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Table of Contents

Static Electricity Precautions

Static electricity could damage components on this mainboard. Take the following precautions while unpacking this mainboard and installing it in a system.

1. Don't take this mainboard 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 mainboard by its edges. Do not touch those components unless it is absolutely necessary. Put this mainboard on the top of static-protection package with component side facing up while installing.

Pre-Installation Inspection

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

Notice:

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.
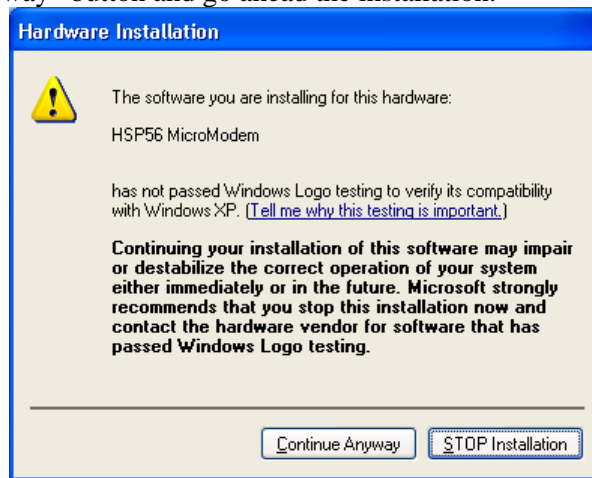
Chapter 1

Introduction

This mainboard has onboard **VIA C3 Samuel2** processor with front-side bus speed up to **133MHz.**

This mainboard has the **SiS635** chipset and integrates a 4X AGP controller with pipeline support, a **256-bit 3D/128-bit 2D** graphics engine and motion compensation MPEG I/MPEG II accelerator, and it provides the **Ultra DMA** 33/66/**100** function. The mainboard has a built-in **AC97 Codec**, a **CNR** (Communication Network Riser) slot, and a built-in **10BaseT/100BaseTX Network Interface** (optional). In addition, the mainboard has an extended set of **ATX I/O Ports** including one PS/2 keyboard port, one PS/2 mouse port, one Serial port, one VGA port, one Parallel port and maximum six USB1.1 ports --four back-panel USB ports and one onboard USB connector USB3 making two extra USB ports by connecting the extended module to the mainboard.

This mainboard has all the features you need to develop a powerful multimedia workstation. The board is **Micro ATX** size and has a power connector for an **ATX** power supply.

Key Features

The mainboard has the following key features:

VIA C3 Samuel2 Processor
- ♦ Supports the **VIA C3 Samuel2** processor
- ♦ Supports **133 MHz** Front-Side Bus

Memory Support
- ♦ Two 184-pin DIMM sockets for DDR memory modules
- ♦ Support for 266 MHz memory bus
- ♦ Maximum installed memory is 2 x 512MB = 1.0GB

Expansion Slots
- ♦ One CNR slot with the 56K v. 90 Fax/Modem card for a special audio/modem riser card
- ♦ Two 32-bit PCI slots for PCI 2.2-compliant bus interface.

Onboard IDE channels
- ♦ Primary and Secondary PCI IDE channels
- ♦ Support for PIO modes, Bus Mastering and Ultra DMA 33/66/**100** modes

Power Supply and Power Management
- ♦ ATX power supply connector
- ♦ ACPI and previous PMU support, suspend switch
- ♦ Supports Wake on LAN and Wake on Alarm

VGA
- ◆ Built-in a high performance **256-bit 3D/128-bit 2D** engine
- ◆ Supports AGP 2.0 compliant configuration setting
- ◆ Supports AGP 4X 266 MHz with 16 stages pipeline full side-band/pipe function

AC'97 Codec
- ♦ Compliant with AC'97 2.2 specification
- ♦ 16-bit stereo full-duplex CODEC with fixed 48KHz sampling rate

♦ 3 analog line-level stereo inputs with 5-bit volume control: LINE-IN, CD-IN
♦ Power management support

Built-in Ethernet LAN (optional)
♦ Built-in **10BaseT/100BaseTX Ethernet LAN**
♦ Embedded Fast Ethernet MAC and onboard Realtek RTL8201 LAN PHY compliant with IEEE802.3u 100BASE-TX, 10BASE-T and ANSI X3.263 TP-PMD standards
♦ Compliant with ACPI 1.0 and the Network Device Class Power Management 1.0
♦ High Performance provided by 100Mbps clock generator and data recovery circuit for 100Mbps receiver

