

Installation Procedures

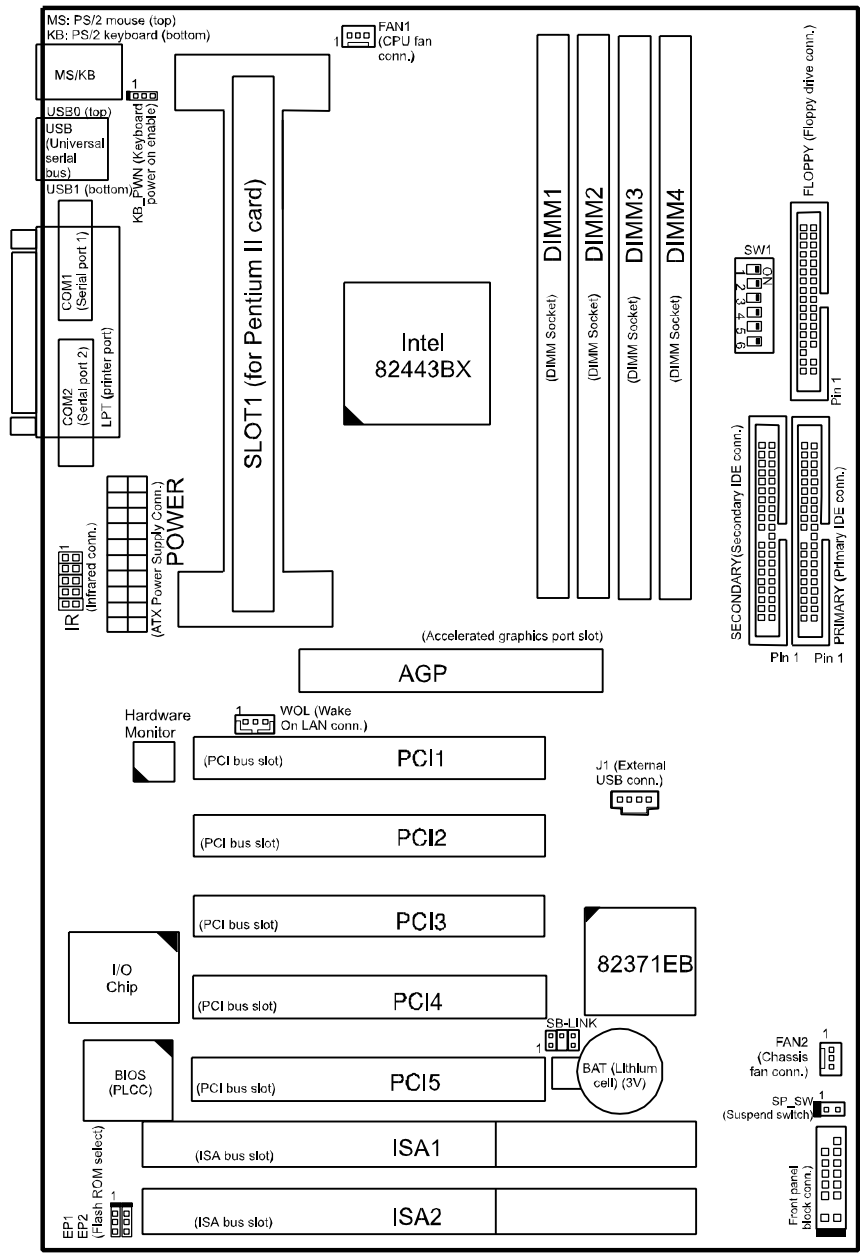
The VB-601 has several user-adjustable jumpers/switches on the board that allow you to configure your system to suit your requirements. This chapter contains information on the various hardware settings on your motherboard.

To set up your computer, you should follow these installation steps:

- Step 1 - Set system jumpers/switches
- Step 2 - Install memory modules
- Step 3 - Install the CPU cartridge
- Step 4 - Install expansion cards
- Step 5 - Connect devices
- Step 6 - Set up BIOS feature
- Step 7 - Set up software utilities

CAUTION: If you use an electric drill to install this motherboard on your chassis, please wear a static wrist strap. The recommended electric drill torque is from 5.0 to 8.0 kg/cm to avoid damaging the chips' pins.

