

Declaration of conformity



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

declares that the product

Pentium®II Motherboard
P6I440BX/B2

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

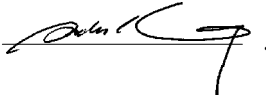
QDI COMPUTER (NETHERLANDS) B. V.

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Signature :  . Place / Date : HONG KONG/1998

Printed Name : Anders Cheung Position/ Title : President

Declaration of conformity

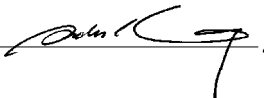


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Equipment Classification: FCC Class B Subassembly
Type of Product: AGP Pentium®II Motherboard
Manufacturer: Quantum Designs (HK) Inc.
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Supplementary Information:

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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Chapter 1

Introduction

Overview

P6I440BX/B2 mainboard, using the latest QDI innovation —Twin Magic technology, provides users with high performance and cost-effective platform for both workstations and servers. By using QDI Twin Magic CPU card, the single slot1 mainboard turns to support dual Intel®Celeron™PPGA 370 processors, therefore provides high performance system at an extremely low price, especially for the multi-task operating system such as Windows NT or Windows 2000. It also supports all Intel®Pentium®II/Pentium®III and Slot 1 Celeron™ processors. Both 66MHz and 100MHz SDRAMs are supported. It provides advanced features such as Wake-up On LAN, Wake-up On internal/external Modem and Keyboard Password Power-on functions. 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.

Key Features

Form factor

- ATX form factor of 305mm x 193mm.

Microprocessor

- Supports dual Intel® Celeron™ PPGA processors at 266/300/333/366/400/433/500MHz with 66MHz FSB(front side bus) and future processors with 100MHz FSB speed by using QDI twin Magic Card
- Supports all Intel Pentium®II processors at 233/266/300/333MHz with 66MHz FSB and 350/400/450/500/550/600MHz with 100MHz FSB.
- Supports all Intel Pentium®III processors at 450/500/550MHz with 100MHz FSB
- Supports all Intel®Celeron™ processors(Slot 1) at 266/300/333/366/400/433/466 MHz with 66MHz FSB.
- Supports 66/100MHz front side bus.
- CPU core frequency = Bus speed x2.5, x3, x3.5, x4, x4.5, x5, x5.5, x6, x6.5, x7, 7.5, 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. Compatible with Ultra DMA/66 HDD.
- 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

- 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).



- Provides management application such as ManageEasy.
- Supports keyboard password power-on function.
- 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

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



Performance List

The following performance data list is the testing results of authoritative ServerBench testing program.

These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different ServerBench testing results.)

Hardware & Software configuration:

- Mainboard QDI P6I440BX/B2 with QDI Twin Magic CPU card
- CPU
 1. Dual Intel® Celeron™ PPGA 370 466MHz processor
 2. Single Intel® Celeron™ PPGA 370 466MHz processor
 3. Single Intel Pentium® III 550MHz processor
- DIMM 128MPC100DIMM
- SCSI Card Adaptec AHA-2940UW
- LAN Intel Etherexpress PRO adapter
- SCSI HD Quantum ATLAS™ III 3.5 SERIES 18.2GB
- O.S. Windows NT™ 4.0 server with SP3
- Client 6
- Controller 1
- Server 1

ServerBench Summary Table			
Mix Name	Harmonic mean of Total TPS Scores (Dual Intel® Celeron™ PPGA 370 466MHz processor)	Harmonic mean of Total TPS Scores (Single Intel® Celeron™ PPGA 370 466MHz processor)	Harmonic mean of Total TPS Scores (Single Intel® Pentium III 450MHz processor)
sys_1	286.582	281.781	438.037
sys_2	477.856	330.551	431.455
sys_3	532.952	325.044	424.606
sys_4	522.207	326.408	413.413
sys_5	522.890	319.742	407.634
sys_6	520.819	319.867	406.179

Test Information: ServerBench 4.01 for Windows NT -svr-

QDI P6I440BX/B2 with QDI Twin Magic CPU card offers a substantial increase in performance at a competitive price by information of table shown above.



Chapter 2

Installation Instructions

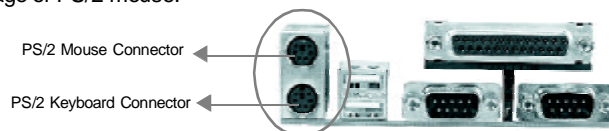
This section covers External Connectors, Jumper Settings and Memory Configuration. Refer to the motherboard layout chart for locations of all the jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular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

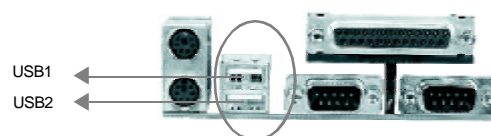
PS/2 Keyboard Connector, PS/2 Mouse Connector

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.



