

KW15

MAINBOARD MANUAL

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Handling Precautions

Warning:

1. Static electricity may cause damage to the integrated circuits on the motherboard. Before handling any motherboard outside of its protective packaging, ensure your body is not electrostatically charged.
2. There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or an equivalent type of battery as recommended by the manufacturer.
3. Discard used batteries according to the manufacturer' s instructions.

Observe the following basic precautions when handling the motherboard or other computer components:

- Wear a static wrist strap which fits around your wrist and is connected to a natural earth ground.
- Touch a grounded or anti-static surface or a metal fixture such as a water pipe.
- Ensure add-on cards, mainboards, and modules do not come into contact with the *golden fingers* connectors, plugged into the expansion slot.

The above methods prevent static build-up and allow it to be discharged properly.

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Handling Precautions

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Overview

The smart ATX sized 1stMainboard KW15 features a choice of the Slot 1 and the highly scalable Socket 370 processor. A full range of Intel® Celeron™ and Pentium® II/III processors are supported at speeds up to 733MHz with Front Side Bus speeds of 66, 100 and 133 MHz. The Slot 1 / Socket 370 flexibility allows for convenient processor upgrades to meet the changing demands of new productivity software. The advantages of having the CPU choice on board rather than utilizing a CPU adapter card are a shorter local bus trace time and less noise interference providing extra reliability and performance.

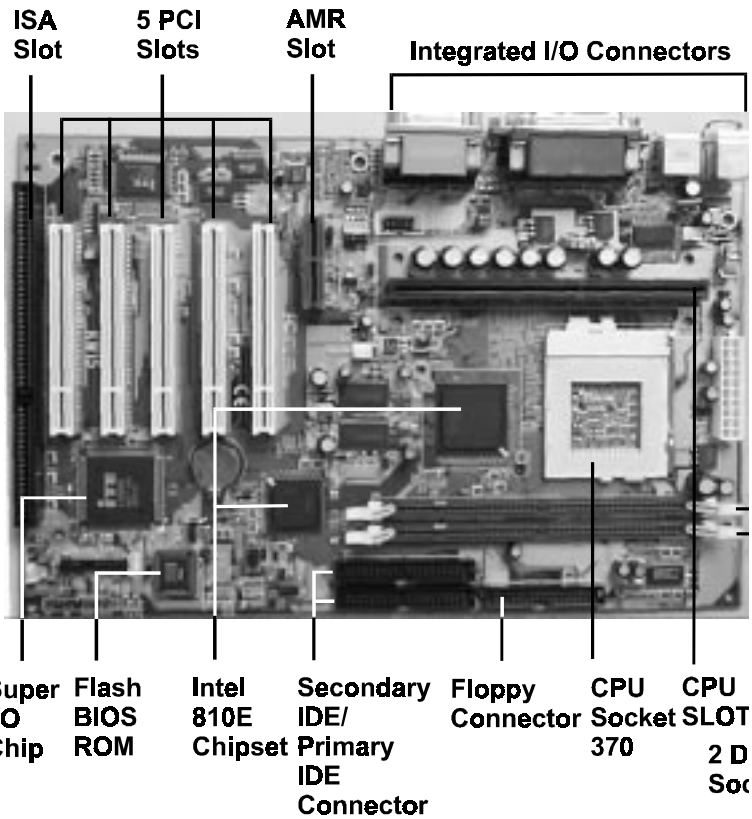
The Intel 810/E accelerated Hub architecture provides exceptional onboard video. Direct AGP and it's efficient memory utilization allows a 4MB SDRAM display cache and Dynamic Video Memory Technology which provides the equivalent of 8 MB video memory performance.

Support for the Ultra DMA/66 protocol and its high-speed interface further ensures that data transfer speeds are improved, especially for long sequential transfers required by audio/visual applications. With 2 DIMM there is up to 512 MB available SDRAM. In addition, the 1stMainboard KW15 is equipped with 2 dual channeled enhanced PCI bus master IDE connectors.

Power-On management features include Keyboard/Mouse Power On, Wake on Ring (WOR) with Modem system boot support.

The 1stMainboard KW15 comes with a versatile range of I/O features such as 2 serial ports, 1 parallel port, 1 PS/2 mouse and keyboard connector, 2 USB connectors, 1 VGA connector and 1 media connector (MIDI /game port, Line-in, Line-out and Mic-in). Ample expansion is available through 5 PCI, 1 AMR and IISA (mfg. option).

Mainboard Layout



System Specifications

- Flexible Processor Support
 - Single CPU, with both Slot 1 and PPGA Socket 370 on board for choice.
 - Supports CPU Clock 66MHz, 100MHz and 133MHz. CPU Clock Ratios from 3.0x to 8.0x (step 0.5x).
 - Support CPUs: Pentium II 233MHz~450MHz, Celeron 300MHz~533MHz, and Pentium III 450MHz~733MHz.
 - CPU Core Voltage 1.30V~2.05V (step 0.05V), and 2.1V~3.5V (Step 0.1V); CPU~I/O Voltage 3.3V.
 - Built-in Switching Voltage Regulator, supporting Vcore autodetection.
- Memory Support
 - SingleTwo DIMM sockets on board supporting up to 512MB SDRAM.
 - PC-66 / PC-100 compatible.
- I/O System
 - On-board Intel 810 Chipset for I/O Control: FW82810DC100 / FW82810E + FW82801AA.
 - Bus Frequency 66/100/133MHz
 - 5 PCI slots on board, compliant with version 2.2 PCI Local Bus spec.
 - One Optional ISA slot.
 - One AMR (Audio, Modem Riser) slot on board.
 - Dual Master IDE connectors, supporting UDMA33/66 for 4 IDE devices such as high capacity HDD, CD-ROM, LS-120 and tape backup etc.
 - Two USB connectors in stack supporting up to 127 USB devices.

- PS/2 Keyboard and PS/2 Mouse connectors.
- One Infrared (IrDA TX/DX) connector.
- One FDD port supporting two Floppy drives of : 1.2MB / 1.44MB / 2.88MB.
- One parallel port for SSP/EPP/ECP mode printer.
- Two 16550A Fast UART compatible connectors for serial and VGA port.
- One Game /Midi port and 3 Audio Jacks for Speak-out, Line-in and Microphone-in.
- One SB-Link Connector for Sound Card and PCI connection.

- BIOS Support
 - Built-in VGA BIOS in Intel 810/E; and built-in Keyboard BIOS;.
 - AWARD BIOS in Intel 810/E, providing **CMOS Setup Utilities**:
 - **Standard CMOS Features Setup** for Date, Drives and VGA;
 - **Advanced BIOS Features Setup** for CPU Cache, Self Test, Boot Device, Typematic Rate , and Security Options etc.;
 - **Advanced Chipset Features Setup** for SDRAM CAS, RAS, System BIOS Cacheable, and Video BIOS Cacheable etc.;
 - **Integrated Peripherals Setup** for IDE Mode, USB, Audio, and Modem etc.;
 - **Power Management Setup** on Video, HDD, CPU etc.;
 - **PnP/PCI Configurations Setup** for PnP, Reset, Resources etc.;
 - **PC Health Status Control** and Setup;
 - **Frequency / Voltage Control** on CPU, SDRAM, PCI & SSC etc.;
 - **Load Fail-Safe Defaults** and **Load Optimized Defaults**;
 - **Set Supervisor/User Password**;

- Board Dimension:
308mm x 202mm, in ATX form Factor. with one ATX Power Connector.

