Play) and PCI expansion cards operate in your system. Both the ISA and PCI buses on the Mainboard use system IRQs (Interrupt Requests) and DMAs (Direct Memory Access). You must set up the IRQ and DMA assignments correctly through the PnP/PCI Configurations Setup utility for the mainboard to work properly. Selecting PnP/PCI Configurations on the main program screen displays this menu:

CMOS Setup Utility – Copyright (C) 1984 – 2000 Award Software
PnP/PCI Configurations

		Item Help
Reset Configuration Data	Disabled	Menu Level ► Default is Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot.
Resources Controlled by	Auto(ESCD)	
x IRQ Resources	Press Enter	
x DMA Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	

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

Reset Configuration Data (Disabled)

If you enable this item and restart the system, any Plug and Play configuration data stored in the BIOS Setup is cleared from memory.

Resources Controlled By (Auto(ESCD))

You should leave this item at the default Auto(ESCD). Under this setting, the system dynamically allocates resources to Plug and Play devices as they are required.

If you cannot get a legacy ISA (Industry Standard Architecture) expansion card to work properly, you might be able to solve the problem by changing this item to Manual, and then opening up the IRQ Resources and Memory Resources submenus.

In the IRQ Resources submenu, if you assign an IRQ to Legacy ISA, then that Interrupt Request Line is reserved for a legacy ISA expansion card. Press <Esc> to close the IRQ Resources submenu.

In the DMA Resources submenu, if you assign a DMA to Legacy ISA, then that DMA is reserved for a legacy ISA expansion card. Press <Esc> to close the DMA Resources submenu.

In the Memory Resources submenu, use the first item Reserved Memory Base to set the start address of the memory you want to reserve for the ISA expansion card. Use the second item Reserved Memory Length to set the amount of reserved memory. Press <Esc> to close the Memory Resources submenu.

PCI/VGA Palette Snoop (Disabled)

This item is designed to overcome problems that can be caused by some non-standard VGA cards. This board includes a built-in VGA system that does not require palette snooping so you must leave this item disabled.

Frequency/Voltage Control

This item enables you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system.

CMOS Setup Utility – Copyright (C) 1984 – 2001 Award Software
Frequency/Voltage Control

Auto Detect DIMM/PCI Clk	Enabled	Item Help
Spread Spectrum	Enabled	
CPU Host/SDRAM/PCI Clock	Default	Menu Level ▶
CPU Clock Ratio Jumpless	By H/W	

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

Auto Detect DIMM/PCI Clk (Enabled)

When this item is enabled, BIOS will disable the clock signal of free DIMM and PCI slots.

Spread Spectrum (Enabled)

If you enable spread spectrum, it can significantly reduce the EMI (Electro-Magnetic Interference) generated by the system.

CPU Host/SDRAM/PCI Clock (Default)

Use the CPU Host Clock to set the frontside bus frequency for the installed processor (usually 133 MHz, 100 MHz or 66 MHz).

CPU Clock Ratio Jumpless (By H/W)

Use the CPU Host/SDRAM/PCI Clock to set the frontside bus frequency for the installed processor (usually 133 MHz, 100 MHz or 66 MHz). Then use *CPU Clock Ratio Jumpless* to set a multiple. The multiple times the frontside bus must equal the core speed of the installed processor e.g., **3.5 (multiple) x 100 MHz (frontside bus) = 350 MHz (installed processor clock speed)**.

Load Fail-Safe Defaults Option

This option opens a dialog box that lets you install fail-safe defaults for all appropriate items in the Setup Utility:

Press <Y> and then <Enter> to install the defaults. Press <N> and then <Enter> to not install the defaults. The fail-safe defaults place no great demands on the system and are generally stable. If your system is not functioning correctly, try installing the fail-safe defaults as a first step in getting your system working properly again. If you only want to install fail-safe defaults for a specific option, select and display that option, and then press <F6>.

