NuPRO-865

Full-Size SBC

User's Manual



Recycled Paper

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Part No.:

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Detailed Company Information			
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Questions			
Product Model			
Environment	OS: Computer Brand: M/B: CPU: Chipset: BIOS: Video Card: NIC: Other:		
Detail Description			
Suggestions for ADLINK			

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1

Introduction

The NuPRO-865 single board computer is optimized for socket 478 FC-PGA processors, supporting an 800/533MHz Front Side Bus. The memory can accommodate is up to 2GB DDR333/400 SDRAM. This board is based on the Intel® 865G chipset and is fully designed for harsh industrial environment. The NuPRO-865 chipset is an on-die enhanced Intel® Extreme Graphics 2 with one 10/100/1000 Mbps Gigabit Ethernet controller. It is optimized for CTI and high-performance applications.

I/O functions include two SATA ports, two serial ports, one parallel port, two ATA100 IDE interface, one FDC interface, four USB 2.0 ports, Watch Dog Timer and PS/2 Keyboard & Mouse. Key components are selected based on the long-term availability.

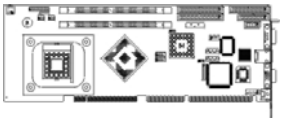
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1.1 Unpacking Checklist

1. Take out the NuPRO-865 series unit from the carton box, check if the unit is properly secure in the plastic bag.

2. Check the contents of the carton box:

◆ Single Board Computer



◆ Installation guide



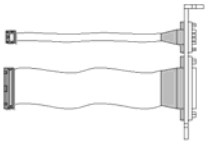
◆ ATA-66/100 HDD ribbon cable



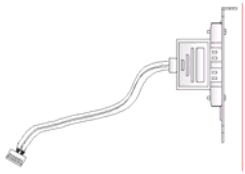
◆ Floppy ribbon cable



◆ Print & COM1 ribbon cable



◆ USB cable (1 Set)



◆ S-ATA & Power cable



◆ KB & MS Y type cable



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◆ Driver CD



◆ ATX control round cable
(4-pins to 4-pins)

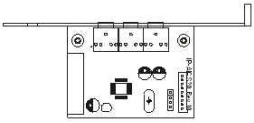


◆ KB extend to BP round cable
(5-pins to 6-pins)



3. Optional Audio Card / Cable

◆ IP-ALCS20 Audio Card



◆ Audio 9-pins round cable



Note: NuPRO-865 OEM versions with non-standard configurations may vary in function or contents according to request.

CAUTION: This board must be protected from static discharge and physical shock. Never remove any of the socketed parts except at a static-free workstation. Use the anti-static bag shipped with the product to handle the board. Wear a wrist strap grounded through one of the system's ESD Ground jacks while servicing system components.

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1.2 Features

- Intel® Pentium® 4 / Celeron™ processor
- Intel® 865G + ICH5 AGPset
- Support 2GB DDR333/400 SDRAM (Max.) Memory
- Front Side Bus Frequency: 533 / 800 MHz
- Chipset integrated AGP8X graphic function
- Single 10/100/1000 Mbps Gigabit Ethernet using Intel® 82547GI chip
- Software programmable watchdog timer
- Hardware Monitoring
- AC97 Audio pin-header (Option IP-ALCS20 audio card)

Hardware Monitoring

Hardware monitoring allows the user to monitor various aspects of their systems operations and status. Features include the CPU temperature, voltage, and RPM of fan.

I/O Shield Connector

The SBC is equipped with an I/O bracket. Please use the appropriate I/O shield.

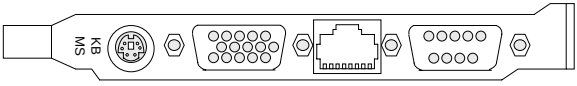


Figure 1: I/O back panel layout

NuPRO-865 Series Overview

Function	NuPRO-865
Chipset	i865G
SCSI Function	/
LCD Function	/
VGA Function	⦿ (i865G)
Gigabit Ethernet Function	⦿
AC97 Audio	Pin-header (Option IP-ALCS20 Audio Card)
Two EIDE Interface	⦿
Two SATA Interface	⦿
One Floppy Interface	⦿
Two Serial, One Parallel	⦿
Four USB 2.0 ports	⦿