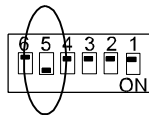
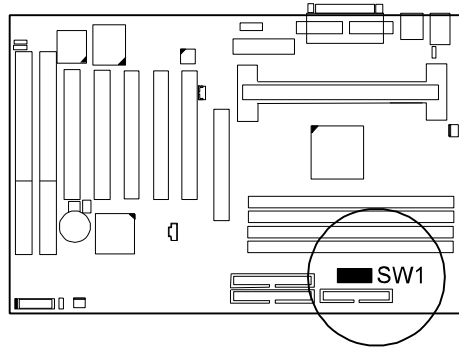
Motherboard Layout



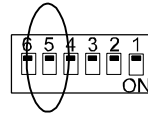
1). Set System Jumpers/Switches

Clear CMOS: SW1-5

The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1). Turn off your computer, (2). Enable it, (3). Turn on your computer, (4). Hold down the Del key during boot up and enter BIOS setup to re-enter user preferences, (5). Turn off the computer, (6). Disable the Clear CMOS feature, (7). Turn on the computer.



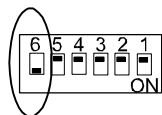
Enable (Clear CMOS)



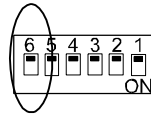
Disable (Default)

Clear Password: SW1-6

This switch allows you to enable or to disable the password settings. You may need to adjust switch if you forget your password. To clear the password setting: (1) Turn off your computer, (2) Enable this feature by setting the SW1-6 to On position, (3) Turn on your computer, (4) Hold down the Delete key when boots and enter BIOS Setup to re-enter user preferences, (5) Turn off your computer, (6) Disable the Clear Password feature by setting the SW1-6 to Off position, (7) Turn on your computer for the new settings to take effect.



Enable (Clear Password)

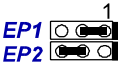


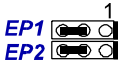
Disable (Default)

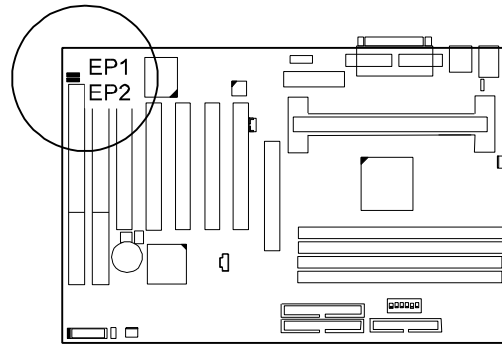
Flash ROM Type Selection: EP1, EP2

These two jumpers allow you to configure the type of flash ROM chip. This jumper setting is correct by manufactory default. If you want to know the flash ROM type installed on this motherboard, remove the sticker from the chip to see its type.

2MB:


MXIC 28F2000TPC 


SST 29EE020
ATMEL AT29C020
AMD AM29F002NT 

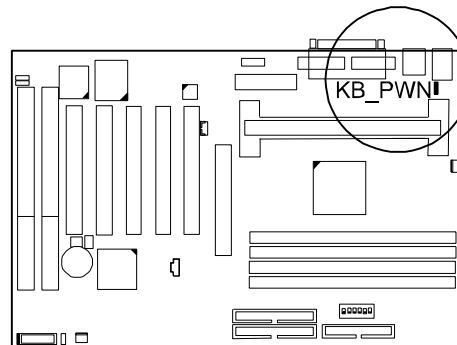


Keyboard and Mouse Power-On Feature: KB_PWN

The 3-pin jumper provides you with the capability to power on the system by simply touching your keyboard or mouse. To enable this feature, you have to set this jumper and the related BIOS feature, **POWER ON Function**, Page 44, that introduced in **Integrated Peripherals** section in Chapter 3.

 Enable

 Disable
(Default)



NOTE: To use this function and WOL (mentioned in Page 21) together, your power supply should have a current of 1A at 5 V Stand-by.

2). Install RAM Modules

RAM Module Configuration

PC100 modules may have a serial EEPROM containing a number of critical timing parameters and data regarding the chip and module vendor. This guarantees that the BX chip set will properly recognize the module by reading all of the important timing parameters specified in the EEPROM over the serial presence detect interface. The module supplier must understand these differences in detail and provide the correct information so that the BX chip set will be programmed properly to control the memory.

This motherboard provides four onboard DIMM sockets for allowing 3.3V (unbuffered) SDRAM DIMM modules. Either 8, 16, 32, 64, 128MB, or 256*MB DIMM can be installed on these four sockets. The maximum total memory supported is up to 1GB*.

