

Safety and Regulatory Information

Notice for the USA

FCC Part 15: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, this notice is not a guarantee that interference will not occur in a particular installation.

CAUTION: To comply with the limits for the class B device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class B limits. All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

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Chapter 1

Motherboard Feature Introduction

Congratulations on purchasing your Pro-Motherboard – **BIZ1Aseries**. The **BIZ1Aseries** motherboard will increase your computer system into a full-function position and provide your system with stable performance.

The **BIZ1Aseries** motherboard is an ATX board measuring 304mm by 170mm and uses a 4-layer printed circuit board. This board features a SLOT 1 processor socket. This socket can be installed with the new generation of Intel the PentiumII processors.

The **BIZ1Aseries** motherboard supports a system bus of 66 and 100 MHz that permits the use of inexpensive 66 MHz memory chips or high-performance 100 MHz memory chips. Two DIMM sockets are provided, for a maximum memory capacity of 256 MB. It is also ready for PC99 – the color-coding of connectors. By the way, when you setup up your PC will be no confused and obvious. The motherboard has the Intel chipset supports an AGP graphics card. Four PCI slots and two ISA slots are provided for system expansion. An anti-virus function is built-in in the BIOS component. This protects the system from boot viruses and ensures that a clean environment is maintained at all times. This is a powerful platform that leverages the low-cost/high-performance features of the new generation Intel ZX chipsets. You will be able to feel for yourself how convenient it is when you use it.

1.1 ABOUT THE MANUAL

The manual consist of the following chapters:

- CH1. Motherboard feature introduction – Introduce the features of **BIZ1Aseries** and the checklist of items that are shipped with the package.

CH2. Setup guide – Let you learn how to install the motherboard and get your system up and running.

CH3. Award BIOS setup – Configure the BIOS of motherboard for optimum performance.

CH4. Software setup – Let you learn how to install the software drivers and support programs that are provided with this motherboard.

1.2 SPECIFICATIONS

System Chipset	Intel 82440ZX PCIsset (82443ZX + 82371EB) w/AGP solution
Processor	Single Slot 1 support Intel Pentium®II processor 233Mhz ~ 450Mhz. Intel Pentium®III processor 450Mhz ~ 550Mhz. Intel Celeron processor at 266-366Mhz
Bus Architecture	AGP/PCI/ISA
Clock Generator	66.8, 68.5, 75, 83.3, 100, *103, *112, and *133Mhz (* For your reference only)
DRAM Modules	168 pin DIMMs x 2. Support 8MB to 256MB SDRAM.
BIOS	2MB Award PnP BIOS with enhanced ACPI feature for PC98 compliance. Supports 120MB ATAPI floppy disk. Supports ZIP disk drive. Supports multi-boot from IDE,SCSI,CD-ROM and FDD. Supports software clock control. Supports Trend™ChipAway AntiVirus. Supports HDD S.M.A.R.T.

BIZ1A*series*

On Board I/O	1 Floppy port (up to 2.88MB, 3 mode floppy supported & LS-120). 2 Serial ports, 1 Parallel port (SPP/EPP/ECP). 2 USB, 1 PS/2 mouse, 1 PS/2 keyboard. 1 IrDA.
On Board IDE Port	Dual Ultra DMA/33 IDE ports support greater than 8.4GB HDD. ATAPI IDE CD-ROM & LS-120.
Expansion slot	1 x 32-bit AGP slot. 4 x 32-bit PCI slots. 2 x 16-bit ISA slots.
PC99 connectors	Ready for PC99 color connectors
I/O Chip	Winbond super I/O W83977TF-AW.
Other Feature	Supports keyboard & mouse power on feature with ATX power. Onboard Creative® SB-Link header. CPU & power supply temperature header. (Optional) Wake-up On LAN header.
Board Size	ATX form factor Size : 304mm x 170mm (12" x 6.7")

1.3 COLOR CODING FOR PC99 CONNECTORS

The color scheme is a careful balance of a number of criteria aimed at making the PC easier for the consumer to understand and set up. The color-coding of connectors has proven to be an effective tactic in helping end users associate the peripheral connector with its mate on either the CPU or monitor. It is expected that standard industry icons and possibly the physical shape of the connector overloads themselves can also contribute to the "obviousness" of a first-time set up.

PC99 Connector Guidelines

The following are the primary criteria established by the design team to make the selection of the colors:

1. PCs are often set up in low light conditions. Therefore, use vibrant colors wherever possible.
2. About 4% of people have some level of red/green color blindness. Avoid using red and green together in situations where shape, size, or labeling can be confused.
3. With older age, the eye's cornea may yellow. For this reason, similar connectors should use colors that are different in ways other than their yellow content.
4. Color selection should be considerate of cultural, social, and psychological meaning. In some cases, related industries have established a certain level of standardization of color coding (for example, red/white/yellow in consumer electronics) that should also be considered when making the final selection.
5. Colors should be easily discernable when used on small labels on the backside of a CPU.
6. Try not to duplicate colors, even if connectors are obviously different, for the sake of communication in user assistance collateral or phone support calls.
7. Be sensitive to the overall impression of a personal computer and its aesthetic intentions. Realize these colors will be used on PCs with housings that could range in color value from almost white to black.

PC99 color connector definition

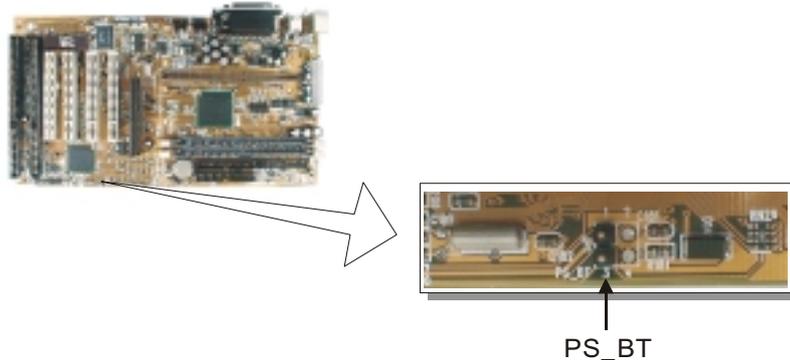
Connector	Color	Panton
Analog VGA	Blue	661C
Audio line in	Light blue	284C
Audio line out	Lime	577C
Digital monitor	White	
IEEE 1394	Grey	424C
Microphone	Pink	701C
MIDI/Gameport	Gold	131C
Parallel	Burgundy	235C
PS/2-compatible keyboard	Purple	2715C
PS/2-compatible mouse	Green	3395C
Serial	Teal or Turquoise	322C
Speaker out/subwoofer	Orange	157C
Right-to-left speaker	Brown	4645C
USB	Black	426C
Video out	Yellow	123C
SCSI, network, telephone modem, and so on	None	

1.4 POWER OFF CONTROL SOFTWARE

The motherboard design supports the software power off Control feature through the SMI code in the BIOS under Win98/95 operating system environment. It is an ATX form factor, so you should use ATX power supply.

First, connect the power switch cable (provided by the ATX/AT case Supplier) to the connector [PS_BT] on the motherboard (Please refer to the following illustration). In the BIOS screen of “POWER MANAGEMENT SETUP”, choose “User Defined”(or min power saving or Max power saving) in “POWER MANAGEMENT” and choose “Yes” in “PM Control by APM”.

Note: BIOS Setup. Please refer the “Chapter 3 Award BIOS Setup”



In Windows 98/95, under the “SHUT DOWN” option, the computer’s power will switch off automatically and put the PC in a suspend mode. A blinking power light will indicate this. To restart the system, simply press the Power Button.

1.5 PACKAGING CHECK LIST

The Motherboard comes securely packed in a gift box and shipping carton. If any of the above items are missing or damaged, please contact your supplier.

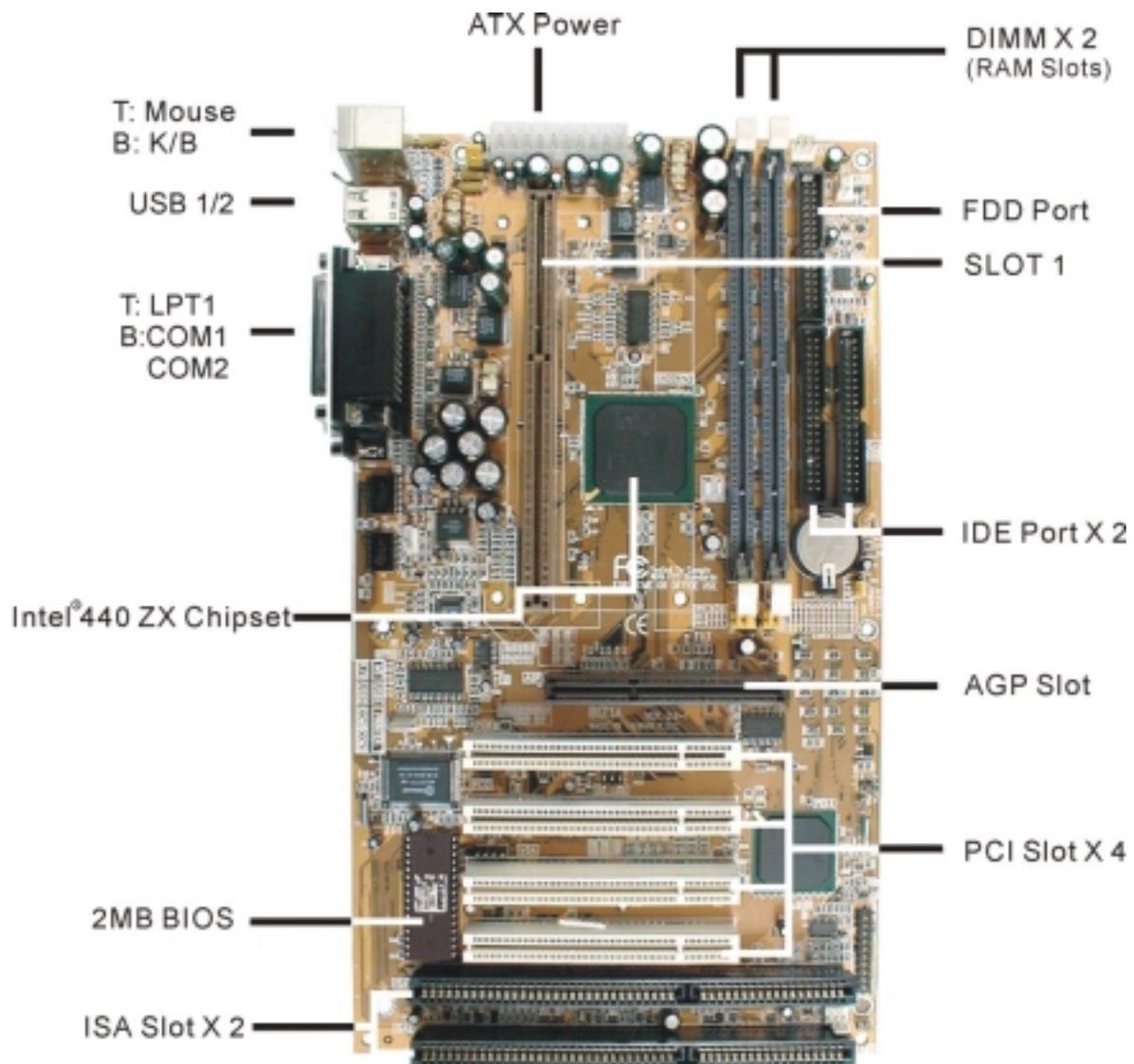
The motherboard contains:

Q’TY		Description
1	Motherboard	: With Intel ZX chipset
1	Driver	: CD-Title w/Installation label <ul style="list-style-type: none">• PC-Cillin Software• Motherboard Bus master Driver• W83781D Temperature sensor Driver
1	Resister	: For Temperature Sensor (Optional)
1	Cable	: IDE Cable
1	Cable	: Floppy Cable
1	User’ s guide	: PC-Cillin
1	Manual	: User’ s manual

