

PENTIUM® II

**P6I440EX/MATX**  
**EXCELLENT II**

# Declaration of conformity



(EC conformity marking)

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

declares that the product

**Pentium® II Motherboard**  
**P61440EX/MATX EXCELLENT II**

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

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> EN 55022   | Limits and methods of measurements of radio disturbance characteristics of information technology equipment |
| <input checked="" type="checkbox"/> EN 50081-1 | Generic emission standard part 1:<br>Residential , commercial and light industry                            |
| <input checked="" type="checkbox"/> EN 50082-1 | Genetic immunity standard Part 1:<br>Residential, commercial and light industry                             |

European Representative:

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QDI COMPUTER (ESPANA)S.A.	QDI COMPUTER (SWEDEN) AB

Signature : \_\_\_\_\_ Place /Date : HONG KONG /1998

Printed Name : Anders Cheung \_\_\_\_\_ Position/ Title : President

# Declaration of conformity



Trade Name:	QDI Computer ( U. S . A. ) Inc.
Model Name:	P6I440EX/MATX EXCELLENT II
Responsible Party:	QDI Computer ( U. S. A.) Inc.
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Type of Product:	Pentium® II Motherboard
<b>Manufacturer:</b>	<b>Quantum Designs (HK) Inc.</b>
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 : \_\_\_\_\_1998\_\_\_\_\_

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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. Press the <Del> key and switch on power to the system 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).**

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:

ROM PCI/ISA BIOS (2A69JQ1K) SpeedEasy CPU SETUP QDI Innovative Technology	
CPU Model : Pentium® II Speed Mode : SpeedEasy CPU Speed : 233MHz	Warning: Be sure your selection is right .CPU over speed will be dangerous!
	ESC:Quit    ↑ ↓ → ← Select Item F1: Help    PU/PD/+/-: Modify (Shift) F2: Color

*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® II/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 in 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. Bei der Pentium® II/Celeron™ sind das 200MHz.***

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

## SpeedEasy CPU Installationsmenü

Wählen Sie < SpeedEasy CPU SETTING> aus dem Hauptmenu und öffnen Sie das untergeordnete Menü

ROM PCI/ISA BIOS (2A69JQ1K) SpeedEasy CPU SETUP QDI Innovative Technology	
CPU Model : Pentium® II Speed Mode : SpeedEasy CPU Speed : 233MHz	Warning: Be sure your selection is right .CPU over speed will be dangerous!
	ESC:Quit    ↑ ↓ → ← Select Item F1: Help    PU/PD/+/-: Modify (Shift) F2: Color

Abb.1 SpeedEasy CPUInstallationsmenü

Das BIOS stellt Ihnen eine Reihe von Grundeinstellungen für Ihren CPU zur Verfügung, anstelle von "Jumper Setting". Sie können manuell die Geschwindigkeit der 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 minima por defecto (200MHz)**

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:

ROM PCI/ISA BIOS (2A69JQ1K) SpeedEasy CPU SETUP QDI Innovative Technology	
CPU Model : Pentium® II Speed Mode : SpeedEasy CPU Speed : 233MHz	Warning: Be sure your selection is right .CPU over speed will be dangerous!
	ESC:Quit    ↑ ↓ → ← Select Item F1: Help    PU/PD/+/-: Modify (Shift) F2: Color

*Figura-1 Menú 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 cual esta diseñada su CPU. De otra manera, no seremos responsables de los daños que esto pudiera ocasionar.**



## Facilité de vitesse Initialisation

Procédure:

1. Insérez le Pentium® II/Intel® Celeron™ correctement.
2. Connectez les autres configurations et restaurez le système.
3. Appuyez sur la touche <Del> et mettez le système sous tension pour entrer dans l'initialisation BIOS.
4. Entrez le menu "SpeedEasy CPU SETUP" (=initialisation de la facilité de vitesse dans l'unité centrale) pour déterminer la vitesse de l'unité centrale.

**Note: Si vous ne déterminez pas la vitesse de votre unité centrale, votre système fonctionnera par défaut (200MHz).**

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

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

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

ROM PCI/ISA BIOS (2A69JQ1K) SpeedEasy CPU SETUP QDI Innovative Technology	
CPU Model : Pentium® II Speed Mode : SpeedEasy CPU Speed : 233MHz	Warning: Be sure your selection is right .CPU over speed will be dangerous!
	ESC:Quit    ↑ ↓ → ← Select Item F1: Help    PU/PD/+/-: Modify (Shift) F2: Color

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 dégâts qui en résulteraient.





## SETUP DELLA SCHEDA SPEEDEASY

### Procedura di installazione:

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

**Nota: se non regolate la velocità del microprocessore, il sistema funzionerà con le regolazioni standard (200MHz).**

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:

ROM PCI/ISA BIOS (2A69JQ1K) SpeedEasy CPU SETUP QDI Innovative Technology	
CPU Model : Pentium® II Speed Mode : SpeedEasy CPU Speed : 233MHz	Warning: Be sure your selection is right .CPU over speed will be dangerous!
	ESC:Quit    ↑ ↓ → ← Select Item F1: Help    PU/PD/+/-: Modify (Shift) F2: Color

*Figure -1 Menudel Setup del Microprocessore SpeedEasy*

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

## SpeedEasy ǒİĒÛÉèÖÃÖ\_Äİ

### ³İĐðŁ°

1ǒĲŌýĒ·μØ²ăĒĚ Pentium® II »ð Intel® Celeron™ ÖĐÑĚ ĴÀÍÆ÷ǒŁ

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×ĲŌâŁ°Èð²»μ÷½ÚÖĐÑĚ ĴÀÍÆ÷μÄĒÛĴĒĒŁ¬İμÍ³»ă×ŌĴǒ½«ÆăĒÛĴĒĒŁ  
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**200MHzǒŁ**

