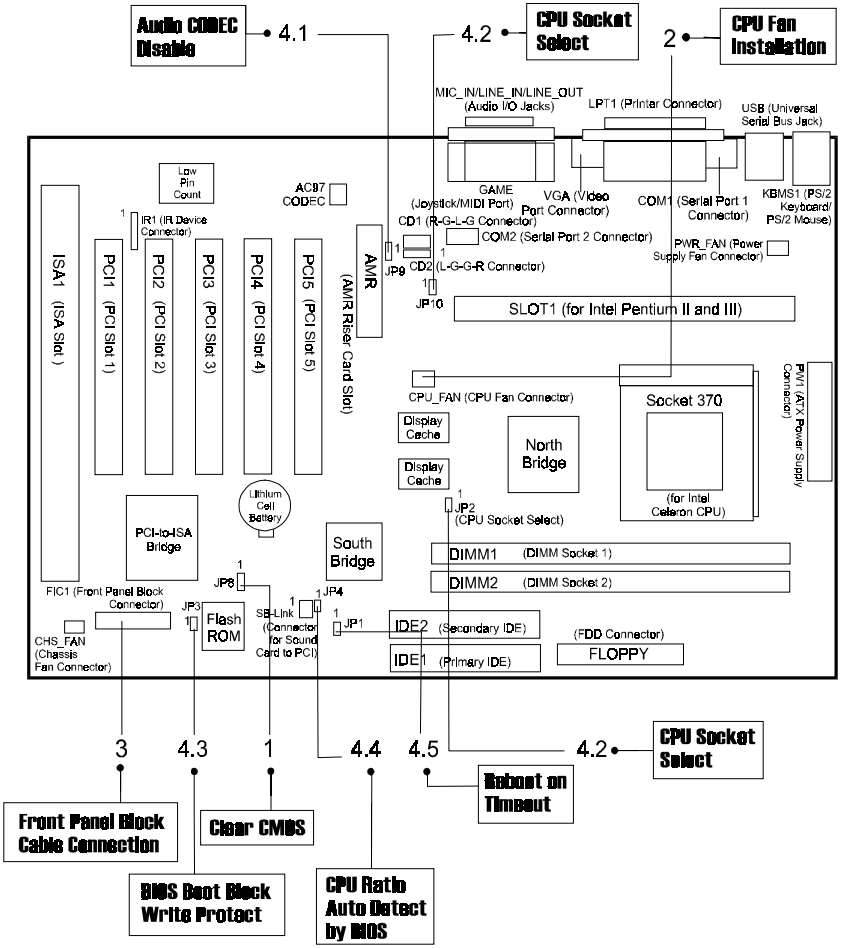
Installation Procedures

Before setting up the computer, please prepare all components such as CPU, DRAM; peripherals such as hard drive, keyboard, CD-ROM and accessories such as cables. Then, install the system as following:

- Insert CPU / heat sink (refer to Celeron™ CPU installation guide or see the following setup chapter), and DRAM modules on the mainboard.
- Plug add-on cards into PCI slots, if needed.
- Connect cables to peripheral devices, especially for COM2 connec tor.
- Make sure all components and devices are well connected, turn on the power and setup System BIOS based on your configuration.
- Install peripheral devices, add-on card drivers and test them.
- If all of above procedures are running successfully, turn the power off and screw the chassis cover to the chassis.

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.


