

# **M815A**

## **Series**

(Industrial Board)

# **INSTALLATION GUIDE**

Installation Guide Revision A.0  
60002MAA0



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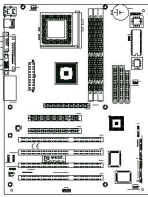
# SECTION 1

## INTRODUCTION

### 1.1 Unpacking M815A

1. Take out the M815A unit from the carton box, check if the unit is properly secure in the plastic bag.
2. Check the contents of the carton box:

◆ Industrial Board



◆ Installation Guide



◆ Floppy ribbon cable



◆ ATA-66/100 HDD ribbon cable



◆ External USB cable (optional)



◆ Driver & PC-CILLIN Utility



## 1.2 Description

The M815A combines the high performance and exceptional value of Intel® 815EP chipset with a full-featured, new generation, industrial board. The Intel® 815EP chipset, that SDRAM interface supports 100MHz and 133MHz operation, the Intel® 815EP chipset has re-engineered the Value PC, providing next generation features. The Intel® 82815EP provides an AGP universal connector to support the AGP 2.0 including 4X AGP data transfers.

The 82801BA I/O Controller Hub (ICH2) employs the Intel® Accelerated Hub Architecture to make a direct connection from the graphics and memory to the integrated AC97 controller, the IDE controllers (ATA/33 or ATA/66 or ATA/100), four USB ports that meets the performance, stability and reliability requirements.

The industrial board - M815A is suitable and valuable for all the industry applications, which also well support with the Windows® 95/98/2000/SE/ME and Windows® NT operation system.



## 1.3 Features

### 1.3.1 Accelerated Graphics Port (AGP or A.G.P.)

Typically, 3D graphics rendering requires a tremendous amount of memory, and demands ever increasing throughput speed as well. As 3D products for the personal computer become more and more popular, these demands will only increase. This will cause a rise in costs for both end users and manufacturers. Lowering these costs as well as improving performance is the primary motivation behind AGP. By providing a massive increase in the bandwidth available between the video card and the processor, it will assist in relieving some of these pressures for quite sometime.

The board provides the AGP 2.0 interface. The AGP Interface Specification revision 2.0 enhances the functionality of the original AGP Interface Specification (revision 1.0) by allowing 4X data transfers (4 data samples per clock) and 1.5 volts (power supply) operation. The AGP 2.0 interface, along with Direct Rambus memory technology, allows graphics controllers to access main memory at over 1GB/s. In order to match the 1X, 2X and 4X AGP card. The board used the Universal AGP connector. To maximize add-in flexibility. (such as 1.5 volts for 1X, 2X and 4X or 3.3 volts for 1X and 2X AGP card).

### 1.3.2 Ultra ATA/66/100

The ICH2 provides two channel Ultra ATA/66/100 Bus Master IDE controller, that support Ultra ATA/66/100 protocols, perfect for such demanding applications as real-time video, multimedia, and high performance operating system. A new IDE cable is required for Ultra ATA/66/100. This cable is an 80-conductor cable; however the connectors are, of course, backwards compatible with ATA/33.

### 1.3.3 Hardware Monitoring

Hardware monitoring allows you to monitor various aspects of your systems operations and status. The features include CPU temperature, voltage and RPM of fan.

### 1.3.4 I/O Shield Connector

The board is equipped with an I/O back panel. Please use the appropriate I/O shield (figure 1).

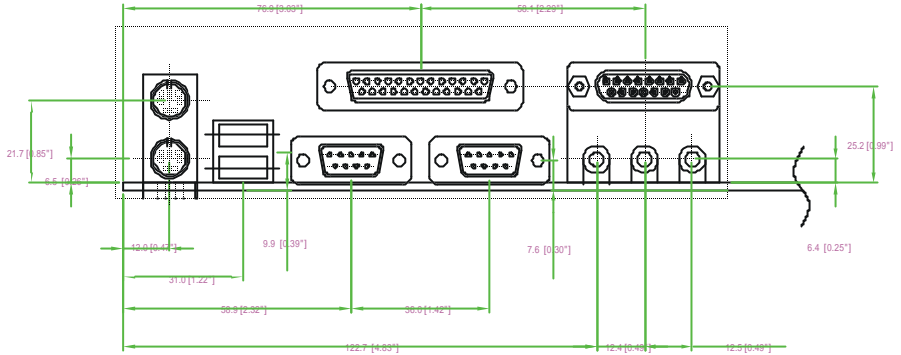


Figure 1: I/O back panel layout

### 1.3.5 Power-On/Off (Remote)

The board has a single 20-pin connector for ATX power supplies. For ATX power supplies that support the Remote On/Off feature, this should be connected to the systems front panel for system Power On/Off button. The systems power On/Off button should be a momentary button that is normally open.

The board has been designed with "Soft Off" functions. You can turn Off the system from one of two sources: The first is the front panel Power On/Off the button, and the other is the "Soft Off" function (coming from the M/B onboard circuit controller) that can be controlled by the operating system such as Windows<sup>®</sup> 95/98/SE/ME or Windows<sup>®</sup> 2000.

