

MI7WBM
Socket 370 Intel 810
Micro ATX Motherboard

User's Manual

Version 1.0

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Chapter 1 Introduction

This manual is designed to give you information on the MI7WBM motherboard. It is divided into the following sections:

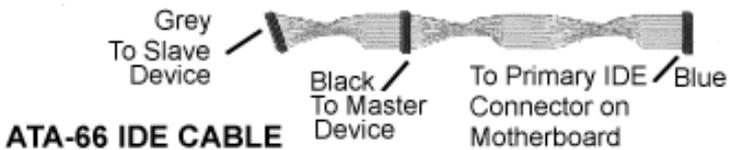
- **Introduction**
- **Specifications**
- **Hardware Description**
- **Configuring the Motherboard**
- **Installation**
- **BIOS Configuration**

Checklist

Please check that your package is complete and contains the items below. If you discover damaged or missing items, please contact your dealer.

- The MI7WBM Motherboard
- 1 IDE ribbon cable
- 1 floppy ribbon cable

Note: The ATA-66 IDE cable that is used in conjunction with Ultra DMA/66 hard disks is optional. Refer to the figure below on how to connect the cable.



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Chapter 2 Specifications

The MI7WBM is a high-performance Micro ATX Intel 810 motherboard with a Socket 370 connector for Intel Celeron processors. The motherboard offers flexibility in terms of CPU frequency and main memory type and size. The main features of the motherboard consist of the following:

CPU Socket

Socket 370

Processor

Intel Celeron

300/333/350/366/400/433/450/466/500MHz CPU frequency

Bus Speed

66/100MHz

L2 Cache

CPU integrated L2 cache

Main Memory

Two 168-pin DIMM sockets

Memory types: SDRAM (Synchronous DRAM)

Memory sizes: 64MB, 128MB

Chipset

Intel 810 chipset with built-in PCI-IDE

Super I/O

Built-in Winbond 83627HF chip

- Two 16550 UART compatible serial ports
- One parallel port (ECP/EPP compatible)
- One floppy controller (2.88MB compatible)
- One IrDA port

PCI Bus Master IDE Controller

The onboard chipset's PCI Bus Master IDE controller with two connectors for up to four IDE devices in two channels, supporting enhanced IDE devices such as tape backup and CD-ROM drives, PIO Mode 3/4 and Bus Mastering Ultra DMA/66 / Ultra DMA/33.

Note: A UDMA66 cable should be used for UDMA66 interface. Under Windows NT 4.0, you need to install Windows NT Service Pack 5.)

BIOS

Award BIOS with ISA Plug and Play (PnP) extension, DMI, bootable CD-ROM and power-management features. The BIOS is Y2K (Year 2000) compliant.

Mouse Connector

PS/2 type

Keyboard Connector

PS/2 type

USB Connector

2 ports on board

Win95/98 shut-off

Allows shut-off control from within Windows 95/98

Onboard Audio

Built-in Intel 82801AA/AB

The onboard audio is fully compliant with AC97 specifications.

Onboard VGA

The highly integrated graphics accelerator consists of dedicated multimedia engines executing in parallel to deliver high performance 3D, 2D and motion compensation video capabilities. The 3D and 2D engines are managed by a 3D/2D pipeline preprocessor allowing a sustained flow of graphics data to be rendered and displayed. It also features a 4MB display cache buffer.

Expansion Slots

Three 32-bit PCI slots

One AMR slot for modem

Form Factor

Micro ATX, 9.65" x 7.87" (24.5cm x 20cm)

Chapter 3 Hardware Description

This chapter briefly describes each of the major features of the MI7WBM motherboard. The layout of the board in Figure 1 shows the location of the key components. The topics covered in this chapter are as follows:

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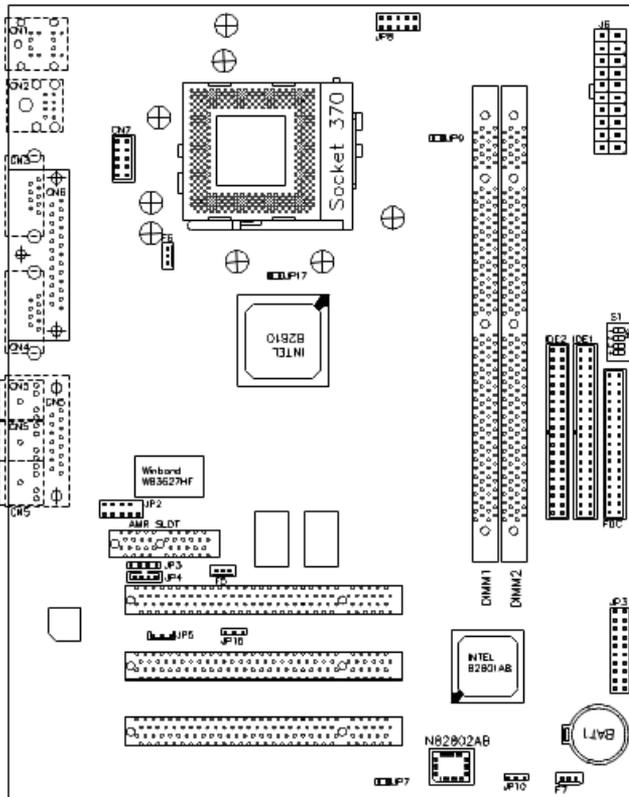


Figure 1: Layout of the MI7WBM Motherboard

3.1 Processor

The MI7WBM motherboard is designed to take an Intel Celeron processor running 300/333/350/366/400/433/450/466/500MHz.

3.2 L2 Cache

The L2 cache is integrated in the processor.

3.3 Main Memory

The MI7WBM motherboard supports two 168-pin DIMM (Dual In-line Memory Module) sockets to form a memory configuration from 64MB to 256MB. DIMM modules can be 64M and 128MB in SDRAM. In populating the DIMM sockets, any socket can be populated first. Refer to the following table on how to do the memory configuration.

NOTE: Use SDRAM modules with PC100 specification only when running either 66MHz or 100MHz CPU bus speed.

(DIMM1)	(DIMM2)	Total Memory
64MB	----	64MB
128MB	----	128MB
64MB	64MB	128MB
128MB	64MB	192MB
128MB	128MB	256MB

Note: The red LED indicator beside the DIMM memory sockets determine if there is electric current in the memory. Before removing or installing a memory module, make sure that this LED indicator is not ON. If the LED light is on, please turn off the power or unplugged the power cable.

3.4 BIOS

The BIOS on the MI7WBM motherboard provides the standard BIOS functions plus the following feature:

Power Management

The power management feature provides power savings by slowing down the CPU clock, turning off the monitor screen and stopping the HDD spindle motor. The BIOS fully conforms to ACPI (Advanced Configuration and Power Interface) specification.

3.5 Onboard VGA

The highly integrated graphics accelerator consists of dedicated multimedia engines executing in parallel to deliver high performance 3D, 2D and motion compensation video capabilities. The 3D and 2D engines are managed by a 3D/2D pipeline preprocessor allowing a sustained flow of graphics data to be rendered and displayed. It also features a 4MB display cache buffer.

3.6 Hardware Monitoring

The Winbond 83627HF chip has a built-in hardware status monitoring function that monitor several hardware parameters including power supply voltages, fan speeds, and temperatures, which are very important for a high-end computer system to work stable and properly. This function is used together with System Monitor utility or the optional Intel LANDesk Client Manager utility.

3.7 Onboard Multi-I/O

The multi-I/O function is built in the Winbond 83627HF chip supports a keyboard controller, two serial ports, one parallel port, one floppy controller and one IrDA port. The serial ports are 16550 UART compatible. The parallel port features high-speed EPP/ECP mode. The floppy controller supports up to 2.88MB format.