Onboard I/O Ports
The mainboard has a full set of I/O ports and connectors:
♦ Two PS/2 ports for mouse and keyboard
♦ One serial port
♦ One VGA port
♦ One parallel port
♦ Maximum six **USB1.1** ports (four back-panel ports, onboard USB connector USB3 providing two extra ports)
♦ Audio jacks for microphone, line-in and line-out

Hardware Monitoring
♦ Built-in hardware monitoring for CPU & System temperatures, fan speeds and mainboard voltages

Onboard Flash ROM
♦ Automatic board configuration support Plug and Play of peripheral devices and expansion cards

Bundled Software
♦ **PC-Cillin2002** provides automatic virus protection under Windows 98/ME/NT/2000/XP
♦ **Adobe Acrobat Reader V5.0** is the software to help users read .PDF files.

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Dimensions

♦ Micro ATX form factor (244 x 200 mm)

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

Package Contents

Your mainboard package ships with the following items:
- ❑ The mainboard
- ❑ The User's Manual
- ❑ One diskette drive ribbon cable (optional)
- ❑ One IDE drive ribbon cable
- ❑ Software support CD

Optional Accessories

You can purchase the following optional accessories for this mainboard.
- ❑ Extended USB module
- ❑ CNR v.90 56K Fax/Modem card
- ❑ Card Reader (You can buy your own Card Reader from the third party, but please contact your local Card Reader vendor on any issues of the specification and compatibility.)

Chapter 2

Mainboard Installation

To install this mainboard in a system, follow the procedures in this chapter:

❑ Identify the mainboard components
❑ Install a CPU
❑ Install one or more system memory modules
❑ Verify that all jumpers or switches are set correctly
❑ Install the mainboard in a system chassis (case)
❑ Connect any extension brackets or cables to connectors on the mainboard
❑ Install any peripheral devices and make the appropriate connections to connectors on the mainboard

Note:
1. Before installing this mainboard, make sure jumper JP1 set to Normal setting. See this chapter for information on locating JP1 and the setting options.
2. Never connect power to the system during installation. Doing so may damage the mainboard.

Mainboard Components

This diagram identifies major components on the mainboard.
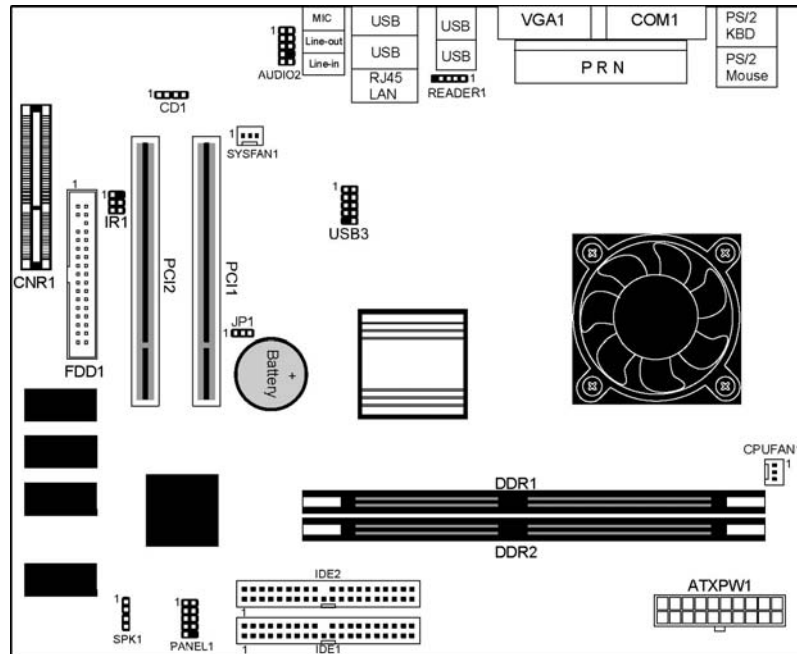
Note: Any jumpers on your mainboard that do not appear in this illustration are for testing only.