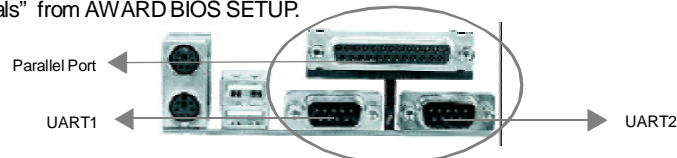
USB1, USB2

Two USB ports are available for connecting USB devices.



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

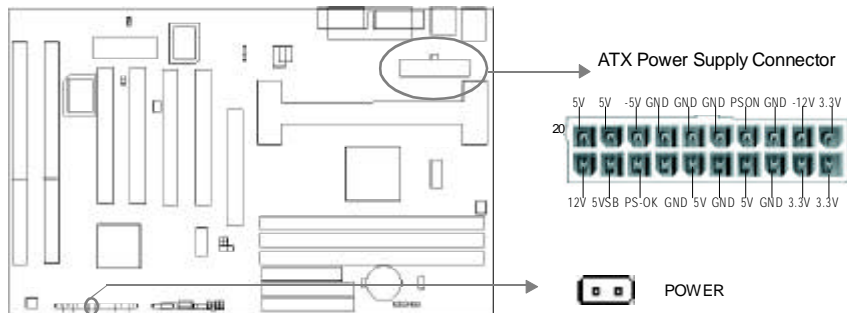
The parallel port connector can be connected to a parallel device such as a printer, while the serial port connectors can be connected to serial port devices such as a serial port mouse. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP.





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 two status. When the system is powered off, the LED is off. 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.

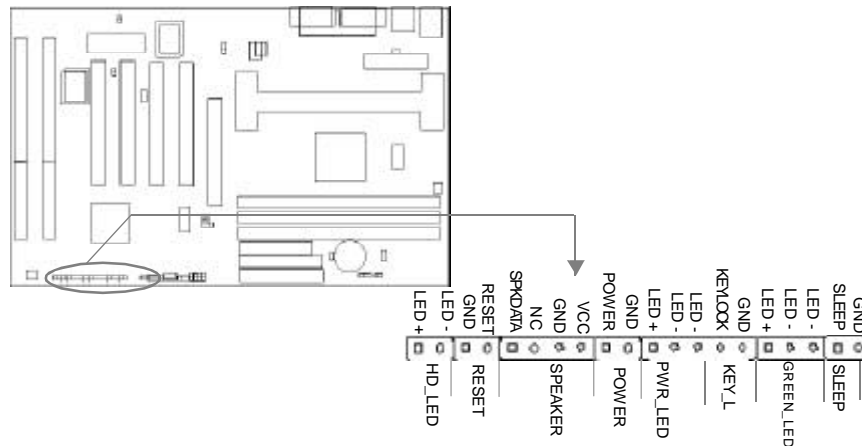


ACPI LED Connector (GREEN_LED)

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, the LED will flash.

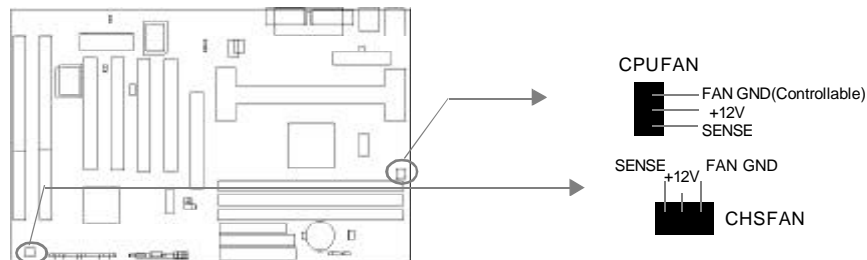
Hardware Green Connector (SLEEP)

Push once the switch connected to this header, the system enters suspend mode.



Fan Connector (CPUFAN, CHSFAN)

The fan speed of these two fans can be detected and viewed in “System Monitor” section of the BIOS. The CPUFAN will be automatically turned off after the system enters suspend mode.

