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# **Chapter 1 Introduction**

This mainboard is a **100MHz** high-performance mainboard based on the advanced Pentium<sup>®</sup> II microprocessor and featuring Accelerated Graphics Port (AGP) and the **high-end AGPset** chipset. The mainboard offers a high degree of flexibility in configuration and is fully IBM PC/AT compatible.

#### **Key Features**

The advanced features of the mainboard include:

- Supports Pentium<sup>®</sup> II 233 ~ **500**MHz and Celeron 266~333 MHz CPUs at Slot1 for AT Form Factor
- Provides 3 DIMMs for SDRAM/EDO/FPM memory modules and is expandable up to 768MB, however, it is not recommended to use EDO/FPM DRAM when 100MHz CPU frequency is being used and SDRAM has to meet the requirement of PC-100 if using 100MHz
- Supports Accelerated Graphics Port (AGP) v1.0, 3
   PCI. and 2 ISA slots
- Supports Advanced Configuration Power Interface (ACPI) and Legacy PMU and the Ultra DMA/33, fully compliant to PC97 and PC98
- Provides both AT/ATX power connectors, and supports various functions of ATX power, such as Suspend/Shutdown, Modem Ring On, and Alarm Wake Up
- Onboard PCI Bus Master IDE interface supports 4 IDE devices with 2 channels
- Onboard super Multi-I/O chip supports 2 serial ports with 16550 compatible fast UART, 1 parallel port with EPP and ECP capabilities, and one floppy disk drive interface with 1Mb/s transfer rate
- Provides ATX Form Card which containing PS/2 Mouse, 2 USB interface, and Infrared connectors
- System BIOS supports Trend's ChipAway Virus function to ensure the entire boot process is virusfree, no installation and configuration worries
- Bundled PC-cillin98 (OEM) provides automatic Virus Protection for Windows 95/98 and the Internet

*Introduction* 3

• Onboard 3D Sound Pro meets PC98' spec. and support HRTF Positional Audio, Direct Sound 3D, provide drivers for 3D games that use Aureal software interface, Software Wave-table Synthesizer, and Digital Audio Interface (SPDIF) IN/OUT

- Built-in Hardware Monitor circuit supports thermal, power and fan speed monitor, optional Intel LANDesk Client Manager (LDCM) support
- Bundled AMI Desktop Client Manager for abnormal condition detect and thermal management through the network link or self take care

## **Unpacking the Mainboard & Static Electricity Precautions**

This Mainboard package contains the following items:

- 1. This Mainboard and the Device Driver
- 2. The Slot1 holder and AT cable set
- 3. This User's Guide
- 4. Sound & Game ribbon cables/bracket and SPDIF/IN cable
- 5. ATX Form Card

The mainboard is easily damaged by static electricity. Follow the precautions below while unpacking or installing the mainboard.

- 1. Do not remove the mainboard from its original package until you are ready to install it.
- 2. Frequently ground yourself to discharge any static electric charge that may build up in your body while working on installation and/or configuration. For example, you may ground yourself by grasping an unpainted portion of the system's metal chassis.
- 3. Remove the mainboard from its anti-static packaging and place it on a grounded surface, component side up.
- 4. Handle the mainboard by its edges or by the mounting bracket to avoid touching its components.
- 5. Check the mainboard for damage. If any integrated circuit appears loose, press carefully to seat it firmly in its socket.
- 6. Do not apply power if the mainboard appears damaged. If there is damage to the board contact your dealer immediately.

# **Chapter 2 Hardware Configuration**

Before you install the mainboard into the system chassis, you may find it convenient to first configure the mainboard's hardware. This chapter describes how to set jumpers and install memory modules, and where to attach components.

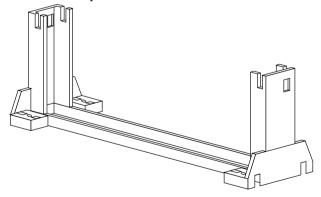
#### **CPU Installation**

This mainboard supports Intel Pentium<sup>®</sup> II CPU using a Single Edge Contact (SEC) slot. Make sure that you have the following items (which should be included in the package) before doing any installation. All parts are labeled here with item numbers which will be refered to in the Installation Procedures section. Item 1 and 2 together are the retention mechanism, please refer to following procedures to complete your CPU installation.