3.8 Interrupt Request (IRQ) Lines

There are a total of 15 IRQ lines available on the motherboard. Peripheral devices use an interrupt request to notify the CPU for the service required. The following table shows the IRQ lines used by the devices on the motherboard:

<u>Level</u>	<u>Function</u>
IRQ0	System Timer Output
IRQ1	Keyboard
IRQ2	Interrupt Cascade
IRQ8	Real Time Clock
IRQ9	Software Redirected to Int 0Ah
IRQ10	Reserved
IRQ11	Reserved
IRQ12	Reserved
IRQ13	Co-Processor
IRQ14	Primary IDE
IRQ15	Secondary IDE
IRQ3	INTERRUPT
IRQ4	Serial Port #1
IRQ5	INTERRUPT
IRQ6	Floppy Disk Controller
IRQ7	Parallel Port #1

3.9 Onboard PCI-IDE

The Intel 810 chipset's built-in's PCI-IDE controller supports PIO mode 3/4 and bus mastering Ultra DMA/66 / Ultra DMA/33. The peak transfer rate of PIO mode 3/4 can be as high as 17MB/sec. Using HDDs that support Ultra DMA/66, the peak transfer rate can reach 66MB/sec. The peak transfer rate of PIO mode 3/4 can be as high as 17MB/sec. There are two IDE connectors - primary IDE and secondary IDE. With two devices per connector, up to four IDE devices can be supported.

3.10 DMA Channels

There are seven DMA channels available on the motherboard; only DMA2 is used by the floppy controller. In the case that ECP mode on the parallel port is utilized, DMA1 or DMA3 will be used.

3.11 I/O Port Address Map

Each peripheral device in the system is assigned a set of I/O port addresses, which also becomes the identity of the device. There is a total of 1K port address space available. The following table lists the I/O port addresses used on the motherboard.

Address	Device Description
000h - 01Fh	DMA Controller #1
020h - 03Fh	Interrupt Controller #1
040h - 05Fh	Timer
060h - 06Fh	Keyboard Controller
070h - 07Fh	Real Time Clock,, NMI
080h - 09Fh	DMA Page Register
0A0h - 0BFh	Interrupt Controller #2
0C0h - 0DFh	DMA Controller #2
0F0h	Clear Math Coprocessor Busy Signal
0F1h	Reset Math Coprocessor
1F0h - 1F7h	IDE Interface
2F8h - 2FFh	Serial Port #2(COM2)
378h - 3FFh	Parallel Port #1(LPT1)
3F0h - 3F7h	Floppy Disk Controller
3F8h - 3FFh	Serial Port #1(COM1)

3.12 Onboard Audio

The onboard audio is embedded in the 82801 chip. It is compliant with Standard v2.01 AC97 interface

Chapter 4 Configuring the Motherboard

The following sections describe the necessary procedures and proper jumper settings to configure the MI7WBM motherboard. For the locations of the jumpers, refer to Figure 2.

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4.6 JP16: Onboard Audio Enable/Disable.....	14
4.7 JP17: Memory Clock Select.....	15

The following examples show the conventions used in this chapter.

	Jumper Open
	Jumper Closed/Short

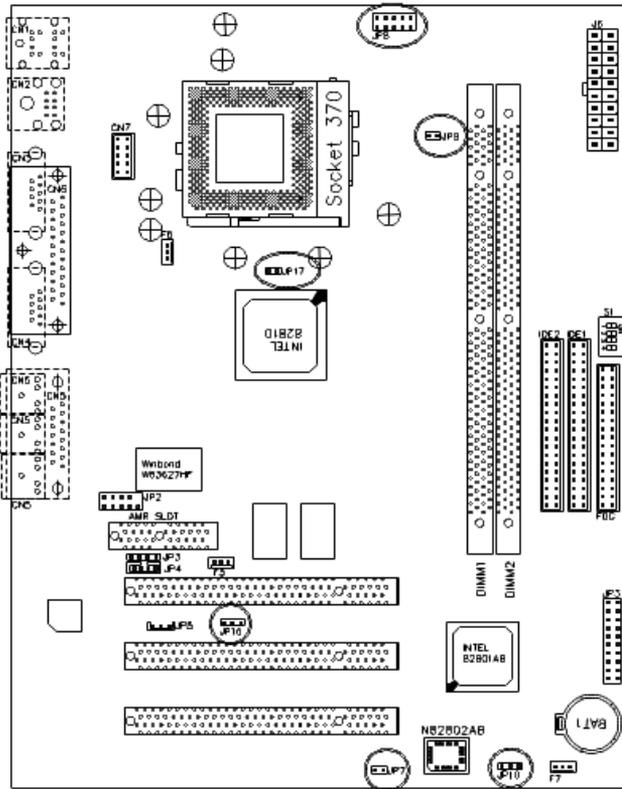


Figure 2: Jumper Location on the MI7WBM

4.1 CPU Frequency Setting

The MI7WBM uses jumper-free technology in configuring the processor on the motherboard. The system automatically detects the CPU bus speed, 66MHz or 100MHz and sets the multiplier, or ratio, to 3X. However, the bus speed can also be configured through the BIOS if the processor supports this feature. The BIOS (under CPU Features Setup) allows users to change the CPU bus speed multiplier (3X, 3.5X, 4X, 4.5X, 5X, 5.5X, 6X, 6.5X, 7X, 7.5X, 8X) to set the correct or desired CPU frequency. *The CPU bus speed multiplier will remain unchanged if the CPU installed supports a fixed (only one) bus speed multiplier.*

IMPORTANT NOTE: It is possible that the system will not boot if the CPU has been changed. When this happens, turn off the computer by pressing the power button and turn it on again by pressing the **Insert** key and the power button simultaneously. (Note to press the **Insert** key until an image appears on the screen.) When the system is turned on, press the **Delete** key to enter BIOS Setup and configure the CPU speed.

4.2 JP9: 100MHz CPU Host Frequency Force Selector

The MI7WBM is able to detect the host frequency (66MHz or 100MHz) of the installed CPU. The JP9 jumper, however, can be set to **OPEN** to override the detection and force the host frequency to run at 100MHz.

JP9	Function	JP9	Function
 SHORT	Host Frequency Auto-detect (default)	 OPEN	Host Frequency set to 100MHz

4.3 JP10: Clear CMOS Select

Use JP10, a 3-pin header, to clear the contents of the CMOS RAM. Do not clear the CMOS RAM unless it is absolutely necessary. You will lose your password, etc.

JP10	Jumper Setting	Function
 1 2 3	pin 1-2: short	Clear CMOS
 1 2 3	pin 2-3: short	Normal

NOTE: To clear CMOS, the power connector should be disconnected from the motherboard.

4.4 JP7: Boot Block Lock/Unlock

When the Boot Block is locked, BIOS flash update cannot be executed.

JP7	Function	JP7	Function
 SHORT	Boot Block Unlock	 OPEN	Boot Block Lock

4.5 JP8: Manufacturing Test Jumper

The 10-pin JP8 jumper is for manufacturing testing use only and should be left as is.

4.6 JP16: Onboard Audio Enable/Disable

JP16	Jumper Setting	Function
 1 2 3	pin 1-2: short	Onboard Audio Disabled
 1 2 3	pin 2-3: short	Onboard Audio Enabled

4.7 JP17: Memory Clock Select

The MI7WBM comes with the JP17 memory clock select jumper. In case you are using 64MB NEC or LGS SDRAM module and the system does not boot, set JP17 to SHORT to delay the memory clock.

IMPORTANT NOTES:

1. If the memory module you are using is not included in our test report or is an 'unknown' brand, set JP17 to OPEN first. If the system does not boot, then set JP17 to SHORT.

2. Regardless of the brand of memory module you are using, they must be PC-100 compatible modules.

3. In the BIOS setup on page 40, there is an option for the SDRAM cycle time. Its setting must meet the specification of your SDRAM module. Or else, the system might become unstable.

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Chapter 5 Installation

This chapter describes the interface that the MI7WBM provides for creating a working system. Refer to Figure 3 for the location of the connectors.

