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MANUAL

Supporting Intel Pentium III® FCPGA, Celeron® PPGA,
Celeron® FCPGA or Cyrix® III Socket 370 Processors,
UDMA33/66/100, PC100/133 SDRAM

Quality, Performance Mainboards

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Contents

Table Of Contents

Overview	5
Fast Start Installation	6
Checking the Package Contents	7
Mainboard Diagram	9
Jumper Settings Table	10
7 Quick Steps	11
Installing the CPU	11
Installing the Memory	13
ATX Power Connector	14
Floppy Disk Drive Connector	15
IDE Connector	15
Mounting Mainboard to chassis	16
Installing Add-In Boards	17
BIOS Setup	19
Glossary	37
CD Driver & Software Installation Guide	45
Norton AntiVirus OEM Version Setup Guide	46
INSTANT ON Guide	48





Overview

Thank you for purchasing our High Performance Mainboard. Our advanced mainboard is designed for processing speeds of 1GHz or above and is upgradeable for future processors.

The VIA Mainboard utilizes VIA's VT82C694X and VT82C686B chipset providing an integrated Bus Mastering IDE controller with two high performance IDE interfaces for up to four Ultra DMA33/66/100 IDE devices (hard drives, or CD-ROM's). It's I/O controller integrates floppy drive interface, two 16C550 compatible serial ports, one parallel port and one Consumer Infra Red compatible interface.

VIA VT82C694X chipset supports Intel Pentium III[®] FCPGA, Celeron[®] FCPGA, Celeron[®] PPGA or Cyrix[®] III Processors on Socket 370 with 66/100/133MHz Processor Front-side Bus. Support PC100 & PC133MHZ SDRAM DIMM.

Two DIMM slots support up to 1GB Memory Capacity. Four USB ports support USB Devices. Wake-On-LAN Header support Intel Wake-On-LAN.

Integrated AC97 2.1 Compliant Codec with 3D Stereo enhancement (optional). Award 2Mbit BIOS, ACPI/DMI Compliant.

ATX Form factor, 305mm x 170mm.

Fast Start Installation

This section will aid you in quickly setting up the mainboard. Be sure to take caution to avoid personal injury or damage to wiring due to sharp pins on connectors, printed circuit assemblies, rough edges and corners and hot components.

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
- Line voltage and frequency must be compliant with the specifications stated on the package or nameplate (located on the back, opposite the power plug) of the power supply

Checking The Package Contents

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

ATX Box Standard Package

- 1) Mainboard
- 2) Driver CD with Norton AntiVirus 2001 OEM Version
- 3) User Manual
- 4) IDE Hard Drive Ribbon Cable
- 5) Floppy Drive Ribbon Cable
- 6) USB Cable for onboard **USB Header (Optional)**

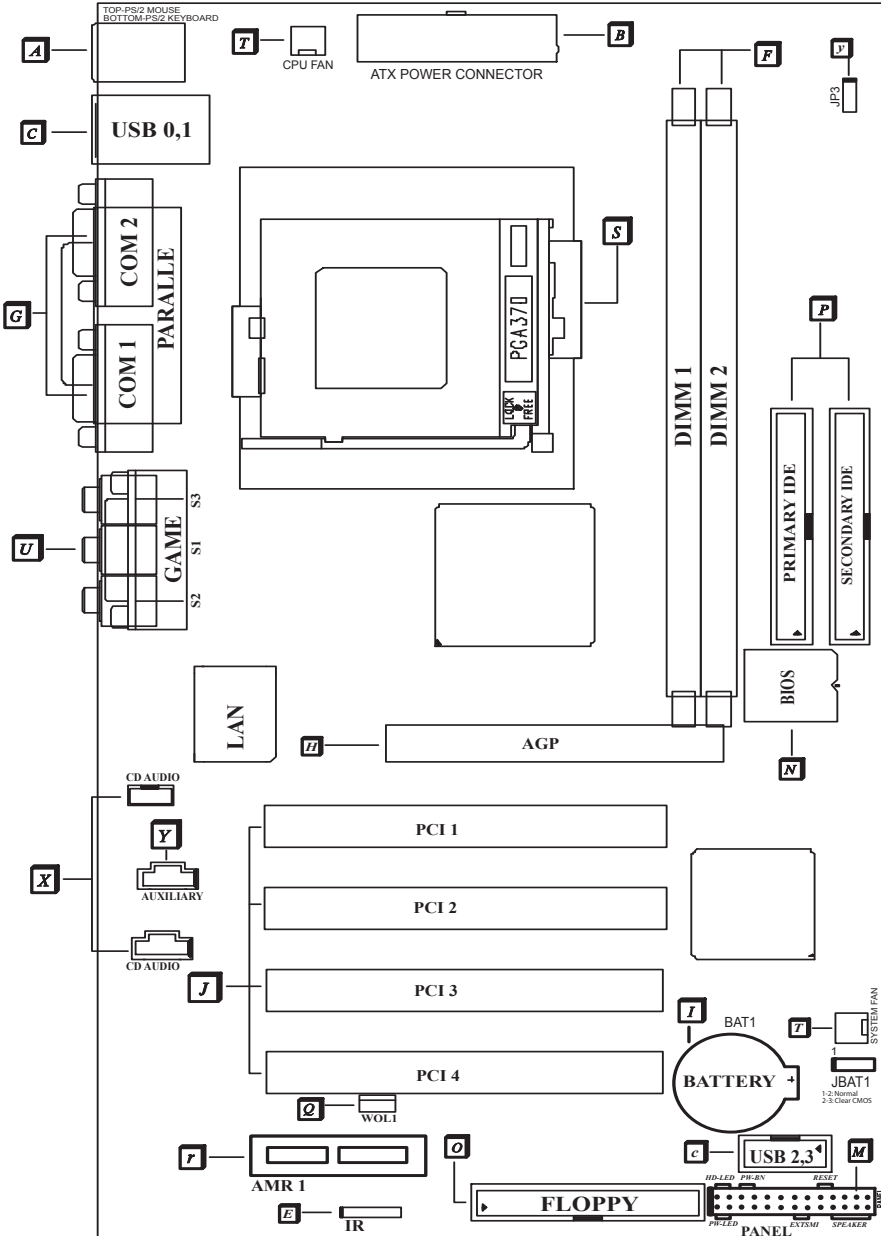
Before installing your series Mainboard, we have provided you with a diagram of the Mainboard. To help you locate the appropriate "connectors". The letters below describe the key Mainboard components. Page number in the right hand column will direct you to detail description of the component.