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1.3 System Block Diagram

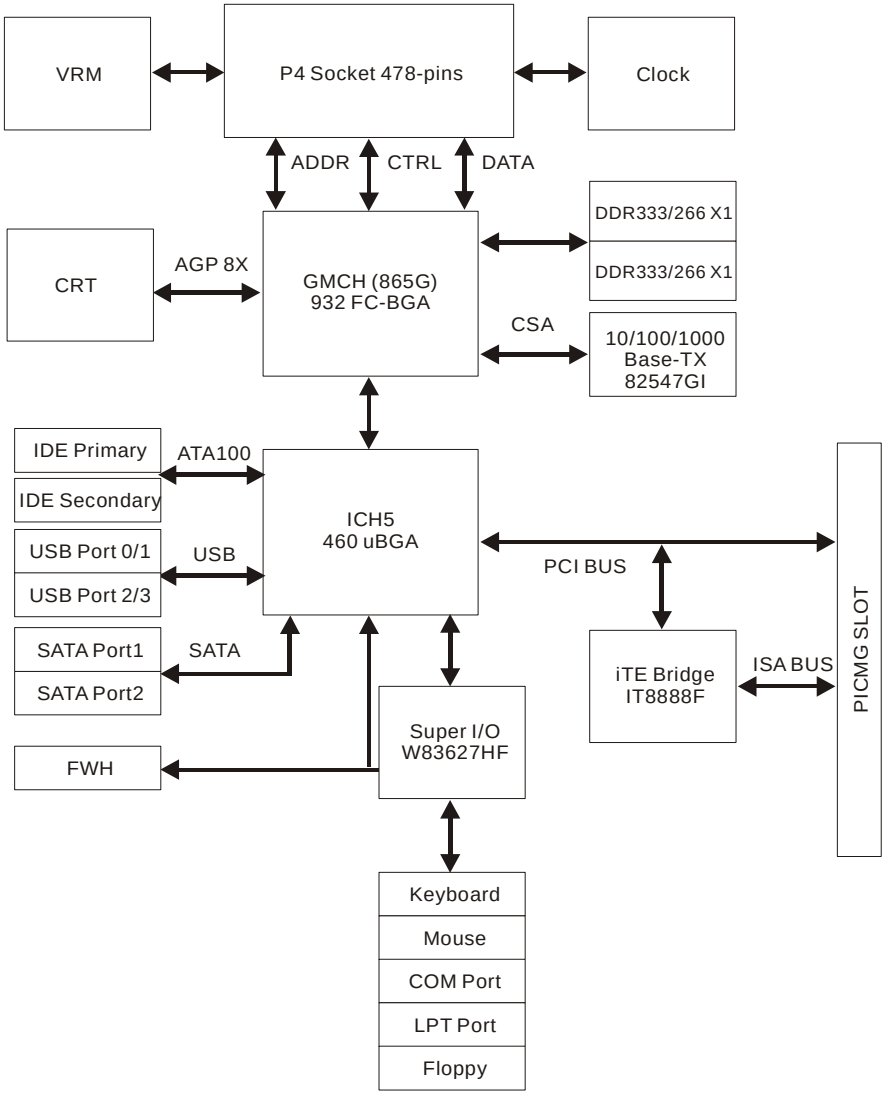


Figure 2: System Block Diagram

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1.4 Specifications

- **Processor:**
  - Socket 478 processors, for Intel® Pentium® 4/ Celeron™ processor
  - Up to 3.2GHz
- **Chipset:**
  - Intel® 865G + ICH5 AGPset
- **Front Side Bus:**
  - 400 / 533 / 800 MHz
- **DRAM Module:**
  - Two 184pins DIMM for DDR SDRAM up to 2GB (max.)
  - Support DDR 266 / 333 / 400 SDRAM
- **VGA Function:**
  - Intel® 865G chipset integrated graphic function
- **Gigabit Ethernet Function:**
  - Intel® 82547GI Gigabit Ethernet controller
  - For 10 / 100 / 1000 Base-TX Ethernet
- **Audio Function: (Optional)**
  - AC97 audio interface, by option audio card --- IP-ALCS20
  - Onboard 9-pins (pin-header) interface
- **SATA Function:**
  - Two S-ATA ports, support data transfer rates up to 150MB/s
- **Onboard I/O:**
  - On-Chip I/O integrated with K/B, Mouse, FDD, Parallel and Serial controller
- **Onboard PCI / IDE:**
  - Intel® ICH5 South Bridge controller
  - PCI rev2.2 Compliant
  - ACPI Compliant Power Management
  - PCI Bus IDE Port with PIO /ATA-100 x 2 (Up to 4 Devices)

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- **Bracket I/O Connectors:**
  - D-Sub Serial port (COM1)
  - Single RJ-45 connector
  - 15-pins D-Sub VGA connector
  - PS/2 style Mouse or Keyboard connector

- **USB 2.0 Ports:**
  - Four USB 2.0 ports (pin-header)

- **BIOS:**
  - Award Plug and Play BIOS

- **Extended Function:**
  - Hardware monitoring function
  - IrDA by pin-header

- **Form Factor:**
  - 13.3” x 4.8” (338 x 122mm)

- **Weight:**
  - 0.93lb (420g) - NuPRO-865

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2

Installation

2.1 System Installation

CPU Installation

Carefully follow the steps below to install the CPU:

1. Check and confirm that the jumpers are correctly set for the CPU being installed (figure 3).
2. Lift the releasing lever of the Socket 478.
3. Align the pins of the CPU with the pinholes of the Socket 478. Be sure to pay attention to the orientation of the CPU.

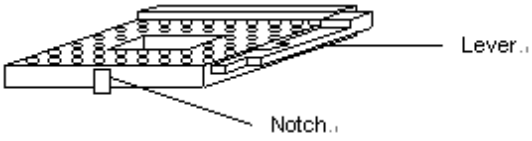


Figure 3: CPU Socket

4. Push down the CPU into the Socket 478.
5. Push down the release lever and lock it against the key hook.
6. Hook the hole in ZIF clip for the CPU cooling fan onto the notch on the socket 478.
7. Place the CPU cooling fan on top of the CPU surface.

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8. Push down the opposite side of the ZIF clip and hook it.

9. Slide the head of the clip to left and lock it.

10. Connect the cooling fan cable to the socket as shown below. Be careful not to place the cable on the CPU cooling fan.

Removing a CPU:

1. Before removing the CPU, turn off the NuPRO-865 Series power; then wait for about three minutes until the heat radiation plate of the cooling fan and the CPU cools down.

2. To remove the CPU, lift the releasing lever of the Socket 478.

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

To remove the CPU, reverse the installation steps.

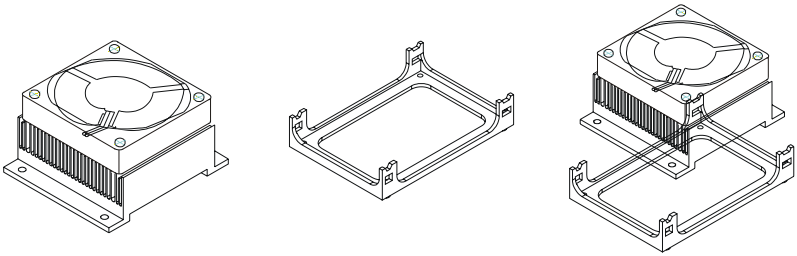
Heat Sink & Retention Module Installation

It is highly recommended that only NuPRO-865 Heat sink and fan (Figure 4), designed for use in the chassis be used - the use of other heat sinks, including those boxed with CPUs, may damage the NuPRO-865 SBC.

Make sure that good contact is made between the processors and the heat sinks. 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.

The Retention Module is used to hold up the weight of the Heat sink and fan.

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Heat Sink & Fan
(For P4 processor only)

Retention Module
(For P4 Heat Sink & Fan)

Installation

Figure 4: Heat Sink Installation

Memory Module Installation

Figure 5 illustrates the notch marks and what they should look like on the DIMM memory module.

DIMMs have 184-pins and two notches matching 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 6) until it fits tightly into the DIMM socket.

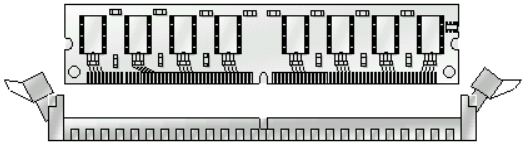


Figure 5: DIMM Memory and 184-pins Socket

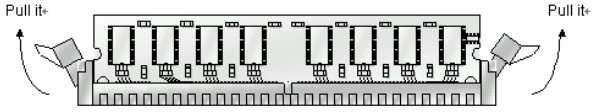


Figure 6: Memory Installation

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Carefully follow the steps below to install the DIMMs:

1. To avoid generating static electricity and damaging the DIMM, ground yourself by touching a grounded metal surface or using a ground scrap before touching the DIMM.

2. Do not touch the connector of the DIMM. Dirt residues may cause malfunctions.

3. Hold the DIMM with its notch to the front side of the NuPRO-865 Series and insert it completely into the socket. A DIMM should be inserted into the inner socket first. Guide the hole on each end of the DIMM over the retaining post at each end of the DIMM socket.

4. If installing two DIMMs, install the second DIMM using the same procedure as above.

5. Do not forcefully insert the DIMM if it does not go in smoothly. Remove the DIMM completely and try again.

6. 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 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 the DIMM is stored in an anti-static bag which must be of the same size and manufacture of memory modules.

Setting Jumpers and DIP Switches

There are jumpers and DIP-switches on the Embedded Board of the NuPRO-865 Series. The jumpers can be set for various operations.