The following items are covered in this chapter:

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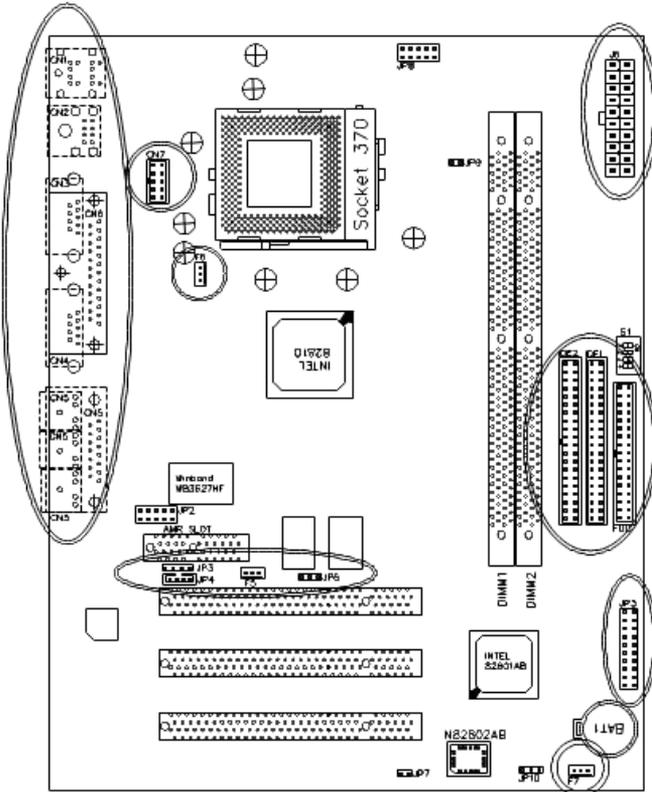


Figure 3: Connector Location on the MI7WBM

5.1 I/O Connectors

The I/O connectors connect the MI7WBM to the most common peripherals. To attach cables to these connectors, carefully align Pin 1 of the cables to that of the connectors. Refer to Figure 4 for the location and orientation of the connectors.

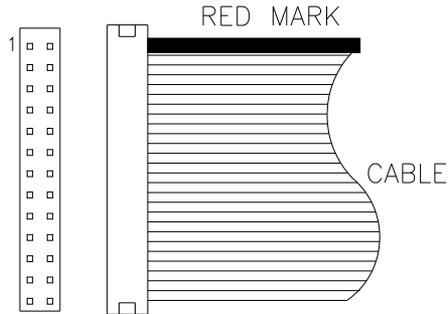
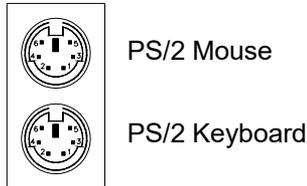


Figure 4: Orientation of the I/O Connector

5.2 CN1: PS/2 Keyboard and PS/2 Mouse Connectors

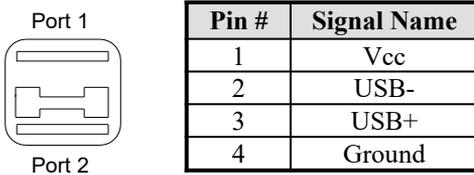


Below are the pin-out assignments of the connectors.

Signal Name	Keyboard	Mouse	Signal Name
Keyboard data	1	1	Mouse data
N.C.	2	2	N.C.
GND	3	3	GND
5V	4	4	5V
Keyboard clock	5	5	Mouse clock
N.C.	6	6	N.C.

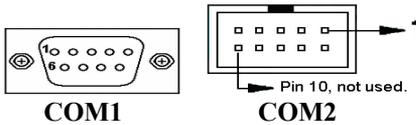
5.3 CN2: USB Connector

CN2 is the standard USB external connector consisting of two ports. USB support allows connections of up to 64 plug and play external peripherals per channel. The following table shows the pin outs of these ports.



5.4 CN3, CN7: Serial Ports

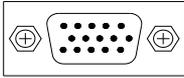
The onboard serial ports are CN3, a DB-9 connector which is COM1 and CN7, a 10-pin header connector which is COM2. The following table shows the pin-out assignments of these connectors.



Signal Name	Pin #	Pin #	Signal Name
DCD, Data carrier detect	1	6	DSR, Data set ready
RXD, Receive data	2	7	RTS, Request to send
TXD, Transmit data	3	8	CTS, Clear to send
DTR, Data terminal ready	4	9	RI, Ring indicator
GND, ground	5	10	Not Used

5.5 CN4: VGA Port Connector

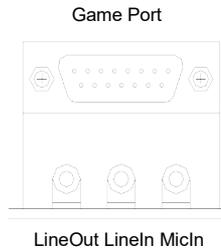
CN4 is a DB-15 VGA connector. The following table shows the pin-out assignments of this connector.



Signal Name	Pin #	Pin #	Signal Name
Red	1	2	Green
Blue	3	4	N.C.
GND	5	6	GND
GND	7	8	GND
N.C.	9	10	GND
N.C.	11	12	N.C.
HSYNC	13	14	VSYNC
NC	15		

5.6 CN5: Line Out, Line In, Mic In, Game Port

CN5 is the connector consisting of audio line out, audio line in, microphone and game port.



5.7 CN6: Parallel Port Connector

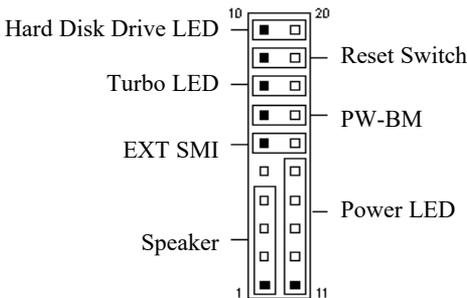
CN6 is a DB-25 external connector as seen in the previous figure. The following table describes the pin-out assignments of this connector.



Signal Name	Pin #	Pin #	Signal Name
Line printer strobe	1	14	AutoFeed
PD0, parallel data 0	2	15	Error
PD1, parallel data 1	3	16	Initialize
PD2, parallel data 2	4	17	Select
PD3, parallel data 3	5	18	Ground
PD4, parallel data 4	6	19	Ground
PD5, parallel data 5	7	20	Ground
PD6, parallel data 6	8	21	Ground
PD7, parallel data 7	9	22	Ground
ACK, acknowledge	10	23	Ground
Busy	11	24	Ground
Paper empty	12	25	Ground
Select	13	N/A	N/A

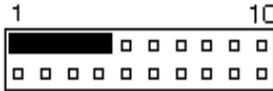
5.8 CN8: Front Bezel Connectors

The front bezel of the case has a control panel which provides light indication of the computer activities and switches to change the computer status. CN8 is a 20-pin header that provides interfaces for the following functions.



Speaker: Pins 1 - 4

This connector provides an interface to a speaker for audio tone generation. An 8-ohm speaker is recommended.



Pin #	Signal Name
1	Speaker out
2	No connect
3	Ground
4	+5V

Power LED: Pins 11 - 15

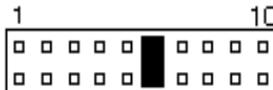
The power LED indicates the status of the main power switch.



Pin #	Signal Name
11	Power LED
12	No connect
13	Ground
14	No connect
15	Ground

EXT SMI: Pins 6 and 16

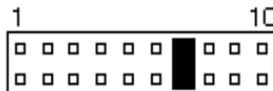
This 2-pin connector is for the “Green Switch” on the control panel, which, when pressed, will force the system immediately into the power saving (sleep) mode.



Pin #	Signal Name
7	Sleep
17	Ground

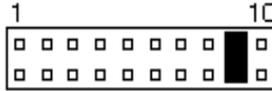
PW-BM: Pins 7 and 17

This 2-pin connector is an “ATX Power Supply On/Off Switch” on the motherboard that connects to the power switch on the case. When pressed, the power switch will force the motherboard to power on. When pressed again, it will force the motherboard to power off.



