Trademarks

Static Electricity Precautions

1. Don't take this motherboard and components out of their original static-proof package until you are ready to install them.
2. While installing, please wear a grounded wrist strap if possible. If you don't have a wrist strap, discharge static electricity by touching the bare metal of the system chassis.
3. Carefully hold this motherboard by its edges. Do not touch those components unless it is absolutely necessary. Put this motherboard on the top of static-protection package with component side facing up while installing.

Pre-Installation Inspection

1. Inspect this motherboard whether there are any damages to components and connectors on the board.
2. If you suspect this motherboard has been damaged, do not connect power to the system. Contact your motherboard vendor about those damages.

P33G Series, V1.0
March 2007

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Notice:

1 Owing to Microsoft's certifying schedule is various to every supplier, we might have some drivers not certified yet by Microsoft. Therefore, it might happen under Windows XP that a dialogue box (shown as below) pop out warning you this software has not passed Windows Logo testing to verify its compatibility with Windows XP. Please rest assured that our RD department has already tested and verified these drivers. Just click the "Continue Anyway" button and go ahead the installation.

Chapter 1 Introduction

This motherboard has a **LGA775 socket** for latest **Intel® Core™2 Duo/ Celeron® D** processors with **Hyper-Threading Technology** and Front-Side Bus (FSB) speeds up to **1066 MHz**. Hyper-Threading Technology, designed to take advantage of the multitasking features, giving you the power to do more things at once.

It integrates the SiS671FX Northbridge and SiS968 Southbridge that supports theSerial ATA interface for high-performance and mainstream desktop PCs; the built-in **USB 2.0** providing higher bandwidth, implementing **Universal Serial Bus Specification Revision 2.0** and is compliant with **OHCI 1.1** and **EHCI 2.0**. It supports **High Definition Audio Codec** and provides **Ultra DMA 133**/ 100/66/33 function. It has one **PCI Expressx16**, one **PCI Expressx1**, one **CNR** (optional) and two 32-bit **PCI** slots. There is a full set of I/O ports including two PS/2 ports for mouse and keyboard, one serial port, one parallel port (optional), one VGA port, one LAN port (optional), four back-panel USB 2.0 ports and Audio jacks for microphone, line-in and 6/8-channel (optional) line-out and onboard USB headers providing extra ports by connecting the Extended USB Module to the motherboard.

It is a **Micro ATX** motherboard and has power connectors for an ATX power supply.

Key Features

The key features of this motherboard include:

LGA775 Socket Processor

- Supports the latest **Intel® Core™2 Duo/Celeron® D** processors with **Hyper-Threading Technology**
- Supports up to **1066 MHz** Front-Side Bus

Note: **Hyper-Threading** technology enables the operating system into thinking it's hooked up to two processors, allowing two threads to be run in parallel, both on separate 'logical' processors within the same physical processor.

Chipset

There are **SiS671FX Northbridge** and **SiS968** in the chipsets in accordance with an innovative and scalable architecture with proven reliability and performance.

- High Performance Host Interface: Supports **Intel® Core™2 Duo/ Celeron® D** processor family with FSB 1066 MHz
- Hyper-Threading Technology

- System Memory Controller Support: DDR2 SDRAM with up to maximum memory of 4 GB.
- PCI Express Graphics Interface Support: One PCI Express x16 port
- PCI Bus Interface Support: PCI Revision 2.3 Specification at 33MHz
- Integrade Serial ATA Host Controller: Independent DMA operation on two ports with Data transfer rates up to 3.0 Gb/s
- Intgrated IDE Controller: Ultra DMA-133/100/66/33 Bus Master EIDE Controller
- USB 2.0: Integrated USB 2.0 interface, supporting up to eight functional ports

Memory Support

- Two 240-pin DIMM sockets for DDR2 SDRAM memory modules
- Supports **DDR2 667**/533/400 memory bus
- Maximum installed memory is 4 GB

Expansion Slots

- Two 32-bit PCI slots
- One **PCI Expressx16** slot
- One **PCI Expressx1** slot
- One CNR slot (optional)

Onboard IDE channels

- One IDE Connector
- Supports PIO (Programmable Input/Output) and DMA (Direct Memory Access) modes
- Supports IDE Ultra DMA bus mastering with transfer rates of **133**/100/66/33 MB/sec

Serial ATA

- Two Serial ATA Connectors
- Transfer rate exceeding best ATA (3.0 Gb/s) with scalability to higher rates
- Low pin count for both host and devices

Audio (Optional)

• 7.1+ 2 Channel High Definition Audio Codec • All DACs support 192k/96k/48k/44.1kHz sample rate • High-quality analog differential CD input • Meets Microsoft WHQL/WLP 3.0 audio requirements • Direct Sound 3D™ compatible
• 5.1Channel High Definition Audio Codec • ADCs support 44.1k/48k/96k sample rate • Meet Microsoft WHQL/WLP 3.0x audio requirements • Direct Sound 3D™ compatible

LAN (Optional)

• 10BASE-T/100BASE-TX IEEE 802.3u fast Ethernet transceiver • Low-power mode • MII and 7-wire serial interface
• Integrated 10/100/1000BASE-T transceiver • 10/100/1000BASE-T full-duplex/half-duplex MAC • Wake on LAN (WOL) support meeting the ACPI requirements • Statistics for SNMP MIB II, Ethernet-like MIB, and Ethernet MIB

Onboard I/O Ports

- Two PS/2 ports for mouse and keyboard
- One serial port
- One parallel port (optional)
- One VGA port
- One LAN port (optional)
- Four back-panel USB2.0 ports
- Audio jacks for microphone, line-in and 6/8-channel (optional) line-out

BIOS Firmware

This motherboard uses AMI BIOS that enables users to configure many system features including the following:

- Power management
- Wake-up alarms
- CPU parameters and memory timing
- CPU and memory timing

The firmware can also be used to set parameters for different processor clock speeds.

Dimensions

- Micro ATX form factor of 244 x 210 mm

Note: Hardware specifications and software items are subject to change without notification.

Package Contents

Your motherboard package ships with the following items:

- ❑ The motherboard
- ❑ The User's Guide
- ❑ One diskette drive ribbon cable (optional)
- ❑ One IDE drive ribbon cable
- ❑ The Software support CD

Optional Accessories

You can purchase the following optional accessories for this motherboard.

- ❑ The Extended USB module
- ❑ The CNR v.90 56K Fax/Modem card
- ❑ The Serial ATA cable
- ❑ The Serial ATA power cable

Note: You can purchase your own optional accessories from the third party, but please contact your local vendor on any issues of the specification and compatibility.

