NuPRO-761

Full-Size Single Board Computer

User's Guide



6007002N761A0

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Detailed Company Information			
Company/Organization			
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E-mail Address			
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Questions			
Product Model			
Environment to Use	OS: Computer Brand: M/B: CPU: Chipset: BIOS: Video Card: Network Interface Card: Other:		
Detail Description			
Suggestions to ADLINK			

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SECTION 1

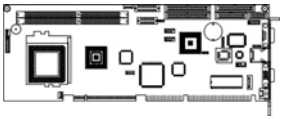
INTRODUCTION

1.1 Unpacking NuPRO-761 Series

1. Take out the NuPRO-761 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



◆ K/B & M/S Y Type cable



◆ Driver CD



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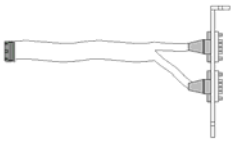
◆ K/B-M/S extend to BP cable
(6-pins to 5-pins)



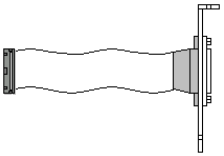
◆ ATX power control cable
(4-pins to 5-pins)



◆ COM2 ribbon cable
(14-pins to Dual 9-pins D-Sub)

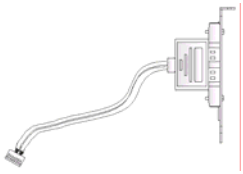


◆ Printer ribbon cable
(26-pins to 25-pins D-Sub)

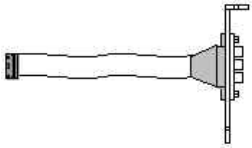


3. Optional cable:

◆ USB2.0 cable



◆ Audio cable



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1.2 Description

The NuPRO-761 Series all-in-one single board computer is optimized for socket 370 FC-PGA processor, supporting 100MHz and 133 MHz Front Side Bus, the memory can accommodate is up to 2 GB DDR SDRAM. This board is based on the VIA® 8623 (CLE266) chipset and is fully designed for harsh industrial environment. The NuPRO-761 series is with integrated LCD/VGA, AC97 Audio function and on board single 10/100 Mbps Ethernet. They are for CTI and high-end applications.

The other I/O function include two serial ports, one parallel port, two IDE interface, one FDC interface, four USB2.0 ports, Watch Dog Timer, DOC and PS/2 Keyboard & Mouse.

1.3 Features

- ◆ Socket 370 for Intel® Celeron™ / Pentium® !!! / VIA® C3 processor
- ◆ VIA® VT8623 + VT8235 AGPset (CLE266)
- ◆ Support 2GB DDR SDRAM (Max.) Memory
- ◆ Front Side Bus Frequency: 100/133 MHz
- ◆ VIA® VT8623 chip integrated LVDS / TFT panel interface
- ◆ Single 10/100 Mbps Ethernet interface using Realtek® RTL8100BL chip
- ◆ AC97 Audio Codec
- ◆ 2 x COM ports, 4 x USB2.0
- ◆ Software programmable watchdog timer
- ◆ Hardware Monitoring
- ◆ SSD (DOC) socket

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1.3.1 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.

1.3.2 I/O Shield Connector

The SBC is equipped with an I/O bracket. Please use the appropriate I/O shield (figure 1).

NuPRO-761 Series

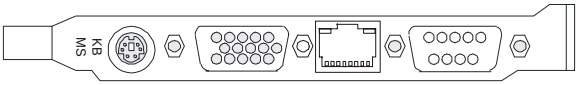


Figure 1: I/O bracket layout

1.3.3 NuPRO-761 Series Overview

Function / Model	NuPRO-761
◆ Chipset	VIA® VT8623 (CLE266)
◆ LCD Function	⊙
◆ VGA Function	⊙
◆ Ethernet Function	⊙
◆ Audio Function	⊙
◆ Two EIDE Interface	⊙
◆ One Floppy Interface	⊙
◆ Two Serial, One Parallel	⊙
◆ Four USB2.0 ports	⊙
◆ Solid State Disk Socket	⊙

