

# USER'S MANUAL

**PS-8060-G3**

All-in-One Book-sized PC  
For Socket 370 System

**PS-8060G3-M2**

# *PS-8060-G3 All-in-One Book-sized PC*

## *OPERATION MANUAL*

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## TABLE OF CONTENTS

### CHAPTER 1 INTRODUCTION

1-1	About This Manual .....	1-2
1-2	Case Illustration .....	1-3
1-3	System Specification .....	1-4
1-4	Safety Precautions .....	1-7

### CHAPTER 2 SYSTEM CONFIGURATION

2-1	Jumper & Connector Quick Reference Table .....	2-2
2-2	Component Locations .....	2-3
2-3	How to Set the Jumpers .....	2-4
2-4	COM Port Connector .....	2-6
2-5	RS232/422/485 (COM2) Selection .....	2-8
2-6	Keyboard Connector .....	2-9
2-7	PS/2 Mouse Connector .....	2-9
2-8	VGA Connector .....	2-10
2-9	PanelLink Connector .....	2-11
2-10	Universal Serial Bus Connector .....	2-12
2-11	LAN Connector .....	2-12
2-12	LAN Led Indicator .....	2-13
2-13	Gameport Connector .....	2-13
2-14	Reset Connector .....	2-14
2-15	CPU Fan Connector .....	2-14
2-16	External Speaker Connector .....	2-15
2-17	Power Led & Keylock Connector .....	2-15
2-18	Hard Disk Drive Led Connector .....	2-15
2-19	Green Function Connector .....	2-16
2-20	Microphone Connector .....	2-16
2-21	Speaker Connector .....	2-16
2-22	Line Input Connector .....	2-17
2-23	Power Connector .....	2-17
2-24	Floppy Disk Drive Connector .....	2-18
2-25	Hard Disk Drive Connector .....	2-20
2-26	Printer Connector .....	2-22
2-27	Solid State Disk Socket .....	2-24

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2-28	SSD Memory Mapping Selection .....	2-25
2-29	PCI/ISA Extension Bus Connector .....	2-26
2-30	CD Audio-in Connector .....	2-28
2-31	Mono Connector .....	2-28
2-32	Reset/NMI/Clear Watchdog Selection .....	2-29
2-33	Case Fan Connector .....	2-29
2-34	VGA Enable/Disable Selection .....	2-30
2-35	LAN Enable/Disable Selection .....	2-30
2-36	Audio Enable/Disable Selection .....	2-31
2-37	Memory Installation .....	2-31

### **CHAPTER 3 SOFTWARE UTILITIES**

3-1	Introduction .....	3-2
3-2	VGA Driver Utility .....	3-2
3-3	Flash BIOS Update .....	3-4
3-4	LAN Driver Utility .....	3-6
3-5	Sound Driver Utility .....	3-8
3-6	Watchdog Timer Configuration .....	3-10

### **CHAPTER 4 GREEN PC FUNCTION**

4-1	Power Saving Block Diagram .....	4-2
4-2	CPU Doze Mode .....	4-2
4-3	System Standby Mode .....	4-2
4-4	System Suspend Mode .....	4-3

### **CHAPTER 5 AWARD BIOS SETUP**

5-1	Introduction .....	5-2
5-2	Entering Setup .....	5-3
5-3	The Standard CMOS Setup Menu .....	5-4
5-4	The BIOS Features Setup Menu .....	5-9
5-5	Chipset Features Setup .....	5-13
5-6	Power Management Setup .....	5-17
5-7	PNP/PCI Configuration .....	5-19
5-8	Load BIOS Defaults .....	5-21

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5-9	Load Setup Defaults .....	5-21
5-10	Integrated Peripherals .....	5-22
5-11	Password Settings .....	5-24
5-12	IDE HDD Auto Detection .....	5-26
5-13	Save & Exit Setup .....	5-27
5-14	Exit Without Saving .....	5-28

**APPENDIX A RISER CARD**

Riser Card .....	A-2
ISA Slot Pin Assignment .....	A-3
PCI Slot Pin Assignment .....	A-4

**APPENDIX B TECHNICAL SUMMARY**

Block Diagram .....	B-2
Interrupt Map .....	B-3
RTC & CMOS RAM Map .....	B-4
Timer & DMA Channels Map .....	B-5
I/O & Memory Map .....	B-6

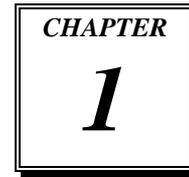
**APPENDIX C TROUBLE SHOOTING**

Trouble Shooting for Error Messages .....	C-2
Trouble Shooting for POST Codes .....	C-4

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# ***INTRODUCTION***



This chapter gives you the information for PS-8060-G3. It also outlines the System specifications.

Section includes:

- About This Manual
- Case Illustration
- System Specifications
- Safety precautions

## **1-1. ABOUT THIS MANUAL**

Thank you for purchasing our PS-8060-G3 Book-sized PC. The PS-8060-G3 is an updated system designed to be comparable with the highest performance of IBM AT personal computers. It provides faster processing speed, greater expandability, and can handle more task. This manual is designed to assist you on how to make the proper installation to set up the system. It contains five chapters. The user can use this manual for configuration according to the following chapters :

### ***Chapter 1 Introduction***

This chapter introduces you to the background of this manual, illustration of the case, and the specifications for this system. The final page of this chapter indicates some safety reminders on how to take care of your system.

### ***Chapter 2 System Configuration***

This chapter outlines the component's locations and their functions. In the end of this chapter, you will learn how to set jumper and how to configure the system for your own needs.

### ***Chapter 3 Software Utilities***

This chapter contains helpful information for proper installations of the VGA utility, LAN utility, Sound utility and Flash BIOS update. It also describes the function of the Watchdog Timer Configuration.

### ***Chapter 4 Green PC Function***

This chapter explains the Green PC functions concisely.

### ***Chapter 5 Award BIOS Setup***

This chapter indicates on how to set up the BIOS configurations.

### ***Appendix A Riser Card***

This Appendix introduces you the riser card included with our PS-8060-G3 Book-sized PC package.

### ***Appendix B Technical Summary***

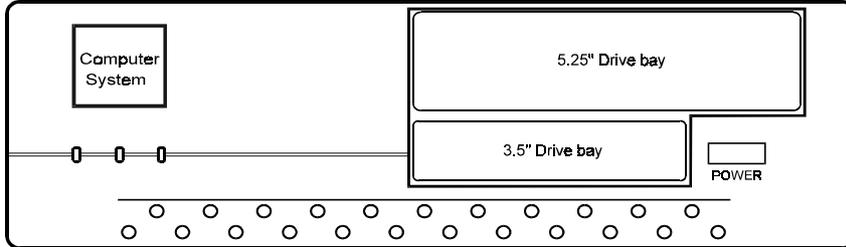
This section gives you the information about the Technical maps.

**Appendix C Trouble Shooting**

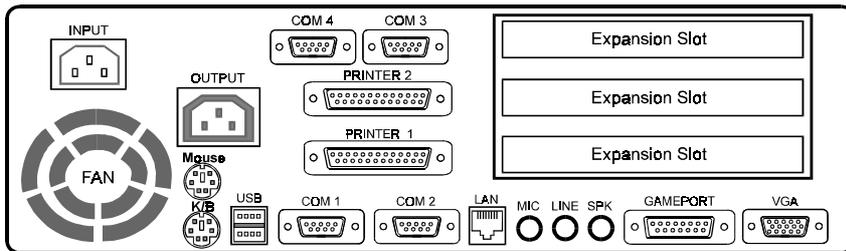
This section outlines the error messages and offers you the methods to solve the problems.

**1-2. CASE ILLUSTRATION**

**Front View -- Control Panel**



**Rear View**



## 1-3. SYSTEM SPECIFICATIONS

- **CPU PROCESSOR:**

- Intel® Celeron™ processors in 370-pin socket.  
300A/333/366/400/433/466/500/533/566/600MHz clock generator.
- Intel® Pentium® III processors in 370-pin socket.  
500E/550E/600E/650/700/750/800/850MHz clock generator.
- Auto detect voltage regulator.

- **MEMORY :**

- Up to 512MB SDRAM
- Two 168pin DIMM sockets on board.

- **CACHE :**

- Built-in CPU.

- **REAL-TIME CLOCK :**

- CMOS data back up from BIOS set or BIOS default.
- Dallas DS 12887 Real Time Clock.

- **BIOS :**

- Award Flash BIOS for plug & play function.
- Easy update 256KB flash EEPROM.
- Support Green Function.
- Support S/IO Setup.

- **KEYBOARD CONNECTOR :**

- Mini DIN connector.
- Supports PC/AT Keyboard.

- **MOUSE CONNECTOR :**

- Mini DIN connector.
- Supports PS/2 Mouse.

- **SSD SOCKET :**

- Supports Disk-on-chip up to 144MB.

● **BUS SUPPORT :**

Internal AGP for VGA  
Internal PCI for IDE, LAN, and Sound  
External PISA

● **DISPLAY :**

Support CRT and PanelLink.  
VGA BIOS combines in 256KB flash ROM together with system BIOS.  
Onboard 15-pin connector, support 1280 x 1200(16bit High Color) resolution on SVGA Monitor.  
Onboard 20-pin connector, support for PanelLink.  
Support 8MB (4MB optional) SGRAM Video memory.

● **WATCHDOG :**

I / O port 0443H to Enable watchdog.  
I / O port 0441H to Disable watchdog.  
Time-out timing select 0 / 8 / 16 / 24 / 32 / 40 / 48 / 56 / 64 / 72 / 80 / 88 / 96 / 104 / 112 / 120 sec +/- 25%.

● **IDE INTERFACE :**

Two IDE ports, support Ultra DMA-33.  
Supports up to four Enhanced IDE devices.

● **FLOPPY DISK DRIVE INTERFACE :**

One 34-pin connector, supports up to two 3.5" or 5.25" (360K / 720K / 1.2M / 1.44M / 2.88M) Floppy Disk Drives.  
*Optional:* One 26-pin connector, support up to one 3.5" slim FDD.  
Two connector shares one channel.

● **SERIAL PORT :**

Four high speed 16550 Compatible UARTs with Send / Receive 16 Byte FIFOs. COM1/3/4 = RS-232; COM2 = RS232/422/485.  
MIDI Compatible.  
Programmable Baud Rate Generator.

● **PARALLEL PORT :**

2 ports, support for SPP, ECP, EPP Function.  
Bi-directional parallel port.

● **LAN ADAPTER :**

RTL 8139 Fast Ethernet.  
10/100 Base-T PCI BUS.

● **USB CONNECTOR :**

Universal serial bus connector on board, Support up to two USB ports.

● **SOUND :**

ESS ES1938 (Solo-1, Single Chip PCI audio)  
BUS: 32 bit PCI BUS  
Sound: Stereo full duplex playback & recording.  
Software Compatible: Windows 95/98, Windows NT 4.0.  
Sampling rate: Support from 4kHz up to 48kHz.  
Power Management: ACPI 1.0 compliant  
3D Sound: Integrated Spatializer 3D sound software wavetable, general MIDI and MPU-401 support.  
Interface: Gameport, MIC, SPK, LINE-IN, CD Audio-In, and Mono.

● **GREEN FUNCTION :**

Software support by BIOS setup.  
Hardware support by switch control.

● **LED INDICATOR :**

System power.  
Hard Disk access.  
Turbo mode.  
LAN LED indicator.

● **DMA CONTROLLER :**

82C37 x 2

● **DMA CHANNELS :**

7

● **INTERRUPT CONTROLLERS :**

82C59 x 2

● **INTERRUPT LEVELS :**

15

● **OPERATING TEMPERATURE :**

0 to 60°C.

● **POWER SUPPLY :**

80watts

Supports 100V ~ 240V auto detect power voltage.

● **DIMENSIONS :**

CASE: 300 mm x 270 mm x 95mm

MAIN BOARD: 235 mm x 235 mm

● **NET WEIGHT :**

5.2 Kg.

## 1-4. SAFETY PRECAUTIONS

Following messages are safety reminders on how to protect your systems from damages. And thus, helps you lengthen the life cycle of the system.

### 1. Check the Line Voltage

- a. The operating voltage for the power supply should cover the range of 95VAC-260VAC, otherwise the system may be damaged.

### 2. Environmental Conditions

- a. Place your PS-8060-G3 on a sturdy, level surface. Be sure to allow enough room on each side to have easy access.
- b. Avoid extremely hot or cold places to install your PS-8060-G3 Book-sized PC.
- c. Avoid exposure to sunlight for a long period of time (for example in a closed car in summer time. Also avoid the system from any heating device.). Or do not use PS-8060-G3 when it's been left outdoors in a cold winter day.
- d. Bear in mind that the operating ambient temperature is from 0°C up to +50°C.
- e. Avoid moving the system rapidly from a hot place to a cold place or vice versa because condensation may come from inside of the system.
- f. Place PS-8060-G3 against strong vibrations, which may cause hard disk failure.

- g. Do not place the system too close to any radio active device. Radio-active device may cause interference.

**3. Handling**

- a. Avoid putting heavy objects on top of the system.
- b. Do not turn the system upside down. This may cause the floppy drive and hard drive to mal-function.
- c. Do not remove the diskette from the Floppy drive while the light is still on. If you remove the diskette while the light is on, you may damage the information on the diskette.

**4. Good Care**

- a. When the outside of the case is stained, remove the stain with neutral washing agent with a dry cloth.
- b. Never use strong agents such as benzene and thinner to clean the system.
- c. If heavy stains are present, moisten a cloth with diluted neutral washing agent or with alcohol and then wipe thoroughly with a dry cloth.
- d. If dust has been accumulated on the outside, remove it by using a special made vacuum cleaner for computers.

# ***SYSTEM CONFIGURATION***

CHAPTER

**2**

Helpful information that describes the jumper & connector settings, and component locations.

