

Declaration of conformity



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

declares that the product

Motherboard
BrilliantX 1S/2000

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

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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

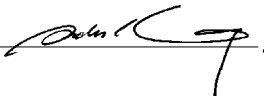


Trade Name: QDI Computer (U. S . A.) Inc.
Model Name: BrilliantX 1S/2000
Responsible Party: QDI Computer (U. S. A.) Inc.
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Equipment Classification: FCC Class B Subassembly
Type of Product: AGP Pentium®III Motherboard
Manufacturer: Quantum Designs (HK) 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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SpeedEasy Quick Setup

Procedures :

1. Correctly insert the Pentium®II or Intel® 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 "SpeedEasy CPU 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).

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



SpeedEasy CPU Setup Menu

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



Figure - 1 SpeedEasy CPU 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 "SpeedEasy CPU SETUP" menu screen.

Warning:

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



Schnell-Installation durch SpeedEasy

Vorgehensweise der Installation:

1. Legen sie die Pentium®/ Intel® 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 "SpeedEasy CPU 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.



SpeedEasy CPU Installationsmenü

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



Abb. 1 SpeedEasy CPU Installationsmenü

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 "SpeedEasy CPU 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 Pentium®II/ Intel® 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 "SpeedEasy CPU SETUP" para establecer la velocidad de su CPU.

Nota: Si no establece la velocidad del CPU, su sistema funcionará a la velocidad mínima 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 SpeedEasy CPU

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



Figura-1 Menu del CPU SpeedEasy

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 "SpeedEasy CPU 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.



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

Sélectionnez la rubrique <SpeedEasy CPU 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 "SpeedEasy CPU SETUP".



Avertissement:

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



SETUP DELLA SCHEDA SPEEDEASY

Procedura di installazione:

1. Inserite il microprocessore Pentium®/ Intel® 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 "SpeedEasy CPU* 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 <SpeedEasy CPU SETUP> dal menu principale ed entrare nel seguente sottomenu:

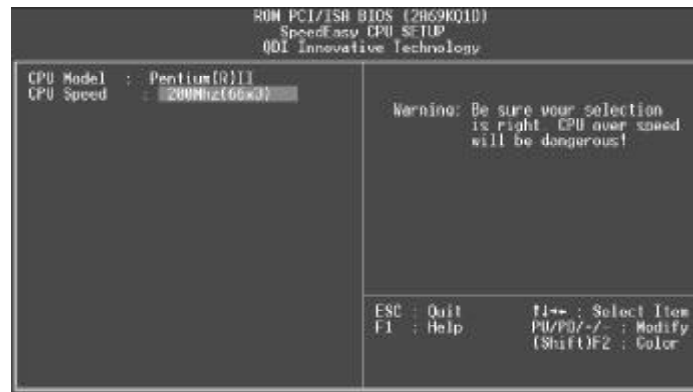


Figure -1 Menu del Setup del Microprocessore SpeedEasy

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 "SpeedEasy CPU SETUP".



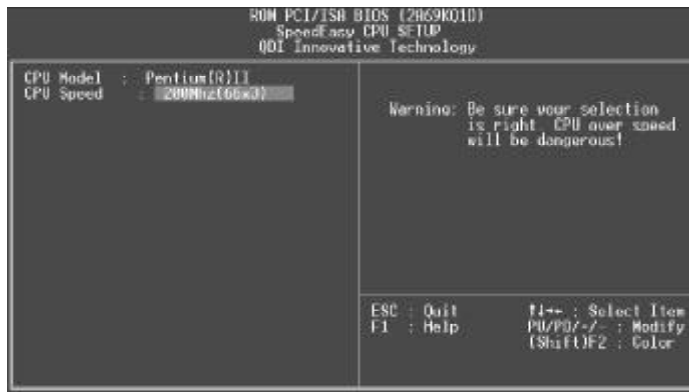
Avvertenza:

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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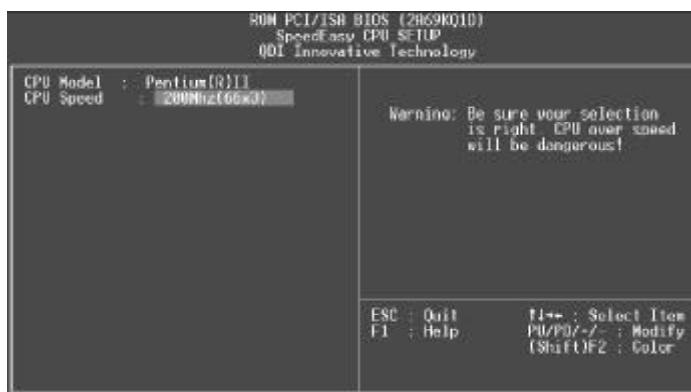
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Chapter 1

Introduction

Overview

The B1S/2000 green motherboard utilizes the Intel® 440BX AGPset and provides a highly integrated solution for fully compatible, high performance PC/ATX platform. It provides 66MHz and 100MHz system bus support for all Intel Pentium®III, Coppermine, Pentium®II and Celeron™ Slot1 processors. Both 66MHz/100MHz SDRAM with SPD and 66MHz EDO DIMMs are supported. It also provides advanced features such as wake-up on LAN, wake-up on internal/external modem and keyboard password power-on function. ManageEasy, our system management application is supplied to enable remote monitoring and configuration of the system. The green function is in compliance with the ACPI specification. With the everlasting innovations of QDI such as SpeedEasy, LogoEasy and SecurityEasy technologies, the system BIOS is protected from being attacked by severe virus such as CIH virus, so you get a powerful corporate system.

Key Features

Form factor

- ATX form factor of 305mm x 190mm.

Microprocessor

- Supports all Intel Pentium®III processors at 450/500/533/550/600/733 and future processors with 100MHz bus speed.
- Supports Intel Coppermine Processors at 550/600/650/700MHz and future processors with 100MHz bus speed.
- Supports all Intel Pentium®II processors at 233/266/300/333MHz and future processors with 66MHz bus speed and 350/400/450MHz and future processors with 100MHz bus speed.
- Supports all Intel® Celeron™ Slot1 processors at 266/300/333 /350/366/400/433/466/500/533MHz and future processors with 66MHz bus speed.
- Supports 66MHz and 100MHz host bus speed.
- CPU core frequency = Bus speed x2.5, x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, x7.5, x8.
- CPU core supply voltage adjustable from 1.3V to 3.5V through on-board switching voltage regulator with VID(Voltage ID).

Chipset

- Intel® 440BX AGPset: 82443BX, 82371EB (PIIX4E)

**System memory**

- Provides three 168 pin 3.3V unbuffered DIMM sockets.
- Supports both 66MHz/100MHz SDRAMs with SPD and 66MHz EDO DIMMs.
- Minimum memory size is 8MB, maximum memory size is 768MB.
- SDRAM 64 bit data interface with ECC support.

On-board 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 mode 4 timing.
- Supports "Ultra DMA/33" Synchronous DMA mode transferring up to 33 Mbytes/sec.
- Integrated 16x32bit buffer for IDE PCI Burst Transfers.

