

Installation Procedures

The mainboard has several user-adjustable jumpers on the board that allow you to configure your system to suit your requirements. This chapter contains information on the various jumper settings on your mainboard.

To set up your computer, you must complete the following steps:

- Step 1 - Set system jumpers
- Step 2 - Install system RAM modules
- Step 3 - Install the Central Processing Unit (CPU)
- Step 4 - Install expansion cards
- Step 5 - Connect ribbon cables, cabinet wires, and power supply
- Step 6 - Set up BIOS software (see Chapter Three)
- Step 7 - Set up supporting software tools



WARNING: Excessive torque may damage the mainboard. When using an electric screwdriver on the mainboard, make sure that the torque is set to the allowable range of 5.0 ~ 8.0kg/cm.

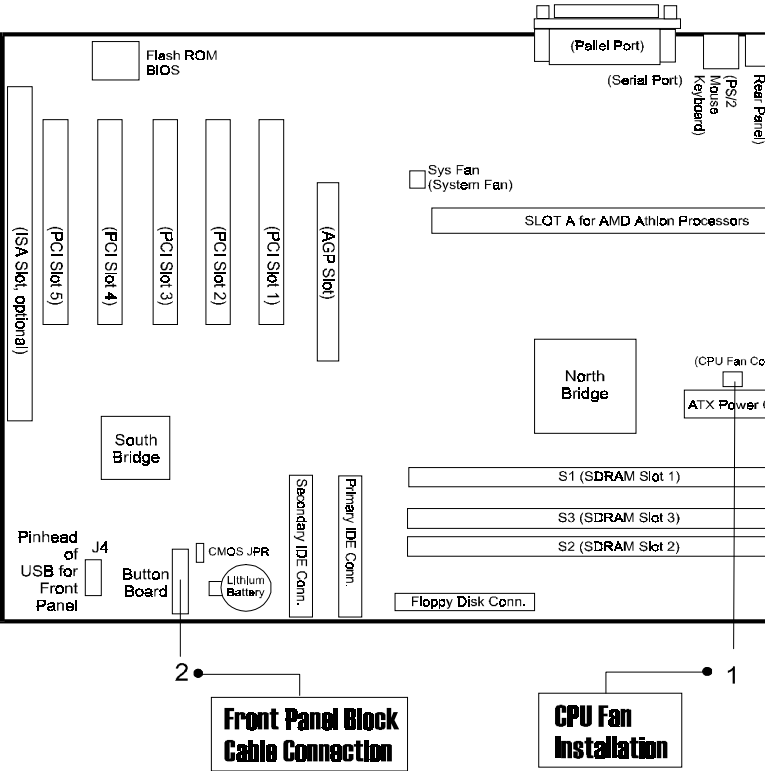
Mainboard components contain very delicate Integrated Circuit (IC) chips. To prevent static electricity from harming any of the mainboard's sensitive components, you should follow some precautions whenever working on the computer:

1. Unplug the computer when working on the inside.
2. Hold components by the edges and try not to touch the IC chips, leads, or circuitry.
3. Wear an anti-static wrist strap which fits around the wrist.
4. Place components on a grounded anti-static pad or on the bag that came with the component whenever the components are separated from the system.



QUICK REFERENCE

*This Chapter is intended to aid quick and easy installation.
In the event that more detailed information is required, please
consult the Installation Procedures Chapter.*

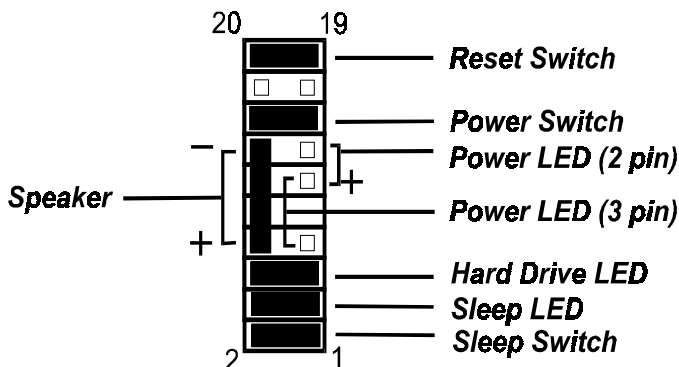


1). CPU Fan Installation

This connector is linked to the CPU fan. When the system is in suspend mode, the CPU fan will turn off; when it reverts back to full on mode, the fan will turn back on. Without sufficient air circulation, the CPU may overheat and cause damage to both the CPU and the mainboard.