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1.3.4 System Block Diagram

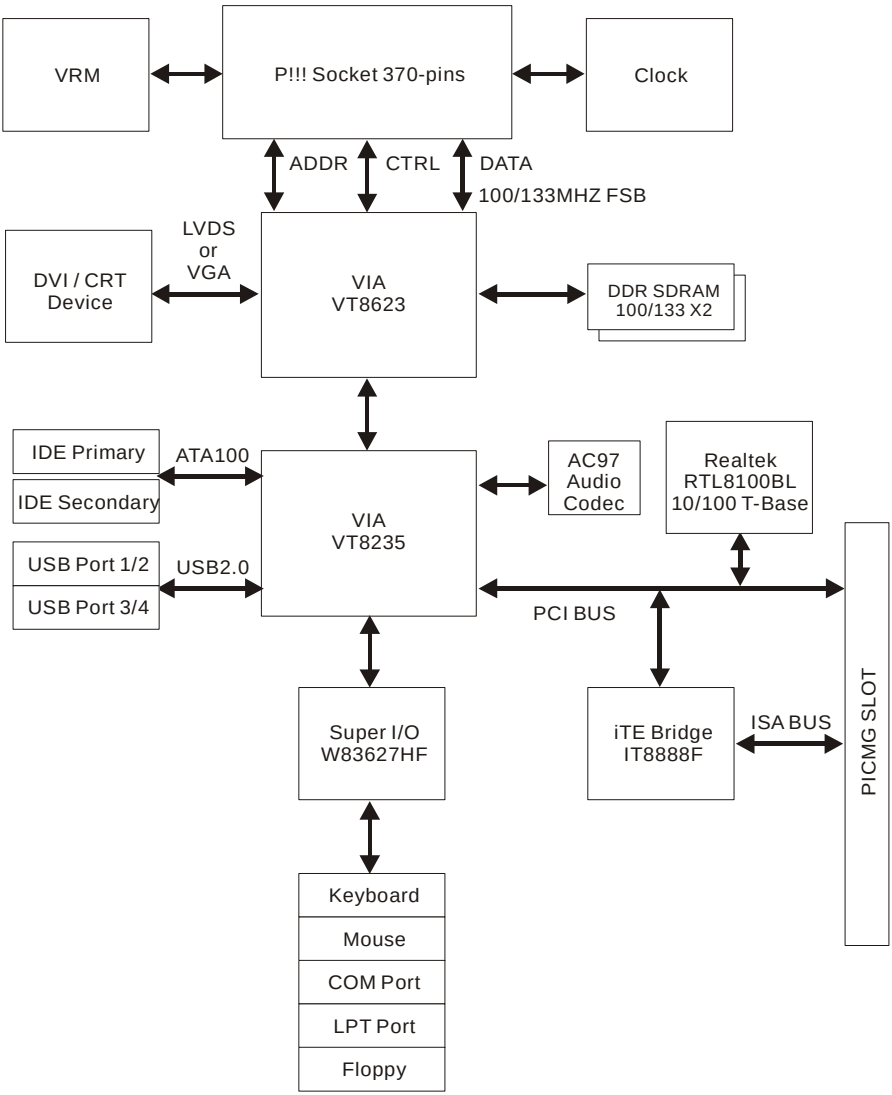


Figure 2: System Block Diagram

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1.4 Specifications

NuPRO-761 Series:

- **Processor:**
  - Socket 370 Processor, for Intel® Celeron™ / Pentium® !!! / VIA® C3™ Processor

- **Chipset:**
  - VIA® VT8623 AGPset

- **Front Side Bus:**
  - 66/100/133 MHz

- **DRAM Module:**
  - 184pins DIMM x 2 for 200/266 MHz Memory
  - Support DDR SDRAM up to 2GB

- **LCD/VGA Function:**
  - VIA® VT8623 integrated Video Accelerators controller
  - Support LVDS / TFT panel interface

- **LAN Function:**
  - Realtek® RTL8100BL Ethernet controller
  - For 10/100Base-TX Ethernet

- **Onboard I/O:**
  - On-Chip I/O integrated with K/B, Mouse, FDD, Parallel and Serial controllers

- **Onboard PCI / IDE:**
  - VIA® VT8235 Southbridge Controller
  - PCI rev2.2 Compliant
  - ACPI Compliant Power Management
  - PCI Bus IDE Port with PIO / ATA-100 x 2 (Up to 4 Devices)

- **I/O Connector:**
  - 9-pins D-Sub COM1 connector
  - RJ-45 Ethernet connector
  - 15-pins D-Sub VGA connector
  - PS/2 Mouse and PS/2 style Keyboard