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中文繁體



## SpeedEasy: àÊÛÉèÖÃÖ, ÄÏ

### ³IDð£°

1; ¢ÖýÈ·µØ²ãÈë Pentium® II »ð Intel® Celeron™ ÖÐÑë¹ÀíÆ÷; £

2; ¢²ãÈëÆãËûÃäÖÃ£¬×é×³ÉÍëÖûµÄÎ¢»úµÍ³; £

3; ¢;³ÆðÏµÍ³µçÔ´£¬²¢ÇÖ°´ <Del> ¼ü£¬½øÈë BIOS Éè¶; £

4; ¢½øÈë “SpeedEasy CPU SETUP” ²Ëµ¥£¬¬ÖÔµ÷½ÚÖÐÑë¹ÀíÆ÷µÄËÜ¶È; £

×¢Òâ£°Èð²»µ÷½ÚÖÐÑë¹ÀíÆ÷µÄËÜ¶È£¬ÏµÍ³»á×Ô¶¬½«ÆãËÜ¶ÈÉèÖÃÎª

**200MHz; £**

5; ¢±£´æ°ÃÉè¶²ÎÊý°óÏë³öBIOS Éè¶; £ÄãµÄÏÍ³½«»á°ÖÖÃãµÄÉè¶²É¹Æð¶; £



# Chapter 1

## Introduction

### Overview

P6I440EX/MATX EXCELLENT II is a highly integrated, cost-effective, micro-ATX motherboard which is centered on the Intel® 440EX AGPset. It provides 66MHz system bus support for both Pentium® II and Intel® Celeron™ processors. Flexible main memory size can be ranged from 8MB up to 256MB SDRAM or from 8MB up to 512MB EDO memory. It also provides advanced features such as AGP, wake-up on LAN and wake-up on internal modem. LDCM ( LANDesk® Client Manager) application is shipped optionally to enable remote monitoring and configuration of the system. The current green function is compliant with ACPI specification.

### Key Features

#### **Form factor**

- microATX form factor of 244mm x177mm.
- Provides backward compatibility with standard ATX 2.01 chassis for easy integration.

#### **Microprocessor**

- Supports Pentium® II and Intel® Celeron™ processors at 233/266/300/333MHz.
- Supports 66MHz bus speed.
- CPU core frequency = System Clock x2.5, x3, x3.5, x4, x4.5, x5, x5.5.
- On board switching voltage regulator with VID(Voltage ID), CPU core supply voltage can be selected from 1.3V to 3.5V automatically.

#### **Chipset**

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

#### **System memory**

- Two 168 pin 3.3V unbuffered DIMM sockets.
- Supports up to 256MB SDRAM or up to 512MB EDO Memory.

#### **On-board IDE**

- Supports two PCI PIO and bus Master IDE ports.
- Supports up to Mode 4 Timing.
- 2 Fast IDE interfaces supporting 4 IDE devices including IDE hard disks and CD ROMs.
- Supports "Ultra DMA/33" Synchronous DMA mode , transfers up to 33 MBytes/sec.
- Integrated 8x32bit buffer for IDE PCI Burst Transfers.

#### **Green function**

- Supports ACPI (Advanced Configuration and Power Interface) and ODPM (OS Directed Power Management).
- Supports three green modes: Doze, Standby and Suspend.
- Green LED will flash when the system is in the green status.

### **On-board I/O**

- Use Winbond W83977 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.
- Supports LS-120 floppy disk drive.
- All I/O ports can be enabled/disabled by the BIOS setup.
- Two high speed 16550 fast compatible UART. (COM1/COM2/COM3 /COM4 selective) with 16-byte send/receive FIFOs and supported MIDI mode.
- One enabled parallel port at the I/O address 378H/278H/3BCH with additional bi-direction I/O capability and multi-mode (SPP/EPP/ECP) (IEEE1284 compliant).
- Circuit protection provided preventing damage to the parallel port when a connected printer is powered up or operates at a higher voltage.

### **Advanced Features**

- On board W83781D supports system monitoring(monitors system voltages, chassis intrusion and FAN speed) (Optional).
- Supports LDCM(LanDesk Client Manager) software (Optional).
- On board PS/2 mouse and PS/2 keyboard ports.
- Two USB ports.
- On board switching voltage regulator with VID (support from 1.3V to 3.5V).
- Provides Anti-Virus function.
- Provides Infrared interface.
- Supports Windows 95 Software Power-Down.
- Supports External Modem Ring Power-On.
- Supports the wake up on LAN and wake up on internal modem function.
- Supports Auto Fan off when the system enters suspend mode.

### **BIOS**

- Licensed advanced AWARD BIOS, Supports Flash ROM BIOS, Plug and play ready.
- Supports IDE CD-ROM or SCSI boot up.

### **Expansion slots**

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



## Chapter 2

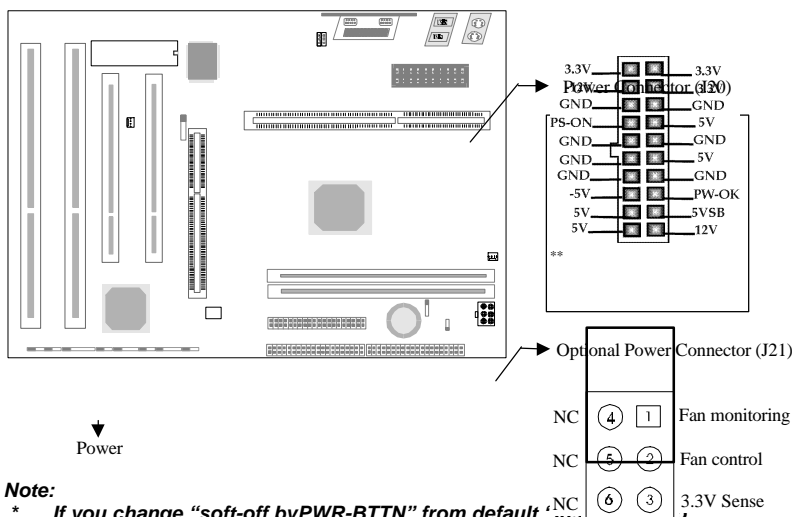
### Connector Configuration

This section lists all connector pin assignment and port descriptions on the mainboard. The particular state of the connectors and ports are illustrated in the following figures. Before inserting these connectors, please pay attention to the directions.

