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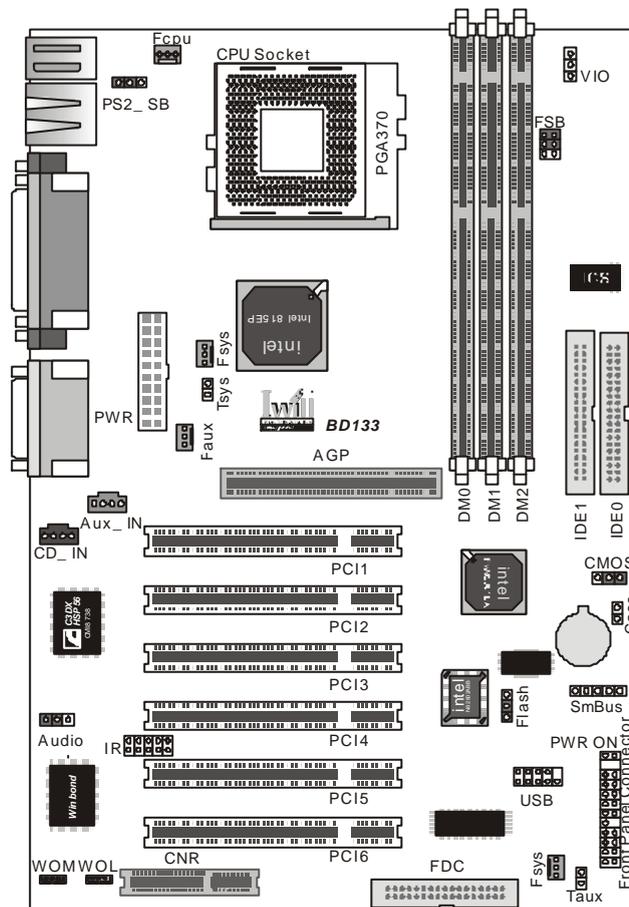
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1 Quick Installation

1.1 Layout



1.2 Item Checklist

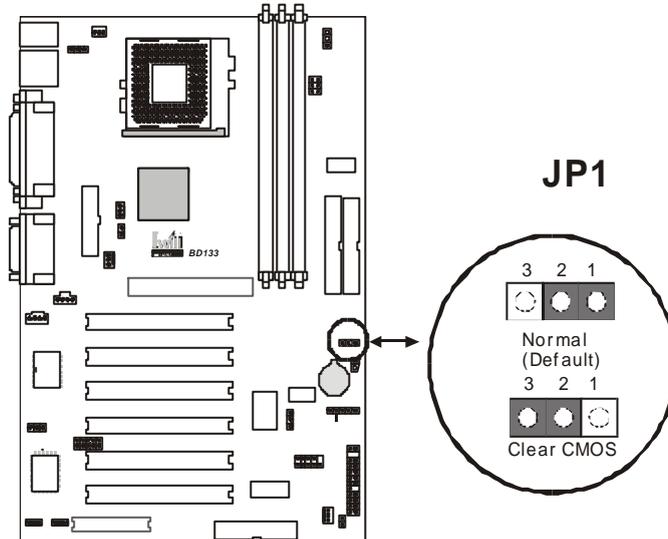
- [V] The motherboard
- [V] Operation manual
- [V] ATA 100/66 IDE cable
- [V] Floppy cable
- [V] Power Installer CD

Optional

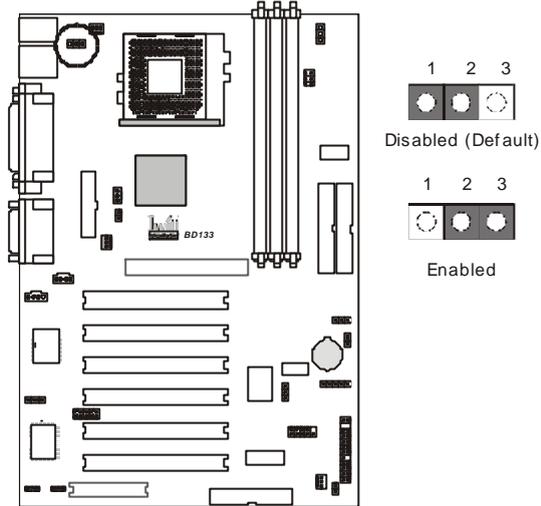
- [] USB riser kit
- [] Thermal Sensor for System
- [] Infrared port cable
- [] Optional Module (SPDIF version only)

1.3 Jumpers

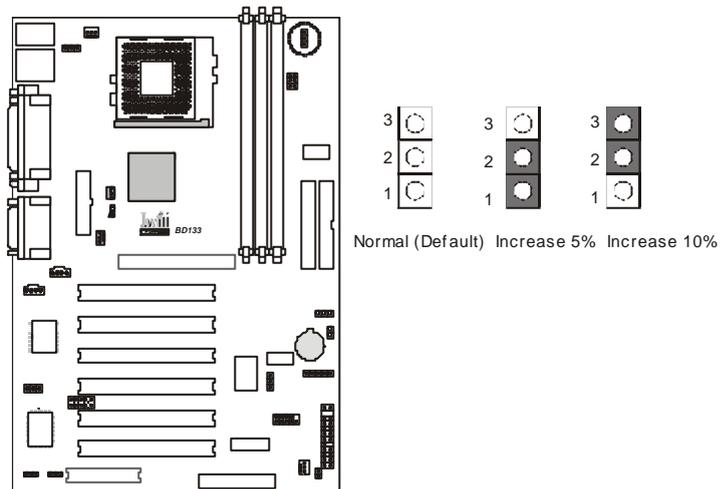
Clear CMOS jumper (CMOS)



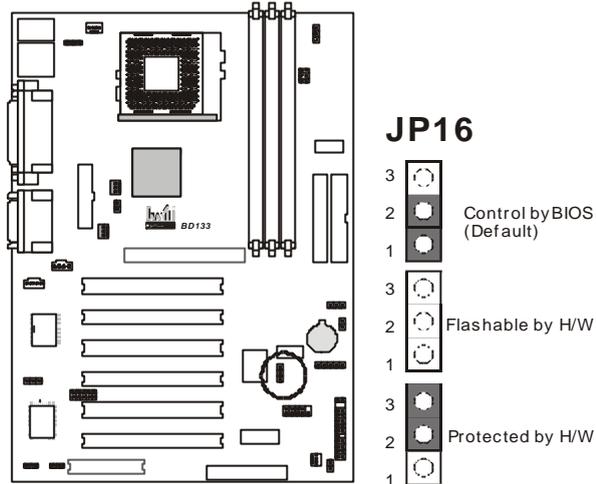
PS/2 power on jumper (PS2_SB)



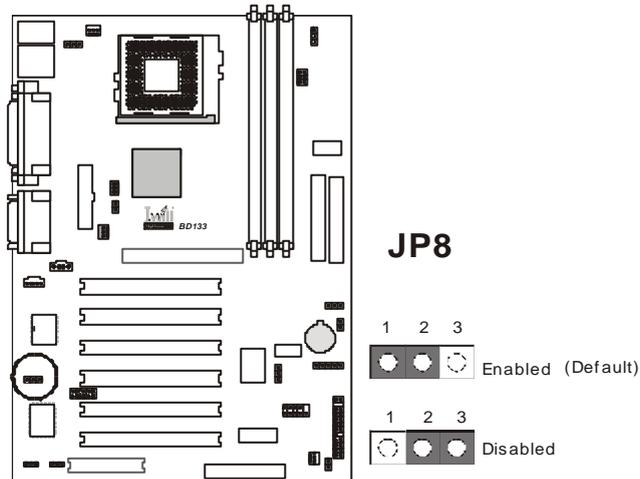
VIO select jumper (VIO)



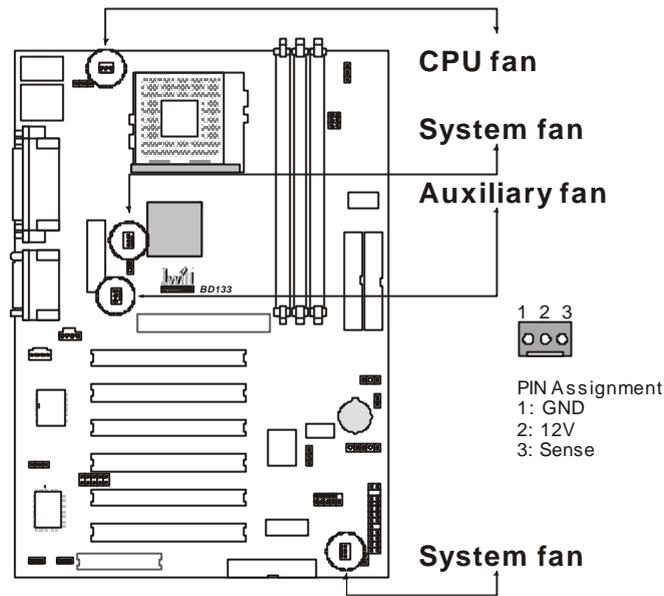
Flash protect jumper (Flash)



