2807611

Embedded System Board

User's Manual

Version 1.0

Table of Contents

How to Use This Manual

Chapter 1 System Overview 1-1

1.1 Introduction 1-1
1.2 Check List 1-1
1.3 Product Specification 1-2
1.3.1 Mechanical Drawing 1-3
1.4 System Architecture 1-4

Chapter 2 Hardware Configuration 2-1

2.1 Jumper Setting 2-2
2.2 Connector Allocation 2-4

Chapter 3 System Installation 3-1

3.1 Graphic & Ethernet 3-1
3.2 Ultra ATA/66/100 3-1
3.3 Hardware Monitoring 3-1
3.4 I/O Shield Connector 3-2
3.5 Power-On/Off (Remote) 3-2
3.6 2807611 Series Overview 3-3
3.7 CPU Installation (2807611A series) 3-3
3.8 Heat Sink Installation 3-4
3.9 Memory Module Installation 3-5

Chapter 4 BIOS Setup Information 4-1

4.1 Main Menu 4-1
4.2 Standard CMOS Features 4-2
4.3 IDE Adapters 4-4
4.4 Advanced BIOS Features 4-5
4.5 Advanced Chipset Features 4-9
4.6 Integrated Peripherals 4-12
4.7 Power Management Setup 4-18
4.8 PnP/PCI Configurations 4-21
4.9 PC Health Status 4-23
4.10 Frequency/Voltage Control 4-24
4.11 Load Fail-Safe Defaults 4-25
4.12 Load Optimized Defaults 4-25
4.13 Supervisor/User Password Setting 4-25
4.14 Exit Selecting 4-26

How to Use This Manual

The manual describes how to configure your 2807611 system to meet various operating requirements. It is divided into five chapters, with each chapter addressing a basic concept and operation of Single Board Computer.

Chapter 1 : System Overview. Presents what you have in the box and give you an overview of the product specifications and basic system architecture for this model of single board computer.

Chapter 2 : Hardware Configuration. Shows the definitions and locations of Jumpers and Connectors that you can easily configure your system.

Chapter 3 : System Installation. Describes how to properly mount the CPU, main memory and M-systems flash disk to get a safe installation and provides a programming guide of Watch Dog Timer function.

Chapter 4 : BIOS Setup Information. Specifies the meaning of each setup parameters, how to get advanced BIOS performance and update new BIOS. In addition, POST checkpoint list will give users some guidelines of trouble-shooting.

The content of this manual is subject to change without prior notice. These changes will be incorporated in new editions of the document. Global American may make supplement or change in the products described in this document at any time.

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Chapter 1
System Overview

1.1 Introduction

The 2807611 series combines the high performance and exceptional value of Intel® 855GME chipset with a full-featured board. The Intel® advanced 855GME chipset support socket 479-pins Intel® Pentium® M / Celeron® M processor of 1.3GHz and up to 2.0GHz (Dothan™ Core), that memory base on the FSB 400 MHz operation supports DDR SDRAM interface. In the meantime, the 855GME chipset integrated the LVDS & VGA function. The 2807611 system memory size can be up to 1GB DDR memory, onboard one Intel® 82562ET Ethernet controller (support 10/100 Base-TX Ethernet), Audio Line_Out, IEEE-1394 and with 4 COM ports, besides the 2807611 with four USB2.0 ports on rear panel and two internal USB2.0 ports. They are for mini box PC, Panel PC and high-end applications. *(2807611B and 2807611A are the difference between on CPU onboard and core logic.)*

The 82801DB I/O Controller Hub (ICH4) employs the Intel® Accelerated Hub Architecture to make a direct connection from the graphics and memory, the IDE controllers (ATA/33 or ATA/66 or ATA/100), six USB ports that are supported USB 1.1/2.0 standard meets the performance, stability and reliability requirements.

1.2 Check List

The 2807611 package should cover the following basic items:

- One 2807611 Embedded Board
- Driver CD
- ATA-66/100 HDD ribbon cable
- Floppy ribbon cable
- Line_out cable (1 set)
- Installation guide
- External K/B & M/S cable (6-pins to 6-pins)
- Heat sink with fan (for 2807611A series)
- Heat sink without fan (for 2807611B series)
- I/O Shield

Optional Kits

- USB cable (1 set)
- COM2 ribbon cable (1 set)

1.3 Product Specification

- Processor (2807611A)
  - Support socket 479 Intel® Pentium® M with 1MB L2 cache processor, Speed at 1.1GHz ~ 1.7GHz (Banias™ core)
  - Support socket 479 Intel® Pentium® M with 2MB L2 cache processor, Speed at 1.5GHz ~ 2.0GHz (Dothan™ core)
  - System bus frequency at 400 MHz FSB
  - 2807611B onboard Intel® Celeron® M 600MHz (without L2 cache)
- Chipset (2807611A)
  - Intel® 855GME + ICH4 AGPset
  - 2807611B used the Intel® 852GM + ICH4 AGPset
- DRAM Module
  - 1 x 184-pins DIMM socket, Support DDR SDRAM up to 1GB (Max.)
  - For DDR 200/266/333 memory
- LVDS & VGA Function
  - Intel® 855GME chipset integrated LVDS & graphic controller
  - Support 18-bit dual channels LVDS panel
  - Resolution up to 1600 x 1200 UXGA
  - Onboard one 15-pins VGA connector
- Ethernet Function
  - Intel® 82562ET Ethernet controller, for 10/100 Base-TX Ethernet
  - Onboard one RJ-45 Ethernet connector
- IEEE-1394 Function
  - VIA® VT6307S IEEE-1394 controller
  - Onboard one port IEEE-1394 connector
- External Connector
  1 x 6-pins extend to front of chassis for external KB / MS connector
- Expansion Slot
  1 x PCI slot
- Onboard I/O
  On-Chip I/O integrated with keyboard, mouse, parallel and serial and power-on controllers
- Onboard PCI / IDE
  - Intel® 82801DB (ICH4) controller
  - PCI bus IDE port with PIO / Ultra DMA-100 x 2 (up to 4 devices)
- Rear I/O Connectors
  - PS/2 mouse and PS/2 style keyboard
  - D-Sub 25-pins printer port connector

- D-Sub 9-pins COM1 serial port connector for RS-232
- D-Sub 15-pins VGA connector
- RJ-45 Ethernet and 2 x USB2.0 (USB 0/1) connectors
- 1 x IEEE-1394 and 2 x USB2.0 (USB 2/3) connectors

z Internal I/O Connectors (pin-header)
- 2 x USB2.0 connectors (USB cable with bracket by optional)
- Audio Line-out pin-header