I/O Ports

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

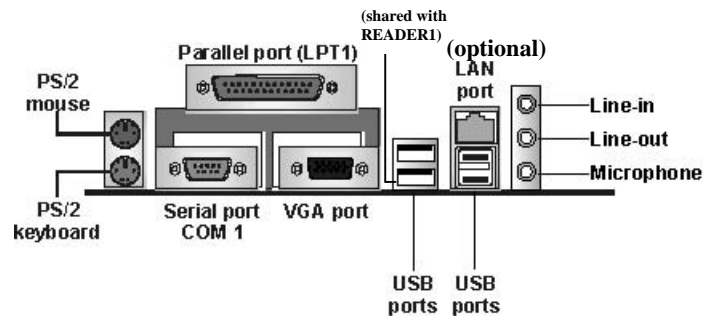|	
PS/2 Mouse	Use the upper PS/2 port to connect a PS/2 pointing device.
PS/2 Keyboard	Use the lower PS/2 port to connect a PS/2 keyboard.
LPT1	Use LPT1 to connect printers or other parallel communications devices.
COM1	Use the COM port to connect serial devices such as mice or fax/modems. COM1 is identified by the system as COM1.
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. *Note: The lower USB port located beside the VGA port is shared with the READER1 connector.*
Audio Ports	Use the three audio ports to connect audio devices. The first jack is for stereo Line-In signal. The second jack is for stereo Line-Out signal. The third jack is for Microphone.

Installing Memory Modules

This mainboard accommodates two 184-pin 2.5V unbuffered Double Data Rate SDRAM (DDR SDRAM) Dual Inline Memory Module (DIMM) sockets, and supports up to 1.0 GB of 266 MHz DDR SDRAM.

DDR SDRAM is a type of SDRAM that supports data transfers on both edges of each clock cycle (the rising and falling edges), effectively doubling the memory chip's data throughput. DDR DIMMs can synchronously work with 100 MHz or 133 MHz memory bus.

DDR SDRAM provides 1.6 GB/s or 2.1 GB/s data transfer rate depending on whether the bus is 100 MHz or 133 MHz.

DDR SDRAM uses additional power and ground lines and requires 184-pin 2.5V unbuffered DIMM module.

DDR1

DDR2
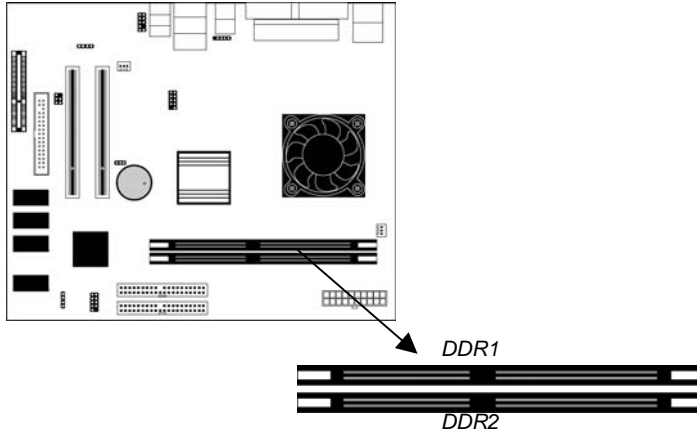
Memory Module Installation Procedure

These modules can be installed with up to 1 GB system memory. Following these steps 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

Using a jumper cap to connect two pins is SHORT, removing it from these pins, OPEN.
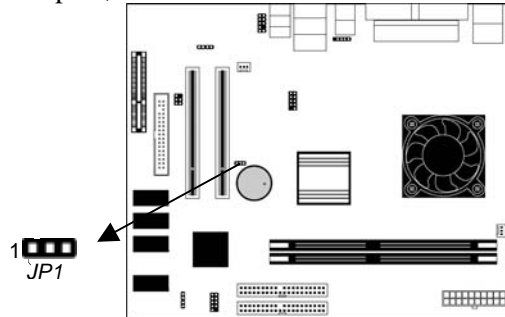
Jumper JP1: Clear CMOS Memory

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 mainboard from operating. To clear the CMOS memory, disconnect all the power cables from the mainboard and then move the jumper cap into the CLEAR setting for a few seconds.

Function	Jumper Setting
Normal Operation	Short Pins 2-3
Clear CMOS Memory	Short Pins 1-2

Install the Mainboard

Install the mainboard in a system chassis (case). The board is a Micro ATX size mainboard. You can install this mainboard in an ATX case. Ensure your case has an I/O cover plate that matches the ports on this mainboard.

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

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SYSFAN1

PANEL1
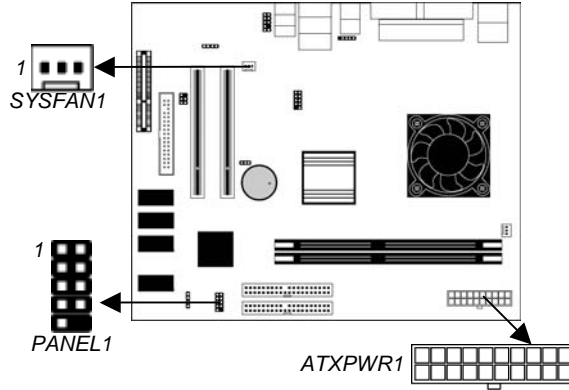
ATXPWR1

Connect the power connector from the power supply to the **ATXPW1** connector on the mainboard.

