

CW33

CW33+

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 that there is no static electric charge in your body.
2. There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or an equivalent type 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.
- Avoid contacting the components on add-on cards, motherboards, and modules with the *golden fingers* connectors plugged into the expansion slot. It is best to handle system components by their mounting brackets.

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

Trademark

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Handling Precautions

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Overview

CW33 Mainboard

The 1stMainboard CW33 is a microATX sized Socket 370 Mainboard supporting the Intel® Celeron™ PPGA 300A-500 MHz processor. A highly integrated and feature rich Mainboard it offers the very latest in cutting edge onboard features. Based around the advanced architecture of the new Intel® 810 chipset, the 1stMainboard CW33 is equipped with high quality onboard audio and video capabilities.

The onboard video function benefits significantly from the state of the art *Dynamic Video Memory Technology* (DVMT), which ensures more efficient use of the system memory. The DVMT feature builds upon AGP technology to automatically size video memory to meet the appropriate functional and performance requirements of any application.

With the advanced new *Suspend to RAM* function (must run an operating system which allows ACPI, such as Windows 98), all data is stored to the DRAM when the system goes to suspend mode- greatly reducing the system's power consumption. When the system is woken from the suspend mode, all data is instantly available, meeting the user-friendly requirements of the 1stMainboard *Instantly Available PC*. The CW33 also supports the Ultra DMA33/66* protocol and its high-speed interface, which significantly improves hard drive performance and data transfer speeds. This is especially the case for long sequential data transfers typically associated with audio/visual applications.

The 1stMainboard CW33 boasts a complete range of standard I/O connections including the new Audio Modem Riser Card connection, TV-Out pin-header, Digital Flat Panel pin header, VGA connector and Media connector. Other advanced features include Auto Power Failure Recovery and Keyboard/Mouse Power On. The 1stMainboard CW33 has 3 PCI expansion slots, 2 DIMM for up to 512 MB of SDRAM, and is PC98 and Y2K compliant. The 1stMainboard CD Pro provides users with easy 'one-touch' access to the latest advanced onboard drivers.

CW33+ Mainboard

The 1stMainboard CW33+ is a microATX sized Socket 370 Mainboard supporting the Intel® Celeron™ PPGA 333-500 MHz processor. A highly integrated and feature rich Mainboard it offers the very latest in cutting edge onboard features. Based around the advanced architecture of the new Intel® 810 chipset, the 1stMainboard CW33+ is equipped with high quality onboard audio and video capabilities. Onboard video comes with an impressive 4 MB display cache. With the advanced new *Suspend to RAM* function (must run an operating system which allows ACPI, such as Windows 98), all data is stored to the DRAM when the system goes to suspend mode- greatly reducing the system's power consumption. When the system is woken from the suspend mode, all data is instantly available, meeting the user-friendly requirements of the 1stMainboard *Instantly Available PC*. The CW33+ also supports the Ultra DMA/66 protocol and its high-speed interface, which significantly improves hard drive performance and data transfer speeds. This is especially the case for long sequential data transfers typically associated with audio/visual applications.

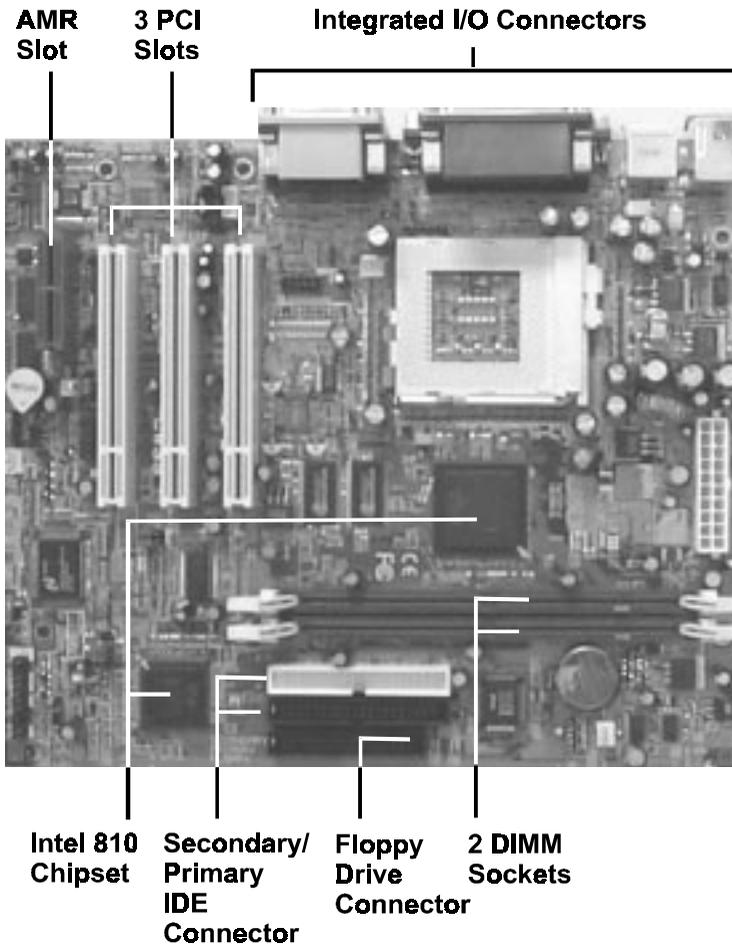
The 1stMainboard CW33+ boasts a complete range of standard I/O connections including the new Audio Modem Riser Card connection, TV-Out pin-header, Digital Flat Panel pin header, VGA connector and Media connector. Other advanced features include Auto Power Failure Recovery and Keyboard/Mouse Power On. The 1stMainboard CW33+ has 3 PCI expansion slots and one AMR slot, 2 DIMM for up to 512 MB of SDRAM, and is PC98 and Y2K compliant. The 1stMainboard CD Pro provides users with easy 'one-touch' access to the latest advanced onboard drivers.

Package Checklist

If you discover any item below was damaged or lost, please contact your vendor.

- The mainboard
- This user manual
- One floppy disk drive ribbon cable
- One IDE ribbon cable
- Software utilities

The Mainboard



Main Features

■ Easy Installation

BIOS with support for Plug and Play, auto detection of IDE hard drives, LS-120 drives, IDE ZIP drives, Windows 95, Windows 98, Windows NT, and OS/2.

■ Leading Edge Chipset

Intel 810 chipset includes a CPU interface controller, integrated memory controller, integrated power management unit, concurrent PCI (PCI v.2.0, 2.1, 2.2), 3D video, IDE and ISA bus controller.