### 1.3.6 System Block Diagram

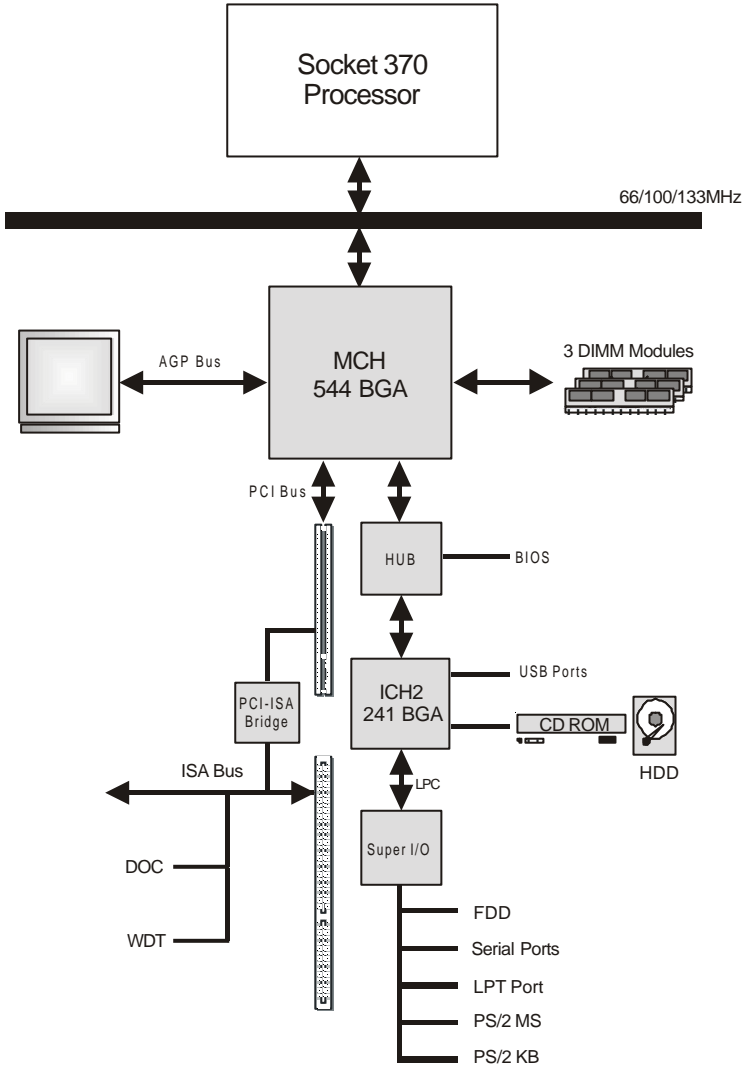


Figure 2: System Block Diagram

## 1.4 Specifications

### ◆ Processor:

- Intel® Celeron™ Processors with PPGA / FC-PGA socket 370 packing, operating at 433 ~ 766MHz
- Intel® Pentium® II/Coppermine™ Processor with FC-PGA socket 370 packing, operating at 500 ~ 1GHz

### ◆ Chipset:

- Intel® 82815EP AGPset

### ◆ DRAM Module:

- 168pin DIMM x 3 for PC133 Memory
- DRAM Size: 32MB to 512MB

### ◆ Expansion Slot:

- PCI slot x 2 (1 Shared), ISA slot x 4, and 4X AGP slot x 1

### ◆ Onboard I/O:

- On-Chip I/O integrated with K/B, Mouse, FDD, Parallel and Serial, Fast IR and Power-ON controllers

### ◆ Onboard PCI / IDE:

- Intel® 82801BA/ICH2 Controller
- PCI rev2.2 Compliant
- ACPI Compliant Power Management
- AC97 2.1/2.0 Compliant Link for Audio CODEC
- PCI Bus IDE Port with PIO /Ultra DMA-100 x 2 (Up to 4 Devices)

### ◆ I/O Connector:

- PS/2 Mouse and PS/2 style Keyboard

### ◆ USB Ports:

- USB connector x 4 (2 for Opt.)

### ◆ BIOS:

- Award Plug & Play BIOS

◆ **Built-in AC97 Digital Audio:**

- Dual full-duplex Direct Sound channels
- H/W Sound Blaster Pro for DOS legacy compatibility
- FM synthesis for legacy compatibility
- Supports game and MIDI port

◆ **Extended Function:**

- Supports exclusive USDM (Unified System Diagnostic Manager) and Hardware Monitoring Function by W83627HF-AW
- Supports exclusive KBPO (Keyboard Power ON) Function
- Supports STR (Suspend To RAM) power saving Function
- Supports CPU Clock Settings via Jumper & BIOS
- Supports Wake-On-LAN Function

◆ **Form Factor:**

- 305mm x 230mm ATX Size

◆ **Weight:**

- 1.31lb (595 g.w.) --- M815A

## SECTION 2

### INSTALLATIONS

#### 2.1 System Installation

##### 2.1.1 CPU Installation

Carefully follow the steps below in order to install the CPU:

1. Check and confirm that the jumpers are correctly set for the CPU you are going to install (figure 5).
2. Lift the releasing lever of the Socket 370.
3. Align the pins of the CPU against the pinholes of the Socket 370. Be sure to pay attention to the orientation of the CPU.

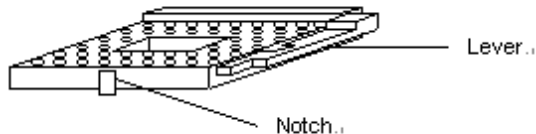


Figure 3: CPU Socket

4. Push down the CPU into the Socket 370.
5. Push down the release lever and lock it against the key hook.
6. Hook the hole in ZIF clip for the CPU cooling fan onto the notch on the socket 370.
7. Place the CPU cooling fan atop the CPU surface.
8. Push down the opposite side of the ZIF clip and hook it.
9. Slide the head of the clip to left and lock it.
10. Connect the cooling fan cable to the socket as shown below. Be careful not to place the cable on the CPU cooling fan.

### Removing a CPU:

1. Before removing the CPU, turn off the M815A power; then wait for about 20 minutes until the heat radiation plate of the cooling fan and the CPU cools down.
2. To remove the CPU, lift the releasing lever of the Socket 370.

Note: The CPU and the heat radiation plate are hot. They may cause burns.

**To remove the CPU, reverse the installation steps.**

### 2.1.2 Memory Module Installation

Figure 4 display the notch marks and what they should look like on your DIMM memory module.

DIMMs have 168-pins and two notches, that will match with the onboard DIMM socket. DIMM modules are installed by placing the chip firmly into the socket at a 90-degree angle and pressing straight down (figure 5) until it fits tightly into the DIMM socket.

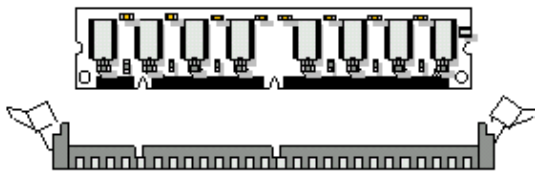


Figure 4: DIMM Memory and 168-pins Socket

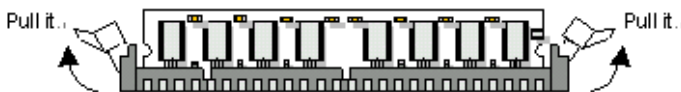


Figure 5: Memory Installation

## Installations

Carefully follow the steps below in order to install the DIMMs:

1. To avoid generating static electricity and damaging the DIMM, ground yourself by touching a grounded metal surface or using a ground scrap before you touch the DIMM.
2. Do not touch the connector of the DIMM. Dirt residue may cause a malfunction.
3. Hold the DIMM with its notch to the front side of the M815A and insert it completely into the socket. A DIMM should be inserted into the inner socket first. Guiding the hole at each end of the DIMM over the retaining post at each end of the DIMM socket.
4. If you install two DIMMs, install the second DIMM using the same procedure as above.
5. If DIMM does not go in smoothly, do not force it. Pull it all the way out and try again.
6. Make sure the DIMM is properly installed and locked by the tabs on both sides of the socket.

### **Removing a DIMM:**

To remove the DIMM, use your fingers or a small screwdriver to carefully push away the plastic tabs that secure the DIMM at each end. Lift it out of the socket.

**Make sure you store the DIMM in an anti-static bag.**



### 2.1.3 Setting Jumpers and DIP Switches

There are jumpers and DIP-switches on the system board of the M815A. You can set the jumpers to make the necessary operations.

