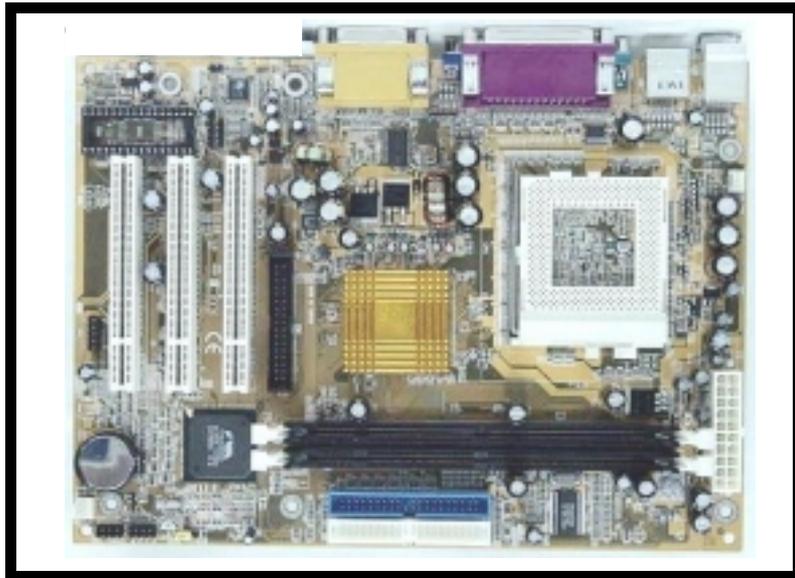


U601BS Mainboard User Manual

SOCKET 370 Micro-ATX
Mainboard



Version 1.x
UM-U601BS-E1
Rev 1.0V
Creation Date: 29 November 2001

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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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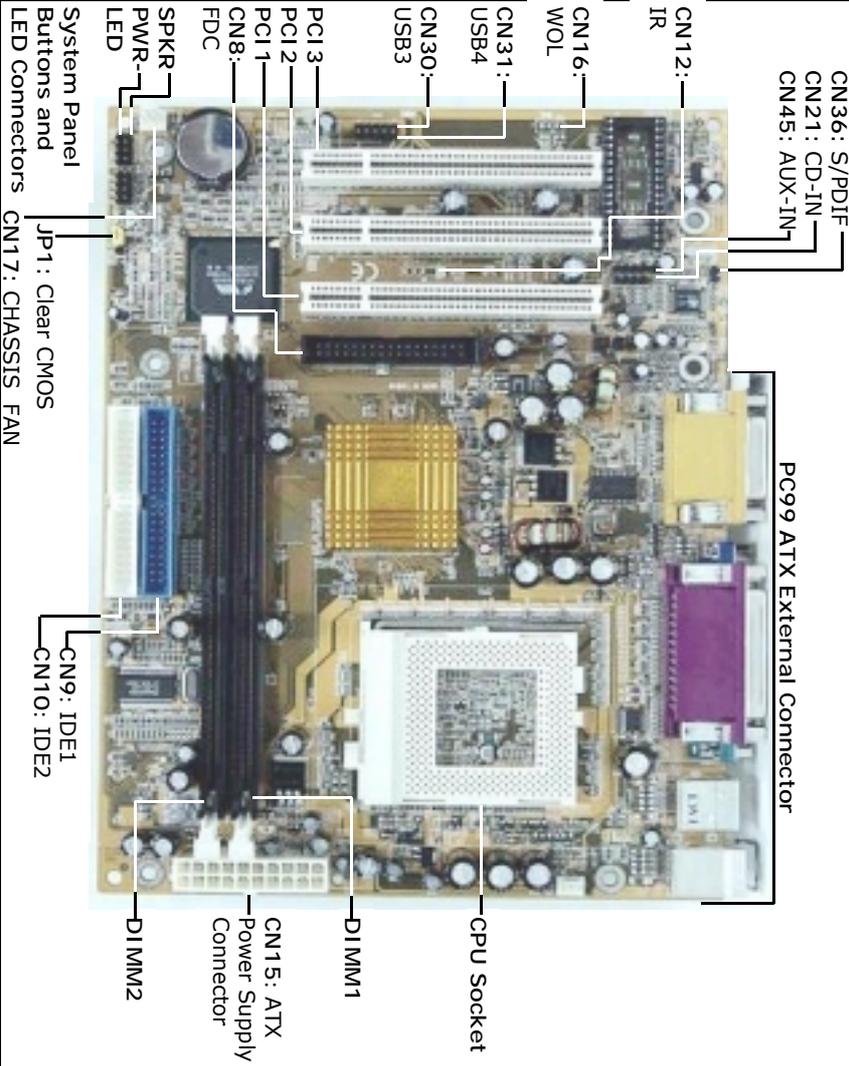
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Introduction

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 U601BS Mainboard

The U601BS is a Micro-ATX Socket 370 CPU platform. It based on the VIA Apollo PLE133T. It is able to support three different FSB Clock speeds: 66 MHz, 100 MHz or 133 MHz. It also supports up to 1GB of SDR SDRAM. It has four USB ports, three PCI slots. It comes with a number of different connectors including Auxiliary-In, CD-In and WOL. The infrared (IR) and Sony Phillips Digital Interface (S/PDIF) connectors are optional items (see appendix A for further details). It also has a single jumper (for clearing CMOS) and this facilitates simplified assembly.

1.2.2. Mainboard Dimensions

Width : 244 mm
Length : 180 mm

1.2.3. Environmental Limitations

Operating Temperature: 10°C to 40°C (50°F to 104°F)
Required Airflow: 50 linear feet/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

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

Introduction

Chipset

The U601BS mainboard is based on the VIA Apollo PLE133T:

Northbridge: VT8601T (VT8602)

Southbridge: VT82C686B

CPU Switching Voltage regulator

These mainboards are equipped with a switching voltage regulator that automatically detects a DC power supply from +1.050V to +1.825V.

System Memory

The U601BS mainboard has two 168-pin SDR SDRAM DIMM modules on-board. These modules are able to support PC-133 and PC-100 SDRAM modules. A maximum memory of 1GB is supported.

Expansion Slots

The U601BS mainboard is equipped with three dedicated PCI slots

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)

FSB frequencies of 66MHz, 100MHz and 133MHz are supported.

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

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 simpli-

Introduction

WOL (Wake-On-LAN) Port

One WOL connector supports Wake-On-LAN functionality.