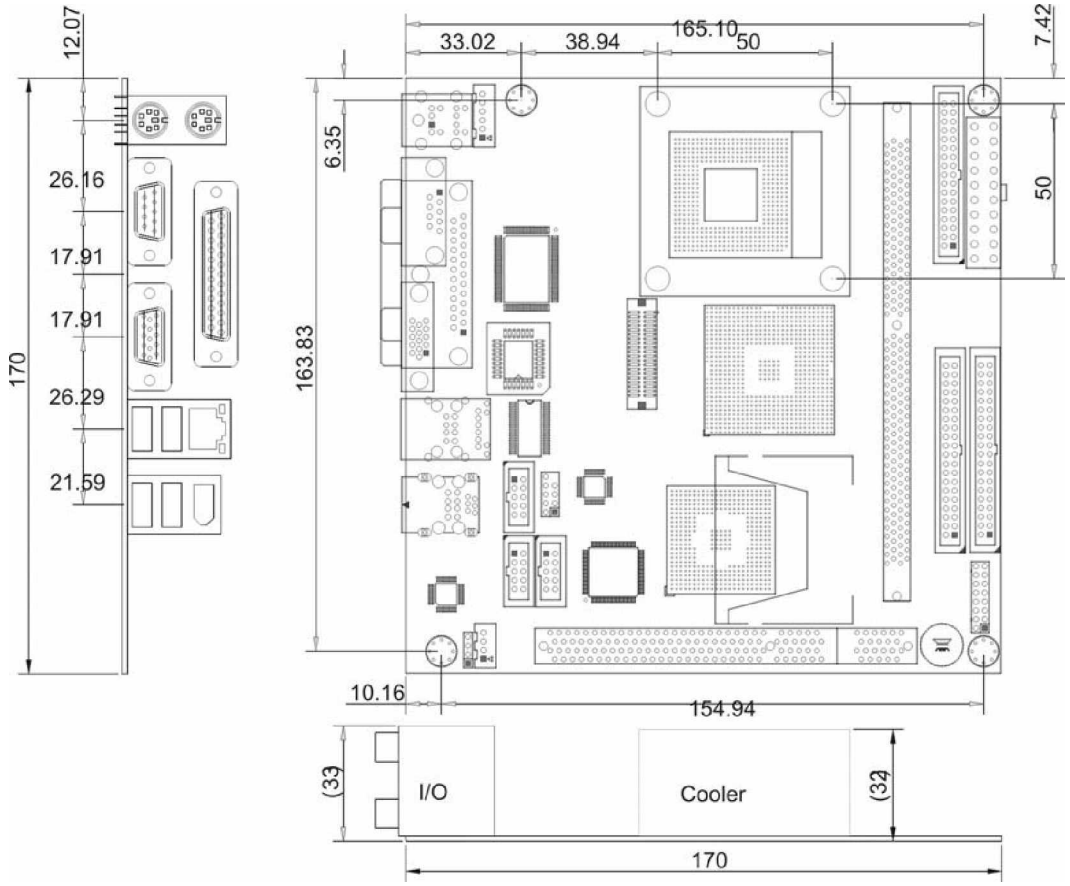
z Power Connector
20-pins ATX power connector

z BIOS
Award Plug & Play BIOS

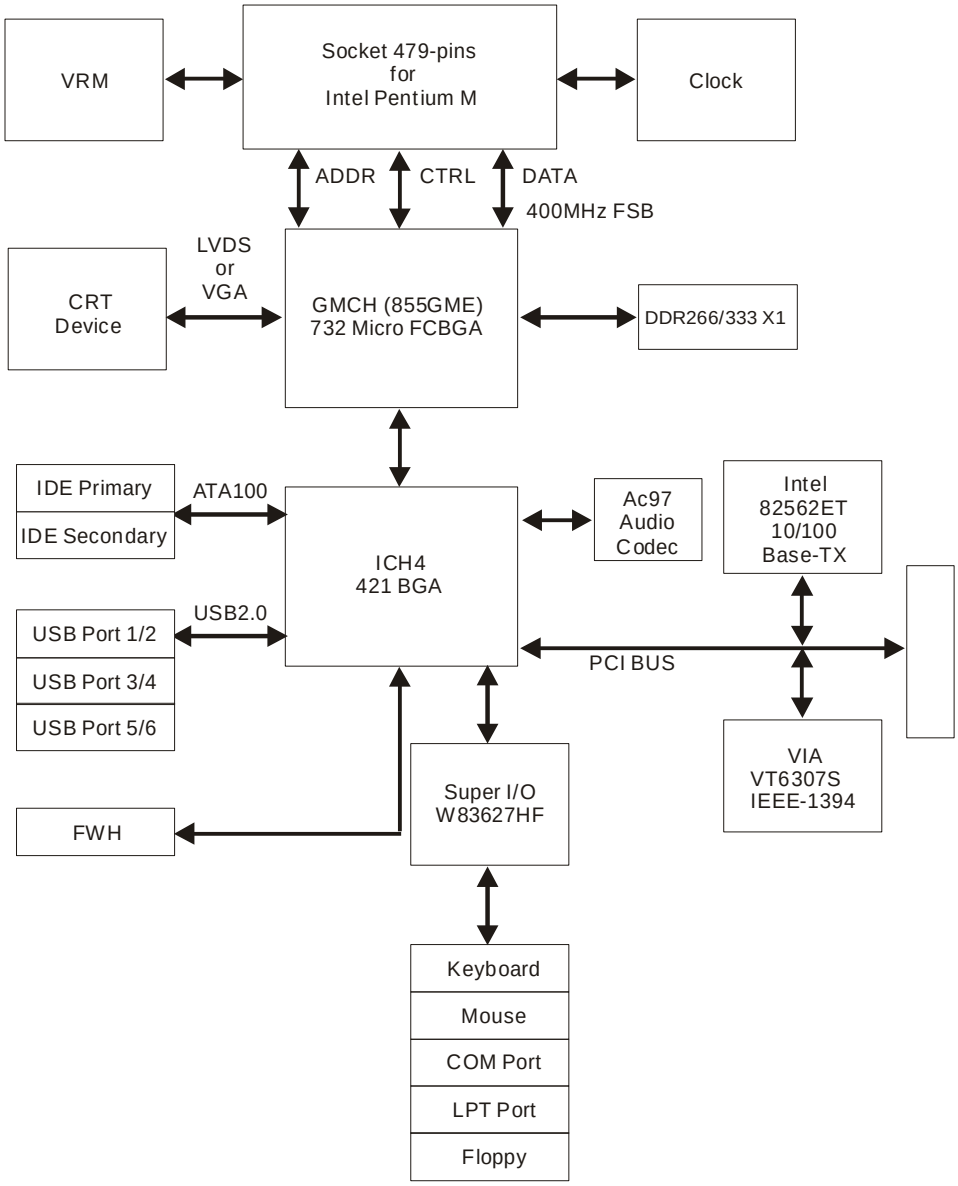
z Form Factor
6.69" x 6.69" (170 x 170mm), Mini ITX size

z Weight
0.77lb (350g) --- 2807611A series

1.3.1 Mechanical Drawing



1.4 System Architecture



2807611 System Block Diagram

Chapter 2
Hardware Configuration

This chapter indicates jumpers', headers' and connectors' locations. Users may find useful information related to hardware settings in this chapter. The default settings are indicated with a star sign (Ì).

There are jumpers on the Embedded Board of the 2807611A series. You can set the jumpers to make the necessary operations.