<i>Socket</i>	<i>Accepted Memory Module</i>		<i>Total Memory</i>
1	8/16/32/64/128/256MB 168-pin 3.3V SDRAM	x1	
2	8/16/32/64/128/256MB 168-pin 3.3V SDRAM	x1	
3	8/16/32/64/128/256MB 168-pin 3.3V SDRAM	x1	
4	8/16/32/64/128/256MB 168-pin 3.3V SDRAM	x1	

Total System Memory allowed up to 1GB =

NOTE:

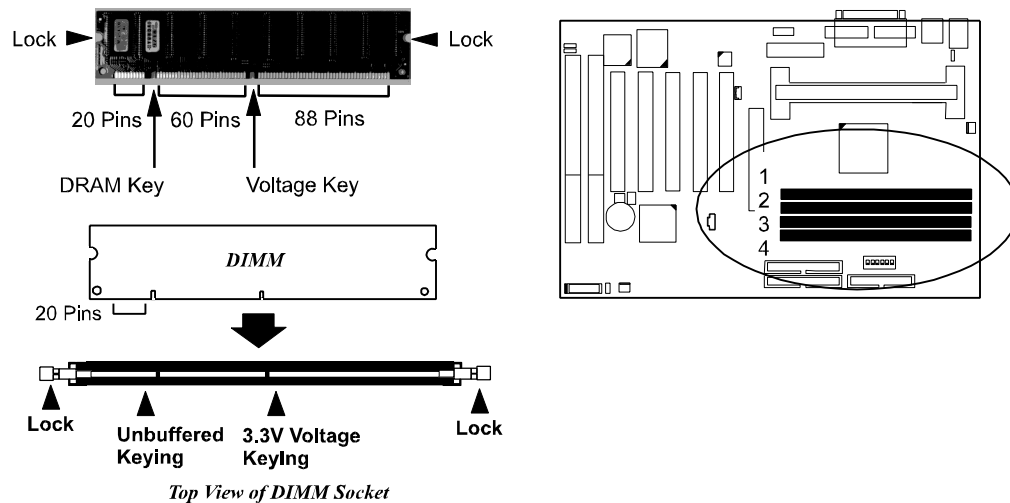
- * A RAM module of this size was not available for testing at time of printing.
- This board only supports 3.3V (unbuffered) SDRAM modules.
- This motherboard supports DIMMs with data access time of 12ns, 10ns, 8ns or less. ECC memory and parity check are also supported.
- If DIMM runs at the speed of 100MHz, it must meet the PC100 Specification.
- Please use the same memory sizes of DIMM on each socket for better performance.

Install and Remove DIMMs

This motherboard supports 100MHz SDRAM DIMMs; when the system frequency set to 100MHz, PC100-compliant SDRAM should be used.

Complete the following procedures to install DIMMs:

1. Locate the DIMM slots on the motherboard.



2. Install the DIMM straight down into the DIMM slot with both hands.
3. The clips of the slot will close up to hold the DIMM in place when the DIMM touches the slot's bottom.



Press the clips with both hands to remove the DIMM.

3). Install the CPU

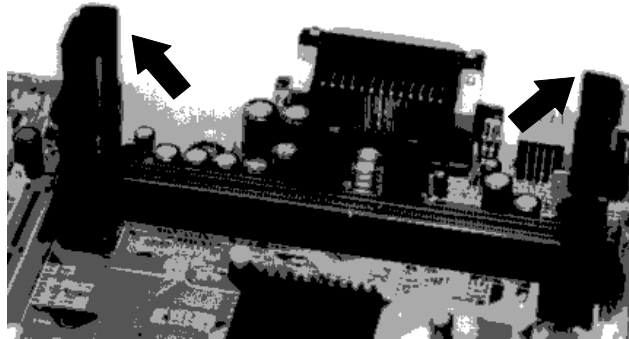
Two options of Retention Mechanism Assembly are offered to install your CPU on this motherboard. One is installed on the motherboard by the manufacturer. The assemblies are foldable for saving space when shipping and packing.

The other option is that the non-foldable Retention Mechanism Assembly (two pieces) and two Retention Mechanism Attachment Mount (two pieces) that packed in a plastic bag come with the board. You need to mount them before install the CPU module.

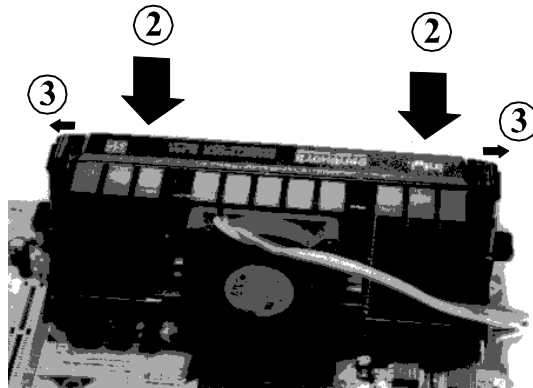
This section introduces you how to install these devices.