A694X

Onboard

COMPONENT	PAGE
A- PS/2 Mouse & Keyboard Connector	38
B- ATX Power Supply Connector	38
C- Universal Serial Bus (USB) Connector	39
c- Universal Serial Bus (USB) Header	39
E- Infra-Red (IR) Header	39
F- Memory Module Sockets	40
G- Parallel Port Connector	40
H- Accelerated Graphics Port (AGP) Connector	40
I- Lithium Battery	41
J- PCI Add-in Board Connectors	41
M- Front Panel Function Connector	41
N- Flash BIOS	42
O- Floppy Drive Header	42
P- IDE Device Connector	42
Q- Wakeup-on-LAN Header	43
r- Audio Modem Riser (AMR) Connector	43
S- CPU Socket	43
T- CPU / SYSTEM FAN Connector	43
U- Game & Audio Header	44
X- CD Audio Header	44
Y- Auxiliary Header	44
y- STR Function Select Jumper	44

Mainboard Diagram



Installation

Jumper settings

Clear CMOS

Set the Jumper JBAT1 to [2-3] to clear CMOS

Remember: Please set it back to normal [1-2] after clearing CMOS

STR Function Select

Set the Jumper JP3 to [2-3] to select STR function

Remember: If set JP3 to [1-2], the M/B can't support STR function

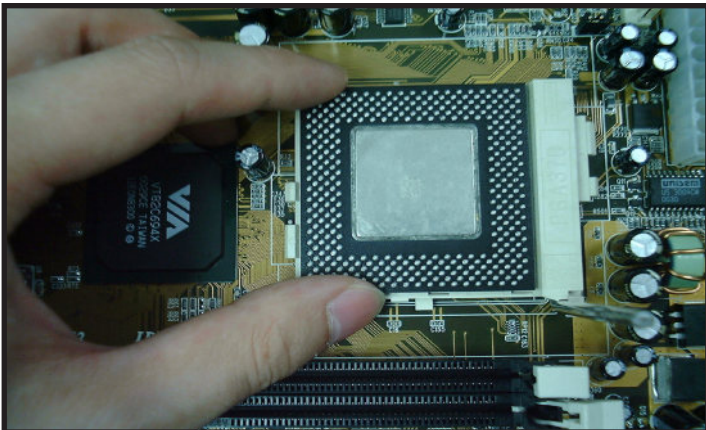
7 Quick Steps

Please follow these steps in order to assure your series Mainboard installation is successful. Please refer to the following chapters for further information regarding boot-up and configurations. 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 (PGA CPU)

The mainboard provides a 370 pins, Socket 370. The CPU should have a fan attached 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 mainboard. It provides the +12 Volts D.C. for your CPU cooling fan.

Connect the CPU Fan power to "CPU FAN" header on the motherboard. (T on mainboard diagram.)



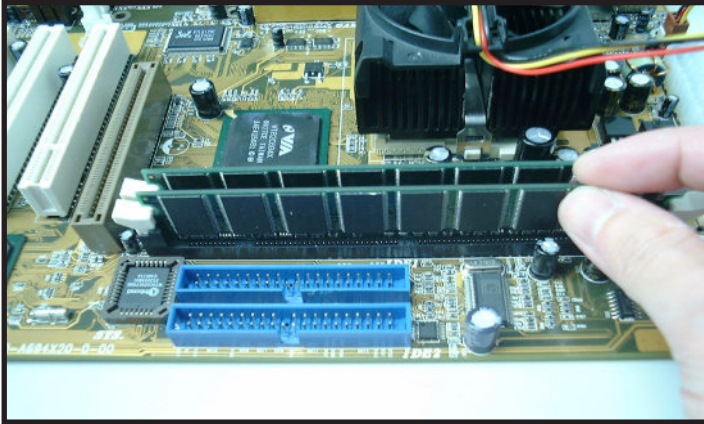


Set the suitable Jumper Settings according to the Jumper settings Table.

CAUTION! Be sure that sufficient air circulation must be available across the processor's heatsink. Without sufficient circulation, the processor could overheat and damage both the processor and the mainboard. You may install an auxiliary fan if necessary.

2 Installing the Memory

Memory is installed in DIMM Sockets 1-2 (F in diagram) as follows :



After you have set the DIMM firmly into its socket, snap the white chip holders up to lock in the DIMM.

3 Attaching the power supply ribbon cable

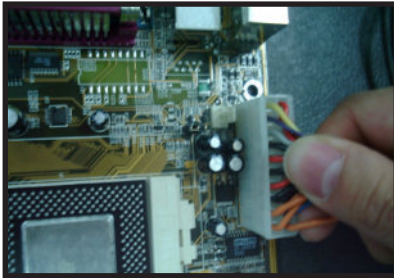


IMPORTANT: Ribbon cables should always be connected with the red stripe on the Pin 1 side of the connector. The four corners of the connector's are labeled on the mainboard.

ATX Power Connector

ATX Power Supply Connector (20-pin ATXPWR)

The single 20-pin connector (B in mainboard diagram) incorporates standard +/-5V and +/-12V, with a standby 5V. 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.

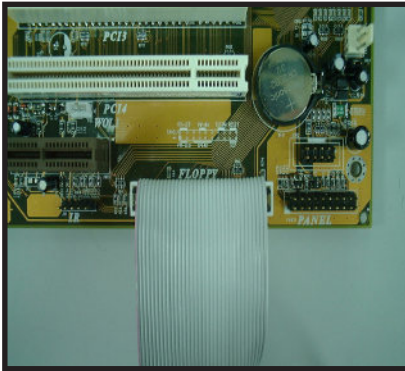


ATX Power Connector

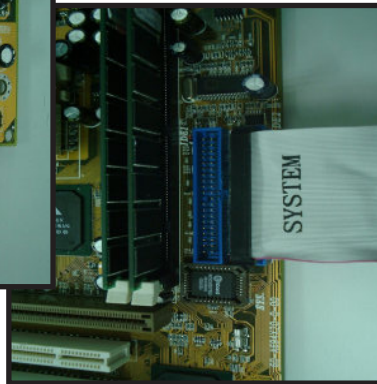
4

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 mainboard diagram) connect the remaining plugs on the other end to the corresponding floppy drives.



Floppy connection



IDE connection

5

IDE Connector.

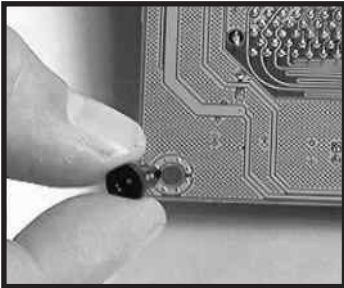
The on-board IDE connectors (P in mainboard diagram) support the provided 80-pin IDE hard disk ribbon cable. After connecting the single end to the mainboard, connect the remaining plugs at the other end of your hard disk(s). If you install hard disks, you must configure the drives by setting its jumpers 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 IDE-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 “ the mainboard diagram”.

