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1 Quick Installation

1.1 Layout
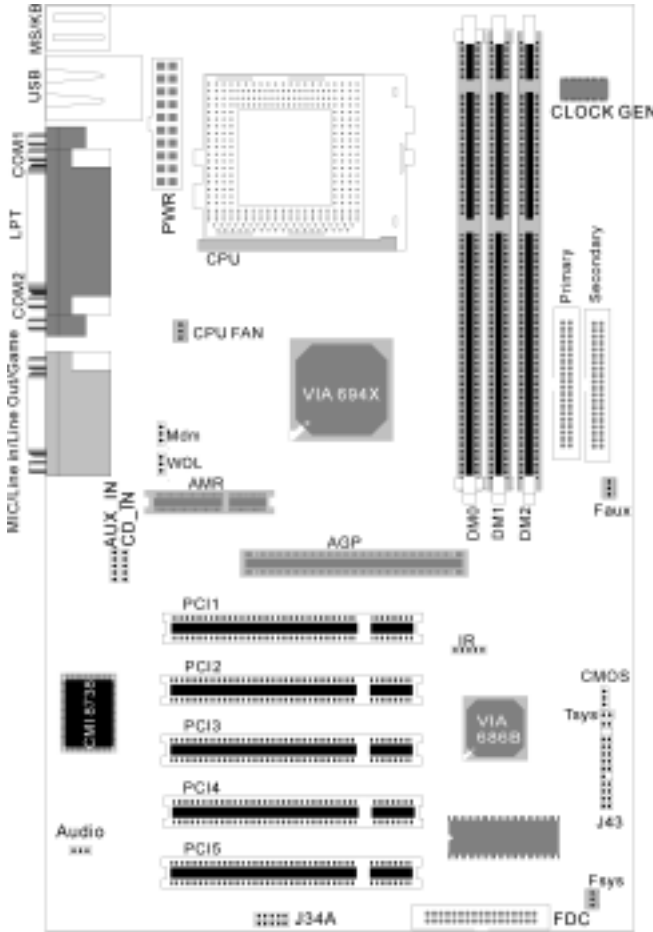
1.2 Item Checklist

[ ] The motherboard
[ ] Operation manual
[ ] ATA 66/100 cable
[ ] Floppy cable
[ ] Power Installer CD

Optional
[ ] USB riser kit
[ ] Thermal Sensor for System
[ ] Display Cache Riser Card

1.3 Jumpers

1.3.1 Clear CMOS jumper(CMOS)

Normal(Default) Clear CMOS

1.3.2 Audio jumper

Enabled
(Normal)

Disabled
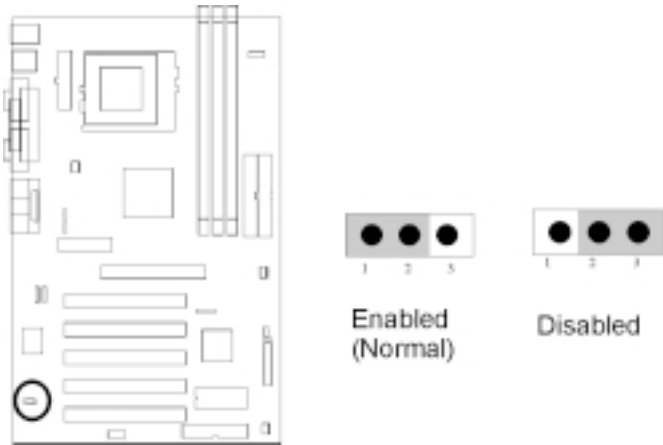
1.4   Connectors

1.4.1 CPU fan header (J39)

1.4.2 Auxiliary fan header(J40)

1.4.3 System fan header (J41)
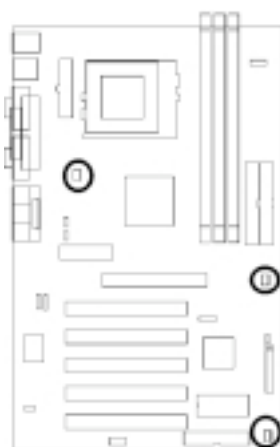
CPU Fan Pin Assignment
1: SENSE
2: 12V
3: GND

Faux Pin Assignment
1: SENSE
2: 12V
3: GND

Fsys Pin Assignment
1: SENSE
2: 12V
3: GND

1.4.4 Infrared connector (IR)

1 2 3 4 5
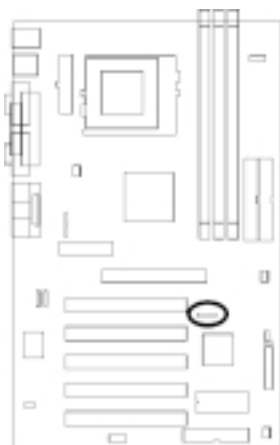
Pin Assignment

1:5V
2:NC
3:IRRX
4:GND
5:IRTX

1.4.5 Wake-ON-LAN header

Pin Assignment

1:5VSB
2:GND
3:LAN_WAKE

1.4.6 Wake On Moden
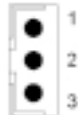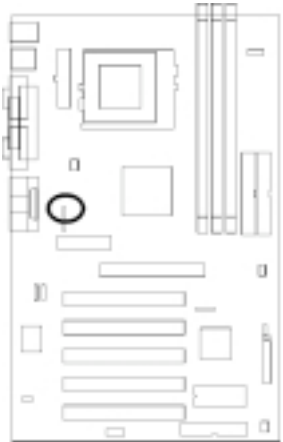
Pin Assignment

1:5VSB
2:GND
3:Control Pin

1.4.7 System temp. sensor header
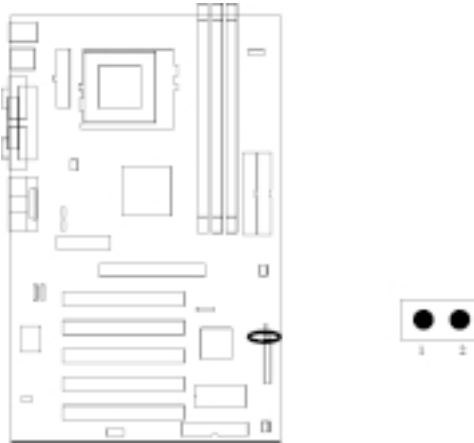
1.4.9 Front panel connector (J43)
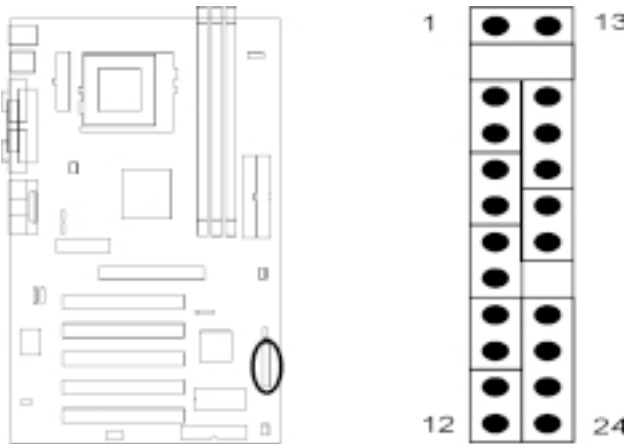
Function	PIN NO.	Definition
PWR_ON (Power/Soft-Off)	1, 13	
ACPI (ACPI LED)	3, 4	PIN 3:Anode PIN 4:Cathode
ALED (IDE LED)	7, 8	PIN 7:Anode PIN 8:Cathode
RST (REST)	11, 12	PIN 11:RST PIN 12:GND
PLED (System Power LED)	15, 16, 17	PIN 15:VCC PIN 16:NC PIN 17:GND
SPKR (Speaker)	21, 22, 23, 24	PIN 21:VCC PIN 22:GND PIN 23:NC PIN 24:SPEAK (BUZZ)

1.4.9 Aux-In connector(Aux_IN)
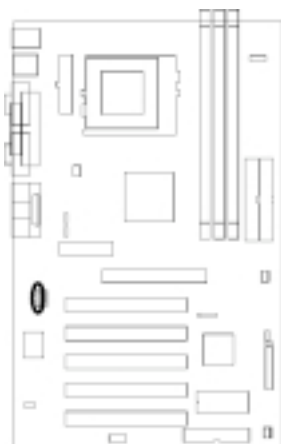
AUX_IN

Pin Assignment

1:Left Channel
2:GND
3:GND
4:Right Channel

1.4.10 CD_In connector(CD_IN)
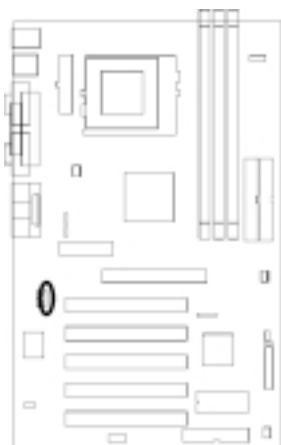
CD_IN

Pin Assignment

1:Left Channel
2:GND
3:GND
4:Right Channel

1.4.11 Internal USB connector

The motherboard has two USB ports onboard. The extra two USB support can only functionable with the additional USB riser kit.
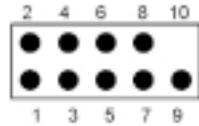
Pin Assignment

1:5V   2:5V
3:USBDT2-   4:USBDT3-
5:USBT2+   6:USBDT3+
7:GND   8:GND
9:GND   10:NC

1.4.12 ATX power connector (J37)
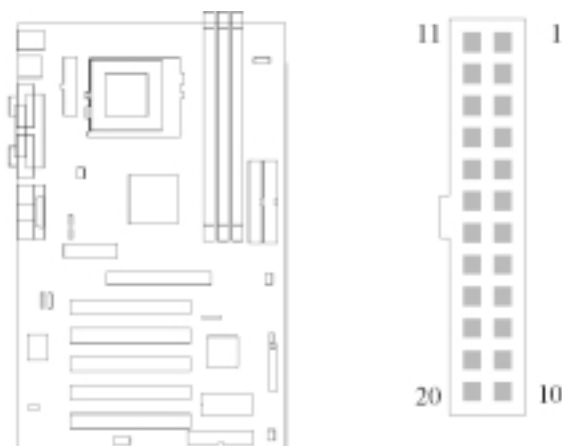
PIN NO	Definition	PIN NO	Definition
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GROUND	13	GROUND
4	+5V	14	Power Supply On
5	GROUND	15	GROUND
6	+5V	16	GROUND
7	GROUND	17	GROUND
8	Power Good	18	-5V
9	+5V Standby	19	+5V
10	+12V	20	+5V