#### Power Connector(J20, J21) & Power Switch (Power)

ATX/SFX power supply can both be used on this system. They should be connected to J20, while 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 button of the momentary switch. If you want to power off your system, you needn't turn off the mechanical switch, just **push once**\* the button of the momentary switch.

J21 is an optional 6-pin power connector mainly used for the power supply which has an identical connector. The pin assignment and the location of the connectors are as shown below:



#### Note:

- \* If you change "soft-off byPWR-BTTN" from default "Delay 4 Secs", the power button should be pressed for more than 4 seconds before the system powers down.

For details, please refer to Page 3-10.

- \*\* This optional signal (-5V) is not available in theSFX power supply.

#### Hard Disk LED Connector(HD\_LED)

PIN NUMBER	FUNCTION
1	LED ANODE

2	LED CATHODE
---	-------------

**Reset Switch (RESET)**

SETTING	FUNCTION
CLOSE ONCE	RESET THE SYSTEM
OPEN	NORMAL

**Speaker Connector(SPEAKER)**

PIN NUMBER	FUNCTION
1	SPKDATA (for speaker)
2	NC
3	GND
4	VCC (for speaker)

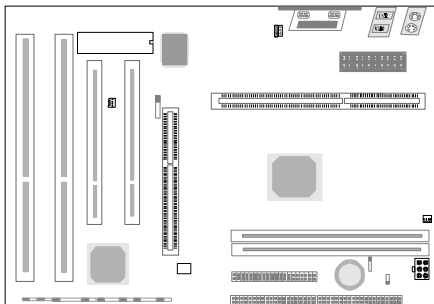
**Power LED Connector ( PWR\_LED)**

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE/GND
3	LED CATHODE/GND

The LED connected to "PWR\_LED" will light slightly when the system is in the standby status.

**KEY\_LOCK Connector(KEY\_L)**

PIN NUMBER	FUNCTION
1	KEYLOCK
2	GND



**Green LED Connector ( GREEN\_LED)**

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE/GND
3	LED CAHODE/GND

HD\_L LED RESET SPEAKER PWR\_L HD KEY\_L

Green LED will flash when the system enters the green mode.

**Hardware Green Connector (SLEEP)**

SETTING	FUNCTION
CLOSE ONCE	HARDWARE GREEN
OPEN	NORMAL

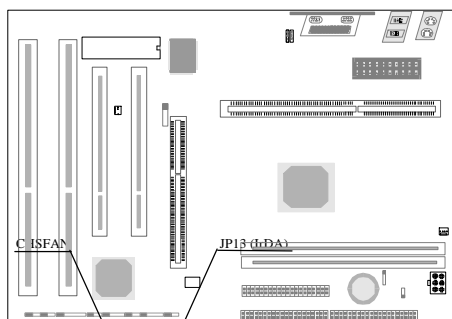
**Infrared Header (JP13)**

PIN NUMBER	FUNCTION
1	VCC
2	NC
3	IRRXX
4	GND
5	IRTX
6	VCC

**Fan Connector (CPUFAN, CHSFAN, PSFAN)**

PIN NAME	FUNCTION
-	GND
+	+12V
S	Signal

These three fans are controllable. They will be automatically turned off after the system enters the suspend mode. About PSFAN, please refer to the optional 6-pin power connector described above.

**Wake-Up On LAN (WOL)**

PIN NUMBER	FUNCTION
1	+5V Standby
2	GND
3	Signal for waking up (active high) CPUFAN

If the Wake-Up On LAN function is to be used, please connect this header to a LAN adapter, set "Resume by LAN/Ring" to Enabled at the "POWER MANAGEMENT SETUP" in BIOS setup, then boot to operating system once, making sure this function takes effect.

**Wake-Up On Internal Modem (WOM)**

PIN NUMBER	FUNCTION
------------	----------

1	+5V Standby
2	Signal for waking up (active low)
3	GND

**Chassis Security (CHSSEC):**

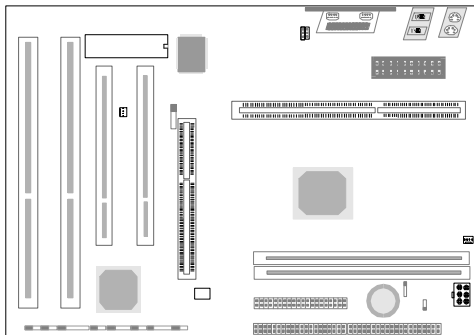
SETTING	FUNCTION
CLOSED	If chassis is opened
OPENED	If chassis is closed

*This header is optional.*

**Sound Connector (PC-PCI)**

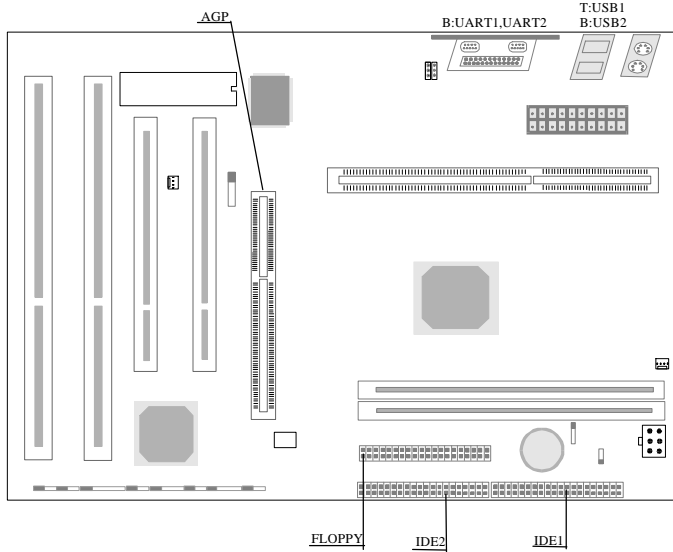
PIN NUMBER	FUNCTION
1	PC/PCI DMA ACKNOWLEDGE
2	GND
3	KEY
4	PC/PCI DMA REQUEST
5	GND
6	SERIAL INTERRUPT REQUEST