■ Flexible Processor Support

Onboard Socket 370 supports leading-edge processors:
Celeron™ PPGA processors 333/366/400/433/466/500 MHz and up.

■ Various External Bus and CPU/Bus Frequency Ratio Support

The board supports the Bus frequency of 66 / 75 / 83 / 90 / 95 / 100 / 112 / 124 / 133MHz and the CPU/Bus frequency ratio of 2x / 2.5x / 3x / 3.5x / 4x / 4.5x / 5x / 5.5x / 6x / 6.5x / 7x / 7.5x / 8x by a switching voltage regulator which accepts 1.8V to 2.8V. (Please read **Install the CPU** in Chapter 2 for more information).

■ Versatile Main Memory Support

Accepts up to 512MB (total) RAM using two DIMMs of 8, 16, 32, 64, 128, 256MB with support for lightning-fast SDRAM (66/100MHz).

■ PCI Expansion Slots and AMR Slot

Three 32-bit PCI Bus expansion slots provide the room to install a full range of add-on cards and an AMR slot for modem riser card.

■ Onboard IrDA Connector

An IrDA connector for wireless infrared connections is available.

- **Enhanced PCI Bus Master IDE Controller with Ultra DMA/33 and Ultra DMA/66 Support (CW33 optional support)**

Integrated Enhanced PCI Bus Master IDE controller features two dual-channel connectors that accept up to four Enhanced IDE devices, including CD-ROM and Tape Backup Drives, as well as Hard Disk Drives supporting the new Ultra DMA/66 protocol (CW33 optional support). Standard PIO Mode 3, PIO Mode 4, DMA Mode 2/4 devices are also supported.
- **USB Support**

Two USB jacks for rear panel connection and one pinhead for front panel connection provide you with convenient, high-speed Plug and Play connections (up to four USB ports) to the growing number of USB compliant external peripheral devices on the market.
- **Remote Wake-Up Support**

One LAN wake-up connector, WOL, supports LAN cards equipped for remote wake-up functionality; also, an additional Wake-On-Ring connector, WOR, awakes the system while the ring signal via modem.
- **Super Multi Input/Output (I/O) Support**

Integrated Plug and Play multi-I/O chipset features two high-speed UART 16550 compatible serial ports, one IR connector, one EPP/ECP capable parallel port, and one FDD connector.
- **Advanced Suspend to RAM Function for Saving Power Consumption**

If your operating system supports ACPI, such as Windows 98, this feature allows all data to be kept in the DRAM to make sure all data instantly available for reducing the system power consumption.
- **Compact ESS Solo-1 Audio Subsystem for Sound and Game (optional)**

The onboard audio provides DirectMusic accelerator. It also provides OPL3, Sound Blaster Pro, MPU401 UART mode and Joystick function for various PC games on real DOS mode that without software drivers. The board came with three audio jacks: MIC_IN, LINE_IN, LINE_OUT; and one connector for joystick with MIDI interface.

Intelligent Properties

This mainboard comes equipped with the most advanced new features that not only optimize the performance of the latest processors but also enhance the manageability, power management capabilities, and user-friendliness of your system. This section provides detailed information on these features, and how they are implemented on the mainboard.

- **Advanced Multi-Media Properties of Intel 810 Chipset**

The built-in audio and video features of the Intel chipset 810 on the mainboard CW33 and CW33+ (with 4MB display cache) provides better visual performance with the Dynamic Video Memory Technology (DVMT) properties.

- **Optimized Celeron® PPGA Processor Performance**

The mainboard utilizes the advanced features of the Intel 810 chipset to optimize the unrivaled performance of the [Celeron® PPGA](#) processor with MMX® technology, allowing you to enjoy a richer video, audio, digital imaging and communications experience from the latest generation of multimedia software.

- **Using TV as Monitor (optional)**

The connector, RGB_OUT, makes use of a television as a monitor for software games and other tasks by a cable from the mainboard to your TV.

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 system, such as Windows 98, you fully utilized the power saving under ACPI.

It is compatible with all other none ACPI operating systems. If you want to setup ACPI feature under Windows 98, please follow the description below: Run Windows 98 setup by using **setup/p j** on the command line for installing Windows 98 with the ACPI control feature.

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. Its address is: www.microsoft.com/hwtest/.

The major features of ACPI were listed as follows:

■ Soft-Off Support

The mainboard's Soft-Off feature allows you to turn off your computer using the operating system. This feature requires a power supply with a soft-off power controller.

■ Remote Ring-On

The Remote Ring-On function allows your computer to be turned on remotely via a modem while it is in sleep mode. This feature is particularly usefully when you are expecting a fax late night and leave only your modem on to minimize power consumption. As soon as possible the phone rings, the modem automatically turn on the system, which answers the phone and downloads the fax. Then the computer shuts off again, thereby minimizing its consumption of power. The Remote Ring-On function requires a power supply with a soft-off power controller.

■ RTC Alarm

The RTC alarm feature allows you to preset the computer to wake-up at a certain time allowing you to implement a number of useful functions, such as automatically sending out a fax late at night.

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Installation Procedures

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

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

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



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

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

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

1). Set 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:



Jumper Cap



3-pin Jumper



2-pin Jumper



Jumper Block



"□" stands for pin 1

Jumpers are shown like above



Jumpers cap like above



Jumpers in a Block



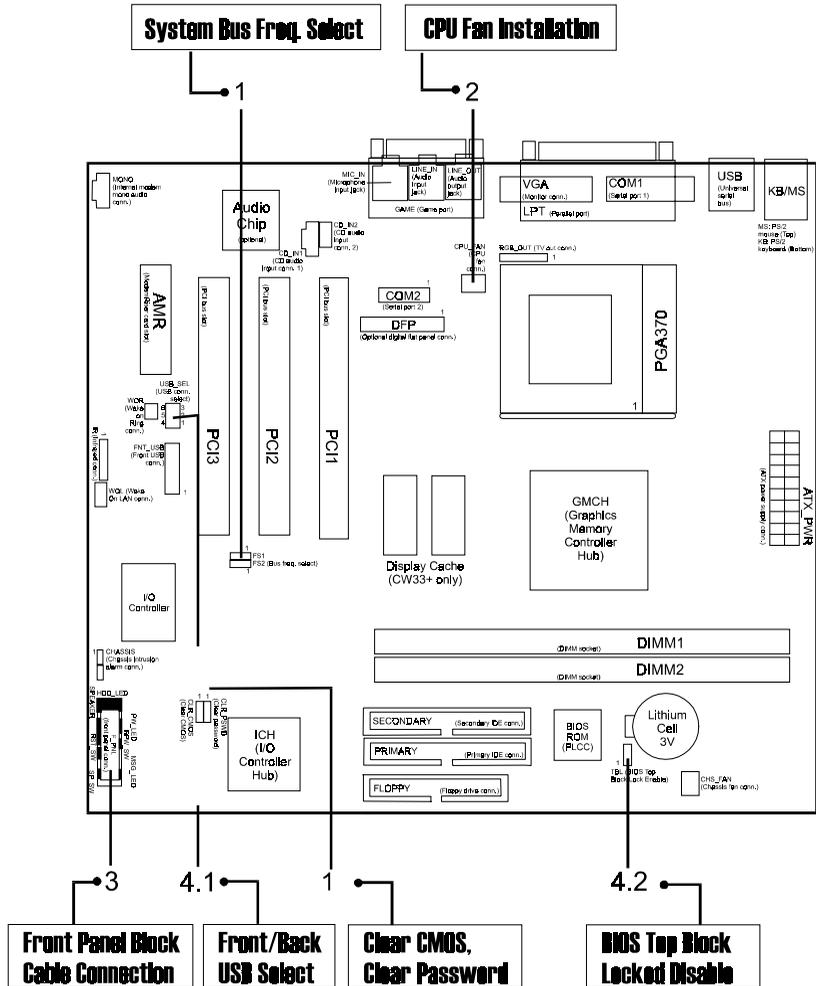
NOTE: Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.



QUICK REFERENCE

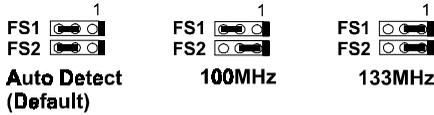
*This Chapter is intended to aid quick and easy installation.
In the event that more detailed information is required, please
consult the Installation Procedures Chapter.*

Chapter 2
Installation
Procedures

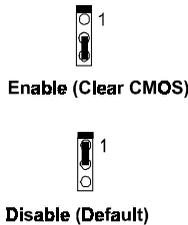


1). System Bus Frequency Select, CPU Ratio Select, Clear CMOS, Clear Password

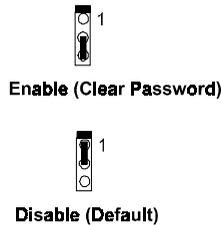
FS1, FS2 (System Bus Frequency Select)



CLR_CMOS (Clear CMOS)



CLR_PSWD (Clear Password)

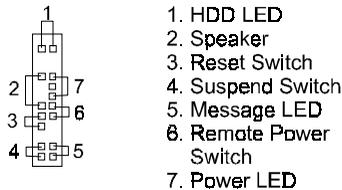


2). CPU Fan Installation

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 USB_SEL (Front/Back USB Connector Select)



Front USB



Back USBs
(Default)

4.2 TBL (BIOS Top Block Lock)



Unlocked



Locked
(Default)

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 AMIBCP before the binary image burns into the ROM.

Load Optimized Defaults (recommended)

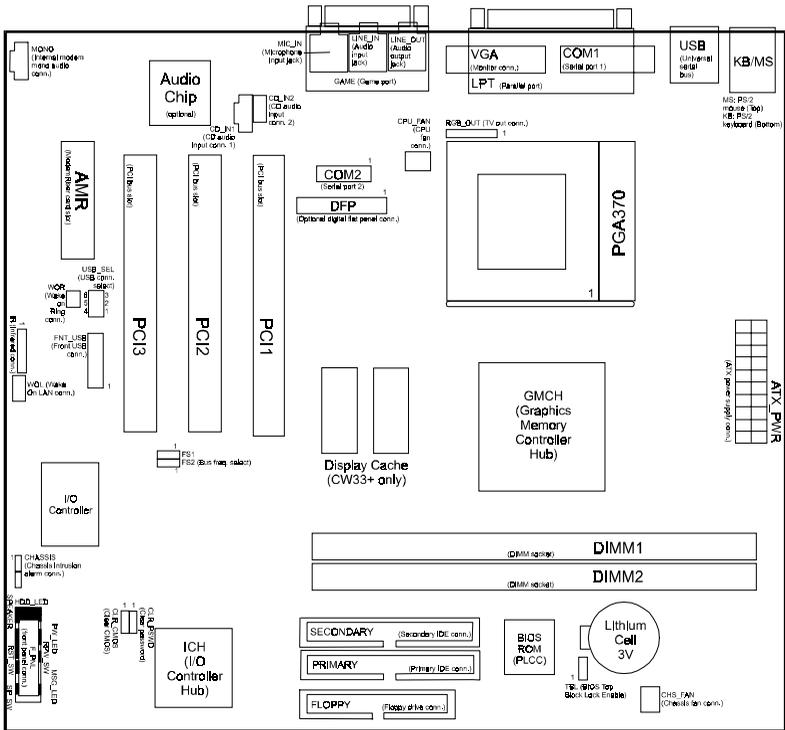
Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

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. Insert the bootable diskette containing the BIOS file into the floppy disette drive.
5. Assuming that the floppy diskette drive is A, reboot the system by using the A: drive. At the A: > prompt, run the BIOS upgraded file by executing the Flash BIOS utility and the BIOS file with its appropriate extension.

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

Mainboard Layout



Chapter 2 Installation Procedures

ONBOARD MARK	MEANING	PAGE
<i>Jumpers</i>		
CLR_CMOS	Clear CMOS Data	2 - 9
CLR_PSWD	Clear Password	2 - 9
TBL	BIOS Top Block Lock Select	2 - 10
FS1, FS2	System Bus Frequency Select	2 - 10
FNT_USB	Front Panel USB Connector Select	2 - 11

Slots

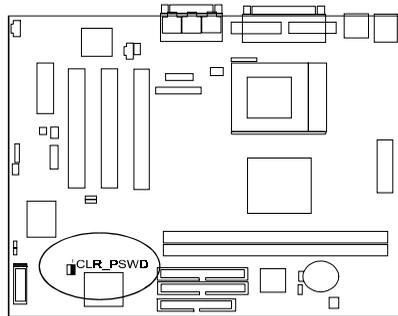
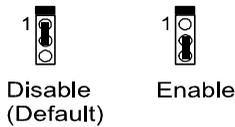
DIMM1/2	DIMM Memory Module Support	2 - 12
PGA370	Celeron CPU Socket	2 - 13
AMR	Audio Modem Riser Card Slot	2 - 14
PCI1/2/3	PCI Bus Expansion Slot (32-bit)	2 - 14