If there is a cooling fan installed in the system chassis, connect the cable from the cooling fan to the **SYSFAN1** fan power connector on the mainboard.

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

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 mainboard's optional devices:

AUDIO2

READER1

IR1

USB3
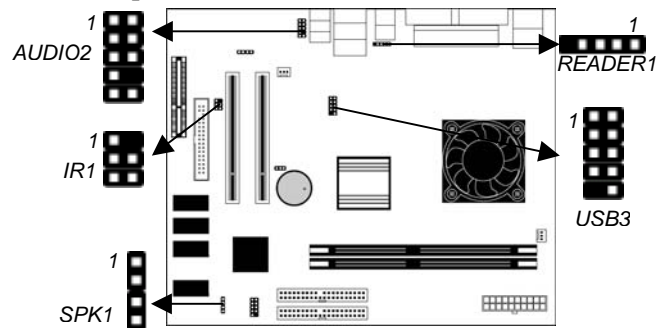
SPK1

SPK1: Speaker Connector
Connect the cable from the PC speaker to the **SPK1** connector on the mainboard.

Pin	Signal	Pin	Signal
1	SPKR	2	NC
3	GND	4	+5V

AUDIO2: Front Panel Audio Connector
This connector allows the user to install auxiliary front-oriented microphone and line-out ports for easier access.

Pin	Signal	Pin	Signal
1	AUD_MIC	2	AUD_GND
3	AUD_MIC_BIAS	4	AUD_VCC
5	AUD_FPOUT_R	6	AUD_RET_R
7	HP_ON	8	KEY
9	AUD_FPOUT_L	10	AUD_RET_L

USB3: Front panel USB Connector
The mainboard 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 connector USB3 to connect the front-mounted ports to the mainboard.

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	USB_FP_OC0

1. Locate the USB3 connector on the mainboard.
2. Plug the bracket cable onto the USB3 connector.
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.

READER1: USB Card Reader Connector (optional)

This connector is for connecting internal USB card reader. You can use a card reader to read or transfer files and digital images to your computer.

Pin	Signal	Pin	Signal
1	VCC	2	USB-
3	USB+	4	GND
5	KEY		

❶ The READER1 is shared with one of the USB ports of the I/O back panel. The USB port is located beside the VGA port connector. See "I/O Ports" for more information.

❶ Please check the pin assignment of the cable and the USB header on the mainboard. Make sure the pin assignment will match before plugging in. Any incorrect usage may cause unexpected damage to the system. The vendor won't be responsible for any incidental or consequential damage arising from the usage or misusage of the purchased product.

IR1: Infrared Port

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

Install Other Devices

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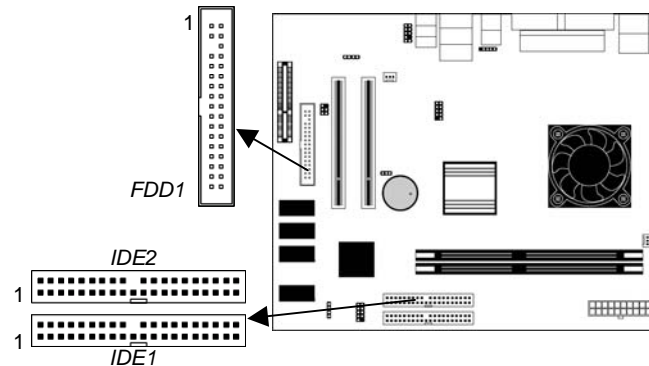
Floppy Disk Drive

The mainboard 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 360K, 720K, 1.2MB, 1.44MB, or 2.88MB.
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 mainboard 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 mainboard.
If you want to install more IDE devices, you can purchase a second IDE cable and connect one or two devices to the Secondary IDE

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channel connector **IDE2** on the mainboard. If you have two devices on the cable, one must be Master and one must be Slave.