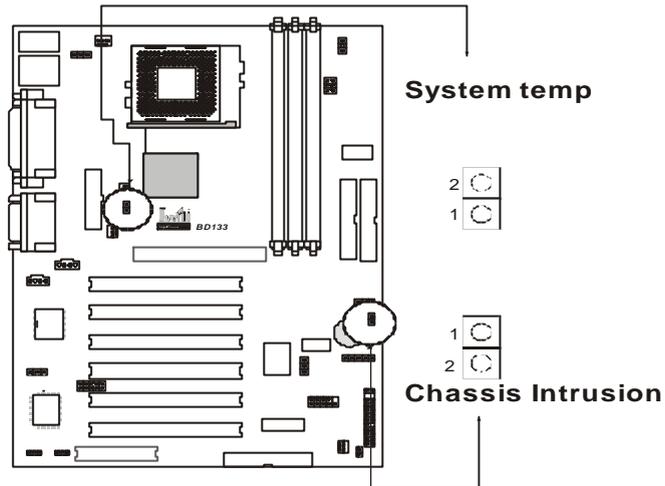
Audio jumper



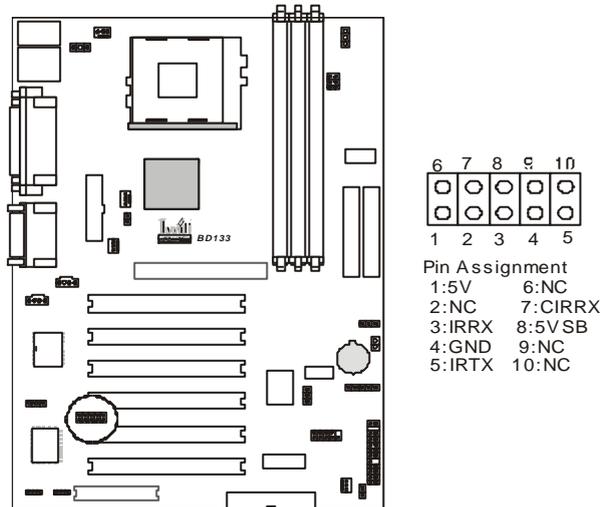
1.4 Connectors



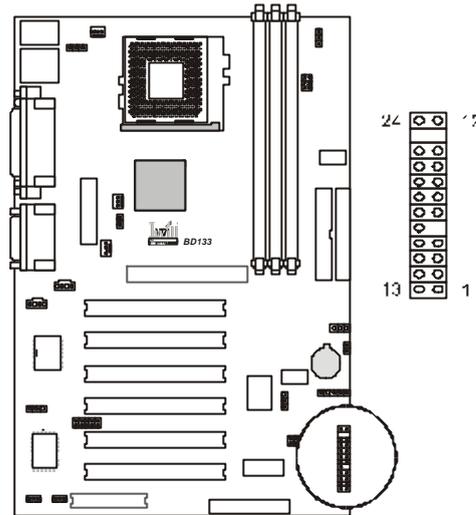
System temp. sensor (Tsys)/Chassis Intrusion (Case)



Infrared connector (IR)

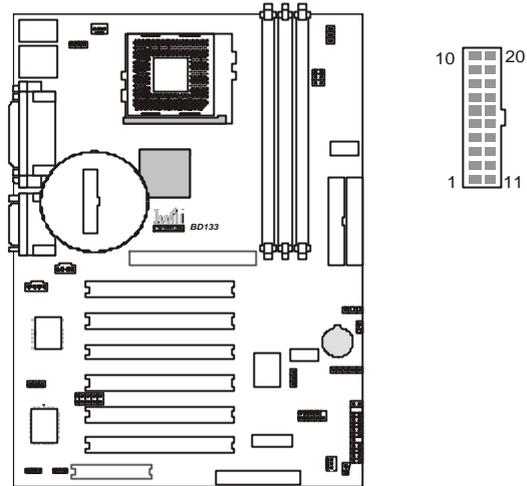


Front panel connector (J43)



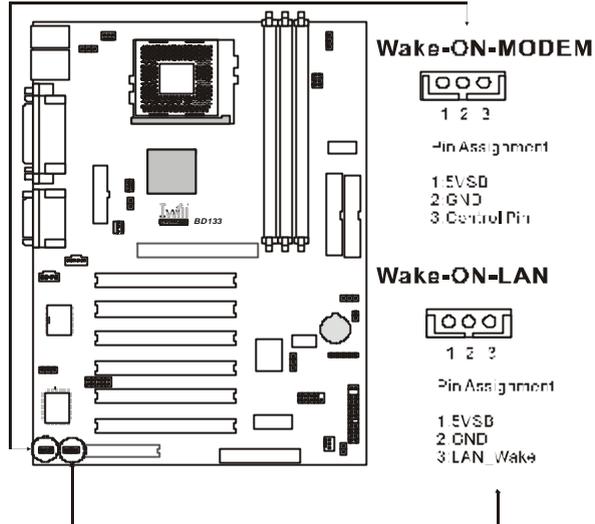
Function	PIN NO.	Definition
PWR_ON (Power/Soft_Off)	12,24	
ACPI(ACPI LED)	21,22	PIN 22:Anode PIN 21:Cathode
A LED(IDE LED)	17,18	PIN 18:Anode PIN 17:Cathode
RST(RESET)	13,14	PIN 14:RST PIN 13:GND
P LED (System PowerLED)	8,9,10	PIN 10:VCC PIN 9:NC PIN 8:GND
KL (Keyboard Lock)	6,7	PIN 7:KL PIN 6:GND
SPKR(Speaker)	1,2,3,4	PIN 4:VCC PIN 3:NC PIN 2:NC PIN 1:SPEAK (BUZZ)

ATX power connector (J37)

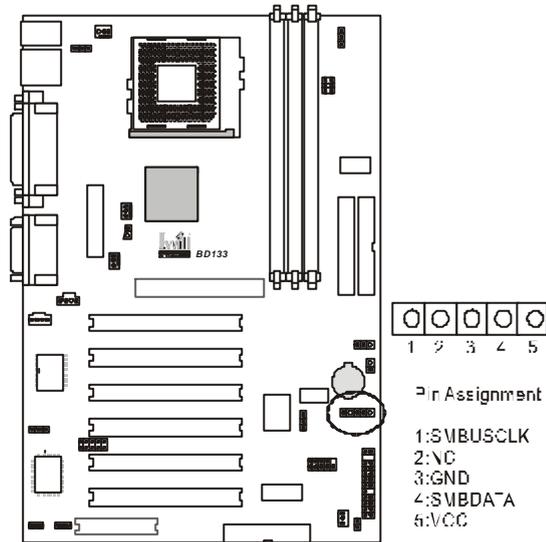


PIN No.	Definition	PIN No	Definition
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	Power Supply On
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	Power Good	18	-5V
9	+5V	19	+5V
10	+12V	20	+5V

