

MS-6183
User's Guide

Version 1.0A

Manual Rev: 1.0A
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FCC-B Radio Frequency Interference Statement

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 when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

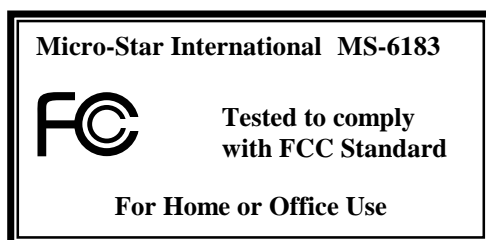
Notice 1

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Notice 2

Shielded interface cables and A.C. power cord, if any, must be used in order to comply with the emission limits.

VOIR LA NOTICE D'INSTALLATION AVANT DE RACCORDER AU RESEAU.



Edition

September 1999

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CAUTION: Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.

MS-6183 Safety Instructions

1. Always read the safety instructions carefully.
2. Keep this User's Manual for future reference.
3. Keep this equipment away from humidity.
4. Lay this equipment on a reliable flat surface before setting it up.
5. The openings on the enclosure are for air convection hence protects the equipment from overheating.
DO NOT COVER THE OPENINGS.
6. Make sure the voltage of the power source and adjust properly 110/220V before connecting the equipment to the power inlet.
7. Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
8. Always Unplug the Power Cord before inserting any add-on card or module.
9. All cautions and warnings on the equipment should be noted.
10. Never pour any liquid into the opening that could damage or cause electrical shock.
11. If any of the following situations arises, get the equipment checked by a service personnel:
 - The power cord or plug is damaged
 - Liquid has penetrated into the equipment
 - The equipment has been exposed to moisture
 - The equipment has not work well or you can not get it work according to User's Manual.
 - The equipment has dropped and damaged
 - If the equipment has obvious sign of breakage
12. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE ABOVE 60° C (140°F), IT MAY DAMAGE THE EQUIPMENT.**

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1 Introduction

The MS-6183 Micro ATX WH9 mainboard is a high-performance computer mainboard based on Intel® 810 chipset. The MS-6183 is designed for the Intel® Pentium II/III or Celeron™ processor for inexpensive business/personal desktop markets.

The Intel® 810 chipset is the first generation Integrated Graphics chipset for the Intel® Celeron™ processor. The graphics accelerator architecture consists of dedicated multi-media engines executing in parallel to deliver high performance 3D, 2D, and motion compensation video capabilities. An integrated centralized memory arbiter allocates memory bandwidth to multiple system agents to optimize system memory utilization. A new chipset component interconnect, the hub interface, is designed into the Intel 810 chipset to provide an efficient communication channel between the memory controller hub and I/O hub controller.

The Intel 810 chipset contains three core components: the Graphics and Memory Controller Hub (GMCH), the I/O Controller Hub (IHO/ICH) and the Firmware Hub (FWH). The GMCH integrates a 66/100MHz, P6 family system bus controller, integrates 2D/3D graphics accelerator, 100MHz SDRAM controller and high-speed hub interface for communication with the IHO/ICH. The IHO/ICH integrates an Ultra ATA/33(IHO) or Ultra ATA/66(ICH) controller, USB host controller, LPC interface controller, FWH interface controller, PCI interface controller, AC'97 digital controller and a hub interface for communication with the GMCH.

1.1 Mainboard Features

CPU

- Slot 1 for Intel® Pentium® II/III or Celeron™ processor.
- Supports 233MHz, 266MHz, 300MHz, 333MHz, 350MHz, 400MHz, 450MHz, 500MHz, 533MHz, 550MHz, 600MHz, 650MHz, 667MHz, 700MHz, 733MHz and faster processor.

Chipset

- Intel® 810 (GMCH) chipset. (421 BGA)
 - Integrated Graphics Controller
 - Intel DDM Architecture
 - SDRAM memory Independent of System Bus
- Intel® ICH chipset. (241 BGA)
 - AC'97 Controller Integrated
 - 2 full IDE channels, up to ATA66
 - Low pin count interface for SIO

Front Side Bus (FSB)

- 66/100/133MHz clocks are supported.

Main Memory

- Support two 168-pin DIMM sockets.
- Support a maximum memory size of 256MB(64Mbit technology) or 512MB(128Mbit technology) SDRAM

Slots

- One AMR(Audio Modem Riser) and one PTI(PanelLink TV-Out Interface)
- Three 32-bit Master PCI Bus slots.
- Support 3.3v/5v PCI bus Interface.

On-Board IDE

- An IDE controller on the ICH/ICH0 chipset provides IDE HDD/CD-ROM with PIO, Bus Master, Ultra DMA/33 and Ultra DMA/66 (ICH only) operation modes.
- Can connect up to four IDE devices.

On-Board Peripherals

- On-Board Peripherals include:

- 1 floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88Mbytes.
- 2 serial port (COMA + COMB), COMB optional
- 1 parallel port supports SPP/EPP/ECP mode
- 2 USB ports and 2 USB connectors
- 1 IrDA connector for SIR.
- 1 VGA port

Video

- GMCH chip integrated
- 2D/3D Graphics
- Onboard 4MB Display Cache (optional)

Audio

- ICH chip integrated
- Creative® ES1373 (optional)
 - Running on PCI BUS.
 - Support Direct Sound and Direct Sound 3D
 - AC97' Compliant

BIOS

- The mainboard BIOS provides "Plug & Play" BIOS which detects the peripheral devices and expansion cards of the board automatically.
- The mainboard provides a Desktop Management Interface(DMI) function which records your mainboard specifications

Dimension

- Micro ATX Form Factor

Mounting

- 6 mounting holes.

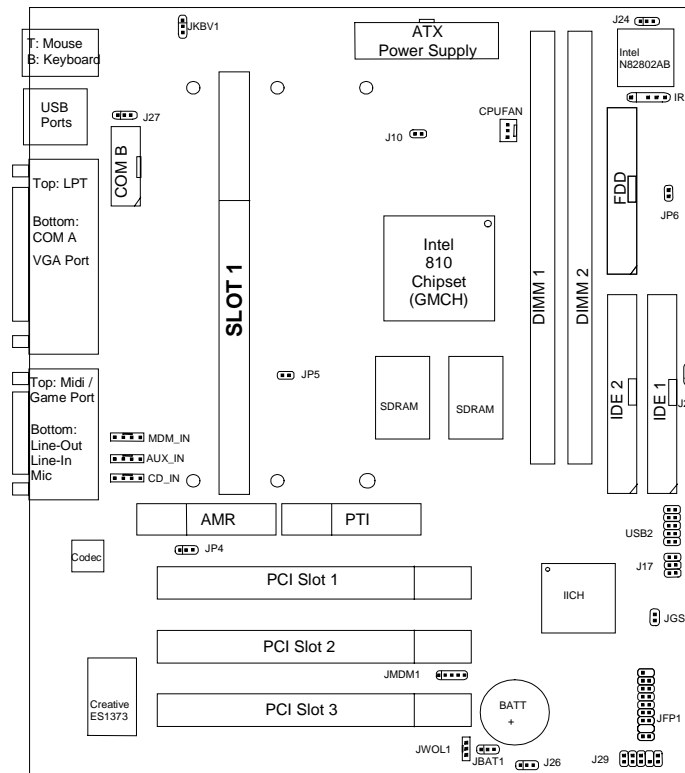
System Hardware Monitor

- CPU Fan Revolution Detect
- CPU Fan Control (the fan will automatically stop when the system enters suspend mode)
- System Voltage Detect
- CPU Overheat Warning.
- Display Actual Current Voltage

Other Features

- Keyboard Password Wake-Up (reserved)
- LAN Wake-Up
- Internal/External Modem Wake-Up

1.2 Mainboard Layout



MS-6183 Micro ATX WH9

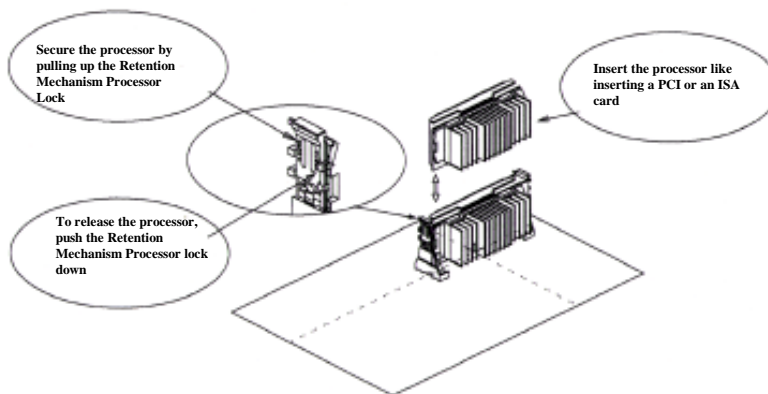
2. Hardware Installation

2.1 Central Processing Unit: CPU

2.1-1 CPU Installation Procedures

Step 1: Install the Retention Mechanism.

