



Declaration of Conformity

According to 47 CFR, Parts 2 and 15 of the FCC Rules

The following designated product:

EQUIPMENT: MAINBOARD
MODEL NO.: CT- 6WSV/2

is a Class B digital device that complies with 47 CFR Parts 2 and 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This declaration is given to the manufacturer:

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Tel: 1-408-935-6988

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Chaintech President: Raff Tung

Signature:

A handwritten signature in black ink, appearing to read 'Raff Tung', written over a horizontal line.

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- ♦ This device may not cause harmful interference
- ♦ This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy. If this equipment is not installed and used in accordance with the manufacturer's instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ♦ Reorient or relocate the receiving antenna.
- ♦ Increase the separation between the equipment and receiver.
- ♦ Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- ♦ Consult the dealer or an experienced radio/TV technician for help.

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for audio noise emissions from digital apparatuses set out in the Radio Interference Regulations of the Canadian Department of Communications.

Manufacturer's Disclaimer Statement

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Memo

Chapter 1

Introduction

1-1 Product Specifications

❑ Processor

- Supports Intel Slot 1 processors up to 733MHz
- Supports 66/100/133MHz system clocks
- High efficiency switching power modules with dual power delivery (VRM 8.4 compliant)

❑ Chipset

- Intel **810-E** three chip AGPset with 2D/3D graphics controller

❑ DRAM Memory

- Two 168-pin DIMM sockets support up to 512MB SDRAM
- Supports 16/32/64/128/256MB, 64/72-bit unbuffered Synchronous DIMM modules

❑ Embedded 3D AGP VGA

- 3D Hyper Pipelined Architect w/ PDP, PPI
- Full 2D graphics up to 1600x1200x256c at 75Hz refresh
- Hardware Motion compensation assistance for S/W MPEG2 decode
- Integrated 24-bit 230MHz RAMDAC
- 85MHz Flat Panel Monitor Interface or Digital Video output for use with an external TV encoder.
- (Optional) 4MB SDRAM display cache

❑ Embedded Audio Subsystem

- AC'97 v2.1 compliant CODEC with SRC

❑ Embedded Ultra DMA-66 (ICH only) PCI IDE controller

- Two IDE ports support up to 4 ATAPI devices
- Supports up to PIO Mode 4 up to 16.6MBps
- Bus Mastering software drivers for all common multitasking operating systems
- *Blue colored IDE connectors for IDE#1

❑ Embedded USB Controller with two USB ports (UHCI v.1.0 compliant)

❑ Expansion Slots

- One AMR slot (v 1.0 compliant)
- One LTI slot line up with AMR for Panel Link LCD monitor and TV out
- Three 32-bit PCI slots with master mode (Rev 2.2 compliant)

❑ **Boot-Block Flash ROM**

- Intel 4Mb FWH (Firmware Hub)
- Award System BIOS, supports PnP, APM, DMI, ACPI & Multi-device booting features(Floppy, LS120, CD-ROM, IDE, SCSI, ZIP-ATAPI etc.)
- Includes Trend **ChipAway Virus** protection for virus-free boot and virus free operating system
 - ✎ Trend ChipAway Virus is a rule-based anti-virus technology and does not require periodical updates of virus code

❑ **Onboard Super I/O Controller**

- W83627HF LPC I/O chip with System Monitor Hardware (SMH)
- One Parallel (SPP/ECP/EPP) and two Serial (16550A compliant) ports
- One floppy disk drive connector supports up to 2.88MB, Japanese 3-Mode, and 1Mbps transfer rates
- Supports HPSIR, and ASKIR function shared with 2nd serial port
- Supports Game/MIDI port

❑ **Embedded System Monitoring Hardware (Optional)**

- 8 voltage inputs for CPU Vcore, +3.3v, +/-12v, +5v, Vtt(1.5v), 5vsb,Vbat
- 2 temperature inputs for CPU thermal and System temperature
- 5 VID inputs pin for Slot1 CPU Vcore identification
- 2 Fan speed monitoring with On/Off control in Suspend

❑ **Double Stack Back-Panel I/O Connectors with PC99 Colored Codes**

- PC99 compliant color connectors
- PS/2 Mini-DIN keyboard and mouse ports
- Two USB ports
- One D-SUB 9-pin male serial port
- One D-SUB 15-pin female VGA port
- One D-SUB 25-pin female Printer port
- One D-SUB 15-pin female Game/MIDI port
- Audio Line-out, Line-in and Mic-in jacks
- Support 9-pin connect for serial port

❑ **Board Dimensions**

- Micro-ATX form factor, 244mm x 210mm, 4 Layers
- Six mounting holes

❑ Advanced Management Features

- Innovative *SeePU* technology for jumperless CPU installation
- LDCM compliant System Monitor Hardware
- Supports StDram (S3) ready!
- Poly-fuse over-current protection for USB and keyboard circuitry
- Power-on events: Mouse clicks, Keyboard password, WOL(Wake-On-LAN) network card, Modem ring, RTC-Alarm
- AOL(Alert-on-LAN) network card
- Software power-off control for Win95/98
- Over-ride power button, Blinking Power-LED in suspend and Power failure recovery
- System lockup recovery
- Chassis intrusion detection with mnemonics during power loss
- On-line BIOS help
- Complete Data Security
Flash BIOS write protection against unauthorized access with Trend ChipAway Virus and PC-cillin98 to ensure virus-free booting procedure

❑ Switching Power Supply Requirement

Output Voltage	Max. Regulation Requirement	Min.Current Requirement(Amps)
+12V	+/- 5%	6
+5V	+/- 5%	20
+3.3V	+/- 5%	15
-5V	+/- 10%	0.5
-12V	+/- 10%	0.5
+5VSB	+/- 5%	0.8

Table 1-1



3.3V at 10Amps is necessary too guarantee full loading operation because some AGP cards and memory modules have high current consumption.