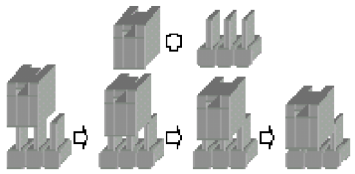


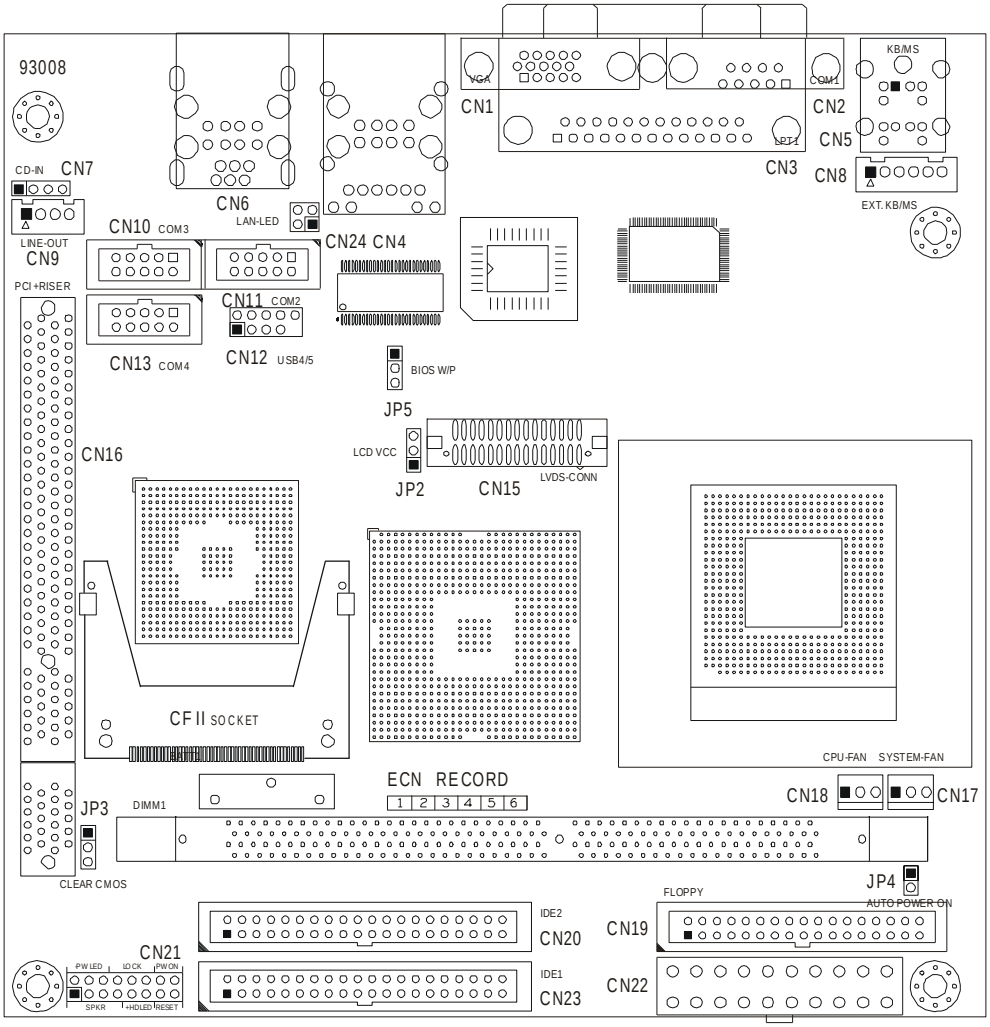
Figure 2-1 Jumper Connector

For any three-pins jumpers (Figure 2-1), the jumper setting is 1-2 when the jumper connects pins 1 and 2. The setting is 2-3 when pins 2 and 3 are connected and so on. You could see one of the lines surrounding jumpers is thick, which indicates pin NO.1.

To move a jumper from one position to another, use needle-nose pliers or tweezers to pull the pin cap off the pins and move it to the desired position.

2.1 Jumper Setting

2807611A Jumper & Connector Location



2807611B onboard Celeron® M 600MHz without L2 cache processor. So the board layout has not the socket of CPU.

In order to set up the correct configuration, here is the description about how to set the jumpers to enable/disable or change functions. All jumpers' location please refer to jumper location diagram.

JP2 : LVDS Voltage Setting Select

JP2	Function
1-2	3.3V Ì
2-3	5V

JP3 : Clear CMOS Setting Select

JP3	Function
1-2	Normal Ì
2-3	Clear CMOS

JP4 : Auto Power on Setting Select

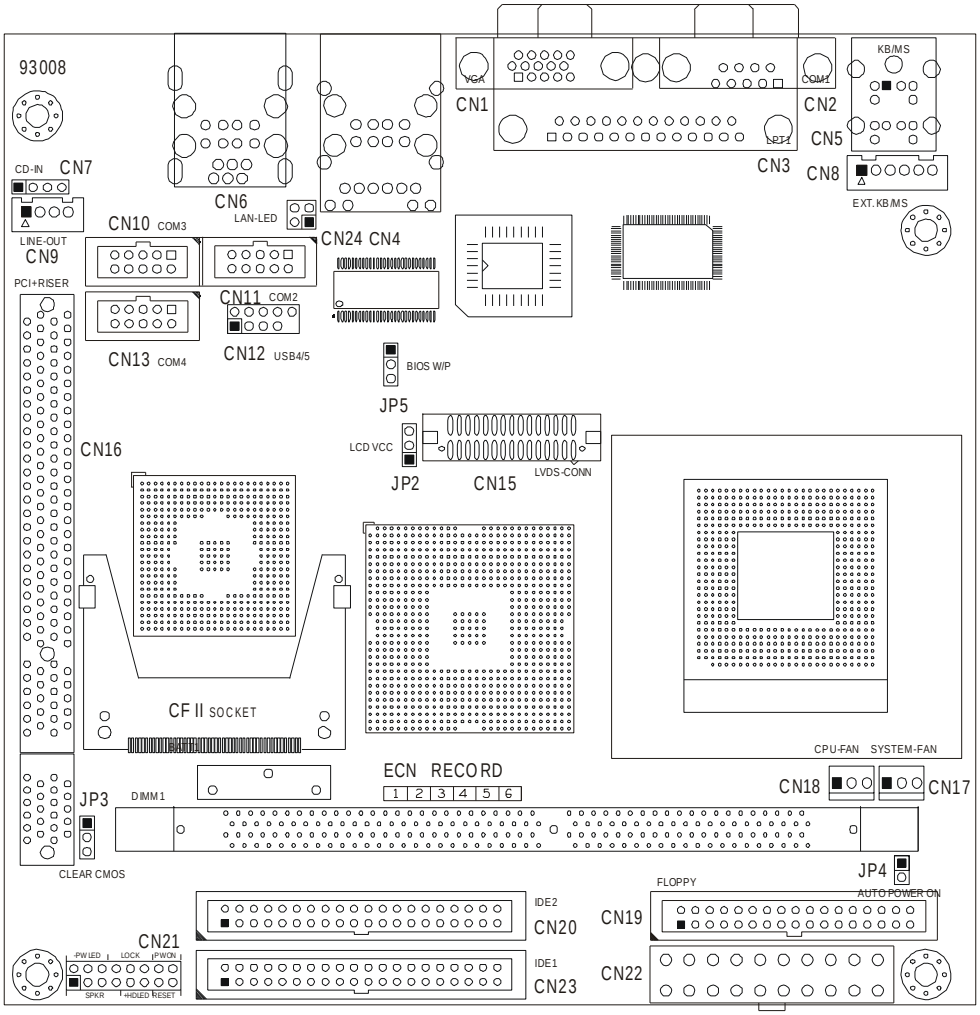
JP4	Function
On	Auto power on
Off	Normal Ì

JP5 : BIOS Protection Setting Select

JP5	Function
1-2	BIOS protection
2-3	Normal Ì

2.2 Connector Allocation

2807611A Connector Location



2807611B onboard Celeron® M 600MHz without L2 cache processor.

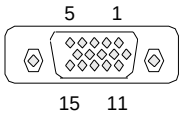
So the board layout has not the socket of CPU.

Connector Function List

Connector	Description	Remark
CN1	CRT VGA port connector	
CN2	COM1 RS-232 serial port connector	
CN3	Parallel port connector	
CN4	USB 0/1 & 10/100 Ethernet RJ-45 connectors	
CN5	PS/2 keyboard & mouse connectors	
CN6	USB 2/3 & IEEE1394 connectors	
CN7	CD_IN pin-header	
CN8	External keyboard & mouse connector	
CN9	Audio Line_out pin-header	
CN10	COM3 RS-232 serial port connector (pin-header)	
CN11	COM2 RS-232 serial port connector (pin-header)	
CN12	USB 4/5 connector (pin-header)	
CN13	COM4 RS-232 serial port connector (pin-header)	
CN15	LVDS panel interface	
CN17	System fan power connector	
CN18	CPU fan power connector	
CN19	Floppy disk connector	
CN20	Secondary IDE connector	
CN21	System panel indicate connector	
CN22	20-pins ATX power connector	
CN23	Primary IDE connector	
CN24	LAN LED pin-header	

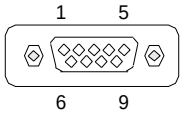
Pin Assignments of Connectors

CN1 : CRT VGA Port Connector (D-SUB 15-pins female)



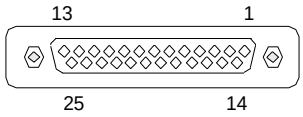
Pin No.	Signal Description	Pin No.	Signal Description
1	Red	2	Green
3	Blue	4	NC
5	Ground	6	Ground
7	Ground	8	Ground
9	VCC	10	Ground
11	NC	12	DDData
13	Hsync	14	VSync
15	DDClk		

CN2 : COM1 RS-232 Serial Port Connector (D-Sub 9-pins male)



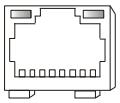
Pin No.	Signal Description	Pin No.	Signal Description
1	DCD (Data Carrier Detect)	6	DSR (Data Set Ready)
2	RXD (Receive Data)	7	RTS (Request to Send)
3	TXD (Transmit Data)	8	CTS (Clear to Send)
4	DTR (Data Terminal Ready)	9	RI (Ring Indicator)
5	Ground		