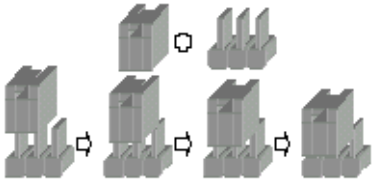


Figure 7: Jumper Connector

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For three-pin jumpers (Figure 7), 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. The pins are numbered “1“ and “3“ on the circuit board for identification purposes. Also, pin 1 has a thick line surrounding the jumper.

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 to the required position.

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2.2 Board Layout

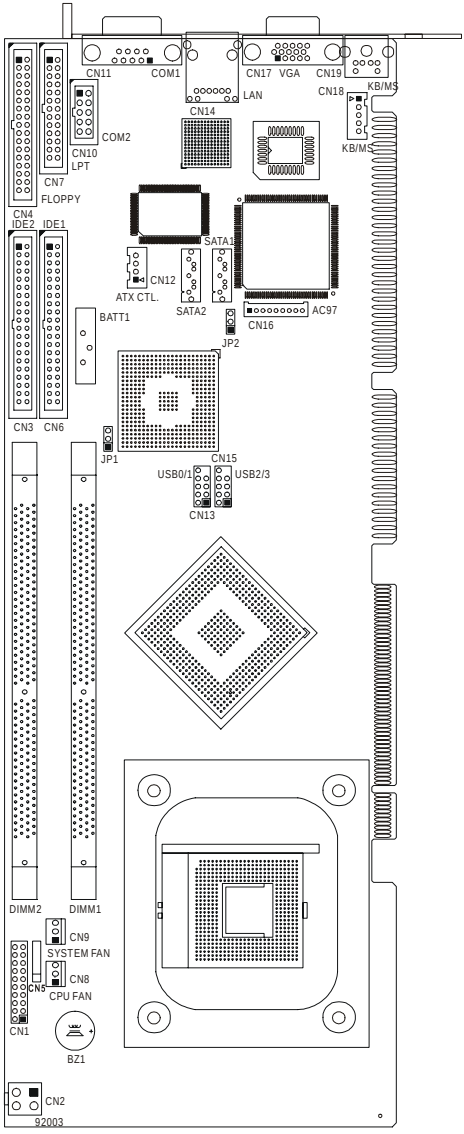


Figure 8: Jumper and Connector Locations

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2.3 Jumper setting

Jumper Location Description:

Use the information in the following table to change the jumpers and the DIP switches.

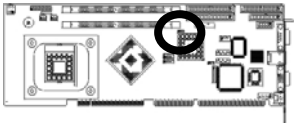
Jumpers	Functions
JP1	Clear CMOS Setting Select
JP2	Watchdog Timer Setting Select

A description on setting the jumpers to enable/disable or change functions is illustrated below. Please refer to the diagrams below for jumper locations.

1. Clear CMOS Setting Select: JP1

Function	JP1
Normal (Default)	1-2
Clear CMOS	2-3

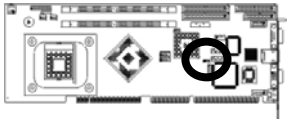
Location



2. CPU Type Setting Select: JP2

Function	JP2
NMI	1-2
Reset System (Default)	2-3

Location



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2.4 Connectors Description

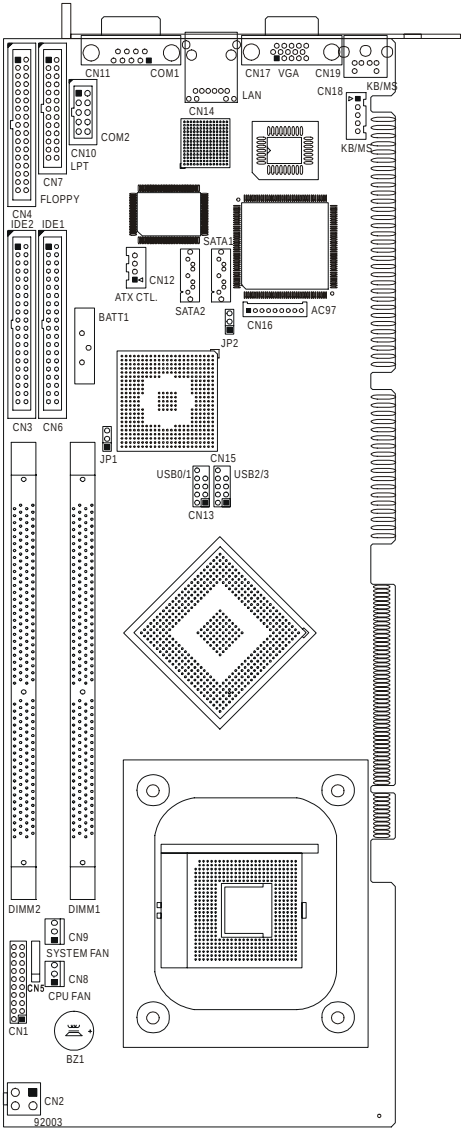


Figure 9: Connector Location

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Table for Connector's Location Description:

Use the information in the following table to change the connector.

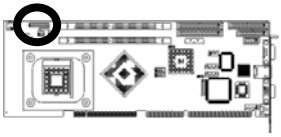
Connectors	Functions
CN1	System Panel Indicate Connector
CN2	ATX 12V Power Connector
CN3	Secondary IDE Connector
CN4	Floppy Disk Connector
CN5	IrDA Connector
CN6	Primary IDE Connector
CN7	Parallel Port Connector
CN8	CPU FAN Connector
CN9	System FAN Connector
CN10	COM2 RS-232 Serial Port Connector
CN11	COM1 RS-232 Serial Port Connector
CN12	ATX Control Power Connector
CN13	USB0/1 Port Connector
CN14	Gigabit LAN (82547GI) RJ-45 Connector
CN15	USB2/3 Port Connector
CN16	Extension Audio (Pin-Header) Connector
CN17	CRT VGA Port Connector
CN18	External Keyboard & Mouse Connector
CN19	PS/2 Keyboard & Mouse Connector
SATA1	S-ATA1 Connector
SATA2	S-ATA2 Connector

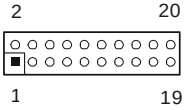
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System Panel Indicate Connector: CN1

Pin #	Assignment	Pin #	Assignment
PWR LED		**SPEAKER**	
1	+5V	2	SPKR (Default)
3	NC	4	BUZZ (Default)
5	PWLED	6	NC
KEYLOCK		8	+5V
7	KBLOCK	**RESET**	
9	Ground	8	RESET
ATX PWR ON		10	Ground
11	Ground	**HD_LED**	
13	NC	14	HDDLED
15	PSON	16	+5V
17	5VSB	**PWR ON**	
19	PME	18	PWRBT+
		20	PWRBT+

Location:

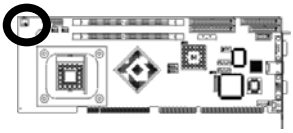




ATX 12V Power Connector: CN2

Pin #	Assignment	Pin #	Assignment
1	Ground	2	Ground
3	+12V	4	+12V

Location:



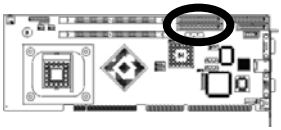


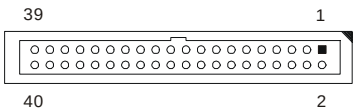
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Secondary IDE Connector (40-pins 2.54mm Pitch Pin-Header with Housing): CN3

Pin #	Assignment	Pin #	Assignment
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	NC
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	No Connect
33	Address 1	34	No Connect
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

Location:





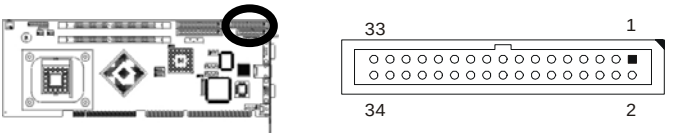
Floppy Disk Connector (34-pins 2.54mm Pitch Pin-Header with Housing): CN4

Pin #	Assignment	Pin #	Assignment
1	Ground	2	Drive Density Selection
3	Ground	4	No Connect
5	Ground	6	Drive Density Selection
7	Ground	8	Index
9	Ground	10	Motor Enable 0
11	Ground	12	Drive Select 1

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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	Ground	30	Read Data
31	Ground	32	Head Select
33	Ground	34	Diskette Change

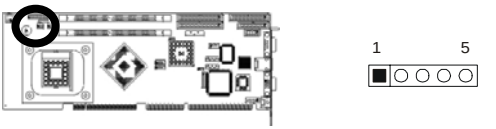
Location:



IrDA Connector: CN5

Pin #	Assignment
1	+5V
2	FIRTX
3	IRRX
4	Ground
5	IRTX

Location:



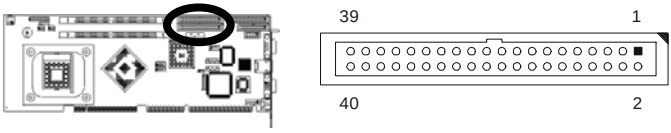
Primary IDE Connector (40-pins 2.54mm Pitch Pin-Header with Housing): CN6

Pin #	Assignment	Pin #	Assignment
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

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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	NC
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	No Connect
33	Address 1	34	No Connect
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

Location:

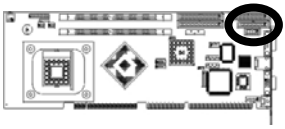


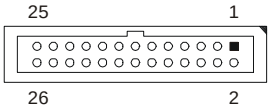
Parallel Port Connector (26-pins 2.54mm Pitch Pin-Header with Housing): CN7

Pin #	Assignment	Pin #	Assignment
1	Line Printer Strobe	2	Auto Feed
3	PD 0, Parallel Data 0	4	Error
5	PD 1, Parallel Data 1	6	Initialize
7	PD 2, Parallel Data 2	8	Select
9	PD 3, Parallel Data 3	10	Ground
11	PD 4, Parallel Data 4	12	Ground
13	PD 5, Parallel Data 5	14	Ground
15	PD 6, Parallel Data 6	16	Ground
17	PD 7, Parallel Data 7	18	Ground
19	ACK, Acknowledge	20	Ground
21	Busy	22	Ground
23	Paper Empty	24	Ground
25	Select	26	NC

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Location:

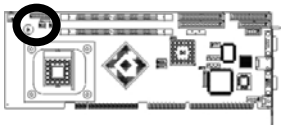




CPU FAN Connector: CN8

Pin #	Assignment
1	Ground
2	+12V
3	Fan Status Signal

Location:

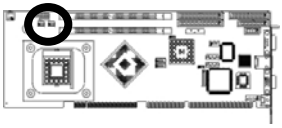




System FAN Connector: CN9

Pin #	Assignment
1	Ground
2	+12V
3	Fan Status Signal

Location:



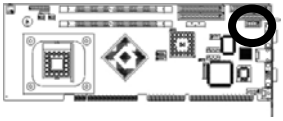


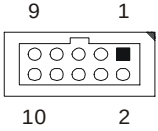
COM2 RS-232 Serial Port Connector (10-pins 2.54mm Pitch Pin-Header with Housing): CN10

Pin #	Assignment	Pin #	Assignment
1	DCD (Data Carrier Detect)	2	DSR (Data Set Ready)
3	RXD (Receive Data)	4	RTS (Request to Send)
5	TXD (Transmit Data)	6	CTS (Clear to Send)
7	DTR (Data Terminal Ready)	8	RI (Ring Indicator)
9	Ground	10	Ground

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Location:

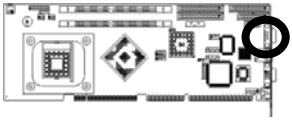


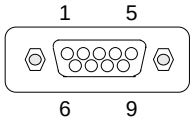


COM1 RS-232 Serial Port Connector (D-Sub 9-pins Male): CN11

Pin #	Assignment	Pin #	Assignment
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		

Location:

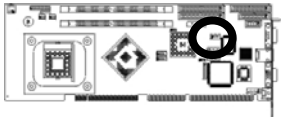


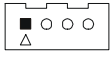


ATX Control Power Connector: CN12

Pin #	Assignment
1	PME
2	5VSB
3	PWRON
4	Ground

Location:



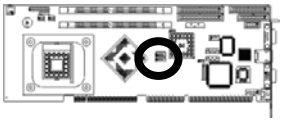


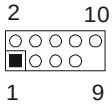
USB0/1 Port Connector (9-pins Pin-Header): CN13

Pin #	Assignment	Pin #	Assignment
1	VCC	2	VCC
3	USB0 N	4	USB1 N
5	USB0 P	6	USB1 P
7	Ground	8	Ground
9	---	10	NC

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Location:

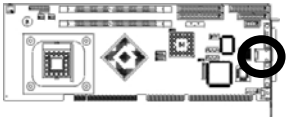


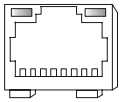


Gigabit LAN (82547GI) RJ-45 Connector (RJ-45 Phone-jacket): CN14

Pin #	Assignment	Pin #	Assignment
1	Transmit output (+)	5	NC
2	Transmit output (-)	6	Receive input (-)
3	Receive input (+)	7	NC
4	NC	8	NC

Location:

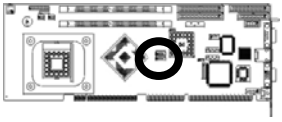


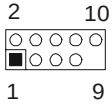


USB2/3 Port Connector (9-pins Pin-Header): CN15

Pin #	Assignment	Pin #	Assignment
1	VCC	2	VCC
3	USB2 N	4	USB3 N
5	USB2 P	6	USB3 P
7	Ground	8	Ground
9	---	10	NC

Location:





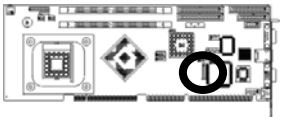
Extension Audio Connector (9-pins Pin-Header): CN16

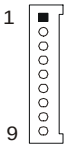
Pin #	Assignment
1	+12V
2	3.3V
3	AC_SYNC
4	AC_SDOUT
5	Ground