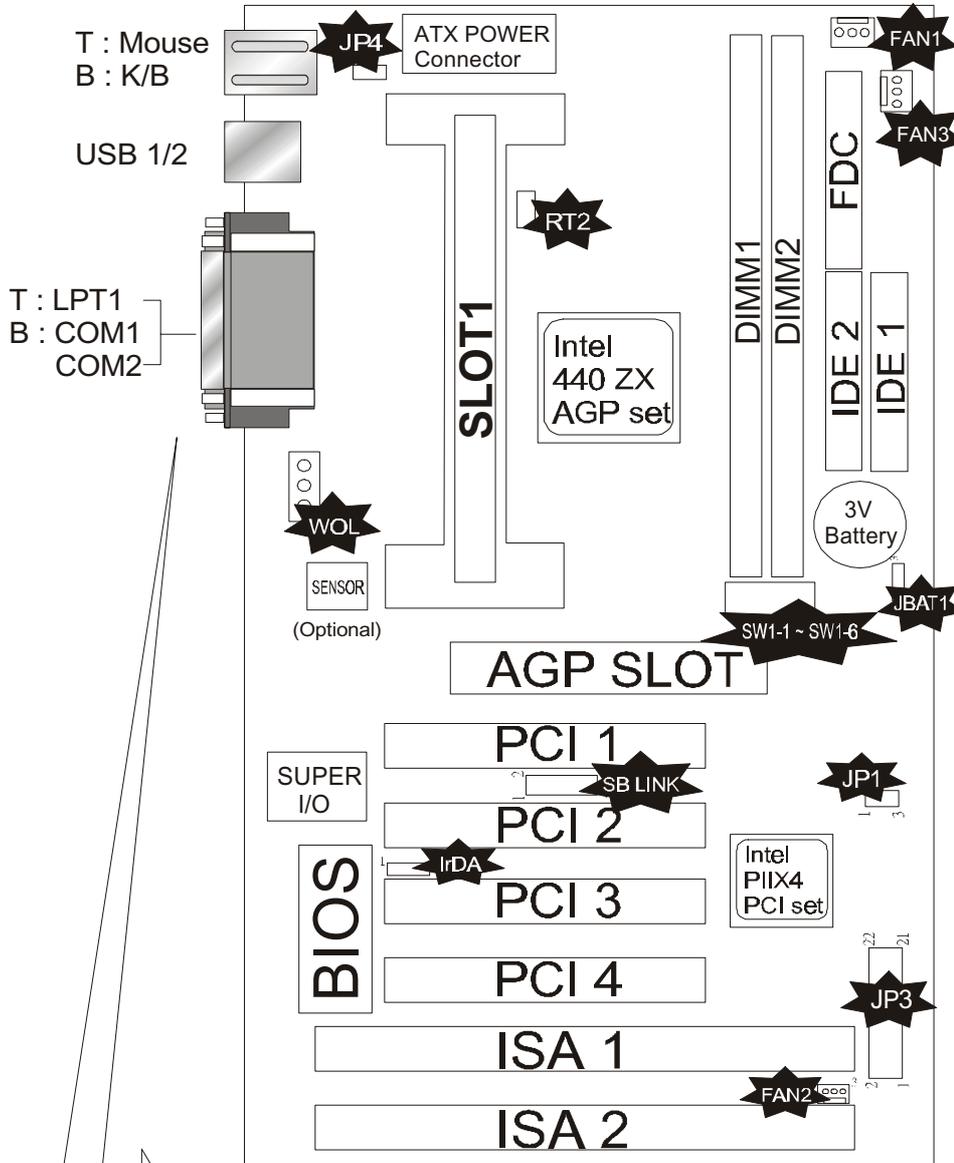
Chapter 2

Setup Guide

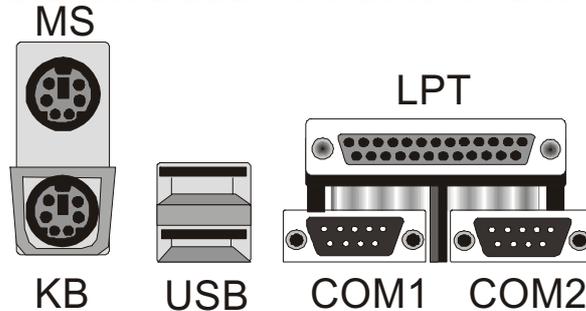
2.1 Motherboard layout



2.2 Connector & Jumper Reference Chart



Connector Front View



2.3 The setup steps

Please refer to the following steps to setup your computer:

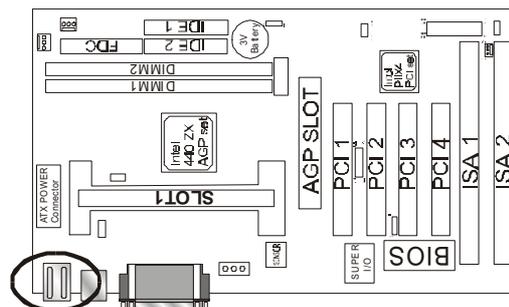
- I. Refer to the Jumper Setup section to set up the jumpers correctly.
- II. Install the DIMM modules on the motherboard; be sure to set up safely.
- III. Install the CPU on the motherboard (please refer to the CPU installation manual).
- IV. Choose a case and install the motherboard into this case.
- V. Plug in all the interface cards of your system equipment.
- VI. Connect the cable, power supply and other message lines in the correct position.
- VII. Turn on the power and set up your computer system software.
- VIII. Reboot, and enter the Award BIOS setup Menu to correct the definitions.

2.3-1 Jumper & Connector Setting

PS1- PS/2 Keyboard Connector

This connector can connect PS/2 Keyboard and has better performance.

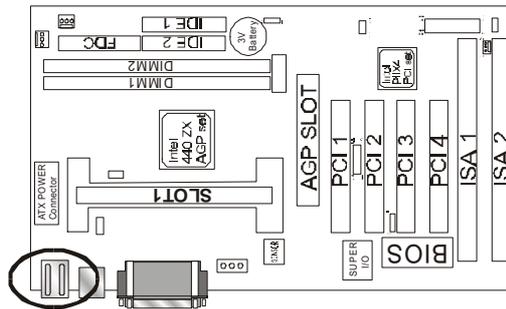
Pin	Description	Pin	Description
1	Keyboard Data	2,6	N.C.
3	Ground	4	+5V
5	Keyboard Clock		



PS2- PS/2 Mouse Connector

This connector can connect PS/2 Mouse and has better performance.

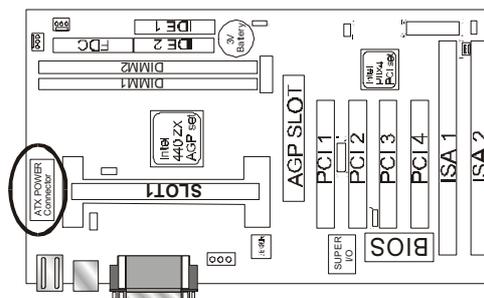
Pin	Description	Pin	Description
1	Mouse Data	2,6	N.C.
3	Ground	4	+5V
5	Mouse Clock		



J16 - ATX Power Supply Connector

This connector allows the motherboard to draw the power form ATX power supply. It requires an ATX power supply of 250 watt at least.

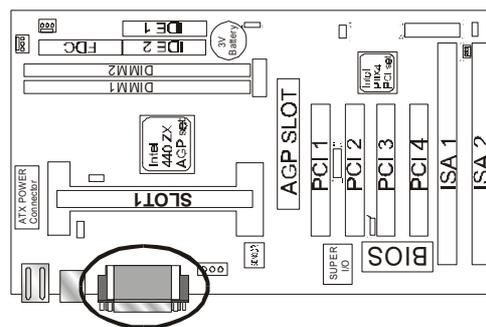
Pin	Description	Pin	Description
1,2,11	+ 3.3 V	3,5,7,13,15,16,17	Ground
4,6,19,20	+ 5 V	8	POWER GOOD
9	5VSB	10	+12 V
12	-12 V	14	PS-ON
18	- 5 V		



LPT1 - Printer Connector

This Connector can transfer the data to printer for printing on paper.

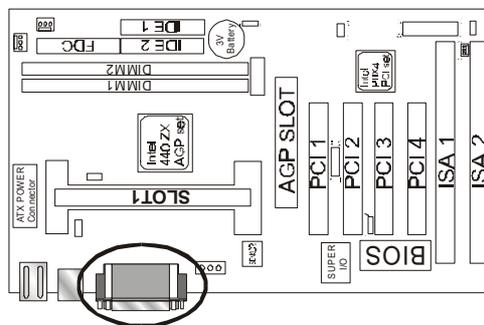
Pin	Signal Name	Pin	Signal Name
1	Strobe-	14	AFD
2	Data Bit 0	15	Error
3	Data Bit 1	16	INIT
4	Data Bit 2	17	SLCTIN
5	Data Bit 3	18	GND
6	Data Bit 4	19	GND
7	Data Bit 5	20	GND
8	Data Bit 6	21	GND
9	Data Bit 7	22	GND
10	ACK	23	GND
11	Busy	24	GND
12	PE	25	GND
13	SLCT	26	GND



COM1,COM2 –Serial Connectors

These connectors allow mouse or the other device which use this type connector for transferring data between computer and devices.

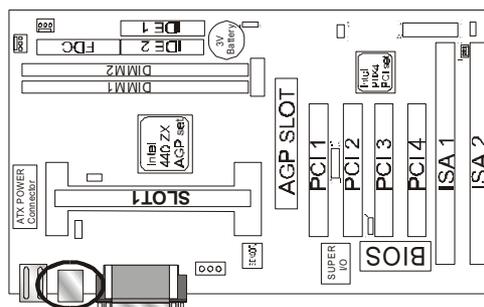
Pin	Signal Name	Pin	Signal Name
1	DCD	6	DSR
2	SIN	7	RTS
3	SOUT	8	CTS
4	DTR	9	RI
5	GND	10	NC



J14 - Universal Serial Bus (USB1, USB2) Connectors

These connectors allow the device which use this type connector for transferring information between computer and devices.

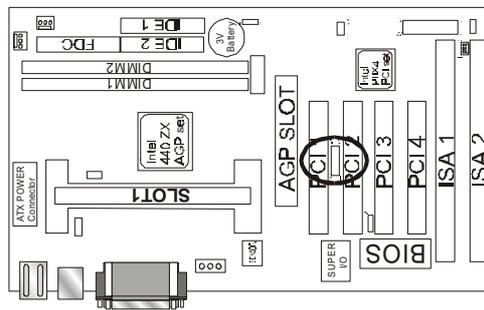
USB1 Pin	Signal Name	USB2 Pin	Signal Name
1	USB VCC 0	1	USB VCC 1
2	USB Data -	2	USB Data -
3	USB Data +	3	USB Data +
4	USB GND 0	4	USB GND 1
5	GND	5	GND



SB LINK – For Sideband Signals Connector

This connector is as a bridge between the motherboard and Creative's PCI Sound Card. Ex. Creative SB-LINK Connector

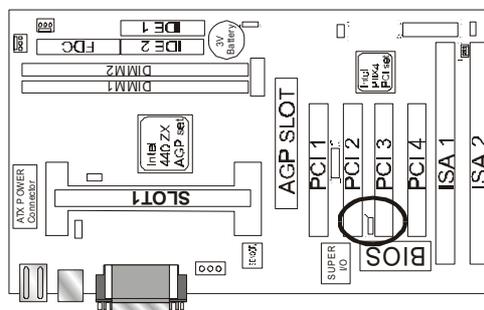
Pin	Signal Name	Pin	Signal Name
1	GNT#A	2	GND
3	-----	4	REQ#A
5	GND	6	GPI7



J15 - Infrared Connector: IR

This connector is used to connect IR Device.

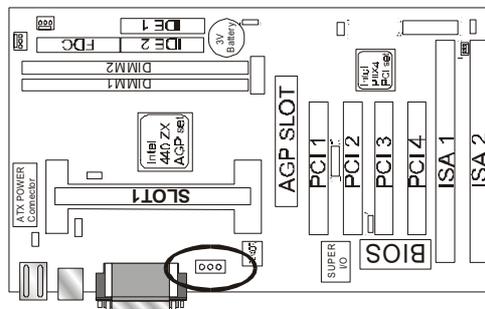
Pin	Signal Name
1	VCC
2	NC
3	SIRRX
4	GND
5	IRTX



WOL – Wake-up On LAN Connector

This connector is used to connect an add-in NIC (Network Interface Card) which gives WOL function to the motherboard. Enable this function for remotely managing PC on a network. When a PC receives the wake up command during sleep, the LAN controller will wake up the PC.

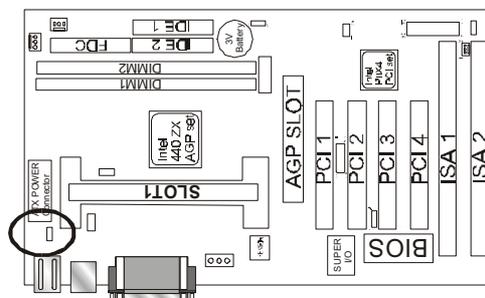
Pin	Signal Name
1	5VSB
2	GND
3	LID



JP4 – Keyboard & PS/2 Mouse ON NOW Connector

This connector is used to enable keyboard & PS/2 mouse power on with hot keys or mouse button.

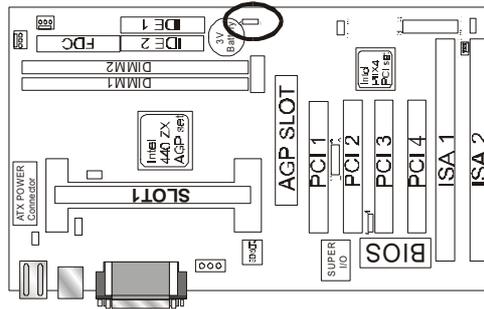
Pin	Signal Name
1-2	Disable
2-3	Enable



JP2 – CMOS Clear

This jumper is able to clear the current data stored in the CMOS memory.

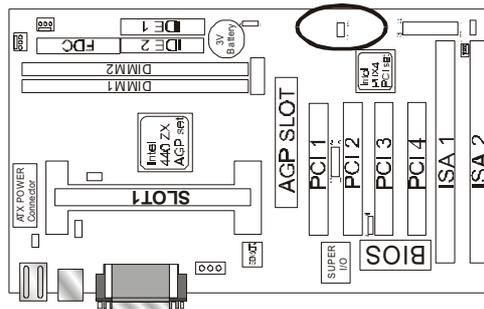
JP2	Description
1-2	Normal (default)
2-3	Clear CMOS



JP1 – POWER BUTTON

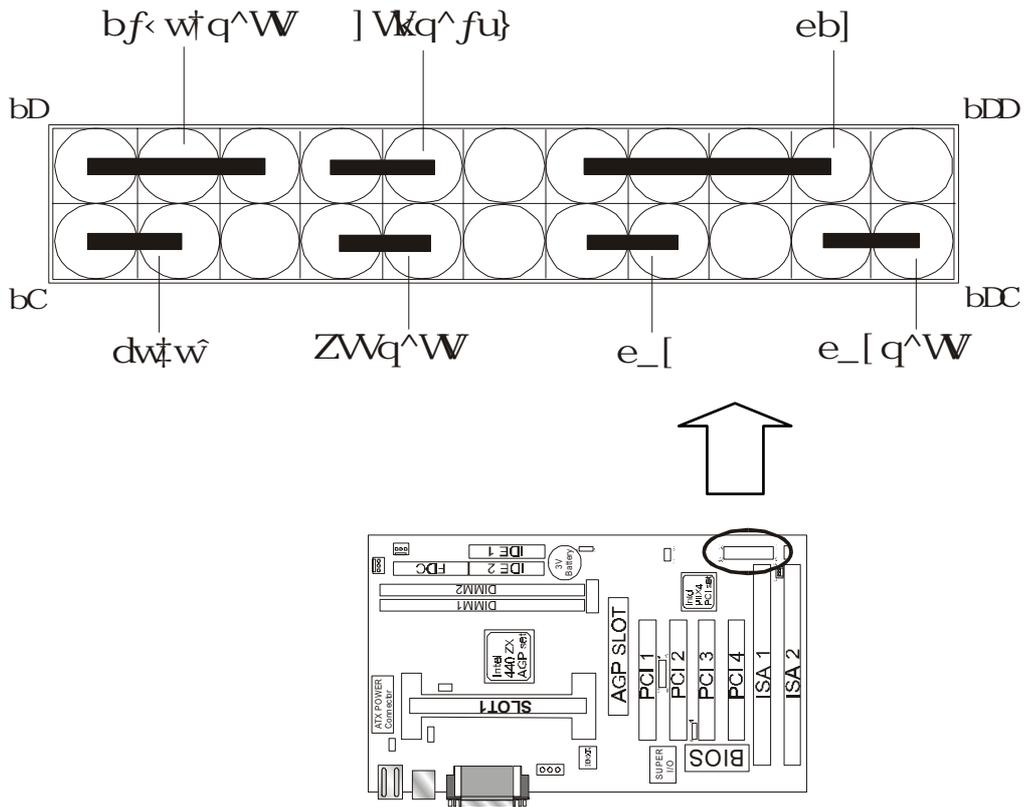
This connector is used to control your system power.

