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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.

Table of Contents

Mainboard User's Manual

Chapter 1

Introduction

This mainboard has a **Socket-462** processor socket for the **AMD K7** type of processors. You can install any of these processors on this mainboard. This mainboard supports front-side bus speed of **200/266MHz**.

This mainboard uses **SiS 740** chipset that supports a **DDR** interface, **Ultra DMA** 33/**66/100** function and remarkably high system performance under all types of system operations. This mainboard has a built-in **AC97 Codec**, providing an **AMR** (Audio Modem Riser) slot to support Audio and Modem application, and a built-in **10BaseT/100BaseTX Network Interface**. This mainboard has the **embedded 256-bit 3D AGP Graphics Accelerator** with 64MB frame buffer, supporting **AGP 4X 266MHz** mode up to 2GB/s bandwidth, which provides a direct connection between the graphics sub-system and memory so that the graphics do not have to compete for processor time with other devices on the PCI bus. In addition, this mainboard has an extended set of **ATX I/O Ports** including PS/2 keyboard and mouse ports, two USB ports, a parallel port, one serial port and one VGA port. Connecting the Extended USB Module to this mainboard can add two extra USB ports.

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

Key Features

The key features of this mainboard include:

Socket-462 Processor Support
- ♦ Supports AMD **Athlon XP/Athlon/Duron** processors
- ♦ Supports 200/266 MHz Front-Side Bus

Processors are automatically configured using firmware and a synchronous Host/DRAM Clock Scheme.

Memory Support
- ♦ Two 168-pin DIMM slots for SDRAM memory modules
- ♦ Two 184-pin DIMM slots for DDR memory modules
- ♦ Support SDRAM up to 133 MHz /DDR up to 266 MHz memory bus
- ♦ Maximum installed memory is 1GB

Notice: You can NOT use SDRAM and DDR simultaneously.

VGA
- ♦ Embeded 256-bit 3D AGP Graphics Accelerator with 64MB frame buffer
- ♦ Supports AGP 4X 266 MHz mode up to 2GB/s bandwidth
- ♦ Supports 333MHz true-colorm RAMDAC, resolution up to 2048 x 1536 x 16 bpp NI
- ♦ Supports AGP Rev. 2.0 Spec. Compliant

Expansion Slots
- ♦ One AMR slot for a special audio/modem riser card
- ♦ Three 32-bit PCI slots for PCI 2.2-compliant bus interface

Onboard IDE channels
- ♦ Primary and Secondary PCI IDE channels
- ♦ Support for PIO (programmable input/output) modes
- ♦ Support for Multiword DMA modes
- ♦ Support for Bus Mastering and Ultra DMA 33/**66**/**100** modes

Power Supply and Power Management
- ATX power supply connector
- Meets ACPI 1.0b and APM 1.2 requirements, keyboard power on/off
- Supports Suspend, Shutdown, Wake on LAN, Wake on Modem, Wake on Alarm, Interrupt Wake-up from Keyboard/Mouse

AC97 Codec
- Compliant AC97 2.1 specification
- Supports 18-bit ADC (Analog Digital Converter) and DAC (Digital Analog Converter) as well as 18-bit stereo full-duplex codec

Built-in Ethernet LAN
- Built-in **10BaseT/100BaseTX Ethernet LAN**
- LAN controller integrates Fast Ethernet MAC and 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
- Built-in Multi-threaded IO Link Delivering 1.2GB/s
- Provides PC99 Color Connectors for easy peripheral device connections
- Floppy disk drive connector with 1Mb/s transfer rate
- One serial port with 16550-compatible fast UART
- One VGA port
- One parallel port with ECP and EPP support
- Two USB ports and optional two USB ports module
- Two PS/2 ports for keyboard and mouse
- One infrared port connector for optional module

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Hardware Monitoring

♦ Built-in Hardware Monitor circuit supports Thermal, Power and Fan Speed monitor

Onboard Flash ROM

♦ Supports 2MB Flash Rom on board, provides complete Advance Configuration Power Interface(ACPI) and Legacy PMU

♦ Supports Ultra DMA 66/100 and fully compliant with PC'97 and PC 98 Spec.