Attach the Retention Mechanism to the Mainboard. Push the Plastic lock to secure the Retention Mechanism into the mainboard.



Step 2: Install the Processor.

Insert the Processor like inserting a PCI or an ISA card.

Step 3: Lock the Processor.

Lock the processor by pulling up the Retention Mechanism processor lock shown above.

Note: The Retention Mechanism processor lock can only lock S.E.C.C. 2 and S.E.P.P. processor.

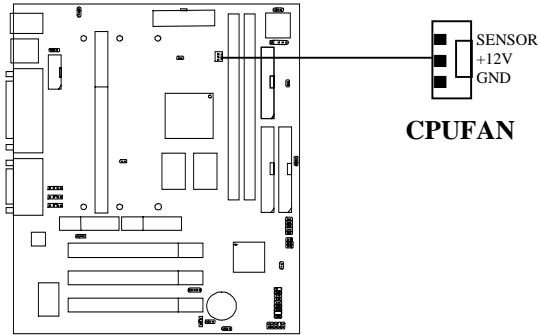
2.1-2 CPU Core Speed Derivation Procedure

The mainboard CPU Bus Frequency can be set through BIOS setup

If CPU Clock = 100MHz
 Core/Bus ratio = 5.5
then CPU core speed = Host Clock x Core/Bus ratio
 = 100MHz x 5.5
 = 550MHz

2.1-3 Fan Power Connector: CPUFAN

This connector support system cooling fan with + 12V. It supports three pin head connector. When connecting the wire to the connector, always take note that the red wire is the positive and should be connected to the +12V, the black wire is ground and should be connected to GND. If your mainboard has System Hardware Monitor chipset on-board, you must use a specially designed fan with speed sensor to take advantage of this function.



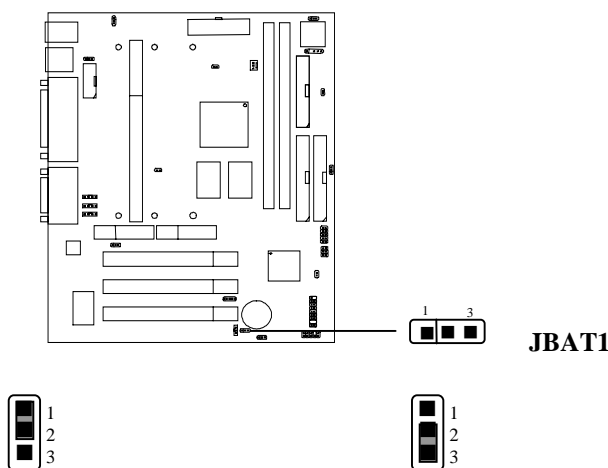
CPUFAN: Processor Fan

For fans with fan speed sensor, every rotation of the fan will send out 2 pulses. System Hardware Monitor will count and report the fan rotation speed.

- Note:**
- 1. Always consult vendor for proper CPU cooling fan.
 - 2. CPU FAN supports the FAN control. You can install PC Alert utility. This will automatically control the CPU FAN Speed according to the actual CPU temperature.

2.2 Clear CMOS Jumper: JBAT1

A battery must be used to retain the mainboard configuration in CMOS RAM. Short 1-2 pins of JBAT1 to store the CMOS data.



Keep Data

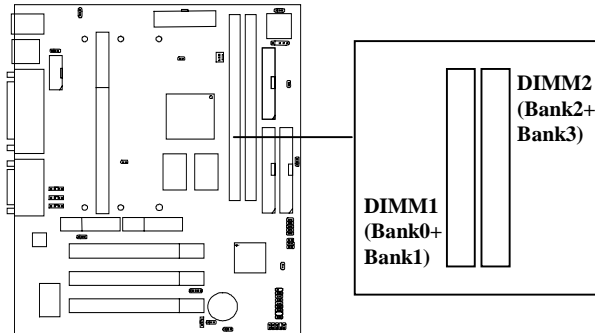
Clear Data

- Note:** You can clear CMOS by shorting 2-3 pin, while the system is off. Then, return to 1-2 pin position. Avoid clearing the CMOS while the system is on, it will damage the mainboard. Always unplug the power cord from the wall socket.

2.3 Memory Installation

2.3-1 Memory Bank Configuration

The mainboard supports a maximum memory size 512MB DIMM for SDRAM. It provides two 168-pin DIMMs (Double In-Line Memory Module) sockets. It supports 8 MB to 256 Mbytes DIMM memory module.

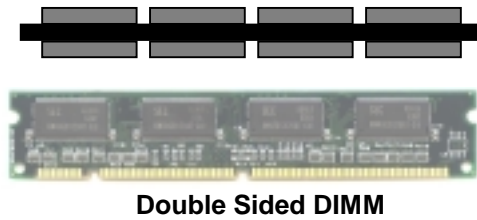
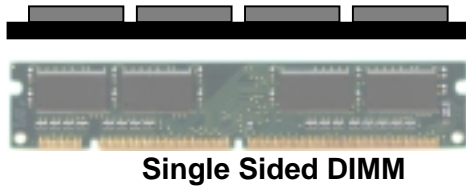


WARNING

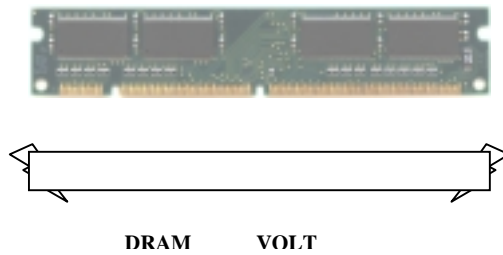
There is only one kind of DIMM specification supported by this mainboard: PC100. If you use 133, 100 or 66 MHz CPU Bus Frequency, every time PC100 DIMM Specs. is supported.

2.3-2 Memory Installation Procedures

A. How to install a DIMM Module



1. The DIMM slot has a two Notch Key "VOLT and DRAM", so the DIMM memory module can only fit in one direction.
2. Insert the DIMM memory module vertically into the DIMM slot. Then push it in.



3. The plastic clip at the side of the DIMM slot will automatically close.

2.3-3 Memory Population Rules

1. Supports only SDRAM DIMM.
2. To operate properly, at least one 168-pin DIMM module must be installed.
3. This mainboard supports Table Free memory, so memory can be installed on DIMM1 or DIMM 2 in any order.
4. Supports 3.3 volt DIMM.
5. The DRAM addressing and the size supported by the mainboard is shown below:

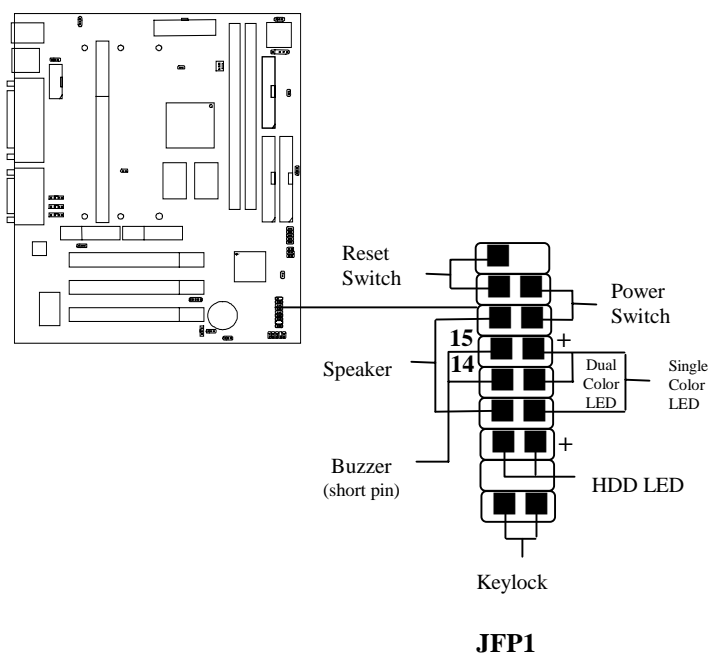
Table 2.3-1 SDRAM Memory Addressing

DRAM Tech.	DRAM Density & Width	DRAM Addressing	Address Size		MB / DIMM	
			Row	Column	Single Side(S) no. pcs.	Double Side(D) no. pcs.
16M	1Mx16	ASYM	11	8	8MBx4	16MBx8
	2Mx8	ASYM	11	9	16MBx8	32MBx16
	4Mx4	ASYM	11	10	32MB	64MB
64M	2Mx32	ASYM	11	9	32MBx2	64MBx4
	2Mx32	ASYM	12	8	16MBx2	32MBx4
	4Mx16	ASYM	11	10	32MB	64MB
	4Mx16	ASYM	13	8	32MB	64MB
64M	8Mx8	ASYM	13	9	64MB	128MB
	16Mx4	ASYM	13	10	128MB	256MB
	2Mx32	ASYM	12	8	16MB	32MB
64M	4Mx16	ASYM	13	8	32MB	64MB
	8Mx8	ASYM	13	9	64MB	128MB
	16Mx4	ASYM	13	10	128MB	256MB

NOTE: Please see page 2-5 for reference.