CN3 : Parallel Port Connector (D-Sub 25-pins female)



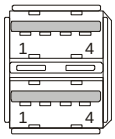
Pin No.	Signal Description	Pin No.	Signal Description
1	Line Printer Strobe	14	Auto Feed
2	PD 0, Parallel Data 0	15	Error
3	PD 1, Parallel Data 1	16	Initialize
4	PD 2, Parallel Data 2	17	Select
5	PD 3, Parallel Data 3	18	Ground
6	PD 4, Parallel Data 4	19	Ground
7	PD 5, Parallel Data 5	20	Ground
8	PD 6, Parallel Data 6	21	Ground
9	PD 7, Parallel Data 7	22	Ground
10	ACK, Acknowledge	23	Ground
11	Busy	24	Ground
12	Paper Empty	25	Ground
13	Select		

CN4 : Ethernet RJ-45 Connector (RJ-45 phone-jack)



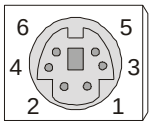
Pin No.	Signal Description	Pin No.	Signal Description
1	Transmit output (+)	5	NC
2	Transmit output (-)	6	Receive input (-)
3	Receive input (+)	7	NC
4	NC	8	NC

CN4 : USB 0/1 Connectors (4-pins female)



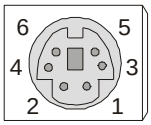
Pin No.	Signal Description	Pin No.	Signal Description
1a	VCC	1b	VCC
2a	USB0 -	2b	USB1 -
3a	USB0 +	3b	USB1 +
4a	Signal ground	4b	Signal ground

CN5 : PS/2 Keyboard Connector (6-pins purple mini Din)



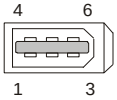
Pin No.	Signal Description	Pin No.	Signal Description
1	Keyboard data	2	NC
3	Ground	4	+5V
5	Keyboard clock	6	NC

CN5 : PS/2 Mouse Connector (6-pins green mini Din)



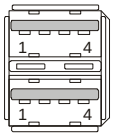
Pin No.	Signal Description	Pin No.	Signal Description
1	Mouse data	2	NC
3	Ground	4	+5V
5	Mouse clock	6	NC

CN6 : IEEE1394 Connector (phone–jack)



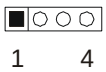
Pin No.	Signal Description	Pin No.	Signal Description
1	VCC	4	XTPB0+
2	Ground	5	XTPA0-
3	XTPB0-	6	XTPA0+

CN6 : USB 2/3 Connectors (4-pins female)



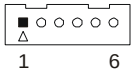
Pin No.	Signal Description	Pin No.	Signal Description
1a	VCC	1b	VCC
2a	USB2 -	2b	USB3 -
3a	USB2 +	3b	USB3 +
4a	Signal ground	4b	Signal ground

CN7 : CD_IN pin-header



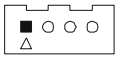
Pin No.	Signal Description
1	CD_IN_Left
2	CD_GND
3	CD_GND
4	CD_IN_Right

CN8 : External Keyboard & Mouse Connector (6-pins pin-header)



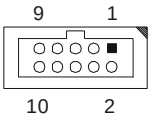
Pin No.	Signal Description	Pin No.	Signal Description
1	MS Clock	2	MS Data
3	KB Clock	4	KB Data
5	Ground	6	VCC

CN9 : Audio Line_out pin-header



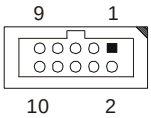
Pin No.	Signal Description
1	LOUT_L
2	Ground
3	Ground
4	LOUT_R

CN11 : COM2 RS-232 Serial Port Connector (10-pins pin-header)



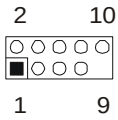
Pin No.	Signal Description	Pin No.	Signal Description
1	DCD	2	DSR
3	RXD	4	RTS
5	TXD	6	CTS
7	DTR	8	RI
9	Ground	10	VCC

CN10/CN13 : OM3/4 RS-232 Serial Port Cconnector (10-pins pin-header)



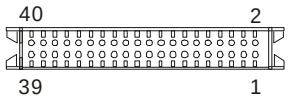
Pin No.	Signal Description	Pin No.	Signal Description
1	DCD	2	DSR
3	RXD	4	RTS
5	TXD	6	CTS
7	DTR	8	RI
9	Ground	10	VCC

CN12 : USB 4/5 Connector (10-pins pin-header)



Pin No.	Signal Description	Pin No.	Signal Description
1	VCC	2	VCC
3	USB4 -	4	USB5 -
5	USB4 +	6	USB5 +
7	Ground	8	Ground
9	---	10	NC

CN15 : LVDS Panel Interface (40-pins male)



Pin No.	Signal Description	Pin No.	Signal Description
1	NC	2	NC
3	Ground	4	Ground
5	YAM0	6	YAM1
7	YAP0	8	YAP1
9	Ground	10	Ground
11	YAM2	12	CLKAM
13	YAP2	14	CLKAP
15	Ground	16	Ground
17	YAM3	18	YBM0
19	YAP3	20	YBP0
21	Ground	22	Ground
23	YBM1	24	YBM2
25	YBP1	26	YBP2
27	Ground	28	Ground
29	CLKBM	30	YBM3
31	CLKBP	32	YBP3
33	NC	34	+12V
35	NC	36	+12V
37	NC	38	VCC_LCD
39	BKL	40	VCC_LCD

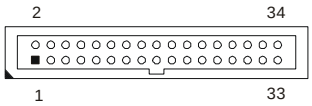
CN17 : System Fan Power Connector

Pin No.	Signal Description
1	Ground
2	VCC
3	Fan Status Signal

CN18 : CPU Fan Power Connector

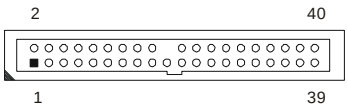
Pin No.	Signal Description
1	Ground
2	VCC
3	Fan Status Signal

CN19 : Floppy Disk Connector (34-pins 2.54mm pitch pin-header with housing)



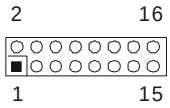
Pin No.	Signal Description	Pin No.	Signal Description
1	Ground	2	Drive Density Selection
3	Ground	4	NC
5	Ground	6	Drive Density Selection
7	Ground	8	Index
9	Ground	10	Motor Enable 0
11	Ground	12	Drive Select 1
13	Ground	14	Drive Select 0
15	Ground	16	Motor Enable 1
17	Ground	18	Direction
19	Ground	20	Step
21	Ground	22	Write Data
23	Ground	24	Write Gate
25	Ground	26	Track 00
27	Ground	28	Write Protect
29	NC	30	Read Data
31	Ground	32	Head Select
33	NC	34	Diskette Change

CN20 : Secondary IDE Connector (40-pins 2.54mm pitch pin-header with housing)



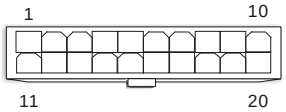
Pin No.	Signal Description	Pin No.	Signal Description
1	Reset IDE	2	Ground
3	Host Data 7	4	Host Data 8
5	Host Data 6	6	Host Data 9
7	Host Data 5	8	Host Data 10
9	Host Data 4	10	Host Data 11
11	Host Data 3	12	Host Data 12
13	Host Data 2	14	Host Data 13
15	Host Data 1	16	Host Data 14
17	Host Data 0	18	Host Data 15
19	Ground	20	---
21	DRQ 1	22	Ground
23	Host IOW	24	Ground
25	Host IOR	26	Ground
27	IOCHRDY	28	Host ALE
29	DACK 1	30	Ground
31	IRQ 15	32	NC
33	Address 1	34	Ground
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

CN21 : System Panel Indicate Connector



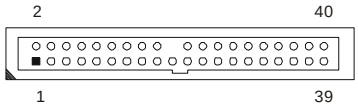
Pin No.	Signal Description	Pin No.	Signal Description
SPEAKER		PWR LED	
1	+5V	2	+5V
3	NC	4	NC
5	BZ	6	Ground
7	SPKR	KEYLOCK	
		8	KBLOCK
9	HDLED+	10	Ground
11	HDLED-	12	NC
RESET		PWR ON	
13	RESET+	14	PWRBT+
15	RESET-	16	PWRBT-