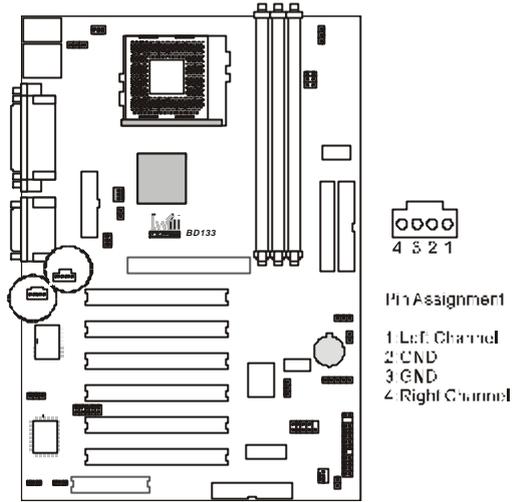
Wake-ON-LAN(WOL) /Wake-ON-MODEM header



SMBus connector

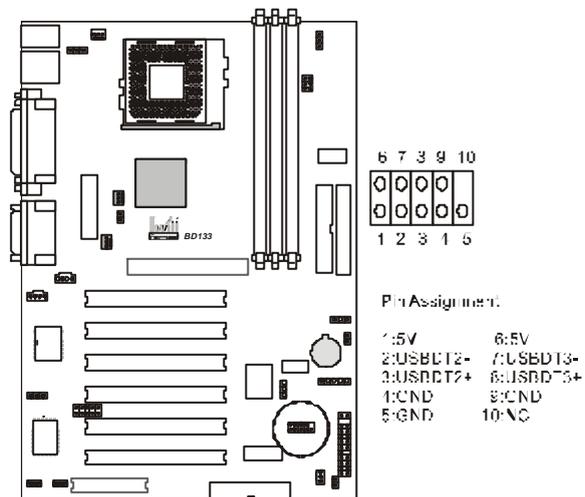


Aux-In connector/CD_IN connector

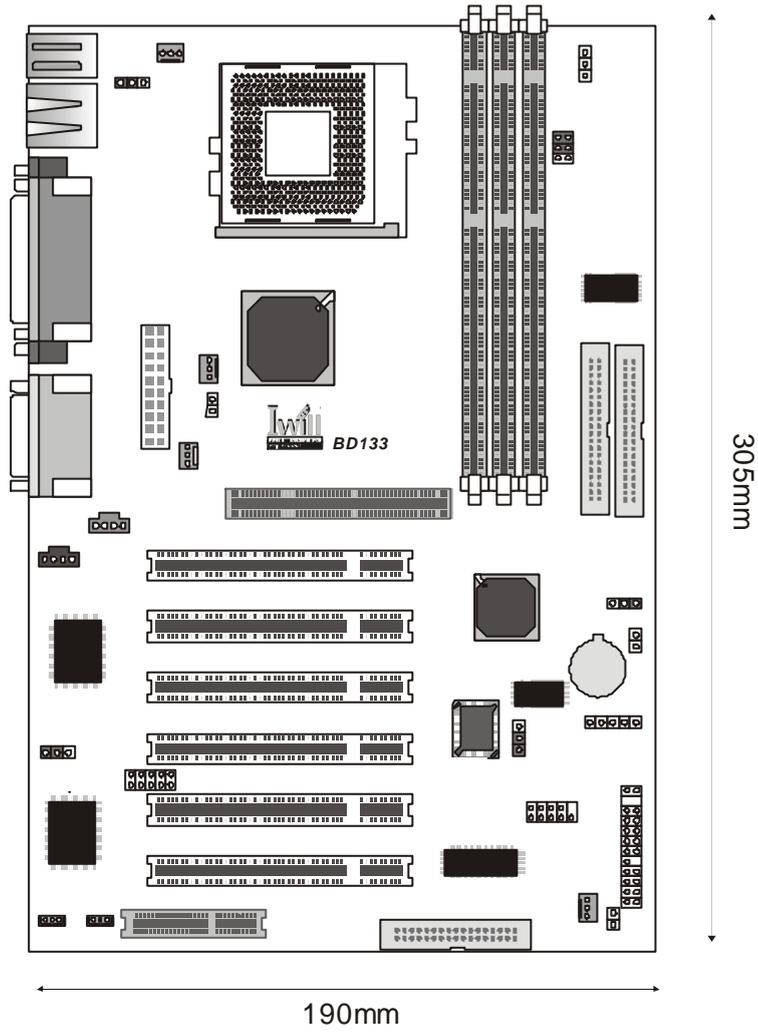


Internal USB connector

There are two internal USB ports. It supports USB riser kit.(optional)

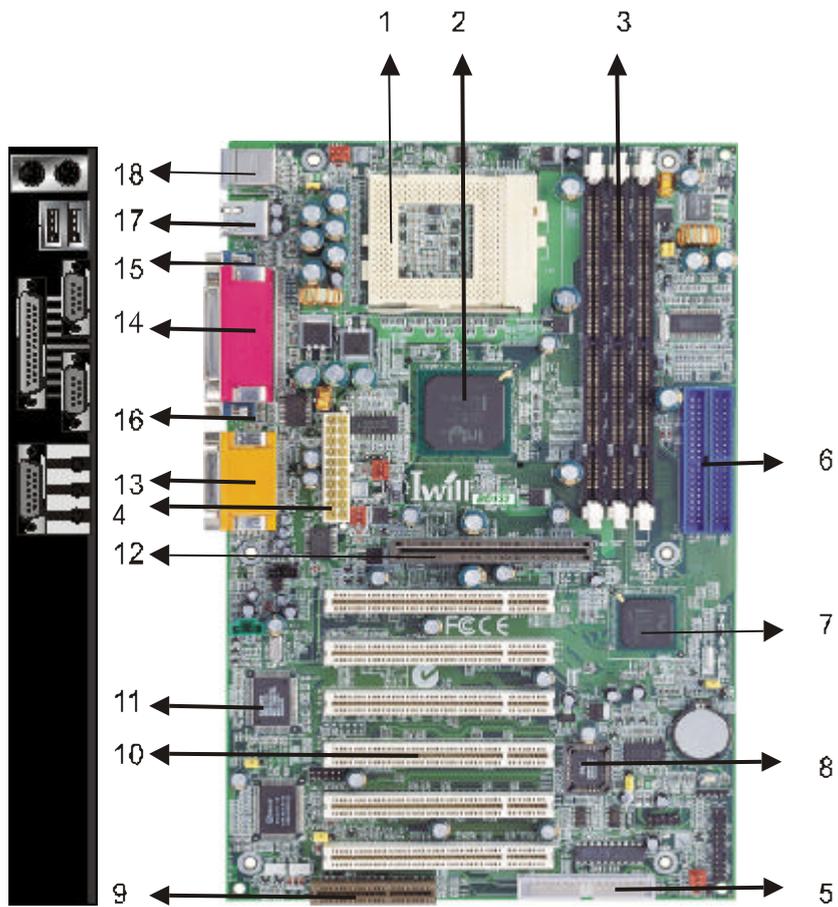


1.5 Form Factor



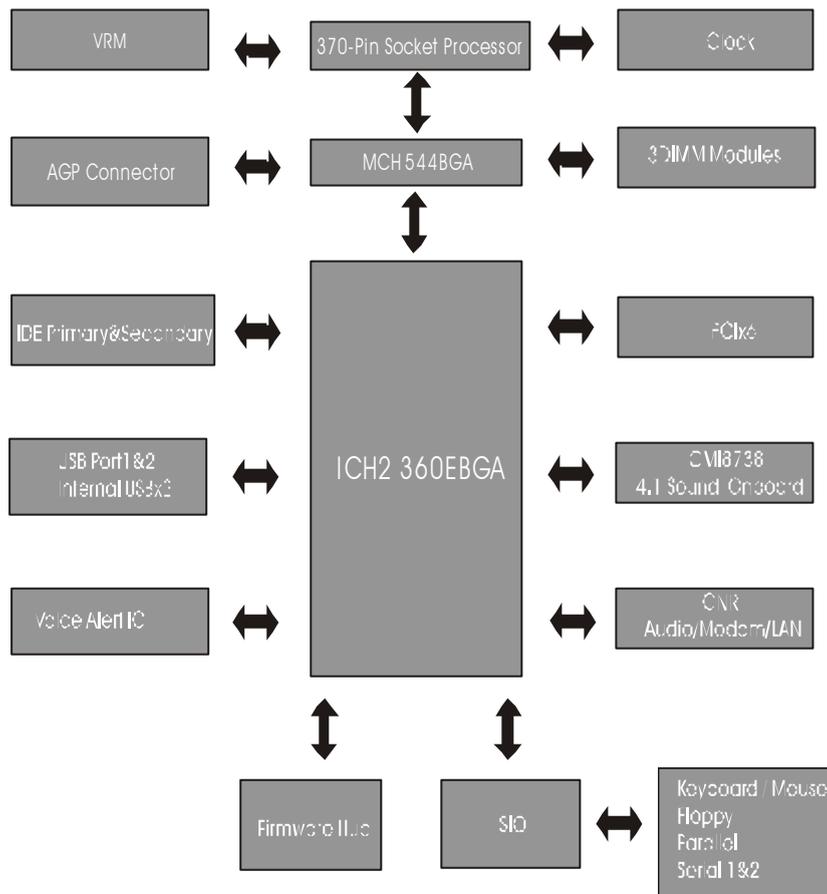
Features

2.1 Motherboard Components Placement



NO.	Description
1	CPU Socket (370 Pin)
2	Intel 815ep chipset
3	DIMM sockets
4	ATX Power connector
5	FDC connector
6	IDE connector
7	Intel ICH2 chipset
8	FWH chipset for programmable BIOS
9	CNR(Communication and Networking Riser) slot
10	PCI slots
11	CMI sound chip
12	AGP slot
13	Joystick, Midi Line In / Out, Microphone In
14	Parallel Port
15	COM1
16	COM2
17	USB
18	PS2 Mouse / Keyboard

2.2 Block Diagram



2.3 Specifications

Processor / (Socket370)

Supports Socket370 processor
Supports 66M/100M/133 MFront Side Bus
Supports Intel Celeron (Katmai, PPGA) CPU from 300A MHz to 533 MHz
Supports Intel Celeron (Cu-128, FCPGA) CPU from 566 MHz to 733 MHz and higher
Supports Intel Pentium III (Cu-256, FCPGA) CPU from 500 MHz to 1GHz and higher
Supports VIA CyrixIII CPU from 433MHz to 533 MHz or higher

CPU Frequency/Voltage Selection

Supports Vcore selection from BIOS (+1.60~+2.05V)
Supports VIO selection from Jumpers (+5%, +10%)
Supports CPU Multiplier selection from BIOS
Supports CPU External Frequency selection from BIOS

Memory

Supports PC100/PC133 SDRAM/ESDRAM
Supports Unbuffered DIMMs
Supports 16M/64M/128M/256MDRAM
Maximum 512MB Memory Capacity

Graphics

Supports Universal AGP 4X / 2X mode AGP Adaptor

General I/O

PCI2.2 compliance
Supports 32-bit/33MHz PCI interface
Supports LPC interface
Supports ATA33/ATA66/ATA100 IDE interface
Supports Floppy interface
Supports 16550AUART interface
Supports ECP/EPP interface
Supports PS2 interface
Supports SIR/FIR/CIR interface
Supports 4XUHCI USB interface

Sound support

C-Media HW Sound controller on board
Supports Game/MIDI interface
Supports Win9X/WinNT/Win2000/WinME.