Load Optimized Defaults Option

This option opens a dialog box that lets you install optimized defaults for all appropriate items in the Setup Utility. Press <Y> and then <Enter> to install the defaults. Press <N> and then <Enter> to not install the defaults. The optimized defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option, and then press <F7>.

Set Supervisor and User Passwords Options

These items can be used to install a password. A Supervisor password takes precedence over a User password, and the Supervisor can limit the activities of a User. To install a password, follow these steps:

1. Highlight the item Set Supervisor/User Password on the main menu and press <Enter>.
2. The password dialog box appears.

Enter Password:

3. If you are installing a new password, type in the password. You cannot use more than eight characters or numbers. The Set Supervisor/User Password item differentiates between upper and lower case characters. Press <Enter> after you have typed in the password. If you are deleting a password that is already installed press <Enter> when the password dialog box appears. You see a message that indicates that the password has been disabled.

PASSWORD DISABLED !!!
Press any key to continue . . .

4. Press any key. You are prompted to confirm the password:

Confirm Password:

5. Type the password again and press <Enter>, or press <Enter> if you are deleting a password that is already installed.
6. If you typed the password correctly, the password will be installed.

Save & Exit Setup Option

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. When the Save and Exit dialog box appears, press <Y> to save and exit, or press <N> to return to the main menu:

Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Exit Without Saving dialog box appears, press <Y> to discard changes and exit, or press <N> to return to the main menu.

Note: If you have made settings that you do not want to save, use the "Exit Without Saving" item and press <Y> to discard any changes you have made.

This concludes Chapter 3. Refer to the next chapter for information on the software supplied with the mainboard.

—Notes—

Chapter 4

Using the Mainboard Software

About the Software CD-ROM

The support software CD-ROM that is included in the mainboard package contains all the drivers and utility programs needed to properly run the bundled products. Below you can find a brief description of each software program, and the location for your mainboard version. More information on some programs is available in a README file, located in the same directory as the software.

Note: Never try to install software from a folder that is not specified for use with your mainboard.

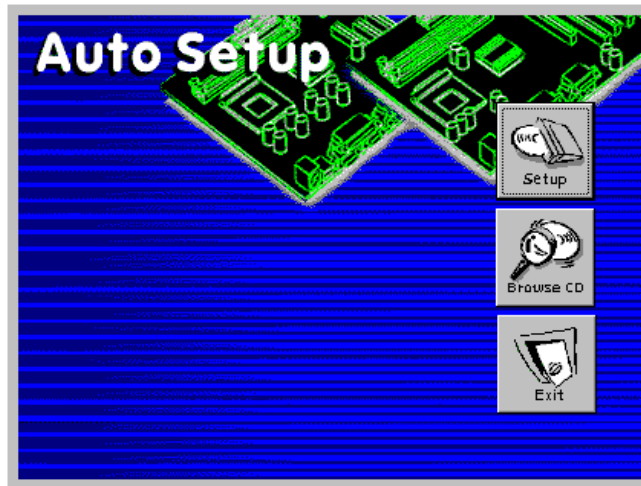
Before installing any software, always inspect the folder for files named README.TXT, INSTALL.TXT, or something similar. These files may contain important information that is not included in this manual

Auto-installing under Windows 98

The Auto-install CD-ROM makes it easy for you to install the drivers and software for your mainboard.

Note: If the Auto-install CD-ROM does not work on your system, you can still install drivers through the file manager for your OS (for example, Windows Explorer). Refer to Utility Folder Installation Notes later in this chapter.

The support software CD-ROM disc loads automatically under Windows 98. When you insert the CD-ROM disc in the CD-ROM drive, the autorun feature will automatically bring up the install screen. The screen has three buttons on it, Setup, Browse CD and Exit.



Note: If the opening screen doesn't appear, double-click the file "setup.exe" in the root directory.

Setup

Click the Setup button to run the software installation program. Select from the menu which software you want to install.

Browse CD

The Browse CD button is the standard Windows command that allows you to open Windows Explorer and show the contents of the support CD.