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- **USB2.0 Ports:**
  - 4 x USB2.0 ports (pin-header)

- **BIOS:**
  - Award Plug & Play BIOS

- **Extended Function:**
  - Hardware Monitoring function by Winbond® ASIC
  - IrDA by pin-header

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

- **Weight:**
  - 0.84lb (380g) --- NuPRO-761

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SECTION 2

INSTALLATIONS

2.1 System Installation

2.1.1 CPU Installation

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

1. Check and confirm that the jumpers are correctly set for the CPU you are going to install (figure 3).

2. Lift the releasing lever of the Socket 370.

3. Align the pins of the CPU against the pinholes of the Socket 370. Be sure to pay attention to the orientation of the CPU.

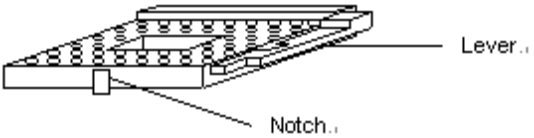


Figure 3: CPU Socket

4. Push down the CPU into the Socket 370.

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 370.

7. Place the CPU cooling fan atop the CPU surface.

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.

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Removing a CPU:

1. Before removing the CPU, turn off the NuPRO-761 Series power; then wait for about 20 minutes until the heat radiation plate of the cooling fan and the CPU cool down.

2. To remove the CPU, lift the releasing lever of the Socket 370.

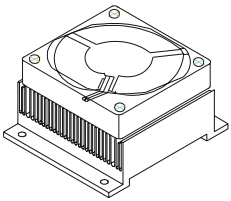
Note: The CPU and the heat radiation plate are hot. They may cause burns.

To remove the CPU, reverse the installation steps.

2.1.2 Heat Sink Installation

It is highly recommended that only NuPRO-761 Heat Sink + Fan (Figure 4), designed for use in the chassis be used -- the use of other heat sinks, including those boxed with CPUs, may result in damage to the NuPRO-761 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.



Heat Sink & Fan
(For P3 processor only)

Figure 4: Heat Sink Installation

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2.1.3 Memory Module Installation

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

DIMMs have184-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 6) until it fits tightly into the DIMM socket.

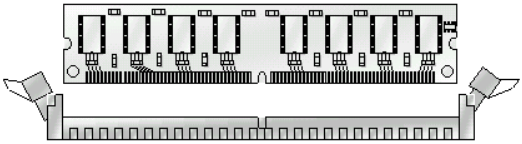


Figure 5: DIMM Memory and 184-pins Socket

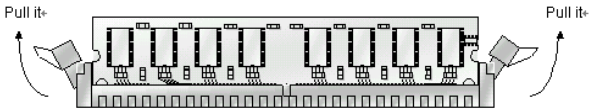


Figure 6: Memory Installation

Carefully follow the steps below in order 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 you touch the DIMM.

2. Do not touch the connector of the DIMM. Dirt residue may cause a malfunction.

3. Hold the DIMM with its notch to the front side of the NuPRO-761 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.

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

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5. If DIMM does not go in smoothly, do not force it. Pull it all the way out 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 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. .

2.1.4 Setting Jumpers and DIP Switches

There are jumpers and DIP-switches on the system board of the NuPRO-761 Series. You can set the jumpers to make the necessary operations.