Features Highlight

Add-on Features for VGA in Intel 810/E

- **Integrated Graphics Controller**
 - 3D Hyper Pipelined Architecture.
 - Full 2D H/W Acceleration.
 - Motion Video Acceleration.
- **3D Graphics Visual Enhancements**
 - Flat & Gouraud Shading.
 - Mip Maps with Bilinear and Anisotropic Filtering.
 - Fogging Atmospheric Effects.
 - Z Buffering.
 - 3D Pipe 2D Clipping.
 - Backface Culling.
- **3D Graphics Texturing Enhancements**
 - Per Pixel Perspective Correction Texture Mapping.
 - Texture Compositing.
 - Texture Color Keying/Chroma Keying.
 - Integrated 24-bit 230MHz RAMDAC.

■ 2D Graphics

- Up to 1600 x 1200 in 8-bit Color at 85 Hz Refresh.
- Hardware Accelerated Functions.
- H/W Motion Compensation Assistance for S/W MPEG2 Decode
- Software DVD at 30fps.
- H/W Overlay Engine with Bilinear Filtering.
- Intel 810 ICH with built-in AC'97 controller.

Add-on Features for Audio

- Intel 810 ICH with built-in AC'97 controller.
- Supporting HRTF-based 3D positional audio, A3D, Q3D, wavetable, and 3D surround sound.



NOTE: If you want to enable the onboard AC'97 CODEC, you need to set JP9 pin 1-2 closed. But in this way, the **AMR** slot will only accept a riser board with Modem CODEC and cannot accept another Audio Riser.

AMR and AC'97 CODEC Controller

AMR slot and AC'97 CODEC are integrated into the Mainboard to enable audio and modem playback.

AMR (Audio/Modem Riser) slot is mounted on board to connect riser board with Audio and/or Modem CODEC (AMC/AC/MC Adapters). The AMR specification developed by Intel provides a mechanism for AC'97 codes to be on a riser card.

To enable the onboard AC'97 CODEC, set JP9 pin 1-2 closed. And in such way, you can further plug a riser board with Modem CODEC to the AMR slot. Otherwise, disabling onboard AC'97 CODEC by setting JP9 2-3 closed, you can plug a riser board with Audio/Modem CODEC to the AMR slot.

Modem Ring On

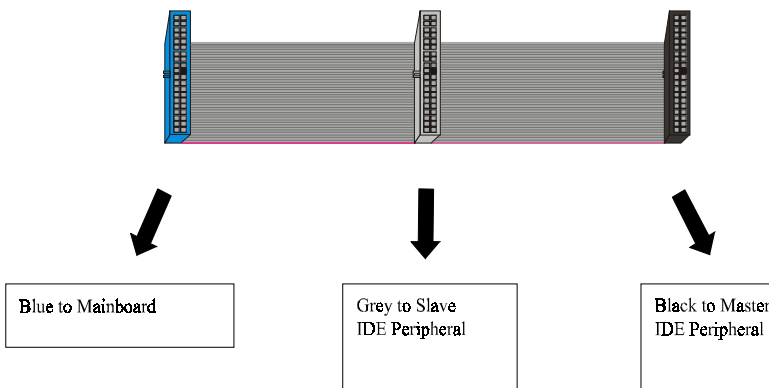
With Modem Ring On function, the computer can wake up by remote signal through a connected modem. This function enables users to access their computer data from anywhere in the world. Users have to enable “Power On by Ring” in “Power Management Setup” of the AWARD BIOS setup screens.

SB-Link Sideband Signals

In order to migrate the legacy Sound Blaster compatible audio to the PCI bus, EMU8008 incorporates a pair of SB-Link request/grant sideband signals (PCPCIR EQN and PCPCIGNTN) to interface to the PCI bus. SB-Link is a mechanism that was defined and developed by Intel as a docking solution which allows ISA slots to exist in docking stations connected to desktop PC PCI bus. The figure below is the pin assignments on the mainboard.

Ultra DMA 66 Cable (optional)

Ultra DMA 66 cable (40-pin connector & 80-line cable) is packaged while utilizing FW82801AA chip which supports both UDMA 33 & UDMA 66 on the mainboard. In other words, Ultra DMA 33 cable is only used with FW82801AB chip. And the Ultra DMA 66 color coded connectors are shown as below:



ACPI Ready

This mainboard fully implements the new ACPI (Advanced Configuration and Power Interface) 1.0 Hardware and BIOS requirement. If you install ACPI aware operating systems, such as Windows 98, you can fully utilize the power saving features under ACPI.

It is compatible with all other non-aware ACPI operating systems. If you want to setup ACPI features under Windows 98, please follow the instruction below:

Run Windows 98 setup by using **setup/p j** on the command line for installing Windows 98 with the ACPI control features.

If you type **setup** without the parameter **/p j**, Windows 98 will be installed as APM, PnP mode, no ACPI will be used.

For more detail information, please visit the web site of Microsoft. The URL is: www.microsoft.com/hwtest/.

FIC Unique Innovation for Users (NOVUS) - *Enhanced Mainboard Features and System Support*

■ LogoGenie

A user friendly GUI supporting Windows 98, LogoGenie allows you to customize, create or select a Logo which will be displayed when the system is booting.

Important: *Before executing this LogoGenie function, please make sure the related BIOS feature, BIOS Guardian, is disabled; and refer to its related README file.*



NOTE:

1. LogoGenie supports Award BIOS only.
2. If you create a Logo file (.bmp) by LogoGenie, the file size must be 640 x 464 x 16 colors (around 145K).

To enable this utility, please proceed as follows:

1. Insert CD Pro 4.X. Select LogoGenie from the Menu and follow the installation instructions.
2. After LogoGenie has been installed, go to Windows Start Box. In Programs Menu, select LogoGenie. Click through three check boxes in the pop-up menu to ensure of the BIOS feature (*BIOS Guardian*) and other anti-virus software are disabled. Read README file carefully.
3. In LogoGenie Dialogue Box, choose one of 3 options; and then proceed as per 4 or 5 steps listed on the left hand side of the Dialogue Box.
4. After completing the last step, press OK. The system will reboot to restore the BIOS with your new customized Logo.
5. The system will automatically restart with your customized Logo that appears in background.



WARNING: To avoid BIOS damage, do not turn off system power while executing step 3 below.

■ BIOS Guardian

BIOS Guardian by default is enabled. It must be disabled in order to reflash BIOS, thus effectively acting as a fire-wall against viruses that can attack the BIOS while the system is running.