Audio CODEC Disable
4.1
4.2
CPU Socket Select
2
CPU Fan Installation
MIC_IN/LINE_IN/LINE_OUT (Audio I/O Jacks)
LPT1 (Printer Connector)
USB (Universal Serial Bus Jack)
Low Pin Count
AC97 CODEC
IR1 (IR Device Connector)
GAME (Joystick/MIDI Port)
VGA (Video Port Connector)
COM1 (Serial Port 1 Connector)
KBMS1 (PS/2 Keyboard/ PS/2 Mouse)
CD1 (R-G-L-G Connector)
COM2 (Serial Port 2 Connector)
PWR_FAN (Power Supply Fan Connector)
JP9
CD2 (L-G-G-R Connector)
JP10
SLOT1 (for Intel Pentium II and III)
ISA1 (ISA Slot)
PCI1 (PCI Slot 1)
PCI2 (PCI Slot 2)
PCI3 (PCI Slot 3)
PCI4 (PCI Slot 4)
PCI5 (PCI Slot 5)
AMR
(AMR Riser Card Slot)
CPU_FAN (CPU Fan Connector)
Socket 370
PW1 (ATX Power Supply Connector)
Display Cache
Display Cache
North Bridge
(for Intel Celeron CPU)
Lithium Cell Battery
JP2
(CPU Socket Select)
PCI-to-ISA Bridge
South Bridge
DIMM1 (DIMM Socket 1)
DIMM2 (DIMM Socket 2)
JP8
JP4
FIC1 (Front Panel Block Connector)
JP3
Flash ROM
SB-Link (Connector for Sound Card to PCI)
JP1
IDE2 (Secondary IDE)
IDE1 (Primary IDE)
(FDD Connector)
FLOPPY
CHS_FAN (Chassis Fan Connector)
3
4.3
1
4.4
4.5
4.2
CPU Socket Select
Reboot on Timeout
Front Panel Block Cable Connection
Clear CMOS
BIOS Boot Block Write Protect
CPU Ratio Auto Detect by BIOS

1). Clear CMOS

JP8 (Clear CMOS)

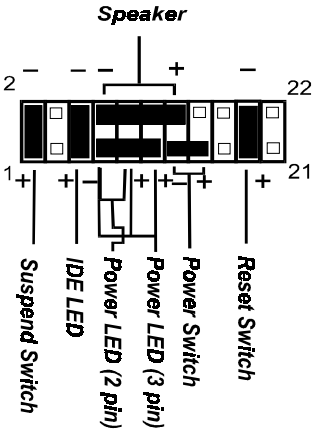
Normal Clear CMOS

2). 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.

3). Front Panel Block Cable Connection



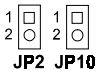
4). Other Enabled/Disabled Jumpers

4.1 JP9 (Audio CODEC Disable)

Enable

Disable

4.2 JP2, JP10 (CPU Socket Select)



Socket 370

Slot 1

4.3 JP3 (BIOS Boot Block Write Protect)

Enable

Disable

4.4 JP4 (BIOS Setting CPU Ratio)

BIOS Setting CPU Ratio

Safe Mode

4.5 JP1 (Reboot on Timeout)

Enable

Disable

5). 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.EXE before the binary image burns into the ROM.

Load Optimized Defaults (recommended)

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

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. The CD-Pro contained in the package with this mainboard provides the flash utility in the subdirectory: **\utility\flash**. (If your BIOS is Award, the subdirectory **\utility\flash\Award**. If BIOS is AMI, the subdirectory **\utility\flash\AMI**.) You need to copy the flash tool to the bootable diskette.
5. Insert the bootable diskette containing the BIOS file into the floppy diskette drive.
6. 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 there will be a problem booting up your system.

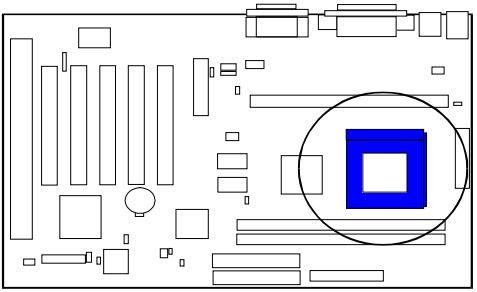
CPU Installation

The mainboard has built-in Switching Voltage Regulator to support CPU Vcore autodetection. That is, It has the ability to detect and recognize the CPU voltage, clock, ratio and enables users to set up the CPU frequency from the BIOS Setup Screen. Users can adjust the frequency through "Frequency / Voltage Control" of the BIOS Setup Screen.

Socket 370

To install the CPU, do the following:

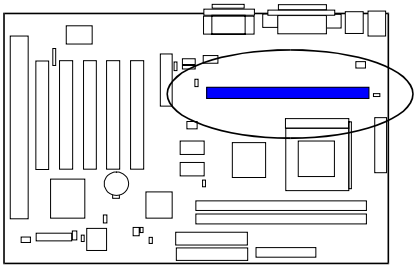
1. Lift the lever on the side of the CPU socket.
2. Handle the chip by its edges and try not to touch any of the pins.
3. Place the CPU in the socket. The chip has a notch to correctly locate the chip. Align the notch with pin one of the socket. Pin one is located in the blank triangular area. Do not force the chip. The CPU should slide easily into the socket.
4. Swing the lever to the down position to lock the CPU in place.
5. Place the cooling fan with heatsink on top of the installed CPU.