2.4 Case Connector: JFP1

The Power Switch, Reset Switch, Power LED, Speaker, Keylock and HDD LED are all connected to the JFP1 connector block.



2.4-1 Power Switch

Connect to a 2-pin push button switch. This switch has the same feature with JRMS1.

2.4-2 Reset Switch

Reset switch is used to reboot the system rather than turning the power ON/OFF. Avoid rebooting while the HDD LED is lit. You can connect the Reset switch from the system case to this pin.

2.4-3 Power LED

The Power LED is lit while the system power is on. Connect the Power LED from the system case to this pin. There are two types of LED that you can use: 3-pin single color LED or 2-pin dual color LED(ACPI request).

- a. 3 pin single color LED connect to pin 4, 5, & 6. This LED will lit when the system is on.
- b. 2 pin dual color LED connect to pin 5 & 6.

GREEN Color: Indicate the system is full on mode.

ORANGE Color: Indicate the system is in suspend mode.

2.4-4 Speaker

Speaker from the system case is connected to this pin. If on-board Buzzer is available:

Short pin 14-15: On-board Buzzer Enabled.

Open pin 14-15: On-board Buzzer Disabled.

2.4-5 HDD LED

HDD LED shows the activity of a hard disk drive. Avoid turning the power off while the HDD led is lit.

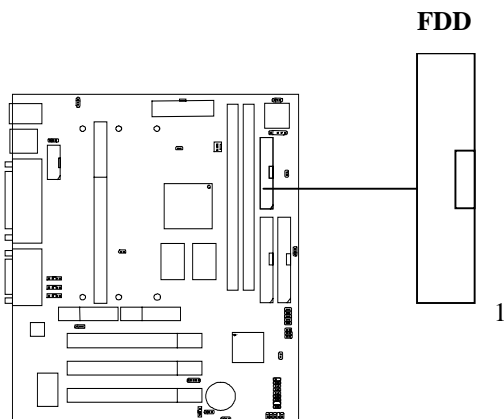
You can connect the HDD LED from the system case to this pin.

2.4-6 Keylock

Keylock allows you to disable the keyboard for security purposes. You can connect the keylock to this pin.

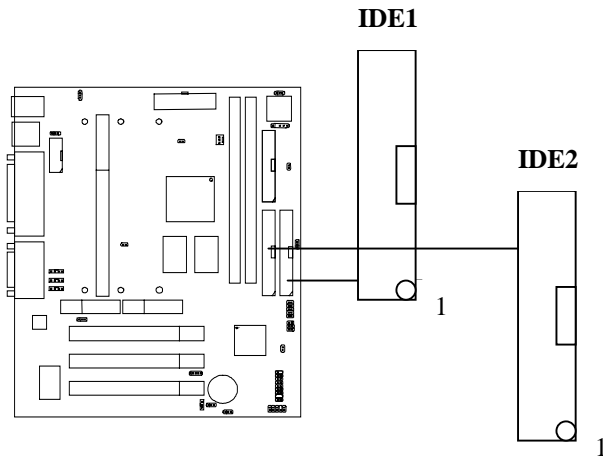
2.5 Floppy Disk Connector: FDD

The mainboard also provides a standard floppy disk connector FDC that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types. This connector supports the provided floppy drive ribbon cables.



2.6 Hard Disk Connectors: IDE1 & IDE2

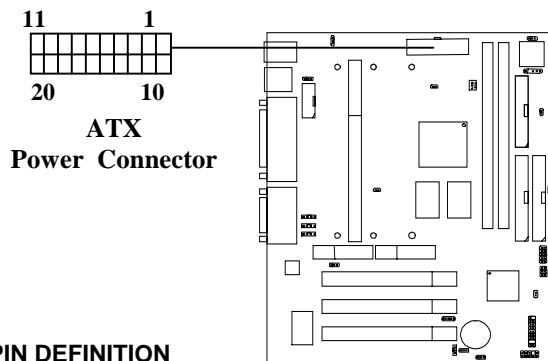
The mainboard has a 32-bit Enhanced PCI IDE Controller that provides PIO mode 0~4, Bus Master, and Ultra DMA/33/66 function. It has two HDD connectors IDE1 (primary) and IDE2 (secondary). You can connect up to four hard disk drives, CD-ROM, 120MB Floppy (reserved for future BIOS) and other devices to IDE1 and IDE2. These connectors support the provided IDE hard disk cable.



2.7 Power Supply

2.7-1 ATX 20-pin Power Connector: JPWR1

This connector supports the power button on-board. Using the ATX power supply, functions such as Modem Ring Wake-Up and Soft Power Off are supported by this mainboard. This power connector supports instant power on function which means that system will boot up instantly when the power connector is inserted on the board.

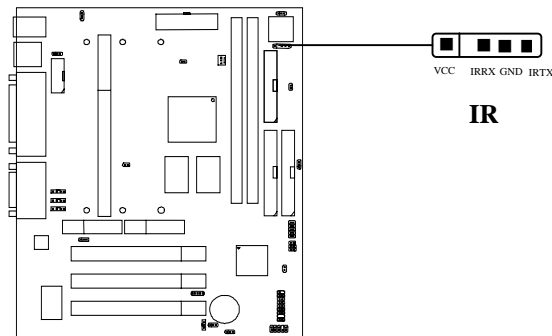


PIN	SIGNAL	PIN	SIGNAL
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	5V	14	PS_ON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	PW_OK	18	-5V
9	5V_SB	19	5V
10	12V	20	5V

Warning: Since the mainboard has the instant power on function, make sure that all components are installed properly before inserting the power connector to ensure that no damage will be done.

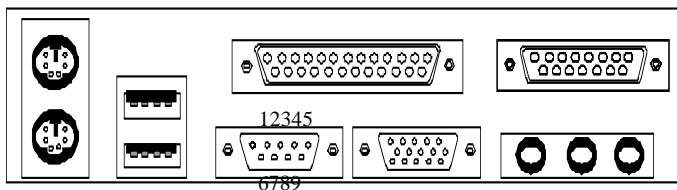
2.8 IrDA Infrared Module Connector: IR (J9)

The mainboard provides one 5-pin infrared (J9) connector for IR modules. This connector is for optional wireless transmitting and receiving infrared module. You must configure the setting through the BIOS setup to use the IR function.



2.9 Serial Port Connectors: COM A and COM B

The mainboard has two 9-pin male DIN connectors for serial port COM 1 and COM 2. These ports are 16550A high speed communication port that send/receive 16 bytes FIFOs. You can attach a mouse or a modem cable directly into this connector.



COM A

Serial Port (9-pin male)

PIN DEFINITION

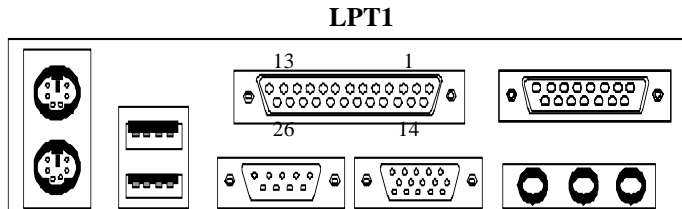
PIN	SIGNAL
1	DCD (Data carry Detect)
2	SIN (Serial In or Receive Data)
3	SOUT (Serial Out or Transmit Data)
4	DTR (Data Terminal Ready)
5	GND
6	DSR (Data Set Ready)
7	RTS (Request to Send)
8	CTS (Clear to Send)
9	RI (Ring Indicate)

Note: There's another serial port connector (COM B), which is located on the mainboard. Connect a serial port 9-pin male port into this connector.