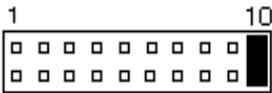
Reset Switch: Pins 9 and 19

The reset switch allows the user to reset the system without turning the main power switch off and then on again. Orientation is not required when making a connection to this header.



Hard Disk Drive LED Connector: Pins 10 and 20

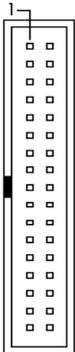
This connector connects to the hard drive activity LED on control panel. This LED will flash when the HDD is being accessed.



Pin #	Signal Name
10	HDD LED
20	5V

5.9 FDC: Floppy Drive Connector

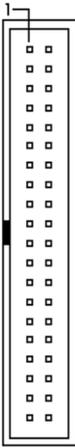
FDC of the MI7WBM is a 34-pin header and will support up to 2.88MB floppy drives. The following table shows its pin-out assignments.



Signal Name	Pin #	Pin #	Signal Name
Ground	1	2	RM/LC
Ground	3	4	No connect
Ground	5	6	No connect
Ground	7	8	Index
Ground	9	10	Motor enable 0
Ground	11	12	Drive select 1
Ground	13	14	Drive select 0
Ground	15	16	Motor enable 1
Ground	17	18	Direction
Ground	19	20	Step
Ground	21	22	Write data
Ground	23	24	Write gate
Ground	25	26	Track 00
Ground	27	28	Write protect
Ground	29	30	Read data
Ground	31	32	Side 1 select
Ground	33	34	Diskette change

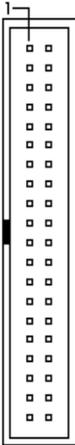
5.10 IDE1, IDE2: EIDE Connectors

IDE1: Primary IDE Connector



Signal Name	Pin #	Pin #	Signal Name
Reset IDE	1	2	Ground
Host data 7	3	4	Host data 8
Host data 6	5	6	Host data 9
Host data 5	7	8	Host data 10
Host data 4	9	10	Host data 11
Host data 3	11	12	Host data 12
Host data 2	13	14	Host data 13
Host data 1	15	16	Host data 14
Host data 0	17	18	Host data 15
Ground	19	20	Key
DRQ0	21	22	Ground
Host IOW	23	24	Ground
Host IOR	25	26	Ground
IOCHRDY	27	28	Host ALE
DACK0	29	30	Ground
IRQ14	31	32	No connect
Address 1	33	34	UDMA66 Enable
Address 0	35	36	Address 2
Chip select 0	37	38	Chip select 1
Activity	39	40	Ground

IDE2: Secondary IDE Connector



Signal Name	Pin #	Pin #	Signal Name
Reset IDE	1	2	Ground
Host data 7	3	4	Host data 8
Host data 6	5	6	Host data 9
Host data 5	7	8	Host data 10
Host data 4	9	10	Host data 11
Host data 3	11	12	Host data 12
Host data 2	13	14	Host data 13
Host data 1	15	16	Host data 14
Host data 0	17	18	Host data 15
Ground	19	20	Key
DRQ0	21	22	Ground
Host IOW	23	24	Ground
Host IOR	25	26	Ground
IOCHRDY	27	28	Host ALE
DACK1	29	30	Ground
MIRQ0	31	32	No connect
Address 1	33	34	UDMA66 Enable
Address 0	35	36	Address 2
Chip select 0	37	38	Chip select 1
Activity	39	40	Ground

5.11 J6: ATX Power Supply Connector

J6 is a 20-pin ATX power supply connector. Refer to the following table for the pin out assignments.

11	1	Signal Name	Pin #	Pin #	Signal Name
○	□	3.3V	11	1	3.3V
○	○	-12V	12	2	3.3V
○	○	Ground	13	3	Ground
○	○	PS-ON	14	4	+5V
○	○	Ground	15	5	Ground
○	○	Ground	16	6	+5V
○	○	Ground	17	7	Ground
○	○	-5V	18	8	Power good
○	○	+5V	19	9	5VSB
○	○	+5V	20	10	+12V

5.12 F5: Chip Fan Power Connector

The F5 chip fan power connector is a 3-pin header supporting a 12V fan.

□	□	□	Pin #	Signal Name
1	2	3	1	N. C.
			2	+12V
			3	Ground

5.13 F6: CPU Fan Power Connector

F6 CPU fan power connector is a 3-pin header supporting a 12V fan.

□	□	□	Pin #	Signal Name
1	2	3	1	Rotation
			2	+12V
			3	Ground

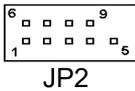
5.14 F7: Chassis Fan Power Connector

The F7 chassis fan power connector is a 3-pin header for a 12V fan.

□	□	□	Pin #	Signal Name
1	2	3	1	Rotation
			2	+12V
			3	Ground

5.15 JP2: IrDA Connector

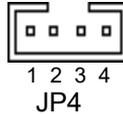
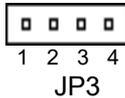
This connector is used for an IrDA connector that supports infrared wireless communication.



Signal Name	Pin #	Pin #	Signal Name
+5V	1	6	N.C.
N.C.	2	7	CIRRX
Ir RX	3	8	5VSB
Ground	4	9	N.C.
Ir TX	5		

5.16 JP3, JP4: CD-ROM Audio In Connectors

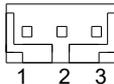
JP3 and JP4 are the onboard CD-ROM audio in connectors. Below are their pin assignments.



Signal Name	Pin #	Pin #	Signal Name
Left	1	1	Ground
Ground	2	2	Left
Ground	3	3	Ground
Right	4	4	Right

5.17 JP5: Wake on LAN Connector

JP5 is a 3-pin header for the Wake on LAN function on the motherboard. The following table shows the pin out assignments of this connector. Wake on LAN will function properly only with an ATX power supply with 5VSB that has 200mA.



Pin #	Signal Name
1	+5VSB
2	Ground
3	Wake on LAN

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Chapter 6 BIOS Configuration

This chapter describes the different settings available in the Award BIOS. The topics covered in this chapter are as follows:

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	Boot Up Floppy Seek	
	Boot Up NumLock Status	
	Gate A20 Option	
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	Typematic Rate (Chars/Sec)	
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6.1 BIOS Introduction

The Award BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel Celeron processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial and parallel ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

6.2 BIOS Setup

The Award BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the Award BIOS is immediately activated. Pressing the key immediately allows you to enter the Setup utility. If you are a little bit late pressing the key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

```
Press <DEL> to Enter Setup
```

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

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Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
ESC : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	
Time, Date, Hard Disk Type...	

The section below the setup items of the Main Menu displays the control keys for this menu. At the bottom of the Main Menu just below the control keys section, there is another section which displays information on the currently highlighted item in the list.

NOTE: If your computer cannot boot after making and saving system changes with Setup, the Award BIOS supports an override to the CMOS settings that resets your system to its default.

We strongly recommend that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both Award and your system manufacturer to provide the absolute maximum performance and reliability.

6.3 Standard CMOS Setup

“Standard CMOS Setup” choice allows you to record some basic hardware configurations in your computer system and set the system clock and error handling. If the motherboard is already installed in a working system, you will not need to select this option. You will need to run the Standard CMOS option, however, if you change your system hardware configurations, the onboard battery fails, or the configuration stored in the CMOS memory was lost or damaged.

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Standard CMOS Features

Date (mm:dd:yy)	Tue, Mar 26 1999	Item Help
Time (hh:mm:ss)	00 : 00 : 00	Menu Level
IDE Primary Master	Press Enter 13020 MB	Change the day, month, Year and century
IDE Primary Slave	Press Enter None	
IDE Secondary Master	Press Enter None	
IDE Secondary Slave	Press Enter None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All Errors	
Base Memory	640K	
Extended Memory	129024K	
Total Memory	130048K	

At the bottom of the menu are the control keys for use on this menu. If you need any help in each item field, you can press the <F1> key. It will display the relevant information to help you. The memory display at the lower right-hand side of the menu is read-only. It will adjust automatically according to the memory changed. The following describes each item of this menu.