1-2 Package Contents

This product comes with the following components:

- One mainboard
- One 40-pin Ultra DMA-66 IDE connector ribbon cable (Figure 1-1)
 -  **Color coded connection for UDMA/66 cable**
Blue to mainboard, Gray to Master and Black to slave
- One 34-pin floppy disk drive ribbon cable (Figure 1-2a) or (Figure 1-2b)
- One plastic stub for standard ATX installation (Figure 1-3)
- Optional** 9-pin serial port ribbon cable with bracket (Figure 1-4)
- One User's Manual
- One CD-ROM that includes
 - Acrobat Reader
 - Award Flash Utility and Award DMI Utility for DOS
 - Intel Bus Master IDE drivers for Win95/98 and WinNT
 - Intel security driver
 - Exclamation Mark Remover Utility
 - Audio Driver and Utility for Win95/98/NT
 - AGP VGA Driver for Win95/98/NT
 - System Health Monitoring Software
 - Trend **PC-cillin 98** with multilingual support
 - Optional AIRBAG software group including Norton AntiVirus



Figure 1-1 UDMA66 IDE cable

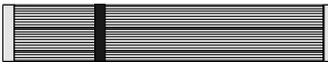


Figure 1-2a Standard Floppy cable



Figure 1-2b Optional 5.25 in. floppy cable

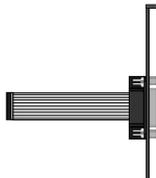


Figure 1-4 COM2(Optional)

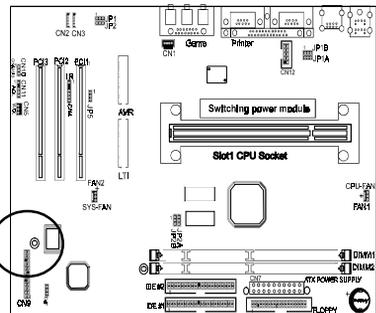
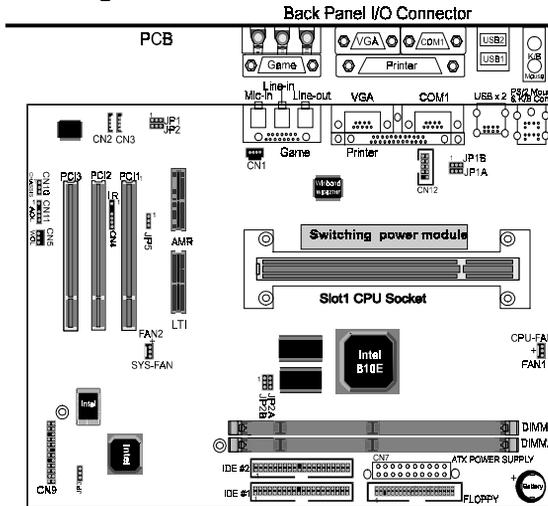


Figure 1-3

Insert the stub if the mounting screw is not supported by the ATX case

1-3 Mainboard Layout



1-4 Connector and Jumper Reference Chart

Jumper & Connector No.	Function	Ref. page
CN1	CD-ROM Audio-in connector	17
CN2	Auxiliary CD-ROM Audio-in connector	17
CN3	Audio Mono -in/out connector	17
CN4	Infrared connector	18
CN5	WOL (Wake-on-LAN) connector	18
CN9	Green switch connector	13
	Green LED connector	13
	System reset switch connector	13
	Message LED connector	13
	Keyboard lock & power indicator LED connector	12
	Speaker connector	13
	IDE activity LED connector	13
	Over-ride power button connector	12
CN10	Chassis intrusion monitoring connector	18
CN11	Alert On LAN Connector	19
JP1/JP2	Audio Line out and Speaker out jumper	15
JP1A	PS/2 Keyboard/Mouse Power-on Function jumper	15
JP1B	USB Device Power On Function jumper	15
JP2A/JP2B	External clock frequency jumper	16
JP3	Clear CMOS data jumper	16
JP5	AMR/MR/AC'97 CODEC Jumper	16
CN7	ATX power supply connector	11
FAN1/2	CPU/System cooling fan connector	14
Ports	PS/2 mouse and keyboard ports	14
Ports	USB (Universal Serial Bus) ports	19



Memo

Award BIOS Setup Program

Award's BIOS ROM has a built-in setup program that allows users to modify the basic system configuration. This information is stored in CMOS RAM so that it can retain the setup information, even when the power is turned off.

When you turn on or reboot the system, press the Delete key to enter the Award BIOS setup program. The primary screen as shown in Figure 3-1 is a list of the menus and functions available in the setup program. Select the desired item and press enter to make changes. Operating commands are located at the bottom of this and all other BIOS screens. When a field is highlighted, on-line help information is displayed on the right side of the screen.