1) 4 screws:



2) 1 retention clip:

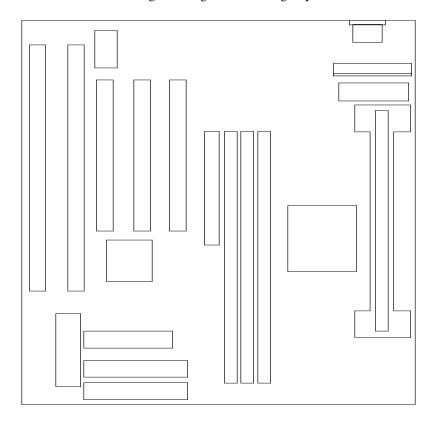


#### **Installation Procedures**

Follow the following steps in order to install your intel Pentium<sup>®</sup> II properly.

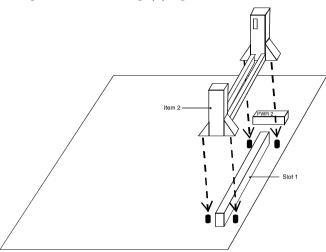
#### Step 1:

Make sure that the mainboard is set the same direction as the following drawing before doing any installation.



#### Step 2:

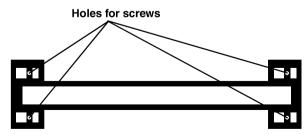
There are 2 sets of small holes along Slot 1 of your motherboard: two on the top and two on the bottom. Snap the retention clip (2) right into those 2 sets of holes



If the retention clip is installed incorrectly, you will not be able to insert the retention clip into the CPU and in this situation you might need to rotate the retention clip by  $180^{\circ}$ .

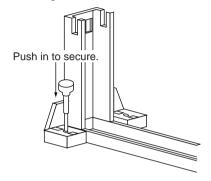
#### Step 3:

Find the hole in each corner of the retention clip then insert the 4 screws from the top of the motherboard.



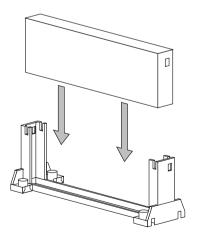
#### Step 4:

And then simply push the screws downward to secure the the retention clip.



#### Step 5:

Flatten the two latches on the side of CPU. Insert the CPU into the retention clip. Lock the two latches to secure the CPU.



#### **Mainboard Component Locations**

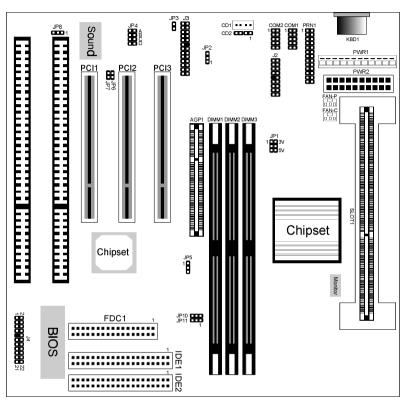


Figure 2-1. Mainboard Component Locations

#### Connectors

Attach system components and case devices to the mainboard via the mainboard connectors. A description of each connector pins follows. See Figure 2–1 for the location of the connectors on the mainboard.

Note: Make sure that the power is turned off before making any connection to the board.

**PWR1 – AT Power Connector** 

**COM1/2 – Serial Port #1/#2** 

PRN1 - Parallel Printer Connector

**FDC1 – Floppy Disk Drive Connector** 

IDE1/IDE2 – Primary/Secondary IDE Connectors

**KBD1 – Keyboard Connector** 

#### J2 - ATX Form Card Connector

This connector contains 2 sets of USB interface, PS/2 Mouse, and Infrared connectors. Connect the ATX Form Card cable to this connector.

## J4 (2, 4, 6, 8, 10) (KEYLOCK) – Keylock & Power LED Connector

Keylock connector enables and disables the keyboard key-in function on the case.

