



# USER'S

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# MANUAL

Supporting Intel Pentium III® FCPGA, Celeron® PPGA / FCPGA

Socket 370 Processors, UDMA33/66, PC100/133 SDRAM,

Integrated VGA Graphic Controller.

**Quality, Performance Mainboards**

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# Overview

Thank You for purchasing our High Performance Mainboard. Our advanced technology mainboard is designed for processing speeds of 900MHz or above and is upgradeable for future processors.

The VIA Mainboard Utilizes VIA's VT8605 and VT82C686A chipset provide an Integrated Bus Mastering IDE controller with two high performance IDE interfaces for up to four UDMA IDE devices (hard drives, or CD-ROM's). It's I/O controller integrates floppy drive interface, two FIFO serial ports, one parallel port and Consumer Infra Red compatible interface.

VIA VT8605 Chipset Support Intel Pentium III<sup>®</sup> FCPGA, Celeron<sup>®</sup> PPGA or Celeron II FCPGA Processors on Socket 370 with 66/100/133MHz Processor Front-side Bus. Support 100MHz PC100 SDRAM DIMM & 133MHz PC133 SDRAM DIMM.

AGP Graphics Controller Integrated inside VIA VT8605 Chipset. Dynamic Graphics Memory Allocation on System Memory. 128-bit Single Cycle 2D/3D Graphics Engine. Supports 2 to 32 Mbytes of Frame Buffer. Real Time DVD MPEG-2 and AC-3 Playback. Extended Screen Resolutions up to 1600x1200. Extended Text Modes 80 or 132 columns by 25/30/43/60 rows. Full Support for Microsoft Direct 3D and Direct Draw.

Two DIMM slots support up to 1GB Memory Capacity. Audio Modem Riser (AMR) slot supports AMR modem cards. Four USB ports support USB Devices. WAKEUP-LINK Header support Intel Wake-On-LAN.

Integrated AC97 2.1 Compliant Codec with 3D Stereo enhancement (optional). Award 2Mbit BIOS, PC99/ACPI/DMI Compliant.

MicroATX 244 mm x 220mm.

# 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:

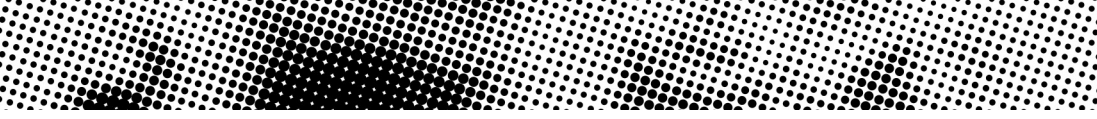
- A sturdy, level surface for placement
- Space allowance around mainboard
- A stable environment with no abrupt temperature or humidity changes
- No exposure to chemicals or direct sunlight
- Line voltage and frequency not varying more than + or -10% from the value stated on the package or nameplate (located on the back, opposite the power plug)

## 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 the representative for part replacement.

### Micro 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) VGA Port Cable for VGA
- 7) USB Cable for onboard **USB Header ( Optional )**



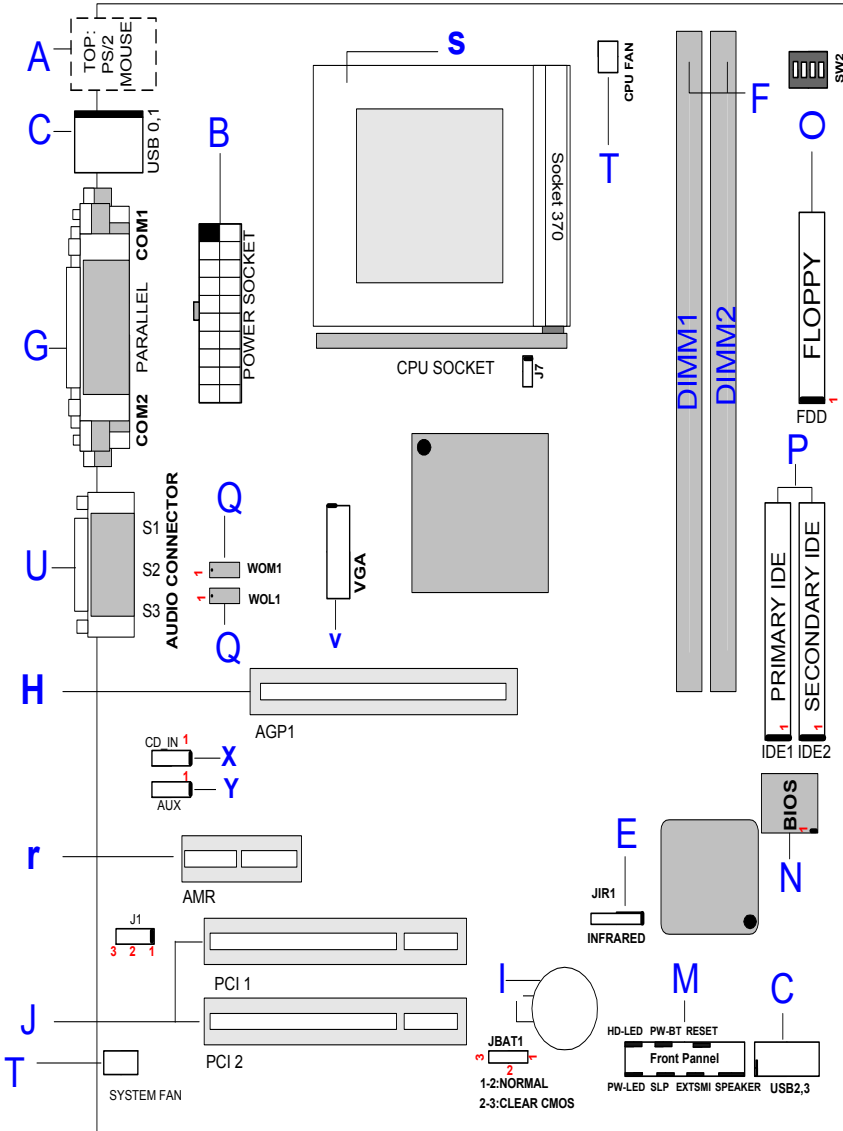
Before we begin installing your series Mainboard, we have provided you with a diagram of the Mainboard to help you locate the appropriate "connectors". The letters below describe the key Mainboard components. Page number in the right hand column will direct you to detailed description of the component.