Chapter 2 Motherboard Installation

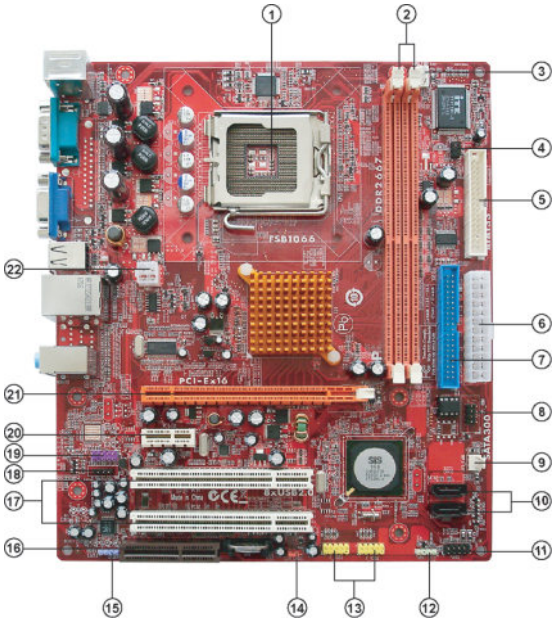
To install this motherboard in a system, please follow these instructions in this chapter:

- Identify the motherboard components
- Install a CPU
- Install one or more system memory modules
- Make sure all jumpers and switches are set correctly
- Install this motherboard in a system chassis (case)
- Connect any extension brackets or cables to headers/connectors on the motherboard
- Install peripheral devices and make the appropriate connections to headers/connectors on the motherboard

Note:

1. Before installing this motherboard, make sure jumper CLR_CMOS1 is under Normal setting. See this chapter for information about locating CLR_CMOS1 and the setting options.
2. Never connect power to the system during installation; otherwise, it may damage the motherboard.

Motherboard Components

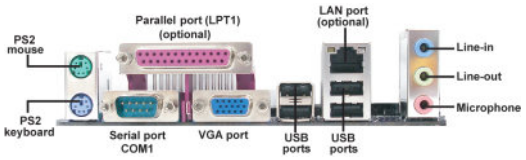


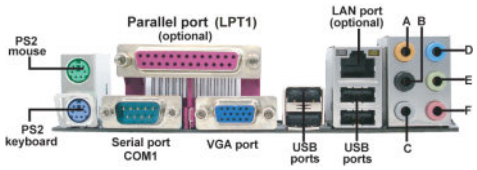
LABEL	COMPONENTS
1. CPU Socket	LGA775 socket for Intel® Core™2 Duo/Celeron® D CPUs
2. DDRII1~2	240-pin DDR2 SDRAM slots
3. CPU_FAN1	CPU cooling fan connector
4. IR1	Onboard infrared header
5. FDD1	Floppy disk drive connector
6. PWR1	Standard 24-pin ATX power connector
7. IDE1	Primary IDE channel
8. SPI_ROM	SPI ROM Header
9. SYS_FAN1	System cooling fan connector
10. SATA1~2	Serial ATA connectors
11. PANEL1	Front panel switch/LED header
12. SPK1	Speaker header
13. F_USB1~2	Front Panel USB headers
14. CLR_CMOS1	Clear CMOS jumper
15. SPDIFO1	SPDIF out header
16. CNR1*	CNR slot
17. PCI1~2	32-bit add-on card slots
18. CD_IN1	Analog audio input connector
19. F_AUDIO1	Front panel audio header
20. PCI-E2	PCI Express x1 slot
21. PCI-E1	PCI Express x16 slot for graphics interface
22. PWR2	Auxiliary 4-pin power connector

* Stands for optional components

I/O Ports (Optional)

The illustration below shows a side view of the built-in I/O ports on the motherboard.





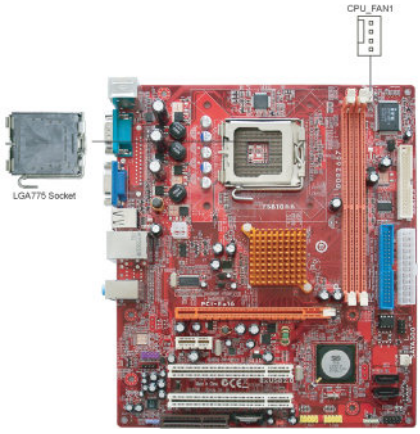
PS/2 Mouse	Use the upper PS/2 port to connect a PS/2 pointing device.
PS/2 Keyboard	Use the lower PS/2 port to connect a PS/2 keyboard.
Parallel Port (LPT1) (optional)	Use the Parallel port to connect printers or other parallel communications devices.
COM1	Use the COM port to connect serial devices such as mice or fax/modems. COM1 is identified by the system as COM1.
VGA	Use the VGA port to connect VGA devices.
LAN Port (optional)	Connect an RJ-45 jack to the LAN port to connect your computer to the Network.
USB Ports	Use the USB ports to connect USB devices.
Audio Ports	Use these three audio jacks to connect audio devices. The first jack is for stereo Line-In signal, the second jack for stereo Line-Out signal, and the third jack for Microphone.
	Use these audio jacks to connect audio devices. The A port is for stereo Line-In signal, while the C port is for microphone in signal. The motherboard supports 8-channel audio devices that correspond to A, B, D and E port respectively. In addition, all of the three ports, A, B and D provide users with both right & left channels individually.

Installing the Processor

This motherboard has a **LGA775** socket for the latest **Intel® Core™2 Duo/ Celeron® D** processors. 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

Follow these instructions to install the CPU:



A. Read and follow the instructions shown on the sticker on the CPU cap.

B. Unload the cap
   - Use thumb & forefinger to hold the lifting tab of the cap.
   - Lift the cap up and remove the cap completely from the socket.

C. Open the load plate
   - Use thumb & forefinger to hold the hook of the lever, pushing down and pulling aside unlock it.
   - Lift up the lever.
   - Use thumb to open the load plate. Be careful not to touch the contacts.

D. Install the CPU on the socket
   - Orientate CPU package to the socket. Make sure you match triangle marker to pin 1 location.

E. Close the load plate
   - Slightly push down the load plate onto the tongue side, and hook the lever.
   - CPU is locked completely.

F. Apply thermal grease on top of the CPU.

G. Fasten the cooling fan supporting base onto the CPU socket on the motherboard.

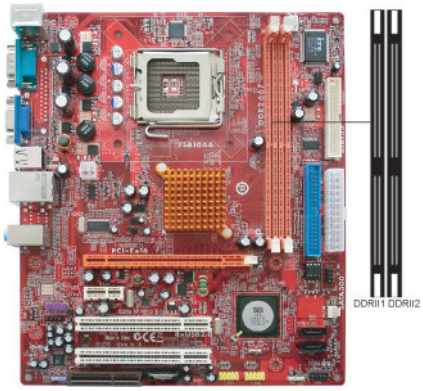
H. Make sure the CPU fan is plugged to the CPU fan connector. Please refer to the CPU cooling fan user's manual for mor detail installation procedure.