*This connector is for the usage of PCI sound card.*



**I/O Port Description**

CONNECTOR	FUNCTION
IDE1	Primary IDE Port
IDE2	Secondary IDE Port
FLOPPY	Floppy Drive Port
PRINTER	Parallel Port
UART1	COM1/COM2/COM3/COM4
UART2	COM2/COM3/COM4/COM1
USB1	First USB Port
USB2	Second USB Port
AGP	Accelerated Graphics Port



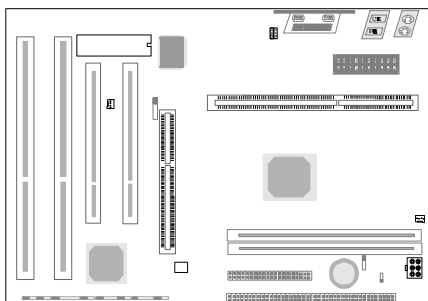
## **Memory Configuration**

The P6I440EX/MATX EXCELLENT II mainboard provides two 168 pin 3.3V un-buffered DIMM sockets to support a flexible memory size ranging from 8MB to 256MB for SDRAM or from 8MB to 512MB for EDO memory. The following set of rules allow optimum configurations.

Rules for populating a 440EX memory array:

- ☞ The DRAM Timing register, which provides the DRAM speed grade control for the entire memory array, must be programmed to use the timings of the slowest DRAMs installed.
- ☞ Possible EDO DIMM memory sizes are 8MB, 16MB , 32MB, 64MB, 128MB, 256MB in each DIMM socket.
- ☞ Possible SDRAM memory sizes are 8MB, 16MB , 32MB, 64MB, 128MB in each DIMM socket.

## Clear CMOS



Close Once

Clear CMOS :  JCC

Normal :  JCC

*Note: The AC powersupply(110/220V) must be unplugged when wanting to clear CMOS.*

JCC

## Chapter 3

### 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 the <Del> key or simultaneously press the <Ctrl> + <Alt> + <Esc> keys to enter the Award BIOS CMOS Setup Utility.

**Press <Del> to enter SETUP**

Once you have entered, the Main Menu (Figure 1) will appear 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.

ROM PCI/ISA BIOS (2A69JQ1K)	
CMOS SETUP UTILITY	
AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
SpeedEasy CPU SETUP	SYSTEM MONITOR
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc: Quit	↑ ↓ → ← :Select Item
F10: Save & Exit Setup	( Shift ) F2 :Change Color
Time, Date, Hard Disk Type ...	

Figure-1 Main Menu

*\*Note: The item of "SYSTEM MONITOR" will not be displayed if there is no W8378ID on the mainboard*

#### Load Setup Defaults

The Setup Defaults are common and efficient.

## Standard CMOS Setup

Use the arrow keys to highlight the item, then use the < PgUp> or < PgDn> keys to select the value you want in each item.

ROM PCI/ISA BIOS(2A69JQ1K) STANDARD CMOS SETUP AWARD SOFTWARE, INC								
Date (mm:dd:yy)		: Tue, Apr 28 1998						
Time (hh:mm:ss)		: 17:27:52						
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	:Auto	0	0	0	0	0	0	Auto
Primary Slave	:Auto	0	0	0	0	0	0	Auto
Secondary Master	:Auto	0	0	0	0	0	0	Auto
Secondary Slave	:Auto	0	0	0	0	0	0	Auto
Drive A	: 1.44M, 3.5 in.				Base Memory :: 640K			
Drive B	: None				Extended Memory : 15360K			
					Other Memory : 384K			
Video	: EGA/VGA				Total Memory : 16384K			
Halt On	: All Errors							
ESC: Quit		↑ ↓ → ←:Select Item			PU/PD/+/- :Modify			
F1 :Help		(Shift)F2 :Change Color						

Figure-2 Standard CMOS Setup Menu

### Hard Disk

#### Primary Master/Primary Slave/Secondary Master/Secondary Slave

The categories identify the HDD types of the 2 IDE channels that have been installed in the computer. There are 45 predefined types and 4 user definable types which are used for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type "User" is user-definable. If your hard disk drive type does not match with the drive table listed, you can use Type "User" to manually define your own drive type.

If you have selected Type "**Auto**", that means the system can auto-detect your hard disk when booting up. If you select Type "**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 precomp	LANDZ	landing zone
SECTOR	number of sectors	MODE	HDD access mode

### Video



There are two ways to boot up the system:

- I. When VGA is used as primary and monochrome is used as secondary, the selection of the video type is **"EGA/VGA"** mode.
- II. When monochrome is used as primary and VGA is used as secondary, the selection of the video type is **"Mono"** mode.

EGA/ VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or VGA 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 error 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 the other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all the other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all the other errors.

### Memory

This category displays only which is 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 generally used in this field.
Total Memory	Total memory of the system equals the sum of the above memory.

### SpeedEasy CPU Setup

ROM PCI/ISA BIOS(2A69JQ1K)  
SpeedEasy CPU SETUP  
QDI Innovative Technology

CPU Model : Pentium® II Speed Mode : SpeedEasy CPU Speed : 233MHz	<div>Warning : Be sure your selection is right. CPU over speed will be dangerous!</div> <div>ESC : Quit    ↑ ↓ → ← : Select Item  F1 : Help    PU/PD/+/- : Modify  (Shift) F2 : Color</div>
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Figure-3 SpeedEasy CPU Setup

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• CPU Model	<div>SpeedEasy</div> <div>Jumper Emulation</div>	BIOS can automatically detect the CPU model, so this item is shown only. It could be Pentium® II or Intel® Celeron™, depending on the processor chosen.
• Speed Mode		Select the CPU speed according to your CPU brand and type. This item is only for the user who understands all the CPU parameters, i.e. System Bus frequency, “66MHz” and multiplication of Processor Core frequency to System Bus frequency “×2.5, ×3, ×3.5, ×4, ×4.5, ×5, ×5.5”.