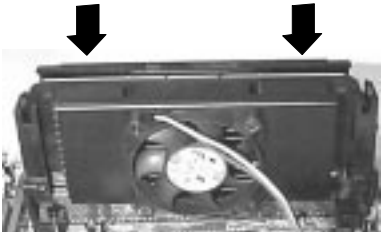
NOTE: A terminal board (see the picture below) comes with your mainboard KW15. It should be installed on your mainboard Slot1 when you use a Intel FC-PGA (Coppermine) CPU.

SLOT1

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

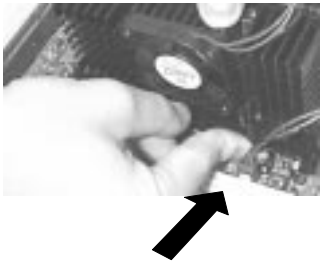


2. Insert he CPU module onto the SLOT1 along the Retention Mechanism Assembly.



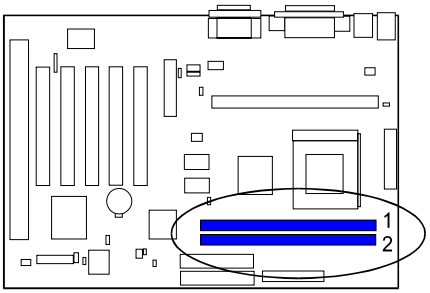
3. Pull the buttons outwards until they click to the right positions.

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



System Memory Installation

The mainboard provides two 3.3V 168-pin DIMM sockets for system memory expansion from 8MB to 512MB SDRAM.



Bank/DIMM	PC-100 Memory Module	Total Memory
Bank0/DIMM1	8/16/32/64/128/256MB	8MB~256MB
Bank1/DIMM2	8/16/32/64/128/256MB	8MB~256MB
Total System Memory		*8MB~512MB*

DIMM Type, Size, Parity Supported

PC-66/100 or higher performance memory module.

Both parity or non-parity are available.

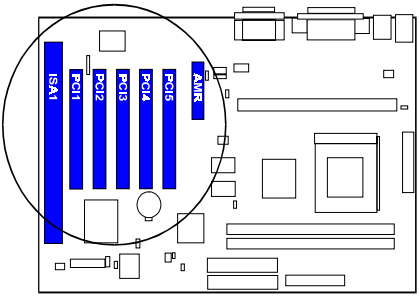
3.3V, single/double-side.

8/16/32/64/128/256Mbytes.

NOTE: For either 66MHz , 100MHz and 133MHz host bus CPUs, please use 10ns or faster and PC-100 compliant modules .

Expansion Cards Installation

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 expansion slots, one ISA bus expansion slot, and one AMR slot for your MR modem riser card.



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 expansioncards.
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.

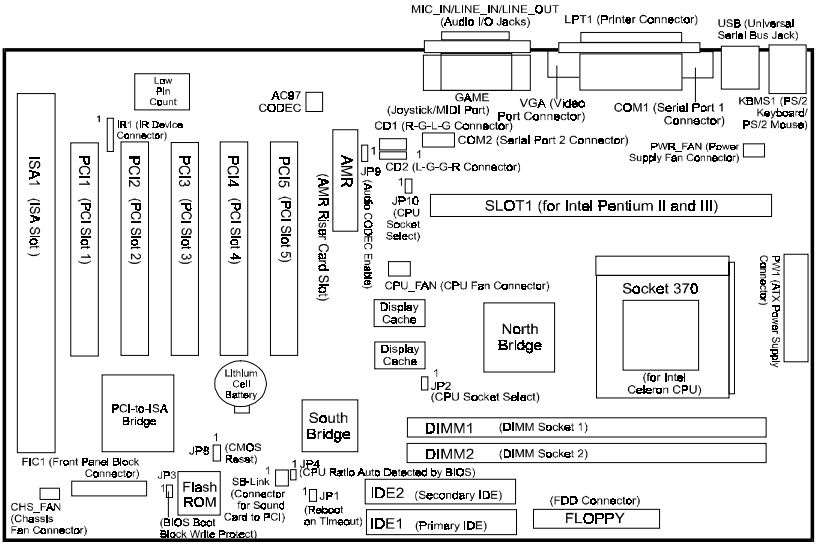
5. Secure the board with the mounting screw removed in Step 2. Make sure that the card has been placed evenly and completely into the expansion slot.

