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MANUAL

Supporting Intel PENTIUM III®, PENTIUM II® or Celeron®
Processors, Bus Master IDE, UDMA66, PC100/66 SDRAM,
Integrated VGA Display Controller.

Quality, Performance Mainboards

contents

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overview

Thank You for purchasing our new generation with best performance mainboard. Our advanced technologies mainboard designs for state of art processor and the processing speed of 233MHz to 500MHz or above. The system board can upgradeable for future processors.

The SiS chipset integrates the high performance host bus interface, the DRAM controller, the IDE controller, the PCI interface, 2D/3D Graphics accelerator and video playback accelerator. The DRAM controller supports 3-DIMM/6-Bank of 3.3V SDRAM. The maximum memory size supported per bank is 256MB, with a total of 1.5GB system memory. The memory clock frequency can be operated at up to 100MHz.

The IDE controller is ATA-3 compliant, supporting PIO mode 0/1/2/3/4, DMA multiword 0/1/2 and Ultra DMA 33/66 operations. The two IDE channels are fully independent with dedicated 16 double-word FIFO built-in.

The integrated 3D graphics accelerator is composed of the triangle setup engine and the rendering engine. The hardware acceleration features can be enabled by SiS driver under Direct 3D and OpenGL. The supported 3D-quality acceleration includes Gouroud Shading, Zbuffer, Alpha buffer, Perspective Correction, MipMapping, Tri-linear Texture Filtering, Specular Lighting and Dithering.

In UMA mode operation, the integrated graphics accelerator uses up to 8MB of system memory as display memory, thereby saving the on-board DRAM cost for building a PC system.

This Mainboard is among our "Auto Jumper" Series that eliminates the necessity for the user to be overwhelmed by jumper settings on the Mainboard. It is capable of detecting the CPU brand and core voltage, setting the appropriate CPU speed according to the instructions from the user through the CMOS setup.

Fast start installation

This section will aid you in quickly setting up your series Mainboard, be sure to use caution to avoid personal injury and damage to wiring due to sharp pins on connector's and printed circuit assemblies, rough edges and corners and hot components. Adhere to warnings regarding accessibility into areas designated only for authorized Technicians.



Auto Jumper. This Mainboard is among our “Auto Jumper” Series that eliminates the necessity for the user to be Overwhelmed by jumper settings on the Mainboard. It is capable of detecting the CPU brand and core voltage setting the appropriate CPU speed according to the instructions from the user through the CMOS setup.

Your Location Requirements Are:

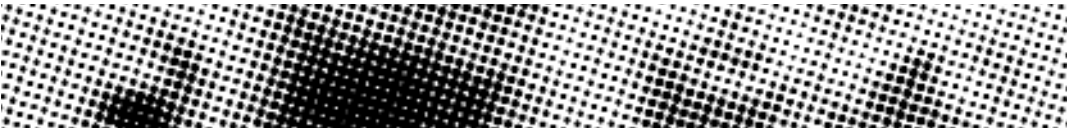
- A sturdy, level surface for placement
- Space allowance around mainboard
- A stable environment with no abrupt temperature or humidity changes
- No exposure to chemicals or direct sunlight

Checking The Package Contents

Remove the items from the box and make sure you have the following items before beginning. If you are missing any of the items below please contact the representative for a replacement part.

MICRO ATX Box Standard Package

- 1) Mainboard
- 2) IDE Hard Drive Ribbon Cable
- 3) Floppy Drive Ribbon Cable
- 4) Serial Port Cable For COM2
- 5) CD-ROM
- 6) Users Guide

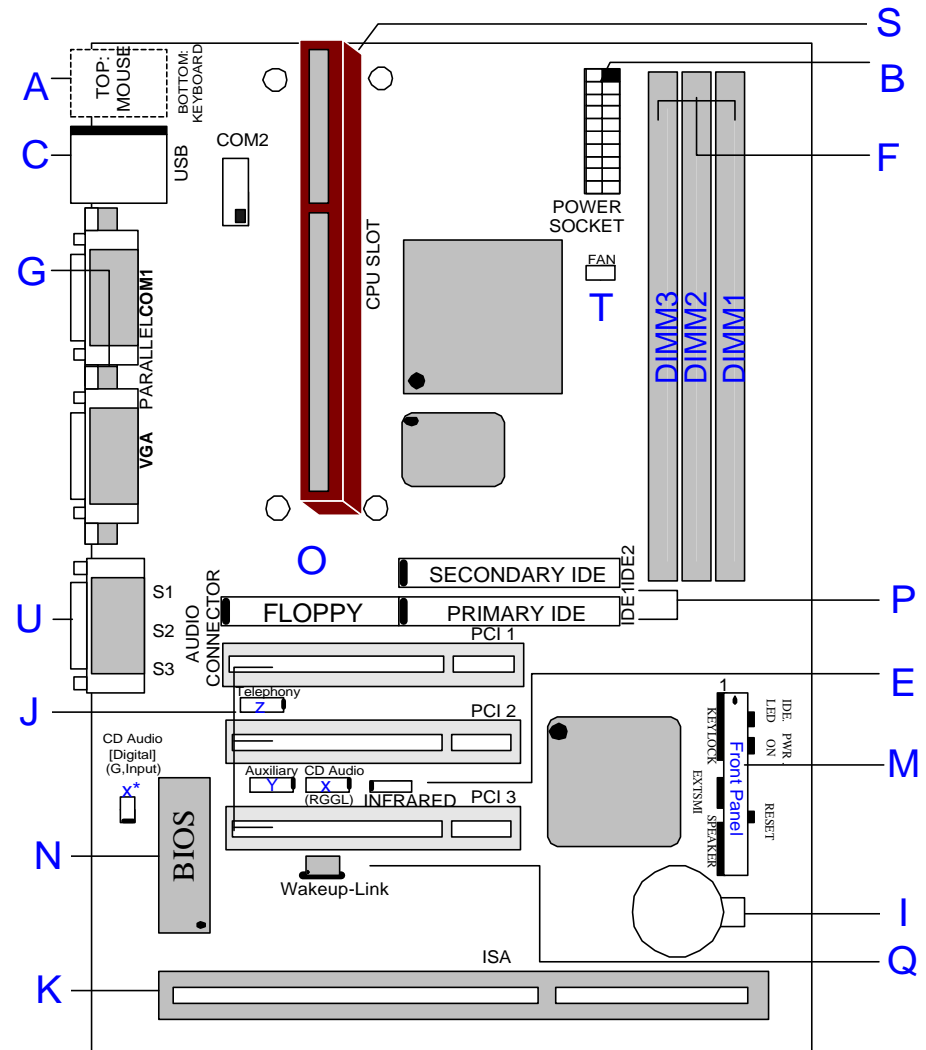


Mainboard diagram

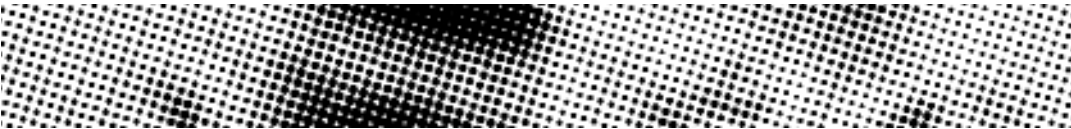
Before we begin installing your Mainboard we have provided you with a diagram of the Mainboard to help you locate the appropriate “connector’s” we will make reference to on the Quick Step portion of this manual. The letters below describes the key Mainboard components. Page number in the right hand column will direct you to a detailed description of the component.