Connectors

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CPU_FAN	CPU Fan Connector	2 - 17
CHS_FAN	System Case Fan Connectors	2 - 17
WOR	Wake on Ring Connector	2 - 18
WOL	Wake on LAN Connector	2 - 18
IR	Infrared Port Module Connector	2 - 19
CD_IN1/2	CD Audio-Out Connector	2 - 19
RGB_OUT	TV Video Port Connector	2 - 20
F_PNL	Connectors for Front Panel LEDs and Switches on Front Panel	2 - 20
VGA	VGA Connector	2 - 21
KB, MS	PS/2 Keyboard and Mouse Connector	2 - 22
FNT_USB, Back USBs	Universal Serial Bus Connectors	2 - 22
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MIC_IN	Audio I/O Jacks	2 - 24

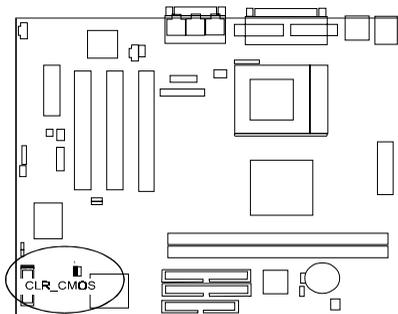
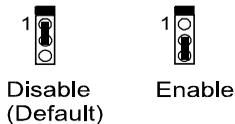
Password Clearance Function: CLR_PSWD

This jumper allows you to enable or to disable the password configuration. You may need to enable this jumper by shorting it with a jumper cap if you forget your password. To clear the password setting: (1). Turn off your computer, (2). Set the jumper to Enable, (3). Turn on your computer after booting, (4). Turn off your computer, (5). Turn on your computer for the new settings to take effect.



CMOS Clearance Function: CLR_CMOS

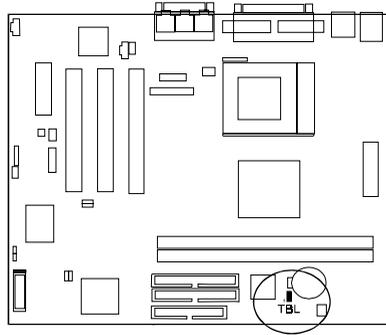
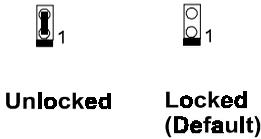
The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1). Turn off your computer, (2). Move this jumper to Enable, (3). Move the jumper back to Disable, (4). Turn on your computer, (5). Hold down the Delete key during boot and enter BIOS Setup to re-enter user preferences.



BIOS Top Block Lock Selection: TBL

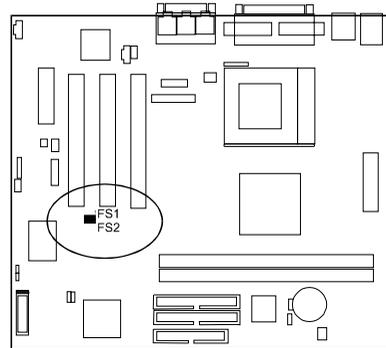
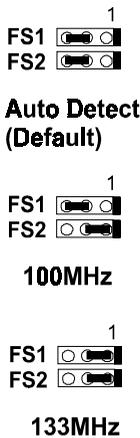
The 2-pin jumper provides you with the capability to enable the top block of the BIOS flash ROM while booting ROM needed to be reflash. This feature provides the protection to the booting area of the BIOS ROM.

Chapter 2
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Procedures



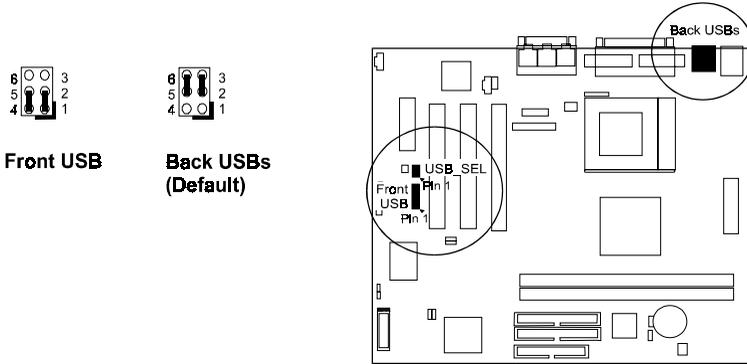
System Bus Frequency Selection: FS1, FS2

These two 3-pin jumpers allow users to select the system bus frequency or stay with the default setting, Auto Detection to let the system automatically detect the system bus frequency.



Front Panel USB Connector Selection: FNT_USB

The 6-pin block jumper provides you with the capability to enable the USB connector on the front panel if you need to connect your USB devices with your computer system via front panel instead of back panel.



**Chapter 2
Installation
Procedures**

2). Install RAM Modules

RAM Module Configuration

This mainboard provides two onboard DIMM sockets for allowing 3.3V (un-buffered) SDRAM DIMM modules. Either 8, 16, 32, 64, 128, 256MB DIMM can be installed on these two sockets. The maximum total memory supported is up to 512MB.

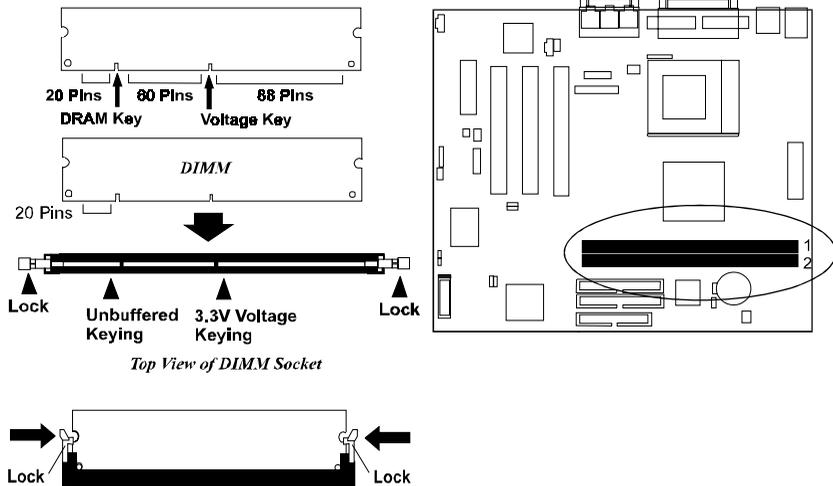


NOTE: This mainboard supports DIMMs with access speeds of 12ns, 10ns, or faster. ECC memory and parity check is also supported.