Management

Supports voltage monitoring
(+12V/-12V/+5V/-5V/Vcore/VTT/MIO/bat/5VSB)
Supports fan control signal (CPU/AUX/SYS1/SYS2)
Supports temperature sensor (CPU/AUX/SYS)
Supports Chassis Intrusion
Supports Power on by LAN/Ext. Modem/Int. Modem/PS2 Keyboard/
PS2 Mouse/RTC/PME
Supports Resume by LAN/Ext. Modem/Int. Modem/PS2 Keyboard/
PS2 Mouse/RTC/PME
Supports Intel LDCM
Supports ACPI
Supports APM
Supports DMI
Supports SMBUS
Supports PnP
Supports BIOS ROM Flash Control
(3-pin jumper provide H/W & S/W protection)
Supports "AC-Loss Recovery"
Supports Manually Assign PCI IRQ
Supports PS2 mouse and PS2 keyboard auto swapping

Power requirement

Onboard DC/DC switching voltage regulator supports VIO up to 10A
current
Supports adjustable MO (Normal/Increase 5%/Increase 10%,
Normal=3.4V, jumper)
Supports 20A/us Icc slew rate
Supports 8A/us VTT slew rate

Board Size

ATX Form Factor 305mm x 190mm

Hardware Setup

3.1 Before Installation

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

Medium size flatblade 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.

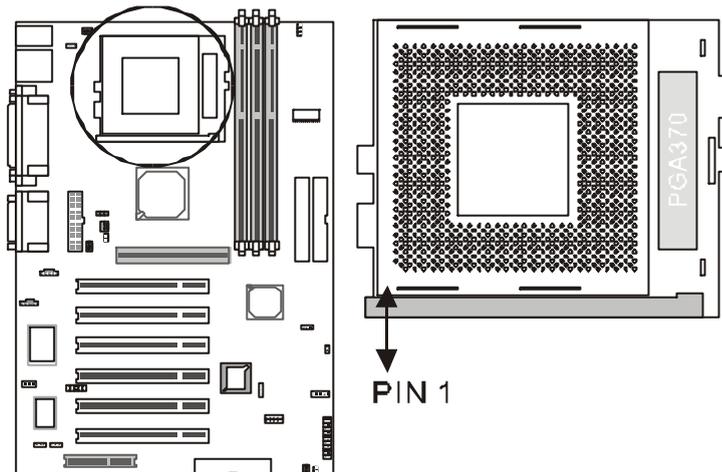
1. Make sure your computer is powered-off whenever you work with inside components.
2. The motherboard, like all other electronic equipment, is sensitive to static. Please take the proper precautions when handling it. If possible, ground yourself by touching a metal table or desk. Keep the board in its 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 screw drivers. Keep both floppy and hard disks apart if disassembled.
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.

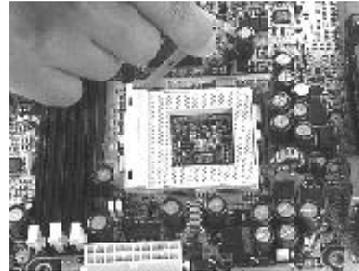
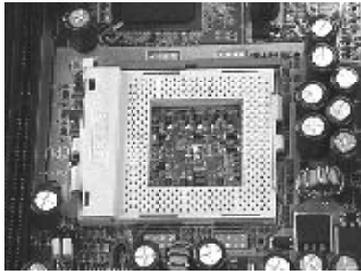


Be sure that there is sufficient air circulation across the processor's heatsink by regularly checking that your CPU fan is working. Without sufficient circulation, the processor could overheat and damage both the processor and the motherboard. You may install an auxiliary fan, if necessary.

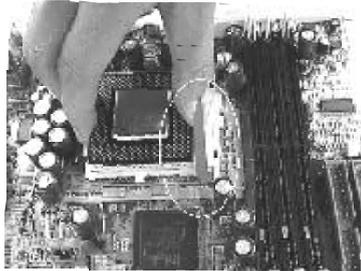


Step1:

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

**Step2:**

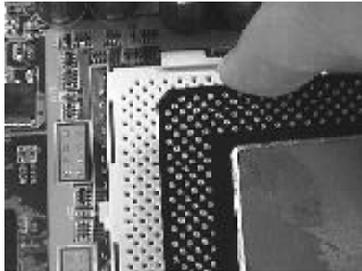
Insert the CPU into the socket. Please keep the lever right angle when inserting CPU.

**Step3:**

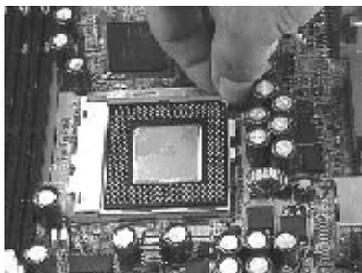
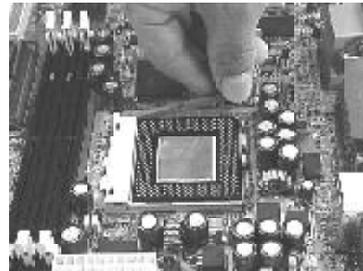
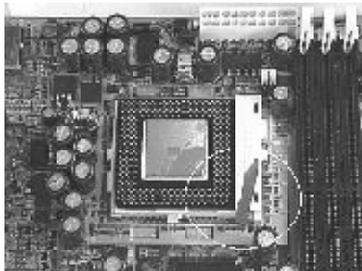
When inserting the CPU please note the correct orientation as shown. The notched corner should point toward the end of the lever.



Because the CPU has a corner pin for two of the four corners, the CPU will only fit in the orientation as shown.



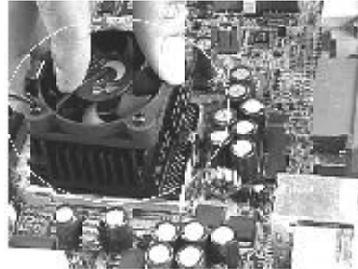
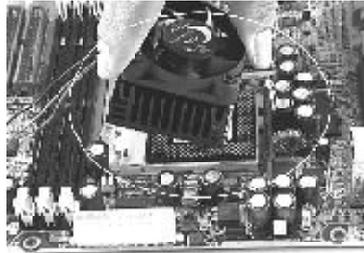
Step4:
Push the lever down to close the socket.



Step 5:
Attach the heatsink onto the CPU.

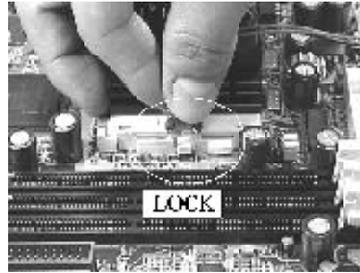
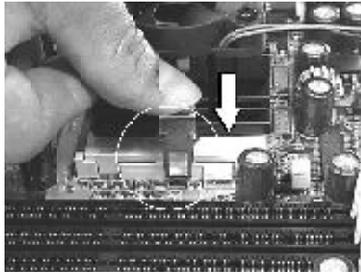


Be careful not to scrape the motherboard when mounting a clampstyle processor fan or else damage may occur to the motherboard.



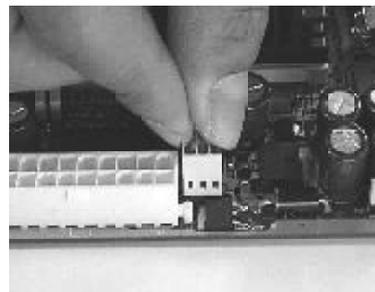
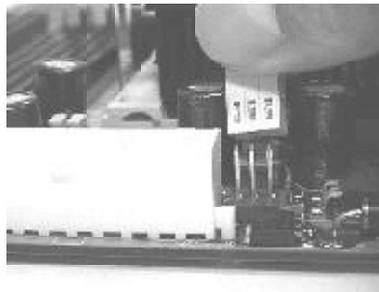
Step6:

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.



NOTE

Don't forget to set the correct Bus Frequency and Multiple(frequency multiple setting is available only on unlocked processors) for your Socket 370 processor or else boot-up may not be possible.

3.3 Install Memory Modules

The motherboard has three Dual Inline Memory Module (DIMM) sockets and supports the maximum memory size up to 512MB. These DIMM sockets only support 3.3V unbuffered SDRAM modules of 16M, 64M, 128M and 256M. The motherboard also supports SPD (Serial Presence Detect) architecture to provide the best choice for performance vs. stability.

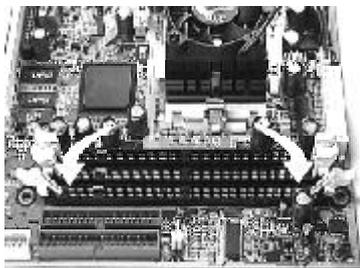


The chipset does not support ECC. However, the ECC memory modules may still be used, but the ECC function will not be available.
No hardware or BIOS setup is required after adding or removing memory modules.

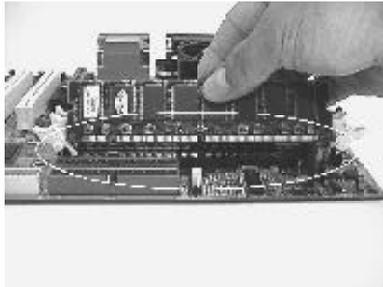
Memory Configuration Table

Location	Support Module Type
DM0	Single-Side Module
	Double-Side Module
DM1	Single-Side Module
	Double-Side Module
DM2	Single-Side Module
	Double-Side Module
	Maximum 512MB System Memory

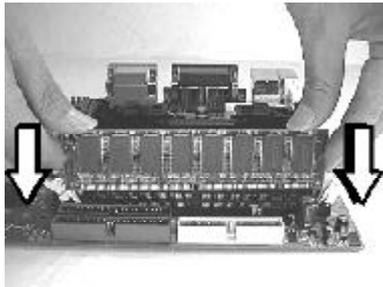
Step 1: Open latches of DIMM socket



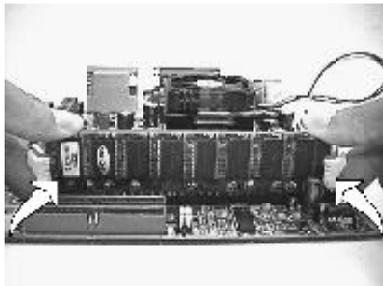
Step 2: Proofread the RAM module to the DIMM Socket.