On-board I/O

- Use Winbond W83977EF super 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 fast compatible UARTs(COM1/COM2/COM3/COM4 selective) with 16-byte send/receive FIFOs.
- One enabled parallel port at the I/O address 378H/278H/3BCH with additional bi-direction I/O capability and multi-mode as SPP/EPP/ECP (IEEE 1284 compliant).
- Circuit protection provided, preventing damage to the parallel port when a connected printer is powered up or operates at a higher voltage.
- Supports LS-120 floppy disk drive.
- All I/O ports can be enabled/disabled in the BIOS setup.

Advanced features

- Supports PC99 color-coding connector specification.
- Provides Trend ChipAwayVirus® On Guard.
- Provides on-board PS/2 mouse and PS/2 keyboard ports.
- Two USB ports supported.
- Provides infrared interface.
- Supports Windows 95/98 software power-down.
- Supports external modem ring power-on.
- Supports wake-up on LAN and wake-up on internal modem.
- Supports auto fan off when the system enters suspend mode.
- On-board LM80 supports system monitoring (monitors system temperature, voltages, chassis intrusion and fan speed) (manufacturing option).
- On-board MAXIM1617 monitors the CPU temperature. (manufacturing option)
- Provides management application such as ManageEasy and LDCM(LANDesk® Client Manager) (manufacturing option).



- Supports keyboard password power-on function.
- Supports SecurityEasy function (manufacturing option)
- System status resumes after AC power failure.
- Protects the system BIOS from being attacked by severe virus such as CIH, by enabling “Flash Write Protect” in CMOS setup.

BIOS

- Licensed advanced AWARD BIOS, supports flash ROM BIOS with 2MB memory size, 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 three green modes: Doze, Standby and Suspend.

Expansion slots

- 3 ISA slots and 4 PCI slots.
- 1 AGP Slot



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Chapter 2

Installation Instructions

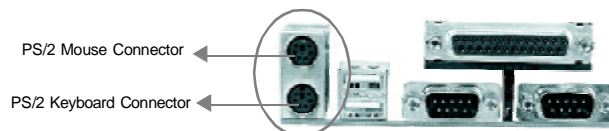
This section covers External Connectors, Jumper Settings and Memory Configuration. Refer to the motherboard layout chart for locations of all the jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular 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 motherboard and expansion cards might be seriously damaged.

External Connectors

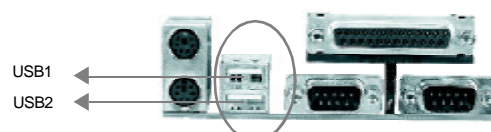
PS/2 Keyboard Connector, PS/2 Mouse Connector

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.



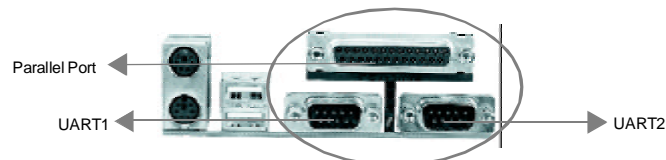
USB1, USB2

Two USB ports are available for connecting USB devices.



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

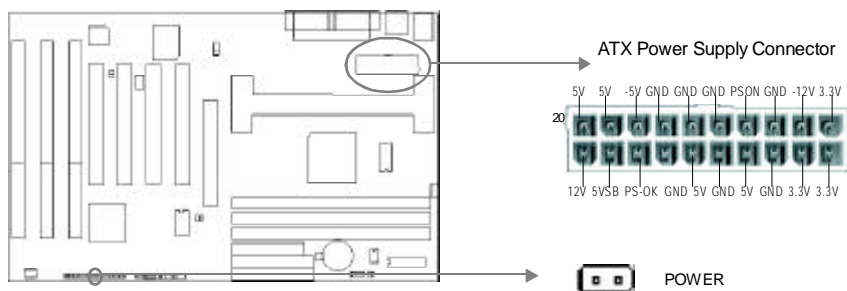
The parallel port connector can be connected to a parallel device such as a printer, while the serial port connectors can be connected to serial port devices such as a serial port mouse. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP.





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 button. When powering off the system, you needn't turn off the mechanical switch, just ***Push once*** the power button.



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 button 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.

Reset Switch (RESET)

The connector connects to the case's reset switch. Press the switch once, the system resets.

Speaker Connector (SPEAKER)

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

Power LED Connector (PWR_LED)

The power LED has three status. When no AC power supply is present, the LED is off. When the system is in soft power-down status, the LED glows dimly. When the system is powered up, the LED is on.

Key-Lock Connector (KEY_L)

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



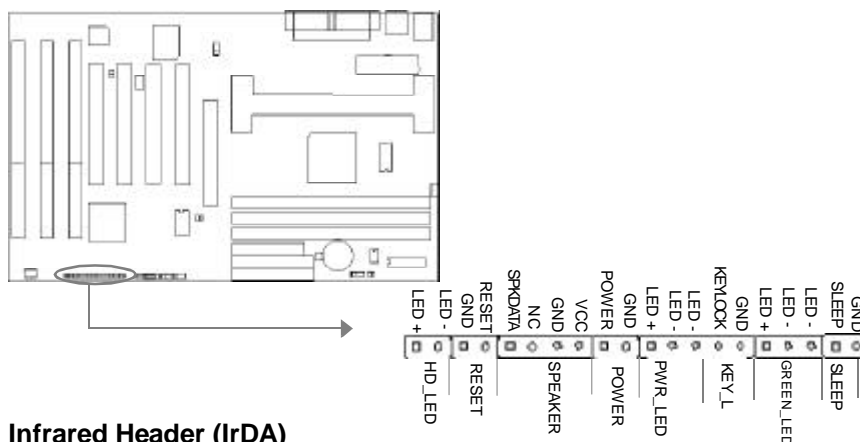
Green LED Connector (GREEN_LED)

The LED connected to this header shows the status of the system as described below:

LED Status	System Status
Off	No AC power supply.
On	The system is in power-up status.
Flashing at a frequency of about 1.5Hz	The system is in soft power-down status.
Flashing at a frequency of about 0.5Hz	The system is in Green Mode.
Flashing at a frequency of about 1/6Hz	The system is in Lock status.

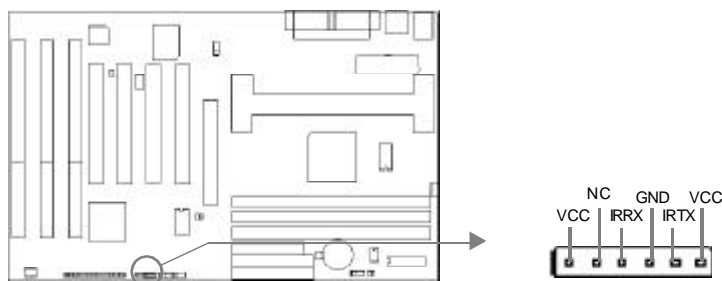
Hardware Green Connector (SLEEP)

If the SecurityEasy function is enabled, push once the switch connected to this header and the system will enter lock status. If the lock function is disabled, push once the switch, the system enters suspend mode.