# **P8605**    **Option : AC97 2.1 Compliant 3D Audio**

## **Onboard**

COMPONENT	PAGE
A- PS/2 Keyboard / Mouse Connector . . . . .	43
B- ATX Power Supply Connector . . . . .	43
C- Universal Serial Bus (USB) Connector . . . . .	44
E- Infra-Red (IR) Connector . . . . .	44
F- 3.3V Memory Module Sockets . . . . .	45
G- Serial COM1, COM2 & Parallel Port Connector . . . . .	45
H- Accelerated Graphics Port (AGP) Connector . . . . .	45
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X- CD Audio Connector . . . . .	50
Y- AUX Audio Connector . . . . .	50

# Mainboard Diagram



Installation



# Jumper Settings Table

CPU TYPE	Freq.	Ratio	Bus F.
Pentium-III 1000EB	1000	7.5x	133
Pentium-III 933EB	933	7x	133
Pentium-III 866EB	866	6.5x	133
Pentium-III 800EB	800	6x	133
Pentium-III 733EB	733	5.5x	133
Pentium-III 667EB	667	5x	133
Pentium-III 600EB	600	4.5x	133
Pentium-III 533EB	533	4x	133
Pentium-III 500E	500	5x	100
Pentium-III 550E	550	5.5x	100
Pentium-III 600E	600	6x	100
Pentium-III 650E	650	6.5x	100
Pentium-III 700E	700	7x	100
Pentium-III 750E	750	7.5x	100
Pentium-III 800E	800	8.0x	100
Celeron 300A	300	4.5x	66
Celeron 333	333	5x	66
Celeron 366	366	5.5x	66
Celeron 400	400	6x	66
Celeron 433	433	6.5x	66
Celeron 466	466	7x	66
Celeron 500	500	7.5x	66
Celeron 533A	533	8.0x	66
Celeron 533	533	8.0x	66
Celeron 600	600	9x	66
Celeron 633	633	9.5x	66
Celeron 667	667	10.0x	66
Celeron 700	700	10.5x	66

## Clear CMOS

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

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

## CPU type setting

	J7
CELERON	OPEN
COPPERMINE	OPEN

J1 1-2 : ON BOARD CODEC IS USED (DEFAULT)  
AS PRIMARY CODEC.

2-3 : AMR SLOT IS USED AS PRIMARY CODEC.

## Frequency ratio setting table

Ratio	SW2			
	1	2	3	4
2	on	on	on	on
2.5	on	on	off	on
3	on	off	on	on
3.5	on	off	off	on
4	off	on	on	on
4.5	off	on	off	on
5	off	off	on	on
5.5	off	off	off	on
6	on	on	on	off
6.5	on	on	off	off
7	on	off	on	off
7.5	on	off	off	off
8	off	on	on	off
Auto	off	off	off	off (Default)

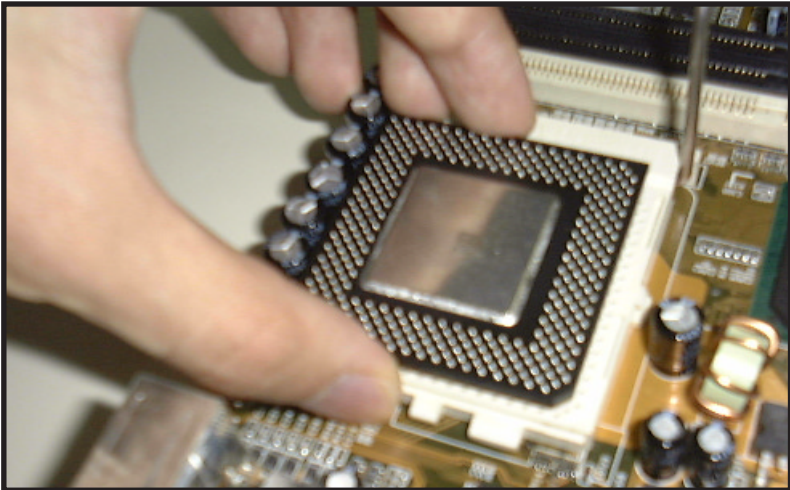
# 8 Quick Steps

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 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 motherboard. It provides the +12 Volts DC for your CPU cooling fan.