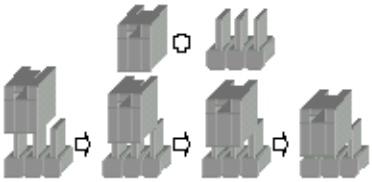


Figure 7: Jumper Connector

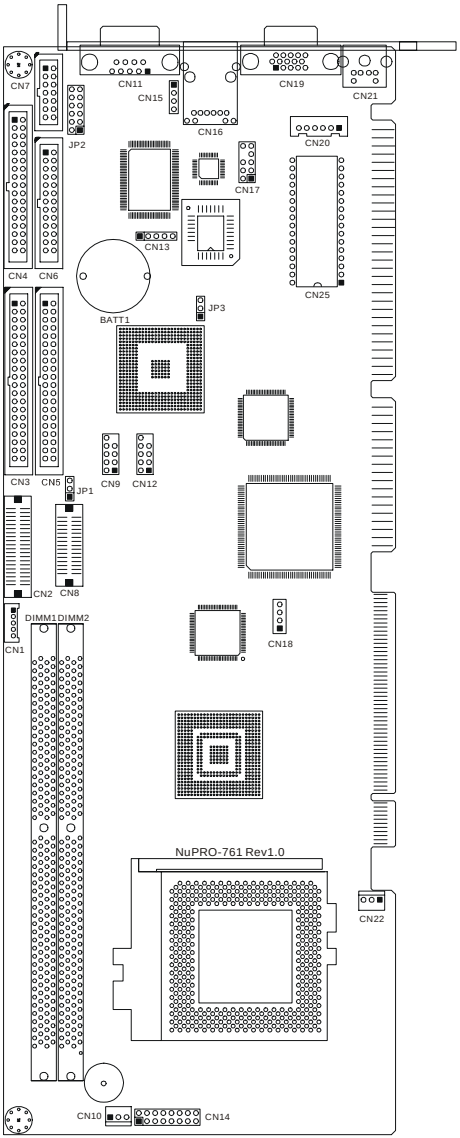
For any three-pins jumpers (figure 7), the jumper setting is 1-2 when the jumper connects pin 1 and 2. The setting is 2-3 when pin 2 and 3 are connected and so on. You see a number " 1 " and a " 3 " printed on the circuit board to identify these pins. And also, there is a second way of indication – one 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.

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2.2 Board Layout

Jumper & Connector Location



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2.3 Jumper Setting

Table for Jumper Location Description:
Use the information in the following table to change the jumpers.

Jumpers	Functions
JP1	LCD Power Setting Select
JP2	COM Port Setting Select
JP3	Clear CMOS Setting Select

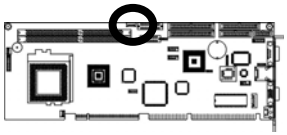
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In order to set up the correct configuration, here is the description about how to set the jumpers to enable/disable or change functions. All jumpers' location please refer to jumper location diagram.

◆LCD Power Setting Select: JP1

Function	JP1
3.3V (Default)	1-2
5V	2-3

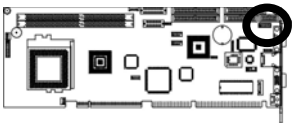
- **Location:**



◆ COM Port Setting Select: JP2

Function	JP2					
	1-2	3-4	5-6	7-8	9-10	11-12
RS-232 (Default)	Off	Off	Off	Off	Off	On
RS-422	On (Term.)	On (Term.)	Off	On	On	Off
RS-485	On (Term.)	On (Term.)	On	Off	On	Off

- **Location:**

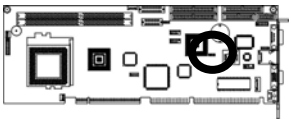


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◆ **Clear CMOS Setting Select: JP3**

Function	JP3
Normal (Default)	1-2
Clear CMOS	2-3

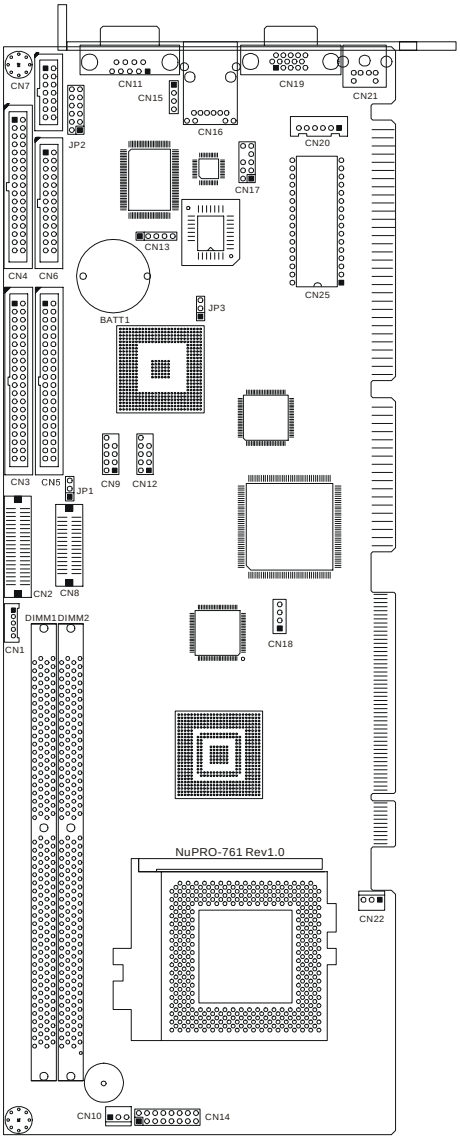
- **Location:**



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2.4 Connector's Description

Connector Location



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Table for Connector's Location Description:
Use the information in the following table to change the connector.