1.5   Form Factor
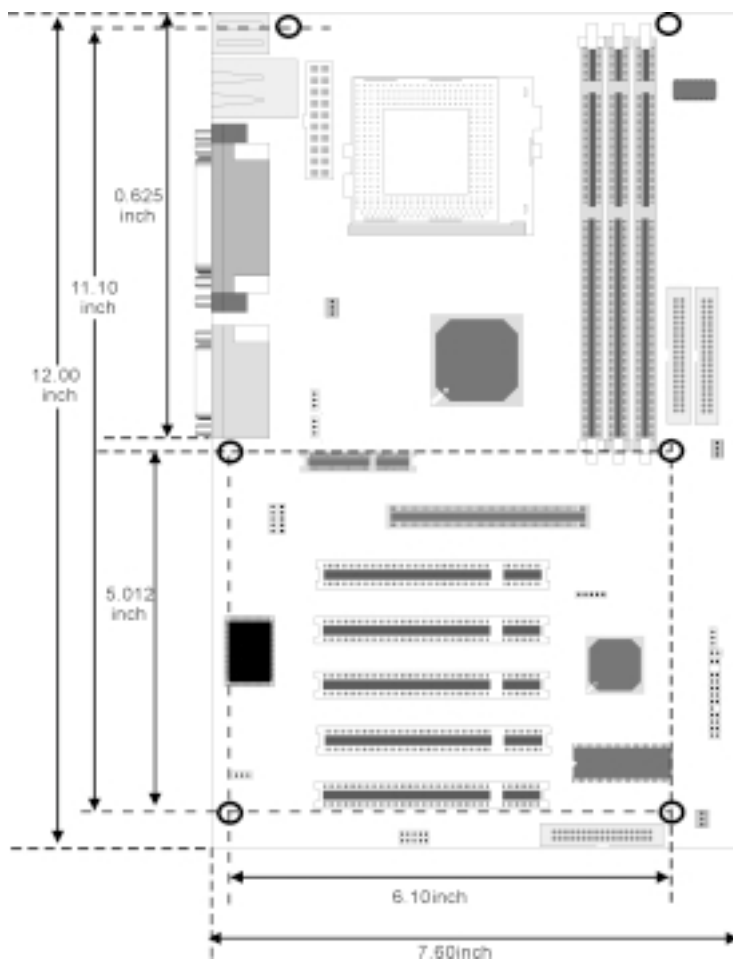
2 Features

2.1   Motherboard Components Placement
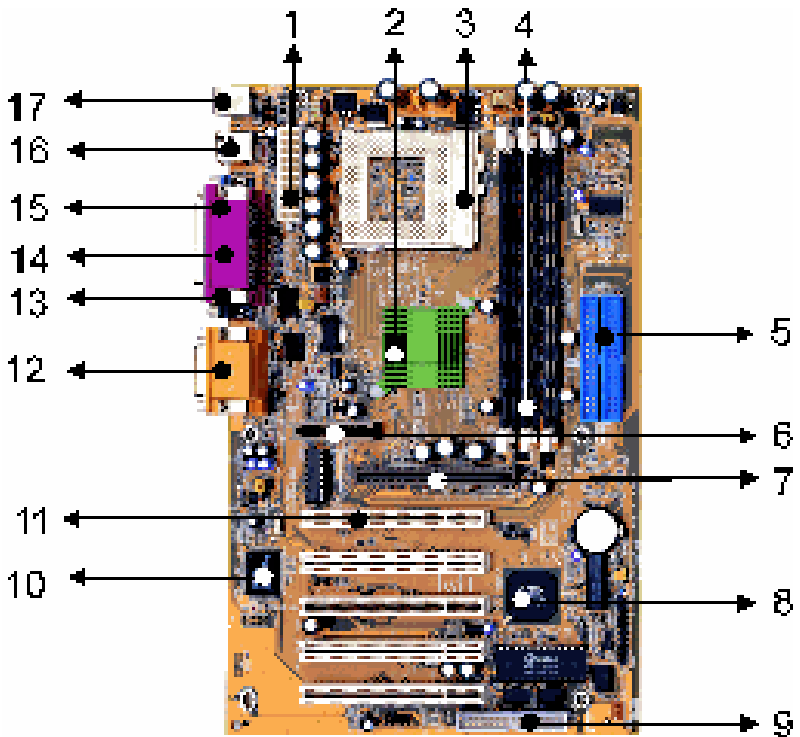
NO.	Description
1	ATX Power connector
2	VIA 694X
3	CPU of Slocket 370
4	DIMM slocktets
5	1th and 2th IDE connectors
6	AMR slot
7	AGP slot
8	VIA VT82C686B
9	FDC connector
10	CMI chipset for suond onboard
11	PCI slots
12	Joystick, Midi Line In / Out, Microphone In
13	COM2
14	Parallel connector
15	COM1
16	USB ports
17	PS2 Mous / Keyboard

2.**2   Block Diagram**
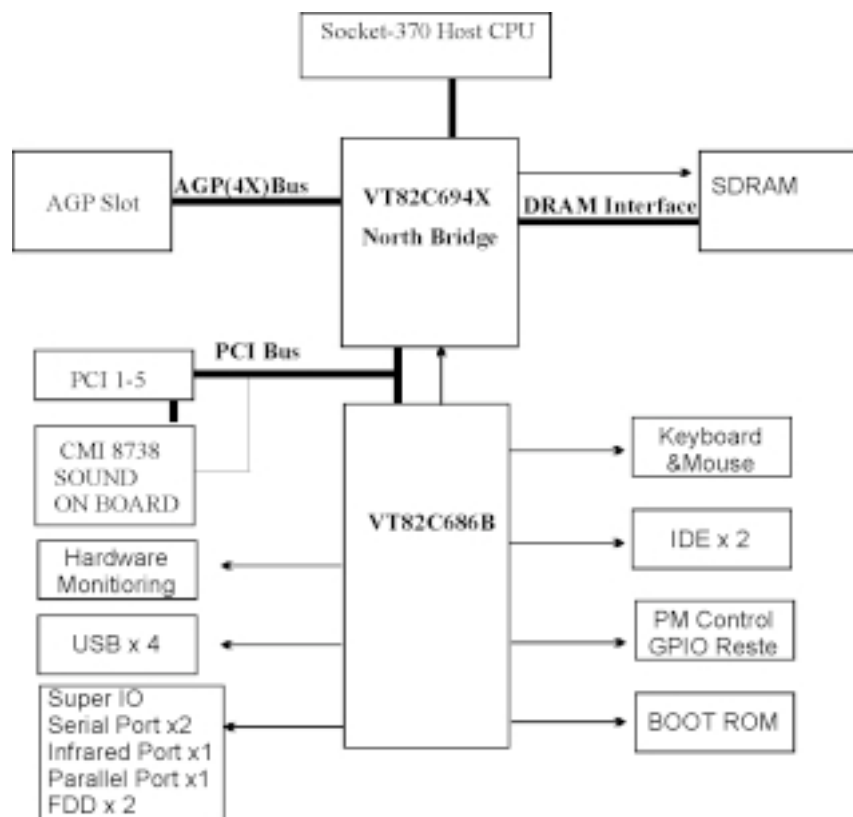
2.3 Specifications

Processor/Socket 370

Supports 1 processor through Socket 370
Supports 66M/100M/133MHz FSB (Front Side Bus)
Supports Intel Celeron (Mendochino,PPGA) CPU from 300A and higher
Supports Intel Celeron (Cu-128 FCPGA) CPU from 533A to 700MHz
and higher
Supports Intel Pentium III (Cu-256, FCPGA) CPU from 500 to 1GHz
and higher
Supports VIA Joshua CPU from 433 to 500MHz and higher

CPU Frequency Select

Supports S/W CPU speed adjustable (Jumper-free) method
Supports "Software assign ext. frequency" up to 166MHz
(by Bye Bye Jumper)
Supports "Software assign CPU Multiplier" from 2.5X to 12X

Memory

Supports PC66/PC100/PC133 SDRAM/VCM
Supports EDO,SDRAM,ESDRAM,VCM SDRAM
Supports Unbuffered/Registered DIMM
Supports 16M/64M/256M SDRAM Module
Maximum memory up to 1.5GB/768MB when using 256M/64M-16M
technology
Supports Suspend to Ram
Supports Singel-Sided/Double-sided DIMMs
Supports ECC memory module

General I/O

    PCI 2.2 compliance
    Supports 32-bit/33MHz PCI interface
    Supports ATA33/66/100 IDE interface
    Supports Floppy interface
    Supports 16550A UART interface
    Supports ECP/EPP interface
    Supports PS2 interface
    Supports SIR interface
    Supports USB interface

Sound support (VX133 only)

    C-Media HW Sound controller on board
    Supports Game/MIDI interface
    Supports Win9X/WinNT/Win2K

Management

    Supports Power on by LAN/Ext. Modem/Int. Modem /Alarm
    Supports Resume by LAN/Ext. Modem/Int. Modem/Keyboard/PS2
    Mouse/Alarm
    Supports ACPI Blinking LED
    Supports BIOS ROM Flash Control S/W protection
    Supports STD,STR

Others

    ATX Form Factor 305mm x 193mm

3   Hardware Setup

3.1   Before Installation

For installation, you may need some or all of the following tools:

Medium size flat blade screwdriver

Medium size Phillips head screwdriver

A 3/16 inch nut driver or wrench

Users must follow these guidelines to ensure the motherboard is protected during installation.

1.Make sure your computer is powered-off wheneven work in with inside components

2.The motherboard, like all other electronic equipment,   is sensitive to static. Please take the proper precautions when handling it. If possible, ground yourself by touching a metal table or desk. keep the board in its conductive wrapping until it is configured and ready to be installed in your system.

3.Keep all magnets away from both your hard and floppy disk drives, especially magnetic screwdrivers. Keep both floppy and hard disks apart if disassembed.

4.Keep water and liquids away from your computer and its components.

3.2   Install the Processor

The CPU should have a fan attached to it to prevent overheating. If this is not the case, then purchase a fan before you turn on your system.

NOTE

Be sure that there is sufficient air circulation across the processors heatsink by regularly checking that your CPU fan is working. Without sufficient circulation, the processor could overheat and damage both the processor and the motherboard. You may install an auxiliary fan, if necessary.

