



MORE THAN JUST A MAINBOARD

The **AZZA** U815EPC Mainboard

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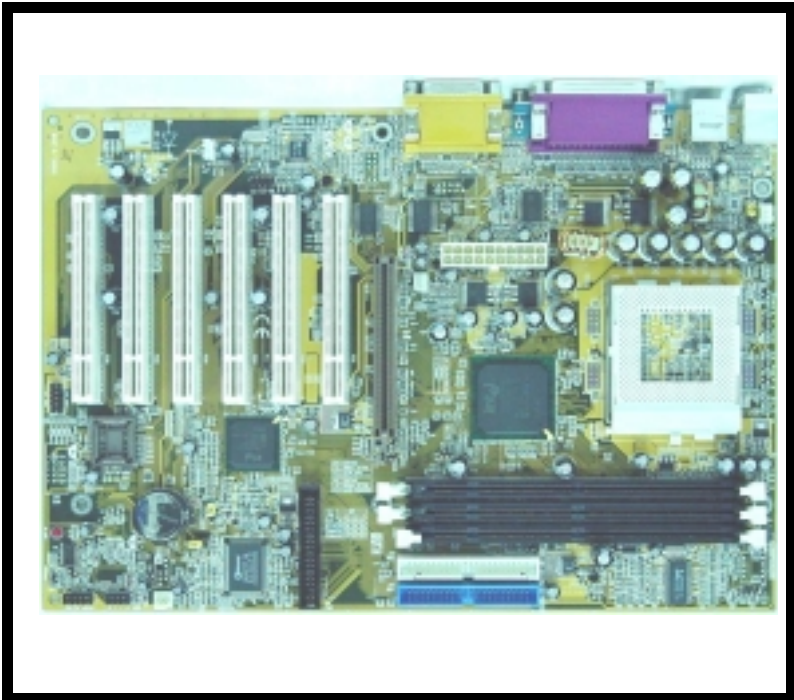


*Create High Quality
Service and Technology*



U815EPC User Manual

Socket 370 SDR ATX Mainboard



Version 1.x
UM-U815EPC-E1
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Package Checklist

This package contains the following items:

- Mainboard
- Users manual
- One IDE cable
- One 34-pin floppy disk drive cable
- One Driver Utility CD

If any of these items are damaged or missing, please contact your dealer or sales representative for assistance.

Technical Support

If you require additional information or assistance during installation please contact your dealer. Your dealer will be able to provide the latest information.



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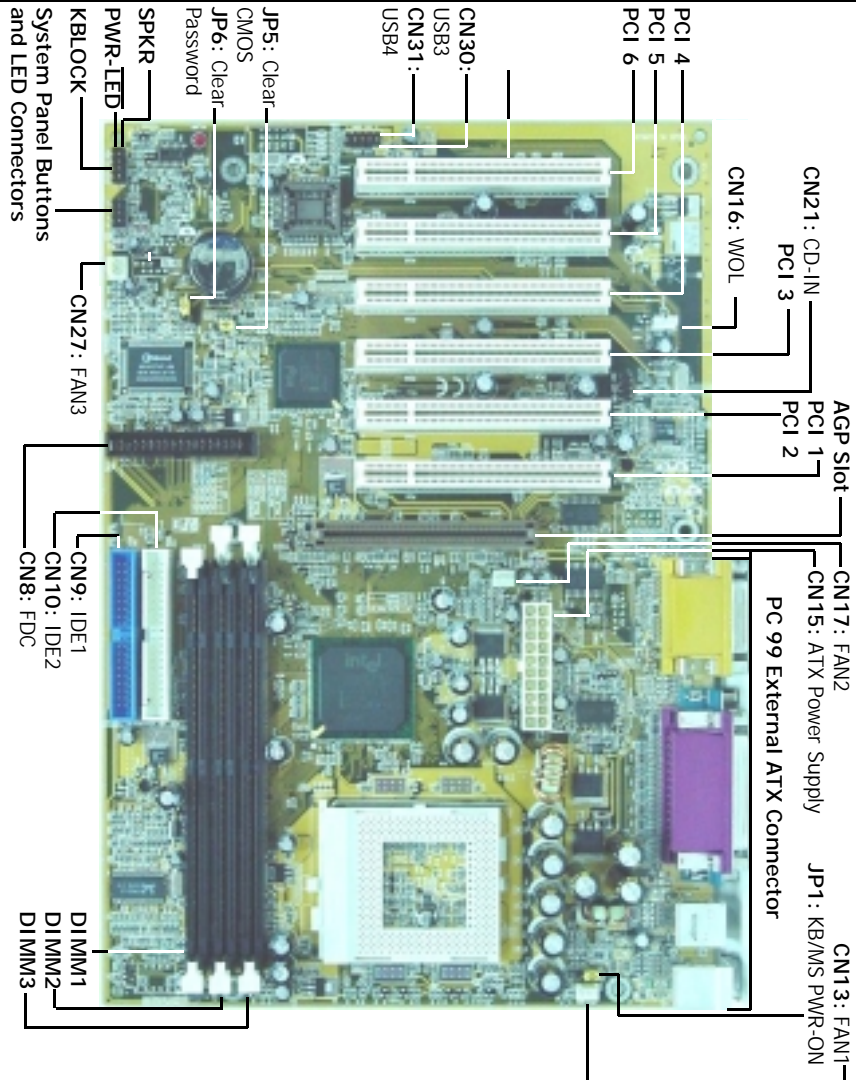
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Chapter 1 - Introduction

1.1. Mainboard And PC99 ATX External Connector Layout

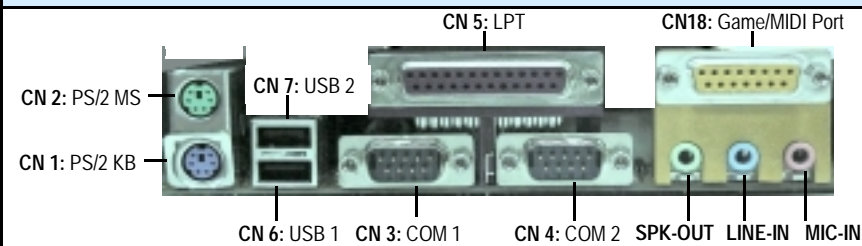




Introduction



PC 99 ATX External Connector



1.2. Overview

1.2.1. The U815EPC Mainboard

The **U815EPC** mainboard is a reliable and stable platform for Socket 370 Intel® Pentium III and Intel® Celeron processors and supports a maximum memory of 512MB.

1.2.2. Mainboard Dimensions

Width	305 mm
Length	210 mm

1.2.3. Environmental Limitations

Operating Temperature:	10°C to 40°C (50°F to 104°F)
Required Airflow:	50 linear feet per minute across the CPU
Storage Temperature:	-40°C to 70°C (-40°F to 158°F)
Humidity:	0 to 90% non-condensing
Altitude:	0 to 10 000 feet

1.3. Features and Specifications

Processor

Socket 370 Intel® Pentium™ III/Tualatin™ (0.18μ or 0.13μ)
Socket 370 Intel® Celeron™ (0.18μ or 0.13μ)

Chipset

Northbridge:	Intel® FW82815EP
Southbridge:	Intel® FW82801BA (ICH2)



Introduction



I/O Chipset

Winbond W83697HF

CPU Switching Voltage regulator

This mainboard is equipped with a switching voltage regulator that automatically detects a DC power supply from +1.6V to +1.7V.

System Memory

The **U815EPC** mainboard series uses Single Data Rate Dual Inline Memory Modules (SDR DIMM). Each mainboard has three 168-pin DIMM sockets. These sockets support 3.3V (power level) single-sided or double sided PC-100 or PC-133 SDR DIMM modules. The maximum memory supported by these mainboards is 512MB.

Expansion Slots

The **U815EPC** mainboard is equipped with six dedicated PCI slots and one 2x/4x AGP slot.

Onboard Audio Features

Supports Microsoft DirectSound/ DirectSound 3D and AC97 Full Duplex.

Word Size

- Data Path: 8-bit, 16-bit, 32-bit, 64-bit
- Address Path: 32-bit

Front Side Bus Frequency (FSB)

The **U815EPC** is able to support three different FSB: 66MHz, 100MHz or 133MHz

BIOS

- Award BIOS, Windows 95/98 Plug and Play (PnP) compatible.
- Supports SCSI sequential boot-up.
- Flash EPROM for easy BIOS upgrades.
- Supports DMI 2.0 function



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Desktop Management Interface (DMI)

The mainboard comes with DMI 2.0 built into the BIOS. The DMI utility in the BIOS will automatically record different information about your system configuration and store this information in the DMI pool, which is a part of the system board's Plug and Play BIOS. DMI, along with the appropriately networked software, is designed for easy inventory, maintenance and the simplified troubleshooting of computer systems.