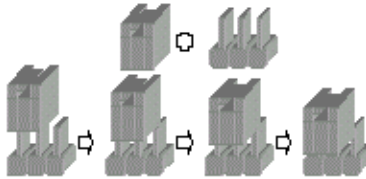
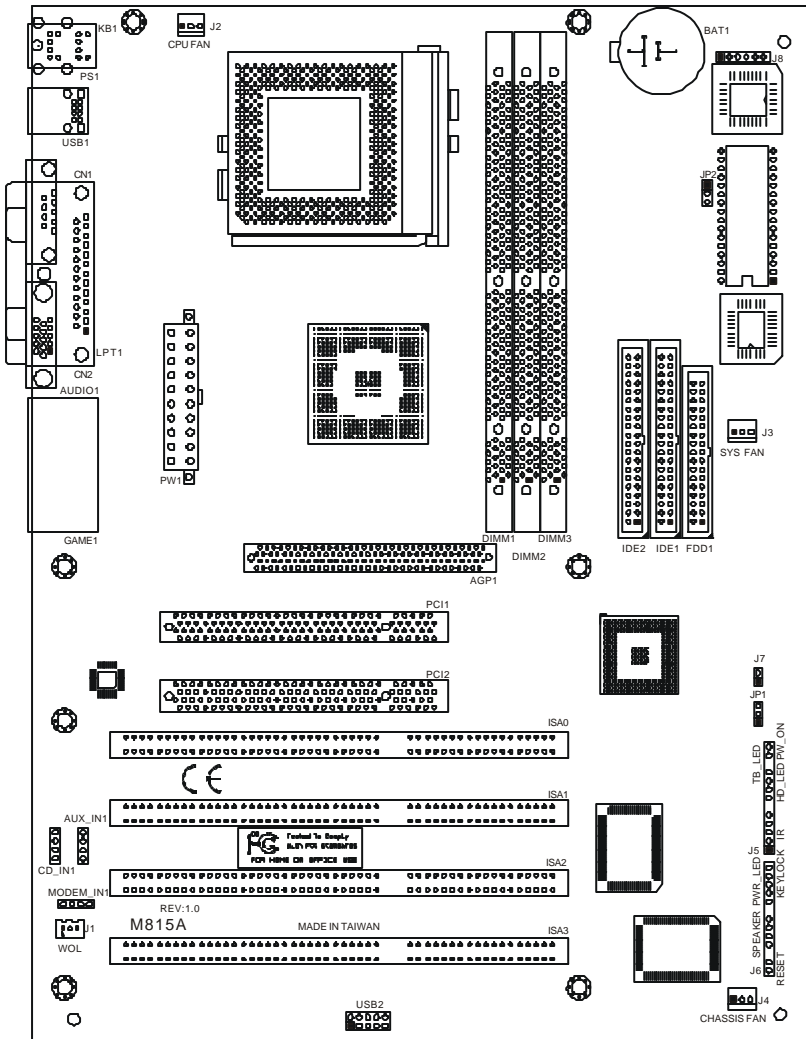


Figure 6: Jumper Connector

For any three-pin jumpers (Figure 6), the jumper setting is 1-2 when the jumper connects pins 1 and 2. The setting is 2-3 when pins 2 and 3 are connected and so on. You see a number “ 1 ” and a “ 3 ” printed on the circuit board to identify these pins. And also, there is a second way of indication – one of the lines surrounding jumpers is thick, which indicates pin NO.1.

To move a jumper from one position to another, use needle-nose pliers or tweezers to pull the pin cap off the pins and move it to the desired position.

## 2.2 Board Layout Jumper & Connector Location



## 2.3 Jumper Setting

### Table for Jumper Location Description:

Use the information in the following table to change the jumpers and the DIP switches.

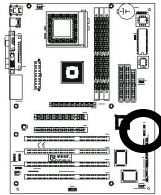
<b>Jumpers</b>	<b>Functions</b>
JP1	Clear CMOS Setting Select
JP2	Watchdog Timer Setting Select

In order to set up the correct configuration, here is the description about how to set the jumpers to enable/disable or change functions. All jumpers' location please refer to jumper location diagram.

◆ **Clear CMOS Setting Select: JP1**

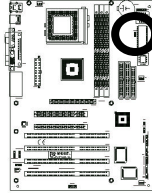
Function	JP1
Normal (Default)	1-2
Clear CMOS	2-3

• **Location:**



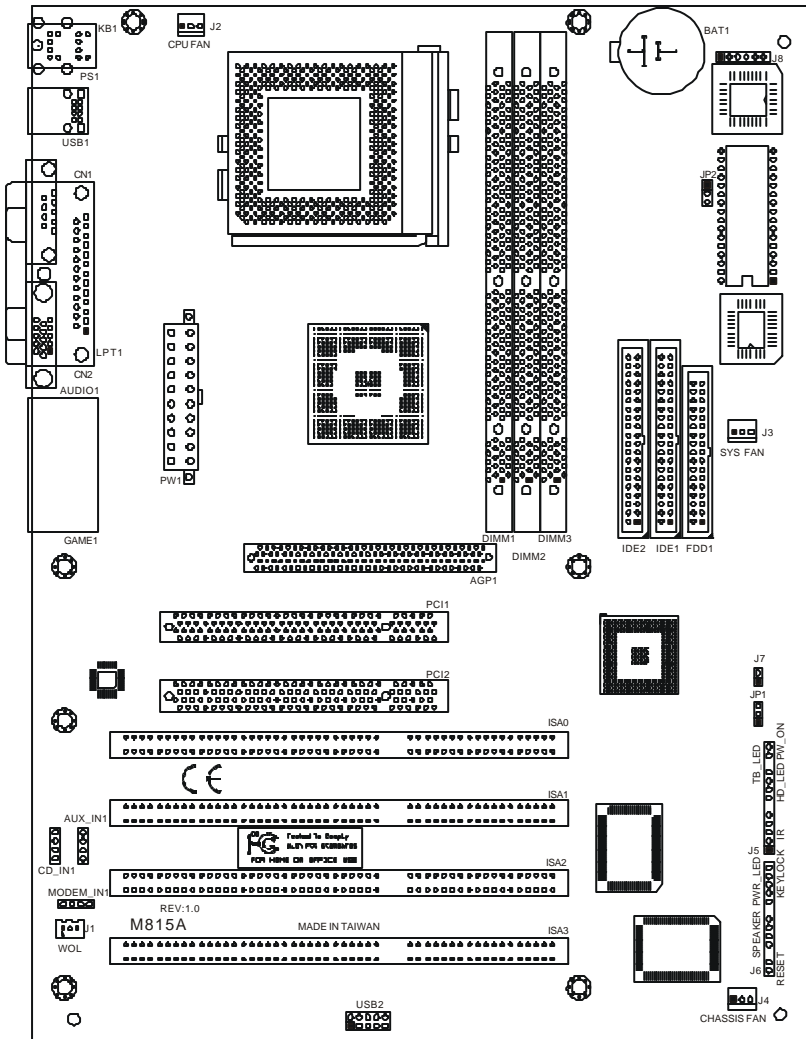
**◆ Watchdog Timer Setting Select: JP2**

Function	JP2
NMI	1-2
Reset System (Default)	2-3

**• Location:**

## 2.4 Connector's Description

### Connector Location



**Table for Connector' s Location Description:**

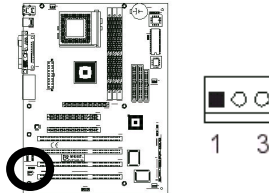
Use the information in the following table to change the connector.