CreateGX-MX [PCI Sound Onboard]
 GX98-MX (Without Sound Onboard]

COMPONENT	PAGE
A- PS/2 Keyboard / Mouse Connector	40
B- ATX Power Supply	40
C- Universal Serial Bus (USB) Connector	41
E- Infra-Red (IR) connector	41
F- Memory Module Sockets	42
G- Serial COM1, Serial COM2 and Parallel Port Connector	42
I- 3V Lithium Battery	42
J- PCI Add-in Board Connector	43
K- ISA Add-in Board Connector	43
M- Front Panel Function Connector	43
N- Flash BIOS	44
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P- IDE Device Connector	44
Q- WAKEUP-LINK Header	45
S- CPU Slot 1	45
T- CPU FAN Connector	45
U- Audio Connectors	46
X- CD Audio Connector	46
Y- Auxiliary Connector	46
Z- Telephony Connector	46



Installation

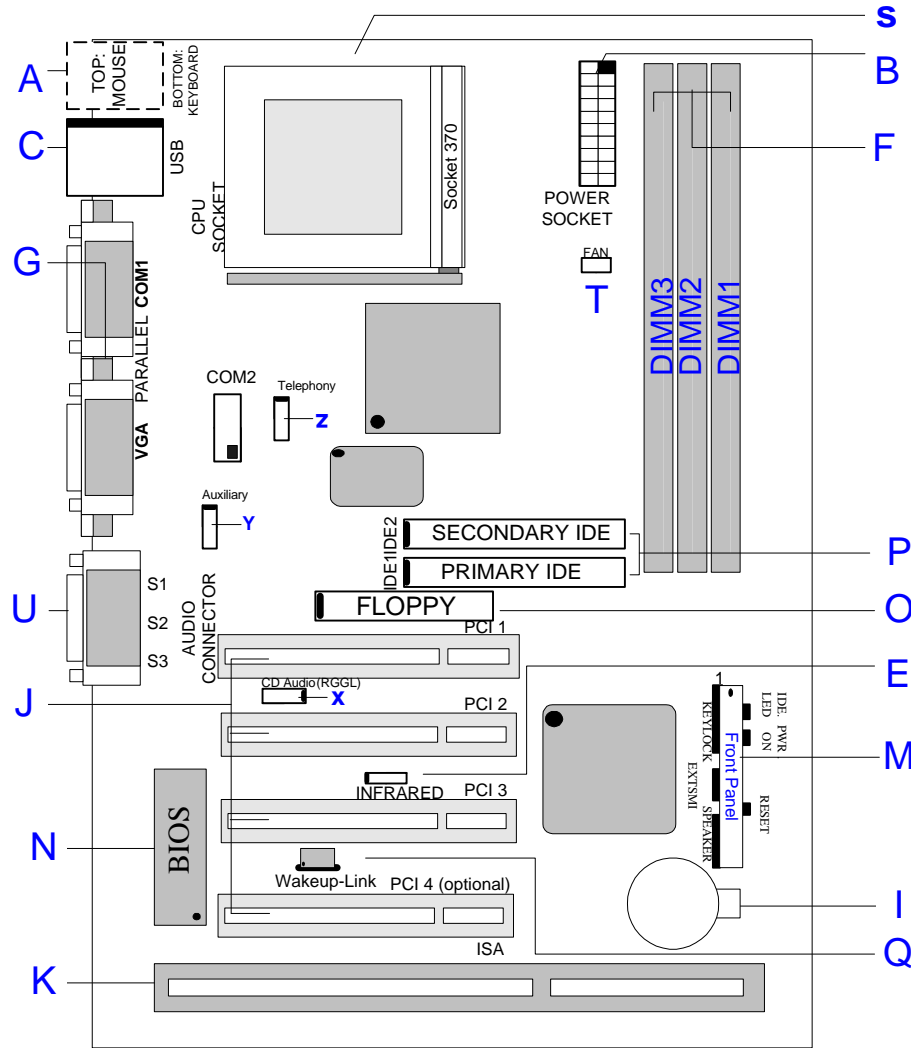


Mainboard diagram

Before we begin installing your Mainboard we have provided you with a diagram of the Mainboard to help you locate the appropriate “connector’s” we will make reference to on the Quick Step portion of this manual. The letters below describes the key Mainboard components. Page number in the right hand column will direct you to a detailed description of the component.

GX3D-CM [PCI Sound Onboard]
 GX98-CM (Without Sound Onboard)

COMPONENT	PAGE
A- PS/2 Keyboard / Mouse Connector	40
B- ATX Power Supply	40
C- Universal Serial Bus (USB) Connector	41
E- Infra-Red (IR) connector	41
F- Memory Module Sockets	42
G- Serial COM1, Serial COM2 and Parallel Port Connector	42
I- 3V Lithium Battery	42
J- PCI Add-in Board Connector	43
K- ISA Add-in Board Connector	43
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N- Flash BIOS	44
O- Floppy Drive Connector	44
P- IDE Device Connector	44
Q- WAKEUP-LINK Header	45
s- Socket 370 CPU Socket	47
T- CPU FAN Connector	45
U- Audio Connectors	46
X- CD Audio Connector	46
Y- Auxiliary Connector	46
Z- Telephony Connector	46



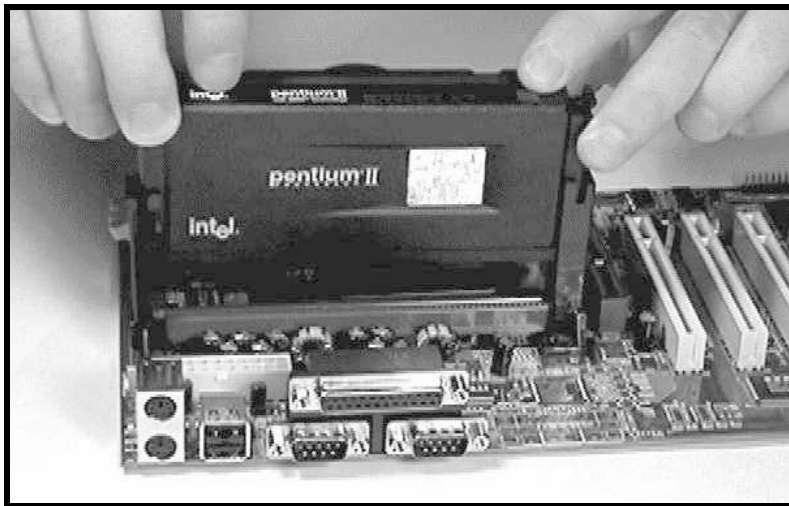
Installation

6 quick steps

Please follow these steps in order to assure your series Mainboard installation is successful. Please refer to the back chapters for further information regarding boot-up and configuration. An anti static wrist band is recommended when handling electronic components, be sure your work area is static free before you begin this section

1 Installing the Central Processing Unit (CPU)

The Mainboard provides a 242-pin CPU slot.(S in diagram). The CPU card should have a fan attached to it to prevent overheating. If a fan is not present, user should purchase a fan prior to turning on the system. The fan power connector should be included.



CPU Cooling Fan Installation Diagram The recommended heatsinks for the Pentium II processor are those with three-pin fans that can be connected to the fan connectors on the motherboard provides the +12 Volts D.C. for your CPU cooling fan.