Install and Remove DIMMs

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

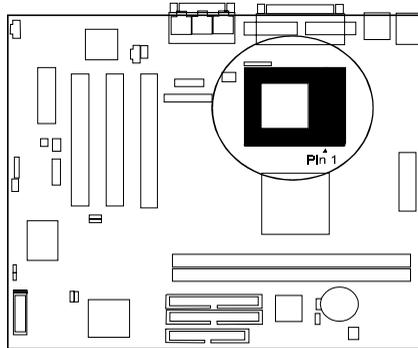
Chapter 2
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Press the clips with both hands to remove the DIMM.

3). Install the CPU

The CPU module resides in the ZIF PGA370 socket on the motherboard.

**CAUTION:**

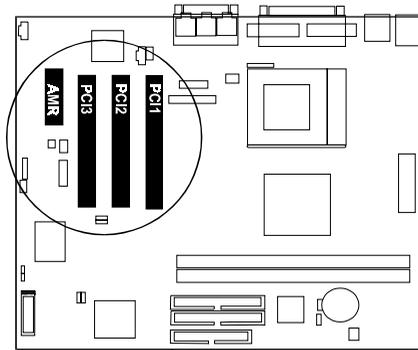
1. Always turn the system power off before installing or removing any device.
2. Always observe static electricity precautions. See “Handling Precautions” at the start of this manual.
3. Inserting the chip incorrectly may damage the chip.

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. See the following sections for information on the CPU jumpers settings.

4). Install Expansion Cards

This section describes how to connect an expansion card to one of your system's expansion slots. Expansion cards are printed circuit boards that, when connected to the mainboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities. The mainboard features [three 32-bit PCI bus](#) expansion slots and [one AMR slot](#) for you for your 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:

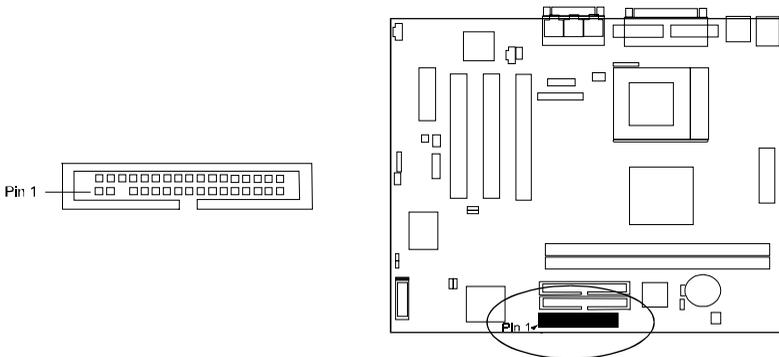
1. Remove the computer chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the computer chassis. Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the computer chassis. Keep the slot cover mounting screw nearby.

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.

5). Connect Devices

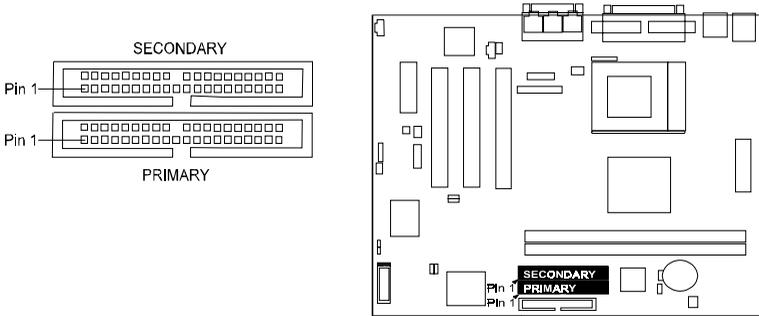
Floppy Diskette Drive Connector: FLOPPY

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.



IDE HDD Device Connectors: PRIMARY, SECONDARY

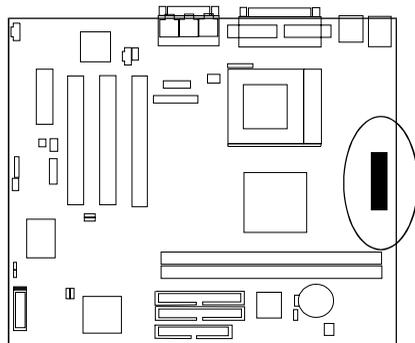
These two connectors are used for your IDE hard disk drives, CD drives, LS-120 drives, or IDE ZIP drives. The red stripe of the ribbon cable must be the same side with the Pin 1.



ATX Power Connector: POWER

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.

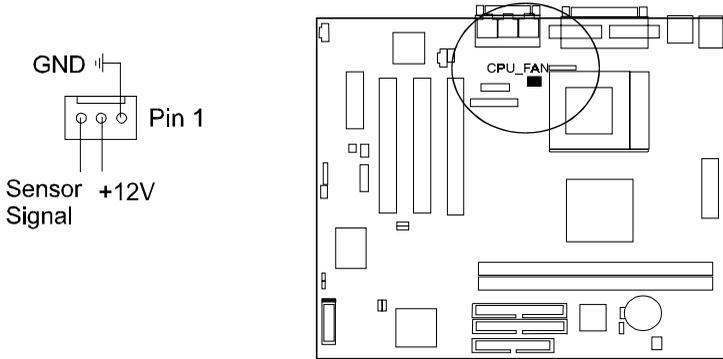
+12V	10	20	+5V
5V_VR	9	19	+5V
PWR_GOOD	8	18	-5V
GND	7	17	GND
+5V	6	16	GND
GND	5	15	GND
+5V	4	14	-PWR_ON
GND	3	13	GND
+3.3V	2	12	-12V
+3.3V	1	11	+3.3V



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

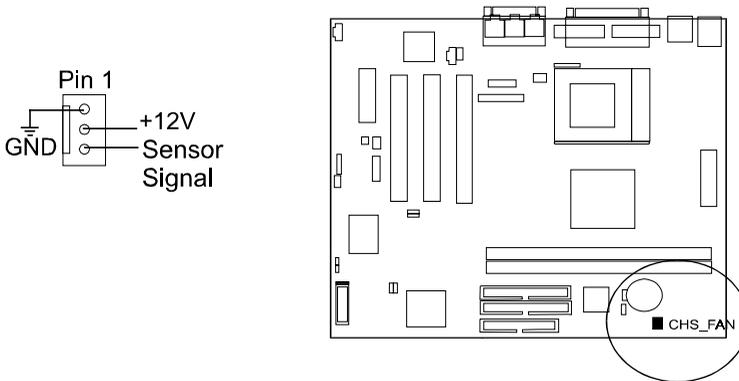
CPU Fan Connector: CPU_FAN

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.