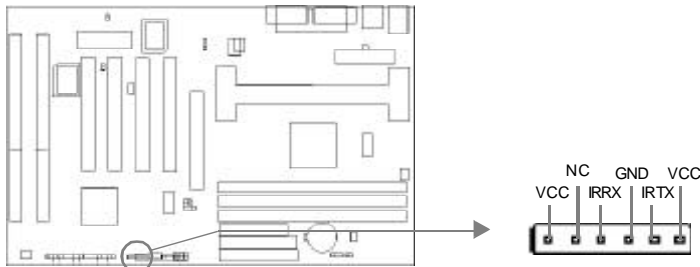


Note: It is recommended the CPU fan connector is used only when single processor is installed in the system. When dual Intel® Celeron™ PPGA processors are installed by using the Twin Magic CPU card, you have to use the CPU fan of which power connector uses ATX power supply's connector.



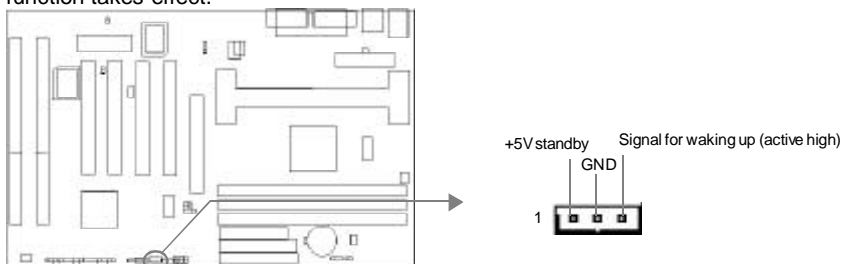
Infrared Header (IrDA)

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.



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)

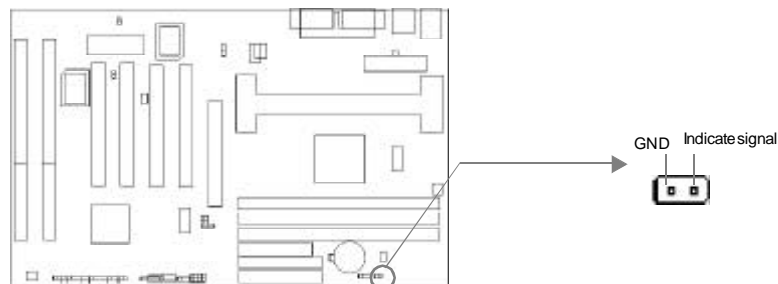
Through the Wake-Up On Internal Modem function, the system which is in the power-off status can be powered on by a ring signal received from the internal modem. If this function is to be used, be sure an internal modem card which supports the function is used. Then connect this header to the relevant 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.





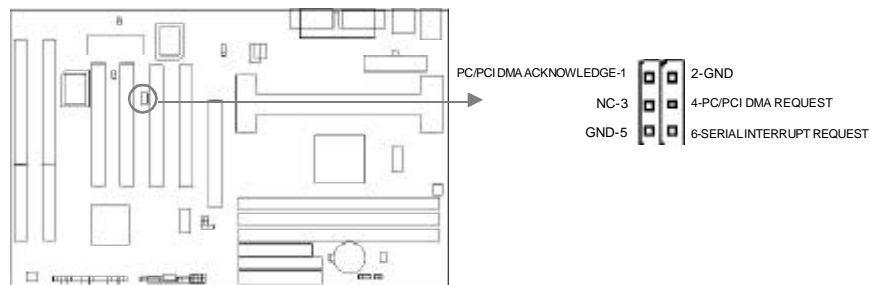
Chassis Security Switch (CHSSEC)

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 to the customer that the chassis has been opened. You can get this information from "System Monitor" of the BIOS



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.
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

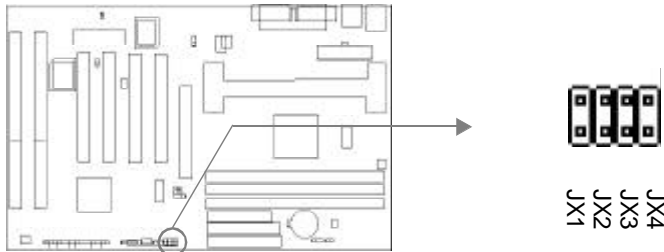


Jumper Settings

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.