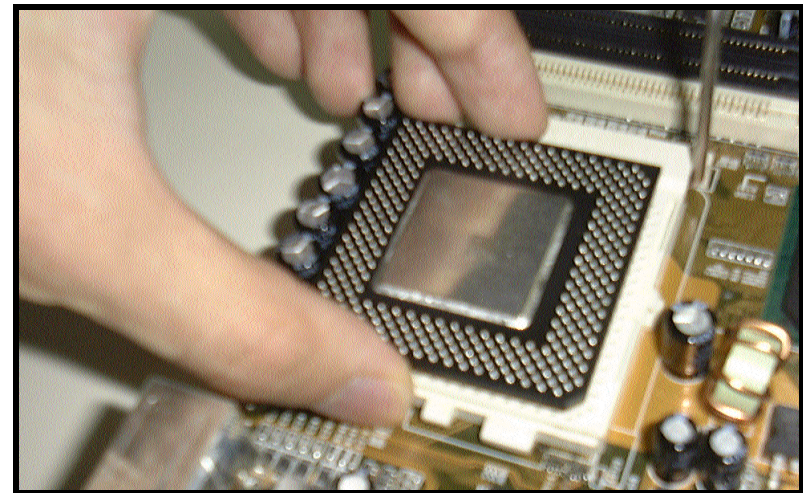


CAUTION! Be sure that sufficient air circulation is available across the processor's heatsink by regularly checking that your CPU fan is working. Without sufficient circulation, the processor could overheat and damage both the processor and the motherboard. You may install an auxiliary fan, if necessary.

Insert the Cartridge: Push the SEC cartridge's two locks inward. With the heatsink facing the mainboard's chipset, press this cartridge gently but firmly until it is fully inserted.

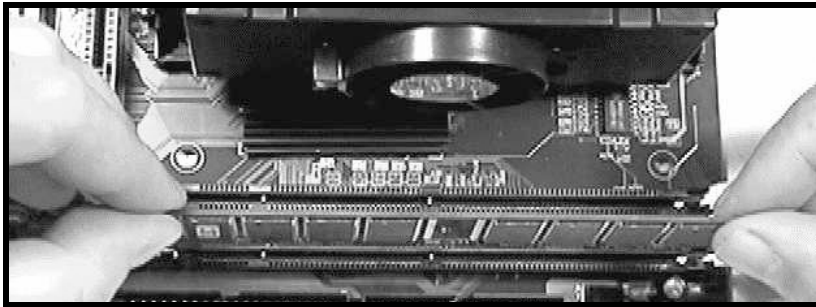
Installing the Central Processing Unit (CPU)

The motherboard provides a 370 pins, Socket 370. The CPU should have a fan attached to it to prevent overheating. If a fan is not present, user should purchase a fan prior to turning on the system. The recommended heatsinks for the Socket 370 processor are those with three-pin fans that can be connected to the fan connectors on the motherboard. provides the +12 Volts D.C. for your CPU cooling fan.



2 Installing the memory

Memory is installed in DIMM Sockets 1-3 (F in diagram) as follows.



After you have set the memory firmly into its slot snap the white chip holders up to lock in the memory chip. The chart below will help you determine what slot to use for the memory configuration you want.

SDRAM Installation Sequence

Install SDRAM into the DIMM Slot must according to the following sequence.

1. DIMM1 Slot (**Must Install First**)
2. DIMM2 Slot
3. DIMM3 Slot

3 Attaching the power supply ribbon cable

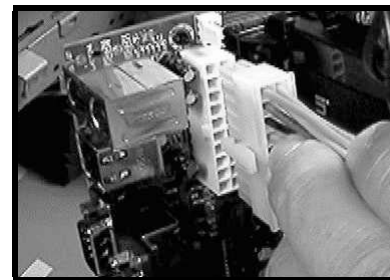


IMPORTANT: Make sure your main power switch is OFF or remove the power cord. Ribbon cables should always be connected with the red stripe on the Pin 1 side of the connector. The four corners of the connector's are labeled on the motherboard. Pin 1 is the side closest to the power connector on hard drives and floppy drives.

ATX Power Connector.

ATX Power Supply Connector (20-pin ATXPWR)

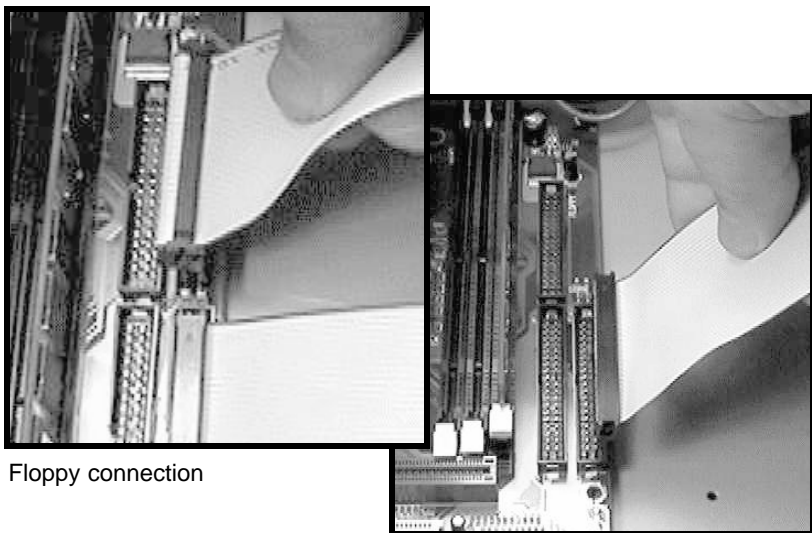
The single 20-pin connector (B in diagram) incorporates standard +5V and +12V, with optional 3.3V soft-on/off signals. With a power supply that supports remote power on/off, the mainboard can turn off the system power through the software control, such as the shutdown in Windows 95 Start Menu. The BIOS system will turn the system power off when it receives the proper APM command from the OS. APM must be enabled in the BIOS and OS systems in order for the soft-off feature is to work properly.



ATX Power Connector

Floppy Disk Drive Connector (34-pin FLOPPY).

This is a 34-pin connector that supports the provided floppy drive ribbon cable. After connecting the single end to the on-board "FLOPPY" connector, (O in diagram) connect the remaining plugs on the other end to the corresponding floppy drives.



Floppy connection

IDE connection

IDE Connector.

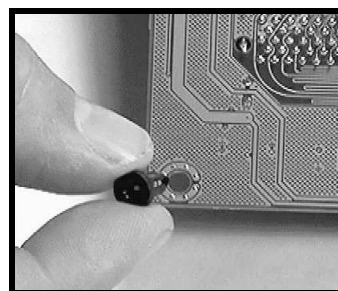
The on-board IDE connector's (P in diagram) support the provided 40-pin IDE hard disk ribbon cable. After connecting the single end to the mainboard, connect the remaining plugs at the other end of your hard disk(s). If you install hard disks, you must configure the drives by setting its jumpers according to the documentation of your hard disk.

Also, you may connect the hard disk drives so that both become Masters, using one ribbon cable on the primary connector. and the other on the secondary IDE connector.

NOTE: For the flat ribbon cable connection, please make sure that the pin 1 of the ribbon cable (the red wire side of the cable) is correctly connected to the on-board connector's pin 1 as shown on the "diagram the mainboard".

4 Installing the mainboard into your computer chassis

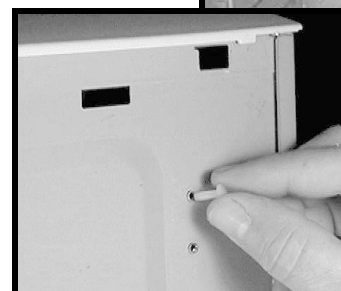
Snap black mounting pins onto the mainboard as shown. Carefully insert the mainboard into the computer chassis and align the corresponding mounting holes on the mainboard with the holes on your chassis. *While chassis design varies you may need to refer to the chassis manual for the mainboard mounting area.* Insert white pins through the chassis and through the mounting holes on the mainboard into the black pin making sure they have snapped fully into place.