Step1:

Locate the ZIF socket and open it by first pulling   the lever of socket upward.
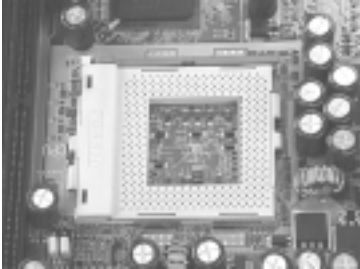
Step2:

Insert the CPU into the socket. Please keep the lever right angle when inserting CPU.
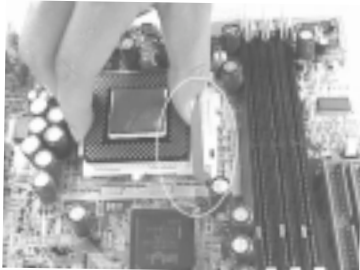
Step3:

When inserting the CPU please note the correct orientation as shown. The notched corner should point toward the end of the lever.
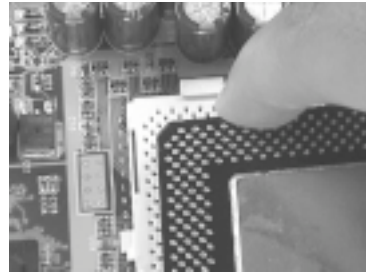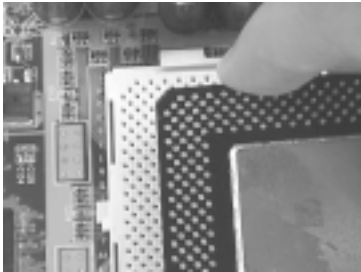
Step4:

Push the lever down to close the socket.
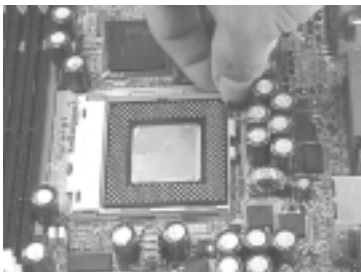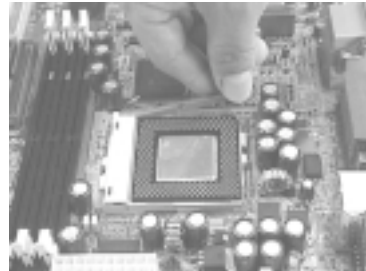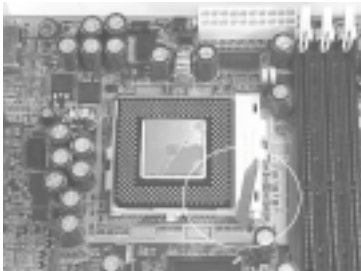
Step 5:

Attach the heatsink onto the CPU.
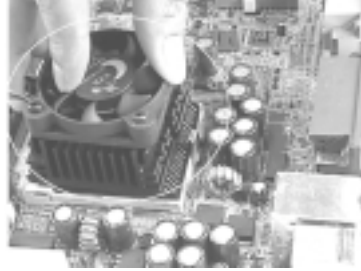
Step6:

Push the clip of heatsink downward to hock the ear of socket firmly.
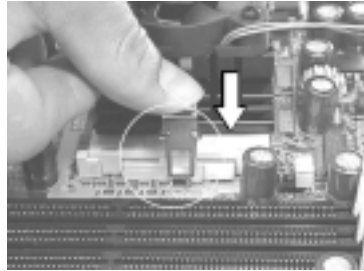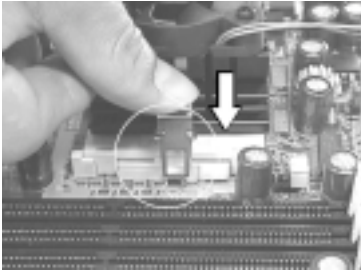
Step7:

Finally, attach the fan cable to the CPU fan header FCPU.
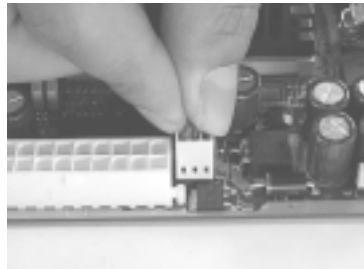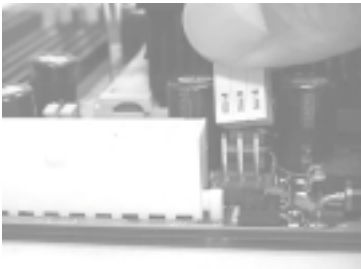
3.3   Install Memory Modules

The motherboard has three Dual Inline Memory Module (DIMM)
sockets and supports the maximum memory size up to 1.5GB.
These DIMM sockets only support 3.3V unbuffered SDRAM
modules. The motherboard also support SPD (Serial Presence
Detect) architecture to provide the best choice for performance vs.
stability.

Step 1:Open latches of DIMM socket
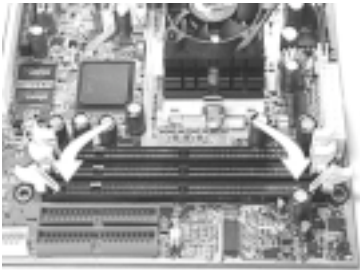
Step 2:Proofread the RAM module to the DIMM Socket.
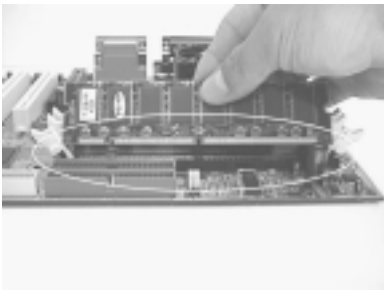
Step 3:Insert the RAM module into the DIMM socket.
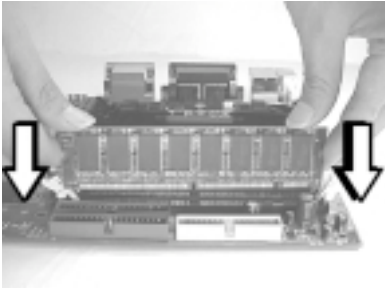
Step 4:Press the latches into the notches of the RAM module.
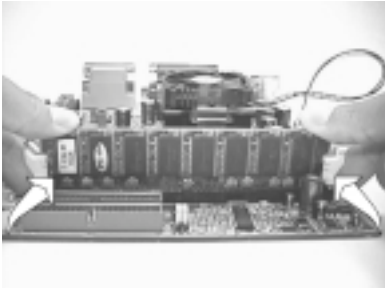
3.5   ATX Power Supply Connector

3.5.1 Power on procedures

STEP	Description
1	After all connections are made, close thesystem case over.
2	Be sure that all switches are off.
3	Connect the power cord into the power suppply located on the back of your system case.
4	Connect the power coard a power outlet that is equipped with a surge protector.
5	Many of the power supply support 110V/220V by a switch setting. Switch your power supply to the correct supply voltage.

6	Turn on your system in the following order
	  a. The monitor
	  b. The external devices.
	  c. The computer system.

**The power LED on the front panel of the chassis will
light. After few seconds, the system will then run power-
on tests. Some additional messages will appear on the
screen during the test. If you do not see anything within
30 seconds from the time you turn on the power, the
system may have failed a power-on test. Recheck the
jumper settings and connections or call your retailer for
assistance.**

3.5.2 Power off procedures

STEP	Description
1	Exit from all the software applications.
2	shut down your operating system.
3	Switch off power button. If you are using Win 95/98,the power supply should turn off automatically after Windows shut down.
4	Turn off all external devices.
5	Turn off your monitor.

3.6   Back Panel

Function	color	Description
PS2/Mouse	Green	This connector can be used to support a PS/2 mouse
PS2/ keyboard	Purple	This connector can be used to support a PS/2 keyboard.
Universal Serial Bus	Black	This motherboard has two USB ports, any USB-compatible peripherals and/or hub can be connected into either USB port.
Serial port COM1& COM2	Teal	Two serial port is ready for a modem or other serial devices.
Parellel port	Burgundy	This connector is used for printers, or other parallel devices.
Joystick, Midi and Audio Port	Gold	You may connect joysticks or game pads to this connector for playing games, or connect MIDI devices for playing / editing professional audio. Line Out (Lime color) can be connected to headphones or powered speakers. Line In (Light Blue color) allows audio sources to be recorded by your computer or played through the Line Out connector. Mic (Pink color) allows microphones to be connected for inputting voice.

> **The PS/2 mouse and PS/2 keyboard can be auto-detected by this motherboard. That means if you plug the PS/2 keyboard into the mouse connector, it still can work without any trouble and vice versa. It is recommended that you turn off the computer before connecting or disconnecting keyboard and/or mouse.**

4   BIOS Setup

4.1   PhoenixNet Introduction

PhoenixNet is a *service* that provides PC users with best-of-breed, free, software services to support their PC hardware and software and to turn their computer into a powerful tool for communication, entertainment, education and business

4.1.1 Internet Launch System

The PhoenixNet Internet Launch System (ILS) is a patent-pending technology built into the firmware to enable online PC users worldwide to communicate with PhoenixNet and to receive the free PhoenixNet services. ILS resides safely within ROM and is activated the first time a user launches a PhoenixNet-enabled PC with a Windows 98 Operating System.

4.1.2 PhoenixNet Online Services

When the PhoenixNet ILS detects an Internet connection, it makes contact with the PhoenixNet server and delivers user-selectable services from PhoenixNet's Internet Partners. These services are delivered to the user as hotlinks on the desktop and in the web browser or, as applications that **PhoenixNet automatically packages, downloads and installs.**

4.1.3 PhoenixNet Online Services

Manage & protect your computer and your files
      Antivirus.com Driveway Help.com

Turn your computer into a communication tool
      RocketTalk FireTalk Adobe ActiveShare

Turn your computer into an entertainment center
      Real JukeBox   NetRadio

Save time and money when shopping online
      MySimon CNET.com

Best of the Web¡K
      Portals: Lycos Snap Excite Yahoo ISPs:AOL
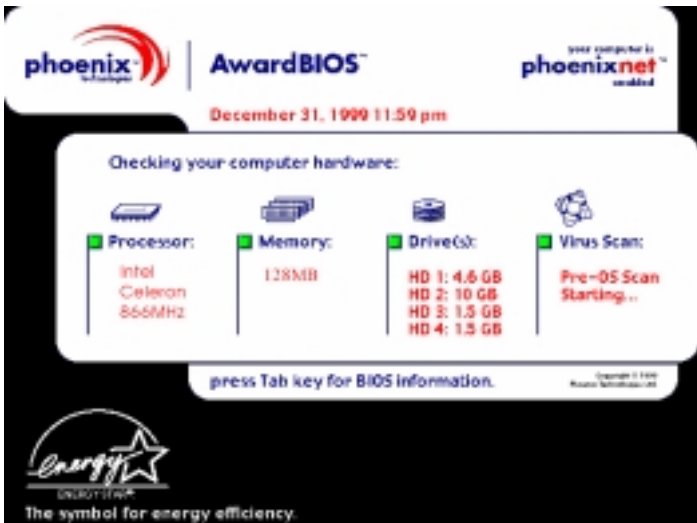
4.1.4 User Boot

1	User reads system information from graphic Launch Screen.
2	User registers MS Windows and completes MS OOBE.
3	User accepts/Rejects PhoenixNet service.
4	User accepts/Rejects PhoenixNet ISP partnery.
5	PhoenixNet and ISP icon appear on desktop.

4.1.5 Internet Access

1	PhoenixNet sets desktop icons & browser defaults.
2	New browser window appears linking to *www.phoenixnet.com*.
3	User selects Phoenixnet partner software & services.
4	User enters name, e-mail and country
5	PhoenixNet downloads and installs selected partner software in the background, with one mouse-click.
6	User receives monetary reward by e-mail.
7	User receives ongoing PhoenixNet services to enhance their PC and Internet experience.

