

Item Checklist

Completely check your package. If you discover damaged or missing items, contact your retailer.

- WinneX 2 mainboard
- QDI Mainboard Utility CD-ROM
- Retention Module
- I/O shield
- 1 IDE ribbon cable
- 1 floppy ribbon cable
- 1 9-pin ribbon cable with bracket for serial port 2 (manufacturing option)
- User' s manual

Notice

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All trademarks are the property of their respective owners.

If you require further information, please visit our web-site: "www.qdigrp.com".

Declaration of conformity



QUANTUM DESIGNS(HK) LTD.
5/F Somerset House, TaiKoo Place 979 Kings Road,
Quarry Bay, Hong Kong

declares that the product

Mainboard
WinneX 2

is in conformity with
(reference to the specification under which conformity is declared in
accordance with 89/336 EEC-EMC Directive)

- EN 55022 Limits and methods of measurements of radio disturbance characteristics of information technology equipment
- EN 50081-1 Generic emission standard Part 1:
Residential, commercial and light industry
- EN 50082-1 Generic immunity standard Part 1:
Residential, commercial and light industry

European Representative:

| | |
|----------------------------|------------------------------------|
| QDI COMPUTER (UK) LTD | QDI COMPUTER (SCANDINAVIA) A/S |
| QDI SYSTEM HANDEL GMBH | QDI COMPUTER (NETHERLANDS) B. V. |
| QDI COMPUTER (FRANCE) SARL | QDI COMPUTER HANDELS GMBH |
| QDI COMPUTER (ESPANA) S.A. | QDI COMPUTER (SWEDEN) AB |

Signature :  . Place / Date : HONG KONG/1999

Printed Name : Anders Cheung Position/ Title : President

Declaration of conformity

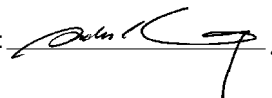


Trade Name: QDI Computer (U . S . A .) Inc.
Model Name: WinneX 2
Responsible Party: QDI Computer (U . S . A .) Inc.
Address: 41456 Christy Street
Fremont, CA 94538
Telephone: (510) 668-4933
Facsimile: (510) 668-4966

Equipment Classification: FCC Class B Subassembly
Type of Product: Mainboard
Manufacturer: Quantum Designs (HK) Inc.
Address: 5/F, Somerset House, TaiKoo Place
979 Kings Road, Quarry Bay, HONG
KONG

Supplementary Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Signature :  Date : 1999



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Caution

Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, especially the SDRAM memory, otherwise your mainboard or the system memory might be seriously damaged.

The AC power status (ON/OFF) of the system is indicated by the red LED under the two DIMM sockets. If the LED is on, adding or removing devices like SDRAM memory is prohibited.



SpeedEasy Quick Setup

Procedures :

1. Correctly insert the Intel® Pentium III/Pentium II/Celeron™ processor.
2. Plug in other configurations and restore the system.
3. Switch on power to the system and press the key to enter BIOS Setup.
4. Enter "CPU SpeedEasy Setup" menu to set up the CPU speed.

Note: If you do not set the CPU speed, your system will run at the default setting (200MHz for processor with 100MHz host bus speed, 133MHz for processor with 66MHz host bus speed, for bus ratio locked processor, run its real speed.

5. Save and exit BIOS Setup, your system will now boot successfully.



CPU SpeedEasy Setup Menu

Select <CPU SpeedEasy Setup> item from the main menu and enter the sub-menu:



Figure - 1 CPU SpeedEasy Setup Menu

BIOS provides you with a set of basic values for your processor selection instead of the jumper settings. The processor speed can be manually selected on the “CPU SpeedEasy SETUP” menu screen.



Warning:

Do not set CPU frequency higher than its working frequency. If you do, we will not be responsible for any damages caused.



Schnell-Installation durch SpeedEasy

Vorgehensweise der Installation:

1. Legen sie die Intel® Pentium III/Pentium II/Celeron™ im Slot 1 mit Hilfe der mitgelieferten Halterung.
2. Vervollständigen Sie das System mit den weiteren erforderlichen Computerkomponenten
3. Drücken Sie die Taste < Entf > und schalten Sie das System an um das BIOS-setup zu gelangen.
4. Steigen Sie in das Menü "CPU SpeedEasy Setup" ein, um die Geschwindigkeit einzustellen.

ACHTUNG:Falls Sie die Taktfrequenz der CPU nicht setzen, arbeitet Ihr System mit den Standardwerten für die CPU. (200MHz für den CPU mit 100MHz Host Bus Speed, 133MHz für den CPU mit 66MHz Host Bus Speed).

5. Speichern Sie die Einstellungen und verlassen Sie das BIOS, um die zuvor eingestellte Taktfrequenz zu aktivieren.



CPU SpeedEasy Installationsmenü

Wählen Sie < CPU SpeedEasy Setup> aus dem Hauptmenü und öffnen Sie das untergeordnete Menü

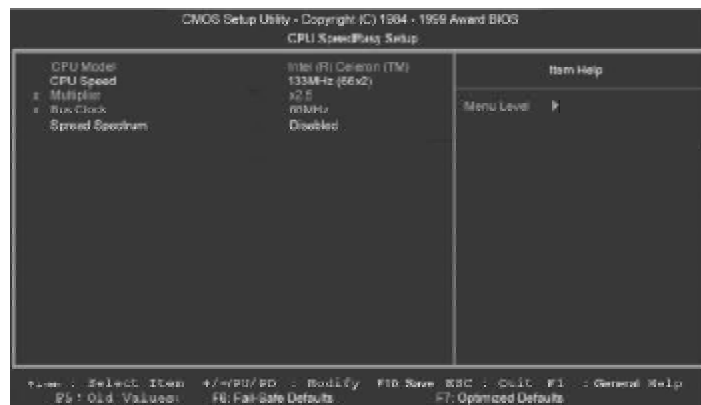


Abb. 1 CPU SpeedEasy Setup menü

Das BIOS stellt Ihnen eine Reihe von Grundeinstellungen für Ihren CPU zur Verfügung, anstelle von "jumper setting". Sie können manuell die Geschwindigkeit des CPU innerhalb des "CPU SpeedEasy SETUP" einstellen

⚠️ Warnung:

Bitte Setzen Sie die Taktfrequenz der CPU nicht höher als die tatsächliche freigegebene Taktfrequenz, ansonsten kann QDI für rechtliche Ansprüche nicht herangezogen werden.



SpeedEasy Instalación rápida

Procedimiento:

1. Introduzca correctamente el Intel® Pentium III/Pentium II/Celeron™.
2. Finalize el proceso de ensamblaje de su equipo.
3. Presione la tecla <Supr> y encienda el sistema, para entrar en BIOS.
4. Entre al menu "CPU SpeedEasy Setup" para establecer la velocidad de su CPU.

Nota: Si no establece la velocidad del CPU, su sistema funcionará a la velocidad minima por defecto (200MHz para CPU con velocidad de bus de 100MHz, 133MHz para CPU con velocidad de bus de 66MHz)

5. Salve y salga de BIOS, luego su sistema arrancará a la velocidad por Ud. seleccionada.



Menu del CPU SpeedEasy

Seleccione el ítem <CPU SpeedEasy Setup> desde el menú principal, y entre en el submenú:

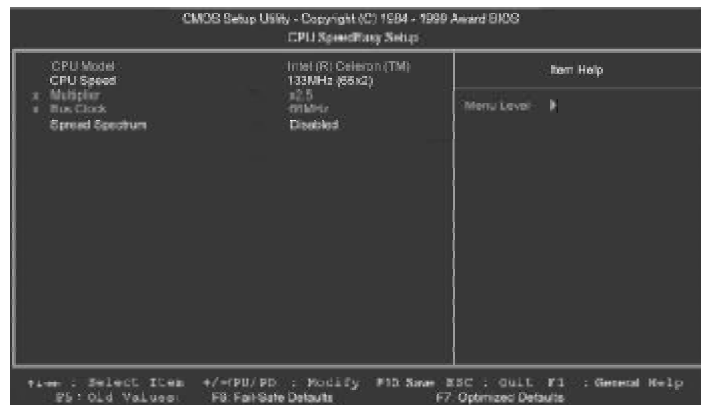


Figura-1 Menu del CPU SpeedEasy Setup

BIOS le proporcionará unos valores básicos para la elección de su CPU, en vez de tener que configurar jumpers. Ud. puede seleccionar manualmente la velocidad de CPU en el menú "CPU SpeedEasy Setup".



Aviso

No es recomendable seleccionar una frecuencia de trabajo superior a la a la cual esta diseñada su CPU. De otra manera, no seremos responsables de los daños que esto pudiera ocasionar.



Facilité de vitesse Initialisation

Procédure:

1. Ins, rez le Intel® Pentium III/Pentium II/Celeron™ correctement.
2. Connectez les autres configurations et restaurez le systšme.
3. Appuyez sur la touche et mettez le systšme sous tension pour entrer dans l' initialisation BIOS.
4. Entrez le menu "CPU SpeedEasy Setup" (=initialisation de la facilit, de vitesse dans l' unit, centrale) pour d, terminer la vitesse de l' unite centrale.

Note: Si vous ne déterminez pas la vitesse de votre unité centrale, votre système fonctionnera par défaut (200MHz pour le CPU avec vitesse bus d' hôte de 100MHz, 133MHz pour le CPU avec vitesse bus d' hôte de 66MHz).

5. Sauvegardez et sortez de la position BIOS. Le système pourra alors démarrer avec le succès auquel vous vous attendez.



Menu d'initialisation de "SpeedEasy" dans l'unité centrale.