2.10 Parallel Port Connector: LPT1

The mainboard provides a 25 pin female centronic connector for LPT. A parallel port is a standard printer port that also supports Enhanced Parallel Port(EPP) and Extended capabilities Parallel Port(ECP). See connector and pin definition below:

Parallel Port (25-pin Female)

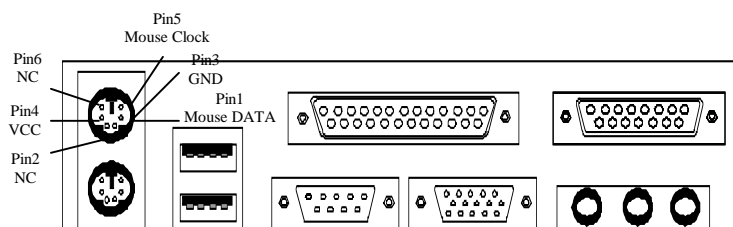


PIN DEFINITION

PIN	SIGNAL	PIN	SIGNAL
1	STROBE	14	AUTO FEED#
2	DATA0	15	ERR#
3	DATA1	16	INIT#
4	DATA2	17	SLIN#
5	DATA3	18	GND
6	DATA4	19	GND
7	DATA5	20	GND
8	DATA6	21	GND
9	DATA7	22	GND
10	ACK#	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SELECT		

2.11 Mouse Connector: JKBMS1

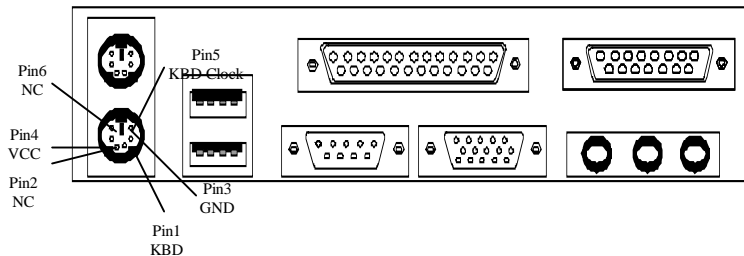
The mainboard provides a standard PS/2[®] mouse mini DIN connector for attaching a PS/2[®] mouse. You can plug a PS/2[®] mouse directly into this connector. The connector location and pin definition are shown below:



PS/2 Mouse (6-pin Female)

2.12 Keyboard Connector: JKBMS1

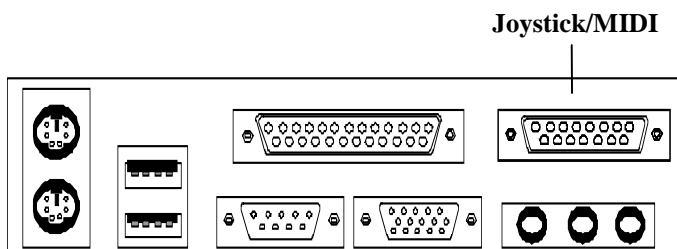
The mainboard provides a standard PS/2® keyboard mini DIN connector for attaching a keyboard. You can plug a keyboard cable directly to this connector.



PS/2 Keyboard (6-pin Female)

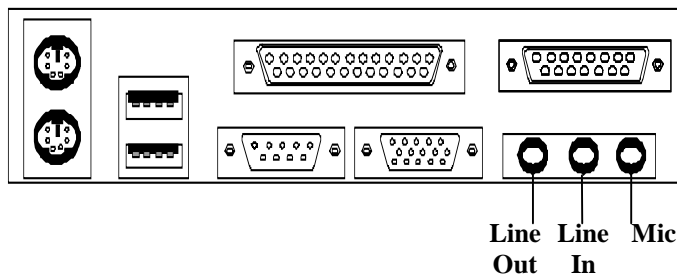
2.13 Joystick/Midi Connectors

You can connect joystick or game pads to this connector.



2.14 Audio Port Connectors

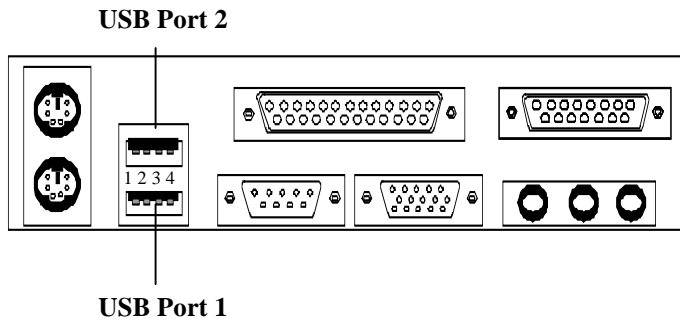
Line Out is a connector for Speakers or Headphones. **Line In** is used for external CD player, Tape layer, or other audio devices. **Mic** is a connector for the microphones.



1/8" Stereo Audio Connectors

2.15 USB Connectors

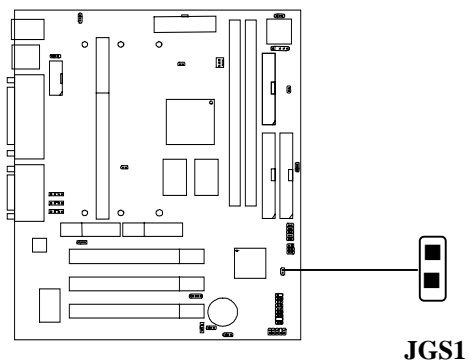
The mainboard provides a **UHCI(Universal Host Controller Interface) Universal Serial Bus** root for attaching USB devices like: keyboard, mouse and other USB devices. You can plug the USB device directly to this connector.



PIN	SIGNAL
1	VCC
2	-Data0
3	GND
4	+Data0

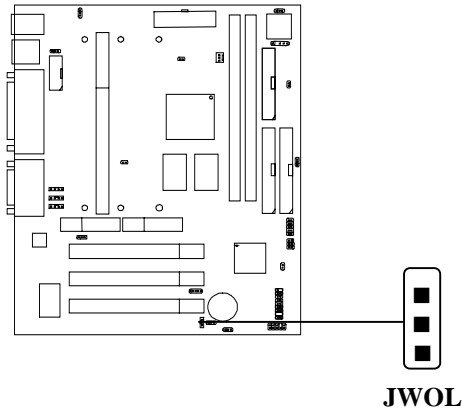
2.16 Power Saving Switch Connector: JGS1

Attach a power saving switch to **JGS1**. When the switch is pressed, the system immediately goes into suspend mode. Press any key and the system wakes up.



2.17 Wake-Up on LAN Connector: JWOL1

The JWOL1 connector is for use with LAN add-on cards that supports Wake Up on LAN function. To use this function, you need to set the “Wake-Up on LAN” to enable at the BIOS Power Management Setup.

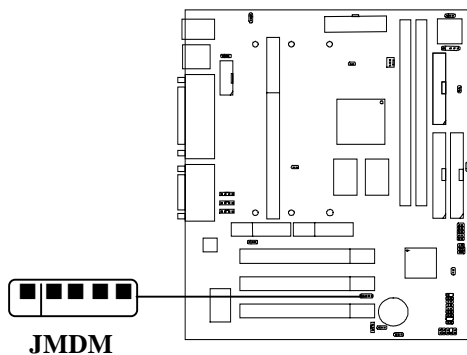


PIN	SIGNAL
1	5VSB
2	GND
3	MP_WAKEUP

Note: To be able to use this function, you need a power supply that provide enough power for this feature. (Power supply with 750mA 5V Stand-by)

2.18 Modem Wake Up Connector: JMMD1

The JMMD1 connector is for use with Modem add-on card that supports the Modem Wake Up function.



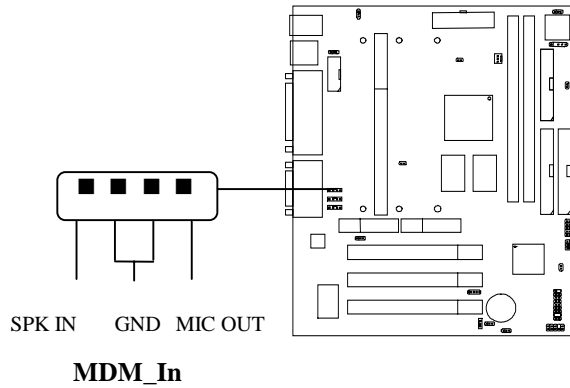
PIN	SIGNAL
1	NC
2	GND
3	MDM_WAKEUP
4	NC

Note: Modem wake-up signal is active “low”.

Note: To be able to use this function, you need a power supply that provide enough power for this feature. (Power supply with 750mA 5V Stand-by)

2.19 Modem-In: MDM_IN

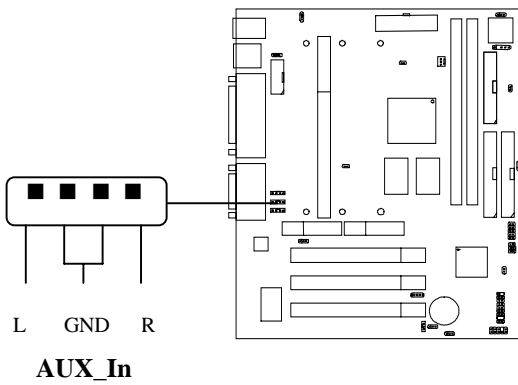
The connector is for Modem with internal voice connector.



SPK_IN is connected to the Modem Speaker Out connector.
MIC_OUT is connected to the Modem Microphone In connector.