Damage may occur to the mainboard and/or the CPU fan if these pins are incorrectly used. These are not jumpers, do not place jumper caps over these pins.

2). Front Panel Block Cable Connection



3). Load BIOS Setup Default

Load Fail-Safe Defaults

BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance. The OEM manufacturer may change the defaults through MODBIN before the binary image burns into the ROM.

Load Optimized Defaults

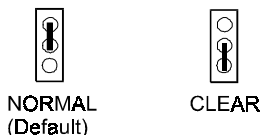
Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

5). System Jumper

The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data:

1. Turn off your computer.
2. Move this jumper cap to CLEAR (figure below right).
3. Move the jumper cap to NORMAL after a few seconds (figure below left).
4. Turn on your computer.
5. Hit Delete key during boot.
6. After BIOS Setup menu appears, re-enter user preferences.

CMOS JPR (CMOS Clearance Function)

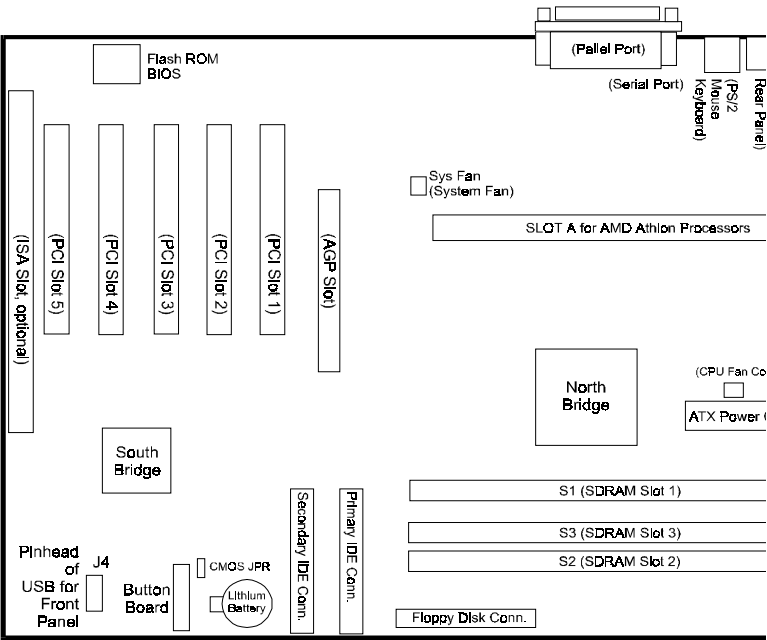


6). How to Upgrade BIOS

1. Format a bootable system floppy diskette by typing the command **format a:/s** in command mode.
2. Visit the the web site of the vendor and visit the BIOS Update page in the related Technical Support section.
3. Select the BIOS file you need and download it to your bootable floppy diskette.
4. Insert the bootable diskette containing the BIOS file into the floppy diskette drive.
5. Assuming that the floppy diskette drive is A, reboot the system by using the A: drive. At the A: > prompt, run the BIOS upgraded file by executing the Flash BIOS utility and the BIOS file with its appropriate extension.

Do not turn off or reset the computer during the flash process or if there is a problem.

Mainboard Layout



ONBOARD MARK	MEANING	PAGE
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Jumpers

CMOS JPR	Clear CMOS Data	2 - 8
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Slots

S1/2/3	DIMM Memory Module Support	2 - 11
SLOT A	Slot for AMD Athlon Processors	2 - 10
PCI Slot 1/2/3/4/5	PCI Bus Expansion Slot (32-bit)	2 - 12
J21 (optional)	ISA Bus Expansion Slot (16-bit)	2 - 12
AGP Slot	Slot for AGP Add-On Card	2 - 12