Sélectionnez la rubrique <CPU SpeedEasy Setup> dans le menu principal et entrez le sous-menu:

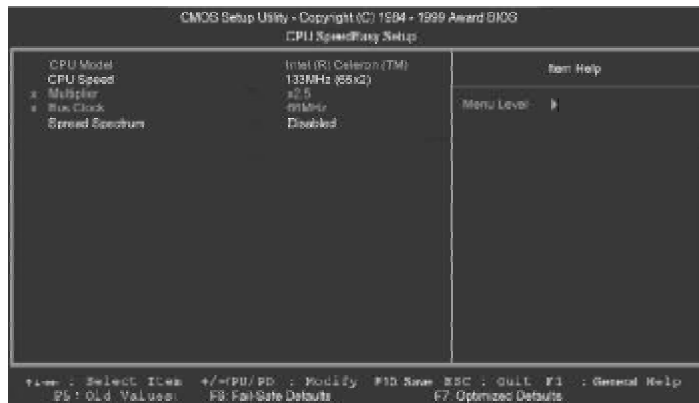


Figure-1 Menu d'initialisation de "SpeedEasy" dans l'unité centrale

BIOS fournira un jeu de valeurs de base pour votre sélection de CPU au lieu de positions cavaliers. Vous pouvez sélectionner manuellement la vitesse de CPU dans l'affichage du menu "CPU SpeedEasy SETUP".



Avertissement:

Ne vous laissez pas aller à installer une fréquence à l'unité centrale supérieure à sa fréquence de travail. Sinon nous déclinons toute responsabilité en ce qui concerne les dommages qui en résulteraient.



SETUP DELLA SCHEDA SPEEDEASY

Procedura di installazione:

1. Inserite il microprocessore Intel® Pentium III/Pentium II/Celeron™ come da istruzioni.
2. Modificate la configurazione del computer e ripristinate il sistema.
3. Premete il tasto e accendete il computer per entrare nel setup BIOS.
4. Entrate nel menu “CPU SpeedEasy Setup” per regolare la velocità del microprocessore. ¹

Nota: se non regolate la velocità del microprocessore, il sistema funzionerà con le regolazioni standard (Microprocessore da 200MHz con velocità di “host bus” da 100MHz e microprocessore da 133MHz con velocità di “host bus” da 66MHz).

5. Salvate e uscite dal Setup BIOS, e fate ripartire il computer.

*CPU= microprocessore



Menu del Setup del Microprocessore SpeedEasy

Selezionare <CPU SpeedEasy Setup> dal menu principale ed entrare nel seguente sottomenu:

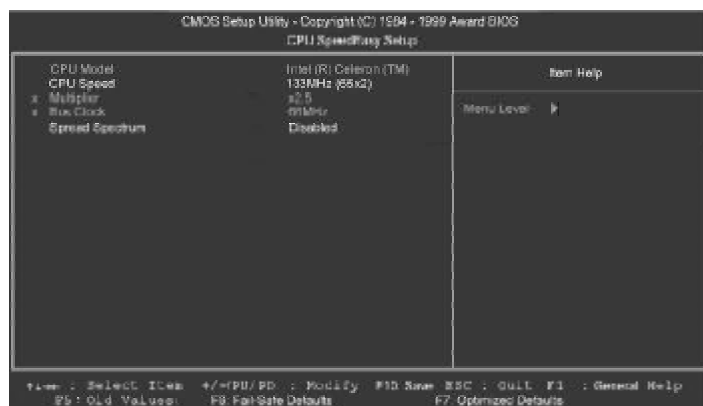


Figure -1 Menu del Setup del Microprocessore SpeedEasy

Il sistema BIOS Vi fornirà una serie di valori base per la selezione del microprocessore al posto della regolazione jumper (dell'accoppiamento). Potete selezionare manualmente la velocità del microprocessore sulla schermata "CPU SpeedEasy SETUP".



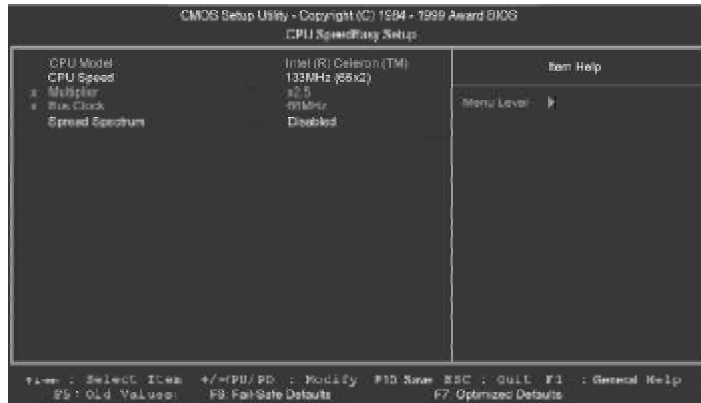
Avvertenza:

non dovete regolare la frequenza del microprocessore più alta di quella predisposta, altrimenti la casa produttrice non si farà carico di eventuali danni al microprocessore.



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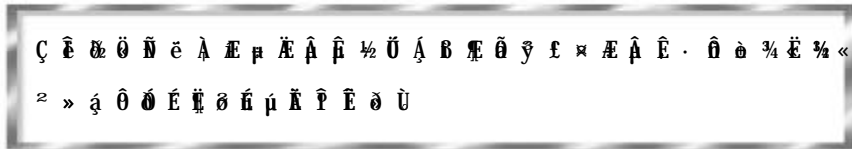


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Chapter 1

Introduction

Overview

The WinneX 2 green mainboard utilizes the Intel first generation integrated graphics chipset — Intel®810 Chipset, providing a fully compatible, high performance and cost-effective PC/ATX platform. The new integrated technologies, together with the software configurable AC' 97 audio and modem system give customers an advanced, multimedia solution at an extremely low price. It provides 66MHz and 100 MHz system bus support for all Intel® Pentium®III, Pentium®II, and Celeron Slot1 Processors. 100MHz SDRAMs are supported up to 512MB. It also provides advanced features such as Wake-Up On LAN, Wake-Up On Internal/External Modem and Keyboard Password Power-on functions. Suspend to RAM, the optimal implementation of the Advanced Configuration and Power Interface (ACPI) specification, makes the PC's power consumption drop to the lowest possible level and enable quick wakeup. ManageEasy, our system management application is also supplied to enable remote monitoring and configuration of the system.

Flexibility in Designing Cost-effective System

The Intel®810 Chipset is a high-integration chipset which consists of a Graphics and Memory Controller Hub (GMCH) Host Bridge and an I/O Controller Hub (ICH) Bridge. There are two versions of the GMCH (GMCH0/GMCH). The Intel®810 Chipset System provides added flexibility in designing cost-effective solutions by using different combinations of the GMCH and ICH.

The following describes the two kinds of Intel®810 chipset combination and their added features. Please identify which kind of mainboard you purchased.

1. **Intel®810 DC-100:** GMCH (Intel®82810-DC100) + ICH (Intel®82801AA)
Added features:
 - Includes 4MB, 32-bit 100MHz Display Cache.
 - Supports Ultra ATA/66.
2. **Intel®810:** GMCH0 (Intel®82810) + ICH (Intel®82801AA)
Added features:
 - Supports Ultra ATA/66.

All information contained in this manual applies to all two kinds of system, unless otherwise specified.



Key Features

Form factor

- ATX form factor of 305mm x 192mm.

Microprocessor

- Supports Intel® Pentium III Processors at 450/500/550MHz and future processors with 100MHz bus speed.
- Supports Intel® Pentium II Processors at 233/266/300/333MHz with 66MHz bus speed.
- Supports Intel® Pentium II Processors at 300/350/400/450MHz with 100MHz bus speed.
- Supports Intel® Celeron Slot1 Processors at 266/300/333/366/400/433MHz with 66MHz bus speed.
- The CPU core voltage adjustable from 1.3V to 3.5V automatically through onboard switching voltage regulator with VID(Voltage ID).
- Provides onboard 1.5V, 1.8V, 2.5V and 3.3V standby regulator.

System memory

- Provides two 168 pin 3.3V unbuffered DIMM sockets.
- Supports 64-bit wide DIMM modules with 100MHz SDRAM devices.
- Supports 8MB to 256MB SDRAM using 16Mb/64Mb technology.
- Supports 512MB SDRAM using 128Mb technology.
- Supports suspend to RAM.

Onboard IDE

- Supports two PCI PIO and Bus Master IDE ports.
- Two fast IDE interfaces supporting four IDE devices including IDE hard disks and CD-ROM drives.
- Supports up to PIO Mode 4 timing.
- Supports "Ultra ATA/33" Synchronous DMA modes, transferring data up to 33MB/s.
- Supports "Ultra ATA/66" Synchronous DMA modes, transferring data up to 66MB/s.
- Integrated 16x32bit buffer for IDE PCI Burst Transfers.

Onboard I/O

- Winbond W83627HF LPC I/O chip.
- One floppy port supporting up to two 3.5" or 5.25" floppy drives with 360K/720K/1.2M/1.44M/2.88M format.
- Two high speed 16550 compatible UART (COM1/COM2/COM3/COM4 selective) with 16-byte send/receive FIFOs.



- USB host interface supporting 2 USB ports.
- One joystick port.
- Infrared interface.
- All I/O ports can be enabled/disabled in the BIOS setup.

Onchip AGP

- Integrated 2D/3D Graphics Controller.
- Integrated H/W Motion Compensation Engine.
- Provides 4MB SDRAM Display Cache (for Intel®810 DC-100 only).

Onboard Sound

- Intel AC' 97 2.1 Specification Compliant.
- 18bit stereo codec.
- Multiple stereo input mixer.
- Mono and stereo volume control.
- Provides onboard Line-in Jack, Microphone-in Jack, Speaker-out Jack and MIDI/ Joystick Connector.