BIOS Guardian can be disabled as follows:

1. Go to BIOS Set Up Menu. (Press **Del** key while booting.)
2. Go to Chipset Features Set Up Submenu.
3. Disable BIOS Guardian.
4. Save the setting, and restart system.



NOTE: If BIOS Guardian is disabled in the boot process, the POST screen will slow the current BIOS Guardian Status. Press **G** key to enable the BIOS Guardian again; or simply press the Space bar to continue the boot process.

■ Easy Key

Instead of completing the multi-layered BIOS setup process these 3 Easy Key functions provide direct access to Sub-Menus when completing BIOS settings adjustments.

Easy-Keys are as follows:

- Ctrl + c:** To enter clock settings menu.
- Ctrl + p:** To load Performance Default settings and restart.
- Ctrl + f:** To load Fail-Safe Default settings and restart.

Installation Procedures

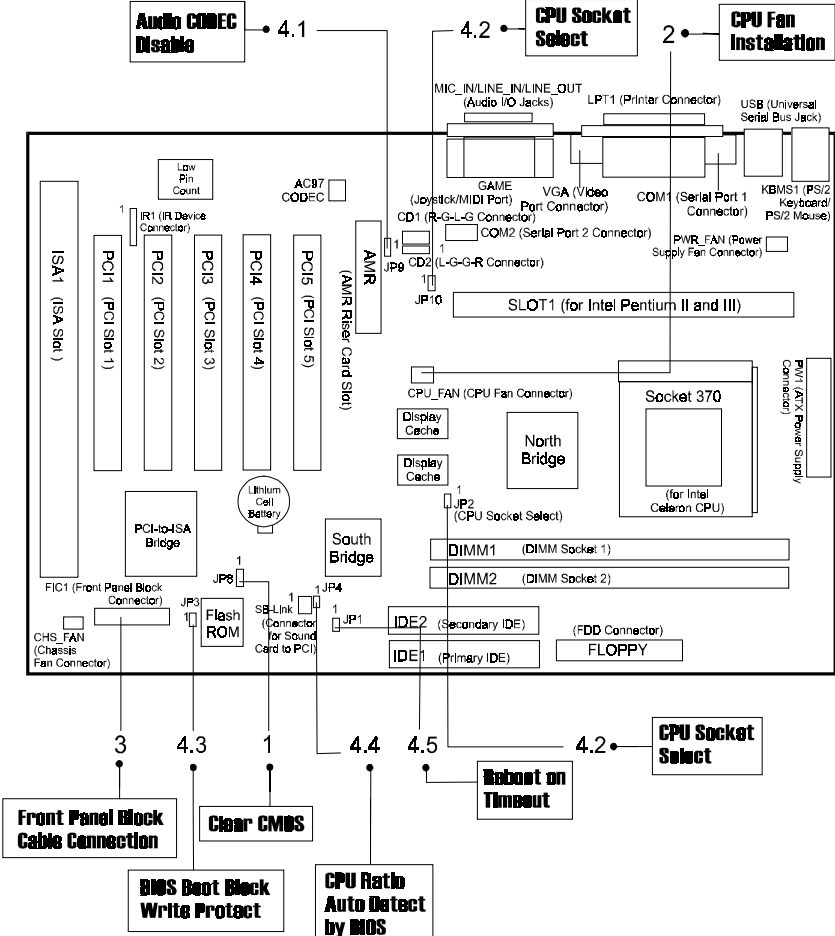
Before setting up the computer, please prepare all components such as CPU, DRAM; peripherals such as hard drive, keyboard, CD-ROM and accessories such as cables. Then, install the system as following:

- 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 connector.
- 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.*



1). Clear CMOS

JP8 (Clear CMOS)



Normal



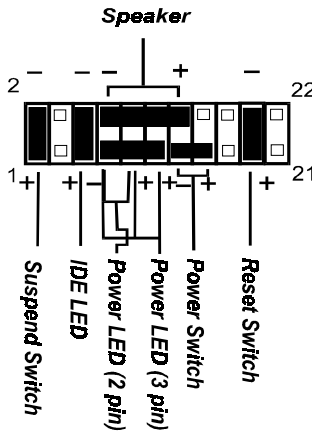
Clear CMOS

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.

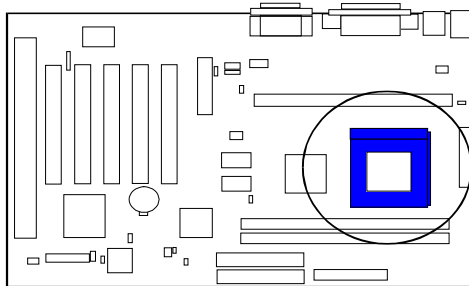
CPU Installation

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.

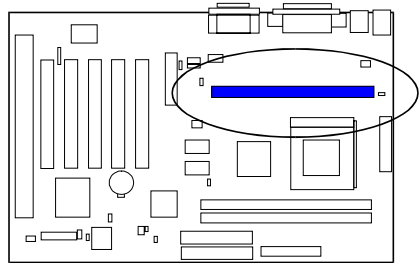
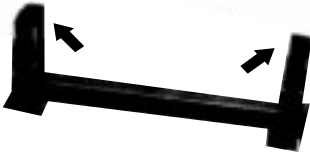


NOTE: A terminal board (see the picture below) comes with your mainboard KW15. It should be installed on your mainboard Slot1 when you use a Intel FC-PGA (Coppermine) CPU.

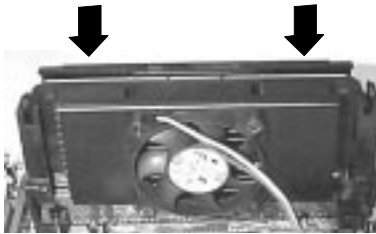


SLOT1

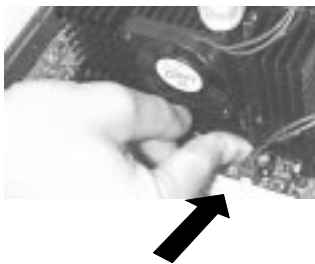
1. Pull the two sets of the Retention Mechanism Assembly upward to the right position.



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

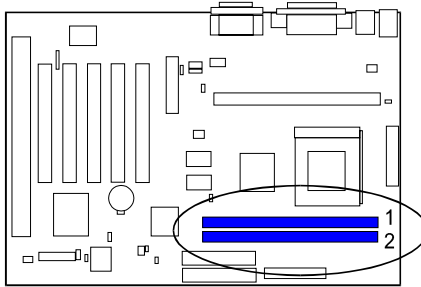


3. Pull the buttons outwards until they click to the right positions.
4. Hook the Heatsink Top Support to the Heatsink Support Base to affix the CPU module.



System Memory Installation

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



**Chapter 2
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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
<i>Total System Memory</i>		<i>8MB~512MB</i>

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.