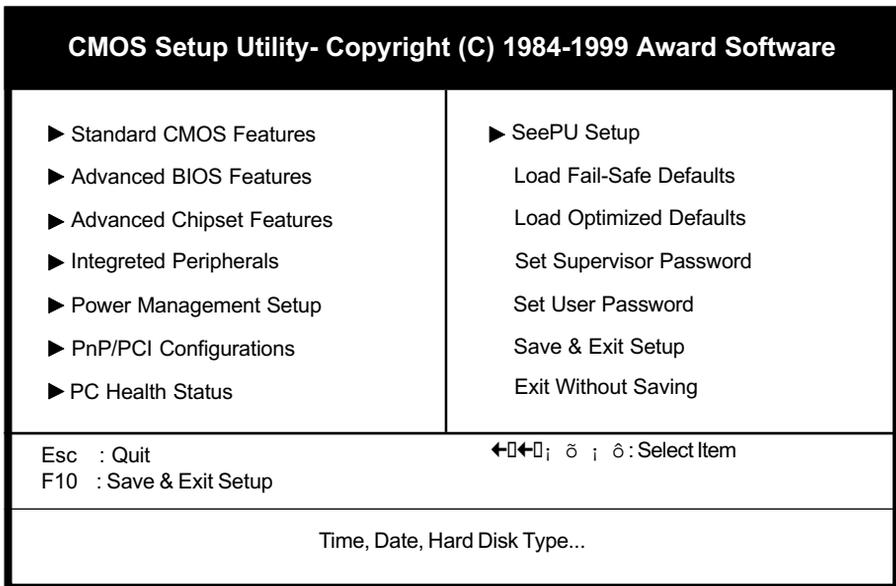
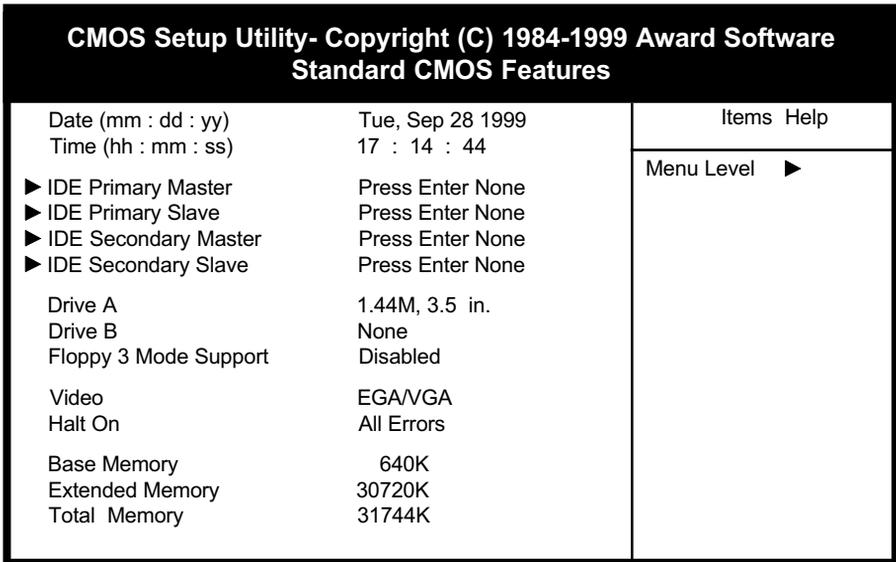


Figure 3-1 Setup Program Initial Screen

3-1 Standard CMOS Setup

The Standard CMOS Setup allows users to configure system components such as hard disk drive, floppy disk drive and video display as well as date, time and boot-up error signaling. This configuration menu should be changed when installing a mainboard for the first time, changing hardware in your system such as the HDD, FDD, video display, or when the CMOS data has been lost or contaminated. Choose the Standard CMOS Setup option from the CMOS Setup Utility menu (Figure 3-1) to display the following screen. When a field is highlighted, on-line help information is displayed on the right side of the screen.



←→; ; δ Move Enter:Select +/-PU/PD:Value F10:Save ESC:Exit F1:General Help
 F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Figure 3-2 Standard CMOS Features Screen

Date/Time

Set the date and time. Do not skip this function as all of your timed events such as power management, saving files, etc. are based on this timer.

Hard Disk Setup (Primary/Secondary; Master/Slave)

This category identifies up to four IDE hard disk drives that have been installed in the computer. This section does not show information on other IDE devices such as CD-ROM drives or other hard drive types such as SCSI drives.

Type (Auto/User/None): Use the fields under the Type column to determine the method you will use to configure the IDE devices. If you choose Auto, BIOS will automatically detect and make optimal settings for most IDE hard drives.



The mainboard manufacturer recommends that you choose Auto for all drives.

Choose User to define your own drive type manually. You must enter values indicated in the table below into each drive parameter field. This information should be included in the documentation from your hard disk vendor or system manufacturer:

TYPE	Setting method
CYLS	Number of cylinders
HEAD	Number of heads
PRECOMP	Write precompensation cylinder
LANDZ	Landing zone
SECTOR	Number of sectors
MODE	Mode type

Table 3-1 Hard Disk Drive Parameters

Cyls/Head/Sector: The number of Cylinders, Heads, and Sectors can usually be found written on the top of the hard disk. If you have a relatively new hard drive, entering this information alone is usually sufficient for normal hard disk operation. The hard disk will not work properly if you enter improper information for these categories.

Precomp: Older hard drives (i.e., MFM or RLL drives) have the same number of sectors per track at the innermost tracks as at the outermost tracks. Thus, the data density at the innermost tracks is higher and the bits are lying closer together. Even though the physical size of a sector gets progressively smaller as the track diameter diminishes, each sector must still hold 512 bytes. Write precompensation circuitry compensates for the difference in sector size by boosting the write current for inner track sectors.

Landz: This defines the address of the landing zone and is only used for older hard drives which do not have an auto-parking feature.

Mode: If the Type value is not None for any device, you must set the Mode value for that device. There are four different Mode values: Auto, Normal, Large, and LBA.

Auto - BIOS detects and enters the IDE drive type during bootup.

Normal - for IDE drives that meet the old IDE specification which support a maximum capacity of 528MB (1024 cylinders, 16 heads, and 63 sectors).

Large - for IDE drives that do not support LBA and have more than 1024 cylinders. Try this setting if your hard disk does not operate properly with the LBA setting. Large mode is not supported by all operating systems, i.e., only certain versions of DOS support large mode.

LBA - (Large/Logical Block Addressing) With LBA, the IDE controller transforms the data address described by sector, head, and cylinder number into a physical block address, significantly improving data transfer rates. This mode is for drives with greater than 1024 cylinders and between 528MB and 8.4GB in size. This protocol is the current common standard.

Choose None for Type if there are no IDE HDD devices in your system.

- ✎ You can use the IDE HDD Auto Detection function to auto detect your hard drive parameters. Using this function will automatically insert the parameters discussed under Hard Disk Setup and will indicate User for the Field value. Please see Section 3-9 for more information.

Floppy Disk Drives

Choose the memory capacity and disk size that corresponds with that of your floppy disk drive(s).

Video

Select the type of video adapter present in your system. You can ignore this setting if you are using a VGA monitor since VGA BIOS automatically configures this setting.