Pin	Description
2	LED Output
4	N.C.
6	Ground
8	Keylock
10	Ground

#### J4 (1, 3, 5, 7) (SPK) – Speaker Connector

Pin	Description
1	Data Out
3	N.C.
5	Ground
7	+5V

#### J4 (13, 14) (TB-LED) – Turbo LED Connector

Pin	Description
13 (+)	+5V
14 (-)	Active Low

## J4 (15, 16) (HDD-LED) – HDD LED Connector

P	in	Description
15	(+)	+5V
16	(-)	Active Low

#### J4 (17, 18) (RST) - Reset Switch Connector

Setting	Description
Open	Normal Mode
Close	Reset System

## J4 (19, 20) (SPDLED) – Suspend LED Connector

Pin	Description
19 (+)	+5V
20 (-)	Active Low

#### FAN-P/FAN-C - Processor/Case Fan Connector

#### **Sound Pro Connectors:**

## CD1/CD2 – Analog Audio for Panasonic/Sony

Connect to "AUDIO" on the CD-ROM drive, and the signal for Panasonic jack is G-S-G-S and S-G-G-S for Sony.

#### J3 - Sound and Game

Sound contains Line-in/MIC (Microphone), and Line-out (Speaker). Game connector is also the Joystic connector. Connect this connector to the Sound & Game ribbon cable/bracket as the following drawing:



#### JP6 - Digital Audio IN

Depending on the type of your CD-ROM drive to connect this connector to "DIGITAL AUDIO" on the CD-ROM drive by using the SPDIF/IN cable.

#### JP7 - Digital Audio OUT

By using the optional SPDIF/OUT cable/barcket, you can connect the digital audio devices such as external audio amplifier or minidisk.

#### **Jumper Settings**

JP1 – DIMM Voltage Selectors

Voltage	Setting
	АВ
3.3V	3V 🔲 🗎
	5V 🔲 🖂
	АВ
5V	3∨ □ □
	5V 🔲 🔲

JP3 – Microphone Type Selector

Description	Setting
Standard (default)	
Special	

JP8 - Onboard Sound Pro Selector

Description	Setting
Enabled (default)	1 🗆
Disabled	1 🔲

#### JP2 - CMOS RAM Clear Selector

Description	Setting
Normal Mode	3 🔲
Clear CMOS	3 🔲

Note: 1. Make sure the jumper is set to Normal Mode before use.
2. If using the ATX power and you need to cleare the CMOS, make sure your system is runed off and the power core is unplugged.

**JP4 - CPU Multiplier Selectors** 

	0. 7	UI U	Maitipii	Ci Ci		'	
Mul.	Setting	Mul.	Setting	Mul.	Setting	Mul.	Setting
2.0X	A B C C D D	4.0X	A B C D D	6.0X	A B C C D	8.0X	A B C D C
2.5X	A D D	4.5X	A D D	6.5X	A D C D D		
3.0X	A B C C C C	5.0X	A B C C C C C C C C C C C C C C C C C C	7.0X	A B C C C		
3.5X	A D D D	5.5X	A D D D D D D D D D D D D D D D D D D D	7.5X	A OO		

#### JP5,JP10,JP11 - Frequency Selectors

		-	•
Fre.	Setting	Fre.	Setting
66MHz	JP5 1 JP10 1 JP11 1	112MHz	JP5
100MHz	JP5	133MHz	JP5

Note: The mainboard chipset supports maximum 100MHz frequency, the over 100MHz settings are for internal test only, which may cause serious system damage.

#### **Memory Installation**

The mainboard lets you add up to 768MB of system memory. Three 168-pin DIMM sockets are divided into three banks: Bank 0, Bank 1, and Bank 2. The mainboard supports the following memory configurations.

Bank	Memory Module	
Bank 0		
DIMM1	4MB, 8MB, 16MB, 32MB, 64MB, 128MB, 256MB	
Bank 1		
DIMM2	4MB, 8MB, 16MB, 32MB, 64MB, 128MB, 256MB	
Bank 2		
DIMM3	4MB, 8MB, 16MB, 32MB, 64MB, 128MB, 256MB	
Total System Memory = Bank $0 + Bank 1 + Bank 2$		

- Notes: 1. The speed of SDRAM DIMM modules have to be faster than 12ns ("-12" parts), while 100MHz clock speed used, the speed of SDRAM DIMM should meet the PC100 SDRAM specification (8ns or "-8" SDRAM at least).
  - 2. The EDO/FPM DRAM are not recommended for the performance purpose of the system.