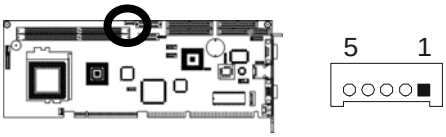
Connectors	Functions
CN1	LCD Inverter Connector
CN2	TFT Panel Connector
CN3	Primary IDE Connector
CN4	Floppy Disk Connector
CN5	Secondary IDE Connector
CN6	Parallel Port Connector
CN7	COM2 RS-232/422/485 Serial Port Connector
CN8	LVDS Panel Connector
CN9	USB0 / USB1 Port Connector
CN10	System Fan Power Connector
CN11	COM1 RS-232 Serial Port Connector
CN12	USB2 / USB3 Port Connector
CN13	IrDA Connector
CN14	System Panel Indicate Connector
CN15	CD_IN Connector
CN16	LAN RJ-45 Connector
CN17	Audio Connector
CN18	ATX Power Connector
CN19	CRT VGA Port Connector
CN20	External K/B & M/S Connector
CN21	PS/2 Keyboard / Mouse Connector
CN22	CPU Fan Power Connector

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◆ **LCD Inverter Connector (5-pins): CN1**

Pin #	Assignment
1	Ground
2	NC
3	LCD BKL
4	Ground
5	+12V

- **Figure:**

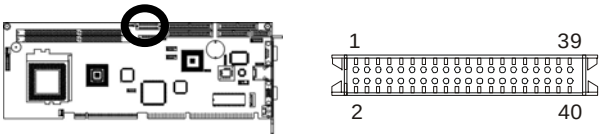


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◆ **TFT Panel Connector (40-pins Male): CN2**

Pin #	Assignment	Pin #	Assignment
1	B0	2	B1
3	B2	4	B3
5	B4	6	B5
7	B6	8	B7
9	Ground	10	Ground
11	G0	12	G1
13	G2	14	G3
15	G4	16	G5
17	G6	18	G7
19	Ground	20	Ground
21	R0	22	R1
23	R2	24	R3
25	R4	26	R5
27	R6	28	R7
29	Ground	30	Ground
31	VS	32	HS
33	CLK	34	DE
35	VCC	36	VCC
37	VCC	38	VCC
39	VCC	40	VCC

- **Figure:**

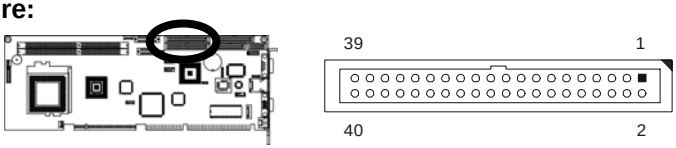


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◆ **Primary IDE Connector (40-pins 2.54mm Pitch Pin-Header with Housing): CN3**

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 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

- **Figure:**

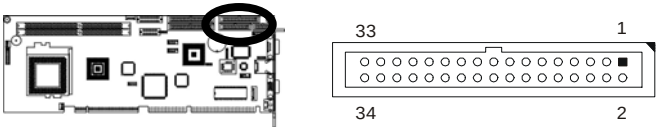


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◆ **Floppy Disk Connector (34-pins 2.54mm Pitch Pin-Header with Housing): CN4**

Pin #	Assignment	Pin #	Assignment
1	Ground	2	Drive Density Selection
3	Ground	4	NC
5	Ground	6	NC
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	Ground	30	Read Data
31	Ground	32	Head Select
33	Ground	34	Diskette Change

- **Figure:**

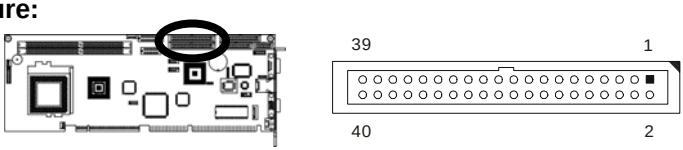


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◆ **Secondary IDE Connector (40-pins 2.54mm Pitch Pin-Header with Housing): CN5**

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	NC
33	Address 1	34	NC
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