Before installing the software from Windows Explorer, look for a file named README.TXT, INSTALL.TXT or something similar. This file may contain important information to help you install the software correctly.

Some software is installed in separate folders for different operating systems, such as DOS, WIN NT, or WIN98/95. Always go to the correct folder for the kind of OS you are using.

To install the software, execute a file named SETUP.EXE or INSTALL.EXE by double-clicking the file and then following the instructions on the screen.

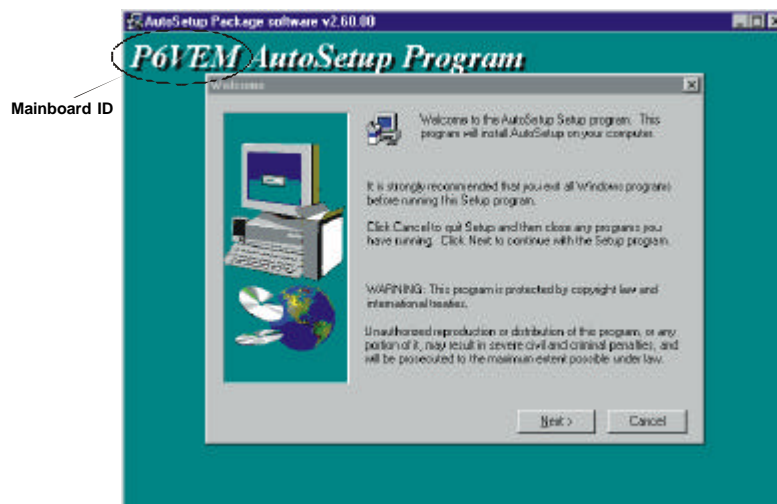
Exit

The Exit button closes the Auto Setup window.

Running Setup

Follow these instructions to install device drivers and software for the mainboard:

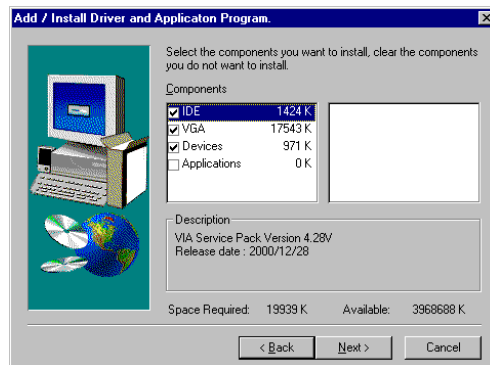
1. Click **Setup**. The installation program begins:



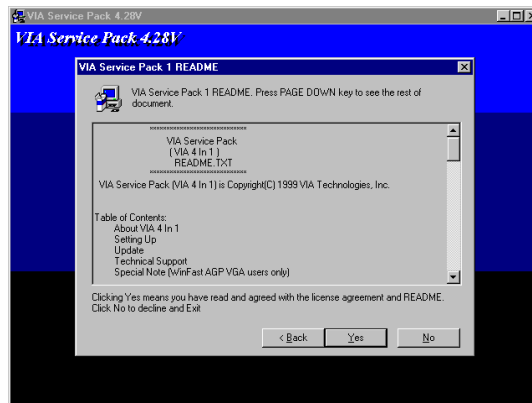
Note: The following screens are examples only. The screens and driver lists will be different according to the mainboard you are installing.

The mainboard identification is located in the upper left-hand corner.

2. Click **Next**. The following screen appears:



3. Check the items you want to install. The default options are recommended.
4. Click **Next** to run the Installation Wizard. An item installation screen appears:



5. Follow the instructions on the screen to install the items.

Drivers and software are automatically installed in sequence. Follow the onscreen instructions, confirm commands and allow the computer to restart after each installation.

Manual Installation

Insert the CD in the CD-ROM drive and locate the PATH.DOC file in the root directory. This file contains the information needed to locate the drivers for your mainboard.

Look for the chipset and mainboard model; then browse to the directory and path to begin installing the drivers. Most drivers have a setup program (SETUP.EXE) that automatically detects your operating system before installation. Other drivers have the setup program located in the operating system subfolder.