1). Install with Foldable Retention Mechanism Assembly

1. Pull out two sets of the Retention Mechanism Assembly upward to the right position.



2. Insert the CPU module onto the SLOT1 along the Retention Mechanism Assembly.

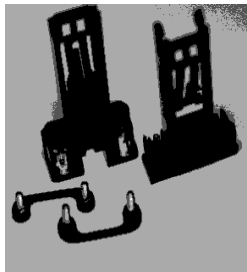


3. Pull the buttons outwards until click to the right positions.

II). Install with Non-Foldable Retention Mechanism Assembly

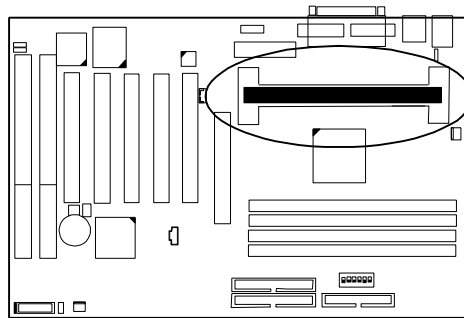
1. Unpack the plastic bag. Take out the Retention Mechanism Assembly (two pieces) and Retention Mechanism Attachment Mount (two pieces).

**Retention
Mechanism
Attachment
Mount**

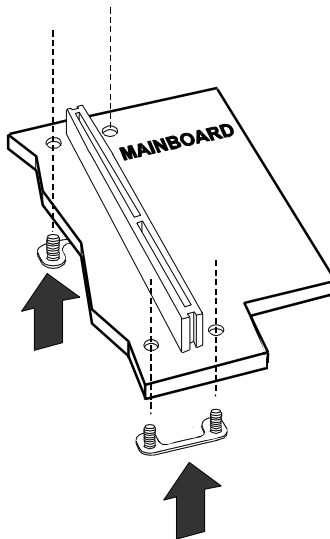


**Retention
Mechanism
Assembly**

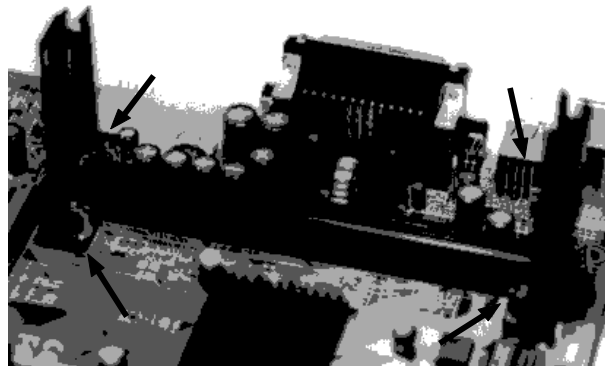
2. Locate SLOT1 on the motherboard.



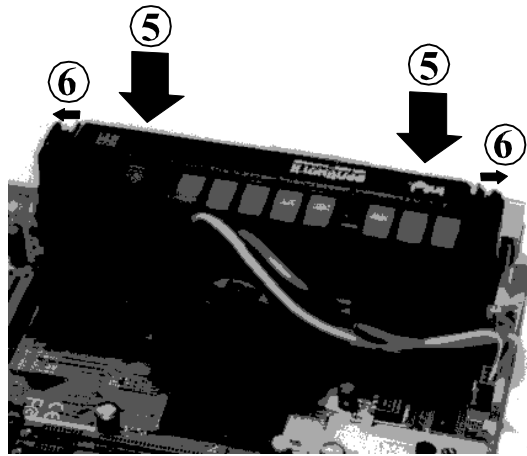
3. Install two Retention Mechanism Attachment Mounts on the board.



4. Place the Retention Mechanism Assembly on the board, on top of the Retention Mechanism Attachment Mounts.
Affix the Retention Mechanism Assembly with four screws.
(As the arrows point.)



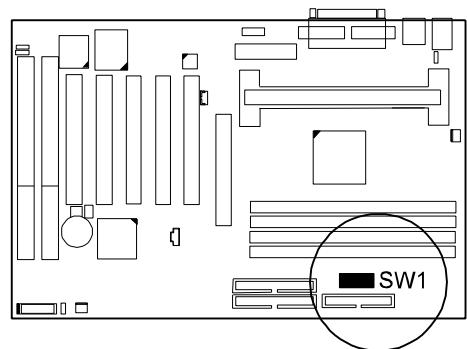
5. Insert the CPU module onto the SLOT1 along the Retention Mechanism Assembly.



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

CPU Internal Frequency: SW1-1, SW1-2, SW1-3, SW1-4

These four switches are used to decide the internal frequency of the CPU.