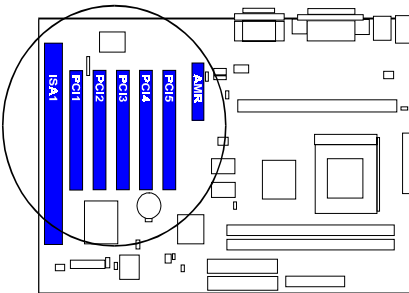
8/16/32/64/128/256Mbytes.



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 expansion cards.

Always observe static electricity precautions.

Please read "Handling Precautions" at the start of this manual.

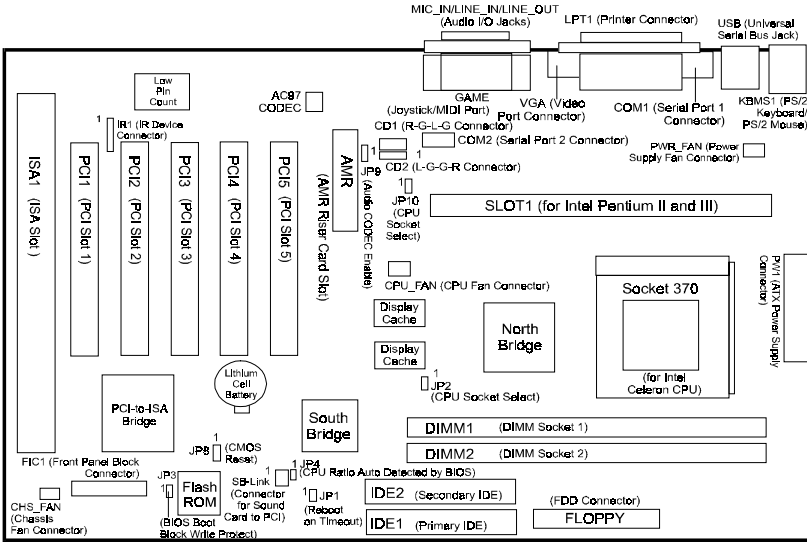
To install an expansion card, follow the steps below:

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.

Mainboard Layout

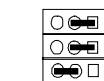
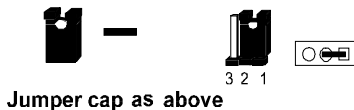
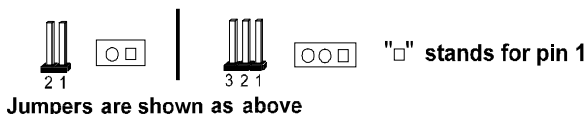
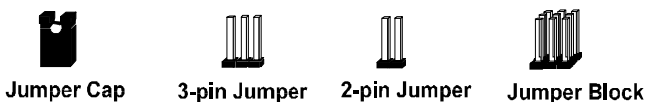
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System Jumpers

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:



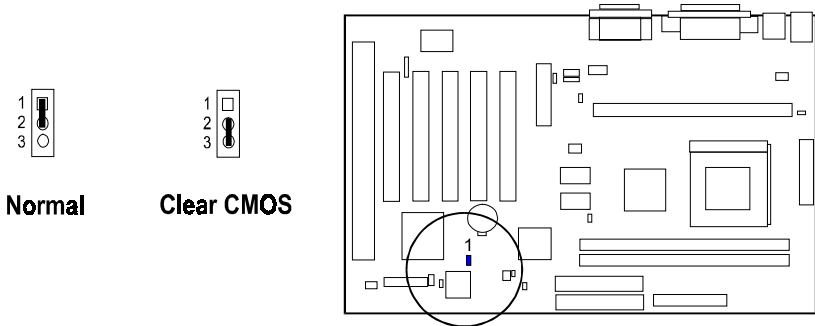
Jumpers in a Block



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

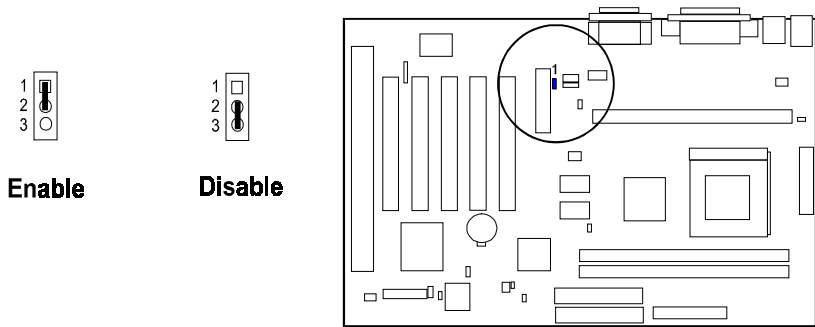
The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1). Turn off your computer, (2). Move this jumper to Enable, (3). Move the jumper back to Disable, (4). Turn on your computer, (5). Hold down the Delete key during boot and enter BIOS Setup to re-enter user preferences.



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Procedures**

Audio CODEC Enable: JP9

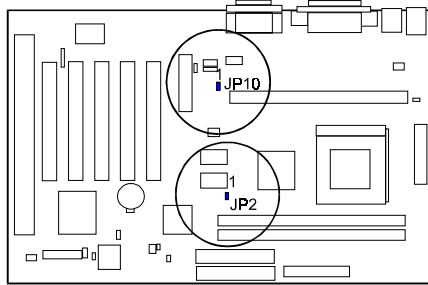
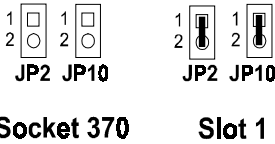
The jumper allows you to disable the onboard CODEC when you want to install your sound card.



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.

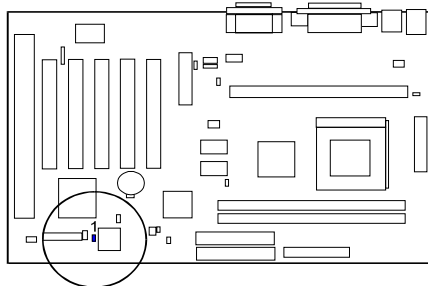
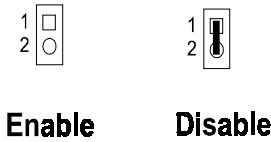
CPU Socket Type Select: JP2, JP10

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



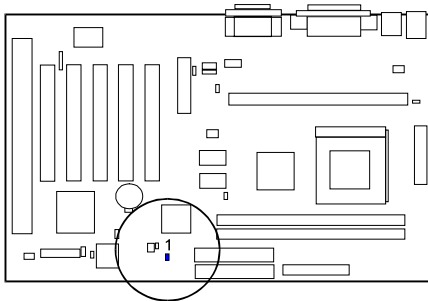
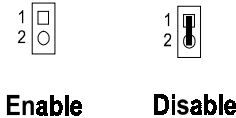
BIOS Top Block Lock Select: JP3

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.



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.