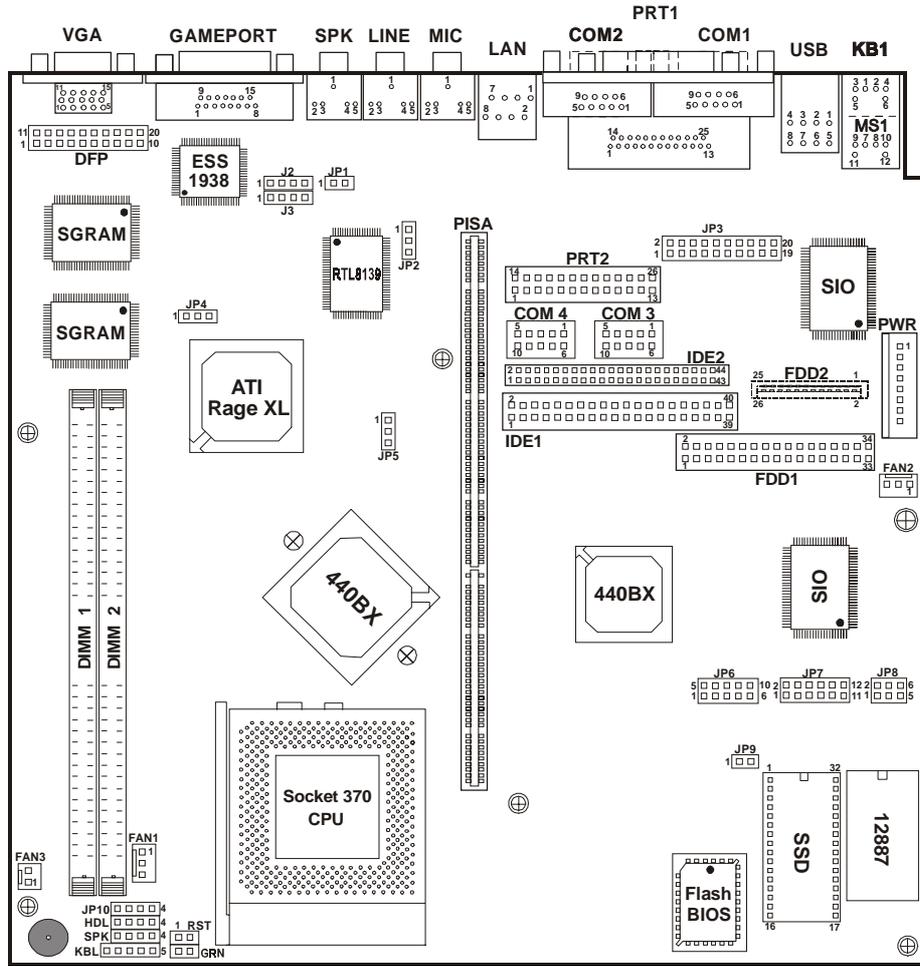
Section includes:

- Jumper & Connector Quick Reference Table
- Component Locations
- Configuration and Jumper settings
- Connector Pin Assignments

## 2-1. JUMPER & CONNECTOR QUICK REFERENCE TABLE

COM Port Connector .....	COM1, COM2 COM3, COM 4
RS232/422/485 (COM2) Selection .....	JP3
Keyboard Connector .....	KB1
PS/2 Mouse Connector .....	MS1
VGA Connector .....	VGA
PanelLink Connector .....	DFP
Universal Serial Bus Connector .....	USB
LAN Connector .....	LAN
LAN LED Indicator .....	JP10
Game Port Connector .....	GAMEPORT
Reset Connector .....	RST
CPU Fan Connector .....	FAN1, FAN2
External Speaker Connector .....	SPK
Power LED & Keylock Connector .....	KBL
Hard Disk Drive LED Connector .....	HDL
Green Function Connector .....	GRN
Microphone Connector .....	MIC
Speaker Connector .....	SPK
Line Input Connector .....	LINE
Power Connector .....	PWR
Floppy Disk Drive Connector .....	FDD1, FDD2
Hard Disk Drive Connector .....	IDE1, IDE2
Printer Connector .....	PRT1, PRT2
Solid State Disk Socket .....	SSD
SSD Memory Mapping Selection .....	JP7
PCI/ISA Extension Bus Connector .....	PISA
CD Audio-in Connector .....	J2
Mono Connector .....	J3
Reset/NMI/Clear Watchdog Selection .....	JP8
Case Fan Connector .....	FAN3
VGA Enable/Disable Selection .....	JP5
LAN Enable/Disable Selection .....	JP2
Audio Enable/Disable Selection .....	JP1
Memory Installation .....	DIMM1, DIMM2
Reserved pin .....	JP9, JP6, JP4

2-2. COMPONENT LOCATIONS



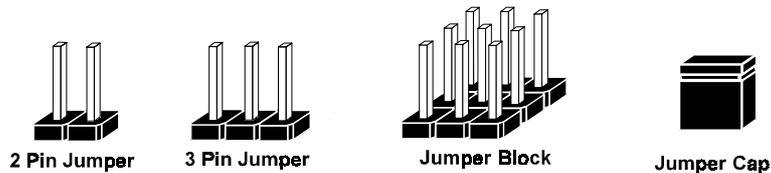
PS-8060-G3 Connector, Jumper and Component locations

## 2-3. HOW TO SET THE JUMPERS

You can configure your board by setting the jumpers. Jumper is consists of two or three metal pins with a plastic base mounted on the card, and by using a small plastic "cap", Also known as the jumper cap (with a metal contact inside), you are able to connect the pins. So you can set-up your hardware configuration by "opening" or "closing" pins.

The jumper can be combined into sets that called jumper blocks. When the jumpers are all in the block, you have to put them together to set up the hardware configuration. The figure below shows how this looks like.

### JUMPERS AND CAPS

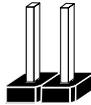


If a jumper has three pins for example, labelled PIN1, PIN2, and PIN3. You can connect PIN1 & PIN2 to create one setting and shorting. You can either connect PIN2 & PIN3 to create another setting. The same jumper diagrams are applied all through this manual. The figure below shows what the manual diagrams look and what they represent.

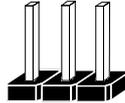
**JUMPER DIAGRAMS**



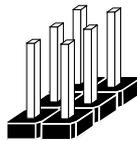
Jumper Cap looks like this



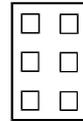
2 pin Jumper looks like this



3 pin Jumper looks like this



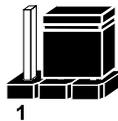
Jumper Block looks like this



**JUMPER SETTINGS**



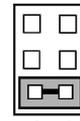
2 pin Jumper closed(enabled)  
looks like this



3 pin Jumper  
2-3 pin closed(enabled)  
looks like this



Jumper Block  
1-2 pin closed(enabled)  
looks like this

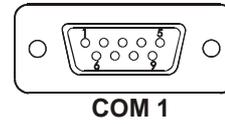


## 2-4. COM PORT CONNECTOR

The system possesses four communication port connectors namely: COM1, COM2, COM3, and COM4. The pin assignments are as follows:

**COM1** : COM1 Connector, DB9 male connector

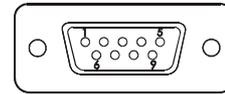
PIN	ASSIGNMENT
1	DCD
2	RX
3	TX
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI



**COM 1**

**COM2** : COM2 Connector, DB9 male connector

PIN	ASSIGNMENT		
	RS-232	RS-422	RS-485
1	DCD	TX-	TX-
2	RX	TX+	TX+
3	TX	RX+	RX+
4	DTR	RX-	RX-
5	GND	GND	GND
6	DSR	RTS-	NC
7	RTS	RTS+	NC
8	CTS	CTS+	NC
9	RI	CTS-	NC

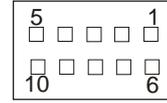


**COM 2**

**COM3** : COM3 Connector

The pin assignments are as follows :

PIN	ASSIGNMENT
1	DCD
2	RX
3	TX
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI
10	NC

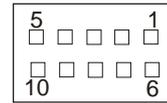


**COM 3**

**COM4** : COM4 Connector

The pin assignments are as follows :

PIN	ASSIGNMENT
1	DCD
2	RX
3	TX
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI
10	NC



**COM 4**

## 2-5. RS232/422/485 (COM2) SELECTION

**JP3** : RS-232/422/485 (COM2) Selection

COM1, COM3, and COM4 is fixed for RS-232 function only.

COM2 is selectable for RS-232, 422, 485 function.

The jumper settings are as follows :

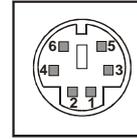
COM 2 FUNCTION	JUMPER SETTINGS (pin closed)	JUMPER ILLUSTRATION
RS-232	Open	 <p style="text-align: center;"><b>JP3</b></p>
RS-422	1-2, 5-6, 7-8, 9-10, 11-12, 13-14, 15-16, 17-18, 19-20	 <p style="text-align: center;"><b>JP3</b></p>
RS-485	1-3, 4-6, 7-8, 9-10, 11-12, 13-14, 15-16, 17-18, 19-20	 <p style="text-align: center;"><b>JP3</b></p>

\*\*\* Manufactory default --- RS-232.

## 2-6. KEYBOARD CONNECTOR

**KB1** : PC/AT Keyboard Connector  
The pin assignments are as follows :

PIN	ASSIGNMENT
1	KBDATA
2	NC
3	GND
4	VCC
5	KBCLK
6	NC

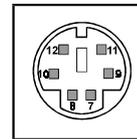


**KB1**

## 2-7. PS/2 MOUSE CONNECTOR

**MS1** : PS/2 Mouse Connector  
The pin assignments are as follows :

PIN	ASSIGNMENT
7	MS DATA
8	NC
9	GND
10	VCC
11	MSCLK
12	NC

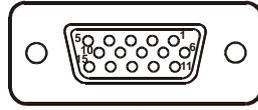


**MS1**

## 2-8. VGA CONNECTOR

**VGA :** VGA Connector

The pin assignments are as follows:



**VGA**

<b>PIN</b>	<b>ASSIGNMENT</b>
1	RED
2	GREEN
3	BLUE
4	NC
5	GND
6	GND
7	GND
8	GND
9	NC
10	GND
11	NC
12	NC
13	HSYNC
14	VSYNC
15	NC

## 2-9. PANELLINK CONNECTOR

**DFP** : PanelLink Connector

The pin assignments are as follows :



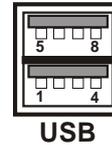
**DFP**

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	TX1+	11	TX2+
2	TX1-	12	TX2-
3	SHLD1	13	SHLD2
4	SHLDC	14	SHLD0
5	TXC+	15	TX0+
6	TXC-	16	TX0-
7	GND	17	RESERVED
8	+5V	18	HPD
9	RESERVED	19	DDC_DAT
10	RESERVED	20	DDC_CLK

## 2-10. UNIVERSAL SERIAL BUS CONNECTOR

**USB :** Universal Serial Bus Connector  
This board supports up to two USB port.  
The pin assignment is as follows:

PIN	ASSIGNMENT
1	VCC
2	USBP0-
3	USBP0+
4	GND
5	VCC
6	USBP1-
7	USBP1+
8	GND

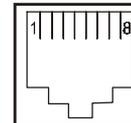


**USB**

## 2-11. LAN CONNECTOR

**LAN:** LAN Connector.  
The pin assignment is as follows :

PIN	ASSIGNMENT
1	TX+
2	TX-
3	RX+
4	ISOLATED GND
5	ISOLATED GND
6	RX-
7	ISOLATED GND
8	ISOLATED GND



**LAN**

## 2-12. LAN LED INDICATOR

**JP10:** LAN LED Indicator

The pin assignment is as follows :

PIN	ASSIGNMENT
1	PULL HI
2	LED
3	PULL HI
4	LED

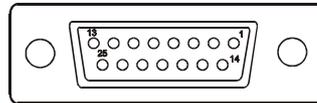


Pin 1-2 is used to detect the 100Mbps speed, and Pin 3-4 is used to detect “LINK” and “ACTIVE” signal.

## 2-13. GAME PORT CONNECTOR

**GAMEPORT :** Game Port Connector.

The pin assignments are as follows :



PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	+5 VDC	9	+5 VDC
2	Button 1	10	Button 4
3	Joystick 1 - X	11	Joystick 2 - X
4	GND	12	MIDI Transit
5	GND	13	Joystick 2 - Y
6	Joystick 1 - Y	14	Button 3
7	Button 2	15	MIDI Receive
8	+5 VDC		

## 2-14. RESET CONNECTOR

**RST** : Reset Connector.  
The pin assignments are as follows :

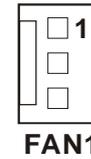
PIN	ASSIGNMENT
1	RESET
2	GROUND



## 2-15. CPU FAN CONNECTOR

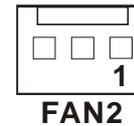
**FAN1**: CPU Fan Connector.  
The pin assignments are as follows :

PIN	ASSIGNMENT
1	GROUND
2	+12V
3	FAN1IN



**FAN2**: CPU Fan Connector.  
The pin assignments are as follows :

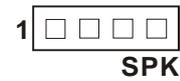
PIN	ASSIGNMENT
1	GROUND
2	+12V
3	FAN2IN



## 2-16. EXTERNAL SPEAKER CONNECTOR

**SPK** : External Speaker Connector  
The pin assignments are as follows :

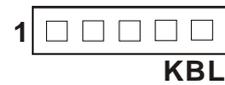
PIN	ASSIGNMENT
1	VCC
2	Speaker Signal
3	Speaker Signal
4	Speaker Signal



## 2-17. POWER LED & KEYLOCK CONNECTOR

**KBL** : Power LED & Keylock Connector  
The pin assignments are as follows :

PIN	ASSIGNMENT
1	Power LED
2	NC
3	GND
4	Keyboard INT
5	GND



## 2-18. HARD DISK DRIVE LED CONNECTOR

**HDL** : Hard disk drive LED Connector  
The pin assignments are as follows :

PIN	ASSIGNMENT
1	VCC
2	HDD Active Signal
3	HDD Active Signal
4	HDD Active Signal



## 2-19. GREEN FUNCTION CONNECTOR

**GRN** : Green Function Connector  
 The pin assignments are as follows :

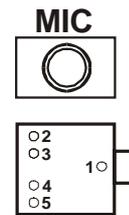
PIN	ASSIGNMENT
1	EXTSMI-
2	GND



## 2-20. MICROPHONE CONNECTOR

**MIC** : Microphone Connector  
 The pin assignments are as follows :

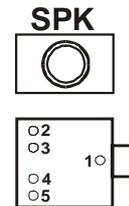
DIN	ASSIGNMENT
1	GND
2	MIC
3	GND
4	NC
5	VDDA



## 2-21. SPEAKER CONNECTOR

**SPK** : Speaker Connector  
 The pin assignments are as follows :

PIN	ASSIGNMENT
1	GND
2	AOUTL
3	X NC
4	X NC
5	A OUT R

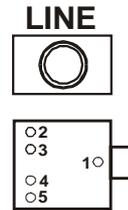


## 2-22. LINE INPUT CONNECTOR

**LINE** : Line Input Connector

The pin assignments are as follows :

DIN	ASSIGNMENT
1	GND
2	LINE L
3	GND
4	GND
5	LINE R

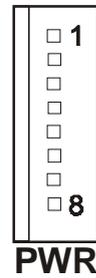


## 2-23. POWER CONNECTOR

**PWR** : Power Connector

The pin assignments are as follows:

PIN	ASSIGNMENT
1	NC
2	+5V
3	+12V
4	-12V
5	GND
6	GND
7	+5V
8	GND



## 2-24. FLOPPY DISK DRIVE CONNECTOR

### FDD1 : Floppy Disk Drive Connector

You can use a 34-pin daisy-chain cable to connect two-FDDs. On one end of this cable is a 34-pin flat cable to attach the FDD connector on the board, the other side is attaches to two FDDs.