Bundled Software

♦ **PC-Cillin2000** provides automatic virus protection under Windows 95/98/NT/2000

♦ **MediaRing Talk** provides PC to PC or PC to Phone internet phone communication

♦ **3Deep** delivers the precise imagery and displays accurate color in your monitor

♦ **Recovery Genius 21st V5.0** provides the function to recover, reserve and transfer hard disk data.

♦ **CD Ghost** is the software stimulating a real CD-ROM to perform equivalent function.

♦ **Language Genius 21st** is the software to provides learning tools of language and singing.

♦ **PC DJ** is a dual-MP3 player that enables users to actually mix music right on their own personal computers.

♦ **Adobe Acrobat Reader V5.0** is the software to help users read .PDF files.

Dimensions

♦ Micro ATX form factor (24.5cm x 24.5cm)

Package Contents

Attention: This mainboard series consists of two models, M841LR (LAN Ready) and M841 (without LAN).
Please contact your local supplier for more information about your purchased model. Each model supports different specification listed as below:

Model	Specification
M841LR	Onboard LAN PHY(U15) and LAN (RJ45) connector
M841	---

Your mainboard package ships with the following items:
- ❏ The mainboard
- ❏ This User's Guide
- ❏ 1 UDMA/66 IDE cable
- ❏ 1 Floppy disk drive cable
- ❏ Support software on CD-ROM disk

Optional Accessories
You can purchase the following optional accessories for this mainboard.
- ❏ Extended USB module
- ❏ AMR v.90 56K Fax/Modem card

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.

Chapter 2

Mainboard Installation

To install this mainboard in a system, please follow the instructions 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 connecting headers on the mainboard
❑   Install other devices and make the appropriate connections to the mainboard connecting headers.
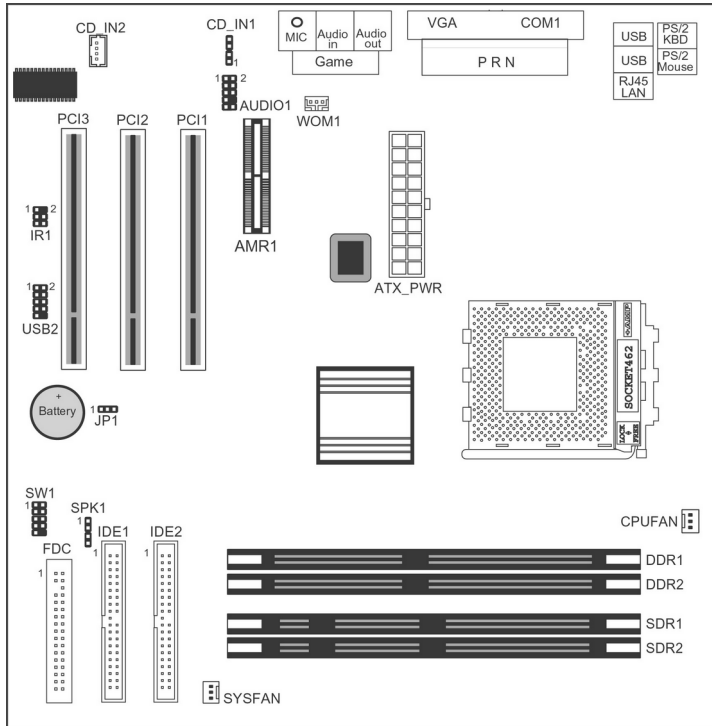
Note:
1. Before installing this mainboard, make sure jumper JP1 is under Normal setting. See this chapter for information about locating JP1 and the setting options.
2. Never connect power to the system during installation; otherwise, it may damage the mainboard.

Mainboard Components

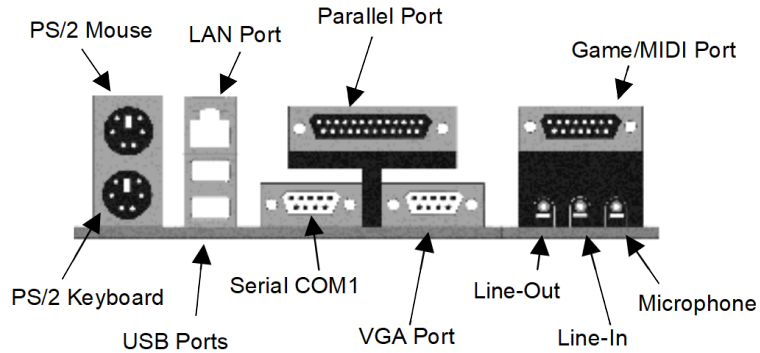Use the diagram below to identify the major components on the mainboard.