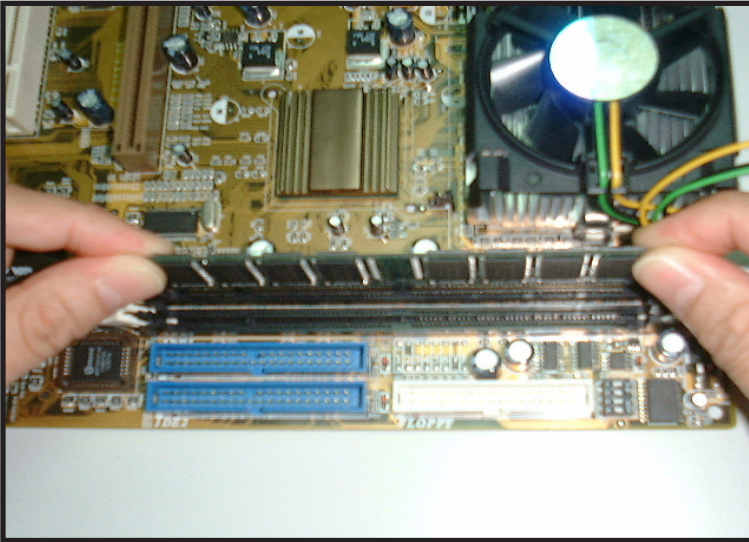


**CAUTION!** Be sure that sufficient air circulation must be available across the processor's heatsink. Without sufficient circulation, the processor could overheat and damage both the processor and the motherboard. You may install an auxiliary fan if necessary.



## 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

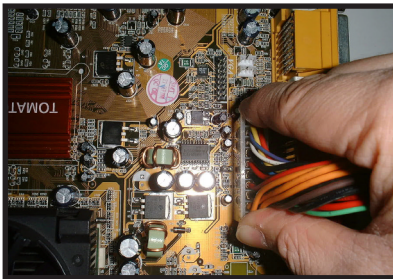


**IMPORTANT:** Ribbon cables should always be connected with the red stripe on the Pin 1 side of the connector. The four corners of the connector's are labeled on the mainboard.

### ATX Power Connector.

ATX Power Supply Connector (20-pin ATXPWR)

The single 20-pin connector (B in 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.

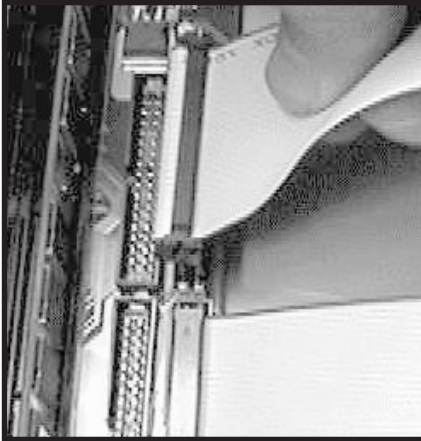


### ATX Power Connector

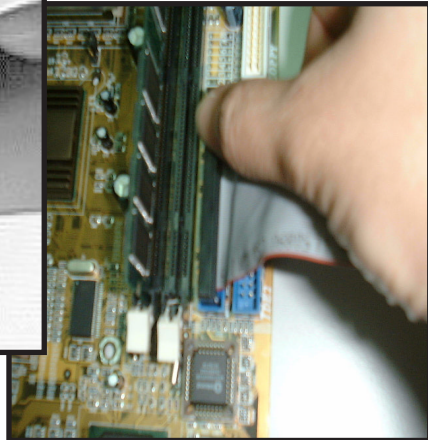
**4**

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



Floppy connection



IDE connection

Quick Steps

**5**

## IDE Connector.

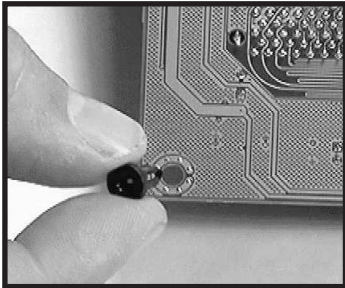
The on-board IDE connectors (P in diagram) support the provided 40/80-pin IDE hard disk ribbon cable. After connecting the single end to the mainboard, connect the remaining plugs at the other end of your hard disk(s). If you install hard disks, you must configure the drives by setting its jumpers according 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.

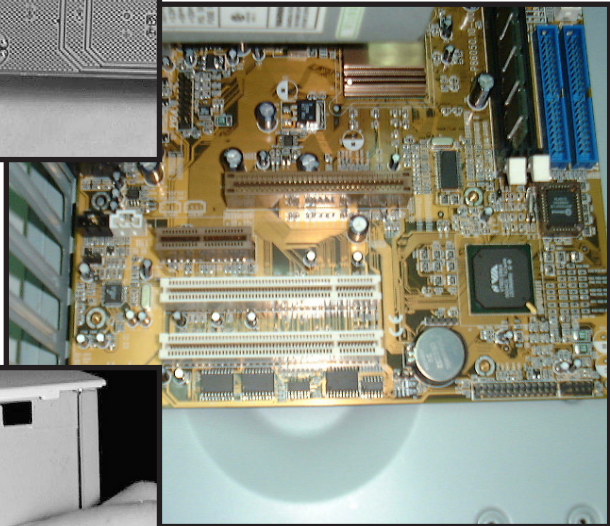
NOTE: For the flat ribbon cable connection, please make sure that the pin 1 of the ribbon cable (the red wire side of the cable) is correctly connected to the on-board connector's pin 1 as shown on the “ the mainboard diagram”.