The pin assignments are as follows :

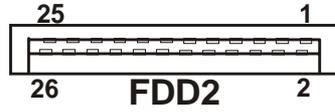


**FDD1**

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	GND	2	RPM
3	GND	4	NC
5	GND	6	NC
7	GND	8	INDEX
9	GND	10	MTR0
11	GND	12	DRV1
13	GND	14	DRV0
15	GND	16	MTR1
17	GND	18	DIR
19	GND	20	STEP
21	GND	22	WDATA
23	GND	24	WGATE
25	GND	26	TRK0
27	GND	28	WRPRT
29	GND	30	RDATA
31	GND	32	SEL
33	GND	34	DSKCHG

(Optional):

**FDD2** : Floppy Disk Drive Connector  
 The pin assignments are as follows:

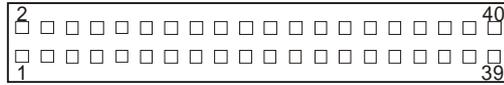


PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	VCC	14	STEP
2	INDEX	15	GND
3	VCC	16	WDATA
4	DR0	17	GND
5	VCC	18	WGATE
6	DSKCHG	19	NC
7	NC	20	TRK0
8	NC	21	NC
9	NC	22	WRTPRTJ
10	MTR0	23	GND
11	NC	24	RDATA
12	FDIR	25	GND
13	RPM	26	HDSEL

⚠ Both FDD1 and FDD2 shares the same channel, user may only select one of the connector.

## 2-25. HARD DISK DRIVE CONNECTOR

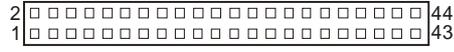
**IDE1** : Hard Disk Drive Connector  
 The pin assignments are as follows:



**IDE1**

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	IDERST	21	IDEREQ0
2	GND	22	GND
3	IDED7	23	IDEIOW
4	IDED8	24	GND
5	IDED6	25	IDEIOR
6	IDED9	26	GND
7	IDED5	27	IDERDY
8	IDED10	28	PULL LOW
9	IDED4	29	IDEACK0
10	IDED11	30	GND
11	IDED3	31	IRQ14
12	IDED12	32	NC
13	IDED2	33	R PDA1
14	IDED13	34	NC
15	IDED1	35	R PDA0
16	IDED14	36	R PDA2
17	IDED0	37	R PDA1
18	IDED15	38	R PDA3
19	GND	39	IDEACTP
20	N.C.	40	GND

**IDE2** : Hard Disk Drive Connector  
 The pin assignments are as follows:



**IDE2**

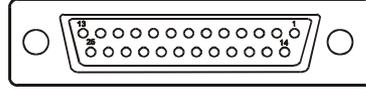
PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	SRSTDRV-	23	R SDIOW
2	GND	24	GND
3	SIDED7	25	R SDIOR
4	SIDED8	26	GND
5	SIDED6	27	SIORDY
6	SIDED9	28	GND
7	SIDED5	29	RSDACK-
8	SIDED10	30	GND
9	SIDED4	31	RIRQ15
10	SIDED11	32	NC
11	SIDED3	33	R SDA1
12	SIDED12	34	NC
13	SIDED2	35	R SDA0
14	SIDED13	36	R SDA2
15	SIDED1	37	R SCS1-
16	SIDED14	38	R SDA3-
17	SIDED0	39	IDEACTS-
18	SIDED15	40	GND
19	GND	41	VCC
20	NC	42	VCC
21	R SDREQ	43	GND
22	GND	44	NC

## 2-26. PRINTER CONNECTOR

The system board is enhanced with two Printer ports - the PRT1 and PRT2.

### **PRT1** : Printer Connector

The pin assignments are as follows :



**PRT1**

<b>PIN</b>	<b>ASSIGNMENT</b>	<b>PIN</b>	<b>ASSIGNMENT</b>
1	STB	14	AUTFE
2	P0	15	ERROR
3	P1	16	INIT
4	P2	17	SLCTIN
5	P3	18	GND
6	P4	19	GND
7	P5	20	GND
8	P6	21	GND
9	P7	22	GND
10	ACK	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCT		

**PRT2** : Printer Connector

The pin assignments are as follows :



**PRT2**

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	STB	14	AUTFE
2	P0	15	ERROR
3	P1	16	INIT
4	P2	17	SLCTIN
5	P3	18	GND
6	P4	19	GND
7	P5	20	GND
8	P6	21	GND
9	P7	22	GND
10	ACK	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCT	26	NC

## 2-27. SOLID STATE DISK SOCKET

**SSD** : Solid State Disk Socket  
 The pin assignments are as follows:



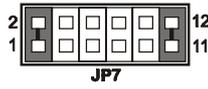
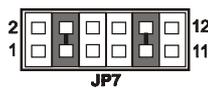
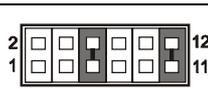
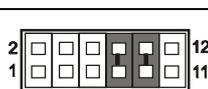
PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	NC	17	SD3
2	NC	18	SD4
3	NC	19	SD5
4	SA12	20	SD6
5	SA7	21	SD7
6	SA6	22	CE
7	SA5	23	SA10
8	SA4	24	OE
9	SA3	25	SA11
10	SA2	26	SA9
11	SA1	27	SA8
12	SA0	28	NC
13	SD0	29	NC
14	SD1	30	VCC
15	SD2	31	WE
16	GND	32	VCC

## 2-28. SSD MEMORY MAPPING SELECTION

### JP7 : SSD Memory Mapping Selection

A 32-pin SSD socket supports Disk-on-Chip up to 144MB. This PnP Flash ROM SSD can be install as one of user's hard disk drive.

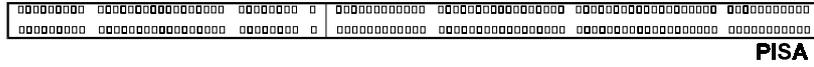
The SSD Memory Mapping Selections are as follows:

SSD Memory Map	JUMPER SETTINGS (pin closed)	JUMPER ILLUSTRATION
CC000h-CDFFFh	1-2 11-12	
D0000h-D1FFFh	3-4 9-10	
D4000h-D5FFFh	3-4 11-12	
D8000h-D9FFFh	5-6 9-10	
DC000h-DDFFFh	5-6 11-12	
E0000h-E1FFFh	7-8 9-10	

\*\*\* Manufactory default --- CC000h-CDFFFh

## 2-29. PCI/ISA EXTENSION BUS CONNECTOR

**PISA** : PISA Extension Bus Connector.  
The pin assignments are as follow:



### PCI Bus:

PIN	ASSIGNMENT	PIN	ASSIGNMENT	PIN	ASSIGNMENT	PIN	ASSIGNMENT
E1	I2CLK	F1	I2DAT	E26	GND	F26	GNT#3
E2	GND	F2	GND	E27	AD16	F27	AD17
E3	INTB#	F3	INTA#	E28	FRAME#	F28	IRDY#
E4	INTD#	F4	INTC#	E29	CBE#2	F29	DEVSEL#
E5	VCC	F5	VCC	E30	TRDY#	F30	LOCK#
E7	VCC	F7	V I/O	E31	STOP#	F31	PERR#
E8	PCIRST#	F8	PCICLK2	G1	GND	H1	SERR#
E9	GNT#0	F9	GND	G2	NC	H2	AD15
E10	REQ#0	F10	GNT#1	G3	CBE#1	H3	AD14
E11	GND	F11	GND	G4	PAR	H4	AD12
E12	PCICLK1	F12	REQ#1	G5	GND	H5	GND
E13	GND	F13	AD31	G7	GND	H7	M66EN
E14	AD30	F14	AD29	G8	AD13	H8	AD10
E15	REQ#2	F15	PCICLK3	G9	AD11	H9	AD8
E17	GNT#2	F17	PCICLK4	G10	AD9	H10	AD7
E18	AD28	F18	AD27	G11	CBE#0	H11	AD5
E19	AD26	F19	AD25	G12	AD6	H12	AD3
E20	AD24	F20	CBE#3	G13	AD4	H13	AD1
E21	AD22	F21	AD23	G14	AD2	H14	AD0
E22	AD20	F22	AD21	G16	VCC	H16	V I/O
E23	AD18	F23	AD19	G17	VCC	H17	VCC
E24	PWRGDIN	F24	REQ#3	G18	GND	H18	GND
				G19	GND	H19	GND

**ISA Bus:**

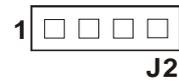
PIN	ASSIGNMENT	PIN	ASSIGNMENT	PIN	ASSIGNMENT	PIN	ASSIGNMENT
A1	/IOCHCHK	B1	GND	C1	/SBHE	D1	/MCS16
A2	SD7	B2	RSTDRV	C2	LA23	D2	/IOCS16
A3	SD6	B3	VCC	C3	LA22	D3	IRQ10
A4	SD5	B4	IRQ9	C4	LA21	D4	IRQ11
A5	SD4	B5	-5V	C5	LA20	D5	IRQ12
A6	SD3	B6	DRQ2	C6	LA19	D6	IRQ15
A7	SD2	B7	-12V	C7	LA18	D7	IRQ14
A8	SD1	B8	/OWS	C8	LA17	D8	/DACK0
A9	SD0	B9	+12V	C9	/MEMR	D9	DRQ0
A10	IOCHRDY	B10	GND	C10	/MEMW	D10	/DACK5
A11	AEN	B11	/SMEMW	C11	SD8	D11	DRQ5
A12	SA19	B12	/SMEMR	C12	SD9	D12	/DACK6
A13	SA18	B13	/IOW	C13	SD10	D13	DRQ6
A14	SA17	B14	/IOR	C14	SD11	D14	/DACK7
A15	SA16	B15	/DACK3	C15	SD12	D15	DRQ7
A16	SA15	B16	DRQ3	C16	SD13	D16	VCC
A17	SA14	B17	/DACK1	C17	SD14	D17	/MASTER
A18	SA13	B18	DRQ1	C18	SD15	D18	GND
A19	SA12	B19	/RFRSH				
A20	SA11	B20	SYSCLK				
A21	SA10	B21	IRQ7				
A22	SA9	B22	IRQ6				
A23	SA8	B23	IRQ5				
A24	SA7	B24	IRQ4				
A25	SA6	B25	IRQ3				
A26	SA5	B26	/DACK2				
A27	SA4	B27	T/C				
A28	SA3	B28	BALE				
A29	SA2	B29	VCC				
A30	SA1	B30	OSC				
A31	SA0	B31	GND				

## 2-30. CD AUDIO-IN CONNECTOR

**J2** : CD Audio-in Connector

The pin assignments are as follows:

PIN	ASSIGNMENT
1	AUXAL
2	GND
3	GND
4	AUXAR

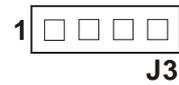


## 2-31. MONO CONNECTOR

**J3** : Mono Connector

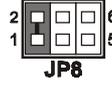
The pin assignments are as follows:

PIN	ASSIGNMENT
1	MONO OUTPUT
2	GND
3	MONO INPUT
4	GND



## 2-32. RESET / NMI / CLEAR WATCHDOG SELECTION

**JP8:** Reset/NMI/Clear Watchdog Selection  
 The selections are as follows:

FUNCTION	JUMPER SETTING (pin closed)	JUMPER ILLUSTRATION
RESET	1-2	
NMI	3-4	
CLEAR WATCHDOG	5-6	

\*\*\*Manufacturing Default is set as Reset.

 User may select to use the Reset or NMI watchdog. NMI, also known as Non-Maskable Interrupt, is used for serious conditions that demand the processor's immediate attention, it cannot be ignored by the system unless it is shut off specifically. To clear NMI command, user should short the "Clear Watchdog" pin via push button.

## 2-33. CASE FAN CONNECTOR

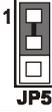
**FAN3 :** Case Fan Connector.  
 The pin assignments are as follows:

PIN	ASSIGNMENT
1	+12V
2	GND



## 2-34. VGA ENABLE/DISABLE SELECTION

**JP5** : VGA Enable/Disable Selection.  
The selections are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
Enable	1-2	
Disable	2-3	

\*\*\* Manufacturing Default --- Enable.