Step 3: Insert the RAM module into the DIMM socket.

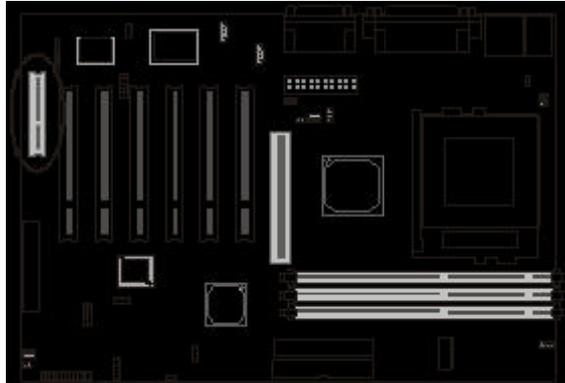


Step 3: Press the latches into the notches of the RAM module.



3.4 CNR

The interface of Communication and Networking Riser (CNR) supports the modem, and local area network (LAN). Motherboard integration of the modem, and LAN subsystems is also problematic, due to the potential for increase noise, which in-turn degrades the performance of each system. The CNR specifically addresses these problems by physical separating these noise-sensitive systems from the noisy environment of the motherboard.



3.5 ATX Power Supply Connector



NOTE

In order to support the power up function other than power/soft-off button, such as Wake-On-LAN, Wake-On-Modem, your ATX power supply must supply at least 720mA 5VSB.



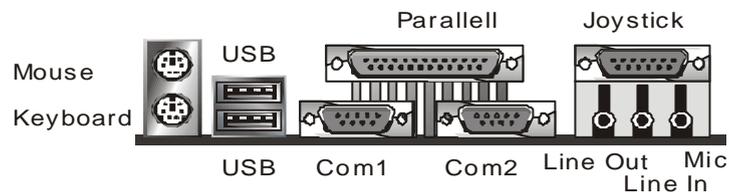
The power LED on the front panel of the chassis will light. After few seconds, the system will then run power-on tests. Some additional messages will appear on the screen during the test. If you do not see anything within 30 seconds from the time you turn on the power, the system may have failed a power-on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

Power off procedures

STEP	Description
1	After all connections are made, close the system case over.
2	Be sure that all switches are off.
3	Connect the power cord into the power supply located on the back of your system case.
4	Connect the power cord 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 <ol style="list-style-type: none"> a. The monitor b. The external devices. c. The computer system.

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	Teal	One serial port is ready for a modem or other serial devices
Parallel 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.



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.

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.

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.**

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

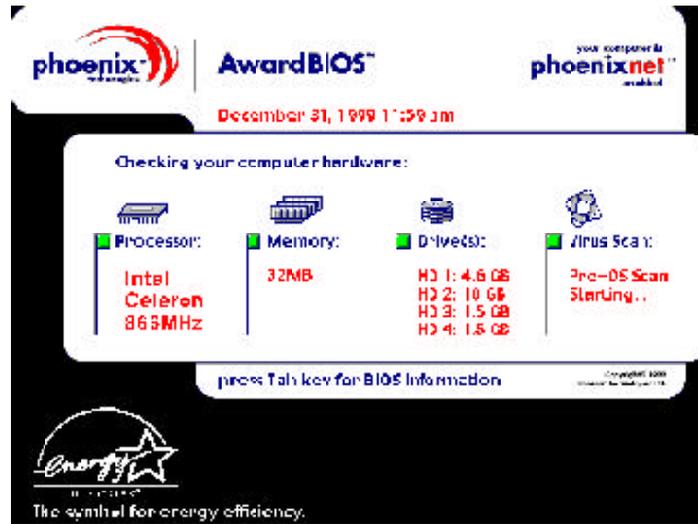
Real JukeBox NetRadio

Save time and money when shopping online

MySimon CNET.com

Best of the Web

Portals: Lycos Snap Excite Yahoo ISPs:AOL



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 partnerny.
5	PhoenixNet and ISP icon appear on desktop.

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

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

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 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 keys simultaneously.

**NOTE**

Generally, the BIOS default settings have been carefully chosen by IWILL's Engineers 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 BIOS if the system works perfectly. **DO NOT** change any setting unless you fully understand what it means.

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

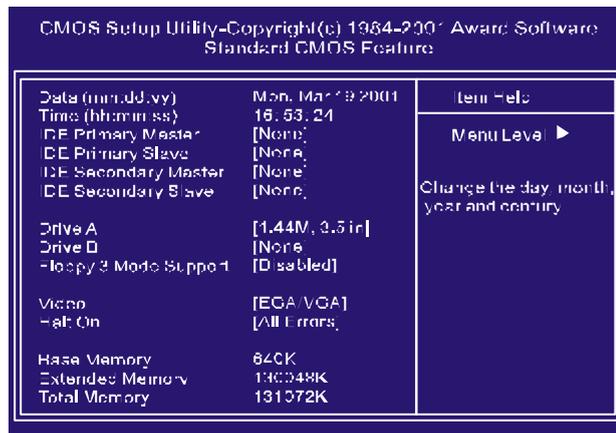
If the system is no longer able to boot after changing the settings, the only way to recover it is to clear the data stored in RTC CMOS. To reset the RTC CMOS data, take the JP1 jumper cap off pins 1-2, place onto pins 2-3, and then place back onto pins 1-2 again. This will return the RTC to the default 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.



4.4 Standard CMOS features



Date

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

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.

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

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

IDE HDD Auto-Detection

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

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

Capacity Auto Display your disk drive size

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 Value)	BIOS specifies translation method automatically.

Cylinders

Set the number of cylinders for this hard disk.

Heads

Set the number of read/write heads

Precomp

Setting a value of 65535 means no hard disk

Sectors

Set the number of sectors per track

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 A default)	A 1.44M floppy drive is connected
2.88M, 3.5 in.	A 2.88M floppy drive is connected

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 connected
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

Video

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

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

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.

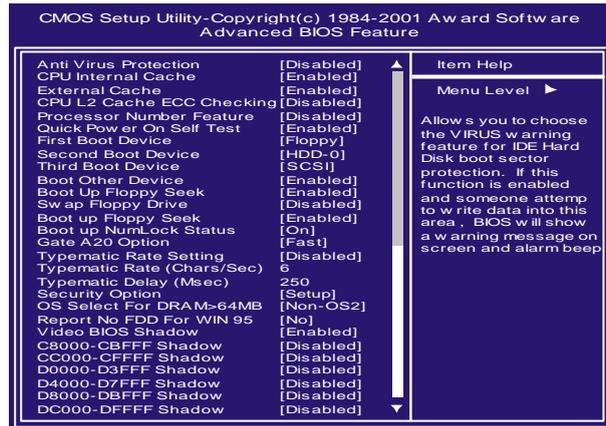
Extended Memory

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.

Total Memory

Displays the total memory available in the system

4.5 Advanced BIOS Features



Anti Virus Protection

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**)]

CPU Internal Cache

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

[Enable(**Default Value**), Disabled]

External Cache

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

[Enable (**Default Value**), Disabled].

CPU L2 Cache ECC Checking

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

[Enable, Disabled(**Default Value**)]

Processor Number Feature

Intel® Pentium® III processors are equipped with a built-in processor serial number for security purposes. When enabled, you allow reading access to this serial number.

[Enable, Disabled(**Default Value**)]

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]

First / Secondary / Third / Boot Other 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, Disabled]

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**)]

Boot Up Floppy Seek

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

[Enable(**Default Value**), Disabled]

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]

Gate 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(Default Value):GateA20 signal supported by core logic]

[Normal: GateA20 signal supported by keyboard controller].

Typematic 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)]

Typematic 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]]

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]

Security Option

This field configures how the system security is handled. It works in 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.]

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)]

Report No FDD For WIN 95

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

[YES, NO(Default Value)]

Video BIOS Shadow

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

[Enable(Default Value),Disabled]

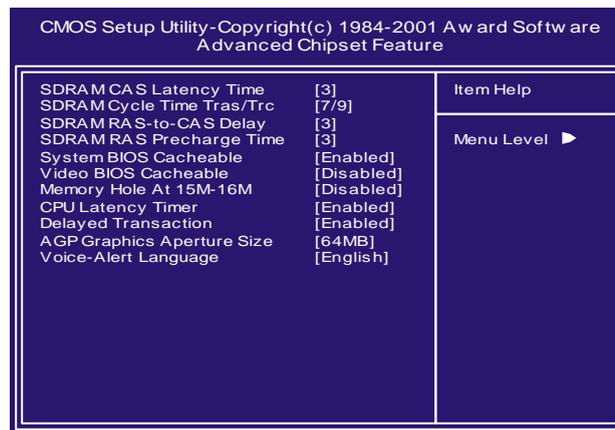
C8000-CBFFF / CC000-CFFFF / D0000-D3FFF / D4000-D7FFF / D8000-DBFFF / DC000-DFFFF Shadow

Setting to enabled, the extended ROM data located at the respective address range will be copied to system memory.