Internal Sound Connections
If you have installed a CD-ROM drive or DVD-ROM drive, you can connect the drive audio cable to the onboard sound system.
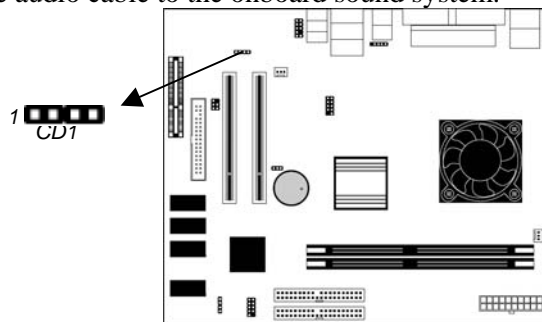
When you first start up your system, the BIOS should automatically detect your CD-ROM/DVD drive. If it doesn't, enter the Setup Utility and configure the CD-ROM/DVD drive that you have installed. On the mainboard, locate the 4-pin connector **CD1.**

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

Expansion Slots

This mainboard has one CNR and two 32-bit PCI expansion slots.
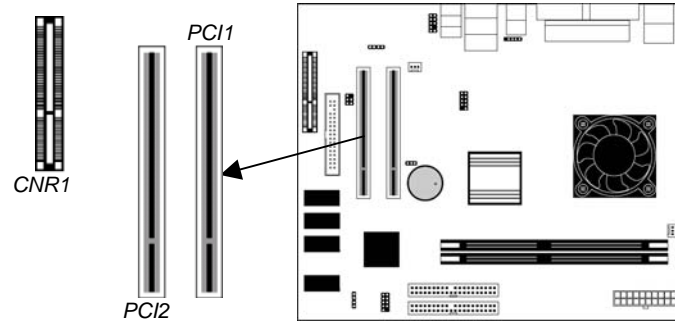
Follow the steps below to install a CNR/PCI expansion card.
1. Locate the CNR or PCI slots on the mainboard.
2. Remove the blanking plate of the slot from the system chassis.
3. Install the edge connector of the expansion card into the slot.
    Ensure the edge connector is correctly seated in the slot.
4. Secure the metal bracket of the card to the system chassis with
    a screw.

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Chapter 3

BIOS Setup Utility

Introduction

The BIOS Setup Utility records settings and information about your computer such as the date and time, the kind of hardware installed, and various configuration settings. Your computer uses this information to initialize all the components when booting up and functions as the basis for coordination between system components.

If the Setup Utility configuration is incorrect, it may cause the system to malfunction. It can even stop your computer from booting properly. If this happens, you can use the clear CMOS jumper to clear the CMOS memory used to store the configuration information.

You can run the setup utility and manually make changes to the configuration. You might need to do this to configure some of the hardware that you install on or connect to the mainboard, such as the CPU, system memory, disk drives, etc.

Running the Setup Utility

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

AMIBIOS SIMPLE SETUP UTILITY – VERSION 1.21.06

(C) 2000 American Megatrends, Inc. All Rights Reserved

Standard CMOS Setup	Features Setup
Advanced Setup	CPU PnP Setup
Power Management Setup	Hardware Monitor
PCI / Plug and Play Setup	Change Password
Load Optimal Settings	Exit
Load Best Performance Settings	

Esc :   Quit   ↑ ↓ ← →: Select Item   (Shift)F2 : Change Color   F5 : Old Values
F6   :   Optimal values   F7 : Best performance values   F10 : Save&Exit

Standards COMOS setup for changing time, date, hard disk type, etc.

You can use the cursor arrow keys to highlight any of the options on the main menu page. Press **Enter** to select the highlighted option. To leave the setup utility, press the **Escape** key. To cycle through the Setup Utility's optional color schemes hold down the **Shift** key and press **F2**.

Some of the options on the main menu page lead to tables of items with installed values. In these pages, use the cursor arrow keys to highlight the items, and then use the **PgUp** and **PgDn** keys to cycle through the alternate values for each of the items. Other options on the main menu page lead to dialog boxes requiring you to answer Yes or No by hitting the **Y** or **N** keys.

If you have already made changes to the setup utility, press **F10** to save those changes and exit the utility. Press **F5** to reset the changes to the original values. Press **F6** to install the setup utility with a set of default values. Press **F7** to install the setup utility with a set of high-performance values.

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Standard CMOS Setup Page

Use this page to set basic information such as the date, the time, the IDE devices, and the diskette drives. If you press the F3 key, the system will automatically detect and configure the hard disks on the IDE channels.

```
┌─────────────────────────────────────────────────────────────────────┐
│                 AMIBIOS SETUP – STANDARD CMOS SETUP                   │
│          (C) 2000 American Megatrends, Inc. All Rights Reserved       │
├─────────────────────────────────────────────────────────────────────┤
│ Date  (mm/dd/yy) :  Fri Sep 26, 2003                                  │
│ Time  (hh/mm/ss) :  15:40:12                                          │
│                                            LBA   Blk   PIO   32Bit    │
│            Type         Size Cyln Head WPcom Sec Mode  Mode  Mode Mode│
│ Pri Master  : Auto                                              On    │
│ Pri Slave   : Auto                                              On    │
│ Sec Master : Auto                                               On    │
│ Sec Slave   : Auto                                              On    │
│                                                                       │
│ Floppy Drive A :  1.44 MB 3 1/2                                       │
│ Floppy Drive B :  Not Installed                                       │
├─────────────────────────────────────────────────────────────────────┤
│ Month :  Jan – Dec                           ESC :  Exit             │
│   Day :  01 – 31                             ↑↓  :  Select Item       │
│  Year :  1901 – 2099                         PU/PD/+/- :  Modify      │
│                                              (Shift)F2 :  Color       │
│                                              F3 :  Detect All HDD     │
└─────────────────────────────────────────────────────────────────────┘
```