Pin	Description
1	5V Stand-by
3	Power Button



OTHER JUMPER SETTING

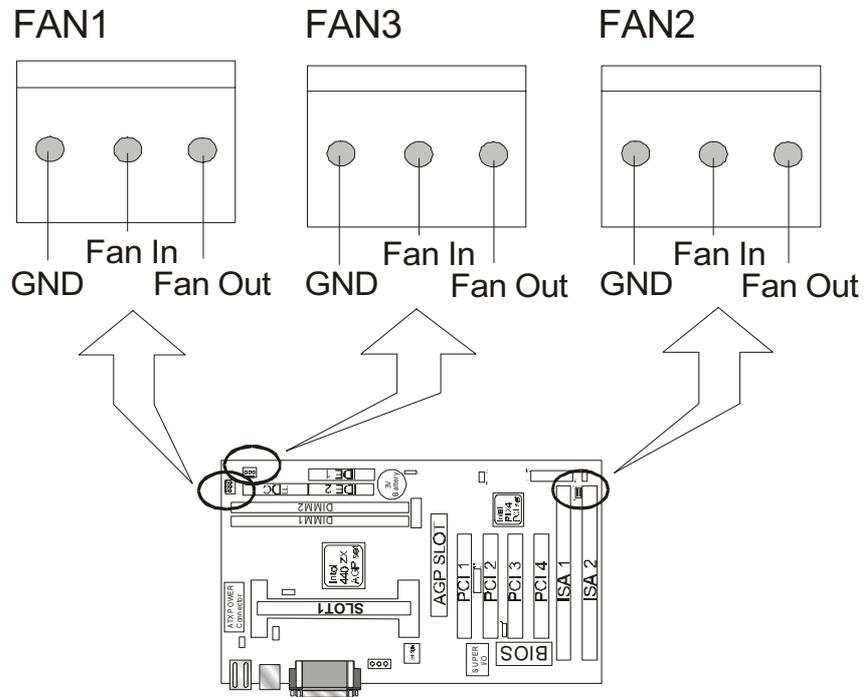
Locate the bank of switch and indicator connectors. These connectors provide control functions to your system case. Such as Speaker, HD LED, Power LED, Key Lock, SMI Switch, SMI ED and Reset ...etc. Please use the cable below to make the connections.



Pin	Name	Description
1 - 3	Reset	Reset button
7 - 9	HDD_LED	Hard Disk LED
13 - 15	SMI	Suspend mode
19 - 21	SMI_LED	Suspend LED
2 - 6	Power_LED	Power LED
8 - 10	KEY_Lock	Key Lock
14 - 20	SPK	Speaker

FAN1, FAN2, FAN3 - FAN CONNECTORS

These connectors allow the fans of CPU and AGP to draw the power from the motherboard.



FAN1 : CPU FAN CONNECTOR.

FAN2 : For SYSTEM COOL FAN CONNECTOR.

FAN3 : For SYSTEM COOL FAN CONNECTOR.

CPU TYPE SELECT

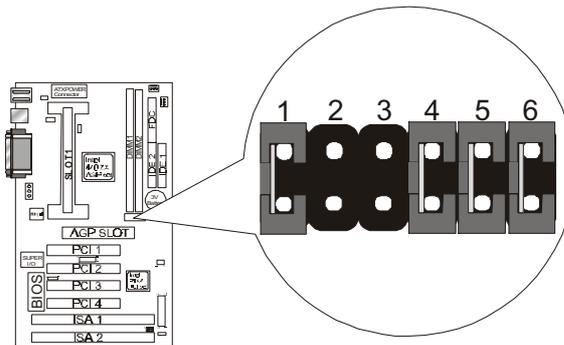


The Intel Pentium® II processor has two kinds of external (Bus) frequency, one is 66 MHz and the other is 100 MHz. But not all Pentium® II CPU have two kinds of external frequency. Please refer your CPU specifications to set the BUS speed firstly.

CPU Bus Speed – 66 MHz Part:

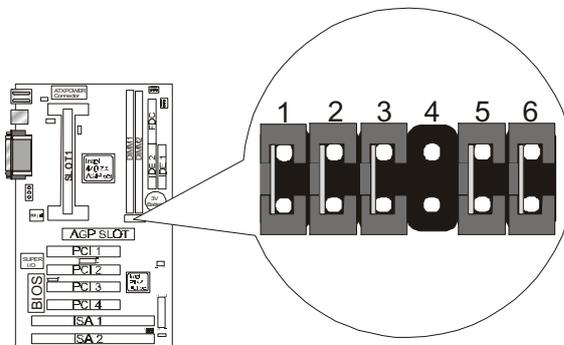
1. 233MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Open	Open	Short	Short	Short



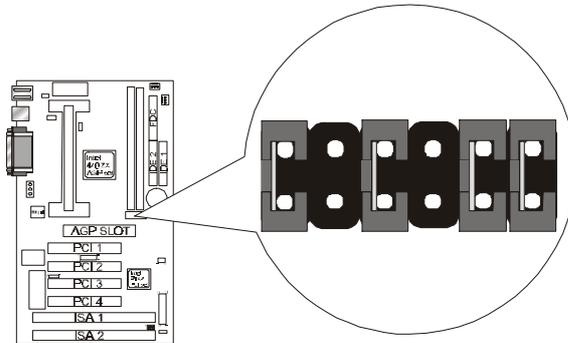
2. 266MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Short	Short	Open	Short	Short



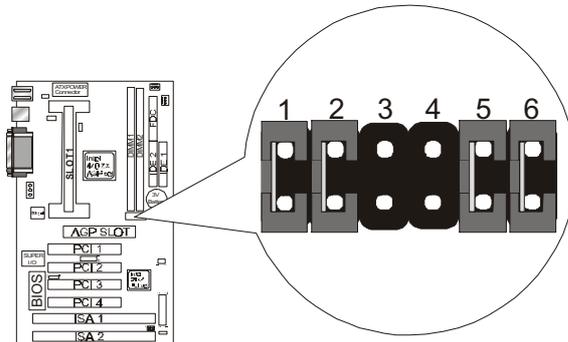
3. 300MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Open	Short	Open	Short	Short



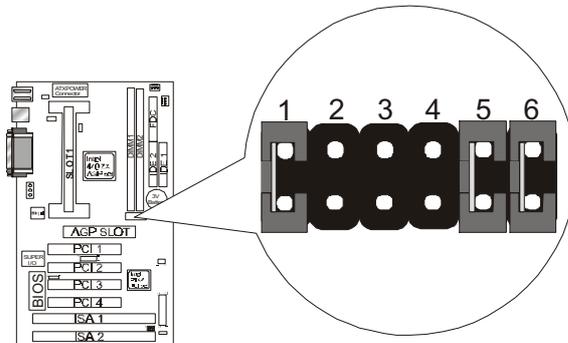
4. 333MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Short	Open	Open	Short	Short



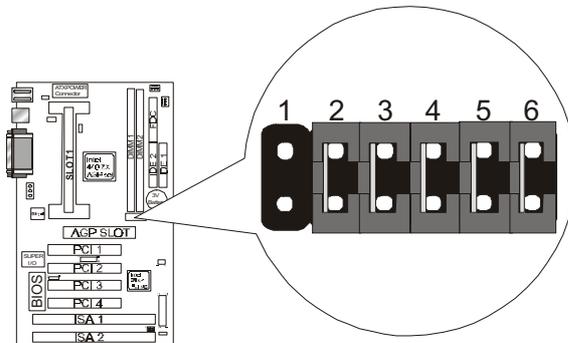
5. 366MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Open	Open	Open	Short	Short



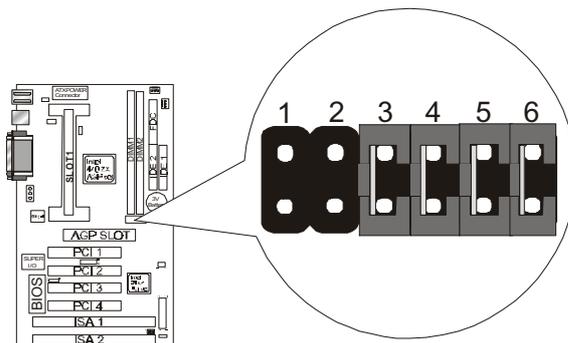
6. 400MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Open	Short	Short	Short	Short	Short



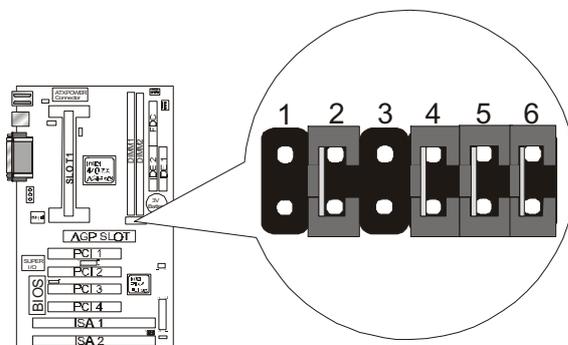
7. 433MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Open	Open	Short	Short	Short	Short



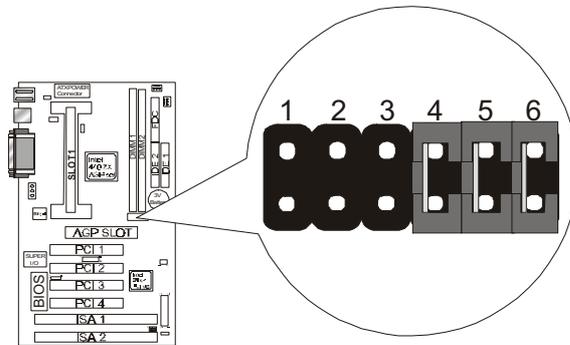
8. 466MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Open	Short	Open	Short	Short	Short



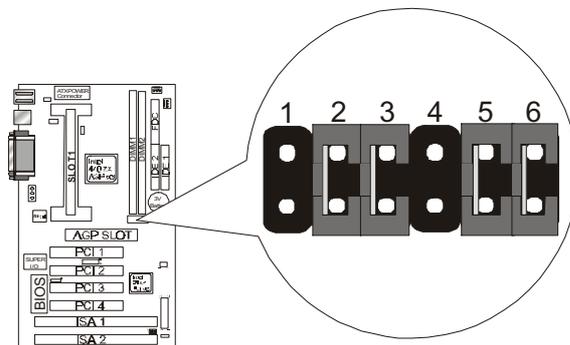
9. 500MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Open	Open	Open	Short	Short	Short



10. 533MHz

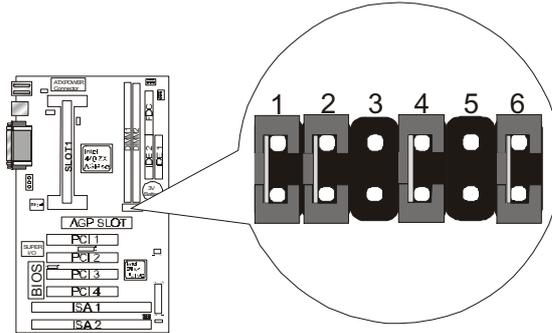
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Open	Short	Short	Open	Short	Short



CPU Bus Speed – 100 MHz Part:

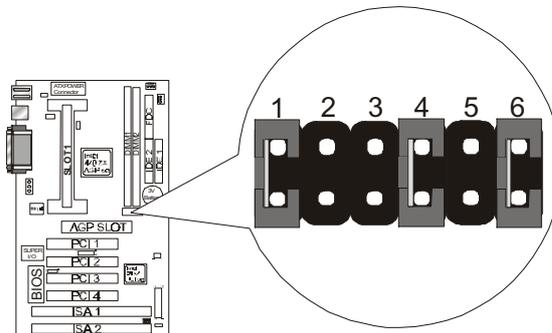
1. 300MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Short	Open	Short	Open	Short



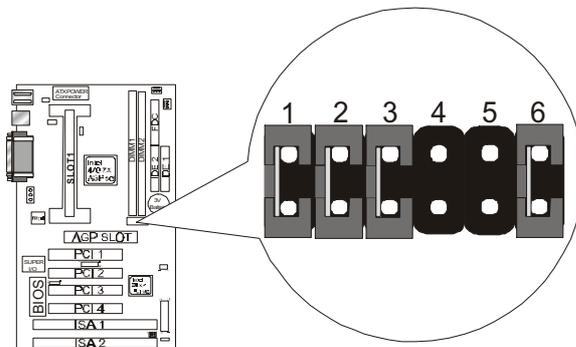
2. 350MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Open	Open	Short	Open	Short



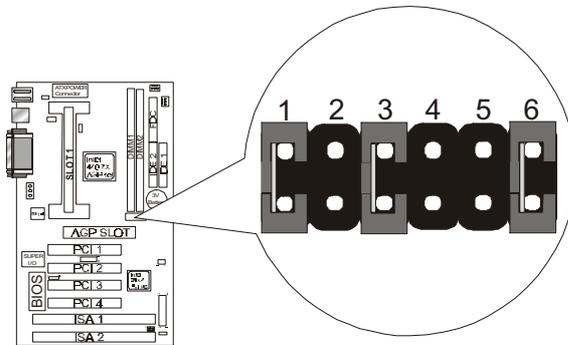
3. 400MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Short	Short	Open	Open	Short