Connectors

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1). Set System Jumper

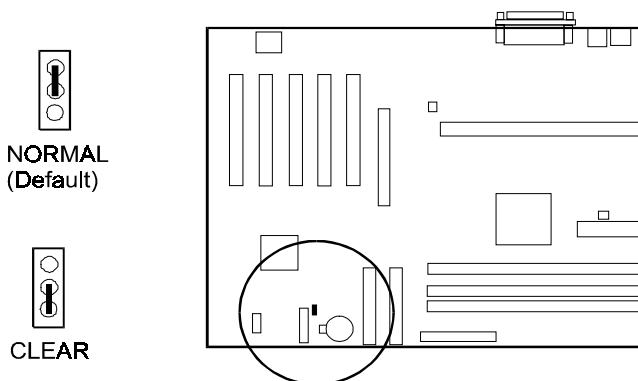
Jumpers are used to select the operation modes for your system. Some jumpers on the board have three metal pins with each pin representing a different function. To **set** a jumper, a black cap containing metal contacts is placed over the jumper pin/s according to the required configuration. A jumper is said to be **shorted** when the black cap has been placed on one or two of its pins. The figure of jumper setting that used in this page is shown below:



Jumper cap like above

CMOS Clearance Function: CMOS JPR

The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1) Turn off your computer, (2) Move this jumper to CLEAR, (3) Move the jumper back to NORMAL, (4) Turn on your computer, (5) Hold down the <Delete> key during bootup and enter BIOS Setup to re-enter user preferences.



2). Install RAM Modules

RAM Module Configuration

The mainboard provides three onboard DIMM sockets allowing 3.3V (unbuffered) SDRAM DIMM modules. Either 8, 16, 32, 64, 128, or 256MB DIMM can be installed on these three sockets. The maximum total memory supported is up to 768MB.

<i>Socket</i>	<i>Acceptable Memory Module</i>		<i>Total</i>
1	8, 16, 32, 64, 128, 256MB 168-pin 3.3V SDRAM	x 1	
2	8, 16, 32, 64, 128, 256MB 168-pin 3.3V SDRAM	x 1	
3	8, 16, 32, 64, 128, 256MB 168-pin 3.3V SDRAM	x 1	
	<i>Total System Memory Allowed Up to 768MB</i>	=	



NOTE: This mainboard supports DIMMs with access speeds of 12ns, 10ns, or faster.

Install and Remove DIMMs

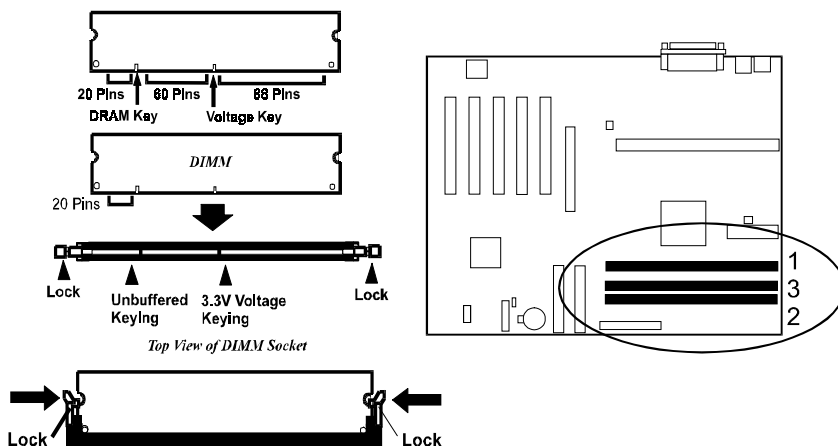
SDRAM DIMM modules have different pin contact on each side and therefore have a higher pin density. Complete the following procedures when installing DIMMs:



NOTE: Do not use memory modules with more than 18 chips per module. Modules with more than 18 chips exceed the design specifications of the memory subsystem and will be unstable. The notch on the DIMM module will shift between left, center, or right to identify the type and also to prevent the wrong type from being inserted into the DIMM slot on the mainboard. Ask your retailer for the specifications before purchasing.

1. Locate the DIMM slots on the mainboard.
2. Install the DIMM straight down into the DIMM slot with both hands.
3. The clip on both ends of the DIMM slot will close up to hold the DIMM in place when the DIMM touches the slot's bottom.

Chapter 2 Installation Procedures



Press the clips with both hands to remove the DIMM.

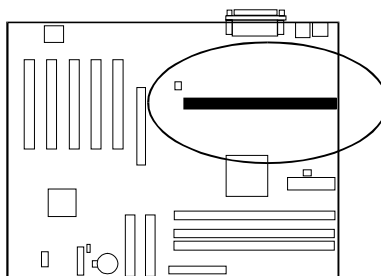
3). Install the CPU

The AMD Athlon CPU module resides in the SLOT A socket on the motherboard. The Retention Mechanism Assembly that is foldable for saving space when shipping and packing had been installed on the board by the manufacturer. Please following the steps introduced below to complete the CPU installation.