[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. DONOT change the value of any field in this setup page without full understanding.



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.

SDRAM CAS Latency Time

This controls the number of clocks between the SDRAM read command and the time that the data actually becomes available.
[2,3(Default Value)]

SDRAM Cycle Time T_{ras}/T_{rc}

This controls the number of SDRAM clocks used per access cycle.
[5/7,7/9(Default Value)]

SDRAM RAS-to-CAS Delay

This controls the number of clocks between the SDRAM active command and the read / write command.
[2,3(Default Value)]

SDRAM RAS Precharge Time

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. This controls the idle(delay) clocks after issuing a precharge command to the SDRAM.
[2,3(Default Value)]

System BIOS Cacheable

When enabled, accesses to the system BIOS will be cached.
[Enable(Default Value), Disabled]

Video BIOS Cacheable

When enabled, access to the video BIOS will be cached.
[Enable, Disabled(Default Value)]

Memory Hole At 15M-16M

Some add-in cards need to re-map its resource to a block of main memory address range. Any host cycles that match this memory hole are passed on to the add-in cards.

[Enable, Disabled (Default Value)]

CPU Latency Timer

[Enable (Default Value), Disable]

Delayed Transaction

When enabled, the south bridge ICH2 will support the Delayed Transaction mechanism when it is the target of a PCI transaction.

[Enable (Default Value), Disabled]

AGP Graphics Aperture Size

This field configures the main memory size for AGP graphics data used.

[32MB, 64MB (Default Value)]

Voice-Alert Language

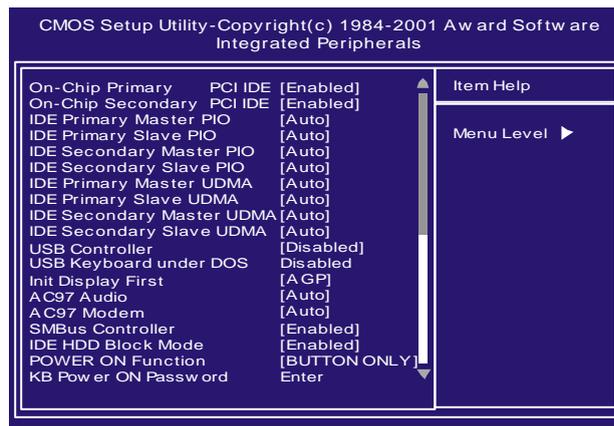
It's a convenient diagnostics system function.

“**WILL Voice Alert**” technology helps users understand the system status.

Select “English” or “Chinese” for alert language.

[English (Default Value), Chinese]

4.7 Integrated Peripherals



On-Chip primary/Secondary PCI IDE

This field enables or disables the onboard IDE controller.
[Enable(Default Value),Disabled]

**IDE Primary Master / Slave PIO
IDE 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

IDE Primary Master / Slave UDMA

IDE Secondary Master / Slave UDMA

If you select Auto, the IDE controller will detect Ultra DMA-capable IDE devices. Depend on the result of negotiation with your HDD.

[Auto(Default Value),Disabled]

USB Controller

Select Enabled if your system contains USB peripherals.

[Enable, Disabled(**Default Value**)]

USB Keyboard under DOS

Select Enabled if you want to use USB keyboard under DOS

[Enable, Disabled(Default Value)]

Init Display First

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

[PCI Slot,AGP(Default Value)]

AC97 Audio/Modem

Auto" allows the motherboard's BIOS to detect whether you are using any AC'97 modem/audio device. If a modem/audio device is detected, the onboard modem/audio controller will be enabled; if no modem/audio device is detected, the onboard modem/audio controller will be disabled. If you want to use different controller cards to connect modem and audio connector, set these fields to disabled".

[Disabled, Auto(Default Value)]

SMBus Controller

[Enable(Default Value), Disable]

IDE HDD Block Mode

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

[Enable, Disabled(Default Value)]

Power-On Function

This field configures the Power-On mode of the system. The Power-On button will not function in this mode.

Passw ord	You can assign a passw ord string through KB Pow er-On Pass w ord field.
Hot KEY	You can assign a hot key through the Hot Key Pow er-On field. Pressing this hot key will pow er-on your system.
Mouse/ Passw ord	Double-Clicking the mouse button or typing the KB pow er-on passw ord will automatically pow er-on your system.
Mouse/Hot KEY	Double-Clicking the mouse button or typing the KB hot-key will pow er-on your system.
Button only (Default Value)	Simply pow er-on your system by pressing the Pow er-On button on the front panel of your PC case.
Keyboard 98	Enables Keyboard 98 function. This function is good only for users of Keyboard 98.

KB Power ON Password

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

To disable a password, bring the cursor to the Enter" field again, then press <Enter>. The computer will display the message, Enter Password Press <Enter>. A message will confirm that the password is disabled.

Hot Key Power-On

This field specifies key selection for the Keyboard-Power-On hot key.

[Ctrl-F1, Ctrl-F2, Ctrl-F3, Ctrl-F4, Ctrl-F5, Ctrl-F6, Ctrl-F7, Ctrl-F8, Ctrl-F9, Ctrl-F10, Ctrl-F11, Ctrl-F12]

PS2 MOUSE Button Power on

The field specifies key selection for PS2 MOUSE Button Power on.

[Left, Right]

Onboard FDC Controller

This field enables or disables the onboard floppy controller.

[Enable(Default Value), Disabled]

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

COM2 Mode Select

This field must be configured in order to use the infrared connector, which supports infrared wireless transmitting and receiving of data between devices when using the appropriate application software.

RxD, TxD Active for IrDA and ASKIR functions

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]

IR Transmission delay for IrDA and ASKIR functions

When setting the field to either IrDA or ASKIR, you must select whether or not you require a delay between IR transmissions.

[Enable(Default Value),Disabled]

IR Duplex Mode

[Full,Half(Default Value)]

Use IR Pins

[RxD2,TxD2,IR-Rx2Tx2(Default Value)]

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

Parallel 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.

[SPP(Default Value),EPP,ECP ECP+EPP]

EPP 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 your peripheral document before selecting field.

[EPP1.7:Use EPP 1.7 protocol]

EPP1.9 (Default Value):Use EPP 1.9 protocol]

ECP Mode Use DMA

When the Parallel Port Mode field is configured as ECP, ECP+EPP mode, 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]

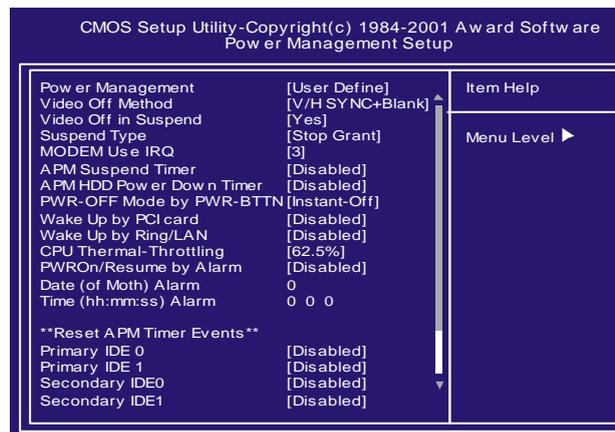
AC PWR Loss Recovery

The field configures the system activity after experiencing a power failure.

[Former-Sts: System returns to former status prior to AC loss events]

[Off(Default Value: System remains off after AC loss event.)]

4.8 Power Management Setup



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.

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 enters suspend 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.

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 only.
DPMS	Initial display power management signaling with DPMS.

Video Off In Suspend

This determines the manner in which the monitor is blanked.

[NO(Default Value),Yes]

Suspend Type

Select the Suspend Type.

[PwrON Suspend, Stop Grant (Default Value)]

MODEM Use IRQ

This determines the IRQ in which the MODEM can use.

[3(Default Value),4,5,7,9,10,11,NA]

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, 8Min, 12Min, 20Min, 30Min, 40Min, 1Hour, Disable (**Default Value**)

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.

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

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

Wake up by PCI card

Enabled, Disabled (**Default Value**)

Wake up by RING/LAN

When Wake up by LAN function is enabled, the PC can power-on or “wake up” through LAN (Local Area Network).

When Wake up by RING function is enabled, the PC can power-on through an external modem connected to your PC.

[Enabled, Disabled (**Default Value**)]

CPU Thermal throttling

87.5%	Keep 87.5% of CPUs full speed performance
75.0%	Keep 75.0% of CPUs full speed performance
62.5% (Default Vaule)	Keep 62.5% of CPUs full speed performance
50.0%	Keep 50.0% of CPUs full speed performance
37.5%	Keep 37.5% of CPUs full speed performance
25.0%	Keep 25.0% of CPUs full speed performance
12.5%	Keep 12.5% of CPUs full speed performance

PowerOn/Resume by Alarm

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

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

Reset APM Timer Events

This field enables the system to detect activity, and restart the timer of the power-saving mode.

Primary IDE 0

If enabled, timer restarts whenever the master disk of the primary IDE channel is active.