Halt

When the system is powered on, BIOS performs a series of diagnostic tests called POST (Power On Self Test). This function stops the computer if BIOS detects a hardware error. You can tell BIOS to halt on all errors, no errors, or not to halt on specific errors.

3-2 Advanced BIOS Features

By choosing the Advanced BIOS Features option from the Standard CMOS Features menu (Figure 3-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.

CMOS Setup Utility- Copyright (C) 1984-1999 Award Software		Items Help
Advanced BIOS Features		Menu Level ▶
Anti-Virus Protection	Disabled	
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Processor Number Feature	Enabled	
Quiet Post	Disabled	
Quick Power On Self Test	Enabled	
Frist Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS/ZIP	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up NumLock Status	Off	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select (For DRAM>64MB)	Non-OS2	

←→; ; ; Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Figure 3-3 Advanced BIOS Features Screen

A. Anti Virus Protection

Trend ChipAway Virus

Trend ChipAway Virus is a code incorporated in the mainboard's BIOS firmware. During the boot-up sequence, BIOS loads before loading of the partition table or boot sector. ChipAway Virus loads with BIOS and is able to detect boot-up viruses before they have a chance to infect the hard drive. ChipAway Virus employs rule-based logic that doesn't look for specific viruses but rather detects patterns found in every virus, eliminating the need to perform periodical version updates after new viruses have been found.

B. Cache Control

CPU Internal Cache/External Cache

Cache memory is much faster than conventional DRAM system memory. These fields allow you to enable or disable the CPUs Level 1 built-in cache and Level 2 external cache. Both settings are left enabled to significantly increase the performance of your computer.

C. Boot Up Features

After turning on the system, BIOS will perform a series of device initializations and diagnostic tests discussed below.

Quick Power On Self Test (POST)

Enable this function to reduce the amount of time required to run the POST (Power On Self Test). BIOS saves time by skipping some items during POST. It is recommended that you disable this setting. Discovering a problem during bootup is better than losing data during your work.

First/Second/Third/Boot Other Device

This option sets the sequence of drives BIOS attempts to boot from after POST completes. BIOS will search these drives for an operating system.

Swap Floppy Drive

Enabling this function will swap the floppy drive assignment so that drive A will function as drive B, and drive B will function as drive A. Note that the boot sequence assignment mentioned directly above does not include booting from floppy drive B. This function is useful if floppy drives B and A are of a different format and you want to boot from floppy drive B.

Boot up Floppy Seek

During POST, BIOS will determine if the installed floppy disk drive has 40 or 80 tracks. A 360K drive has 40 tracks and 720K, 1.2M and 1.44M drives have 80 tracks. All modern floppy disk drives have 80 tracks.

Boot Up NumLock Status

This function defines the keyboard's numberpad as number keys or arrow keys.

D. Gate A 20 Option

Gate A20 refers to the way the system addresses memory above 1 MB (extended memory). When set to Fast, the system chipset controls Gate A20. When set to Normal, a pin in the keyboard controller controls Gate A20. Setting Gate A20 to Fast improves system speed, particularly with OS/2 and Windows.

E. Keyboard Interface

Typematic Rate Setting

When enabled, you can set the following two typematic control items. When disabled, keystrokes are determined arbitrarily by the keyboard controller in your system.

Typematic Rate (Chars/Sec)

The typematic rate sets the rate at which characters on the screen repeat when a key is pressed and held down.

Typematic Delay (Msec)

The typematic delay sets how long after you press a key that a character begins repeating.

F. Security Option

The Supervisor and/or User Password functions shown in Figure 3-1 must be set to take advantage of this function. See Section 3-11 for password setting information. When the Security Option is set to System, a password must be entered to boot the system or enter the BIOS setup program. When the Security Option is set to Setup, a password is required to enter the BIOS setup program.

G. OS Select (For DRAM > 64MB)

If your system's DRAM is larger than 64MB and you are running OS/2, select OS/2 as the item value. Otherwise, set the item value to Non-OS/2 for all other operating systems.

B. Flash BIOS Protection

The mainboard manufacturer developed BIOS protection technology that protects the System BIOS from accidental corruption by unauthorized users or computer viruses. When enabled, the BIOS data cannot be changed when attempting to update BIOS with the the FLASH utility. When disabled, the BIOS data can be updated by using the FLASH utility.

C. Hardware Reset Protect

When this function is enabled, your PC's hardware reset button will not function. This function is especially useful to prevent accidental resets for file servers and routers, etc., which should be available 24 hrs/day. When disabled, your PC's hardware reset button will function normally.

3-4 Integrated Peripherals

This section provides information on setting peripheral devices. By choosing the Integrated Peripherals option from the Standard CMOS Features menu (Figure 3-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.

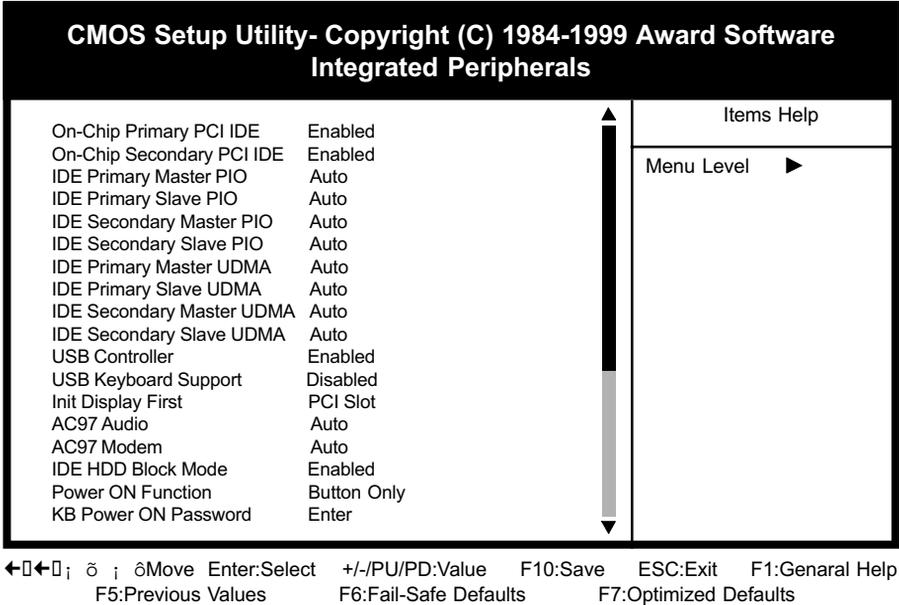


Figure 3-5 Integrated Peripherals Screen

A. On Board IDE Control

On-chip Primary/Secondary PCI IDE

You can set this to disable the On-chip IDE controller if you are going to add a higher performance IDE board.