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6	AC_BCLK
7	Ground
8	AC_RST#
9	AC_SDIN0

Location:

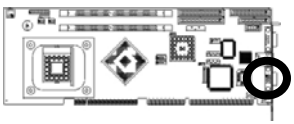


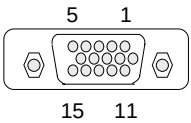


CRT VGA Port Connector (D-SUB 15-pins Female): CN17

Pin #	Assignment	Pin #	Assignment
1	Red Color Signal	2	Green Color Signal
3	Blue Color Signal	4	5V
5	Ground	6	Ground
7	Ground	8	Ground
9	5V	10	Ground
11	5V	12	VGA DDA
13	H-Sync.	14	V-Sync.
15	SPCLK		

Location:

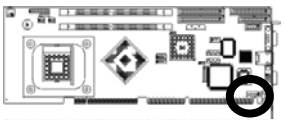


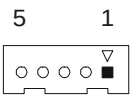


External Keyboard & Mouse Connector (5-pins): CN18

Pin #	Assignment
1	Keyboard Clock
2	Keyboard Data
3	NC
4	Ground
5	VCC

Location:



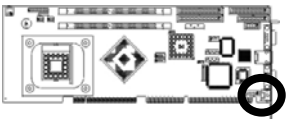


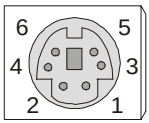
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PS/2 Keyboard & Mouse Connector (Mini Din 6 Pins): CN19

Pin #	Assignment	Pin #	Assignment
1	Keyboard Data	2	Mouse Data
3	Ground	4	+5V
5	Keyboard Clock	6	Mouse Clock

Location:

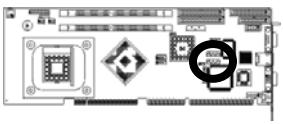


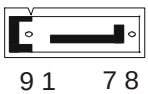


S-ATA1 Connector (9-pins): SATA1

Pin #	Assignment
1	Ground
2	SATA1_TXP
3	SATA1_TXN
4	Ground
5	SATA1_RXN
6	SATA1_RXP
7	Ground
8	Ground
9	Ground

Location:



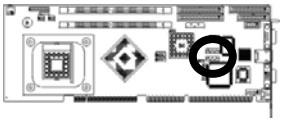


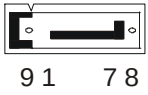
S-ATA2 Connector (9-pins): SATA2

Pin #	Assignment
1	Ground
2	SATA2_TXP
3	SATA2_TXN
4	Ground
5	SATA2_RXN
6	SATA2_RXP
7	Ground
8	Ground
9	Ground

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Location:





2.5 Optional IP-ALCS20 Audio Card

Board Location:

Thank you for choosing the IP-ALCS20 Audio Card, instructions on connecting the connector and phone jack for audio functions are described below.

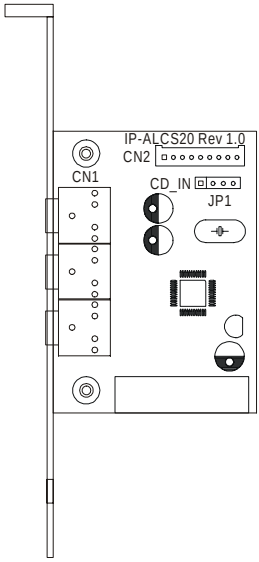
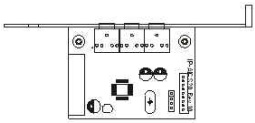


Figure 10: IP-ALCS20 Audio Card

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1. Check the contents of the packing:
   - ◆ IP-ALCS20 Audio Card
   - ◆ Audio 9-pins round cable





2. Table for Audio Card Description of Connector:

Connectors	Functions
JP1	CD_IN Connector
CN1	Audio Line_In, Line_Out, MIC Phone Jack
CN2	Audio Signal Connector

3. Description of Connector:

CD_IN Connector: JP1

Pin #	Assignment
1	Left
2	Ground
3	Ground
4	Right

◆ **Audio Line_In, Line_Out, MIC Phone Jack: CN1**

Pin #	Assignment
1	Line_In
2	Line_Out
3	MIC

◆ **Audio Signal Connector (9-pins): CN2**

Pin #	Assignment
1	+12V
2	3.3V
3	AC_SYNC
4	AC_SDOUT
5	Ground
6	AC_BCLK
7	Ground
8	AC_RST#
9	AC_SDIN0

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3

Award BIOS Setup

3.1 BIOS Instructions

Award's ROM BIOS provides a built-in Setup program, which allows the 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, which would cause data loss in the CMOS only. If this does happen the BIOS settings would need to be reconfigured.

3.2 Main Menu

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

Phoenix - AwardBIOS CMOS Setup Utility

Standard CMOS Feature	Frequency/Voltage Control
Advanced BIOS Feature	Load Fail-Safe Defaults
Advanced Chipset Feature	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving

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Esc: Quit ↑↓→←: Select Item F10: Save & Exit Setup
Time, Date, Hard Disk Type….

Note: A brief description of each highlighted selection appears at the bottom of the screen.

Setup Items:
The main menu includes the following main setup categories. Recall that some systems may not include all entries.

Standard CMOS Features:
Use this menu for basic system configuration. Please refer to section 3.3 for further information.

Advanced BIOS Features:
Use this menu to set the Advanced Features available on the system. Please refer to section 3.5 for further information.

Advanced Chipset Features:
Use this menu to change the values in the chipset registers and to optimize the system's performance. Please refer to section 3.6 for further information.

Integrated Peripherals:
Use this menu to specify the settings for integrated peripherals. Please refer to section 3.7 for further information.

Power Management Setup:
Use this menu to specify the settings for power management. Please refer to section 3.8 for further information.

PnP / PCI Configuration:
This entry appears if the user's system supports PnP / PCI. Please refer to section 3.9 for further information.

PC Health Status:
Use this menu to view the system temperature, speed and voltage status. Please refer to section 3.10 for further information.

Frequency / Voltage Control:
Use this menu to specify the settings for frequency/voltage control. Please refer to section 3.1 for further information.

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Load Fail-Safe Defaults:
Use this menu to load the BIOS default values for the minimal/stable performance for the system to operate. Please refer to section 3.12 for further information.

Load Optimized Defaults:
Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While Award has designed the custom BIOS to maximize performance, the user can change these defaults to meet their needs. Please refer to section 3.13 for further information.

Supervisor / User Password:
Use this menu to set User and Supervisor Passwords. Please refer to section 3.14 for further information.

Save & Exit Setup:
Save CMOS value changes to CMOS and exit setup. Please refer to section 3.15 for further information.

Exit Without Save:
Abandon all CMOS value changes and exit setup. Please refer to section 3.15 for further information.

3.3 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes none, one, or more than one setup items. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value required of each item.