## Installing the mainboard into your computer chassis

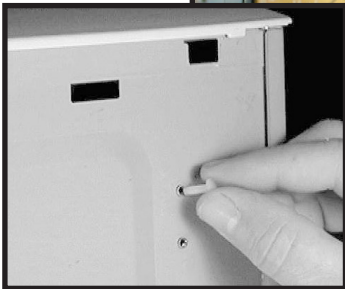
Snap black mounting pins onto the mainboard as shown. Carefully install the mainboard into the computer chassis and align the corresponding mounting holes on the mainboard with the holes on your chassis. *While chassis design varies you may need to refer to the chassis manual for the mainboard mounting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



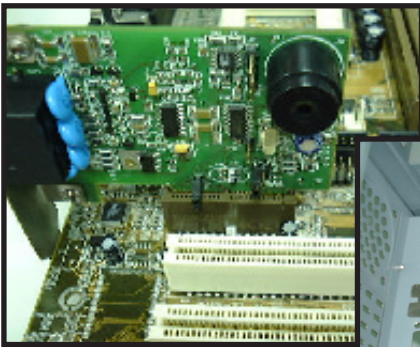
Insert into chassis



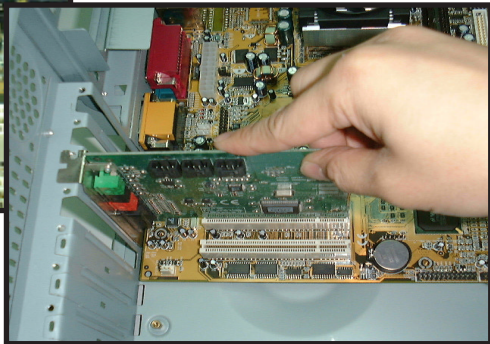
Insert White mount pin

## 7 Installing the AMR Add-in Boards

First read your AMR card documentation for hardware and software settings that may be required to set up your specific card. Remove the cover plate on your computer case at the slot aligned with the AMR port. 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.



AMR Card



PCI Board Installation

Quick Steps

## 8 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 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 serial 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

BIOS  
Setup

BIOS  
Setup

BIOS  
Setup

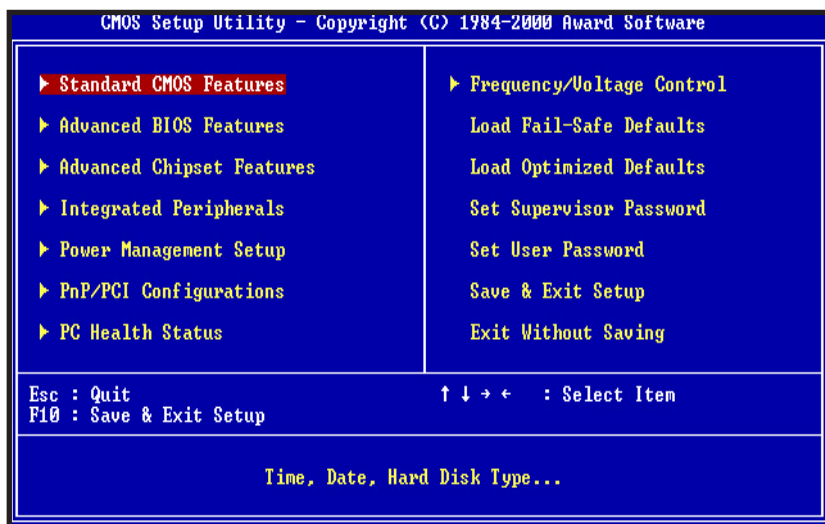
BIOS  
Setup

BIOS  
Setup

BIOS  
Setup

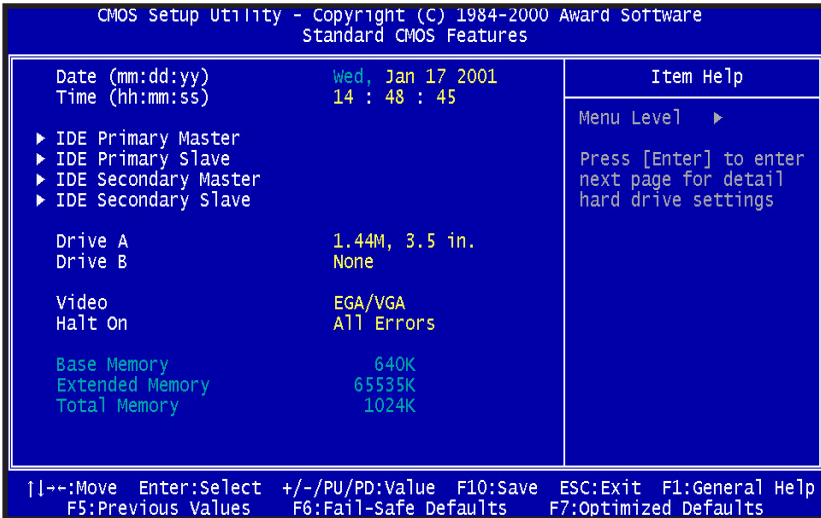
BIOS  
Setup

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 <Del> 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 IDE to let BIOS automatically configure the drive.