Advanced features

- PCI 2.2 Specification Compliant.
- Provides Trend ChipAwayVirus®On Guard.
- Supports Windows 95/98 software power-down.
- Supports Wake-Up On LAN and Wake-Up On Internal/External Modem.
- Supports Keyboard Password Power-on function.
- Onboard I/O Winbond 83627HF supports system monitoring (monitors CPU and system temperatures, system voltages, chassis intrusion and fan speed).
- Supports management applications such as LDCM (LANDesk Client Manager) or ManageEasy. (manufacturing option)
- Provides onboard 3.3V regulator to support ATX power supply without 3.3V output.
- System status resumes after AC power failure.
- Supports QDI' s innovation such as SpeedEasy.
- Protects the system BIOS from being attacked by severe virus such as CIH.
- Supports suspend to RAM.
- Supports system shut down/alarm when the CPU temperature reaches the shut down/warning temperature presetting in "PC Health Status" in AWARD BIOS CMOS Setup.

BIOS

- Licensed advanced AWARD BIOS, supports Firmware Hub (FWH) with 4M-bits flash memory, plug and play ready.
- Supports IDE CD-ROM or SCSI boot up.



Green function

- Supports ACPI (Advanced Configuration and Power Interface) and ODPM (OS Directed Power Management).
- Supports four ACPI power states: Full-on, Stop Grant, Suspend to RAM, and soft-off.

Expansion slots

- 6 PCI slots.
- 1 AMR.

Introduction to New Features

FWH(Firmware Hub) Protection

The BIOS of the mainboard is inside the FWH. Some severe viruses such as CIH virus are so dangerous that it may overwrite the BIOS of the mainboard. If the BIOS has been damaged, the system will be unable to boot. We provide both the hardware and software solution which protects the system BIOS from being attacked by such viruses.

Here are two choices which implements this function.

1. Set the jumper (JAV) as closed, the BIOS can not be overwritten.
2. Set the jumper (JAV) as open, meanwhile set "Flash Write Protect" as Enabled in AWARD BIOS CMOS Setup. In this way, the BIOS can not be overwritten, but the DMI information can be updated.

Refer to page 16 for detailed information on jumper setting, and page 26 for related BIOS setting.

Suspend to RAM

Suspend to RAM is a cost-effective, optimal implementation of the Advanced Configuration and Power Interface (ACPI) 1.0 specification, which makes a PC' s power consumption drop to the lowest possible level and enables quick wakeup. When the system is in Suspend-to-RAM status, the system context is maintained in system memory, the system consumes only a small fraction of the power used for full operation. Instead of shutting down the system to save power when not in use and then having to reboot later, Suspend-to-RAM solution enables the system to quickly wake up, restoring all applications and features, enabling operation in a few seconds.

To implement this function, the following requirements are essential:

1. Power supply requirements: The current of 5VSB line of the power supply should be more than 0.75A.



2. The BIOS option “ACPI function” should be enabled, and “ACPI Suspend Type” should be set as S3 in AWARD BIOS CMOS setup. Refer to page 28 for detailed information.
3. An ACPI-enabled operating system such as Windows 98 or Windows 2000 family is needed. In order to install ACPI-enabled Windows 98 operating system, the setup command should be typed as shown below:

```
D:\SETUP /P J
```

For the operating system already installed, you can enable ACPI function through the Microsoft HCT (Hardware Compatibility Test) installation process.
4. Two ways to enter Suspend-to-RAM status:
 - Under Windows 98/Windows 2000, clicking Start— Shut down— Standby enables the system to enter Suspend-to-RAM status.
 - Under Windows 98/Windows 2000, from Power Management Properties in Control Panel, set the continuous idle time before suspend, the system will enter Suspend-to-RAM status when time out.

The same ways used to power up the system can be used to wake up the system from Suspend-to-RAM status. For example, pushing the power button, through the Wake-Up On LAN, Wake-Up On Internal/External Modem function or RTC Alarm. If the keyboard password power-on function is enabled, the keyboard password should be used to wake up the system instead of pushing the power button.

Ultra ATA/66

According to the previous ATA/IDE hard drive data transfer protocol, the signaling way to send data was in synchronous strobe mode by using the rising edge of the strobe signal. The Ultra ATA/33 protocol doubles the burst transfer rate from 16.6MB/s to 33.3MB/s, by using both the rising and falling edges of the strobe signal, this time Ultra ATA/66 doubles the Ultra ATA burst transfer rate once again (from 33.3MB/s to 66.6MB/s) by reducing setup times and increasing the strobe rate. The faster strobe rate increases EMI, which cannot be eliminated by the standard 40-pin cable used by ATA and Ultra ATA. To eliminate this increase in EMI, a new 40-pin, 80-conductor cable is needed. This cable adds 40 additional ground lines between each of the original 40 ground and signal lines. The additional 40 lines help shield the signal from EMI, reduce crosstalk and improve signal integrity.



Ultra ATA/33 introduced CRC (Cyclical Redundancy Check), a new feature of IDE that provides data integrity and reliability. Ultra ATA/66 uses the same process. The CRC value is calculated by both the host and the hard drive. After the host-request data is sent, the host sends its CRC to the hard drive, and the hard drive compares it to its own CRC value. If the hard drive reports errors to the host, then the host retries the command containing the CRC error.

Ultra ATA/66 technology increases both performance and data integrity. However there are basically five requirements for your system to run in Ultra ATA/66 mode:

1. The system board must have a special Ultra ATA/66 detect circuit, such as WinneX 2 mainboard.
2. The system BIOS must also support Ultra ATA/66.
3. The operating system must be capable of DMA transfers. Win95 (OSR2) and Win98 are capable.
4. An Ultra ATA/66 capable, 40-pin, 80-conductor cable is required.
5. Ultra ATA/66 compatible IDE device such as a hard drive or CD-ROM drive.



Chapter 2

Installation Instructions

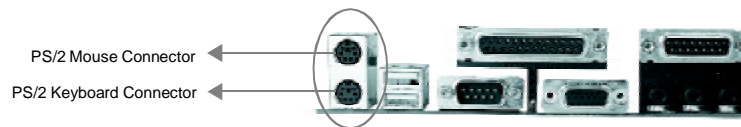
This section covers External Connectors and Jumper Settings. Refer to the mainboard layout chart for locations of all jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular state of the jumpers, connectors and ports are illustrated in the following figures. Before setting the jumpers or inserting these connectors, please pay attention to the directions.

Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.

External Connectors

PS/2 Keyboard Connector, PS/2 Mouse Connector

PS/2 keyboard connector is for the usage of PS/2 keyboard. If using a standard AT size keyboard, an adapter should be used to fit this connector. PS/2 mouse connector is for the usage of PS/2 mouse.



USB1, USB2

Two USB ports are available for connecting USB devices.



Parallel Port Connector and Serial Port Connector (UART1, UART2)

The parallel port connector can be connected to a parallel device such as a printer, while the serial port connectors can be connected to serial port devices such as a serial port mouse. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP.





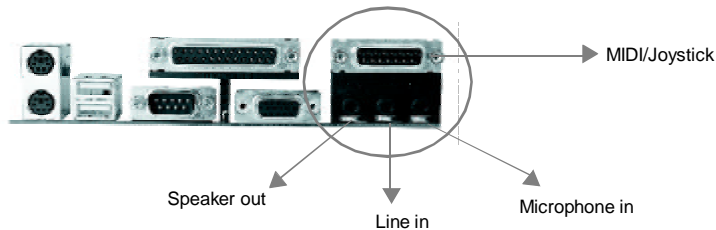
The serial port UART2 is not available on the back panel. Therefore, we provide a 9-pin ribbon cable with bracket for UART2 port. (manufacturing option)



Line-in jack, Microphone-in jack, Speaker-out jack and MIDI/Joystick connector

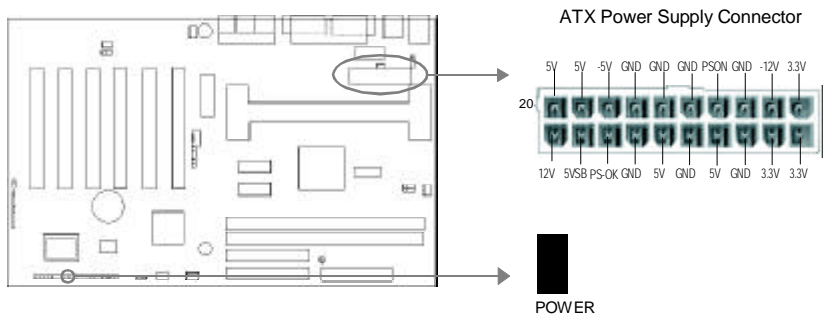
The Line-in jack can be connected to devices such as a cassette or minidisc player for playback or recording. The Microphone-in jack can be connected to a microphone for voice input. The Speaker-out jack allows you to connect speakers or headphones for audio output from the internal amplifier.

The MIDI/Joystick connector allows you to connect a game joystick or a MIDI device.



ATX Power Supply Connector & Power Switch (POWER)

Be sure to connect the power supply plug to this connector in its proper orientation. The power switch (POWER) should be connected to a momentary switch. When powering up your system, first turn on the mechanical switch of the power supply (if one is provided), then push once the power switch. When powering off the system, you needn't turn off the mechanical switch, just ***Push once*** the power switch.



**Note:**

If you change “Soft-off by PWR-BTTN” from default “Instant-off” to “Delay 4 Secs” in the “POWER MANAGEMENT SETUP” section of the BIOS, the power switch should be pressed for more than 4 seconds before the system powers down.

Hard Disk LED Connector (HD_LED)

The connector connects to the case's IDE indicator LED indicating the activity status of IDE hard disk. The connector has an orientation. If one way doesn't work, try the other way.

Reset Switch (RESET)

The connector connects to the case's reset switch. Press the switch once, the system resets. However, press the switch for more than 4 seconds, the system will be powered off.

Speaker Connector (SPEAKER)

The connector can be connected to the speaker on the case.

Power LED Connector (PWR_LED)

The power LED has two status. When the system is in power-off or suspend to RAM status, the LED is off. When the system is powered up, the LED is on. The connector has an orientation.