Infrared Header (IrDA)

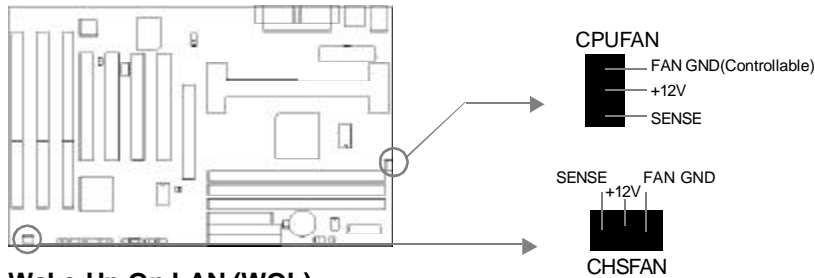
This connector supports wireless transmitting and receiving. If using this function, set 'Serial Port 2 Mode' to IrDA or ASKIR and configure the settings from the 'INTEGRATED PERIPHERALS' section of the BIOS.





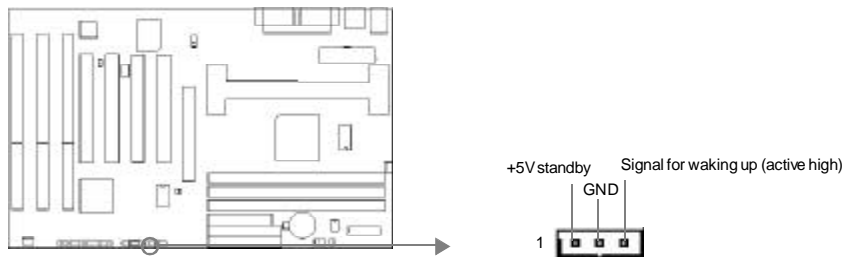
Fan Connector (CPUFAN, CHSFAN)

These two fans are controllable. They will be automatically turned off after the system enters suspend mode. You also can choose not to turn the CPUFAN off by setting "CPUFAN Off In Suspend" as Disabled in the "POWER MANAGEMENT SETUP" section of the BIOS.



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 are used. Then connect this header to the relevant connector on the LAN adapter, set "Wake Up On LAN" 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 the function is used. Then connect this header to the relevant connector on the modem card, set "Resume by 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.





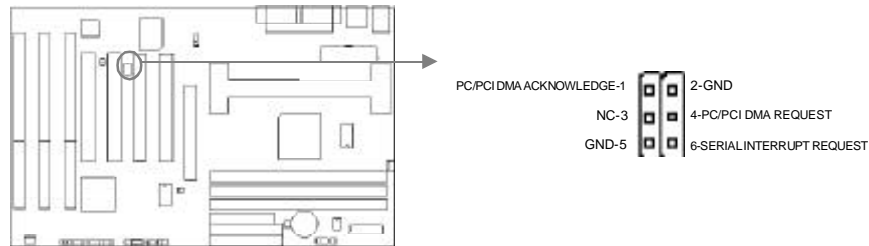
Chassis Security Switch (CHSSEC)

If the switch is off, this indicates the chassis is closed. Otherwise, it indicates the chassis is opened.



Sound Connector (PC-PCI)

This connector is for the usage of PCI sound card.






Expansion Slots & I/O Ports description

Slot / Port	Description
ISA 1	First ISA slot.
ISA 2	Second ISA slot.
ISA 3	Third ISA slot.
PCI1	First PCI slot.
PCI2	Second PCI slot.
PCI3	Third PCI slot.
PCI4	Fourth PCI slot.
IDE 1	Primary IDE port.
IDE 2	Secondary IDE port.
FLOPPY	Floppy Drive Port.
AGP	Accelerated Graphics Port

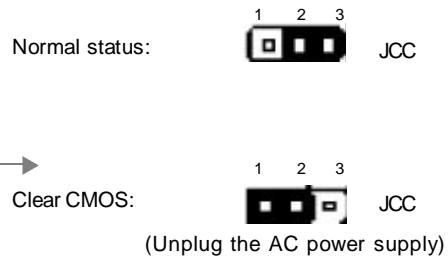
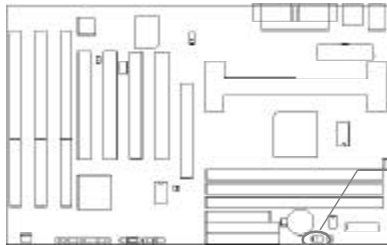


Jumper Settings

There are some jumpers on the motherboard, they represent, clear CMOS jumper JCC, enable keyboard password power-on function jumper JP2. Pin 1 for all jumpers are located on the side with a thick white line (Pin1→ ), referring to the motherboard's silkscreen . Jumpers with three pins will be shown as  to represent pin1&pin2 connected and  to represent pin2&pin3 connected.

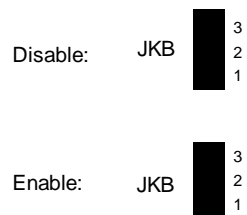
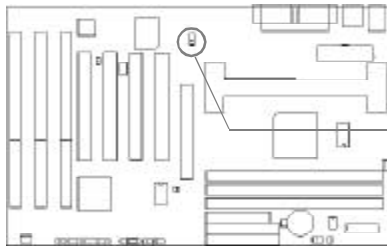
Clear CMOS (JCC)

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.



Enable keyboard password power-on function (JKB)

The motherboard provides the advanced keyboard password power-on function. When wanting to use this function, set JKB with pin1 & pin2 closed. Otherwise, set JKB with pin2&pin3 shortened for disabling this function.



In order to implement this function, set "POWER ON Function" to **Password** and enter 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. The only way to power up the system is to enter the correct password. If you forget the password, clear CMOS and set it again. Refer to BIOS description on page 43 for detailed information.



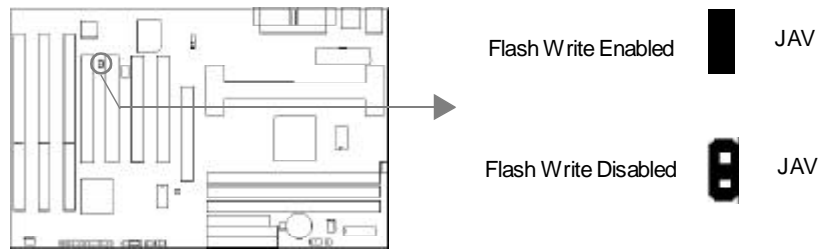
Note: 1.If wanting to use this function, 5VSB line of the power supply should be capable of delivering enough current (eg. 200mA) for all the devices connected to the keyboard port, or you can't power up the system using the keyboard.

2.If you set JP2 with pin2&pin3 closed, set "POWER ON Function" to **BUTTON ONLY**, don't set it to Password, or this will prevent you from powering up your system.

3. If you encounter problems above, clear CMOS and set the jumper and BIOS option properly again.

BIOS Write Protection Jumper (JAV)

The BIOS of the mainboard is contained inside the Flash ROM. 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.



Setting the jumper JAV as Opened(default), meanwhile disabling the "Flash Write Protect" item from "BIOS Features Setup" in AWARD BIOS CMOS Setup, allows you to flash the BIOS to the FlashROM.

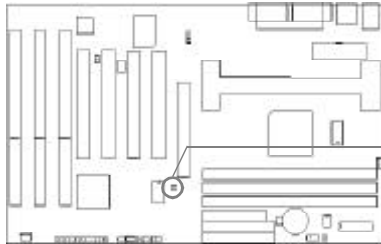
The DMI (Desktop Management Interface) system information such as the CPU type/speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting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

Refer to page 35 for related BIOS setting.