- **Figure:**

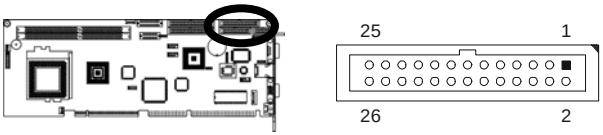


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◆ **Parallel Port Connector (26-pins 2.54mm Pitch Pin-Header with Housing): CN6**

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

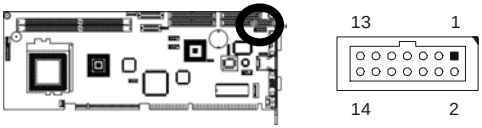
- **Figure:**



◆ **COM2 RS-232/422/485 Serial Port Connector (14-pins 2.54mm Pitch Pin-Header with Housing): CN7**

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
11	TXD+ (Transmit Data+)	12	TXD- (Transmit Data-)
13	RXD+ (Receive Data+)	14	RXD- (Receive Data-)

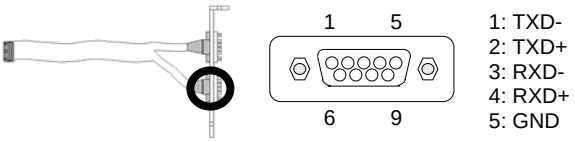
- **Figure:**



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Note: How to connect RS485 device with COM port ribbon cable?

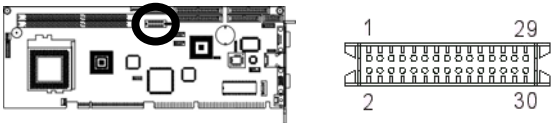
Our Industrial Board encloses a COM port ribbon cable for internal connection. RS422/485 device must connect to downside D-Sub with 5-pins cable and signal indication as below.



◆ **24 Bits LVDS Connector (30-pins Male): CN8**

Pin #	Assignment	Pin #	Assignment
1	A0M	2	A1M
3	A0P	4	A1P
5	Ground	6	Ground
7	Ground	8	Ground
9	A2M	10	CK1M
11	A2P	12	CK1P
13	Ground	14	Ground
15	Ground	16	Ground
17	A3M	18	Ground
19	A3P	20	Ground
21	Ground	22	Ground
23	Ground	24	Ground
25	VCC	26	VCC
27	VCC	28	VCC
29	VCC	30	VCC

- **Figure:**

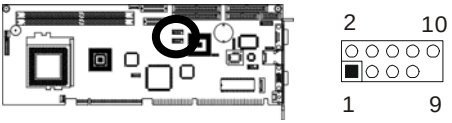


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◆ **USB0 / USB1 Port Connector (9-pins Pin-Header): CN9**

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

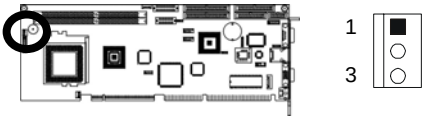
- **Figure:**



◆ **System Fan Power Connector: CN10**

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

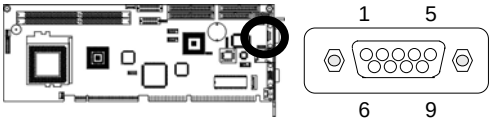
- **Figure:**



◆ **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		

- **Figure:**

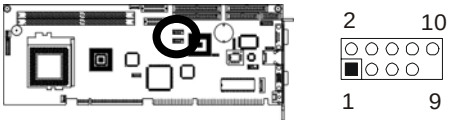


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◆ USB2 / USB3 Port Connector (9-pins Pin-Header): CN12

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

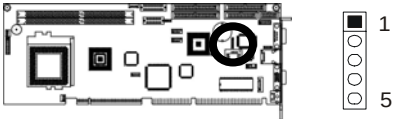
- **Figure:**



◆ IrDA Connector: CN13

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

- **Figure:**

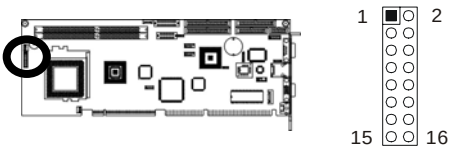


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◆ **System Panel Indicate Connector: CN14**