WOL (Wake-On-LAN) Port

One WOL connector supports Wake-On-LAN functionality.

USB Ports

USB allows data exchange between your computer and a wide range of simultaneously accessible external Plug and Play peripherals. The **U815EPC** mainboard is equipped with 4 USB connectors. USB 1 and USB 2 are external connectors. They can be found on the PC 99 ATX connector. The other USB connectors are internal connectors and can be used to connect other USB devices. (Cables for the internal connectors are sold separately).

Please note that the USB3 and USB4 connectors are non-standard. When you purchase the cable please ensure that the connector on one side of the cable is compatible with the internal USB connector and the connector on the other side of the cable is a standard USB connector.

Connectors

- Two IDE connectors.
- One floppy drive interface supports up to two 2.88MB floppy drives.
- One 20-pin ATX power supply connector.
- CPU and two chassis fan connectors.
- One CD audio-in connector.
- One WOL connector.

ATX Double Deck Ports (PC 99 color-coded connectors)

- Two USB ports.
- Two external DB-9 serial port connector: **COM 1** and **COM 2** (UART).



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- One SPP/ECP/EPP DB-25 parallel port.
- One mini-DIN-6 PS/2 mouse port.
- One mini-DIN-6 PS/2 keyboard port.
- One game/MIDI port.
- Three audio jacks: speak-out, line-in and mic-in.

PCI Bus Master IDE Controller

- Two PCI IDE interfaces support up to four IDE devices.
- The **U815EPC** mainboard supports ATA/33, ATA/66 and ATA/100 hard drives.
- PIO Mode 3 and Mode 4 Enhanced IDE (data transfer rate up to 16.6MB/sec)
- Bus mastering reduces CPU utilization during disk transfer.
- Supports ATAPI CD-ROM, LS-120 and ZIP

1.4. System Health Monitor Functions

The mainboard is capable of monitoring the following health conditions of your system:

1. Processor temperature. It has an overheat alarm.
2. VCORE/3.3V/5V/12V/-12V voltages and failure alarm.
3. Processor and chassis fan speeds. It has a failure alarm for these fans.
4. Read back capability that displays temperature, voltage and fan speed.

Note: Only use this utility in Windows ® 95 or Windows ® 98 operating systems.

1.4.1. Hardware Monitoring System Utility

The mainboard comes with the Hardware Monitoring System utility contained on the CD. It is capable of monitoring the system's hardware conditions such as the temperature of the processor, voltage, and the speed of both the CPU and chassis fans. You are allowed to manually set a range to the items being monitored. If the values are over or under the set range a warning message will automatically pop up. We recommend that you use the Default Settings, which are the ideal settings that will maintain the system in a good working condition.



Introduction



1.4.2. Installation

To install this utility, please insert the CD into the CD-ROM drive. The auto run screen (Driver Utility) will automatically appear. Click the Hardware Monitoring button, choose the chipset, model number and the OS that is installed. Please refer to the CD "Readme" file for further installation instructions.

1.5. System Intelligence

Dual Function Power Button

Depending on the setting in the Soft-Off By Power-Button field of the Power Management Setup, this switch allows the system to enter the Soft-Off or Suspend mode.

RTC Timer to Power-on the System

The RTC installed on the system board allows your system to automatically power-on at a set date and time.

Wake-On-LAN Ready

The Wake-On-LAN function allows the network to remotely wake up a Soft Power Down (Soft-Off) PC. Your LAN card must support the remote wakeup function. The 5V SB power source of your power supply must be at least 720mA.

ACPI Ready

The mainboard is designed to meet the ACPI (Advanced Configuration and Power Interface) specification. ACPI has energy saving features that support OS Direct Power Management (OSPM) for round the clock PC operation.



Chapter 2 - Hardware Installation

2.1. Installation Checklist

The following is a checklist of all the expansion slots, jumpers and connectors that should be configured on your mainboard before you can run your pc.

Installation Checklist		
Expansion Slots and Sockets		
CPU Socket	Socket 370 Intel® Pentium III and Celeron processors	
DIMM Slots	Three 168 pin slots that supports up to 512MB of SDR SDRAM .	
PCI Slots	Six 32 bit PCI Slots.	
AGP Slot	One Accelerated Graphics Port Slot	
Internal Connectors		
CN8	Floppy Disk Drive	FDC
CN9	Primary IDE	IDE1
CN10	Secondary IDE	IDE2
CN13	CPU Fan	FAN1
CN15	ATX Power Supply	ATX
CN16	Wake On Lan	WOL
CN17	Chassis Fan 1	FAN2
CN21	CD Audio In	CD-In
CN27	Chassis Fan 2	FAN3
CN30	Universal Serial Bus 3	USB3
CN31	Universal Serial Bus 4	USB4
External Connectors		
CN1	PS/2 Keyboard Connector	PS/2 KB
CN2	PS/2 Mouse Connector	PS/2 MS
CN3	Serial Port 1	COM1
CN4	Serial Port 2	COM2
CN5	Parallel Port	LPT
CN6	Universal Serial Port 1	USB1
CN7	Universal Serial Port 2	USB2
CN18	Game/Audio Port	Audio/Game



Installation Checklist (Continued)

System Panel Buttons and LED Connectors

PW	Power On/Off and Suspend Switch Connector.
SL	Standby LED Connector
HL	HDD LED Connector
RS	Reset Button Connector

Speaker and Power LED Connector

PWR-LED	Power LED
KBLOCK	Keyboard Lock
SPK	Speaker Connector

Jumpers and Switches

JP1	KB/MS Power-ON
JP5	Clear CMOS
JP6	Clear Password

A Diagram of the Expansion Slots, Jumpers and Connectors can be seen on the following page

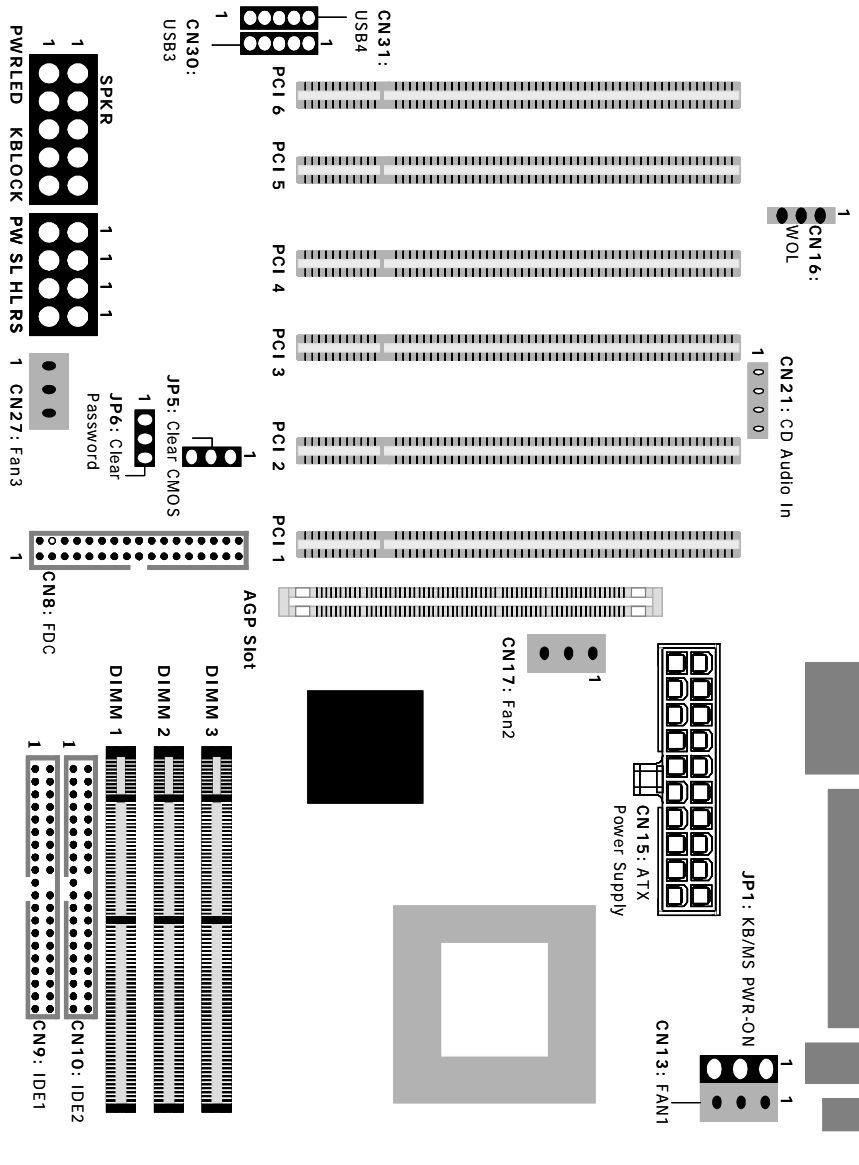
2.2. Installation Steps

You need to complete the following installation steps before you can use your PC.