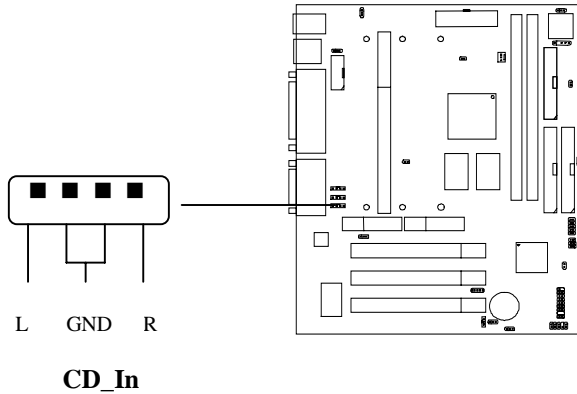
2.20 AUX Line In Connector: AUX_IN

This connector is used for DVD Add on Card with Line In connector.



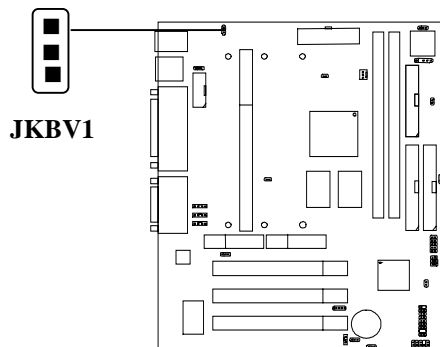
2.21 CD-In Connector: CD_IN

This connector is for CD-ROM audio connector.



2.22 Keyboard Power: JKBV1

The JKBV1 jumper is for setting keyboard power. This function should be set in the BIOS for the keyboard Wake-up function.



5V Standby
Enable keyboard
power on function

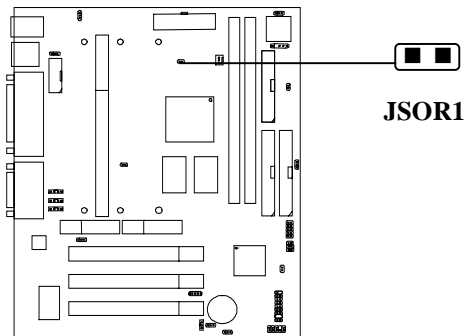


5V (default)
Disable keyboard
power on function

Note: To be able to use this function, you need a power supply that provide enough power for this feature. (Power supply with 750mA 5V Stand-by)

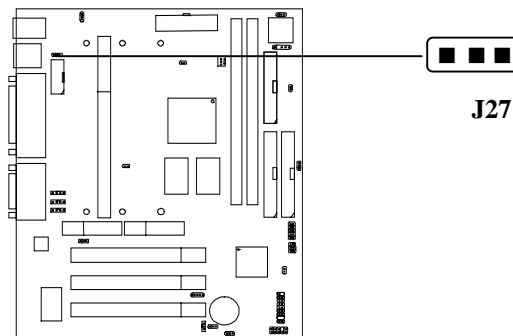
2.23 Chassis Intrusion Switch Case: J10

This connector is connected to a 2-pin connector chassis switch. If the Chassis is open, the switch will be open. The system will record this status. To clear the warning, you must enter the BIOS setting and clear the status.



2.24 USB Device Power Jumper: J27

This jumper provides Vcc or 5V standby setting for USB Device Power.



Vcc (Default)

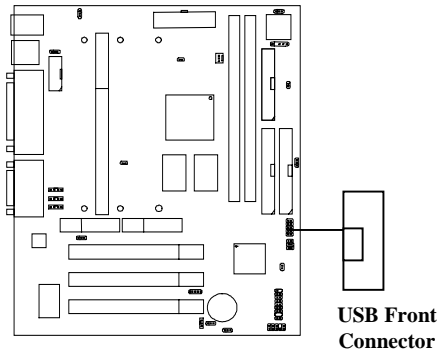


USB Device
Power
5V Standby

Note: If motherboard doesn't support STR (Suspend to RAM), then J27 will use jumper wire short pin 1&2.

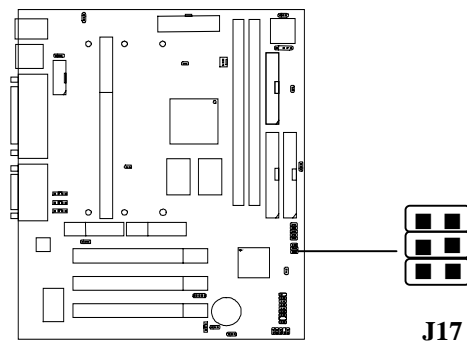
2.25 USB Front Connector

The mainboard provides a **front Universal Serial Bus connector**. This is an optional USB connector for Front Panel.



2.26 USB Front Connector Enabled/Disabled Jumper: J17

This jumper is used to Enabled or Disabled the USB Front Connector. If the USB Front connector is set to enabled, the top USB port at the rear I/O panel will be disabled. If the USB Front connector is set to disabled, the USB ports at rear I/O panel will both be operational.



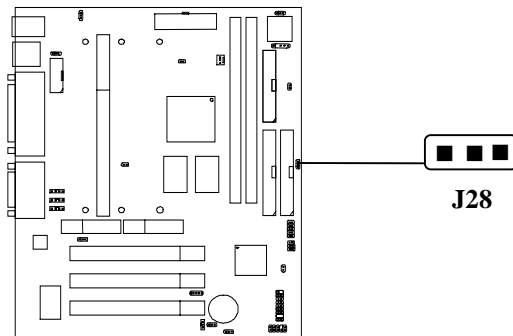
Enabled



Disabled

2.27 Front Panel USB Power Selection: J28

This jumper provides Vcc or 5V standby setting for the Front Panel USB Power Selection.



Vcc (Default)

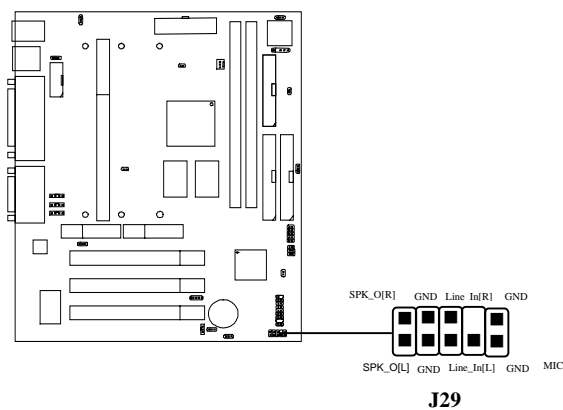


USB Power Support
5V Standby

Note: If motherboard doesn't support STR (Suspend to RAM), then J28 will use jumper wire short pin 1&2.

2.28 Front Panel Audio Header: J29

You can connect an optional audio connector to the Front Panel Audio Header.

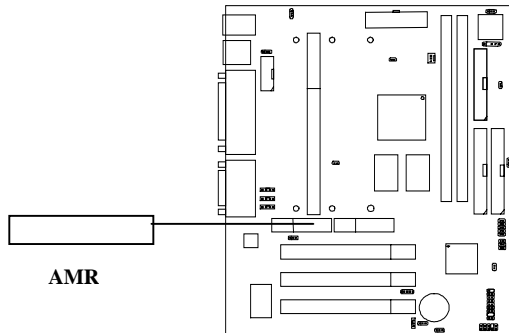


SPK_O[R] GND Line_In[R] GND
SPK_O[L] GND Line_In[L] GND MIC

J29

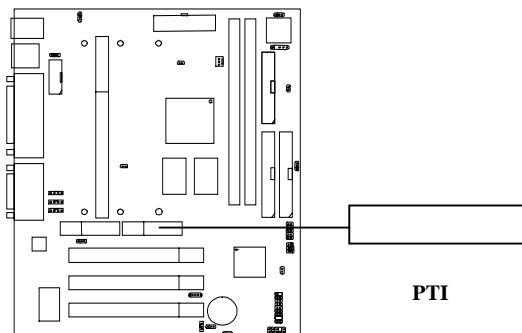
2.29 AMR

The Audio/Modem Riser specification is an open industry-standard specification that defines a hardware scalable Original Equipment Manufacturer (OEM) mainboard riser board and interface, which supports both audio and modem.



2.30 PTI

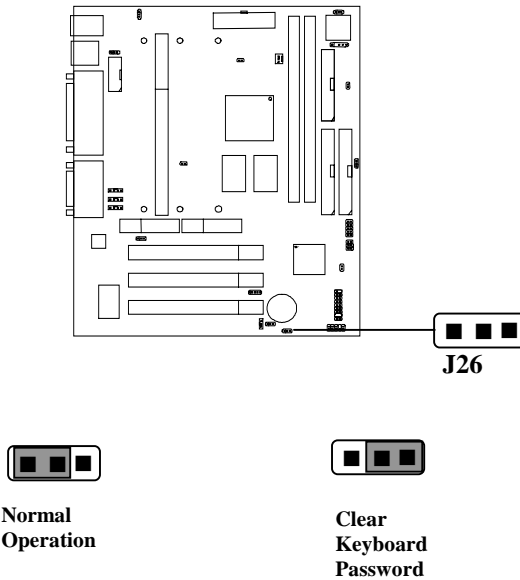
The Panel link/TV-Out Interface (PTI) is an MSI in-house design which support either Panel link or TV-out function. To be able to utilize both AMR and PTI simultaneously, you need to use MSI products like MS-5965 & MS-5966 or MS-5964 & MS-5966.