6. Replace the computer system’s cover.

7. Setup the BIOS if necessary.

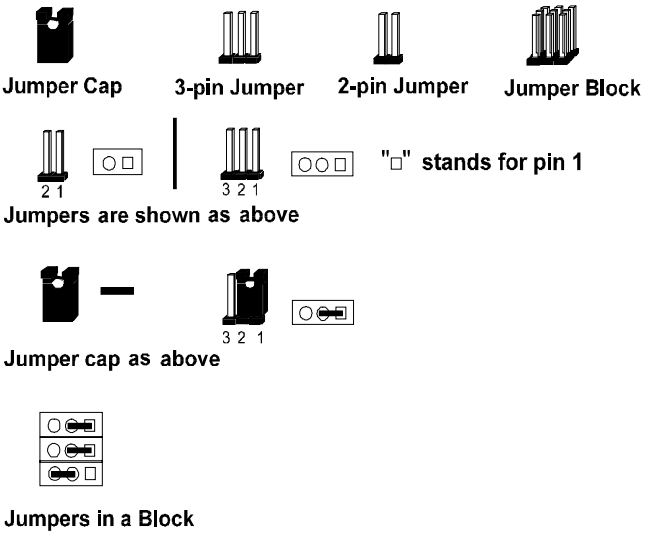
8. Install the necessary software drivers for the expansion card.

Mainboard Layout



System Jumpers

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. A "1" is written besides pin 1 on jumpers with three pins. 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 types of jumpers used in this manual are shown below:



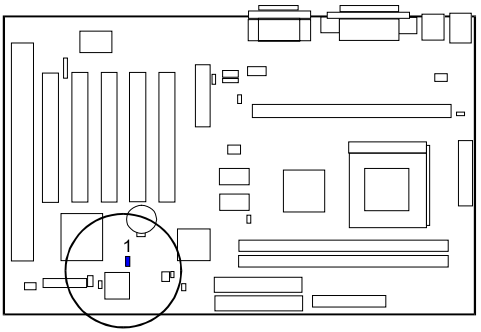
NOTE: Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.

CMOS Clearance Function: JP8

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 Enable, (3). Move the jumper back to Disable, (4). Turn on your computer, (5). Hold down the Delete key during boot and enter BIOS Setup to re-enter user preferences.

Normal

Clear CMOS

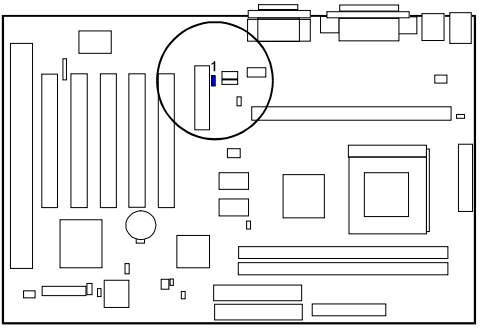


Audio CODEC Enable: JP9

The jumper allows you to disable the onboard CODEC when you want to install your sound card.

Enable

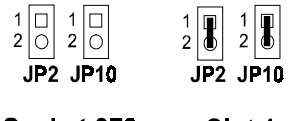
Disable



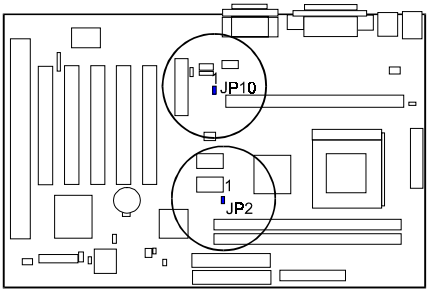
NOTE: When the function is disabled, only a primary MR modem card is acceptable on the AMR slot. If the function is enabled, only a secondary MR modem card is allowed on the AMR slot.

CPU Socket Type Select: JP2, JP10

These two jumpers are to be set in accordance with which CPU socket you are using.