## BIOS Features Setup

ROM PCI/ISA BIOS (2A69JQ1K) BIOS FEATURES SETUP AWARD SOFTWARE, INC.
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Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
Pentium(R)II L1 Cache	: Enabled	C8000–CBFFF Shadow	: Disabled
Pentium(R)II L2 Cache	: Enabled	CC000–CFFFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D0000–D3FFF Shadow	: Disabled
Boot From LAN First	: Disabled	D4000–D7FFF Shadow	: Disabled
Boot Sequence	: C,A, SCSI	D8000–DBFFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	DC000–DFFFF Shadow	: Disabled
Boot Up Floppy Seek	: Disabled	Delay For HDD (Secs)	: 0
Hard Disk Write Protect	: Disabled	Show Boot up Logo	: Enabled
Drive A Boot Permit	: Enabled		
Floppy Disk Access Control	: R/W		
Boot Up Numlock Status	: On		
Gate A20 Option	: Fast		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay(Msec)	: 250		
Security Option	: Setup	ESC: Quit	↑↓→← : Select Item
PS/2 mouse function control	: Enabled	F1 : Help	PU/PD/+/- : Modify
OS Select For DRAM>64MB	: Non-OS2	F5 : Old Values (Shift)F2: Color	
Report No FDD For WIN 95	: Yes	F7 : Load Setup Defaults	

Figure-4 BIOS Features Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Virus Warning	<i>Enabled</i>	Activated automatically when the system boots up, causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
	<i>Disabled</i>	No warning message appears when anything attempts to access the boot sector or hard disk partition table. <b>Note: This function is available only for DOS and other OS that does not trap INT13.</b>
• Pentium(R)II L1/L2 Cache	<i>Enabled</i>	Enables Pentium® II internal Level1/Level2 cache.
• Quick Power On Self Test	<i>Disabled</i>	Disables Pentium® II internal Level1/Level2 cache.
	<i>Enabled</i>	Enables quick POST. BIOS will shorten or skip some items normally checked 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>A,C,SCSI, ...</i>	Any search sequence can be chosen for booting.
	<i>C, CDROM,A</i>	
• 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 Floppy Seek	<i>Enabled</i>	BIOS searches for the floppy disk drive to determine if the drive is ready for diskette read/write during booting.
	<i>Disabled</i>	Skips the drive seeking to speed up system booting.

• Hard Disk Write Protect	<i>Enabled</i> <i>Disabled</i>	Does not allow any data to be written on theHDD. Allows data to be written on theHDD.
• Drive A Boot Permit	<i>Enabled</i> <i>Disabled</i>	Boot from drive A function is enabled. Boot from drive A function is disabled.
• Floppy Disk Access Control	<i>R/W</i> <i>Read only</i>	Users can both read from and write to floppy disk. Users can read from floppy disk but can not write to floppy disk.
• Boot Up Numlock Status	<i>On</i> <i>Off</i>	Keypad is used as number keys. Keypad is used as arrow keys.
• Gate A20 Option	<i>Normal</i>  <i>Fast</i>	The A20 signal is controlled by the keyboard controller or chipset hardware. It is default. The A20 signal is controlled by Port 92 or the specific chipset method.
• Typematic Rate Setting	<i>Enabled</i>  <i>Disabled</i>	Enables typematic rate and typematic delay programming. Disables typematic rate and typematic delay programming. The system BIOS will use the default value of these two items.
• Typematic Rate Chars/Sec)	6~30	Sets the speed of the typematic rate (characters per second).
• Typematic Delay (Msec)	250~1000	Sets the time of the typematic delay.
• Security Option	<i>System</i>  <i>Setup</i>	The system will not boot and access to Setup will be denied if the correct password is not entered when prompted. The system will boot up, but access to Setup will be denied if the correct password is not entered when prompted.
• PS/2 mouse function control	<i>Enabled</i> <i>Disabled</i>	Without using PS/2 mouse, all PS/2 resource will be released.
• OS Select For DRAM>64MB	<i>Non-OS2</i>  <i>OS2</i>	If your operating system is not OS/2, please select this item. If system DRAM is more than 64MB and operating system is OS/2, please select this item.
• Report No FDD For WIN 95	<i>Yes</i> <i>No</i>	Reports No Floppy Disk Drive for WIN95 to release IRQ6. Does not reportNo Floppy Disk Drive for WIN95.
• Video BIOS Shadow	<i>Enabled</i>  <i>Disabled</i>	Video BIOS will be copied to RAM. Video Shadow will increase the video speed. Video shadow is disabled.
• C8000~CBFFF Shadow ... DC000-DFFFF Shadow:	<i>Enabled</i>  <i>Disabled</i>	Optional ROM will be copied to RAM by 16K bytes per unit. The shadow function is disabled.
• Delay For HDD (Secs):	0~15	Sets the pre-delay time for hard disk to be accessed by the system.
• Show Boot up Logo	<i>Enabled</i> <i>Disabled</i>	Enables the logo when system boots up. Logo will not be shown when system boots up.