USB Ports

The U601BS mainboard is equipped with 4 USB ports. USB allows data exchange between your computer and a wide range of simultaneously accessible external Plug and Play peripherals. USB 1 and USB 2 are external ports. They can be found on the PC 99 ATX connector. USB 3 and USB 4 are internal connectors that can be used to connect other USB devices. (Optional cable for two connectors is sold separately)

Please note that the internal USB connectors (CN30 and CN31) 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.
- One CPU Fan connector.
- One Chassis Fan connector
- Two USB connectors
- One WOL connector
- One CD audio-in connector.
- One Auxiliary-in connector.
- One connector for IrDA interface (*optional see appendix A*)
- One S/PDIF connector (*optional see appendix A*)

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

- Two USB ports.
- One external DB-9 serial port connector: COM 1.
- 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.
- One VGA port

Introduction

PCI Bus Master IDE Controller

- Two PCI IDE interfaces support up to four IDE devices.
- Both models support 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.

IrDA Interface (Optional)

The mainboard is equipped with an IrDA connector for wireless connectivity between your computer and peripheral devices. It supports peripheral devices that meet the HPSIR or ASKIR standard.

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/2.5V/3.3V/5V/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.

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.

Introduction

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.

Hardware Installation

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 which supports Intel® Pentium™III Celeron or Tualatin™	
DIMM Slots	Two 168 pin slots that supports up to 1GB of SDRAM .	
PCI Slots	Three 32 bit PCI Slots.	
Internal Connectors		
CN8	Floppy Disk Drive	FDC
CN9	Primary IDE	IDE1
CN10	Secondary IDE	IDE2
CN12	Infrared	IR (optional*)
CN13	CPU Fan	CPU Fan
CN15	ATX Power Supply	ATX
CN16	Wake On Lan	WOL
CN17	Chassis Fan	Chassis Fan
CN21	CD Audio In	CD-In
CN30	Universal Serial Bus 3	USB3
CN31	Universal Serial Bus 4	USB4
CN36	Sony Phillips Digital Interface	S/PDIF (optional*)
CN45	Auxiliary In	AUX-IN
External Connectors		
CN1	PS/2 Keyboard Connector	PS/2 KB
CN2	PS/2 Mouse Connector	PS/2 MS
CN3	Serial Port 1	COM1
CN5	Parallel Port	LPT
CN6	Universal Serial Port 1	USB1
CN7	Universal Serial Port 2	USB2
CN18	Game/Audio Port	Audio/Game
CN19	VGA Port	VGA

* These items are manufacture options. Please see Appendix A for further details about these options and how they can be obtained.

Hardware Installation

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
SPK	Speaker Connector

Jumpers

JP1	Clear CMOS
-----	------------

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

2.2. Installation Steps

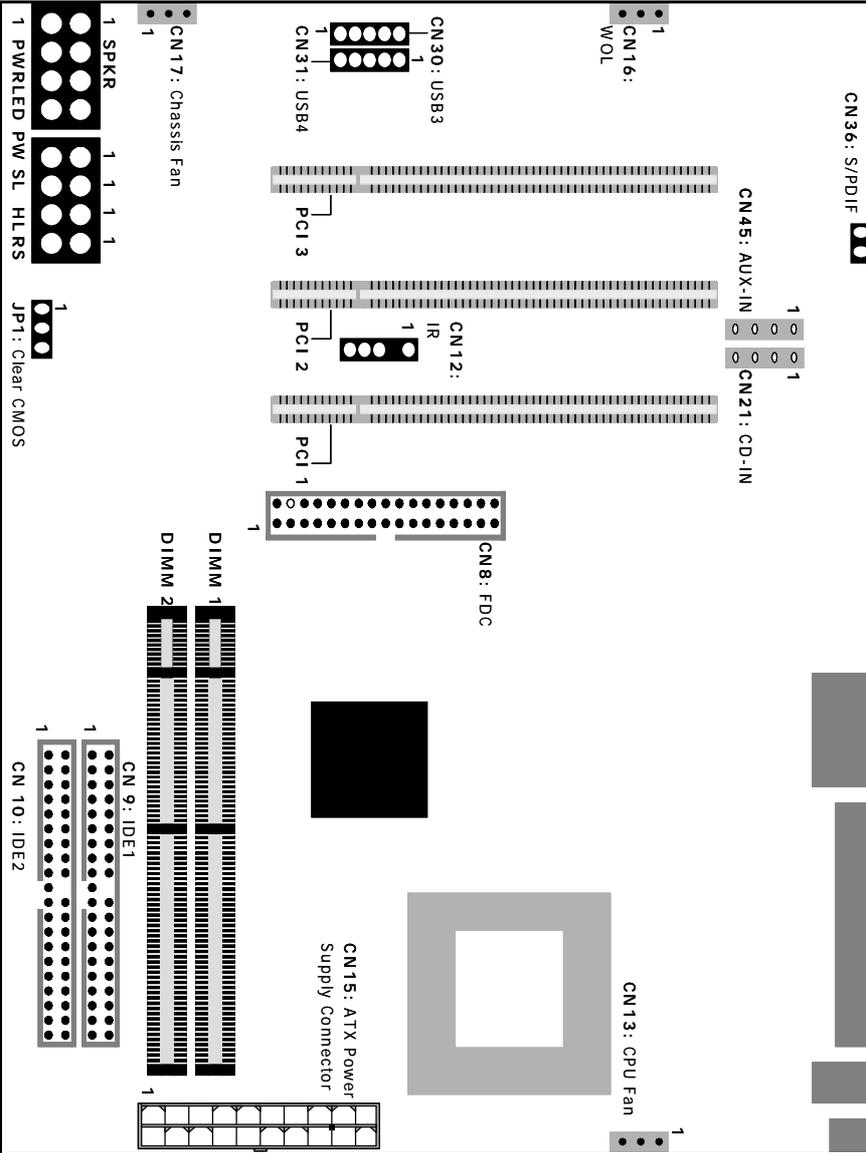
You need to complete the following installation steps before you can use your PC.

- 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.