Key-Lock Connector (KEY_L)

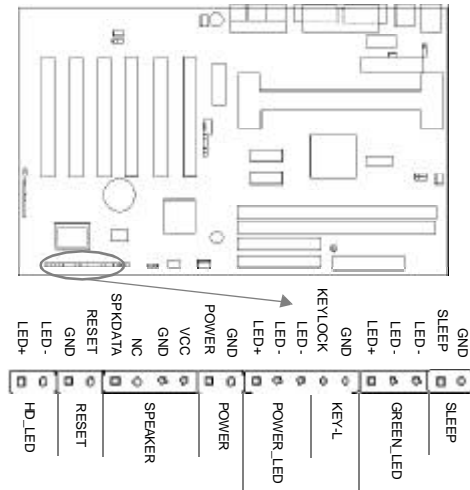
The connector can be connected to the keyboard lock switch on the case for locking the keyboard.

ACPI LED Connector (GREEN_LED)

The ACPI LED has three status. When the system is in power-off status, the LED is off. When the system is powered up, the LED is on. When the system enters suspend mode (including suspend to RAM status), the LED will flash. The connector has an orientation.

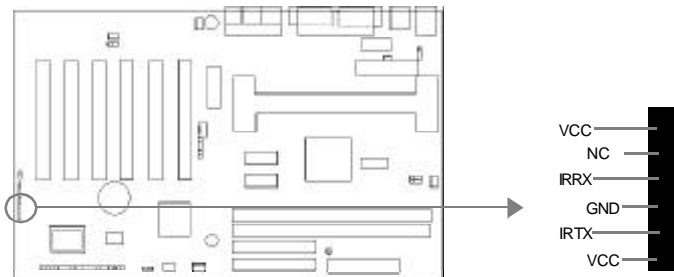
Hardware Green Connector (SLEEP)

If either the operating system or the BIOS does not enable ACPI, push once the switch connected to this header, the system enters APM suspend mode.



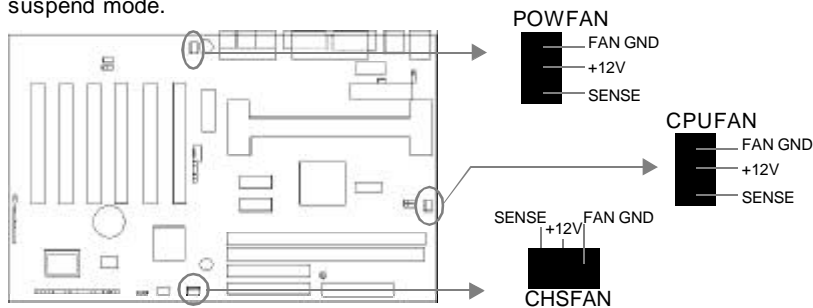
Infrared Header (IrDA)

This connector supports wireless transmitting and receiving. When using this function, configure the settings for IR Address, IR Mode and IR IRQ from the "INTEGRATED PERIPHERALS" section of the BIOS.



Fan Connector (CPUFAN, CHSFAN, POWFAN)

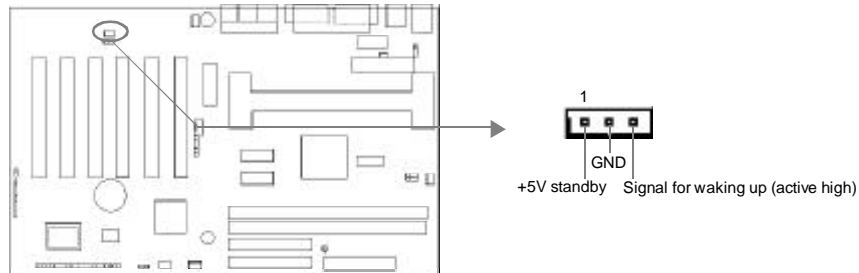
The fan speed of these three fans can be detected and viewed in "PC Health" section of the BIOS. These three fans will be automatically turned off after the system enters suspend mode.





Wake-Up On LAN (WOL)

Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. If this function is to be used, please be sure an ATX 2.01 power supply of which 5VSB line is capable of delivering 720mA, and a LAN adapter which supports this function is used. Then connect this header to the relevant connector on the LAN adapter, set "Wake-Up by LAN/Ring" as Enabled in the "POWER MANAGEMENT SETUP" section of the BIOS. Save & exit, then boot the operating system once to make sure this function takes effect.



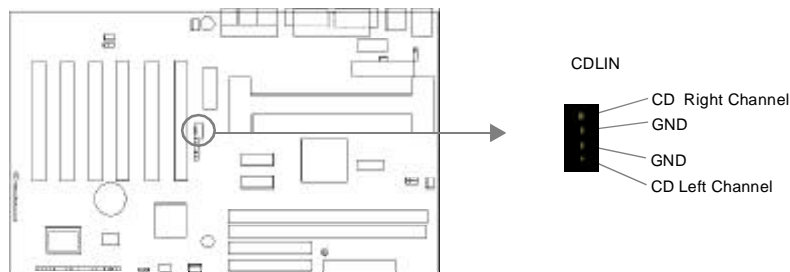
Wake-Up On Internal Modem (WOM)

Through the Wake-Up On Internal Modem function, the system which is in the power-off status can be powered on by a ring signal received from the internal modem. If this function is to be used, be sure an internal modem card which supports this function is used. Then connect this header to the relevant connector on the modem card, set "Wake-Up by LAN/Ring" to Enabled in the "POWER MANAGEMENT SETUP" section of the BIOS. Save & exit, then boot the operating system once to make sure this function takes effect.



Digital Audio Connector (CDLIN)

CDLIN is a Sony standard CD audio connector, it can be connected to a CD-ROM drive through a CD audio cable.



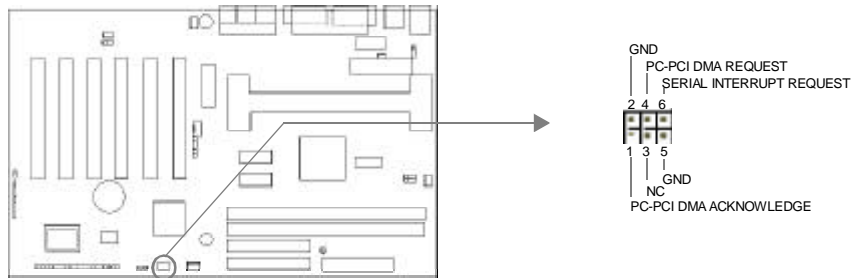
4 pin SMBus Connector(SMBUS)

This connector allows you to connect SMBus devices. SMBus devices communicate by means of the SMBus with an SMBus host and/or other SMBus devices. The SMBus or System Management Bus is a specific implementation of an I²C bus, which is a multi-master bus, that is, multiple chips can be connected to the same bus and each one can act as a master by initiating data transfer.



Sound Connector (PC-PCI)

This connector provides a bridge between the mainboard and PCI sound card to deliver sound compatibility under DOS real-mode environment.



Chassis Security Switch (CHSSEC)

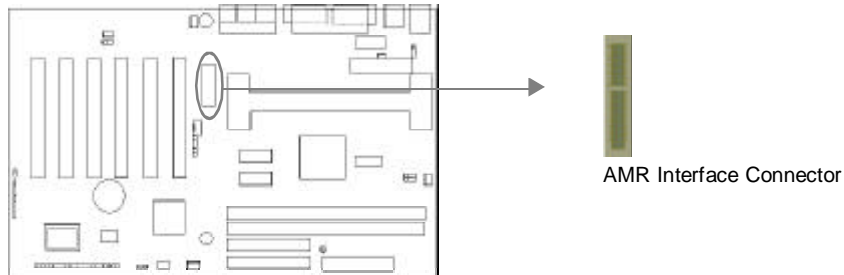
The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the connector has been closed once, the system will record the status and indicate the chassis has been opened. You can receive this information from QDI ManageEasy software.





Audio/Modem Riser Interface Connector (AMR)




The AMR Interface Connector is the interface between the mainboard and the Audio/Modem Riser card. The connector provides all necessary signals which supports several different configurations of audio and modem in the system, such as audio and modem on the Riser, audio on the mainboard and modem on the Riser, or no audio with modem on the Riser. WinneX 2 mainboard provides you with audio onboard solution, onboard audio can be enabled/disabled. Either AMR (Audio/Modem Riser) card or MR (Modem Riser) card can be used on this system. If you choose to use the audio on AMR card, the onboard audio CODEC can be disabled by setting jumper JSD with pin1 & pin2 closed. This software configurable AC' 97 audio and modem system gives customers an advanced, multimedia solution at an extremely low price. The AC' 97 audio and modem system can be enabled/disabled in "Integrated Peripherals" in AWARD BIOS CMOS Setup.



Expansion Slots & I/O Ports description

| Slot / Port | Description |
|-------------|---------------------|
| PCI 1 | First PCI slot. |
| PCI 2 | Second PCI slot. |
| PCI 3 | Third PCI slot. |
| PCI 4 | Fourth PCI slot. |
| PCI 5 | Fifth PCI slot. |
| PCI 6 | Sixth PCI slot. |
| DIMM1 | First DIMM slot. |
| DIMM2 | Second DIMM slot. |
| IDE 1 | Primary IDE port. |
| IDE 2 | Secondary IDE port. |
| AMR | AMR slot. |
| FLOPPY | Floppy Drive Port. |

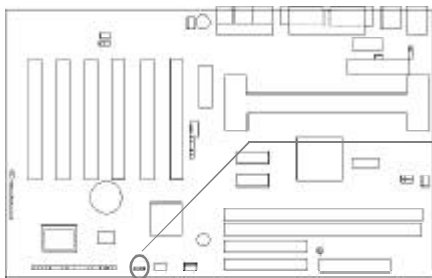
Jumper Settings

Jumpers are located on the mainboard, they represent, clear CMOS jumper JCC, enable keyboard password power-on function jumper JKB, and enable/disable onboard audio jumper JSD etc. Pin 1 for all jumpers are located on the side with a thick white line (Pin1→ ), referring to the mainboard' s silkscreen. Jumpers with three pins will be shown as  to represent pin1 & pin2 connected and  to represent pin2 & pin3 connected.