<b>Connectors</b>	<b>Functions</b>
J1	Wake-On-LAN Connector
J2	CPU Fan Power Connector
J3	Chassis Intrusion System Fan Power Connector
J4	Chassis Fan Power Connector
J5	System Panel Indicate Connector (1)
J6	System Panel Indicate Connector (2)
IDE1	Primary IDE Connector
IDE2	Secondary IDE Connector
FDD1	Floppy Disk Connector
LPT1	Parallel Port Connector
CN1 / CN2	COM 1/2 RS232 Serial Port Connector
USB1	USB 1/2 Connector
USB2	USB 3/4 (Pin-Header) Connector
PW1	ATX Power Connector
KB1	PS/2 Keyboard Connector
PS1	PS/2 Mouse Connector
Game1	Game Port Connector
Audio1	Audio Port Connector

◆ **Wake-On-LAN Connector: J1**

Pin #	Assignment
1	VccSBY
2	Ground
3	ICH-RI

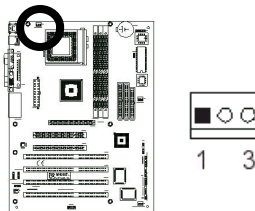
• **Figure:**



◆ **CPU Fan Power Connector: J2**

Pin #	Assignment
1	Sense
2	+12V
3	Ground

• **Figure:**

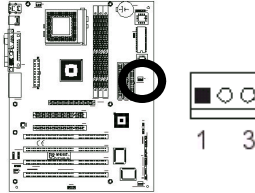




◆ Chassis Intrusion System Fan Power Connector: J3

Pin #	Assignment
1	Sense
2	+12V
3	Ground

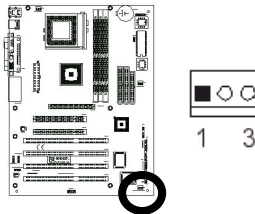
• Figure:



◆ Chassis Fan Power Connector: J4

Pin #	Assignment
1	Sense
2	+12V
3	Ground

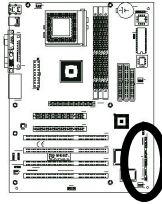
• Figure:



◆ **System Panel Indicate Connector (1): J5**

Function	J5
IRDA	1, 5 pin
IDE LED	7, 8 pin
TB LED	9, 10 pin
Power ON Button	12, 13 pin
Reset Button	13, 14 pin

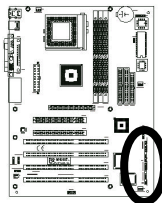
• **Figure:**



◆ **System Panel Indicate Connector (2): J6**

Function	J6
Reset Button	1, 2 pin
Speaker	4, 7 pin
PW LED	9, 11 pin
Key-Lock	12, 13 pin

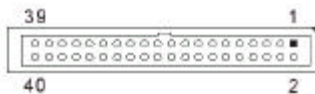
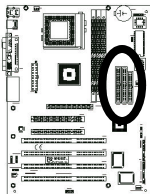
• **Figure:**



◆ **Primary IDE Connector (40-pin 2.54mm Pitch Pin-Header with Housing): IDE1**

Pin #	Assignment	Pin #	Assignment
1	Reset IDE	2	Ground
3	Host Data 7	4	Host Data 8
5	Host Data 6	6	Host Data 9
7	Host Data 5	8	Host Data 10
9	Host Data 4	10	Host Data 11
11	Host Data 3	12	Host Data 12
13	Host Data 2	14	Host Data 13
15	Host Data 1	16	Host Data 14
17	Host Data 0	18	Host Data 15
19	Ground	20	NC
21	DRQ 0	22	Ground
23	Host IOW	24	Ground
25	Host IOR	26	Ground
27	IOCHRDY	28	Host ALE
29	DACK 0	30	Ground
31	IRQ 14	32	No Connect
33	Address 1	34	No Connect
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

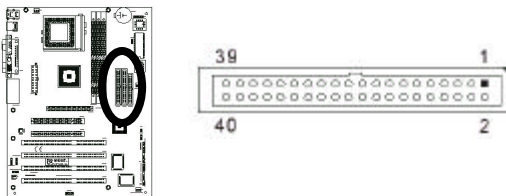
• **Figure:**



◆ **Secondary IDE Connector (40-pin 2.54mm Pitch Pin-Header with Housing): IDE2**

Pin #	Assignment	Pin #	Assignment
1	Reset IDE	2	Ground
3	Host Data 7	4	Host Data 8
5	Host Data 6	6	Host Data 9
7	Host Data 5	8	Host Data 10
9	Host Data 4	10	Host Data 11
11	Host Data 3	12	Host Data 12
13	Host Data 2	14	Host Data 13
15	Host Data 1	16	Host Data 14
17	Host Data 0	18	Host Data 15
19	Ground	20	NC
21	DRQ 0	22	Ground
23	Host IOW	24	Ground
25	Host IOR	26	Ground
27	IOCHRDY	28	Host ALE
29	DACK 0	30	Ground
31	IRQ 14	32	No Connect
33	Address 1	34	No Connect
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

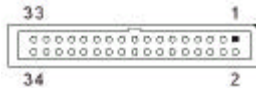
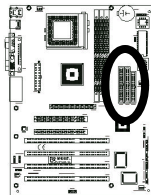
• **Figure:**



◆ Floppy Disk Connector (34-pin 2.54mm Pitch Pin-Header with Housing): FDD1

Pin #	Assignment	Pin #	Assignment
1	Ground	2	Drive Density Selection
3	Ground	4	No Connect
5	Ground	6	Drive Density Selection
7	Ground	8	Index
9	Ground	10	Motor Enable 0
11	Ground	12	Drive Select 1
13	Ground	14	Drive Select 0
15	Ground	16	Motor Enable 1
17	Ground	18	Direction
19	Ground	20	Step
21	Ground	22	Write Data
23	Ground	24	Write Gate
25	Ground	26	Track 00
27	Ground	28	Write Protect
29	Ground	30	Read Data
31	Ground	32	Head Select
33	Ground	34	Diskette Change

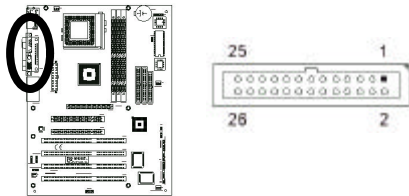
• Figure:



◆ **Parallel Port Connector (26-pin 2.54mm Pitch Pin-Header with Housing): LPT1**