## 2-35. LAN ENABLE/DISABLE SELECTION

**JP2** : LAN Enable/Disable Selection.  
The selections are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
Enable	Closed	
Disable	Open	

\*\*\* Manufacturing Default --- Enable.

## 2-36. AUDIO ENABLE/DISABLE SELECTION

**JP1** : LAN Enable/Disable Selection.  
The selections are as follows:

SELECTION	JUMPER SETTING	JUMPER ILLUSTRATION
Enable	Closed	 1 JP1
Disable	Open	 1 JP1

\*\*\* Manufacturing Default --- Enable.

## 2-37. MEMORY INSTALLATION

This system is enhanced with 2 SDRAM banks.

### DRAM BANK CONFIGURATION

DIMM 1	DIMM 2	TOTAL MEMORY
32M		32M
32M	32M	64M
32M	64M	96M
64M		64M
64M	32M	96M
64M	64M	128M
64M	128M	192M
128M		128M
128M	64M	192M
128M	128M	256M
128M	256M	384M
256M		256M
256M	128M	384M
256M	256M	512M



# ***SOFTWARE UTILITIES***

CHAPTER

**3**

This chapter comprises the detailed information of VGA Driver, Sound driver, LAN driver, and Flash BIOS Update. It also describes how to install the Watchdog Timer Configuration.

Section includes:

- VGA Driver Utility
- Flash BIOS Update
- LAN Driver Utility
- Sound Driver Utility
- Watchdog Timer Configuration

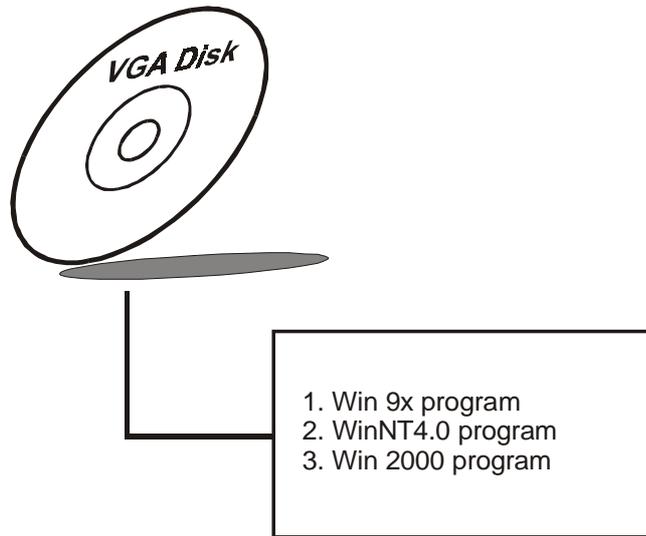
### 3-1. INTRODUCTION

Enclosed with our PS-8060-G3 Book-sized PC package, you will find a CD ROM disk containing all types of drivers we have. As a PS-8060-G3 user, you will only need the some of files contained in the CD ROM disk, please take note of the following chart :

File name (Assume that CD ROM drive is D:)	Purpose
D:\VGA\ATI\Rage XL	For VGA driver installation
D:\Flash\Awdflash.exe	For BIOS update
D:\LAN\RTL8139	For LAN Driver installation
D:\Sound\	For Sound driver installation

### 3-2. VGA DRIVER UTILITY

The VGA interface is embedded with our PS-8060-G3 system to support CRT display. The following illustration briefly shows you the content of VGA driver in D:\VGA\ATI\ Rage XL):



### 3-2-1. Installation of VGA Driver

#### 1. Install VGA Driver to Windows 9x

The Windows 9x ATI Rage XL enhanced display driver is a Windows 9x mini driver. It can be installed and configured using the standard Windows 9x Configuration utilities or the ATI Single Button install.

Installation procedure are as follows:

- (1) Start the computer (Win 95/98).
  - (2) Insert the Utilities Disk into the CD ROM drive.
  - (3) In the Taskbar, click Start, click Run, and type  
D:\VGA\ATI\WIN9X\ATISSETUP.EXE  
(if D is not your CD ROM drive and substitute D with the right drive) in the text entry area and press OK.
  - (4) Click on the Easy Install (Display Drivers and ATI Player) icon.
  - (5) Follow the instructions displayed on the screen to complete the installation process.
- ⚠ Windows 9x will require a restart to implement certain display settings.

#### 2. Install VGA Driver to Win NT4.0

- (1) Start the computer (Win NT).
- (2) Run the Windows NT Display program located in the Control Panel, under "Settings" in the Start Menu. Alternatively, position the cursor on the background of the desktop, click the right mouse button, then select "Properties" from the pop-up menu.
- (3) Select the "Settings" Page, then select "Display Type ...", then select "Change ..." from the display option and then select "Have Disk ..."
- (4) Win NT will prompt you for the correct path, enter the correct pathname where the drive containing the mach64 Driver Disk is located.
- (5) A list of ATI graphics accelerators will be displayed on screen. Select "ATI 3D Rage XL ...", then click the "OK" button.
- (6) Windows NT will once again prompt for confirmation. All appropriate files are then copied to the hard disk.
- (7) When install is complete, shut down the system and restart the computer.

### 3-3. FLASH BIOS UPDATE

#### 3-3-1. System BIOS Update:

Users of PS-8060-G3 can use the program “Awdflash.exe” contained in CD ROM for BIOS update. This is found in D:\flash\Awdflash.exe.

#### 3-3-2. To update BIOS :

1. Install “Awdflash.exe” from the CD ROM Disk into your system.
2. Insert the new BIOS file you have obtained from PS-8060-G3 vendor.
3. Type the pathname to Awdflash.exe and execute the BIOS update with file 600xxxxx.bin

**C:\UTIL\AWDFLASH>AWDFLASH 600xxxxx.bin**

4. The screen will display the table below:

FLASH MEMORY WRITER v7.xx ( C ) Award Software 2000 All Rights Reserved	
For i440BX-SMC669-2A69KP6TC-0	DATE : 03/02/2001
Flash Type - MXIC 29F002T /5V	
File Name to Program : 600xxxxx.bin	Checksum : XXXXX
Error Message : Do You Want To Save BIOS (Y/N)	

If you want to save up the original BIOS, enter “Y ”and press < Enter > .  
If you choose “N”, the following table will appear on screen.

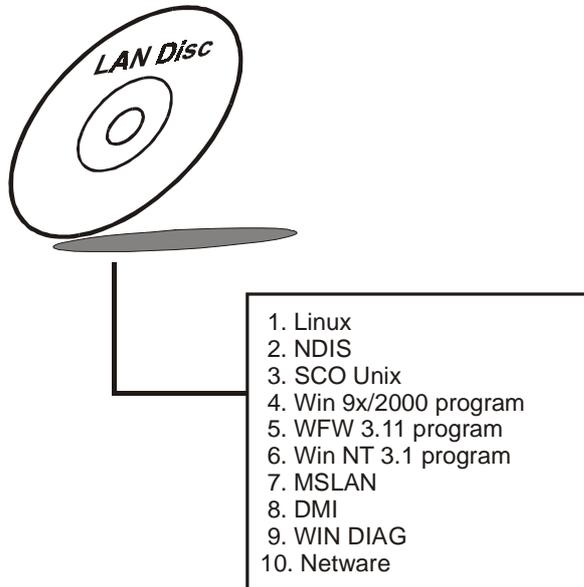
FLASH MEMORY WRITER v7.xx ( C ) Award Software 2000 All Rights Reserved
For i440BX-2A69KP6TC-0      DATE : 03/02/2001 Flash Type - MXIC 29F002T /5V
File Name to Program : 600xxxxx.bin Checksum : XXXXX
Error Message : Are You Sure To Program (Y/N)

Select “Y”, and the BIOS will be renewed. When you are refreshing your BIOS, do not turn off or reset the system, or you will damage the BIOS. After you have completed all the programming, you will see the line: “Reset System or power off to accomplish update process!”. Please turn off or reset the system. Then the Flash BIOS is fully implemented.

## 3-4. LAN DRIVER UTILITY

### 3-4-1. Introduction

The PS-8060-G3 Book-sized PC is enhanced with LAN function that can support various network adapters. The content of the LAN driver is found as follows :



### 3-4-2. Installation of LAN Driver

#### 1. Install LAN Driver to Microsoft Windows 95

Executing Windows 95, it will auto-detect your system configuration and find the adapter hardware.

- (1) Insert the LAN Driver disk into Drive A or CD ROM drive and specify the setup file pathname A:\.
- (2) Windows 95 will appear some messages to insert Windows 95 system disk to complete setup.
- (3) Windows 95 will finish the other installation procedure automatically, and then restart the system.

## 2. Install LAN Driver to Microsoft Windows NT

- (1) In the Main group to NT, select the "Control Panel" icon.
- (2) In the Control Panel window, choose the "Network" icon.
- (3) In the Network Settings dialog box, choose the "Add adapter" button. The Add Network Adapter dialog box appears.
- (4) In the list of network cards, select "<Other> requires disk from manufacturer", and then press <Enter> button.
- (5) Insert the LAN Driver disk in Drive A, and key-in A:\ (pathname) where the setup file OEMSETUP.INF is located, and then choose OK button.
- (6) The screen will appear "Select Line Speed" dialog box, which is provided by RTL8139.SYS driver. The default value is "auto" so that the line speed can be auto detected as 10Mb or 100Mb, while the RTL8139.SYS is loading.
- (7) The screen will appear "Input Ethernet ID" dialog box, which is provided by RTL8139.SYS driver. This option is only required when you have more than one RTL8139 PCI Fast Ethernet adapters on this computer. Select "SKIP" if only one adapter is installed on this computer.
- (8) "Bus Location" display in next screen. If your system contains more than one hardware bus, please select the Bus Type and Bus number on which your network adapter card in installed.
- (9) NT will then perform the binding process. If any additional network software options were installed, you may be prompted for specific information for these packages.
- (10) Re-boot your system to complete the installation process.

\*\*\* Note: Installing Multiple LAN Adapters:

Enter Windows NT and follow above setup procedure setup 2, in the "Network Setting" dialog box, choose the "Configure.." button. The "Input Ethernet ID" dialog box appears and input adapter's Ethernet ID. Last step to select OK and close NETWORK SETUP. Select SKIP if only one adapter is installed on this computer.

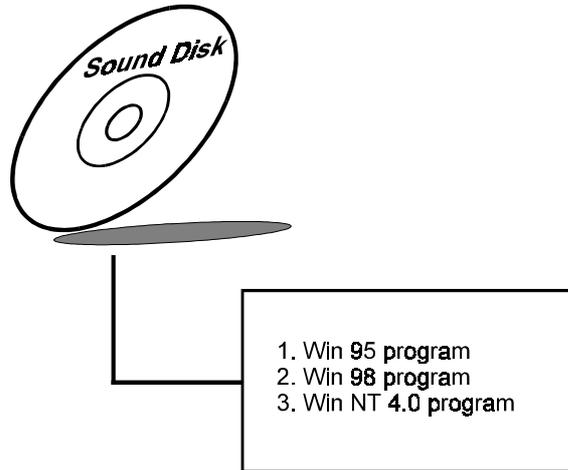
**For more details on Installation procedure, please refer to TXT directory found on LAN DRIVER UTILITY.**

## 3-5. SOUND DRIVER UTILITY

### 3-5-1. Introduction

The ESS ES1938 sound function enhanced in this system is fully compatible with Windows 95, Windows 98 and Windows NT 4.0. It can fully support Sound Blaster Pro, Adlib, Windows Sound System, MPU-401 & GM.

Below, you will find the content of the Sound driver :



### 3-5-2. Installation of Sound Driver

#### 1. Install Sound Driver to Microsoft Windows 95/98

- (1) In the Main group of Win 95/98, select the "Control Panel" icon.
- (2) Select "Driver from disk provided by hardware manufacturer" from New Hardware Found dialog box, then click OK button.
- (3) Insert the CD ROM disk driver into your CD-ROM drive, then enter the correct pathname (ex: D:\SOUND\ESS\W95 or \W98), then click "OK" button from "Install from Disk dialog box".
- (4) Follow screen instructions to complete the process.
- (5) Restart your computer.

**2. Install Sound Driver to Microsoft Windows NT 4.0**

- (1) In "My Computer" icon of NT4.0, choose the "Control Panel" icon.
- (2) In the Control Panel window, choose the "Multimedia" icon.
- (3) Select "Devices", then click "Add" button.
- (4) In the "List of Driver" dialog box, select the "Unlisted/updated Driver" from the list and press the "OK" button and a "Install Driver" dialog box will appear on screen.
- (5) Insert the CD ROM driver disk into your CD ROM drive, and then choose the "Browse" button.
- (6) Locate the pathname where the sound driver is located. "D:\SOUND\ESS\" and press the <ENTER> key.
- (7) Follow screen instructions to complete the process.
- (8) Restart your computer.

### 3-6. WATCHDOG TIMER CONFIGURATION

This board has watchdog timer function for monitoring whether the system is still work or not after a period of time. The user can select watchdog timer to system reset or NMI (Non Maskable interrupt) depending on the jumper set in “Reset/NMI/Clear Watchdog Selection” as described in chapter 2. This is defined at I/O port **443H**. When you want to enable the watchdog timer, please write I/O port **443H**, then the system will either reset itself or perform the NMI function. Likewise, when you want to disable the function, write I/O port **441H**, the system will run the command to stop the Watchdog function.

In PS-8060-G3 watchdog function, You must write your program so when it writes I/O port address 443 for enable watchdog and write I/O port address 441 for disable watchdog. The timer's intervals have a tolerance of 25% so you should program an instruction that will refresh the timer about every second.

The following program shows you how to program the watch timer in your program.