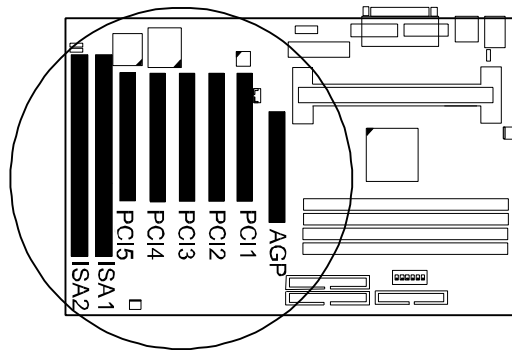


Ratio	Bus Frequency = 100MHz	Bus Frequency = 66MHz	Switches Settings
3.5 x	350MHz	233MHz	
4 x	400MHz	266MHz	
4.5 x	450MHz	300MHz	
5 x		333MHz	

4). Install Expansion Cards

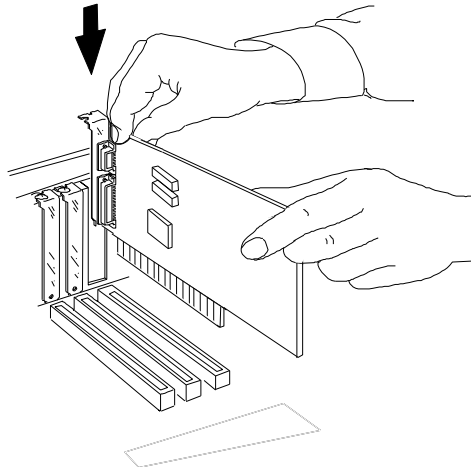
This section describes how to connect an expansion card to one of your system's expansion slots. Expansion cards are printed circuit boards that, when connected to the motherboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities. This motherboard features **one 32-bit AGP bus**, **two 16-bit ISA bus**, and **five 32-bit PCI bus** expansion slots. (PCI5 is shared with ISA2.)

CAUTION: Always turn the system power off before installing or removing any device and always observe static electricity precautions.



To install an expansion card, do the following:

1. Remove the chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the chassis.
Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the chassis. Keep the slot cover mounting screw nearby.
3. Holding the edge of the expansion card, carefully align the edge connector with the expansion slot. (See the figure below.)
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 card is firmly seated inside the 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.



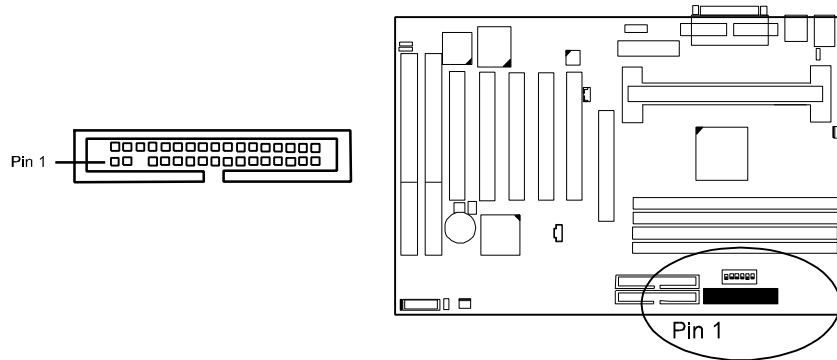
5). Connect Devices

Connectors to Internal Devices

Floppy Diskette Drive Connector: FLOPPY

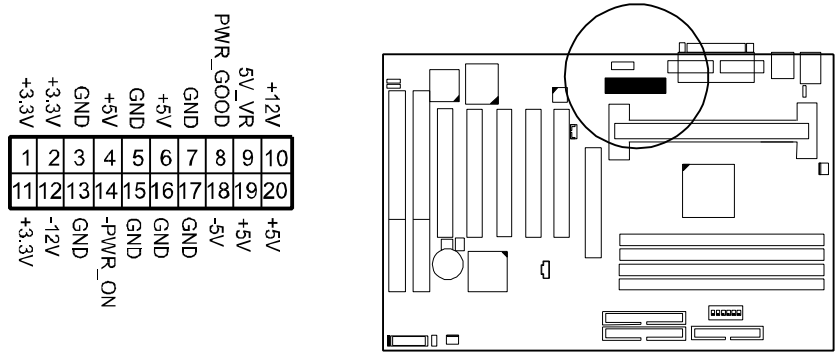
This connector provides the connection with your floppy disk drive.

The red stripe of the ribbon cable must be the same side with the Pin 1.