Pin #	Assignment	Pin #	Assignment
1	Line Printer Strobe	2	PD 0, Parallel Data 0
3	PD 1, Parallel Data 1	4	PD 2, Parallel Data 2
5	PD 3, Parallel Data 3	6	PD 4, Parallel Data 4
7	PD 5, Parallel Data 5	8	PD 6, Parallel Data 6
9	PD 7, Parallel Data 7	10	ACK, Acknowledge
11	Busy	12	Paper Empty
13	Select	14	Auto Feed
15	Error	16	Initialize
17	Select	18	Ground
19	Ground	20	Ground
21	Ground	22	Ground
23	Ground	24	Ground
25	Ground	26	N/A

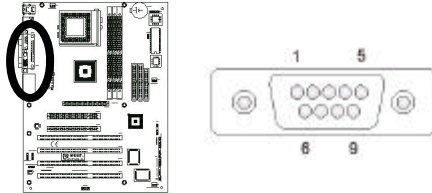
• **Figure:**



◆ **COM1/2 RS-232 Serial Port Connector (D-Sub 9-pin Male): CN1/CN2**

Pin #	Assignment	Pin #	Assignment
1	DCD (Data Carrier Detect)	2	RXD (Receive Data)
3	TXD (Transmit Data)	4	DTR (Data Terminal Ready)
5	Ground	6	DSR (Data Set Ready)
7	RTS (Request to Send)	8	CTS (Clear to Send)
9	RI (Ring Indicator)		

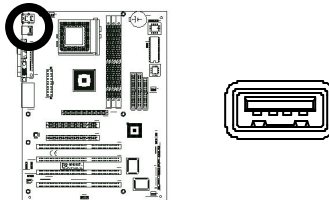
• **Figure:**



◆ **USB1 / USB2 Connector (4-pin Female): USB1**

Pin #	Assignment	Pin #	Assignment
1a	VCC via Ploy-fuse	1b	VCC via Poly-fuse
2a	USBP1	2b	USBP2
3a	USBP1+	3b	USBP2+
4a	Ground	4b	Ground

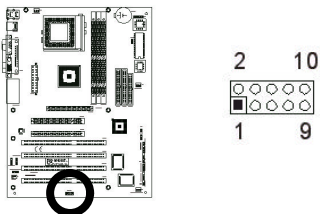
• **Figure:**



◆ **USB3 / USB4 Connector (10-pin Pin-Header): USB2**

Pin #	Assignment	Pin #	Assignment
1	VCC	2	Ground
3	USBP3 0-	4	Ground
5	USBP3 0+	6	USBP4 0+
7	Ground	8	USBP4 0-
9	Ground	10	VCC

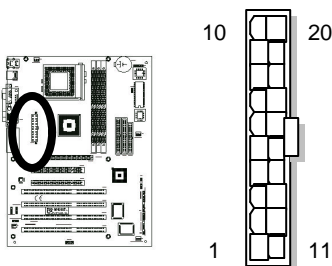
• **Figure:**



◆ **ATX Power Connector: PW1**

Pin #	Assignment	Pin #	Assignment
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS-ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PW-OK	18	-5V
9	5VSB	19	+5V
10	+12v	20	+5V

• **Figure:**

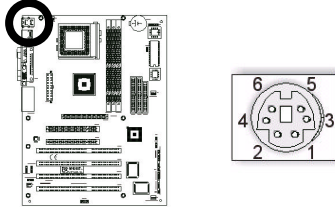




◆ **PS/2 Keyboard Connector (6-pin Mini Din): KB1**

Pin #	Assignment	Pin #	Assignment
1	Keyboard data	2	NC
3	Ground	4	+5V
5	Keyboard clock	6	NC

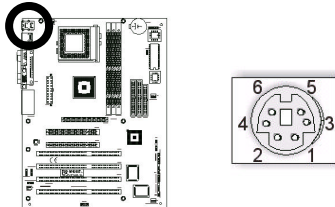
• **Figure:**



◆ **PS/2 Mouse Connector (6-pin Mini Din): PS1**

Pin #	Assignment	Pin #	Assignment
1	Mouse data	2	NC
3	Ground	4	+5V
5	Mouse clock	6	NC

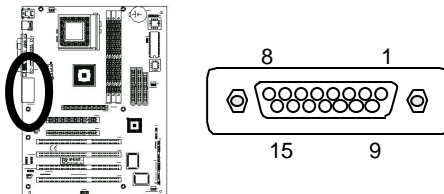
• **Figure:**



◆ **Game Port Connector (D-SUB 15-pin Female): Game1**

Pin #	Assignment	Pin #	Assignment
1	VCC +5V	2	GPXA1
3	GPX1	4	Ground
5	Ground	6	GPY1
7	GPXA2	8	VCC +5V
9	VCC +5V	10	GPXB1
11	GPX2	12	MSO
13	GPY2	14	GPSV2
15	MSI		

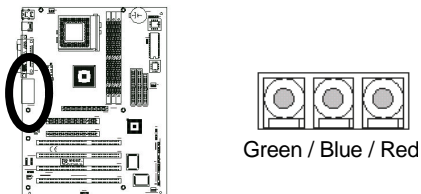
• **Figure:**



◆ **Audio Port Connector: Game1**

Pin #	Assignment	Pin #	Assignment
Green	Line-Out	Blue	Line-In
Red	Mic-In		

• **Figure:**



The graphic consists of three overlapping rectangular boxes, each containing the text 'SECTION 3'. The boxes are arranged in a slightly offset, overlapping manner, with the top-left box being the most prominent.

## SECTION 3

# AWARD BIOS SETUP

## 3.1 BIOS Instructions

Award' s ROM BIOS provides a built-in Setup program, which allows user to modify the basic system configuration and hardware parameters. The modified data will be stored in a battery-backed CMOS, so that data will be retained even when the power is turned off. In general, the information saved in the CMOS RAM will stay unchanged unless there is a configuration change in the system, such as hard drive replacement or a device is added.

It is possible for the CMOS battery to fail, this will cause data loss in the CMOS only. If this does happen you will need to reconfigure your BIOS settings.

### 3.2 Main Menu

Once you enter the AwardBIOS™CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

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Standard CMOS Feature Advanced BIOS Feature Advanced Chipset Feature 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 F6: Save CMOS To BIOS F10: Save & Exit Setup	↑ ↓ ← →: Select Item F7: Load CMOS From BIOS
Time, Date, Hard Disk Type...	

Note: that a brief description of each highlighted selection appears at the bottom of the screen.

#### Setup Items:

The main menu includes the following main setup categories. Recall that some systems may not include all entries.

#### Standard CMOS Features:

Use this menu for basic system configuration. See Section 2 for the details.

#### Advanced BIOS Features:

Use this menu to set the Advanced Features available on your system. See Section 3 for the details.

#### Advanced Chipset Features:

Use this menu to change the values in the chipset registers and optimize your system's performance. See section 4 for the details.

**Integrated Peripherals:**

Use this menu to specify your settings for integrated peripherals. See section 4 for the details.