- Check and Set the Mainboard Settings.
- Install the Central Processing Unit (CPU).
- Install the Memory Modules.
- Install the Expansion Cards.
- Connect the Ribbon Cables, Panel Wires and the Power Supply.
- Setup the system BIOS

Before you start installing your mainboard we strongly recommend that you use a grounded anti-static mat. We further recommend that you attach an anti-static wristband, which is grounded at the same location as the mat, to your wrist.

2.3. Expansion Slots, Jumpers and Internal Connectors





2.4. CPU, Memory and Expansion Slots

2.4.1. Installation of the CPU

To install your processor, please complete the following set of instructions:

1. Locate a small dot marked on the top of the CPU. This mark indicates Pin 1 of the CPU.
2. Locate Pin 1 for the Socket on the mainboard.
3. There is a lever on the side of the socket. First push this lever sideways and then lift it to a 90-degree angle.
4. Insert the CPU into the Socket. Please make sure that Pin 1 for the CPU is inserted into Pin 1 of the Socket.
5. When the CPU is installed correctly push the lever back into place.
6. **Install a proper heat sink with cooling fan** for proper heat dissipation. Failing to install a heat sink with cooling fan may cause overheating which will burnout your CPU and damage your mainboard.

IMPORTANT: CPU COOLING FAN

Please ensure that you have an approved heat sink with cooling fan. Without a proper heat sink with cooling fan you will damage the mainboard and the CPU.

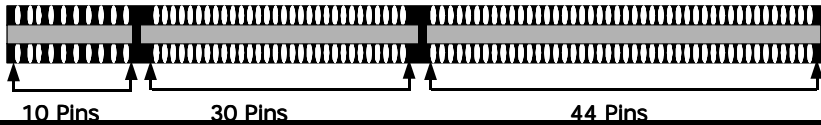
2.4.2. Memory Modules

These mainboards all have three 168-pin SDR DIMM slots that are able to support **3.3 volt** un-buffered Synchronous Random Access Memory (SDRAM) of 64MB, 128MB or 256MB. They are able to support single-side or double-side SDRAM DIMM modules. The maximum memory that is supported is 512MB.

The SDR DIMM slots are located on the right hand side of the board. To install the DIMM's into these slots, make sure the white lever at each side of the slot has been pulled down to an angle of approximately 45°. Make sure that the DIMM is in the correct orientation. Place the DIMM on the slot and push down firmly. The white levers will come back up and lock the module in place.

Note: The Intel Chipset that is used on this mainboard supports both PC-100 and PC-133 DIMM modules. The memory access time maybe selected using the **CMOS Setup Utility**. See the **System Memory Frequency** (page 33) in the **Advanced Chipset Features** Menu (page 32) for the available options.

Top View of a 168-pin DIMM Slot



NOTE: "Out Of Memory" Error Message

If you have installed more than 512 MB of RAM and are running Microsoft Windows Millennium Edition, Windows 98 Second Edition, Windows 98 or Windows 95 you may experience memory problems. Two symptoms of these problems are being unable to run an MS-DOS session while you are running Windows or the computer may stop responding while Windows is starting.

There are three possible solutions to this problem:

- 1) Reduce the amount of memory Vcache uses to 512 MB or less by altering the Max-FileCache setting in the System.ini file.
- 2) Use the System Configuration Utility to reduce the amount of memory Windows uses to 512 MB or less.
- 3) Reduce the memory installed on your computer to 512 MB or less.

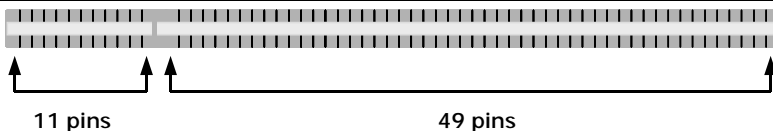
This problem can also occur if an Advanced Graphic Port (AGP) video adapter is used.

2.4.3. PCI Slots

This mainboard comes with six PCI slots. They are located on the left hand side of the board. Both PCI and PCI expansion cards may require IRQ's. This mainboard complies with Plug and Play (PnP) specifications. Whenever a PnP compliant card is added the system will automatically be configured and the IRQ's will be assigned automatically.

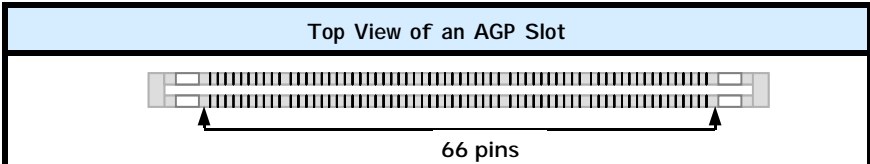
When you are inserting your PCI card make sure that the pins are correctly aligned. When the pins are properly aligned with the hole's in the slot, push down gently.

Top View of a 32 bit PCI Slot



2.4.4. AGP (Accelerated Graphics Port) Slot

AGP is a dedicated bus slot. It operates at 66 MHz and transfers data at a rate up to 106 MB/s. This allows 3D applications to run more smoothly. The U815EPC mainboards each come with one AGP slot. These slots are able to support 2x and 4x AGP cards.

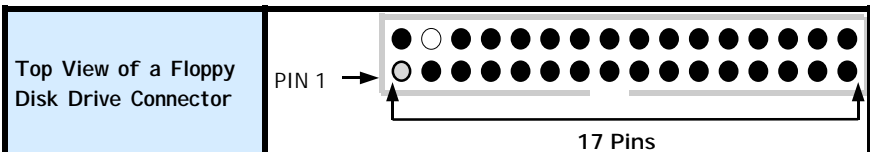


2.5. Internal Connectors

2.5.1. Floppy Disk Controller (FDC)

Connector: CN 8
Type: 34 pin block

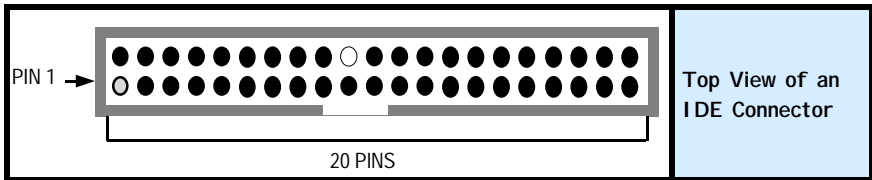
The FDC connector can support two Floppy drives. It is located at the front of the mainboard. To connect, use the ribbon-cable that has been provided. **Make sure** that the red strip is connected to **PIN 1** of the connector.



2.5.2. Primary and Secondary IDE connectors

Connector: CN 9 (primary)/ CN 10 (secondary)
Type: 40 pin blocks

The **U815EPC** mainboard has two IDE connectors: a primary and secondary. Each IDE connector can support two IDE drives. This mainboard can therefore support up to four IDE devices. If you install two hard drives, you need to configure the second drive to **slave** mode in the BIOS setup. Please refer to your hard drive manual for the appropriate jumper settings.