Overclocking Jumper Setting(JFSB1)

Jumper labeled JFSB1 is located on the mainboard providing users with CPU overclocking feature. The host bus speed can be set as 100MHz or AUTO select. Refer to the chart below for the location of these jumpers and the information on how to set them.



CPU FSB 100MHz  JFSB1

CPU FSB AUTO  JFSB1

JFSB1	JFSB2	JCLK	CPU FSB
CLOSE	CLOSE	1-2	66/100MHz
OPEN	CLOSE	1-2	100MHz FSB
NA	OPEN	2-3	133MHz FSB

If CPU FSB is set as default setting AUTO by jumper JFSB1, the system detects the CPU front side bus (66/100MHz) automatically. If CPU FSB is set as 100MHz, the system can run at 100MHz front side bus even if a processor with 66MHz FSB is installed. However, whether or not your 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 100MHz, meanwhile adjusting the bus ratio (Multiplier) lower in "SpeedEasy CPU Setup" in AWARD BIOS CMOS Setup. We do not guarantee the overclocking system to be stable.

Note: The jumpers JFSB2 and JCLK are located on the mainboard for our next product. We suggest that the CPU front side bus can be set as overclocking only by the jumper JFSB1.

Memory Configuration

This mainboard provides three 168 pin 3.3V un-buffered DIMM sockets to support a flexible memory size ranging from 8MB/384MB for SDRAM or from 8MB/768MB for EDO memory. Both 66MHz/100MHz SDRAM with SPD and 66MHz EDO DIMMs are supported. The following set of rules allows for optimum configurations.

Rules for populating a 440BX memory array:

- Processors with 100MHz front-side bus should be paired only with 100MHz SDRAM. Processors with 66MHz front-side bus can be paired with either 66MHz or 100MHz SDRAM.
- Using the serial presence detect (SPD) data structure, programmed into an E²PROM on the DIMM, the BIOS can determine the SDRAM's size and speed.
- The DRAM Timing register, which provides the DRAM speed grade control for the entire memory array, must be programmed to use the timing of the slowest DRAMs installed.
- Possible SDRAM DIMM memory sizes are 8MB, 16MB, 32MB, 64MB, 128MB in each DIMM socket.
- Possible EDO DIMM memory sizes are 8MB, 16MB, 32MB, 64MB, 128MB, 256MB in each DIMM socket.



Chapter 3

SecurityEasy

There are two ways to prevent unauthorized entry or use of the system:
System Password and SecurityEasy.

System Password

Set system password in the "PASSWORD SETTING" section of the BIOS, and set the "Password Setting" to **System** in the "BIOS FEATURES SETUP" section. You will be prompted for the password every time the system boots or any time you try to enter BIOS Setup. If the "Password Setting" is set as **Setup**, you will be prompted for the password only when entering BIOS Setup.

SecurityEasy

The BrillianX 1S/2000 provides additional SecurityEasy function to protect the system from unauthorized entry or use. There are two ways to enter the lock status.

- Push once the button connected to the two-pin header SLEEP after enabling the lock function in BIOS Setup. If the lock function is disabled, this button is used as SLEEP button.
- 'Keyboard Inactive Timer' is counted to the preset value-from 1 minute to 1 hour set in the BIOS Setup.

In the lock status, the power switch and reset buttons are unresponsive, PS/2 mouse is locked, and the keyboard is locked except for the SecurityEasy password entering. You can preset the Video as blank in the lock status. The only way to exit the lock status is to enter SecurityEasy password using the keyboard. This means if you set the lock function as enabled, you must also set the SecurityEasy password.

Please read the notes below thoroughly.

Note 1: The green function and the lock function can not be enabled at the same time.

Note 2: If lock function is enabled, the SecurityEasy password should be set, no more than six characters.

Note 3: When entering the SecurityEasy password to exit the lock status, use the <Enter> key located on the alphabetic pad and not the <Enter> key located on the numeric pad.

Note 4: If there is no SLEEP button on your case, your system still can enter lock status through our lock application. Refer to Appendix A (item 4) for details.

Note 5: See also 'SecurityEasy Setup' in chapter 4 'BIOS Description'.



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Chapter 4

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, please don't forget to set JAV as close and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup first (refer to page 26).

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>7.07) 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 located 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 different usage of parameters, please type A:\>AWDFLASH /?



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 twelve 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

Note:The 'System Monitor' item will not be displayed if there is LM80 chip on the motherboard.

Load Setup Defaults

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

Standard CMOS Setup

The basic CMOS settings included in 'Standard CMOS Setup' 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 you want in each item.



Figure-2 Standard CMOS 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

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.
Other Memory	This is the memory that can be used for different applications. Shadow RAM is most used in this area.
Total Memory	Total memory of the system equals the sum of the above memory.



SpeedEasy CPU Setup



Figure-3 SpeedEasy CPU Setup

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• CPU Model		BIOS automatically detects the CPU model, therefore this item is shown only. It could be Pentium(R)II or Intel (R) Celeron(TM), depending on the processor chosen.
• CPU Speed	<i>SpeedEasy</i>	CPU frequency should be set according to the CPU type. For Celeron™ or Pentium®II (66MHz front-side bus) processors, you can choose from 200MHz (66X3), 233MHz(66X3.5), 266MHz (66x4), 300MHz(66X4.5), or 333MHz (66X5). For Pentium®II processors with 100MHz front-side bus, you can select from 300MHz(100X3), 350MHz (100X3.5), 400MHz (100X4), 450MHz(100X4.5), or 500MHz(100X5).
	<i>Jumper Emulation</i>	This item is only for users who understand all the CPU parameters, i.e. System Bus Frequency '100MHz / 66MHz' and multiplication of Processor Core Frequency to System Bus frequency " x2.5, x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7,x7.5, x8." .

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



BIOS Features Setup



Figure-4 BIOS Features Setup 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>	Invalidates this function.
• CPU L1/L2 Cache	<i>Enabled</i>	Enables CPU internal Level1/Level2 cache.
	<i>Disabled</i>	Disables CPU internal Level1/Level2 cache.
• CPU L2 Cache ECC	<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>	Pentium®III Processor Number can be readable.
	<i>Disabled</i>	Pentium®III Processor Number can be unreadable.
• Quick Power On Self Test	<i>Enabled</i>	Enables quick POST. BIOS will shorten or skip some check items during POST to speed up POST after you power on the computer.
	<i>Disabled</i>	Normal POST.
• Boot From LAN First	<i>Enabled</i>	Boot from LAN is ahead of any boot sequence selection (LAN Adapter must support this function).
	<i>Disabled</i>	Does not boot from LAN first.
• Boot Sequence	<i>C,A,SCSI,... C,CDROM,A LS/ZIP, C</i>	Any search sequency can be chosen for booting