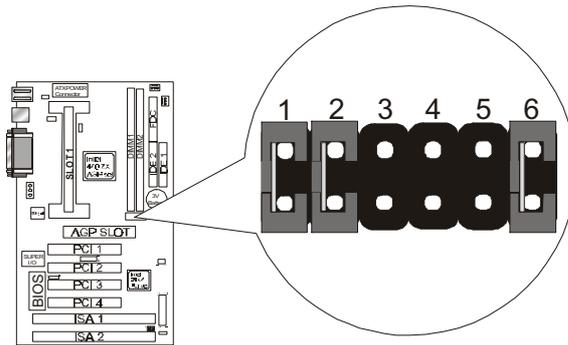
4. 450MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Open	Short	Open	Open	Short



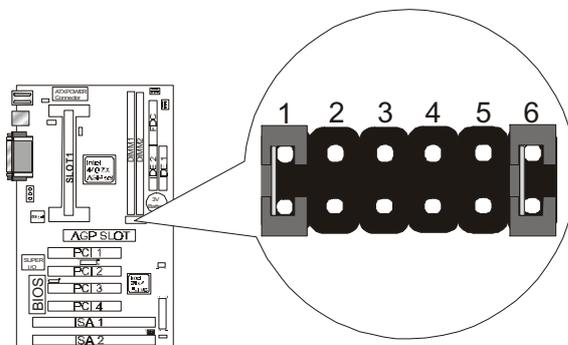
5. 500MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Short	Open	Open	Open	Short



6. 550MHz

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6
Short	Open	Open	Open	Open	Short



CPU TYPE SELECTION LIST

SW1-1,2,3,4 (For RATIO select)

RATIO	SW1-1	SW1-2	SW1-3	SW1-4
3.0	ON	ON	OFF	ON
3.5	ON	OFF	OFF	ON
4.0	ON	ON	ON	OFF
4.5	ON	OFF	ON	OFF
5.0	ON	ON	OFF	OFF
5.5	ON	OFF	OFF	OFF
6.0	OFF	ON	ON	ON

SW1-5 (For BUS clock)

CLOCK	SW1-5
66 MHz	ON
100 MHz	OFF

SW1-6 (CPU BUS Clock manual / Auto detect)

CLOCK	SW1-6
Default (Auto Detect)	ON
Force BUS CLOCK up to 100 MHz	OFF



Short



Open

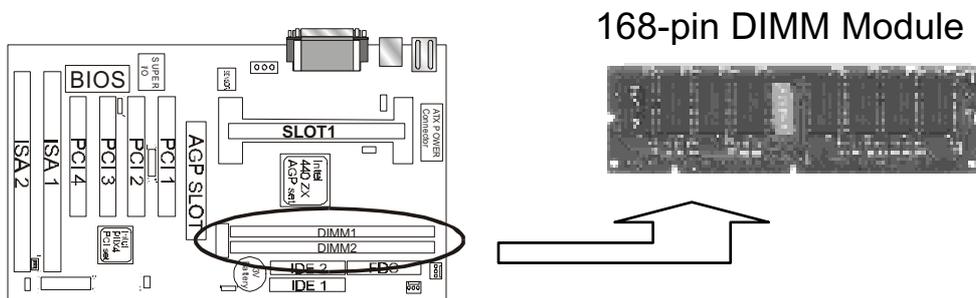
2.3-2 Memory installation

No jumper setting is necessary for DRAM setting; BIOS will check DRAM type and size automatically. This motherboard contains 2 by 168-pin DIMM socket (DIMM1, DIMM2). The motherboard has a table-free (or auto-bank) feature; the user can install DIMM into any bank. The two DIMM Sockets permit system memory expansion from 8MB to 256MB. Each bank provides a 64-bit wide data path. You can install 100MHz SPD RAM or 66MHz SD RAM into the motherboard, using your CPU clock to make the selection.

If you want to install more memory and there are no sockets available, you must remove some installed modules and replace them with the upgrade modules.

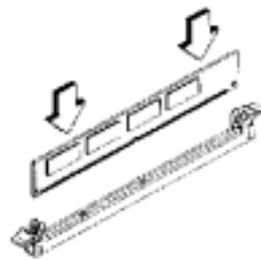
If you have to do this, be sure to identify what type of memory is already installed. In some cases, there may be a mix of module types. You can confirm this by checking the configuration screen that appears while the computer is starting up. Press the pause key to temporarily interrupt the start-up so that you have more time to read the screen. When you're done, press any key to resume.

Remove the lowest performance and smallest size modules and replace them with the upgrades.



How to Install DIMM Modules on Motherboard

1. The SDRAM sockets are keyed with notches and the DIMMs are keyed with cut-outs so that they cannot be installed incorrectly. Check that the cut-outs on the DIMM edge connector match the notches in the SDRAM socket. In other words, before inserting the DIMM, make sure the pin1 of the DIMM matches with the pin1 on the DIMM socket.
2. Push down the latches on each side of the SDRAM socket.
3. Install the DIMM into the socket and press it carefully but firmly down so that it seats correctly. The latches at either side of the socket will be levered upwards and latch on the edges of the DIMM when it is installed correctly.



Install DIMM

How to Remove DIMM Modules from Motherboard

1. Press the holding the latches at either side of the socket outward to release the DIMM.
2. Gently pull the DIMM out of the socket.



Remove DIMM

NOTE: Samples of System Memory Combinations Options

DIMM1	DIMM2	TOTAL
8MB	---	8MBytes
---	8MB	8MBytes
8MB	8MB	16MBytes
16MB	---	16MBytes
---	16MB	16MBytes
8MB	16MB	24MBytes
16MB	8MB	24MBytes
16MB	16MB	32MBytes
32MB	---	32MBytes
---	32MB	32MBytes
64MB	---	64Mbytes
---	64MB	64Mbytes
32MB	32MB	64Mbytes
64MB	64MB	128Mbytes
128MB	---	128Mbytes
---	128MB	128Mbytes
128MB	128MB	256Mbytes
:	:	:
:	:	:
:	:	:

DIMM type : 3.3V, unbuffered or registered, 64/72-bit Synchronous DRAM with SPD. Supports Single/Double-side 16/32/64/128 Mbytes module size with parity or non-parity.

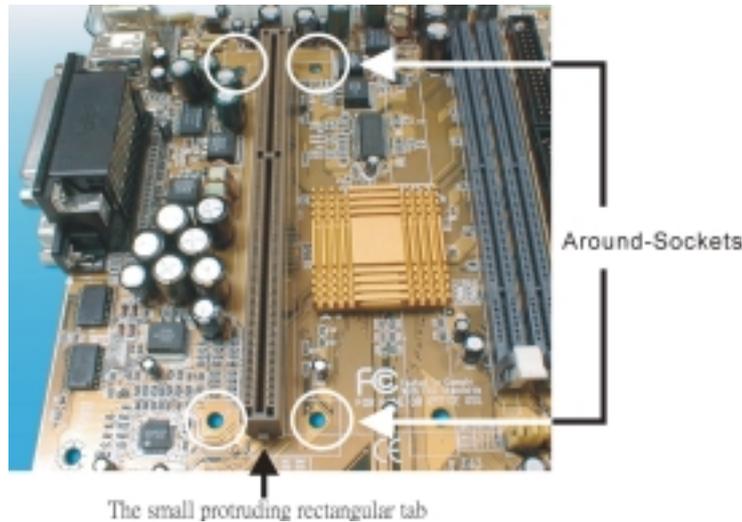
2.3-3 How to install the CPU

Prepare the motherboard by installing the supplied Slot 1 CPU, then install the CPU according to the instructions supplied. Complete the processor installation by installing the supplied heat-sink support, and connecting the heat sink power cable to the motherboard connector.

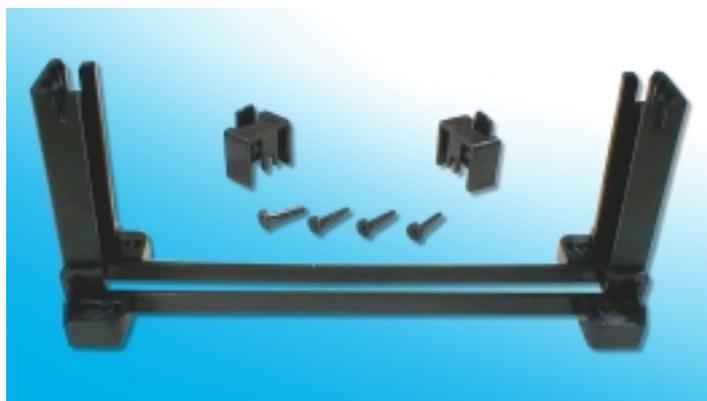
Referential Steps of installing the Slot 1 CPU

This part is only for CPU installation. Regarding to the heat-sink part, please refer the instructions supplied.

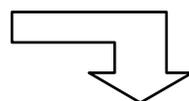
1. Inspect the area around Slot1, verify the position of four around-sockets, and then locate the small protruding rectangular tab on the side of Slot1 (see diagram).



2. Examine the CPU Retention and attachments. There are three sets of attachments: 1. The stand itself. 2. The CPU locking caps (two). 3. The plastic screws (four).

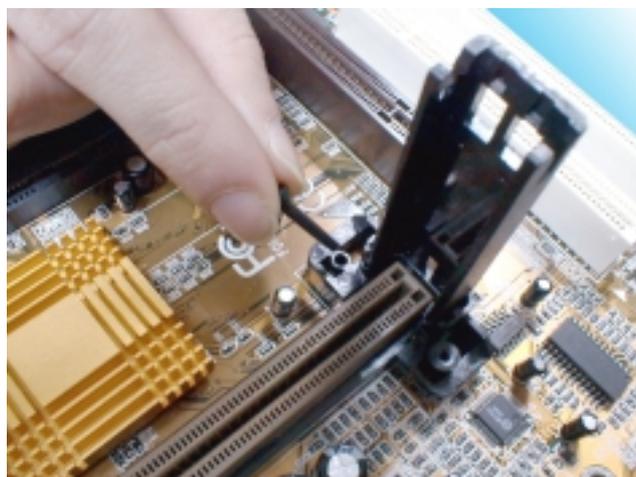


3. Once the above two steps have been completed, slot the CPU Retention into Slot1. Pull up the CPU stays on both side of the CPU Retention so they are horizontal, at an angle of 90°. Then the side of the CPU Retention with no mark on it and the side of Slot1 with the small rectangular tab should be on the same side.



The CPU Retention has to go in a particular direction. Make sure that it is the right way round before slotting it in. Do not force it in, otherwise you may damage the motherboard and CPU Retention.

4. Ensure that the CPU Retention has been slotted all the way in, then screw the four plastic screws into the sockets on each side of Slot1 to make sure that the CPU Retention is fixed firmly in position.

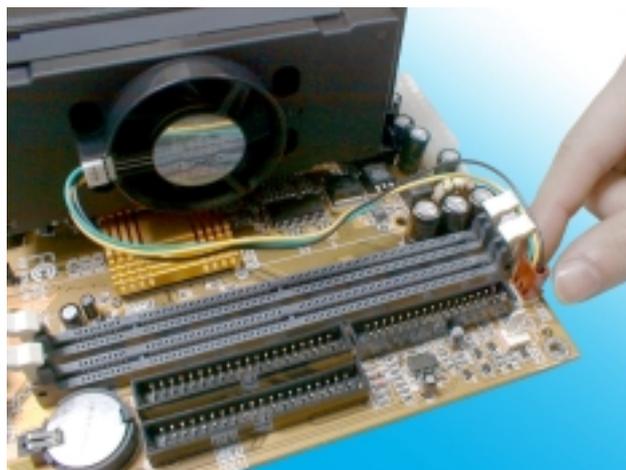


5. Slide the CPU slowly into Slot1 along the two sides of the CPU Retention.



Note: Some Slot 1 processors with different packing maybe need the caps to let them be fixed. So if it need the caps during installing Slot 1 CPU, please follow this step: “ Fix the CPU locking caps onto the two ends of the CPU stays ”.

6. Connect the CPU Fan head to the CPU Fan connector on the motherboard, and make sure that the CPU has been fixed firmly onto the motherboard. You have now completed assembly.



SLOT 1 CPU Disassembly/Replacement Procedures

1. Move the protruding part on top of the CPU locking caps gently outwards, so that the locking caps come off.
2. Pull the CPU Fan connector off the motherboard, and then gently pull the CPU out from Slot1.
3. If you need to install another CPU, follow the instructions for Slot1 CPU installation given above.

CPU & Power Supply Fan Connectors (3-pin FanPWR)

These connector support cooling fans of 500mAMP (6WATT) or less. Orientate the fans so that the heat sink fins allow airflow to go across the onboard heat sink(s) instead of expansion slots. Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive, while the black should be ground. Connect the fan's plug to the board taking into consideration the polarity of this connector.

The "Rotation" signal is to be used only by a specially designed fan with rotation signal.



The CPU and motherboard will overheat if there is no airflow across the CPU and onboard heatsinks. Damage may occur to the motherboard and the CPU fan if these pins are incorrectly used.

2.3-4 Installing the Motherboard

The **BIZ1A***series* motherboard complies with the specifications for an ATX board, so you can also install this kind of board into a full-size ATX case. Some features on the motherboard are implemented by cabling connectors on the motherboard to indicators and switches on the system case. Ensure that your case supports all the features required. The **BIZ1A***series* motherboard can support one or two floppy diskette drives and four enhanced IDE drives. Ensure that your case has sufficient power and space for all the drives that you intend to install.



Caution: Make sure that you have already installed the system board components like the CPU and memory, and have set the appropriate jumpers before you proceed.

2.3-5 Installing the interface card

This section explains how to install new interface cards on your motherboard. It covers installing ISA cards, PCI cards and AGP card. There are seven expansion card slots on the motherboard, one AGP slot, four PCI slots and two ISA slots. When you get an expansion card, it will come with instructions on how to install it, so this section covers relevant information for the motherboard only.