Date

The date format is:

- Day :** Sun to Sat
- Month :** 1 to 12
- Date :** 1 to 31
- Year :** 1994 to 2079

To set the date, highlight the “Date” field and use the PageUp/ PageDown or +/- keys to set the current time.

Time

The time format is: **Hour : 00 to 23**
Minute : 00 to 59
Second : 00 to 59

To set the time, highlight the “Time” field and use the <PgUp>/<PgDn> or +/- keys to set the current time.

IDE Primary HDDs / IDE Secondary HDDs

The onboard PCI IDE connectors provide Primary and Secondary channels for connecting up to four IDE hard disks or other IDE devices. Each channel can support up to two hard disks; the first is the “Master” and the second is the “Slave”.

Press <Enter> to configure the hard disk. The selections include Auto, Manual, and None. Select ‘Manual’ to define the drive information manually. You will be asked to enter the following items.

CYLS : Number of cylinders
HEAD : Number of read/write heads
PRECOMP : Write precompensation
LANDZ : Landing zone
SECTOR : Number of sectors

The Access Mode selections are as follows:

Auto
Normal (HD < 528MB)
Large (for MS-DOS only)
LBA (HD > 528MB and
supports Logical Block
Addressing)

Drive A / Drive B

These fields identify the types of floppy disk drive A or drive B that has been installed in the computer. The available specifications are:

360KB	1.	2MB	720KB	1.	44M	2.	88M
5.25 in.	5.25 in.	3.5 in.	B	B			
			3.5 in.	3.5 in.			

Video

This field selects the type of video display card installed in your system. You can choose the following video display cards:

- | | |
|---------|---|
| EGA/VGA | For EGA, VGA, SEGA, SVGA or PGA monitor adapters. (default) |
| CGA 40 | Power up in 40 column mode. |
| CGA 80 | Power up in 80 column mode. |
| MONO | For Hercules or MDA adapters. |

Halt On

This field determines whether or not the system will halt if an error is detected during power up.

- | | |
|-------------------|---|
| No errors | The system boot will not be halted for any error that may be detected. |
| All errors | Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted. |
| All, But Keyboard | The system boot will not be halted for a keyboard error; it will stop for all other errors |
| All, But Diskette | The system boot will not be halted for a disk error; it will stop for all other errors. |
| All, But Disk/Key | The system boot will not be halted for a keyboard or disk error; it will stop for all others. |

6.4 Advanced BIOS Features

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

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Advanced BIOS Features

		ITEM HELP
Virus Warning	Disabled	
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Quick Power On Self Test	Disabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS/ZIP	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up Numlock Status	Off	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
Typematic Rate (chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM>64MB	Non-OS2	
Report No FDD For WIN 95	No	
		Menu Level
		Allows you choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep

Virus Warning

This item protects the boot sector and partition table of your hard disk against accidental modifications. If an attempt is made, the BIOS will halt the system and display a warning message. If this occurs, you can either allow the operation to continue or run an anti-virus program to locate and remove the problem.

NOTE: Many disk diagnostic programs, which attempt to access the boot sector table, can cause the virus warning. If you will run such a program, disable the Virus Warning feature.

CPU Internal Cache / External Cache

Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from 486-type on up contain internal cache memory, and most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. These items allow you to enable (speed up memory access) or disable the cache function. By default, these items are **Enabled**.

CPU L2 Cache ECC Checking

This field enables or disables the ECC (Error Correction Checking) checking of the CPU level-2 cache. The default setting is **Enabled**.

Quick Power On Self Test

When enabled, this field speeds up the Power On Self Test (POST) after the system is turned on. If it is set to *Enabled*, BIOS will skip some items.

First/Second/Third Boot Device

These fields determine the drive that the system searches first for an operating system. The options available include *Floppy*, *LS/ZIP*, *HDD-0*, *SCSI*, *CDROM*, *HDD-1*, *HDD-2*, *HDD-3*, *LAN* and *Disable*.

Boot Other Device

These fields allow the system to search for an operating system from other devices other than the ones selected in the First/Second/Third Boot Device.

Swap Floppy Drive

This item allows you to determine whether or not to enable Swap Floppy Drive. When enabled, the BIOS swaps floppy drive assignments so that Drive A becomes Drive B, and Drive B becomes Drive A. By default, this field is set to *Disabled*.

Boot Up Floppy Seek

When enabled, the BIOS will seek whether or not the floppy drive installed has 40 or 80 tracks. 360K type has 40 tracks while 760K, 1.2M and 1.44M all have 80 tracks.

Boot Up NumLock Status

This allows you to activate the NumLock function after you power up the system.

Gate A20 Option

This field allows you to select how Gate A20 is worked. Gate A20 is a device used to address memory above 1 MB.

Typematic Rate Setting

When disabled, continually holding down a key on your keyboard will generate only one instance. When enabled, you can set the two typematic controls listed next. By default, this field is set to *Disabled*.

Typematic Rate (Chars/Sec)

When the typematic rate is enabled, the system registers repeated keystrokes speeds. Settings are from 6 to 30 characters per second.

Typematic Delay (Msec)

When the typematic rate is enabled, this item allows you to set the time interval for displaying the first and second characters. By default, this item is set to *250msec*.

Security Option

This field allows you to limit access to the System and Setup. The default value is *Setup*. When you select *System*, the system prompts for the User Password every time you boot up. When you select *Setup*, the system always boots up and prompts for the Supervisor Password only when the Setup utility is called up.

OS Select for DRAM > 64MB

This option allows the system to access greater than 64MB of DRAM memory when used with OS/2 that depends on certain BIOS calls to access memory. The default setting is *Non-OS/2*.

Video BIOS Shadow

This item allows you to change the Video BIOS location from ROM to RAM. Video Shadow will increase the video speed.

C8000 - CBFFF Shadow/DC000 - DFFFF Shadow

Shadowing a ROM reduces the memory available between 640KB to 1024KB. These fields determine whether or not optional ROM will be copied to RAM.

6.5 Advanced Chipset Features

This Setup menu controls the configuration of the motherboard chipset.

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Advanced Chipset Features

SDRAM CAS Latency Time	3	ITEM HELP
SDRAM Cycle Time Tras/Trc	6/8	Menu Level
SDRAM RAS-to-CAS Delay	3	
SDRAM RAS Precharge Time	3	
System BIOS Cacheable	Disabled	
Video BIOS Cacheable	Disabled	
Memory Hole At 15M-16M	Disabled	
Delayed Transaction	Enabled	
On-Chip Video Window Size	64MB	
* Onboard Display Cache Setting *		
CAS# Latency	3	
Paging Mode Control	Close	
RAS-to-CAS Override	By CAS# LT	
RAS# Timing	Slow	
RAS# Precharge Timing	Slow	

SDRAM CAS Latency Time

You can select CAS latency time in HCLKs of 2/2 or 3/3. The system board designer should set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU. The choices are 2 and 3.

SDRAM Cycle Time Tras/Trc

The settings available for the SDRAM Cycle Time Tras/Trc are 6/8 and 5/7. The default setting is 6/8.

SDRAM RAS-to-CAS Delay

You can select RAS to CAS Delay time in HCLKs of 2/2 or 3/3. The system board designer should set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU. The choices are 2 and 3.

SDRAM RAS Precharge Time

This option defines the length of time for Row Address Strobe is allowed to precharge. The choices are 2 and 3.

System BIOS Cacheable

The setting of *Enabled* allows caching of the system BIOS ROM at F000h-FFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Video BIOS Cacheable

The Setting *Enabled* allows caching of the video BIOS ROM at C0000h-F7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

Memory Hole At 15M-16M

In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16 MB. The choices are *Enabled* and *Disabled*.

Delayed Transaction

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

On-Chip Video Window Size

The setting choices for the On-Chip Video Window Size are *64MB* and *32MB*. By default, this option is set to *64MB*.