Hardware Installation

2.3. Expansion Slots, Jumpers and Internal Connectors



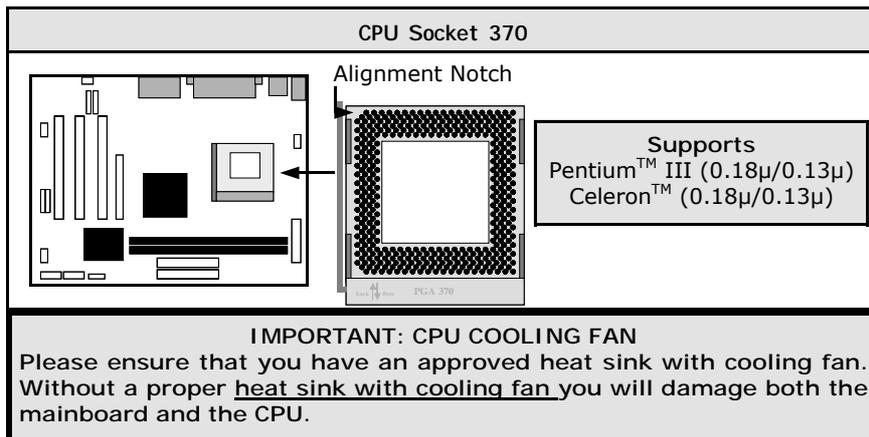
Hardware Installation

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 (Alignment Notch) the Socket on the mainboard.
3. There is a lever on the side of the socket. First push this lever side-ways 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.



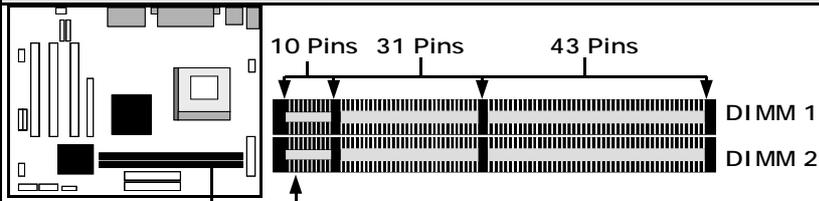
2.4.2. Memory Modules

The U601BS mainboard has two 168-pin DIMM slots and are able to support a maximum of 1GB PC-100/PC-133 SDR SDRAM. The 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 (diagram on next page).

Important: The DIMM's can only be fitted into the slots in one orientation. Make sure that the DIMM's are in the correct orientation and the pins are correctly aligned before you insert them.

Hardware Installation

168-pin DIMM sockets location



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:

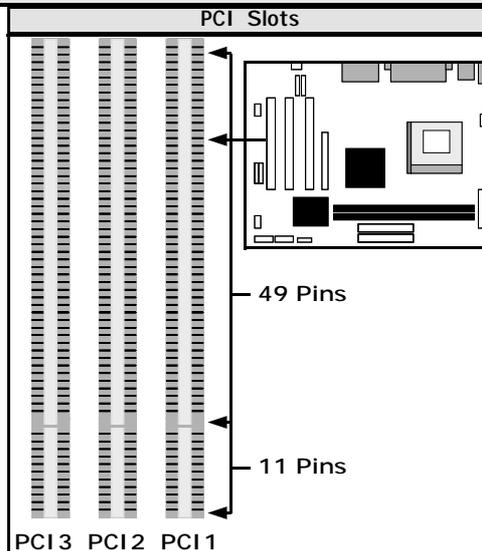
- 1) Reduce the amount of memory Vcache uses to 512 MB or less by altering the MaxFileCache setting in the System.ini file.
- 2) Use the System Configuration Utility to reduce the amount of memory Windows uses to 512 MB or less.
- 3) Reduce the memory installed on your computer to 512 MB or less.

This problem can also occur if you are using an Advanced Graphic Port (AGP) video adapter.

2.4.3. PCI Slots

The U601BS mainboards comes with three 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.



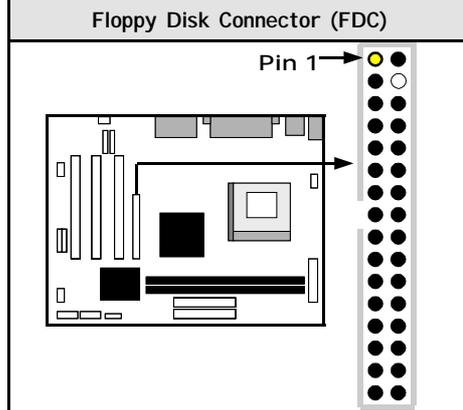
Hardware Installation

2.5. Internal Connectors

2.5.1. Floppy Disk Connector (FDC)

Connector: CN 8
Type: 34 pin block

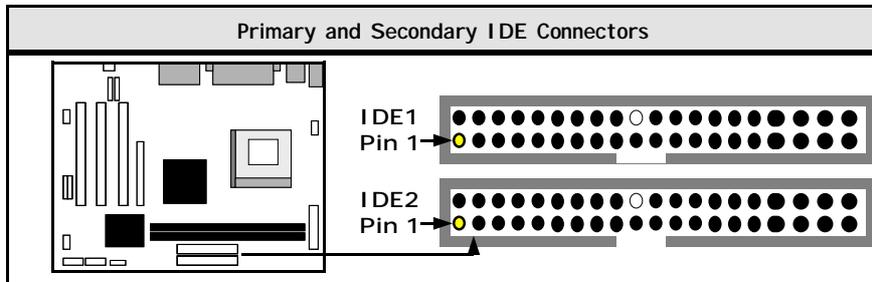
The FDD connector can support two Floppy drives. It is located at the front of the mainboard. To connect, use the ribbon-cable that has been provided. Make sure that the red strip is connected to PIN 1 of the connector.



2.5.2. Primary and Secondary IDE connectors

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

The U601BS mainboard has two IDE connectors: a primary and secondary. Each IDE connector can support two IDE drives. These mainboards can therefore support up to four IDE devices each. 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.



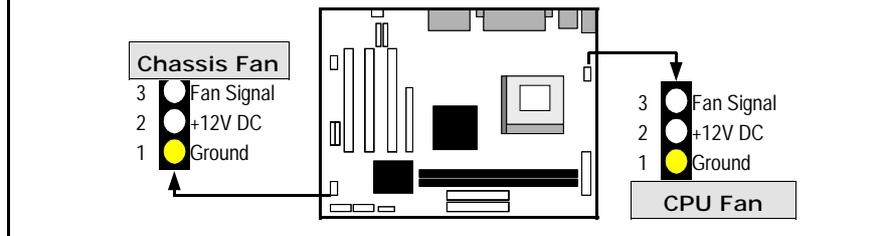
2.5.3. CPU Fan and Chassis Fan Connector

Connector: CN 13 (CPU Fan)/CN 17 (Chassis Fan)
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.