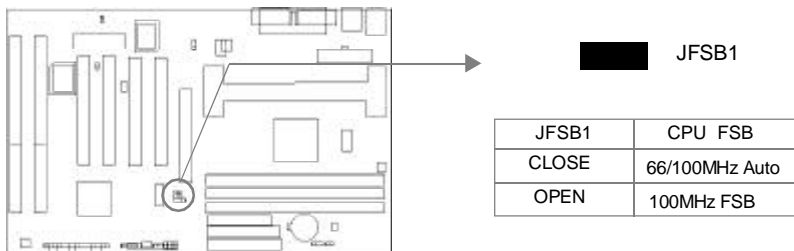
Clock Multiple Selection (JX4,JX3,JX2,JX1)

These jumpers set the frequency ratio between the Internal frequency of the CPU and the external frequency (namely the Front Side Bus). The system can determine the external frequency (FSB) of the CPU automatically. The Front Side Bus multiplied by the Clock Multiple equals the CPU's frequency.



Overclocking Jumper Setting (JFSB1)

Jumpers labeled JFSB1, JFSB2 and JCLK are located on the mainboard providing users with CPU overclocking feature. The host bus speed can be set as 66/100MHz or AUTO select. Refer to the chart below for the location of these jumpers, and the table for information on how to set them.



If CPU FSB is set as default setting 66/100MHz AUTO, 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. We do not guarantee the overclocking system to be stable. Please keep Jumper(JFSB1) setting in accordance with the Jumper(JFSB) on Twin Magic card, or set Jumper(JFSB1) default setting in order to suit Jumper(JFSB) setting on card. Refer to Twin Magic card introduction for more information.



Clock Multiple Selection Table

Since current Intel Celeron™ PPGA 370 processors are all bus ratio locked, the following clock multiple settings are in fact not available for those processors.

FREQ.MUT	JX1	JX2	JX3	JX4
2	Close	Close	Close	Close
2.5	Open	Close	Close	Close
3	Close	Open	Close	Close
3.5	Open	Open	Close	Close
4	Close	Close	Open	Close
4.5	Open	Close	Open	Close
5	Close	Open	Open	Close
5.5	Open	Open	Open	Close
6	Close	Close	Close	Open
6.5	Open	Close	Close	Open
7	Close	Open	Close	Open
7.5	Open	Open	Close	Open
8	Close	Close	Open	Open

Carefully set the processor frequency by referring to the list below. The default setting is 400MHz.

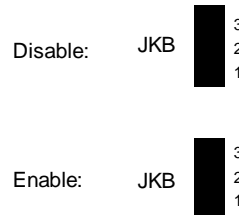
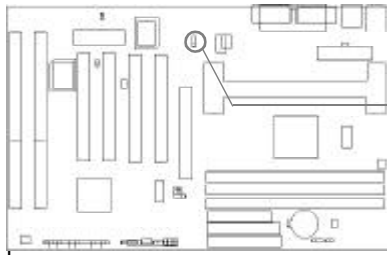
CPU Model	Freq. (MHz)	FSB (MHz)	Multiple	JX1	JX2	JX3	JX4
Pentium®II/ Pentium®III/ Celeron™	233	66	3.5	Open	Open	Close	Close
	266	66	4.0	Close	Close	Open	Close
	300	66	4.5	Open	Close	Open	Close
	333	66	5.0	Close	Open	Open	Close
	366	66	5.5	Open	Open	Open	Close
	400	66	6.0	Close	Close	Close	Open
	400	100	4.0	Close	Close	Open	Close
	350	100	3.5	Open	Open	Close	Close
	450	100	4.5	Open	Close	Open	Close
	500	100	5.0	Close	Open	Open	Close
	550	100	5.5	Open	Open	Open	Close
	600	100	6.0	Close	Close	Close	Open
	650	100	6.5	Open	Close	Close	Open
	700	100	7.0	Close	Open	Close	Open
750	100	7.5	Open	Open	Close	Open	
800	100	8.0	Close	Close	Open	Open	

Note: P6I440BX/B2 supports dual Celeron™ processors solution by using QDI Twin Magic CPU card.



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 closed 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.

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.

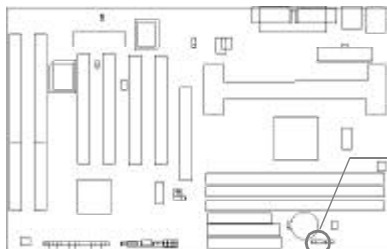
2.If you set JKB with pin2&pin3 closed, set “POWER ON Function” to **BUTTON ONLY, don’t set it to Password/Keyboard 98, or this will prevent you from powering up your system.**

3. If Keyboard 98 is used, set JKB with Pin1& Pin 2 closed, meanwhile set “Power On Function” to keyboard 98 in AWARD BIOS CMOS setup.

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

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.

