
Introduction

1

The MS-6341 ATX mainboard is a high-performance computer mainboard based on AMD® 761 chipset and VT82C686B. The MS-6341 is designed for the AMD® Duron & Thunderbird processors for inexpensive business/personal desktop markets.

The AMD-761 system controller features the AMD Duron system bus, system memory controller, accelerated graphics port (AGP) controller, and peripheral component interconnect (PCI) bus controller. The AMD-761 system controller is also designed to support 200MHz or 266MHz DDR SDRAM DIMMs.

The VT82C686B integrates all system control functions such as ACPI (Advanced Configuration and Power Interface). The ACPI provides more Energy Saving Features for the OSPM (OS Direct Power Management) function. The VT82C686B chipset also improves the IDE transfer rate by supporting Ultra DMA-33/66/100 IDE that transfers data at the rate 33/66/100MB/sec.

This chapter contains the following topics:

Mainboard Specifications	1-2
Mainboard Layout	1-4
Quick Components Guide	1-5
Key Features	1-6
MSI Special Features	1-7

Chapter 1

Mainboard Specification

CPU

- Socket A for AMD® Duron™ & Athlon™ processors
- Support 700/750/800/850/900/950MHz, 1GHz, 1.2GHz or up

Chipset

- AMD® 761 chipset. (569 BGA)
 - Supports 200 or 266MHz High speed, split transaction system bus.
 - AGP 4x and PCI Advanced high performance memory controller
 - Support 200 or 266MHz DDR SDRAM technology
- VIA® VT686B chipset. (352 BGA)
 - Enhanced Power Management Features
 - Integrated Super I/O (FDC, LPT, COM 1/2, and IR)
 - Dual bus Master IDE Ultra DMA33/66/100
 - Integrated Hardware Soundblaster
 - Direct Sound AC97 Audio
 - ACPI

Clock Generator

- 100 or 133Mhz clocks are supported. (200 or 266MHz Internal System Bus)

Main Memory

- Support 4 memory banks using two 184-pin DDR-DIMM
- Support a maximum memory size of 2GB

Slots

- One AGP(Accelerated Graphics Port) Pro slot
 - AGP 4x mode
- One CNR(Communication Network Riser) slot
- Five 32-bit Master PCI Bus slots
- Supports 3.3v/5v PCI bus Interface

On-Board IDE

- An IDE controller on the VIA® VT686B Chipset provides IDE HDD/CD-ROM with PIO, Bus Master and Ultra DMA 33/66/100 operation modes.
- Can connect up to four IDE devices

Audio

- Chip Integrated
 - Direct Sound AC97 Audio

Onboard Ultra 160 SCSI Connector

- Adaptec AIC-7899
 - supports high performance 160Mbytes/sec Dual Channel Ultra SCSI
 - supports Ultra(SE) 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 ports (COMA + COM B)
 - 1 parallel port supports SPP/EPP/ECP mode
 - 4 USB ports (2 Rear Connectors/USB Front Pin Header)
 - 1 IrDA connector for SIR/FIR/ASKIR/HPSIR
 - 1 Audio/Game port

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

- ATX Form Factor: 30.5cm x 25.9cm

Mounting

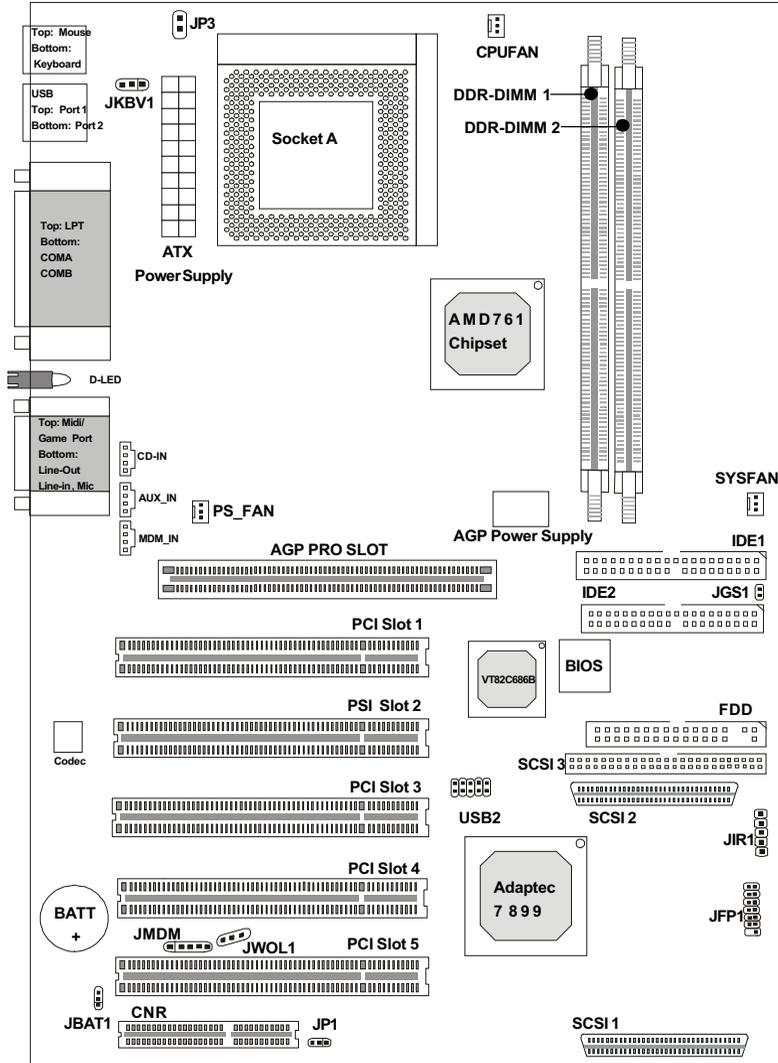
- 9 mounting holes

Note:

Please use 200MHz system bus/100MHz clocks for PCB v1.0 and use 266MHz system bus/133MHz clocks for PCB v1.1.

Chapter 1

Mainboard Layout



MS-6341 ATX Mainboard

Quick Components Guide

Component	Function	Reference
DDR-DIMM 1&2	Installing memory modules	See p. 2-4~2-5
Socket A	Installing CPU	See p. 2-2~2-3
CPU/PS/SYS FAN	Connecting to CPU/PS/SYS FAN	See p. 2-17
ATX Power Supply	Installing power supply	See p. 2-6
IDE1 & IDE2	Connecting to IDE hard disk drive	See p.2-12
FDD	Connecting to floppy disk drive	See p.2-11
SCSI 1~ SCSI 3	Connecting to SCSI interface	See p. 2-18
USB2	Connecting to USB interface	See p. 2-11
AGP Pro Slot	Installing AGP card	See p. 2-23
PCI Slot 1~5	Installing expansion boards	See p. 2-23
JFP1	Connecting to case	See p. 2-13
JMDM	Connecting to modem card	See p. 2-15
JWOL1	Connecting to LAN card	See p. 2-15
JGS1	Connecting to power saving switch	See p. 2-16
JIR1	Connecting to IrDA infrared module	See p. 2-16
JBAT1	Clearing CMOS data	See p. 2-19
JKBV1	Setting keyboard wake-up function	See p. 2-20
JP1	Setting audio onboard	See p. 2-20
JP3	Setting CPU core bus ratio	See p. 2-21

Chapter 1

Key Features

- Microsoft® PC99 compliant
- D-LED™ - 4 LEDs embedded in mainboard
- PC Alert™ III system hardware monitor
- CPU: Socket A for AMD® Duron™ & Athlon™ processors, 700/750/800/850/900/950MHz, 1GHz, 1.2GHz
- Form Factor: ATX, 30.5 cm x 25.9cm
- Clock: 100MHz (200MHz Internal System Bus)
- Chip Integrated Audio: Direct Sound Ac97 Audio
- Memory: 2DIMM. Max, up to 2GB DDR SDRAM
- Wake up on LAN Function
- I/O: 2 serial ports, 1 parallel port, 4 USB ports, 1 floppy port, 1 IrDA connector, 1 Audio/Game port
- Slot: 1 AGP Pro slot, 1 CNR slot, 5 PCI slots

MSI Special Features

The MSI special features are designed by MSI R&D which are only available in MSI mainboards. The 6341 mainboard is equipped with PC Alert™ III and D-LED™.