6**Installing the mainboard into your computer chassis**

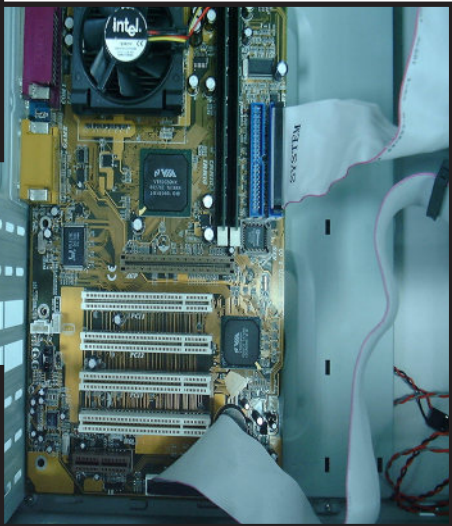
Snap black mounting pins onto the mainboard as shown. Carefully install the mainboard into the computer chassis and align the corresponding mounting holes on the mainboard with the holes on you chassis. *While chassis design varies you may need to refer to the chassis manual for the mainboard mounting 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 White mount pin

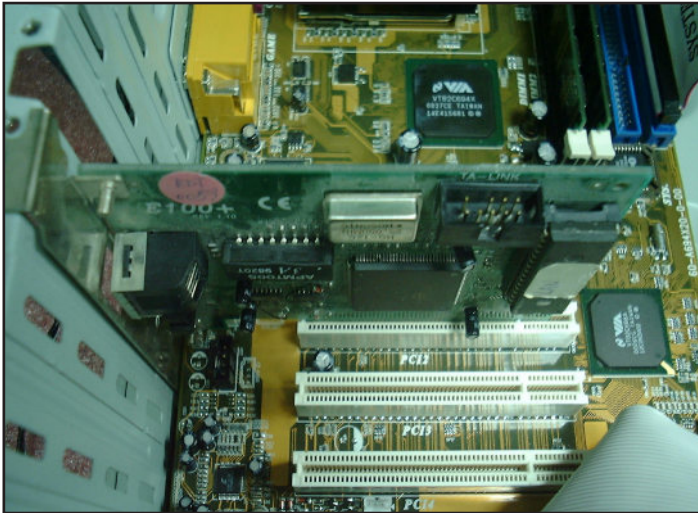


Insert into chassis

7

Installing 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 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's 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 mainboard diagram)

You can now attach the Front Panel Function Connector (M in mainboard diagram P.9) wires and Keyboard, Mouse and Monitor cables to the appropriate ports. Connect the main power cable and boot your system.

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



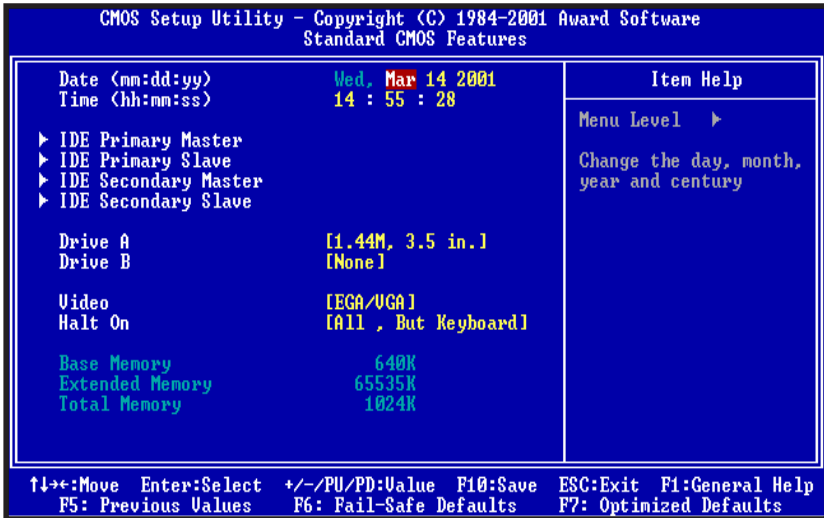
I/O connector aligned with openings

BIOS Setup



Award BIOS Setup

Standard CMOS Features	Sets time, date, hard disk type, types of floppy drive, Monitor type, and if keyboard is installed.
Advanced BIOS Features	Sets Typematic Rate and Delay, Above 1 MB Memory Test, Memory Test Tick Sound, Hit Message Display, System Boot Up Sequence, and many others.
Advanced Chipset Features	Sets chipset-specific options and features.
Integrated Peripherals	Controls I/O Controller- related options.
Power Management Setup	Controls power savings options.
PnP/PCI Configurations	Sets options related to PCI bus and Plug and Play options.
PC Health Status	Display CPU or System Temperature, Fan Speed
Frequency/ Voltage Control	Control CPU's Clock & Voltage
Load Fail-Safe Defaults	Load Fail-Safe Defaults
Load Optimized Defaults	Load Optimized Defaults
Set Supervisor Password	Change/Set/Disable Password
Set User Password	Change/Set/Disable Password
Save & Exit Setup	Save Data to CMOS
Exit Without Saving	Abandon all Saving



Standard CMOS Features

Select the BIOS Setup options by choosing Standard CMOS Features from the BIOS. Standard Setup options are described below.

Date (mm:dd:yy) - Setting for the system Date

Time (hh:mm:ss) - Setting for the system Time

Primary Master

Primary Slave

Secondary Master

Secondary Slave

Select these options to configure the drive named in the option. Select Auto Detect to let BIOS determines the device type. A screen with a list of drive parameters appears.

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, 1.44MB 3 1/2 inch or 2.88 MB 3 1/2 inch.

Video

The category selects the type of video adapter used for the primary system monitor.

EGA/VGA	Enhanced Graphics Adapter; Video Graphics Adapter. For EGA, VGA, SEGA, SVGA or PGA monitor adapters.
CGA 40	Color Graphics Adapter, power up in 40 column mode.
CGA 80	Color Graphics Adapter, power up in 80 column mode.
MONO	Monochrome adapter, includes high resolution monochrome adapters.

Halt On

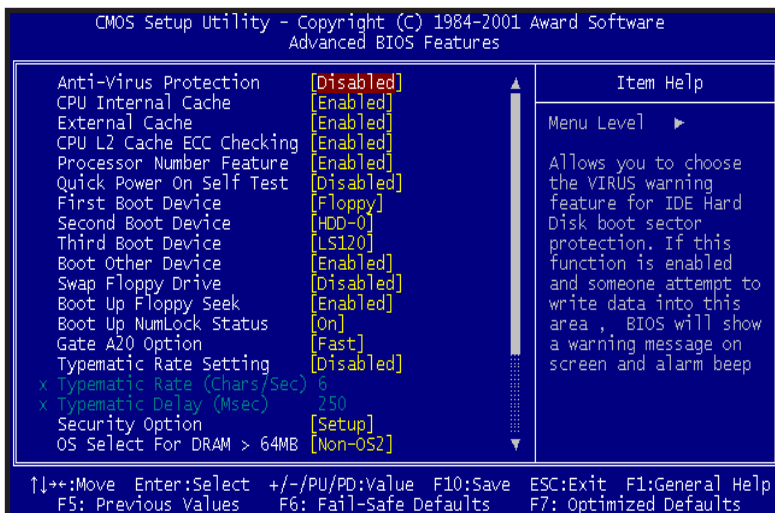
The category determines whether the computer will stop if an error is detected during power up.