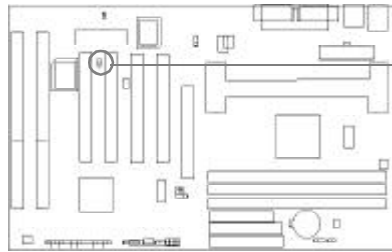



(Unplug the AC power supply)



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.



Flash Write Enabled
(Default)  JAV

Flash Write Disabled  JAV

Setting the jumper JAV as open (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 Flash ROM.

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 close makes flashing BIOS and updating DMI information impossible. Therefore, set JAV as open 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 detailed BIOS explanation.

Memory Configuration

This motherboard 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.



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Chapter 3

BIOS Description

Utility Support:

FLASH.EXE

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

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

When you are encountering problems, for example, you find your system doesn't support the new CPU which is released after our current motherboard, you may therefore update 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 FLASH.EXE from the directory \Utility on the QDI Motherboard 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 motherboard.
4. Uncompress the file download, copy the BIOS file (xx.bin) onto the bootable diskette, and write down the checksum of this BIOS which is included in readme file.
5. Reboot the system from the bootable diskette which you have created.
6. Then run the FLASH utility at the **A:** prompt. During the process, the system will prompt : ' Do you want to save the BIOS(Y/N)' . If you type ' Y' , the system will prompt for the BIOS name. The system will also display the checksum which should be exactly the same as the checksum you copied from the readme file. Don' t turn off power or reset the system until the BIOS upgrade has been completed.

Concerning how to run the FLASH utility, please refer to the following descriptions:

Usage: FLASH [BIOSfile] [/c[<command...>]][/n]

FLASH [BIOSfile] [/g]

/c: Flashing memory will clear previous settings. Default allows settings to remain.

<command> function definition:

c: clear CMOS;

p: clear PnP;

d: clear DMI.



/n: programs BIOS without prompting. If this option is chosen:

Be sure your new BIOS is compatible with your MB. If not, the system will be damaged.

/g: Retrieves BIOS file from BIOS ROM.

Examples:

A:\FLASH.EXE BIOSfile.bin

A:\FLASH.EXE BIOSfile.bin /cdpc/n

A:\FLASH.EXE BIOSfile.bin /g

Note: FLASH utility runs incorrectly at Windows DOS prompt.



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.

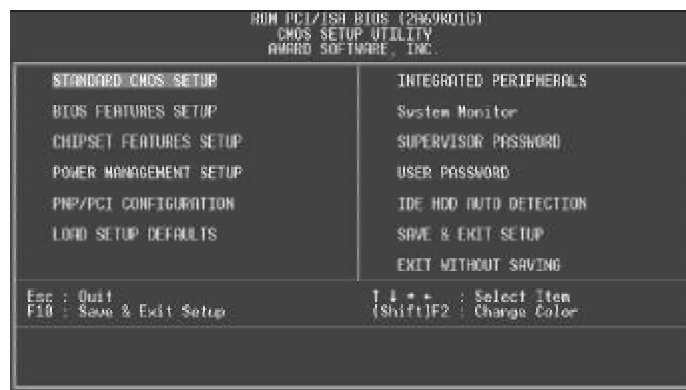


Figure-1 Main Menu

Note:The 'System Monitor' item will not be displayed if there is no LM80 supporting chips 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.



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.
• Memory Parity/ECC Check	<i>Enabled</i>	Enables the Error Checking & Correction if ECC memory is used.
	<i>Disabled</i>	Disables the ECC function
• 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.
	<i>Non-OS2</i>	If your operating system is not OS/2, please select this item.
• OS Select For DRAM>64MB	<i>OS2</i>	If system DRAM is more than 64MB and the operating system is OS/2, please select this item.
	<i>Enabled</i>	Enables S.M.A.R.T hard disk support.
• HDD S.M.A.R.T Capability	<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.
	<i>Disabled</i>	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). 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>
• Auto Configuration	<i>Enabled</i>	Automatically configures DRAM Timing according to the value of ' DRAM Speed Selection' .
	<i>Disabled</i>	Manually configures. *Note: It is recommended that the ' Enabled' option be chosen by common users.
• EDO DRAM Speed Selection	50ns, 60ns	This item is of selected EDO DRAM read/write timing. You must ensure that your DIMMs are as fast as 50ns, otherwise 60ns should be selected .
• EDO CAS# MA Wait State	2	One additional wait state is inserted before the assertion of the first CAS# for page hit cycles. This allows one additional clock of MA setup time to the CAS# for the leadoff page hit cycle. Page miss and row miss timing are not affected by this bit.
• EDO RAS# Wait State	1	Without additional wait state.
	2	One additional wait state is inserted before RAS# is asserted for row misses. This provides one clock of additional MAX[13:0] setup time to RAS# assertion. This bit does not affect page misses since the MAX[13:0] lines are setup several clocks in advance of RAS# assertion for page misses.
	1	Without additional wait state.