Black mount pin



Insert into chassis

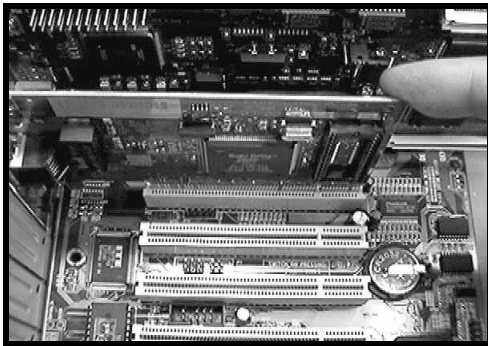


Insert White mount pin

Quick Start

5 Installing COM2 cable connector

The Mainboard provides a COM2 header for the Serial Cable (Package Included). First Install the cable header on the mainboard COM2. Remove the opening cover plate on your computer case at the place you intend to use. Keep the plate for possible future use. Carefully align the cable's connector's and press firmly. Secure the cable on the case with the screw you removed from the cover plate.



PCI Board Installation

6 Installing PCI Add-in Boards

First read your expansion card documentation for hardware and software settings that may be required to set up your specific card. Set any necessary jumpers on your expansion card and remove the opening cover plate on your computer case at the slot you intend to use. Keep the plate for possible future use. Carefully align the card's connector and press firmly. Secure the card on the slot with the screw you removed from the cover plate.



Make sure to align rear external I/O connector's with the corresponding openings in chassis shown below (A,C & G in diagram)

You can now attach the Front Panel Function Connector (M in diagram) wires and Keyboard, Mouse and Monitor cables to the appropriate serial ports. connect the main power cable and boot your system.

Boot the system while pressing the key on your keyboard to detect CPU speed and auto configure Mainboard.

Press the DEL key when prompted and continue BIOS configurations discussed in the next chapter.



I/O connector aligned with openings



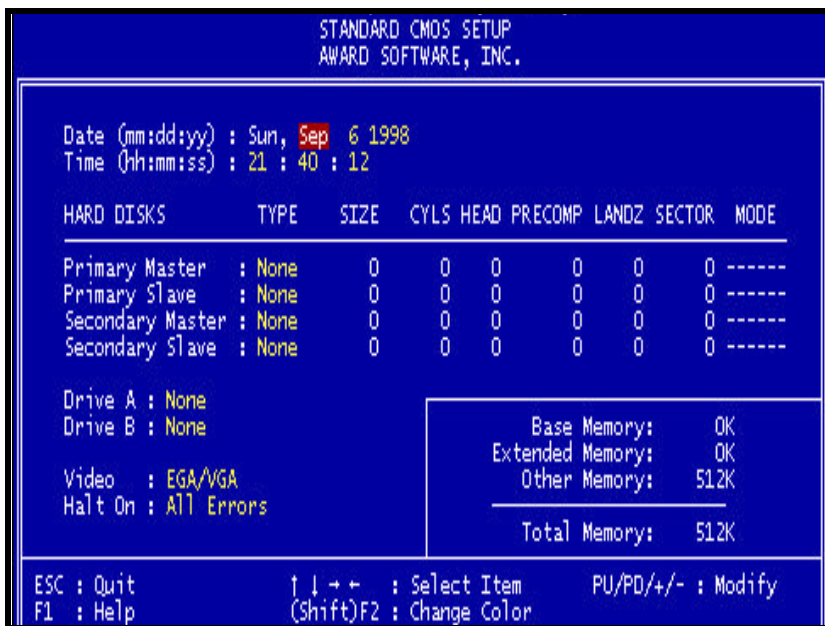
REMEMBER! This Mainboard is among our “Auto Jumper” Series that eliminates the necessity for the user to be overwhelmed by jumper settings on the Mainboard. It is capable of detecting the CPU brand and core voltage setting the appropriate CPU speed according to the instructions from the user through the CMOS setup.

BIOS Set-Up



Award BIOS Setup

Standard CMOS Setup	Sets time, date, hard disk type, types of floppy drive. Monitor type, and if keyboard is installed.
Bios Features Setup	Sets Typematic Rate and Delay, Above 1 MB Memory Test, Memory Test Tick Sound, Hit Message Display, System Boot Up Sequence, and many others.
Chipset Features Setup	Sets chipset-specific options and features.
Power Management Setup	Controls power conservation options.
PCI/PnP Configuration	Sets options related to PCI bus and Plug and Play options.
Integrated Peripheral Setup	Controls I/O Controller- related options.
Load BIOS Defaults	This function is for user to load the BIOS default settings.
Load SETUP Defaults	This function is for user to load the SETUP default settings.
Password Setting	The password setting allows you to limit the user access to the system and Setup.
IDE HDD Auto Detection	Automatically configure hard disk parameters.



Standard CMOS Setup

Select the Award BIOS Setup options by choosing Standard Setup from the Award BIOS. Setup main menu. The Standard CMOS Setup options are described below.

Floppy Drive A: and B:

Move the cursor to these fields and select the floppy type. The settings are 360 KB 5 1/4 inch, 1.2 MB 5 1/4 inch, 720 KB 3 1/2 inch or 2.88 MB 3 1/2 inch.

Primary Master

Primary Slave

Secondary Master

Secondary Slave

Select these options to configure the drive named in the option. Select Auto Detect IDE to let BIOS automatically configure the drive. A screen with a list of drive parameters appears. Click on OK to configure the drive.

Type

How to Configure

IDE

Select Type. Select Auto to let BIOS determine the parameters. Click on OK when BIOS displays the drive parameters. Select LBA Mode. Select On if the drive has a capacity greater than 540 MB. Select Block Mode. Select On to allow block mode data transfers. Select 32-Bit Mode. Select On to allow 32-bit data transfers. Select the PIO Mode. It is best to select Auto to allow BIOS to determine the PIO mode. If you select a PIO mode that is not supported by the IDE drive. The drive will not work properly. If you are absolutely certain that you know the drive's PIO mode. Select PIO mode 0-4, as appropriate.

Standard MFM

Select Type. You must know the drive parameters. Select the drive type that exactly matches your drive's parameters.

Non-Standard MFM

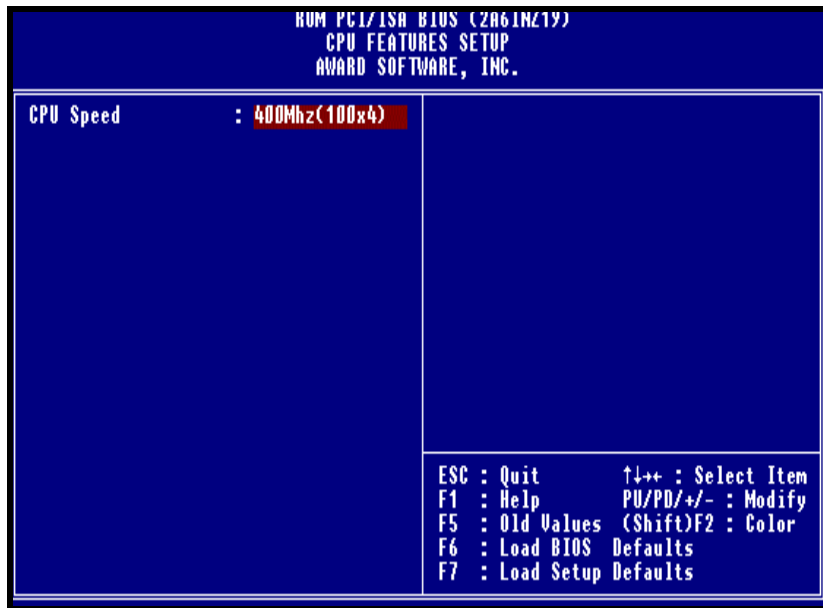
Select Type. If the drive parameters do not match the drive parameters listed for drive types 1 - 46. Select User and enter the correct hard disk drive parameters.