No error	The system boot will not be stopped for any error that may be detected.
All errors	When ever the BIOS detects a non-fatal error the system will be stopped and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error; it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; it will stop for all other errors.
All But Disk/Key	The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

Memory

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

Base Memory	The POST will determine the amount of base (or conventional) memory installed in the system.
Extended Memory	The BIOS determines how much extended memory is present in the system.



Advanced BIOS Features

Anti-Virus Protection

You can “Enable” or “Disable” this feature. When enabled, BIOS 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 CPU internal cache to speed up memory access. The default value is “Enabled”.

External Cache

This category enables or disables the secondary level (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 “Disabled”.

Processor Number Feature

This category enables or disables the Processor Number Feature.

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 “Enabled”.

First / Second / Third Boot Device

This feature allows you to select the system first boot device. The options are Floppy, LS120, HDD-0, SCSI, CD-ROM, HDD-1, HDD-2, HDD-3, ZIP100, LAN, Disabled.

Boot Other Device

This feature allows you to system to select other boot device automatically.

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 during boot up. 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 determines the Num-Lock LED on keyboard is turned on/off. 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".

Gate A20 Option

This entry allows you to enable the A20 address line access. The default is "FAST".

Typematic Rate Setting

Typematic Rate sets the rate 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, this option specifies the numbers of times of character repeat on the screen. The default setting is "250".

Security Option

This option limits the access to the system and Setup or just to Setup. When you select "System", the system will not boot and access to CMOS Setup. A correct password must be entered at the prompt. The default setting is "Setup".

OS Select For DRAM > 64MB

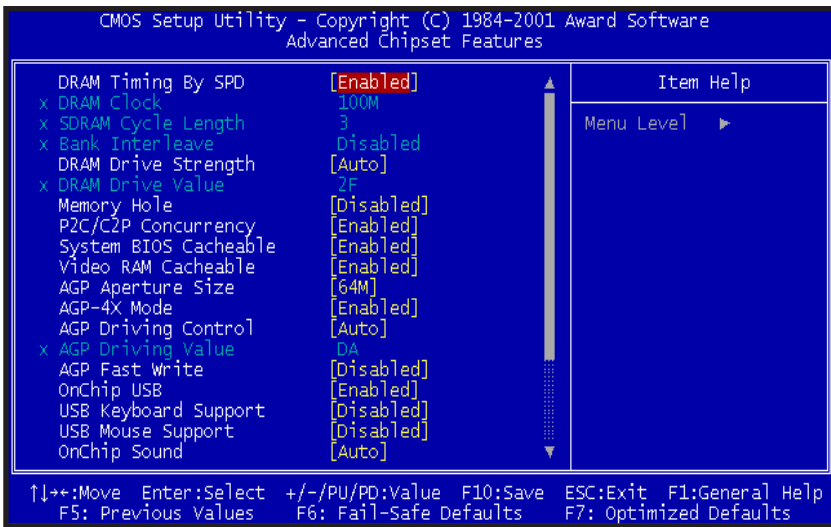
Some the OS/2 application access the memory in different mode. Enable this option to allow the system use another mode to access the main memory for OS/2 applications.

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.



Advanced Chipset Features

DRAM Timing by SPD

When Enabled, DRAM clock speed is automatically determined by system BIOS based on the EEPROM data on the DIMM module. Set to Disabled if you want to select DRAM clock speed manually.

DRAM Clock

This item allows you to control the DRAM speed.
The Choices: 100MHz, 133MHz.

SDRAM Cycle Length

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer. The Choices: 2, 3.

Bank Interleave

Set to 'Enabled' to increase memory performance.
Default is 'Disabled' for better DRAM compatibility.

DRAM Drive Strength

This item is reserved for technical support personnel only. Default is Auto.

Memory Hole

In order to improve performance, certain space in memory is reserved for ISA cards. This memory must be mapped into the memory space below 16MB. The Choices: 15M-16M, Disabled.

P2C/C2P Concurrency

This item allows you to enable/disable the PCI to CPU, CPU to PCI concurrency.
The Choices: Enabled, Disabled.

System BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The Choices: Enabled, Disabled.

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. The Choices: Enabled, Disabled.

AGP Aperture Size

Select the size of 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 Choices: 4M, 8M, 16M, 32M, 64M, 128M, 256M.

AGP-4X Mode

This item allows you to enable / disable the AGP-4X Mode. The Choices: Enabled, Disabled.

AGP Driving Control

This item allows you to Auto / manual the AGP Driving Control. The Choices: Auto, Manual.

AGP Driving Value

This item allows you to 00-FF the AGP Driving Value. The Choices: 00-FF.

AGP Fast Write

Set to Enabled for higher AGP data transfer performance. Default is Disabled to improve AGP card compatibility.

USB Keyboard Support

This option is enabled to support USB Keyboard.

USB Mouse Support

This option is enabled to support USB Keyboard.

OnChip Sound

This option allows you to control the onboard AC 97 audio.

The choices: Auto, Disabled.

CPU to PCI Write Buffer

When this field is Enabled, writes from the CPU to the PCI bus are buffered, to compensate for the speed differences between the CPU and the PCI bus. When Disabled, the writes are not buffered and the CPU must wait until the write is completed before starting another write cycle. The choices: Enabled, Disabled.

PCI Dynamic Bursting

This item allows you to enable / disable the PCI dynamic bursting function. The choices: Enabled, Disabled.

PCI Master 0 WS Write

When Enabled, writes to the PCI bus are executed with zero wait states. The choices: Enabled, Disabled.

PCI Delay Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select "Enabled" to support compliance with PCI specification version 2.1. The choices: Enabled, Disabled.