# Chapter 3 ACPI Functions & Connectors with ATX Power

#### PWR2 – ATX Style Power Connector

The ATX power supply provides a single 20-pin connector.

Pin	Description	Pin	Description
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS-ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	Power OK	18	-5V
9	5VSB	19	+5V
10	+12V	20	+5V

The functions and connectors described below work with the ATX power supply.

#### **Software Power-Off**

Follow the steps below to use the "Software Power-Off Control" function in Windows 95/NT with ATX power supply.

- 1. Click the **START** button on the Windows 95 task bar.
- 2. Select **Shut Down The Computer** to turn off the computer. The message "**It is now safe to turn off your computer.**" will not be shown when using this function.

#### **Modem Ring Power-On**

While in Soft-off/Suspend state, if an external modem ring-up signal occurs, the system wakes up and can be remotely accessed. Make sure that the Ring Resume From Soft Off option is set to Enabled in the BIOS setup section (Refer to the Power Management section in Chapter 4.)

#### **Alarm Wake Up**

If you want to autoboot the system at a certain time, set the function of RTC Alarm time properly and the function of RTC Alarm Resume From Soft Off option in the BIOS Setup section will be set to Enabled.

## J4 (21, 22) (SUS-SW) – ATX Power Button and Suspend Switch Connector

Attach the ATX Power Button or Suspend Switch cable to this connector.

In the AT power system, this connector will act as a suspend switch; and in the ATX power system, this connector will be not only an ATX power button but a Suspend switch as well. Details are described below:

When the system is off, push the power button to turn the system on. When the system is on, push the power button rapidly to switch the system to the Suspend mode, and, by pushing and holding the button for more than 4 seconds, it will turn the system completely off. When the system is in the Suspend mode, push the power button rapidly to turn the system on.

# **Chapter 4 BIOS Setup**

This chapter explains how to configure the mainboard's BIOS setup program. The setup program provided with the mainboard is the BIOS from AMI.

After you have configured the mainboard and have assembled the components, turn on the computer and run the software setup to ensure that the system information is correct.

The software setup of the system board is achieved through Basic Input-Output System (BIOS) programming. You use the BIOS setup program to tell the operating system what type of devices are connected to your system board.

The system setup is also called CMOS setup. Normally, you need to run system setup if either the hardware is not identical with information contained in the CMOS RAM, or if the CMOS RAM has lost power.

Note: Hold down the <End> key then power on to reboot the system when installing newer BIOS into this mainboard.

#### **Entering BIOS Setup**

To enter the BIOS Setup program:

- 1. Turn on or reboot the system. A screen appears with a series of diagnostic checks.
- 2. When "Hit <DEL> if you want to run SETUP" appears, press the <DEL> key to enter the BIOS setup program. The following screen appears:

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.1X (C)1998 American megatrends, Inc. All Rights Reserved

Standard CMOS Setup	Peripheral Setup	
Advanced CMOS Setup	Change Supervisor Password	
Advanced Chipset Setup	Auto-Detect Hard Disks	
Power Management Setup	Save Settings and Exit	
PCI/Plug and Play Setup	Exit Without Saving	
Load Optimal Settings		
Load Best Performance Settings		
Esc: Quit $\uparrow \downarrow \rightarrow \leftarrow$ : Select Item (Shift) F2: Change Color F5: Old Values F6: Optimal values F7: Best performance values F10 : Save&Exit		
Standard CMOS setup for changing time, date, hard disk type, etc.		

3. Use your keyboard to choose options. Modify system parameters to reflect system options. Press Alt-H for Help.

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#### **Default**

Every option in the BIOS Setup contains two default values: Best default and the Optimal default value.

#### **Load Optimal Settings**

The Optimal default values provide optimum system settings for all devices and system features.