Onboard Display Cache Setting

The default setting and optional setting for the onboard display cache functions are as follows:

CAS# Latency	3(default), 2(option)
Paging Mode Control	Close(default), Open (option)
RAS-to-CAS Override	by CAS# LT (default), Override (2)(option)
RAS# Timing	Slow (default), Fast (option)
RAS# Precharge Timing	Slow (default), Fast(option)

6.6 Integrated Peripherals

This section sets configurations for your hard disk and other integrated peripherals.

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Advanced Chipset Features

			ITEM HELP
On-Chip Primary PCI IDE	Enabled		Menu Level
On-Chip Secondary PCI IDE	Enabled		
IDE Primary Master PIO	Auto		
IDE Primary Slave PIO	Auto		
IDE Secondary Master PIO	Auto		
IDE Secondary Slave PIO	Auto		
IDE Primary Master UDMA	Auto		
IDE Primary Slave UDMA	Auto		
IDE Secondary Master UDMA	Auto		
IDE Secondary Slave UDMA	Auto		
USB Controller	Enabled		
USB Keyboard Support	Disabled		
Init Display First	PCI Slot		
AC97 Audio	Enabled		
AC97 Modem	Disabled		
IDE Block Mode	Enabled		
POWER ON Function	Any KEY		
KB Power ON Password	Enter		
Hot Key Power ON	Ctrl-F1		
Onboard FDC Controller	Enabled		
Onboard Serial Port 1	3F8/IRQ4		
Onboard Serial Port 2	2F8/IRQ3		
UART Mode Select	Hi, Lo		
IR Transmission Delay	Enabled		
Onboard Parallel Port	378/IRQ7		
Parallel Port Mode	SPP		
EPP Mode Select	EPP1.7		
ECP Mode Use DMA	3		
PWRON After PWR-Fail	Off		
Game Port Address	201		
Midi Port Address	330		
Midi Port IRQ	5		

OnChip Primary/Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select *Enabled* to activate each channel separately.

IDE Primary/Secondary Master/Slave PIO

These fields allow your system hard disk controller to work faster. Rather than have the BIOS issue a series of commands that transfer to or from the disk drive, PIO (Programmed Input/Output) allows the BIOS to communicate with the controller and CPU directly.

The system supports five modes, numbered from 0 (default) to 4, which primarily differ in timing. When Auto is selected, the BIOS will select the best available mode.

IDE Primary/Secondary Master/Slave UDMA

These fields allow your system to improve disk I/O throughput to 33Mb/sec with the Ultra DMA/33 feature. The options are *Auto* and *Disabled*.

USB Controller

The options for this field are *Enabled* and *Disabled*. By default, this field is set to *Enabled*.

USB Keyboard Support

The options for this field are *Enabled* and *Disabled*. By default, this field is set to *Disabled*.

Init Display First

This field allows the system to initialize first the VGA card on chip or the display on the PCI Slot. By default, the *PCI Slot* VGA is initialized first.

AC97 Audio

The options for this field are *Enabled* and *Disabled*. By default, this field is set to *Enabled*.

AC97 Modem

The options for this field are *Enabled* and *Disabled*. By default, this field is set to *Disabled*.

IDE HDD Block Mode

This field allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive.

POWER ON Function

This field allows powering on by the following methods:

Password	Hot KEY	Mouse Left	Mouse Right
Any KEY	BUTTON ONLY	Keyboard 98	

Onboard FDD Controller

Select *Enabled* if your system has a floppy disk controller (FDC) installed on the motherboard and you wish to use it. If you install an add-in FDC or the system has no floppy drive, select *Disabled* in this field. This option allows you to select the onboard FDD port.

Onboard Serial/Parallel Port

These fields allow you to select the onboard serial and parallel ports and their addresses. The default values for these ports are:

Serial Port 1	3F8/IRQ4
Serial Port 2	2F8/IRQ3
Parallel Port	378H/IRQ7

UART 2 Mode

This field determines the UART 2 mode in your computer. The default value is *Normal*. Other options include *IrDA* and *ASKIR*.

Parallel Port Mode

This field allows you to determine parallel port mode function.

SPP	Normal Printer Port
EPP	Enhanced Parallel Port
ECP	Extended Capabilities Port

PWRON After PW-Fail

In case of power failure, the system can be configured to power on or to remain off when the power returns. These two settings are *Former-Sts* and *Off* respectively. The default setting for this field is *Off*.

Game Port Address

The option settings for this field are *201*, *209* and *Disabled*. The default setting is *201*.

Midi Port Address

The option settings for this field are *330*, *400* and *Disabled*. The default setting is *330*.

Midi Port IRQ

The option settings for this field are *5* and *7*. The default setting is *7*.

6.7 Power Management Setup

The Power Management Setup allows you to save energy of your system effectively. It will shut down the hard disk and turn off video display after a period of inactivity.

CMOS Setup Utility – Copyright © 1984-1999 Award Software
Power Management Setup

		ITEM HELP
ACPI Function	Enabled	Menu Level
ACPI Suspend Type	S1 (POS)	
Power Management	User Define	
Video Off Method	DPMS	
Video Off In Suspend	Yes	
Suspend Type	Stop Grant	
Modem Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant-Off	
PW On by Modem/LAN	Enabled	
CPU Thermal-Throttling	50.0%	
Resume by Alarm	Disabled	
Date (of Month) Alarm	0	
Time (hh:mm:ss) Alarm	0	
** Reload Global Timer Events **		
Primary IDE 0	Disabled	
Primary IDE 1	Disabled	
Secondary IDE 0	Disabled	
Secondary IDE 1	Disabled	
FDD, COM, LPT Port	Disabled	
PCI PIRQ[A-D] #	Disabled	

ACPI Function

This field allows you to enabled or disable the ACPI function on the motherboard. By default, this field is set to **Disabled**.

ACPI Suspend Type

The options for the ACPI Suspend Type field are *S1(POS)* and *S3(STR)*. The default setting for this field is ***S1(POS)***.

Note: The S3(STR) hardware is optional.

Power Management

This field allows you to select the type of power saving management modes. There are four selections for Power Management.

Min. Power Saving	Minimum power management
Max. Power Saving	Maximum power management.
User Define	Each of the ranges is from 1 min. to 1hr. Except for HDD Power Down which ranges from 1 min. to 15 min. (Default)

Video Off Method

This field defines the Video Off features. There are three options.

V/H SYNC + Blank	Default setting, blank the screen and turn off vertical and horizontal scanning.
DPMS	Allows the BIOS to control the video display card if it supports the DPMS feature.
Blank Screen	This option only writes blanks to the video buffer.

Video Off in Suspend

When enabled, the video is off in suspend mode. The default setting is *Yes*.

Modem Use IRQ

This field sets the IRQ used by the Modem. By default, the IRQ used is 3.

Suspend Mode

This field enables and disables the suspend mode.

Suspend Mode

When enabled, and after the set time of system inactivity, all devices except the CPU will be shut off.

HDD Power Down

When enabled, and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Soft-Off by PWRBTN

This field defines the power-off mode when using an ATX power supply. The *Instant Off* mode allows powering off immediately upon pressing the power button. In the *Delay 4 Sec* mode, the system powers off when the power button is pressed for more than four seconds or enters the suspend mode when pressed for less than 4 seconds. The default value is *Instant Off*.

PW On by Modem/LAN

This field enables or disables the power on of the system through the modem connected to the serial port or LAN.

CPU Thermal-Throttling

The CPU Thermal Throttling function, by default, is set to 50.0%

Resume by Alarm

This field enables or disables the resumption of the system operation. When enabled, the user is allowed to set the *Date* and *Time*.

Doze Mode

When enabled, and after the set time of system inactivity, the CPU clock will run at a slower speed while all other devices still operate at full speed.

Reload Global Timer Events

The HDD, FDD, COM, LPT Ports, and PCI PIRQ are I/O events which can prevent the system from entering a power saving mode or can awaken the system from such a mode. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

6.8 PNP/PCI Configurations

This option configures the PCI bus system. All PCI bus systems on the system use INT#, thus all installed PCI cards must be set to this value.