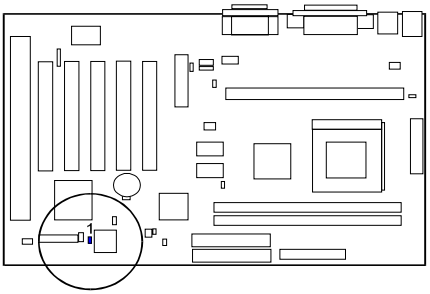
Socket 370 Slot 1



BIOS Top Block Lock Select: JP3

The 2-pin jumper provides you with the capability to enable the top block of the BIOS flash ROM while booting ROM needed to reflash. This feature provides protection to the booting area of the BIOS ROM.

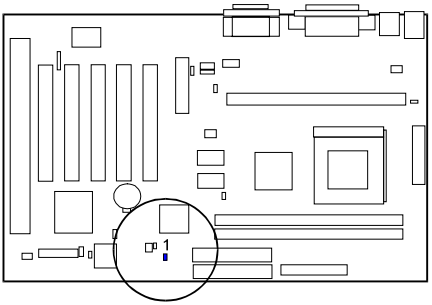
Enable Disable



Reboot on Timeout: JP1

The mainboard offers the capability to automatically reboot the system after a period of time if the system fails to boot successfully.

Enable Disable

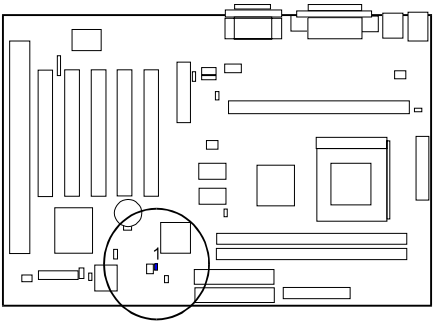


BIOS Setting CPU Ratio: JP4

The 2-pin jumper allows you to use set CPU ratio via BIOS settings. If the setting is improper and the system can not boot up, please short this jumper (i.e. Safe Mode) to reboot the system.

BIOS Setting
CPU Ratio

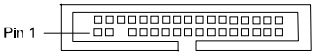
Safe Mode

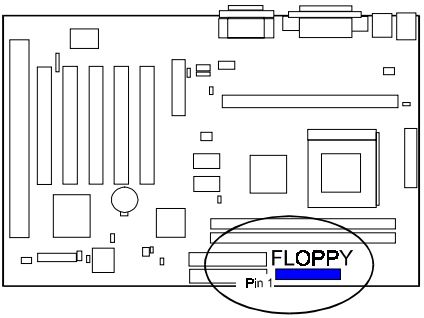


Connectors

Floppy Diskette Drive Connector: FLOPPY

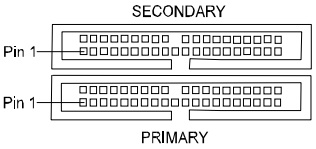
This connector provides the connection with your floppy disk drive.
The red stripe of the ribbon cable must be aligned to the same side with the Pin 1.

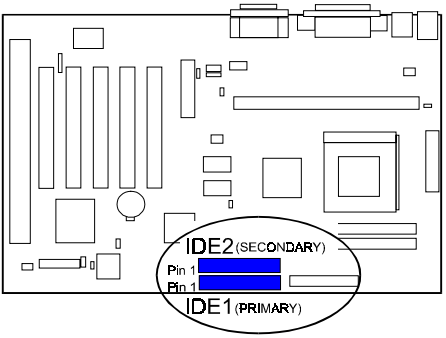




IDE HDD Device Connectors: IDE1, IDE2

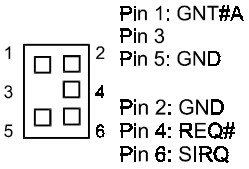
These two connectors are used for your IDE hard disk drives, CD drives, LS-120 drives, or IDE ZIP drives. The red stripe of the ribbon cable must be aligned to the same side with the Pin 1.

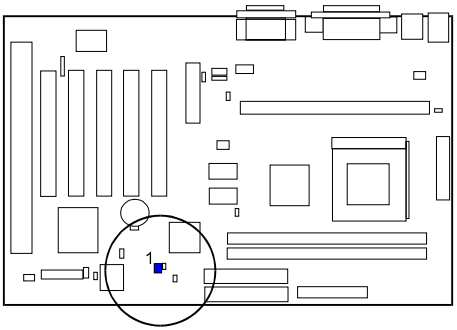




PCI Add-On Audio Card Connector: SB-LINK

This connector allows you to connect to your PCI add-on audio card connector cable when not using the onboard sound chip.