**Power Management Setup:**

Use this menu to specify your settings for power management. See section 5 for the details.

**PnP / PCI Configuration:**

This entry appears if your system supports PnP / PCI. See section 6 for the details.

**PC Health Status:**

Use this menu to show your system temperature, speed and voltage status.

**Frequency/Voltage Control:**

Use this menu to specify your settings for frequency/voltage control. See section 7 for the details.

**Load Fail-Safe Defaults:**

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate. See section 8 for the details.

**Load Optimized Defaults:**

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While Award has designed the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs. See section 8 for the details.

**Supervisor / User Password:**

Use this menu to set User and Supervisor Passwords. See section 9 for the details.

**Save & Exit Setup:**

Save CMOS value changes to CMOS and exit setup. See section 10 for the details.

**Exit Without Save:**

Abandon all CMOS value changes and exit setup. See section 10 for the details.

### 3.3 Standard CMOS Features

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.

Standard CMOS Features		Item Help
Date:	Mon, May 7 2001	
Time:	16:19:20	
➤ IDE Primary Master	2557 MB	Menu Level ➤
➤ IDE Primary Slave	None	
➤ IDE Secondary Master	None	Change the day, month, year and century
➤ IDE Secondary Slave	None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All Errors	
Based Memory	640K	
Extended Memory	64512K	
Total Memory	65536K	
↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults		

**Date:** Options Month/DD/YYYY

Set the system date. Note that the 'Day' automatically changes when you set the date.

**Time:** Options HH : MM : SS

Set the system time.

**IDE Primary Master:** Options are in its sub menu (described in Table 3)  
Press <Enter> to enter the sub menu of detailed options.

**IDE Primary Slave:** Options are in its sub menu (described in Table 3)  
Press <Enter> to enter the sub menu of detailed options.

**IDE Secondary Master:** Options are in its sub menu (described in Table 3)  
Press <Enter> to enter the sub menu of detailed options.

**IDE Secondary Master:** Options are in its sub menu (described in Table 3)  
Press <Enter> to enter the sub menu of detailed options.

**Drive A/ Drive B:** Options None 360K, 5.25 in/1.2M, 5.25 in/720K, 3.5 in/  
1.44M, 3.5 in/2.88M, 3.5 in  
Select the type of floppy disk drive installed in your system.

**Video:** Options EGA/VGA/CGA 40/CGA 80/MONO  
Select the default video device.

**Halt On:** Options All Errors/No Errors/All, but Keyboard/All, but Diskette/All,  
but Disk/Key  
Select the situation in which you want the BIOS to stop the POST process  
and notify you.

**Base Memory:** Option N/A  
Displays the amount of conventional memory detected during boot up.

**Extended Memory:** Option N/A  
Displays the amount of extended memory detected during boot up

**Total Memory:** Option N/A  
Displays the total memory available in the system

### 3.4 IDE Adapters

The IDE adapters control the hard disk drive. Use a separate sub menu to configure each hard disk drive.

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IDE Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master Access Mode	Auto 2557 MB Auto	Menu Level >> To auto-detect the HDD' s size, head... on this channel
Cylinder	4956	
Head	16	
Precomp	0	
Landing Zone	4955	
Sector	63	
↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults		

**IDE HDD Auto-detection:** Options Press Enter

Press Enter to auto-detect the HDD on this channel. If detection is successful, it fills the remaining fields on this menu.

**IDE Primary Master:** Options None, Auto and Manual

Selecting “Manual” lets you set the remaining fields on this screen. Selects the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc. Note: PRECOMP=65535 means NONE !

**Capacity:** Options Auto Display your disk drive size

Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk-checking program.

**Access Mode:** Options Normal, LBA, Large and Auto

Choose the access mode for this hard disk



The following options are selectable only if the ' IDE Primary Master' item is set to "Manual"

**Cylinder:** Options Min = 0, Max = 65535  
Set the number of cylinders for this hard disk.

**Head:** Options Min = 0, Max = 255  
Set the number of read/write heads

**Precomp:** Options Min = 0, Max = 65535  
\*\*\*\* **Warning:** Setting a value of 65535 means no hard disk

**Landing zone:** Options Min = 0, Max = 65535  
\*\*\*\*

**Sector:** Options Min = 0, Max = 255  
Number of sectors per track

### 3.5 Advanced BIOS Features

This section allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing and security.

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Advanced BIOS Features

Virus Warning	Enabled	<p>Item Help</p> <hr/> <p>Menu Level &gt;</p> <p>Allow 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</p>
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Quick Power On Self Test	Disabled	
First Boot device	Floppy	
Second Boot device	HDD-0	
Third Boot device	Floppy	
Boot other device	Disabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up NumLock Status	Off	
Gate A20 Option	Normal	
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	
Small Logo (EPA) Show	Enable	
<p>↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults</p>		

#### Virus Warning:

Allow 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.

- Enabled---Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
- Disabled---No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

**CPU Internal Cache/External Cache:**

These two categories speed up memory access. However, it depends on CPU/chipset design.

Enabled---Enable cache

Disabled---Disable cache

**CPU L2 Cache ECC Checking:**

This item allows you to enable/disable CPU L2 Cache ECC checking.

The choice: Enabled, Disabled.

**Quick Power On Self Test:**

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

Enabled---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 Choice: Floppy, LS/ZIP, HDD, SCSI, CDROM and Disabled.

**Swap Floppy Drive:**

If the system has two floppy drives, you can swap the logical drive name assignments.

The choice: Enabled, Disabled.

**Boot Up Floppy Seek:**

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

The choice: Enabled, Disabled.

**Boot Up NumLock Status:**

Select power on state for NumLock.

The choice: Enabled, Disabled.

**Gate A20 Option:**

Select if chipset or keyboard controller should control GateA20.

Normal---A pin in the keyboard controller controls GateA20

Fast---Lets chipset control GateA20

**Typematic Rate Setting:**

Keystrokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.

The choice: Enabled, Disabled.

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

Sets the number of times a second to repeat a keystroke when you hold the key down.

The choice: 6, 8, 10, 12, 15, 20, 24 and 30.

**Typematic Delay (Msec):**

Sets the delay time after the key is held down before it begins to repeat the keystroke.

The choice: 250, 500, 750 and 1000.

**Security Option:**

Select whether the password is required every time the system boots or only when you enter 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---The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

Note: To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

**OS Select For DRAM > 64MB:**

Select the operating system that is running with greater than 64MB of RAM on the system.

The choice: Non-OS2, OS2.

**Report No FDD For Win 95:**

Whether report no FDD for Win 95 or not.

The choice: Yes, No.

**Small Logo (EPA) Show:**

Set the Logo (EPA) show or not.

The choice: Enabled, Disabled.