PC Alert™ III

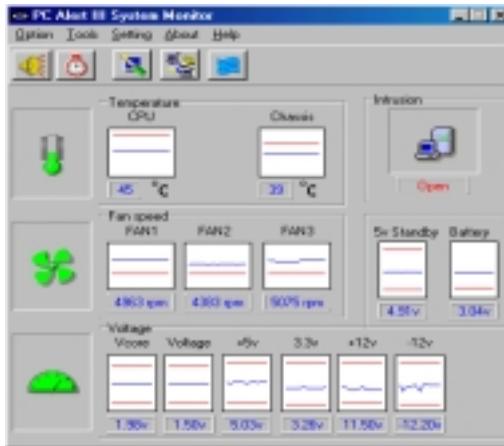
The PC Alert™ III is a utility you can find in the CD-ROM. The utility is just like your PC doctor that can detect the following PC hardware status during real time operation:

- * monitor CPU & system temperature
- * monitor fan speed
- * monitor system voltage
- * monitor chassis intrusion

If one of the items above is abnormal, the program main screen will be immediately shown on the screen, with the abnormal item highlighted in red. This will continue to be shown until user disables warning.



Chapter 1



Features:

- Network Management
 - Monitoring & remote control
- Basic System Utilities
 - Scandisk & Defragment to maintain your HDD
- 3D Graphics Design
 - Enables a more friendly user interface
- Software Utilities
 - SoftCooler Optimized Cooling
 - Doctor Y2K Diagnoses Y2K problems
 - BusRacing function adjusts F.S.B under Windows 95/98
 - MoSpeed Speeds up your modem transmission

D-LED™

The D-LED™ uses graphic signal display to help you understand your system. There are 4 LED embedded in the mainboard which provides up to 16 combination of signals to debug system. The 4 LEDs can debug all problems that fail the system, such as VGA, RAM or other failures. This special feature is very useful for the overclocking users. The users can use this feature to detect if there are any problems or failures while doing the overclocking.



● Red ○ Green

D-LED	Description
1 2 3 4 	System Power On -The D-LED will hang here if the processor is damaged or not installed properly.
	Early Chipset Initialization.
	Memory Detection Test -Testing onboard memory size. The D-LED will hang if the memory module is damaged or not installed properly.
	Decompressing BIOS image to RAM for fast booting.
	Initializing keyboard controller.
	Testing VGA BIOS -This will start writing VGA sign-on message to the screen.
	Processor Initialization - This will show information regarding the processor (like brand name, system bus, etc...)

Chapter 1

D-LED	Description
	Testing RTC (Real Time Clock)
	Initializing Video Interface - This will start detecting CPU clock, checking type of video onboard. Then, detect and initialize the video adapter.
	BIOS Sign on -This will start showing information about logo, processor brand name, etc...
	Testing Base and Extended Memory -Testing base memory from 240K to 640K and extended memory above 1MB using various patterns.
	Assign Resources to all ISA.
	Initializing Hard Drive Controller - This will initialize IDE drive and controller.
	Boot Attempt - This will set low stack and boot via INT 19h.
	Operating System Booting

Hardware Setup

2

This chapter provide you with the information about hardware setup procedures. While doing the installation, be careful in holding the components and follow the installation procedures. For some components, if you install in the wrong orientation, the components will not work properly.

Besides, you should also use a grounded wrist strap before handling computer components. Static electricity may damage the components.

This chapter contains the following topics:

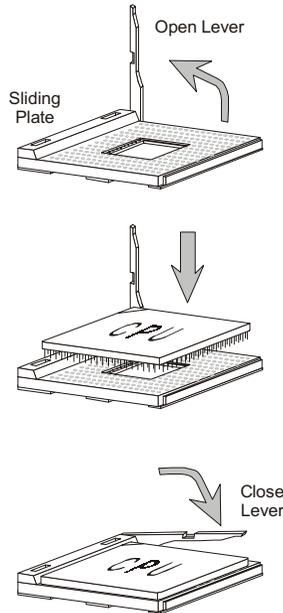
Central Processing Unit (CPU)	2-2
Memory Installation	2-4
Power Supply	2-6
Back Panel	2-7
Connectors	2-11
Jumpers	2-19
Slots	2-22

Central Processing Unit: CPU

The mainboard supports AMD® Duron™ and Athlon™ processors. The mainboard uses a CPU socket called Socket A for easy CPU installation. Make sure the CPU have a heat sink and a cooling fan attached to prevent overheating. If you do not find the heat sink and cooling fan, contact your dealer or purchase them before turning on the computer.

CPU Installation Procedures

1. Pull the lever sideways away from the socket. Then, raise the lever up to a 90-degree angle.
2. Look for the cut edge on the corner of CPU. Hold the CPU firmly.
3. Press the lever down to complete the installation.



WARNING!

Overheating will seriously damage the CPU and system. Always make sure the cooling fan can work properly to protect the CPU.

CPU Core Speed Derivation Procedure

The mainboard can automatically set the CPU Host Bus Frequency Clock.

If CPU Clock = 100MHz
 Core/Bus ratio = 7
then CPU core speed = Host Clock x Core/Bus ratio
 = 100MHz x 7
 = 700MHz



WARNING!

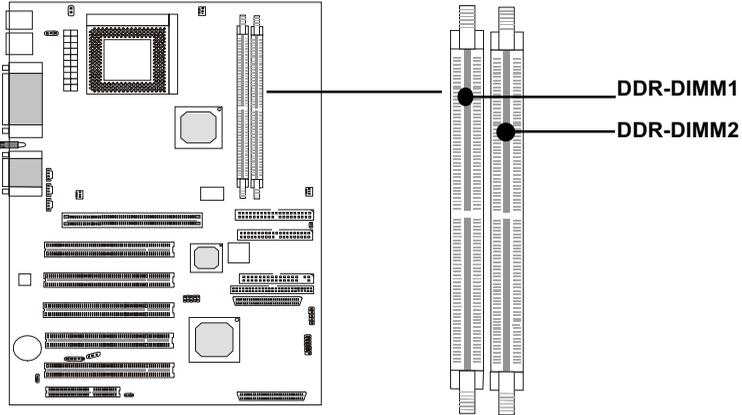
Overclocking

*This motherboard are designed to support overclocking .
However, please make sure your components are able to
tolerate such abnormal setting, while doing overclocking.
Any attempt to operate beyond product specifications are
not recommended. **We do not guarantee the damages or
risks caused by inadequate operation or beyond product
specifications.***

Chapter 2

Memory Installation

The mainboard provides 2 sockets for 184-pin DDR-DIMM with 4 memory banks. To operate properly, at least one DIMM module must be installed. The mainboard supports the memory size up to 2GB.



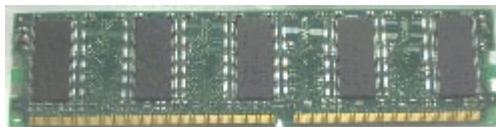
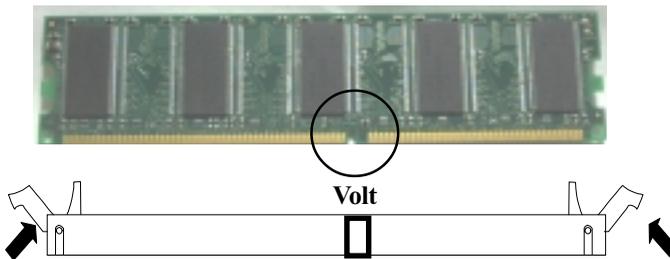
The DRAM Addressing & Size

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

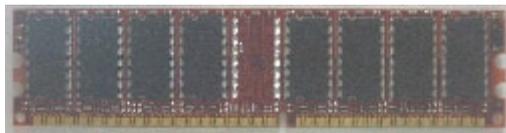
Module Installation Procedure

You can install the single sided or double sided DIMM according to your needs. Different from the SDRAM DIMM, the DDR DIMM has only one notch on the center of module. The pins on the either side of the breaks are different. Pay attention to the orientation as shown below. The module will only fit in the right orientation.

1. Insert the DIMM module vertically into the DIMM slot. Make sure the notch is on the right orientation. The DIMM module will be plugged into the slot in one way only.
2. Press the ejector tab at the side of the DIMM slot to fix the installation.



Single Sided DIMM



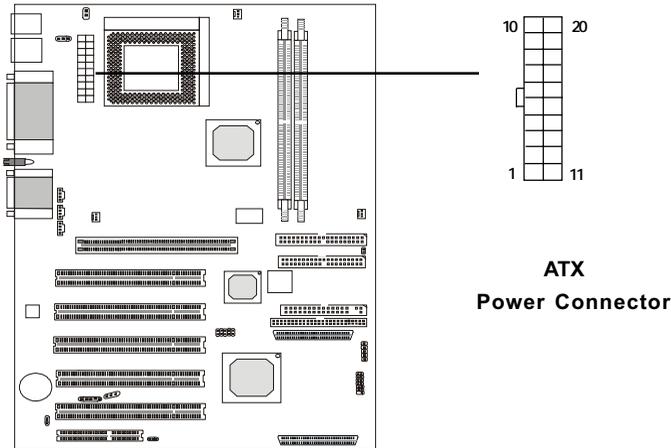
Double Sided DIMM

Power Supply

The mainboard supports ATX power supply for the power system. As the mainboard has the instant power on function, make sure that all components are installed properly before inserting the power supply connector to ensure that no damage will be done.