AGP Card and Slot

The AGP (Accelerated Graphics Port) slot is for an AGP display card. With the Optimum Settings loaded in the BIOS Setup Utility the AGP has a default memory aperture of 4MB, expandable to 256MB.

PCI Cards and Slots

With very few exceptions, any PCI expansion card you are likely to get will be Plug and Play compliant. If you are using an Operating System that supports PnP, such as Windows 98/95, you should be able to follow the installation instructions that come with the card and have the Operating System automatically recognize and configure the card.

The PCI slots on the motherboard all have “Bus Master” capability. For installed PCI cards to use this feature, an Operating system specific Bus Master software driver that comes with this motherboard must be installed under your Operating System. These drivers are located on the support Disk.

ISA Cards and Slots

ISA expansion cards often use system resources in the form of IRQs and DMA channels. Newer cards that comply with the Plug and Play (PnP) standard are designed to allow the Operating System to automatically configure system resources. Cards that do not support PnP may require manual configuration of both the card hardware and settings in the CMOS Setup Utility.

If you have a PnP compliant card to install, there should be little to do other than follow the installation instructions. If, however, you have a non-PnP card and it requires configuring system resources, you may need to setup the configuring expansion card resources in CMOS Setup.

2.3-6 Installing Accessory Cables

This section describes how to connector the accessory cables that motherboard or system housing supports. In the case of ATX, there is no need to use a bracket to extend the connectors to the rear panel, so here we will discuss only the installation instructions for Floppy, IDE. Power supply and Front Panel switch/LED cables.



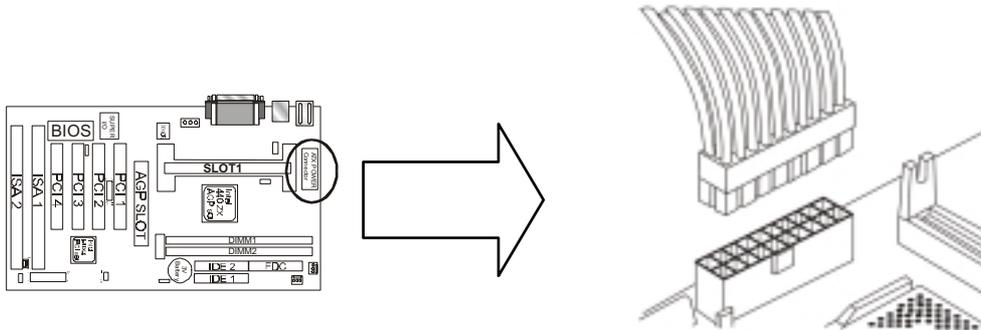
Caution: Make sure that the power supply is OFF before connecting or disconnecting any bracket or cable.

ATX Power Cable

The 20-pin ATX power cable supports 5V standby current and soft power-on switch. The soft power switch can be either momentary or toggle

type and must comply with the ATX specification.

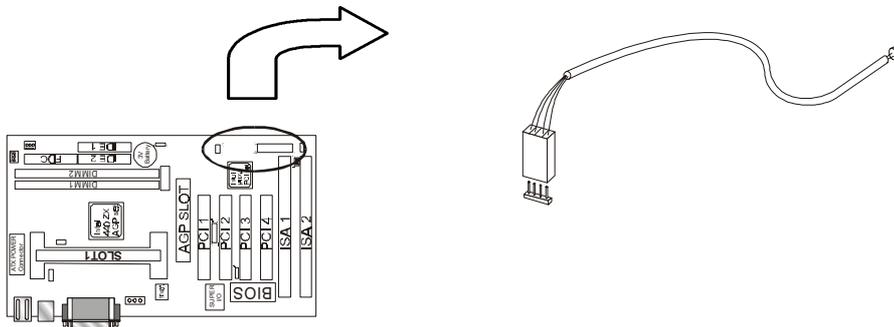
Plug in the power cable to the onboard power connector.



Front Panel Switch and LED Cables

Normally, the front-panel housing has power switch, power LED, reset switch, suspend switch, speaker, keylock and HDD LED. These accessories are included in the housing package and are connector.

Refer to the 2.3-1 “OTHER JUMPER SETTING” for proper location of the connector.



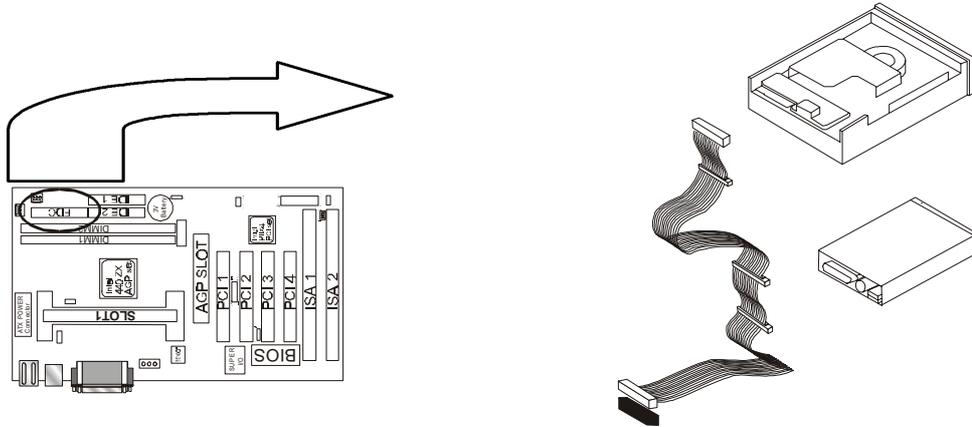
Floppy Cable

The floppy cable for floppy driver is a 34-pin flat cable with 5 connectors classified as follows:

1. Female header (For floppy connector onboard)
2. Female header and Edge connector (For driver B)
3. Female header and Edge connector (For driver A)

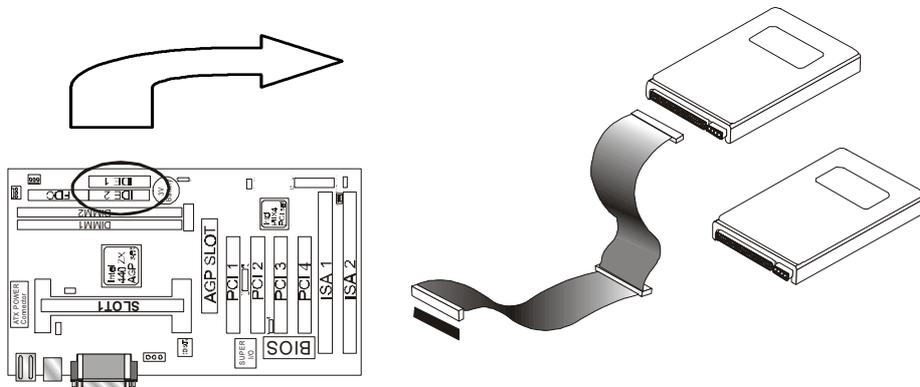
The end-most connector cable is twisted to support floppy drive A, while the middle connectors are for floppy drive B. The drive B connectors are designed to accommodate both 1.44MB and 1.2MB drives. The female header supports the 1.44MB drive, while the female edge connector supports

the 1.2MB drive. When connecting the drive, make sure that pin1 of the cable (ie., the red-colored wire) matches pin1 of the drive.



IDE Cables for HDD and CDROM

The motherboard comes with two IDE interfaces; primary IDE and secondary IDE connectors. Each channel supports two IDE devices via 34-pin flat cable; thus enabling the system to accommodate a maximum of four devices.



Chapter 3

Award BIOS Setup

This chapter explains how to use and modify the BIOS setup utility that is stored on the motherboard. The setup utility stores information about the motherboard components, and the configuration of other devices that are connected to it. The system uses this information to test and initialize components when it is started up, and to make sure everything runs properly when the system is operating.

The setup utility is installed with a set of default values. The default values are designed to ensure that the system will operate adequately. You will probably have to make changes to the setup utility whenever you add new components to your system such as new disk drives. You may be able to generate increased performance by changing some of the timing values in the setup, but this can be limited by the kind of hardware you are using, for example the rating of your memory chips. In certain circumstances, the system may generate an error message which asks you to make changes to the setup utility. This happens when the system finds an error during the POST (power on self test) that it carries out at start up.

Starting the Setup Utility

You can only start the setup utility shortly after the computer has been turned on. A prompt appears on the computer display which says "**Press DEL to run Setup**". When you see this prompt press the **Delete** key, and the system will start the setup utility and display the main menu of the utility.

Using the Setup Utility

When you press the **Delete** key to start setup, the main menu of the utility appears.

The main menu of the setup utility shows a list of the options that are available in the utility. A highlight shows which option is currently selected. You can use the cursor arrow keys to move the highlight to other options.

When an option is highlighted, you can execute the option by pressing the **Enter** key. Some options lead to dialog boxes which ask you verify that that you wish to execute that option. You usually answer these dialogs by typing **Y** for yes and **N** for no.

Some options lead to dialog boxes which ask for more information. Setting the User Password or Supervisor Password has this kind of dialog box.

PRESS F1 TO CONTINUE, CTRL-ALT-ESC OR DEL TO ENTER SETUP

Control Keys

Up Arrow	Move to previous item
Down Arrow	Move to next item
Left Arrow	Move to the item in the left hand
Right Arrow	Move to the item in the right hand
Esc Key	Main Menu Quit and not to save changes to CMOS Status Page setup menu and Option Page Setup Menu Exit current page and return to Main Menu
PgUp Key	Increase the numeric value or make changes
PgDn Key	Decrease the numeric value or make changes
F1 Key	General help, only for Status Page Setup Menu and Option Setup Menu
F2 Key	Change color from total 16 colors
F3 Key	Calendar, only for Status Page Setup Menu
F4 Key	Reserved
F5 Key	Restore the previous CMOS value from BIOS, only for Option Page Setup Menu
F6 Key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 Key	Load the default
F8 Key	Reserved
F9 Key	Reserved
F10 Key	Save all the CMOS changes, only for Main Menu

3.1 The Main Menu

Once you enter Award BIOS CMOS Setup Utility, the Main Menu will appear on the Screen. Use arrow keys to select among the items and press to accept or enter the **sub-menu**.

Some options lead to tables of items. These items usually have a value on the right side. The value of the first item is highlighted, and you can use the cursor arrow keys to select any of the other values in the table of items. When an item is highlighted, you can change the value by pressing the **PageUp** or **PageDown** keys, or the **Plus** or **Minus** keys. The **PageUp** and **Plus** keys cycle forward through the available values, the **PageDown** and **Minus** keys cycle backwards through the values.

When you are in the main menu, you can exit the utility by pressing the **Escape** key. You can save the current selections and exit the utility by pressing the F10 key. You can change the color scheme of the utility by pressing the **F2** key **while** holding down **the Shift** key. When you are in one of the options that displays a dialog box, you can return to the main menu by pressing the **Escape** key.

When you are in one of the options that displays a table of items, you can return to the main menu by pressing the **Escape** key. For some items, you can display a help message by pressing the **F1** key. You can change the color scheme of the utility by pressing **the F2** key while holding down **the Shift** key. You can press **FS** to discard any changes you have made and return all items to the value **that** they held when the setup utility was started. You can press **F6** to load the displayed items with a list of default values. You can press **F7** to load the displayed items with a **high-performance** list of default values.

ROM PC/ISA BIOS (2A69KPNI)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURE SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
Esc : Quit F10 : Save & Exit Setup	↑ ↓ → ← : Select Item (Shift) F2 : Change Color

Standard CMOS Setup

This setup page includes all the items in standard compatible BIOS.

BIOS Features Setup

This setup page includes all the items of Award special enhanced features.

Chipset Features Setup

This setup page includes all the items of chipset special features.

Power Management Setup

This menu provides functions for Green products by allowing users to set the timeout value for monitor and HDD.

PNP / PCI CONFIGURATION SETUP

This menu allows the user to modify PNP / PCI configuration function.

Load BIOS Defaults

BIOS defaults indicates the most appropriate value of the system parameter which the system would be in minimum performance.

Load Setup Defaults

Chipset defaults indicates the values required by the system for the maximum performance.

INTEGRATED PERIPHERALS

This section page includes all the items of IDE hard drive and Programmed Input / Output features.

Supervisor / User Password Setting

Change, set, or disable password. It allows you to limit access to the system and Setup, or just to setup.

IDE HDD Auto Detection

Automatically configure hard disk parameters.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

3.2 Standard CMOS Setup

The item in Standard CMOS Setup Menu are divided into several categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

da_2bUj A[eS2T] ae2: DSHK] b` [; ef`S` VSDV2U ae2eWgb Si SdV2eaXfi SdW2] `U@								
Vs`w2: @LvwL` ; 2L2f%w*2Wwu2K2CKKJ f{ @w2: zZL@L+; 2L22K2L2GD2L2FD								
ZSdV2M[e	fkBW	e[1W	Uk^e	ZV8V	bdW@a_b	^S`M	eWf ad	_aVW
b{ { @s+ 2_s+ w 2222222B		B	B	B	B	B	B	NORMAL
b{ { @s+ 2e-sSw2222222B22		B	B	B	B	B	B	NORMAL
evuf, vs+ 2_s+ wL	B	B	B	B	B	B	B	NORMAL
evuf, vs+ 2e-sSwL	B	B	B	B	B	B	B	NORMAL
V{ { \$w2S222L2C@F_>2E@C2{ , @ V{ { \$w2T222L2` f, w X-f, ., 2E2_ fvw2e%a, f+ 2L2M {st~w						2222Ts+vw2_v@f+ L222222B] WEw vvw2_v@f+ L222222B] 222a` zw+ 2_v@f+ L222222C] <hr/> 222f` f` s~2_v@f+ L222222C]		
W@L222L22c% Xc222L22Zw,								
: ez{x` ; 2XD22L2L2s, yw2Uf~f+								

Date and Time

The Date and Time items show the current date and time held by your computer. If you are running a Windows operating system, these items will automatically be updated whenever you make changes to the Windows Date and Time Properties utility.

Hard Disks

Default: Auto

These items show the characteristics of any hard disk drives on the four available IDE channels. (Note that SCSI hard disk drives do not appear here.) You can automatically install most modem hard disks using the IDE HDD Auto Detect Option from the main menu. However, if you find that a drive cannot be automatically detected, you can use these items to select USER, and then manually enter the characteristics of the drive. The documentation provided with your drive provides the data you need to fill in the values for CYLS (cylinders), HEAD (read/write heads), and so on.