4.2 BIOS Setup

4.2.1 Upgrade BIOS

The BIOS can be upgraded from a diskette with the Award Flash utility — AWDFLASH.EXE. The BIOS image file, and update utility are available from IWILL's WEB site: ***www. iwill.net***

4.2.2 Enter BIOS setup program

Power-on the system by either pressing the Power-On button, or by using any of the power-on features provided by the motherboard. Then, press the <Del> key after the Power-On Self Test (POST), and before the scanning of IDE devices. Simply look for the message "Press DEL to enter SETUP" displayed at the bottom of the screen during the boot up process. If the message disappears before you've had a chance to respond, you can restart the system by

Turning off the system power then turn it on again, or

Pressing the "RESET" button on the system case, or

Pressing <Ctrl>, <Alt> and <Del> keys simultaneously.

Generally, the BIOS default settings have been carefully chosen by the system manufacturer to provide the absolute maximum performance and reliability. It is very dangerous to change any setting without full understanding. We strongly recommend that you. DO NOT update your BIOS if the system works perfectly. DO NOT change any setting unless you fully understand what it means.

4.2.3 Using BIOS setup program

↑Up	Move to the previous field
↓Down	Move to the next field
←Left	Move to the field on the left hand side
→Right	Move to the field on the right hand side
<Esc>	Quit from setup program without saving changes, or Exit from current menu page and return to main menu page
<PgUp> or <+>	Select the previous value for a field
<PgDn> or <->	Select the next value for a field
<F1>	General Help
<F2>	Item Help
<F5>	Previous Values
<F6>	Fail-Safe Defaults
<F7>	Optimized Defaults
<F10>	Save the current value and exit setup program

If the system is no longer able to boot after changing the settings, the only way to recover it is to clear the data stored in RTC CMOS. To reset the RTC CMOS data, take the JP1 jumper cap off pins 1-2, place onto pins 2-3, and then place back onto pins 1-2 again. This will return the RTC to the default setting. Then, get into the BIOS setup program , choose Load Fail-Safe Defaults ; Load Optimized Defaults, and select the original manufacturer default settings in your CMOS.

4.3 Main Menu

The main menu allows you to select from several setup pages. Use the arrow keys to select among these pages and press <Enter> key to enter the sub-menu. A brief description of each highlighted selection appears at the bottom of the screen.