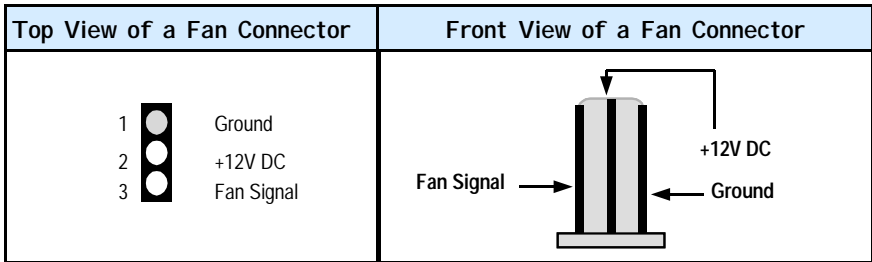


Top View of an IDE Connector

2.5.3. CPU Fan and Chassis Fan Connector

Connector: CN 13 (FAN1)/CN 17 (FAN2)/CN27 (FAN3)
Type: 3 pin

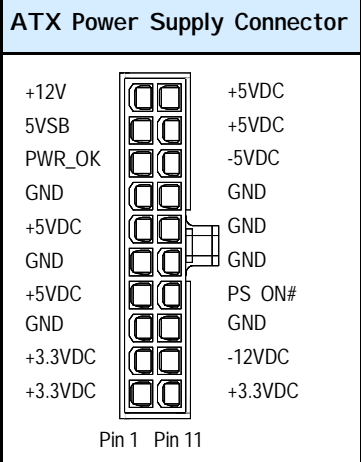
The cooling fans must be connected to their respective power connectors. If you have installed the hardware-monitoring feature you will be able to monitor the rotating speed of the CPU cooling fan in your Windows operating system.



2.5.4. ATX Power Supply Connector

Connector: CN 15
Type: 20 pin block

This must be connected to an ATX power supply. The plug from the power supply can only be inserted in one orientation. Make sure the pins are correctly aligned. Find the correct orientation and push the plug down firmly.

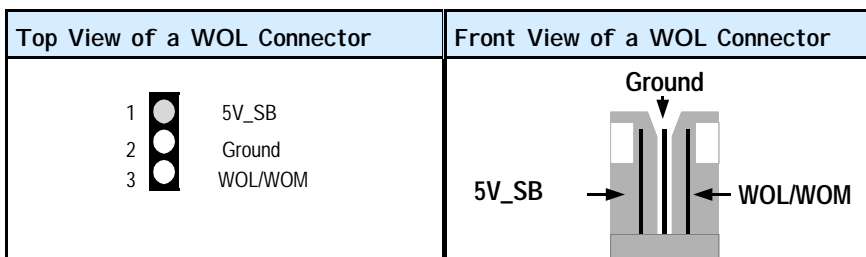


2.5.5. WOL (Wake On LAN) Connector

Connector: CN 16 (WOL)
Type: 3 pin

The WOL connector must be connected to a LAN card that has Wake-On-LAN (WOL) output. This connector powers up the system when a wakeup packet or signal is received through the LAN card.

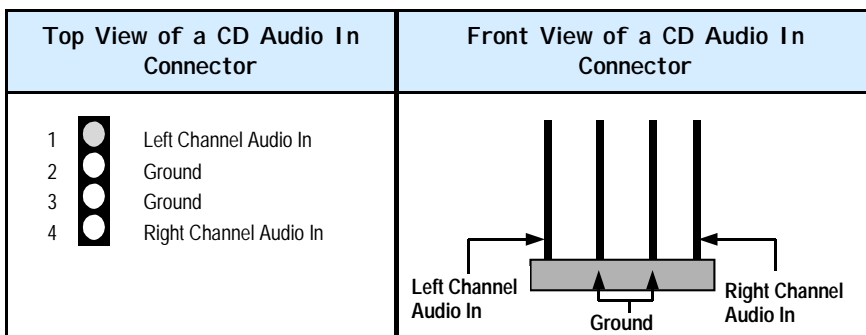
In order to use the WOL LAN card to trigger the power on the PC system, the switching power supply must have the ability to provide a driving current of at least 720 mA and be connected to a "5V standby" voltage.



2.5.6. CD Audio-in Connector

Connector: CN 21
Type: 4 pin un-housed

This mainboard has one CD Audio-in connector. This connector is used to connect the CD ROM audio out.

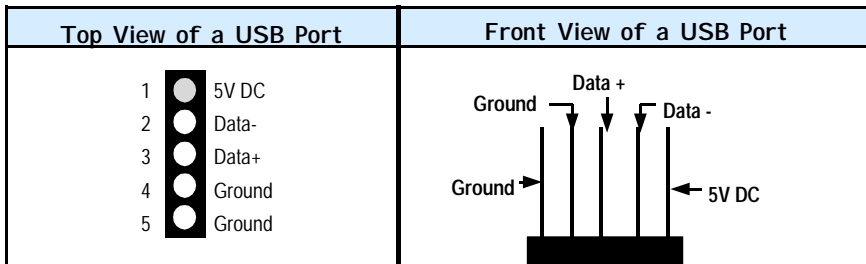


2.5.7. USB 3 and USB 4

Connector: CN 30 (USB 3)/CN 31 (USB 4)
Type: 5 pin / 5 pin

You already have two USB ports available, USB 1 and 2 (see external connectors). The internal USB connectors allow you to add on an optional kit to expand the total number of USB ports available. The **U815EPC** mainboard has two internal USB connectors. This enables you to use an extra 2 USB devices. Cable for these additional connectors needs to be purchased separately.

Note: These are not the standard USB connectors you find on the ATX PC99 connector. To connect USB devices you need to use an expansion cable (purchased separately) that ends in a standard USB connector. Ask your retailer for more details.



2.6. System Panel Buttons and LED Connectors

The following System Panel Buttons and LED Connectors can be found at the front of the mainboard on the left hand side.

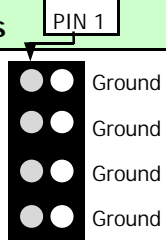
- PW**= Power On/Off and Suspend Switch Connector
- SL** = Standby LED Connector
- HL** = HDD LED Connector
- RS** = Reset Button Connector

PW: +5V DC Pull Up

SL: Standby DC pull up

HL: +5V DC Pull Up

RS: Reset Control



Top View of the System Panel and LED Connectors



2.6.1 PW: Power On / Off and External Suspend Switch Connector

The Power On/Off connector has two functions. It can be the Power Switch or Suspend Switch of your PC system. You can either choose "**Delay 4 Sec**" or "**Instant OFF**" (Please refer to the Award BIOS setup instructions in Chapter 3).

Option 1: If you choose "**Delay 4 Sec.**" In the BIOS CMOS Setup, the function of "PW" will be:

- A. When the system power is "OFF", press this switch, the system will power on.
- B. When system power is "ON", you can select two different modes: -

Mode 1: Press and hold the Power ON button for less than 4 seconds and then release it. The system will be turned into Suspend mode (turned into the GREEN mode) When the system is in the Suspend mode: -

- Press the Power on button (less than 4 seconds), the system will re turn to Full-ON mode.
- Press and hold the Power On Button for more than 4 seconds, the system will be powered off.

Mode 2: Press and hold the Power ON button for more than 4 seconds, the system will be completely powered off.

Option 2: If you choose "**Instant OFF.**" In the BIOS CMOS Setup, the power switch will operate like a normal ON / OFF Power button.

2.6.2. SL LED Connector

When the AC power is "ON" the mainboard will always have a standby voltage of +5V and the SL LED will be on. If this LED is off it means that the AC power is "OFF" or has been disconnected or Full on.

2.6.3. IDE HDD LED Connector

Any read and write activity by the HDD will turn this LED on.

2.6.4. Reset Button Connector

If you connect this connector, you will be able to reset you computer by pressing the reset button at the front of the chassis.

2.7. Speaker and Power LED Connectors

2.7.1. Speaker Connector

Connect your chassis speaker to this four pin connector. It allows you to hear systems beeps and warnings sound.

2.7.2. Front Panel Power LED

The chassis Power LED connector can be connected to the four pin connector. When you turn your system on, this LED will also be turned on.

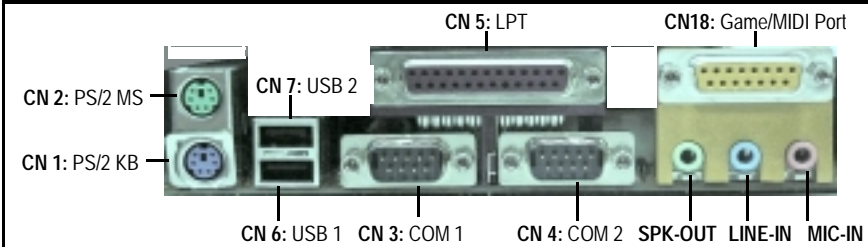
2.7.3. Key-Lock Connector

If your chassis has a Key-Lock connector then it must be attached to Pin 4 and Pin 5.