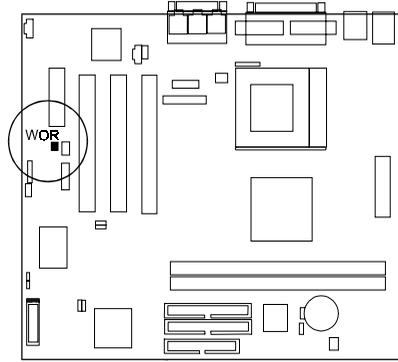
System Case Fan Connector: CHS_FAN

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



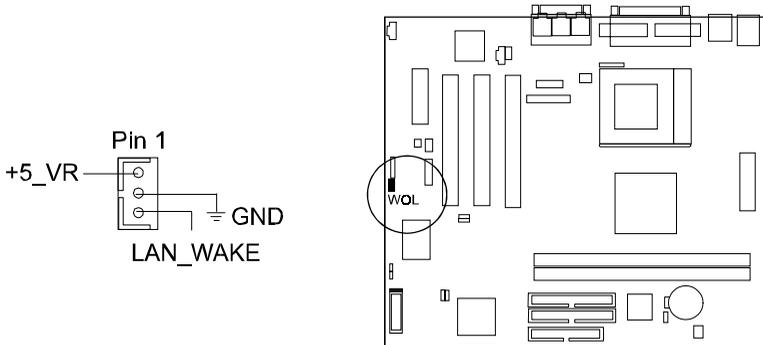
Wake-On-Ring Connector: WOR

This 2-pin connector allows the coming ring signal to wake up the system via your modem riser card which equipped a connector for linking with the WOR. Please also refer to the modem card installation guide for related information.



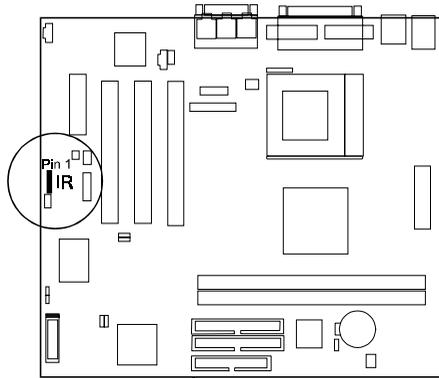
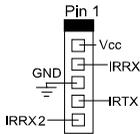
Wake-On-LAN Connector: WOL

This 3-pin connector allows the remote LAN server to wake up the system with a LAN card installed. Please also refer to the LAN card installation guide for related information.



Infrared Connector: IR

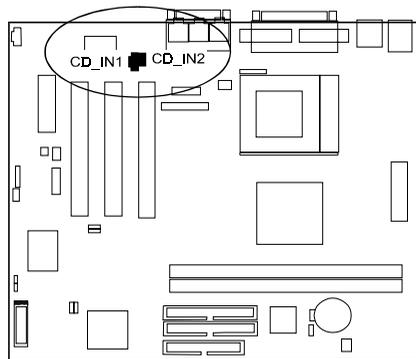
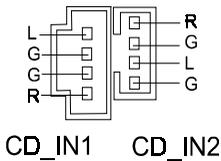
This 5-pin connector is used to link with your ID device to allow transmission of data to another system that also supports the IR feature. This module mounts to a small opening on system cases that support it.



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CD Audio-Out Connectors: CD_IN1, CD_IN2

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



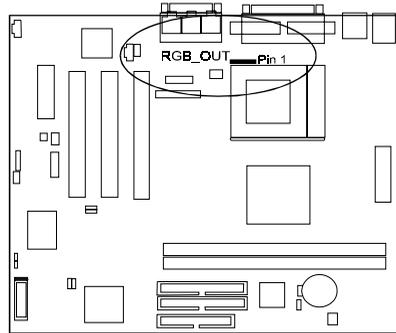


CAUTION:

Before connecting with the TV video cable to RGB_OUT connector, make sure your system power is off. Failure to do so may cause damage to the mainboard.

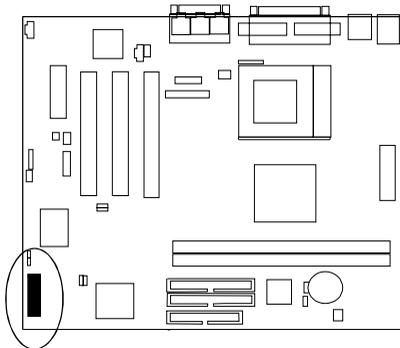
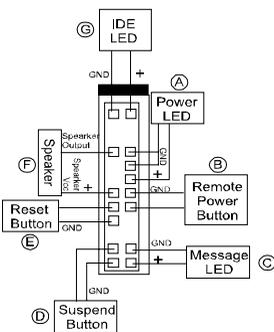
TV Video Port Connector: RGB_OUT

This 1x6-pin connector allows you to connect to your TV set video port for using your TV as a monitor.



Front Panel Block Connector: F_PNL

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 this buttons will not affect the function.



Power LED (A) is connected with the system power indicator to indicate whether the system is on/off. When the system enter the suspend mode, it blinks.

Remote Power Button (B) is connected with remote power (soft power) switch. Push this switch will turn off and on the system instead of turning the power switch on the power supply.

Message LED (C) is connected with the message LED. When the system is running normally, the indicator is off. It is controlled by the operating system or application software.

Suspend Button (D) is connected with suspend mode switch.

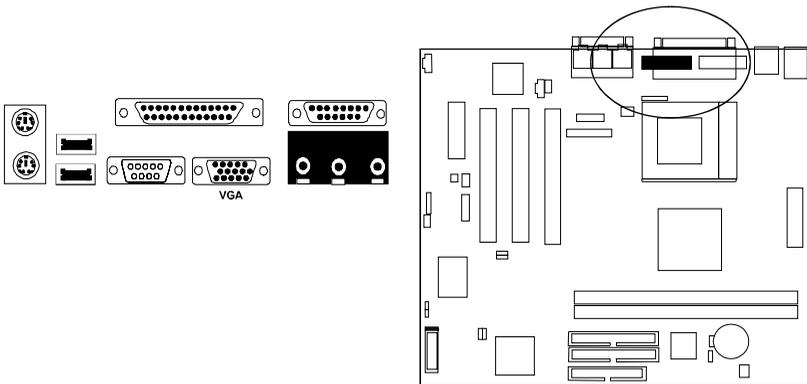
Reset Button (E) is connected to the reset switch. Push this switch to reboot the system instead of turning power switch off and on.