**Watchdog enable program:**

```
MOV    AX, 000FH      (choose the values you need; start from 0)
MOV    DX, 0443H
OUT    DX, AX
```

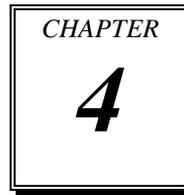
**Watchdog disable program:**

```
MOV    AX, 000FH      (this value can be ignored)
MOV    DX, 0441H
OUT    DX, AX
```

The Watchdog Timer control table is as follows:

Level	Value	Time/sec	Level	Value	Time/sec
1	F	0	9	7	64
2	E	8	10	6	72
3	D	16	11	5	80
4	C	24	12	4	88
5	B	32	13	3	96
6	A	40	14	2	104
7	9	48	15	1	112
8	8	56	16	0	120

# ***GREEN PC FUNCTION***

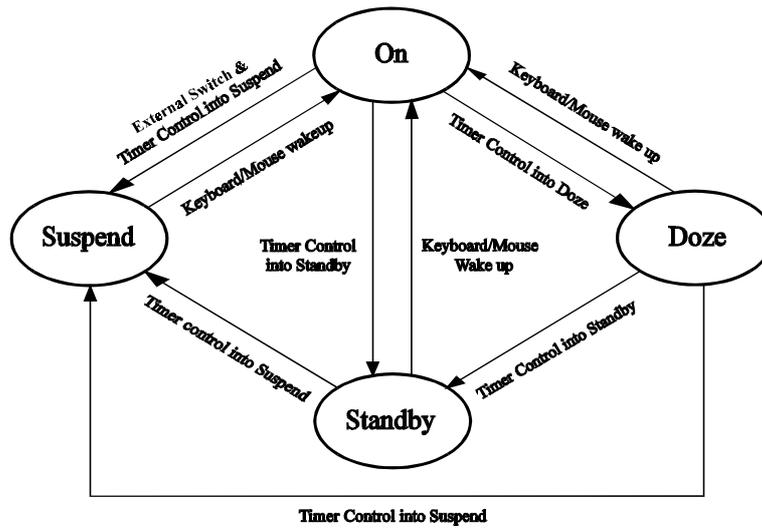


This chapter gives you the concise information for Green PC Function.

Section includes:

- Power Saving Block Diagram
- CPU Doze Mode
- System STANDBY Mode
- System SUSPEND Mode

## 4-1. POWER SAVING BLOCK DIAGRAM



## 4-2. CPU DOZE MODE

1. After timing out, CPU clock slows down.
2. One beep sound.
3. Flash LED to indicate power saving status.
4. Monitor Activity, according to the setting of Advanced Setup.
5. Any activity occurs, system will exit from Doze mode to On mode.

## 4-3. SYSTEM STANDBY MODE

1. After timing out, CPU clock slows down.
2. Two beep sound.
3. Flash LED to indicate power saving status.
4. Level 1 cache are disabled.
5. VGA monitor displays blank screen.
6. Fixed disk driver motor will be spin off.
7. Any activity occurs, system will exit from Standby mode to On mode.

#### **4-4. SYSTEM SUSPEND MODE**

1. After timing out, CPU clock slows down.
2. Three beep sounds.
3. Flash LED to indicate power saving status.
4. Level 2 cache are disabled.
5. VGA monitor displays blank screen.
6. Fixed disk driver motor will be spin off.
7. Monitor activity according to the setting of Advanced Setup.
8. When system in Suspend mode, only Keyboard / Mouse / Alarm resume can wakeup system.



# ***AWARD BIOS SETUP***



This chapter states out how to set up the Award BIOS.

Section includes:

- Introduction
- Entering Setup
- The Standard CMOS Setup
- The BIOS Features Setup
- The Chipset Features Setup
- Power Management Setup
- PNP/PCI Configuration
- Load BIOS defaults
- Integrated Peripherals
- Password Setting
- IDE HDD Auto Detection
- Save Setup and Exit Setup

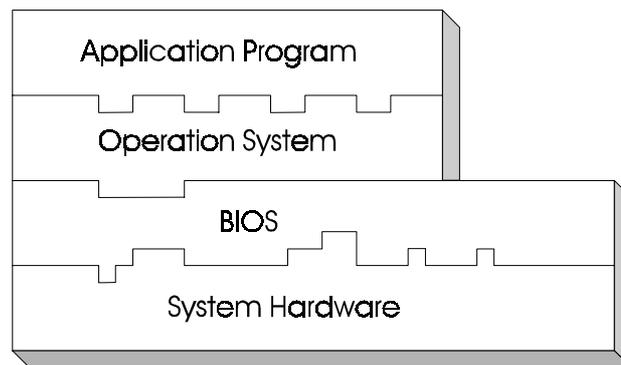
## 5-1. INTRODUCTION

This chapter will show you the function of the BIOS in managing the features of your system. The PS-8060-G3 Book-sized PC is equipped with the BIOS for system chipset from Award Software Inc. This page briefly explains the function of the BIOS in managing the special features of your system. The following pages describe how to use the BIOS for system chipset Setup menu.

Your application programs (such as word processing, spreadsheets, and games) rely on an operating system such as DOS or OS/2 to manage such things as keyboard, monitor, disk drives, and memory.

The operating system relies on BIOS (Basic Input and Output system), a program stored on a ROM (Read-only Memory) chip, to initialize and configure your computer's hardware. As the interface between the hardware and the operating system, the BIOS enables you to make basic changes to your system's hardware without having to write a new operating system.

The following diagram illustrates the interlocking relationships between the system hardware, BIOS, operating system, and application program:



## 5-2 ENTERING SETUP

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines and the following message will appear on the lower screen:

**PRESS <DEL> TO ENTER SETUP, ESC TO SKIP MEMORY TEST**

As long as this message is present on the screen you may press the <Del> key (the one that shares the decimal point at bottom of the number keypad) to access the Setup program. In a moment, the main menu of the Award SETUP program will appear on the screen:

ROM PCI / ISA BIOS (2A69KP6T) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color
Time, Date, Hard Disk Type . . .	

### Setup program initial screen

You may use the cursor up/down keys to highlight the individual menu items. As you highlight each item, a brief description of that item's function appears in the lower window. If you have a color monitor you can use the Shift F2 keys to scroll through the various color combinations available.

### 5-3 THE STANDARD CMOS SETUP MENU

Highlight "STANDARD CMOS SETUP" and press < ENTER > and the screen will display the following table:

ROM PCI / ISA BIOS (2A69KP6T)									
STANDARD CMOS SETUP									
AWARD SOFTWARE, INC.									
Date (mm:dd:yy)	: Tue, Oct 3 2000								
Time (hh:mm:ss)	: 21 : 45 : 26								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE	
Primary Master	: Auto	0M	0	0	0	0	0	AUTO	
Primary Slave	: Auto	0M	0	0	0	0	0	AUTO	
Secondary Master	: Auto	0M	0	0	0	0	0	AUTO	
Secondary Slave	: Auto	0M	0	0	0	0	0	AUTO	
Drive A	: 1.44M, 3.5 in.								
Drive B	: None								
Video	: EGA/VGA								
Halt On	: All, But Keyboard								
		Base Memory:		640K					
		Extended Memory:		64512K					
		Other Memory:		384K					
		-----							
		Total Memory:		65536K					
Esc	: Quit	↑↓→←			: Select Item	Pu/Pd/+/-			: Modify
F1	: Help	(Shift) F2			: Change Color				

CMOS setup screen

In the above table the base memory size and the extended memory size are displayed. This is automatically read from your systems, and you do not need to set these parameters. The screen shows a calendar. Since you have not yet set the time and date, the date displayed is probably incorrect.

Information on each item are as follows:

**Date:**

< Month >, < Date > and < Year >. Ranges for each value are in the CMOS Setup Screen, and the week-day will skip automatically.

**Time:**

< Hour >, < Minute >, and < Second >. Use 24 hour clock format, i.e., for PM numbers, add 12 to the hour. For example, 4: 30 P.M. You should enter the time as 16:30:00.

**Primary Master/Slave & Secondary Master/Slave :**

The categories identify the types of 2 channels that have been installed in the computer. There are 45 predefined types and 4 user definable types are for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type User is user-definable.

Press PgUp / <+> or PgDn / <-> to select a numbered hard disk type or type the number and press < Enter >. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Type User to define your own drive type manually.

If you select Type User, related information is ask to be entered to the following items. Enter the information directly from the keyboard and press < Enter >. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is ESDI, the selection shall be "Type 1".

If the controller of HDD interface is SCSI, the selection shall be "None"

If the controller of HDD interface is CD-ROM, the selection shall be "None"

**TYPE:**

This is the number designation for a drive with certain identification parameters.

**CYLS:**

This is the number of cylinders found in the specified drive type.

**HEAD:**

This is the number of heads found in the specified drive type.

**PRECOMP:**

Precomp is the read delay circuitry in which takes into account the timing differences between the inner and outer edges of the surface of the disk platter. The number designates the starting cylinder of the signal.

**LANDZ:**

Landzone is the landing zone of the heads. This number determines the cylinder location where the heads will normally park when the system is shut down.

**SECTOR :**

This is the number of sectors found in the specified drive type.

**DRIVE A AND DRIVE B:**

This category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

**VIDEO:**

This category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

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

**HALT ON:**

This category allows user to choose whether the computer will stop if an error is detected during power up.

**BASE MEMORY:**

This category refers to the amount of conventional memory installed in the system. The value is typically 512K for systems with 512K memory on the motherboard, or 640K for systems with 640K or more memory installed on the motherboard.

**EXTENDED MEMORY:**

The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

**OTHER MEMORY:**

This refers to the memory located in the 640K or 1024K address space. This is memory that can be used for different applications. DOS uses this area to load device drivers in an effort to keep as much base memory free for application programs. The BIOS is the most frequent user for this RAM area since this is where it shadows RAM.

**HARD DISK ATTRIBUTES:**

Type	Cylinders	Heads	V-P comp	LZone	Sect	Capacity
1	306	4	128	305	17	10
2	615	4	300	615	17	20
3	615	6	300	615	17	30
4	940	8	512	940	17	62
5	940	6	512	940	17	46
6	615	4	65535	615	17	20
7	642	8	256	511	17	30
8	733	5	65535	733	17	30
9	900	15	65535	901	17	112
10	820	3	65535	820	17	20
11	855	5	65535	855	17	35
12	855	7	65535	855	17	49
13	306	8	128	319	17	20
14	733	7	65535	733	17	42
15	000	0	0000	000	00	00
16	612	4	0000	663	17	20
17	977	5	300	977	17	40
18	977	7	65535	977	17	56
19	1024	7	512	1023	17	59
20	733	5	300	732	17	30
21	733	7	300	732	17	42
22	733	5	300	733	17	30
23	306	4	0000	336	17	10
24	977	5	65535	976	17	40
25	1024	9	65535	1023	17	76
26	1224	7	65535	1223	17	71
27	1224	11	65535	1223	17	111
28	1224	15	65535	1223	17	152
29	1024	8	65535	1023	17	68
30	1024	11	65535	1023	17	93
31	918	11	65535	1023	17	83
32	925	9	65535	926	17	69
33	1024	10	65535	1023	17	85
34	1024	12	65535	1023	17	102
35	1024	13	65535	1023	17	110
36	1024	14	65535	1023	17	119
37	1024	2	65535	1023	17	17
38	1024	16	65535	1023	17	136
39	918	15	65535	1023	17	114
40	820	6	65535	820	17	40
41	1024	5	65535	1023	17	42
42	1024	5	65535	1023	26	65
43	809	6	65535	852	17	40
44	809	6	65535	852	26	61
45	776	8	65335	775	33	100
47			AUTO			

**Award Hard Disk Type Table**

## 5-4 The BIOS FEATURES SETUP MENU

Choose the "BIOS FEATURES SETUP" in the main menu, the screen shown as below.

ROM PCI/ISA BIOS (2A69KP6T)			
BIOS FEATURES SETUP			
AWARD SOFTWARE, INC.			
Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000-D3FFF Shadow	: Disabled
		D4000-D7FFF Shadow	: Disabled
Quick Power On Self Test	: Disabled	D8000-DBFFF Shadow	: Disabled
Boot Sequence	: A,C, SCSI	DC000-DFFFF Shadow	: Disabled
Swap Floppy Drive	: Disabled		
Boot Up Floppy Seek	: Enabled		
Boot Up Numlock Status	: On		
Gate A20 Option	: Fast		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250	Esc : Quit	↑↓→← : Select Item
Security Option	: Setup	F1 : Help	Pu/Pd/+/- : Modify
PCI/VGA Palette Snoop	: Disabled	F5 : Old Values (Shift)	F2 : Color
OS Select For DRAM > 64MB	: Non-OS2	F6 : Load BIOS Defaults	
Report No FDD for WIN 95	: Yes	F7 : Load Setup Defaults	

### BIOS Features Setup

This Setup Menu allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing and security.

To get help on each item, highlight the relevant item and press the F1 key. A window will appear on your screen detailing the various options available for each item.

A brief introduction of each setting in the BIOS FEATURES SETUP program is given on the next following pages.

**VIRUS WARNING:**

When this item is Enabled, the BIOS will supervise the boot sector and partition table of the hard disk drive for any attempt for modification.

**CPU INTERNAL/EXTERNAL CACHE:**

Always set this to enable to speed up memory access.

**CPU L2 CACHE ECC CHECKING:**

When set to enabled, memory checking is enable when the external cache contains ECC SRAMs.

**QUICK POWER ON SELF TEST:**

This item allows you to speed up Power On Self Test (POST) after power up the computer when set to Enabled. The BIOS will shorten or skip some check items during POST.

**BOOT SEQUENCE:**

This item allows you to define to the system, the sequence for which drive to look for first when system boots up.

**SWAP FLOPPY DRIVE:**

This item allows you to swap the floppy drive or not. You may choose enabled or disabled.

**BOOT UP FLOPPY SEEK:**

When enabled, BIOS will determine during POST if the FDD installed is 40/80 tracks. Only 360KB floppy drives have 40 tracks; drives with 720KB, 1.2MB and 1.44MB capacity have 80 tracks.

**BOOT UP NUMLOCK STATUS:**

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on.