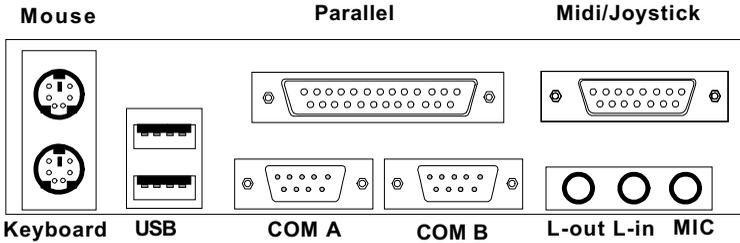
ATX 20-Pin Power Supply

This connector allows you to connect to an ATX power supply. To connect to the ATX power supply, make sure the plugs of the power supply insert in the proper orientation and the pins are aligned. Then push down the power supply firmly into the connector.



Back Panel

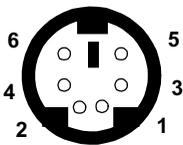
The Back Panel provides the following connectors:



Mouse Connector

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.

PS/2 Mouse (6-pin Female)



PIN	SIGNAL	DESCRIPTION
1	Mouse DATA	Mouse DATA
2	NC	No connection
3	GND	Ground
4	VCC	+5V
5	Mouse Clock	Mouse clock
6	NC	No connection

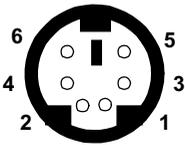
Pin Definition

Chapter 2

Keyboard Connector

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

PS/2 Keyboard (6-pin Female)



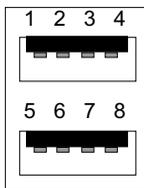
PIN	SIGNAL	DESCRIPTION
1	Keyboard DATA	Keyboard DATA
2	NC	No connection
3	GND	Ground
4	VCC	+5V
5	Keyboard Clock	Keyboard clock
6	NC	No connection

Pin Definition

USB Connectors

The mainboard provides a UHCI (Universal Host Controller Interface) Universal Serial Bus root for attaching USB devices such as keyboard, mouse or other USB devices. You can plug the USB device directly into this connector.

USB Ports

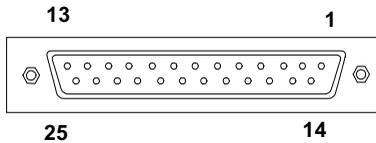


PIN	SIGNAL	DESCRIPTION
1	VCC	+5V
2	-Data 0	Negative Data Channel 0
3	+Data0	Positive Data Channel 0
4	GND	Ground
5	VCC	+5V
6	+Data 1	Positive Data Channel 1
7	-Data 1	Negative Data Channel 1
8	GND	Ground

USB Port Description

Parallel Port Connector

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).



Pin Definition

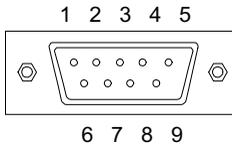
PIN	SIGNAL	DESCRIPTION
1	STROBE	Strobe
2	DATA0	Data0
3	DATA1	Data1
4	DATA2	Data2
5	DATA3	Data3
6	DATA4	Data4
7	DATA5	Data5
8	DATA6	Data6
9	DATA7	Data7
10	ACK#	Acknowledge
11	BUSY	Busy
12	FE	Paper End
13	SELECT	Select
14	AUTOFEED#	Automatic Feed
15	ERR#	Error
16	INIT#	Initialize Printer
17	SLIN#	Select In
18	GND	Ground
19	GND	Ground
20	GND	Ground
21	GND	Ground
22	GND	Ground
23	GND	Ground
24	GND	Ground
25	GND	Ground1

Chapter 2

Serial Port Connectors: COM A & COM B

The mainboard has two 9-pin male DIN connectors for serial port COM A and COM B. You can attach a mouse or other serial devices.

9-Pin Male DIN Connectors

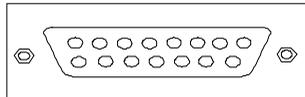


Pin Definition

PIN	SIGNAL	DESCRIPTION
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	Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear To Send
9	RI	Ring Indicate

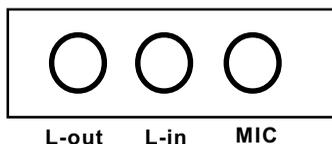
Joystick/Midi Connectors

You can connect game joysticks or game pads to this 15-pin female connector for playing game. You can also connect MIDI devices for playing or editing professional audio.



Audio Port Connectors

Line Out is a connector for headphone or speakers. **Line In** is used for external CD player, tape players or other audio devices to be recorded by your computer or played through the Line Out. **Mic** is a connector for the microphone.

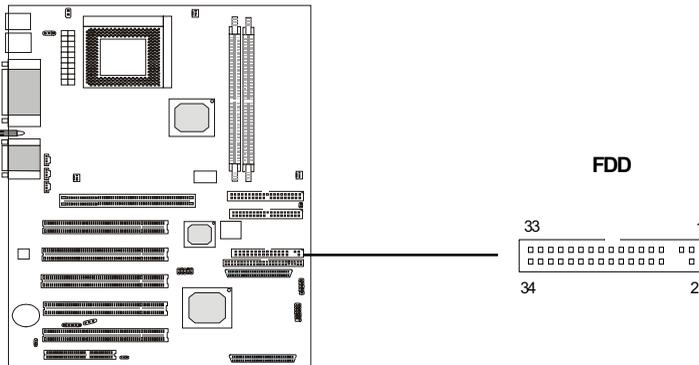


Connectors

The mainboard provides the connectors to connect to FDD, HDD, case, modem, LAN, USB, power saving switch, IR module, CPUFAN, SYSFAN and SCSI interface.

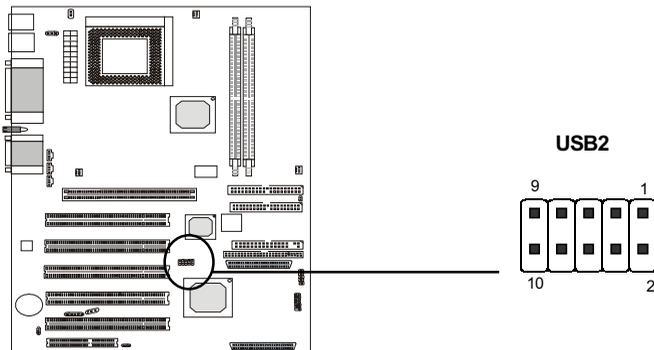
Floppy Disk Drive Connector: FDD

The mainboard provides a standard floppy disk drive connector that supports 360K, 720K, 1.2M, 1.44M and 2.88M floppy disk types.



USB Front Connector: USB2

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



Chapter 2

Hard Disk Connectors: IDE1 & IDE2

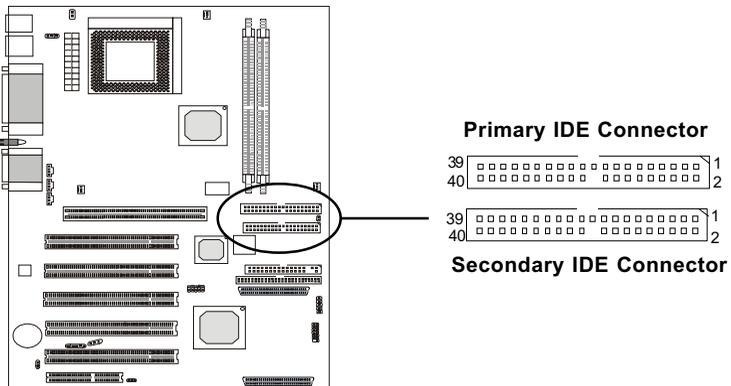
The mainboard has a 32-bit Enhanced PCI IDE Controller that provides PIO mode 0-4, Bus Master, and Ultra DMA/33 function. It has two HDD connectors IDE1 (Primary) and IDE2 (Secondary). You can connect up to four hard disk drives, CD-ROM or 120MB Floppy to IDE1 and IDE2.

IDE1 (Primary IDE Connector)

- The first hard disk drive should always be connected to IDE1. You can connect a Master and a Slave drive to IDE1.

IDE2 (Secondary IDE Connector)

- You can connect a Master and a Slave drive to IDE2.