Hardware Installation

CPU and Chassis Fan Connectors

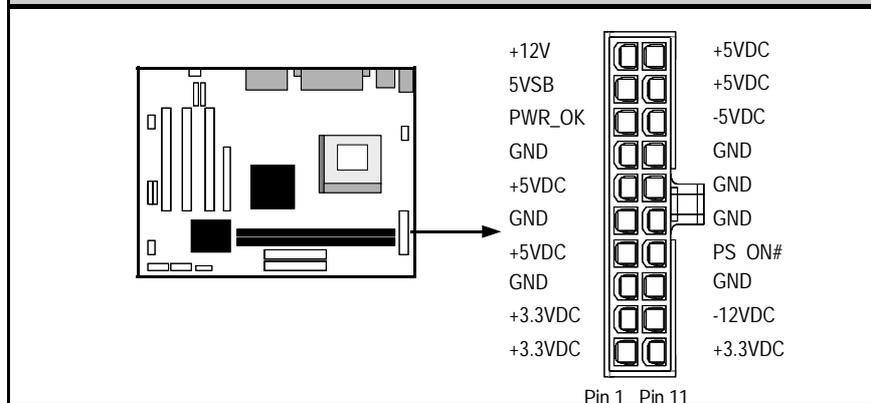


2.5.4. ATX Power Supply Connector

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.

ATX Power Supply Connector

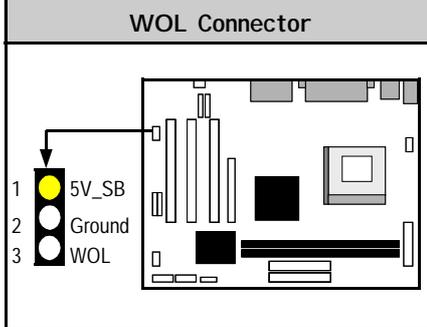


Hardware Installation

2.5.5. WOL Connector

Connector: CN 16 (WOL)
Type: 3 pin

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

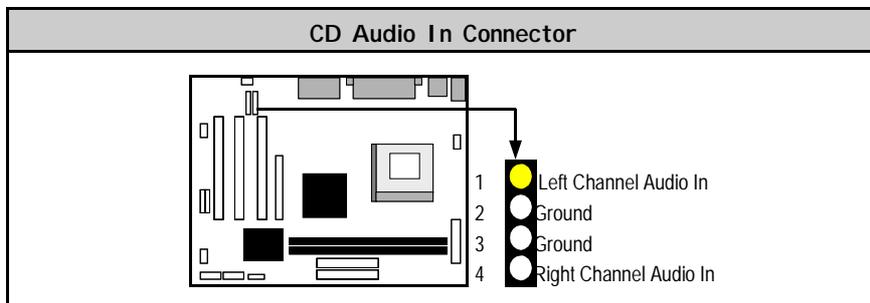


In order to use the WOL LAN card or the modem to trigger the power on the PC system, the switching power supply must have the ability to provide a driving current of at least 720 mA and be connected to a "5V standby" voltage.

2.5.6. CD Audio-in Connector

Connector: CN 21
Type: 4 pin un-housed

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



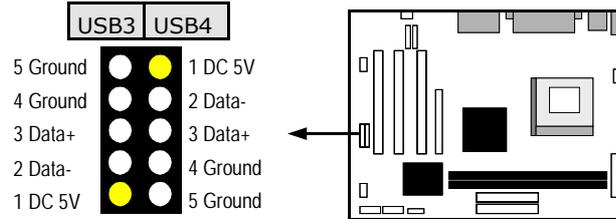
2.5.7. USB 3 and USB 4 Connectors

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 U601BS has two internal USB connectors (CN30 and CN31). This enables you to use an extra two USB devices. Cable for these additional connectors needs to be purchased separately.

Hardware Installation

Connectors for USB3 and USB4



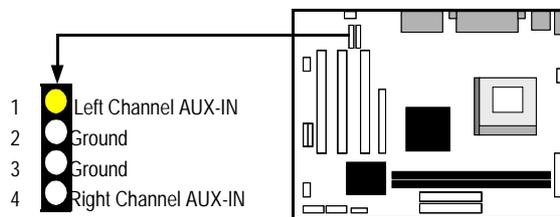
Note: These are not the standard USB connectors you find on the ATX PC99 connector. To connect USB devices you need to use an expansion cable (purchased separately) that ends in a standard USB connector. Ask your retailer for more details.

2.5.8. AUX-IN Connector

Connector: CN 45 (AUX-IN)
Type: 4 pin un-housed

The U601BS mainboard comes with an AUX-IN connector. The AUX-IN connector allows you to receive signals from other audio devices like a radio or tape.

Auxiliary-IN Connector



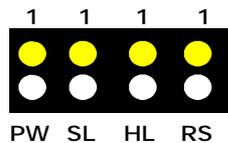
2.6. System Panel Buttons and LED Connectors

Buttons and Connectors		Pin 1	Pin 2
PW	Power On/OFF and Suspend Switch Connector	+5V DC Pull Up	Ground
SL	Standby LED Connector	Standby DC Pull UP	Ground
HL	HDD LED Connector	+5V DC Pull Up	Ground
RS	Reset Button Connector	Reset Control	Ground

Hardware Installation

System Panel and LED Connectors

See table on page 19 for the Pin assignments and connector



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 return 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.

2.6.3. IDE HDD LED Connector

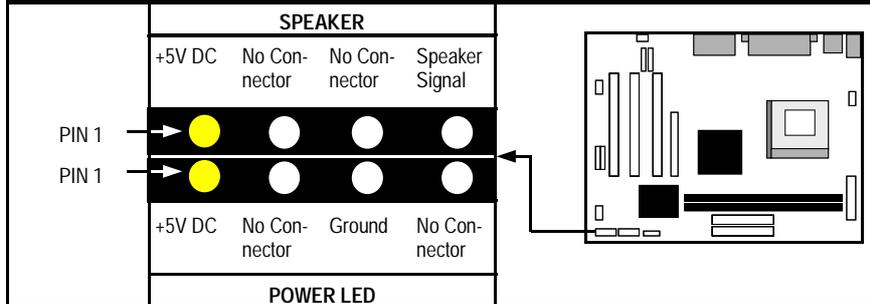
Any read and write activity by the HDD will turn this LED on.

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.

Hardware Installation

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.