**GATE 20A OPTION:**

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

**TYPOMATIC RATE SETTING:**

Enable this item if you wish to be able to configure the characteristics of your keyboard. Typematic refers to the way in which characters are entered repeatedly if a key is held down. For example, if you press and hold down the "A" key, the letter "a" will repeatedly appear on your screen on your screen until you release the key..

**TYPOMATIC RATE (CHARS/SEC):**

When the typematic rate is enabled, this selection allows you to select the rate at which the keys are accelerated.

**TYPOMATIC DELAY (MSEC):**

When the typematic rate is enabled, this selection allows you to select the delay between when the key was first depressed and when the acceleration begins.

**SECURITY OPTION:**

This category allows you to limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

 To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

**PCI/VGA PALETTE SNOOP:**

This entry enable or disable the system to work with MPEG ISA/VESA VGA Card.

**OS SELECT FOR DRAM >64MB:**

This item allows you to access the memory that over 64Mb in OS/2. You may choose OS2 or Non-OS2.

**REPORT NO FDD FOR WIN 95:**

Select yes to release IRQ6 when the system contains no floppy drive, for compatibility with Windows 95 logo certification. In the “Integrated Peripherals” screen select disabled for the Onboard FDC Controller field.

**VIDEO BIOS SHADOW:**

Determines whether video BIOS will be copied to RAM. However, it is optional depending on chipset design. Video Shadow will increase the video speed.

**C8000-CBFFF ~ DC000-DFFFF SHADOW:**

These categories determine whether option ROMs will be copied to RAM. An example of such option ROM would be support of on-board SCSI.

## 5-5 CHIPSET FEATURES SETUP

Choose the "CHIPSET FEATURES SETUP" from the main menu, the screen shown as below.

ROM PCI/ISA BIOS (2A69KP6T) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.			
Auto Configuration	: Enabled	Auto Detect DIMM/PCI Clk	: Disabled
EDO DRAM Speed Selection	: 60ns	Spread Spectrum	: Disabled
EDO CASx# MA Wait State	: 2		
EDO RASx# Wait State	: 2	CPU Warning Temperature	: Disabled
SDRAM RAS-to-CAS Delay	: 3	Current CPU1 Temperature	: 35°C/95°F
SDRAM RAS Precharge Time	: 3	Current CPUFAN1 Speed	: 0 RPM
SDRAM CAS latency Time	: 3	Current CPUFAN2 Speed	: 6192RPM
SDRAM Precharge Control	: Disabled	IN0(V) : 1.50 V	IN1(V) : 1.48 V
DRAM Data Integrity Mode	: Non-ECC	IN2(V) : 3.32 V	+ 5 V : 4.99 V
System BIOS Cacheable	: Disabled	+12 V : 12.46 V	-12 V : -12.69 V
Video BIOS Cacheable	: Disabled		
Video RAM Cacheable	: Disabled		
8 Bit I/O Recovery Time	: 1		
16 Bit I/O Recovery Time	: 1	Esc : Quit	↑↓→← : Select Item
Memory Hole at 15M-16M	: Disabled	F1 : Help	Pu/Pd/+/- : Modify
Passive Release	: Enabled	F5 : Old Values	(Shift)F2 : Color
Delay Transaction	: Disabled	F6 : Load BIOS Defaults	
IO Channel Check NMI	: Disabled	F7 : Load Setup Defaults	

### Chipset Features Setup Screen

The parameters in this screen are for system designers, service personnel, and technically competent users only. Do not reset these values unless you understand the consequences of your changes.

#### AUTO CONFIGURATION:

Auto Configuration selects predetermined optimal values of chipset parameters. When disabled, chipset parameters revert to setup information stored in CMOS. Many fields in this screen are not available when Auto Configuration is Enable.

**EDO DRAM SPEED SELECTION:**

The DRAM timing is controlled by the DRAM Timing Registers. The timings programmed into this register are dependent on the system design. Slower rates may be required in certain system designs to support loose layouts or slower memory.

**EDO CASx# MA WAIT STATE:**

The board designer may elect to insert one additional wait state before the assertion of the first CASx# for page hit cycles, thus allowing one additional clock of MA setup time to the CASx# for the leadoff page hit cycle. Do not change from the manufacturer's default unless you are getting memory addressing errors. This field applies only if the EDO DRAM is installed in the system.

**EDO RASx# WAIT STATE:**

The board designer may elect to insert one additional wait state before RAS# is asserted for row misses, thus allowing one additional MAX[13:0] setup time to RASx# assertion. This field applies only if EDO DRAM is installed in the system.

**SDRAM RAS-TO-CAS DELAY:**

This field lets you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. Fast gives faster performance, slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

**SDRAM RAS PRECHARGE TIME:**

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. Fast gives faster performance; Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

**SDRAM CAS LATENCY:**

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer.

**SDRAM PRECHARGE CONTROL:**

When Enabled, all CPU cycles to SDRAM result in an All Banks Precharge Command on the SDRAM interface.

**DRAM DATA INTEGRITY MODE:**

Select Parity or ECC (error-correcting code), according to the type of installed DRAM.

**SYSTEM BIOS CACHEABLE:**

Selecting Enabled allows caching of the system BIOS ROM at F0000h to FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

**VIDEO BIOS CACHEABLE:**

Selecting Enabled allows caching of the video BIOS ROM at C0000h to C7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

**VIDEO RAM CACHEABLE:**

Selecting Enabled allows caching of the video memory (RAM) at A0000h to AFFFFh, resulting in better video performance. However, if any program writes to this memory area, a memory access error may result.

**8/16 BIT I/O RECOVERY TIME:**

The I/O recovery mechanism adds bus clock cycles between PCI-originated I/O cycles to the ISA bus. This delay takes place because the PCI bus is so much faster than the ISA bus. These two fields let you add recovery time (in bus clock cycles) for 8-bit and 16-bit I/O.

**MEMORY HOLE AT 15M-16M:**

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirement.

**PASSIVE RELEASE:**

When Enabled, CPU to PCI bus accesses are allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM.

**DELAYED TRANSACTION:**

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

**AUTO DETECT DIMM/PCI CLK:**

To reduce the occurrence of electromagnetic interference (EMI), the BIOS detects the presence or absence of components in DIMM and PCI slots and turns off system clock generator pulses to empty slots.

**CPU WARNING TEMPERATURE:**

Select the combination of lower and upper limits for the CPU temperature. If the CPU temperature extends beyond either limit, any warning mechanism programmed into your system will be activated.

**CURRENT CPU1 TEMPERATURE:**

This item displays the current CPU temperature, if your computer contains a monitoring system.

**CURRENT CPUFAN1/CPUFAN2 SPEED:**

This item displays the current system speed of the CPU fans, if your computer contains a monitoring system.

## 5-6 POWER MANAGEMENT SETUP

Choose "POWER MANAGEMENT SETUP" option on the main menu, a display will be shown on screen as below :

ROM PCI/ISA BIOS (2A69KP6T) 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	: Disabled
Video Off Method	: V/H SYNC+Blank	Primary IDE 0	: Disabled
Video Off After	: Standby	Primary IDE 1	: Disabled
		Floppy Disk	: Disabled
Doze Mode	: Disable	Serial Port	: Enabled
Standby Mode	: Disable	Parallel Port	: Disabled
Suspend Mode	: Disable		
HDD Power Down	: Disable		
Throttle Duty Cycle	: 62.5%		
PCI/VGA Act-Monitor	: Disabled		
IRQ 8 Break Suspend	: Disabled		
		Esc : Quit	↑↓→← : Select Item
		F1 : Help	Pu/Pd/+/- : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

### Power Management Setup Screen

This section allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

#### POWER MANAGEMENT:

This item allows the user to select the type or degree of power saving and is directly related to HDD Power Down, Doze Mode, Suspend Mode, and Standby Mode.

#### PM CONTROL BY APM:

When this item is set to be YES, the system's BIOS will wait for APM's prompt before it enter any PM mode e.g. DOZE, STANDBY or SUSPEND. If APM is installed, & if there is a task running, even the timer is time out, the APM will not prompt the BIOS to put the system into any power saving mode.

**VIDEO OFF METHOD:**

This category determines the manner in which the monitor is blanked.

V/H SYNC+BLANK	This selection will cause the system to turn off the vertical & horizontal synchronization ports and write blanks to video buffer.
BLANK SCREEN	This selection only writes blanks to video buffer.
DPMS SUPPORT	Initial display power management signaling.

**VIDEO OFF AFTER:**

As the system moves from lesser to greater power-saving modes, select the mode in which you want the monitor to blank.

**DOZE MODE:**

When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.

**STANDBY MODE:**

When enabled and after the set time of system inactivity, the fixed disk drive and the video would be shut off while all other devices still operate at full speed.

**SUSPEND MODE:**

When enabled and after the set time of system inactivity, all device except the CPU will be shut off.

**HDD POWER DOWN:**

When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

**THROTTLE DUTY CYCLE:**

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

**PCI/VGA ACT-MONITOR:**

When enabled, any video activity restarts the global timer for Standby mode.

**POWERON BY RING:**

When enabled, an incoming call on the modem awakens the system from a soft-off state.



**PNP OS INSTALLED:**

This item allows user to determine install PnP OS or not.

**RESOURCE CONTROLLED BY:**

The Award Plug and Play Bios can automatically configure all of the boot and Plug and Play-compatible devices. If set to Auto, all interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

**RESET CONFIGURATION DATA:**

When Enable, the system will reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

**IRQ # ASSIGNED TO:**

If resources are controlled manually, assign each system interrupt as Legacy ISA Devices or PCI/ISA PnP Devices.

Legacy ISA Devices	It complaint with the original PC AT bus specification, requiring a specific interrupt such as IRQ4 for serial port 1.
PCI/ISA PnP Devices	It complaint with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

**DMA # ASSIGNED TO:**

If resources are controlled manually, assign each system DMA channel as Legacy ISA Devices or PCI/ISA PnP Devices.

Legacy ISA Devices	It complaint with the original PC AT bus specification, requiring a specific DMA channel.
PCI/ISA PnP Devices	It complaint with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

**USED MEM BASE ADDR:**

Select a base address for the memory area used by any peripheral that requires high memory.

## 5-8 LOAD BIOS DEFAULTS

### AUTO CONFIGURATION WITH BIOS DEFAULTS

"LOAD BIOS DEFAULTS" loads the default BIOS values. When the diagnostic aid of your system becomes unusable, choose this option and the following message appears :

Load BIOS Default ( Y / N ) ? Y

To use the BIOS defaults, change the prompt to "Y" and press < Enter >, the CMOS is load automatically when you power on the PS-8060-G3.

## 5-9 LOAD SETUP DEFAULTS

### AUTO CONFIGURATION WITH SETUP DEFAULTS

This Main Menu item uses the default SETUP values. Use this option as a diagnostic aid of your system behaves erratically. Choose this item and the following message appears:

Load SETUP Default ( Y / N ) ?Y

To use the SETUP defaults, change the prompt to "Y" and press <Enter>  
The CMOS is load automatically form SETUP default values.

## 5-10 INTEGRATED PERIPHERALS

Choose "INTEGRATED PERIPHERALS" from the main menu, a display will be shown on screen as below:

ROM PCI/ISA BIOS (2A69KP6T)	
INTEGRATED PERIPHERALS	
AWARD SOFTWARE, INC.	
IDE HDD Block Mode	: Enabled
IDE Primary Master PIO	: Auto
IDE Primary Slave PIO	: Auto
IDE Secondary Master PIO	: Auto
IDE Secondary Slave PIO	: Auto
IDE Primary Master UDMA	: Auto
IDE Primary Slave UDMA	: Auto
IDE Secondary Master UDMA	: Auto
IDE Secondary Slave UDMA	: Auto
On-Chip Primary PCI IDE	: Enabled
On-Chip Secondary PCI IDE	: Enabled
USB Keyboard Support	: Disabled
Onboard Parallel Port	: 378/IRQ7
Parallel Port Mode	: Normal
Onboard Serial Port 3	: 3E8
Serial Port 3 Use IRQ	: IRQ10
Onboard Serial Port 4	: 2E8
Serial Port 4 Use IRQ	: IRQ11
Onboard Parallel Port 2	: 278
Parallel Port 2 Use IRQ	: IRQ5
Onboard FDC Controller	: Enabled
Onboard Serial Port 1	: 3F8/IRQ4
Onboard Serial Port 2	: 2F8/IRQ3
Esc : Quit      ↑↓→← : Select Item	
F1 : Help      Pu/Pd/+/- : Modify	
F5 : Old Values (Shift)F2 : Color	
F6 : Load BIOS Defaults	
F7 : Load Setup Defaults	

### IDE HDD BLOCK MODE:

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

### IDE PRIMARY/SECONDARY MASTER/SLAVE PIO:

The four IDE PIO fields allow you to set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

**IDE PRIMARY/SECONDARY MASTER/SLAVE UDMA:**

UDMA, also known as Ultra DMA, is a DMA data transfer protocol that utilizes ATA commands and the ATA bus to allow DMA commands to transfer data at a maximum burst rate of 33 MB/s. When you select Auto in the four IDE UDMA fields, the system automatically determines the optimal data transfer rate for each IDE device.

**ON-CHIP PRIMARY PCI IDE:**

The Integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

**USB KEYBOARD SUPPORT:**

Select Enabled if you have a USB Keyboard.

**ONBOARD FDC CONTROLLER:**

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

**ONBOARD SERIAL PORT 1/2:**

Select a logical COM port name and matching address for the first and second serial ports. Select an address and corresponding interrupt for the first and second serial ports.

**ONBOARD PARALLEL PORT:**

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

**PARALLEL PORT MODE:**

Select an operating mode for the onboard parallel (printer) port. Select Normal unless your hardware and software require one of the other modes offered in this field.

## 5-11 PASSWORD SETTINGS

You may choose to select to set either supervisor or user password, or both of them. The difference is that the supervisor password can enter and change options of the setup menus while user password can only enter setup menu but does not have any rights to change any settings.