### 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, 1.44 MB 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 VGA 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.

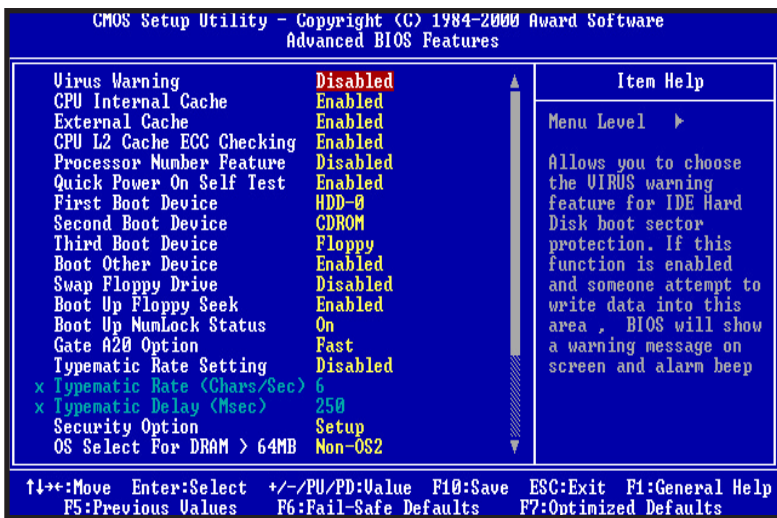
No error	The system boot will not be stopped for any error that may be detected.
All errors	Whenever the BIOS detects a non-fatal error the system will be stopped and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error; it will stop for all other errors.
All, But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

### Virus Warning

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”.

### **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**

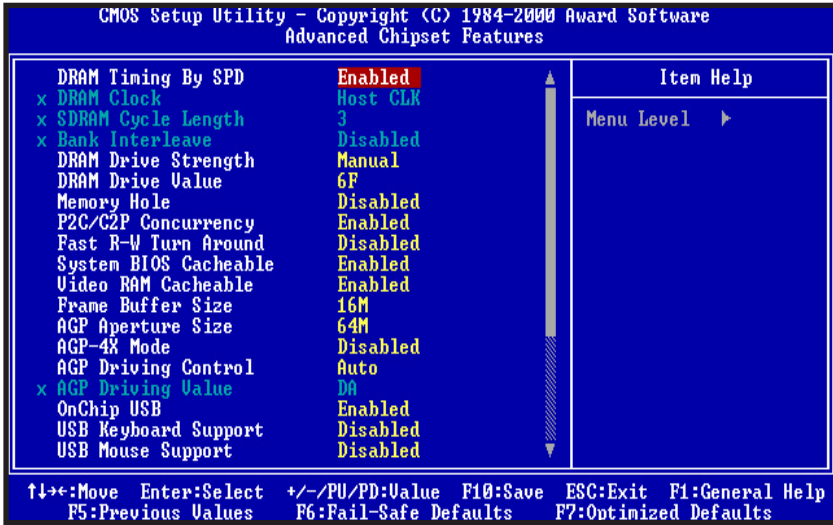
Some the OS/2 application access the memory in different mode. Enable this option to allow the system use another mode to access the main memory for OS/2 applications.

### **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

This item controls the DRAM timing, it allows you to enable/disable the DRAM timing by SPD. The choices : Enabled, Disabled.

### DRAM Clock

This item allows you to control the DRAM speed. The choices: Host CLK, HCLK-33M.

### 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

This item allows you to control the bank interleave. The choices: Disabled, 2 bank, 4 bank.

### DRAM Drive Strength

This item allows you to auto / manual the DRAM Drive Strength. The choices : auto, manual.

### **DRAM Drive Value**

This item allows you to 00-FF the DRAM Drive Value.

The choices : 00-FF.

### **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.

### **Fast R-W Turn Around**

This item controls the DRAM timing. It allows you to enable/ disable the Fast-Read/Write turn around. 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.

### **Frame Buffer Size**

This item allows you to control the VGA frame buffer size.

The choices: 2M, 4M, 8M,16M, 32M.

### **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.

### **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

### **OnChip USB**

This should be enabled if your system has a USB installed on the system board and you want to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.

### **USB Keyboard Support**

This option is enabled to support USB Keyboard.

### **USB Mouse Support**

This option is enabled to support USB Mouse.

### **OnChip Sound**

This option allows you to control the onboard AC 97 audio.  
The choices: Auto, Disabled.

### **OnChip Modem**

This item allows you to control the onboard MC 97 Modem.  
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**

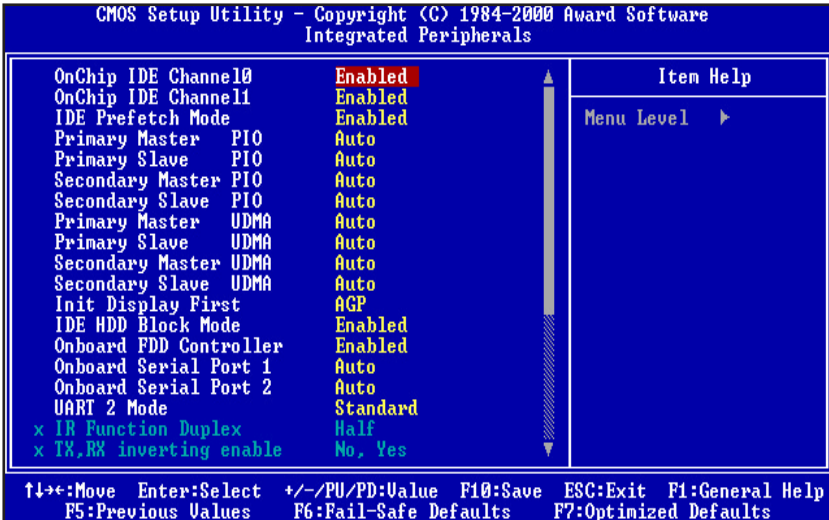
When Disabled, PCI#2 will not be disconnected until access finishes (default). When enabled, PCI#2 will be disconnected retries are attempted without success. The choices: Enabled, Disabled.