2.8. 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



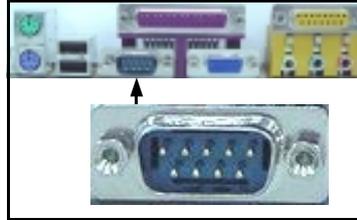
This connector only supports a PS/2 mouse plug. If a PS/2 mouse is detected then IRQ 12 will be directed to CN 2.

Hardware Installation

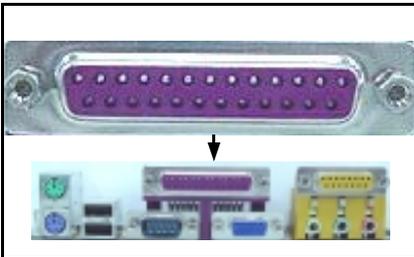
2.8.3. Serial Port 1 (COM 1)

Connector: CN 3 (COM 1)
Type: 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 (LPT)



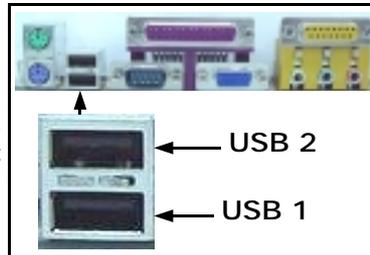
Connector: CN 5
Type: 25 pin female.

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).

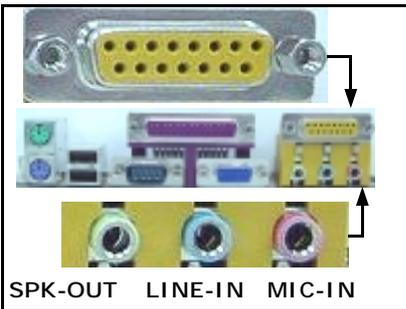
2.8.5. Universal Serial Bus (USB) Port 1 & 2

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

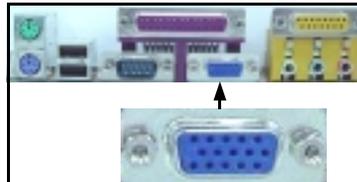
The Game/MIDI port connector is a dual purpose connector. It can either be used to connect a joystick to the computer for game participation, or it can be used to attach an external MIDI device. All these motherboards have 3D audio interfaces onboard.

Hardware Installation

2.8.7. VGA Connector

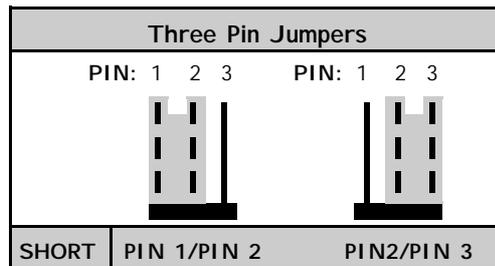
Connector: CN 19
Type: 15 pin male.

Connect your VGA monitor adapter to this connector.



2.9. Clear CMOS Memory

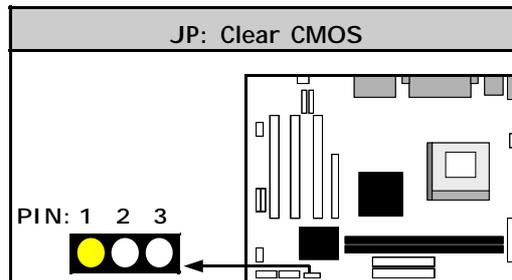
Jumpers are built on the mainboard to allow the user flexibility to configure the mainboard settings to meet their specific requirements. The U601BS mainboard has a single three pin jumper. On a three pin jumper if a jumper cap is inserted on pins 1 and 2 we say PIN 1 and PIN 2 are SHORT. When the jumper cap is inserted on pin 2 and 3, we say PIN 2 and PIN 3 are SHORT (see the diagrams below).



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, JP 1, to clear the CMOS memory and to reconfigure 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.
4. Turn your PC on and run the BIOS setup program.



Managing The PC BIOS

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 on your system, press the <Delete> button to activate the BIOS CMOS Setup Utility.

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.

3.2. Main Menu

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 ControlLoad Optimized DefaultsSet Supervisor PasswordSet User PasswordSave & Exit SetupExit Without Saving
Esc : Quit	← ↑ ↓ → : Select Item
Time, Date, Hard Disk Type ...	

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

Managing The PC BIOS

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 (Menu on Page 26)

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.

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.

Managing The PC BIOS

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

Date (mm : dd : yy)	Wed, Nov 28, 2001	Item Help
Time (hh : mm : ss)	13 : 39 : 52	Menu Level ▶
▶ IDE Primary Master	Maxtor 52049H4	Change the day, month, year and century
▶ IDE Primary Slave	None	
▶ 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	15360K	
Total Memory	16384K	

Drive A /B

The U601BS mainboard series 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 3.50 in	3-1/2 inch single-sided drive	720 KB
1.44M 3.50 in	3-1/2 inch double-sided drive	1.44 MB
2.88M 3.50 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.

Managing The PC BIOS

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 (Menu on Page 28)

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.

NOTE! Many disk diagnostic programs that access the boot sector table can trigger the virus-warning message. If you plan to run such a program, we 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.

Managing The PC BIOS

CMOS Setup Utility - Copyright (C) 1984 – 2001 Award Software.
Advanced BIOS Features

		Item Help
Virus Warning	:Disabled	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	:LS/ZIP	
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	
Video BIOS Shadow	:Enabled	
C8000 - CBFFF Shadow	:Disabled	
CC000 - CFFF Shadow	:Disabled	
D0000 - D3FFF Shadow	:Disabled	
D4000 - D7FFF Shadow	:Disabled	
D8000 - DBFFF Shadow	:Disabled	
DC000 - DFFFF Shadow	:Disabled	

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 a Pentium processor onboard you should enable this option. This will allow the serial code of the Pentium processor to be published on certain applications.

Managing The PC BIOS

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.

Managing The PC BIOS

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 1 (JP1) to clear the password by erasing the CMOS Real Time Clock (RTC) Ram. For further details on how to do this please see section 2.9. 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.

Note! Using this feature may decrease system performance.

Video BIOS Shadow

These fields allow you to change the Video BIOS location from ROM to RAM. Information access is faster through RAM than ROM. Therefore when you enable this option you will enhance your system performance.