Note: Any jumper on your mainboard that do not appear in the illustration above is for testing only.

I/O Ports

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

Install A CPU

This mainboard has a Socket-462 that supports AMD K7 processors.

To ensure reliability, ensure that your processor has a heatsink/cooling fan assembly.

Do not try to install a Socket-370/Socket-7 processor in the Socket-462. A Socket-370/Socket-7 processor such as the PPGA Celeron, FCPGA Pentium-III, Pentium-MMX, or the AMD K5/K6 does not fit in the Socket-462.

The following list indicates these processors are currently supported by this mainboard.

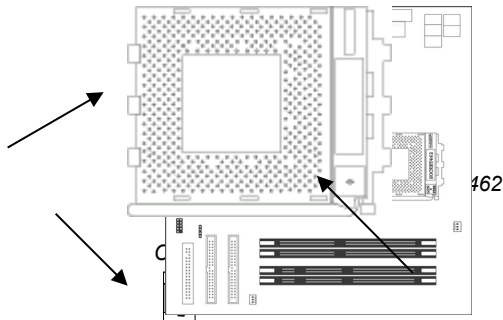**Athlon XP**: 1500+ ~ 2000+; FSB: 266 MHz
Athlon/Duron: 500M ~ 1.4GHz; FSB: 200 MHz, 266 MHz

Installing a Socket-462 Processor

Install a processor into the ZIF (Zero Insertion Force) Socket-462 on the mainboard.

1. Locate the Socket-462 and CPUFAN. Pull the locking lever out slightly from the socket and raise it to the upright position.


2. On the processor, identify the Pin-1 corner by its beveled edge.
3. On the Socket-462, identify the Pin-1 corner. The Pin-1 corner is at the top of the locking lever when it locked.
4. Match the Pin-1 corners and insert the processor into the socket. No force is required and the processor should drop into place freely.
5. Swing the locking lever down and hook it under the catch on the side of the socket. This secures the CPU in the socket.
6. All processors should be installed with a combination heatsink/ cooling fan, connect the cable from the fan to the CPU fan power connector CPUFAN.

Install Memory

The mainboard has two 168-pin/184-pin DIMM sockets for SDRAM/DDR (Double Data Rate) SDRAM system memory modules. You must install at least one memory module in order to work out the mainboard, **either SDRAM or DDR SDRAM, but you can not use them simultaneously.**

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DDR SDRAM provides 800 MBps or 1 GBps data transfer depending on whether the bus is 100 MHz or 266 MHz. It doubles the rate to 1.6 GBps and 2.1 GBps by transferring data on both the rising and falling edges of the clock. DDR SDRAM uses additional power and ground lines and requires 184-pin 2.5V unbuffered DIMM module reather than the 168-pin 3.3V unbuffered DIMMs used by SDRAM.

DDR1
DDR2

SDR1
SDR2
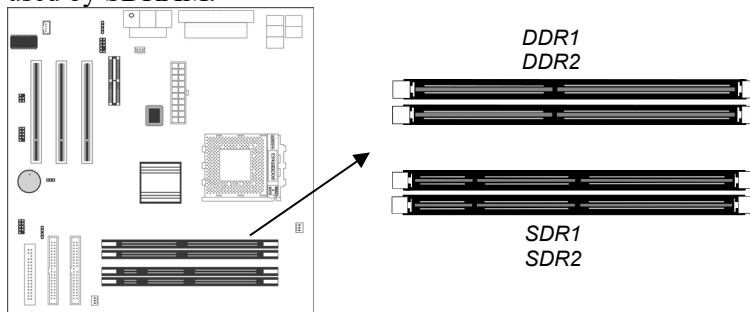
For this mainboard, the maximum memory size is 1GB.

The edge connectors on the memory modules have cut outs, which coincide with spacers in the DIMM sockets so that memory module can only be installed in the correct orientation.

To install a module, push the retaining latches at either end of the socket outwards. Position the memory module correctly and insert it into the DIMM socket. Press the module down into the socket so that the retaining latches rotate up and secure the module in place by fitting into notches on the edge of the module.