The documentation provided with the drive may not tell you what value to use under the MODE heading. If the drive is smaller than 528 NM, set MODE to Normal. If the drive is larger dm 528 NM and it supports Logical Block Addressing, set MODE to LBA- Very few high-capacity drives do not support Logical Block Addressing. If you have such a drive, you might be able to configure it by setting the MODE to Large. If you're not sure which MODE setting is required by your drive, set MODE to Auto and let the setup utility try to determine the mode automatically.

Drive A and Drive B

Default: 1.44M, 3.5 in., None

These items define the characteristics of any diskette drive attached to the system. You can connect one or two diskette drives.

Floppy 3 Mode Support

Default: Disabled

Floppy 3 mode refers to a 3.5" diskette with a capacity of 1.2MB. Floppy 3 mode is sometimes used in Japan.

Video

Default: Disabled

This item defines the video mode of the system. This motherboard has a built-in VGA graphics system so you must leave this **item** at the default value.

Halt On

Default: All. But Keyboard

This item defines the operation of the system POST (Power On Self Test)

routine. You can use this item to select which kind of errors in the POST is sufficient to halt the system.

Base, Extended and Other Memory *Default: All. But Keyboard*

These items show how much memory is available on the system. They are automatically detected by the system so you cannot manually make changes to these items.

3.3 BIOS Features Setup

This option displays a table of items which defines more advanced information about your system you can make modifications to most of these items without introducing fatal errors to your system.

ROM PCI/ISA BIOS (2A69KPNI)
BIOS FEATURE SETUP
AWARD SOFTWARE, INC

Anti-Virus Protection	: Enabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000-D3FFF Shadow	: Disabled
Processor Number Feature	: Enabled	D4000-D7FFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D8000-DBFFF Shadow	: Disabled
Boot Sequence	: A, C ,SCSI	DC000-DFFFF Shadow	: Disabled
Swap Floppy Drive	: Disabled		
Boot Up Floppy Seek	: Disabled		
Boot Up NumLock Status	: On		
Gate A20 Option	: Fast		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PCI/VGA Palette Snoop	: Disabled		
OS Select For DRAM > 64MB	: Non-OS2	Esc : Quit	↑↓→← : Selection Item
HDD S.M.A.R.T. capability	: Enabled	F1 : Help	PU/PD/+/- : Modify
Report No FDD For Win95	: No	F5 : Old Values	(Shift) F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

Anti-Virus Protection

Default: Enabled

Anti-Virus program could locate and remove the problem before any damage is done. So when this item is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive for any attempt at modification. If an attempt is made, the Anti-Virus program built-in the BIOS will be run for protecting your system to be clean.



WARNING:

Disk boot sector is to be modified
Type 'Y' to accept write or 'N' to abort write
Award Software, Inc.

Enabled : Activates automatically when the system boots up, if anything attempts to access the boot sector or hard disk partition table will cause a warning message to **appear**.

Disabled : No warning message will appear when anything attempts to access the boot **sector or hard disk partition table**.

Many disk diagnostic programs which attempt to access the boot sector table can cause the above warning message.

CPU Internal Cache

Default: Enabled

All the processors that can be installed in this motherboard use internal (level 1) cache memory to improve performance. Leave this item at the default value Enabled for better performance.

External Cache

Default: Enabled

Most of the processor cartridges that can be installed in this motherboard have (level 2) external cache memory (the Celeron-266MHz is an exception). Only enable this item if your processor cartridge has external cache memory.

CPU L2 Cache ECC Checking

Default: Enabled

This item can be used to enable ECC (Error Checking Code) for the level-2 cache memory. We recommend that you leave this item at the default value Enabled.

Processor Number Feature**Default: Enabled**

This item can be used to enable Intel Pentium III processor serial number. It can let others know who is you when you on the web. If you want keep your secrets, please choose disabled.

Quick Power On Self Test**Default: Enabled**

You can enable this item to shorten the power on testing and have your system start up a little faster.

Boot Sequence**Default: A, C, SCSI**

This item defines where the system will look for an operating system, and the order of priority. You can boot an operating system from many locations including a SCSI device, a ZEP drive, a floppy diskette drive, or an LS-120 high-capacity diskette drive.

Swap Floppy Drive**Default: Disabled**

If you have two floppy diskette drives in your system, this item allows you to swap around the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.

Boot Up Floppy Seek**Default: Disabled**

During POST, BIOS will determine if the Floppy disk drive installed is 40 or 80 tracks. 360 K type is 40 tracks while 720K, 1.2M and 1.44M drive type as they are all 80 tracks.

Enabled: BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720K, 1.2M or 1.44M drive type as they are all 80 tracks.

Disabled: BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360K.

Boot Up NumLock Status**Default: On**

This item defines if the keyboard Num Lock key is active when your system is started.

Gate A20 Option**Default: Fast**

This option provides compatibility with older software written for the 286 processor. Leave this item at the default value Fast.

Typematic Rate Setting**Default: Disabled**

This determines if the typematic rate is to be used. When disabled, continually holding down a key on your keyboard will generate only one key instance. In other words, the BIOS will only report that the key is down. When the typematic rate is enabled, the BIOS will report as before, but it will then wait a moment, and, if the key is still down, it will begin the report that the key has been depressed repeatedly. For example, you would use such a feature to accelerate cursor movements with the arrow keys.

Typematic Rate (Chars/Sec)**Default: 6**

When the typematic rate is enabled, this section allows you select the rate at which the keys are repeated.

<u>6</u>	<u>6 characters per second</u>	<u>15</u>	<u>15 characters per second</u>
<u>8</u>	<u>8 characters per second</u>	<u>20</u>	<u>20 characters per second</u>
<u>1 0</u>	<u>1 0 characters per second</u>	<u>24</u>	<u>24 characters per second</u>
<u>12</u>	<u>12 characters per second</u>	<u>30</u>	<u>30 characters per second</u>

Typematic Delay (Msec)**Default: 250**

When the typematic rate is enabled, this section allows you select the delay between when the key was first depressed and when the acceleration begins.

<u>250</u>	<u>250 msec</u>
<u>500</u>	<u>500 msec</u>
<u>750</u>	<u>750 msec</u>
<u>1000</u>	<u>1000 msec</u>

Security Option**Default: Setup**

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required when a user tries to enter the setup utility.

PCI/VGA Palette Snoop**Default: Disabled**

This item can help overcome problems that are caused by some non-standard VGA cards. We recommend that you leave this item at the default value Disabled.

OS Select For DRAM > 64 MB**Default: Non-OS2**

This item is required if you have installed more than 64 NM of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default Non-OS2.

HDD S.M.A.R.T Capability

Default: Enabled

S.M.A.R.T is an industry acronym for Self-monitoring, Analysis and Reporting Technology. If the documentation of your hard disk states that S.M.A.R.T. is supported, you can enable this item.

Report No FDD For WIN 95

Default: No

Set this item to Yes BIOS will report FDD to Win95. If in standard CMOS setup, set Drive A to none, and set this item to yes. Inside Win95, My Computer and File manager Disk(A:) will show Removable Disk (A:).

Video BIOS Shadow

Default: Enabled

This item allows the video BIOS to be copied to system memory for faster performance.

XXXXX-XXXXX Shadow

Default: Disabled

These items allow the BIOS of other devices to be copied to system memory for faster performance.

3.4 Chipset Features Setup

This option displays a table of items which define timing parameters of the motherboard components including the graphics system, the memory, and the system logic. In general rule, you should leave the items on this page at the default values unless you are very familiar with the technical specifications of your hardware. If you change the values, you may introduce fatal errors or recurring instability into your system.

ROM PCI/ISA BIOS (2A69KPN1)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC

Auto Configuration	: Enabled	Auto Detect DIMM/PCI Clk	: Enabled
EDO DRAM Speed Selection	: 60ns	Spread Spectrum Modulated	: Disabled
EDO CASX# MA Wait State	: 1	CPU Host/PCI Clock	: Default
EDO RASX# Wait State	: 2	CPU Warning Temperature	: Disabled
SDRAM RAS-to-CAS Delay	: 3	Current System Temp.	:
SDRAM RAS Precharge Time	: 3	Current CPU1 Temperature	:
SDRAM CAS latency Time	: 3	Current CPUFAN1 Speed	:
SDRAM Precharge Control	: Disabled	Current CPUFAN2 Speed	:
System BIOS Cacheable	: Enabled	IN0 (V) :	IN1(V) :
Video BIOS Cacheable	: Enabled	IN2 (V) :	+5V
Video RAM Cacheable	: Enabled	+12 V :	-12V :-
8 Bit I/O Recovery Time	: 1	- 5 V :-	
16 Bit I/O Recovery Time	: 1	Shutdown Temperature	: 60°C/140°F
Memory Hole At 15M-16M	: Disabled		
Passive Release	: Enabled	Esc : Quit	↑↓→← : Selection Item
Delayed Transaction	: Disabled	F1 : Help	PU/PD/+/- : Modify
AGP Aperture Size (MB)	: 64	F5 : Old Values	(Shift) F2 : Color
		F6 : Load BIOS Default	
		F7 : Load Setup Default	

Auto Configuration**Default: Enabled**

This function can make BIOS auto-setting the best DRAM parameter.

EDO DRAM Speed Selection**Default: 60ns**

This item defines the timing parameters for the system memory. We recommend that you leave these items at the default values EDO 60ns.

EDO CASX# MA Wait State	Default: 1
EDO RASX# Wait State	Default: 2
SDRAM RAS-to-CAS Delay	Default: 3
SDRAM RAS Precharge Time	Default: 3
SDRAM CAS latency Time	Default: 3
SDRAM Precharge Control	Default: Disabled

These items are setting by **Auto Configuration**.

Auto Configuration : By default, this parameter is set to Enabled. This automatically enters and locks the optimum settings for the chipset. Disable the parameter to unlock the settings without changing them.

System BIOS Cacheable	Default: Enabled
------------------------------	-------------------------

System BIOS segment is cacheable if this item been enable.

Video BIOS Cacheable	Default: Enabled
-----------------------------	-------------------------

Video BIOS segment is cacheable if this item been enable.

Video RAM Cacheable	Default: Enabled
----------------------------	-------------------------

Video RAM segment is cacheable if this item been enable.

8 Bit I/O Recovery Time	Default: 1
--------------------------------	-------------------

The recovery time is the length of time, measured in CPU clocks, which the system will be delay after the completion of an I/O request. This delay takes place because the CPU is operating so much faster than the input/output bus that the CPU must be delayed to allow for the completion of the I/O. This item allows you to determine the recovery time allowed for 8- bit I/O. Choices are from NA, 1 to 8 CPU clocks,

16 Bit I/O Recovery Time	Default: 1
---------------------------------	-------------------

This item allows you to determine the recovery time allowed for 16-bit I/O. Choices are from NA, I to 4 CPU clocks.

Memory Hole At 15M-16M	Default: Disabled
-------------------------------	--------------------------

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

Passive Release**Default: Enabled**

When Enabled, CPU to PCI bus accesses is allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM.

Delayed Transaction**Default: Disabled**

This chipset has an embedded 32-bit posted write buffer to support deadly transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

AGP Aperture Size (MB)**Default: 64**

Select the size of the AGP aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycle that hit the aperture range is forwarded to the AGP without any translation. The choice 4, 8, 16, 32, 64, 128, 256.

Auto Detect DIMM/PCI Clk**Default: Enabled**

If this item is enabled, the unused DIMM and PCI slot clock will be disabled. If this item is disabled the unused DIMM and PCI slot will still get the active clock signal.

Spread Spectrum Modulated**Default: Disabled**

Enable / Disable this item the BIOS will Enable / Disable the clock generator spread spectrum.

CPU Host/PCI Clock**Default: Default**

This item allows other PCI devices to work concurrently with the host PCI IDE channel. We recommend that you leave this item at the default value Disabled.

CPU Warning Temperature**Default: Disabled**

When this item is enabled, we can set the CPU warning temperature. If the CPU temperature is higher than the setting temperature, the system will beep.

Current System Temp.

This field displays the *current* system temperature, if your computer contains a monitoring system.

Current CPU1 Temperature

It shows the current CPU temperature.

Current CPUFAN1 Speed

Current CPUFAN2 Speed

Current CPUFAN3 Speed

It shows the running speed of the system fan, Chassis fan and power fan. The value will be changing when the system is running. If you do not install the fan, the value will show 0.

Shutdown Temperature

Default: 60°C/140°F

When the system temperature up to 60°C/140°F, it will be shutdown.

Note:

The items on the right side of the Chipset Features option are concerned with monitoring certain temperatures, voltages, and so on in your system. These items do not function unless you have installed an optional system-monitoring clip on your motherboard.

3.5 Power Management

This option displays a table of items which lets you control the power management of the system. Modern operating systems take care of much of the routine power management. This motherboard supports ACPI (advanced configuration and power interface).

This system supports three levels of power-saving modes; doze mode, standby mode, and suspend mode. Standby mode uses less power than doze mode and suspend mode uses the least power.

The power management in the setup utility lets you specify a timeout for each of the power-saving modes, and a timeout for a hard disk drive power down. A timeout, means a period of time when the system (or the hard disk drive) is inactive. If the timeout completes, the system power-saving mode will execute, or the hard disk drive will power down.

You can resume from the power-saving modes by carrying out any of the activities which are enabled in the list Reload Global Timer Events. If the hard disk has been powered down it will automation resume to full power when an access to the hard disk is required (this takes just a few seconds).