Managing The PC BIOS

3.5. Advanced Chipset Features

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software
Advanced Chipset Features

DRAM Clock	:By Auto	Item Help
DRAM Timing By SPD	:Disabled	Menu Level ▶
SDRAM Cycle Length	:3	
Bank Interleave	:Disabled	
Memory Hole	:Disabled	
P2C/C2P Concurrency	:Enabled	
Fast R-W Turn Around	:Enabled	
System BIOS Cacheable	:Disabled	
Video RAM Cacheable	:Disabled	
Frame Buffer Size	:8M	
AGP Aperture Size	:64M	
OnChip USB	:Enabled	
USB Keyboard Support	:Disabled	
OnChip Sound	:Enabled	
CPU to PCI Write Buffer	:Enabled	
PCI Dynamic Bursting	:Enabled	
PCI Master 0 WS Write	:Enabled	
PCI Delay Transaction	:Enabled	
PCI #2 Access #1 Retry	:Disabled	
AGP Master 1 WS Write	:Disabled	
AGP Master 1 WS Read	:Disabled	

DRAM Clock

This field allows you to select the DRAM access speed control to the memory performance.

DRAM Timing By SPD

When you select enabled, the system BIOS will read the DRAM parameters from the SPD chip on the DIMM module and set the DRAM timing automatically.

SDRAM Cycle Length

Before SDRAM can execute a read command that it receives, there is a delay time, which is measured in clock cycles (CLK). The lower the delay time the faster the execution of commands will be. It is therefore desirable to minimize this cycle length. Some memory modules are unable to deal with short delay times. We recommend that you set this delay time between 2 and 3 CLK's (the default is 3). If your system becomes unstable we recommend that you increase the delay time.

Managing The PC BIOS

Bank Interleave

This field allows you to select how many banks of DRAM are installed on the mainboard so that the system BIOS will be able to adjust the SDRAM interleave access mode to optimize the SDRAM performance.

Memory Hole

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.

P2C/C2P Concurrency

Sets CPU & PCI transfer as synchronous.

Fast R-W Turn Around

This item controls the DRAM timing. It allows you to enable/ disable the fast read/write turn around.

System BIOS Cacheable

Selecting "Enabled" allows caching of the system BIOS ROM. This results system performance. However, if any program writes to this memory area, a system error may occur.

Video RAM Cacheable

Select Enabled allows caching of the video RAM, resulting in better system performance. However, if any program writes to this memory area, a system error may occur.

AGP 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).

OnChip USB

This should be enabled if your system has a USB installed on the system board and you want to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

Managing The PC BIOS

USB Keyboard Support

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

OnChip Sound

This item allows you to control the onboard AC 97 audio.

CPU to PCI Write buffer

When this field is *Enabled*, writes from the CPU to the PCI bus are buffered, to compensate for the speed differences between the CPU and the PCI bus. When *Disabled*, the writes are not buffered and the CPU must wait until the write is complete before starting another write cycle.

PCI Dynamic Bursting

When *Enabled*, every write transaction goes to the write buffer. Burstable transactions then burst on the PCI bus and nonburstable transactions don't.

PCI Master 0 WS Write

When *Enabled*, writes to the PCI bus are executed with zero wait states.

PCI Delay 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.

PCI #2 Access #1 Retry

When disabled, PCI#2 will not be disconnected until access finishes (default). When enabled, PCI#2 will be disconnected if max retries are attempted without success.

AGP Master 1 WS Write

When *Enabled*, writes to the AGP(Accelerated Graphics Port) are executed with one wait states.

Managing The PC BIOS

AGP Master 1 WS Read

When *Enabled*, read to the AGP (Accelerated Graphics Port) are executed with one wait states.

3.6. Integrated Peripherals (The menu is on page 34)

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

		Item Help
OnChip IDE Channel0	:Enabled	Menu Level ▶
OnChip IDE Channel1	:Enabled	
IDE Prefetch Mode	:Enabled	
Primary Master PIO	:Auto	
Primary Slave PIO	:Auto	
Secondary Master PIO	:Auto	
Secondary Slave PIO	:Auto	
Primary Master UDMA	:Auto	
Primary Slave UDMA	:Auto	
Secondary Master UDMA	:Auto	
Secondary Slave UDMA	:Auto	
Init Display First	:PCI Slot	
IDE HDD Block Mode	:Enabled	
Onboard FDC Controller	:Enabled	
Onboard Serial Port 1	:Auto	
Onboard Serial Port 2	:Auto	
UART 2 Mode	:Standard	
IR Function Duplex	:Half	
TX, RX Inverting Enable	:No, Yes	
Onboard Parallel Port	:378/IRQ7	
Onboard Parallel Mode	:Normal	
ECP Mode Use DMA	: 3	
Parallel Port EPP Type	: EPP 1.9	
Onboard Legacy Audio	:Enabled	
Sound Blaster	:Disabled	
SB I/O Base Address	:220H	
SB IRQ Select	:IRQ 5	
SB DMA Select	:DMA 1	
MPU-401	:Disabled	
MP-401 I/O Address	:330-333H	
Game Port (200—207H)	:Enabled	

Managing The PC BIOS

OnChip IDE Channel 0/1

The chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the primary IDE interface. Select Disabled to deactivate this interface.

IDE Prefetch Mode

The onboard IDE drive interfaces supports IDE prefetching for faster drive accesses. If you install a primary and/or secondary add-in IDE interface, set this field to *Disabled* if the interface does not support prefetching.

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.

Primary/Secondary, Master/Slave UDMA

Ultra DMA/66 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 98 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/66, select Auto to enable BIOS support.

Init Display First

This field allows you to decide to active whether PCI Slot of VGA card or AGP first.

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.

Onboard FDC Controller

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

Onboard Serial Port 1/Port 2

These two selection fields allow you to select the I/O address and corresponding interrupt for the first and second serial ports.

Managing The PC BIOS

UART 2 Mode

Your system may offer a variety of infrared modes on the second serial port. The options are Standard, HPSIR or ASKIR.

IR Function Duplex

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

TX,RX inverting enable

This item allow you to enable the TX, RX inverting which depends on different H/W requirement. This field is not recommended to change its default setting for avoiding any error in your system.

Onboard Parallel Port

This item allows you to determine onboard parallel port controller I/O address setting.

Onboard Parallel 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.

ECP Mode Use DMA

This item allows you to select a DMA channel for the parallel port for use during ECP mode.

Parallel Port EPP Type

This field allows you to select EPP port type between 1.7 or 1.9.