#### **Load Best Performance Settings**

The Best default values provide best performance settings for all devices and system features, but it depends on the devices used and we aren't guarantee the length time used of system on these settings.

#### **Setup Items**

#### **Standard CMOS Setup**

Choosing the item from the BIOS Setup main menu. All Standard Setup options are described in this section.

#### Date/Time

Select the Date/Time option to change the date or time. The current date and time are displayed. Enter new values through the displayed.

#### Pri Master; Pri Slave; Sec Master; Sec Slave

Choose these icons to configure the hard disk drive named in the option. When you click on an icon, the following parameters are listed: Type, LBA/Large Mode, Block Mode, 32Bit Mode, and PIO Mode. All parameters relate to IDE drives except **Type**. Choose the **Type** parameter and select Auto, BIOS automatically detects the IDE drive parameters and displays them. Choose on **LBA Mode** and select *On* to enable support for IDE drives with capacities greater than 528MB. Click on **Blk Mode** and select On to support IDE drives that use Blk Mode. Click on **32Bit Mode** and select *On* to support IDE drives that permit 32-bit accesses.

### Floppy Drive A; B

Choose the Floppy Drive A or B icon to specify the floppy drive type. The settings are 360KB  $5^{1}/_{4}$ ", 1.2MB  $5^{1}/_{4}$ ", 720KB  $3^{1}/_{2}$ ", 1.44MB  $3^{1}/_{2}$ ", or 2.88MB  $3^{1}/_{2}$ ".

BIOS Setup 25

#### **Advanced CMOS Setup**

Choose the item from the BIOS Setup main menu. All Advanced Setup options are described in this section.

Quick Boot Set this option to *Enabled* BIOS to boot within 5

seconds.

1st Boot Device; Set these options to select the boot sequence

2nd Boot Device; from different booting devices.

3rd Boot Device

Try Other Boot Devices Choose Yes to search other boot devices to boot

s up the system when all the options in the

previous function failed.

**SMART** for Hard

Disks

Choose *Enabled* or *Disabled*. This option allows

you to utilize the SMART function of HDDs.

**Bootup Num-Lock** Set this option to turn on *Num Lock* key when the

system is powered on so that arrow keys on both

numeric keypad can be used.

Floppy Drive Swap This option allows you to swap floppy drives

between A: and B:.

Floppy Drive Seek Set Disabled to provide a faster boot and reduces

the possibility of damaging the floppy heads.

PS/2 Mouse Support Set this option to Enable BIOS to support a PS/2

type mouse.

Primary Display This option specifies the primary display in the

computer.

**Password Check** 

This option specifies the type of BIOS password protection that is implemented.

The settings are:

Setup: The password prompt appears

only when an end user attempts

to run WinBIOS Setup.

Always: A password prompt appears

every time the computer is

powered on or rebooted.

The BIOS password does not have to be enabled. The end user sets the password by choosing the Password icon on the

WinBIOS Setup screen.

Boot to OS/2 Over 64MB

You need to set this option to Enabled when using the OS/2 operating system with installed DRAM which is greater than

64MB.

**Internal Cache** This option selects to enable the internal

cache or not. Choices are Disabled and

Enabled.

**Cache Bus ECC** This option allows you to enable ECC

checking in internal cache bus.

System BIOS Cacheable

BIOS always copies the system BIOS from ROM to RAM for faster execution. Set this option to *Enabled* to permit the contents of the F0000h RAM memory segment to be written to and read from cache memory.

BIOS Setup 27

C000, 32K Shadow; Disabled: The specified ROM is not copied to

C800, 16K Shadow; RAM.

CC00, 16K Shadow; Enabled: The contents of the ROM area are D000, 16K Shadow; not only copied from ROM to RAM D400, 16K Shadow; for faster execution, the contents of D800, 16K Shadow; the RAM area can be written to or

DC00, 16K Shadow read from cache memory.

The contents of the ROM area are Cached:

copied from ROM to RAM for

faster execution.

#### **Advanced Chipset Setup**

Choose the item from the BIOS Setup main menu. All Chipset Setup options are described in this section.