Clear CMOS (JCC)

If you want to clear CMOS, unplug the AC power supply first, close JCC (pin1 & pin2) once, set JCC back to the normal status with pin2 & pin3 connected, then power on the system.



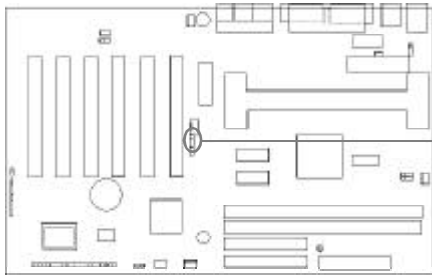
Normal status:  JCC
3 2 1


Clear CMOS:  JCC
3 2 1


(Unplug the AC power supply)

Enable/Disable on-board audio CODEC (JSD)

If you want to use the on-board audio CODEC, set JSD with pin2 & pin3 closed (default). Otherwise, set JSD with pin1 & pin2 closed for disabling this function.

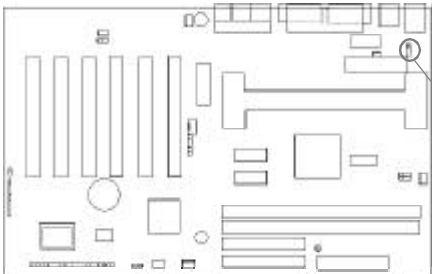


Enable on-board audio:  JSD
1 2 3

Disable on-board audio:  JSD
1 2 3

Enable keyboard password power-on function (JKB)

The mainboard provides the advanced keyboard password power-on function. Before using this function, set JKB with pin1 & pin2 closed. Otherwise, set JKB with pin2 & pin3 closed for disabling.



Disable:  JKB
1 2 3

Enable:  JKB
1 2 3



Furthermore in order to implement this function, set “POWER ON Function” to Password and set the keyboard power-on password in the “INTEGRATED PERIPHERALS” section of the BIOS. Save and exit, then power off your system. In this case, the power button’s power-on function has been disabled.

Note:

1. If using this function, 5VSB line of the power supply should be capable of delivering enough current (eg. 200mA) for all the devices connected to the keyboard port, if not, you will be unable to power up the system using the keyboard.
2. If you set JKB with pin2 & pin3 closed, set “POWER ON Function” to BUTTON ONLY, don’t set it to Password, or you’ll be unable to power up your system by the keyboard or the power button.
3. If you encounter the above problems, clear CMOS and set the jumper and BIOS option again.

Connecting PCI 3.3VSB Voltage Jumper (JSB)

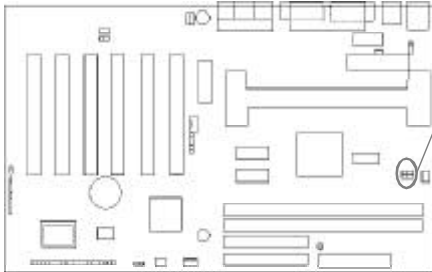
Setting JSB open can disconnect the 3.3VSB voltage to PCI slots. This can prevent the mainboard from being damaged if you add or remove expansion cards without unplugging the AC power supply. However, if you want to use the PCI 2.2 specification compliant expansion cards to wake up the system, for example, a network card which supports wake-up on LAN function but without the WOL header, set JSB as closed, meanwhile set “Wake-Up by PCI card” as enabled in “Power Management Setup” section of the BIOS.



Note: If AMR card is used, this jumper must be set as default setting closed.

Overclocking Jumper Setting (JFS0, JFS1)

Jumpers labeled JFS0 and JFS1 are located on the mainboard providing users with CPU overclocking feature. The host bus speed can be set as 66/100/133MHz or AUTO select. Refer to the chart below for the location of these jumpers, and the table for information on how to set them.



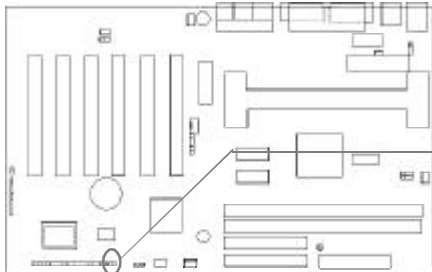
| CPU FSB | 66MHz | 100MHz | 133MHz | AUTO |
|---------|-------|--------|--------|------|
| JFS0 | 1-2 | OPEN | OPEN | 2-3 |
| JFS1 | 1-2 | 1-2 | OPEN | 2-3 |

' 1-2' represents pin1 & pin2 closed.
 ' 2-3' represents pin2 & pin3 closed.


If CPU FSB is set as default setting Auto, the system detects the CPU front side bus automatically. If CPU FSB is set as 100MHz, the system will run at 100MHz even if a processor with 66MHz FSB is installed. Setting up to 133MHz FSB is also supported. However, whether or not the system can be overclocked depends on your processor's capability. Whether the processor is bus ratio locked or unlocked should also be taken into account. For bus ratio unlocked processor, this overclocking feature can be implemented by setting CPU FSB as 100/133MHz, meanwhile adjusting the bus ratio (Multiplier) lower in "CPU SpeedEasy Setup" in AWARD BIOS CMOS Setup. We do not guarantee the overclocking system to be stable.

FWH Protection Jumper (JAV)

The BIOS of the mainboard is inside the FWH. If the jumper JAV is set as closed, you will be unable to flash the BIOS to the mainboard. However in this status, the system BIOS is protected from being attacked by serious virus such as CIH virus.



Flash Write Disabled  JAV

Flash Write Enabled  JAV

Setting the jumper JAV as open (default), meanwhile disabling the "Flash Write Protect" item in AWARD BIOS CMOS Setup, allows you to flash the BIOS to the flash ROM in FWH.

The DMI (Desktop Management Interface) system information such as the CPU type/speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM in FWH. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting jumper JAV as closed makes flashing BIOS and updating DMI information impossible. Therefore, set JAV as open when changing the system hardware configuration, or the error message "Unknown Flash Type" will be displayed on the screen, and DMI information update will fail while updating DMI.

Refer to page 4 for the two choices to implement FWH Protection function.



Installation of All Drivers

A QDI Mainboard Utility CD-ROM is supplied with each mainboard. All drivers can be installed from this CD-ROM. Before installing all the drivers, check the system requirements such as the enough system memory (at least 32MB for Windows 95/98 system or 64MB for Windows 2000 system) and enough disk space. Windows 95 or Windows 98 must be fully installed and running on the system. All running applications should be closed before installing these drivers.

1. Install INF File for Intel 810 Chipset

The INF Files for Intel® Chipset 810 contains Windows device installation (*.INF) files that outline to the operating system how the chipset components shall be configured for the proper functionality. Under Windows 95/98, run `\ChipDrv\Intel\Whitney\inf\Setup.exe` for installation. Locate destination directory to `C:\Program Files\Intel\IntelINF` in adding new hardware wizard. Please refer to README.TXT in the directory `\ChipDrv\Intel\Whitney\inf\` for more information.

2. Install INF Utility Files for Intel 810 Chipset

Under Windows 95/98, run `\ChipDrv\Intel\Whitney\inf utility\Setup.exe` for installation. Locate destination directory to `C:\Program Files\Intel\InfInst` in adding new hardware wizard. Please refer to README.TXT in the directory `\ChipDrv\Intel\Whitney\inf utility\` for more information.

3. Install VGA Drivers

Under Windows 95/98, run `\ChipDrv\Intel\Whitney\Display\win9x \Graphics \Setup.exe` for installation.

Please refer to README.TXT in the directory `\ChipDrv\Intel\Whitney\Display\win9x` for more information.

Under Windows NT 4.0, run `\ChipDrv\Intel\Whitney\Display\NT40 \Graphics\Setup.exe` for installation.

Please refer to README.TXT in the directory `\ChipDrv\Intel\Whitney\Display\NT40\` for more information.

Under Win2000, the VGA driver should be installed manually. For installation guide, refer to README.TXT in the directory `\ChipDrv\Intel\Whitney\Display\win2k`.

4. Install Sound Drivers

Under Windows 95, run `\DevDrv\Codec\ad1881\95\driver\Setup.exe` for installation. For WaveSynth MIDI function under Windows 95, `ich.inf` is contained in the directory

`\DevDrv\Codec\ad1881\95\95synth` should be installed. (Point to the file `ich.inf` --- Right click the mouse --- select install).

Under Windows 98, run `\DevDrv\Codec\ad1881\98\Setup.exe` for installation.

Under Windows NT 4.0, run `\DevDrv\Codec\ad1881\nt40\driver\Setup.exe` for installation.

Regarding the WaveSynth MIDI function under Windows NT 4.0, please refer to README.TXT in the directory `\DevDrv\Codec\ad1881\nt40\MIDI`.



PC-cillin 98

New viruses are appearing frequently; the chance of your PC being infected increases; antivirus softwares are becoming a must. PC-cillin 98 offers you full-time active virus protection as well as manual scans, plus virus clean capability. Keeping up to date on the latest threats and updating significant files are crucial in keeping antivirus software effective. PC-cillin 98 provides Free Virus Pattern File Updates from the Trend Micro Website:

<http://www.trend.com/download/pattern.htm> or

<http://www.antivirus.com/download/pattern.htm>.

Installation of PC-cillin 98

For Windows 95/98 English version, run Setup.exe for installation from the utility CD directory \Pccillin\Win9x.

For Windows 95/98 Chinese version, run Setup.exe for installation from the utility CD directory \Pccillin\PWin9x.

For Windows NT 4.0, run Setup.exe for installation from the utility CD directory \Pccillin\WinNT4.0.

S/N is PN EF-9991-6558-5857-5535.

QDI ManageEasy

It is well known that guaranteeing the computer' s security and reliability is essential. Especially today, effectively managing and monitoring the computer' s hardware is even more important; because processing and exchanging critical data through computer and network are happening every day.