Note 1: To achieve better airflow rates and heat dissipation, we suggest that you use a high quality fan with 3800 rpm at least. CPU fan and heatsink installation procedures may vary with the type of CPU fan/ heatsink supplied. The form and size of fan/heatsink may also vary.
Note 2: The fan connector supports the CPU cooling fan of 1.1A~2.2A (26.4W max.) at +12V.
Note 3: Do Not remove the CPU cap from the socket before installing a CPU.
Note 4: Return Material Authorization (RMA) requests will be accepted only if the motherboard comes with the cap on the LGA775 socket.

Installing Memory Modules

This motherboard accommodates two 240-pin DIMM sockets (Dual Inline Memory Module) for unbuffered **DDR2 667**/533/400 memory modules (Double Data Rate SDRAM), and maximum 4 GB installed memory.

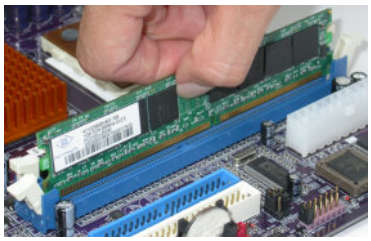
Over its predecessor, DDR-SDRAM, DDR2-SDRAM offers greater bandwith and density in a smaller packahe along with a reduction in power consumption. In addition, DDR2-SDRAM offers new features and functions that enable a higher clock rate and data rate operations of 400 MHz, 533 MHz and 667 MHz. DDR2 transfer 64 bits of data twice every clock cycle.



Memory Module Installation Procedure

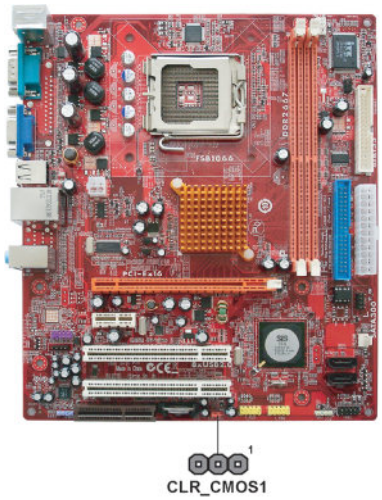
These modules can be installed with up to 4 GB system memory. Refer to the following to install the memory module.

1. Push down the latches on both sides of the DIMM socket.
2. Align the memory module with the socket. There is a notch on the DIMM socket that you can install the DIMM module in the correct direction. Match the cutout on the DIMM module with the notch on the DIMM socket.
3. Install the DIMM module into the socket and press it firmly down until it is seated correctly. The socket latches are levered upwards and latch on to the edges of the DIMM.
4. Install any remaining DIMM modules.



Jumper Settings

Connecting two pins with a jumper cap is SHORT; removing a jumper cap from these pins, OPEN.



CLR_CMOS1: Clear CMOS Jumper

Use this jumper to clear the contents of the CMOS memory. You may need to clear the CMOS memory if the settings in the Setup Utility are incorrect and prevent your motherboard from operating. To clear the CMOS memory, disconnect all the power cables from the motherboard and then move the jumper cap into the CLEAR setting for a few seconds.

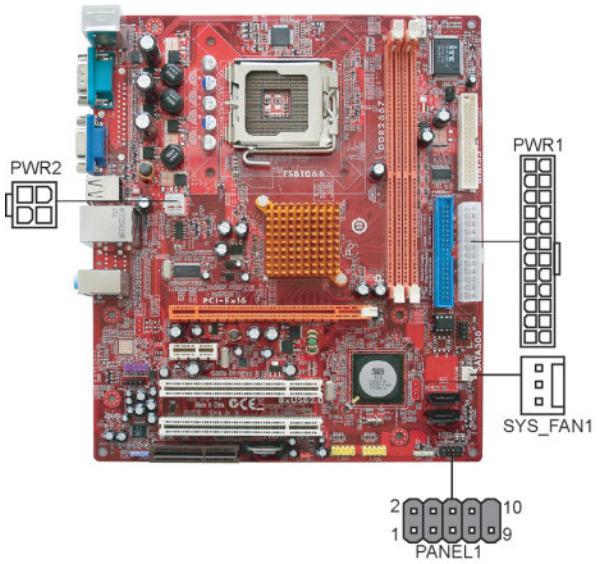
Function	Jumper
Normal	Short Pins 2-3
Clear CMOS	Short Pins 1-2

Note: To avoid the system unstability after clearing CMOS, we recommend users to enter the main BIOS setting page to “Load Optimal De-faults” and then “Save Changes and Exit”.

Install the Motherboard

Install the motherboard in a system chassis (case). The board is a Micro ATX size motherboard. You can install this motherboard in an ATX case. Make sure your case has an I/O cover plate matching the ports on this motherboard.

Install the motherboard in a case. Follow the case manufacturer’s instructions to use the hardware and internal mounting points on the chassis.



Connect the power connector from the power supply to the **PWR1** connector on the motherboard. The **PWR2** is a +12V connector for CPU Vcore power.

If there is a cooling fan installed in the system chassis, connect the cable from the cooling fan to the **SYS_FAN1** fan power connector on the motherboard.

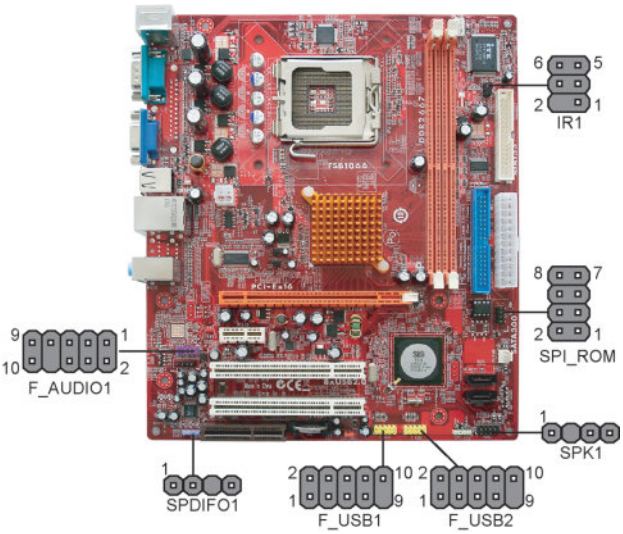
Connect the case switches and indicator LEDs to the **PANEL1** header.

Here is a list of the PANEL1 pin assignments.

Pin	Signal	Pin	Signal
1	HD_LED_P(+)	2	FP PWR/SLP(+)
3	HD_LED_N(-)	4	FP PWR/SLP(-)
5	RESET_SW_N(-)	6	POWER_SW_P(+)
7	RESET_SW_P(+)	8	POWER_SW_N(-)
9	RSVD_DNU	10	KEY

Connecting Optional Devices

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



SPK1: Speaker Header

Connect the cable from the PC speaker to the SPK1 header on the motherboard.