### **Chipset Features Setup**

ROM PCI/ISA BIOS (2A69JQ1K) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.		
Auto Configuration	: Enabled	SDRAM CAS latency Time : 3
DRAM Speed Selection	: 60ns	
MA Wait State	: Slow	
EDO RAS # TO CAS# Delay	: 3	
EDO RAS # Time	: 3	
EDO DRAM Read Burst	: X333	
EDO DRAM Write Burst	: X222	
DRAM ECC Select	: Disabled	
CPU- TO -PCI IDE Posting	: Enabled	
System BIOS Cacheable	: Disabled	
Video BIOS Cacheable	: Disabled	
Video RAM Cacheable	: Disabled	
8 bit I/O Recovery Time	: 1	
16 bit I/O Recovery Time	: 1	
Memory Hole At 15M-16M	: Disabled	
Passive Release	: Enabled	
Delayed Transaction	: Enabled	
AGP Aperture Size (MB)	: 64	ESC: Quit ↑↓→←: Select Item F1: Help PU/PD/+/- : Modify F5: Old Values (Shift)F2: Color F7: Load Setup Defaults
SDRAM RAS- to -CAS Delay	: Slow	
SDRAM RAS Time	: Slow	

Figure-5 Chipset Features Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Auto Configuration	<i>Enabled</i> <i>Disabled</i>	Automatically configures DRAM Timing according to the value of "DRAM Speed Selection". Manually configure. <b>Note: It is recommended that the "Enabled" option be chosen by common users.</b>
• DRAM Speed Selection	<i>50ns</i> , <i>60ns</i>	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.
• MA Wait State	<i>Slow</i>	One additional wait state is inserted before the assertion of the first MA and CAS#/RAS# during DRAM read or write leadoff cycles. This affects page hit, row miss and page miss cases.
• EDO RAS# To CAS# Delay	<i>Fast</i> 2	Without additional wait state. Adds a delay time between the assertion of RAS# and CAS#
• EDO RAS# Time	3 4	Without additional delay time. DRAM RAS# time=3x system clocks. DRAM RAS# time=4x system clocks.
• EDO DRAM Read Burst	3 3 3, 2 2 2,	The DRAM read burst timing depends on the type of DRAM on a per-row basis. Slower rates may be required to support slower DRAM.

• EDO DRAM Write Burst	ˆ 2 2 2, ˆ 3 3 3,	The DRAM write burst timing depends on the type of DRAM on a per-row basis. Slower rates may be required to support slower DRAM.
• DRAMECC Select	ECC	Provides the ECC (Error Checking and Correction) function.
	Disabled	Disables the ECC / EC function.
• CPU-To-PCI IDE Posting	Enabled	Enables CPU-To-PCI write posting.
• System BIOS Cacheable	Disabled	Disables CPU-To-PCI write cycles to IDE.
	Enabled	Beside conventional memory, the system BIOS area is also cacheable.
	Disabled	The system BIOS area is not cacheable.
• Video BIOS Cacheable	Enabled	Beside conventional memory, video BIOS area is also cacheable.
	Disabled	Video BIOS area is not cacheable.
• Video RAM Cacheable	Enabled	Beside conventional memory, video RAM 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 PCI card.
	Disabled	Do not set this memory hole.
• Passive Release	Enabled	Default use is suggested.
	Disabled	
• Delayed Transaction	Disabled	Default use is suggested.
	Enabled	
• AGP Aperture Size (MB)	4~256	Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration.
• SDRAM RAS-To-CAS Delay	Fast	RAS-To-CAS Delay time=2HCLK
	Slow	RAS-To-CAS Delay time=3HCLK
• SDRAM RAS Time	Fast	RAS Time=2HCLK
	Slow	RAS Time=3HCLK
• SDRAM CAS Latency Time	Fast	Defines the CLT timing parameter of SDRAM expressed in 66 MHz clocks. Latency Time=2 clocks
	Slow	Latency Time=3 clocks

### **Power Management Setup**

ROM PCI/ISA BIOS (2A69JQ1K) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.		
Power Management	:User Define	** Reload Global Timer Events **
PM Control by APM	:Yes	IRQ [3-7, 9-15], NMI :Enabled
Video Off Method	:V/H SYNC+Blank	Primary IDE 0 :Disabled
Video Off After	:Suspend	Primary IDE 1 :Disabled

MODEM Use IRQ	:NA	Secondary IDE 0	:Disabled
Doze Mode	:Disable	Secondary IDE 1	:Disabled
Standby Mode	:Disable	Floppy Disk	:Disabled
Suspend Mode	:Disable	Serial Port	:Enabled
HDD Power Down	:Disable	Parallel Port	:Disabled
Throttle Duty Cycle	:62.5%		
VGA Active Monitor	:Enabled		
Soft-off by PWR-BTTN	:Instant - off		
Resume by Ring/LAN	:Disabled	ESC: Quit	↑↓→←: Select Item
Resume by Alarm	:Disabled	F1: Help	PU/PD/+/- : Modify
		F5: Old Values (Shift)	F2: Color
		F7: Load Setup Defaults	
IRQ 8 Break Suspend	:Disabled		

Figure-6 Power Management Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• 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 so that all timers are in their MAX values.
• PM Control by APM	<i>Max Saving</i>	Pre - defined timer values are used so that all timers are in their MIN value.
	<i>No</i>	System BIOS will ignore APM when Power Management is enabled.
	<i>Yes</i>	System BIOS will wait for APM's prompt before it enters any PM mode e.g. Standby or Suspend. <b>Note: If APM is installed, and if there is a task running, when the timer's state 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.</b>
• Video Off Method	<i>Blank Screen</i>	The system BIOS will only blank off the screen when disabling video.
	<i>V / H SYNC + Blank</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. <b>Note: When the Green monitor detects the V/H-SYNC signal, the electron gun will be turned off .</b>
• Video Off After	<i>N/A</i>	System BIOS will never turn off the screen.
	<i>Suspend</i>	Screen blanks after the system enters the Suspend mode.
	<i>Standby</i>	Screen blanks after the system enters the Standby mode.
• Doze	<i>Doze</i>	Screen blanks after the system enters the Doze mode.
	<i>3,4,5,7,9,10, 11</i>	Special wake-up event for the Modem.
	<i>NA</i>	Invalidates this feature.
• MODEM Use IRQ	<i>NA</i>	The system will never enter Doze mode.
• Doze mode	<i>Disabled</i>	