Top View of the Speaker, Power LED and Key Lock Connector

P W R L E D	Pin1 +5V DC			Pin1 +5V DC	S P E A K E R
	Ground			No Con- nector	
	Ground			No Con- nector	
K B L O C K	K/B Sig- nal			Speaker Signal	
	Ground			No Con- nector	

2.8. External Connectors



2.8.1. PS/2 Keyboard connector.

Connector: CN 1
Type: 6 pin female

This connector only supports a PS/2 keyboard plug. If you have a standard AT size (large DIN) keyboard plug, you need to use a mini DIN adapter.



2.8.2. PS/2 Mouse connector.

Connector: CN 2
Type: 6 pin female.

This connector only supports a PS/2 mouse plug. If a PS/2 mouse is detected then IRQ 12 will be directed to CN 2.

2.8.3. Serial Port 1 (COM 1) and Serial Port 2 (COM 2)

Connector: CN 3 (COM 1)/ CN 4 (COM 2)
Type: 9 pin male/9 pin male

One serial port is available for a mouse and other serial devices. (I/O addresses used are 3F8H/2F8H/3E8H/2E8H and IRQ3/IRQ4, selected by CMOS setup.)

2.8.4. Parallel Port Connector

Connector: CN 5
Type: 25 pin female.

This parallel port is used by printers which support the SPP, EPP and ECP modes IRQ7 or IRQ5 can be selected. The ECP mode will use either DMA 3 or DMA 1 (which can be selected by the BIOS setup program).

2.8.5. Universal Serial Bus (USB) Port 1 & 2

Connector: CN 6 (USB 1)/ CN 7 (USB 2)
Type: 4 pin female

Two USB ports are available for connecting USB devices. The mainboard is also equipped with an expansion connector that supports two additional USB external connectors. (The USB cable is not included with the mainboard).

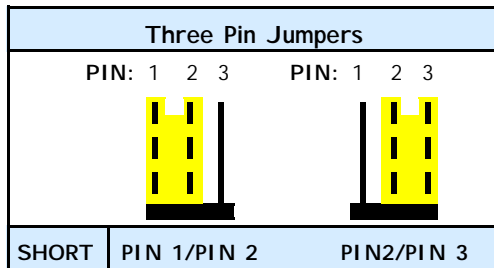
2.8.6. Audio/Game Port Connector

Connector: CN 18
Type: 15 pin female

The Game/MIDI port connector is a dual purpose connector. It can either be used to connect a joystick to the computer for game participation, or it can be used to attach an external MIDI device. All these motherboards have 3D audio interfaces onboard.

2.9. Jumper Settings

Jumpers are built on the mainboard to allow the user flexibility to configure the mainboard settings to meet their specific requirements. The U815EPC mainboard comes with three 3-pin jumpers. When there is no jumper cap inserted onto the jumper it is called “OPEN.” When a cap is inserted into the jumper it is known as a “SHORT.” Below is an example of a short setting on a jumper. (See the diagram on the next page, page 23).



2.9.1. JP1: Keyboard/Mouse Power On

Type: 3 pin
Default: Pin 1 and Pin 2 Short

This jumper allows you to Power On your system using your mouse or keyboard. If you short Pin 1 and Pin 2 then the “**Keyboard/Mouse Power On**” function will be disabled. If Pin 2 and Pin 3 are short then the “**Keyboard/Mouse Power On**” function will be enabled. If you choose to enable this option then you need to enable the **POWER ON** field in the **Integrated Peripherals** Menu (Section 3.6, pg 34) of the BIOS setup.

2.9.2. JP5: Clear CMOS Memory

Type: 3 pin
Default: Pin 1 and Pin 2 Short

If you have made an improper setting in the BIOS setup and your computer is not functioning, or if you have forgotten your password, you can use this jumper, JP5, to clear the CMOS memory and to re-configure your system.



To clear the CMOS, please follow these instructions:

1. Turn the system power "OFF" and unplug your computer.
2. Insert the jumper cap on Pin 2 and Pin 3 for 3 ~ 5 seconds.
3. Pull out the jumper cap and replace it on Pin 1 and Pin 2.
5. Turn your PC on and run the BIOS setup program

2.9.3. JP6: Clear Password

Type: 3 pin
Default: 1 and 2 short

If you forget your keyboard power-on password you can use JP6 to clear it from the I/O chip (where it is stored). To do this you must:

- a) Turn off your PC
- b) Short Pin 2 and Pin 3 on JP6 for 3-5 seconds.
- c) Put the Jumper back on 1 and 2
- d) Power on the PC and run the BIOS setup program.



Chapter 3 - Managing the PC BIOS

3.1. Award BIOS CMOS Setup Utility

Once you have installed the mainboard you still need to setup the BIOS before you can run your PC. The EEPROM on the mainboard stores the AWARD BIOS CMOS Setup Utility, which allows you to configure your system. When you want to configure or make any changes to the configuration of your system BIOS you must run the BIOS CMOS Setup Utility.

GETTING STARTED

Every time you start your computer, the system provides you with an opportunity to run the BIOS CMOS Setup Utility. As soon as you turn the system on press the <Delete> button to activate the BIOS CMOS Setup Utility. When you do this the BIOS **Main Menu** will appear.

If your computer finishes the POST (Power-On-Self-Test) the BIOS CMOS Setup Utility will **not be** activated. If your computer completes the POST you need to restart the system to activate the BIOS CMOS Setup Utility. To restart the system, you can either turn the power off, press the reset button on your chassis or press the <Ctrl> + <Alt> + <Delete> button. In all three cases the system will restart and, to activate the BIOS CMOS Setup Utility, you must immediately press the <Delete> button. When you do this the BIOS **Main Menu** will appear.

3.2. Main Menu (click on the field you wish to view)

CMOS Setup Utility – Copyright (C) 1984 - 2001 Award Software

- | | |
|--|--|
| <ul style="list-style-type: none"> ▶ Standard CMOS Features ▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Integrated Peripherals ▶ Power Management Setup ▶ PNP/PCI Configuration ▶ PC Health Status | <ul style="list-style-type: none"> ▶ Frequency/Voltage Control Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving |
|--|--|

Esc : Quit

F10 : Save and Exit Setup

← ↑ ↓ → : Select Item

Time, Date, Hard Disk Type ...



Managing The PC BIOS



Note! BIOS software is continuously updated therefore the BIOS menus and the descriptions that are given in this manual are for reference purposes only.

Navigation Keys

You will notice a legend bar at the bottom of the main menu. The keys in this legend bar show you how to navigate through the setup menus. The table below lists the control keys with their corresponding functions: -

Control Key	Function
Up Arrow	Moves to the previous item.
Down Arrow	Moves to the next item.
Left Arrow	Moves to the item on the left.
Right Arrow	Moves to the item on the right.
Enter	Selects the desired item.
F1	Displays the help screen for the selected feature.
Esc key	Exits to the previous screen.
PgUp(-)/PgDn(+)	Modifies or changes the content of the highlighted item.
F5	Restores the previous CMOS values to the current page setup. This will not restore the previous values for any other pages.
F7	Loads the SETUP default values from BIOS default table, (only the current page setup will be loaded).
F10	Saves changes to the CMOS and exits the setup.

3.3. Standard CMOS Setup (*This menu is on page 27: [CLICK HERE](#)*)

Date (mm : dd : yy)

Sets your system to the date that you specify (usually the current date). The format is month, day, and year. Press the right or left arrow key to move to the desired field (month, date, year). Press the PgUp or PgDn key to increment the setting, or type the desired value into the field.

Time (hh : mm : ss)

Sets your system to the time you specify (usually the current time). The format is hour, minute, second. The time format is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Press the right or left arrow key to move to the desired field. Press the PgUp or PgDn key to increment the setting, or type the desired value into the field.



Managing The PC BIOS



CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software Standard CMOS Features		
Date (mm : dd : yy)	Thu, Nov 8, 2001	Item Help
Time (hh : mm : ss)	10 : 45 : 32	Menu Level ▶
▶ IDE Primary Master	[Maxtor 52049H4]	
▶ IDE Primary Slave	[None]	Change the day, month, year and century
▶ IDE Secondary Master	[None]	
▶ IDE Secondary Slave	[None]	
Drive A	[1.44, 3.5 in]	
Drive B	[None]	
Video	[EGA/VGA]	
Halt On	[All Errors]	
Base Memory	[640K]	
Extended Memory	[130048K]	
Total Memory	[131072K]	

IDE Primary / Secondary Master / Slave

This mainboard supports four IDE Hard Drives. These fields allow you to set your Hard Drive parameters. Move the selection bar to the IDE Hard Drive you want to configure. Press the "ENTER" key. If you select **AUTO** the system BIOS will detect the HDD type automatically.