Entering Drive Parameters

Parameter

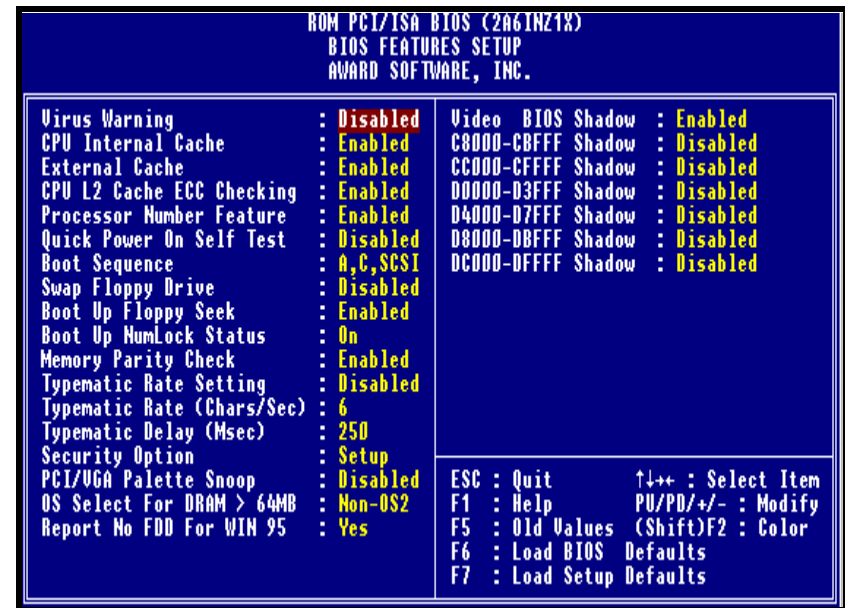
Description

Type	The number for a drive with certain identification parameters.
Cylinders	The number of cylinders in the disk drive.
Heads	The number of heads.
Precompensation	The actual physical size of a sector gets progressively smaller as the track diameter diminishes. Yet each sector must still hold 512 bytes. Write precompensation circuitry on the hard disk compensates for the physical difference in sector size by boosting the write current for sectors on inner tracks. This parameter is the track number on the disk surface where write precompensation begins.
Landing Zone	This number is the cylinder location where the heads normally park when the system is shut down.
Sectors	The number is the cylinder location where the heads normally park when the system is shut down. The formatted capacity of the drive is the number of heads times the number of cylinders times the number of sectors per track times 512 (bytes per sector).



CPU SPEED Setting

The system BIOS is capable to detect the CPU type, say Pentium III or Pentium II or Celeron. The user is only required to select the CPU speed. In addition, overclocking option is provided for advanced users who prefer to run the CPU over the specified clock frequency.



BIOS Features Setup

Virus Warning

You can "Enable" or "Disable" this feature. When enabled, it will activate automatically if anything attempt to access the boot sector or hard disk partition table during system boot-up. The default value is "Disabled".

CPU Internal Cache

This category enables or disables the internal cache to speed up memory access. The default value is "Enabled".

External Cache

This category enables or disables the secondary (L2) cache to speed up memory access. The default value is "Enabled".

CPU L2 Cache ECC Checking

This category enables or disables the CPU L2 cache ECC Checking procedure. The default value is "Enabled".

Quick Power On Self Test

This category speeds up Power On Self Test (POST) after you power on the computer. If it is set to "Enabled", BIOS will shorten or skip some check items during POST. The default value is "Disabled".

Boot Sequence

This category determines which drive computer searches first for the disk operating system (i.e., DOS). The default setting is "A,C,SCSI", means that the system will determine the drive A before drive C.

Swap Floppy Drive

This feature allows you to enable the system swap floppy function, the default is "Disabled". When this function enables, the system will assign the Drive A as Drive B, and vice versa.

Boot Up Floppy Seek

The default setting is "Enabled", so that the BIOS will search for floppy disk drive to determine if it is 40 or 80 tracks. If disabled, BIOS will not search for the type of floppy disk drive by track number. Note that there will be no warning message if the drive installed is 360K.

Boot Up NumLock Status

It determine the Num-Lock is turned on/off Num Lock. when the system is powered on so that the end user can use the arrow keys on both the numeric keypad and the keyboard. The default value is "On".

Boot Up System Speed

It selects the default system speed - the speed that the system will run at immediately after power up. The default value is "High".

Typematic Rate Setting

Typematic Rate sets the rate at which characters on the screen at which characters on the screen repeat. The default setting is Disabled.

Typematic Rate (Chars/Sec)

Typematic rate sets the rate at which characters on the screen repeat when a key is pressed and held down. You can select 6-30 characters per second. The default setting is "6".

Typematic Delay (M sec)

When holding down a key, the time between the first and second character display. you specified numbers of times of character repeat on the screen. The default setting is "250".

Security Option

This category allows you to limit access to the system and Setup or just to Setup. When you select system, the system will not boot and access to Setup will be denied if the correct password is not entered at the prompt. If you select Setup, the system will boot but access to Setup will be denied if the correct password is not entered at the prompt. The default setting is "Setup".

PCI/VGA Palette Snoop

This option controls the system to access the PCI VGA card palette register. In general, this option is "Disabled". However, you may need to enable this option for some VGA cards which have incorrect color displayed on some software application.

OS Select For DRAM > 64MB

Some the OS/2 application access the memory in different mode. Enable this option to allow the system use another mode to access the main memory for OS/2 applications.

Report No Floppy Disk For Windows 95

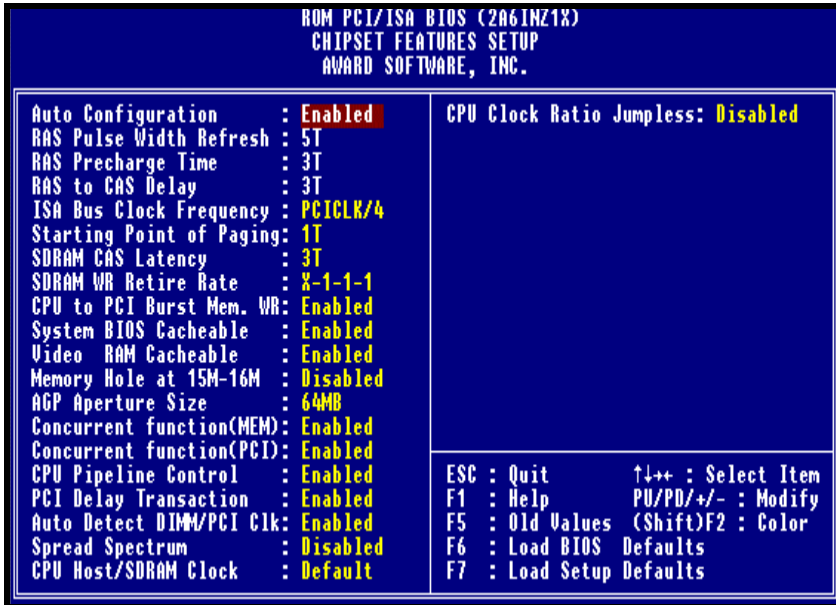
The system will report floppy disk status to Windows95 if setting is Yes.

VIDEO BIOS Shadow

The system BIOS is automatically shadowed. The default setting for the "Video BIOS Shadow" is "Enabled". It determines whether video BIOS will be copied to RAM. However, it is optional from chipset design. Video Shadow will increase the video speed.

C8000 - CFFFF Shadow/E8000 - EFFFF Shadow

These categories determine whether optional ROM will be copied to RAM by 16K byte. You can enable the optional shadow or you can disable it. The default setting is disabled.



Chipset Features Setup

Choose Chipset Features Setup on the Setup main menu. All Chipset Setup options are then displayed.

Auto Configuration

Select the auto configuration setting mode.

The Choice: Enable, Disable

RAS Pulse Width Refresh

This field sets the RAS Pulse Width Refresh timing.

The Choice: 4T, 5T, 6T, 7T.

RAS Precharge Time

This field sets the RAS Precharge timing.

The Choice: 2T, 3T, 4T, 5T.