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software

    Standard CMOS Features        Iwill Smart Setting

    Advanced BIOS Features        Load Fail-Safe Defaults

    Advanced Chipset Features     Load Optimized Defaults

    Integrated Peripherals        Set Supervisor Password

    Power Management Setup        Set User Password

    PnP/PCI Configurations        Save & Exit Setup

    PC Health Status              Exit Without Saving



ESC :Quit                    → ↑ ← ↓ :Select Item
F10 :Save & Exit Setup

                Time, Date Hard Disk Type
```

4.4   Standard CMOS Features

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software
                     Standard CMOS Feature

 Data (mm:dd:yy)         Wed, July 19 2000      Item Help
 Time (hh:mm:ss)          16:  53:   24
 IDE Primary Master      Press Enter None     Menu Level▶
 IDE Primary Slave       Press Enter None
 IDE Secondary Master    Press Enter None
 IDE Secondary Slave     Press Enter None

 Drive A                 1.44M, 3.5 in.
 Drive B                  None
 Floppy 3 Mode Support   Disabled

 Video                   EGA/VGA
 Halt On                 All errors

 Base Memory               640K
 Extended Memory         64512K
 Total Memory            65536K


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

4.4.1 Date

This field specifies the current date. The date format is <month>, <day>, and <year>.

4.4.2 Time

This field specifies the current time. The time format is <hour>, <minute>, and <second>.   The time is calculated based on the 24-hour (military-time) clock.

4.4.3 IDE Primary Master / Primary Slave / Secondary Master / Secondary Slave

Press "Enter" to enter next page for detail hard drive setting.

4.4.3.1 IDE HDD Auto-Detection
Auto-Detect the HDDs Capacity, and its parameters, ex: Cylinder, Head and Sector.

4.4.3.2 IDE Primary Master / Primary Slave / Secondary Master / Secondary Slave
This field specifies type of drive that corresponds to the drive installed in your system. If you select User, please specify the correct number of Cylinders, Heads, and Sectors.

Manual	Selecting anual lets you set the remaining fields on this screen. Selects the type of fixed disk.
Auto **(Default Vaule)**	BIOS automatically fills in the values for the cylinders, heads and sectors fields.
None	Any Disk Drives are attached

4.4.3.3 Capacity Auto Display your disk drive size

4.4.3.4 Access MODE
This field specifies the IDE translation mode.

NORMAL	Specifies traditional CHS addressing mode.
LARGE	Specifies extended CHS translation mode
LBA	Specifies LBA translation mode.
AUTO **(Default Vaule)**	BIOS specifies translation method automatically.

4.4.3.5 Cylinders

Set the number of cylinders for this hard disk.

4.4.3.6 Heads

Set the number of read/write heads

4.4.3.7 Precomp

Setting a value of 65535 means no hard disk

4.4.3.8 Sectors

Set the number of sectors per track

4.4.4 Drive A / Drive B

This field specifies the traditional type of floppy drives.

None **(*Drive B default)**	Any Floppy drive is connected
360K, 5.25 in.	Specifies extended CHS translation mode
1.2M, 5.25 in.	A 1.2M floppy drive is connected
720K, 3.5 in.	A 720K floppy drive is connected.
1.44M, 3.5 in. **(*Drive B default)**	A 1.44M floppy drive is connected
2.88M, 3.5 in.	A 2.88M floppy drive is connected

4.4.5 Floppy 3 Mode Support

3 Mode floppy drive is a type of 3.5-inch drive used by NEC PC98 computers. It supports both 1.2M and 1.44M formats using the same drive. This field specifies which drive supports 3 Mode. When a floppy drive is specified to support 3 Mode, the respective drive setting in "Drive A / Drive B" field will be invalid.

Disabled **(Default Value)**	No 3 Mode drive is connectedd
Drive A	A 3 Mode drive is connected as drive A
Drive B	A 3 Mode drive is connected as drive B
Both	Both drive A and drive B are 3 Mode drives

4.4.6 Video

EGA/VGA **(Default Value)**	Specifies EGA or VGA adapterd
CGA 40	Specifies CGA adapter with 40 column mode
CGA 80	Specifies CGA adapter with 80 column mode
MONO	Specifies Monochrome adapter

4.4.7 Halt On

All Errors **(Default Value)**	Each time the BIOS detects a non-fatal error, the system will stop and display an error message
No Errors	The system will stop for any errors that are detected
All, But Keyboard	The system will stop for any errors except keyboard error
All, But Diskette	The system will stop for any errors except diskette error
All, But Disk/Key	The system will stop for any errors except diskette and key board errors

4.4.8 Base Memory

The POST (Power-On Self Test) determines the amount of base (conventional) memory installed in the system.   The value of the base memory is typically 640K. This field has no options.

4.4.9 Extended Memory

The BIOS determines how much extended memory is present during the POST.   This is the amount of memory located above 1MB in the processor's memory address map. This field has no options.

4.4.10 Total Memory

Displays the total memory available in the system

4.5 Advanced BIOS Features

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software
                    Advanced BIOS Feature

 Virus Warning                  Disabled        Item Help
 CPU Internal Cache             Enabled
 External Cache                 Enabled        Menu Level►
 CPU L2 Cache ECC Checking      Disabled
 Proccessor Number Feature      Disabled
 Quick Power On Self Test       Enabled
 First Boot Device              Floppy
 Second Boot Device             HDD-0
 Third Boot Device              RAID 100
 Boot Other Device              Enabled
 Swap Floppy Drive              Disabled
 Boot Up Floppy Seek            Enabled
 Boot Up NumLock Status         On
 Gate A20 Option                Normal
 Typematic Rate Setting         Disabled
 Typematic Rate (Chars/Sec)     6
 Typematic Delay (Msec)         250
 Security Option                Setup
 OS Select For DRAM >64MB       Non-OS2
 Report No FDD For WIN 95       NO
 Video BIOS Shadow              Enabled
 C8000-CBFFF Shadow             Disabled
 CC000-CFFFF Shadow             Disabled
 D0000-D3FFF Shadow             Disabled
 D4000-D7FFF Shadow             Disabled
 D8000-DBFFF Shadow             Disabled
 DC000-DFFFF Shadow             Disabled

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

4.5.1 Virus Warning

When this function is enabled, the BIOS monitor the boot sector and partition table of the hard disk drive for any attempt at modification. If an attempt is made, the BIOS will halt the system and then display an error message. Afterwards, if necessary, you can run an anti-virus program to locate and remove the problem before any damage is done.

Many disk diagnostic programs will attempt to access the boot sector table, which can cause the above warning message. If you run such a program, we recommend that you first disable the Virus Warning function beforehand.

Enable, Disabled **(Default Value)**

4.5.2 CPU Internal Cache

This field configures the CPU internal cache (L1 cache).

Enable **(Default Value)**, Disabled

4.5.3 External Cache

This field configures the system's external cache (L2 cache).

Enable **(Default Value)**, Disabled

4.5.4 CPU L2 Cache ECC Checking

This field specifies whether the CPU L2 cache supports ECC or not.

Enable, Disabled **(Default Value)**

4.5.5 Proccessor Number Feature

Enable, Disabled **(Default Value)**

4.5.6 Quick Power On Self Test

This field allows the system to skip certain tests while booting. This will decrease the time needed to boot the system.

Enable **(Default Value)**, Disabled

4.5.7 First / Secondary / Third / Other Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

Floppy, LS/ZIP, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, LAN, RAID100, Disabled

4.5.8 Swap Floppy Drive

When enabled, floppy drives A and B will be exchanged without the user physically changing the connection on the cable.

Enable, Disabled **(Default Value)**

4.5.10 Boot Up Floppy Seek

Seeks disk drives during boot up. Disabling speeds boot up.

Enable**(Default Value)**, Disabled

4.5.11 Boot Up NumLock Status

This field determines the configuration of the numeric keypad after system boot up. If On, the keypad uses numbers keys. If Off, the keypad uses arrow keys.

ON **(Default Value),** Off

4.5.12Gate A20 Option

This field configures how the gate A20 is handled. The gate A20 is a device used to address memory above 1 MB. At first, the gate A20 was handled from a pin on the keyboard. While some keyboards still provide this support, it is more common, and much faster, for modern system chipsets to provide support for gate A20.

Fast	GateA20 signal supported by core logic.
Normal **(Default Vaule**)	GateA20 signal supported by keyboard controller.

4.5.13Typematic Rate Setting

This field determines if the typematic rate is to be used. When enabled, the BIOS will report (after a moment) that the key has been depressed repeatedly. When disabled, the BIOS will report only once if a key is held down continuously. This feature is used to accelerate cursor movements using the arrow keys.

Enable, Disabled **(Default Value)**

4.5.14Typematic Rate (Chars/Sec)

When Typematic Rate Setting enabled, this field specifies how many characters will be displayed in one second when a key is held down continuously.

6 **(Default Value)** 8,10, 12,15,20,24,30

4.5.15 Typematic Delay (Msec)

When enabled, typematic delay allows you to select the time delay between when the key is first pressed and when the acceleration begins.

250msec **(Default Value)** 500msec, 750msec, 1000msec

4.5.16 Security Option

This field configures how the system security is handled. It works conjunction with SETTING SUPERVISOR / USER PASSWORD page to control the security level of the system.

Setup **(Default Value)**	System needs a password to enter BIOS setup program
System	System needs a password to boot

4.5.17 OS Select for DRAM >64MB

When enabled, this field allows you to access the memory that is over 64MB under OS/2.

OS2, Non-OS2 **(Default Value)**

4.5.18 Report No FDD For WIN 95

For a floppy diskless system that runs Windows 95, this field should be set to Yes**.**

YES, NO **(Default Value)**

4.5.19Video BIOS Shadow

When enabled, the video BIOS will be copied to system memory and increase the video speed.

Enable**(Default Value)**, Disabled

4.5.20C8000-CBFFF/CC000-CFFFF/D0000-D3FFF Shadow
D4000-D7FFF/D8000-DBFFF/DC000-DFFFF Shadow

Enable, Disabled **(Default Value)**

4.6 Advanced Chipset Features

This setup page is used to specify advanced features available through the chipset. The default settings have been chosen carefully for most operating conditions. DO NOT change the value of any field in this setup page without full understanding.

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software
                    Advanced Chipset Feature

    SDRAM Cycle Length         3              Item Help
    Bank Interleave            By SPD
    DRAM Clock                 Host CLK    Menu Level▶
    DRAM Parity/ECC Check      Disabled
    Memory Hole                Disabled
    PCI Dynamic Bursting       Enabled
    Delay Transaction          Enabled
    System BIOS Cacheable      Enabled
    Video RAM Cacheable        Disabled
    AGP Aperture Size          64MB
    AGP-4X Mode                Enabled
    AGP Fast Write             Disabled

    OnChip USB Port            Disabled
    USB Keyboard Under DOS     Disabled




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

DRAM Settings

The first chipset settings deal with CPU access to dynamic random access memory (DRAM). The default timings have been carefully chosen and should only be altered if data is being lost. Such a scenario might well occur if your system had mixed speed DRAM chips installed. Longer delays might result, however this preserves the integrity of the data held in the slower memory chips.

4.6.1 SDRAM Cycle Length

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

> 2, 3 **(Default Value)**

4.6.2 Bank Interleave

Select numbers of Bank to Bank to realize fast and seamless data access mode amony many different pages.

> By SPD (**Default Vaule**), 2 Banks, 4 Banks

4.6.3 DRAM Clock

This field allows you to select the DRAM operating frequency to get better performance.

Host Clk **(Default Value)**	DRAM clock is the same speed as Front Side Bus
HCLK-33 MHz	DRAM clock is set 33 MHz less than the Front Side Bus
HCLK+33 MHz	DRAM clock is set 33 MHz more than the Front Side Bus

4.6.4 Memory Hole

In order to improve performance, certain space in memory is reserved for ISA cards. This memory must be mapped into the memory space below 16MB.

15M-16M, Disabled **(Default Value)**

4.6.5 PCI Dynamic Bursting

When enabled, every write transaction goes to the write buffer, and burstable transactions will then burst on the PCI bus, and non-burstable transactions won't burst on the PCI bus.

When disabled, if the write transaction is a burst transaction, the information goes into the write buffer and burst transfers are later performed on the PCI bus. If the transaction is not a burst transaction, PCI write occurs immediately (after a write buffer flush).

Enable **(Default Value)**, Disabled

4.6.6 Delayed Transaction

The chipset has embedded 32-bit posted writer buffer to support delayed transaction cycles. When enable, the system is compliant with PCI specificationversion 2.2.

Enable **(Default Value)**, Disabled

4.6.7 System BIOS Cacheable

When enable accesses to the system BIOS will be cached

Enable **(Default Value)**, Disabled

4.6.8 Video RAM Cacheable

When enabled, access to the video memory located at A0000H to BFFFFH will be cached.

Enable **(Default Value)**, Disabled

4.6.10 AGP Aperture Size

This field specifies the size of system memory that can be used for AGP graphics aperture.

4M,8M,16M,32M,64M **(Default Value)**, 128M

4.6.11 AGP-4X Mode

This item allows you to enable/disable the AGP-4X Mode.

Enable **(Default Value)**, Disabled

4.6.12 AGP Fast Writer

Enable, Disabled **(Default Value)**

4.6.13 OnChip USB Port

This should be enabled if your system have USB ports external/internal on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

Enabled, Disabled **(Default Value)**

4.6.14 USB Keyboard Under DOS

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard under DOS.

Enabled, Disabled **(Default Value)**

4.7 Integrated Peripherals

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software
                  Integrated Peripherals

 On-Chip Primary            Enabled       Item Help
 On-Chip Secondary          Enabled
 Primary Master PIO         Auto        Menu Level▶
 Primary Slave   PIO        Auto
 Secondary Master PIO       Auto
 Secondary Slave   PIO      Auto
 Primary Master UDMA        Auto
 Primary Slave   UDMA       Auto
 Secondary Master UDMA      Auto
 Secondary Slave   UDMA     Auto
 Init Display First         AGP
 Ac97 Audio                 Press Enter
 Ac97 Modem                 Disabled
 IDE HDD Block Mode         Enabled
 Onboard FDC Controller     Enabled
 Onboard Serial Port  1     3F8/IRQ4
 Onboard Serial Port  2     2F8/IRQ3
 COM 2 Mode                 Standard
 RxD , TxD Active           Hi, Lo
 IR Duplex Mode             Half
 Onboard Parallel Port      378/IRQ
 Onboard Parallel Mode      Normal
 ECP Mode Use DMA           3
 Parallel Port EPP Type     EPP1.9

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

4.7.1 On-Chip Primary IDE Channel 0

This field enables or disables the onboard IDE controller.

Enable **(Default Value)**, Disabled

4.7.2 On-Chip Secondary IDE Channel 1

This field enables or disables the onboard IDE controller.

Enable **(Default Value)**, Disabled

4.7.3 Primary Master / Slave PIO
Secondary Master / Slave PIO

These fields configure the PIO (Programmable Input Output) transfer mode for each IDE devices. The maximum transfer rates of each PIO mode are listing as follow:

PIO Mode 0	3.3 MB/sec
PIO Mode 1	5.2 MB/sec
PIO Mode 2	8.3 MB/sec
PIO Mode 3	11 MB/sec
PIO Mode 4	16.6 MB/sec

Auto**(Default Value)**	Negotiated with device automatically
Mode 0	Use Mode 0 timing to access device
Mode 1	Use Mode 1 timing to access device
Mode 2	Use Mode 2 timing to access device
Mode 3	Use Mode 3 timing to access device
Mode 4	Use Mode 4 timing to access device

4.7.4Primary Master / Slave UDMA
Secondary Master / Slave UDMA

If you select Auto, the IDE controller uses Ultra DMA 33/66 Mode to access Ultra DMA-capable IDE devices.

Disabled, Auto **(Default Value)**

4.7.5Init Display First

This item allows you to decide which slot to activate first, either PCI slot or AGP slot.

PCI Slot ,AGP **(Default Value)**

4.7.6 AC97 Audio

This item allows you to decide to enable/disable theVIA chipset family to support AC97 Audio.

Auto, Press Enter

4.7.6.1 Onboard Sound blaster

This item allows you to decide onboard legacy sound blaster compatible device.

Enable, Disabled **(Default Value)**

4.7.6.2 SB I/O Address Use

This item allows you to select sound blaster I/O address.

220H **(Default Value)**, 240H,260H,280H

4.7.6.3 SB IRQ Use Select

This item allows you to select sound blaster IRQ.

IRQ 5 **(Default Value)**,7,9.10

4.7.6.4 SB DMA Use Select

This item allows you to selec sound blaster DMA channel.

DMA 0 **,** 1 **(Default Value)**,2,3

4.7.6.5 MIDI Port

This item allows you to selec MIDI Port enable/ disable.

Enable, Disabled **(Default Value)**

4.7.6.6 MIDI Address Port

This item allows you to selec MIDI Port I/O address.

330-303H ,310-313H ,320-323H , 330-333H **(Default Value)**

4.7.6.7 Game port Address

This item allows you to select game port enable/ disable.

200-207H, Disabled **(Default Value)**

4.7.7 AC97 Modem

This item allows you to decide to enable/disable the VIA chipset family to support AC97 Modem.

Auto , Disabled**(Default Value)**

4.7.8 IDE HDD Block Mode

When enabled, the IDE controller will use the faster block mode to access devices.

Enable **(Default Value)**, Disabled

4.7.9 Onboard FDC Controller

This field enables or disables the onboard floppy controller.

Enable **(Default Value)**, Disabled

4.7.10 Onboard Serial Port 1 / 2

These fields configure the onboard serial ports. There are several port addresses and IRQ channels to select from.

3F8 / IRQ 4 **(Default Vaule)**	Port address 3F8h, IRQ 4
2F8 / IRQ 3	Port address 2F8h, IRQ 3
3E8 / IRQ 4	Port address 3E8h, IRQ 4
2E8 / IRQ 3	Port address 2E8h, IRQ 3
Auto	BIOS assigns port address and IRQ channel automatically.
Disabled.	Disables serial port

4.7.11 COM2 Mode Select

A second serial port is using a serial port bracket connected from the motherboard to an expansion slot opening.

Standard **(Default Value),** HPSIR, ASKIR

4.7.11.1 RxD, TxD Active

When setting the field to either IrDA or ASKIR, you must select the active level of receiving and transmission signal.

Hi, Lo **(Default Value)** /Lo, Hi/Lo, Lo/Hi, Hi

4.7.11.2IR Duplex Mode

> When setting the field to either HPSIR or ASKIR, you must select the mode of receiving and transmitting signals.

Half **(Default Value)** ,Full

4.7.12 Onboard Parallel Port

This field configures the onboard parallel port. There are several port addresses and IRQ channels to select from.

378 / IRQ 7 **(Default Value)**	Port address 378h, IRQ 7
278 / IRQ 5	Port address 278h, IRQ 5
3BC / IRQ 7	Port address 3BCh, IRQ 7
Disabled	Disables parallel port

4.7.13Parallel Port Mode

This field configures the operating mode of an onboard parallel port. Ensure you know the specifications of your parallel port devices before selecting field.

Normal**(Default Value)** , EPP, ECP, ECP+EPP

4.7.14ECP Mode Use DMA

When the Parallel Port Mode field is configured as ECP, it needs a DMA channel for data transfer. This field specifies the DMA channel for ECP parallel port use.

1	Use DMA channel 1
3**(Default Value)**	Use DMA channel 1

4.7.15EPP Mode Select

When the Parallel Port Mode field is configured as EPP,
ECP+EPP mode, the EPP version needs to be specified.
Please refer to ypur peripheral document before selecting
field.

EPP1.7	Use EPP 1.7 protocol
EPP1.9 **(Default Value)**	Use EPP 1.9 protocol

4.8 Power Management Setup

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software
                Power Management Setup

Power Management       Press Enter           Item Help
ACPI Suspend Type      S1(POS)
PM Control by APM      Yes                  Menu Level ►
Video Off Option       Suspend → OFF
Video Off Menthod      V/H SYNC+Blank
MODEM Use IRQ          3
PWR-OFF Mode by         Instant-Off
  PWR-BTTN
Wake Up Events         Press Enter




→↑←↓:Move Enter Select +/-/PU/PD:Value F10: Save E5C: Exit F1: General Help
     F5: Previous Values  F6: Fail-Safe Defaults  F7: Optimized Defaults
```

Each power-saving mode has a respective timer. The value of the timer can be assigned or reloaded and it will count down to zero. When the timer equals to zero, the system will be forced into the related suspend or power-saving mode. If any predefined signal or event is detected during the timer counting period, the timer restarts automatically.