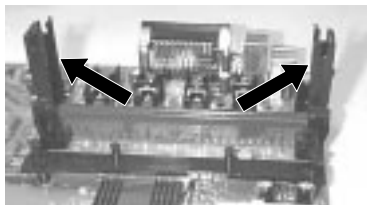
**CAUTION:**

1. Always turn the system power off before installing or removing any device.
2. Always observe static electricity precautions. See "Handling Precautions" at the start of this manual.
3. Inserting the chip incorrectly may damage the chip.

1. Locate SLOT A on the mainboard.



2. Pull out two columns of the Retention Mechanism Assembly upward to the right position.



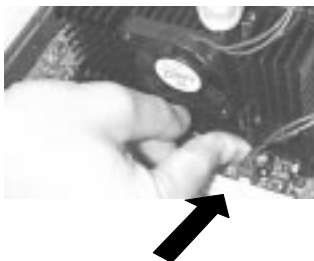
3. Place the CPU module downward along with the columns of the Retention Mechanism Assembly until it is inserted the SLOT A firmly.



4. Pull the buttons outwards until click to the right positions.

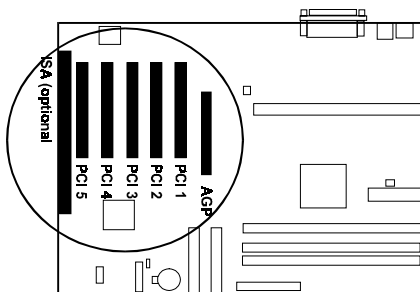


5. Hook the Heatsink Top Support to the Heatsink Support Base to affix the CPU module.



4). Install Expansion Cards

This section describes how to connect an expansion card to one of your system's expansion slots. Expansion cards are printed circuit boards that, when connected to the mainboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities. The mainboard features **five PCI bus, one ISA bus and, and** one optional ISA bus expansion slots.



CAUTION: Make sure to unplug the power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both the mainboard and expansion cards.

Always observe static electricity precautions.

Please read “Handling Precautions” at the start of this manual.

To install an expansion card, follow the steps below:

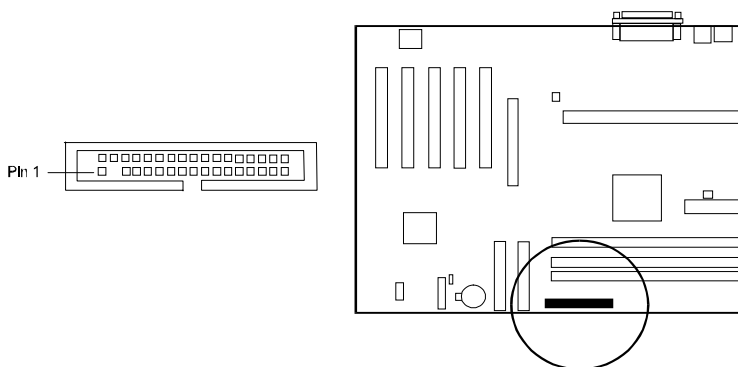
1. Remove the computer chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the computer chassis. Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the computer chassis. Keep the slot cover mounting screw nearby.
3. Holding the edge of the peripheral card, carefully align the edge connector with the expansion slot.
4. Push the card firmly into the slot. Push down on one end of the expansion card, then the other. Use this “rocking” motion until the add-on card is firmly seated inside the expansion slot.

5. Secure the board with the mounting screw removed in Step 2. Make sure that the card has been placed evenly and completely into the expansion slot.
6. Replace the computer system's cover.
7. Setup the BIOS if necessary.
8. Install the necessary software drivers for the expansion card.

5). Connect Devices

Floppy Diskette Drive Connector: Floppy Disk

This connector provides the connection with your floppy disk drive. The red stripe of the ribbon cable must be the same side with the Pin 1.

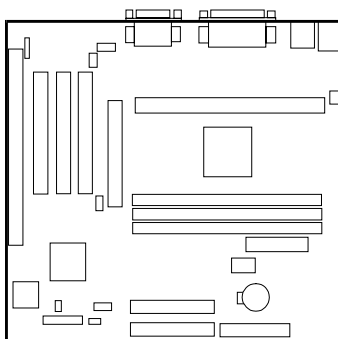


IDE HDD Device Connectors: Primary IDE, Secondary IDE

These two connectors are used for your IDE hard disk drives, CD drives, LS-120 drives, or IDE ZIP drives. The red stripe of the ribbon cable must be the same side with the Pin 1.