If you select **User Type** you will be asked to enter the the information in the table on the right. This information should be provided with in the documentation that came with your Hard Disk. If a Hard Disk has not been installed select **NONE** and press enter.

CYLS	Number of Cylinders
HEADS	Number of Heads
PRECOMP	Write precomp
LANDZONE	Landing Zone
SECTORS	Number of Sectors

Drive A /B

The **U815EPC** mainboard can support up to two floppy disk drives. These two selection fields allow you to select the floppy drives that are installed on your computer. Select the correct specifications for the diskette drive(s) installed on your computer.

Diskette Drive	Type of Disk Drive	Capacity
None	No diskette drive installed	
360K 5.25 in	5-1/4 inch PC-type standard drive	360 KB
1.2M 5.25 in	5-1/4 inch AT-type high-density drive	1.2 MB
720K 3.5 in	3-1/2 inch single-sided drive	720 KB
1.44M 3.5 in	3-1/2 inch double-sided drive	1.44 MB
2.88M 3.5 in	3-1/2 inch double-sided drive	2.88 MB

Video

This field selects the type of primary video subsystem that is on your computer. The BIOS CMOS Setup Utility will automatically detect the correct video type.

Monitors	
EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA , SEGA, SVGA or PGA monitor adapters
CGA 40	Color Graphics Adapter power up in 40 column mode
CGA 80	Color Graphics Adapter power up in 80 column mode
MONO	Monochrome adapter includes high resolution monochrome adapters

Halt On

This field allows you to decide which errors, detected during the Power On Self Test (POST), will halt the system.

Base Memory / Extended Memory / Total Memory

This field displays the amount of memory detected by the system during boot up. This is a display only field. You cannot make any changes to this field.

Base Memory: Indicates the memory installed below the conventional 1MB space.

Extended Memory: Indicates the memory installed above the 1MB space.

Total Memory: Indicates the total memory installed in the PC system.



3.4. Advanced BIOS Features

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Advanced BIOS Features

Virus Warning	[Disabled]	Item Help Menu Level ▶ Allows you to choose the VIRUS warning feature for IDE Hard disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and alarm beep.
CPU Internal Cache	[Enabled]	
External Cache	[Enabled]	
CPU L2 Cache ECC Checking	[Enabled]	
Processor Number Feature	[Disabled]	
Quick Power On Self Test	[Enabled]	
First Boot Device	[Floppy]	
Second Boot Device	[HDD-0]	
Third Boot Device	[LS120]	
Boot Other Device	[Enabled]	
Swap Floppy Drive	[Disabled]	
Boot Up Floppy Seek	[Enabled]	
Boot Up NumLock Status	[On]	
Gate A20 Option	[Fast]	
Typematic Rate Setting	[Disabled]	
X Typematic Rate (Chars/Sec)	6	
X Typematic Delay (Msec)	250	
Security Option	[Setup]	
OS Select For DRAM > 64 MB	[Non-OS2]	
HDD S.M.A.R.T. Capability	[Disabled]	
Report No FDD For in95	[No]	

Virus Warning

When you enable the virus warning you will receive a warning message whenever a program (specifically, a virus) attempts to write to the boot sector or the partition table of the hard disk drive. If you receive such a message you should immediately run an anti-virus program. Keep in mind that this feature **only** protects the boot sector and not the entire hard drive.

Disk diagnostic programs that access the boot sector table can trigger the virus-warning message. If you run such a program, recommend that you first disable the virus warning.

CPU Internal Cache / External Cache

Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from 486-type up contain internal cache memory, and most, but not all, modern PCs have an additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for faster access by the CPU.



CPU L2 Cache ECC Checking

When you select Enabled, the ECC checking will ensure that the data stored on the L2 cache is accurate.

Processor Number Feature

If you have installed a Pentium !!! processor on your mainboard and you have Enabled this option the serial code inside the Pentium !!! Processor can be published on certain applications.

Quick Power On Self Test

If enabled the amount of time required to run the power-on self-test (POST) will decrease. A quick POST skips certain steps. We recommend that you disable quick POST. It is better to find a problem during POST than to lose data during your work.

First / Second / Third Boot Device

These fields allow you to decide the boot sequence of your bootable devices such as Floppy Drive, Hard Drive, CD ROM...etc

Boot Other Device

When this field is enabled you will be able Boot your computer from a another device, not your HDD or FDD.

Swap Floppy Drive

This field is effective only in systems with two floppy drives. When Enabled is selected physical drive B is assigned to logical drive A, and physical drive A is assigned to logical drive B.

Boot Up Floppy Seek

When enabled, the BIOS tests (seeks) floppy drives to determine whether they have 40 or 80 tracks. Only 360-KB floppy drives have 40 tracks; drives with 720 KB, 1.2 MB, and 1.44 MB capacity all have 80 tracks. Very few modern PCs have 40-track floppy drives so we therefore recommend that you set this field to Disabled to save time.



Boot Up NumLock Status

This controls the state of the NumLock key when the system boots. This field is toggled between On or Off. When it is on the numeric keypad generates numbers instead of controlling the cursor operations. When it is off the numeric keypad controls cursor operations and does not generate numbers.

Gate A20 Option

Gate A20 is a signal that gives the system access to addresses higher than A19. If you select Fast the chipset will control this signal. If you select normal a pin in the keyboard controller will control the signal.

Typematic Rate Setting

The keyboard controller determines the rate at which the keystrokes from the keyboard are repeated. If you enable this option then the typematic rate and the typematic delay can be selected.

Typematic Rate

This is the rate a character will repeat itself on the screen when you hold down a key.

Typematic Delay

This is the delay time (Msec) before the repetition of characters starts.

Security Option

This field allows you to select the "Setup" or "System" security option. It works concurrently with the " Set Supervisor Password" in the main menu.

When the "Setup" option is selected, you will be prompted to enter your "Password" before you can start the BIOS CMOS Setup Utility. When you select "System" option, you will be prompted to enter your password in order to load the Operating System.

TIP: Forgot your password then clear the RTC RAM

If you happen to forget your password you can use Jumper 5 (JP5) to clear the password by erasing the CMOS Real Time Clock (RTC) Ram. Please see section 2.9.2 on page 23.



OS Select For DRAM > 64MB

Only select OS2 if you are running an OS/2 operating system with a RAM greater than 64 Mb. Otherwise, for all other operating systems, use the default setting "Non-OS2."

HDD S.M.A.R.T Capability

You may "enable" this option if your Hard Drive supports the S.M.A.R.T. technology (Self Monitoring Analysis Reporting Technology) feature. S.M.A.R.T. will monitor and report your Hard Drive health status. Ask your Hard Drive Vendor for further information.

Using this feature may decrease system performance

Report No FDD for WIN 95

If you did not install a floppy drive select Yes. This will release IRQ6 for compatability with Windows 95 logo certification. You should disable the onboard FDC Controller field in the Integrated Peripherals Menu.

3.5. Advanced Chipset Features

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software Advanced Chipset Features		
SDRAM CAS Latency Time	[3]	Item Help
SDRAM Cycle Time Tras/Trc	[7/9]	Menu Level ▶
SDRAM RAS-to-CAS Delay	[Auto]	
SDRAM PAS Precharge Time	[Auto]	
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]	
System Memory Frequency	[100MHz]	

SDRAM Speed Selection

The first four fields on the screen are used to adjust the SDRAM timing. Use these fields to configure the DRAM parameter properly will give you the best performance. Improper setting on these fields will cause instability, therefore it is recommended to leave it to default setting.



System BIOS Cacheable

Select Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance.

Video BIOS Cacheable

Selecting Enabled allows caching of the video BIOS ROM at C0000h to C7FFFh, resulting in better video performance.

Memory Hole At 15M-16M

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

CPU Latency Timer

This function controls the way in which transfers are carried out on the FSB. This function must be Enabled to maximize performance.

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.

AGP Graphics Aperture Size

This field selects the size of the 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. The default is 64MB. You may increase this memory when you need to have faster access for 3D graphics applications (e.g. games).

System Memory Frequency

This selection field allows you to select the frequency of the system memory. The parameters that can be selected in this field are Auto, 100MHz and 133MHz.

Auto: The system BIOS will read the memory chip information stored in the EEPROM on the DIMM Module via SPD Technology and will automatically determine the memory frequency.



Managing The PC BIOS



100MHz: No matter what kind of DIMM module is installed on the mainboard the System BIOS will force the PC system to run at 100MHz.