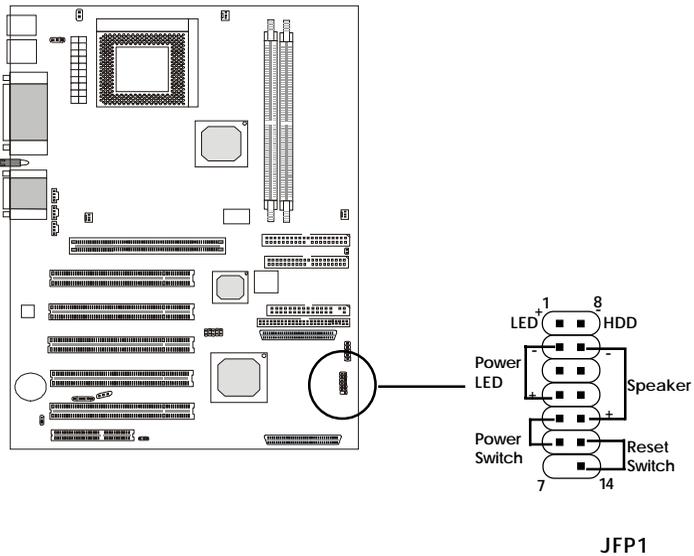


TIP:

If you install two hard disks, you must configure the second drive to Slave mode by setting its jumper accordingly. Refer to the hard disk documentation for the jumper setting.

Case Connector: JFP1

The case connector block JFP1 allows you to connect the Power Switch, Reset Switch, Power LED, Speaker and HDD LED.



Chapter 2

Power Switch

Connect to a 2-pin push button switch.

Reset Switch

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

PowerLED

The Power LED is lit while the system power is on. You can connect the Power LED from the system case to this pin. When the system enters suspend mode, 3-pin/2-pin LED will blink.

Speaker

Speaker from the system case is connected to this pin.

If on-board Buzzer is available:

Short pin 10-11: On-board Buzzer Enabled.

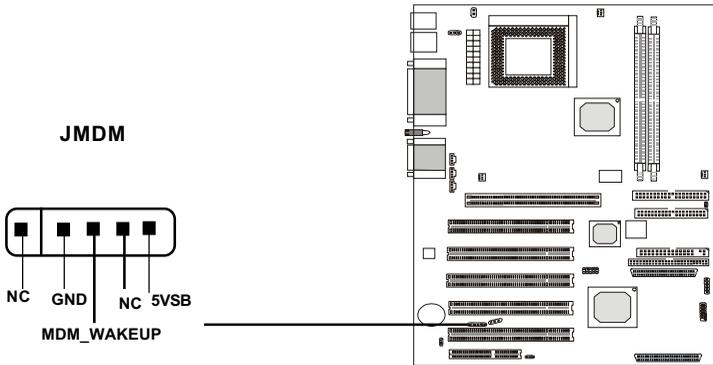
Open pin 10-11: On-board Buzzer Disabled.

HDDLED

HDD LED shows the activity of a hard disk drive. Avoid turning the power off while the HDD is working. You can connect the HDD LED from the system case to this pin.

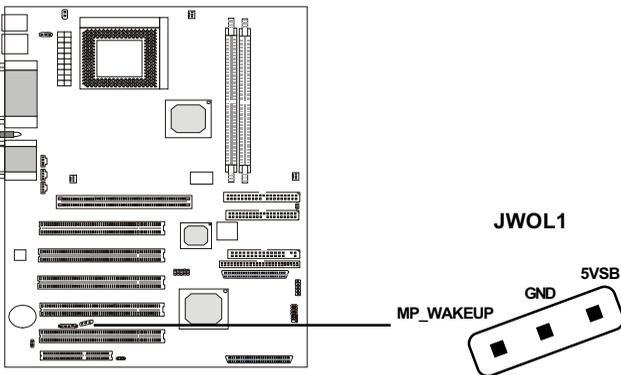
Wake on Ring Connector: JMDM

This connector allows you to connect to a modem card with Wake on Ring function. The connector will power up the system when a signal is received through the modem card.



Wake on LAN Connector: JWOL1

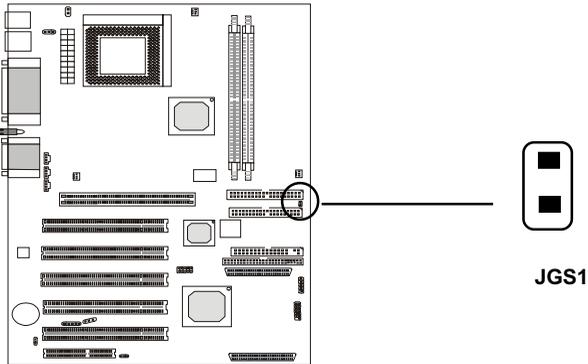
This connector allows you to connect to a LAN card with Wake On LAN function. You can wake up the computer via remote control through a local area network.



Chapter 2

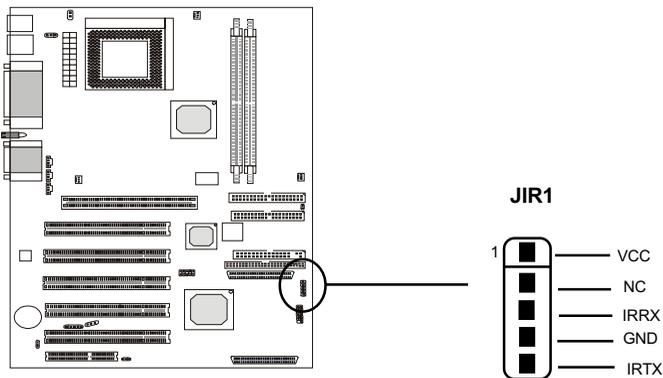
Power Saving Switch Connector: JGS1

This connector allows you to connect to a power saving switch. When the switch is pressed, the system immediately goes into the suspend mode. You can press any key to wake up the system.



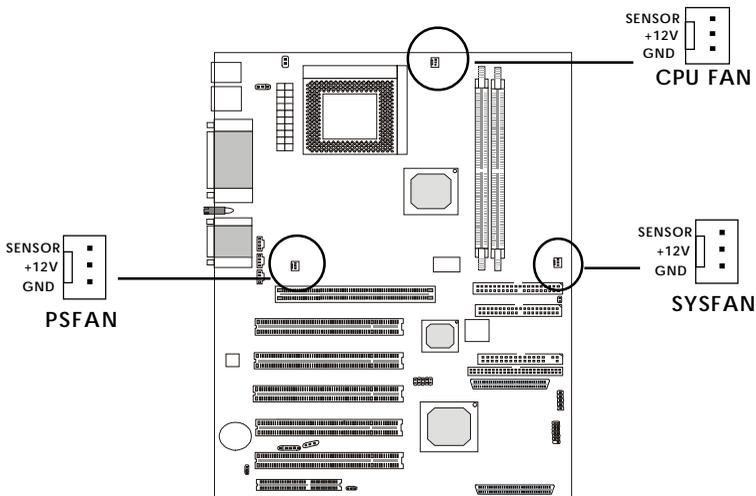
IrDA Infrared Module Connector: JIR1

This connector allows you to connect to an IrDA Infrared module. You must configure the setting through the BIOS setup to use the IR function.



Fan Power Connectors: CPU FAN/SYSFAN/PSFAN

The CPUFAN (processor fan), SYSFAN (system fan) and PSFAN (power supply fan) 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. As the mainboard has a System Hardware Monitor chipset on-board, you must use a specially designed fan with speed sensor to take advantage of the CPU fan control.



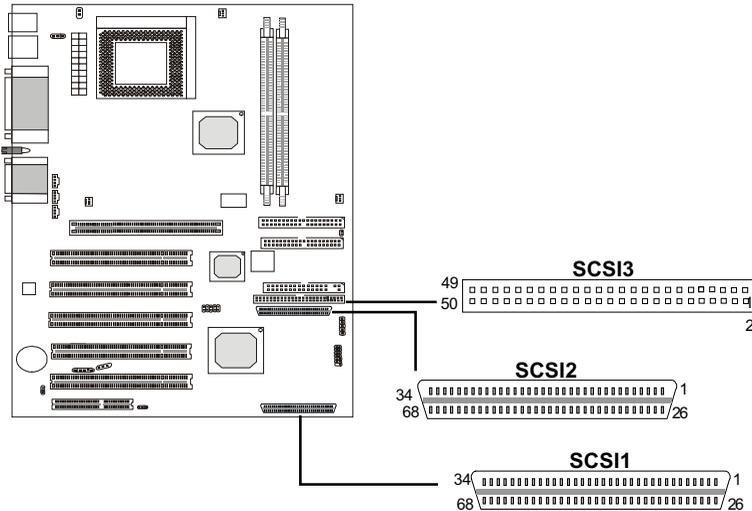
Note:

1. Always consult the vendor for proper CPU cooling fan.
2. CPU Fan supports the fan control. You can install the PC Alert utility that will automatically control the CPU Fan speed according to the actual CPU temperature.

Chapter 2

SCSI Connectors: SCSI 1, SCSI 2, SCSI 3

SCSI (Small Computer System Interface) pronounced “scuzzy”. SCSI is a hardware interface that allows for the connection of up to 15 peripheral devices. The mainboard provides the on-board SCSI function. There are three SCSI connectors (SCSI1, SCSI2, SCSI3) for you to connect to the wires.