Setting Jumper Switches

Jumpers are sets of pins which can be connected together with jumper caps. The jumper caps change the way the mainboard operates by changing the electronic circuits on the mainboard. If a jumper cap connects two pins, we say the pins are SHORT. If a jumper cap is removed from two pins, the pins are OPEN.
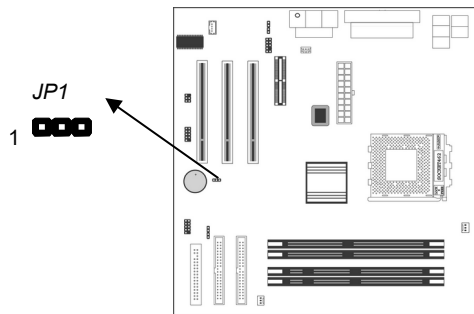
Jumper JP1: Clear CMOS Memory

This jumper can 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
Clear CMOS Memory	Short Pins 1-2
Normal Operation	Short Pins 2-3

Install the Mainboard

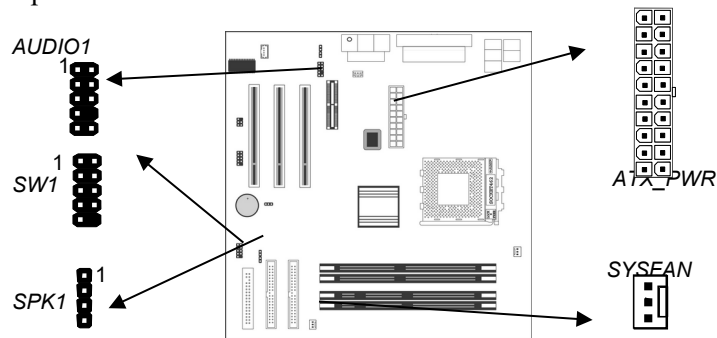Install the mainboard in a system chassis (case). The board is an ATX size mainboard with a twin-tier of I/O ports. You can install this mainboard in an ATX case. Ensure that your case has an I/O cover plate that matches the ports on this mainboard.

Install the mainboard in a case. Follow the instructions provided by the case manufacturer using the hardware and internal mounting points on the chassis.

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

If there is a cooling fan installed in the system chassis, connect the cable from the cooling fan to the **SYSFAN** fan power connector on the mainboard.
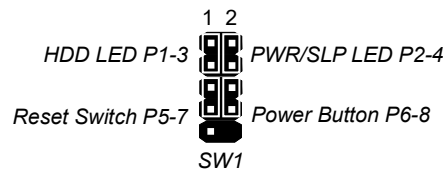
Connect the cable from the PC speaker to the **SPK1** header on the mainboard.

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

Connect the case switches and indicator LEDs to the **SW1** header.

Pin	Signal	Pin	Signal
1	HD_LED_P	2	FP PWR/SLP
3	HD_LED_N	4	FP PWR/SLP
5	RST_SW_N	6	RST_SW_P
7	RST_SW_P	8	RST_SW_N
9	KEY	10	KEY

1 2

HDD LED P1-3   PWR/SLP LED P2-4

Reset Switch P5-7   Power Button P6-8

SW1

If there are a headphone jack or/and a microphone jack on the front panel, connect the cables to the **AUDIO1** header on the mainboard. See the illustrations below for the guide to the SW1 and AUDIO1 headers pin assignments.

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

MIC 1   2 GND
MIC-P 3   4 VCC
FPOUT-R 5   6 RET-R
NC 7   8 Key
FPOUT-L 9   10 RET-L

AUDIO1

Optional Extension Brackets

For this mainboard, you can also obtain a USB module extension bracket for more USB ports. Install them by following the steps below.

Note: All the ribbon cables used on the extension brackets have a red stripe on the Pin-1 side of the cable.