PCI#2 Access #1 Retry

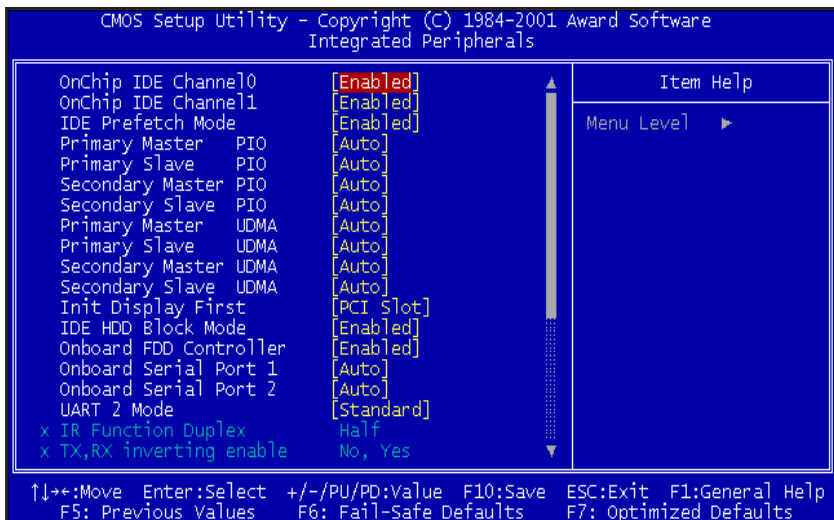
When disabled, PCI#2 will not be disconnected until access finishes (default). When enabled, PCI#2 will be disconnected if max retries are attempted without success. The choices: Enabled, Disabled.

AGP Master 1 WS Write

When Enabled, writes to the AGP (Accelerated Graphics Port) are executed with one wait states. The choices: Enabled, Disabled.

AGP Master 1 WS Read

When Enabled, read to the AGP (Accelerated Graphics Port) are executed with one wait states. The choices: Enabled, Disabled.



Integrated Peripherals

OnChip IDE Channel0

The chipset contains a PCI IDE interface with support for two IDE channels. Select "Enabled" to activate the primary IDE interface. Select "Disabled" to deactivate this interface.

The choices: Enabled, Disabled.

OnChip IDE Channel1

The chipset contains a PCI IDE interface with support for two IDE channels. Select "Enabled" to activate the secondary IDE interface. Select "Disabled" to deactivate this interface.

The choices: Enabled, Disabled.

IDE Prefetch 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 choices: Enabled, Disabled.

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/33/66/100 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/33/66/100, select "Auto" to enable BIOS support.

The choices: Auto, Disabled.

Init Display First

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

The choices: PCI Slot, AGP.

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.

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 choices: Enabled, Disabled.

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

UART 2 Mode

The second serial port on your system offers a variety of infrared port modes. Available options are : STANDARD, HPSIR, ASKIR.

IR Function Duplex

Available options : Full, Half.

TX,RX inverting enable

Onboard Parallel Port

Select a logical LPT port name and matching address for the physical parallel (printer) port.
The choices: 378H/IRQ7, 278H/IRQ5, 3BCH/IRQ7, Disabled.

Onboard Parallel Port Mode

Select an operating mode for the onboard parallel (printer) port. Normal EPP (Extended Parallel Port) ECP (Extended Capabilities Port) ECP+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 supports these modes.

Choices are NORMAL, EPP, ECP, ECP/EPP.

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.

Onboard Legacy Audio

Set this option to "Enabled" to enable the onboard Legacy Audio. The settings are Enabled or Disabled.

Sound Blaster

SB I/O Base Address

SB IRQ Select

SB DMA Select

These options configure the Sound Blaster emulation function of onboard audio system.

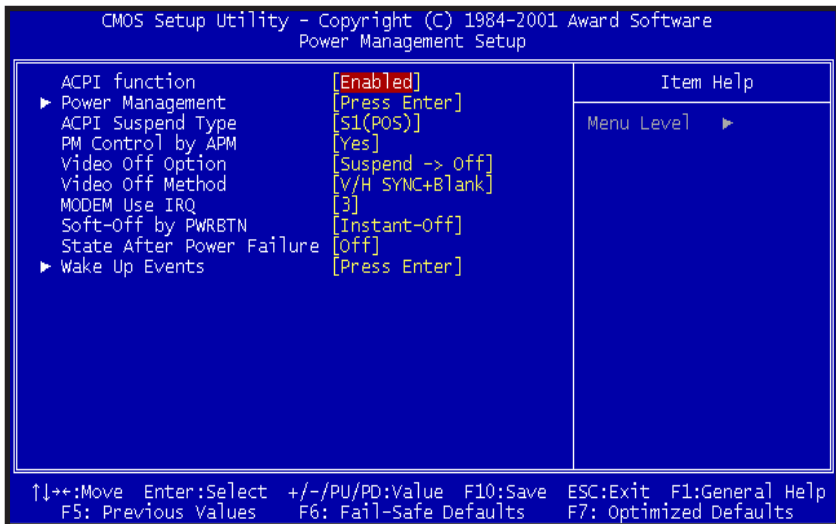
MPU-401

MPU-401 I/O Address

These options configure the onboard MPU-401 MIDI interface. Default is "Disabled".

Game Port (200-207H)

Set this option to "Enabled" to enable the onboard Game Port. The settings are "Enabled" or "Disabled".



Power Management Setup

ACPI function

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

The choices: Enabled, Disabled.

Power Management/APM

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

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

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.

ACPI Suspend Type

This item allows you to choose the Advanced Power Management (ACPI) Suspend Type.

The choices : S1(POS), S3(STR).

PM Control by 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 Advance Power Management (APM) is installed on your system, selecting Yes gives better power savings.

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

Video OFF Option

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On	Monitor will remain on during power saving modes.
Suspend --> Off	Monitor blanked when the systems enters the Suspend mode.
All Modes --> Off	Monitor blanked when the 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	Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards to select video power man-agement values.

MODEM Use IRQ

This determines the IRQ in which the MODEM can use.

The choices: 3, 4, 5, 7, 9, 10, 11, NA.

Soft-Off by PWRBTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system “hung.”

The choices: Delay 4 Sec, Instant-Off.

Wake Up Events

Wake Up 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.

VGA

When Enabled, you can set the VGA awakens the system.

LPT & COM

When On of LPT & COM, any activity from one of the listed system peripheral devices or IRQs wakes up the system.

HDD & FDD

When On of HDD & FDD, any activity from one of the listed system peripheral devices wakes up the system.

PCI Master

When On of PCI Master, any activity from one of the listed system peripheral devices wakes up the system.

Modem Ring Resume

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem or Lan) awakens the system from a soft-off state.