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Standard CMOS Features

Date (mm:dd:yy):	Mon, Aug 4 2003	Item Help
Time (hh:mm:ss):	16:19:20	
➢ IDE Channel 0 Master		Menu Level ➢
➢ IDE Channel 0 Slave	13579 MB	
➢ IDE Channel 1 Master	None	Change the day, month, year and century
➢ IDE Channel 1 Slave	None	
➢ IDE Channel 2 Master	None	
➢ IDE Channel 3 Master	None	
	None	
Drive A	1.44M, 3.5 in.	
Video	EGA/VGA	
Halt On	No Errors	
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

Date: Options Month/DD/YYYY
Set the system date. Note that the 'Day' automatically changes when the date is set.

Time: Options HH : MM : SS
Set the system time.

IDE Channel 0 Master: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

IDE Channel 0 Slave: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

IDE Channel 1 Master: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

IDE Channel 2 Slave: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

IDE Channel 2 Master: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

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IDE Channel 3 Master: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

Drive A: 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 the 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 the BIOS is to stop the POST process and notify the user.

Base Memory:
Displays the amount of conventional memory detected during boot up.

Extended Memory:
Displays the amount of extended memory detected during boot up.

Total Memory:
Displays the total memory available in the system.

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3.4 IDE Adaptors

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 Channel 0 Master

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

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

IDE HDD Auto-detection: Options 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 Channel 0 Master: Options None, Auto, and Manual

Selecting "Manual" allows the user to set the remaining fields on this screen and selects the type of fixed disk. "User Type" will allow the user to select the number of cylinders, heads, etc. Note: PRECOMP=65535 means NONE !

Access Mode: Options CHS, LBA, Large and Auto

Choose the access mode for this hard disk

Capacity: Options 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'

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Cylinder: Options Min = 0, Max = 65535
Set the number of cylinders for this hard disk.

Head: Options Min = 0, Max = 255
Set the number of read/write heads

Precomp: Options Min = 0, Max = 65535
**** **Warning**: Setting a value of 65535 means no hard disk

Landing zone: Options Min = 0, Max = 65535
****

Sector: Options Min = 0, Max = 255
Number of sectors per track

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3.5 Advanced BIOS Features

This section allows the user to configure their system for basic operation. The user can also select the system's default speed, boot-up sequence, keyboard operation, shadowing, and security.

Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features

➢CPU Feature	Press Enter	Item Help
➢Hard Disk Boot Priority	Press Enter	
Virus Warning	Enabled	
CPU L1 & L2 Cache	Enabled	
Hyper-Threading Technology	Enabled	Menu Level ➢
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
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	Normal	
Typematic Rate Setting	Disabled	
X Typematic Rate (Chars/Sec)	6	
X Typematic Delay (Msec)	250	
Security Option	Setup	
APIC Mode	Disabled	
X MPS Version Control For OS	1.1	
OS Select For DRAM > 64MB	Non-OS2	
Console Redirection	Disabled	
Baud Rate	19200	
Agent Commect via	NULL	
Agent wait time (min)	1	
Agent after boot	Disabled	
Report No FDD For Win 95	No	

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

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CPU Feature:

Phoenix - AwardBIOS CMOS Setup Utility

CPU Feature

Delay Prior to Thermal 16Min Thermal Management Thermal Monitor 1	Item Help – Menu Level ➢➢
↑↓→←Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults	

Delay Prior To Thermal:

Select this item allows the delay prior to thermal time.

Options: Auto, 4, 8, 16, 32Min

Thermal Management:

Allows the user to select the thermal Monitor.

Options: Thermal monitor1, thermal Monitor2.

Hard Disk Boot Priority:

Press Enter and It shows Bootable add-in Card.

Virus Warning:

Allows the user 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 an alarm will sound.

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 and L2 Cache:

These two categories speed up memory access. However, they depend on CPU/chipset design.

Enabled - Enable cache

Disabled - Disable cache

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Hyper-Threading Technology:

Allows the user to choose the CPU Hyper-Threading Technology.

Enabled - Enable CPU Hyper-Threading

Disabled - Disabled CPU Hyper-Threading

Quick Power On Self Test:

This category speeds up Power On Self Test (POST) after powering 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

First/Second/Third Boot Device:

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

Options: 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.

Options: Enabled, Disabled

Swap Floppy Drive:

If the system has two floppy drives, the logical drive name assignments can be swapped.

Options: Enabled, Disabled.

Boot Up Floppy Seek:

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

Options: Enabled, Disabled.

Boot Up NumLock Status:

Select power on state for NumLock.

Options: 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.

Options: Enabled, Disabled.

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Typematic Rate (Chars/Sec):

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

Options: 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.

Options: 250, 500, 750, and 1000.

Security Option:

Select whether the password is required every time the system boots or only when entering setup.

System - The system will not boot and access to Setup will be denied if the incorrect password is 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 where the user will be prompted for the password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and Setup can be entered into freely.

APIC Mode:

This item allows the user to enable/disable APIC Mode.

Options: Enabled, Disabled.

MPS Version Control For OS:

Select the operating system that is Multi-Processors Version Control for OS.

Options: 1.4, 1.1.

OS Select For DRAM > 64MB:

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

Options: Non-OS2, OS2.

Console Redirection:

This item allows the user to redirect console.

Enabled - Redirect console via Com Port.

Disabled - Redirect console when keyboard is absent.

Baud Rate:

This item specifies baud rate of console redirection.

Options: 9600, 19200, 38400, 57600, 115200.

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Agent Connect Via:

Select Null lets agent connect directly.

Option: NULL.

Agent Wait Time (min):

Select the time to allow agent connects when timeout.

Options: 1, 2, 4, 8.

Agent After Boot:

This item allows the user to keep agent running after OS boot.

Options: Enabled, Disabled.

Report No FDD For WIN95:

Whether report no FDD for Win 95 or not.

Options: Yes, No.

3.6 Advanced Chipset Features

This section allows the user 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. These items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for the user's system. The only time the user may consider making any changes is when the user discovers that data was being lost while using the system.

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Phoenix - AwardBIOS CMOS Setup Utility
Advanced Chipset Features

DRAM Timing Selectable	By SPD	Item Help
X CAS Latency Time	2	
X Active to Precharge Delay	6	
X DRAM RAS# to CAS# Delay	3	Menu Level ➢
X DRAM RAS# Precharge	3	
Memory Frequency For	Auto	
System BIOS Cacheable	Enabled	
Video BIOS Cacheable	Disabled	
Memory Hole At 15M-16M	Disabled	
AGP Aperture Size (MB)	128	
Init Display First	Onboard/AGP	
On-Chip VGA Setting		
On-Chip VGA	Enabled	
On-Chip Frame Buffer Size	8MB	

↑↓→←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.

Options: Manual, By SPD

CAS Latency Time:

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

Options: 2, 2.5, and 3.

Active To Precharge Delay:

Select the operating system that is active to precharge delay.

Options: 5, 6, 7, 8.

DRAM RAS# to CAS# Delay:

You can select RAS to CAS Delay time in HCLKs of 2/2 or 3/3.

The system board designer should set the values in this field, depending on the DRAM installed. Do not change the values in this field unless the specifications of the installed DRAM or the installed CPU are also changed.

Options: 2, 3, 4.