Moving with the computer' s development, the system of the computer will become more and more complex; at the same time, the control computer' s hardware will be strengthened. Today, it is possible to monitor and manage your complex hardware from Windows 9X and Windows NT. QDI ManageEasy is a system tool, like a bridge between the complex hardware and OS, used to access hardware status and to execute some control functions. It supports stronger functions for Windows 9X and Windows NT. These functions enables you to view more than one hundred of the basic information about their computer and monitor some key reference data about computer health in real time. QDI ManageEasy also helps you to use remote access and control computers in your local area network. With QDI ManageEasy, you can improve your management level.

Installation of QDI ManageEasy V2.0

Run Setup.exe from the utility CD directory \QME2 to install the QDI ManageEasy V2.0. The QDI ManageEasy Setup Wizard will guide you through the installation process.

For detailed information on how to use QDI ManageEasy V2.0, please refer to the QDI ManageEasy V2.0 online help.



Chapter 3

BIOS Description

Utility Support:

AWDFLASH.EXE

This is a flash memory write/read utility used for the purpose of upgrading your BIOS when necessary. Before doing so, please note:

- **We strongly recommend you only upgrade BIOS when encounter problems.**
- **Before upgrading your BIOS, review the description below to avoid making mistakes, destroying the BIOS and resulting in a non-working system.**

When you encounter problems, for example, you find your system does not support the latest CPU released after our current mainboard, you may therefore upgrade the BIOS.

Follow the steps exactly for a successful upgrade.

1. Create a bootable system floppy diskette by typing Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.
2. Copy AWDFLASH.EXE (version>7.0) from the directory \Utility located on QDI Mainboard Utility CD onto your new bootable diskette.
3. Download the updated BIOS file from the Website (<http://www.qdigrp.com>). Please be sure to download the suitable BIOS file for your mainboard.
4. Uncompress the file download, copy the BIOS file (xx.bin) onto the bootable diskette, and note the checksum of this BIOS which is included in readme file.
5. Reboot the system from the bootable diskette created.
6. Then run the AWDFLASH utility at the A:\ prompt as shown below:

```
A:\AWDFLASH xxxx.bin
```

Follow the instruction through the process. Don't turn off power or reset the system until the BIOS upgrade has been completed.

If you require more detailed information concerning AWDFLASH Utility, for example, the usage of different parameters, please type A:\>AWDFLASH /?

Note: AWDFLASH.EXE (version>7.0) utility must be used to upgrade the WinneX 2 mainboard BIOS instead of QDI flash utility. So far QDI flash utility — **FLASH.EXE (V1.3)** does not support the flash memory on WinneX 2 mainboard.



AWARD BIOS Description

Entering Setup

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press key or simultaneously press the <Ctrl> + <Alt> + <Esc> keys, to enter the AWARD BIOS CMOS Setup Utility.

Press to enter SETUP

Once you have entered, the Main Menu (Figure 1) appears on the screen. The main menu allows you to select from eleven setup functions and two exit choices. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.

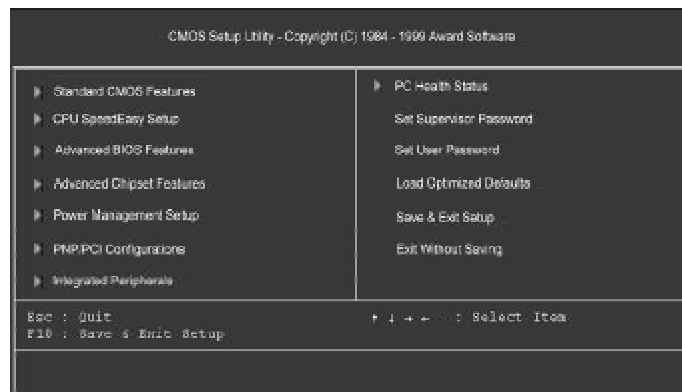


Figure-1 Main Menu

Load Optimized Defaults

The Optimized Defaults are common and efficient. It is recommended users load the optimized defaults first, then modify the needed configuration settings.

Standard CMOS Features Setup

The basic CMOS settings included in “Standard CMOS Features” are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value desired in each item.

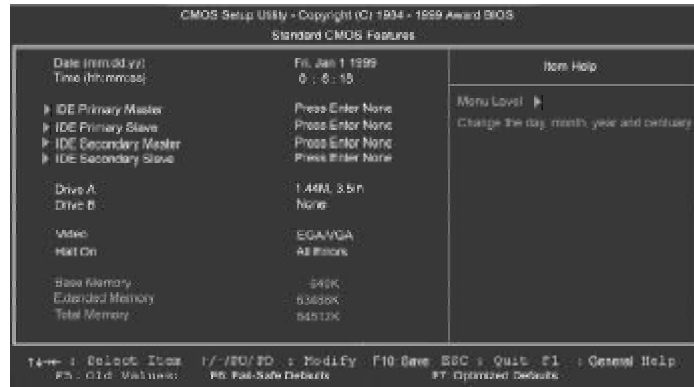


Figure-2 Standard CMOS Setup Menu

For the items marked, press enter, a window will pop up as shown below. You can view detailed information or make modifications.

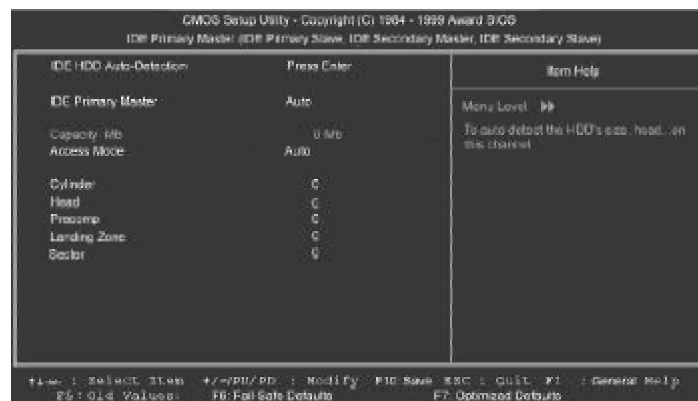


Figure-2-1 IDE Primary Master Setup Menu

Hard Disk

Primary Master/Primary Slave/Secondary Master/Secondary Slave

These categories identify the HDD types of 2 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and User. "None" means no HDD is installed or set; "Auto" means the system can auto-detect the hard disk when booting up; by choosing "user", the related information should be entered regarding the following items. Enter the information directly from the keyboard and press < Enter>:

| | | | |
|---------|------------------------|-------|-----------------|
| CYLS | number of cylinders | HEAD | number of heads |
| PRECOMP | write pre-compensation | LANDZ | landing zone |
| SECTOR | number of sectors | MODE | HDD access mode |



The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE.

NORMAL

Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum number of cylinders, heads and sectors for NORMAL mode are 1024,16 and 63.

If the user sets his HDD to NORMAL mode, the maximum accessible HDD size will be 528 megabytes even though its physical size may be greater than that.

LBA (Logical Block Addressing) mode

A new HDD accessing method to overcome the 528 Megabyte bottleneck. The number of cylinders, heads and sectors shown in setup may not be the number physically contained in the HDD.

During HDD accessing, the IDE controller will transform the logical address described by sector, head and cylinder number into its own physical address inside the HDD. The maximum HDD size supported by LBA mode is 8.4 Gigabytes.

LARGE mode

Some IDE HDDs contain more than 1024 cylinder without LBA support (in some cases, users do not want LBA). The Award BIOS provides another alternative to support these kinds of HDD.

BIOS tricks DOS (or other OS) into dividing the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. A reverse transformation process will be made inside INT13h in order to access the right HDD address.

If using Auto detect, the BIOS will automatically detect the IDE hard disk mode and set it as one of the three modes.

Remark

To support LBA or LARGE mode of HDDs, there must be some softwares involved which are located in Award HDD Service Routine(INT13h).It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System which replaces the whole INT 13h.



Video

Set this field to the type of video display card installed in your system.

| | |
|----------|---|
| EGA/ VGA | Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters. |
| CGA 40 | Color Graphic Adapter, powering up in 40 column mode. |
| CGA 80 | Color Graphic Adapter, powering up in 80 column mode. |
| MONO | Monochrome adapter, including high resolution monochrome adapters. |

Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

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

Memory

This is a Display-Only Category, determined by POST (Power On Self Test) of the BIOS.

| | |
|-----------------|--|
| Base Memory | The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system. |
| Extended Memory | The BIOS determines how much extended memory is presented during the POST. |
| Total Memory | Total memory of the system equals the sum of the above memory. |



CPU SpeedEasy Setup

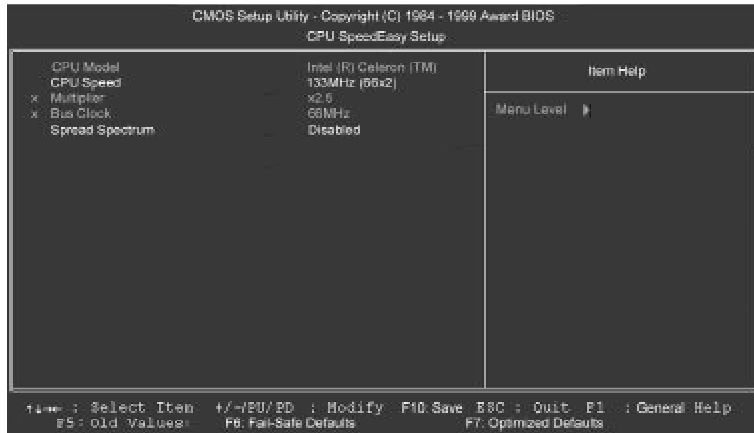


Figure-3 CPU SpeedEasy Setup Menu

The following indicates the options for each item and describes their meaning.