ROM PCI/ISA BIOS (2A69KPNI)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

ACPI function	: Enabled	** Reload Global Timer Events **	
Power Management	: User Define	IRQ [3-7,9-15],NMI	: Disabled
PM Control by APM	: Yes	Primary IDE 0	: Disabled
Video Off Method	: V/H SYNC+Blank	Primary IDE 1	: Disabled
Video off After	: Standby	Secondary IDE 0	: Disabled
MODEM Use IRQ	: 3	Secondary IDE 1	: Disabled
Doze Mode	: Disable	Floppy Disk	: Disabled
Standby Mode	: Disable	Serial Port	: Enabled
Suspend Mode	: Disable	Parallel Port	: Disabled
HDD Power Down	: Disable		
Throttle Duty Cycle	: 62.5%		
PCI/VGA Act-Monitor	: Enabled		
Soft-off by PWR-BTTN	: Instant-off		
CPUFAN off In Suspend	: Enabled		
Poweron by Ring	: Enabled		
Resume by Alarm	: Disabled		
Wake Up on LAN	: Enabled	ECS : Quit	↑↓→← : Selection Item
IRQ 8 Break Suspend	: Disabled	F1 : Help	PU / PD / + / - : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

ACPI function

Default: Enabled

When Enabled, this function can save the power of your system.

Power Management

Default: User Define

This category allows you to select the type (or degree) of power saving and is directly related to the following modes : Doze; Standby; Suspend; HDD Power Down.

- Min.Power Saving Minimum power management. Doze =1 hr.;
- Max. Power Saving Standby= 1 hr.; Suspend= 1 hr.; HDD Power Down=15min
- Maximum power management only available for SL CPU.Doze=1min.;
- Standby=1min.;Suspend=1 min.;HDD Power Down= 1 min
- User Allows you to set each mode individually.

Defined When not disabled, each of the ranges are from I min. to I hr. except for HDD Power Down which ranges from I to 15min. and disable

If you would like to use Software Power-off Control function, you cannot choose "Disabled" here, and should select "Yes" in PM Control by APM.

PM Control by APM

Default: Yes

Windows 95 and 98 have built-in power management capabilities called APM (advanced power management). When you enable this item, you allow the APM routines in Windows to operate on your system.

Video Off Method

Default: V/H SYNC+Blank

This determines the manner in which the monitor is blanked.

V/H SYNC+ Blank	This selection will cause the system to turn off the vertical and horizontal sync. ports and write blanks to the video buffer
Blank Screen	This option only writes blanks to the video buffer
DPMS	Initial display power management signaling

Video Off After

Default: Standby

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

N/A	Monitor will remain on during power saving modes.
Suspend	Monitor blanked when the systems enters the Suspend mode.
Standby	Monitor blanked when the system enters Standby mode.
Doze	Monitor blanked when the system enters any power saving mode.

MODEM Use IRQ

Default: 3

This item determines the IRQ in which the MODEM can be used. The choice: 3,4,5,7,9, 10,11,N/A.

Doze Mode

Default: Disable

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 20 seconds to 40 minutes.

Standby Mode**Default: Disable**

When enabled and after the set time of system inactivity, the fixed disk drive and the video would be shut off while all other devices still operate at full speed.

Suspend Mode**Default: Disable**

If you have selected User Define for the Power Management item, you can set this item to a selection of timeouts from 20 seconds to 40 minutes.

HDD Power Down**Default: Disable**

You can use this item to set a timeout for a hard disk powerdown. You can set a time from 1 to 15 minutes. If the hard disk is inactive for the time specified, it will power down. It will automatically return to full power when it is next accessed.

Throttle Duty Cycle**Default: 62.5%**

When the system enters Doze mode, the CPU clock runs only part of time. You may select the percent of time that the clock runs.

PCI/VGA Act-Monitor**Default: Enabled**

When Enabled, any video active restarts the global timer for standby mode.

Soft-off by PWR-BTTN**Default: Instant-off**

Under ACPI (advanced configuration and power interface) the system can be turned off mechanically (by the power button) or it can undergo a software power off. If the system has been turned off by software, the system can be resumed by a LAN, MODEM or ALARM wake up signal. This item allows you to define a software power off using the power button. If the value is set to Instant-Off, the power button will automatically cause a software power off. If the value is set to Delay 4 Sec. the power button must be held down for a full four seconds to cause a software power off.

CPUFAN off In Suspend**Default: Enabled**

Enabled: under suspend mode, the CPU FAN will be turn off.
Disabled: suspend mode will not turn off CPU FAN.

PowerOn by Ring**Default: Enabled**

Enabled: when system in suspend mode, it can be wake up by modem.
Disabled: it cannot be wake up by modem.

Resume by Alarm

Default: Disabled

When Enabled, two additional lines will be added to the screen Date (of Month) Alarm; Time (hh:mm:ss) Alarm to let user set the desired date and time. After power off, the system will automatic power on at the specified date and time.

Wake Up On LAN

Default: Enabled

Enabled: If you have installed LDCM administrator software, and any client side is powered off, you can wake up by LAN through the LDCM mechanism.

IRQ 8 Break Suspend

Default: Disabled

When enabled, the device which occupies the IRQ8 can wake up the system.

Reload Global Timer Events

When enabled, an event occurring on each device listed below restarts the global time for Standby mode.

IRQ [3 -7, 9-15], NM;

Primary IDE 0;

Primary IDE 1;

Secondary IDEO;

Secondary IDEL;

Floppy Disk;

3.6 PNP/PCI Configuration Setup

The PNP/PCI Configuration Setup allows you to configure the ISA and PCI devices installed in your system. The following screen appears if you select the option PNP/PCI Configuration setup from the main menu.

ROM PCI/ISA BIOS(2A69JPNE)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed : No Resources Contorlled By : Manual Reset Configuration Data : Disabled IRQ-3 assigned to : PCI/ISA PnP IRQ-4 assigned to : PCI/ISA PnP IRQ-5 assigned to : PCI/ISA PnP IRQ-7 assigned to : PCI/ISA PnP IRQ-9 assigned to : PCI/ISA PnP IRQ-10 assigned to : PCI/ISA PnP IRQ-11 assigned to : PCI/ISA PnP IRQ-12 assigned to : PCI/ISA PnP IRQ-14 assigned to : PCI/ISA PnP IRQ-15 assigned to : PCI/ISA PnP DMA-0 assigned to : PCI/ISA PnP DMA-1 assigned to : PCI/ISA PnP DMA-3 assigned to : PCI/ISA PnP DMA-5 assigned to : PCI/ISA PnP DMA-6 assigned to : PCI/ISA PnP DMA-7 assigned to : PCI/ISA PnP	PCI IDE IRQ Map To : PCI-AUTO Primary IDE INT# : A Secondary IDE INT# : B Used MEM base addr : N/A Assign IRQ For VGA : Enabled Assign IRQ For USB : Enabled ESC: Quit ↑↓→←: Select Item F1 : Help PU / PD / + / - : Modify F5 : Old Values (Shift)F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults
---	---

PNP OS Installed

Default: No

If you have installed a Plug and Play **operating** system such as Windows 95 or 98, you can change this item to Yes. When the item is set to Yes you can use the Device Manager utility in the operating system to make changes to the configuration of expansion cards.

Resources Controlled By

Default: Manual

You should leave this item at the default Auto. If you find that you cannot get a particular expansion card to work properly, you might be able to solve the problem by changing this item to Manual, and defining the characteristics of the card in the new items which appear.

If you change this item to Manual, the display will list a series of items that

allow you to define the assignments of the system interrupt lines (IRQS) and Direct Memory Access (DMA) channels. As a default, these items are set to PCI/ISA PnP. If you install an ISA Bus card that does not support PNP, and it requires a special IRQ and DMA, you can modify the list of assignments. Change the values of the IRQ and DMA that are required to Legacy ISA.

Reset Configuration Data**Default: Disabled**

If you enable this item and restart the system, any PNP configuration data stored in the BIOS setup will be cleared from memory. New updated configuration data will be created.

IRQ 3/4/5/7/9/10/11/12/14/15**DMA 1/3/5/6/7**

This item allows you to determine the IRQ/DNM assigned to the ISA bus and is not available to any PCI slot. Choices are Legacy ISA and PCI/ISA PnP.

PCI IDE IRQ MAP To**Default: PCI-AUTO****Primary IDE INT#****Secondary IDE INT#**

This allows you to configure your system to the type of IDE disk controller in use. By default, Setup assumes that your controller is an ISA device rather than a PCI controller. The most apparent difference is the type of slot being used. If you have equipped your *INT#* system with a PCI controller, changing this allows you to specify which slot holds the controller and which PCI interrupt (A,B,C,D) is associated with the connected hard disk. This setting refers to the hard disk drive itself, rather than individual partitions. Since each IDE controller supports two separate hard drives, you can select the INT# for each. Again, you will note that the primary has a lower interrupt than the secondary as described in " *lot x Using INT#* "above. Select "PCI Auto" allows the system to automatically determine how your IDE disk system is configured.

Used MEM base addr**Default: N/A**

This item allows you to determine which basic address will not be occupied by PCI card and leave these address for some special ISA card used only.

Choices are C800, CCOO, DOOO, D400, D800, DCOO.

Assign IRQ For VGA

Default: Enabled

To assign an IRQ to VGA card if you enable this item.

Assign IRQ For USB

Default: Enabled

To assign an IRQ to USB Ports if you enable this item.

3.7 Integrated Peripherals

This option displays a list of items which **defines** the operation of some peripheral items on the system's input/output ports.

ROM PC/ISA BIOS(2A69KPNI)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Enabled	Onboard Serial Port 1	: 3F8/IRQ4
IDE Primary Master PIO	: AUTO	Onboard Serial Port 2	: 2F8/IRQ3
IDE Primary Slave PIO	: AUTO	UART Mode Select	: Normal
IDE Secondary Master PIO	: AUTO		
IDE Secondary Slave PIO	: AUTO	Onboard Parallel port	: 378/IRQ7
IDE Primary Master UDMA	: AUTO	Parallel Port Mode	: ECP+EPP
IDE Primary Slave UDMA	: AUTO	ECP Mode Use DMA	: 3
IDE Secondary Master UDMA	: AUTO	EPP Mode Select	: EPP1.9
IDE Secondary Slave UDMA	: AUTO		
On-Chip Primary PCI IDE	: Enabled		
On-Chip Secondary PCI IDE	: Enabled		
USB keyboard Support	: Disabled		
Init Display First	: PCI Slot		
POWER ON Function	: BUTTON ONLY		
		Esc : Quit	↑↓→← : Selection Item
KBC input clock	: 8 MHz	F1 : Help	PU/PD/+/- : Modify
Onboard FDC Controller	: Enabled	F5 : Old Values	(Shift) F2 : Color
FDC Write Protect	: Disabled	F6 : Load BIOS Default	
		F7 : Load Setup Default	

IDE HDD Block Mode**Default: Enabled**

This allows your HDD controller to use the fast block mode to transfer data to and from your HDD drive; Enabled IDE controller uses block mode ; Disabled IDE controller uses standard mode.

IDE Primary Master/Slave PIO**Default: Auto****IDE Secondary Master/Slave PIO**

PIO - Programmed Input / Output, it allows the BIOS to tell the controller what it wants and then let the controller and the CPU to complete the task by themselves. This is simpler and faster. Your system supports five modes, 0 - 4, which primarily differ in timing. When **Auto** is selected, the BIOS will select the best available mode.

IDE Primary Master/Slave UDMA**Default: Auto**

Auto, will support the Ultra DMA function. Disabled, will not support the Ultra DMA function.

On-Chip Primary PCI IDE**Default: Enabled****On-Chip Secondary PCI IDE**

This setup item allows you to either enable or disable the primary/secondary controller. You might choose to disable the controller if you were to add higher performance or specialized controller.

USB Keyboard Support**Default: Disabled**

Enabled will support USB keyboard in Win95 2.1 and NT 5.0 or above operating system.

Init Display First**Default: PCI Slot**

Use this item to define if your graphics adapter is installed in one of the PCI slots, or if you have installed an AGP graphics adapter into the AC-RP slot.

POWER ON Function**Default: BUTTON ONLY**

The Power On Function item allows you to power on the system by pressing hot-keys. If you set this item to Hot Key, you can use the item Hot Key Power On to choose which hot keys are installed.

KBC input clock**Default: 8 MHz**

This item lets you set a frequency for the input clock of the keyboard controller. Leave this item at the default value 8 MHz.

Onboard FDC Controller**Default: Enabled**

This item will enable or disable the floppy disk controller.

FDC Write Protect**Default: Disabled**

To enable/disable the write protection of floppy.

Onboard Serial Port 1**Default: 3F8/IRQ4**

User can select serial port IRQ. If set to Auto, system will assign an IRQ for it. Note : Set to Auto is not recommended.

Onboard Serial Port 2**Default: 2F8/IRQ3**

User can select serial port IRQ. If set to Auto, system will assign an IRQ for it. Note : Set to Auto is not recommended.

UART Mode Select**Default: Normal**

This lets you select the Infrared mode. Choices are Standard, HPIR, and ASKIR. If you choose BPIR or ASKIR mode, the screen will show another two lines to let you choose 'IR Function Duplex' (Full or Half) and “ RxD TxD Active” (Hi Lo; Lo Hi; Hi Hi-,Lo Lo).

Onboard Parallel Port**Default: 378/IRQ7**

This item lets you disable the built-in parallel port, or enable it by assigning a I/O address and an Interrupt Request Line (IRQ).

Parallel Port Mode**Default: ECP+EPP**

This item defines the operation of the parallel port. As a default it is set to ECP + EPP. If you are connected to a parallel device that supports the higher-performance EPP (enhanced parallel port) or the ECP (extended capabilities port) make the appropriate changes to this item. If you change the parallel port to EPP or ECP, new items appear that let you

ECP Mode Use DMA**Default: 3**

Select a DMA channel for the port. Choices are 3, 1.

EPP Mode Select**Default: EPP1.9**

Select EPP mode for the port.

3.8 Supervisor Password & User Password

These two items can be used to install a Supervisor Password and a User Password. If you log on as Supervisor, you have full access to the system, and you can restrict the permissions granted to someone who logs on as User. For example, a Supervisor can restrict a User from entering the setup utility.

To install a Supervisor or User Password, follow these steps:

1. Highlight the item Supervisor/User password on the main menu and press **Enter**.
2. The password dialog box will appear.
3. If you are installing a new password, carefully 4W in the password. You cannot use more than 8 characters or numbers. The password will differentiate between upper case and lower characters. Press **Enter** after you have typed in the password. If you are deleting a password that is already installed just press **Enter** when the password dialog box appears.
4. The system will ask you to confirm the new password by asking you to type it in a second time, Carefully type the password again and press **Enter**, or just press **Enter** if you are deleting a password that is already installed.
5. If you type the password correctly, the password will be installed.