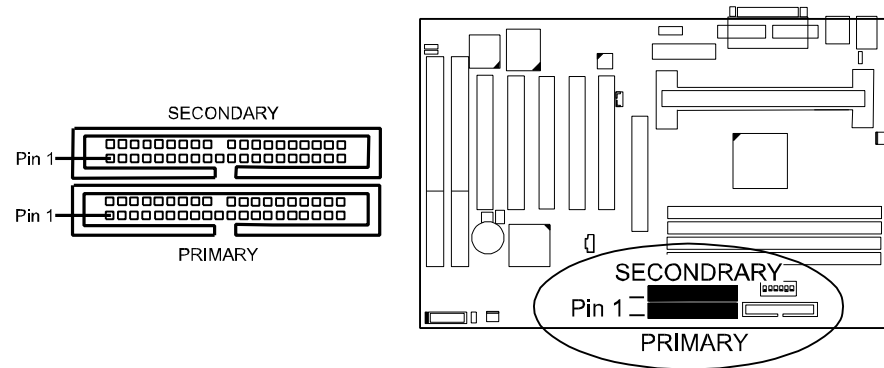
ATX Power Connector: POWER

This connector is connected to the ATX power supply. This board does not provide onboard 3.3V support; therefore, your ATX power supply must provide 3.3V voltage.



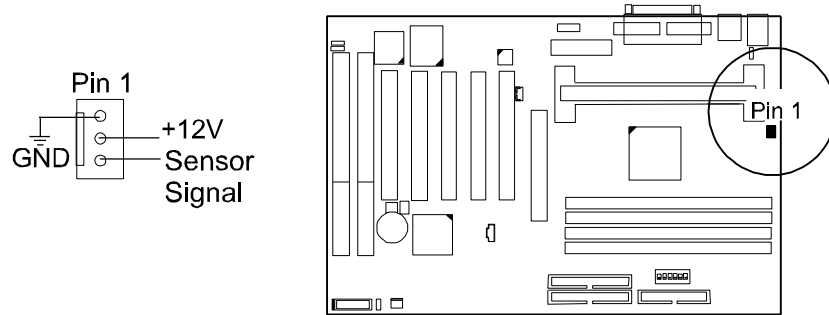
IDE HDD Device Connectors: PRIMARY, SECONDARY

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.



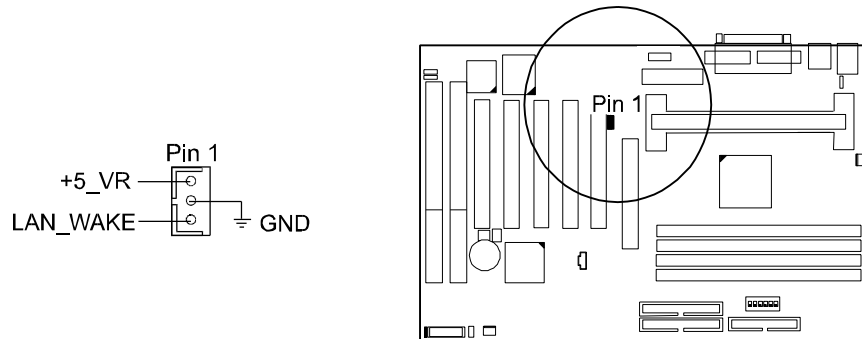
CPU Fan Connector: FAN1

This connector is linked to the CPU fan for cooling the processor temperature. Please read the CPU fan installation guide before connection.



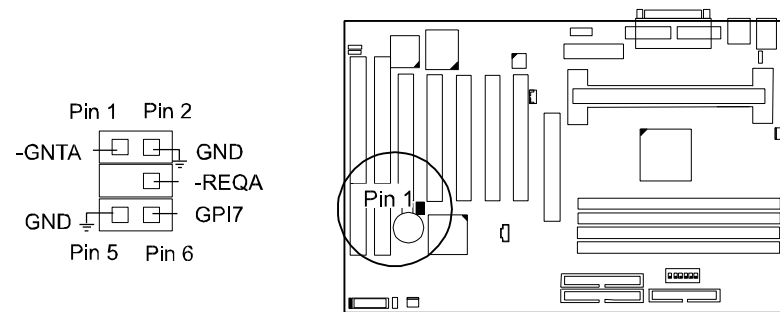
Wake-On-LAN Connector: WOL

This 3-pin connector allows remote LAN servers to manage the system that installed this motherboard via a network adapter which also supports WOL. When you install an adapter with WOL connector, please read the network adapter card's installation guide for details.