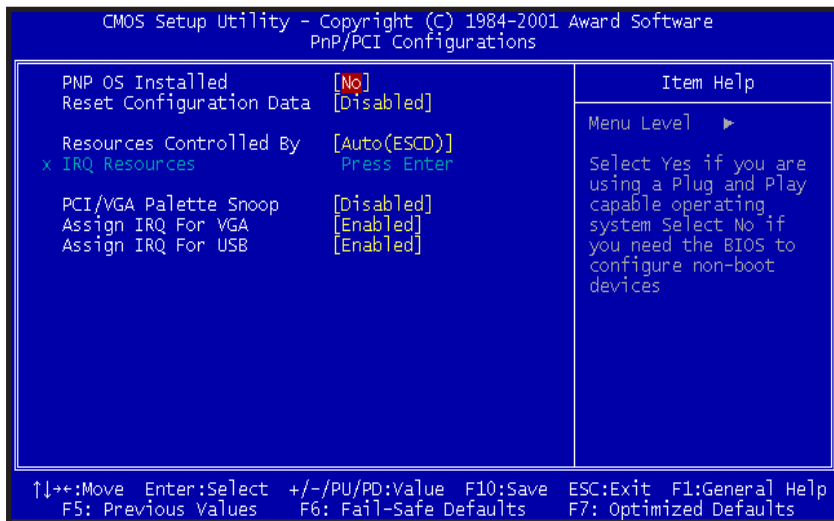
RTC Alarm Resume

When Enabled, you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

The following is a list of IRQ's, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

- IRQ3 (COM 2)
- IRQ4 (COM 1)
- IRQ5 (LPT 2)
- IRQ6 (Floppy Disk)
- IRQ7 (LPT 1)
- IRQ8 (RTC Alarm)
- IRQ9 (IRQ2 Redir)
- IRQ10 (Reserved)
- IRQ11 (Reserved)
- IRQ12 (PS / 2 Mouse)
- IRQ13 (Coprocessor)
- IRQ14 (Hard Disk)
- IRQ15 (Reserved).



PnP/PCI Configurations Setup

PNP O/S Installed

This item allows you to determine PnP OS is installed or not. The choices: Yes, No.

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 choices: Enabled, Disabled .

Resources Controlled By

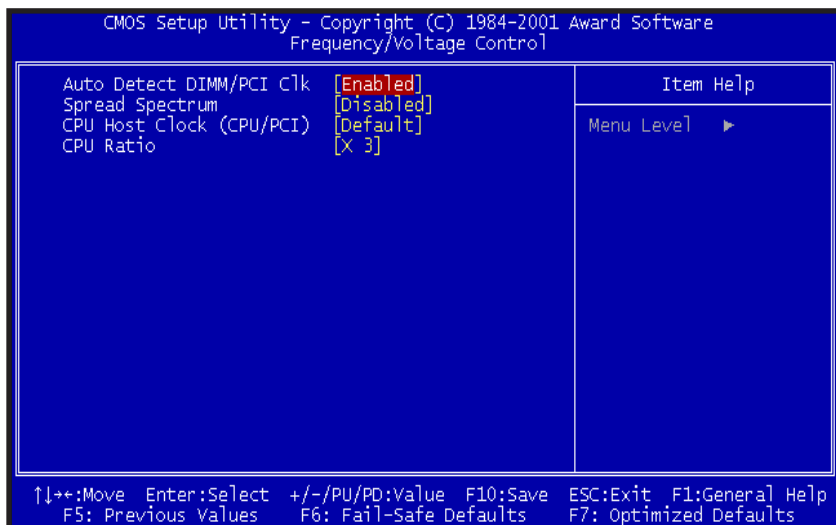
The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows98. The choices: Auto, Manual.

PCI/VGA Palette Snoop

Leave this field at Disabled. Choices are Enabled, Disabled.

Assign IRQ For USB / VGA

Enable/Disable to assign IRQ for USB/VGA. Choices are Enabled, Disabled.



Frequency / Voltage Control

Auto Detect DIMM\PCI Clk

Enabled \ Disabled Auto detect DIMM\PCI CLOCK. Default Setting is "Enabled".

Spread Spectrum

This option turns on/off the clock generator's Spread Spectrum feature to reduce Electromagnetic Interference (EMI) generated by high speed clock signals. Default setting is "Disabled".

CPU Host Clock (CPU / PCI)

Select the clock generator's Front Side Bus frequency for CPU over-clocking. Default setting is "Default".

CPU Ratio

Select CPU's core / bus frequency ratio. This setting has no effect on processors with frequency ratio locked. Available settings are between 2x and 8x of the CPU BUS Speed. The ratio increases with 0.5 step. Default setting is "X3" (Safe).

Glossary

Glossary

A



PS/2 Mouse & Keyboard Connector

The Mainboard provides two on-board PS/2 connectors, one for the keyboard, and one 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. No jumper settings are necessary.

B



ATX Power Supply Connector

The Mainboard provides a single 20-pin ATX power supply connector, which incorporates standard +5V and +12V, 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 to said the soft-off feature working 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 OR shut down instantly. 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 four 4-pin Universal Serial Bus (USB) connectors. 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.

C



Universal Serial Bus (USB) Header

Connect this header to the optional USB extension cable for a USB port.

E



Infra-Red (IR) Header

The Mainboard provides a 5-pin header interface, IR for connection to a Hewlett Packard HSDSL-1000 compatible infrared (IrDA) transmitter/receiver. Connect IR 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 re-directed 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 Memory Module Sockets

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



G Parallel Port Connector

The **ATX** Mainboard provides a parallel port connector. Based on the ATX standard, a 25-pin parallel port is now built on the mainboard back panel. This design makes the mainboard 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.



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 33 Mhz bandwidth, and can transport at peak rates up to 133MB/s over its 32 bit data bus. AGP operates at 66 Mhz clock speed which enables a peak rate of 133 MB/s in 'X2' mode. Using 'X4' mode, the peak transport rate can go as high as 266 MB/s.

I LITHIUM BATTERY

A 3V, CR2032, 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 the technical personnel.



J PCI Add-In Board Connectors

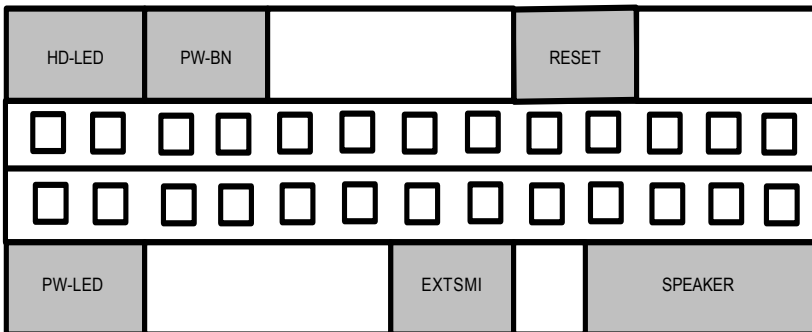
The Mainboard provides 4 PCI connectors for the PCI cards.



M Front Panel Function Connector

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

Function	Connector Pin-Out Label
System Reset	RESET
Power LED / Keylock	PW-LED
Hard Drive Activity LED	HD_LED
Soft-Touch Button Power On/Off	PW-BN
External SMI Button	EXTSMI
Speaker	SPEAKER



N**Flash BIOS**

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

O**Floppy Drive Header**

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-33/66/100 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 connectors support the provided 80-pin IDE hard disk ribbon cables. After connecting the single end to the mainboard connector, connect the two remaining plugs to your hard disk(s) and/or CD-ROM drive(s). If you attach two hard disks and/or CD-Rom drives to the same IDE connector, you must configure the 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-on-LAN Header

The Mainboard provides one Wakeup-on-LAN header used to connect an add-in Network Interface Card which has Wakeup capability.

r



Audio Modem Riser (AMR) Connector

The Mainboard provides a AMR Connector for the AMR cards.