Pin	Signal	Pin	Signal
1	VCC	2	Key
3	NC	4	Signal

F_AUDIO1: Front Panel Audio Header

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

Pin	Signal	Pin	Signal
1	PORT1L	2	GND
3	PORT1R	4	PRESENCE#
5	PORT2R	6	Sense1_return
7	SENSE_SEND	8	KEY
9	PORT2L	10	Sense2_return

F_USB1/F_USB 2: Front panel USB Headers

The motherboard has 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 headers F_USB1/F_USB2 to connect the front-mounted ports to the motherboard.

Pin	Signal	Pin	Signal
1	VERG_FP_USBPWR0	2	VERG_FP_USBPWR0
3	USB_FP_P0(-)	4	USB_FP_P1(-)
5	USB_FP_P0(+)	6	USB_FP_P1(+)
7	GROUND	8	GROUND
9	KEY	10	NC

1. Locate the F_USB1/F_USB2 header on the motherboard.
2. Plug the bracket cable onto the F_USB1/F_USB2 header.
3. Remove a slot cover from one of the expansion slots on the system chassis. Install an extension bracket in the opening. Secure the extension bracket to the chassis with a screw.

IR1: Infrared Header

The infrared port allows 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	Pin	Signal
1	NC	2	KEY
3	+5V	4	GND
5	IRTX	6	IRRX

1. Locate the infrared port-**IR1** header on the motherboard.
2. If you are adding an infrared port, connect the ribbon cable from the port to the IR1 header and then secure the port to an appropriate place in your system chassis.

SPDIFO1: S/PIF Out Header

S/PDIF (Sony/Plilips Digital Interface) is a standard audio transfer file format and allows the transfer of digatal audio signals from one device to another without having to be converted first to an analog format. Via a specific audio cable, you can connect the SPDIFO1 header+(S/PDIF output) on the motherboard to the S/PDIF digital input on the external speakers or AC Decode devices.

Pin	Signal	Pin	Signal
1	SPDIFOUT	2	5VA
3	KEY	4	GDN

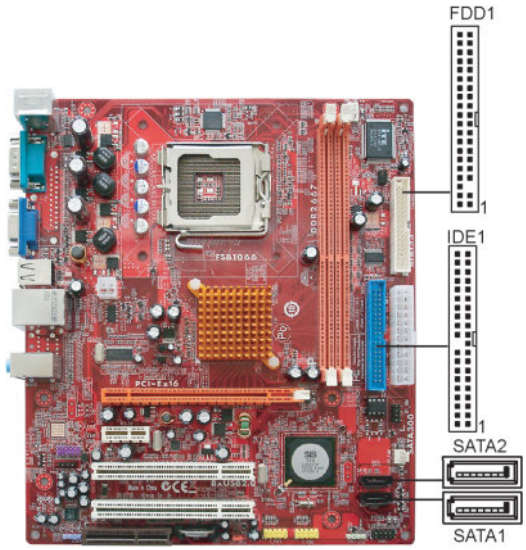
SPI_ROM: SPI ROM Header

This 4 Mb ROM contains the programmable BIOS program.

Pin	Signal	Pin	Signal
1	CHIPSELECT	2	VCC
3	DATAOUTPUT	4	HOLD
5	WRITEPROTECT	6	CLOCK
7	CND	8	DATAINPUT

Install Other Devices

Install and connect any other devices in the system following the steps below.



Floppy Disk Drive

The motherboard ships with a floppy disk drive cable that can support one or two drives. Drives can be 3.5" or 5.25" wide, with capacities of 360 K, 720 K, 1.2 MB, 1.44 MB, or 2.88 MB.

Install your drives and connect power from the system power supply. Use the cable provided to connect the drives to the floppy disk drive connector **FDD1**.

IDE Devices

IDE devices include hard disk drives, high-density diskette drives, and CD-ROM or DVD-ROM drives, among others.

The motherboard ships with an IDE cable that can support one or two IDE devices. If you connect two devices to a single cable, you must configure one of the drives as Master and one of the drives as Slave. The documentation of the IDE device will tell you how to configure the device as a Master or Slave device. The Master device connects to the end of the cable.

Install the device(s) and connect power from the system power supply. Use the cable provided to connect the device(s) to the Primary IDE channel connector **IDE1** on the motherboard.

Serial ATA Devices

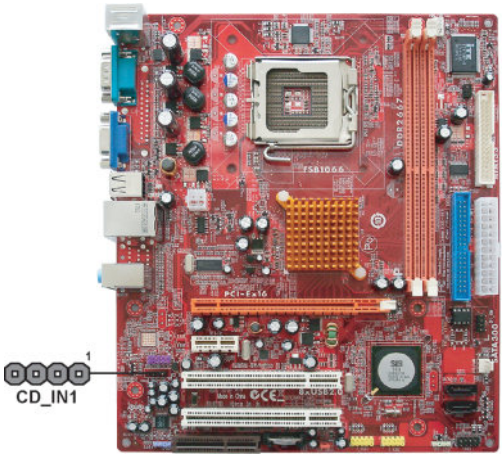
The **Serial ATA (Advanced Technology Attachment)** is the standard interface for the IDE hard drives, which is designed to overcome the design limitations while enabling the storage interface to scale with the growing media rate demands of PC platforms. It provides you a faster transfer rate of **3.0 Gb/s**. If you have installed a Serial ATA hard drive, you can connect the Serial ATA cables to the Serial ATA hard drive or the connector on the motherboard.

On the motherboard, locate the Serial ATA connectors **SATA1/2**, which support new Serial ATA devices for the highest data transfer rates, simpler disk drive cabling and easier PC assembly.

It eliminates limitations of the current Parallel ATA interface, but maintains register compatibility and software compatibility with Parallel ATA.

Analog Audio Input Header

If you have installed a CD-ROM drive or DVD-ROM drive, you can connect the drive audio cable to the onboard sound system.

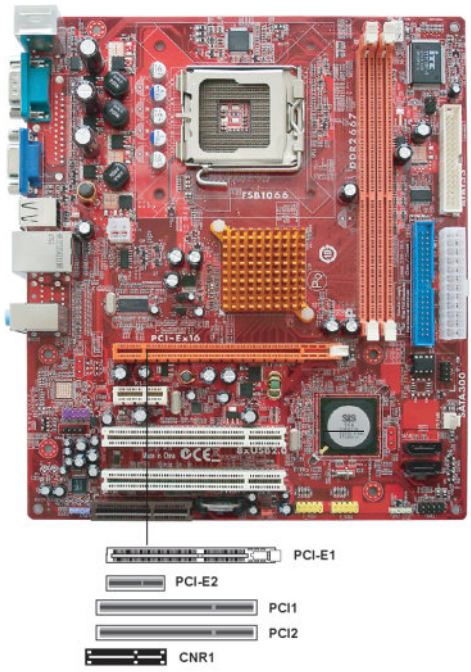


When you first start up your system, the BIOS should automatically detect your CD-ROM/DVD drive. If it doesn't, enter the Setup Utility and configure the CD-ROM/DVD drive that you have installed. On the motherboard, locate the 4-pin header **CD_IN1**.