### **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 Prefect 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 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 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.

### **IR Function Duplex**

### **TX,RX inverting enable**

### **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.

### **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 support 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**

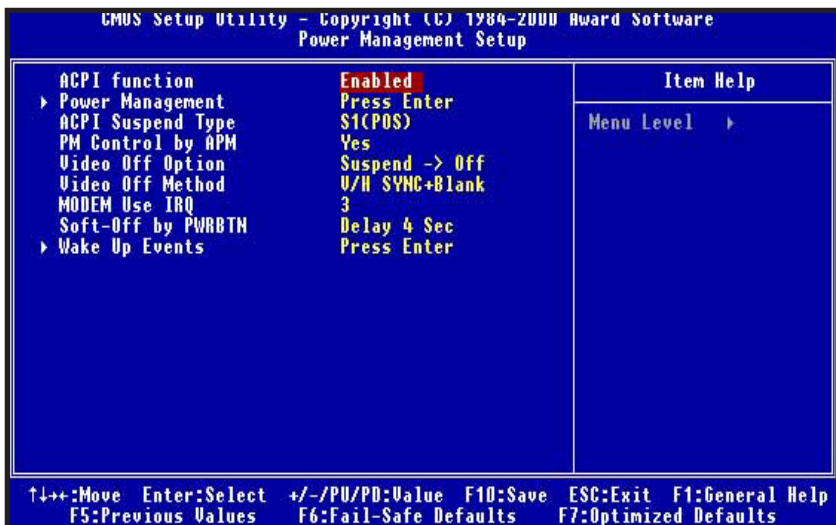
Select EPP port type 1.7 or 1.9. Choices are EPP1.7, EPP1.9.

### **Onboard Legacy Audio**

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

### **Game Port (220-207)**

Set this option to "Enabled" to enable the onboard Game Port. The settings are Enable 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 four 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 system 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 management 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/Lan 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.

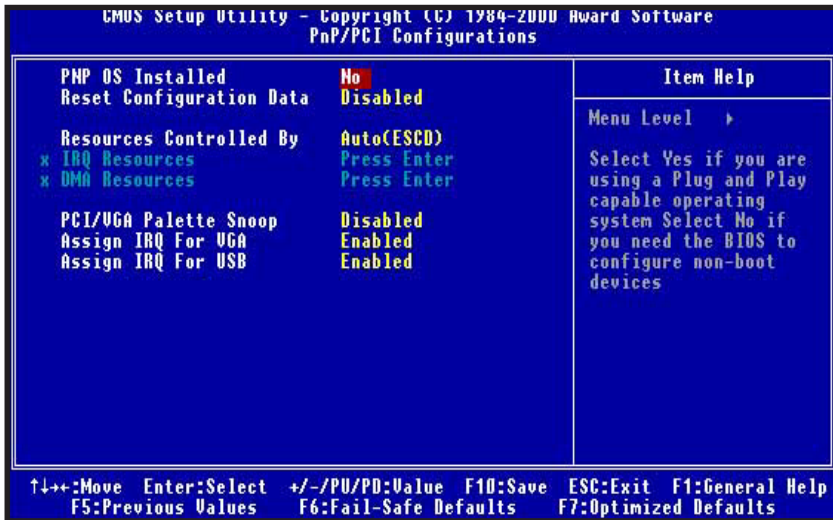
## **RTC Alarm Resume**

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

### 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.

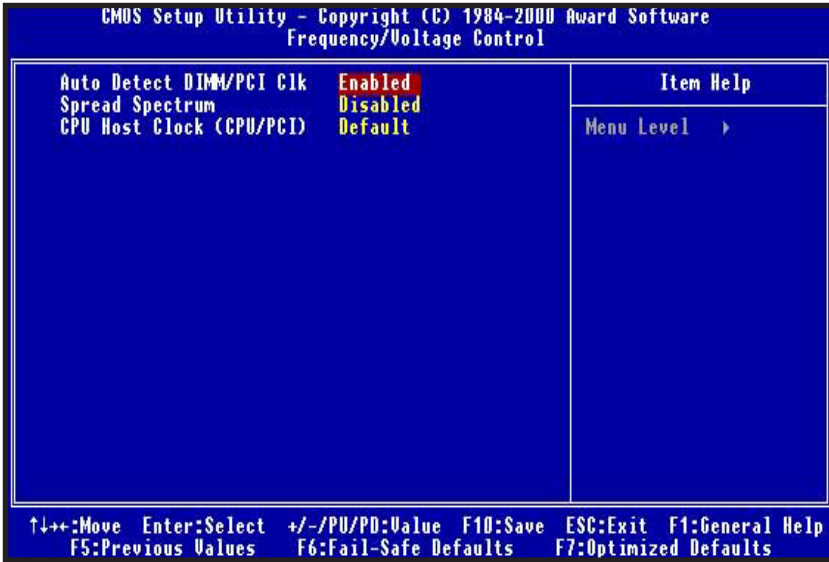
Choices are Enabled, Disabled.