• Swap Floppy Drive	<i>Enabled</i>	Exchanges the assignment of A&B floppy drives.
	<i>Disabled</i>	The assignment of A&B floppy drives are normal.
• Boot Up Numlock Status	<i>On</i>	Keypad is used as number keys.
	<i>Off</i>	Keypad is used as arrow keys.
• Gate A20 Option	<i>Normal</i>	The A20 signal is controlled by the keyboard controller or chipset hardware.
	<i>Fast</i>	Default setting. The A20 signal is controlled by Port 92 or the chipset specific method.
• Password Setting	<i>System</i>	The system will not boot and access to BIOS Setup will be denied if the correct password is not entered when prompted.
	<i>Setup</i>	The system will boot up, but access to BIOS Setup will be denied if the correct password is not entered when prompted.
• OS Select For DRAM>64MB	<i>Non-OS2</i>	If your operating system is not OS/2, please select this item.
	<i>OS2</i>	If system DRAM is more than 64MB and the operating system is OS/2, please select this item.
• HDD S.M.A.R.T Capability	<i>Enabled</i>	Enables S.M.A.R.T hard disk support.
	<i>Disabled</i>	Invalidates this feature.
• Video BIOS Shadow	<i>Enabled</i>	Video BIOS will be copied to RAM. Video Shadow will increase the video speed.
	<i>Disabled</i>	Video shadow is disabled.
• C8000~CBFFF Shadow: DC000-DFFFF Shadow:	<i>Enabled</i>	Optional ROM will be copied to RAM by 16K bytes per unit.
	<i>Disabled</i>	The shadow function is disabled.
• Show Bootup Logo	<i>Enabled</i>	Enables the logo when system boots up
	<i>Disabled</i>	Logo will not be shown when system boots up.
• 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 (Default).
	<i>Disabled</i>	Disabling this item allows you to upgrade the BIOS.



Chipset Features Setup

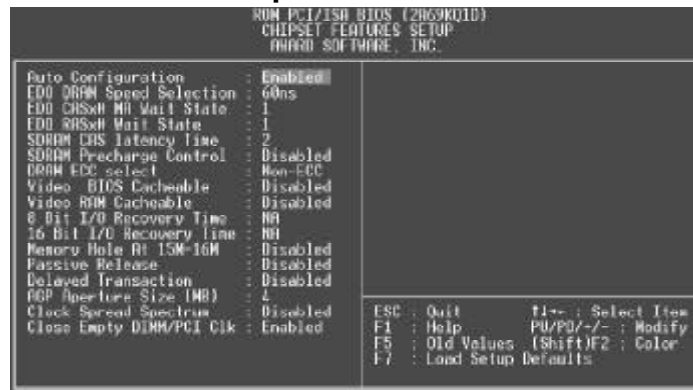


Figure-5 Chipset Features Setup Menu

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	2	Defines the CLT timing parameter of SDRAM. Latency Time=2x system clocks.
	3	Latency Time=3x system clocks.
• SDRAM Percharge Control	Enabled	Default setting is suggested.
	Disabled	
• DRAM ECC Select	ECC	Provides ECC (Error Checking and Correction) function.
	Non-ECC	Disables ECC function.
• Video BIOS Cacheable	Enabled	Beside conventional memory, video BIOS area is also cacheable.
	Disabled	Video BIOS area is not cacheable.
• Video RAM Cacheable	Enabled	Besides conventional memory, video BIOS area is also cacheable.
	Disabled	Video BIOS area is not cacheable.
• 8 Bit I/O Recovery Time	1~ 8	Defines the ISA Bus 8 bit I/O operating recovery time.
	NA	8 bit I/O recovery time does not exist.
• 16 Bit I/O Recovery Time	1~ 4	Defines the ISA Bus 16 bit I/O operating recovery time.
	NA	16 bit I/O recovery time does not exist.
• Memory hole at 15M-16M	Enabled	Memory hole at 15-16M is reserved for expanded ISA card
	Disabled	Does not set this memory hole.



- | | | |
|----------------------------|-----------------------------------|--|
| • Passive Release | <i>Enabled</i>
<i>Disabled</i> | Default setting is suggested. |
| • Delayed Transaction | <i>Enabled</i>
<i>Disabled</i> | Default setting is suggested. |
| • AGP Aperture Size (MB) | 4-256 | Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration. |
| • Clock Spread Spectrum | <i>Enabled</i>
<i>Disabled</i> | Enables Clock Spread Spectrum to reduce EMI.
Disables Clock Spread Spectrum. |
| • 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 or PCI clock. |



Power Management Setup

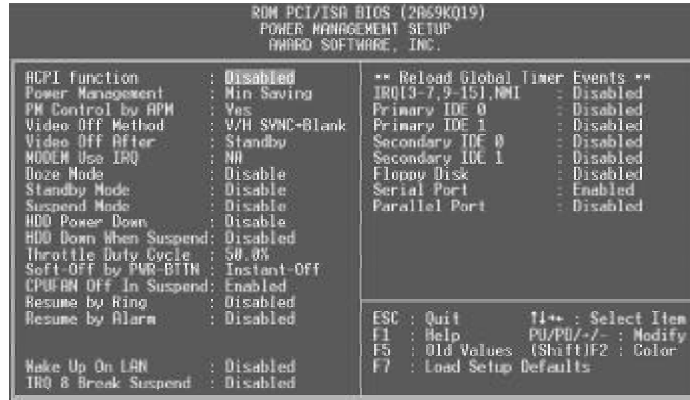


Figure-6 Power Management Setup Menu

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>	Invalidates ACPI function.
	<i>Enabled</i>	Validates ACPI function.
• Power Management	<i>Disabled</i>	Global Power Management (PM) will be disabled.
	<i>User Define</i>	Users can configure their own Power Management Timer.
	<i>Min Saving</i>	Pre - defined timer values are used. All timers are in their MAX values.
	<i>Max Saving</i>	Pre - defined timer values are used. All timers are in their MIN values.
• PM Control by APM	No	System BIOS will ignore APM when Power Management is enabled.
	Yes	System BIOS will wait for APM' s prompt before entering any PM mode e.g. Standby or Suspend. Note: If APM is installed, and there is a task running, even when the timer is time out, the APM will not prompt the BIOS to put the system into any power saving mode. But if APM is not installed, this option has no effect.
• Video Off Method	<i>Blank Screen</i>	The system BIOS will only blank off the screen when disabling video.
	<i>V / H SYNC +</i>	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA cards to monitor.