Pin	Signal
1	CD IN L
2	GND
3	GND
4	CD IN R

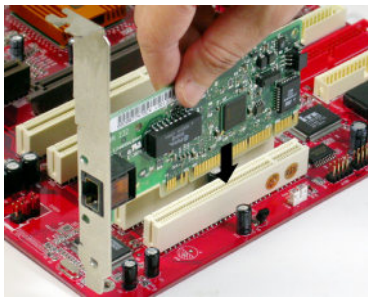
Expansion Slots

This motherboard has one PCI Ex16, one PCI Ex1, one CNR (optional) and two 32-bit PCI slots.



Follow the steps below to install an PCI Express/CNR/PCI expansion card.

1 Locate the PCI Express, CNR or PCI slots on the motherboard.
2 Remove the blanking plate of the slot from the system chassis.
3 Install the edge connector of the expansion card into the slot. Ensure the edge connector is correctly seated in the slot.
4 Secure the metal bracket of the card to the system chassis with a screw.



PCI Express Slot

You can install an external PCI Express graphics card that is fully compliant to the PCI Express Base Specification revsion 1.0a.

CNR Slot (optional)

You can install the CNR (Communications and Networking Riser) cards in this slot, including LAN, Modem, and Audio functions.

PCI Slots

You can install the 32-bit PCI interface expansion cards in the slots.

Chapter 3 BIOS Setup Utility

Introduction

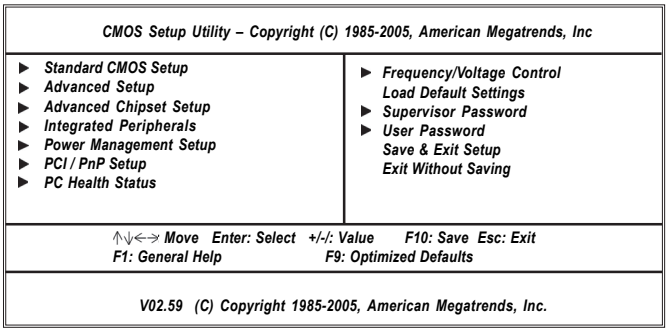
The BIOS Setup Utility records settings and information of your computer, such as date and time, the type of hardware installed, and various configuration settings. Your computer applies the information to initialize all the components when booting up and basic functions of coordination between system components.

If the Setup Utility configuration is incorrect, it may cause the system to malfunction. It can even stop your computer booting properly. If it happens, you can use the clear CMOS jumper to clear the CMOS memory which has stored the configuration information; or you can hold down the **Page Up** key while rebooting your computer. Holding down the **Page Up** key also clears the setup information.

You can run the setup utility and manually change the configuration. You might need to do this to configure some hardware installed in or connected to the motherboard, such as the CPU, system memory, disk drives, etc.

Running the Setup Utility

Every time you start your computer, a message appears on the screen before the operating system loading that prompts you to "*Hit <DEL>if you want to run SETUP*". Whenever you see this message, press the **Delete** key, and the Main menu page of the Setup Utility appears on your monitor.

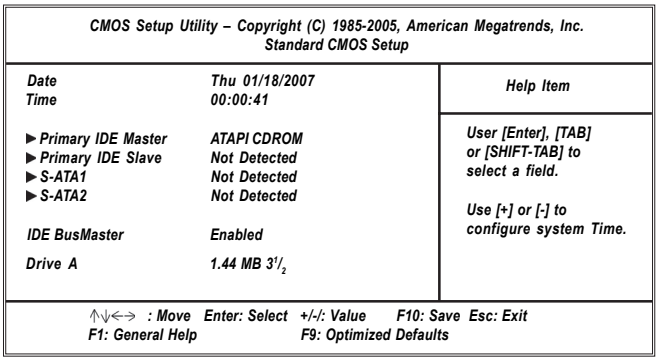


You can use cursor arrow keys to highlight anyone of options on the main menu page. Press **Enter** to select the highlighted option. Press the **Escape** key to leave the setup utility. Press +/-/ to modify the selected field's values.

Some options on the main menu page lead to tables of items with installed values that you can use cursor arrow keys to highlight one item, and press **PgUp** and **PgDn** keys to cycle through alternative values of that item. The other options on the main menu page lead to dialog boxes requiring your answer OK or Cancel by selecting the **[OK]** or **[Cancel]** key.
If you have already changed the setup utility, press **F10** to save those changes and exit the utility. Press **F1** to display a screen describing all key functions. Press **F9** to load optimtimal settings.

Standard CMOS Setup Page

This page displays a table of items defining basic information of your system.



Date & Time

These items set up system date and time.

Primary IDE Master/Primary IDE Slave

Use these items to configure devices connected to the Primary IDE channels. To configure an IDE hard disk drive, choose *Auto*. If the *Auto* setting fails to find a hard disk drive, set it to *User*, and then fill in the hard disk characteristics (Size, Cyls, etc.) manually. If you have a CD-ROM drive, select the setting *CDROM*. If you have an ATAPI device with removable media (e.g. a ZIP drive or an LS-120), select *Floptical*.

S-ATA1/2

These items display the status of auto detection of saa devices when "Onboard SATA-IDE" sets to "IDE".

IDE BusMaster

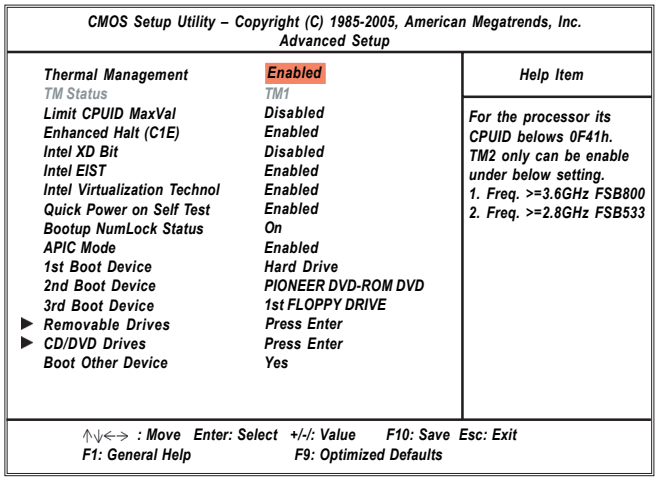
This item enables or disables the DMA under DOS mode. We recommend you to leave this item at the default value.