4.8.1 Power Management

This feature allows the user to select the default parameters for the power-saving mode.

Min saving	When idle for one hour, the system entersuspend mode.
Max Saving	When idle for fifteen minutes, the system enters suspend mode.
User Define **(Default Vaule)**	User can specify the time the system enters suspend mode.

4.8.1.1 APM HDD Power Down Timer

This field specifies the time the system enters HDD power down. It is available only when the Power Management field is set to User Define.

1Min, 2Min, 3Min, 4Min, 5Min, 6Min, 7Min, 8Min, 9Min, 10Min,11Min, 12Min,13Min, 14Min, 15Min,
Disable **(Default Value)**

4.8.1.2 APM Doze Timer Mode

This field specifies the timer value of Doze Mode. It is available only when the Power Management field set to User Define.

1Min, 2Min, 4Min, 6Min, 8Min 10Min, 20Min,30Min, 1Hour, Disable **(Default Value)**

4.8.1.3 APM Suspend Timer

This field specifies the time the system enters power-saving mode. It is available only when the Power Management field is set to User Define.

1Min, 2Min, 4Min, 6Min, 8Min 10Min, 20Min,30Min, 40Min, 1Hour, Disable **(Default Value)**

4.8.2 ACPI Suspend Type

There are several ACPI modes used to save computer's energy.

S1 (POS) **(Default Vaule)**	This is the Power-On-State, the CPU clock runs at slower speed, the system operates at slower speed.
S3 (STR)	This is the Suspend-To-Ram State, all system data will be saved in systems memory and all devices except the memory will shut off. **(Please checking your VGA card, can support the S3 mode.)**

4.8.3 PM Control by APM

When enabled, an Advanced Power Management (APM) protocol will be activated to handle the power-saving mode.

NO, Yes **(Default Value)**

4.8.4 Video off Option

This field specifies the method that video subsystem used for power saving.

Always ON	Monitor will remain on during power saving modes.
Suspend Off	Monitor blanked when the systems enters the Suspend modes
All Modes Off	Monitor blanked when the system enters any power saving mode.

4.8.5 Video off Method

V/H SYNC+Blank **(Default Vaule)**	Turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	Writes blanks to the video buffer onlye.
DPMS	Initial display power management signaling with DPMS.

4.8.6 MODEM Use IRQ

This determines the IRQ in which the Modem can use.

> 3**(Default Value) ,** 4, 5, 7, 9,11, NA

4.8.7 PWR-Off Mode by PWR-BTTN

This field specifies the function of power button.

Instant-Off **(Default Vaule)**	When power button pressed, the system turns off immediately
Delay 4 Sec.	After the power button has been pressed and held for four seconds, the system turns off

4.8.8 Wake Up Events

These are I/O events whose occurrence can prevent the system from entering a power-saving mode, or can awaken the system from such a mode. In effect, the system remains alert for anything that occurs to a device configured and recognized by the system, even when the system is in a power down mode.

4.8.8.1 VGA

When ON, your can set the VGA to awaken the system.

OFF **(Default Value)**, ON

4.8.8.2 LPT & COM

When On, any activity from one of the listed system peripheral devices or IRQs wakes up the system.

LPT/COM **(Default Value)**, COM, LPT, None

4.8.8.3 HDD & FDD

When On, any activity from either hard disk drive or floppy disk drive wakes up the system.

ON **(Default Value)**, OFF

4.8.8.4 PCI master

When On, the system can be resumed from power saving mode by any PCI / master activity signal.

OFF **(Default Value)**, ON

4.8.8.5 Wake up by PCI card

When enabled, you can "wake-up" your system using a PCI rev.2.2 card, such as a WOL card, connected in your PCI slot.

Enabled, Disabled **(Default Value)**

4.8.8.6 Wake Up by Ring/LAN

When enabled, the PC can power-on through an external modem connected to your PC. For example, you may send an e-mail message to your PC from another location, and this will power-on your PC. When using this feature, you must have a modem, and your PC must be turned off.

Enabled, Disabled **(Default)**

4.8.8.7 PWROn/Resume by Alarm

When enabled, you can set the date and time to automatically power-on your PC (similar to an alarm clock). The alarm from RTC (real-time clock) automatically turns on the system.

Enabled	Sets Date (0-31) and Timer (hr, min, sec) to power-on the PC. When date is set to 0, the Timer is set for every day.
Disabled **(Default Vaule)**	Disables RTC alarm function

4.8.8.8 Primary INTR

ON ,OFF, Default **(Default Vaule)**

4.8.8.9Primar INTR

ON, OFF, Disabled **(Default Value)**

4.8.8.10 IRQs Activity Monitoring

When On, any event that occurs will awaken the system after it has powered-down.The following is a list of IRQs, or Interrupt Requests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

4.9   PnP/ PCI Configurations

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

  PNP OS Installed              NO                  Item Help
  Reset Configuration Data      Disabled
                                                   Menu Level▶
  Resources Controlled By       Auto(ESCD)
  IRQ Resources                 Press Enter

  PCI/VGA Palette Snoop         Disabled
  PCI1                    IRQ   Use Auto
  PCI2/                   IRQ   Use Auto
  PCI3/Onboard Sound      IRQ   Use Auto
  PCI4/PCI5               IRQ   Use Auto




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

4.9.1 PNP OS Installed

The field specifies whether a Plug and Play operating system is installed.

Yes, NO **(Default Value)**

4.9.2 Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

Enable, Disabled **(Default Value)**

4.9.3 Resources Controlled By

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means abso-lutely nothing unless you are using a Plug and Play operating system such as WindowsÒ98/95/NT. If you set this field to "manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a "Ø").

Manual	Resources controlled by the user.
Auto(ESCD) **(Default Vaule)**	Resources controlled by BIOS automatically.

4.9.3.1 IRQ Resources

> When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

4.9.3.1.1IRQ3/4/5/7/9/10/11/12/14/15 assigned to

PCI Device Reserved **(Default Value)**

4.9.4 PCI / VGA Palette Snoop

This field controls the ability of a primary PCI graphics controller to share a common palette with an ISA/VESA video or MPEG card.

Enabled	PCI VGA co-works with ISA MPEG card
Disabled **(Default Vaule)**	All cases except above.

4.9.4.1-5 PCI 1 IRQ
    PCI 2/5 IRQ
    PCI 3 Onboard Sound IRQ
    PCI 4/PCI5 RAID IRQ
    These fields set how IRQ use is determined for each PCI slot. The default setting for each field is Auto, which uses auto-routing to determine IRQ use.

Auto **(Default Value)** 3, 4, 5, 7, 9, 10,11,12,14,15

4.10 PC Health Status

This page is monitoring your status of computer. On the screen displays CPU/System temperature, FAN speed, and voltages.

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software
                    PC Health Status

  Current CPU Temperature                      Item Help
  Current System Temperature
  Current CPUFAN Speed                      Menu Level ▶
  Current SYSFAN Speed
  Vcore_
  + 2.5V
  + 3.3V
  +   5V
  +  12V












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

4.11 Iwill Smart Setting

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software
                      Iwill smart Setting

 THE CPU IS                                            Item Help
 THE CPU ID IS
 THE CPU EXPECT SPEED IS                           Menu Level ▶
 CPU Micro Code Updated to


 Spread Spectrum              Disabled
 CPU/PCI Clock                66/33 MHz
 CPU Clock Ratio              X 3
 BIOS-ROM Flash Protect       Non-Flash













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

CPU FREQUENCY SETUP

In general, when adjusting the CPU frequency, you should select a matched bus frequency for both the CPU and the motherboard. The reason is that your CPU can only communicate with its external components at the same speed at which the components operate. In other words, if your motherboard bus speed is 100 MHz, you should start by selecting 100 MHz (as a "base") to set the CPU frequency. This frequency is also referred to as the "system bus frequency" or external frequency.

To understand how does CPU works, and how does it related to FSB and multiplier, here is the example:

CPU speed = FSB x Multiplier (CPU Ratio)

800Mhz = 100Mhz x 8

> **Over-clocking is not guaranteed. Users must have substantial knowledge of proper CPU relative to adjusting CPU speeds. Over-clocking should be done only by experienced engineers who conduct tests.**

4.11.1 Spread Spectrum

This item configures radiation emitted from the system. When enabled, system will release less radiation.

Enabled, Disabled **(Default Value)**

4.11.2CPU/PCI Clock

This field allows user to adjust the CPU external and to show the PCI clock.

66/33 MHz	105/35MHz	140/35MHz
68/34 MHz	110/36MHz	144/36MHz
75/37 MHz	112/37MHz	150/37MHz
80/40 MHz	115/38MHz	155/38MHz
83/41 MHz	124/31MHz	160/40MHz
90/30 MHz	130/32MHz	166/41MHz
95/31 MHz	133/33MHz	
100/133MHz	135/34MHz	
103/34MHz	138/34MHz	

4.11.3CPU Clock Ratio

3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5 ,8
8.5, 9, 9.5, 10, 11.5, 12

Note:BIOS will auto-detect and display your CPU Ratio

WARN **Most of the CPUs sold in the market are with multiplier locked. In this case, the CPU can only function at it's factory multiplier setting even the multiplier setting is changed in the IWILL Bye Bye Jupmer.**

4.11.4BIOS-ROM Flash Protect

Non-Fresh	By BIOS
Freshable	By BIOS

4.12 Load Fail Safe Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to: Pressing **'Y'** loads the BIOS default values for the most stable, minimal-performance system operations.