3.9 IDE HDD Auto Detection Option

This feature allows you to check all the information on your hard disk formation. When you access "IDE HDD Auto Detection", the system executes auto detection.

At the prompt, it represents all the information on your HDD, and you are asked:

Do you accept this drive C: (Y/N) ?

1. If you accept the test result, press [Y] then [Enter] and the result is saved, then the system continues to detect another HDD.
7. If not, press [N] then [enter] and the system continues to detect another HDD.

3.10 Save and Exit Setup Option

This allows you to save the new setting values in the CMOS memory and continue with the booting process. Select what you want to do, press <Enter>.

3.11 Exit Without Saving Option

This allows you to exit the BIOS setup utility without recording any new values or changing old ones.

Highlight this item and press **Enter** to save the change that you have made in the setup utility and exit the setup program. When the *Save and Exit* dialog box appears, press **Y** to discard changes and exit, or press **N** to return to the setup main menu.

Chapter 4

Software Setup

The support software for this motherboard may be supplied on a CD-Title, or it may be supplied on diskettes. All the support programs are stored in separate folders, so you can find the program you need easily enough. The support software contains the following programs:

- IDE Bus Master drivers for Win 95/NT.
- PC-Cillin 98 Software.

Note: Please refer the PC-Cillin 98 installation guide for installing the PC-Cillin 98.

4.1 Installing the IDE Bus Master Driver

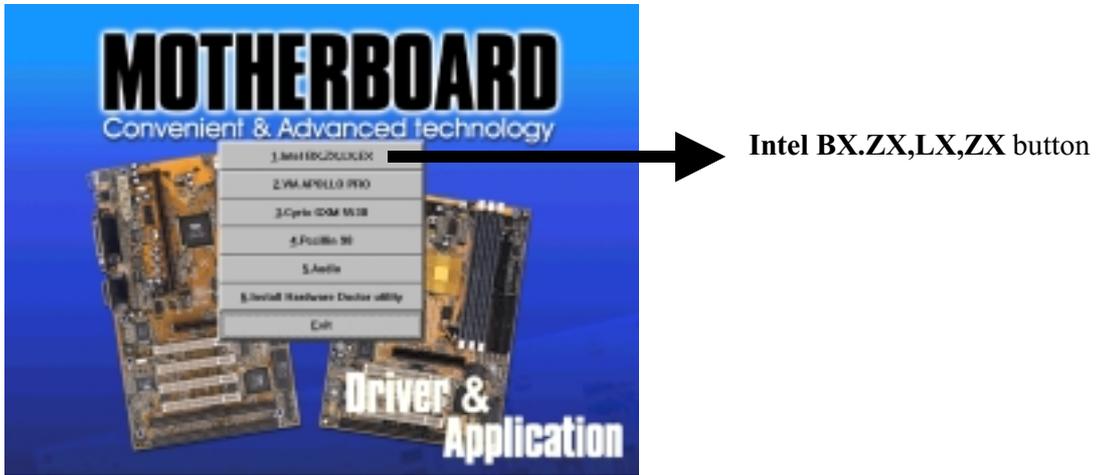
After you have finished the hardware setup, you have to install the IDE Bus Master software of the motherboard, then you can enjoy the advance Motherboard.

Note: If your system is Win98, please skip this section. Because Windows 98 have been built-in the IDE Bus Master Driver, you don't need to install the software again.

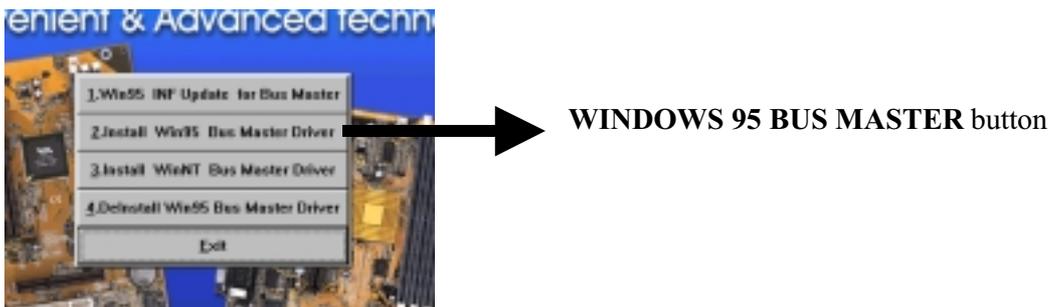
According the follow steps for IDE Bus Master driver installation:

1. Turn on your PC then put the “**CD title**” into your CD-ROM drive.
(Please make sure it's under Win98/95 mode)
2. The CD title will be auto-run. If not, please click the “**start**” button and select “**Run**” item. Then type-> **D:\setup** (D is assigned your CD-ROM Device)

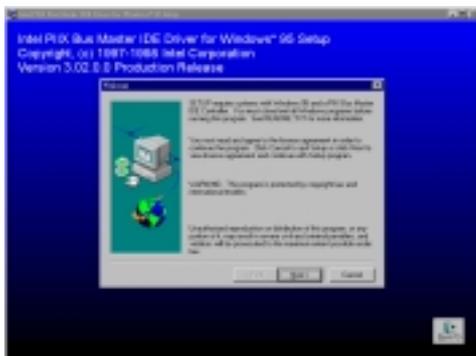
3. Press “**Intel BX,ZX,LX,EX**” button.



4. Press “**WINDOWS 95 BUS MASTER**” and follow the instructions to this software. Then Re-boot your PC.



5. Click **Next** when the Welcome screen appears.



6. Follow the instructions to complete the software installation, then re-boot your PC.

4.2 The Temperature Sensor – W83781D (Optional)

This program is concerned with monitoring certain temperatures, voltages, and so on in your system. These items do not function unless your motherboard has W83781D sensor chip and you have installed following software on your motherboard.

Hardware Doctor Setup for Windows 95 or 98:

1. Turn on your PC and put the “**CD title**” into your CD-ROM drive.
(Please make sure it's under Win98/95 mode)
2. The CD title will be auto-run. If not, please click the “**start**” button and select “**Run**” item. Then type-> **D:\setup** (D is assigned your CD-ROM Device)
3. Click the **Install Hardware Doctor Utility**.

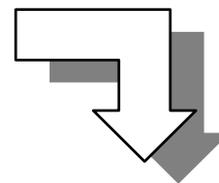


Click here

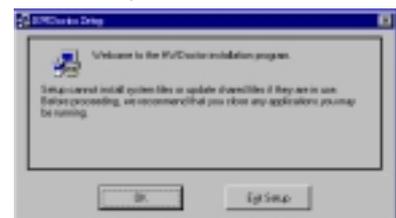
3. Click the **W83781D** and follow the instruction to finish the installation, then reboot your computer.

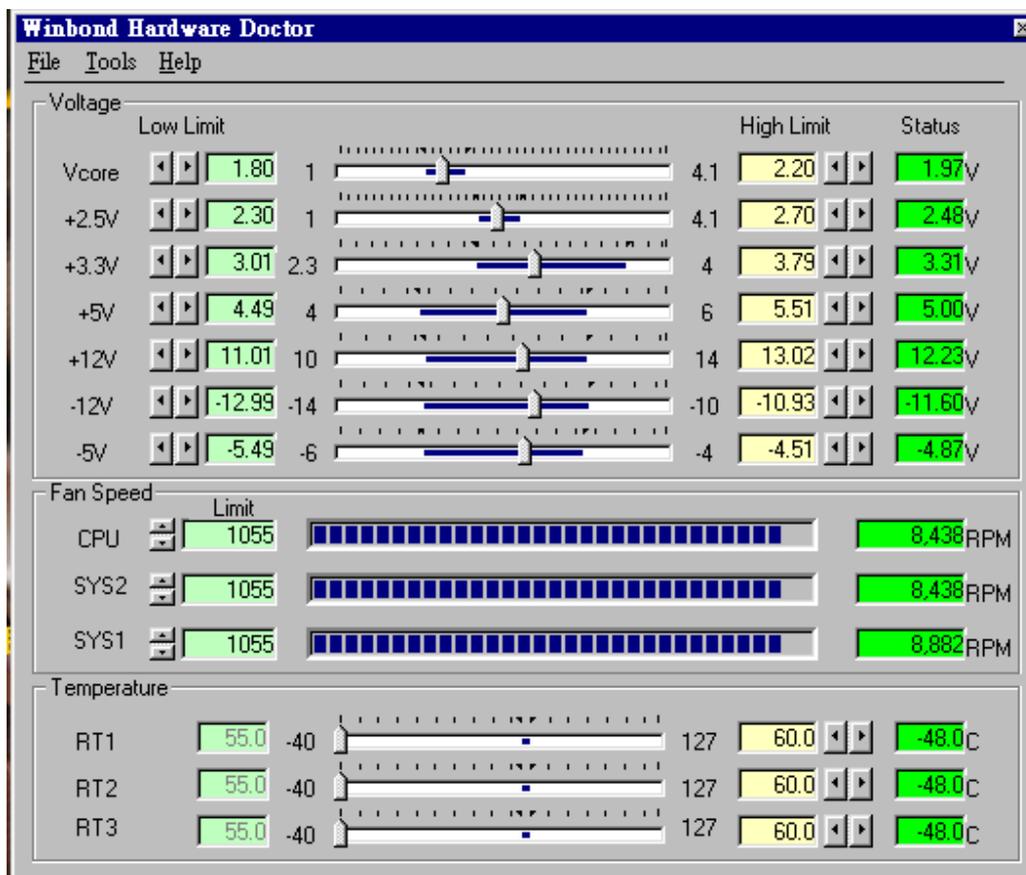


Click here



Run the Hardware Doctor program.



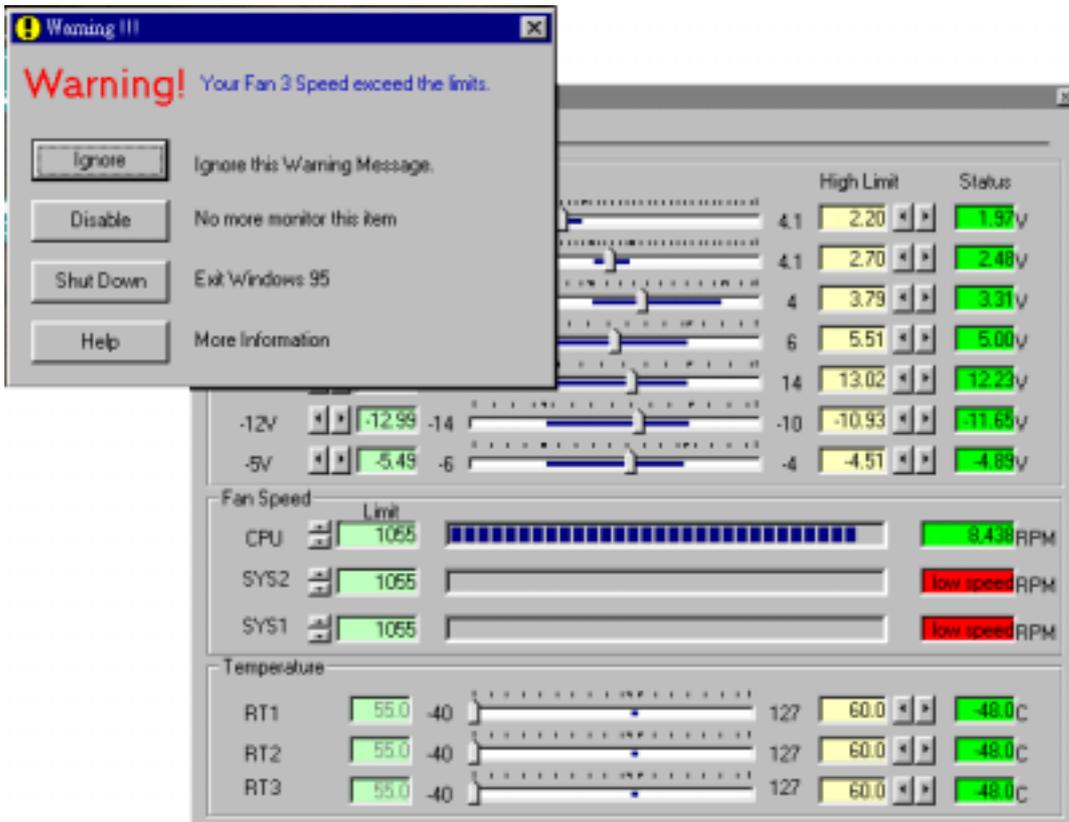
◆ Voltage default -

The Application of W83781D also controls the fan speed. The default of CPU Fan, SYS1 Fan and SYS2 Fan is “Enable”.

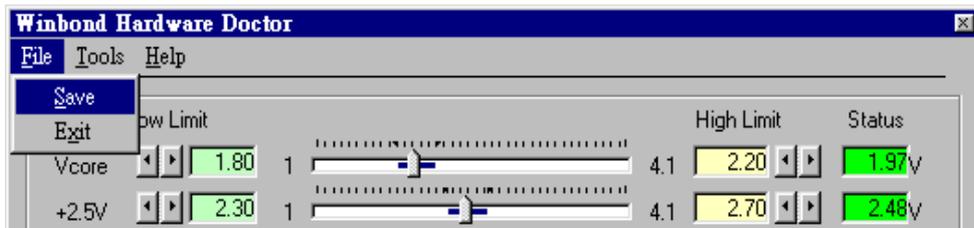
◆ When you connect just only one CPU Fan -

If your system is using CPU Fan only, please disable the function of SYS1 Fan and SYS2 Fan by the following steps:

1. When you complete the setup and reboot the system, the system will alarm with a warning “beep“ sound. Please click the “START” →”PROGRAM” buttons and select the “Hardware Doctor”, the system will display the message as next page:



2. Click the “Disable” of the warning icon of Fan 3, then it shows the warning icon of Fan 2. You just click the “Disable” icon as previous step. Then “Save” and “Exit”.



The correct setup is completed.

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