RAS to CAS Delay

This field sets the RAS to CAS Delay timing.

The Choice: 2T, 3T, 4T, 5T.

ISA Bus Clock Frequency

This field sets the ISA Bus Clock Frequency.

The Choice: PCICLK/4, PCICLK/3, 7.159MHz

Starting Point of Paging

This field sets the Starting Point of Paging timing.

The Choice: 1T, 2T, 4T, 8T.

SDRAM CAS latency

This field sets the CAS latency timing.

The Choice: 2T, 3T.

SDRAM WR Retire Rate

This field sets the SDRAM WR Retire Rate.

The Choice: X-1-1-1, X-2-2-2.

CPU to PCI Burst MEM. WR

This field sets the CPU to PCI Burst MEM. WR.

The Choice: Enable, Disable.

System BIOS Cacheable

Select Enabled allows caching of the System BIOS , resulting in better system performance.

The Choice: Enable, Disable.

Video RAM Cacheable

Select Enabled allows caching of the video RAM , resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Enabled Video RAM access cached

Disabled Video RAM access not cached

Memory Hole At 15M-16M

In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16 MB.

Enabled Memory hole supported.

Disabled Memory hole not supported.

AGP Aperture Size (MB)

Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.

The choice: 4, 8, 16, 32, 64, 128, 256

Concurrent Function (MEM)

When disable, CPU bus will be occupied during the memory operation period.

The choice: Enabled, Disabled.

Concurrent Function (PCI)

When disable, CPU bus will be occupied during the entire PCI operation period.

The choice: Enabled, Disabled.

CPU Pipeline Control

This field sets the CPU Pipeline Control.

The Choice: Enable, Disable.

PCI Delay Transaction

This field sets the PCI Delay Transaction.

The Choice: Enable, Disable.

Auto Detect DIMM / PCI Clk

This field sets the auto detection of DIMM / PCI Clock.

The Choice: Enable, Disable.

Spread Spectrum

This field sets the Spread Spectrum.

The Choice: Disable, 0.25%(Cntr), 0.50%(Down),

CPU Host / SDRAM Clock

This field sets the Spread Spectrum.

The Choice: Enable, Disable.

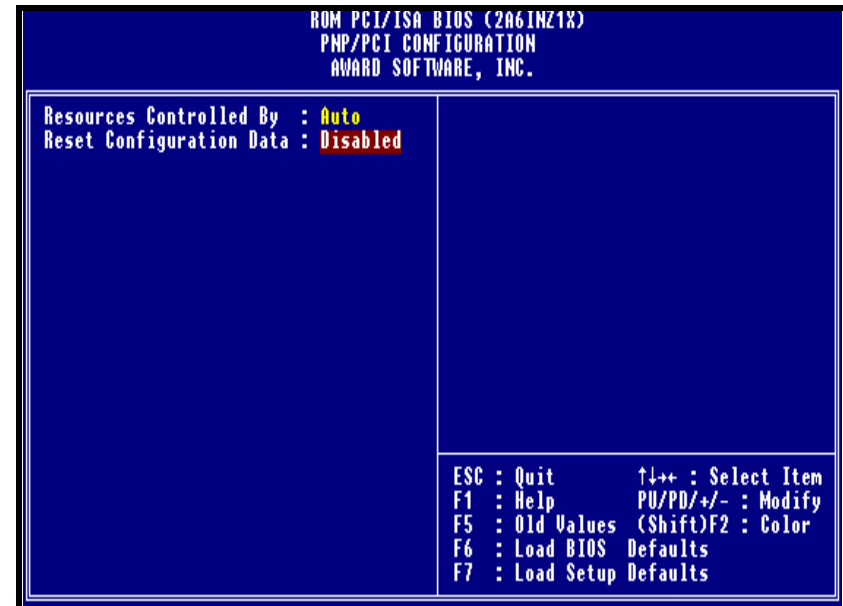
CPU Clock Ratio Jumpless

The field sets the CPU Clock Ratio Jumpless option.

The Choice: Enable, Disable.

Processor Core Frequency (For Socket 370 models only)

The Choice: x2.0, x3.0, x4.0, x5.0, x6.0, x7.0, x8.0
x1.5, x2.5, x3.5, x4.5, x5.5, x6.5, x7.5



PCI/PnP Configuration Setup

Choose PCI/Plug and Play Setup from the BIOS Setup screen to display the PCI and Plug and Play Setup options, described below.

Resources Controlled by

The Award Plug and Play BIOS can automatically configure all the boot and Plug and Play-compatible devices. If you select Auto, all the interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

The choice: Auto and Manual.

Reset Configuration Data

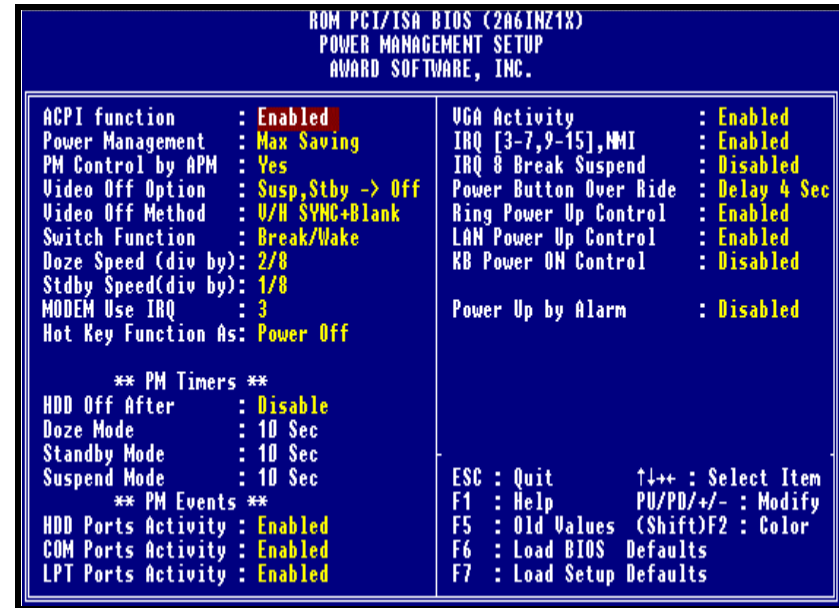
Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

The choice: Enabled and Disabled.

IRQ n Assigned to

When resources are controlled manually, assign each system interrupt as one of the following types, depending on the type of device using the interrupt:

Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific interrupt (such as IRQ4 for serial port 1). PCI/ISA PnP Devices compliant with the Plug and Play standard whether designed for PCI or ISA bus architecture.



Power Management Setup

The BIOS Setup options described in this section are selected by choosing Power Management Setup from the BIOS Setup main menu.

ACPI function

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

The choice: Enabled, Disabled.

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

1. HDD Power Down
2. Doze Mode
3. Suspend Mode
4. Standby Mode

There are three selections for Power Management, three of which have fixed mode settings.

Disable (default) No power management. Disables all four modes
Min. Power Saving Minimum power management. Doze Mode = 1 hr.
Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.

Max. Power Saving Maximum power management -- ONLY AVAILABLE FOR SL CPU'S. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.

User Defined Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

PM Control APM

When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock.

If the Max. Power Saving is not enabled, this will be preset to No.

Video Off Option

Selects the power-saving modes during which the monitor goes blank:

Always On Monitor remains on during power-saving modes.

Suspend --> Off Monitor blanked when system enters Suspend mode.

All Modes --> Off Monitor blanked when system enters any power saving mode.

Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen This option only writes blanks to the video buffer.

DPMS Initial display power management signaling.

PM Timers

The following four modes are Green PC power saving functions which are only user configurable when User Defined Power Management has been selected. See above for available selections.

HDD Power Down

When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Doze Mode

When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

The Choice: Instant-Off, Delay 4 Sec.