CN22 : 20-pins ATX Power Connector



Pin No.	Signal Description	Pin No.	Signal Description
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS-ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	NC	18	-5V
9	5VSB	19	+5V
10	+12V	20	+5V

CN23 : Primary IDE Connector (40-pins 2.54mm pitch pin-header with housing)



Pin No.	Signal Description	Pin No.	Signal Description
1	Reset IDE	2	Ground
3	Host Data 7	4	Host Data 8
5	Host Data 6	6	Host Data 9
7	Host Data 5	8	Host Data 10
9	Host Data 4	10	Host Data 11
11	Host Data 3	12	Host Data 12
13	Host Data 2	14	Host Data 13
15	Host Data 1	16	Host Data 14
17	Host Data 0	18	Host Data 15
19	Ground	20	---
21	DRQ 0	22	Ground
23	Host IOW	24	Ground
25	Host IOR	26	Ground
27	IOCHRDY	28	Host ALE
29	DACK 0	30	Ground
31	IRQ 14	32	NC
33	Address 1	34	Ground
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

CN24 : LAN LED pin-header

Pin No.	Signal Description	Pin No.	Signal Description
1	ACT_LED	2	VCC_3V
3	LINK_LED	4	VCC_3V

Chapter 3
System Installation

3.1 Graphic & Ethernet

The 2807611A is base on the Intel® 855GME chipset, offers users the integrated LVDS, Graphic, one Ethernet, Audio function. The features of system are as below:

- Enhanced integrated LVDS & graphics
  - 400 MHz FSB support
  - Support 18-bit dual channels LVDS panel
  - Resolution up to 1600 x 1200 UXGA
  - Onboard LVDS interface & CRT VGA connectors
- Build-in one Ethernet
  - Onboard one Intel® Ethernet controller
  - Support 10/100 Base-TX Ethernet
- Memory
  - DDR SDRAM 200/266/333
  - 1 x 184-pins DIMM socket
  - 1.0GB Max.
- IO Connectivity - ICH4
  - 6 Hi-Speed USB2.0 ports
  - AC97 Audio Codec

3.2 Ultra ATA/66/100

The ICH4 provides two channel Ultra ATA/66/100 Bus Master IDE controller, that support Ultra ATA/66/100 protocols, perfect for such demanding applications as real-time video, multimedia, and high performance operating system. A new IDE cable is required for Ultra ATA/66/100. This cable is an 80-conductor cable; however the connectors are, of course, backwards compatible with ATA/33.

3.3 Hardware Monitoring

Hardware monitoring allows you to monitor various aspects of your systems operations and status. The features include CPU temperature, voltage and RPM of fan.

3.4 I/O Shield Connector

The board is equipped with an I/O panel. Please use the appropriate I/O shield (Figure 3-1).

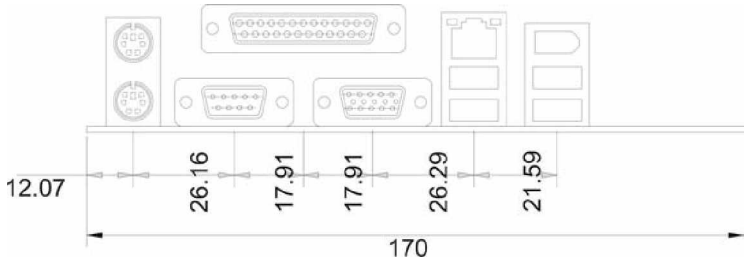


Figure 3-1 I/O back panel layout

3.5 Power-On/Off (Remote)

The board has a single 20-pins connector for ATX power supplies. For ATX power supplies that support the Remote On/Off feature, this should be connected to the systems front panel for system Power On/Off button. The systems power On/Off button should be a momentary button that is normally open.

The board has been designed with “Soft Off" functions. You can turn off the system from one of two sources: The first is the front panel Power On/Off the button, and the other is the "Soft Off" function (coming from the M/B onboard circuit controller) that can be controlled by the operating system.

3.6 2807611 Series Overview

Function / Model	2807611A	2807611B
¡ Processor	Socket Type	Onboard 600MHz (Without L2 Cache)
¡ Chipset	Intel® 855GME	Intel® 852GM
¡ LVDS function	€	€
¡ VGA function	€	€
¡ Ethernet function	€	€
¡ Audio line-out interface	€	€
¡ 40-pins EIDE interface	2	2
¡ Floppy interface	1	1
¡ Parallel port	1	1
¡ PCI slot	1	1
¡ Serial ports	4	4
¡ USB 2.0 ports (two for optional USB cable)	6	6
¡ IEEE-1394 connectors	1	1
¡ Type II CF socket	1	1
¡ Fan connectors	2	2
¡ External KB/MS connector	1	1
¡ LAN Extend to front panel LED pin-header	1	1

3.7 CPU Installation (2807611A series)

Carefully follow the steps below in order to install the CPU:

1. Check and confirm that you are going to install correctly CPU type and pin numbers (Figure 3-2).
2. Take the screwdriver and releasing screw-nut of the socket 479.
3. Rotate mark of screw-nut to face the "OPEN".
4. Align the pins of the CPU against the pinholes of the socket 479. Be sure to pay attention to the orientation of the CPU.

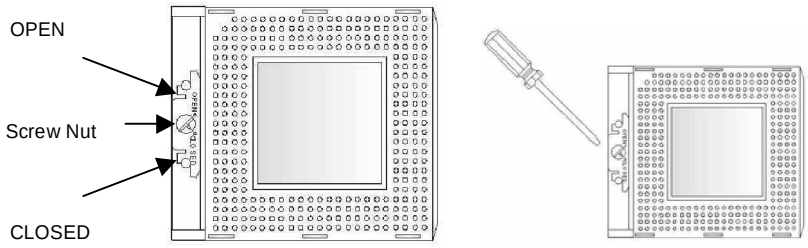


Figure 3-2 CPU Socket

5. Push down the CPU into the socket 479.
6. Rotate mark of screw-nut to face the “CLOSED”.
7. Place the CPU cooling fan atop the CPU surface.
8. Push down the opposite side of the ZIF clip and hook it.
9. Connect the cooling fan cable to the socket. Be careful not to place the cable on the CPU cooling fan.

Removing a CPU:

1. Before removing the CPU, turn off the 2807611 series power; then wait for about 20 minutes until the heat radiation plate of the cooling fan and the CPU cools down.
2. Rotate mark of screw-nut to face the “OPEN”.
3. To remove the CPU.

Note:
The CPU and the heat radiation plate are hot. They may cause burns.

To remove the CPU, reverse the installation steps.

3.8 Heat Sink Installation

Make sure that good contact is made between the processors and the heat sinks & fan. Insufficient contact, incorrect types of heat sinks, fans, or thermal compound used or improper amount of thermal compound applied on the CPU die can cause the processors to overheat, which may crash the system.

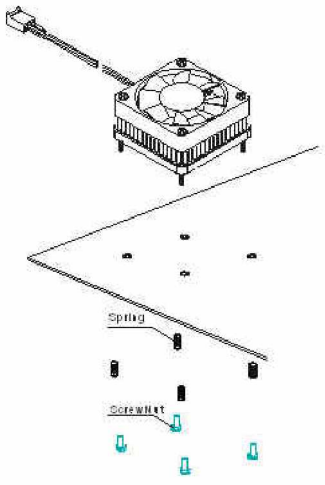


Figure 3-3 Heat Sink Installation

3.9 Memory Module Installation

Figure 3-4 display the notch marks and what they should look like on your DIMM memory module.

DIMMs have 184-pins and two notches, that will match with the onboard DIMM socket. DIMM modules are installed by placing the chip firmly into the socket at a 90-degree angle and pressing straight down (Figure 3-5) until it fits tightly into the DIMM socket.