### **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	options :	Enabled / Disabled
Spread Spectrum	options :	Enabled / Disabled
CPU Host Clock (CPU/PCI)	options :	Default
	(FSB66	FSB100 FSB133)
	66/33 MHz	100/33 MHz 124/31 MHz
	75/37 MHz	103/34 MHz 133/33 MHz
	83/41 MHz	112/37 MHz 140/35 MHz
		124/41 MHz 150/37 MHz
		133/44 MHz
		105/35 MHz
		110/36 MHz
		115/38 MHz
		120/40 MHz

# Glossary

# Glossary

A



## PS/2 Keyboard and Mouse 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 set 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.

E



## Infra-Red (IR) Connector

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	GND, power source
5	IRTX, infra-red transmit

## F 3.3V Memory Module Sockets (DIMM)

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

## G Serial COM1, Serial COM2 & Parallel Port Connector

The **ATX** Mainboard provides two serial port connectors 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 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 a 33 Mhz bandwidth, and can transport at peak rates up to 133MB/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. Using 'X4' mode, the peak transport rate can go as high as 1 GB/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 Connector**

The Mainboard provides 2 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:

<u>Function</u>	<u>Connector Pin-Out Label</u>
System Reset	RESET
Power LED	PW-LED
Hard Drive Activity LED	HD_LED
Soft-Touch Button Power On/Off	PW-BN
External Power Saving Control (optional)	EXTSMI
Sleep Button	SLPBTN

**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-33/66 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 40/80-pin IDE hard disk ribbon cables. After connecting the single end to the mainboard connector, connect 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 two different WAKEUP-LINK headers (WOL & WOM ) used to connect an add-in Network Interface Card and Modem Card which has Wakeup capability.

**r**



### **Audio Modem Riser ( AMR ) Connector**

The Mainboard provides a AMR Connector for the AMR cards.

**S**



### **370 CPU SOCKET**

The Mainboard provides a 370-pin Socket 370 CPU Socket for Socket 370 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.





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

PIN	SIGNAL NAME
1	(No Connection)
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.*



## Audio Connector

The Mainboard provides Audio Connector.

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

**V**  **VGA Connector**

The Mainboard provides a VGA Connector for the Integrated Graphics Controller.

**X**  **CD Audio Connector**

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

**Y**  **AUX Audio Connector**

AUX Audio input ( Right, Ground, Gound, Left )

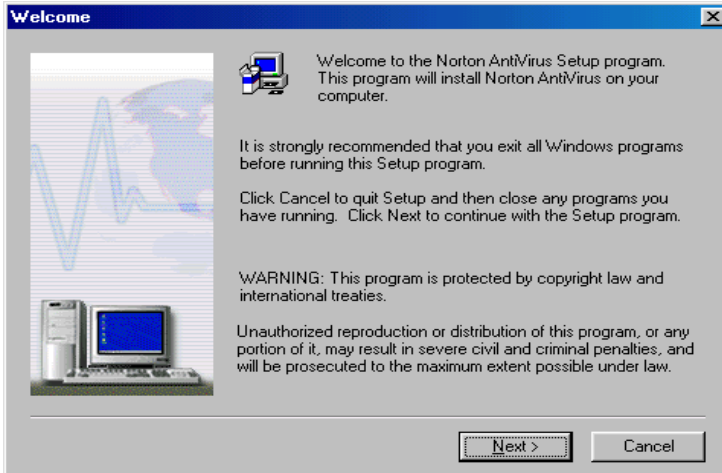
# **CD Driver & Software Installation Guide**

**Steps :**

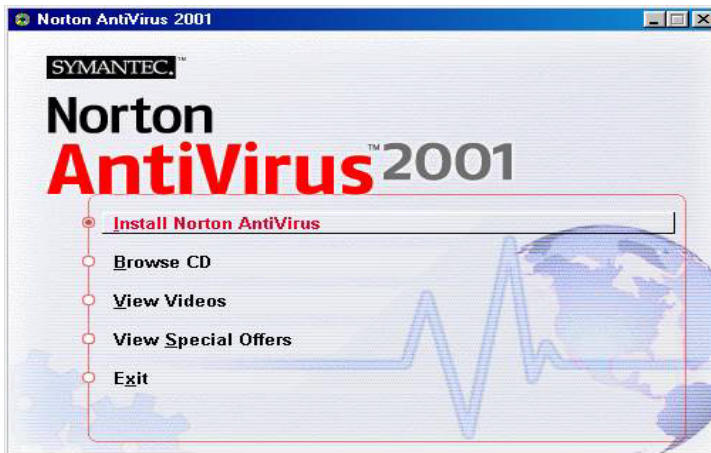
- 1. Boot up the Operating System ( Windows 95/98/NT/2000 )**
- 2. Put the CD Disc into the CD-ROM Drive and wait for Autorun.**
- 3. Select P8605 and click your Operating System Type**
- 4. Follow the instruction and install suitable Drivers**