Drive A

The item defines the characteristics of any diskette drive attached to the system. You can connect one or two diskette drives.

Advanced Setup Page

This page sets up more advanced information about your system. Handle this page with caution. Any changes can affect the operation of your computer.



Thermal Management

This item displays CPU's temperature and enables you to set a safe temperature to Prescott CPU.

- **TM Status (TM1)**: This item displays CPU Monitor status.

Limit CPUID MaxVal

This item can support Prescott CPUs for old OS. Users please note that under NT 4.0, it must be set "Enabled", while under WinXP, it must be set "Disabled"

Enhanced Halt (C1E)

This item enables or disables enhanced halt.

Intel XD Bit

This item allows users to enable or disable the Intel XD bit.

Intel EIST

This item allows users to enable or disable the EIST(Enhanced Intel SpeedStep Technology).

Intel Virtualization Technol

When ebabled, a VMM can utilize the additional hardware capabilities provided by vandor pool technology.

Quick Power on Self Test

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.

Boot Up NumLock Status

This item set the Num-Lock key to be on or off after bootup.

APIC Mode

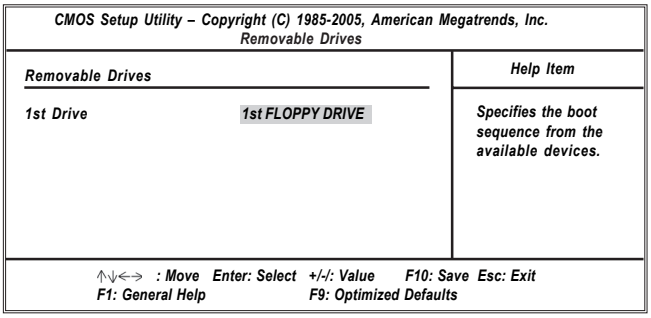
This item allows you to enable or disable the APIC (Advanced Programmable Interrupt Controller) mode. APCI provides symmetric multi-procesing (SMP) for systems, allowing support for up to 60 processors.

1st Boot Device/2nd Boot Device/3rd Boot Device

Use these items to determine the device order the computer uses to look for an operating system to load at start-up time.

▸ Removable Drives (Press Enter)

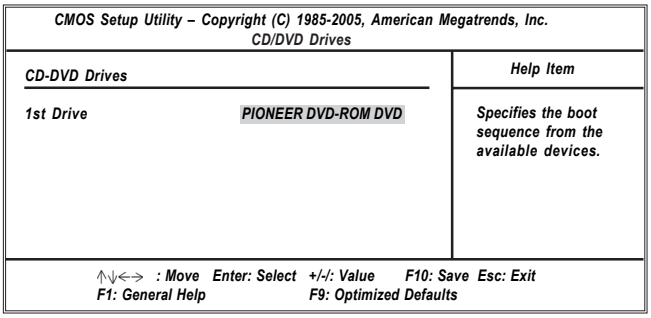
Scroll to this item and press <Enter> to view the following screen:



Press <Esc> to return to Advanced Setup screen.

▸ CD/DVD Drives (Press Enter)

Scroll to this item and press <Enter> to view the following screen:



Press <Esc> to return to Advanced Setup screen.

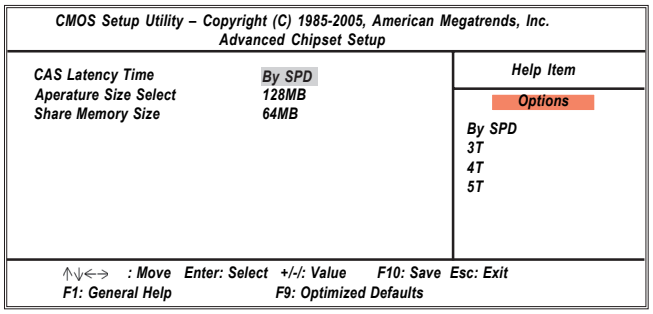
Boot Other Device

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

Press <Esc> to return to the main menu page.

Advanced Chipset Setup Page

This page sets up more advanced chipset information about your system. Handle this page with caution. Any changes can affect the operation of your computer.



CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer.

Aperture Size Select

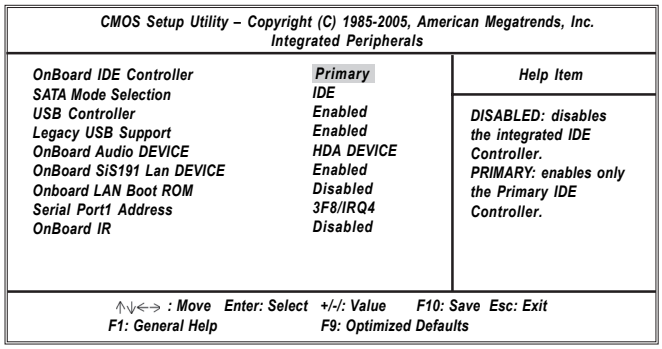
This item enables you to select the size of the aperture if you use an AGP graphics adapter. The AGP aperture refers to a section of the PCI memory address range used for graphics memory. We recommend that you leave this item at the default value.

Share Memory Size

This item shows the VGA memory size borrowed from main memory capability. In this case, 64MB is borrowed, which in the meanwhile the same the main memory loses.

Integrated Peripherals Page

This page sets up some parameters for peripheral devices connected to the system.



OnBoard IDE Controller

Use this item to enable or disable the onboard IDE controllers.

SATA Mode Selection

Use this item to select the mode of the Serial ATA.

USB Controller

Enables or disables the onboard USB controller. We recommend users keep the default value. Disabling it might cause the USB devices not to work properly.

Legacy USB Support

This item allows you to enable or disable Legacy USB support.

OnBoard Audio DEVICE

Enables or disables the onboard Audio.

OnBoard SiS191 Lan DEVICE

This item allows you to control the onboard SiS191 Lan device.

OnBoard LAN Boot ROM

This item enables or disables the onboard LAN Boot ROM function.

Serial Port1 Address

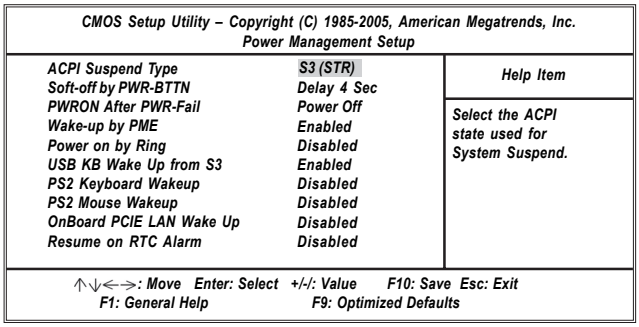
Use this item to enable or disable the onboard COM1/2 serial port, and to assign a port address.