S



CPU SOCKET

The Mainboard provides a 370-pin Socket370 CPU Socket for Socket 370 processor. The CPU should have a fan attached to it to prevent overheat. If a fan is not present, a fan should be installed prior to turning the system on.

T



CPU / SYSTEM 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. It provides +12 Volts DC to the CPU cooling fan as follows:

PIN	SIGNAL NAME
1	rotation speed 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  **Game & Audio Headers**

The Mainboard provides Audio headers.

Audio Headers S1 : Line Output
 S2 : Line Input
 S3 : Microphone Input

X  **CD Audio Header**

CD Audio input (Right, Ground, Ground, Left)

Y  **Auxiliary Connector**

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

y **STR Function Select Jumper**

Set the Jumper JP3 to (2-3) to select STR function.

Remember : If set JP3 to (1-2), it can't use STR function.

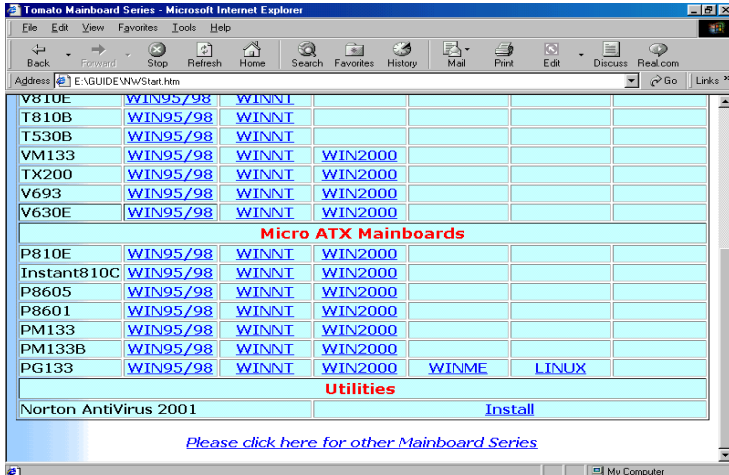
CD Driver & Software Installation Guide

Steps :

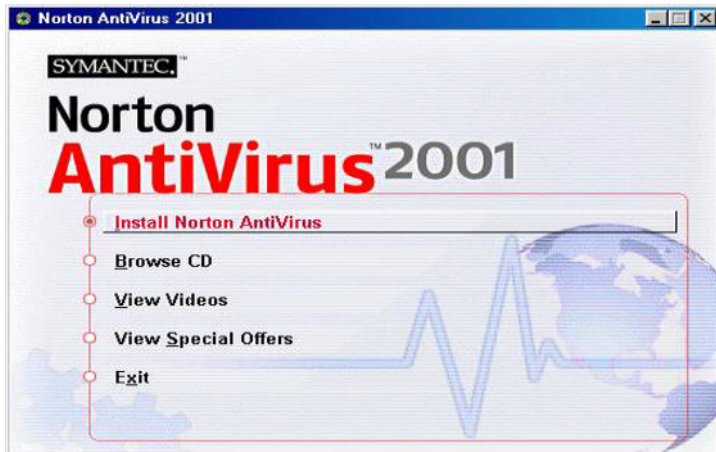
- 1. Boot up the Operating System (Windows 95/98/NT/2000)**
- 2. Put the CD Disc into the CD-ROM Drive and wait for Autorun**
- 3. Select A694X and click your Operating System Type**
- 4. Follow the instructions and install suitable Drivers**

Norton Anti-Virus OEM Version Setup Guide

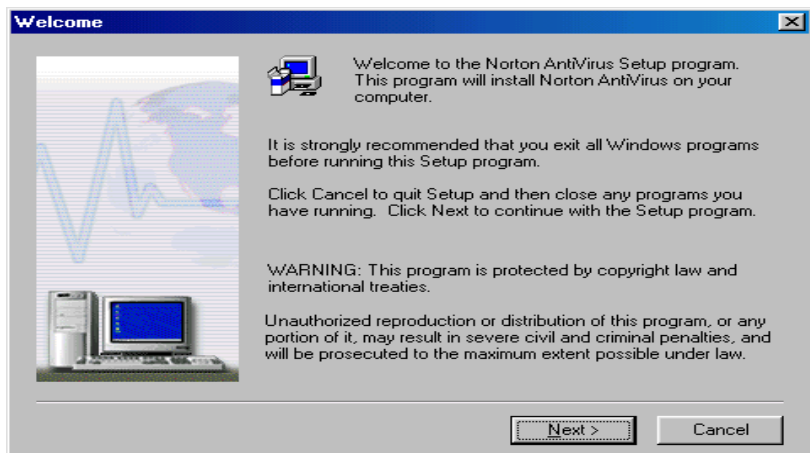
Step 1 : Load the Driver CD in CDROM and find the "Norton AntiVirus 2001 Install" Option.



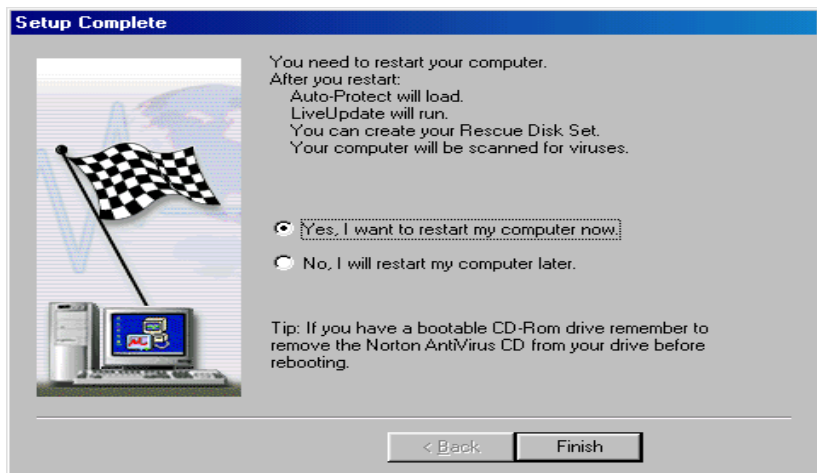
Step 2 : When CD finishes loading, press " Install Norton AntiVirus" to install the software.



Step 3 : Follow the installation procedures on screen.



Step 4 : Select "Yes" and press "Finish" button to reboot computer.