IDE Primary/Secondary Master/Slave PIO

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

B. USB Keyboard Support

If your current operating system doesn't support USB drivers (i.e., DOS) this function must be enabled for USB keyboard operation in these operating systems.

C. Init Display First

This function allows user to choose between AGP slot or VGA slot to initialise Display first .

D. AC97 Audio

Select Enabled if you install the audio riser card.

E. AC97 Modem

Select Enabled if you install the soft modem riser card.

F. IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

G. Power On Function

Set to Button Only to control the system power via the button on your system case. Set to Mouse Left/Right Click to turn on the power via a PS/2 mouse, and set to Keyboard 98, Hot Key or Password to turn on the power via keyboard. With Hot Key and Password you must decide on which keys will turn on the power.

H. Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install an add-in FDC or the system has no floppy drive, select Disabled in this field.

I. UART Mode Select

This function allows you to select an operating mode for the second serial port. (Standard RS-232C serial port/IrDA SIR 1.0 specification/Sharp IR 0.57-MB/sec infrared port)

J. Onboard Parallel Port

Select a logical LPT port address and corresponding interrupt for the physical parallel port.

3-5 Power Management Setup

This section provides information on the Green PC power management functions. By choosing the Power Management Setup option from the Standard CMOS Features menu (Figure 3-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard

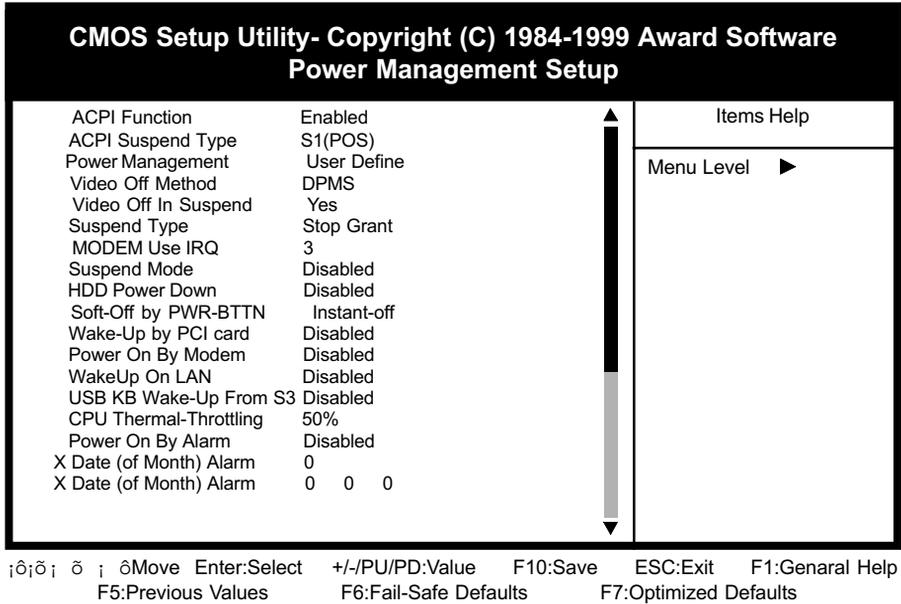


Figure 3-6 Power Management Setup Screen

A. Advanced Configuration Power Interface (ACPI)

ACPI management enables the operating system to control the amount of power given to each device attached to the computer. With ACPI, the operating system can turn off peripherals devices, such as CD-ROM players, when they are not in use.

B. Power Management

Power management allows the computer to save electricity when it is not in use by entering increasingly deep power saving modes as shown by the diagram below.

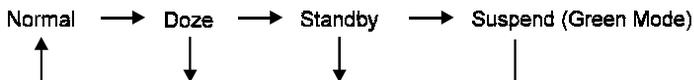


Figure 3-7 Power Saving Mode Flow Chart

V/H SYNC+Blank - The system turns off the vertical and horizontal synchronization ports, writes blanks to the VGA buffer and the monitor's electron gun turns off. This function requires a monitor with Green features in order to take advantage of the power saving function. If you enable this function and do not have a Green monitor, the result will be the same as if you had selected Blank. This function serves as both a screen saver and an electricity saver.

DPMS Supported - Select this option if your video card supports the Display Power Management Signaling (DPMS) standard (i.e., you have a monitor that supports Green features). Use software supplied by your your video subsystem to set video power management options.

C. Video Off Method

This function serves as both a screen saver and power saver for monitors. See the next function, Video Off After, for setting the video timer.

Blank - BIOS will only blank the monitor's screen. The electricity saved in this mode is negligible and this function is only used as a screen saver to prevent screen damage while the screen is on but not in use.

V/H SYNC+Blank - The system turns off the vertical and horizontal synchronization ports, writes blanks to the VGA buffer and the monitor's electron gun turns off. This function requires a monitor with Green features in order to take advantage of the power saving function. If you enable this function and do not have a Green monitor, the result will be the same as if you had selected Blank. This function serves as both a screen saver and an electricity saver.

DPMS Supported - Select this option if your video card supports the Display Power Management Signaling (DPMS) standard (i.e., you have a monitor that supports Green features). Use software supplied by your your video subsystem to set video power management options.