Extended USB Module

This module bracket has two USB ports for more USB devices (USB port 3-4).
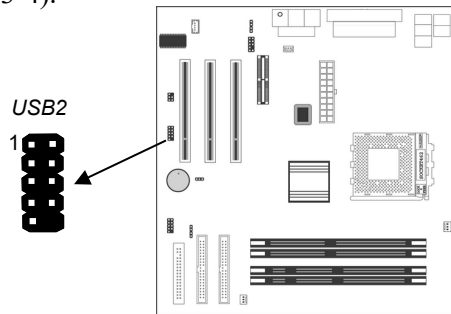
Pin	Signal	Pin	Signal
1	VERG_FP_USBPWR0	2	VERG_FP_USBPWR0
3	USB_FP_P0-	4	USB_FP_P1-
5	USB_FP_P0+	6	USB_FP_P1+
7	GROUND	8	GROUND
9	KEY	10	USB_FP_OC0

1. Locate the USB2 header on the mainboard.
2. Plug the bracket cable onto the USB2 header.
3. In the system chassis, remove a slot cover from one of the expansion slots and install the extension bracket in the opening. Use the screw that held the slot cover to secure the extension bracket in the chassis.

Install Other Devices

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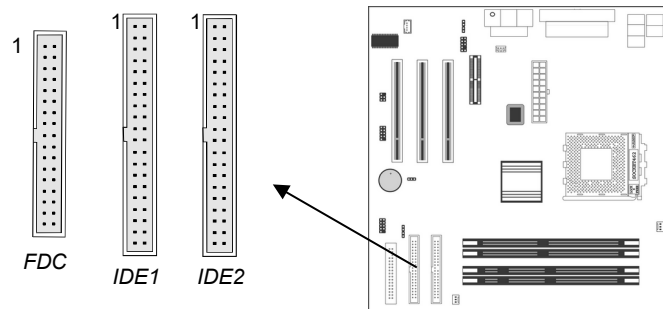
Floppy Disk Drive

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 **FDC**.

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 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.
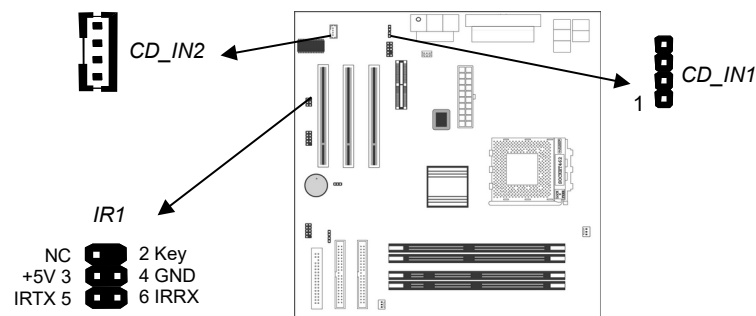
On the mainboard, locate the two 4-pin connectors **CD_IN1** and **CD_IN2**. There are two kinds of connectors because different brands of CD-ROM drives have different kinds of audio cable connectors. Connect the cable to the appropriate connector.

CD_IN1

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

CD_IN2

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

Infrared Port

You can connect an infrared port to the mainboard. You can purchase this option from third-party vendors.
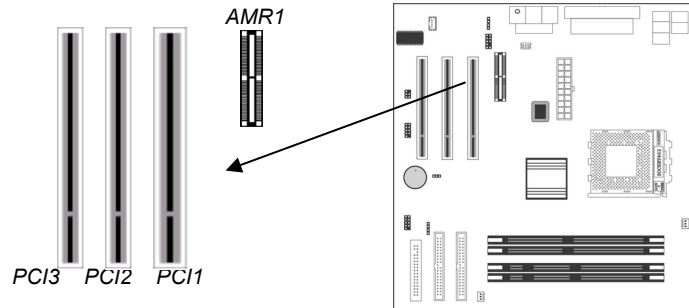
1. Locate the infrared port **IR1** header on the mainboard.
2. If you are adding an infrared port, connect the ribbon cable from the port to the IR1 header and then secure the port to an appropriate place in your system chassis.

Pin	Signal	Pin	Signal
1	NC	2	KEY
3	+5V	4	GND
5	IRTX	6	IRRX

Expansion Slots

This mainboard has three 32-bit PCI slots and one AMR slot.

Follow the steps below to install a PCI/AMR expansion card.
1.   Locate the AMR or PCI slots on the mainboard.
2.   Remove slot cover from the system chassis.
3.   Insert edge connector of expansion card into the slot, press down firmly inside until fully inserted.
4.   Secure the expansion card bracket to the system chassis with the screw that held the slot cover.