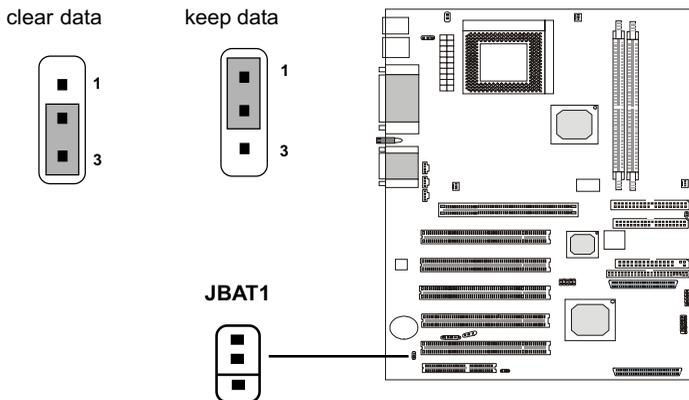


Jumpers

The motherboard provides the following jumpers for you to set the computer's function. Besides jumper settings, some of the motherboard's onboard functions are adjusted through the DIP switches. This section will mention how to change your motherboard's function through the use of jumpers and/or switches.

Clear CMOS Jumper: JBAT1

There is a CMOS RAM on board that has a power supply from external battery to keep the data of system configuration. With the CMOS RAM, the system can automatically boot OS every time. That battery has long life time for at least 5 years. If you want to clear the system configuration, you can use the JBAT1 (Clear CMOS Jumper) to clear data. Follow the steps below to clear the data:



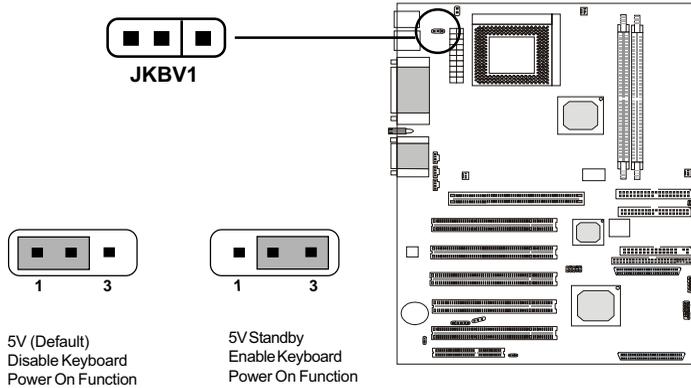


WARNING! You can clear CMOS by shorting 2-3 pin while the system is off, then return to 1-2 pin position. Avoid clearing the CMOS while the system is on; it will damage the mainboard.

Chapter 2

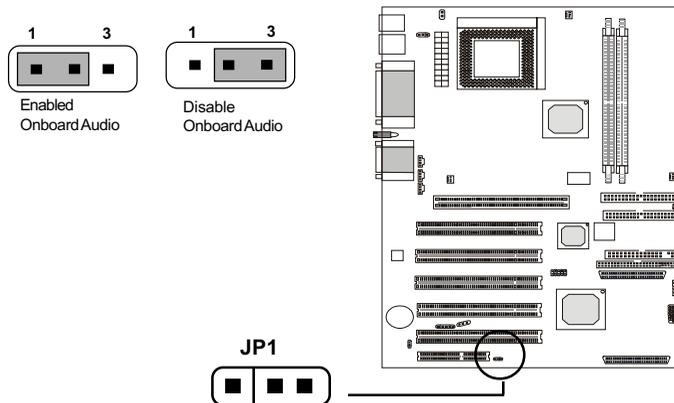
Keyboard Wake-up Jumer: JKBV1

The JKBV1 jumper is for setting PS/2 keyboard wake-up function from S3 (STR) mode.



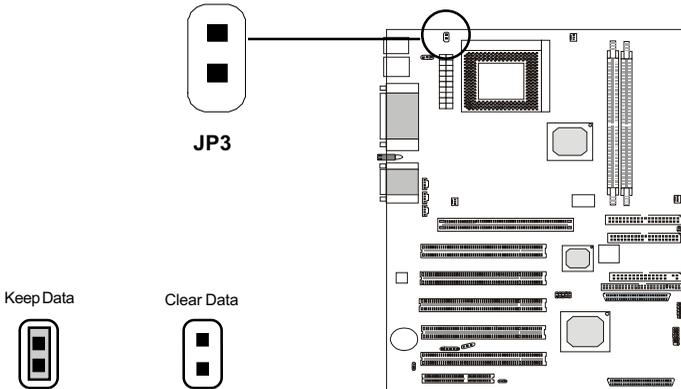
Onboard Audio Enabled/Disabled Jumper: JP1

This jumper is used to Enabled/Disabled the audio on board.



CPU Core Bus Ratio Setting: JP3

This allows you to set the CPU core bus ratio setting. While doing overclocking, setting this switch will let you keep the setting value.



Note:

If the ATX power supply is interrupted or has power failure, the BIOS menu will appear the following message when restarting the computer:

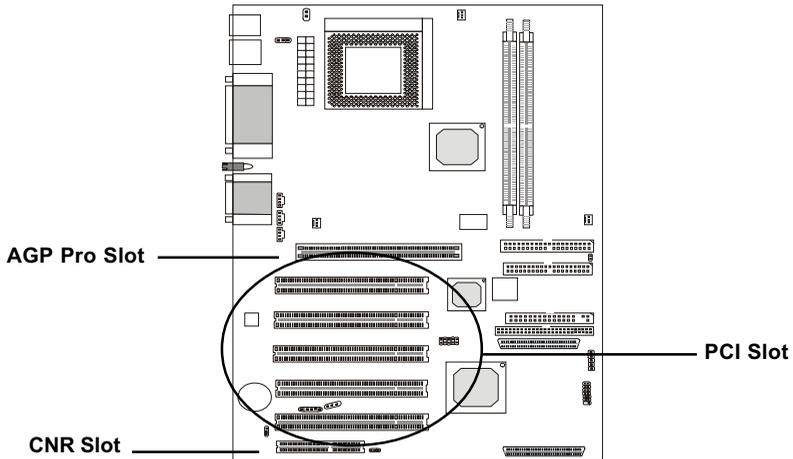
"Warning! CPU Ratio and CPU Vcore has been restored to Default Value.' Please press "Delete" to enter SetUp and Remember to Save Before Exit"

The message reminds users that the CPU ratio and vcore has been restored to default value when restarting the computer. The message will disappear only if you enter the Setup menu to reset or use the "load default" and save it before exit.

Chapter 2

Slots

The motherboard provides one AGP (Accelerated Graphics Port) Pro slot, one CNR (Communication Network Riser) slot and five 32-bit Master PCI Bus Slots.



AGP Pro Slot (Accelerated Graphics Port)

The AGP Pro Slot allows you to insert AGP card.

PCI Slot

The five PCI slots allow you to insert the expansion cards according to your needs. When adding or removing expansion cards, make sure that you unplug the power supply. Meanwhile, read the documentation of the expansion card and make any necessary hardware or software settings for the expansion card, such as jumpers, switches or BIOS.

CNR (Communication Network Riser)

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

PCI Interrupt Request

The IRQ, abbreviation of interrupt request line, and pronounced I-R-Q, are hardware lines over which devices can send interrupt signals to the microprocessor. The PCI IRQ pins are typically connected to the PCI bus INTA#-INTD# pins as follows.

	Order1	Order2	Order3	Order4
AGP	INT B	INT A	INT C	INT D
PCI Slot 1	INT A	INT B	INT C	INT D
PCI Slot 2	INT B	INT C	INT D	INT A
PCI Slot 3	INT C	INT D	INT A	INT B
PCI Slot 4	INT D	INT A	INT B	INT C
PCI Slot 5	INT A	INT B	INT C	INT D
SCSI 1	INT C	INT D	INT A	INT B
SCSI 2	INT D	INT A	INT B	INT C
AC97	INT C	INT D	INT A	INT B
USB	INT D	INT A	INT B	INT C

AGP & PCI2 shared

PCI 1 & PCI 5 shared

PCI 3 & SCSI 1 & AC97 shared

PCI 4 & SCSI 2 & USB shared

PCI 1~ PCI 5: Bus Master

Chapter 2

AWARD® BIOS Setup

3

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

This chapter provides you with the overview of the BIOS Setup program. It contains the following topics:

Entering Setup	3-2	Frequency/Voltage Control	3-27
Control Keys	3-2	Load Fail-Safe Defaults	3-28
Getting Help	3-3	Load Optimized Defaults	3-29
The Main Menu	3-4	Set Supervisor/User Password	3-30
Standard CMOS Feature	3-6	Save & Exit Setup	3-32
Advanced BIOS Features	3-9	Exit without Saving	3-33
Advanced Chipset Features	3-12		
Integrated Peripherals	3-15		
Power Management Setup	3-19		
PnP/PCI Configurations	3-24		
PC Health Status	3-26		

Chapter 3

Entering Setup

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.