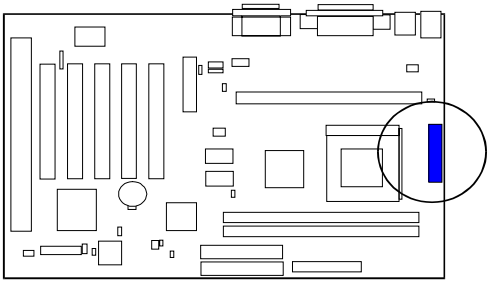




ATX Power Connector: PW1

This 20-pin male block connector is connected to the ATX power supply. The plug from the power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned.

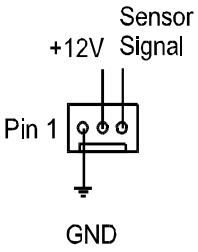
+12V	10	20	+5V
5V_VR	9	19	+5V
PWR_GOOD	8	18	-5V
GND	7	17	GND
+5V	6	16	GND
GND	5	15	GND
+5V	4	14	-PWR_ON
GND	3	13	GND
+3.3V	2	12	-12V
+3.3V	1	11	+3.3V

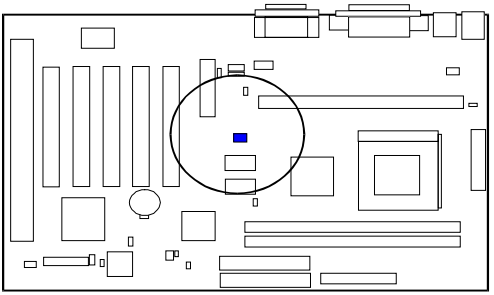


NOTE: The power supply must provide +3.3V voltage.

CPU Fan Connector: CPU-FAN

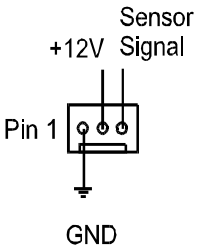
This connector is linked to the CPU fan. When the system is in suspend mode, the CPU fan will turn off; when it reverts back to full–on mode, the fan will turn back on. Please refer to the CPU fan installation manual for more information.

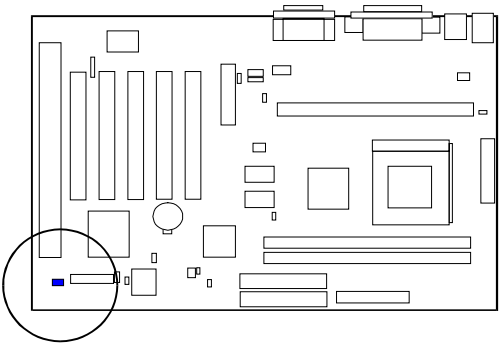




System Case Fan Connector: CHS-FAN

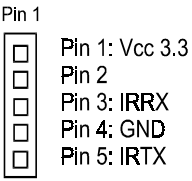
This 3-pin connector links to your cooling fan on the system case to lower the system temperature.

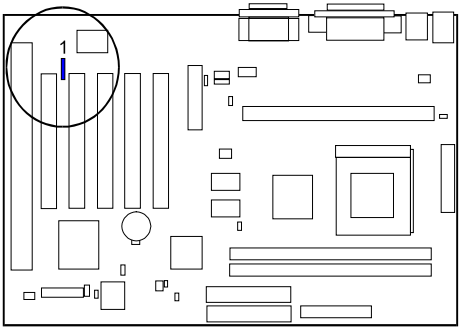




Infrared Connector: IR1

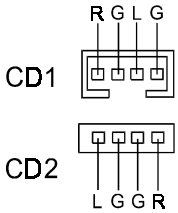
This 5-pin connector is used to link with your ID device to allow transmission of data to another system that also supports the IR feature. This module mounts to a small opening on system cases that support it.

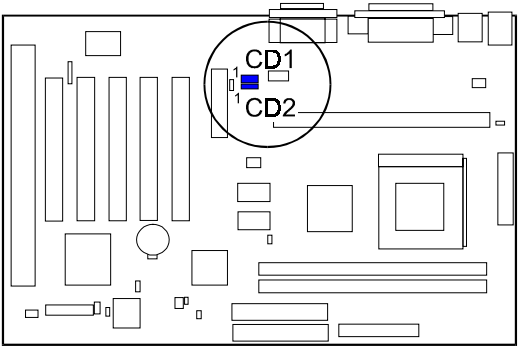




CD Aduio-Out Connectors: CD1, CD2

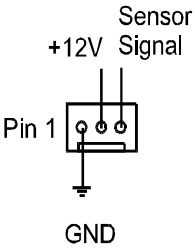
These two 4-pin connectors are used for different types of the AUDIO-OUT port of your CD drive.