Date & Time	Use these items to set the system date and time
Pri Master Pri Slave Sec Master Sec Slave	Use these items to configure devices connected to the Primary and Secondary 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*.
Floppy Drive A Floppy Drive B	Use these items to set the size and capacity of the floppy diskette drive(s) installed in the system.

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Advanced Setup Page

This page sets up more advanced information in the system. Be more carful with this page. Making changes can affect the operation of your computer.

```
                    AMIBIOS SETUP – ADVANCED SETUP
            (C) 2000 American Megatrends, Inc. All Rights Reserved

Quick Boot                  Enabled
1st Boot Device             IDE-0
2nd Boot Device             Floppy
3rd Boot Device             CDROM
Try Other Boot Devices      Yes
S.M.A.R.T. for Hard Disks   Disabled
BootUp Num-Lock             On
Floppy Drive Swap           Disabled
Floppy Drive Seek           Disabled
Password Check              Disabled     ESC : Quit        ↑↓←→ : Select Item
Boot To OS/2 > 64MB         No
L1 Cache                    Enabled      F1   : Help      PU/PD/+/- : Modify
L2 Cache                    Enabled
System BIOS Cacheable       Enabled      F5   : Old Values  (Shift)F2 : Color
Timing Setting Mode         Normal
DRAM CAS# Latency           2.5T         F6   : Load Optimal values
IDE USE BUS                 AUTO
Auto Detect DIMM/PCI Clk    Disabled     F7   : Load Best performance values
Spread Spectrum             Disabled
```

Quick Boot	If you enable this item, the system starts up more quickly be elimination some of the power on test routines.
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.
Try Other Boot Device	If you enable this item, the system will also search for other boot devices if it fails to find an operating system from the first two locations.
S.M.A.R.T. for Hard Disks	Enable this item if any IDE hard disks support the S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) feature.
BootUp Num-Lock	This item determines if the Num Lock key is active or inactive at system start-up time.

Floppy Drive Swap	If you have two diskette drives installed and you enable this item, drive A becomes drive B and drive B becomes drive A.
Floppy Drive Seek	If you enable this item, your system will check all floppy disk drives at start up. Disable this item unless you are using an old 360KB drive.
Password Check	If you have entered a password for the system, use this item to determine, if the password is required to enter the Setup Utility (*Setup*) or required both at start-up and to enter the Setup Utility (*Always*).
Boot to OS/2 > 64MB	Enable this item if you are booting the OS/2 operating system and you have more than 64MB of system memory installed.
L1/L2 Cache	Leave these items enabled since all the processors that can be installed on this board have internal L1/L2 cache memory.
System BIOS Cacheable	If you enable this item, a segment of the system BIOS will be cached to main memory for faster execution.
Timing Setting Mode	This item determines the timing setting mode of the memory. We recommend you leave this item at the default value.
DRAM CAS# Latency	This item determines the operation of DRAM memory CAS (column address strobe). It is recommended that you leave this item at the default value. The 3T setting requires faster memory that specifically supports this mode.
IDE USE BUS	This item determines the IDE channels to use PCI bus or Fast Embedded bus. We recommend that you leave this item at the default value.
Auto Detect DIMM/PCI Clk	When this item is enabled, BIOS will disable the clock signal of free DIMM/PCI slots.