Note: If there is Creative Hardware Audio Onboard and you want to use the MR (Modem Riser) card, please set the CODEC to primary CODEC which is located on the MR card.

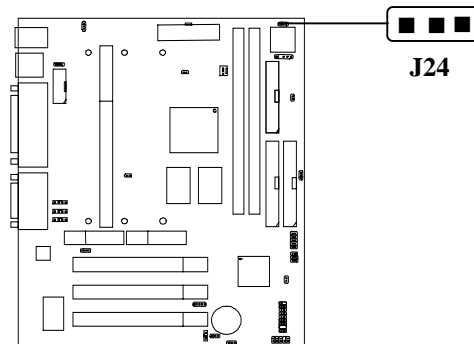
2.31 Clear Keyboard Password: J26

The J26 is used to clear the Keyboard Password. When using this jumper, you need to unplug the power cord from the power source. The jumper should be shorted more than 3 sec.



2.32 STR (Suspend to RAM) Jumper: J24

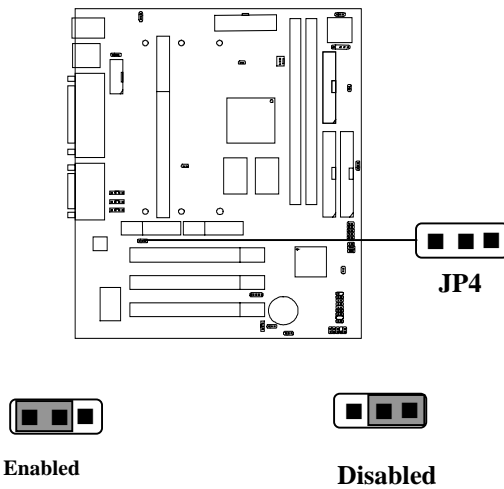
This mainboard may or may not support STR (Suspend to RAM). If J24 pin 2-3 is shorted, the system supports STR (Suspend to RAM). If J24 is open, the system does not support STR (Suspend to RAM).



NOTE: Do not try to alter or change the motherboard's default setting. The default setting will depend on the motherboard manufacturer.

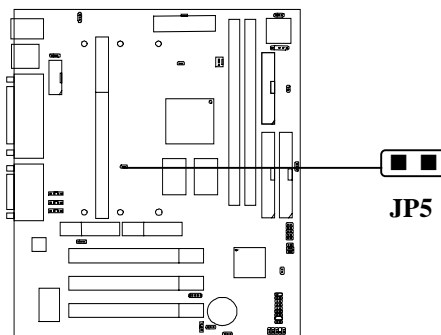
2.33 Onboard Audio Enabled/Disabled Jumper: JP4

This jumper is used to Enabled/Disabled the onboard Soft audio codec.



2.34 CPU Bus Frequency Selector: JP5

If JP5 is shorted, CPU with 133MHz (FSB) will always be set to 100 MHz.

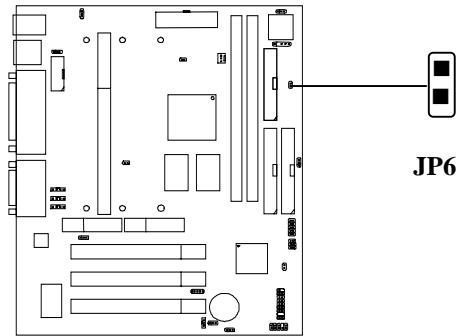


Note: This jumper is for verification only. The default setting for jumper JP5 is open.

2.35 STR (Suspend to RAM) Power Jumper: JP6

This jumper may depend on two conditions:

- A. For motherboard which supports STR, Jumper JP6 is reserved for some power supply. If standby power is not enough (e.g. less than 750 mA), JP6 should be open. The default setting is short.
- B. For motherboard which do not support STR, JP6 should always be open.



3. AWARD® BIOS SETUP

Award® BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed RAM (CMOS RAM), so that it retains the Setup information when the power is turned off.

3.1 Entering Setup

Power on the computer and press immediately to allow you to enter Setup. The other way to enter Setup is to power on the computer. When the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press key or simultaneously press <Ctrl>, <Alt>, and <Esc> keys.

TO ENTER SETUP BEFORE BOOT PRESS <CTRL-ALT-ESC>
OR KEY

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to,

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

3.2 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <F1> or <Esc>.

3.3 The Main Menu

Once you enter Award® BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from eleven setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

**ROM PCI/ISA BIOS (2A59IM4C)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.**

STANDARD CMOS SETUP ADVANCED BIOS FEATURES ADVANCED CHIPSET FEATURES INTEGRATED PERIPHERALS POWER MANAGEMENT SETUP PnP/PCI CONFIGURATIONS PC HEALTH STATUS	FREQUENCY/VOLTAGE CONTROL LOAD FAIL-SAFE DEFAULTS LOAD OPTIMIZED DEFAULTS SET SUPERVISOR PASSWORD SET USER PASSWORD SAVE & EXIT SETUP EXIT WITHOUT SAVING
Esc: Quit F10: Save & Exit Setup	↑ ↓ → ←: Select Item (Shift)F2: Change Color
Time, Date, Hard Disk Type ...	

Standard CMOS Setup

Use this Menu for basic system configurations.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your settings for power management.

PnP/PCI Configuration

This entry appears if your system supports PnP/PCI.

PC Health Status

This entry shows your PC health status.

Frequency/Voltage Control

Use this menu to specify your settings for frequency/voltage control.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations.

Supervisor/User Password

Use this menu to set User and Supervisor Passwords.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

3.4 Standard CMOS Setup

The items in Standard CMOS Setup Menu are divided into 10 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.

ROM PCI/ISA BIOS (2A59IM4A)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy): Fri, Nov 26, 1999									
Time (hh:mm:ss): 00:00:00									
HARD DISKS	TYPE	SIZE	CYLS	HEADS	PRECOMP	LAND ZONE	SECTOR	MODE	
Primary Master:	Auto	0	0	0	0	0	0	AUTO	
Primary Slave:	Auto	0	0	0	0	0	0	AUTO	
Secondary Master:	Auto	0	0	0	0	0	0	AUTO	
Secondary Slave:	Auto	0	0	0	0	0	0	AUTO	
Drive A	: 1.44M, 3.5in				Base Memory:	640K			
Drive B	: None				Extended Base Memory:	15360K			
					Other Memory:	384K			
Video	: EGA/VGA				Total Memory:	16384K			
Halt On	: All, But K/B								
ESC : Quit		↑ ↓ → ← : Select Item			PU/PD/+/-: Modify				
F1 : Help		(Shift)F2 : Change Color							

Date

The date format is <day><month> <date> <year>.

Day Day of the week, from Sun to Sat, determined by BIOS. Read-only.
month The month from Jan. through Dec.
date The date from 1 to 31 can be keyed by numeric function keys.
year The year, depends on the year of the BIOS

Time

The time format is <hour> <minute> <second>.

**PrimaryMaster/PrimarySlave
SecondaryMaster/Secondary Slave**

These categories identify the types of 2 channels that have been installed in the computer. There are 45 pre-defined types and 4 user definable types for Enhanced IDE BIOS. Type 1 to Type 45 are pre-defined. Type User is user-definable.

Press PgUp/<+> or PgDn/<-> to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Type User to define your own drive type manually.

If you select Type User, related information is asked to be entered to the following items. Enter the information directly from the keyboard and press <Enter>. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is SCSI, the selection shall be "None".

If the controller of HDD interface is CD-ROM, the selection shall be "None".

Access Mode	The settings are Auto, Normal, Large,LBA.
Cylinder	number of cylinders
Head	number of heads
Precomp	write precom
Landing Zone	landing zone
Sector	number of sectors

3.5 Advanced BIOS Features

CMOS Setup Utility - Copyright(C) 1984-1999 Award Software
Advanced BIOS Features

Anti-Virus Protection	: Disabled	Item Help
CPU Internal Cache	: Enabled	
External Cache	: Enabled	
CPU L2 Cache ECC Checking	: Enabled	
Processor Number Feature	: Disabled	Menu Level >
Quick Power On Self Test	: Enabled	
First Boot Device	: Floppy	
Second Boot Device	: CDROM	
Third Boot Device	: HDD-0	
Boot other device	: Disabled	
Swap Floppy Drive	: Disabled	
Boot Up Floppy Seek	: Disabled	
Boot Up Numlock Status	: On	
Logo Screen	: Disabled	
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	
↑ ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe defaults F7:Optimized Defaults		

Anti-Virus Protection

Allows you to 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.