## Norton Anti-Virus OEM Version Setup Guide

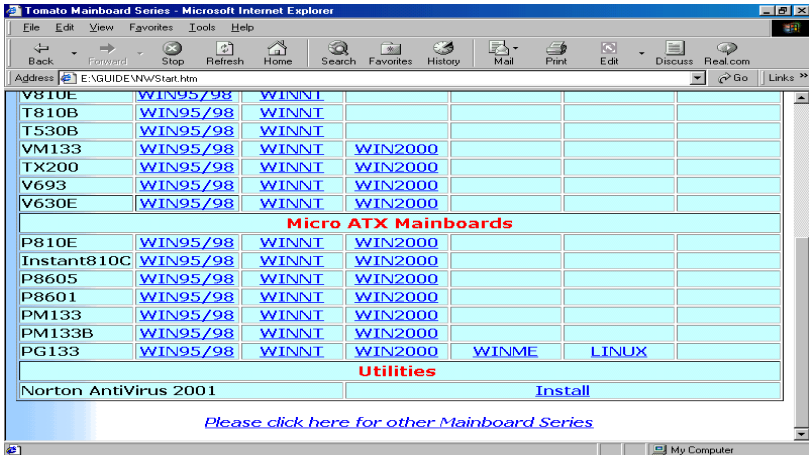
Step 1 : Load the Driver CD in CDROM and find the "Norton AntiVirus 2001 Install" Option.



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.





## Guide

### 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:

**A.** Insert the Windows 98 CD into your CD-ROM drive, select Start, and then Run.

**B.** Type (without quotes) “D:\setup /p j” in the window provided. Hit the enter key or click OK.

**C.** 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.

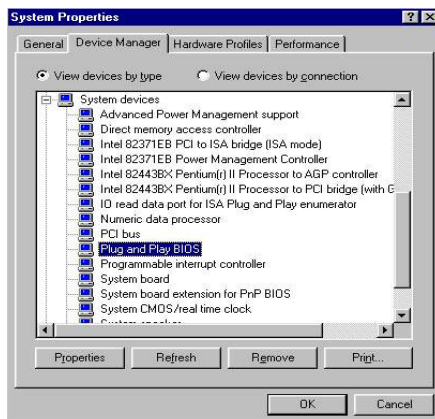
A. When Windows 98 finishes loading, open the “Control Panel” in Windows 98 “My Computer” area.



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 “

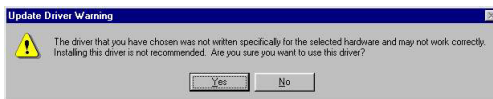




G. Select the “Show all hardware” item , then select the “Advance Configuration and Power Interface (ACPI) BIOS” and press the “Next” button.



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 <Del>. 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.

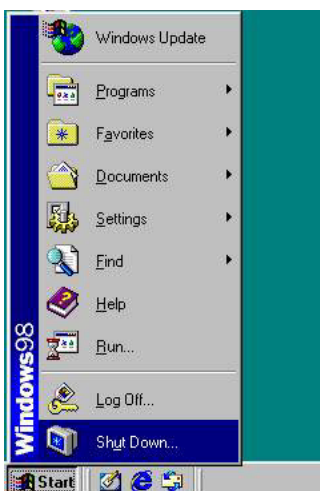
4

## 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”

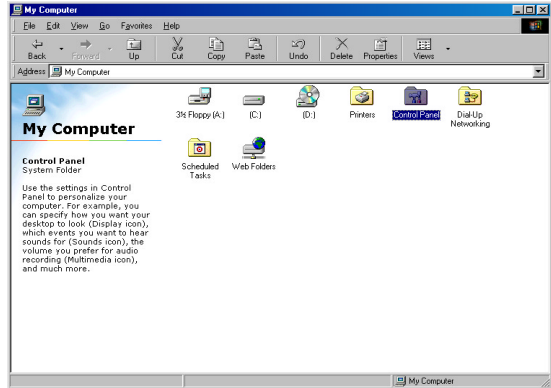


B. Choose the “Stand by” item and Click “OK”



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

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

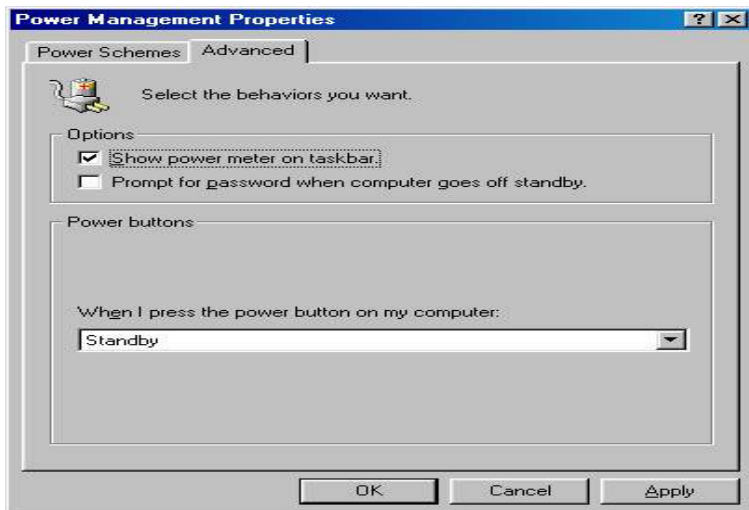


B. Double click the  
"Power  
Management"  
item.



- 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