BIOS Setting CPU Ratio: JP4

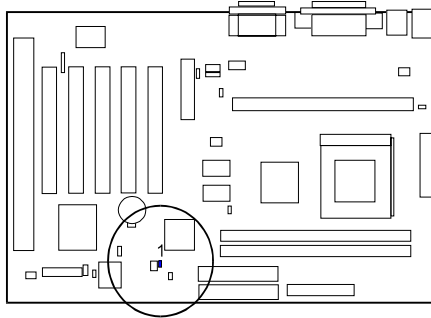
The 2-pin jumper allows you to use set CPU ratio via BIOS settings. If the setting is improper and the system can not boot up, please short this jumper (i.e. Safe Mode) to reboot the system.



**BIOS Setting
CPU Ratio**



Safe Mode

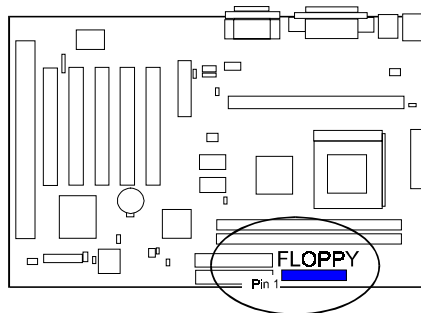
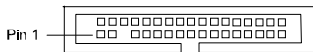


**Chapter 2
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Procedures**

Connectors

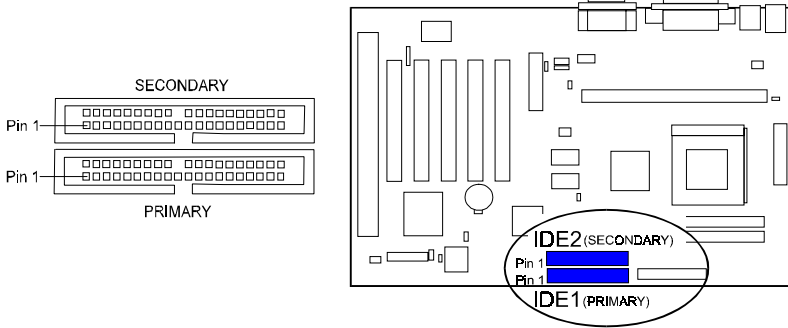
Floppy Diskette Drive Connector: FLOPPY

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.



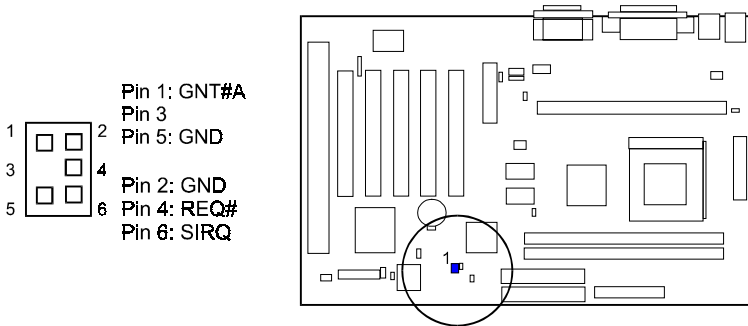
IDE HDD Device Connectors: IDE1, IDE2

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

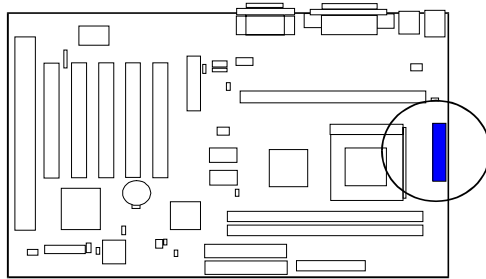
This connector allows you to connect to your PCI add-on audio card connector cable when not using the onboard sound chip.



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.

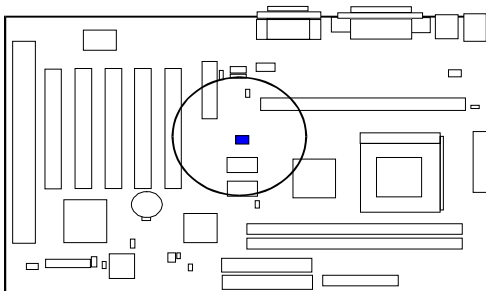
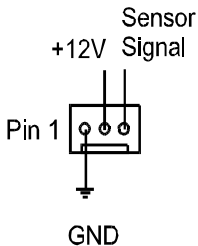
+12V	10	20	+5V
5V_VR	9	19	+5V
PWR_GOOD	8	18	-5V
GND	7	17	GND
+5V	6	16	GND
GND	5	15	GND
+5V	4	14	-PWR_ON
GND	3	13	GND
+3.3V	2	12	-12V
+3.3V	1	11	+3.3V



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

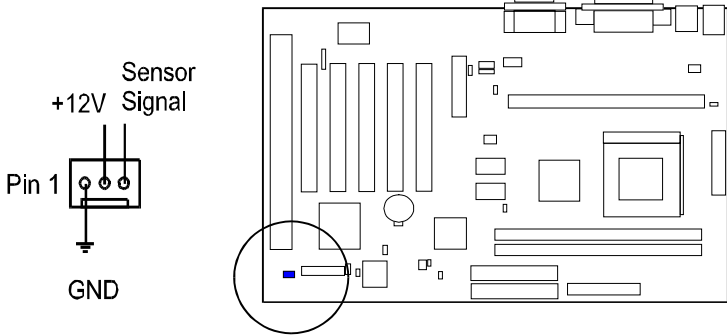
CPU Fan Connector: CPU-FAN

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.



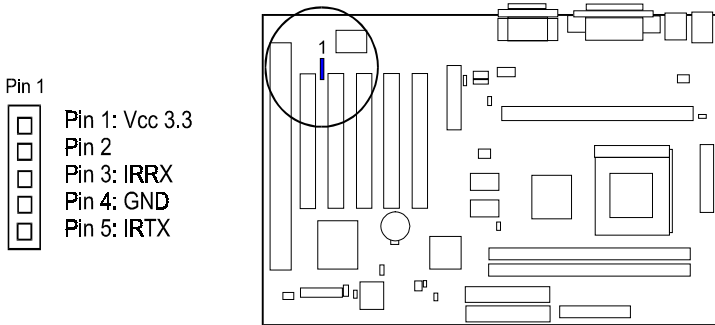
System Case Fan Connector: CHS-FAN

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



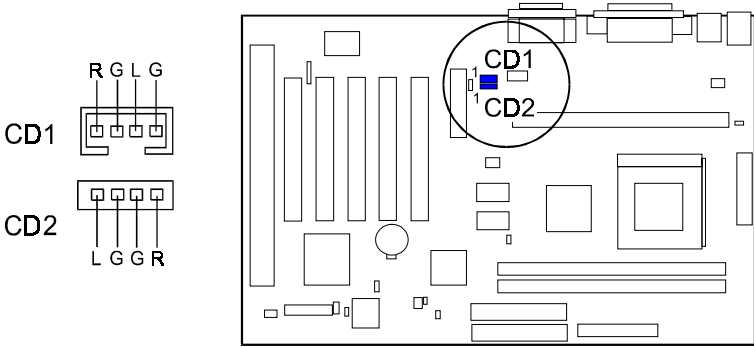
Infrared Connector: IRI

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 Audio-Out Connectors: CD1, CD2