+12V	10	+5V
5V_VR	9	+5V
PWR_GOOD	8	-5V
GND	7	GND
+5V	6	GND
GND	5	GND
+5V	4	-PWR_ON
GND	3	GND
+3.3V	2	-12V
+3.3V	1	+3.3V



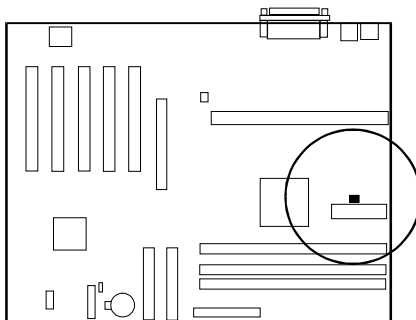
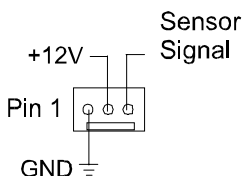
The list on the next page are some recommended power supplies at the time of this printing:

Turbo-Cool 300ATX
American Media CWT-300ATX
Emacs AP2-5300F-RV2
Astec SA302-3515-980
Enlight HPC-250G2, A0-01

Sparkle FSP250-61GN
Enhance ATX-1125B
FSF Group Inc FSP 250-61GN
DELTA ELECT INC 200PB-103A
POWERMAN FSP300-60GT

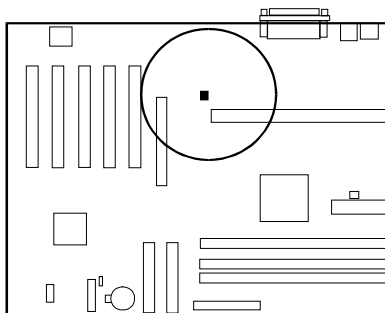
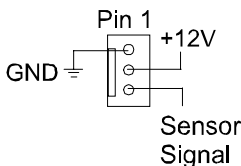
CPU Fan Connector: J9

This connector is linked to the CPU fan. When the system is in sleep mode, the CPU fan will turn off; when it reverts back to full-on mode, the fan will turn back on.



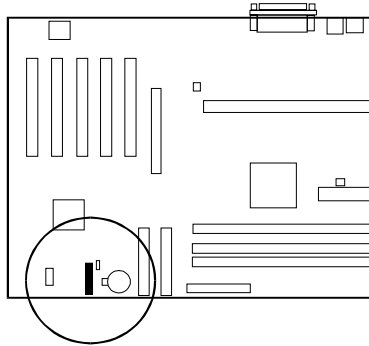
System Case Fan Connector: Sys Fan

This connector is linked with the cooling fan on your system case to lower the system temperature.

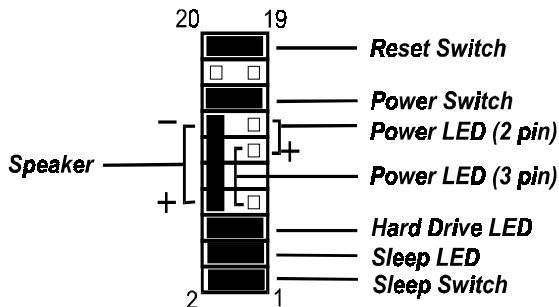


Front Panel Block Connector: Button Board

This block connector concludes the connectors for linking with hard drive LED, power LED, power switch, speaker, sleep LED, and sleep switch on the front panel of the system case. Please identify polarities of plug wires for the LEDs. Please ask vendor about this information when you buy them and install the system by yourself. The polarities of plug wire about these buttons will not affect the function.