	<i>DPMS</i>	This function is enabled only for the VGA card supporting DPMS. Note: When the green monitor detects the V/H-SYNC signals, the electron gun will be turned off.
• Video Off After	<i>N/A</i>	System BIOS never turns off the screen.
	<i>Suspend</i>	Screen blanks after the system enters Suspend mode.
	<i>Standby</i>	Screen blanks after the system enters Standby mode.
	<i>Doze</i>	Screen blanks after the system enters Doze mode.
• Doze mode	<i>Disabled</i>	The system never enters Doze mode.
	<i>1Min ~ 1 Hr</i>	Defines the continuous idle time before the system enters Doze mode. If any items defined in 'Reload Global Timer Events' are On and activated, the system will be woken up.
• Standby Mode	<i>Disabled 1 Min ~ 1Hr</i>	The system never enters Standby mode. Defines the continuous idle time before the system enters Standby mode. If any items defined in 'Reload Global Timer Events' are On and activated, the system will be woken up.
• Suspend Mode	<i>Disabled Min ~ 1Hr</i>	The system never enters Suspend mode. 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. Defines the continuous HDD idle time before the HDD enters the power saving mode (motor off).
• HDD Down When suspend	<i>Enabled</i>	HDD' s motor will be off when the system enters suspend mode.
• Throttle Duty Cycle	<i>Disabled</i>	HDD' s motor will no be off.
	<i>12.5%</i>	Selects the duty cycle of the STPCLK# signal , slowing down the CPU speed when the system enters the green mode.
	<i>25%</i>	
	<i>37.5%</i>	
	<i>50 %</i>	
	<i>62.5%</i>	
	<i>75%</i>	
	<i>87.5%</i>	
• PCI/VGA Act -Monitor	<i>Enabled</i>	VGA active reloads global timer.
	<i>Disabled</i>	VGA active has no influence to global timer.
• Soft-Off by PWR-BTTN	<i>Instant-Off</i>	The system will power off immediately once the ' Power' button is pressed.
	<i>Delay 4 Secs</i>	The system will not power off until the ' Power' button is pressed continuously for more than 4 seconds.



• CPUFAN Off In Suspend	<i>Enabled</i>	CPU fan will be automatically turned off when the system enters suspend mode.
	<i>Disabled</i>	CPU fan remains on when the system enters suspend mode.
• Resume by Ring	<i>Enabled</i>	Allows the system to be powered on when a ring indicator signal comes up to UART1 or UART2 from an external modem or comes up to WOM header from an internal modem card.
	<i>Disabled</i>	Does not allow Ring Power-On.
• Resume by Alarm	<i>Enabled</i>	RTC alarm can be used to generate a wake event to power up the system which is in power-off status. You can set any date, any time to power up the system.
	<i>Disabled</i>	RTC has no alarm function.
• Wake Up On LAN	<i>Enabled</i>	Allows the system to be powered on when a remote wake up signal comes up to the WOL header from LAN adapter .
	<i>Disabled</i>	Does not allow wake-up on LAN.
• IRQ8 Break suspend	<i>Enabled</i>	Generates a clock event.
• IRQ [3-7, 9-15], NMI	<i>Disabled</i>	Does not generate a clock event.
	<i>Enabled</i>	Reloads global timer.
.....	<i>Disabled</i>	Does not influence the global timer.
Parallel Port		



PNP/PCI Configuration Setup

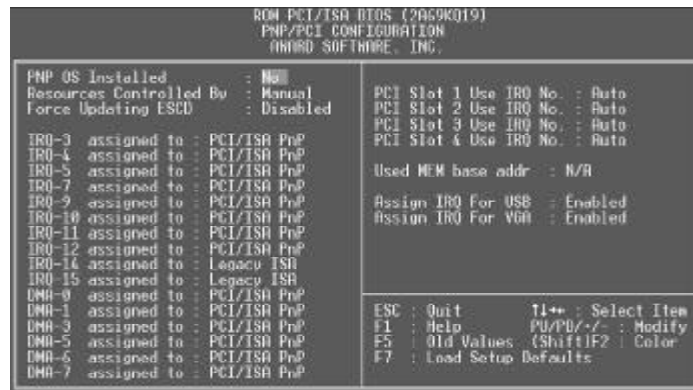


Figure-7 PNP/PCI Configuration Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• PNP OS Installed	Yes	Device resources assigned by PnP OS.
	No	Device resources assigned by BIOS.
• Resources Controlled By	Manual	Assigns the system resources (IRQ and DMA) manually .
	Auto	Assigns system resources (IRQ and DMA) automatically by BIOS.
• Force Updating ESCD	Enabled	The system BIOS will force updating ESCD once, then automatically set this item as Disabled.
	Disabled	Disables the forced update ESCD function.
• IRQ-3~IRQ-15 assigned to	Legacy ISA	The specified IRQ-x will be assigned to ISA only.
	PCI/ISA PnP	The specified IRQ-x will be assigned to ISA or PCI.
• DMA-0~DMA-7 assigned to	Legacy ISA	The specified DMA-x will be assigned to ISA only.
	PCI/ISA PnP	The specified DMA-x will be assigned to ISA or PCI.
• Slot 1/2/3/4 use IRQ No.	Auto,3,4,5,7,9	Assigns an IRQ for slot1/2/3/4 manually or automatically.
	10,11,12,14,15	
• Used MEM base addr	C800/8 ~ 64K	Claims a memory space to be occupied by legacy ISA card. The memory address and the memory size (8/16/32/64K) can be chosen from the options.
	N/A	Invalidates this feature.



- | | | |
|----------------------|-----------------|---|
| • Assign IRQ for USB | <i>Enabled</i> | Assigns an IRQ for USB. If an USB device is used, enable this item. |
| | <i>Disabled</i> | Does not assign an IRQ for USB. If no USB device used, disabling this item can release the IRQ. |
| • Assign IRQ for VGA | <i>Enabled</i> | Assigns the needed IRQ for the VGA Card. |
| | <i>Disabled</i> | Does not assign an IRQ for the VGA card, in order to release the IRQ. |



Integrated Peripherals



Figure-8 Integrated Peripherals Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• IDE HDD Block Mode	<i>Enabled</i>	Allows IDE HDD to read/write several sectors at once.
	<i>Disabled</i>	IDE HDD only reads/writes a sector once.
• IDE Primary/ Secondary Master/Slave PIO	<i>Mode 0 - 4</i>	Defines the IDE primary/secondary master/ slave PIO mode.
	<i>Auto</i>	The IDE PIO mode is defined by auto -detection.
• IDE Primary/ Secondary Master/Slave UDMA	<i>Auto</i>	Ultra DMA mode will be enabled if ultra DMA device is detected.
	<i>Disabled</i>	Disables this function.
• On-chip Primary/Secondary PCI IDE	<i>Enabled</i>	On-chip primary/secondary PCI IDE port is enabled.
	<i>Disabled</i>	On-chip primary/secondary PCI IDE port is disabled.
• USB Keyboard Support	<i>Enabled</i>	USB Keyboard Support is enabled.
	<i>Disabled</i>	USB Keyboard Support is disabled.
• Init Display First	<i>PCI SLOT</i>	Initializes the PCI VGA first. If a PCI VGA card and an AGP card are installed together in the system, the one initialized first functions.
	<i>AGP</i>	Initializes the AGP first.
• POWER ON Function	<i>BUTTON ONLY</i>	Use the power button to power up the system.
	<i>Password</i>	Enables the Keyboard Password Power-on function and disables the power button's power-on function. Other than choosing this option, the password should be entered to implement this function.