133MHz: If a 133MHz CPU has been installed then no matter what kind of DIMM module is installed on the mainboard the System BIOS will force the PC system to run at 100MHz. (**Note:** If you are only using a 100MHz CPU the memory frequency will be fixed at 100MHz no matter what kind of DIMM Module is installed)

If a 66MHz CPU or a 100MHz CPU has been installed this selection field will not be displayed. If a 133MHz CPU has been installed then the following table can be used to configure the system memory.

DIMM Modules	System Memory Frequency Setting in CMOS		
	Auto	100MHz	133MHz
PC-100 Single Side x 1	OK	OK	Not Supported
PC-100 Single Side x 2	OK	OK	Not Supported
PC-100 Single Side x 3	OK	OK	Not Supported
PC-100 Double Side x 1	OK	OK	Not Supported
PC-100 Double Side x 2	OK	OK	Not Supported
PC-100 Double Side x 3	OK	OK	Not Supported
PC-133 Single Side x 1	OK	OK	OK
PC-133 Single Side x 2	OK	OK	OK
PC-133 Single Side x 3	OK	OK	OK
PC-133 Double Side x 1	OK	OK	OK
PC-133 Double Side x 2	OK	OK	OK
PC-133 Double Side x 3	Not Supported	OK	Not Supported

3.6. Integrated Peripherals *(This menu is on page 35 : [CLICK HERE](#))*

On-Chip Primary/Secondary PCI IDE

The chipset contains a PCI IDE interface with support for two IDE channels. To activate the primary or secondary IDE interface select Enabled. If you want to disable the onboard IDE 1 and/or 2, then select Disabled and this interface will be deactivated.



Managing The PC BIOS



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Integrated Peripherals

On-Chip Primary PCI IDE	[Enabled]	Item Help
On-Chip Secondary PCI IDE	[Enabled]	Menu Level ▶
IDE Primary Master PIO	[Auto]	
IDE Primary Slave PIO	[Auto]	
IDE Secondary Master PIO	[Auto]	
IDE Secondary Slave PIO	[Auto]	
IDE Primary Master UDMA	[Auto]	
IDE Primary Slave UDMA	[Auto]	
IDE Secondary Master UDMA	[Auto]	
IDE Secondary Slave UDMA	[Auto]	
USB Controller	[Enabled]	
USB Keyboard Support	[Disabled]	
Init Display First	[PCI Slot]	
AC97 Audio	[Auto]	
IDE HDD Block Mode	[Enabled]	
Onboard FDC Controller	[Enabled]	
Onboard Serial Port 1	[3F8/IRQ4]	
Onboard Serial Port 2	[2F8/IRQ3]	
UART Mode Select	[Normal]	
x RxD, TxD Active	Hi, Lo	
x IR Transmission Delay	[Enabled]	
x UR2 Duplex Mode	Half	
x Use IR Pins	IR-Rx2, Tx2	
Onboard Parallel Port	[378/IRQ7]	
Parallel Port Mode	[SPP]	
x EPP Mode Select	EPP1.7	
x ECP Mode Use DMA	3	
Game Port Address	[201]	
Midi Port Address	[330]	
Midi Port IRQ	[10]	

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.

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA 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, select Auto to enable BIOS support.



USB Controller

This field allows you to enable or disable the onboard USB controller.

USB Keyboard Support

If you are using the Legacy OS (such as MS-DOS) and you're installing a USB keyboard, please select "Enable" in this field. For PnP O/S like Windows 98, Windows 2000, Windows ME ... etc, you should select the default setting.

Init Display First

When you have both onboard AGP and PCI VGA card installed in your system, you can use this field to decide the display loading priority during system startup.

AC97 Audio

There is the Audio interface built in the system chipset. You can use this field to configure the onboard Audio interface or disable the audio interface.

IDE HDD Block Mode

This selection allows your hard disk controller to select the block mode to transfer data to and from your hard disk drive (HDD).

Enabled	IDE controller uses block mode.
Disabled	IDE controller uses standard mode.

Onboard FDC Controller

This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. If you add a higher performance controller, you should disable this feature.

Onboard Serial Port 1/Port 2

This item allows you to determine which I/O address you want the onboard serial port 1 and 2 controller to access.

UART Mode Select

This field allows you to determine the mode of the UART port.



RxD, TxD Active

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

IR Transmission delay

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

UR2 Duplex Mode

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

Use IR Pins

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

Onboard Parallel Port

This field allows you to select the address for the physical parallel (printer) port.

Parallel Port Mode

This field allows you to select an operating mode for the onboard parallel (printer) port. Select Normal, Compatible or SPP.

EPP Mode Select

This field allows you to select the EPP: EPP 1.7 or EPP 1.9

ECP Mode Use DMA

The Parallel port on the mainboard support ECP/EPP, ECP, EPP/SPP and SPP modes. When you select ECP mode, you may specify the DMA# for the parallel port for proper function.

Game Port Address

This field allows you to select the I/O address for the onboard Game port.

Midi Port Address

This field allows you to select the I/O address for the onboard Midi port.

Midi Port IRQ

This field allows you to select the IRQ# for the onboard Midi port.



3.7. Power Management Setup

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software
Power Management Setup

ACPI Function	[Enabled]	Item Help
Power Management	[User Define]	Menu Level ▶
Video Off Method	[Blank Screen]	
Video Off In Suspend	[Yes]	
Suspend Type	[Stop Grant]	
Modem Use IRQ	[3]	
Suspend Mode	[Disabled]	
HDD Power Down	[Disabled]	
Soft-Off by PWR-BTTN	[Instant-Off]	
Lan Resume	[Disabled]	
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 PIRO[A-D]#	[Disabled]	

ACPI function

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

Power Management

This category allows you to select the degree of power saving. The choices are shown in the table at the top of page 39.

Disable (Default)	No Power Management. Disables all modes.
Min. Power Saving	Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr. and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management -- ONLY AVAILABLE FOR SL CPU. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1min. And HDD Power Down = 1 min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min.



Video Off Method

This determines the manner in which the monitor goes blank.

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	Initial Display Power Management Signaling

Video Off In Suspend

This field has two options: **Yes** or **No**. These options allows you to determine the way in which the monitor is switched off. When you select **Yes**, the screen display will be disabled, I.e. nothing will be displayed on the screen when the PC system is in the suspend mode.

Suspend Type

This field allows you to select the status of the CPU when the system goes into the suspend mode. If you select by Stop Grant the CPU stops running completely, by "PWRON Suspend" keeps the CPU.

MODEM Use IRQ

This determines the IRQ which the MODEM can use for power saving purposes. This mainboard has the ACPI feature designed on the board and it will "wakeup" automatically when it detects an incoming modem Ring-in signal. Before you can use the Ring-in signal to wakeup your PC system, you have to install the "External" modem to your PC system and tell the PC system which serial port connects to the modem by selecting the IRQ in this field, (officially, COM 1 uses IRQ4, and COM 2 uses IRQ3).

Suspend Mode

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

HDD Power Down

If this field is enabled, after a set time of system inactivity, the hard disk will be powered down while all the other devices remain active.



Soft-Off by PWRBTN

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

Lan Resume

An input signal from the LAN will wake the system up from a soft off state.

CPU Thermal-Throttling

This field allows you to select the CPU Throttle rate. When the CPU temperature is too high, the onboard hardware monitoring will tell the CPU to reduce its processing speed to the throttling speed to protect the CPU. This function will not work when the **CPU Warning Temperature** is Disabled.

Resume By Alarm

This field allows you to wake up the system at a predetermined date in the future. If you select Enabled then you need to enter the date and the time at which you want the system to "wake up."

****Reload Global Timer Events****

When Enabled, an event occurring on each device listed below will restart the global time for the standby mode.

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



3.8. PNP/PCI CONFIGURATION

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software
PNP/PCI Configurations

Reset Configuration Data	[Disabled]	Item Help
Resources Controlled By x IRQ Resources	[Auto (ESCD)] [Press Enter]	Menu Level ►
PCI/VGA Palette Snoop	:Disabled	Select Yes if you are using a Plug and Play capable operating system. Select No if you need the BIOS to configure non-boot devices.
Assign IRQ For VGA	:Enabled	
Assign IRQ For USB	:Enabled	

Reset Configuration Data

Normally, you leave this field Disabled. If you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot then select Enabled. Selecting Enabled will reset the Extended System Configuration Data (ESCD).

Resources controlled By

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 98.