Onboard Legacy Audio

If the Onboard legacy audio controller is going to be used then this field needs to be enabled. If an add-on audio device is going to be used then this field must be disabled. If no such device is going to be used then the default "enabled" setting should be retained.

Sound Blaster

If a Sound Blaster is going to be used then this field needs to be enabled. If you are not using a Sound Blaster then retain the default "disabled" setting.

Managing The PC BIOS

SB I/O Base Address

This field can be used to select the I/O base address for the Sound Blaster. The default setting is 220H but there are other options. These are: 240H, 260H, 280H.

SB IRQ Select

This field allows you to select an IRQ for a Sound Blaster. The default is IRQ5 but you can select any of the following: IRQ9, IRQ7, IRQ10.

SB DMA Select

This option allows you to select the DMA (Direct Memory Access Channel) for the Sound Blaster. The default DMA channel is DMA 1 but if you find you have difficulties or if this DMA channel is already being used then you can select a different channel. The options are: DMA 2, DMA 3, DMA 0.

MPU-401

If an MPU-401 card is being used then this field must be changed from it's "disabled" default setting to "enabled"

MPU-401 I/O Address

An MPU-401 card can use a number of different I/O addresses. If you are using one of these cards you can use this field to select the I/O address. The default setting is 330-333H but you can also select any of the following: 300-303H, 310-313H or 320-323H.

Game Port (200-207H)

This option allows you to activate the Game Port. The default setting for this field is "Enabled". If you there is no Game Port present then you need to change this field to "Disabled".

3.7. Power Management Setup (Menu on Page 38)

ACPI function

If you want to use this function you need to use an operating system (OS), like Windows 98, that supports the ACPI function. During the installation of the OS, like Windows 98, you need to enter a certain set of parameters. For further details please refer to the OS user manual. (continued on the next page.)

Managing The PC BIOS

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ACPI Function	:Disabled	Item Help
Power Management	:Press Enter	Menu Level ▶
PM Control By APM	:Yes	
Video Off Option	:Suspend > Off	
Video Off Method	:Blank Screen	
Soft-Off by PWRBTN	:Instant-Off	
Wake-Up Events	:Press Enter	

When the ACPI function has been successfully installed on you PC system, you must change the default "disabled" setting to "enabled". You will then find the ACPI function in the power management icon. The PW switch defined by the ACPI is different to the BIOS Setup and it always has a higher priority than that which was defined in the system BIOS.

Power Management

When click the "Enter" key on this selection field, the following setup screen will be triggered:

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software Power Management		
Power Management	:User Defined	Item Help
HDD Power Down	:Disabled	Menu Level ▶▶
Doze Mode	:Disabled	
Suspend Mode	:Disabled	

▶ Power Management

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 . Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., 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. and disable.

▶ 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.

Managing The PC BIOS

▶ Doze Mode

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

▶ Suspend Mode

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

PM Control by APM

When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock. If Advanced Power Management (APM) is installed on your system, selecting Yes gives better power savings.

Video Off Option

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On	Monitor will remain on during power saving modes.
Suspend --> Off	Monitor blanked when the systems enters the Suspend mode.
All Modes --> Off	Monitor blanked when the system enters any power saving mode.

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	Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards to select video power management values.

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".

Managing The PC BIOS

Wake-Up Events

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software Wake-Up Events		
VGA	:OFF	Item Help
LPT & COM	:LPT/COM	Menu Level ▶ ▶
HDD & FDD	:ON	
PCI Master	:OFF	
Lan Resume	:Disabled	
RTC Alarm Resume	:Disabled	
Date (of Month)	:0	
Resume Time (hh : mm : ss)	:0 0 0	
Primary INTR	:ON	
IRQs Activity Monitoring	:Press Enter	

▶ **VGA**

When *Enabled*, you can set the VGA awakens the system.

▶ **LPT & COM**

When this field is "ON" any activity from these devices, or their IRQ's will wake up the system.

▶ **HDD & FDD**

When this field is "ON" any activity from the HDD or the FDD will wake up the system.

▶ **PCI Master**

When you enable the PCI Master mode, any activity from one of the listed system peripheral devices wakes up the system.

▶ **Lan Resume**

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

▶ **Date (of Month)/Resume Time (hh:mm:ss)**

When RTC Alarm Resume is enabled, your can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

▶ **IRQs Activity Monitoring**

The menu on the following page (page 41) is a list of IRQ's, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

Managing The PC BIOS

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software
IRQs Activity Monitoring

		Item Help
Primary INTR	[ON]	Menu Level >>>
IRQ3 (COM 2)	[Enabled]	
IRQ4 (COM 1)	[Enabled]	
IRQ5 (LPT 2)	[Enabled]	
IRQ6 (Floppy Disk)	[Enabled]	
IRQ7 (LPT 1)	[Enabled]	
IRQ8 (RTC Alarm)	[Disabled]	
IRQ9 (IRQ2 Redir)	[Disabled]	
IRQ10 (Reserved)	[Disabled]	
IRQ11 (Reserved)	[Disabled]	
IRQ12 (PS/2 Mouse)	[Enabled]	
IRQ13 (Coprocesor)	[Enabled]	
IRQ14 (Hard Disk)	[Enabled]	
IRQ15 (Reserved)	[Disabled]	

3.8. PNP/PCI CONFIGURATION

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

		Item Help
PnP OS Installed	: No	Menu Level > 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.
Reset Configuration Data	:Disabled	
Resources Controlled By	:Auto (ESCD)	
x IRQ Resources	:Press Enter	
x DMA Resources	:Press Enter	
PCI/VGA Palette Snoop	:Disabled	
Assign IRQ For VGA	:Enabled	
Assign IRQ For USB	:Enabled	

PnP OS Installed

This item allows you to determine if a PnP OS is installed or not.

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.

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PCI/VGA Palette Snoop

The VGA Palette is the set of colors a Video Card uses when it is in the 256-color mode. To determine which colors are being used, some devices need to be able to "look" at the VGA Palette. If this option is "Enabled" then these devices will be able to "look" at the Palette. This option is only used in very rare circumstances and the default setting is therefore "Disabled." *We recommend that you retain this default setting at ALL times.*

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 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

The PC Health Status menu allows you to monitor the health status of your PC system. You can select a field of interest and monitor its status.