● 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	<i>Enabled</i>	Default setting is suggested.
	<i>Disabled</i>	
● DRAM ECC Select	<i>ECC</i>	Provides ECC (Error Checking and Correction) function.
	<i>Non-ECC</i>	Disables ECC function.
● Video BIOS Cacheable	<i>Enabled</i>	Beside conventional memory, video BIOS area is also cacheable.
	<i>Disabled</i>	Video BIOS area is not cacheable.
● Video RAM Cacheable	<i>Enabled</i>	Besides conventional memory, video BIOS area is also cacheable.
	<i>Disabled</i>	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	<i>Enabled</i>	Memory hole at 15-16M is reserved for expanded ISA card
	<i>Disabled</i>	Does not set this memory hole.
● Passive Release	<i>Enabled</i>	Default setting is suggested.
	<i>Disabled</i>	
● Delayed Transaction	<i>Enabled</i>	Default setting is suggested.
	<i>Disabled</i>	
● 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>	Enables Clock Spread Spectrum to reduce EMI.
	<i>Disabled</i>	Disables Clock Spread Spectrum.
● Close Empty DIMM/PCI Clk	<i>Enabled</i>	Closes empty DIMM clock or PCI clock to reduce EMI.
	<i>Disabled</i>	Does not close empty DIMM or PCI clock.
● Spread Spectrum Modulated	<i>Enabled</i>	Enables Spread Spectrum Modulated to reduce EMI.
	<i>Disabled</i>	Disables Spread Spectrum Modulated



Power Management Setup

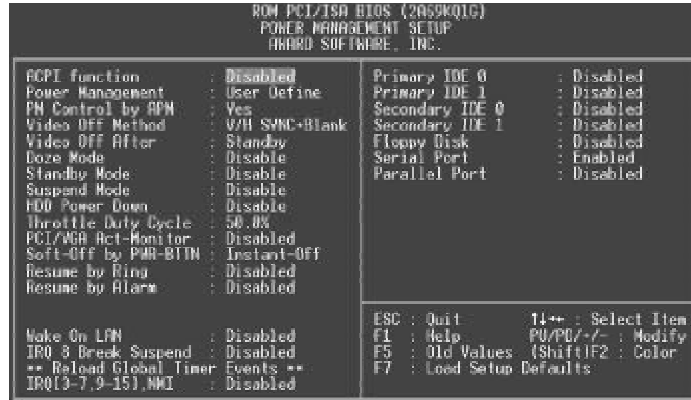


Figure-6 Power Management Setup Menu

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.
• MODEM Use IRQ	<i>3,7,5,7,9, 10,11</i>	Special wake-up event for Modems.
	<i>NA</i>	Invalidates this feature.
• 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).
• Throttle Duty Cycle	<i>12.5% 25% 37.5% 50 % 62.5% 75% 87.5%</i>	Selects the duty cycle of the STPCLK# signal , slowing down the CPU speed when the system enters the green mode.
• VGA Active Monitor	<i>Enabled Disabled</i>	VGA active reloads global timer. 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.



• 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.
• Resume by Alarm	<i>Disabled</i> <i>Enabled</i>	Does not allow Ring Power-On. 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.
• Wake Up on Lan	<i>Disabled</i> <i>Enabled</i>	RTC has no alarm function. Allows the system to be powered on when a remote wake up signal comes up to the WOL header from LAN adapter.
• IRQ8 Break suspend	<i>Disabled</i> <i>Enabled</i> <i>Disabled</i>	Does not allow wake up on LAN Generates a clock event. Does not generate a clock event.
• IRQ [3-7, 9-15], NMI	<i>Enabled</i> <i>Disabled</i>	Reloads global timer. Does not influence the global timer.
..... Parallel Port		