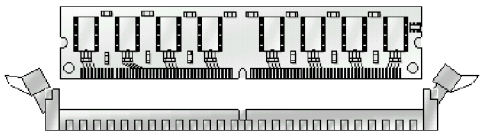


Figure 3-4 DIMM Memory and 184-pins Socket

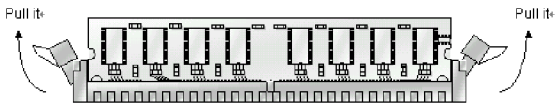


Figure 3-5 Memory Installation

Carefully follow the steps below in order to install the DIMMs:
To avoid generating static electricity and damaging the DIMM, ground yourself by touching a grounded metal surface or using a ground scrap before you touch the DIMM.

1. Do not touch the connector of the DIMM. Dirt residue may cause a malfunction.
2. Hold the DIMM with its notch to the front side of the 2807611 series and insert it completely into the socket. A DIMM should be inserted into the inner socket first. Guiding the hole at each end of the DIMM over the retaining post at each end of the DIMM socket.
3. If you install two DIMMs, install the second DIMM using the same procedure as above.
4. If DIMM does not go in smoothly, do not force it. Pull it all the way out and try again.
5. Make sure the DIMM is properly installed and locked by the tabs on both sides of the socket.

Removing a DIMM:
To remove the DIMM, use your fingers or a small screwdriver to carefully push away the plastic tabs that secure the DIMM at each end. Lift it out of the socket.

Make sure you store the DIMM in an anti-static bag and must be populated the same size and manufactory of memory modules.

Chapter 4
BIOS Setup Information

Award's ROM BIOS provides a built-in Setup program, which allows user to modify the basic system configuration and hardware parameters. The modified data will be stored in a battery-backed CMOS, so that data will be retained even when the power is turned off. In general, the information saved in the CMOS RAM will stay unchanged unless there is a configuration change in the system, such as hard drive replacement or a device is added.

It is possible for the CMOS battery to fail, this will cause data loss in the CMOS only. If this does happen you will need to reconfigure your BIOS settings.

4.1 Main Menu

Once you enter the AwardBIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

Phoenix - AwardBIOS CMOS Setup Utility

¾ Standard CMOS Feature ¾ Advanced BIOS Feature ¾ Advanced Chipset Feature ¾ Integrated Peripherals ¾ Power Management Setup ¾ PnP/PCI Configurations ¾ PC Health Status	¾ Frequency/Voltage Control Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving
Esc: Quit F10: Save & Exit Setup	↑ ↓ →←: Select Item
Time, Date, Hard Disk Type….	

4.2 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features

		Item Help
Date (mm:dd:yy):	Mon, May 9 2005	
Time (hh:mm:ss):	16:19:20	
¾ IDE Primary Master	13579 MB	Menu Level ¾
¾ IDE Primary Slave	None	
¾ IDE Secondary Master	None	Change the day, month, year and century
¾ IDE Secondary Slave	None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Video	EGA / VGA	
Halt On	All, But Keyboard	
Based Memory	640K	
Extended Memory	515072K	
Total Memory	516096K	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

Menu Selections

Date	Month/DD/YYYY	Set the system date. Note that the 'Day' automatically changes when you set the date.
Time	HH : MM : SS	Set the system time.
IDE Primary Master	Options are in its sub menu	Press <Enter> to enter the sub menu of detailed options.
IDE Primary Slave	Options are in its sub menu	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Master	Options are in its sub menu	Press <Enter> to enter the sub menu of detailed options.
IDE Secondary Slave	Options are in its sub menu	Press <Enter> to enter the sub menu of detailed options.
Drive A / Drive B	Options None 360K, 5.25 in/1.2M, 5.25 in/720K, 3.5 in/1.44M, 3.5 in/2.88M, 3.5 in	Select the type of floppy disk drive installed in your system.
Video	Options EGA/VGA/CGA 40/CGA 80/MONO	Select the default video device.
Halt On	Options All Errors/No Errors/All, but Keyboard/All, but Diskette/All, but Disk/Key	Select the situation in which you want the BIOS to stop the POST process and notify you.
Base Memory	N/A	Displays the amount of conventional memory detected during boot up.
Extended Memory	N/A	Displays the amount of extended memory detected during boot up.
Total Memory	N/A	Displays the total memory available in the system.

4.3 IDE Adapters

The IDE adapters control the hard disk drive. Use a separate sub menu to configure each hard disk drive.

Phoenix - AwardBIOS CMOS Setup Utility
IDE Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master		
Access Mode	Auto	Menu Level ¾¾
	Auto	
Capacity		To auto-detect the HDD's size, head... on this channel
Cylinder Head	13579 MB	
Precomp		
Landing Zone	26310	
Sector	16	
	0	
	26309	
	63	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

Menu Selections

IDE HDD Auto-Detection	Press Enter	Press Enter to auto-detect the HDD on this channel. If detection is successful, it fills the remaining fields on this menu.
IDE Primary Master	None, Auto and Manual	Selecting "Manual" lets you set the remaining fields on this screen. Selects the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc. Note: PRECOMP=65535 means NONE!
Access Mode	CHS, LBA, Large and Auto	Choose the access mode for this hard disk
Capacity	Auto Display your disk drive size	Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk-checking program.

The following options are selectable only if the 'IDE Primary Master' item is set to 'Manual'		
Cylinder	Min = 0, Max = 65535	Set the number of cylinders for this hard disk.
Head	Min = 0, Max = 255	Set the number of read / write heads
Precomp	Min = 0, Max = 65535	**** Warning: Setting a value of 65535 means no hard disk
Landing zone	Min = 0, Max = 65535	
Sector	Min = 0, Max = 255	Number of sectors per track

4.4 Advanced BIOS Features

This section 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.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features

		Item Help
¾ CPU Feature	Press Enter	
¾ Hard Disk Boot Priority	Press Enter	
Virus Warning	Disabled	
CPU L1 & L2 Cache Quick	Enabled	Menu Level ¾
Power On Self Test USB	Enabled	
Flash Disk Type	Auto	
First Boot Device	Floppy	
Second Boot Device	Hard Disk	
Third Boot Device	LS-120	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
X Typematic Rate (Chars / Sec)	6	
X Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
Report No FDD For WIN95	No	
Full Screen LOGO Show	Disabled	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

Phoenix - AwardBIOS CMOS Setup Utility
CPU Feature

Thermal Management	Thermal Monitor 1	Item Help
X TM2 Bus Ratio	17 X	
X TM2 Bus VID	1.340V	Menu Level ¾¾
↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults		

Thermal Managemnt

It allows you to select the thermal Monitor.

The choice: Thermal monitor1, thermal Monitor2.

Hard Disk Boot Priority

Press Enter and you can select boot priority by add-in Card.

Virus Warning

Allow you to choose the virus-warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and alarm beep.

Enabled---Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Disabled---No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

CPU L1& L2 Cache

This controls the status of the processor's internal Level One and Level Two cache. However, it depends on CPU chipset design.

Enabled---Enable cache
Disabled---Disable cache

Quick Power On Self Test

This category speeds up Power On Self Test (POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

Enabled---Enable quick POST
Disabled--- Normal POST

USB Flash Disk Type

It allows you to select the type of USB flash disk.

The choice: Auto, Floppy, HDD.

First / Second / Third Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

The choice: Floppy, LS/ZIP, HDD, SCSI, CDROM, LAN and Disabled.

Boot Other Device

When enabled, the system searches all other possible locations for an operating system if it fails to find one in the devices specified under the first, second, and third boot devices.

The choice: Enabled, Disabled.

Swap Floppy Drive

If the system has two floppy drives, you can swap the logical drive name assignments.

The choice: Enabled, Disabled.

Boot Up Floppy Seek

Seeks disk drives during boot up. Disabling speeds boot up.

The choice: Enabled, Disabled.

Boot Up NumLock Status

Select power on state for NumLock.

The choice: On, Off.

Gate A20 Option

Select if chipset or keyboard controller should control GateA20.

Normal---A pin in the keyboard controller controls GateA20.

Fast---Lets chipset control GateA20.

Typematic Rate Setting

Keystrokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.

The choice: Enabled, Disabled.

Typematic Rate (Chars/Sec)

Sets the number of times a second to repeat a keystroke when you hold the key down.