		<p>Note: 1. If this option(Password) is chosen, the jumper JP2 must be set as PIN1&PIN 2 closed, or this will prevent you from powering up your system.</p> <p>2. The keyboard password must be set no more than 6 characters and can only use the numbers and alphabetic letters. The password will always remain unless you clear CMOS or reset it .</p>
• KBC input clock	6MHz, 8MHz 12MHz, 16MHz	PS/2 keyboard input clock.
• Onboard FDC Controller	Enabled Disabled	Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled.
• Onboard Serial 1/2	3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Auto	Defines the onboard serial port address and required interrupt number.
• Uart 2 Mode	Disabled Normal ASKIR IrDA	Onboard serial port address and IRQ are automatically assigned. Onboard serial port is disabled. Defines Serial Port 2 as standard serial port. Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps. Supports IrDA version1.0 SIR protocol with maximum baud rate up to 115.2Kbps.
• Onboard Parallel Port	378/IRQ7, 278/IRQ5, 3BC/IRQ7 Disabled	Defines onboard parallel port address and IRQ channel.
• Parallel Port Mode	SPP EPP ECP, ECP+EPP	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	Off On Former-Sts	The system resumes OFF when the AC power supply powers on. The system will be powered up when the AC power supply powers on. Whatever the system status is, before the AC power supply powers down, the system resumes in the previous status (ON/OFF) when the AC power supply powers on.



System Monitor

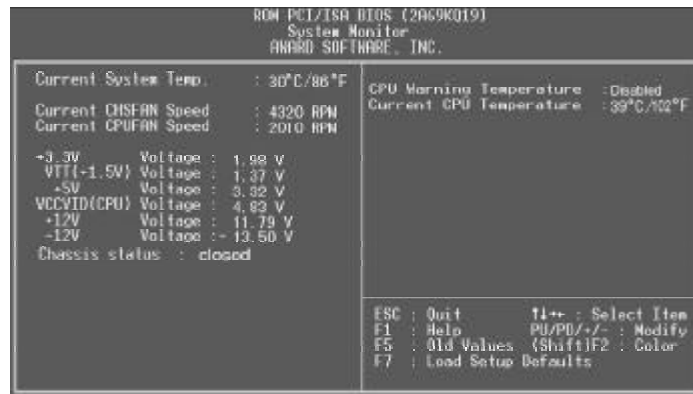


Figure-9 System Monitor Menu

The following describes the meaning of each item.

<u>Item</u>	<u>Current Data Shown</u>	<u>Description</u>
• Current System Temp.	30°C/ 86°C	The temperature inside the chassis.
• Current CHSFAN Speed	2010RPM	RPM(Revolution Per Minute) speed of fan connected to the fan header CPUFAN or CHSFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution; In other cases, you should regard it relatively.
• Current CPUFAN Speed	4320RPM	
• + 3.3V Voltage	1.98V	Displays current Voltage values including all the most important voltages of the mainboard. +3.3V, +5V, +12V, -12V, are voltages from the ATX power supply, VTT (+1.5) Voltage is GTL Termination Voltage from the on-board regulator, and VCCVID (CPU) Voltage is CPU Core Voltage from the on board switching Power Supply.
• VTT (+1.5) Voltage,	1.37V	
• + 5V	4.83V	
• VCCVID(CPU) Voltage	11.79V	
• +12V	-13.50V	
• -12V		
• Chassis Status:	Closed	Indicates status of chassis is closed.
	Opened	Indicates status of chassis is opened.
• CPU Warning Temperature	Enabled	Displays CPU warning temperature.
	Disabled	Note: if no MAX1617 chip on mainboard, this item will no be displayed
• Current CPU Temperature		Temperature of the CPU core.



SecurityEasy Setup



Figure-10 SecurityEasy Setup Menu

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

<u>Item</u>	<u>Current</u> <u>Data Shown</u>	<u>Description</u>
• Lock Function Select	<i>Enable</i> <i>Disable</i>	Enables the LOCK function. The system never enters LOCK mode.
• SecurityEasy Password	<i>Enter</i>	The SecurityEasy password is the only option to exit LOCK mode. When you select this function. The following message 'ENTER PASSWORD' appears at the center of the screen to assist you in creating a password. Type the SecurityEasy Password no more than six characters, then 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>.
• Keyboard Inactive Timer	<i>Disable</i> <i>1Min~</i> <i>1 Hour</i>	The system will not enter the LOCK mode due to the Keyboard Inactive Timer. Set the continuous idle time of the keyboard before the system enters the LOCK mode.
• Video Blanking Control	<i>Enable</i> <i>Disable</i>	Video is blank in the LOCK mode. Video is normal in the LOCK mode.

Note: See also Chapter 3



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 'Password Setting' 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 'Password Setting' from 'BIOS Features Setup' menu, you will be prompted for the password only when you enter BIOS Setup.



IDE HDD Auto Detection

The Enhanced IDE features are included in all Award BIOS. Below is a brief description of these features.

ROM PCI/ISA BIOS (2A69KQ10) CMOS SETUP UTILITY AWARD SOFTWARE, INC.							
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR MODE
Primary Master:							
Select Primary Master Option (N=Skip): N							
OPTION	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
2(Y)	541	525	32	0	1049	67	LBA
1	541	1050	16	65535	1049	63	NORMAL
3	541	525	32	65535	1049	63	LARG
Note: Some OSes (like SCO-UNIX) must use "NORMAL" for installation							
ESC: Skip							

Figure-11 IDE HDD Auto Detection Menu

1. Setup Changes

With auto-detection

- BIOS setup will display all possible modes supported by the HDD including NORMAL, LBA and LARGE.
- If HDD does not support LBA modes, no 'LBA' option will be shown.
- If number of physical cylinder is less than or equal to 1024, 'LARGE' option may not be shown.
- Users can select their appropriate mode .

With Standard CMOS Setup

	CYLS	HEADS	PRECOMP	LAND ZONE	SECTOR	MODE
Drive C: User(516MB)	1120	16	65535	1119	59	Normal
Drive D: None(203MB)	684	16	65535	685	38	-----

When HDD type is in 'user' type, the 'MODE' option will be available for users to select their own HDD mode.



2. HDD Modes

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

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 recognizing 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.

Auto detect

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

3. 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.

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 Motherboard Utility CD-ROM

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

1. Chipset Dispatches:

Intel Chipset Drivers included in the directory \ChipDrv\Intel can be used for this motherboard.

 - a. Intel PIIX4 Driver, included in directory \ChipDrv\Intel\PIIX4
This driver is for Windows 95/OSR2 which supports the latest Intel PCI devices such as the PCI IDE hard disk controller, PCI USB device etc. It can also remove the yellow question mark in the Device Manage of Windows 95 after installation.
Running \ChipDrv\Intel\PIIX4\Setup.exe for installation.
 - b. Intel Bus Master Driver, included in directory \ChipDrv\Intel\BMIDE
It's Intel Bus Master Driver for Windows 95, which can enhance the capability of IDE data transaction up to Ultra DMA/33MB supported by 440BX chipset or other ultimate chipset.
Running \ChipDrv\Intel\BMIDE\Setup.exe for installation.
2. 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.
3. QDI ManageEasy V2.0
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 everyday.



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, a bridge between the complex hardware and OS, used to access hardware status and to execute control functions. It supports stronger functions for Windows 9X and Windows NT. These functions enable you to view more than one hundred of the basic information about the system and monitor some key reference data concerning 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.