Set this option to *Enabled* the Trend ChipAway Trend ChipAway

Virus function. Virus

Bank1, 2, 3 Set these options to select the speed of used

SDRAM/EDO/FPM memory bank.

SDRAM CAS# Set this option to select the proper SDRAM

CAS# Latency. Latency

Set this option to select the proper delay for RAS# to CAS#

delay SDRAM RAS# to CAS#.

**DRAM Integrity** Choose Non-ECC, EC-Only, or ECC. Mode

Non-ECC: Has byte-wise write capability but

no provision for protecting data integrity in the DRAM array.

Data errors are detected but not EC-Only:

corrected.

ECC: Allows a detecton between single-

> bit and multiple-bit errors and recovery of single-bit errors.

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A.G.P. Aperture Size	Set this option to select the memory-mapped, graphics data structures can reside in the Graphics Aperture. Use the default setting.
USWC Memory Gap Size	Choose Auto, 1MB, 2MB, 4MB, 8MB, or 16MB for USWC memory gap size. Use the default setting.
AT Bus Clock	Set this option to select the clock of AT Bus.
ISA Line Buffer	Set this option to <i>Enable</i> the ISA line buffer.
Delay Transaction	Set this option to <i>Enable</i> the Delay Transaction.
OnBoard USB Function	Set this option to <i>Enable</i> the system BIOS USB (Universal Serial Bus) functions.
USB Function for DOS	Set this option to <i>Enable</i> the USB keyboard to support DOS mode.

#### \*\*\* System Hardware Monitor \*\*\*

CPU/System TEMP; These options are displayed only show the status System/CPU Fan; of system hardware.

Vcc; Vcc3; Vcore; +12V

29 BIOS Setup

#### **Power Management Setup**

Choosing the item from BIOS Setup main menu.

Power Management/ APM

Set this option to enable power management features and APM (Advanced Power

Management).

**Green Monitor Power State** 

This option specifies the power state that the green PC-compliant video monitor enters when AMIBIOS places it in a power savings state after the specified period of display inactivity has expired.

Video Power Down Mode

This option specifies the power conserving state that the VESA VGA video subsystem enters after the specified period of display

inactivity has expired.

**Hard Disk Power** Down Mode

This option specifies the power conserving state that the hard disk drive enters after the specified period of hard drive inactivity has

expired.

(Minute)

**Standby Time out** This option specified the length of system inactivity while in Full power on state. When this length of time expires, the computer

enters Standby power state.

(Minute)

**Suspend Time out** This option specified the length of a period of system inactivity while in Standby state. When this length of time expires, the computer enters Suspend power state.

Modem Use IRQ This option is to specify IRQ for modem

device.

#### \* System Event Monitor By \*

**Monitor Parallel** 

Port;

**Monitor Serial** 

Port;

Monitor Floppy; Monitor VGA;

**Monitor Audio**;

**Monitor Pri-HDD**; **Monitor Sec-HDD** 

monitoring on the specified hardware interrupt request line and the computer is in a power saving state, BIOS watches for activity on the specified IRQ line. The computer enters the full on power state if any activity

When set to *Yes*, these options enable event

occurs.

**Power Button Function** 

Set this option to specify the operation of Soft Off by the power button. Select "Suspend" function to enter On-Suspend-Off or select "Soft Off" function to enter On-Off operation

cycle.

Restore On **AC/Power Loss**  Set this option to specify the operation of

restore power loss.

**Ring Resume** From Soft Off Set this option to enable the modem ring to

resume from Soft Off.

**RTC Alarm** Resume Soft Off

Set this option to enable the RTC Alarm to wake up the system which is Soft Off.

RTC Alarm Minute; **RTC Alarm** Second

RTC Alarm Date; Set these options to specify the RTC Alarm RTC Alarm Hour; time on Date/Hour/Minute/Second.

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#### PCI / Plug and Play Setup

Choose the item from the BIOS Setup main menu.

Plug and Play Aware OS

Set this option to *Yes* if the operation system in this computer is aware of and follows the Plug and Play specification. Currently, Windows 95/98

are PnP-aware.