AMR Slot

The AMR (Audio Modem Riser) slot is an industry standard slot that allows for the installation of a special audio/modem riser card. Different territories have different regulations regarding the specifications of a modem card. You can purchase an AMR card that is approved in your area and install it directly into the AMR slot.

Chapter 3

BIOS Setup Utility

Introduction

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

If the Setup Utility configuration is incorrect, it may cause system's malfunction. It can even keep your computer from booting properly. If it happens, you can use the clear CMOS jumper to clear the CMOS memory that has stored 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 1.21.09
              (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 CMOS 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 which require 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) :  Wed Nov 14, 2001
 Time  (hh/mm/ss) :  15:06:30
                                                    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 31/2
 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.

Advanced Setup Page

Use this page to set more advanced information about your system. Take some care with this page. Making changes can affect the operation of your computer.

AMIBIOS SETUP – ADVANCED SETUP	
(C) 2000 American Megatrends, Inc. All Rights Reserved	
Shared Memory Size 32 MB 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 Floppy Drive Swap Disabled Password Check Setup Boot To OS/2 No System BIOS Cacheable Enabled DRAM Timing Configuration Normal Mode SDR/DDR CAS Latency 3T Auto Detect DIMM/PCI Clk Enabled Clk Gen Spread Spectrum Disabled	ESC : Quit ↑↓←→ : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift)F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults

Share Memory Size	This item lets you allocate a portion of the main memory for the onboard VGA display application with 16/32/64MB options.
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 Devices	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.
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.
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	Enable this item if you are booting the OS/2 operating system and you have more than 64MB of system memory installed.
System BIOS Cacheable	If you enable this item, a segment of the system BIOS will be cached to main memory for faster execution.
DRAM Timing Configuration	This item can determine the DRAM timing configuration mode of the memory, four options of Normal, Fast, Ultra and Safe modes. We recommend that you leave this item at the default value.
SDR/DDR CAS Latency	This item determines the operation of the SDRAM / DDR memory CAS (column address strobe). We recommend that you leave this item at the default value. The 2T setting requires faster memory that specifically supports this mode.
Auto Detect DIMM/PCI Clk	Use this item to enable the DIMMs or PCI slots to detect automatically device then generating clock.
Clk Gen Spread Spectrum	Use this item to enable the clock to generate spread spectrum.

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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
RTC Alarm Power On         Disabled
RTC Alarm Date             Every Day
RTC Alarm Hour             12
RTC Alarm Minute           30          ESC  : Quit        ↑↓←→ : Select Item
RTC Alarm Second           00          F1   : Help        PU/PD/+/- : Modify
LAN/Ring Power On           Disabled   F5   : Old Values  (Shift)F2  : Color
Keyboard PowerOn Function   Disabked   F6   : Load BIOS Defaults
                                       F7   : Load Setup Defaults
```

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.
RTC Alarm Power On / Date / Hour / Minute / Second	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.

LAN/Ring Power On	Your system can enter a software power down. If you enable this item, the system can automatically resume if there is traffic on the network adapter.
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.

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 95/98/ME.
Primary Graphics Adapter	This item indicates if the primary graphics adapter uses the PCI or the 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.
Note: It is highly recommended that users enter this option to load optimal values for accessing the best performance.

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 best-performance default values. These default values are quite demanding and your system might not function properly if you are using slower memory chips or other low-performance components.

Features Setup Page

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

AMIBIOS SETUP – FEATURES SETUP	
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OnBoard FDC	Enabled	
OnBoard Serial PortA	3F8h/COM1	
OnBoard Ir Port	Disabled	
OnBoard Parallel Port	378h	
Parallel Port Mode	ECP	
Parallel Port IRQ	7	ESC : Quit ↑↓←→ : Select Item
Parallel Port DMA	3	F1 : Help PU/PD/+/- : Modify
OnBoard Game Port	201h	F5 : Old Values (Shift)F2 : Color
OnBoard MIDI Port	300	F6 : Load BIOS Defaults
MIDI Port IRQ	10	
OnBoard PCI IDE	Both	F7 : Load Setup Defaults
Audio Device	Enabled	
Modem Device	Enabled	
Ethernet Device	Enabled	
USB Function Support	Enabled	
USB Function for DOS	Disabled	
ThumbDrive for DOS	Disabled	

OnBoard FDC	Use this item to enable or disable the onboard floppy disk drive interface.
OnBoard Serial PortA	Use these items to enable or disable the onboard COM1/2 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 options 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 Game Port	Use this item to enable or disable the onboard Game port.
OnBoard MIDI Port	Use this item to enable or disable the onboard MIDI port, and to assign a port address.
MIDI Port IRQ	Use this item to assign an IRQ to the MIDI port.
Onboard PCI IDE	Use this item to enable or disable either or both of the onboard Primary and Secondary IDE channels.
Audio Device	This item enables or disables the onboard AC'97 audio chip.
Modem Device	This item enables or disables the onboard AC'97 modem chip.
Ethernet Device	This item enables or disables the LAN chip.
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.
ThumbDrive for DOS	Enable this item to make a small portion of memory storage device for the USB ports.

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
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CPU BRAND          AMD K7
CPU Type           Athlon
CPU Speed          133/133  MHz
CPU Core Voltage   1.704 V
CPU Ratio          9x
CPU Frequency      133 MHz
DRAM Frequency     133 MHz

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

CPU Brand/Type/ Core Voltage/Ratio /Frequency	These items show the kind, core voltage, ratio and frequency of CPU that has installed in your system.
CPU Speed	Use this item to set the CPU speed that has installed in your system.
DRAM Frequency	Use this item to set the frequency of DRAM that has installed in your system.

Note: If you manually set the wrong speed and the system won't run properly, press the **Page Up** key while the system is booting and a default setting will replace the incorrect CPU setting.

Hardware Monitor Page

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