### TO SET A PASSWORD

If you want to enable this item you should choose the "PASSWORD SETTING" option from the main menu, 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 the < Enter > key. You will be asked to confirm the password. Type the password again and press < Enter >. You may also press < Esc > to abort the selection and not enter a password.

To change the original password, enter CMOS setup Menu again, you will be asked to enter the original password, then select "PASSWORD SETTING" and press enter. The system will ask you to enter a password, then you may enter new password and re-type new password for confirmation.

 User should bear in mind that when a password is set, you will be asked to enter the password whenever you enter CMOS setup Menu. This can prevent an unauthorized person from changing any part of your system configuration.

You may determine when the password is required within the BIOS Features Setup Menu and its Security Option. If the Security Option is set to "System", the password will be required both at boot and at entry to Setup. If set to "Setup", prompting only occurs when trying to enter Setup.

### **TO DISABLE THE PASSWORD**

Upon entering the CMOS setup Menu, the system will ask you to enter the original password. Type the original password, select "PASSWORD SETTING" and you will be prompted to enter a password. Instead of typing a new password, press the enter key and a message will appear at the center of the screen.

Password Disabled!!!  
Press any key to continue...

Press < Enter > and the password will be disabled. Once the password is disabled, you can enter Setup freely.

### 5-12 IDE HDD AUTO DETECTION

Choose the "IDE HDD AUTO DETECTION" option . The screen will be shown as below.

ROM PCI / ISA BIOS (2A69KP6T) CMOS SETUP UTILITY AWARD SOFTWARE, INC.							
Type	Size	CYLS.	HEADS	PRECOMP	LANDZONE	SECTORS	MODE
Primary Master :	( Mb)	0	0	0	0	0	-----
Primary Slave :							
Select Secondary Slave Option (N=Skip) : N							
Option	Size	Cyls	Heads	Precomp	Landzone	Sectors	Mode
2(Y)	1280	620	64	0	2481	63	LBA
1	1281	2482	16	65535	2481	63	NORMAL
3	1280	620	64	65535	2481	63	LARGE
Note: Some Oses (SCO-UNIX Before v5.0) must use "Normal" for installation							
Esc : Skip							

#### IDE HDD AUTO DETECTION Screen

This setup menu allows you to save time in finding the Hard Disk Drive information, just follow the following steps:

1. Select the "IDE HDD AUTO DETECTION" from the Main Menu.
2. After a couple of seconds, the screen will appear the Hard Disk information and following message:

**"SELECT PRIMARY MASTER OPTION (N=SKIP):N"**

3. Enter Y or N to confirm the acceptance of the parameter reported by BIOS, then press the <ENTER> key.

🔔 The process will repeat again form Primary Slave, Secondary Master and Secondary Slave Hard Disks.

## 5-13 SAVE & EXIT SETUP

When you have completed adjusting all the settings as required, you must have these setting into the CMOS RAM. Select "SAVE & EXIT SETUP" and press <Enter>, as the display shown on below:

ROM PCI / ISA BIOS (2A69KP6T) CMOS SETUP UTILITY AWARD SOFTWARE, INC.		
STANDARD CMOS SETUP		INTEGRATED PERIPHERALS
BIOS FEATURES SETUP		SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP		USER PASSWORD
POWER MANAGEMENT SETUP		IDE HDD AUTO DETECTION
PNP/PCI CONF		ETUP
LOAD BIOS DE	SAVE to CMOS and EXIT (Y/N)? N	SAVING
LOAD SETUP DEFAULTS		
Esc : Quit		↑↓→← : Select Item
F10 : Save & Exit Setup		(Shift)F2 : Change Color
Save Data to CMOS & Exit SETUP		

When you confirm that you wish to save the settings your machine will be automatically rebooted and the changes you have made will be implemented. You may call up the setup program at any time to adjust any of the individual items by pressing the <Del> key during boot up.

### 5-14 EXIT WITHOUT SAVING

If wish to cancel any changes you have made, select “EXIT WITHOUT SAVING” and the original setting stored in the CMOS will be retained. The screen will be shown as below:

ROM PCI / ISA BIOS (2A69KP6T) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONF	ETUP
LOAD BIOS DE	SAVING
LOAD SETUP DEFAULTS	
Esc : Quit	↑↓→← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color
Abandon all Datas & Exit SETUP	

# ***RISER CARD***



This appendix explains the riser card and the respective pin assignments of the expansion slots found in the riser card.

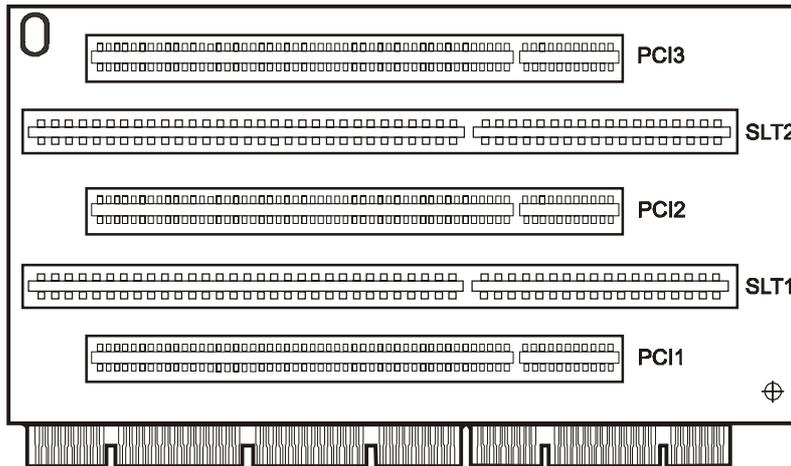
Section includes:

- ISA Slot Pin Assignment
- PCI Slot Pin Assignment

## RISER CARD

You will find a PISA expansion slot on the middle of our system board as illustrated in chapter 2 (page 2-3). By using our Riser Card, which is included in the accessory packed of our PS-8060-G3 Book-sized PC, you can make expansion for any other ISA card and PCI card.

The Riser Card is consists of 2 ISA expansion slot and 3 PCI expansion slot. Below, you will find an illustration of the Riser card enclosed with our PS-8060-G3:

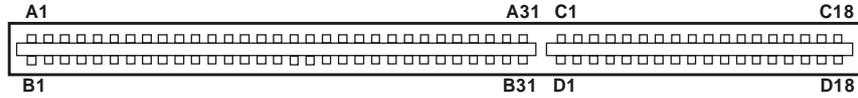


⚠ The Riser Card has a total of 5 expansion slots, but you are only allowed to use up to 3 expansion slots maximum, you may choose :

- (1) PCI1.
- (2) Either PCI2 or SLT1.
- (3) Either PCI3 or SLT2.

## ISA SLOT PIN ASSIGNMENT

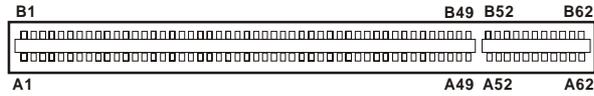
You will find three ISA expansion slot on the Riser Card packed with our PS-8060-G3 Book-sized PC. The ISA-slot is divided into two sets of pins: one consists of 62 pins; and the other consists of 36 pins. The pin assignments as follows :



A		B		C		D	
PIN	ASSIGNMENT	PIN	ASSIGNMENT	PIN	ASSIGNMENT	PIN	ASSIGNMENT
A1	-I/O CH CHK	B1	GND	C1	SBHE	D1	-MEMCS16
A2	SD07	B2	RESET	C2	LA23	D2	-I/OCS16
A3	SD06	B3	+5V	C3	LA22	D3	IRQ10
A4	SD05	B4	IRQ9	C4	LA21	D4	IRQ11
A5	SD04	B5	-5V	C5	LA20	D5	IRQ12
A6	SD03	B6	DRQ2	C6	LA19	D6	IRQ15
A7	SD02	B7	-12V	C7	LA18	D7	IRQ14
A8	SD01	B8	OWS	C8	LA17	D8	-DACK0
A9	SD00	B9	+12V	C9	-MEMR	D9	DRQ0
A10	-I/O CH RDY	B10	GND	C10	-MEMW	D10	-DACK5
A11	AEN	B11	-SMEMW	C11	SD08	D11	DRQ5
A12	SA19	B12	-SMEMR	C12	SD09	D12	-DACK6
A13	SA18	B13	-IOW	C13	SD10	D13	DRQ6
A14	SA17	B14	-IOR	C14	SD11	D14	-DACK7
A15	SA16	B15	-DACK3	C15	SD12	D15	DRQ7
A16	SA15	B16	-DRQ3	C16	SD13	D16	+5V
A17	SA14	B17	-DACK1	C17	SD14	D17	-MASTER
A18	SA13	B18	-DRQ1	C18	SD15	D18	GND
A19	SA12	B19	-REFRESH				
A20	SA11	B20	BCLK				
A21	SA10	B21	IRQ7				
A22	SA09	B22	IRQ6				
A23	SA08	B23	IRQ5				
A24	SA07	B24	IRQ4				
A25	SA06	B25	IRQ3				
A26	SA05	B26	-DACK2				
A27	SA04	B27	T/C				
A28	SA03	B28	BALE				
A29	SA02	B29	+5V				
A30	SA01	B30	OSC				
A31	SA00	B31	GND				

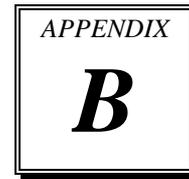
## PCI SLOT PIN ASSIGNMENT

Like ISA-slot, the PCI-slot is also divided into two sets of pins: one consists of 98 pins; and the other consists of 22 pins.  
The pin assignments are as follows :



B		A		B		A	
PIN	ASSIGNMENT	PIN	ASSIGNMENT	PIN	ASSIGNMENT	PIN	ASSIGNMENT
B1	-12V	A1	TRST#	B31	+3.3V	A31	AD18
B2	TCK	A2	+12V	B32	AD17	A32	AD16
B3	GND	A3	TMS	B33	C/BE2#	A33	+3.3V
B4	TDO	A4	TDI	B34	GND	A34	FRAME#
B5	+5V	A5	+5V	B35	IRDY#	A35	GND
B6	+5V	A6	INTA#	B36	+3.3V	A36	TRDY#
B7	INTB#	A7	INTC#	B37	DEVSEL#	A37	GND
B8	INTD#	A8	+5V	B38	GND	A38	STOP#
B9	REQ3#	A9	CLKC	B39	LOCK#	A39	+3.3V
B10	REQ1#	A10	+5V(I/O)	B40	PERR#	A40	SDONE
B11	GNT3#	A11	CLKD	B41	+3.3V	A41	SB0#
B12	GND	A12	GND	B42	SERR#	A42	GND
B13	GND	A13	GND	B43	+3.3V	A43	PAR
B14	CLKA	A14	GNT1#	B44	C/BE1#	A44	AD15
B15	GND	A15	RST#	B45	AD14	A45	+3.3V
B16	CLKB	A16	+5V(I/O)	B46	GND	A46	AD13
B17	GND	A17	GNT0#	B47	AD12	A47	AD11
B18	REQ0#	A18	GND	B48	AD10	A48	GND
B19	+5V(I/O)	A19	REQ2#	B49	GND	A49	AD09
B20	AD31	A20	AD30	B52	AD08	A52	C/BE0#
B21	AD29	A21	+3.3V	B53	AD07	A53	+3.3V
B22	GND	A22	AD28	B54	+3.3V	A54	AD06
B23	AD27	A23	AD26	B55	AD05	A55	AD04
B24	AD25	A24	GND	B56	AD03	A56	GND
B25	+3.3V	A25	AD24	B57	GND	A57	AD02
B26	C/BE3#	A26	GNT2#	B58	AD01	A58	AD00
B27	AD23	A27	+3.3V	B59	+5V(I/O)	A59	+5V(I/O)
B28	GND	A28	AD22	B60	ACK64#	A60	REQ64#
B29	AD21	A29	AD20	B61	+5V	A61	+5V
B30	AD19	A30	GND	B62	+5V	A62	+5V

# ***TECHNICAL SUMMARY***

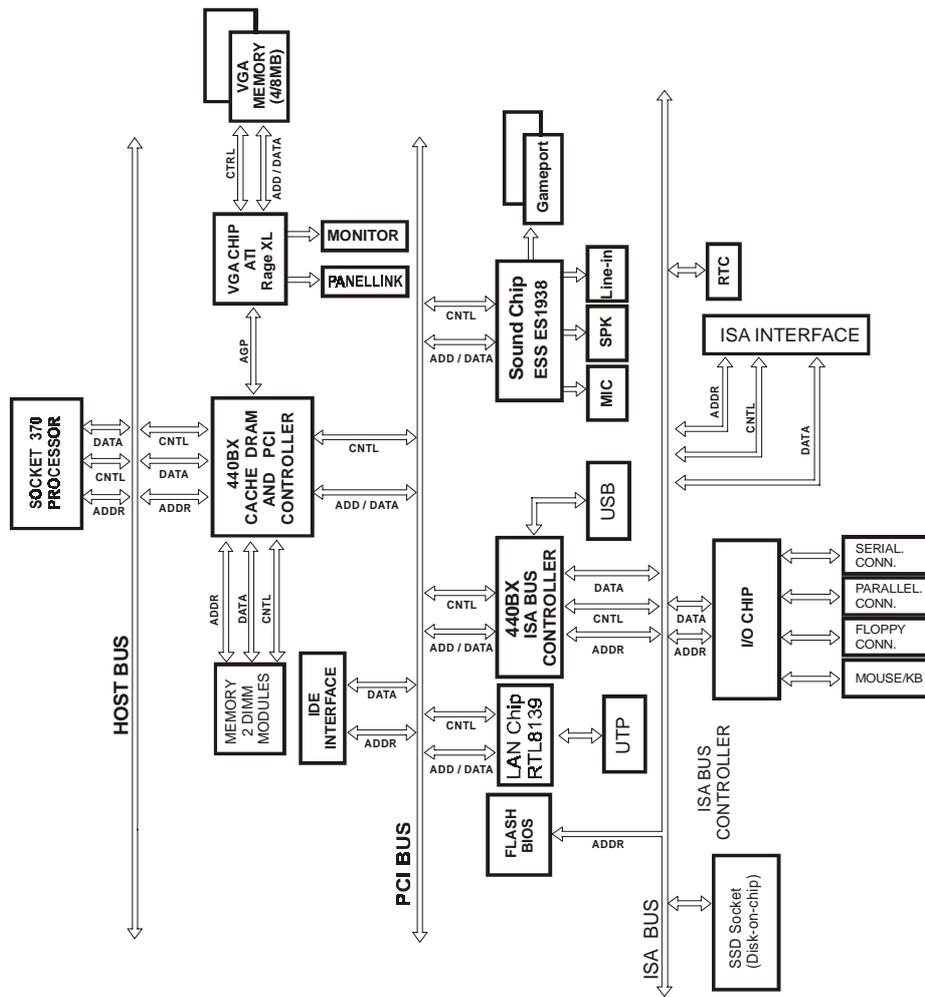


This section introduce you the maps concisely.