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 by turning it OFF then On or pressing the RESET button to try again. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

Control Keys

<↑>	Move to the previous item
<↓>	Move to the next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Enter>	Select the item
<Esc>	Jumps to the Exit menu or returns to the main menu from a submenu
<+/PU>	Increase the numeric value or make changes
<-/PD>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from Fail-Safe default table, only for Option Page Setup Menu
<F7>	Load Optimized defaults
<F10>	Save all the CMOS changes and exit

Getting Help

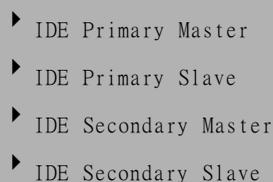
After entering the Setup menu, the first menu you will see is the Main Menu.

Main Menu

The main menu lists the setup functions you can make changes to. You can use the control keys (↑↓) to select the item. The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Sub-Menu

If you find a right pointer symbol (as shown in the right view) appears to the left of certain fields that means a sub-menu can be launched from this field. A sub-menu contains additional options for a field parameter. You can use control keys (↑↓) to highlight the field and press <Enter> to call up the sub-menu. Then you can use the control keys to enter values and move from field to field within a sub-menu. If you want to return to the main menu, just press the <Esc>.

- 
- ▶ IDE Primary Master
 - ▶ IDE Primary Slave
 - ▶ IDE Secondary Master
 - ▶ IDE Secondary Slave

General Help <F1>

The BIOS setup program provides a General Help screen. You can call up this screen from any menu by simply pressing <F1>. The Help screen lists the appropriate keys to use and the possible selections for the highlighted item. Press <Esc> to exit the Help screen.

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

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 system performance 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.

Chapter 3

Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes none, 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.

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

Date(mm:dd:yy):	Fri,May 5,2000	Item Help
Time(hh:mm:ss):	00:00:00	
▶IDE Primary Master		Menu Level ▶ Change the day, month, year and century
▶IDE Primary Slave		
▶IDE Secondary Master		
▶IDE Secondary Slave		
Drive A	1.44M, 3.5in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All, But Keyboard	
Based Memory	640K	
Extended Memory	64512K	
Total Memory	1024K	
↑ ↓ → ←::Move Enter::Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults		

Date

This allows you to set the system to the date that you specify (usually the current date). The 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

This allows you to set the system to the time that you specify (usually the current time). The time format is <hour> <minute> <second>.

**PrimaryMaster/PrimarySlave
SecondaryMaster/Secondary Slave**

Press PgUp/<+> or PgDn/<-> to select the hard disk drive category. The specification of hard disk drive will show on the right hand according to your selection. You can press <Enter> to enter the sub-menu. The sub-menu will appear as the following example:

IDE Primary Master		
IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master	Auto	Menu Level ▶▶ To auto-detect the HDD's size, head...on this channel
Access Mode	Auto	
Capacity	15021MB	
Cylinder	291024	
Head	16	
Precomp	0	
Landing Zone	29103	
Sector	63	

- 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

Chapter 3

Drive A, Drive B

This allows you to set the type of floppy drivers installed. Setting options: [None], [360K, 5.25in], [1.2M, 5.25in], [720k, 3.5in], [1.44M, 3.5in], [2.88M, 3.5in]. Drive A default value: [1.44M, 3.5in]. Drive B default value: [None].

Video

This allows you to set the type of video card. Setting options: [EGA/VGA] [CGA40] [CGA80] [MONO]. Default value: [EGA/VGA].

Halt on

This allows you to set the type of errors that will cause system halt on. Setting option: [All Errors] [No Errors] [All, But Keyboard] [All, But Diskette] [All, But Disk/Key]. Default value: [All, But Keyboard].

All Errors: The system will halt on and display the error message if any error happens.

No Errors: The system will not halt on no matter any error happens.

All, But Keyboard: The system will halt on if any error happens. But the system will not halt on if the keyboard function is not normal.

All, But Disk/Key: The system will halt on if any error happens. But the system will not halt on if the disk drive and keyboard function is not normal.

Advanced BIOS Features

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

		Item Help
Anti-Virus Protection	Disabled	
CPU Internal Cache	Enabled	
External Cache	Enabled	Menu Level >
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot device	HDD-0	Allows you to choose
Third Boot device	LS120	the VIRUS warning
Boot other device	Enabled	feature for IDE Hard
Swap Floppy Drive	Disabled	Disk boot sector
Boot Up Numlock Status	On	protection. If this
Security Option	Setup	function is enabled
OS Select for DRAM > 64MB	Non-OS2	and someone attempt to
HDD S.M.A.R.T Capability	Disabled	write data into this
Video BIOS Shadow	Enabled	area, BIOS will show a
		warning message on
		screen and alarm beep

↑ ↓ → ←: 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 date into this area, BIOS will show a warning message on screen and alarm beep. Setting options: [Disabled] [Enabled]. Default value: [Disabled]

CPU Internal Cache

This allows you to choose from the default of [Enabled] or choose [Disabled] to turn on or off the CPU's internal cache. Setting options: [Disabled] [Enabled].

 **Note:** The internal cache is built in the processor.

Chapter 3

External Cache

This allows you to choose from the default of [Enabled] or choose [disabled] to control the function of level 2 cache memory. Setting options: [Disabled] [Enabled]. Default value: [Enabled].

Quick Power On Self Test

This allows you to speed 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. Setting options: [Disabled] [Enabled]. Default value: [Enabled].

First/Second/Third/Boot Other Device

This allows you to set the sequence of boot device from that the BIOS attempts to load the operating system. Setting options: [Floppy] , [LS120] , [HDD-0] , [HDD-1] , [HDD-2] , [HDD-3] , [SCSI] , [CDROM] , [LAN] , [ZIP100] , [Disabled].

Swap Floppy Drive

This allows you to choose from the default of [Disabled] or choose [Enabled] to switch the floppy disk drives between being designated as A and B. Setting options: [Disabled] [Enabled]. Default value: [Disabled]

Boot Up NumLock Status

This allows you to set the NumLock status when you boot up your computer. When you choose from the default of [On], the keypad is numeric keys. When you choose [Off], the keypad is arrow keys. Setting options: [On] [Off]. Default value: [On]

Security Option

This allows you to limit access to the system and Setup, or just to Setup. When you choose from the default of [Setup], the system will boot, but access to Setup will be denied if the correct password is not entered at the prompt. When you choose [System], the system will not boot and access to Setup will be denied if the correct password is not entered at the prompt. Setting options: [Setup] [System]. Default value: [Setup]

OS Select for DRAM > 64MB

This allows you to run the OS/2® operating system with > 64 MB of DRAM. When you choose from the default of [Non-OS2], you cannot run the OS/2® operating system with > 64 MB of DRAM. When you choose [OS2], it is possible. Setting options: [Non-OS/2] [OS2]. Default value: [Non-OS/2]

HDDS.M.A.R.T Capability

This allows you to set the HDD S.M.A.R.T capability. S.M.A.R.T is a utility that monitors your disk hardware with the goal of identifying disks that have a strong possibility of crashing. This provides you a window of opportunity to gracefully remove data from a failing disk and take it offline before your disk drive takes you offline. Setting options: [Enabled] [Disabled]. Default value: [Disabled]

Video BIOS Shadow

This allows the video BIOS to be copied to shadow RAM to improve the video performance. Setting options:[Enabled] [Disabled]. Default value: [Enabled]

Chapter 3

Advanced Chipset Features

System BIOS Cacheable	Disabled	Item Help
Video RAM Cacheable	Disabled	
Memory Hole at 15M-16M	Disabled	
AGP Aperture Size (MB)	128	Menu Level >
AGP ISA Aliasing	Enabled	
AGP Secondary Lat Timer	20h	
AGP Fast Write	Enabled	
AGP Data Transfer Mode	4X	
K7 CLK_CTL Select	Optimal	
SDRAM ECC Setting	Disabled	
Super Bypass Mode	Enabled	
SDRAM Timing by SPD	Enabled	
xSDRAM PH Limit	8 cycle	
xSDRAM Idle Limit	8 cycle	
xSDRAM Trc Timing Value	8 cycle	
xSDRAM Trp Timing Value	3 cycle	
xSDRAM Tras Timing Value	7 cycle	
xSDRAM CAS Latency	2 cycle	
xSDRAM Trcd Timing Value	3 cycle	

↑ ↓ → ←: 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 the 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. Setting options:[Enabled] [Disabled]. Default value: [Disabled]

Video RAM Cacheable

Selecting Enabled allows caching of the video RAM, resulting in better system performance. However, if any program writes to this memory area, a system error may result. Setting options:[Enabled] [Disabled]. Default value: [Disabled]

Memory Hole at 15M-16M

This allows you to reserve an address space for ISA expansion cards that require it. Setting options:[Enabled] [Disabled]. Default value: [Disabled].