PCI Audio Card Connector: SB_LINK

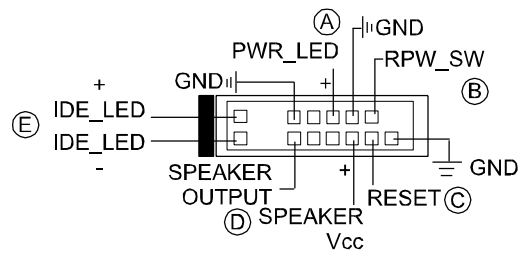
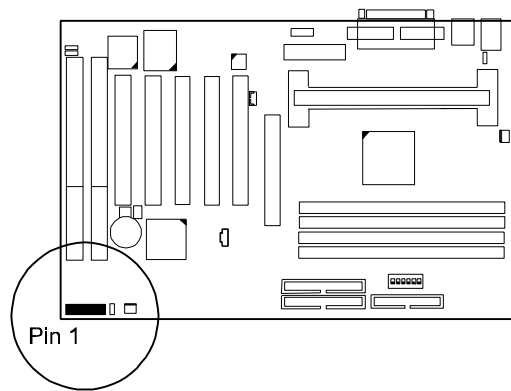
This 6-pin male connector allows you to connect to your Creative®'s sound card or compatible.



Connectors to System Case

Front Panel Block Connector: F_PNL

This block connector includes: PWR_LED, SPK, RPW_SW, IDE_LED, and RST connectors.



PWR_LED (A) – 3-pin male

The system power LED lights when the system is powered on.

RPW_SW (B) – 2-pin male

This connector is connected with the remote power (soft power) switch.

Pushing this switch will turn off and on the system power instead of the power switch on the power supply.

RST (C) – 2-pin male

This connector connects to the case-mounted reset switch for rebooting the system without having to turn off power switch. This is a preferred method of rebooting in order to prolong the life of the system's power supply. It allows soft power off if the operating systems support it such as MS Windows 95.

SPK (D) – 4-pin male

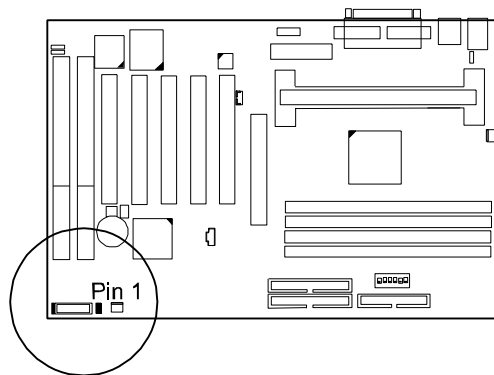
This connector connects with the case-mounted speaker.

IDE_LED (E) – 2-pin male

is connected IDE device indicator.

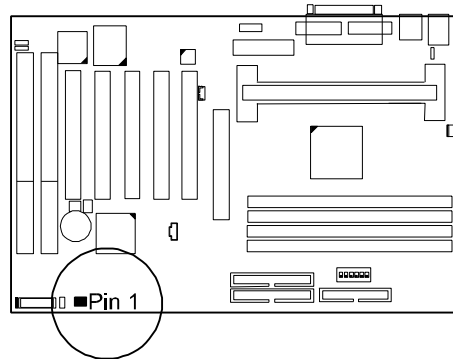
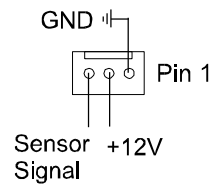
Suspend Switch Connector: SP_SW

This 2-pin male connector allows you to connect to suspend switch on the front panel.



System Case Fan Connector: FAN2

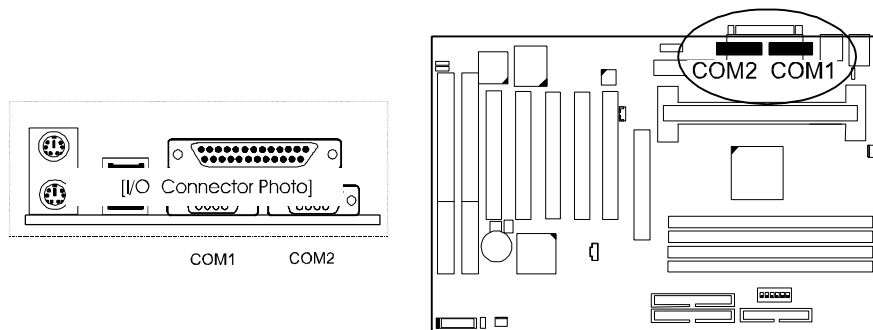
This 3-pin connector links to your cooling fan on the system case to lower the system temperature.