OnBoard IR

Use this item to enable or disable the onboard infrared port, and to assign a port address.

Power Management Setup Page

This page sets some parameters for system power management operation.



ACPI Suspend Type

Use this item to define how your system suspends. In the default, S3 (STR), the suspend mode is a suspend to RAM, i.e., the system shuts down with the exception of a refresh current to the system memory.

Soft-off by PWR-BTTN

This item lets you install a software power down that is controlled by the power buttonon your system. If the item is set to Instant-Off, then the power button cause 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.

PWRON After PWR-Fail

This item enables your computer to automatically restart or return to its operating status.

Wake-up by PME

The system can be turned off with a software command. If you enable this item,the system can automatically resume if there is an incoming call on the PCI Modem or PCI LAN card. You must use an ATX power supply in order to use this feature. Use this item to do wake-up action if inserting the PCI card.

Power On by Ring

An input signal on the serial Ring indicator (RI) line (in other words, and incoming call on the modem) awakens the system from a soft off state.

USB KB Wake Up from S3

This item allows users to enable or disable the USB device, wakeup function from S3 mode.

PS2 Keyboard Wakeup

This item enables or disables you to allow keyboard activity to awaken the system from power saving mode.

PS2 Mouse Wakeup

This item enables or disables you to allow mouse activity to awaken the system from power saving mode.

OnBoard PCIE LAN Wake Up

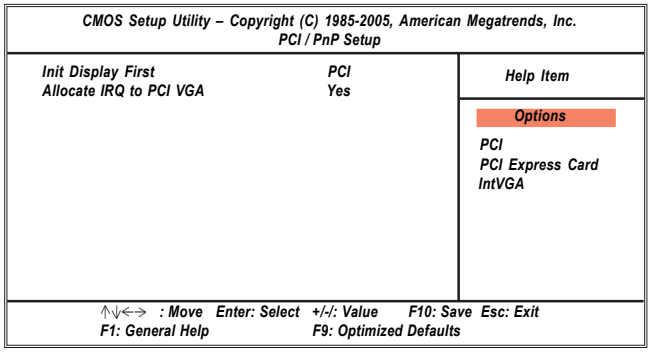
This item allows users to enable or disable Giga LAN activity to wake up the system from power saving mode.

Resume On RTC Alarm

The system can be turned off with a software command. If you enable this item, the system can automatically resume at a fixed time based on the system's RTC (realtime clock). Use the items below this one to set the date and time of the wake-up alarm. You must use an ATX power supply in order to use this feature.

PCI / PnP Setup Page

This page sets up some parameters for devices installed on the PCI bus and those utilizing the system plug and play capability.



Init Dispaly First

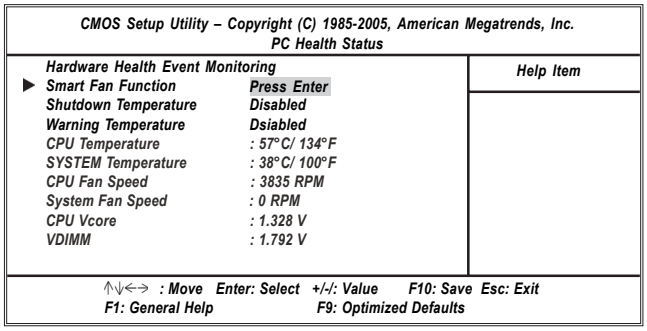
This item allows you to choose the primary display card.

Allocate IRQ to PCI VGA

If this item is enabled, an IRQ will be assigned to the PCI VGA graphics system. You set this value to No to free up an IRQ.

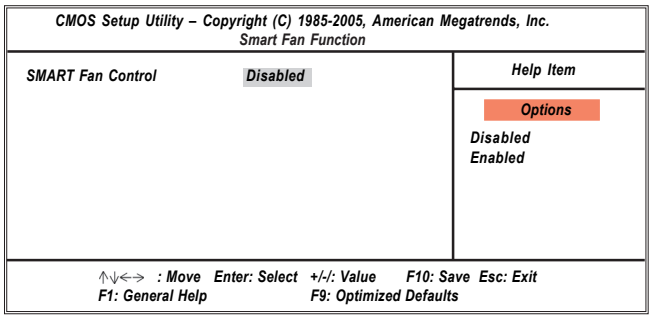
PCI Health Status Page

This page helps you monitor the parameters for critical voltages, temperatures and fan speeds.



▶ Smart Fan Function (Press Enter)

Scroll to this item and press <Enter> to view the following screen:



Press <Esc> to return to PC Health Status screen.

Shutdown Temperature

Enables you to set the maximum temperature the system can reach before powering down.

Warning Temperature

This item enables you to set the system warning temperature.

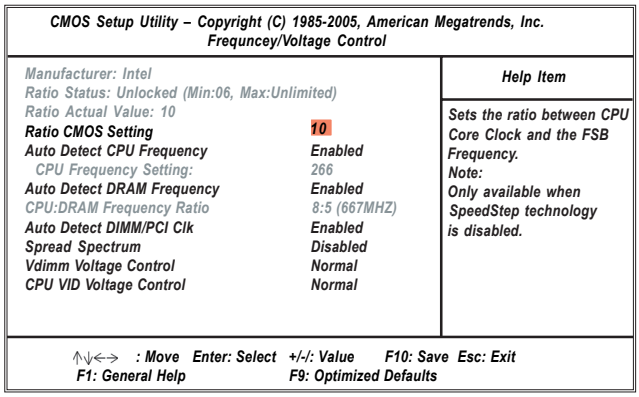
System Component Characteristics

These fields provide you with information about the system current operating status.

- CPU Temperature
- System Temperature
- CPU Fan Speed
- System Fan Speed
- CPU Vorce
- VDIMM

Frequency/Voltage Control Page

This page helps 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.



Manufacturer (Intel)

These items show the brand of the CPU installed in your system.

Ratio Status/Ratio Actual Value

These items show the Locked ratio status and the actual ratio of the CPU installed in your system.

Ratio CMOS Setting

This item allows you to set the ratio between CPU Core Clock and FSB Frequency.

Auto Detect CPU/DRAM Frequency

Auto Detect CPU/DRAM Frequency (Enabled)When this item is enabled, it automatically detects and shows the frequency of the CPUand DRAM memory installed in your system; when disabled, it can adjust the frequencyof the CPU and DRAM memory.

Auto Detect DIMM/PCI Clk

This item allows you to enable or disable you to detect DIMM/PCI clock automatically.

Spread Spectrum

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

Vdimm Voltage Control

This item shows the Vdimm Voltage Control function.

CPU VID Voltage Control

This item shows the CPU VID Voltage Control function.