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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 a more stable performance. This field applies only when synchronous DRAM is installed in the system.

Options: 2, 3, 4.

Memory Frequency For:

Selects the operating frequency for the main system memory.

Options: Auto, DDR266, and DDR333

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.

Options: 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.

Options: Enabled, Disabled.

Memory Hole At 15M-16M:

This area of system memory may be reserved for the ISA adapter ROM. When this area is reserved, it cannot be cached. The user of peripherals using this area of system memory would normally have discussed their memory requirements.

Options: Enabled, Disabled.

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.

Options: 4, 8, 16, 32, 64, 128, and 256

Init Display First:

This allows the user to decide to activate the PCI Slot or the on-chip VGA first.

Options: PCI Slot, Onboard/AGP.

On-Chip VGA:

This is to select the on-chip VGA for the main system VGA.

Options: Enabled, Disabled.

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On-Chip Frame Buffer Size:

This can be used to select the frame buffer size.

Options: 1MB, 8MB,16M

3.7 Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility

Integrated Peripherals

➢ OnChip IDE Device	Press Enter	Item Help
➢ Onboard Device	Press Enter	
➢ SuperI/O Device	Press Enter	Menu Level ➢
Onboard Lan Boot ROM	Enabled	

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

Onboard IDE Device:

OnChip IDE Device

IDE HDD Block Mode	Enabled	Item Help
On-Chip Primary PCI IDE	Enabled	
IDE Primary Master PIO	Auto	Menu Level ➢
IDE Primary Slave PIO	Auto	
IDE Primary Master UDMA	Auto	If you IDE hard drive supports block mode select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.
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	
******On-Chip Serial ATA Setting		
On-Chip Serial ATA	Auto	
X Serial ATA Port 0 Mode	SATA0 master	
X Serial ATA Port 1 Mode	SATA1 master	

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

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IDE HDD Block Mode:

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If the IDE hard drive used 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.

Options: Enabled, Disabled

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.

Options: Enabled, Disabled.

IDE Primary/Secondary Master/Slave PIO:

The four IDE PIO (Programmed Input/Output) fields allows a PIO mode (0-4) to be set 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.

Options: 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 the hard drive and system software the user uses both support Ultra DMA/33, select “Auto” to enable BIOS support.

Options: Auto, Disabled.

On-Chip Serial ATA:

The five Serial ATA fields allows the Serial ATA to be set.

Disabled-Disabled SATA Controller

Auto-Auto arrange by BIOS

Combined Mode: PATA and SATA are combined. Max. of two IDE drives in each channel.

Enhanced Mode: Enable both SATA and PATA. Max. of six IDE drives are supported.

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Onboard Device:

Onboard Device

USB Controller	Enabled	Item Help
USB 2.0 Controller	Enabled	
USB Keyboard Support	Disabled	
USB Mouse Support	Disabled	Menu Level ➢
AC97 Audio	Auto	
CSA LAN(Giga-LAN)	Enabled	

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

USB Controller:

Select “Enabled” if the system contains a Universal Serial Bus (USB) controller and the user has USB peripherals.

Options: Enabled, Disabled.

USB 2.0 Controller:

Select “Enabled” if the system contains a Universal Serial Bus 2.0 (USB 2.0) controller and the user has USB peripherals.

Options: Enabled, Disabled.

USB Keyboard Support:

Select “Enabled” if the system contains a Universal Serial Bus (USB) controller and the user has a USB keyboard.

Options: Enabled, Disabled.

USB Mouse Support:

Select “Enabled” if the system contains a Universal Serial Bus (USB) controller and the user has a USB mouse.

Options: Enabled, Disabled.

AC97 Audio:

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

Options: Auto, Disabled.

CSA LAN(Giga-LAN):

Enables the onboard LAN feature.

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Onboard I/O Chip Setup:

Onboard I/O Chip Setup

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
X RxD, TxD Active	Hi, Lo	Menu Level ➢
X IR Transmission Delay	Enabled	
X UR2 Duplex Mode	Half	
X Use IR Pins	IR-Rx2Tx2	
Onboard Parallel Port	378/IRQ7	
Parallel 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

Onboard FDC Controller:

Select “Enabled” if the system has a floppy disk controller (FDC) installed on the system board and the user wishes to use it. If the user installs and-in FDC or the system has no floppy drive, select Disabled in this field.

Options: Enabled, Disabled.

Onboard Serial Port 1/Port 2:

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

Options: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, and Auto.

UART Mode Select:

This allows the user to determine which Infra Red (IR) function of the onboard I/O chip.

Options: Normal, IrDA, and ASKIR.

RxD, TxD Active:

This allows the user to determine the level of activity of RxD, TxD.

Options: “Hi, Hi”, “Lo, Lo”, “Lo, Hi” and “Hi, Lo”.

IR Transmission Delay:

This allows the user to enable/disable IR transmission delay.

Options: Enabled, Disabled.

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UR2 Duplex Mode:

This item allows the user to select the IR half/full duplex function.

Options: Half, Full.

Use IR Pins:

This item allows the user to select IR transmission routes

Options: IR-Rx2Tx2, RxD2, and TxD2.

Onboard Parallel Port:

This allows the user to determine which onboard parallel port controller connects with which I/O address

Options: 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 it is certain that the hardware and software used both support one of the other available modes.

Options: SPP, EPP, ECP and ECP+EPP, Normal.

EPP Mode Select:

Select EPP port type 1.7 or 1.9.

Options: EPP1.7, 1.9.

ECP Mode Use DMA:

Select a DMA channel for the parallel port for use during ECP mode.

Options: 3, 1.

PWRON After PWR-Fail:

This allows the user to indicate whether or not they want the system to power on after power failure.

Options: Off, On, and Former-Sts.

Onboard Lan Boot ROM:

This allows the user to enable or disable the onboard LAN Boot ROM.

Options: Enabled, Disabled

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3.8 Power Management Setup

The Power Management Setup allows the user to configure the system to most effectively save energy while operating in a manner consistent with the individual's computer operating style.

Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup

ACPI Function	Enabled	Item Help
Power Management	User Define	
Video Off Method	Blank Screen	
Video Off In Suspend	No	
Suspend Type	Stop Grant	Menu Level ➢
MODEM Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant-Off	
CPU THRM-Throttling	50.0%	
Wake-Up by PCI Card	Enabled	
Power On by Ring	Disabled	
Resume by Alarm	Disabled	
X Date (of Month) Alarm	0	
X Time (hh:mm:ss) Alarm	0 0 0	

↑↓→←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 allows the user to enable/disable the Advanced Configuration and Power Management (ACPI).
Options: Enabled, Disabled.

Power Management:
This category allows the user 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

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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 on SL CPU's**. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.

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

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

V/H SYNC+Blank:
By selecting this, the system will 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 Method:
This item allows the user to use the on/off Method function.
Options: Yes, No.

Video Off In Suspend:
This determines the manner in which the monitor is blanked.
Options: Yes, No.

Suspend Type:
Select the Suspend Type.
Options: PwrOn Suspend, Stop Grant.