PM Events

PM events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as On, even when the system is in a power down mode.

HDD / COM / LPT / VGA Ports Activity - Options : Disable / Enable

IRQ [3-7,9-15], NMI - Options : Disable / Enable

IRQ 8 Break Suspend - Options : Disable / Enable

Power Button Over Ride - Options : Delay 4 Sec / Instant Off

Ring Power Up Control - Options : Disable / Enable

LAN Power Up Control - Options : Disable / Enable

KB Power Up Control : Disable / Enter / User Define password

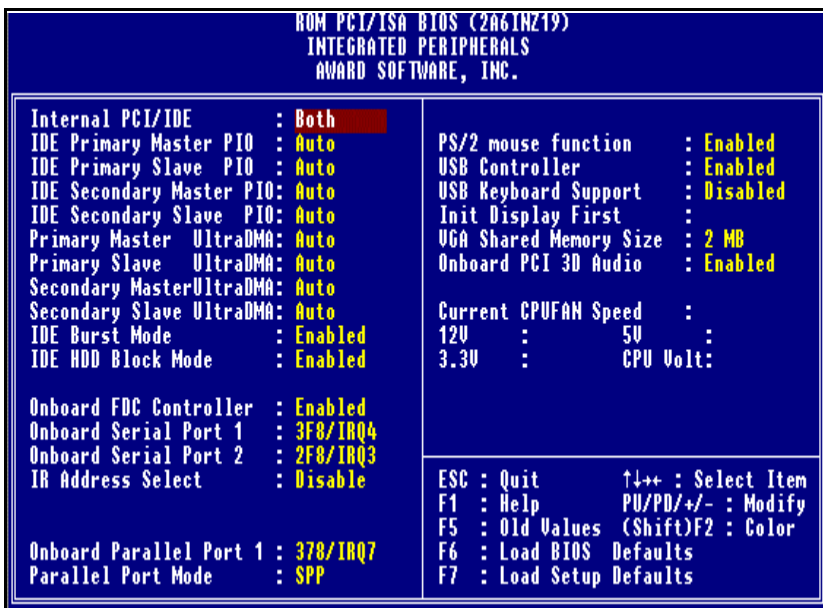
KB Power Up by Alarm - Options : Disable / Enable

Month Alarm - Option : 1 / 0

Day of Month Alarm - Option : 1 ... 31

Week Alarm - Set the option on/off for *** SUN...SAT***

Time (hh:mm:ss) Alarm - Set the time for Alarm



Integrated Peripheral Setup

Integrated Peripheral Setup options are displayed by choosing Peripheral Setup from the BIOS Setup main menu. All Peripheral Setup options are described here.

Internal PCI / IDE

The chipset contains a PCI IDE interface with support for two IDE channels. Select Enabled to activate the first and/or second IDE interface. Select Disabled to deactivate an interface, if you install a primary and/or secondary add-in IDE interface.

The choice: Both, Disabled.

IDE Burst Mode

The onboard IDE drive interfaces supports IDE prefetching, for faster drive accesses. If you install a primary and/or secondary add-in IDE interface, set this field to Disabled if the interface does not support prefetching.

The choice: Enabled, Disabled.

IDE HDD Block Mode

This allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive (HDD).

Enabled IDE controller uses block mode.

Disabled IDE controller uses standard mode.

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

The Choice: Auto, Disabled

Init Display First

This item allows you to decide to active PCI Slot or AGP first

The choice: PCI Slot, AGP.

Onboard FDD Controller

This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

The Choice: Enabled, Disabled.

USB Controller The Choice: Enabled, Disabled.

USB Key board Support The Choice: Enabled, Disabled.

VGA Shared Memory Size - Set the VGA Shared Memory Size option.

The Choice: None, 2, 4, 8 MB

Onboard 3D Sound - Set the Onboard 3D Sound option.

The Choice: Enabled, Disabled.

(This is only For Onboard sound Series)

Onboard Serial Port 1/Port 2

This item allows you to determine access onboard serial port 1/port 2 controller with which I/O address.

The Choice: 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

IR IRQ Address

The Choice: Disable, 3F8H, 2F8H

IR Mode

This item allows you to determine which Infra Red (IR) function of onboard I/O chip.

The Choice: Standard, ASKIR, HPSIR.

IR IRQ Select

The Choice: Disable, IRQ3,IRQ4,IRQ10,IRQ11

Onboard Parallel Port Mode

Select an operating mode for the onboard parallel (printer) port. Normal EPP (Extended Parallel Port) ECP (Extended Capabilities Port) CEP+EPP PC AT parallel port Bidirectional port Fast, buffered port Fast, buffered, bidirectional port.

Select Normal unless you are certain your hardware and software both sup

Onboard Parallel Port

Select a logical LPT port name and matching address for the physical parallel (printer) port.

The choice: 378H/IRQ7, 278H/IRQ5, 3BCH/IRQ7, Disabled.

port EPP or ECP mode.

Choices are SPP, ECP/EPP, ECP, EPP/SPP.

ECP Mode Use DMA


Select a DMA channel for the port.

Choices are 3, 1.

Parallel Port EPP Type

Select EPP port type 1.7 or 1.9.

Choices are EPP1.7, EPP1.9



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glossary

A  PS/2 Keyboard and Mouse Connector's

The Mainboard provides two on-board PS/2 connector's, one for the keyboard, and an other for the mouse. PS/2 devices all have a standard 6-pin round shape connector. If you are already using a PS/2 mouse or keyboard, simply plug them into the corresponding connector's. No jumper settings are necessary.

B  ATX Power Supply Connector

The Mainboard provides a single 20-pin ATX power supply connector, J3 which incorporates standard (5V and 12V), with optional 3.3V and soft-on/off signals. With a power supply that supports remote power on/off, the mainboard can turn off the system power through software control, such as the shutdown command in the Windows 95 Start Menu. The BIOS system will turn the system power off when it receives the proper APM command from the OS. APM must be enabled in the BIOS and OS systems in order for the soft-off feature is to work properly.

Pin	Signal Name	Pin	Signal Name
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PW ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PWRGOOD	18	-5V
9	+5VSB	19	+5V
10	+12V	20	+5V



About the Soft Touch Power Button

In an ATX based system, the new soft touch power button replaces the main power switch that turns your system on and off. From an OFF state, you can switch the system ON by simply pressing the power button. From an ON state, the system can be turned OFF by pressing and holding the power button for four (4) seconds. The functions of the power button can also be altered in the Power Management section of the CMOS setup.

C  Universal Serial Bus (USB) Connector

The Mainboard provides two 4-pin Universal Serial Bus (USB) connector's. USB is a new interface standard for adding external Plug-and-Play (PnP) devices to the computer system. Peripherals that support USB PnP capabilities can operate at up to a 12Mb/sec data transfer rate. Eventually, all external devices connected to your computer will be standardized to USB.

E  Infra-Red (IR) Connector

The Mainboard provides a 5-pin header interface, connection to a Hewlett Packard HSDSL-1000 compatible infrared (IrDA) transmitter/receiver. Connect to the front panel I/O IrDA connector provided with your system. Once the module is connected to the front panel I/O IrDA connector, Serial port 2 can be redirected to the IrDA module. When configured for IrDA, the user can transfer files to or from portable devices such as laptops, PDA's and printers using application software such as LapLink. The IrDA specification provides for data transfers at 115 kbps from a distance of 1-meter. Support for Consumer infrared (ASK-IR) is also included. Please refer to your IR equipment for more detailed information.

The header pin-out is as follows:

Pin	Signal Name
1	.VCC, power source
2	.No Connection
3	.IRRX, infra-red receive
4	.No Connection
5	.IRTX, infra-red transmit

F  3.3V Memory Module Sockets (DIMM)

The Mainboard provides three 168 pin standard DIMM sockets for installation of 3.3V unbuffered Single or Double Bank SDRAM modules.