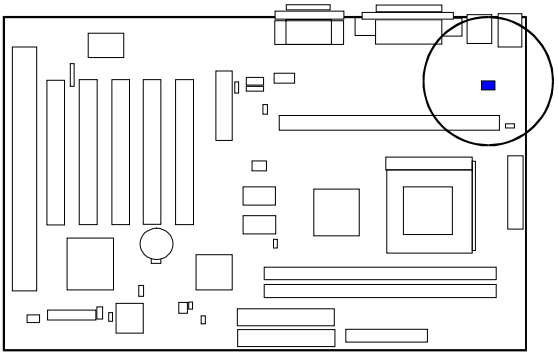




Power Fan Connector: PWR-FAN

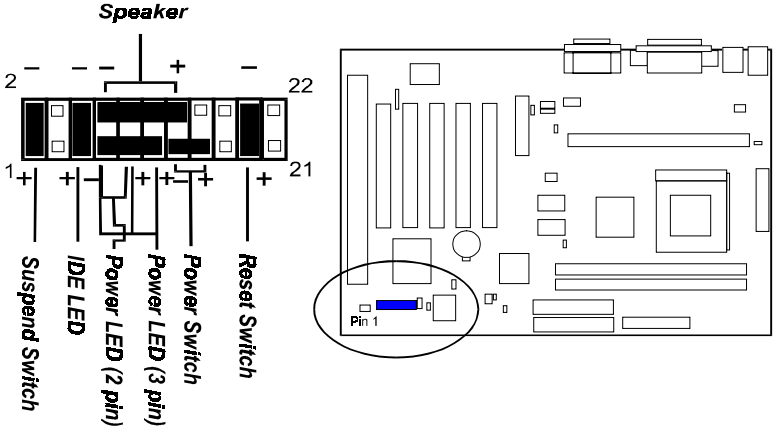
This 3-pin connector is linked with your power supply to control the speed of cooling fan.





Front Panel Block Connector: FIC1

This block connector concludes the connectors for linking with IDE LED, power LED, remote power button, message LED, suspend button, reset button and speaker on the front panel of the system case. Please identify polarities of plug wires for the case speaker and LEDs. Please ask vendor about this information when you buy them and install the system by yourself. The plug wires' polarities of these buttons will not affect the function.



Power LED. This is connected with the system power indicator to indicate whether the system is on/off. It blinks when the system enter the suspend mode.

Power Switch. This is connected with remote power (soft power) switch. Pusing this switch will turn the system off and on, instead of turning on the power supply switch.

Suspend Switch. This is connected with suspend mode switch.

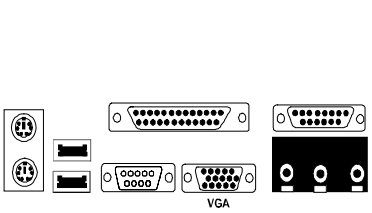
Reset Switch. This is connected to the reset switch. Push this switch to reboot the system instead of turning the power switch off and on.

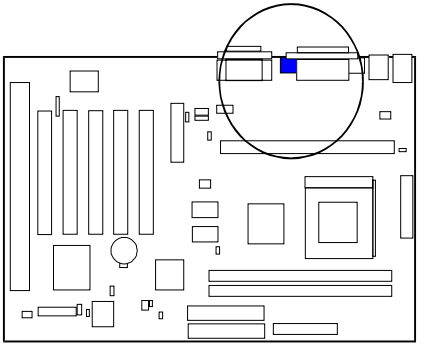
Speaker. This is connected with the case speaker.

IDE LED. This is connected to the IDE device indicator. This LED will blink when the hard disk drives are activated.

Video Graphics Accelerator Connector: VGA

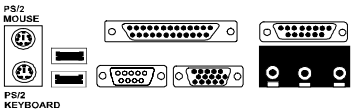
This 15-pin female D-sub connector is connected to your display monitor.