Disabled(default) No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Enable d Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.

CPU Internal Cache

The default value is Enabled.

Enabled (default) Enable cache

Disabled Disable cache

Note: The internal cache is built in the processor.

External Cache

Choose Enabled or Disabled. This option enables the level 2 cache memory.

CPU L2 Cache ECC Checking

Choose Enabled or Disabled. This option enables the level 2 cache memory ECC(error check correction).

Processor Number Feature

This option is for Pentium III processor. During Enabled, this will check the CPU Serial number. Disable this option if you don't want the system to know the Serial number.

Quick Power On Self Test

This category speeds up Power On Self Test (POST) after you power on the computer. If this is set to Enabled, BIOS will shorten or skip some check items during POST.

Enabled (default)	Enable quick POST
Disabled	Normal POST

First/Second/Third/Other Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items. The settings are Floppy, LS/ZIP, HDD-0/HDD-1/HDD-2/HDD-3, SCSI, CDROM, LAN, and Disabled.

Swap Floppy Drive

Switches the floppy disk drives between being designated as A and B. Default is Disabled.

Boot Up Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

Boot Up NumLock Status

The default value is On.

On (default)	Keypad is numeric keys.
Off	Keypad is arrow keys.

Gate A20 Option

Normal	The A20 signal is controlled by keyboard controller or chipset hardware.
Fast (default)	The A20 signal is controlled by port 92 or chipset specific method.

Typematic Rate Setting

Key strokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.
The settings are: Enabled/Disabled.

Typematic Rate (Chars/Sec)

Sets the number of times a second to repeat a key stroke when you hold the key down. The settings are: 6, 8, 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke. The settings are: 250, 500, 750, 1000.

Security Option

This category allows you to limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
Setup (default)	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

OS Selection for DRAM > 64MB

Allows OS2® to be used with > 64 MB of DRAM. Settings are Non-OS/2 (default) and OS2. Set to OS/2 if using more than 64MB and running OS/2®.

Report No FDD For Win 95

Whether report no FDD for Win 95 or not. The settings are: Yes, No.

3.6 Advanced Chipset Features

The Advanced Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

Choose the "ADVANCED CHIPSET FEATURES" from the Main Menu and the following screen will appear.

CMOS Setup Utility - Copyright(C) 1984-1999 Award Software
Advanced Chipset Features

System BIOS Cacheable	: Disabled	Item Help
Video BIOS Cacheable	: Disabled	
Memory Hole at 15M-16M	: Disabled	Menu Level >
CPU Latency Timer	: Disabled	
Delayed Transaction	: Enabled	
On-Chip Video Window Size	: Enabled	
↑ ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe defaults F7:Optimized Defaults		

Note: Change these settings only if you are familiar with the chipset.

System BIOS Cacheable

Selecting *Enabled* allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

Video BIOS Cacheable

Select *Enabled* allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

Memory Hole At 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements. The settings 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. The settings are: Enabled and Disabled.

3.7 Integrated Peripherals

The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

CMOS Setup Utility - Copyright(C) 1984-1999 Award Software
Integrated Peripherals

OnChip Primary PCI IDE	: Enabled	Item Help
OnChip Secondary PCI IDE	: Enabled	
IDE Primary Master PIO	: Auto	Menu Level >
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	: Auto	
AC97 Modem	: Disabled	
IDE HDD Block Mode	: Enabled	
Power On Function	: BUTTON ONLY	
KB Power On Password	: Enter	
Hot Key Power On	: Ctrl-F1	
Onboard FDC Controller	: Enabled	↑ ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe defaults F7:Optimized Defaults
Onboard Serial Port 1	: 3F8/IRQ4	
Onboard Serial Port 2	: Disabled	
UART Mode Select	: Normal	
RxD, TxD Active	: Hi, Lo	
IR Transmission Delay	: Enabled	
UR2 Duplex Mode	: Full	
Use IR Pins	: IR-Rx2Tx2	
Onboard Parallel Port	: 378/IRQ7	
Parallel Port Mode	: EPP	
EPP Mode Select	: EPP 1.7	
ECP Mode use UDMA	: 3	
PWRON After PWR-Fail	: Former-Sts	
Game Port Address	: 201	
Midi Port Address	: 330	
Midi Port IRQ	: 5	
Power Status LED	: Blinking	

OnChip Primary/Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE hannels. Select Enabled to activate each channel separately. The settings are: Enabled and Disabled.

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device. The settings are: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33 and Ultra DMA/66, select Auto to enable BIOS support. The settings are: Auto, Disabled.

USB Controller

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals. The settings are: Enabled, Disabled.

USB Keyboard Support

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard. The settings are: Enabled, Disabled.

Init Display First

This item allows you to decide to activate whether PCI Slot or on-chip VGA first. The settings are: PCI Slot, Onboard.

AC97 Audio/Modem

This item allows you to decide to enable/disable the 810 chipset family to support AC97 Audio/Modem. The settings are: Enabled, Disabled.

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support. The settings are: Enabled, Disabled.

Power On Function

This function allows you to select the item to power on the system. The settings are : Any Key, Button Only, Mouse Left, Mouse Right, Password, Hotkey, keyboard 98.

Onboard FDC Controller

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

The settings are: Enabled and Disabled.

Onboard Serial Port 1/Port 2

Select an address and corresponding interrupt for the first and second serial ports. The settings are 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

UART Mode Select

This item allows you to determine which InfraRed(IR) function of the onboard I/O chip, this functions uses.

Onboard Parallel Port

Disabled There is a built-in parallel port on the on-board Super I/O chipset that provides
(3BCH/IRQ7)/ Standard, ECP, and EPP features. It has the following options:
(278H/IRQ5)/
(378H/IRQ7)

Disabled	
3BCH/IRQ7	Line Printer port 0
278H/IRQ5	Line Printer port 2
378H/IRQ7	Line Printer port 1

Onboard Parallel Mode

SPP : Standard Parallel Port
 EPP : Enhanced Parallel Port
 ECP : Extended Capability Port

SPP/EPP/ECP/ECP+EPP

To operate the onboard parallel port as Standard Parallel Port only, choose "SPP." To operate the onboard parallel port in the EPP modes simultaneously, choose "EPP." By choosing "ECP", the onboard parallel port will operate in ECP mode only. Choosing "ECP + EPP" will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. The ECP mode has to use the DMA channel, so choose the onboard parallel port with the ECP feature. After selecting it, the following message will appear: "ECP Mode Use DMA" At this time, the user can choose between DMA channels 3 or 1. The onboard parallel port is EPP Spec. compliant, so after the user chooses the onboard parallel port with the EPP function, the following message will be displayed on the screen: "EPP Mode Select." At this time either EPP 1.7 spec. or EPP 1.9 spec. can be chosen.

PWRON After PWR-FAIL

This option will determine how the system will power on after a power failure.

Game Port Address/Midi Port Address

This will determine which Address the Game Port/Midi Port will use.

Power Status LED

This item determines which state the Power LED will use. The settings are Blinking, Dual, and Single. During blinking, the power LED will blink when the system enters the suspend mode. When the mode is in Dual, the power LED will change its color. Choose the single and the power LED will always remain lit.

3.8 Power Management Setup

The Power Management Setup allows you to configure you system to most effectively save energy while operating in a manner consistent with your own style of computer use.

CMOS Setup Utility - Copyright(C) 1984-1999 Award Software
Power Management Setup

ACPI Suspend Type : SI(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 PWRBTN : Instant-Off Wake-Up by PCI Card : Enabled Power on Ring : Enabled Wake-Up on LAN : Enabled USB Keyboard Wake Up from S3 : Disabled CPU Thermal-Throtting : 50.0% Resume By Alarm : Date (of Month) Alarm : 0 Time (hh:mm:ss) Alarm : 0:0:0 **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	Item Help
	Menu Level >
↑ ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe defaults F7:Optimized Defaults	

ACPI Suspend Type

This item will set which ACPI suspend type will be used.

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

- 1.Suspend Mode
- 2.HDD Power Down

There are three selections for Power Management, two of which have fixed mode settings.

- | | |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Min. Power Saving | Minimum power management. Suspend Mode = 1 hr., and HDD Power Down = 15 min. |
| Max. Power Saving | Maximum power management — Suspend Mode = 1 min., and HDD Power Down = 1 min. |
| User Defined (default) | Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable. |

Video Off Method

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 synchronization ports and write blanks to the video buffer. |
| Blank Screen | This option only writes blanks to the video buffer. |
| DPMS (default) | Initial display power management signaling. |

Video Off In Suspend

This determines the manner in which the monitor is blanked.
The settings are: Yes and No.