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

Power Management Setup Page

This page sets some of the parameters for system power management operation.

```
                AMIBIOS SETUP – POWER MANAGEMENT SETUP
            (C) 2000 American Megatrends, Inc. All Rights Reserved

ACPI Aware O/S          Yes
Power Management        Enabled
Suspend Time out        Disabled
Hard Disk Time out      Disabled
Ring On Power On        Disabled
RTC Alarm Power On      Disabled
   RTC Alarm Date       Every Day
   RTC Alarm Hour       12          ESC : Quit        ↑↓←→ : Select Item
   RTC Alarm Minute     30          F1  : Help        PU/PD/+/- : Modify
   RTC Alarm Second     00
Keyboard Power On       Disabled    F5  : Old Values  (Shift)F2 : Color
Function
                                    F6  : Load Optimal values
Power On by LAN         Disabled
                                    F7  : Load Best performance values
```

ACPI Aware O/S	Enable this item if you are using an O/S that supports ACPI function such as Windows 98/ME /2000.
Power Management	Use this item to select a power management scheme. Both APM and ACPI are supported.
Suspend Time Out	This sets the timeout for Suspend mode in minutes. If the time selected passes without any system activity, the computer will enter power-saving Suspend mode.
Hard Disk Time Out	This sets the timeout to power down the hard disk drive, if the time selected passes without any hard disk activity.

Ring On Power On	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 Fax/Modem. You must use an ATX power supply in order to use this feature.
RTC Alarm Power On	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.
Keyboard PowerOn Function	If you enable this item, you can turn the system on and off by pressing hot keys on the keyboard. You must enable the Keyboard Power On jumper and use an ATX power supply in order to use this feature.
Power On by LAN	The system can be turned off with a software command. If you enable this item, the system can automatically resume on LAN. You must use an ATX power supply in order to use this feature.

PCI / Plug and Play Setup Page

This page sets some of the parameters for devices installed on the PCI bus and devices that use the system plug and play capability.

```
AMIBIOS SETUP – PCI / PLUG AND PLAY SETUP
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Plug and Play Aware O/S      Yes
Primary Graphics Adapter     PCI
Allocate IRQ to PCI VGA      Yes

                                     ESC : Quit       ↑↓←→ : Select Item
                                     F1  : Help       PU/PD/+/- : Modify
                                     F5  : Old Values  (Shift)F2  : Color
                                     F6  : Load BIOS Defaults
                                     F7  : Load Setup Defaults
```

Plug and Play Aware O/S	Enable this item if you are using an O/S that supports Plug and Play such as Windows 95 or 98.
Primary Graphics Adapter	This item indicates if the primary graphics adapter uses the PCI or AGP bus. The default PCI setting still lets the onboard display work and allows the use of a second display card installed in a PCI slot.
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.

Load Optimal Settings

If you select this item and press **Enter** a dialog box appears. If you press **Y**, and then **Enter**, the Setup Utility loads a set of fail-safe default values. These default values are not very demanding and they should allow your system to function with most kinds of hardware and memory chips.

Load Best Performance Settings

If you select this item and press **Enter** a dialog box appears. If you press **Y**, and then **Enter**, the Setup Utility loads a set of fail-safe default values. These default values are not very demanding and they should allow your system to function with most kinds of hardware and memory chips.

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

Features Setup Page

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

```
AMIBIOS SETUP – PERIPHERAL SETUP
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OnBoard FDC                Enabled
OnBoard Serial PortA       3F8h/COM1
OnBoard IR Port            Disabled
OnBoard Parallel Port      378h
  Parallel Port Mode       Normal
  Parallel Port IRQ        7
  Parallel Port DMA        N/A
OnBoard PCI IDE            Both
Onboard AC'97 Sound        Enabled
Onboard AC'97 Modem        Enabled     ESC : Quit          ↑↓←→ : Select Item
OnBoard LAN                Enabled     F1  : Help      PU/PD/+/- : Modify
USB Function Support       Enabled
USB Function for DOS       Disabled     F5  : Old Values  (Shift)F2  : Color
                                        F6  : Load Optimal values
                                        F7  : Load Best performance values
```

OnBoard FDC	Use this item to enable or disable the onboard floppy disk drive interface.
OnBoard Serial PortA	Use this item to enable or disable the onboard COM1 serial port, and to assign a port address
OnBoard IR Port	Use this item to define the protocol for an infrared port if you have installed an optional IR port. The choices are IrDA and ASKIR.

Onboard Parallel Port	Use this item to enable or disable the onboard LPT1 parallel port, and to assign a port address. The Auto setting will detect and available address.
Parallel Port Mode	Use this item to set the parallel port mode. You can select SPP (Standard Parallel Port), ECP (Extended Capabilities Port), EPP (Enhanced Parallel Port), or ECP + EPP.
Parallel Port IRQ	Use this item to assign either IRQ 5 or 7 to the parallel port.
Parallel Port DMA	Use this item to assign a DMA channel to the parallel port. The options are 0, 1 and 3.
Onboard PCI IDE	Use this item to enable or disable either or both of the onboard Primary and Secondary IDE channels.
Onboard AC'97 Sound	This item enables or disables the onboard audio chip.
Onboard AC'97 Modem	This item enables or disables the onboard modem chip.
OnBoard LAN	This item enables or disables the onboard network interface.
USB Function Support	Enable this item if you plan to use the USB ports on this mainboard.
USB Function for DOS	Enable this item if you plan to use the USB ports on this mainboard in a DOS environment.