D. Video Off In Suspend

This setting determines when the monitor enters power saving mode. If set to Yes, the monitor enters the power saving mode after the chosen event expires. The Power Management function must be enabled to use this function.

E. Modem Use IRQ

If your computer has a modem, use this function to tell BIOS which IRQ is being occupied by the modem card. When the system is in Green mode, the modem requires an IRQ assignment to wake up the system and perform tasks. This assignment is compliant with the APM 1.2 specification and is to be used in coordination with APM 1.2 compliant operating systems.

F. Suspend Mode

The Power Management function must not be set to disabled to enable this function. If the system runs in Standby mode and the Suspend timer expires, all devices regulated by power management will shut off and the CPU speed will be 0 MHz.

G. HDD Power Down

The Power Management function must not be set to disabled to enable this function. When the HDD idle time has elapsed, BIOS sends a command to the hard disk to turn off the motor. Set a time between 1 and 15 to indicate time required to wait before the hard drive enters a power saving mode. Some old hard drives may not support this function.

H. Soft-Off by PWR-BTTN

When set to Delay 4 Sec., this function allows the power button to put the system in Suspend, a power saving mode. See Section 2-4 for operation instructions of the over-ride power button operation which puts the system in Suspend mode. When set to Instant-Off the Soft-Off by PWR-BTTN function is disabled and the computer turns completely off when the power button is pressed.

I. Wake-Up by PCI card

Some PCI (Modem) cards use PME signal to wake up your system. Enable this function if your PCI card support this feature.

J. Power On By Modem

When enabled, a modem that receives a call will wake up the system from soft off and green mode. You should connect the modem to the COM port and turn on the resume event in green mode.

K. Wake Up On LAN

Enable this selection to use the Wake Up On LAN function discussed in Section 2-4 of this manual.

L. USB KB Wake-Up From S3

When enabled, this setting allows the USB keyboard to wake up the system from S3 mode (Suspend to RAM).

M. CPU Thermal-Throttling

When the system enters Doze mode, the CPU clock runs only part of the time. You may select the percent of time that the clock runs.

N. Power On By Alarm

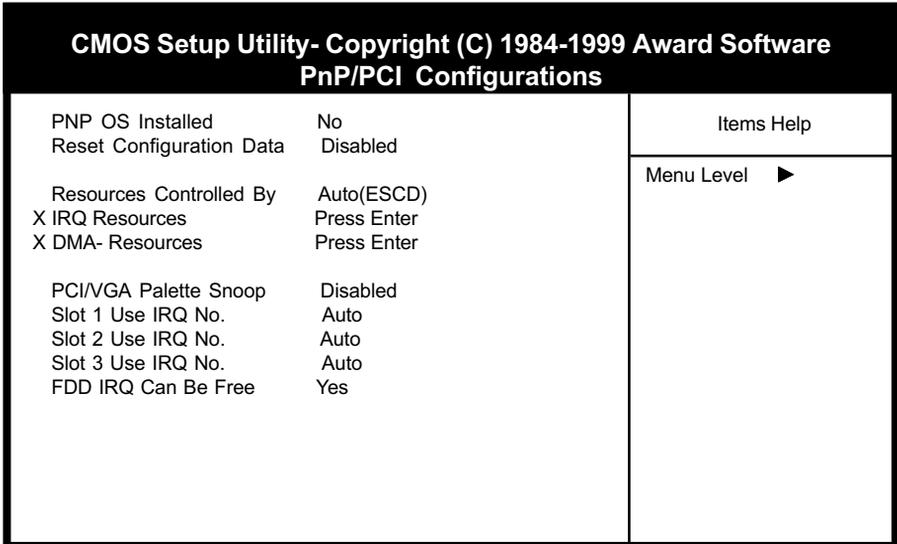
When enabled, this setting allows the system to turn back on at a designated time of the month. User must designate date of month and time of day. This function is only available when using an ATX power supply and the Software Power-Off function to turn off the computer. See the Software Power-Off feature in Section 2-4 of this manual for instructions.

O. Reload Global Timer Events

When Enabled, an event occurring on each listed device restarts the global timer for Standby mode.

3-6 PNP/PCI Configuration

This section provides IRQ and DMA setting information. By choosing the PNP/PCI Configuration option from the Standard CMOS Features menu (Figure 3-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.



←→□; ö ; δMove Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
 F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Figure 3-7 PnP/PCI Configurations Screen

A. PNP OS Installed

If you want to install a PNP compatible OS(such as Windows 95) set to Yes.

B. Resources Controlled By

When set to Manual the system BIOS will not refer to the ESCD for IRQ & DMA information. Instead, it will refer to the items in the setup menu for assigning IRQ & DMA. When set to Auto the system BIOS will refer to the ESCD for all legacy information.



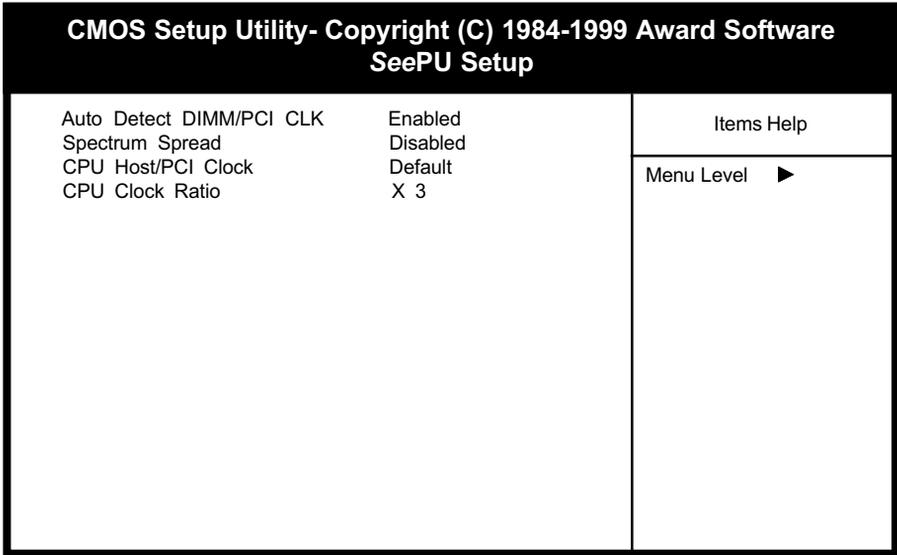
ESCD(Extended System Configuration Data) provides a detailed format of the configuration data structures stored in flash memory. Each data structure defines the resources used by a device or a card in the system. This includes legacy and PCI/ISA PnP devices.