Introduce INSTANT ON function:

INSTANT ON is a Windows 98 ACPI sleep mode function. When recovering from sleep mode, the system is able, in just a few seconds, to retrieve the last “state” of the system before it went to sleep and recover to that state. The “state” is stored in memory (RAM) before the system goes to sleep. During sleep mode, your system uses only enough energy to maintain critical information and system functions, primarily the system state and the ability to recognize various “wake up” triggers or signals, respectively.

INSTANT ON function Installation

Please follow the steps to complete the **INSTANT ON** function installation.

- 1** For using the **INSTANT ON** function, the system must be in Windows 98 ACPI mode. Putting Windows 98 into ACPI mode is fairly easy.

There are two ways :

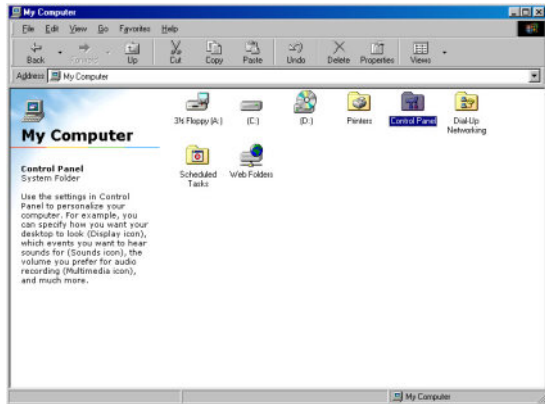
1. Setup with Windows 98 CD:

- Insert the Windows 98 CD into your CD-ROM drive, select Start, and then Run.
- Type (without quotes) “D:\setup /p j” in the window provided. Hit the enter key or click OK.
- After setup completes, remove the CD, and reboot your system (This manual assumes that your CD-ROM device drive letter is D:).

2. Update from Windows98 (Advance Power Management) APM mode:

If your Windows 98 system is in APM mode, please follow the steps to update your system to ACPI mode.

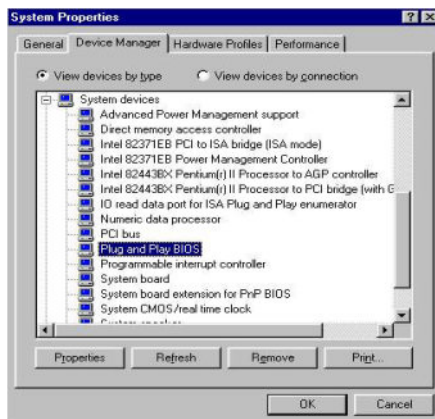
A. When Windows 98 finishes loading, open the “Control Panel” in Windows 98 “My Computer” area.



B. Double click the “System” item.



C. Select the “Device Manager” tab and then the “System Devices” item. Double click the “Plug and Play BIOS” item or select “Properties”



D. Select the driver” item and “Update Driver”



E. The “Update Device Driver Wizard” will appear. Press the “Next” button



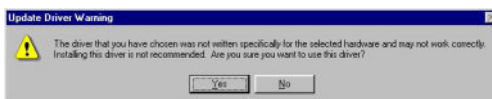
F. In the “Update Device Driver Wizard” window, select the “Display a list of all the drivers in a specific location, so you can select the driver you want.” Then press the “Next” button “



G. Select the “Show all hardware” item , then select the “Advance Configuration and Power Interface (ACPI) BIOS” and press the “Next” button.



H. “Update Driver Warning” will show up and ask “Are you sure you want to use this driver?” Select the “Yes” button.



I. “Update Device Driver Wizard” will show up again. Select the “Next” button and start copying files to the system.



J. When complete, press the “Finish” button.



K. Restart your computer. Your system will start up using the ACPI mode.

2

Power on the computer when memory counting starts, press . You will enter BIOS Setup. Select the item "**POWER MANAGEMENT SETUP**", then select **Enable** in "**Suspend to RAM**" option. Remember to save the settings by pressing "ESC" and choose the "SAVE & EXIT SETUP" option.

3

The installation of **INSTANT ON** is completed. You can use this function in Windows 98.

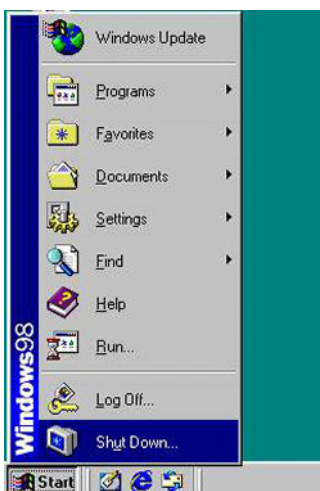
4

How to put your system into Stand by mode ?

There are two ways :

1. Choose the “Stand by” item in the “Shut Down Windows” area.

- A. Press the “Start” button and then select “Shut Down”



- B. Choose the “Stand by” item and Click “OK”



2. Set the system "power on" button to initiate sleep mode:

A. Double click
"My Computer"
and then
"Control Panel"

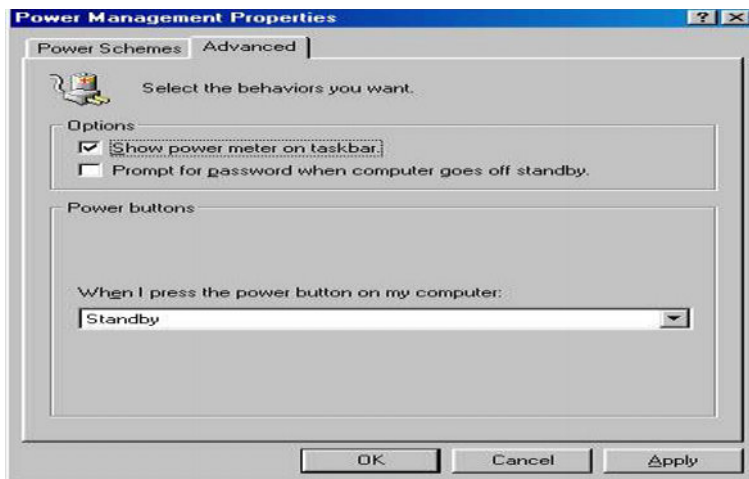


B. Double click the
"Power
Management"
item.



- C. Select the “Advanced” tab and “Standby” mode in Power Buttons.

Restart your computer to complete setup.
Now when you want to enter sleep mode,
just momentarily press the “Power on” button.



5 How to recover from the sleep mode?

There are **four** ways to “wake up” the system:

1. Press the “Power On” button.
2. Use the “Keyboard Power On” function.
3. Use the “Modem/Lan Resume” function.
4. Use the “Resume by Alarm” function.

Notice to INSTANT ON users :

1. ATX power supply requirement
 - comply with the ATX 2.01
 - provide more than 720 mA 5V Stand-By current

2. SDRAM requirement
 - PC-100/PC-133 compliant