AGP Aperture Size (MB)

This allows you to select the size of Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. Setting options:[32] [64] [128] [256]. Default value: [128]

AGP ISA Aliasing

When enabled, it will force address bits [15:10] are not used in decoding. When disabled, [15:10] are used for decoding. Setting options: [Enabled] [Disabled]. Default value: [Enabled]

AGP Secondary Lat Timer

This allows you to set the AGP Secondary Lat Timer. Setting options : [00h] [20h] [40h] [60h] [80h] [C0h] [FFh]. Default value: [20h]

AGP Fast Write

This allows you to enable or disable the function of “AGP Fast Write” for data transfer. Setting options: [Disabled] [Enabled]. Default value: [Enabled]

AGP Data Transfer Mode

This allows you to set the AGP Data Transfer Mode. Setting options: [1x/2x], [4x]. Default value: [4x]

Chapter 3

K7 CLK_CTL Select

During Optimal, this item will auto-detect the processor clock generator. During None, the processor clock will always be set to 100MHz. Setting options: [Optimal] [Default]. Default value: [Optimal]

SDRAM ECC Setting

This allows you to set the SDRAM Error Correcting Code. Setting options: [Disabled] [Check Only] [Correct Errors] [Correct+Scrub]. Default value: [Disabled]

Super Bypass Mode

When enabled, the chipset internally bypass certain memory to CPU pipe stages for optimal performance. Setting options: [Disabled] [Enabled]. Default value: [Enabled]

SDRAM Timing by SPD

When choosing “Enabled”, the SDRAM configures items by reading the contents in the SPD (Serial Presence Detect) device. Setting options: [Enabled] [Disabled]. Default value: [Enabled]

Integrated Peripherals

Onchip IDE Channel0	Enabled	Item Help
Onchip IDE Channel1	Enabled	
Init Display First	PCI Slot	Menu Level >
Onboard SCSI	Enabled	
SCSI Terminator	Enabled	
OnChip USB	Enabled	
USB Keyboard Support	Disabled	
AC97 Audio	Auto	
MC97 Modem	Auto	
Onboard FDD Controller	Enabled	
Onboard Serial Port 1	Auto	
Onboard Serial Port 2	Auto	
UART2 Mode	Standard	
xIR Function Duplex	Half	
xTX,RX inverting enable	No, Yes	
Onboard Parallel Port	378/IRQ7	
Onboard Parallel Mode	Normal	
ECP Mode Use DMA	3	
Parallel Port EPP Type	EPP1.9	
Onboard Legacy Audio	Enabled	
Sound Blaster	Enabled	
SB I/O Base Address	220H	
SB IRQ Select	IRQ5	
SB DMA Select	DMA1	
MPU-401	Disabled	
MPU-401 I/O Address	330-333H	
Game Port (200-207#)	Enabled	
↑ ↓ → ←: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults		

OnChip IDE Channel0/Onchip IDE Channel1

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Choose the default of [Enabled] to activate each channel separately. Setting options: [Enabled] [Disabled]. Default value: [Enabled]

Init Display First

This item allows you to decide to activate whether PCI Slot or AGP Slot. Setting options: [PCI Slot] [AGP]. Default value: [PCI Slot].

Chapter 3

Onboard SCSI

This allows you to use the onboard SCSI function. Setting options: [Enabled] [Disabled]. Default value: [Enabled].

SCSI Terminator

This allows you to use the function of SCSI Terminator. Setting options: [Enabled] [Disabled]. Default value: [Enabled].

OnChip USB

This should be Enabled if your system has a USB installed on the system board and you wish to use it. If you want to add a higher performance controller, you will need to disable this feature. Setting options: [Enabled] [Disabled]. Default value: [Enabled]

USB Keyboard Support

Select Enabled if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard. Setting options: [Enabled] [Disabled]. Default value: [Enabled]

AC97 Audio/MC97 Modem

[Auto] allows the motherboard's BIOS to detect whether you're using any audio/modem device. If it is, the onboard modem/audio controller will be enabled. If not, the onboard modem/audio controller will be disabled. If you want to use different controller cards to connect modem and audio connectors, set these fields to [Disabled]. Setting options: [Auto] [Disabled]. Default value: [Auto]

Onboard FDD Controller

This item allows you to enable or disable the onboard FDD controller. Setting options: [Enabled] [Disabled]. Default value: [Enabled]

Onboard Serial Port 1/2

Select an address and corresponding interrupt for the serial port 1 and 2. Setting options: [Disabled] [3F8/IRQ4] [2F8/IRQ3] [3E8/IRQ4] [2E8/IRQ3] [Auto]. Default value:[Auto]

UART2Mode

This item allows you to select which mode for the Onboard Serial Port 2. Setting options: [Standard], [HPSIR}, [ASKIR}.

Onboard Parallel Port

There is a built-in-parallel port on the onboard Super I/O chipset that provides Standard, ECP, and EPP features. Setting options: [Disabled] [3BC/IRQ7] [378/IRQ7] [278/IRQ5]. Default value: [378/IRQ7]

Onboard Parallel Mode

This allows you to set the Parallel Port Mode. Setting options: [Normal] [EPP] [ECP] [ECP/EPP]. Default value: [Normal]

ECP Mode Use DMA

This allows you to select a DMA channel for the parallel port for use during ECP mode. Setting options: [1] [3]. Default value: [3]

Parallel Port EPP Type

This allows you to select Parallel Port EPP type. Setting options: [1.9] [1.7]. Default value: [1.9]

Onboard Legacy Audio

This allows you to enable/disable the onboard legacy audio. Setting options: [Disabled] [Enabled]. Default value: [Enabled]

Chapter 3

Sound Blaster

Choosing [Enabled] if you want to use the onboard SB function and choosing [Disabled] if you want to change the default value. Setting options: [Enabled], [Disabled]. Default value: [Enabled].

SB I/O Base Address

This allows you to select the SB I/O address. Setting options: [220H], [240H], [260H], [280H]. Default value: [220H].

SB IRQ Select

This allows you to select the SB Interrupt Request and there are four choices. Setting options: [IRQ5], [IRQ7], [IRQ9], [IRQ10]. Default value: [IRQ5].

SB DMA Select

This allows you to select the SB Direct Memory Access Request. Setting options: [DMA1], [DMA0], [DMA2], [DMA3]. Default value: [DMA1]

MPU-401

Choosing [Enabled] if you want to use the MIDI function and choosing [Disabled] if you want to change the default value. Setting options: [Enabled], [Disabled]. Default value: [Disabled].

MPU-401 I/O Address

This allows you to select the MIDI I/O address and there are four choices. Setting options: [300-303H], [310-313H], [320-323H], [330-333H]. Default value: [330-333H].

Game Port (200-207H)

This allows you to use the function of Game Port. Setting options: [Enabled], [Disabled]. Default value: [Enabled].

Power Management Setup

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) 1984-2000 Award Software
Power Management Setup

ACPI Function	Enabled	Item Help
ACPI Suspend Type	S1 (POS)	
USB KB/MS Wake-Up from S3	Disabled	Menu Level >
Power Management	User Define	
Video Off Method	DPMS Support	
Standby Mode	Disabled	
HDD Power Down	Disabled	
HDD Down In Suspend	Disabled	
Soft-Off by PBTN	Instant-off	
Sleep State LED	Blink	
PWRON After PWR-Fail	off	
Wake Up On PME	Disabled	
Wake Up On Ring/LAN	Disabled	
MODEM Use IRQ	3	
RTC Resume	Disabled	
x Date (of Month) Alarm	0	
x Time (hh:mm:ss)	0 0 0	
xx IRQ Wakeup Events xx		
↑ ↓ → ←: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults		

ACPI Function

This item allows you to set ACPI (Advanced Configuration and Power Management) function. Setting options: [Enabled] [Disabled]. Default value: [Enabled]

Chapter 3

ACPI Suspend Type

This item allows you to set the ACPI suspend type you will use. Setting options: [S1 (POS)] [S3 (STR)]. Default value: [S1 (POS)]

S1 (POS)	The S1 sleeping state is low wake-up latency sleeping state. In this state, no system context is lost (CPU or chip set) and hardware maintains all system context.
S3 (STR)	The S3 state is a low wake-up latency sleeping state. In this state all system context is lost except system memory. CPU, cache, and chipset context are lost in this state. Hardware maintains memory context and restores some CPU and L2 configuration context.