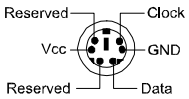


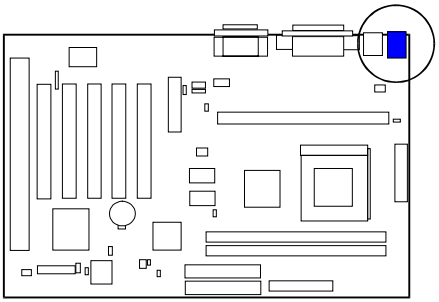


PS/2 Keyboard and Mouse Connector: KBMS1

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

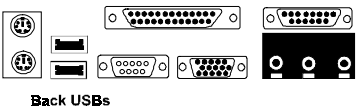


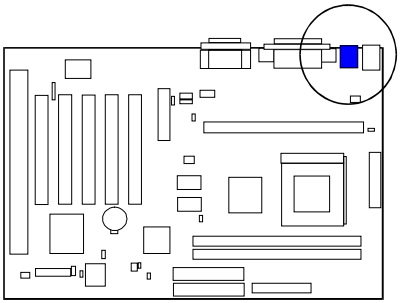




Universal Serial Bus Connectors: USB

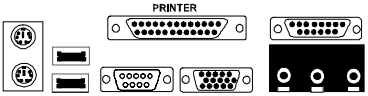
These two connectors integrated on the edge of the board are used for linking with USB peripheral devices. Your operating system must support USB features, such as MS Windows 98, MS Windows 95 OSR2.5 with USB Supplement.

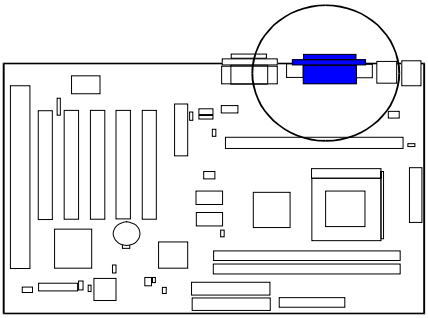




Printer Connector: LPT1

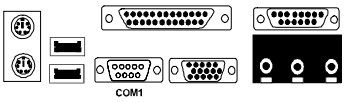
This 25-pin D-Sub female connector is attached to your printer.





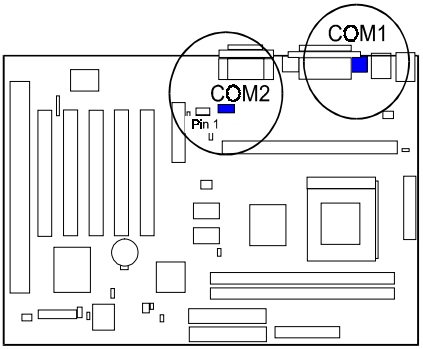
Serial Port Connectors: COM1, COM2

COM1 (9-pin D-sub male connector) and COM2 (9-pin male connector) allow you to connect with your devices that use serial ports, such as a serial mouse or an external modem.



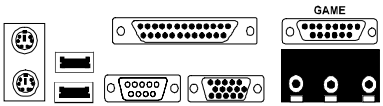
COM2 Port

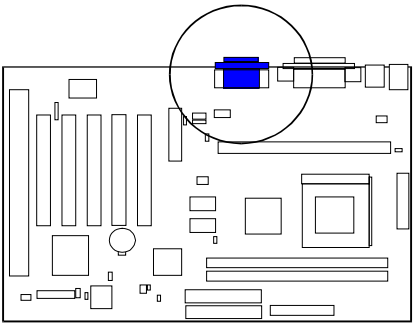
Pin 1: DCD	2 4 6 8 10	Pin 2: RXD
Pin 3: TXD		Pin 4: DTR
Pin 5: GND		Pin 6: DSR
Pin 7: RTS	1 3 5 7 9	Pin 8: CTS
Pin 9: RI		



Joystick/MIDI Connector: GAME

This 15-pin female connector allows you to connect game joysticks or game pads for playing games. Connect MIDI devices for playing or editing audio.





Audio I/O Jacks: LINE_OUT, LINE_IN, MIC_IN

LINE_OUT can be connected to headphones or preferably powered speakers. LINE_IN allows tape players or other audio sources to be recorded by your computer or played through the LINE_OUT. MIC_IN allows microphones to be connected for input voice.