C. FDD IRQ Can Be Free

This function allows user to choose if the FDD IRQ is able to be freed up. The default setting is Yes and this does not allow the IRQ to be free.

3-8 SeePU Setup

By choosing the *SeePU* Setup option from the Standard CMOS Features menu (Figure 3-1), the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.



←→; ; δ ; δ Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Figure 3-9 SeePU Setup Screen

A. CPU Setup

The mainboard manufacturer developed *SeePU* technology that allows you to easily change your CPU's **Host/PCI Clock** and **CPU Clock Ratio** in BIOS. Refer to Section 2-3 for details.

3-10 Load Optimized Defaults

Load Optimized Defaults loads the default system values directly from the Standard CMOS Features menu (Figure3-1). If the stored record created by the setup program becomes corrupted and therefore unusable, these defaults will be loaded automatically when you turn on the computer.

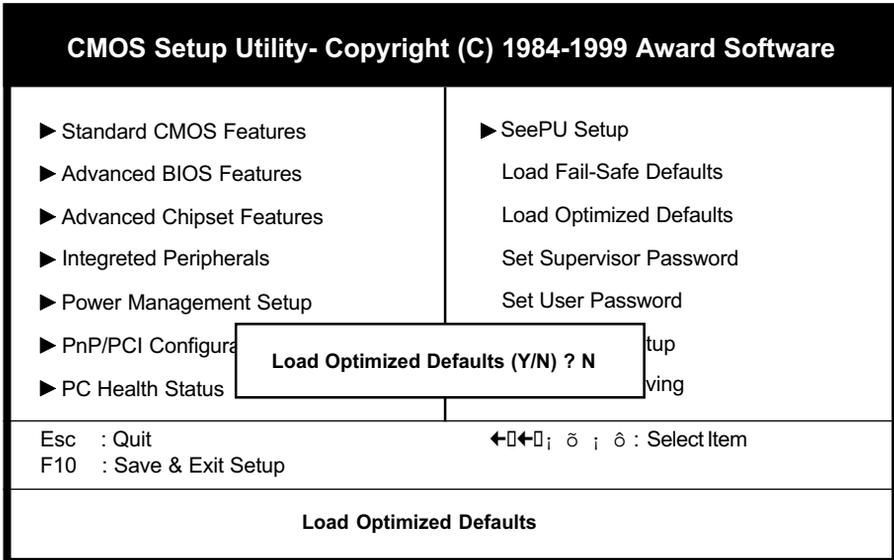


Figure 3-11 Load Optimized Defaults Screen

3-11 Supervisor Password & User Password Setting

There are four different variables that control password settings. The first two are located under the Security Option function in BIOS Features Setup Menu (Figure 3-1). When the Security Option function is set to Setup, a password is required to enter BIOS and change BIOS settings. When the Security Option function is set to System, a password is required to enter both BIOS and the the computer's operating system (for example Windows 95) found on the boot drive. This is shown in Figures 3-12 and 3-13.

The third and fourth variables are user password and supervisor password selected in BIOS (Figure 3-1). The main purpose of separating user and supervisor is to allow only the supervisor to have control over the settings in BIOS. The user, on the other hand, is only allowed to access the computer's operating system and change the user password in BIOS (See Figure 3-13). Note that when there is no supervisor password set, the user password controls access to all BIOS settings (See Figure 3-12 below).

A. Set Either Supervisor Password or User Password

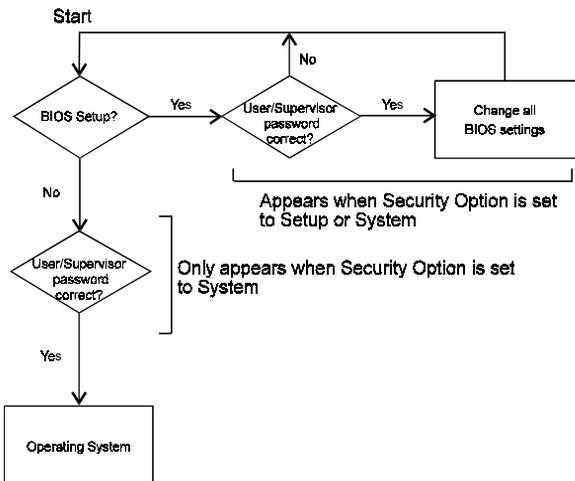


Figure 3-12 Set Either Supervisor or User Password

B. Set Both Supervisor Password and User Password

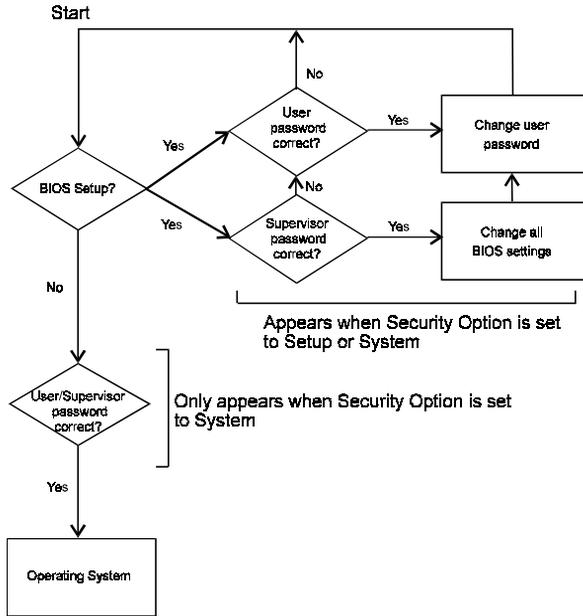


Figure 3-13 Set Both Supervisor and User Password

3-12 Save and Exit Setup

If you select this and type Y (for yes) followed by the [Enter] key, the values entered in the setup utilities will be recorded in the CMOS memory of the BIOS chip.