MODEM Use IRQ:
This determines the IRQ in which the MODEM can use.
Options: 3, 4, 5, 7, 9, 10, 11, and NA.

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Suspend Mode:
When “Enabled” and after the set time of system inactivity, all devices except the CPU will be shut off.

Options: 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.

Options: Disabled, 1 - 15Min.

Soft-Off by PWR-BTTN:
Holding down the power button for more than four seconds forces the system to enter into Soft-Off state when the system has “hung.”

Options: Delay four Sec, Instant-Off.

CPU THRM-Throttling:
Select the CPU THRM-Throttling rate.

Options: 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.

Options: 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.

Options: Enabled, Disabled.

Resume by Alarm:
When “Enabled”, the date and time can be set for when the RTC (real-time clock) alarm awakens the system from Suspend mode.

Options: Enabled, Disabled.

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3.9 Plug and Play / PCI Configurations

This section describes the configuration of the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, 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	
PCI/VGA Palette Snoop	Disabled	Menu Level ➢
INT Pin 1 Assignment	Auto	
INT Pin 2 Assignment	Auto	Select Yes if you are using a Plug and Play capable operating system. Select No. if you need the BIOS to configure non. Boot devices.
INT Pin 3 Assignment	Auto	
INT Pin 4 Assignment	Auto	
INT Pin 5 Assignment	Auto	
INT Pin 6 Assignment	Auto	
INT Pin 7 Assignment	Auto	
INT Pin 8 Assignment	Auto	

↑↓→←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, this field is left Disabled. Select “Enabled” to reset Extended System Configuration Data (ESCD) when exiting from Setup if a new add-on has been installed and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

Options: Enabled, Disabled.

PCI/VGA Palette Snoop:

Leave this field at “Disabled”.

Options: Enabled, Disabled.

INT Pin 1 - Pin 8 Assignment:

These allows the user to specify what IRQ will be assigned.

Options: Auto, 3,4,5,7,9,10,11,12,14,15.

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3.10 PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility
PC Health Status

CPU Warning Temperature	Disabled	Item Help
Current System Temp.	33°C / 91°F	
Current CPU1 Temperature	38°C / 100°F	–
Current CPUFan1 Speed	3835 RPM	Menu Level ➢
Current System Fan Speed	4725RPM	
VDIMM (V)	2.48V	
Vcore (V)	1.45V	
+3.3V	3.37V	
+ 5 V	5.08V	
+12 V	11.91V	
-12 V	-12.44	
-5V	-4.99V	
VBAT (V)	3.24V	
5VSB (V)	4.80	
Shutdown temperature	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 will prevent the CPU from overheating.

Options: 50°C /122°F - 70°C /158°F, Disabled.

Current System Temp:

Displays the current system temperature.

Current CPU1 Temperature:

Displays the current CPU temperature.

Current CPUFan1 Speed:

Displays the current CPU fan operating speed.

Current System Fan Speed:

Displays the current system fan operating speed.

VDIMM (V)

Displays the voltage level of the DRAM.

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Vcore (V)
Displays the voltage level of CPU (Vcore).

VCC3.3V/+5V/+12V/-12V/-5V/5VSB(V):
Displays the voltage of 3.3V/+5V/+12V/-12V/-5V.

VBAT (V)
Displays the voltage level of the battery.

Shutdown Temperature:
This allows the user to set up the CPU shutdown Temperature. This item is only effective under the Windows® 98 ACPI mode.
Options: Disabled, 60°C / 140°F, 65°C / 149°F, 70°C / 158°F, and 75°C / 167°F.

3.11 Frequency/Voltage Control

Phoenix - AwardBIOS CMOS Setup Utility
Frequency/Voltage Control

Auto Detect PCI Clk	Enabled	Item Help
Spread Spectrum	Disabled	
		–
		Menu Level ➢

↑↓→←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 socket have devices and will send clock signal to PCI devices. When disabled, it will send the clock signal to all PCI socket.
Options: Enabled, Disabled.

Spread Spectrum:
This item allows the user to set the spread spectrum modulated.
Options: +/- 0.35%, +/- 0.50%, +/- 0.75%, +/- 1.0%, Disabled.

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3.12 Load Fail-Safe Defaults

When pressing <Enter> on this item a confirmation dialog box would appear 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.

3.13 Load Optimized Defaults

When pressing <Enter> on this item a confirmation dialog box will appear 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.

3.14 Supervisor/User Password Setting

The user can set either the supervisor or user password, or both. The differences between are:

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

Set User Password:
Can only enter but do not have the right to change the options of the setup menus. When selecting this function, the following message will appear in the center of the screen to create a password.

ENTER PASSWORD:

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Type the password, up to eight characters in length, and press <Enter>. The

password typed will now clear any previously entered password from CMOS memory. The user will then be prompted to confirm the password. Type the password again and press <Enter>. To abort, press <Esc> and do not enter a password.

To disable a password, just press <Enter> when prompted to enter the password. A message will appear to confirm that the password will be disabled. Once the password is disabled, the system will boot and Setup can be entered into password-free.

PASSWORD DISABLED.

When a password has been enabled, there will be a prompt to enter it every time when entering Setup. This prevents an unauthorized person from changing any part of the system configuration.

Additionally, when a password is enabled, the BIOS can be set to request a password every time the system is rebooted. This would prevent any unauthorized use of the computer.

The user determines when the password is required in 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.

3.15 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 turning off the system. Upon the next boot-up, the BIOS configures the system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

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Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows the user to exit Setup without any changes in CMOS. The previous selections remain in effect. This exits the Setup utility and restarts the computer.

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Warranty Policy

Thank you for choosing ADLINK. To understand your rights and enjoy all the after-sales services we offer, please read the following carefully:

1. Before using ADLINK's products please read the user manual and follow the instructions exactly.
2. When sending in damaged products for repair, please attach an RMA application form.
3. All ADLINK products come with a two-year guarantee, repaired free of charge.The warranty period starts from the product's shipment date from ADLINK's factory.
    - Peripherals and third-party products not manufactured by ADLINK will be covered by the original manufacturers' warranty.
    - End users requiring maintenance services should contact their local dealers. Local warranty conditions will depend on local dealers.
4. This warranty will not cover repair costs due to:
    a. Damage caused by not following instructions.
    b. Damage caused by carelessness on the users' part during product transportation.
    c. Damage caused by fire, earthquakes, floods, lightening, pollution, other acts of God, and/or incorrect usage of voltage transformers.
    d. Damage caused by unsuitable storage environments (i.e. high temperatures, high humidity, or volatile chemicals.
    e. Damage caused by leakage of battery fluid.
    f. Damage from improper repair by unauthorized technicians.
    g. Products with altered and/or damaged serial numbers.
    h. Other categories not protected under our guarantees.
5. Customers are responsible for shipping costs to transport damaged products to our company or sales office.
6. To ensure the speed and quality of product repair, please download a RMA application form from our company website: www.adlinktech.com. Damaged products with attached RMA forms receive priority.

For further questions, please contact our FAE staff.

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