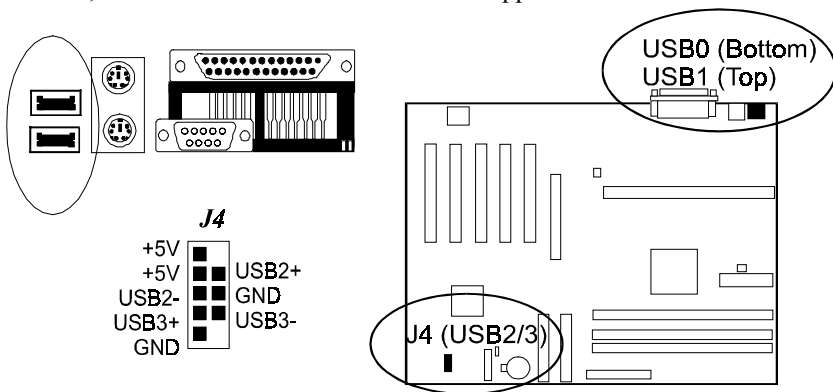


The pin connections of this button board block connector are shown in the diagram below:



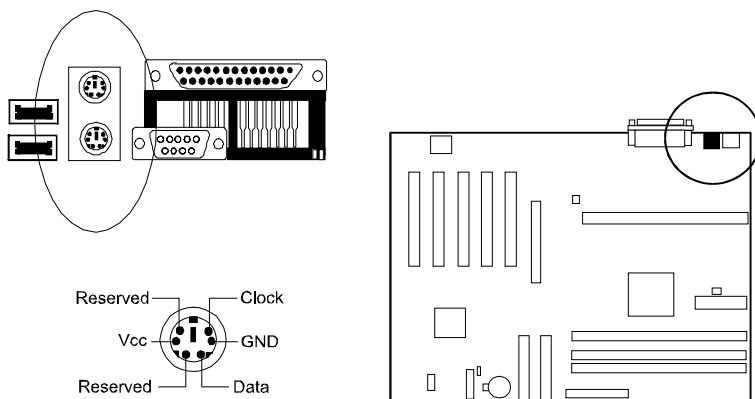
Universal Serial Bus Connectors: USB0, USB1, J4

These two connectors, USB0 (bottom)/USB1 (top), that integrated on the edge of the board are used for linking with USB peripheral devices; moreover, a pinhead, J4, was equipped for you to connect USB devices on the front panel. Your operating system must support USB features, such as MS Windows 98, MS Windows 95 OSR2.5 with USB Supplement.



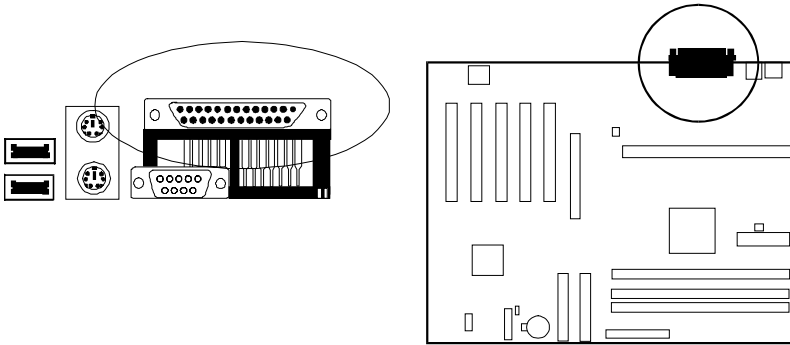
PS/2 Keyboard and Mouse Connector: KB, MS

These two 6-pin female connectors are used for your PS/2 keyboard and PS/2 mouse.



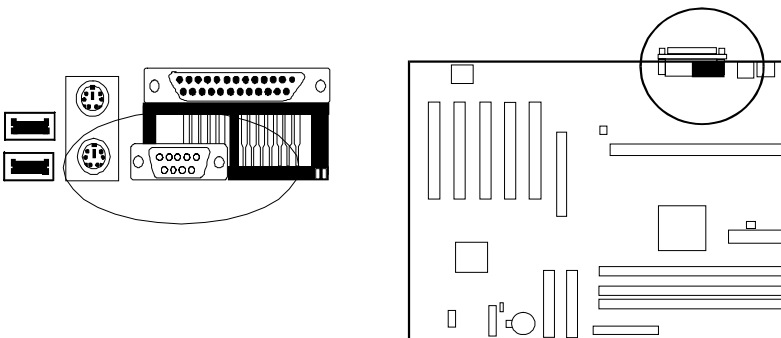
Printer Connector: Parallel Port

This 25-pin D-Sub female connector is attached to your printer.



Serial Port Connector: Serial Port

The 9-pin D-sub male connector allows you to connect with your devices that use serial ports, such as a serial mouse or a modem.



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