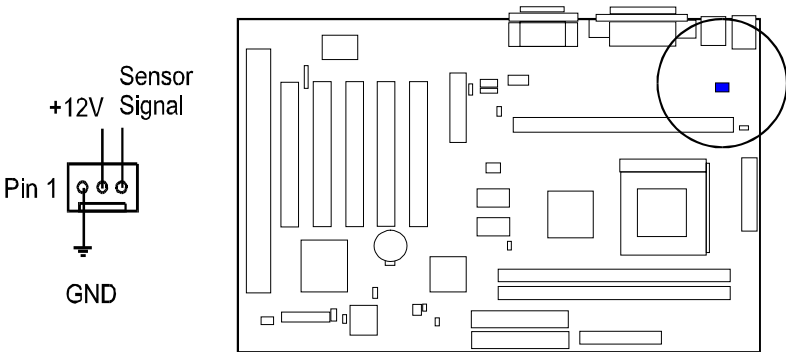
These two 4-pin connectors are used for different types of the AUDIO-OUT port of your CD drive.



**Chapter 2
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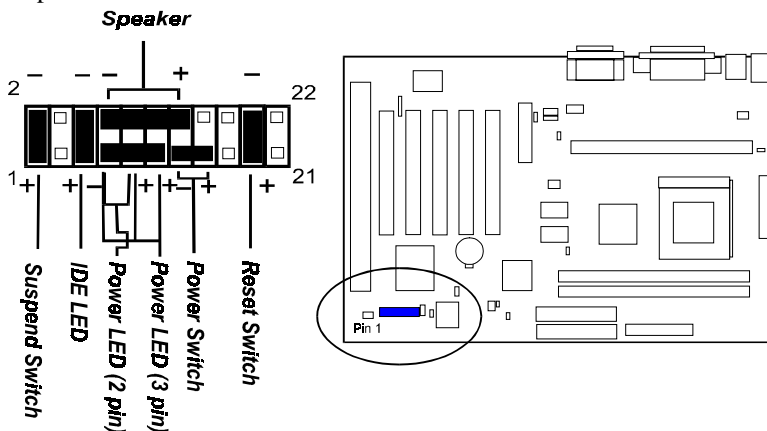
Power Fan Connector: PWR-FAN

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.

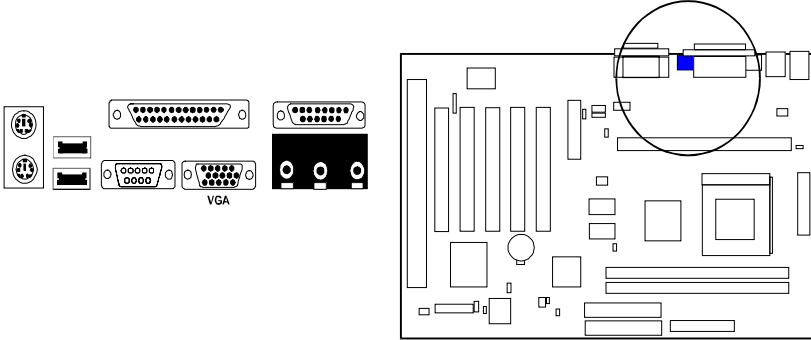
Reset Switch. This is connected to the reset switch. Push this switch to reboot the system instead of turning the power switch off and on.

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

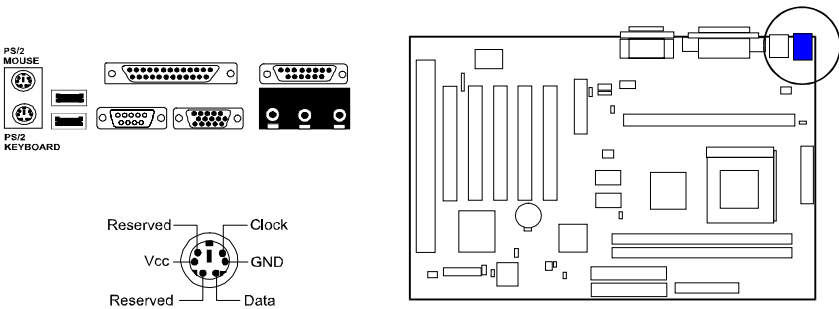
This 15-pin female D-sub connector is connected to your display monitor.



**Chapter 2
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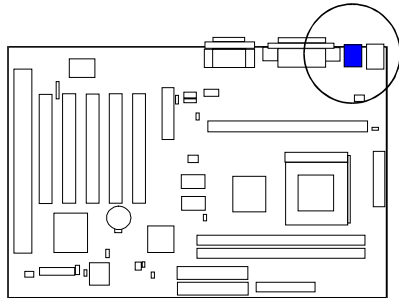
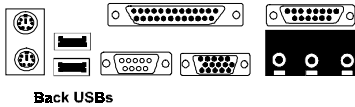
PS/2 Keyboard and Mouse Connector: KBMS1

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



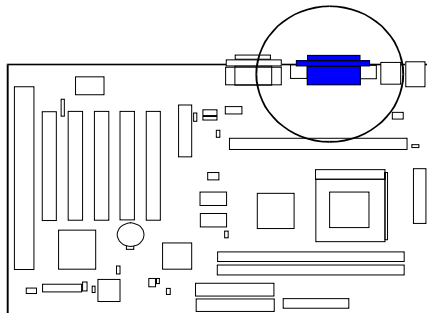
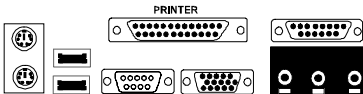
Universal Serial Bus Connectors: USB

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.



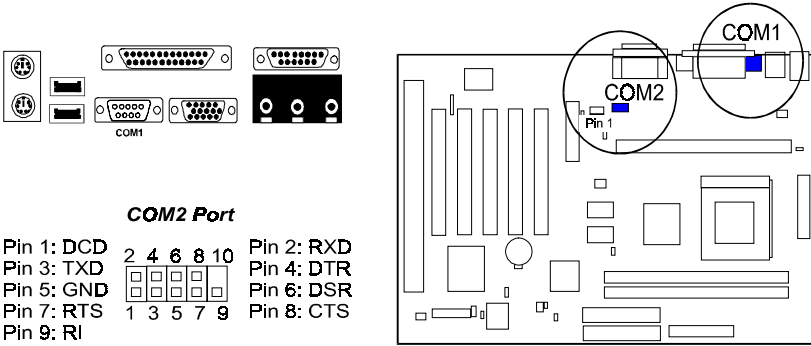
Printer Connector: LPT1

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



Serial Port Connectors: COM1, COM2

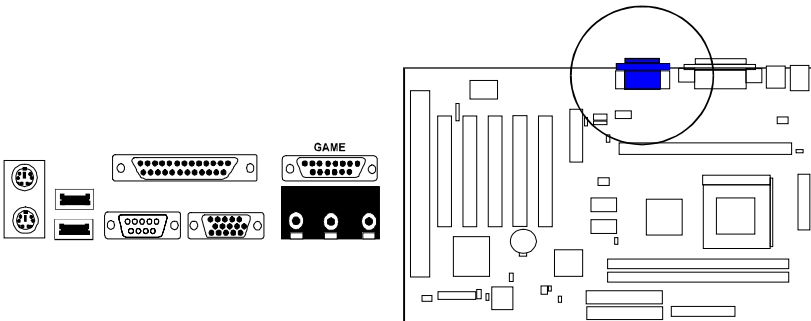
COM1 (9-pin D-sub male connector) and COM2 (9-pin male connector) allow you to connect with your devices that use serial ports, such as a serial mouse or an external modem.