	<i>1Min ~ 1 Hr</i>	Defines the continuous idle time before the system enters the Doze mode. If any item defined in “Wake Up Events In Doze & Suspend” is On and activated, the system will be waken up.
• Standby Mode	<i>Disabled</i> <i>1 Min ~ 1Hr</i>	The system will never enter Standby mode. Defines the continuous idle time before the system enters the Standby mode. If any item defined in “Wake Up Events In Doze & Suspend” is On and activated, the system will be waken up.
• Suspend Mode	<i>Disabled</i> <i>1 Min ~ 1Hr</i>	The system will never enter Suspend mode. Defines the continuous idle time before the system enters the Suspend mode. If any item defined in “Wake Up Events In Suspend” is On and activated, the system will be waken up.
• HDD Power Down	<i>Disabled</i> <i>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 when the system is in the system throttling mode.
• VGA Active Monitor	<i>Enabled</i> <i>Disabled</i>	VGA active reloads global timer. VGA active has no influence to global timer.
• Soft-off by PWR-BTTN	<i>Instant -off</i>  <i>Delay 4 Sec.</i>	The system will power off immediately once the power button is pressed. The system will not power off until the power button is pressed continuously for more than 4 seconds.
• Resume by Ring/LAN	<i>Enabled</i>	Allows the system to be powered on when a Ring Indicator signal comes up to UART1 or UART2 from external modem or comes up to the WOM header from an internal modem card, or when a remote wake-up signal comes up to the WOL header through the LAN adapter.
• Resume by Alarm	<i>Disabled</i> <i>Enabled</i>	Does not allow Ring Power-On and wake-up on LAN. RTC alarm can be used to generate a wake event to power up the system.
• IRQ 8 Break Suspend	<i>Disabled</i> <i>Enabled</i> <i>Disabled</i>	RTC has no alarm function. Generates a clock event. Does not generate a clock event.
• IRQ [3-7, 9-15], NMI	<i>Enabled</i> <i>Disabled</i>	<b>Note: IRQ8 Clock Event must be enabled when using Resume By Ring and Alarm.</b> Reload global timer. Does not influence the global timer.

### **PNP/PCI Configuration Setup**

ROM PCI/ISA BIOS (2A69JQ1K) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.		
PNP OS Installed	: No	PCI IDE IRQ Map To : ISA
Resources Controlled By	: Manual	



Force Updating ESCD	: Disabled	Slot 1 Use IRQ No.	: AUTO
IRQ-3 assigned to	: Legacy ISA	Slot 2 Use IRQ No.	: AUTO
IRQ-4 assigned to	: Legacy ISA		
IRQ-5 assigned to	: PCI/ISA PnP		
IRQ-7 assigned to	: Legacy ISA		
IRQ-9 assigned to	: PCI/ISA PnP	Used MEM base addr	: N/A
IRQ-10 assigned to	: PCI/ISA PnP		
IRQ-11 assigned to	: PCI/ISA PnP	Assign IRQ For USB	: Enabled
IRQ-12 assigned to	: PCI/ISA PnP	Assign IRQ For VGA	: Enabled
IRQ-14 assigned to	: Legacy ISA		
IRQ-15 assigned to	: Legacy ISA		
DMA-0 assigned to	: PCI/ISA PnP		
DMA-1 assigned to	: PCI/ISA PnP		
DMA-3 assigned to	: PCI/ISA PnP		
DMA-5 assigned to	: PCI/ISA PnP		
DMA-6 assigned to	: PCI/ISA PnP		
DMA-7 assigned to	: PCI/ISA PnP		

ESC: Quit	↑↓→←	:Select Item
F1	: Help	PU/PD/+/- : Modify
F5	: Old Values	(Shift)F2 : Color
F7	: Load Setup Defaults	

Figure-7 PNP/PCI Configuration Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
• PNP OS Installed	<i>Yes</i> <i>No</i>	Device resource assigned by PnP OS. Device resource assigned by BIOS.
• Resources Controlled By	<i>Manual</i> <i>Auto</i>	Assigns the system resources (IRQ and DMA) manually by user. Assigns the system resources (IRQ and DMA) automatically by BIOS.
• Force Updating ESCD	<i>Enabled</i> <i>Disabled</i>	The system BIOS will force updating ESCD once, then automatically set this item as Disabled. Disables the forced update ESCD function.
• IRQ-3~IRQ-15 assigned to	<i>Legacy ISA</i> <i>PCI/ISA PnP</i>	The specified IRQ-x will be assigned to the ISA only. The specified IRQ-x will be assigned to the ISA or PCI.
• DMA-0~DMA-7 assigned to	<i>Legacy ISA</i> <i>PCI/ISA PnP</i>	The specified DMA-x will be assigned to the ISA only. The specified DMA-x will be assigned to the ISA or PCI.
• PCI IDE IRQ Map To	<i>PCI-AUTO</i>	BIOS will scan the PCI IDE devices and determine the location of the PCI IDE device.

	<i>PCI - SLOT4-1</i>	BIOS will scan IRQ14 for primary IDE INT# and IRQ15 for secondary IDEINT# at the specified slot.
	<i>ISA</i>	The BIOS will not assign anyIRQs even if the PCI IDE card is found. Because some IDE cards connect the IRQ14&15 directly from the ISA slot through a card. Assigns an IRQ for PCI slot 1/2/3 manually or automatically.
• SLOT 1/2 Use IRQ No.	<i>AUTO, 3,4,5,7,9,10,11,12,14,15</i>	
• Used MEM base address	<i>C800/8 ~ 64K</i>	Claims a memory space occupied by legacy ISA card.
• Assign IRQ For USB	<i>N/A Enabled</i>	Invalidates this feature. Assigns an IRQ for USB when it is used. This function is disabled (USB can't be used at this moment).
• Assign IRQ For VGA	<i>Disabled Enabled  Disabled</i>	Assigns the needed IRQ for the VGA Card. Does not assign an IRQ for the VGA Card.