3-13 Exit Without Saving

Selecting this option and pressing Y followed by the [Enter] key lets you exit the Setup program without recording any new values or changing old ones.

Brief Software Driver Guide

The Mainboard Software Guide is found on the CD-ROM that is enclosed with your mainboard and is a PDF file which must be viewed with Adobe's freeware called Acrobat® Reader. The Acrobat Reader software is also included on the same CD-ROM. See the Readme.txt file in the CD-ROM's root directory for installation instructions of the Acrobat Reader. The Mainboard software guide discusses the following items:

The following items are discussed in the TXT and PDF files:

- Bus Master/PIO IDE Driver Installation
- USB Driver Installation
- Removing the Exclamation and/or Question Marks From the Windows 95 Device Manager Menu
- Updating Your System BIOS
- Installing and Using a Desktop Management Interface (DMI) Utility for DOS
- Sound Driver and Utility Installation
- Graphics Accelerator Driver and Utility Installation



The DMI utility is a DOS utility, operating under Windows or other operating system might cause damage to the BIOS.



Memo

Optional Audio Subsystem

5-1 Features

- Creative **1373** or **CT5880** audio chip option
- Advanced 64-Voice WaveTable synthesizer
- Programmable independent sample rate from 4KHz to 48KHz for recording and playback
- Full-duplex operation for simultaneous recording and playback
- 4-Channel speaker audio support for Home Theater environment (CT5880 only)
- Supports S/PDIF-out for digital audio (for example compressed AC3 data)
- Supports Microsoft's DLS (Downloadable sample) level-1 technology with limitless variety of instrument samples using PC RAM
- Up to 8MB wavedata provides 128 GM, GS and WT-32 compatible instruments and 10 drum kits
- Supports HRTF 3D positional audio with Microsoft's DirectSound, DirectSound3D, DirectMusic, Aural A3D and Creative EAX(Environment Audio Extensions) APIs
- PCI v2.1 compliant and full Legacy DOS software compatible



5-2 Onboard Audio jumper (See Section 2-4)

5-3 Sound Driver and Utility (See Chapter 4)

5-4 CD-ROM Audio-in Connection (See Section 2-4)



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Appendix I

On Board I/O Addresses & IRQ Maps

System Resource	IRQ	I/O Address
1. Timer	IRQ0	040, 043
2. Keyboard	IRQ1	060, 064
3. Programmable INT	IRQ2	0020, 0021, 00A0, 00A1
4. COM2(B)	IRQ3	2F8, 2FF
5. COM1(A)	IRQ4	3F8, 3FF
6. Floppy	IRQ6	3F0, 3F7
7. LPT1	IRQ7	378, 37F
8. Real Time Clock	IRQ8	070, 071
9. PS/2 Mouse	IRQ12	060, 064
10. Math coprocessor	IRQ13	0F0, 0FF
11. IDE 1	IRQ14	1F0, 1F7
12. IDE 2	IRQ15	170, 177

⚠ IRQ 5, 9, 10 and 11 are available for interface cards.



Memo

Quick Connector and Jumper Reference

JP1/JP2: Audio Line out and Speaker out

Setting Jumpers

1-2 Line out

2-3 Speaker out

JP3: CMOS Setting

1-2 Normal (default)

2-3 Clear CMOS data

JP5: Primary CODEC Setting Jumper

1-2 On board (default)

2-3 AMR

JP1A/1B: Keyboard/mouse power-on Jumpers

1-2: Disabled

2-3: Enabled

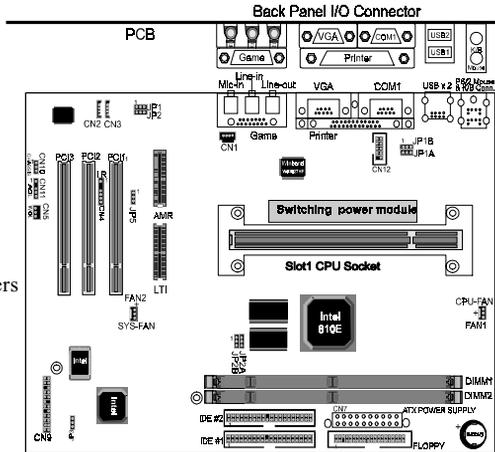
JP2A/2B: HOST bus frequency

JP2A JP2B

Auto 1-2 1-2

100MHz 2-3 1-2

133MHz 2-3 2-3

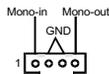


*See*PU (Jumper free CPU installation) setting table

FAN1/2: CPU/System cooling fan connectors

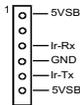


CN1/CN2: CD_IN/AUX_IN



CN3: Audio Mono in/out Conn.

CN4: Infrared Conn.

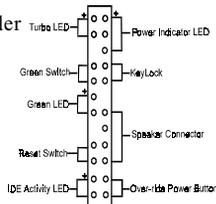


CN5: WOL (Wake-on-LAN) Conn.



CN7: ATX power supply

CN9: Front Panel header



CPU Type	CPU Speed		
	External Clock	Frequency Ratio	Internal Clock
Intel Slot1 Pentium III/ III & Celeron processor	100	4.5	450
		5	500
		5.5	550
		6	600
		6.5	650
133(810E)		5	667
		5.5	733

CN10: Chassis intrusion detection



CN11: AOL (Alert On LAN) header



CN12: COM2

LTI: LCD/TV-OUT extension slot

6WSV2-M101



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