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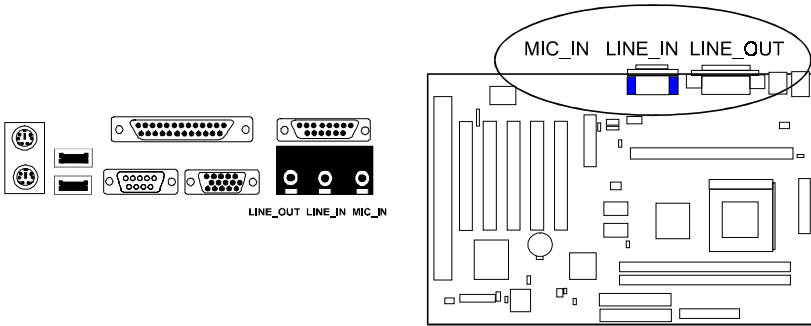
Joystick/MIDI Connector: GAME

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.



BIOS Setup

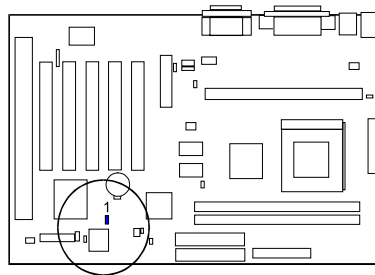
Award BIOS manufacturer provides access to the system BIOS through the hardware and software on mainboard. The hardware consists of a Flash ROM and the software is a group of programs that are installed in the ROMBIOS along with all the other data that should be included into the BIOS.

After the BIOS is updated, if you want to clear the old setup data stored in the CMOS, then you can reset CMOS as follow.



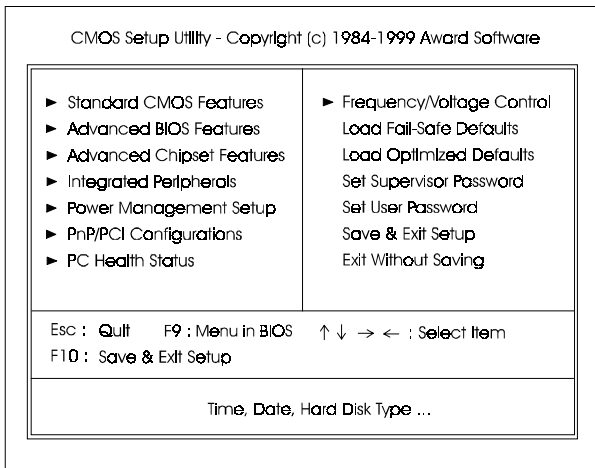
NOTE: In case CMOS should be reset, first unplug the power cord, then set Jumper 8 2-3 closed for at least 5 seconds, reset JP8 1-2 closed so as to return to normal position and plug the power cord again.

	JP8
Normal	1-2
Reset CMOS	2-3



BIOS Configuration Setup

The mainboard comes with an Award BIOS chip that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the mainboard's components. Each feature contains an introduction to its function for your convenience.



The top-level main setup menu screen is displayed above. Entering each field that pointed by a triangle head for second-level features by moving highlight bar by arrow keys to indicate it and then following the Enter key. It allows you to configure each items if necessary.

Standard CMOS Features allows you to record some basic system hardware configuration and set the system clock and error handling. If the mainboard is already installed in a working system, you will not need to select this option anymore. However, if the configuration stored in the CMOS memory on the mainboard gets lost or damaged, or if you change the system hardware configuration, you will need to specify the configuration values. The configuration values usually get lost or corrupted when the power of the onboard CMOS battery weakens.

Advanced BIOS Features contains the entries that allows you to improve the system performance, or lets you set up some system features according to your preference. Some entries here are required by the board's design to remain in their default settings.

Advanced Chipset Features controls the configuration of the mainboard's chipset.

Integrated Peripherals allows you to configure the parameters that your peripheral devices provided to take advantage of them.

Power Management Setup allows you to reduce the system power consumption. It provides some features for turning off the video display and shutting down some peripheral devices, such as hard disks, after a specified time period.

PnP/PCI Configurations allows you to set up the PCI bus slots. All PCI bus slots on the system use INTA#, thus all installed PCI adapter cards must be set to this value.

PC Health Status allows you and technicians to monitor data provided by the BIOS on this mainboard. Some of them are not user-configurable.

Frequency/Voltage Control allows you to configure the frequency and voltage of your processor.

Load Fail-Safe Defaults is for settings that provide a more efficient computer. If the computer will not boot, select this option and try to diagnose the problem after the computer boots. These settings do not give optimal performance.

Load Optimal Defaults is selected for settings which provide the best system performance.

Set Supervisor/User Password

To enable the Supervisor/User passwords, select the item from the Standard CMOS Setup. You will be prompted to create your own password. Type your password up to eight characters and press Enter. You will be asked to confirm the password. Type the password again and press Enter. To disable password, press Enter twice when you are prompted to enter a password. A message appears, confirming the password is disabled

Under the BIOS Feature Setup, if *Setup* is selected under the Security Option field and the Supervisor/User Password is enabled, you will be prompted password every time you try to enter the CMOS Setup Utility. If *System* is selected and the Supervisor/User Password is enabled, you will be requested to enter the Password every time when you reboot the system or enter the CMOS Setup utility.

Save & Exit Setup allows you to write the current settings to CMOS and exit.

Exit Without Saving allows you to exit without writing the current settings to CMOS.

FAQs

General FAQs

How do I know which version BIOS I have?

Check it on the boot screen, click [Pause/Break] button to give you time to write it down.

How do I know which FLASH chip I have?

Partially remove the sticker from the chip to check the name of the manufacturer. Usually the jumper setting is set correctly in the factory.

How can I get the USB drivers?

Download Microsoft USB Supplement and a set of generic USB Drivers from Drivers and Utilities Page. You must have Windows 950B (Service Release II, "Windows97") to install these. These drivers resolve the yellow exclamation mark problem (Unknown Devices, USB) in Device Manager. It is recommended to install Windows 98/98 SE; as it provides built-in USB drivers.

What is the DMI utility is used for?