| <u>Item</u> | <u>Option</u> | <u>Description</u> |
|-------------------|-------------------------|--|
| • CPU Speed | <i>Jumper Emulation</i> | This item is only for users who understand all the CPU parameters, i.e. system bus frequency like 66MHz/100MHz, and the frequency ratio (Multiple) between the processor core frequency and system bus frequency " x2.5, x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8" . |
| | 133MHz(66x2) | Selects the CPU speed according to your CPU brand and type. |
| | 166MHz(66x2.5) | |
| | . | |
| | . | |
| | 533MHz(66x8) | |
| | 200MHz(100x2) | |
| | 250MHz(100x2.5) | |
| | . | |
| | . | |
| | 800MHz(100x8) | |
| • Spread Spectrum | <i>Enabled</i> | Enables Spread Spectrum to reduce EMI. |
| | <i>Disabled</i> | Disables Spread Spectrum. |



Advanced BIOS Features Setup



Figure-4 Advanced BIOS Features Menu

The following indicates the options for each item and describes their meaning.

| <u>Item</u> | <u>Option</u> | <u>Description</u> |
|-----------------------------|-----------------|--|
| • ChipAway/Virus On Guard | <i>Enabled</i> | Guards against boot virus threats early in the boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system. |
| | <i>Disabled</i> | Disables this function. |
| • CPU Internal Cache | <i>Enabled</i> | Enabling this option speeds up memory access. |
| • External Cache | <i>Enabled</i> | However, it depends on CPU/chipset design. Enables external L2 cache. This allows better performance. |
| | <i>Disabled</i> | Disables external cache. |
| • CPU L2 Cache ECC Checking | <i>Enabled</i> | Enables CPU L2 Cache ECC (Error Checking and Correction) function. |
| | <i>Disabled</i> | Disables CPU L2 Cache ECC function. |
| • Processor Number Feature | <i>Enabled</i> | When Pentium III CPU is installed, the serial number is readable. |
| | <i>Disabled</i> | The serial number is unreadable. |
| • Quick Power On Self Test | <i>Enabled</i> | Allows the system to skip certain tests while booting. This will decrease the time needed to boot the system. |
| | <i>Disabled</i> | Normal POST. |



| | | |
|-------------------------------------|-----------------------------|---|
| • First (Second, Third) Boot Device | <i>Disabled Floppy</i> | Select Your Boot Device Priority. It could be Disabled, Floppy, LS/ZIP, HDD-0, HDD-1, HDD-2, HDD-3, SCSI, CDROM, LAN. |
| • Boot Other Device | <i>Enabled Disabled</i> | Allows other device to boot. Does not allow other device to boot. |
| • Swap Floppy Drive | <i>Enabled Disabled</i> | If the system has two floppy drives, choose enable to assign physical drive B to logical drive A and vice-versa. |
| • Boot Up Floppy Seek | <i>Enabled Disabled</i> | Tests floppy drives to determine whether they have 40 or 80 tracks. |
| • Boot Up NumLock Status | <i>On Off</i> | Select power on state for NumLock. |
| • Gate A20 Option | <i>Normal Fast</i> | Lets chipset control GateA20 and Normal - a pin in the keyboard controller controls GateA20. Default is Fast. |
| • Typematic Rate Setting | <i>Enabled Disabled</i> | Keystrokes repeat at a rate determined by the keyboard controller - when enabled, the typematic rate and typematic delay can be selected. |
| • Typematic Rate (chars/sec) | <i>6-30</i> | The rate at which character repeats when you hold down a key. |
| • Typematic Delay (Msec) | <i>250-1000</i> | The delay before keystrokes begin to repeat. |
| • Security Option | <i>Setup System</i> | Select whether the password is required every time the system boots or only when you enter setup. |
| • OS Select For DRAM>64MB | <i>Non-OS2 OS2</i> | Select OS2 only if you are running OS/2 operating system with more than 64MB of RAM. |
| • Flash Write Protect | <i>Enabled</i> | Does not allow you to upgrade the BIOS. Note: Enabling this item can protect the system BIOS from being attacked by severe virus such as CIH. Therefore disable this item only when wanting to flash BIOS, afterwards set this item as Enabled. |
| | <i>Disabled</i> | Disabling this item allows you to upgrade the BIOS. |
| • Report NO FDD for WIN 95 | <i>Yes</i> | Reports NO Floppy Disk Drive for WIN 95 to release IRQ6. |
| | <i>No</i> | Does not report No Floppy Disk Drive for WIN 95. |



Advanced Chipset Features Setup

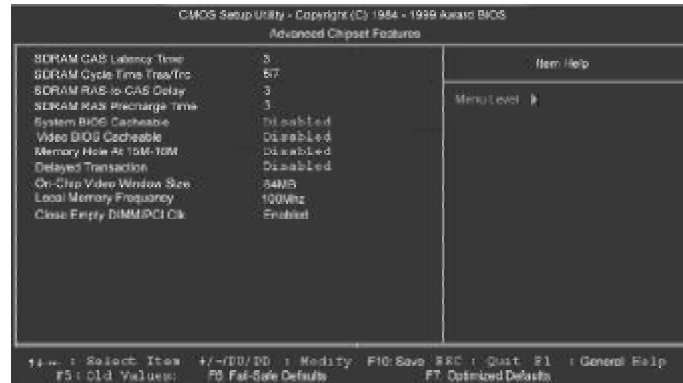


Figure-5 Advanced Chipset Features Menu

The following indicates the options for each item and describes their meaning.

| <u>Item</u> | <u>Option</u> | <u>Description</u> |
|-----------------------------|-----------------------------------|---|
| • SDRAM CAS Latency Time | 3 2 | Contains the information for SDRAM initialization procedure. |
| • SDRAM Cycle Time Tras/Trc | 5/7 6/8 | |
| • SDRAM RAS To CAS Delay | 2 3 | Adds a delay time between the assertion of RAS and CAS. Without additional delay time. |
| • SDRAM RAS Precharge Time | 2 3 | Default setting is suggested. |
| • System BIOS Cacheable | <i>Enabled</i> <i>Disabled</i> | Besides conventional memory, the system BIOS area is also cacheable. |
| • Video BIOS Cacheable | <i>Enabled</i> <i>Disabled</i> | Besides conventional memory, video BIOS is also cacheable. Video BIOS is not cacheable. |
| • Memory hole at 15M-16M | <i>Enabled</i> <i>Disabled</i> | Memory hole at 15-16M is reserved for expanded ISA card. Does not set this memory hole. |
| • Delayed Transaction | <i>Enabled</i> <i>Disabled</i> | Default setting is suggested. |
| • On-Chip Video Window Size | 32/64MB <i>Disabled</i> | Selects graphic display cache window size. Does not select it. |
| • Local Memory Frequency | 100MHz 133MHz | Defines the local memory frequency, 100MHz or 133MHz. |
| • Close Empty DIMM/PCI Clk | <i>Enabled</i> <i>Disabled</i> | Closes empty DIMM clock or PCI clock to reduce EMI. Does not close empty DIMM/PCI clock. |



Power Management Setup

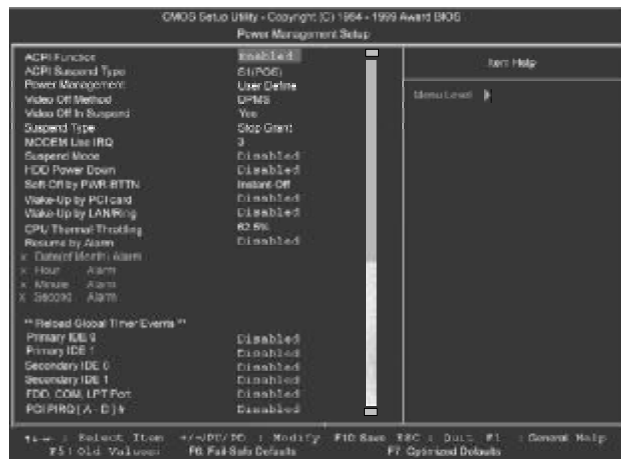


Figure-6 Power Management Setup Menu

The following indicates the options for each item and describes their meaning.

| <u>Item</u> | <u>Option</u> | <u>Description</u> |
|------------------------|---|--|
| • ACPI function | <i>Disabled</i> <i>Enabled</i> | Invalidates ACPI function. Validates ACPI function. |
| • ACPI Suspend Type | <i>S1</i> <i>S3</i> | Selects the ACPI suspend type. |
| • Power Management | <i>Disabled</i> <i>User Define</i> <i>Min Saving</i> <i>Max Saving</i> | Global Power Management (PM) will be disabled. Users can configure their own Power Management Timer. Pre - defined timer values are used. All timers are in their MAX values. Pre - defined timer values are used. All timers are in their MIN values. |
| • Video Off Method | <i>Blank Screen</i> <i>V / H SYNC +</i> <i>DPMS</i> | The system BIOS will only blank off the screen when disabling video. In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA card to monitor. This function is enabled only for VGA cards supporting DPMS. Note: When the green monitor does not detect the V/H-SYNC signals, the electron gun will be turned off. |
| • Video Off In Suspend | <i>Yes</i> | The system will disable video when entering suspend mode. |



| | | |
|---|---|--|
| | <i>No</i> | Does not turn off video when entering suspend mode. |
| • Suspend Type | <i>Stop Grant PwrOn Suspend</i> | Selects the Suspend type. |
| • MODEM Use IRQ | <i>3, 5, 7, 9, 10, 11 NA</i> | Special wake-up event for Modem. |
| • Suspend Mode | <i>Disabled Min ~ 1Hr</i> | The system never enters Suspend mode by timer. Defines the continuous idle time before the system enters Suspend mode. If any items defined in "Reload Global Timer Events" are on and activated, the system will be woken up. |
| • HDD Power Down | <i>Disabled 1 - 15 Min</i> | HDD' s motor will not be off by timer. Defines the continuous HDD idle time before the HDD enters power saving mode (motor off). |
| • Soft-Off by PWR-BTTN | <i>Instant-Off Delay 4 secs</i> | They system will immediately power off once the power button is pressed. The system will power off when power button is pressed for 4 seconds. |
| • Wake-Up by PCI card | <i>Enabled Disabled</i> | Allows the system to be woken up by PCI card. Does not allow the system to be powered on by PCI card. |
| • Wake-Up by LAN/Ring | <i>Enabled</i> | Allows the system to be powered on when a Ring indicator signal comes up to UART1 or UART2 from external modem (to LAN Wake-up Header from LAN adapter or to modem Ring on Header from internal modem card). |
| • CPU Thermal-Throttling | <i>Disabled 12.5%, 25%, 50%, 37.5%, 62.5%, 75%, 87.5%</i> | Does not allow Ring/LAN wake up. Selects the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters green mode. |
| • Resume by Alarm | <i>Enabled Disabled</i> | RTC alarm can be used to generate a wake-up event to power up the system. RTC has no alarm function. |
| • Primary IDE 0/1, Secondary IDE 0/1 | <i>Enabled Disabled</i> | Reloads global timer, when there' s an IDE event. Does not reload global timer. |
| • FDD/COM/LPT Port | <i>Enabled Disabled</i> | Reloads global timer, when there' s a FDD/COM/ LPT event. Does not reload global timer. |
| • PCI IRQ [A - D] # | <i>Enabled Disabled</i> | Reloads global timer, when there' s an PCI event. Does not reload global timer. |