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software

   Standard CMOS Features         Iwill Smart Setting

   Advanced BIOS Features         Load Fail-Safe Defaults

   Advanced Chipset Features      Load Optimized Defaults

   Integrated Peripherals         Set Supervisor Password

   Power Management Setup         Set User Password

   PnP/PC                          up
          Load Fail Safe Defaults (Y/N)?
   PC Health Status                        ving



 ESC :Quit                    → ↑ ← ↓ :Select Item
 F10 :Save & Exit Setup

           Time, Date Hard Disk Type
```

4.13 Load Optimized Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software

Standard CMOS Features	Iwill Smart Setting
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PC	Load Optimized Defaults (Y/N)? up
PC Health Status	ving

ESC :Quit
F10 :Save & Exit Setup

→↑←↓ :Select Item

Time, Date Hard Disk Type

4.14 Set Supervisor/ User Password Setting

```
CMOS Setup Utility-Copyright(C) 1984-2000 Award Software

   Standard CMOS Features          Iwill Smart Setting

   Advanced BIOS Features          Load Fail-Safe Defaults

   Advanced Chipset Features       Load Optimized Defaults

   Integrated Peripherals          Set Supervisor Password

   Power M            Enter Password:            ord

   PnP/PC                                        up

   PC Health Status                Exit Without Saving


   ESC :Quit                  → ↑ ← ↓ :Select Item
   F10 :Save & Exit Setup

               Time, Date Hard Disk Type
```

These setup pages are used for password setting. When a password has been enabled and the Security Option field is set as Setup, you will be required to enter the password every time you try to enter BIOS Setup program. This prevents an unauthorized person from changing any part of your system configuration. Additionally, if the Security Option field is set as Boot, the BIOS will request a password every time your system boot.   This would prevent unauthorized use of your computer.

In you wish to use this function, bring the cursor to this field, then press <Enter>. The computer will display the message, "Enter Password". Type your password and press <Enter>. After the message onfirm Password" is displayed, re-type your password. The Supervisor Password function will be in effect after you save and exit setup.

To disable a password, bring the cursor to this field, then press <Enter>. The computer will display the message, "Enter Password". Press <Enter>. A message will confirm that the password is disabled. Once the password is disabled, the system will boot and you can enter setup program freely.

4.15 Save & Exit Setup

Saves current CMOS value and exit BIOS setup program.
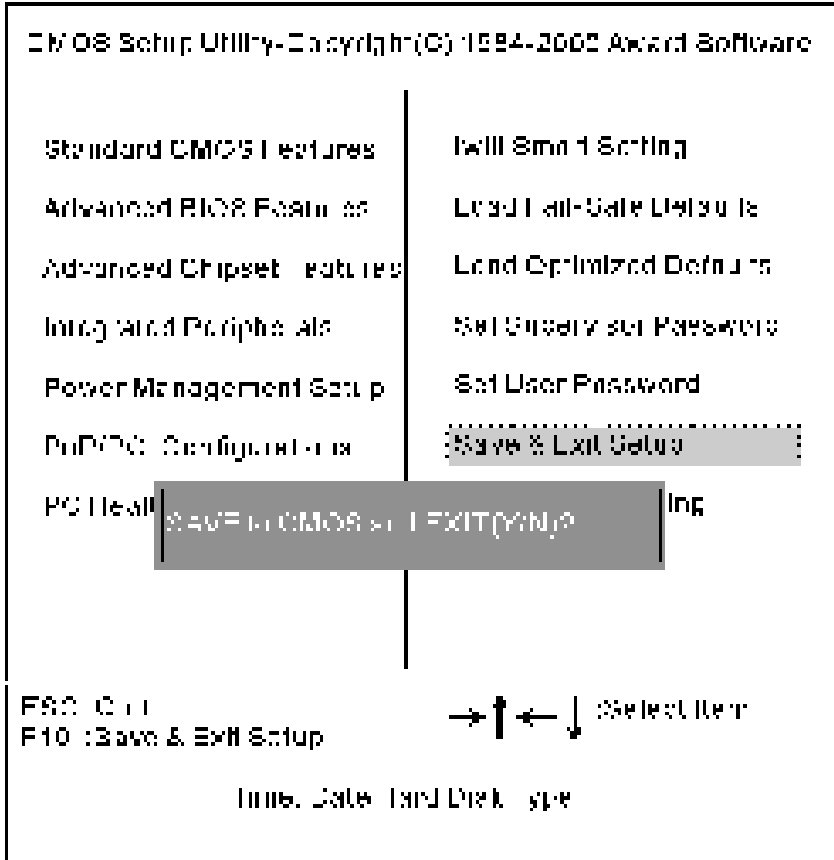
4.16 Exit Without Saving

Abandons all CMOS value changes and exits BIOS setup program.

CMOS Setup Utility-Copyright(C) 1984-2000 Award Software

Standard CMOS Features	Iwill Smart Setting
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power M	rd
PnP/PCI	Quick Without Saving(Y/N)?	p
PC Health Status	Exit Without Saving

ESC :Quit
F10 :Save & Exit Setup
→↑←↓ :Select Item

Time, Date Hard Disk Type

5 On board Audio *(For VX133 Only)*

The on board 4.1 channel PCI Audio on Iwill motherboards offer a new generation PCI audio solution: it utilizes the state-of-the-art CRL® 3D Audio technology (HRTF 3D positional audio), and supports Microsoft® Direct Sound ® 3D and Aureal®'s A3D® interfaces. Better yet, it supports two / four speakers and DLS based (Down Loadable Sound) wave table music synthesizer which supports the Direct Music®.

Trademark Acknowledgments

Microsoft, Windows, Direct Sound 3D, and Direct Music are trademarks of Microsoft Corporation. Sound Blaster is a trademark of Creative Technology, Ltd. Aureal is a trademark of Aureal Inc. A3D is a registered trademark of Aureal Inc. All other trademarks and registered trademarks mentioned in this manual are the property of their respective holders and are hereby acknowledged.

Information in this manual is subject to change without notice.

5.1   Audio Features

5.1.1 Special Features

32 bit PCI bus master. Full duplex playback and recording, built-in 16 bits CODEC.

HRTF 3D positional audio, supports both Direct Sound 3D® & A3D® interfaces, supports earphones, two and four channel speakers mode.

Support Windows 95/ 98/ 2000 and Windows NT 4.0.

MPU-401 Game/Midi port and legacy audio SB16 support.

Downloadable Wave Table Synthesizer, supports Direct Music®.

5.1.2 Stereo Mixer and FM Music Synthesizer

Stereo analog mixing from CD-Audio, Line-in

Stereo digital mixing from Voice, FM/Wave-table, Digital CD-Audio

Mono mixing from MIC and software adjustable volume

OPL3 FM synthesizer (4 operators)

Up to 15 melody sounds and 5 rhythm sounds (20 voices)

5.1.3 Game and Midi Interface

Fully compatible with MPU-401 Midi UART and Sound Blaster Midi mode/ Standard IBM PC joystick/game port

5.2 Driver Installation

5.2.1 DOS Installation

Before beginning the installation, please make sure that your hard disk has sufficient space(min. 4MB). Insert the Power Installer CD into the CD-ROM Drive.

STEP 1	Change directory to PCI audio DOS drivers folder at DOS prompt, and type: ***INSTALL [Enter]***
STEP 2	Type DOS utilities path which you want to install.
STEP 3	Program will expand the file to the path which you've specified.
STEP 4	Install program will add initial drivers.

5.2.2 Win 95/98 Installation

We recommend that you have Microsoft Windows intalled, and remove any exsisting sound drivers from your current system, before you install this PCI sound device driver

STEP 1	Power off your system, install the audio cable, speaker, microphone, and insert the Iwill Power Installer CD into the CD-ROM drive.
STEP 2	Turn on the computer, and enter the Microsoft Windows 95 /98 /2000.
STEP 3	You will see a windows prompt like this: "New Hardware Found PCI Multimedia Audio Device Windows has found new hardware and is installing the software for it", then the dialog box shown. Click "Next" button to go on.
STEP 4	Click on "Other Locations" button to specify drivers path.
STEP 5	When CMI8738/C3Dx (SX) PCI Audio Device found, click **Finish**.
STEP 6	Now, system is installing device drivers autiomaticlly, After a while, the system will finish the installation includs the following device drivers. CMI8738/C3DX (SX) PCI Audio Device CMI8738/C3DX (SX) PCIJoystick Device CMI8738/C3DX (SX) PCI Legacy Device
STEP 7	Click **start** key
STEP 8	Select **Run**
STEP 9	Key in the drive and path for Windows application installation program.
STEP 10	Click **OK** to start the installation procedure, and follow the on-screen instructions to finish the installation. When all the application softwares have been installed, please shut down Windows 95/98/2000 system, and reboot your system.

5.2.3 Win 95/98 Un-Installation

In the cases you are experiencing some technical difficulties (the sound device is not function properly). It is suggested that you proceed with the un-install procedure:

STEP 1	Click **start** button.
STEP 2	Select **run** item.
STEP 3	Find UINSTDRV.EXE in driver disk under Win95/98 drivers folder.
STEP 4	Run it.
STEP 5	Follow the on-screen instructions to re-install the hardware.

If you want to completely remove the drivers, you can also run the un-install procedure as described previously, and then reboot the system.

5.2.4 Windows NT4.0 Installation

We recommend that you have Microsoft Windows NT intalled, and remove any exsisting sound drivers from your current system, before you install this PCI sound device driver.

STEP 1	Click "Start" button, move the highlight bar to "Setting" item, and select the "Control Panel".
STEP 2	Double-click "Multimedia" icon..
STEP 3	Select "Devices" page, and press "Add" button.
STEP 4	Select "Unlisted or Updated Driver" item in "List of Drivers".
STEP 5	Select "C-Media CM8738" item and press "OK" button.
STEP 6	Select proper I/O value.
STEP 7	Press "OK" button
STEP 8	Restart the system when being asked
STEP 9	Now, you have already installed the PCI Audio Adapter under Microsoft Windows NT4.0 successfully. If you want to install the Windows applications, continue the following steps:
STEP 10	Click start key
STEP 11	Select Run item
STEP 12	key in drive and path for Windows NT application installation program,
STEP 13	Click OK to start the installation procedure, and follow the on-screen instructions to finish the installation. When all of application softwares have been installed shut down the Windows NT system, and then reboot your system.

5.3 The Audio Rack

5.3.1 Introduction

By means of a user-friendly interface (as easy as operating your home stereo system), this PCI audio rack provides you with the control over your PC's audio functions, including the advantage of four speakers mode enable/ disable,

5.3.2 About Audio Rack

The Audio Rack is consisted of several major components.

5.3.2.1 Control Center

Controls the display of the PCI Audio Rack's components.

5.3.2.2 MIDI Player

Plays MIDI music files, and allows you to create your personal song playlists, and play the song files.

5.3.2.3 MP3/Wave Player

Records and plays digital audio (mp3/wave) files. Allows you to create wave file playlists, and playback the wave files.

5.3.2.4 CD Player