[Enabled, Disabled (**Default Value**)]

Primary IDE 1

If enabled, timer restarts whenever the slave disk of the primary IDE channel is active.

[Enabled, Disabled (**Default Value**)]

Secondary IDE 0

If enabled, timer restarts whenever the master disk of the secondary IDE channel is active.

[Enabled, Disabled (**Default Value**)]

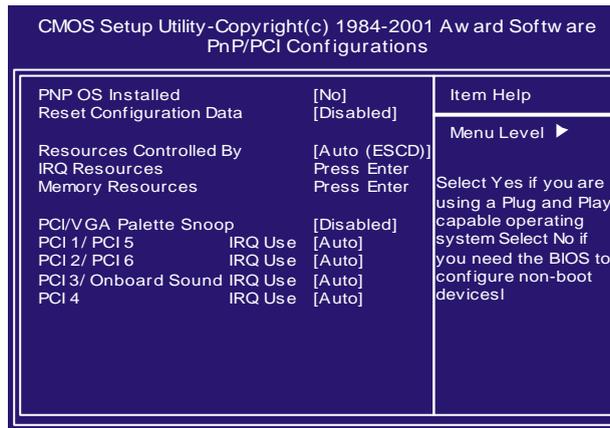
Secondary IDE 1

If enabled, timer restarts whenever the slave disk of the secondary IDE channel is active.

[Enabled, Disabled (**Default Value**)]

FDD, COM, LPT PORT/PCI IRQ#

[Disabled (Default value), Enabled]

4.9 PnP/ PCI Configurations**PNP OS Installed**

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

[Yes, No (Default Value)]

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.

[Enabled, Disabled (Default Value)]

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 absolutely nothing unless you are using a Plug and Play operating system such as Windows 98/95/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.

IRQ Resources

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

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

[PCI Device Reserved (Default Value)]

DMA Resources

This sub menu can let you control the memory resource.

ReservedMemoryBase

Reserved a low memory for the legacy device (non-PnP device).

[C800,CC00,D000,D400,D800,DC00,N/A (Default Value)]

ReservedMemoryLength

Reserved a low memory length for the legacy device (non-PnP device).

[8K (Default Value), 16K, 32K, 64K]

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.

PCI 1 IRQ, PCI 2 IRQ, PCI 3/Onboard Sound IRQ,
PCI 4 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) 1984-2001 Award Software		Item Help
PC Health Status		Menu Level ▶
CPU Warning Temperature	[Disabled]	
Current CPU Temperature	45 C/113 F	
Current SYS Temperature	0 C/ 32 F	
Current SYS Temperature	0 C/ 32 F	
Current CPUFAN Speed	4687 RPM	
Current SYSFAN1 Speed	0 RPM	
Current SYSFAN2 Speed	0 RPM	
Vcore_	1.68 V	
VTT_	1.48 V	
+3.3V	3.40V	
+ 5V	5.08V	
+12V	12.09V	
- 12V	12.11V	
- 5V	5.20V	
VBAT (V)	3.10V	
5VSB (V)	4.92V	
Shut down Temperature	[Disabled]	

4.11 Iwill Smart Setting

CMOS Setup Utility-Copyright(c) 1984-2001 Award Software		Item Help
IWILL Smart Setting		Menu Level ▶
The CPU Is	Pentium III - MMX	
The CPU ID Is	0681	
The CPU Expect Speed Is	133x 4.5 MHz	
CPU MicroCode Updated to	0011	
Spread Spectrum	[Disable]	
== IWILL Micro Stepping ==		
CPU Clock	[66]	
CPU Clock Ratio	[X 3.0]	
x DRAM Clock	[By SPD]	
CPU Vcore Setting	[Auto]	
BIOS-ROM Flash Protect	[Non-Flash]	

Iwill MicroStepping

MicroStepping

Microstepping is Iwill's another step forward to provides users a fuss free CPU frequency set up procedure. It contains two main functions, AutoDetecting CPUs speed and Micro Adjustable CPU FSB speed.

Auto Detecting CPU speed:

IWILL MicroStepping will auto detect the CPU's factory multiplier setting and CPU FSB to the factory default. This function provides a "fuss free" CPU setup process for the general users.

Micro Adjustable CPU FSB speed:

IWILL provides a user friendly overclocking function that allows users to experience the fun of overclocking. This function allows user to adjust CPU FSB by 1MHz interval. This is particularly useful when user wants to extract the most out of the purchased CPU. For example: you select from 133, 134, 135, 136, 137, 138MHz and up to the maximum speed that the system can sustained.

In the time should overclocking failed, MicroStepping will auto detects the CPU's factory multiplier setting and set the CPU FSB to default 66MHz, to protect the CPU installed.

SpreadSpectrum

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

[Enabled, Disabled(Default Value)]

BIOS-ROM Flash Protect

The main function of BIOS-ROM Flash Protect prevents the virus of computers to destroy the system of computers.

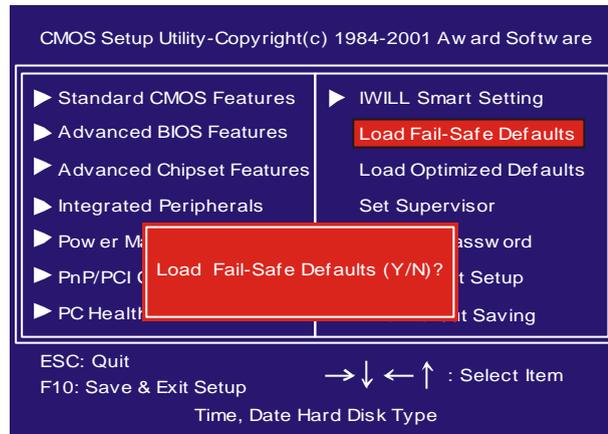
When JP16 is set on 1-2, the Flash ROM protection mode will be controlled by this field.

[Non-Flash: By BIOS]

[Flashable: By BIOS]

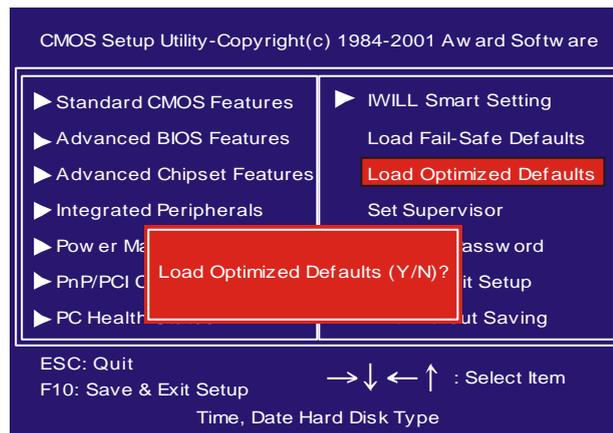
4.12 Load Fail Safe Defaults

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.

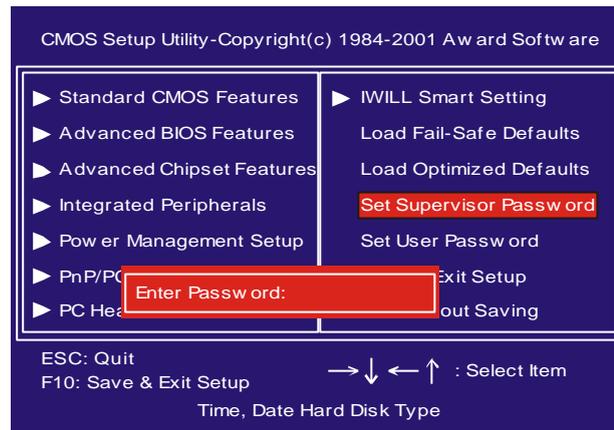


4.13 Load Optimized Defaults

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



4.14 Set Supervisor/ User Password Setting



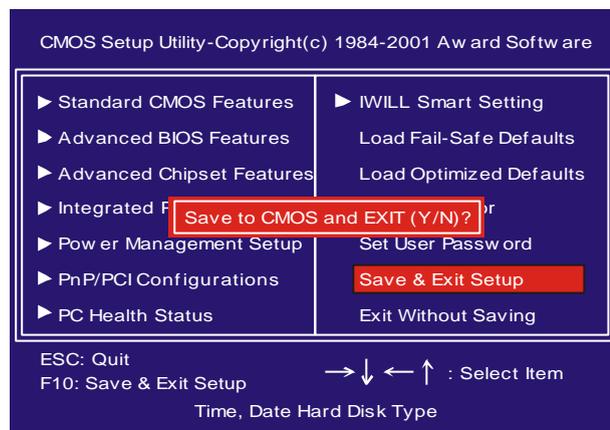
These setup pages are used for password setting. When a password has been enabled and the Security Option field is set as Setup, you will be required to enter the password every time you try to enter BIOS Setup program. This prevents an unauthorized person from changing any part of your system configuration.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

If 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 on "Confirm 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.