CMOS Setup Utility - Copyright (C) 1984 - 2001 Award Software PC Health Status		
Current CPU Temp.	40°C/104°F	Item Help
Current CPU Fan Speed	4687RPM	Menu Level >
Current Chassis Fan Speed	0RPM	
Vcore	1.63V	
2.5V	2.58V	
3.3V	3.30V	
5V	5.10V	
12V	12.48V	

Current CPU Temp.

This field will show you the current CPU temperature

Current CPU FAN Speed

This field will show you the current CPU Cooling FAN1 speed.

Current Chassis FAN Speed

This field will show you the current Chassis Fan speed.

Vcore

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

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3.10. Frequency/Voltage Control

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

Auto Detect Dimm/PCI Clk	:Enable	Item Help
Spread Spectrum	:Disabled	Menu Level >
CPU Host/PCI Clock	:133/33MHz	

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).

Spread Spectrum

When Spread Spectrum is enabled, the EMI radiation on this mainboard will be reduced.

CPU Host / PCI Clock

According to different CPU installed on this mainboard, you will see different clock frequency available for your choice in this field. This field allows to select the CPU FSB and PCI clock speed.

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 <li style="background-color: black; color: white; padding: 2px;">Load Optimized Values Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving |
|---|---|

ESC : Quit ← ↑ ↓ → : Select Item

Load Optimized Defaults

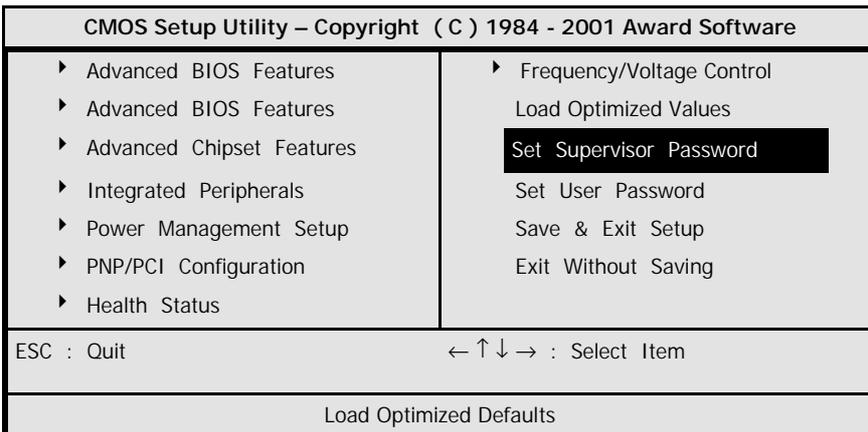
Managing The PC BIOS

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 default values from the BIOS default table.

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



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:

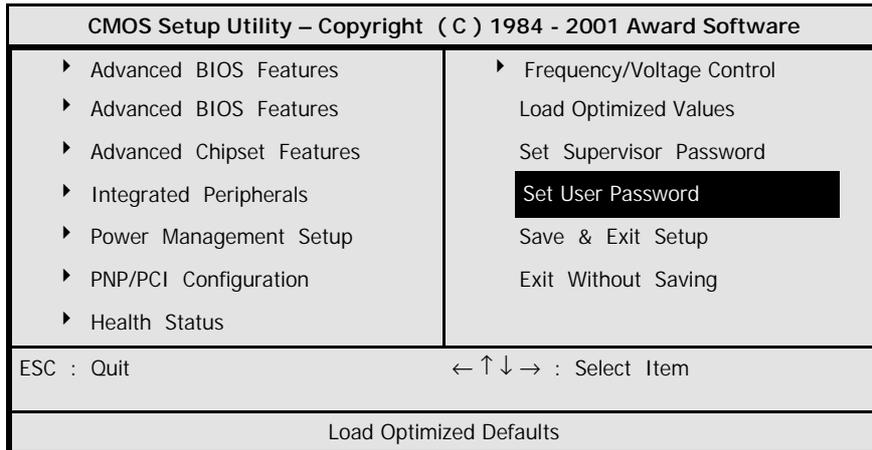
If you want to change any BIOS setting, you will have to key-in the Supervisor Password so that you can start the BIOS CMOS Setup Utility and change the system setting.

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.

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3.13. Set User Password



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.

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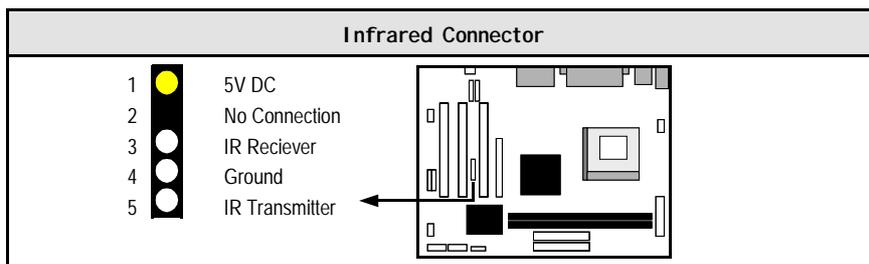
Appendix A: Optional Items

The two connectors listed in the appendix are Manufacture Options i.e. boards that come with these connectors are Made-To-Order. An end user cannot add them on at a later date. If you are a reseller or a system integrator you must pre-order these items with the manufacturer. If you are an end user and you would like to have these functions on the board please speak to your retailer.

A.1 Standard Infrared Connector

Connector: CN 12
Type: 5 pin

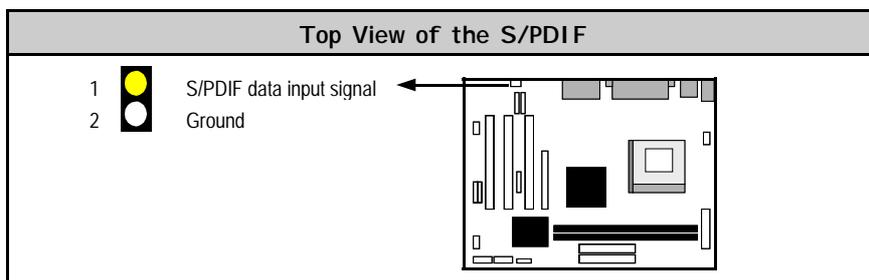
The SIR connector supports an optional wireless transmitting and receiving module. You must configure UART 2 to select whether UART 2 is directed for use with COM 2 or IrDA.



A.2 S/PDIF Connector

Connector: CN 36
Type: 2 pin

The Sony Phillips Digital Interface, S/PDIF, connector is a digital interface that can be used to improve the quality of the sound output from your system.



Managing The PC BIOS

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