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PnP/PCI Configurations

Reset Configuration Data	Disabled	ITEM HELP
Resources Controlled By	Auto (ESCD)	Menu Level
IRQ Resources	Press Enter	
Memory Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	Default is 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 OS cannot boot

Reset Configuration Data

This field allows you to determine whether to reset the configuration data or not. The default value is **Disabled**.

Assign IRQ for USB/VGA

These fields allow you to enable or disable the IRQ for USB and VGA. By default, these fields are enabled.

PCI/VGA Palette Snoop

Some non-standard VGA display cards may not show colors properly. This field allows you to set whether or not MPEG ISA/VESA VGA Cards can work with PCI/VGA. When this field is enabled, a PCI/VGA can work with an MPEG ISA/VESA VGA card. When this field is disabled, a PCI/VGA cannot work with an MPEG ISA/VESA Card.

6.9 PC Health Status

This section shows the parameters in determining the PC Health Status. These parameters include temperatures, fan speeds and voltages.

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PC Health Status

		ITEM HELP
CPU Warning Temperature	Disabled	
Current System Temp.	32°C/89°F	
Current CPU Temperature	38°C/100°F	
Current CPUFAN1 Speed	4470 RPM	
Current AMR Speed	0 RPM	
Current Chassis Speed	0 RPM	
VCCP(V)	1.98 V	
1.8V(V)	1.76 V	
3.3V (V)	3.34 V	
+ 5 V	4.97 V	
+12 V	11.91V	
-12 V	12.03V	
- 5 V	5.04 V	
VBAT (V)	3.50 V	
5VSB (V)	5.29 V	
Shutdown Temperature	75°C/140°F	

Temperatures/Fan Speeds/Voltages

These fields are the parameters of the hardware monitoring function feature of the motherboard. The values are read-only values as monitored by the system and show the PC health status.

Shutdown Temperature

This field allows the user to set the temperature by which the system automatically shuts down once the threshold temperature is reached. This function can help damage to the system that is caused by overheating.

6.10 Frequency/Voltage Control

This section shows the user how to configure the processor frequency.

CMOS Setup Utility – Copyright © 1984-1999 Award Software
Frequency/Voltage Control

Auto Detect DIMM/PCI Clk	Disabled	ITEM HELP
Spread Spectrum	Disabled	Menu Level
Host CPU/PCI Clock	Default	
CPU Clock Ratio	3X	

Auto Detect DIMM/PCI Clk

This field enables or disables the auto detection of the DIMM/PCI clock. The default setting is **Disabled**.

Spread Spectrum

This field sets the value of the spread spectrum. The default setting is **Disabled**. This field is for CE testing use only.

Host CPU/PCI Clock

The Host CPU/PCI Clock has a default setting of **Default** which is either 66/33MHz or 100/33MHz as automatically detected by the system. The options are as follows:

CPU with 66MHz FSB	CPU with 100MHz
66/33MHz (Default)	FSB
66/34MHz	100/33 MHz (Default)
75/3 MHz	112/37MHz
	117/39MHz
	124/4 MHz
	129/43MHz
	133/44MHz
	133/33MHz

NOTE: Overclocking could cause the system not to boot. When this happens, turn off the computer by pressing the power button and turn it on again by pressing the **Insert** key and the power button simultaneously. Then press the **Delete** key to enter BIOS Setup and configure the CPU speed.

CPU Clock Ratio

The CPU Ratio, also known as the CPU bus speed multiplier, can be configured as 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, and 8.

6.11 Load Fail-Safe Defaults

This option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disable all high-performance features.

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Load Fail-Safe Defaults

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
ESC : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	

6.12 Load Setup Defaults

This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

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Load Optimized Defaults

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
ESC : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	

6.13 Set Supervisor/User Password

These two options set the system password. Supervisor Password sets a password that will be used to protect the system and Setup utility. User Password sets a password that will be used exclusively on the system. To specify a password, highlight the type you want and press <Enter>. The Enter Password: message prompts on the screen. Type the password, up to eight characters in length, and press <Enter>. The system confirms your password by asking you to type it again. After setting a password, the screen automatically returns to the main screen.

To disable a password, just press the <Enter> key when you are prompted to enter the password. A message will confirm the password to be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

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Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
ESC : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	

6.14 Save & Exit Setup

This option allows you to determine whether or not to accept the modifications. If you type “Y”, you will quit the setup utility and save all changes into the CMOS memory. If you type “N”, you will return to Setup utility.

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Save & Exit Setup

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
ESC : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	

6.15 Exit Without Saving

Select this option to exit the Setup utility without saving the changes you have made in this session. Typing “Y” will quit the Setup utility without saving the modifications. Typing “N” will return you to Setup utility.

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Exit Without Saving

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
ESC : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	

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Chapter 7 Intel 810 Drivers Installation

This chapter describes the installation of the drivers in conjunction with the Intel 82810 chipset. The topics covered in this chapter include:

Installing Intel 82810 Define Drivers for Windows 95/98.....	56
Installing Intel 82810 VGA Driver for Windows 95/98.....	59
Installing Intel 82810 Audio Driver for Windows 95/98.....	62
Installing Intel 82810 VGA Driver for Windows NT.....	65

Installing Intel 82810 Define Drivers for Windows 95/98

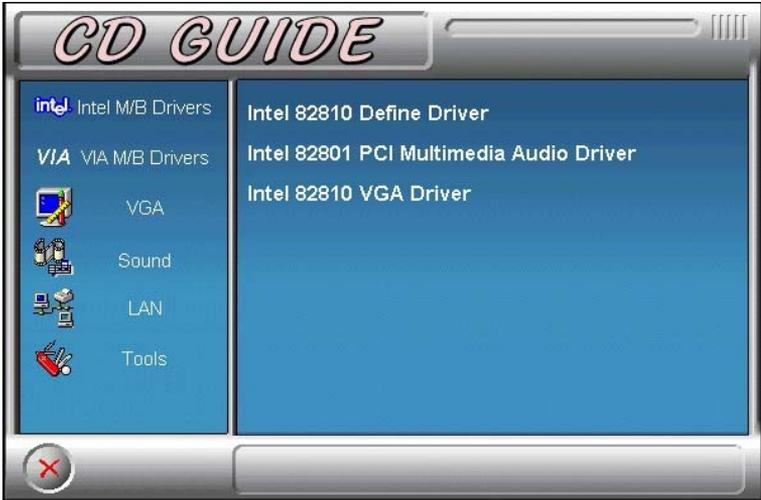
1. After you have installed Windows 95/98, install the Intel 82810 define drivers. Insert the driver CD provided with the motherboard. Once it is inserted, the following screen appears.



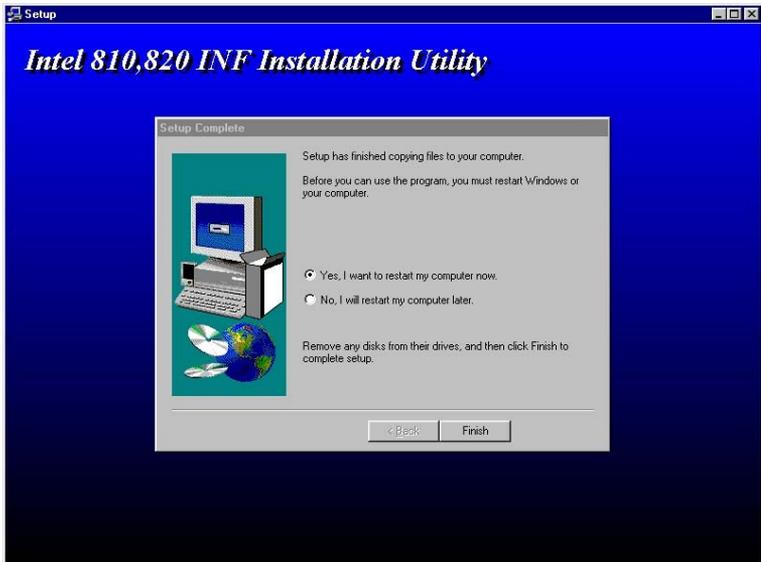
2. Click **Intel M/B Drivers** and the following screen appears.