Connectors to External Devices

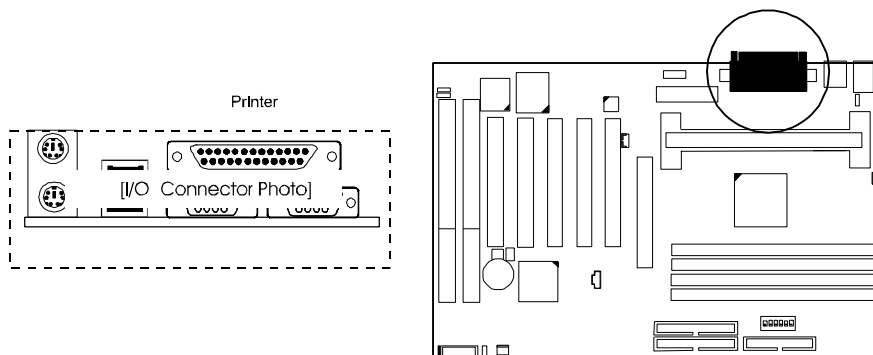
Serial Port Connectors: COM1, COM2

These two 9-pin D-Sub male connectors allow you to connect devices that use serial ports, such as a serial mouse or a modem.



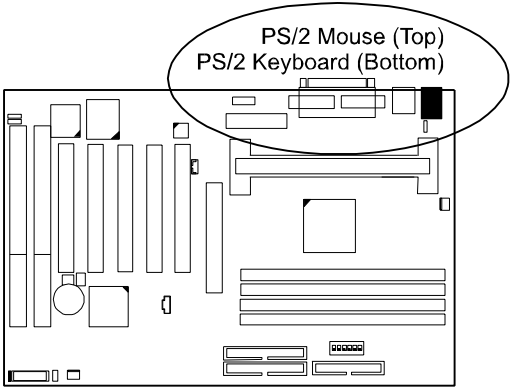
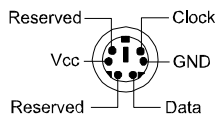
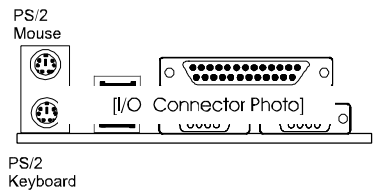
Printer Connector: LPT

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



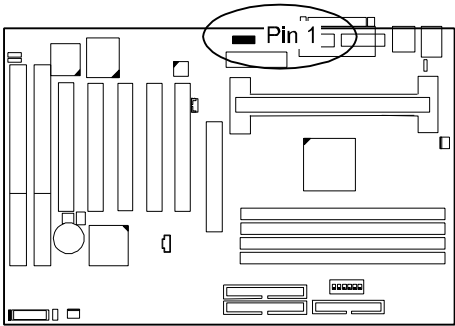
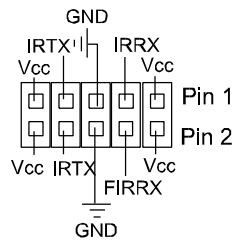
PS/2 Keyboard and Mouse Connector: KB/MS

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



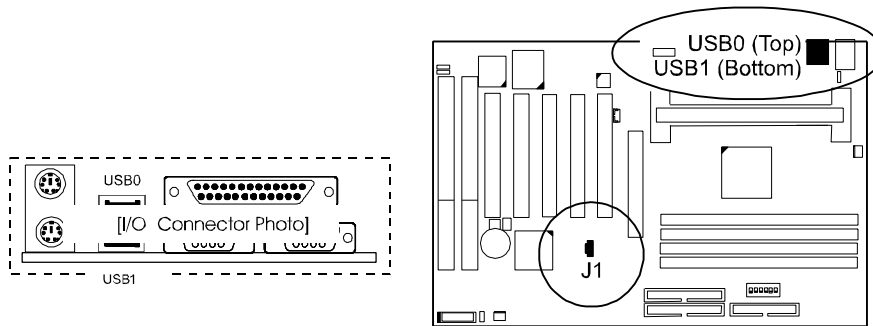
Infrared Connector: IR

An optional bracket with 9-pin D-Sub female connector is used to link to your IR device.



Universal Serial Bus Connectors: USB0, USB1, J1

These two connectors that integrated on the edge of the board are used for linking with USB peripheral devices. Also, this board provides an manufacturing optional connector J1 for linking with the USB socket on the front panel of some system cases. If this connector is onboard and is used, the USB0 connector is disabled. Your operating system must support USB features, such as MS Windows 98, MS Windows 95 OSR2.5 an USB Supplement.



The figure below is the pin assignment of the onboard manufacturing optional J1 connector.