Suspend Type

Select the Suspend Type. The settings are: PWRON Suspend, Stop Grant.

Modem Use IRQ

This determines the IRQ in which the MODEM can use.
The settings are: 3, 4, 5, 7, 9, 10, 11, NA.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off. The settings are: 1/2/4/8/12/20/30/40 Min, 1 Hour, and Disabled.

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.
The settings are: 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15Min and Disabled.

Soft-Off by PWRBTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state.
The settings are: Delay 4 Sec, Instant-Off.

Wake-Up by PCI Card

This will enable the system to wake up through PCI Card peripheral. The settings are : Enabled and Disabled.

Power on by Ring

During Disabled, the system will ignore any incoming call from the modem. During Enabled, the system will boot up if there's an incoming call from the modem.
NOTE: If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

Wake-Up on LAN

To use this function, you need a LAN add-on card which support power on functions. It should also support the wake-up on LAN jumper (JWOL1).

Enabled	Wake up on LAN supported.
Disabled	Wake up on LAN not supported.

USB Keyboard Wake-Up from S3

This function allows the user to Enabled or Disabled the USB Keyboard Wake-up from Suspend to RAM. The default setting is Disabled.

CPU Thermal-Throttling

Select the CPU THRM-Throttling rate. The settings are: 25.0%, 37.5%, 50.0%, 62.5%, 75.0%, 87.5%.

Resume by Alarm

This function is for setting date and time for your computer to boot up. During Disabled, you cannot use this function. During Enabled, choose the Date and Time Alarm:

Date(of month) Alarm	You can choose which month the system will boot up. Set to 0, to boot every day.
Time(hh:mm:ss) Alarm	You can choose what hour, minute and second the system will boot up.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

Reload Global Timer Events

Reload Global Timer events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as *Enabled*, even when the system is in a power down mode.

Primary IDE 0
Primary IDE 1
Secondary IDE 0
Secondary IDE 1
FDD, COM, LPT Port
PCI PIRQ[A-D] #

3.9 PnP/PCI Configuration Setup

This section describes configuring the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

CMOS Setup Utility - Copyright(C) 1984-1999 Award Software
PnP/PCI Configuration Setup

Reset Configuration Data	Disabled	Item Help
Resources Controlled By IRQ Resources	Auto Press Enter	
PCI/VGA Palette Snoop	Disabled	
		Menu Level >
↑ ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe defaults F7:Optimized Defaults		

Reset Configuration Data

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

Resource Controlled By

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95/98. If you set this field to

“manual”, choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a “▶”). The settings are: Auto(ESCD), Manual.

IRQ Resources

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

PCI/VGA Palette Snoop

Leave this field at *Disabled*. The settings are Enabled, Disabled.

3.10 PC Health Status

This section only shows the Status of your CPU, Fan, Warning for overall system status. You can not change the settings.

CMOS Setup Utility - Copyright(C) 1984-1999 Award Software
PC Health Status

Current System Temp : 38°C/100°F Current CPU Temperature : 69°C/156°F Current System Fan : 0 RPM Current CPU Fan : 5720 RPM Vcore : 2.00V VTT : 1.50V 3.3V : 3.39V +5V : 5.05V +12V : 12.28V -12V : -12.52V -5V : -5.04V VBAT(V) : 3.18V 5VSB(V) : 5.06V	Item Help
	Menu Level >

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

Current System Temp/CPU1 Temperature/Current CPUFAN/Current System Fan/Current Power Fan/Current CPU Fan/Vcore/VTT/3.3V/+5V/+12v/-12V/-5V/VBAT(V)/5VSB(V)

This will show the CPU/FAN/System voltage chart and FAN Speed.

3.11 Frequency/Voltage Control

This section is for setting CPU Frequency/Voltage Control.

CMOS Setup Utility - Copyright(C) 1984-1999 Award Software
Frequency/Voltage Control

Auto Detect DIMM/PCI Clk Enabled Spread Spectrum Enabled CPU Clock Ratio Auto	Item Help
	Menu Level >
↑ ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-Safe defaults F7:Optimized Defaults	

Auto Detect DIMM/PCI CLK

This item allows you to enable/disable auto detect DIMM/PCI Clock.
The settings are: Enabled, Disabled.

Spread Spectrum

This item allows you to set the Spread Spectrum.

CPU Clock Ratio

This item allows you to select the CPU Clock ratio.

3.12 Load Fail-Safe/Optimized Defaults

Load Fail-Safe Defaults

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

Load Fail-Safe Defaults (Y/N) ? N

Pressing 'Y' loads the BIOS default values for the most stable, minimal-performance system operations.

Load Optimized Defaults

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

Load Optimized Defaults (Y/N) ? N

Pressing 'Y' loads the default values that are factory settings for optimal performance system operations.

3.13 Set Supervisor/User Password

You can set either supervisor or user password, or both of them. The differences are:

Supervisor password : Can enter and change the options of the setup menus.

User password: Can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

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

PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option. If the Security option is set to "System", the password will be required both at boot and at entry to Setup. If set to "Setup", prompting only occurs when trying to enter Setup.

4. Intel® 810 Integrated graphics controller

4.1 Overview

The Intel® 810 Chipset extends Intel's graphics capabilities into the value PC segment by incorporating 2D and 3D capabilities with the memory controller, to provide the industry with complete graphics offerings for every computing segment.

4.1.1 Intel® 810 Chipset

- Support 4MB Display Cache (optional)
- Support AGP 2X BUS
- 2D & 3D Graphics Accelerator

4.1.2 System Requirements

This section describes system requirements for the VGA Driver installation and Usage.

Computer	Intel® Celeron™ processor or higher
Monitor	VGA Support, minimum 640x480 resolution
Operating system	DOS 5.0 or higher, Windows® 95/98, Windows® NT 3.51 or 4.0, or OS/2®
CD-ROM	Double Speed or Higher
Chipset	Intel® 810 chipset
VGA BIOS	Version 00.23 or Higher

4.2 Intel® 810 VGA Driver Setup & Usage Procedures

Insert the CD into your CD-ROM drive. This CD will auto-run. Just click the button for driver installation.

Note: It is recommended that you restart your computer after every installation of a new driver to prevent any technical problems.

4.2.2 Windows®NT 4.0

You need to install Windows®NT “Service Pack 3” or higher, before you install Windows®NT driver.

4.2.2-1 Display Driver Installation Procedure:

Step 1: Click **Start** menu and select **Control Panel** from **Settings** group.

Step 2: Select **Display** icon.

Step 3: Select **Settings** on the Display Properties.

Step 4: Select **Display Type**.

Step 5: Select **Change** from the **Adapter Type** Area.

Step 6: Select **Have Disk** of Change Display.

Step 7: Insert the **CD-Title Disk** into CD-ROM Drive.

Step 8: When the Install from Disk dialog box appears, look for your CD-ROM drive
:\SVGA\Intel\810\NT4\WINNT4

Step 9: When the **Change Display** dialog box appears, click **OK**.

Step 10: When the Third-party Drivers dialog box appears, click **Yes**. A message will appear stating that the drivers were successfully installed. Click **OK**. You must now restart Windows®NT 4.0.

Note: A. You can also use CD autorun to install the VGA NT driver.
B. It is recommended that you restart your computer after every installation of a new driver to prevent any technical problems.

4.2.2-2 Changing resolution, color depth, and refresh rate:

Step 1: Click **Start** menu and select **Control Panel** from **Settings** group.

Step 2: Select **Display** icon.

Step 3: Select **Settings**.

Step 4: Select Color Palette to change between 256 color, 65536 colors, and 16777216 colors.

Step 5: To select desktop resolution size, go to the Desktop area and use the slide bar to change resolution from 640x480, 800x600, 1024x768, 1152x864, 1280x1024, to 1600x1200.

Step 6: Select Test to test the resolution. If the display test screen was good, then select Yes when the Testing Mode dialog box appears. If the display test screen was bad, then select No. Windows® NT will give you an error message.

Step 7: Click **OK**. If the display test screen was good and you select Yes, Windows® NT 4.0 will change the mode without restarting the system.

5. ICH/ICH0 Audio Driver

5.1 Overview

The ICH AC' 97 digital controller provides the next generation of audio performance to the PC market.

5.1.1 Features

- PCI Bus Master for fast DMA.
- Fully Compliant with PC97 Power Management Specification.

5.1.2 System Requirements

This section describes system requirements for the Audio Driver installation and Usage.

Computer	Intel® Celeron™ processor or higher
Operating system	DOS 5.0 or higher, Windows® 95/98, Windows® NT 3.51 or 4.0, or OS/2®
CD-ROM	Double Speed or Higher
Chipset	ICH/ICH0

5.2 Audio Driver Setup & Usage Procedures

Insert the CD into your CD-ROM drive. This CD will auto-run. Just click the button for driver installation.