**Primary Graphics** Adapter

Set this option to select AGP or PCI VGA for primary graphics adapter.

**PCI VGA Palette** Snoop

When this option is set to Enabled, multiple VGA devices operating on different buses can handle data from the CPU on each set of palette registers on every video device. Bit 5 of the command register in the PCI device configuration space is the VGA Palette Snoop bit.

Assign IRQ for **VGA** 

This option is used to assign IRQ for VGA. Recommendation is set to *No*.

Card

OffBoard PCI IDE This option specifies if an offboard PCI IDE controller adapter card is installed in the computer. You must specify the PCI expansion slot on the motherboard where the offboard PCI IDE controller is installed. If an offboard PCI IDE controller is used, the onboard IDE controller is automatically disabled. If an offboard PCI IDE controller adapter card is installed in the computer, you must also set the Pri. OffBoard PCI IDE IRQ and Sec. OffBoard PCI IDE IRQ options.

PCI IDE IRQ

Pri., Sec. OffBoard These two options specify the PCI interrupt used by the primary (or secondary) IDE channel on the offboard PCI IDE controller.

**PCI Slot1, 2, 3 IRQ** Set these options to specify IRQ Priority to **Priority** PCI slots.

**DMA Channel 0,** These options specify the bus that the 1, 3, 5, 6, 7 specified DMA channel is used on.

IRQ3, 4, 5, 7, 9, 10, These options specify the bus that the specified IRQ line is used on. These options allow you to reserve IRQs for legacy ISA adapter cards.

#### **Peripheral Setup**

Choose the item from the BIOS Setup main menu.

OnBoard FDC This option enables the FDC (Floppy Drive Controller) on the motherboard or auto

detects the FDC.

OnBoard Serial This option specifies the base I/O port address of serial port 1.

**Serial Port1 Mode** This option specifies the serial port1 mode.

Normal: The normal serial port mode is

being used.

IrDA/ASKIR: The serial port1 will be

redirected to support IR function when this option is set to IrDA or

ASKIR.

IR Duplex Mode; Set these options to configure the IR
IR Trans. Polarity; particularity when either IrDA or ASKIR is
IR Receiver chosen in the previous option.

IR Receiver Polarity

BIOS Setup	33
OnBoard Serial Port2	Set this option to specify the base I/O port address of serial port 2.
Serial Port2 Mode	Set this option to specify the serial port 2 mode.  Normal: The normal serial port mode is being used.  IrDA/ASKIR: The serial port 2 will be redirected to support IR function when this option is set to IrDA or ASKIR.
IR Duplex Mode; IR Trans. Polarity; IR Receiver Polarit	Set these options to configure the IR particularity when either IrDA or ASKIR is chosen in the y previous option.
OnBoard Parallel Port	Set this option to specify the base I/O port address of the parallel port on the motherboard.
Parallel Port Mode	Choose Normal, Bi-Dir, EPP, or ECP mode. Depends on the type of your external device which connects to this port.
EPP Version	Set this option to select version of EPP.
Parallel Port IRQ	Set this option to specify IRQ for parallel port.
Parallel Port DMA Channel	This option is only available if the setting of the Parallel Port Mode option is ECP.
OnBoard IDE	Set this option to specify the channel used by the IDE controller on the motherboard.
OnBoard Sound PRO	Set this option to <i>Enabled</i> the onboard Sound Profunction.

#### **Change Supervisor Password**

This item lets you configure the system password which is required every time when the system boots up or an attempt is made to enter the Setup program. The password cannot be longer than six characters.

Note: Keep a safe record of the new password. If you forget or lose the password, the only way to access the system is to clear CMOS memory by holding down the <End> key then powering on to reboot the system.

#### **Auto-Detect Hard Disks**

If your system has an IDE hard drive, you can use this utility to detect its parameters and automatically enter them into the Standard CMOS Setup. This utility will autodetect up to four IDE devices.

#### **Save Settings and Exit**

Select this item to save the values entered during the current session and then exit the BIOS setup program.

#### **Exit Without Saving**

Select this item to exit the BIOS setup program without saving the values which has been entered during the current session.