The choice: 6, 8, 10, 12, 15, 20, 24 and 30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.

The choice: 250, 500, 750 and 1000.

Security Option

Select whether the password is required every time the system boots or only when you enter 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.

Note:
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.

OS Select For DRAM > 64MB

Select the operating system that is running with greater than 64MB of RAM on the system.

The choice: Non-OS2, OS2.

Report No FDD For WIN95

Whether report no FDD for Win 95 or not.

The choice: Yes, No.

Full Screen LOGO Show

Select if you want to show logo by full screen.

The choice: Enabled, Disabled.

4.5 Advanced Chipset Features

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced Chipset Features

		Item Help
DRAM Timing Selectable	By SPD	
X CAS Latency Time	2.5	Menu Level ¾
X Active To Precharge Delay	7	
X DRAM RAS# To CAS# Delay	3	
X DRAM RAS# Precharge MGM	3	
Core Frequency	Auto Max 266MHz	
System BIOS Cacheable	Enabled	
Video BIOS Cacheable	Disabled	
Memory Hole At 15M-16M	Disabled	
Delayed Transaction	Enabled	
Delay Prior To Thermal	16Min.	
AGP Aperture Size (MB)	64	
** On-Chip VGA Setting **		
On-Chip VGA	Enabled	
On-Chip Frame Buffer Size	32MB	
Boot Display	CRT	
Panel Number	1	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

DRAM Timing Selectable

Select the operating system that is selecting DRAM timing, so select SPD for setting SDRAM timing by SPD.

The choice: Manual, By SPD.

CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.

The choice: 2, 2.5.

Active To Precharge Delay

Select the operating system that is active to precharge delay.

The choice: 5, 6, 7.

DRAM RAS# To CAS# Delay

This field let's 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; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The choice: 2, 3.

DRAM RAS# Precharge

If an insufficient number of cycles are 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; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.

The choice: 2, 3.

MGM Core Frequency

This item allows you to determine the MGM core frequency.

The choice: Auto Max 266MHz, 400/266/133/200MHz, 400/200/100/200MHz, 400/200/100/133MHz, 400/266/133/267MHz, 400/333/166/250MHz, Auto Max 400/333.

System BIOS Cacheable

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

The choice: Enabled, Disabled.

Video BIOS Cacheable

Select "Enabled" allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The choice: Enabled, Disabled.

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 requirements.

The choice: Enabled, Disabled.

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 2.2.

The choice: Enabled, Disabled.

Delay Prior To Thermal

Select this item allows the delay prior to thermal time.

The choice: 4Min, 8Min, 16Min and 32Min.

AGP Aperture Size (MB)

This field determines the effective size of the Graphic Aperture used for a particular GMCH configuration. It can be updated by the GMCH-specific BIOS configuration sequence before the PCI standard bus enumeration sequence takes place. If it is not updated then a default value will select an aperture of maximum size.

The choice: 4, 8, 16, 32, 64, 128 and 256.

****On-Chip VGA Setting****

On-Chip VGA

This item allows you to control the on-chip VGA.

The choice: Enabled, Disabled.

On-Chip Frame Buffer Size

This item allows you to control the on-chip frame buffer size.

The choice: 1M, 4M, 8M, 16M and 32M.

Boot Display

This item allows you to select the boot display device.

The choice: CRT, LFP and CRT+LFP.

Panel Number

This item allows you to select the panel resolution.

The choice: 1~8

4.6 Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals

		Item Help
¾ OnChip IDE Device	Press Enter	
¾ Onboard Device	Press Enter	
¾ SuperIO Device	Press Enter	Menu Level ¾
Onboard Lan Boot ROM	Disabled	
Onboard Serial Port 1	3F8	
Serial Port 1 Use IRQ	IRQ3	
Onboard Serial Port 2	2F8	
Serial Port 2 Use IRQ	IRQ4	
Onboard Serial Port 3	3E8	
Serial Port 3 Use IRQ	IRQ5	
Onboard Serial Port 4	2E8	
Serial Port 4 Use IRQ	IRQ7	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

OnChip IDE Device

On-Chip Primary PCI IDE	Enabled	Item Help
IDE Primary Master PIO	Auto	
IDE Primary Slave PIO	Auto	Menu Level ¾
IDE Primary Master UDMA	Auto	
IDE Primary Slave UDMA	Auto	
On-Chip Secondary PCI IDE	Enabled	
IDE Secondary Master PIO	Auto	
IDE Secondary Slave PIO	Auto	
IDE Secondary Master UDMA	Auto	
IDE Secondary Slave UDMA	Auto	
IDE HDD Block Mode	Enabled	
↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults		

OnChip Primary/Secondary PCI IDE

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

The choice: Enabled, Disabled.

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you 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.

The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3 and Mode 4.

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select "Auto" to enable BIOS support.

The choice: Auto, Disabled.

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.

The choice: Enabled, Disabled

Onboard Device

USB Controller	Enabled	Item Help
USB 2.0 Controller	Enabled	
USB Keyboard Support	Disabled	Menu Level ¾
USB Mouse Support	Disabled	
AC97 Audio	Auto	
Init Display First	Onboard / AGP.	
Onboard IEEE 1394	Enabled Enabled	
Onboard LAN Controller		

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

USB / USB 2.0 Controller

Select “Enabled” if your system contains a Universal Serial Bus (USB) / USB 2.0 controller and you have USB peripherals.

The choice: Enabled, Disabled.

USB Keyboard Support

Select “Enabled” if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

The choice: Enabled, Disabled.

USB Mouse Support

Select “Enabled” if your system contains a Universal Serial Bus (USB) controller and you have a USB mouse.

The choice: Enabled, Disabled.

AC97 Audio

This item allows you to decide to auto or disable the chipset family to support AC97 Audio.

The choice: Auto, Disabled.

Init Display First

This item allows you to decide to active whether PCI slot or onchip VGA first.

The choice: PCI Slot, Onboard / AGP.

Onboard IEEE 1394

Select "Enabled" if your system has a IEEE1394 device installed on the system board and you wish to use it.

The choice: Enabled, Disabled.

Onboard LAN Controller

Select "Enabled" if your system has a LAN device installed on the system board and you wish to use it.

The choice: Enabled, Disabled.

SuperIO Device

POWER ON Function	BUTTON ONLY	Item Help
X KB POWER ON Password	Enter	
X Hot Key Power ON	Ctrl-F1	Menu Level ¾
Onboard FDC Controller	Enabled	
Onboard Parallel Port Parallel	378 / IRQ7	
Port Mode	SPP	
X EPP Mode Select	EPP1.7	
X ECP Mode Use DMA	3	
PWRON After PWR-Fail	Off	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

Power On Function

You can use this item to select operating Power On the system.

The choice: Password, Hot KET, Any KEY, BUTTON ONLY and Keyboard 98, mouse Left, Mouse Right.

KB Power ON Password

You can set the password to limit operating KB Power On system by pressing enter.

Hot Key Power ON: Options

You can use this item to select operating Hot Key to Power On system.

The choice: Ctrl+F1 ~ Ctrl+F12.

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.

The choice: Enabled, Disabled.

Onboard Parallel Port

This item allows you to determine access onboard parallel port controller with which I/O address.

The choice: 3BC / IRQ7, 378 / IRQ7, 278 / IRQ5 and Disabled.

Parallel Port Mode

Select an operating mode for the onboard parallel (printer) port. Select Normal, Compatible, or SPP unless you are certain your hardware and software both support one of the other available modes.

The choice: SPP, EPP, ECP and ECP+EPP, Normal.

EPP Mode Select

This item allows you to determine the IR transfer mode of onboard I/O chip.

The choice: EPP1.7, EPP1.9.

ECP Mode Use DMA

This item allows you to select a DMA channel for the parallel port for use during ECP mode.

The choice: 3, 1.

PWRON After PWR-Fail

This item allows you to select if you want to power on the system after power failure.

The choice: Off, Former-Sts

Onboard Lan Boot ROM

Select “Enabled” if your system has a LAN device installed on the system board and you wish to use it.

The choice: Enabled, Disabled.