 Serial COM1, Serial COM2 and Parallel Port Connector's

The **ATX** Mainboard provides two serial port connector's and one parallel port connector. Based on the ATX standard, (2) 9-pin serial ports and (1) 25-pin parallel port are now built on the mainboard back panel. This design makes your mainboard's installation easier. The parallel port can be BIOS configured into standard (SPP) mode, Enhanced Parallel Port (EPP) mode, and a high speed Extended capabilities Port (ECP) mode. EPP Mode requires a driver provided by the peripheral manufacturer in order to operate properly.

The **AT** Mainboard provides two 10-pin serial ports and one 26-pin parallel port pin Headers for Cable are now built on the mainboard.

H  Accelerated Graphics Port (AGP) Connector

The Mainboard provides an AGP slot compatible with the Accelerated Graphics Port specification. AGP compliant video cards offer a much higher throughput than equivalent PCI bus video cards. PCI currently only supports a 33 Mhz bandwidth, and can transport at peak rates up to 133 MB/s over its 32 bit data bus. AGP operates at a 66 Mhz bandwidth which enables a peak rate of 266 MB/s in what is known as 'X1' mode. Using 'X2' mode, the peak transport rate can go as high as 532 MB/s.

I LITHIUM BATTERY

A 3V, CR-2030, Lithium battery is installed on the on-board battery socket. This battery is used to supply the CMOS RAM backup power during system powered-off. Danger of explosion if battery is incorrectly replaced. Therefore, if you have any difficulties, please consult to the technical personnel.

J  PCI Add-In Board Connector

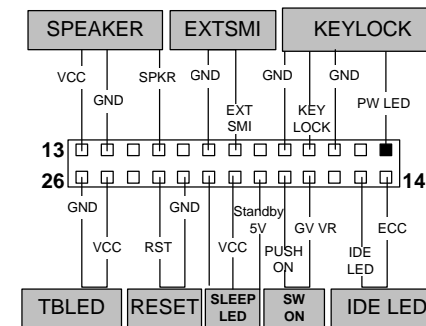
K  ISA Add-In Board Connector

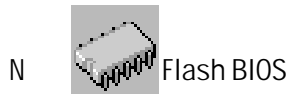
The Mainboard provides 32-bit PCI 2.1 compatible expansion slots and 16-bit ISA expansion slots.

M  Front Panel Function Connector

The Mainboard integrates all system front panel functions into a single on-board 26-pin connector, JP9. These include connections for the following features:

Function	Connector Pin-Out Label
System Reset	RESET
Power LED / Keylock	KEYLOCK
Hard Drive Activity LED	IDE LED
System Speaker	SPEAKER
Soft-Touch Button Power On/Off	SW ON
Turbo LED	TBLED
External Power Saving Control (optional)	EXTSMI





N Flash BIOS

The Mainboard flash BIOS provides users with more flexibility in upgrading their mainboards. The flash BIOS can be easily reprogrammed via software.



O Floppy Drive Connector

The Mainboard provides a 34-pin connector that supports the included floppy drive ribbon cable. After connecting the single end to the on-board "FLOPPY" connector, connect the remaining plugs on the other end of the cable to the corresponding floppy drives.

NOTE: Pin 5 is removed to prevent inserting the connector in the wrong orientation.

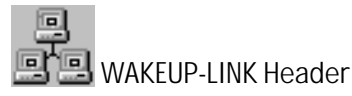


P IDE Device Connector

The Mainboard provides (2) independent bus-mastering PCI IDE interfaces capable of supporting up to Mode 4 and Ultra DMA-33 devices. The system BIOS supports automatic detection of the IDE device data transfer rate and translation between different kinds of device modes such as Logical Block Addressing (LBA), Extended Cylinder Sector Head (ECSH) translation modes and ATAPI (e.g., CD-ROM) devices on both IDE interfaces.

The two on-board IDE connector support the provided 40-pin IDE hard disk ribbon cables. After connecting the single end to the mainboard connector, connecting the two remaining plugs at the other end of your hard disk(s) and/or CD-ROM drive(s). If you install two hard disks and/or CD-ROM drives, you must configure the two drives by setting their IDE master/slave jumpers according to the documentation for those devices.

Also, you may connect the two hard disk drives so that both become Masters, using one ribbon cable on the primary IDE connector and one on the secondary IDE connector.



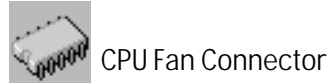
Q WAKEUP-LINK Header

The Mainboard provides a WAKEUP-LINK header used to connect an add-in NIC (Network Interface Card) which has Wake-on-LAN capability.



S CPU Card Slot 1

The Mainboard provides a 242-pin CPU slot for use with Intel Pentium II / III processor. The CPU should have a fan attached to it to prevent overheating. If a fan is not present, a fan should be installed prior to turning the system on.




T CPU Fan Connector

The recommended heatsinks for the processor are those with 12 Volt three-conductor fans that can be connected to the fan connector on the mainboard. Provides +12 Volts DC to the CPU cooling fan as follows:

PIN	SIGNAL NAME
1	(CPU FAN Rotation Signal)
2	+12V
3	Ground



CAUTION! Be sure that sufficient air circulation is available across the processor's heatsink by regularly checking that your CPU fan is working. Without sufficient circulation, the processor could overheat and damage both the processor and the mainboard. You may install an auxiliary fan if necessary.


U  Audio Connectors

The Mainboard provides Audio headers.

- Audio Connectors S1 : Line Output
S2 : Line Input
S3 : Microphone Input


W  SIS Hardware Monitor


The Mainboard provides sophisticated hardware monitoring via the onboard SIS Monitor integrated circuit. The SIS Monitor can be used to monitor temperatures, power supply voltages, and fan speeds and will generate interrupts and audible tones that allow the system speaker to sound an alarm if it detects an abnormal system situation. Through the software interface, the host can program the temperature trip points and query the SIS monitor about system interrupt status, current temperature, voltage, and fan speed.

X  CD Audio Connector
CD Audio input (1:Left,2,3:Ground,4:Right)

* CD Audio Connector (Digital)

CD Audio digital(1:Ground,2:input)

Y  Auxiliary Connector
Auxiliary input (1:Left,2,3:Ground,4:Right)

Z  Telephony Connector
Telephony input(1:Phone,2,3:Ground,4:Mono)

S  370 CPU SOCKET

The Mainboard provides a 370-pin Socket 370 CPU Socket for use with Intel Socket 370 Celeron processor. The CPU should have a fan attached to it to prevent overheating. If a fan is not present, a fan should be installed prior to turning the system on.

Ultra DMA 66 Device Guide

For the best I/O transfer rate, we recommend you connecting your Ultra ATA/66 and Ultra ATA/33 Devices according to the following configuration :

Primary IDE - Connect Ultra ATA/66 device with Ultra ATA/66 cable (Optional)

- Attach the blue connector to mainboard IDE 1.
- Attach the black connector to master drive e.g. Ultra ATA/66 Hard Disk
- Attach the grey connector to slave drive e.g. Ultra ATA/66 CD-Rom

Secondary IDE -Connect Non-Ultra ATA/66 device with regular IDE cable

- Attach the devices to mainboard IDE 2 .
- Attach the master cable connector to master drive e.g. Ultra ATA/33 Hard Disk
- Attach the slave cable connector to slave drive e.g. Ultra ATA/33 CD-Rom

Ultra ATA Specification :

Ultra ATA/66 - cycle time : 30ns
- maximum transfer rate : 66MB/sec

Ultra ATA/33 - cycle time : 60ns
- maximum transfer rate : 33MB/sec

For Software Installation, please refer to the CD-ROM.