The DMI Configuration Utility can be used to maintain the Management Information Format Database (MIFD). DMI is also able to auto-detect and record information pertinent to a computers system such as the CPU type, CPU speed and internal/external frequencies and memory size. The onboard BIOS detects as much system information as possible and stores it in a 4KB Block in the motherboards Flash EPROM and allows the DMI to retrieve data from this database. The DMI utility also allows the system integrator or end user to add additional information into the MIFD such as serial numbers, housing configuration and vendor information. This information cannot be detected by the motherboards BIOS and has to manually entered through the DMI Configuration utility and updated into the MIFD.

How do I use the DMI Utility?

Be very careful in using this utility as your system can become totally unusable after altering and saving some configurations on DMI. DMI Utility should not be run from Windows or DOS version higher than v6.22.

If you accidentally alter some settings using DMI Utility under Windows95 (or MS-DOS that comes with it), flash the system BIOS immediately, do not reboot. We recommended using DOS 6.22 as Win 95 (when applying the DMI Utility) will sometimes show an insufficient error message, when loading the Flash Utility. In that case, the other option is to use the Boot Block feature on the BIOS. Use an ISA VGA card for the system to allow them to boot at least on drive "A" (using DOS 6.22 of course) so you will be able to flash the BIOS at least. If you use DMI from Windows95 DOS prompt or Restart in MS-DOS mode, you will not be able to restart the PC.

Where can I get the drivers for PCI set motherboards?

To download the drivers you need, visit the chipset vendor's website Drivers and Utilities Page. There you will see links to FAQs and other Web sites that explain in detail how to install the drivers.

Why not update BIOS?

In 90% of cases, a BIOS update is released to address a problem with a particular piece of hardware or software. Therefore, the new BIOS gives the system some new (different) parameters to work with. Newer BIOS'es contain all fixes from previous versions. If the fix list of a new BIOS does NOT address any of problems that you may have, it is unreasonable to update BIOS only for sake of it, because you may be using a combination of hardware/software that is incompatible and yet-untested with the BIOS version you're upgrading to.

It is recommended to refrain from updating BIOS without a good reason. If you don't see your problem listed in the fix list, do not update BIOS - better go to a shareware Web site (winfiles.com, shareware.com, tucows.com) and update your software or do something less dangerous.

And finally, some 10% of BIOS updates contain new CPU ID strings and code enhancements (ACPI, etc.). For those an update is recommended only when it is necessary (i.e. the processor ID does not display properly, the system must have ACPI, etc.).

A typical situation occurs when a user wants to update BIOS because the new version supports a CPU he/she "plans" to buy sometime in the future. With some bad luck, the user ends up with a wrong BIOS (wrong PCB, or chipset, or I/O or all of them) and a fried BIOS.

BIOS FAQs

How do I flash a new BIOS?

The mainboard package provides a BIOS flash software tool in the software utility CD-ROM. This software feature is provided for upgrading BIOS use. Play the CD-ROM, click on *Browse CD*, select *Flash*, then choose the BIOS vendor that provided the BIOS this board came with. Please print the relating README file and read it first. For more information, please visit FIC Online at www.fic.com.tw.

Downloading BIOS File

Format a bootable system diskette, and then visit the FIC website at **www.fic.com.tw**. Click *BIOS/Drivers Update* item under **BIOS** group, then select the BIOS file you need. Download it to your bootable diskette.

Upgrading BIOS File

Place the bootable diskette containing the BIOS file in the diskette drive (Assume the diskette drive is A.), and reboot the system by A drive. At the A: > prompt, execute the BIOS upgrading procedure by entering the Flash BIOS utility and the BIOS file with its extension.

Command: {flash tool file} {space} {downloaded BIOS file} <Enter>

The other parameters are listed in the relating README file, please read it if need.

After press *Enter* key, type Y to the message **Press “Y” to Continue, “N” to Reboot**. Press *Enter* key. When the message **Press Any Key to Reboot**, appears the procedure is completed. Press any key to reboot.

What is "Hardware-based intelligent virus protection"?

This is a new BIOS feature based on anti-virus (AV) software that protects the system from boot-time viruses. It is intelligent in the sense that it uses rules modeled after viruses behavior. For example, it can tell the difference between normal writing to HDD boot sector and virus-attempted writing. It unloads after boot-up so it does not provide total protection and is not intended to serve as replacement for regular anti-virus software.

This utility includes only Scan Function and not Virus Delete function. There are no virus definition files to update.

When I try to flash the BIOS I get an error message saying there is a wrong part number. Why?

Flash EPROM ("BIOS") chips used on FIC motherboards vary (Intel, AMD, Fujitsu, etc.). As far as this problem is concerned, there are two possible reasons:

- a) you may have used a wrong BIOS or flash utility. Verify that both the BIOS file and the flash utility are the correct versions.
- b) the flash utility you used did not recognize the type of flash EPROM installed on your motherboard. Verify that you have the right files and if you're sure in that, ignore the warning.

I updated my BIOS and am not satisfied with the result (slower performance, new bugs, etc.). What now?

Restore the old BIOS or wait until a newer BIOS is available. You should use the flash utility supplied with the old BIOS and NOT the flash utility you got with the new BIOS. If you do not know what flash utility it was, consult the Web support pages or contact technical support.

Why not update BIOS?

In 90% of cases, a BIOS update is released to address a problem with a particular piece of hardware or software. Therefore, the new BIOS gives the system some new (different) parameters to work with. Newer BIOS'es contain all fixes from previous versions. If the fix list of a new BIOS does NOT address any of problems that you may have, it is unreasonable to update BIOS only for sake of it, because you may be using a combination of hardware/software that is incompatible and yet-untested with the BIOS version you're upgrading to.

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Windows 98/98 SE FAQs

What is the correct installation procedure for VIA-based motherboards?

There are four steps:

- 1) Install Win98/98 SE on your system
- 2) Install the patch files and other drivers that are contained in the CD-Pro
- 3) Install your add-on card drivers



NOTE: If your visual performance became unstable after the above installation was completed (especially if a VGA card driver was installed in Step 3), please execute Step 2 again. It should solve the problem. This is possible as most probably the driver version of the add-on card is earlier than that of the patch files and drivers contained in the CD-Pro.

Windows 95 FAQs

What is the proper install order of graphics-related VIA drivers?

1) Install Windows, 2) If your motherboard has an AGP port, load Vxd driver v. 2.9. 4) Load display card driver.

Why does my VIA chipset-based system crash when the system attempts to access the UDMA HDD?

This problem occurs under Windows 95 OSR2 and OSR 2.1. Please download them at

<http://support.microsoft.com/support/kb/articles/q171/3/53.asp>

How can I know if a software (example: WindowsNT) is compatible with FIC motherboards?

Each FIC motherboard is tested with a variety of operating systems and applications. Compatibility reports are published every time new or updated models of a motherboard are released. Compatibility reports can be downloaded from individual motherboard support pages or from the FIC FTP Server (opens in a new window).

Windows95 shows an exclamation mark next to USB device on my motherboard. Is there any driver that can help me?

The reason you can see that Exclamation mark on USB serial Bus & PCI Bridge is that Windows95 does not support it. You will need to install the drivers to fix it.