Plays standard audio CDs. Allows you to create your favorite song playlists.

5.3.2.5 System Mixer

Controls the volume level of your audio inputs and outputs

5.3.3 Showing or Hiding Audio Rack Components

To remove or add a component from the display, click on the component's button on the Control Center's Button Bar or toggle it off.

5.3.4 MIDI Player, Wave Player, and CD Player

CD Player(above, similar to MP3/Wave Player and MIDI Player)

5.3.4.1 Sel (or Trk) field:

> If you have multiple selections in your playlist, this shows the number of the current selection or CD track.

5.3.4.2 Current File or Track:

> The name of the current MIDI file, wave audio file, or CD track.

5.3.4.3 Total Length field:

> Displays the total length of files or tracks in minutes and seconds.

5.3.4.4 Current Time field:

> Displays the current time of files or tracks in minutes and seconds when playback or recording.

Please refer to the help screen or more detail button function descriptions.
(click on help button on the player)

5.3.5 System Mixer

System Mixer allows you to control all the audio output and input levels. System Mixer displays the volume controls which your audio drivers make available. The names for these controls may vary.

Mixer panel while the four speakers mode is enabled.

Mixer panel while the four speakers mode is disabled.

5.3.5.1   Volume Control:

Clicking on this button shows and allows you to use the output level controls.

5.3.5.2 Recording Control:

Clicking on this button shows and allows you use the input level controls.

5.3.5.3 Input and Output Level Sliders and Buttons:

For each input or output signal type, the control slider controls the loudness whereas the horizontal slider controls the balance between the two speakers. The mute button temporarily stops input or output without changing slider positions.

Control types and names might vary. The common types are listed below:

a Vol:

The master control for all outputs. The strength of an output signal is determined by both the Vol slider and the slider for the individual output. To affect all outputs, move the Vol slider. To change the output of an individual output type, move its slider.

b Line-in/Rear:

Controls the audio hardware's Line In or Line Out levels. Line levels might be for an externally attached cassette player, for instance, while the four speakers mode is enabled, this control becomes the Rear speaker volume control.

c Mic:

Controls the microphone input level.

d Wave:

Controls wave (voice) playback or the recording levels.

e FM:

Controls the FM music playback or the recording level.

f Aux-in:

Controls the Aux-in music play or the recording level.

g PC-SPK:

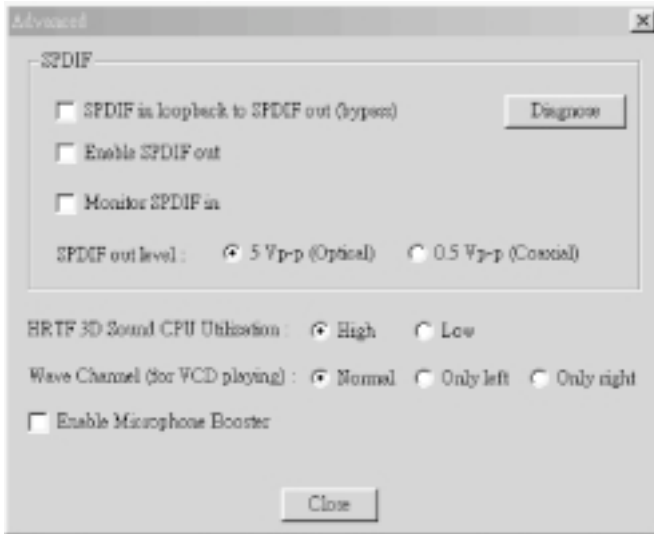Controls the external PC speaker input level.

h CD:

Controls the CD drive output level, for CD drives configured to play their audio output through the PCs audio hardware.

i 4SPK:

Turn on or turn off the Rear speakers effect.

j Surround:

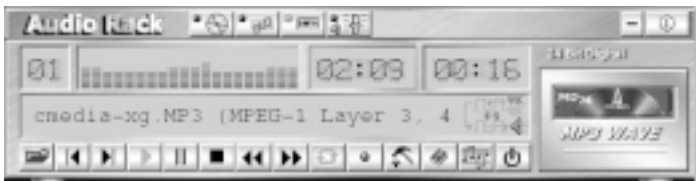Turn on or turn off the 3D surround sound effect.

5.3.5.4 Mute Buttons:

Toggle between muting and enabling the signal. A button with a lit LED is enabled, and when it is not lit, it means it is mute. Several output signals can usually be enabled at once.

5.3.6 MP3 Player

MP3 player can play both wave files and MP3 files.

MP3 player while the loop function enables.

5.3.7 The 4 Speakers System

The on board audio on Iwill motherboards provide 2 wave channels (front/rear + subwoffer), known as the 4.1 speakers system. When games or application programs via DirectSound® 3D or A3D® interface locate the sound sources to the listener's back, the two rear speakers will work to enhance the rear audio positional effect, so as to complement the insufficiency of using only two front speakers to emulate the audio effect. The following is the hardware installation and the software setups:

5.3.7.1 The speaker installation.

Connect the front pair speakers to the Line-out jack of the audio adapter, and then connect rear pair speakers to Line-in/Rear jack of the audio adapter.

5.3.7.2 The positions of the speakers

Put your speakers the way the following picture suggests, to deliver the best audio result.
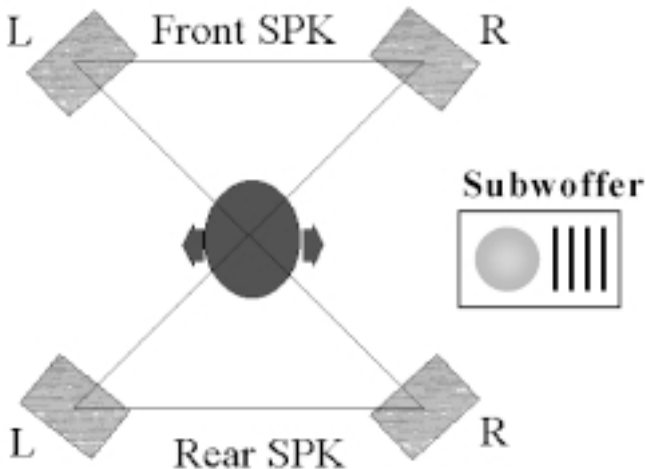
5.3.7.3 The mixer setup

There is a 4 speakers option in the volume control of the mixer, and when you enable this option, it means the rear speakers are connected to Line-in/Rear jack.

When Line-in/Rear jack is connected to other external Line-in sources, please DO NOT enable this option in order to avoid hardware conflicts.

Regarding rear speaker option, you can turn on or turn off the output of the back speakers, and adjust the volume, to have the rear/front speakers have the same volume.

5.3.7.4 The demo

Execute the Helicopter demo within the C3D HRTF Positional Audio Demos of this audio adapter. When the helicopter flies behind you, the rear speakers will work.

6   Power Installer CD

6.1 Software Installation

The attached Power Installer CD contains all the necessary drivers, utilities. It provides an easy way for users to install the needed drivers without going through a complicated process. The Power Installer CD is able to auto-detect and display the drivers, utilities needed for your motherboard.

6.1.1 What's inside Power Installer CD for this motherboard

Driver	**Software Utility**
Service Pack Driver	*PC-Cillin Anti-Virus*
Onboard Audio Driver	*Hardware Monitor Utility*
High Point XStore Pro	*Suspend To Disk Guide*
Award Patch File	*Adobe Acrobat Reader*
User's Manual	*Audio Application Utility (For Windows 98/NT only)*
	Make Driver **Exit**

6.2   How to use the Power installer CD

The Power Installer CD supports the Auto Run program under Windows 98/95/2000 and Windows NT operating systems. All the necessary drivers, utilities and manual for this motherboard will show on the screen.

Power Installer does not support a keyboard at this moment. You must use a mouse to install it.

6.2.1 How to view manual

This Power Installer CD includes detailed information of all manuals for every motherboard manufactured. Please insert the Power Installer CD into the CD-ROM drive; Click the "View Manual" item, and select the product that you want to view.

6.3   How to make driver diskette

6.3.1 Without O.S. installed

This bootable Power Installer CD also allows you to boot up your system, even when the OS has not been installed. During the boot-up process, you can perform Diskette Creator, which will automatically make the driver diskettes you need. Follow the instructions below to make your own device driver floppy diskettes if you have a CD-ROM with IDE interface. If you have already installed SCSI CD-OM, please make sure your SCSI host adapter supports bootable CD-ROM, and then proceed directly to step 8 ,and then finish the procedure.

STEP 1	First, power-on or **boot** your system.
STEP 2	Press <**Del**> key during boot sequence to enter **CMOS Setup Utility**.
STEP 3	Use arrow keys to select **ADVANCED BIOS FEATURES** on the menu, then press **Ente**r.
STEP 4	Select **First Boot Device** and change the default setting to **CDROM** using Page Up /Page Down key.
STEP 5	Press <**Esc**> key to go back to CMOS SETUP Utility menu.
STEP 6	Press <**F10**> to select Save and Exit Setup.
STEP 7	Press **Y** then Enter to complete. Now you are able to boot up the system from the CD-ROM.
STEP 8	Insert the Power Installer CD into the CD-ROM drive and re-start the computer.
STEP 9	The Diskette Creator will now execute automatically for making your own driver disketes.
STEP10	Make the desired driver diskettes according to the instructions displayed on screen.

6.3.2 Under windows 98/95/NT

You may just click on the software **Make Driver Diskettes Utility** shown on screen, then select the driver you need, follow the messages shown on screen to complete.

6.4 Install driver

6.4.1 How to install Service Pack Driver

You may just click on the Service Pack Driver shown on screen that needs to be installed, then follow the prompts to complete setup.

6.4.2 How to install Onboard Audio Driver File

You may just click on the Onboard Audio Driver shown on screen that needs to be installed, then follow the prompts to complete setup.

6.4.3 How to Install High Point XStore Driver

You may just click on the **High Point XStore Driver** shown on screen that needs to be installed, then follow the prompts to complete setup.

6.4.4 How to install Award Patch Driver

You may just click on the **Award Patch Driver** shown on screen that needs to be installed, then follow the prompts to complete setup.

6.5 Install Software Utility

6.5.1 How to use PC-Cillin Anti-Virus program

Simply click on the **PC-Cillin Anti-Virus** shown on screen that be installed, then follow the prompts to complete setup.

6.5.2 How to use Hardware Monitoring Utility

You may just click on the **Hardware Monitor Utility** shown on screen then follow the prompts to complete setup.

6.5.3 How to use Suspend To Disk Guide

Please follow the steps on the document to complete setup.

6.5.4 How to use Adobe Acrobat Reader

You may just click on the **Adobe Acrobat Reader** shown on screen then follow the prompts to complete setup.

6.5.5 Audio Application Utility (For Windows 98/NT)

Please follow the steps on section of Audio Application Utility to complete setup.