USB KB/MS Wake-Up from S3

This option is used to Enabled/Disabled USB keyboard wake up with suspend to RAM. Setting options: [Disabled] [Enabled]. Default value: [Disabled]

Power Management

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

HDD Power Down Doze Mode Suspend Mode

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

Min. Saving	Minimum power management. Standby Mode = 1hr., and HDD Power Down = 1 min.
Max. Saving	Maximum power management. Standby Mode = 30 sec.. HDD Power Down "Disabled"
User Define (default)	Allow you to set each mode individually. When not disabled, each of the ranges are from 30 sec. 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 Support (default)	Initial display power management signaling.

Standby Mode

This allows you to set the time period before the system goes into standby mode. Setting options: [30sec] [Disabled] [1/4/10/20/30 min] [1 hour]. Default value:[Disabled]

HDD Power Down

This allows you to set the time period before the hard disk drive will be powered down while all other devices remain active. Setting options: [Disabled] [1/2/3/4/5/6/7/8/9/10/11/12/13/14/15 min]. Default value: [Disabled]

HDD Down In Suspend

When enabled, the hard disk drive will be powered down while the other devices are in suspend mode. Setting options: [Disabled] [Enabled]. Default value: [Disabled]

Soft-off by PBTN

Choose the value of [Delay 4 Sec] to allow pressing the power button for more than 4 seconds to force the system to enter the Soft-Off state. Setting options: [Delay 4 sec] [Instant-Off]. Default value: [Instant-Off]

Chapter 3

Sleep State LED

This allows you to determine the state the Power LED will use when the system enters the sleep mode. Setting options: [Single] [Dual] [Blink]. Default value: [Blink]

Blink Power LED will blink when the system enters the sleep mode.

Single Power LED will always remain lit.

Dual Power LED will change its color when the system enters the sleep mode.

PWRON After PWR-Fail

This allows you to set whether you want your system to reboot after the power has been interrupted. [Off] leaves your system off and [On] reboots the system. [Former-sts] leaves the system in the former status. Setting options: [Off] [On] [Former-sts]. Default value: [off]

Wake Up On PME

This allows your computer to be booted from another computer via a network by sending a wake-up frame or signal. Setting options: [Enabled] [Disabled]. Default value: [Disabled]

Wake Up On Ring/LAN

To use this function, you need a Modem which supports power on functions. During the default value of [Disabled], the system cannot be booted up from modem and ignores any incoming call from modem. During [Enabled], the system can be booted up through modem.

Modem Use IRQ

This determines the IRQ in which the MODEM can use. Setting options: [3] [4] [5] [7] [9] [10] [11] [NA]. Default value: [3].

RTC Resume

This allows you to set the date and time alarm for your computer to boot up. During [Disabled], you cannot use this function. During the value of [Enabled], you can set the date and time alarm. Default value: [Disabled]

- Date (of Month) Alarm

You can choose which month the system will boot up. Setting “0” will allow you to boot the system 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.*

Chapter 3

PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, 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) 1984-2000 Award Software PnP/PCI Configuration Setup

PNP OS Installed	No	Item Help
Clear ESCD	Disabled	
Resources Controlled By xIRQ Resources	Auto (ESCD) Press Enter	Menu Level > Select Yes if you are using a Plug and Play capable operation system Select No if you need the BIOS to configure non-boot devices
xDMA Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	
↑ ↓ → ←: Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults		

PnP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Windows® 95 or 98. When set to NO, BIOS will initialize all the PnP cards. So, for non-PnP operating system (DOS, Netware®), this option must set to Yes.

Clear ESCD

The ESCD (Extended System Configuration Data) is a method that the BIOS uses to store resource information for both PNP and non PNP devices in a bit string format. When “Enabled”, the system will rebuilt ESCD and you will see the message “ESCD Update Successfully” on boot up.

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. (If you choose “Auto”, the IRQ Resources and DMA Resources will not have function.)

IRQ Resources

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

DMA Resources

This sub menu can let you control the DMA resource.

PCI/VGA Palette Snoop

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

Chapter 3

PC Health Status

This section helps you to get more information about your system including CPU temperature, FAN speed and voltages. It is recommended that you contact with your motherboard supplier to get proper value about your setting of the CPU temperature.

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

Current CPU Temp. Current System Temp. Current CPUFAN Speed Current SYSFAN Speed Vcore 2.5V 3.3V 5V 12V	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 CPU Temp.

This item shows the current CPU temperature.

Current System Temp.

This item shows the current system temperature.

Current CPUFAN Speed

This item shows the current CPUFAN speed.

Current SYSFAN Speed

This item shows the current SYSFAN speed.

Vcore

This item shows the current system voltage.

Frequency/Voltage Control

This section is for setting CPU Frequency/Voltage Control.

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
Frequency/Voltage Control

Auto Detect DIMM/PCI Clk	Enabled	Item Help
Spread Spectrum Modulated	Disabled	
CPU Host/PCI Clock	Default	Menu Level >
CPU Vcore Select	Default	
CPU Ratio	Default	
↑ ↓ → ←: 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.
Default value: [Enabled]. Setting options: [Enabled] [Disabled]

Spread Spectrum Modulated

This item allows you to set the Spread Spectrum. Default value: [Disabled].

CPU Host/PCI Clock

This item allows you to set the CPU Host/PCI clock. Default value: [Default].

CPU Vcore Select

This item allows you to select the current system voltage.

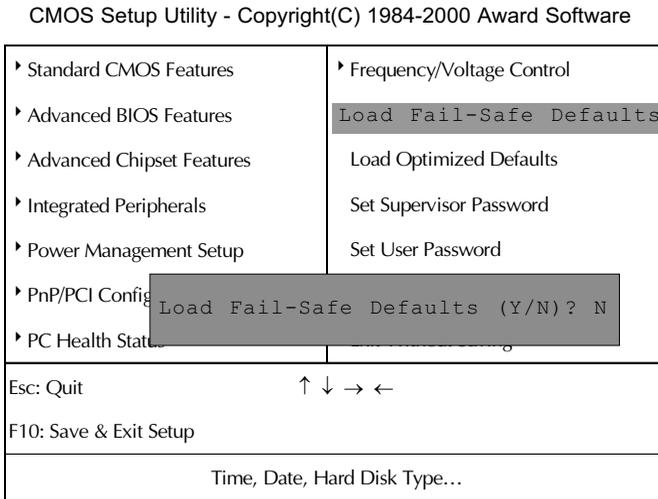
CPU Ratio

This item allows you to set the CPU Ratio.

Chapter 3

Load Fail-Safe/Optimized Defaults

When you select this function, a message as below will appear on the screen:



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

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.

About Supervisor Password & User Password:

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.

Chapter 3

Glossary

Buffer

A temporary storage area, usually in RAM. The purpose of most buffers is to act as a holding area, enabling CPU to manipulate data before transferring it to a device.

Bus

A collection of wires through which data is transmitted from one part of a computer to another. You can think of a bus as a highway on which data travels within a computer.

Chipset

A number of integrated circuits designed to perform one or more related functions. For example, one chipset may provide the basic functions of a modem while another provides the CPU functions for a computer.

CMOS

Abbreviation of *complementary metal oxide semiconductor*. Pronounced *see-moss*, CMOS is a widely used type of semiconductor. CMOS chips are particularly attractive for use in battery-powered devices, such as portable computers. Personal computers also contain a small amount of battery-powered CMOS memory to hold the date, time, and system setup parameters.

Com

In DOS system, the name of a serial communications port. DOS supports four serial ports: COM1, COM2, COM3, and COM4.

DIMM

Short for *dual in-line memory module*, a small circuit board that holds memory chips. A *single in-line memory module (SIMM)* has a 32-bit path to the memory

chips whereas a DIMM has 64-bit path.

IDE

Abbreviation of either *Intelligent Drive Electronics* or *Integrated Drive Electronics*, depending on who you ask. An IDE interface is an interface for mass storage devices, in which the controller is integrated into the disk or CD-ROM drive.

IrDA

Short for *Infrared Data Association*, a group of device manufacturing that developed a standard for transmitting data via infrared light waves. This enables you to transfer data from one device to another without any cables.

LED

Abbreviation of *light emitting diode*, an electronic device that lights up when electricity is passed through it. LEDs are usually red. They are good for displaying images because they can be relatively small, and they do not burn out.

LPT

A name frequently used by operating systems to identify a printer. Although LPT originally stood for *line printer terminal*, it is now used more generally to identify any type of printer.

PCI

Acronym for *Peripheral Component Interconnect*, a local bus standard developed by Intel Corporation. Most modern PCs include a PCI bus in addition to a more general ISA expansion bus.

PS/2 Port

A type of port developed by IBM for connecting a mouse or keyboard to a PC. The PS/2 port supports a mini DIN plug containing just 6 pins. Most PCs have a PS/2 port so that the special port can be used by another device, such as a modem.