PNP/PCI Configuration Setup

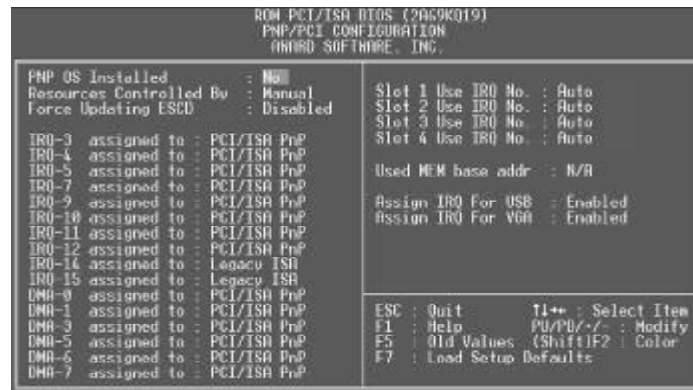


Figure-7 PNP/PCI Configuration Setup Menu

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 10,11,12,14,15	Assigns an IRQ for slot1/2/3/4 manually or automatically.
• 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>Keyboard 98</i>	“Wake” key on keyboard 98 can be used to power up the system.
	<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. Note: 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.
• Onboard FDC Controller	<i>Enabled</i> <i>Disabled</i>	Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled.
• Onboard Serial 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. Onboard serial port address and IRQ are automatically assigned.
• Serial Port 2 Mode	<i>Disabled</i> <i>Normal</i> <i>ASKIR</i> <i>IrDA</i>	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 version 1.0 SIR protocol with maximum baud rate up to 115.2Kbps.
• Onboard Parallel Port	<i>378/IRQ7,</i> <i>278/IRQ5,</i> <i>3BC/IRQ7</i>	Defines onboard parallel port address and IRQ channel.
• Parallel Port Mode	<i>Disabled</i> <i>SPP</i> <i>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.



System Monitor

```

ROM PCI/ISA BIOS (2A59K019)
System Monitor
AWARD SOFTWARE, INC.

Current System Temp. : 30°C/86°F
Current CHSFAN Speed : 4320 RPM
Current CPUFAN Speed : 2010 RPM

+3.3V Voltage : 3.28 V
VTT(+1.5V) Voltage : 1.37 V
+5V Voltage : 4.83 V
VCCVID(CPU) Voltage : 4.83 V
+12V Voltage : 11.79 V
-12V Voltage : -13.50 V
Chassis status : closed

ESC : Quit      F10 : Select Item
F1 : Help      PU/PD/+/ : Modify
F5 : Old Values (Shift)F2 : Color
F7 : Load Setup Defaults
  
```

Figure-9 System Monitor Menu

The following describes the meaning of each item.

<u>Item</u>	<u>Current Data Shown</u>	<u>Description</u>
<ul style="list-style-type: none"> Current System Temp. Current CHSFAN Speed Current CPUFAN Speed 	30°C/ 86°C 2010RPM 4320RPM	The temperature inside the chassis. 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.
<ul style="list-style-type: none"> + 3.3V Voltage VTT (+1.5) Voltage, + 5V VCCVID(CPU) Voltage +12V -12V 	3.28V 1.37V 4.83V 4.83V 11.79V -13.50V	Displays current Voltage values including all the most important voltages of the motherboard. +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.
<ul style="list-style-type: none"> Chassis Status 	Closed Opened	Indicates status of chassis is closed. Indicates status of chassis is opened.



Supervisor/User 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	SECTOR	MODE
	ZONE					
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.



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.
4. 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 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.

5. QDI Motherboard Utility:

FLASH.EXE
CBLOGO.EXE
LFEXE

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

6. Documents for QDI Motherboard:

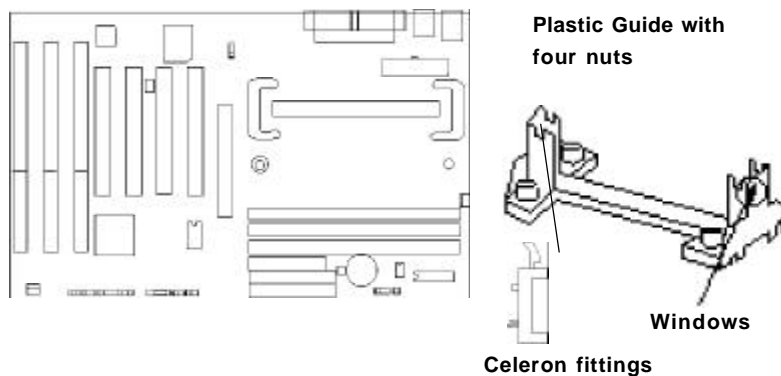
The files included in the directory \Doc are:
Adobe Acrobat Reader V3.0 —ar32e301.exe
ManageEasy Manuals —QMEV12.PDF.



Appendix B.