Speaker (F) is connected with the case speaker.

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

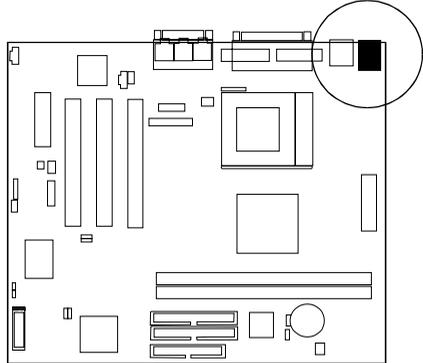
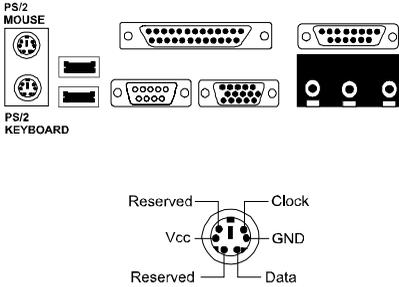
Video Graphics Accelerator Connector: VGA

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



PS/2 Keyboard and Mouse Connector: KB, MS

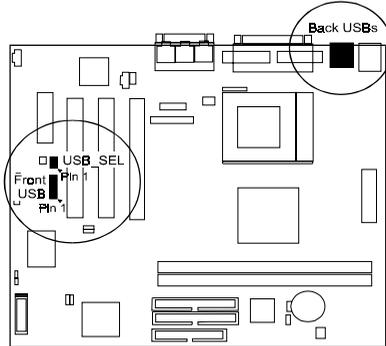
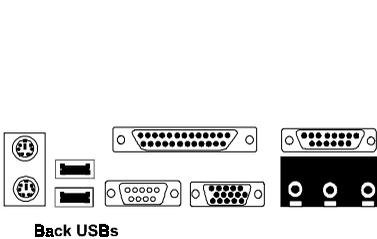
These two 6-pin female connectors are used for your PS/2 keyboard and PS/2 mouse.



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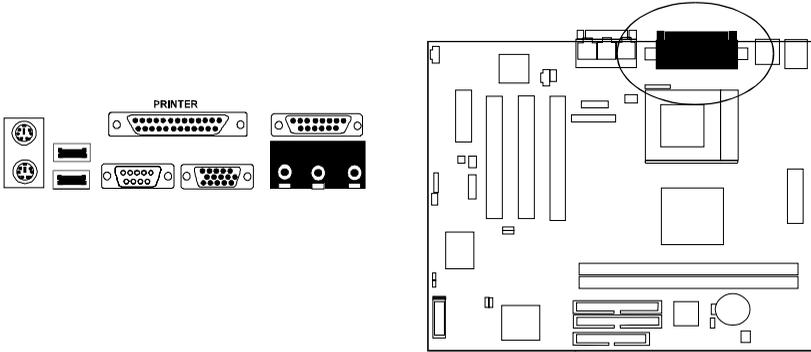
Universal Serial Bus Connectors: FNT_USB, Back USB

These two connectors that integrated on the edge of the board are used for linking with USB peripheral devices. Also, this board provides a pinhead, FNT_USB, for linking with the USB socket on the front panel of some system cases. If the FNT_USB connector is used (the jumper USB_SEL must be set at Front USB option; please read Page 2-6.), one of the back USBs will be disabled. Your operating system must support USB features, such as MS Windows 98, MS Windows 95 OSR2.5 with USB Supplement.



Printer Connector: LPT

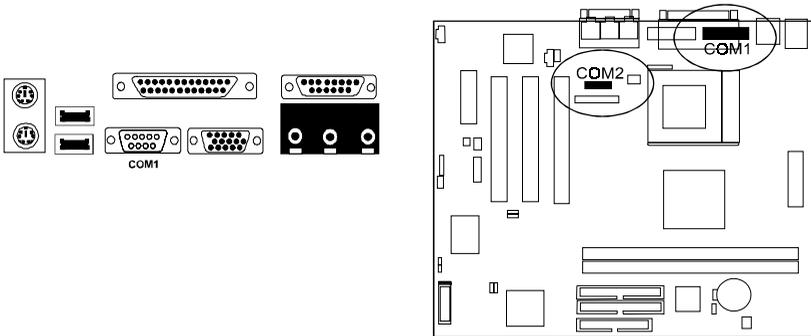
This 25-pin D-Sub female connector is attached to your printer.



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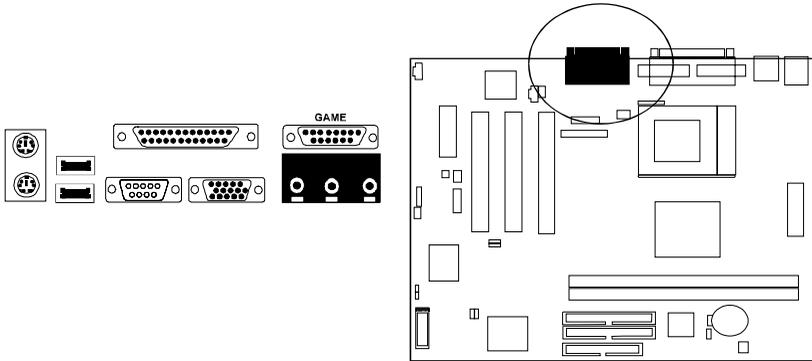
Serial Port Connectors: COM1, COM2

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.



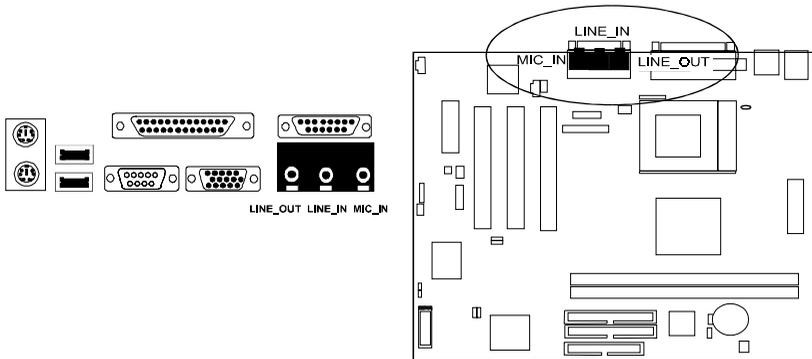
Joystick/MIDI Connector: GAME

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.