3. Click **Intel 82810 Driver**, then **Intel 82810 Define Driver** and the welcome screen appears.



4. Click **Next** and **Next** to start copying files. After the installation is done, click **Finish** to restart the computer.



5. When Windows restarts, the Add New Hardware Wizard screen would appear as Windows searches the driver for Intel® 82802 firmware Hub Device. Click **Next** to “search for the best driver for the device”. Click **Next** again for Windows to start searching for the driver. The Insert Disk screen will appear and prompt you to enter the path of the file **ifWH.cat**. The file is located in the **i810cat** subdirectory under the Windows directory. (You may click on **Browse** to find the correct path.) When the correct path is entered and the files are copied, click **Finish**.
6. At this stage, the Add New Hardware Wizard searches for the drivers for *Intel 82810 DC-100 System and Graphics Controller*. Follow the instructions on the screen to install the drivers.
7. After the drivers are installed, the wizard starts to find other hardware available in the system. The wizard will also search for the drivers of the *Standard PCI Graphics Adapter (VGA)*. Follow the instructions on the screen. When Windows prompts you to restart the computer, click **Yes**.

Installing Intel 82810 VGA Driver for Windows 95/98

1. After you have installed Windows 95/98, install the Intel 82810 VGA driver. Insert the driver disk provided with the motherboard. Once it is inserted, the following screen appears.



2. Click **Intel M/B Drivers** and the following screen appears.



3. Click **Intel 82810 Drivers**, then **Intel 82810 VGA Driver**. When the Welcome screen appears, click **Next**.



4. When the Choose Destination Location window appears, click **Next** to start copying of files. After the files are copied, restart your computer for changes to take effect.



Installing Intel 82810 Audio Driver for Windows 95/98

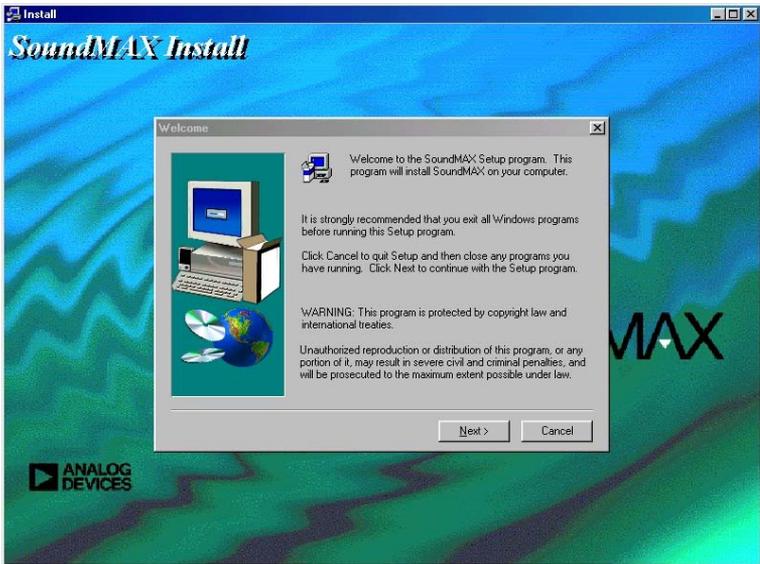
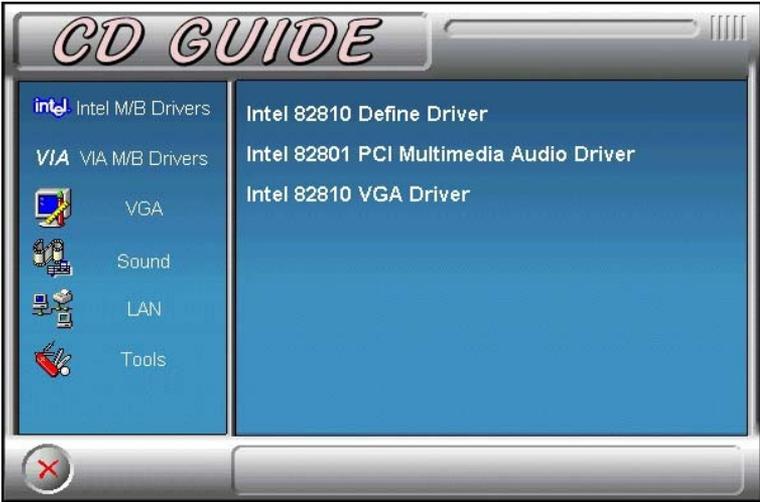
1. After you have installed Windows 95/98, install the Intel 82810 audio driver. Insert the driver disk provided with the motherboard. Once it is inserted, the following screen appears.



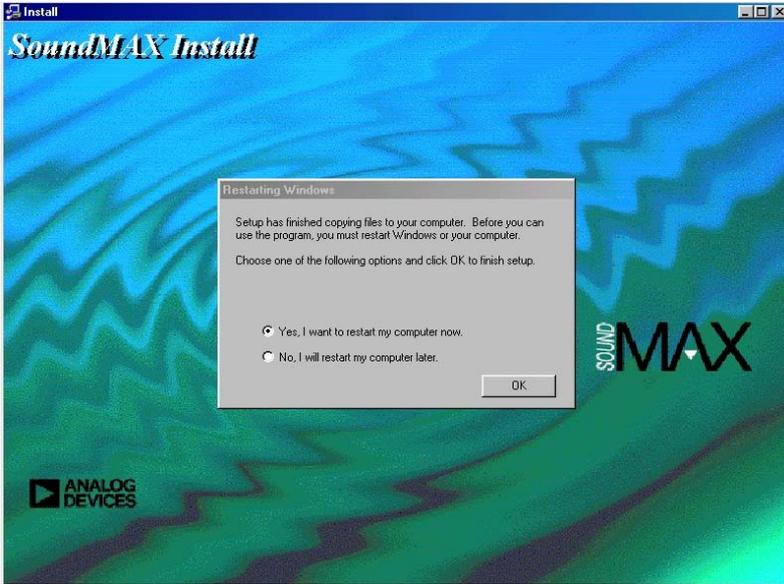
2. Click **Intel M/B Drivers** and the following screen appears.



3. Click **Intel 82810 Drivers**, then **Intel 82810 PCI Multimedia Audio Driver**. When the Welcome screen appears, click **Next** to start copying files.



- When file copying is done, click **Ok** to restart the computer and for changes to take effect. When the system reboots, the Add New Hardware Wizard screen appears and searches the driver for SoundMAX Integrated Digital Audio. Click **Next**, and follow the instructions on the screen. After the system will automatically detects the location of the driver, click **Finish**.



NOTE: With some CDROM device, you will be required to enable the digital CD audio for the CDROM device by clicking on its checkbox in order to play CD music. To see this checkbox, click Start → Control Panel → Multimedia Properties → CD Music.

Installing Intel 82810 VGA Driver for Windows NT

1. After you have installed Windows NT, install the Intel 82810 VGA driver. Insert the driver disk provided with the motherboard. Once it is inserted, the following screen appears.



5. Click **Intel M/B Drivers** and the following screen appears.



6. Click **Intel 82810 Drivers**, then **Intel 82810 VGA Driver**. When the Welcome screen appears, click **Next**.



7. Click **Next** when the Welcome screen appears. Click **Yes** when the Software License Agreement screen appears. When the Choose Destination Location window appears, click **Next** to start copying of files. After the files are copied, restart your computer for changes to take effect.

Appendix

A. Additions & Errata

The manufacturer sees to it that the most up-to-date and accurate information are contained in this manual. This section would contain page insert(s) of additional information, updates or corrections that the user should know to ensure that proper configuration and setup of the motherboard is made.