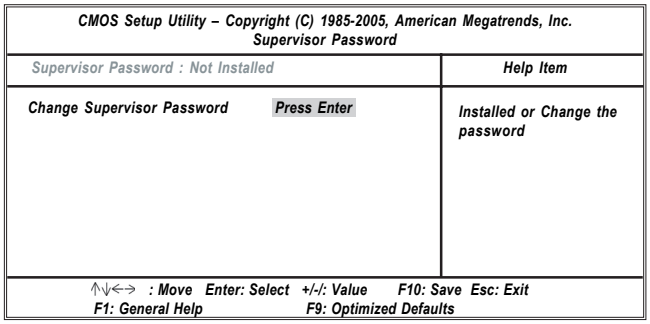
Load Default Settings

This option opens a dialog box to ask if you are sure to install optimized defaults or not. You select [OK], and then <Enter>, the Setup Utility loads all default values; or select [Cancel], and then <Enter>, the Setup Utility does not load default values.

Note: It is highly recommend that users enter this option to load optimal default values for accessing the best performance.

Supervisor Password Page

This page helps you set up some parameters for the hardware monitoring function of this motherboard.



Supervisor Password

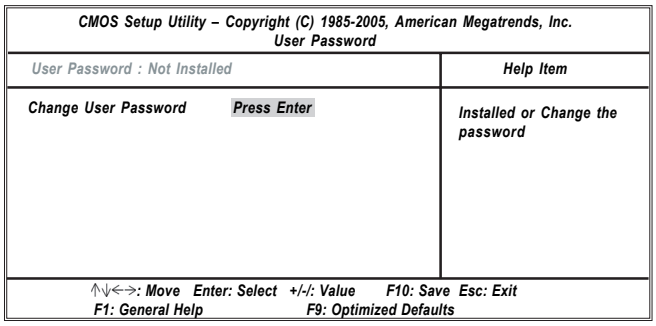
This item indicates whether a supervisor password has been set. If the password has been installed , Installed displays. If not, Not Installed dispalys.

Change Supervisor Password

You can select this option and press<Enter> to access the sub menu. You can use the sub menu to change the supervisor password.

User Password Page

This page helps you set up some parameters for the hardware monitoring function of this motherboard.



User Password

This item indicates whether a user password has been set. If the password has been installed , Installed displays. If not, Not Installed dispalys.

Change User Password

You can select this option and press<Enter> to access the sub menu. You can use the sub menu to change the supervisor password.

Save & Exit Setup

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 presst [Y] to discard any changes you have made.

Chapter 4 Software & Applications

Introduction

This chapter describes the contents of the support CD-ROM that comes with the motherboard package.

The support CD-ROM contains all useful software, necessary drivers and utility programs to properly run our products. More program information is available in a README file, located in the same directory as the software.

To run the support CD, simply insert the CD into your CD-ROM drive. An Auto Setup screen automatically pops out, and then you can go on the auto-installing or manual installation depending on your operating system.

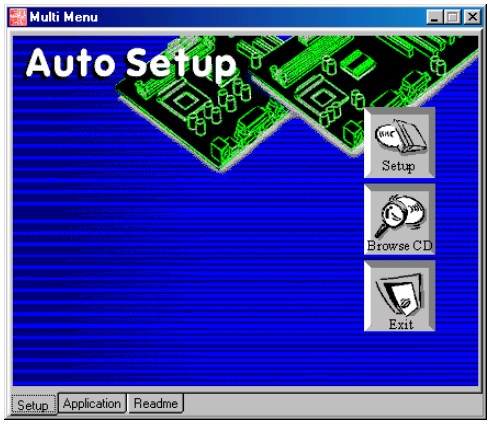
If your operating system is Windows 2000/XP, it will automatically install all the drivers and utilities for your motherboard.

Installing Support Software

1 Insert the support CD-ROM disc in the CD-ROM drive.

2 When you insert the CD-ROM disc in the system CD-ROM drive, the CD automatically displays an Auto Setup screen.

3 The screen displays three buttons of **Setup**, **Browse CD** and **Exit** on the right side, and three others **Setup**, **Application** and **ReadMe** at the bottom. Please see the following illustration.



The **Setup** button runs the software auto-installing program as explained in next section.

The **Browse CD** button is a standard Windows command that you can check the

contents of the disc with the Windows file browsing interface.

The **Exit** button closes the Auto Setup window. To run the program again, reinsert the CD-ROM disc in the drive; or click the CD-ROM driver from the Windows Explorer, and click the Setup icon.

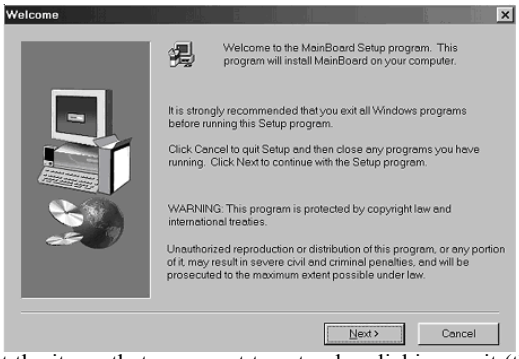
The **Application** button brings up a software menu. It shows the bundled software that this mainboard supports.

The **ReadMe** brings you to the Install Path where you can find out path names of software driver.

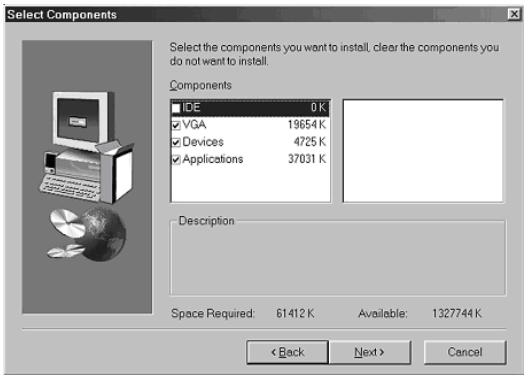
Auto-Installing under Windows 2000/XP

If you are under Windows 2000/XP, please click the **Setup** button to run the software auto-installing program while the Auto Setup screen pops out after inserting the support CD-ROM:

1 The installation program loads and displays the following screen. Click the **Next** button.



2 Select the items that you want to setup by clicking on it (the default options are recommended). Click the **Next** button to proceed.



3 The support software will automatically install.

Once any of the installation procedures start, software is automatically installed in sequence. You need to follow the onscreen instructions, confirm commands and allow the computer to restart as few times as needed to complete installing whatever software you selected. When the process is finished, all the support software will be installed and start working.

Bundled Software Installation

All bundled software available on the CD-ROM is for users' convenience. You can install bundled software as follows:

1 Click the **Application** button while the Auto Setup screen pops out after inserting the support CD-ROM.
2 A software menu appears. Click the software you want to install.
3 Follow onscreen instructions to install the software program step by step until finished.