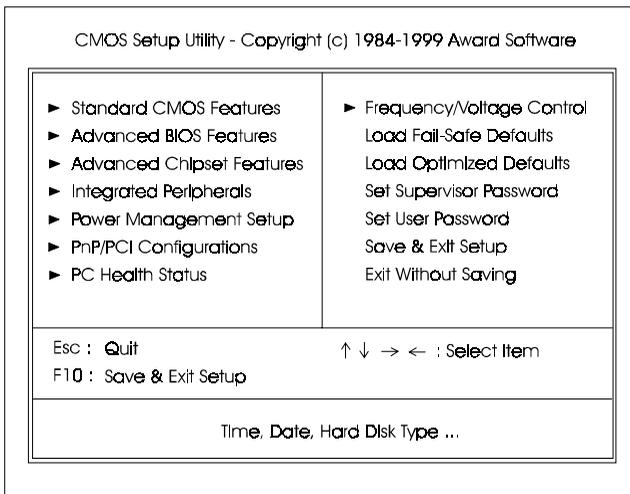
Audio I/O Jacks: LINE_OUT, LINE_IN, MIC_IN

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

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.

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General FAQs

How do I know my BIOS version?

Spot it on the boot screen, click [Pause/Break] button to write it down.

How to install a PS/2 mouse?

Enable PS/2 in the BIOS feature that concerning about it. There is a label on the board which points to pin number one when connecting the PS/2 mouse adapter on the board. The Pin number two is not connected because the female connector (on PS/2 Mouse adapter) doesn't have wire on number two slot. The PS/2 mouse port is a 5 pins pin header which is located beside keyboard socket.

How do I know which PCB Revision my motherboard is?

Some motherboards have more than one PCB Revision. This is written in the top left corner of the motherboard, next to the ISA slots. In some cases different PCB revisions may not all support the same processors, or may require different BIOSes. This is indicated where applicable.

Can I use ECC memory?

Yes, provided your chipset supports it. Check your manual (Overview section) or consult the chipset manufacturer's Web site.

My FIC Pentium-based motherboard PCI 2.1-compliant?

Yes. All FIC Pentium-based motherboards are PCI 2.1-compliant.

How do I know which FLASH chip I have?

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

What is the purpose of KB_LOCK pins located on the front panel connector?

To lock the keyboard access to the system (if short). This feature works in conjunction with keylock found on some computer cases - when it is locked, it shorts the two KB_LOCK pins and prevents keyboard access to the system.

What the DMI utility is used for?

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 computer's 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 motherboard's 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. Those information cannot be detected by the motherboard's BIOS and has to manually entered through the DMI Configuration utility and updated into the MIFD.

Is my FIC Pentium-based motherboard PCI 2.1-compliant?

Yes. All FIC Pentium-based motherboards are PCI 2.1-compliant.

Where can I get the drivers for PCI set motherboards?

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

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.

How do I use DMI Utility?

Very carefully, because otherwise your system can become totally unusable after altering and saving some configuration 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. In some cases, using Win95 as operating system (for applying DMI Utility) shows insufficient error message while trying to load the Flash utility, that's why we recommend to use DOS 6.22. 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.

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 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 about, please visit FIC Online at www.fic.com.tw.

Downloading BIOS File

Format a bootable system diskette, 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**, 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. It is not necessary to "update" virus definition files because there are none.

When I try to flash BIOS I get an error message saying about 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 right 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 very much pleased 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.

Windows 98 FAQs

What's the proper install procedure for VIA-based motherboards?

There are four steps:

- 1) Go to BIOS Setup and enable USB
- 2) Install Win98 on your system
- 3) Download and install the VIA IrQ routing miniport driver from our Drivers and Utilities page
- 4) Download and install the VIA AGP driver from the same page (for MVP3 & VP3 chipsets only).

Windows98 comes with PCI Bridge patch included so you don't need to install it. In case you have more PCI devices always put the first PCI device on PCI Slot 2 and remember to enable USB in BIOS.

Why does my VIA chipset-based motherboard crash under Windows98?

This problem is caused by incorrect assignment of IRQ by Microsoft(r) Windows98. MiniPort driver released by VIA reassigns these IRQs. The driver has not been released by FIC yet but it can be found on the FIC FTP server. Drivers approved by FIC can be downloaded from Drivers and Utilities page.

I need Windows98 drivers for my (VIA chipset-based) FIC motherboard!

Windows98 contains all drivers necessary. Therefore you need not use any of the drivers supplied on the CD-PRO/floppy.

For VIA chipset based motherboards, there is a problem with the way Windows98 assigns IRQs to devices - some may remain "invisible". This is the IRQ routing problem described above (download the driver).

Another driver you might wish to update (not recommended unless you are experiencing problems) is VIA Bus Master IDE driver. It is shipped with MS Windows98 but newer versions are available for download.

Another thing you might wish to update is your VxD driver, also available on Drivers and Utilities page.

I flashed BIOS and now Windows won't boot.. I get a VxD error message.

This happens sometimes and is a software problem. You will have to reinstall Windows based on new BIOS. Windows must have found new settings (registers) different from the old BIOS, so Vxd error message will pop up if these are not found.

My Sound Blaster Live does not work under DOS. Why?

Creative Labs specifies that it does not work under DOS but it does work in DOS mode under Windows

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, 3) 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 UDMA HDD?

This problem appears under Windows 95 OSR2 and OSR 2.1. Microsoft made two updated versions of drivers that cause the problem. 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 model or updated model of a motherboard is 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 only reason why you can see that Exclamation mark on USB serial Bus & PCI Bridge is that Windows95 didn't support it. You will need to install its drivers to fix it.

Intel CPU FAQs

What's the difference between Celeron(tm) CPU packages SEPP and PPGA?

Celeron SEPP is a Slot-1 version of the processor. Celeron PPGA is the type that fits on Socket 370. For more information, visit <http://www.intel.com>.

How do I know what Intel CPU I've got?

CPU ID is a string by which a CPU identifies itself to BIOS. Since processor marking can be changed and some processors can run even at higher frequencies than they're manufactured for, remarked processors can be found on the market. Since they usually do run at the remarked frequency, in that case it is hard to find out what CPU you actually have. To learn what Intel CPU you really have, download Intel's utility CPUID.EXE and run it in real mode (boot from a floppy and run it under DOS).

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