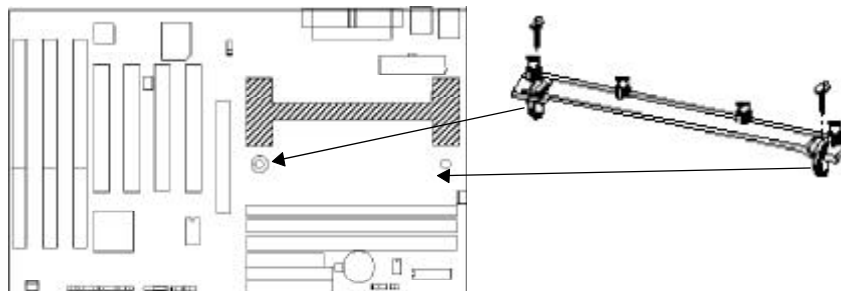
Retention Mechanism & Pentium® II/ Celeron™ Processor Installation Procedures

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



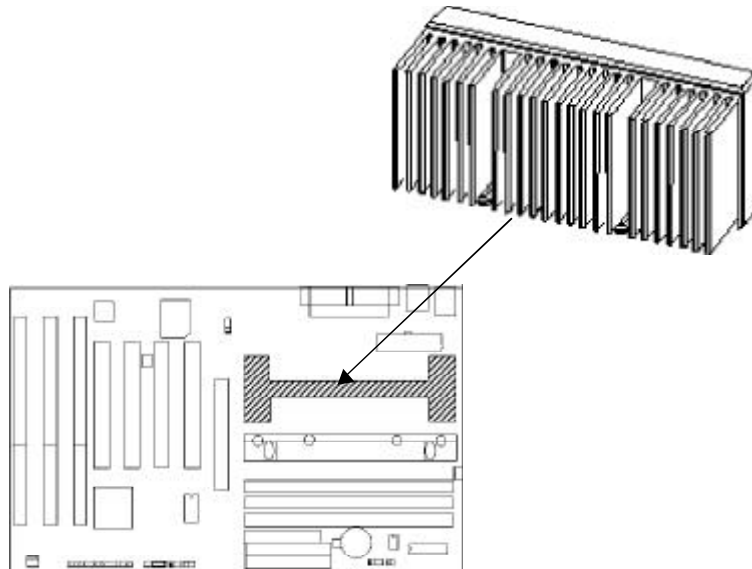
- Note: 1. Please choose four caps which match the motherboard.
2. If choosing to use Celeron™ Processor, snap-on Celeron fittings onto the Plastic Guide.
 3. Please note the Plastic Guide has one orientation. If one way doesn't fit, change the direction to the other way. Do not forcefully press the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

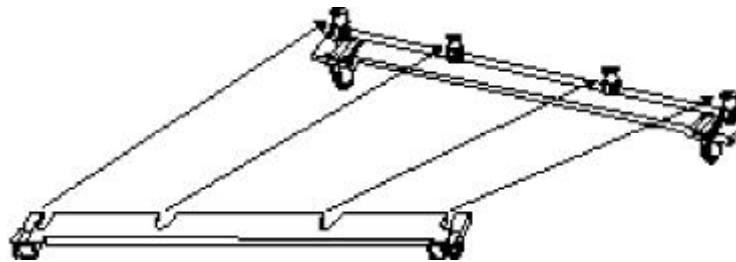




3. Insert Pentium® II or Celeron™ Processor in Slot1.

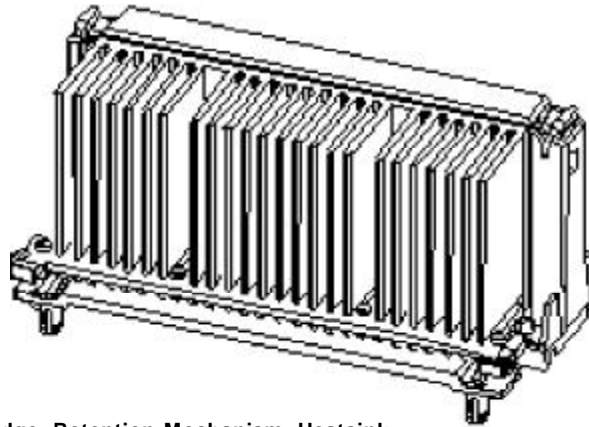


4. Clip Plastic Bar onto the HSSBASE through the fins on the processors' heatsink.





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.**

P/N : 430-01017-401-00
Manual P6I440BX/B2 Ver 1.0

Item Checklist

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

- P6I440BX/B2 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
P6I440BX/B2 V1.0**