```
┌──────────────────────────────────────────────────────────────────┐
│              AMIBIOS SETUP – HARDWARE MONITOR                      │
│        (C) 2000 American Megatrends, Inc. All Rights Reserved      │
├────────────────────────────────────┬─────────────────────────────┤
│ *** System  Hardware  ***          │                             │
│ Vcore                    1.720V     │                             │
│ Vcc 2.5V                 2.496V     │                             │
│ Vcc 3V                   3.392V     │                             │
│ Vcc                      4.972V     │                             │
│ +12V                     12.056V    │                             │
│ SB3V                     3.488V     │ ESC : Quit     ↑↓←→ : Select Item │
│ -12V                    -11.721V    │ F1  : Help      PU/PD/+/- : Modify │
│ SB5V                     4.999V     │                             │
│ VBAT                     3.488V     │ F5  : Old Values (Shift)F2 : Color │
│ SYSTEM Fan Speed         0 RPM      │ F6  : Load BIOS Defaults     │
│ CPU Fan Speed            4821 RPM   │                             │
│ SYSTEM Temperature       38°C/100°F │ F7  : Load Setup Defaults    │
│                                     │                             │
│ CPU Temperature          45°C/113°F │                             │
└────────────────────────────────────┴─────────────────────────────┘
```

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

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.
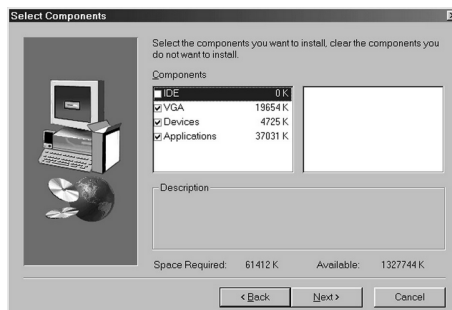
3. The support software will automatically install.

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.

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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 **Browse CD** button to bring up a file browser window. You can find out the **PATH.HTML**; or click the **ReadMe** to bring up a screen, and then click the Install Path at the bottom of the screen to find out the **PATH.HTML**, too.
2. Find out your mainboard model name from the **PATH.HTML**. Click the model name and obtain its correct driver directory.
3. Install each software in accordance with the corresponding driver path.

Notice: It is extremely significant for you to identify the type of built-in AC'97 Codec on the mainborad first. Please identify your AC'97 Codec as follows—
*1.Click the **Browse CD** button to bring up a file browser window while the Auto Setup screen pops out after inserting the support CD-ROM.*
2.Execute the Identification of the AC'97 Codec:
* D:\Utility\Tools\Codec_Check*

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.