PNP/PCI Configuration Setup

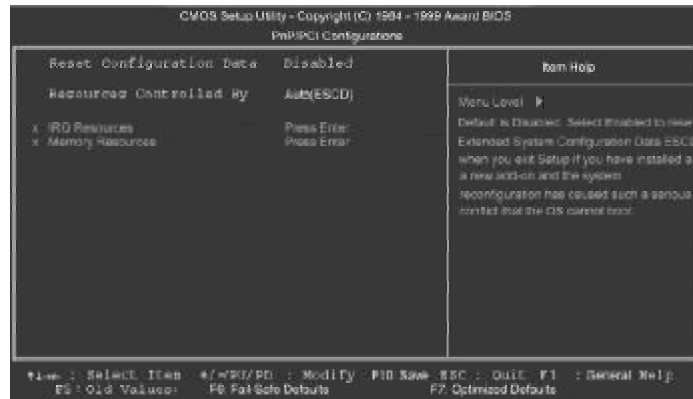


Figure-7 PNP/PCI Configuration Setup Menu

The following indicates the options for each item and describes their meaning.

| <u>Item</u> | <u>Option</u> | <u>Description</u> |
|----------------------------|-------------------|---|
| • Reset Configuration Data | <i>Enabled</i> | Default is Disabled. Select Enabled to reset Extended System Configuration Data (ESCD). |
| | <i>Disabled</i> | Does not reset the configuration data function. |
| • Resources Controlled By | <i>Auto(ESCD)</i> | BIOS can automatically configure all boot and Plug and Play compatible devices. If you choose Auto, you can not select IRQ DMA and memory base address fields, because BIOS automatically assigns them. |
| | <i>Manual</i> | |



| | | |
|---------------------------|---|--|
| | | function and disables the power button's power-on function. Other than choosing this option, the password should be set to implement this function. Note: 1. If the option(Password) is chosen, the jumper JKB must be set as pin1 & pin2 closed, or you will be unable to power up the system. 2. The keyboard password must be set no more than 5 characters and can only use the numbers and alphabetic letters. The password will always remain unless you clear CMOS or reset it. |
| • Onboard FDC Controller | <i>Enabled</i> <i>Disabled</i> | Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled. |
| • Onboard Serial Port 1/2 | <i>3F8/IRQ4,</i> <i>2F8/IRQ3,</i> <i>3E8/IRQ4,</i> <i>2E8/IRQ3,</i> <i>Auto</i> | Defines the onboard serial port address and required interrupt number. |
| | <i>Disabled</i> | Onboard serial port address and IRQ are automatically assigned. |
| • UART Mode Select | <i>Disabled</i> | Onboard serial port is disabled. |
| • Onboard Parallel Port | <i>Normal</i> <i>378/IRQ7,</i> <i>278/IRQ5,</i> <i>3BC/IRQ7</i> | This option is used to configure UART Mode. Defines onboard parallel port address and IRQ channel. |
| • Parallel Port Mode | <i>Disabled</i> <i>SPP, EPP,</i> <i>ECP,</i> <i>ECP+EPP</i> | Onboard parallel port is disabled. Defines the parallel port mode as standard Parallel Port(SPP), Enhanced Parallel Port(EPP), or Extended Capabilities Port(ECP). |
| • PWRON After PWR-Fail | <i>OFF</i> <i>ON</i> <i>Former-Sts</i> | The system remains OFF when the AC power supply resumes. The system will be powered up when the AC power supply resumes. Whatever the system status is before the AC power supply cuts off, the system resumes in the previous status (ON/OFF) when the AC power supply resumes. |
| • Game Port Address | <i>Disabled</i> <i>201</i> <i>209</i> | This option is used to configure Game Port Address. |
| • Midi Port Address | <i>Disabled</i> <i>300</i> <i>330</i> | This option is used to configure Midi Port Address. |



PC Health Status

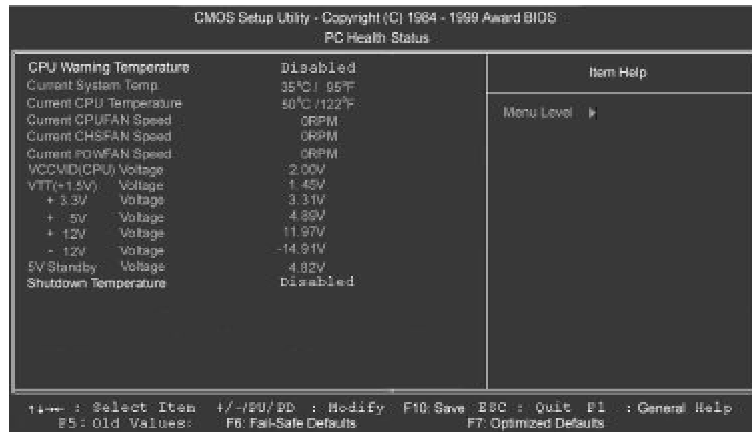


Figure-9 PC Health Status Menu

The following indicates the options for each item and describes their meaning.

| <u>Item</u> | <u>Option</u> | <u>Description</u> |
|--|--|--|
| • CPU Warning Temperature | 50°C/122°F 53°C/127°F 56°C/133°F 60°C/140°F 63°C/145°F 66°C/151°F 70°C/158°F Disabled | An alarm will beep when the CPU temperature reaches the previous setting, such as 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F, 63°C/145°F, 66°C/151°F, 70°C/158°F, etc. No alarm beep. |
| • Current System Temp. | | The temperature inside the chassis. |
| • Current CPU Temperature | | The temperature near CPU. |
| • Current CPUFAN Speed Current CHSFAN Speed Current POWFAN Speed | | RPM (Revolution Per Minute) Speed of fan which is connected to the fan header, CPUFAN or CHSFAN or POWFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution. In other cases, you should regard it relatively. |
| • VCCVID(CPU) Voltage, VTT(+1.5V) Voltage, | | Displays current voltage value including all significant voltages of the mainboard. +3.3V, +5V, +12V, -12V are voltages from the ATX power supply, VTT(+1.5) Voltage is GTL |



BIOS Description

| | | |
|---|---|---|
| +3.3V, +5 V, +12 V, -12 V, 5V Standby Voltage | | Termination voltage from the on board regulator and VCCVID (CPU) Voltage is the CPU core voltage from the on board switching Power Supply. |
| • Shutdown Temperature | <i>60°C/140°F</i> <i>65°C/149°F</i> <i>70°C/158°F</i> <i>75°C/167°F</i> <i>Disabled</i> | The system will shut down automatically when the CPU temperature reaches the previous setting, such as 60°C/140°F, 65°C/149°F, 70°C/158°F, 75°C/167°F, etc. The system remains on regardless of how much the CPU temperature is. |



Password Setting

When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

PASSWORD DISABLED

If you have selected “**System**” in “Security Option” of “BIOS Features Setup” menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected “**Setup**” at “Security Option” from “BIOS Features Setup” menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

Boot with BIOS defaults

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in setup, clear CMOS after power-down, then power on again. System will boot with BIOS default settings.



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Appendix A

QDI Mainboard Utility CD-ROM

A QDI Motherboard Utility CD-ROM is supplied with each motherboard. The contents used for this motherboard are:

1. Intel®810 Chipset Drivers

A. INF Files for Intel 810 Chipset

Contained in the directory \ChipDrv\Intel\Whitney\inf for Windows 95/98.

B. INF Utility Files for Intel 810 Chipset

Contained in the directory \ChipDrv\Intel\Whitney\inf utility for Windows 95/98.

C. VGA Drivers

Contained in the directory \ChipDrv\Intel\Whitney\display for Windows 9x, Windows 2000 and Windows NT4.0 respectively.

2. Sound Drivers

Contained in the directory \DevDrv\Codec\ad1881 for Windows 95, Windows 98 and Windows NT 4.0 respectively.

3. PC-cillin 98 Anti-Virus software:

Contained in the directory \Pccillin\Win9x for Windows 95/98 English version.

Contained in the directory \Pccillin\PWin9x for Windows 95/98 Chinese version.

Contained in the directory \Pccillin\WinNT4.0 for Windows NT 4.0.

4. QDI ManageEasy V2.0:

Contained in the directory \QME2.

5. QDI Mainboard Utilities:

AWDFLASH.EXE

CBLOGO.EXE

LF.EXE

Please refer to the online help for information on how to use these utilities.

6. Documents

The files included in the directory \Doc are:

Adobe Acrobat Reader V3.0 —ar32e301.exe

QDI ManageEasy (V1.2) Manual —QMEV12.PDF.



The Patent for SpeedEasy

Board Layout of WinneX 2 V1.0

P/N: 430-01017-301-00
Manual WinneX 2 Ver 1.0