Onboard Serial Port 1 / Port 2 / Port 3 / Port 4

Select an address and corresponding interrupt for the first and second serial ports.

The choice: Disabled, 3F8, 2F8, 3E8, 2E8.

Serial Port 1 / 2 / 3 / 4 Use IRQ

The choice: IRQ3, IRQ4, IRQ5, IRQ7, IRQ9, IRQ10, IRQ11.

4.7 Power Management Setup

The Power Management Setup allows you to configure you system to most effectively save energy while operating in a manner consistent with your own style of computer use.

Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup

		Item Help
ACPI Function	Enabled	
Power Management	User Define	
Video Off Method	DPMS	Menu Level ¾
Video Off In Suspend	Yes	
Suspend Type Modem	Stop Grant	
Use IRQ Suspend	3	
Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant-Off	
CPU THER-Throttling	50.0%	
Wake-Up by PCI card	Disabled	
Power On By Ring	Disabled	
Resume by Alarm	Disabled	
X Date (of Month) Alarm	0	
X Time (hh : mm : ss) Alarm	0 : 0 : 0	
** Reload Global Timer Events **		
Primary IDE 0	Disabled	
Primary IDE 1	Disabled	
Secondary IDE 0	Disabled	
Secondary IDE 1	Disabled	
FDD, COM, LPT Port	Disabled	
PCI PIRQ [A-D]#	Disabled	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

ACPI Function

This item allows you to enable or disable the Advanced Configuration and Power Management(ACI).

The choice: Enabled, Disabled.

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

1. HDD Power Down
2. Doze Mode
3. Suspend Mode

This table describes each power management mode:

Min. Power Saving:
Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.

Max. Power Saving:
Maximum power management -- ONLY AVAILABLE FOR SL CPU's. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.

User Defined:
Allow you to set each mode individually. When not disabled, each of the ranges is from 1 min. to 1 hr. except for HDD Power Down, which ranges from 1 min. to 15 min.

Video Off Method:
This determines the manner in which the monitor is blanked.

V/H SYNC+Blank:
This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen:
This option only writes blanks to the video buffer.

DPMS:
Initial display power management signaling.

Video Off In Suspend

This determines the manner in which the monitor is blanked.
The choice: Yes, No.

Suspend Type

This determines the CPU status during power saving mode.

The choice: PwrOn Suspend, Stop Grant.

MODEM Use IRQ

This determines the IRQ in which the MODEM can use.

The choice: 3, 4, 5, 7, 9, 10, 11 and NA.

Suspend Mode

When "Enabled" and after the set time of system inactivity. All devices except the CPU will be shut off.

The choice: Disabled, 1, 2, 4, 8, 12, 20, 30, 40 Min and 1Hour.

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.

The choice: Disabled, 1~15Min.

Soft-Off by PWR-BTTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung."

The choice: Delay 4 Sec, Instant-Off.

CPU THER-Throttling

Select the CPU THRM-Throttling rate.

The choice: 12.5%, 25.0%, 37.5%, 50.0%, 62.5%, 75.0% and 87.5%.

Wake-Up by PCI Card

An input signal from PME on the PCI card awakens the system from a soft off state.

The choice: Enabled, Disabled.

Power On by Ring

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.

The choice: Enabled, Disabled.

Resume by Alarm

When "Enabled", your can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.

The choice: Enabled, Disabled.

PM Events:
PM events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything, which occurs to a device, which is configured as Enabled, even when the system is in a power down mode.

Primary IDE 0
Primary IDE 1
Secondary IDE 0
Secondary IDE 1
FDD, COM, LPT Port
PCI PIRQ [A-D] #

4.8 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system, which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

Phoenix - AwardBIOS CMOS Setup Utility
PnP/PCI Configurations

PNP OS Installed	No	Item Help
Reset Configuration Data	Disabled	
Resources Controlled By	Auto (ESCD)	Menu Level ¾
X IRQ Resources	Press Enter	
X DMA Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to 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.

The choice: Enabled, Disabled.

Resource controlled by

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95. If you set this field to "Manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a "¾").

The choice: Auto (ESCD), Manual.

Phoenix - AwardBIOS CMOS Setup Utility
IRQ Resources

		Item Help
IRQ3 assigned to	PCI Device	
IRQ4 assigned to	PCI Device	
IRQ5 assigned to	PCI Device	Menu Level ¾
IRQ7 assigned to	PCI Device	
IRQ8 assigned to	PCI Device	
IRQ9 assigned to	PCI Device	
IRQ10 assigned to	PCI Device	
IRQ11 assigned to	PCI Device	
IRQ12 assigned to	PCI Device	
IRQ14 assigned to	PCI Device	
IRQ15 assigned to	PCI Device	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

IRQs

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

Phoenix - AwardBIOS CMOS Setup Utility
DMA Resources

		Item Help
DMA-0 assigned to	PCI/ISA PnP	
DMA-1 assigned to	PCI/ISA PnP	
DMA-2 assigned to	PCI/ISA PnP	Menu Level ¾
DMA-3 assigned to	PCI/ISA PnP	
DMA-4 assigned to	PCI/ISA PnP	
DMA-5 assigned to	PCI/ISA PnP	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

DMAs

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

PCI/VGA Palette Snoop:

This item is designed to overcome problems that can be caused by some nonstandard VGA cards. This board includes a built-in VGA system that does not require palette snooping so you must leave this item disabled. The choice: Enabled, Disabled.

4.9 PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility
PC Health Status

		Item Help
CPU Warning Temperature	Disabled	
SYS Temperature	34°C/93°F	Menu Level ¾
CPU Temperature	40°C/104°F	
CPUFAN SYSFAN	5010RPM	
VCC_2V5	5213RPM	
VCORE	2.48 V	
3.3V	1.29 V	
+ 5 V	3.28 V	
+12 V	4.97 V	
-12V	12.03 V	
-5V	-11.54 V	
VBAT (V)	- 5.20 V	
5VSB (V)	3.02 V	
Shutdown Temperature	4.92 V	
	Disabled	

↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

CPU Warning Temperature

This item will prevent CPU from overheating.

The choice: 50°C / 122°F~70°C / 158°F, Disabled.

SYS / CPU Temperature

Show you the current system & CPU temperature.

CPU / SYS FAN

Show you the current CPU & system fan speed.

VCORE / VBAT (V)

Show you the voltage level of the CPU (Vcore) / Battery.

+3.3V / +5V / +12V / -12V / -5V

Show you the voltage of +3.3V / +5V / +12V / -12V / -5V.

Shutdown Temperature

This item allows you to set up the CPU shutdown Temperature.

The choice: Disabled, 60°C / 140°F, 65°C / 149°F, 70°C / 158°F and 75°C / 167°F.

4.10 Frequency/Voltage Control

Phoenix - AwardBIOS CMOS Setup Utility
Frequency / Voltage Control

Auto Detect PCI CLK Spread Spectrum	Enabled Disabled	Item Help Menu Level ¾
↑↓→← : Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults		

Auto Detect PCI CLK

When “Enabled”, this item will auto detect if the PCI slot have devices and will send clock signal to PCI devices. When disabled, it will send the clock signal to PCI slot.

The choice: Enabled, Disabled.

Spread Spectrum

When you enabled spread spectrum, it can significantly reduce the EMI (ElectroMagnetic Interference) generated by the system.

The choice: Disabled, Enabled.

4.11 Load Fail-Safe Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Fail-Safe Defaults (Y/N)? N

Pressing 'Y' loads the BIOS default values for the most stable, minimal-performance system operations.

4.12 Load Optimized Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N)? N

Pressing 'Y' loads the default values that are factory settings for optimal performance system operations.

4.13 Supervisor/User Password Setting

You can set either supervisor or user password, or both of then. The differences between are:

Set Supervisor Password: can enter and change the options of the setup menus.

Set User Password: just can only enter but do not have the right to change the options of the setup menus. When you select this function, 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 in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

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

PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option (see Section 3). 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.

4.14 Exit Selecting

Save & Exit Setup

Pressing <Enter> on this item asks for confirmation:

Save to CMOS and EXIT (Y/N)? Y

Pressing "Y" stores the selections made in the menus in CMOS – a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.