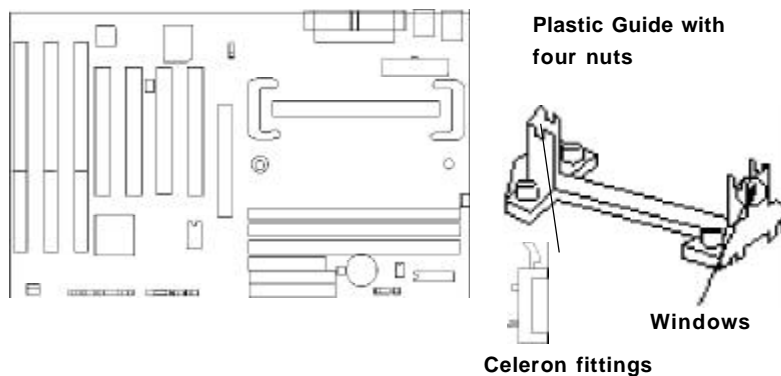
4. QDI SecurityEasy
This software provides a convenient access method to activate SecurityEasy. Other than pushing the SLEEP button, clicking the watchdog icon on the task bar also allows the system to enter Lock Status. Running \QSE\lock.exe for Windows 95 and Windows NT installation. (After installation refer to readme file for details by clicking Start/Programs/Security Easy Access). Please note, hardware is a manufacturing option.
5. QDI Motherboard Utility:
AWDFLASH.EXE
CBLOGO.EXE
LFEXE
Refer to the online help for information on how to use these utilities.
6. Documents for QDI Motherboard:
The files included in the directory \Doc are:
Adobe Acrobat Reader V3.0 —ar32e301.exe
ManageEasy Manuals —QMEV12.PDF.



Appendix B.

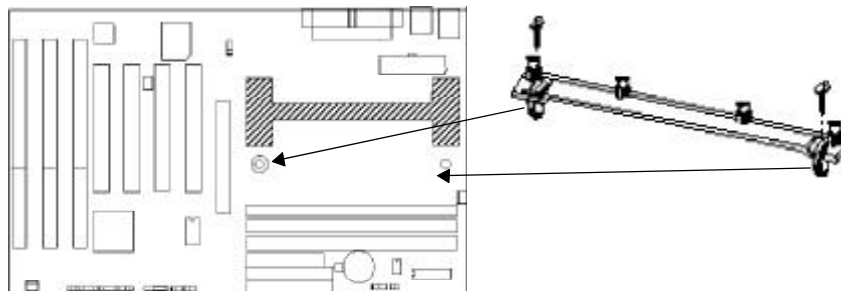
Retention Mechanism & Pentium® II/ Celeron™ Processor Installation Procedures

1. Place Plastic Guide with plastic caps on the motherboard, and secure all four caps.

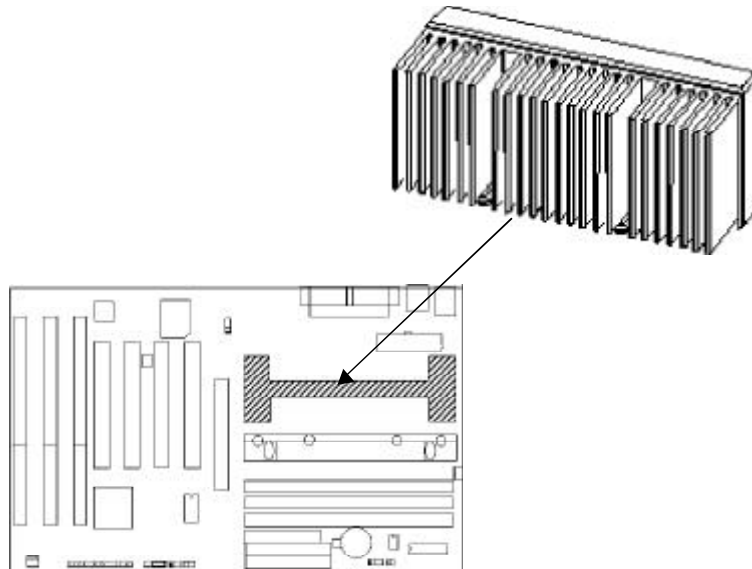


- Note: 1. Please choose four caps which match the motherboard.
2. If choosing to use Celeron™ Processor, snap-on Celeron fittings onto the Plastic Guide.
 3. Please note the Plastic Guide has one orientation. If one way doesn't fit, change the direction to the other way. Do not forcefully press the Plastic Guide onto the motherboard.

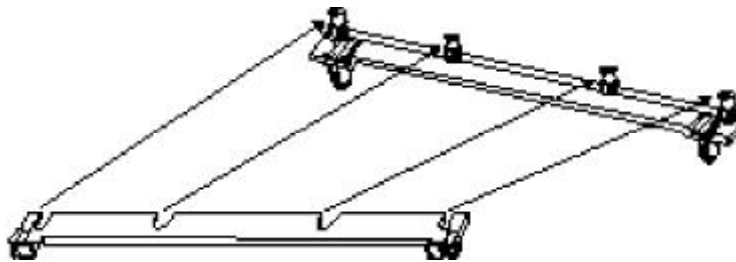
2. Install HSSBASE (Heatsink Support Base) on motherboard, then insert the two plastic pins through the HSSBASE securing it to the motherboard.



3. Insert Pentium® II or Celeron™ Processor in Slot1.

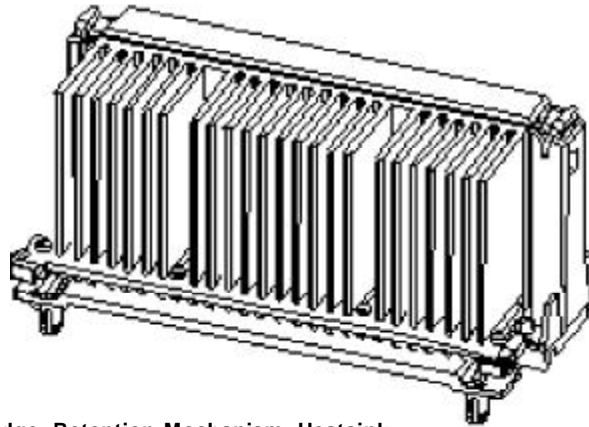


4. Clip Plastic Bar onto the HSSBASE through the fins on the processors' heatsink.





5. The Retention Mechanism installation procedure is completed as shown below.



**S.E.C Cartridge, Retention Mechanism, Heatsink support, and ATX Form Factor Headsink Isometric View
Not To Scale**

Remark:

Please skip step2 and step4 for Boxed Pentium® II Processor and refer to relevant details of this kind of processor for your installation.

Appendix C. Boot Logo

When you power on or reset your system, the picture listed below will be shown on the screen.



If you press <Esc>, it switches to the booting message screen. Otherwise, it enters operating system directly. You can use ' **cblogo.exe** ' (included on the QDI Motherboard Utility CD) to replace it by any other logo which you prefer. Regarding the method of using **cblogo.exe** utility, please refer to it's online help. If you don't prefer the logo displayed on the screen during boot up, set the ' Show Bootup Logo' option as Disabled in the ' BIOS FEATURES SETUP' section of the BIOS

*** We reserve the right of modifying the default full-logo of QDI without further notification.**

Item Checklist

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

- BrillianX 1S/2000 motherboard
- QDI Motherboard Utility CD-ROM
- Retention Module
- I/O shield
- 1 IDE ribbon cable
- 1 floppy ribbon cable
- User' s manual

Notice

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

**Board Layout of
BrilliantX 1S/2000 V2.0**



The Patent for SpeedEasy