CPU PnP Setup Page

This page lets you manually configure the mainboard for the CPU. The system will automatically detect the kind of CPU that you have installed and make the appropriate adjustments to the items on this page.

```
┌────────────────────────────────────────────────────────────────┐
│            AMIBIOS SETUP – CPU PnP SETUP                         │
│      ©2000 American Megatrends, Inc. All Rights Reserved        │
├───────────────────────────────┬────────────────────────────────┤
│ Auto Detect DRAM Freq.  Disabled                                │
│ DRAM Frequency          100MHz                                  │
│                               │                                 │
│                               │                                 │
│                               │ ESC : Quit      ↑↓←→ : Select Item│
│                               │ F1 : Help    PU/PD/+/- :  Modify │
│                               │ F5 : Old Values  (Shift)F2 : Color│
│                               │ F6 : Load Optimal values         │
│                               │ F7 : Load Best performance values│
└───────────────────────────────┴────────────────────────────────┘
```

Auto Detect DRAM Frequency	Use this item to detect the system bus frequency.
DRAM Base Frequency	Use this item to set the bus frequency for the memory bus.

Hardware Monitor Page

This page sets some of the parameters for the hardware monitoring function of this mainboard.

```
AMIBIOS SETUP – HARDWARE MONITOR
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*** System  Hardware  ***
Vcore                    1.632V
Vcc 2.5V                 2.496V
Vcc 3.3V                 3.392V
Vcc 1.8V                 1.765V
SB3V                     3.488V
VBAT                     3.488V
SYSTEM Fan Speed         0 RPM
CPU Fan Speed            1288 RPM       ESC  : Quit        ↑↓←→ : Select Item
SYSTEM Temperature       45°C/113°F     F1   : Help        PU/PD/+/- : Modify
CPU Temperature          37°C/98°F
                                        F5   : Old Values  (Shift)F2  : Color
                                        F6   : Load Optimal values
                                        F7   : Load Best performance values
```

System/ CPU Temperature	These items display Power, CPU and System temperature measurement.
FANs & Voltage Measurements	These items indicate cooling fan speeds in RPM and the various system voltage measurements.

Change Password

If you highlight this item and press **Enter**, a dialog box appears which lets you enter a Supervisor password. You can enter no more than six letters or numbers. Press **Enter** after you have typed in the password. A second dialog box asks you to retype the password for confirmation. Press **Enter** after you have retyped it correctly. The password is then required to access the Setup Utility or for that and at start-up, depending on the setting of the Password Check item in Advanced Setup.

Change or Remove the Password
Highlight this item, press Enter and type in the current password. At the next dialog box, type in the new password, or just press Enter to disable password protection.

Exit

Highlight this item and press **Enter** to save the changes that you
have made in the Setup Utility configuration and exit the program.
When the Save and Exit dialog box appears, press **Y** to save and
exit, or press **N** to exit without saving.

Chapter 4

Software & Applications

Introduction

This chapter describes the contents of the support CD-ROM that comes with the mainboard 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 98/ME/2000/XP, it will automatically install all the drivers and utilities for your mainboard; if Windows NT or manual installation, please follow the instructions described as the Installing under Windows NT or Manual Installation section.

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 98 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 98/ME/2000/XP

If you are under Windows 98/ME/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.
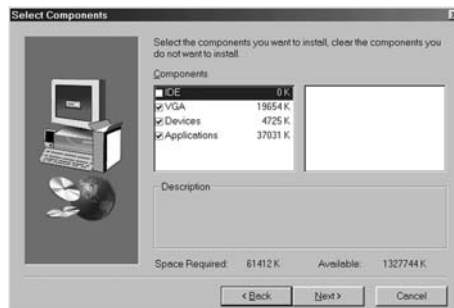
3. The support software will automatically install.

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.

Installing under Windows NT or Manual Installation

If you are under Windows NT, the auto-installing program doesn't work out; or you have to do the manual installation, please follow this procedure while the Auto Setup screen pops out after inserting the support CD-ROM:

1. Click the **ReadMe** to bring up a screen, and then click the Install Path at the bottom of the screen.
2. Find out your mainboard model name and click on it to obtain its correct driver directory.
3. Install each software in accordance with the corresponding driver path.

Bundled Software Information

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.