If the driver you want to install does not have a setup program, browse to the operating system subfolder and locate the readme text file (README.TXT or README.DOC) for information on installing the driver or software for your operating system.

Utility Software Reference

All the utility software available on the CD-ROM is Windows compliant. It is provided only for the convenience of customers. The following software is furnished under license and may only be used or copied in accordance with the terms of the license.

Note: The software in these folders is subject to change at anytime without prior notice. Please refer to the support CD for available software.

Award Flash Memory Utility

This utility enables you to erase the system BIOS stored on a Flash Memory chip on the mainboard, and lets you copy an updated version of the BIOS to the chip. Proceed with caution when using this program. If you erase the current BIOS and fail to write a new BIOS, or write a new BIOS that is incorrect, your system will malfunction. Refer to Chapter 3, Using BIOS for more information.

PC-CILLIN

The PC-CILLIN software program provides anti-virus protection for your system. This program is available for Windows 2000/ME/98SE and Windows NT. Be sure to check the e-adme.txt and install the appropriate anti-virus software for your operating system.

We strongly recommend users to install this free anti-virus software to help protect your system against viruses.

Note: Update your virus software regularly to protect against new viruses.

MediaRing Talk – Telephony Software

To install the MediaRing Talk voice modem software for the built-in modem, run MRTALK-SETUP72.EXE from the following directory:

UTILITY\MEDIARING TALK

Super Voice – Fax/Modem Software

To install the Super Voice voice, fax, data communication application for use with the built-in fax/modem, run PICSHELL.EXE from the following directory:

UTILITY\SUPER VOICE

CD Ghost

The CD Ghost software enables you to create a virtual cabinet of CD-ROM drives on your system to help you categorize and organize your CD collection. A user-friendly interface assists you in quickly creating images of both CDs and DVDs onto your system. To install the software, run SETUP.EXE from the following directory:

UTILITY\CDGHOST\ENG\CDGHOST

Recovery Genius

The Recovery Genius software program is an innovative windows application system that protects your Hard Disk Drive from virus intrusion, accidental deletions, and system corruption. To install the Recovery Genius software program run SETUP.EXE from the following directory

UTILITY\RECOVERY GENIUS\ENG\RECOVERYGENIUS

Language Genius

The Language Genius is a software-based product that helps you to learn new languages. To install the Language Genius software program run SETUP.EXE from the following directory

\UTILITY\LANGUAGE GENIUS\ENG\LANGUAGEGENIUS

PageABC

The PageABC application software enables you to create your own home page. To install the PageABC, run SETUP.EXE from the following directory:

\UTILITY\PageABC



This concludes Chapter 4.

—Notes—

Appendix A

Setting Jumpers

Jumper Settings

Jumper	Type	Description	Setting (default)
JP1	3-pin	Clear CMOS	1-2: Clear 2-3: <i>Normal</i> 
JP3	2-pin	BIOS flash protection	Short: Enable <i>Open: Disable</i> 

Jumper 1 – enables you to clear the BIOS. Follow these instructions:

1. Turn the system off.
2. Short pins 1 and 2 on jumper 1.
3. Return the jumper to the normal setting.
4. Turn the system on. The BIOS is returned to the default settings.

Jumper 3 – enables you to prevent the BIOS from being updated (flashed). Open the jumper if you are going to update your BIOS. After updating the BIOS, short the jumper to protect the BIOS from being flashed. For instructions on updating the BIOS refer to Chapter 3.

The Panel Connector

The panel connector provides a standard set of switch and LED connectors usually found on ATX or Micro ATX cases. Refer to the table below for information:

Device	Pins
Empty	13
Reset Switch	+12, -14
Power Switch	+9, -11
Speaker	+4, -6, -8, 10
Power LED	-3 (Y), -5 (G), +7
HDD LED	+1, -2

Note: The plus sign (+) indicates a pin which must be connected to a positive voltage.