Section includes:

- Block Diagram
- Interrupt Map
- RTC & CMOS RAM Map
- Timer & DMA Channels Map
- I / O & Memory Map

**BLOCK DIAGRAM**



## INTERRUPT MAP

IRQ	ASSIGNMENT
0	System TIMER interrupt from TIMER-0
1	Keyboard output buffer full
2	Cascade for IRQ 8-15
3	Serial port 2
4	Serial port 1
5	Parallel port 2
6	Floppy Disk adapter
7	Parallel port 1
8	RTC clock
9	Available
10	Available
11	Available
12	Available
13	Math coprocessor
14	Hard Disk adapter
15	Available

## RTC & CMOS RAM MAP

CODE	ASSIGNMENT
00	Seconds
01	Second alarm
02	Minutes
03	Minutes alarm
04	Hours
05	Hours alarm
06	Day of week
07	Day of month
08	Month
09	Year
0A	Status register A
0B	Status register B
0C	Status register C
0D	Status register D
0E	Diagnostic status byte
0F	Shutdown byte
10	Floppy Disk drive type byte
11	Reserve
12	Hard Disk type byte
13	Reserve
14	Equipment byte
15	Base memory low byte
16	Base memory high byte
17	Extension memory low byte
18	Extension memory high byte
30	Reserved for extension memory low byte
31	Reserved for extension memory high byte
32	Date Century byte
33	Information Flag
34-3F	Reserve
40-7f	Reserved for Chipset Setting Data

## TIMER & DMA CHANNELS MAP

**Timer Channel Map :**

Timer Channel	Assignment
0	System timer interrupt
1	DRAM Refresh request
2	Speaker tone generator

**DMA Channel Map :**

DMA Channel	Assignment
0	Available
1	IBM SDLC
2	Floppy Disk adapter
3	Channel-3 Available
4	Cascade for DMA controller 1
5	Available
6	Available
7	Available

## I/O & MEMORY MAP

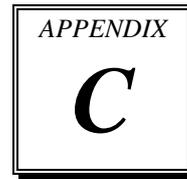
### Memory Map :

MEMORY MAP	ASSIGNMENT
0000000-009FFFF	System memory used by DOS and application
00A0000-00BFFFF	Display buffer memory for VGA/ EGA / CGA / MONOCHROME adapter
00C0000-00DFFFF	Reserved for I/O device BIOS ROM or RAM buffer.
00E0000-00EFFFF	Reserved for PCI device ROM
00F0000-00FFFFFF	System BIOS ROM
0100000-FFFFFFF	System extension memory

### I/O Map :

I/O MAP	ASSIGNMENT
000-01F	DMA controller (Master)
020-021	Interrupt controller (Master)
022-023	Chipset controller registers I/O ports.
040-05F	Timer control registers.
060-06F	Keyboard interface controller (8042)
070-07F	RTC ports & CMOS I/O ports
080-09F	DMA register
0A0-0BF	Interrupt controller (Slave)
0C0-0DF	DMA controller (Slave)
0F0-0FF	Math coprocessor
1F0-1F8	Hard Disk controller
278-27F	Parallel port-2
2B0-2DF	Graphics adapter controller
2F8-2FF	Serial port-2
360-36F	Net work ports
378-37F	Parallel port-1
3B0-3BF	Monochrome & Printer adapter
3C0-3CF	EGA adapter
3D0-3DF	CGA adapter
3F0-3F7	Floppy disk controller
3F8-3FF	Serial port-1

# ***TROUBLE SHOOTING***



This section outlines the errors that may occur when you operate the system. It also gives you the suggestions on solving the problems.

Section includes:

- Trouble Shooting for Error Messages
- Trouble Shooting for POST Code

## **TROUBLE SHOOTING FOR ERROR MESSAGES**

The following information tells you the error messages and the trouble shooting. Please adjust your systems according to the messages below. And make sure all the components and connectors are in proper position and firmly attached. If the errors still encountered, please contact with your distributor for maintenance.

### **POST BEEP :**

Currently there are two kinds of beep codes in BIOS. The one code indicates that a video error has occurred and the BIOS cannot initialize the video screen to display any additional information. This beep code consists of a single long beep followed by three short beeps. The other one code indicates that your DRAM error has occurred. This beep code consists of a single long beep repeatedly.

### **CMOS BATTERY FAILURE :**

When the CMOS battery is out of work or has run out, the user has to replace the whole unit.

### **CMOS CHECKSUM ERROR :**

This error inform you that the CMOS is corrupted. When the battery runs weak, this situation might happen. Please check the battery and change a new one when necessary.

### **DISPLAY SWITCH IS SET INCORRECTLY :**

Display switch on the motherboard can be set to either monochrome or color. This indicates the switch is set to a different setting than indicated in Setup. Determine which setting is correct, and then either turn off the system and change the jumper, or enter Setup and change the video selection.

### **DISK BOOT FAILURE:**

When you can't find the boot device, insert a system disk into Drive A and press < Enter >. Make sure both the controller and cables are all in proper positions, also make sure the disk is formatted correct device. Then reboot the system.

**DISKETTE DRIVES OR TYPES MISMATCH ERROR :**

When the diskette drive type is different from CMOS, please run setup or configure the drive again.

**ERROR ENCOUNTERED INITIALIZING HARD DRIVE :**

When you can't initialize the hard drive. Assure the adapter is installed correctly and all cables are correctly and firmly attached. Also be sure the correct hard drive type is selected in Setup.

**ERROR INITIALIZING HARD DISK CONTROLLER :**

When this error occurs. Be sure the cord is exactly installed in the bus. Make sure the correct hard drive type is selected in Setup. Also check whether all of the jumpers are set correctly in the hard drive.

**FLOPPY DISK CONTROLLER ERROR OR  
NO CONTROLLER PRESENT :**

When you cannot find or initialize the floppy drive controller, please check the controller whether in proper Setup. If there are no floppy drive installed, Ensure the Diskette Drive selection in Setup is set to NONE.

**KEYBOARD ERROR OR NO KEYBOARD PRESENT :**

When this situation happens, please check keyboard attachment and no keys being pressed during the boot. If you are purposely configuring the system without a keyboard, set the error halt condition in Setup to HALT ON ALL, BUT KEYBOARD. This will cause the BIOS to ignore the missing keyboard and continue the boot.

**MEMORY ADDRESS ERROR :**

When the memory address indicates error. You can use this location along with the memory map for your system to find and replace the bad memory chips.

**MEMORY SIZE HAS CHANGED :**

Memory has been added or removed since the last boot. In EISA mode use Configuration Utility to re-configure the memory configuration. In ISA mode enter Setup and enter the new memory size in the memory fields.

**MEMORY VERIFYING ERROR :**

It indicates an error verifying a value already written to memory. Use the location along with your system's memory map to locate the bad chip.

**OFFENDING ADDRESS MISSING :**

This message is used in connection with the I/O CHANNEL CHECK and RAM PARITY ERROR messages when the segment that has caused the problem cannot be isolated.

**REBOOT ERROR :**

When this error occurs that requires you to reboot.. Press any key and the system will reboot.

**SYSTEM HALTED :**

Indicates the present boot attempt has been aborted and the system must be rebooted. Press and hold down the CTRL and ALT keys and press DEL.

## **TROUBLE SHOOTING FOR POST CODES**

When you power on your PC, and the screen display nothing. You have to insert the POST Card for test. The address for ISA POST port is 80h. Make sure the card is in correct slot. The lists below indicate you the error messages. Please follow the instruction to adjust your system. If the error still occurred, please contact with your distributor for maintenance.

**C0 :** Turn off OEM specific cache, shadow.....

**03 :** Initialize all the standard devices with default values Standard devices includes :  
DMA controller (8237).  
Programmable Interrupt Controller (8259).  
Programmable Interval Timer (8254).  
RTC chip.

**05 :** 1.Keyboard Controller Self-Test.  
2.Enable Keyboard Interface.

**07 :** Verfies CMOS's basic R/W functionality.

- BE** : Program defaults values into chipset according to the MODBINable Chipset Default Table.
- C1** : Auto-detection of onboard DRAM & Cache.
- C5** : Copy the BIOS from ROM into E0000-FFFF shadow RAM so that POST will go faster.
- 08** : Test the first 256K DRAM.
- 09** : 1. Program the configuration register of Cyrix CPU according to the MODBINable Cyrix Register Table.  
2. OEM specific cache initialization (if needed).
- 0A** : 1. Initialize the first 32 interrupt vectors with corresponding Interrupt handlers  
Initialize INT no from 33-120 with Dummy(Spurious) Interrupt Handler.  
2. Issue CPUID instruction to identify CPU type.  
3. Early Power Management initialization (OEM specific).
- 0B** : 1. Verify the RTC time is valid or not.  
2. Detect bad battery.  
3. Read CMOS data into BIOS stack area.  
4. PnP initializations including (PnP BIOS only).  
-Assign CSN to PnP ISA card.  
-Create resource map from ESCD.  
5. Assign I/O & Memory for PCI devices (PCI BIOS only).
- 0C** : Initialization of the BIOS Data Area (40 : 0N-40:FF).
- 0D** : 1. Program some of the Chipset's value according to Setup. (Early Setup Value Program).  
2. Measure CPU speed for display & decide the system clock speed.  
3. Video initialization including Monochrome ,CGA, EGA/VGA. If no display device found, the speaker will beep.

- 0E** :
1. Initialize the APIC (Multi-Processor BIOS only).
  2. Test video RAM (If Monochrome display device found).
  3. Show messages including :
    - Award Logo, Copyright string, BIOS Date code & Part No.
    - OEM specific sign on messages.
    - Energy Star Logo (Green BIOS only).
    - CPU brand, type & speed.
    - Test system BIOS checksum (Non-compress Version only).
- 0F** : DMA channel 0 test.
- 10** : DMA channel 1 test.
- 11** : DMA page registers test.
- 14** : Test 8254 Timer 0 Counter2.
- 15** : Test 8259 interrupt mask bits for channel 1.
- 16** : Test 8259 interrupt mask bits for channel 2.
- 19** : Test 8259 functionality.
- 30** : Detect Base Memory & Extended Memory Size.
- 31** :
1. Test Base Memory from 256K to 640K.
  2. Test Extended Memory from 1M to the top of memory.
- 32** :
1. Display the Award Plug & Play BIOS Extension message (PnP BIOS only).
  2. Program all onboard super I/O chips (if any) including COM ports, LPT ports, FDD port....according to setup value.
- 3C** : Set flag to allow users to enter CMOS Setup Utility.
- 3D** :
- 1 Initialize Keyboard.
  - 2 Install PS2 mouse.

**3E** : Try to turn on Level 2 cache.

Note : Some chipset may need to turn on the L2 cache in this stage. But usually, the cache is turn on later in POST 61h.

**BF** : 1. Program the rest of the Chipset's value according to Setup. (Later Setup Value Program).

2. If auto-configuration is enabled, programmed the chipset with pre-defined value in the MODBINable Auto-Table.

**41** : Initialize floppy disk drive controller.

**42** : Initialize Hard drive controller.

**43** : If it is a PnP BIOS, initialize serial & parallel ports.

**45** : Initialize math coprocessor.

**4E** : If there is any error detected (such as video, kb....), show all the error messages the screen & wait for user to press <F1> key.

**4F** : 1. If password is needed, ask for password.

2. Clear the Energy Star Logo (Green BIOS only).

**50** : Write all CMOS values currently in the BIOS stack area back into the CMOS.

**52** : 1. Initialize all ISA ROMs.

2. Later PCI initializations (PCI BIOS only).

-assign IRQ to PCI devices.

-initialize all PCI ROMs.

3. PnP Initializations (PnP BIOS only).

-assign I/O, Memory, IRQ & DMA TO PnP ISA devices.

-initialize all PnP ISA ROMs.

4. Program shadows RAM according to Setup settings.

5. Program parity according to Setup setting.

6. Power Management Initialization.

-Enable/Disable global PM.

-APM interface initialization.

- 53** : 1.If it is NOT a PnP BIOS, initialize serial & parallel ports.  
2. Initialize time value in BIOS data area by translate the RTC time value into a timer tick value.
- 60** : Setup Virus Protection (Boot Sector Protection) functionality according to Setup setting.
- 61** : 1. Try to turn on Level 2 cache.  
Note : if L2 cache is already turned on in POST 3D, this part will be skipped.  
2. Set the boot up speed according to Setup setting.  
3. Last chance for Chipset initialization.  
4. Last chance for Power Management initialization (Green BIOS only).  
5. Show the system configuration table.
- 62** : 1.Setup daylight saving according to Setup value.  
2.Program the NumLock, typematic rate & typematic speed according to Setup setting.
- 63** : 1. If there is any changes in the hardware configuration, update the ESCD information (PnP BIOS only).  
2. Clear memory that have been used.  
3. Boot system via INT 19H.
- FF** : System Booting. this means that the BIOS already pass the control right to the operating system.

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