### 3.6 Advanced Chipset Features

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

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#### Advanced Chipset Features

SDRAM CAS Latency Time	<b>3</b>	Item Help
SDRAM Cycle Time Tras/Trc	Auto	
SDRAM RAS-to-CAS Delay	Auto	
SDRAM RAS Precharge Time	Auto	Menu Level >
System BIOS Cacheable	Disabled	
Video BIOS Cacheable	Disabled	
Memory Hole At 15M-16M	Disabled	
CPU Latency Timer	Enabled	
Delayed Transaction	Enabled	
AGP Graphics Aperture Size	64MB	
↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults		

#### SDRAM CAS Latency Time:

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.

The choice: 2, 3

#### SDRAM Cycle Time Tras/Trc:

Select the number of SCLKs for an access cycle.

The choice: 5/7, 7/9 and Auto.

**SDRAM RAS-to-CAS Delay:**

This field let's you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The choice: 2, 3 and Auto.

**SDRAM RAS Precharge Time:**

If an insufficient number of cycles are allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The choice: 2, 3 and Auto.

**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 choice: Enabled, 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 choice: Enabled, 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 choice: Enabled, Disabled.

**CPU Latency Timer:**

When enabled this item, the CPU cycle will only be deferred after it has been held in a “Snoop Stall” for 31 clocks and another ADS# has arrived. When disabled, the CPU cycle will be deferred immediately after the GMCH receives another ADS#.

The choice: Enabled, 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 choice: Enabled, Disabled.

**AGP Graphics Aperture Size:**

This field determines the effective size of the Graphic Aperture used for a particular GMCH configuration. It can be updated by the GMCH-specific BIOS configuration sequence before the PCI standard bus enumeration sequence takes place. If it is not updated then a default value will select an aperture of maximum size.

The choice: 4, 8, 16, 32, 64, 128 and 256



### 3.7 Integrated Peripherals

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#### Integrated Peripherals

		Item Help
On-Chip Primary PCI IDE	Enabled	
On-Chip Secondary PCI IDE	Enabled	
IDE Primary Master PIO	Auto	
IDE Primary Slave PIO	Auto	Menu Level >
IDE Secondary Master PIO	Auto	If your IDE hard drive supports block
IDE Secondary Slave PIO	Auto	mode select Enabled for automatic
IDE Primary Master UDMA	Auto	detection of the optimal number of
IDE Primary Slave UDMA	Auto	block read/write per sector the drive
IDE Secondary Master UDMA	Auto	can support
IDE Secondary Slave UDMA	Auto	
USB Controller	Enabled	
USB Keyboard Support	Disabled	
Init Display First	AGP	
AC97 Audio	Auto	
AC97 Modem	Auto	
IDE HDD Block Mode	Enabled	
Power On Function	Hot Key	
X K/B Power On Password	Enter	
Hot Key Power On	Ctrl-F1	
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
X Rx/D, Tx/D Active	Hi, Lo	
X IR Transmission Delay	Enabled	
X UR2 Duplex Mode	Half	
X Use IR Pins	IR-Rx2Tx2	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	SPP	
X EPP Mode Select	EPP1.7	
X ECP Mode Use DMA	3	
PWRON After PWR-Fail	Off	
Game Port Address	201	
Midi Port Address	330	
Midi Port IRQ	10	
↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults		

**OnChip Primary/Secondary PCI IDE:**

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

The choice: Enabled, 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 choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3 and 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, select “Auto” to enable BIOS support.

The choice: Auto, Disabled.

**USB Controller:**

Select “Enabled” if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

The choice: Enabled, Disabled.

**USB Keyboard Support:**

Select “Enabled” if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

The choice: Enabled, Disabled.

**Init Display First:**

This item allows you to decide to active whether PCI Slot or on-chip VGA first.

The choice: PCI Slot, Onboard.

**AC97 Audio/Modem:**

This item allows you to enable/disable to support AC97 Audio/Modem.

The choice: 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 choice: Enabled, Disabled

**POWER On Function:**

This item allows you the select power on event.

The choice: Password, Hot Key, Mouse Left, Mouse Right, Any Key, Button Only, Keyboard 98.

**KB Power ON Password:**

This item allows you to set the keyboard power on password.

**Hot Key Power On:**

This item allows you to select the hot key of the keyboard power on.

The choice: Ctrl-F1~F12.

**Onboard FDC Controller:**

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

The choice: Enabled, Disabled.

**Onboard Serial Port 1/Port 2:**

Select an address and corresponding interrupt for the first and second serial ports.

The choice: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled and Auto.

**UART Mode Select:**

This item allows you to select UART mode.

The choice: IrDA, ASKIR and Normal.

**RxD, TxD Active:**

This item allows you to determine the active of RxD, TxD.

The Choice: "Hi, Hi", "Lo, Lo", "Lo, Hi" and "Hi, Lo".

**IR Transmission delay:**

This item allows you to enable/disable IR transmission delay.

The choice: Enabled, Disabled.

**UR2 Duplex Mode:**

This item allows you to select the IR half/full duplex function.

The choice: Half, Full.

**Use IR Pins:**

This item allows you to select IR transmission routes, one is RxD2m, TxD2 (COM Port) and the other is IR-Rx2Tx2.

The choice: IR-Rx2Tx2, RxD2 and TxD2.

**Onboard Parallel Port:**

This item allows you to determine access onboard parallel port controller with which I/O address.

The choice: 3BC/IRQ7, 378/IRQ7, 278/IRQ5 and Disabled.

**Parallel Port Mode:**

Select an operating mode for the onboard parallel (printer) port. Select Normal, Compatible, or SPP unless you are certain your hardware and software both support one of the other available modes.

The choice: SPP, EPP, ECP and ECP+EPP.

**EPP Mode Select:**

Select EPP port type 1.7 or 1.9.

The choice: EPP1.7, 1.9.

**ECP Mode Use DMA:**

Select a DMA channel for the parallel port for use during ECP mode.

The choice: 3, 1.

**PWRON After PWR-Fail:**

This item allows you to select if you want to power on the system after power failure.

The choice: Off, On and Former-Sts.

**Game Port Address:**

This item allows you to select the Game Port Address.

The choice: Disabled, 201 and 209.

**Midi Port Address:**

This item allows you to select the Midi Port Address.

The choice: Disabled, 330 and 300

**Midi Port IRQ:**

This item allows you to select the Midi Port IRQ.

The choice: 5, 10.

### 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.

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Power Management Setup

ACPI Function	Enable	Item Help
Power Management	User Define	
Video Off Method	DPMS	
Video Off In Suspend	Yes	Menu Level ➤
Suspend Type	Stop Grant	
MODEM Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant-Off	
Wake-Up by PCI card	Disabled	
Power On By Ring	Enabled	
CPU Thermal-Throttling	50.0%	
Resume by Alarm	Disabled	
X Date (of Month) Alarm	0	
X 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	
↑↓←→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 enable/disable the Advanced Configuration and Power Management (ACPI).

The choice: Enabled, Disabled.