IRQ Resources

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

PCI/VGA Palette Snoop

Some display cards are non-standard VGA card (such as graphics accelerator or MPEG Card) which may not display color properly on your screen. "Enable" the setting in this field may correct this problem. Leave it "Disabled" as the default setting shown above if you are using the normal display card.



Assign IRQ For VGA/USB

A system's IRQs are limited. Sometimes you may need to use more IRQ signals for your add-on cards. BIOS allows you to disable the IRQ which is supposed to be connected to the VGA and USB ports. If you choose to disable the IRQ on the VGA or USB port, the IRQ will be re-released and becomes available for other devices. Please make sure that you have a USB or VGA adapter that does not need an IRQ before you select Disabled.

3.9. PC Health Status

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software
PC Health Status

CPU Warning Temperature	[Disabled]	Item Help
Current CPU Temperature	40°C/104°F	Menu Level ▶
Current FAN1 Speed	4687 RPM	
Current FAN2 Speed	4440 RPM	
Current FAN3 Speed	3835 RPM	
VccCore (V)	1.64 V	
2.5 (V)	2.51 V	
3.3 (V)	3.37 V	
+ 5 V	5.02 V	
+ 12 V	11.97 V	
- 12 V	-12.44 V	
VBAT (V)	3.10 V	
5VSB (V)	5.01 V	
Shutdown Temperature	[Disabled]	

CPU Warning Temperature

This field allows you to select an operating temperature range for your CPU. If the CPU temperature moves out of this range, any warning mechanism you have programmed into your system will be activated.

Current CPU Temp.

This field shows the current temperature for CPU 1.

Current FAN1, FAN2, FAN3 Speed

These fields show the present present speed of the three cooling fans that should be installed in your system.



VccCore

This field and the files below show you the current system voltage

Shutdown Temperature

When the system reaches a certain maximum temperature the system will automatically shutdown.

3.10. Frequency/Voltage Control

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software
Frequency/Voltage Control

Auto Detect DIMM/PCI Clk	[Disabled]	Item Help
CPU Host/PCI Clock	[133]	Menu Level >
CPU Clock Ratio	[X 3]	

Auto Detect DIMM/PCI Clk

When "Enabled" is selected, the mainboard will detect the presence of devices on DIMM and PCI slots. When there is no device present on some of the PCI or DIMM connectors, the clock on the related DIMM and PCI slot will be disabled to reduce the Electro-Magnetic Interference (EMI).

CPU Host/PCI Clock

This field can be used to adjust the Front Side Bus clock speed of the CPU. The adjustment of the clock frequency in this field is +/- 1MHz increment so you can fine tune the system performance. Below is a table for the different CPU FSB Clock Speeds.

CPU FSB Clock	Adjustable Range
66MHz	66MHz ~99MHz
100MHz	100MHz ~132MHz
133MHz	133MHz ~166MHz



CPU Clock Ratio

This field allows you to select the CPU clock ratio. Most CPU clock ratios are fixed inside the CPU by the manufacturers that prohibit you to make any changes. In this case, the setting in this field will make no change to the CPU clock ratio since it is locked and automatically determined by the CPU.

!	If you happen to over-clock the FSB and you PC system fail to start. You need to clear the CMOS data (see detail regarding clearing CMOS Data on page 23). If the PC system still fails to start, then you have to remove the battery for 1 minute to clear the CMOS Data.
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3.11. Load Optimized Defaults

CMOS Setup Utility – Copyright (C) 1984 - 2001 Award Software	
<ul style="list-style-type: none"> ▶ Advanced BIOS Features ▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Integrated Peripherals ▶ Power Management Setup ▶ PNP/PCI Configuration ▶ Health Status 	<ul style="list-style-type: none"> ▶ Frequency/Voltage Control <ul style="list-style-type: none"> Load Optimized Values Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving
ESC : Quit	← ↑ ↓ → : Select Item
F10 : Save & Exit Setup	
Load Optimized Defaults	

There is CMOS memory on the mainboard that can be used to store the system settings. If you don't know how to use the Award BIOS CMOS Setup Utility to select the settings, you may use this field to load the optimized defaults which are defined in the system BIOS. **Our engineer recommends the Optimized Defaults.** If this option is selected it will give a series of parameters that will ensure the reliability and performance of your PC.

If you lose your CMOS data or you don't know how to complete the setup procedure, you may use this option to load the Optimized de-



If the CMOS data is corrupted, or if you selected some CMOS settings and find that the PC system becomes very unstable, you should try to load the optimized default values first and then re-configure the BIOS.

3.12. Set Supervisor Password

CMOS Setup Utility – Copyright (C) 1984 - 2001 Award Software	
<ul style="list-style-type: none"> ▶ Advanced BIOS Features ▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Integrated Peripherals ▶ Power Management Setup ▶ PNP/PCI Configuration ▶ Health Status 	<ul style="list-style-type: none"> ▶ Frequency/Voltage Control Load Optimized Values <li style="background-color: #800000; color: white;">Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving
ESC : Quit	←↑↓→ : Select Item
F10 : Save & Exit Setup	
Load Optimized Defaults	

The "SUPERVISOR PASSWORD" is for you to control unauthorized access to your BIOS CMOS Setup or Booting into the your PC system. The Supervisor Password option is used together with the Security Option in section 3.5.

When "Setup" is selected In the Security Option:

If you want to change any BIOS setting, you will have to key-in the Supervisor Password so that you can start the BIOS CMOS Setup Utility and change the system setting.

When "System" is selected in Security Option:

Whenever you turn on the PC, it will request the user to enter the Password in order to boot up your system. Without the correct password, the PC system will stop and the operating system will not be loaded.



3.13. Set User Password

CMOS Setup Utility – Copyright (C) 1984 - 2001 Award Software	
<ul style="list-style-type: none"> ▶ Advanced BIOS Features ▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Integrated Peripherals ▶ Power Management Setup ▶ PNP/PCI Configuration ▶ Health Status 	<ul style="list-style-type: none"> ▶ Frequency/Voltage Control Load Optimized Values Set Supervisor Password <li style="background-color: #800000; color: white;">Set User Password Save & Exit Setup Exit Without Saving
ESC : Quit F10 : Save & Exit Setup	← ↑ ↓ → : Select Item
Load Optimized Defaults	

The User Password can be used to check the user's authority. However, this password entry is different from the "SUPERVISOR PASSWORD". The User Password has a different function to the "Supervisor Password" and the "Security Option" setup in Section 3.5:

A. When there is the password stored in the "SUPERVISOR PASSWORD"

1. When "Setup" is selected in the Security Option:

When you use the "User Password" to log into the BIOS setup program, you can only view the BIOS settings, but you cannot change any settings. The only setting you can change is the "User Password" and you can also select "SAVE & EXIT SETUP" and "EXIT WITHOUT SAVING" from the main menu. (If you use the Supervisor Password to log into the PC system, you will have the complete rights to all the BIOS settings.

2. When "System" is selected in Security Option:

When you turn on the PC system, it will request that you enter the Password. Without the correct password, the PC system will stop and the operating system won't be loaded.



B. When there is no password stored in the "SUPERVISOR PASSWORD"

1. When "Setup" is selected in Security Option:

Users can use the "User Password" to log into the BIOS setup program, and they can change any of the BIOS settings.

2. When "System" is selected in Security Option:

When you turn on your PC, you will be requested to enter the Password. Without the correct password, the PC system will stop and the operation system will not be loaded.

3.14. Save & Exit Setup/ Exit Without Saving

CMOS Setup Utility – Copyright (C) 1984 - 2001 Award Software	
<ul style="list-style-type: none"> ▶ Advanced BIOS Features ▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Integrated Peripherals ▶ Power Management Setup ▶ PNP/PCI Configuration ▶ Health Status 	<ul style="list-style-type: none"> ▶ Frequency/Voltage Control Load Optimized Values Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving
ESC : Quit F10 : Save & Exit Setup	← ↑ ↓ → : Select Item
Load Optimized Defaults	

Save & Exit Setup

This option will save all the setup values to CMOS RAM and exit the SETUP utility. Move the selection bar to "SAVE & EXIT SETUP" and press the "Enter" key, then type "Y" and press the "Enter" key again. The values you have entered will be saved and all the information stored in the CMOS memory.

Exit Without Saving

This option will exits the setup utility without saving any of the values you changed in the CMOS RAM. If you do not want to save any of the changes, or settings you selected in the BIOS SETUP utility, move the selection bar to the "EXIT WITHOUT SAVING" option. Press the "Enter" key. Then press "Y"