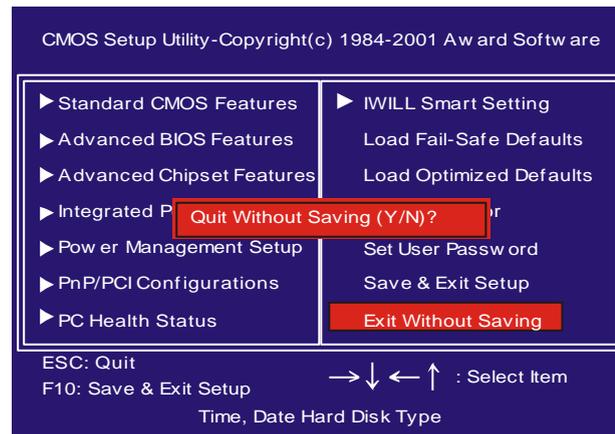
4.15 Save & Exit Setup

Saves current CMOS value and exit BIOS setup program.



4.16 Exit Without Saving

Abandons all CMOS value changes and exits BIOS setup program.



On board Audio

The on board 4.1 channel PCIAudio 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®. Besides being legacy audio SB16® compatible and providing professional SPDIF IN/OUT non-distortion digital interface, it also supports MPU-401 interface, etc. We provide line-in/rear speaker jack, microphone jack, audio output jack, SPDIF/OUT header, and 15pin D-SUB multiplexed joystick/MIDI connector.

Trademark Acknowledgments

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5.1 Audio Features

Special Feature

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 3.1 / 95 / 98 and Windows NT 4.0.MPU-401 Game/Midi port and legacy audio SB16 support.Downloadable Wave Table Synthesizer, supports Direct Music®

Digital Audio (SPDIF IN/OUT) (SPDIF version only)

Up to 24 bit stereo 44KHz sampling rate voice playback/recording.Full duplex playback and recording, 120dB audio quality measured.Auto detectable SPDIF/IN signal level from 0.5V to 5V

Stereo Mixer and FM Music Synthesizer

Stereo analog mixing from CD-Audio, Line-inStereo digital mixing from Voice, FMWave-table, Digital CD-AudioMono mixing from MIC and software adjustable volumeOPL3 FM synthesizer (4 operators)Up to 15 melody sounds and 5 rhythm sounds (20 voices)

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

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: <i>INSTALL [Enter]</i>
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.

Win 95/98 Installation

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

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	Power off your system, install the audio cable, speaker, microphone, and insert the Will Power Installer CD into the CD-ROM drive.
STEP 2	Turn on the computer, and enter the Microsoft Windows 95 / 98.
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 LocationsK" 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 automatically, After a while, the system will finish the installation includes the following device drivers. CMI8738/C3DX (SX) PCI Audio Device CMI8738/C3DX (SX) PCI Joystick 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 system, and reboot your system.

STEP 1	Click start button.
STEP 2	Select run item.
STEP 3	Find UNSTDRV.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.

Windows NT4.0 Installation

We recommend that you have Microsoft Windows NT installed, and remove any existing 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

Introduction

By means of a user-friendly interface (as easy as operating your home stereosystem), this PCI audio rack provides you with the control over your PC's audio functions, including the advantage of four speakers mode enable/disable, and perfect digital sound (SPDIF version ONLY) input / output. control.



About Audio Rack

The Audio Rack is consisted of several major components.

ControlCenter

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



MIDIPlayer

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

MP3/Wave Player

Records and plays digital audio (mp3/w ave) files. Allow s you to create w ave file playlists, and playback the w ave files.

CDPlayer

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

System Mixer

Controls the volume level of your audio inputs and outputs

Showing or Hiding Audio Rack Components

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

MIDI Player, Wave Player, and CD Player



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

Sel (or Trk) field:

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

Current File or Track:

The name of the current MIDI file, w ave audio file, or CD track.

Total Length field:

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

Current Time field:

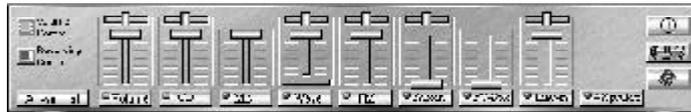
Displays the current time of files or tracks in minutes and seconds when playback or recording.



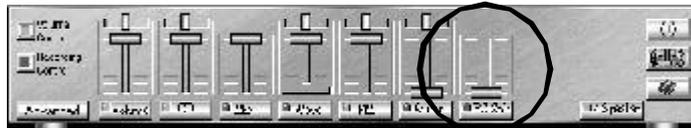
Please refer to the help screen or more detail button function descriptions.
(click on help button on the player)

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.*



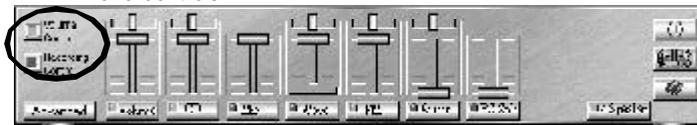
Mixer panel while the four speakers mode is enabled.



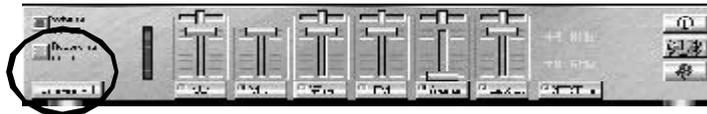
Mixer panel while the four speakers mode is disabled.

Volume Control:

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

**Recording Control:**

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



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 PC's audio hardware.

i 4SPK:

Turn on or turn off the Rear speakers effect.

j Surround:

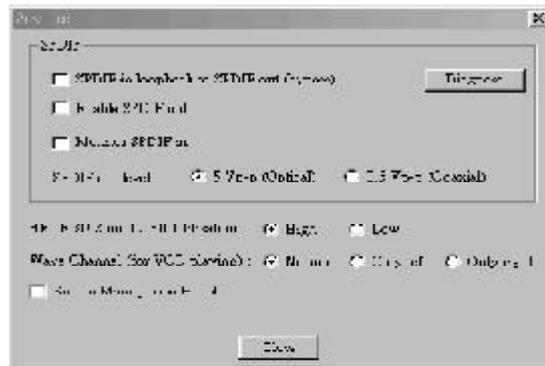
Turn on or turn off the 3D surround sound effect.

k SPDIF-in:

Turn on or turn off the SPDIF digital signal input. **(SPDIF version ONLY)**

l Advanced:

Check the SPDIF status **(SPDIF version ONLY)**, HRTF 3D sound CPU Utilization, turn on the Microphone Booster.



Mute Buttons:

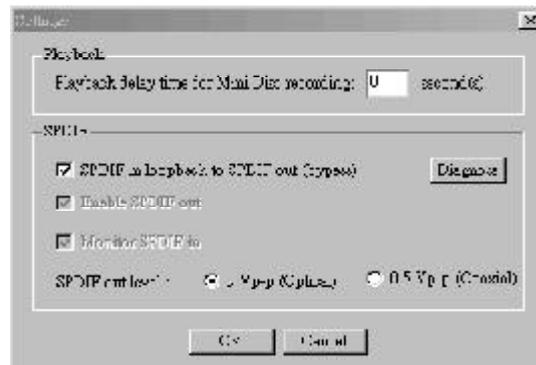
Toggle between muting and enabling the signal. A button with a lit LED is enabled, and when it is not lit, it means it is mute. Several output signals can usually be enabled at once.

MP3 Player

MP3 player can play both wave files and MP3 files.



MP3 player while the loop function enabled.



The settings' window when one of the SPDIF functions is enabled. (SPDIF version ONLY)

The 4 Speakers System

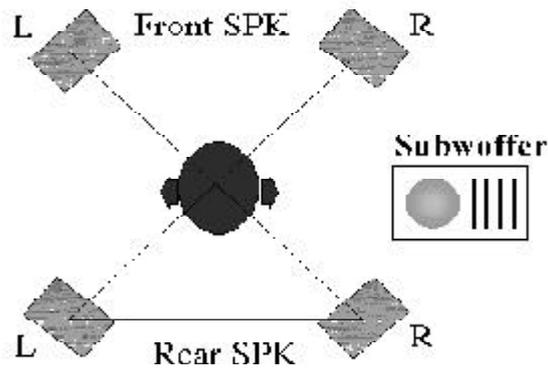
The on board audio on Intel motherboards provide 2 wave channels (front/rear + subwoofer), known as the 4.1 speakers system. When games or application programs via DirectSound® 3D or A3D® interface locate the sound sources to the listener's back, the two rear speakers will work to enhance the rear audio 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:

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.

The positions of the speakers

Put your speakers the way the following picture suggests, to deliver the best audio result.



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.

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.

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.

What's inside Power Installer CD for this motherboard

Driver	Software Utility
<u>Intel INF Utility</u>	<u>PC-Cillin Anti-Virus</u>
<u>Security Driver</u>	<u>Hardware Monitor Utility</u>
<u>Award Patch File</u>	<u>Adobe Acrobat Reader</u>
<u>Softwrdr Audio Driver</u>	Make Driver
<u>User's Manual</u>	Exit

6.2 How to read the manual

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.

How to read the 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 Making driver diskette

Before installing O.S.

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-ROM, 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 key during boot sequence to enter CMOS Setup Utility .
STEP 3	Use arrow keys to select ADVANCED BIOS FEATURES on the menu, then press Enter .
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 diskettes.
STEP 10	Make the desired driver diskettes according to the instructions displayed on screen.

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**How to install Intel INF Utility**

You may just click on the **Intel INF Utility** shown on screen that needs to be installed, then follow the prompts to complete setup.

How to install Security Driver

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

How to install Award Patch File

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

How to install Software Audio Driver

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

6.5 Install Software Utility**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.

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.

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.