### **Integrated Peripherals**

ROM PCI/ISA BIOS (2A69JQ1K) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.			
IDE HDD Block Mode	: Enabled	Parallel Port Mode	: SPP
IDE Primary Master PIO	: Auto		
IDE Primary Slave PIO	: Auto		
IDE Secondary Master PIO	: Auto		
IDE Secondary Slave PIO	: Auto		
IDE Primary MasterUDMA	: Auto		
IDE Primary SlaveUDMA	: Auto		
IDE Secondary MasterUDMA	: Auto		
IDE Secondary SlaveUDMA	: Auto		
On-Chip Primary PCI IDE	: Enabled		
On-Chip Secondary PCI IDE	: Enabled		
USB Keyboard Support	: Disabled		
Onboard FDC Controller	: Enabled		
Onboard Serial Port 1	: Auto		
Onboard Serial Port 2	: Auto		
UART Mode Select	: Normal		
		ESC: Quit    ↑↓→← : Select Item	
		F1 : Help    PU/PD/+/-: Modify	

Onboard Parallel Port	: 378/IRQ7	F5 : Old Values (Shift) F2 : Color F7 : Load Setup Default
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Figure-8 Integrated Peripherals Menu

The following indicates the options of 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 read/write several sectors at once.
	<i>Disabled</i>	IDE HDD only reads/writes a sector once.
• IDE Primary/Secondary Master/Slave PIO (UDMA)	<i>Mode 0 - 4</i>	Defines the IDE primary/secondary master slave PIO mode.
	<i>Auto</i>	The IDE PIO mode is defined according to auto - detect.
• 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.
• Onboard FDC Controller	<i>Enabled</i>	Onboard floppy disk controller is enabled.
	<i>Disabled</i>	Onboard floppy disk controller is disabled.
• Onboard Serial Port 1/2	<i>3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Disabled, Auto</i>	Defines the onboard serial port address and required interrupt number.
		Onboard serial port is disabled.
		Sets the address and interrupt number automatically.
• UART Mode Select	<i>Normal</i>	Defines UART2 as the standard serial port.
	<i>ASKIR</i>	Supports SHARP ASK-IR protocol with maximum band rate up to 57600bps.
	<i>IrDA</i>	Supports IrDA version 1.0 SIR protocol with maximum band rate up to 115.2kbps.
	<i>IrDA SIR</i>	The system function is the same as in Sharp-IR mode, but at 115.2K Baud.
• Onboard Parallel Port	<i>378/IRQ7, 278/IRQ5,</i>	Defines onboard parallel port address and IRQ channel.
• Parallel Port Mode	<i>SPP</i>	Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).
	<i>EPP</i>	
	<i>ECP,</i>	
	<i>ECP+EPP</i>	

### System Monitor

ROM PCI/ISA BIOS (2A69JQ1K)	
SYSTEM MONITOR	
AWARD SOFTWARE , INC.	
Current CPU Temp.	: 35°C/95°F

Current System Temp.	:	35°C/95°F	
Current CPUFAN Speed	:	4320 RPM	
Current CHSFAN Speed	:	2010 RPM	
Current PSFAN Speed	:	2150 RPM	
VCCVID(CPU) Voltage	:	2.81V	
VTT (+1.5) Voltage	:	1.50V	
+3.3V Voltage	:	3.32V	
+5V Voltage	:	4.97V	
+12V Voltage	:	11.97V	
-12V Voltage	:	-12.03V	
-5V Voltage	:	-4.85V	ESC: QUIT    ↑↓→← : Select Item
			F1 : Help    PU/PD/+/- : Modify
			F5 : Old Values    (Shift)F2: Color
			F7 : Load Setup Defaults

Figure-9 System Monitor Setup Menu

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

<u>Item</u>	<u>Option</u>	<u>Description</u>
<ul style="list-style-type: none"> <li>• Current CPU Temp.</li> <li>• Current System Temp.</li> <li>• Current CPUFAN Speed</li> <li>• Current CHSFAN Speed</li> <li>• Current PSFAN Speed</li> </ul>		<p>The temperature near the CPU.</p> <p>The temperature inside the chassis.</p> <p>RPM (Revolution Per Minute) Speed offan which is connected to the fan header CPUFAN, PSFAN 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.</p>
<ul style="list-style-type: none"> <li>• VCCVID(CPU) Voltage,</li> <li>• VTT (+1.5) Voltage,</li> <li>• + 3.3V,</li> <li>• + 5V,</li> <li>• +12 V,</li> <li>• - 12 V,</li> <li>• - 5 V.</li> </ul>		<p>Displays current Voltage value including all the most important voltages of the mainboard. +3.3V, +5V, +12V, -12V, -5V 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 the CPU Core Voltage from the on board switching Power Supply.</p>

### **Supervisor/User Password**

If this function is selected, the following message will appear 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 will be able to enter Setup freely.

#### **PASSWORD DISABLED**

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

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

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

#### **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 (2A69JQ1K)							
CMOS SETUP UTILITY							
AWARD SOFTWARE, INC.							
AWARD <span style="border: 1px solid black; padding: 0 5px;">ESC : Skip</span>							
HARD DISKS   TYPE   SIZE   CYLS   HEAD   PRECOMP   LANDZ   SECTOR   MODE							
Primary Master:							
Select Primary Master Option (N=Skip): N							
OPTIONS	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	LARGE
Note:        Some OSes (like SCO-UNIX) must use “NORMAL” for installation							

Figure-10 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 the number of physical cylinders are 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 the HDD type is set as "user" type, the "MODE" option will be opened 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 the 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 contains 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) so that 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 regarding 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.

**Power - On Boot**

If you have made all the changes to CMOS values and the system can not boot with the CMOS values selected in Setup, restart the system by turning it OFF then ON or press the "RESET" button on the system case. You may also restart the system by simultaneously pressing the < Ctrl >, < Alt > and < Del > keys.





## **Appendix A.**

### **Utility Diskette**

This diskette may be used for the purpose of updating your BIOS when necessary. For the most update and additional information about BIOS upgrade, please refer to "README" in the "BIOS Upgrade Diskette".

#### **Warning:**

1. We strongly recommend that you only upgrade BIOS when encountering problems.
2. Before you update your BIOS, look over the " README" file to avoid making mistakes.



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## **Manual P6I440EX/MATX EXCELLENT II Ver 1.0**