#### Power Management:

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

1. HDD Power Down
2. Doze Mode
3. Suspend Mode

**Min. Power Saving:**

Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.

**Max. Power Saving:**

Maximum power management -- **ONLY AVAILABLE FOR SL CPU' s**  
Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min.,  
and HDD Power Down = 1 min.

**User Defined:**

Allow you to set each mode individually. When not disabled, each of the ranges is 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:**

Initial display power management signaling.

**Video Off In Suspend:**

This determines the manner in which the monitor is blanked.

The choice: Yes, No.

**Suspend Type:**

Select the Suspend Type.

The choice: PWRON Suspend, Stop Grant.

**MODEM Use IRQ:**

This determines the IRQ in which the MODEM can use.

The choice: 3, 4, 5, 7, 9, 10, 11 and NA.

**Suspend Mode:**

When “Enabled” and after the set time of system inactivity. All devices except the CPU will be shut off.

The choice: Enabled, 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 choice: Enabled, Disabled.

**Soft-Off by PWR-BTTN:**

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has “hung.”

The choice: Delay 4 Sec, Instant-Off.

**Wake-Up by PCI Card:**

An input signal from PME on the PCI card awakens the system from a soft off state.

The choice: Enabled, Disabled.

**Power On by Ring:**

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

The choice: Enabled, Disabled.

**CPU Thermal-Throttling:**

Select the CPU THRM-Throttling rate.

The choice: 12.5%, 25.0%, 37.5%, 50.0%, 62.5%, 75.0% and 87.5%.

**Resume by Alarm:**

When “Enabled”, you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

The choice: Enabled, Disabled.



**PM Events:**

PM 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 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.

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#### PnP/PCI Configurations

PNP OS Installed	No	Item Help
Reset Configuration Data	Disabled	
Resources Controlled By	Auto (ESCD)	Menu Level >
X IRQ Resources	Press Enter	
X DMA Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	Default is Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
↑↓←→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:

This item allows you to determine install PnP OS or not.

The choice: Yes, No.

#### Reset Configuration Data:

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

The choice: Enabled, 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<sup>®</sup>95. 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 choice: 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.

**DMA Resources:**

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

**PCI/VGA Palette Snoop:**

Leave this field at "Disabled".

The choice: Enabled, Disabled.

### 3.10 PC Health Status

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PC Health Status

<p>CPU Warning Temperature      Disabled</p> <p>Current System Temp.</p> <p>Current CPU1 Temperature</p> <p>Current CPU2 Temperature</p> <p>Current CPUFAN1 Speed</p> <p>Current CPUFAN2 Speed</p> <p>Current CPUFAN3 Speed</p> <p>CPU0 Vcore</p> <p>CPU1 Vcore</p> <p>Vcc3 (3.3V)</p> <p>+ 5 V</p> <p>+12 V</p> <p>-12 V</p> <p>-5V</p> <p>VBAT (V)</p> <p>5VSB (V)</p> <p>Shutdown temperature      Disabled</p>	<p style="text-align: right;">Item Help</p> <hr/> <p>Menu Level    ➤</p>
<p>↑↓←→Move    Enter: Select    +/-/PU/PD: Value    F10: Save    ESC: Exit    F1: General Help</p> <p>F5: Previous Values    F6: Fail-safe defaults    F7: Optimized Defaults</p>	

**CPU Warning Temperature:**

This item will prevent CPU from overheating.  
The choice: 30-120.

**Current System Temp:**

Show you the current system temperature.

**Current CPU1 Temperature:**

Show you the current CPU1 temperature.

**Current CPUFAN 1/2/3 Speed:**

Show you the current CPUFAN operating speed.

**IN0/1/2 (V):**

Show you the voltage of Vin (0)/(1)/(2).

**+5V/+12V/-12V/-5V:**

Show you the voltage of +5V/+12V/-12V/-5V.

**Shutdown Temperature:**

This item allows you to set up the CPU shutdown Temperature. This item is only effective under Windows<sup>®</sup> 98 ACPI mode.

The choice: Disabled, 60°C / 140°F, 65°C / 149°F, 70°C / 159°F and 75°C / 167°F.

### 3.11 Frequency/Voltage Control

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#### Frequency/Voltage Control

System Memory Frequency	Auto	Item Help
Auto Detect DIMM/PCI CLK	Enabled	
CPU Host/PCI Clock	133/33MHz	
CPU Clock Ratio	X 3	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		

#### **System Memory Frequency:**

You can use this item to select the operating frequency for the main system memory.

The choice: Auto, 100MHz and 133MHz.

#### **Auto Detect DIMM/PCI CLK:**

When “Enabled”, this item will auto detect if the DIMM and PCI socket have devices and will send clock signal to DIMM and PCI devices. When disabled, it will send the clock signal to all DIMM and PCI socket.

The choice: Enabled, Disabled.

#### **CPU Host/PCI Clock:**

This item allows you to select CPU Host/PCI Clock.

The choice: 66 ~ 166 MHz.

#### **CPU Clock Ratio:**

This item allows you to set up the CPU clock ratio, but this function depends on different CPU performance. It is only effective for those clock ratio haven't been locked.

The choice: X3.0 ~ X8.0.

### 3.12 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.

### 3.13 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.



### 3.14 Supervisor/User Password Setting

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

**Set Supervisor Password:** can enter and change the options of the setup menus.

**Set User Password:** just 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 (see Section 3). 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.

### 3.15 Exit Selecting

#### Save & Exit Setup

Pressing <Enter> on this item asks for confirmation:

**Save to CMOS and EXIT (Y/N)?**  Y

Pressing “Y” stores the selections made in the menus in CMOS – a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

#### Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

**Quit without saving (Y/N)?**  Y

This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.

## SECTION 4

### DRIVER UTILITY INSTALLATION

#### 4.1 M815A Driver Installation

##### ◆ Easy Driver Installation:

Step 1: To put the utilities into the CD-ROM, then it will auto run and show the figure below:



Step 2: Select and click the **M815A** model.

Step 3: Click the **Chipset Driver Installation**.



Step 4: To click that enables the **Intel® 815EP Chipset** to be recognized by listed operating systems. This installer will unpack updated **.INF** files into a specified folder. Supported operating systems:

## Driver Utility Installation

Microsoft Windows® 95 OSR 2.1+, Windows® 98 / 98SE / 98ME and Windows® NT2000 operating systems. This procedure will Re-start the system.



Step 5: Click the **INTEL® Ultra Storage Driver** to install the IDE Driver.

Step 6: Click the **AD1881 / AD1881A Driver** to install the Audio Sound Driver in operating system.

Note: If user cannot install CD-Driver, that user may copy file of driver to Hard Disk, then click the “ Setup ” file to install.

Step 7: Click the **Main menu** icon to return main menu.

Step 8: To click the **Additional Software** into the **NORTON GHOST ANTIVIRUS** or **PC-CILLIN 2000** and follow the setup to finish the installation. Please do make sure to update the virus definition code regularly to protect your system from virus damage.