Pin #	Assignment	Pin #	Assignment
SPEAKER		**PWR LED**	
1	+5V	2	PWLED+
3	NC	4	NC
5	BZ	6	PWLED-
7	SPKR	**KEYLOCK**	
HDD LED		8	KBLOCK
9	HDLED+	10	Ground
11	HDLED-	12	NC
RESET		**PWR ON**	
13	RESET+	14	PWRBT+
15	RESET-	16	PWRBT-

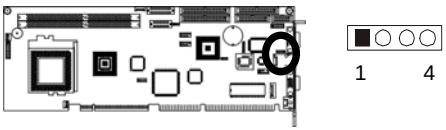
- **Figure:**



◆ **CD_IN Connector (4-pins Male): CN15**

Pin #	Assignment
1	CD_IN_Left
2	CD_Reference
3	CD_Reference
4	CD_IN_Right

- **Figure:**

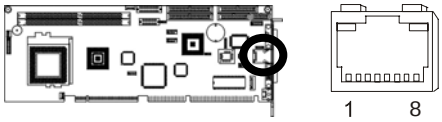


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◆ LAN1 Connector (RJ-45 Phone-jacket): CN16

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

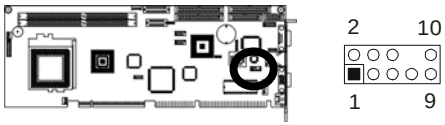
- **Figure:**



◆ Audio Connector (9-pins): CN17

Pin #	Assignment	Pin #	Assignment
1	MIC IN	2	AU_GND
3	MIC BIAS	4	AU VCC5
5	LOUTR	6	LINR
7	GROUND	8	--
9	LOUTL	10	LINL

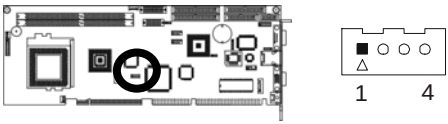
- **Figure:**



◆ ATX Control Power Connector: CN18

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

- **Figure:**

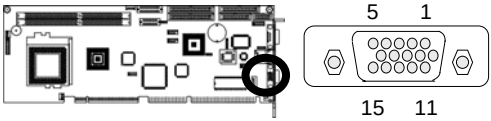


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◆ **CRT VGA Port Connector (D-SUB 15-pins Female): CN19**

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		

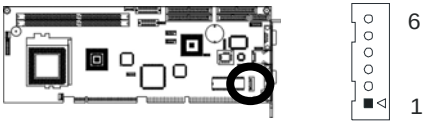
- **Figure:**



◆ **External Keyboard Connector (6-pins): CN20**

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

- **Figure:**

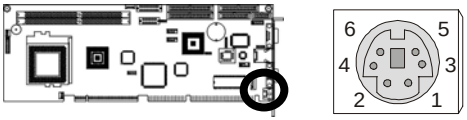


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◆ PS/2 Keyboard/Mouse Connector (Mini Din 6 Pins): CN21

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

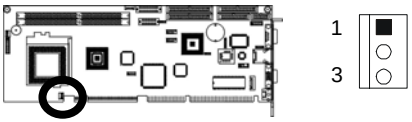
- **Figure:**



◆ CPU Fan Power Connector: CN22

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

- **Figure:**



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SECTION 3

AWARD BIOS SETUP

3.1 BIOS Instructions

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.

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3.2 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

➢ Standard CMOS Feature ➢ Advanced BIOS Feature ➢ Advanced Chipset Feature ➢ Integrated Peripherals ➢ Power Management Setup ➢ PnP/PCI Configurations ➢ PC Health Status	➢ 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….	

Note: that 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. See Section 2 for the details.

Advanced BIOS Features:
Use this menu to set the Advanced Features available on your system. See Section 3 for the details.

Advanced Chipset Features:
Use this menu to change the values in the chipset registers and optimize your system's performance. See section 4 for the details.

Integrated Peripherals:
Use this menu to specify your settings for integrated peripherals. See section 4 for the details.

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Power Management Setup:
Use this menu to specify your settings for power management. See section 5 for the details.

PnP / PCI Configuration:
This entry appears if your system supports PnP / PCI. See section 6 for the details.

PC Health Status:
Use this menu to show your system temperature, speed and voltage status.

Frequency / Voltage Control:
Use this menu to specify your settings for frequency/voltage control. See section 7 for the details.

Load Fail-Safe Defaults:
Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate. See section 8 for the details.

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 factory has the right to change these defaults to meet their needs. See section 8 for the details.

Supervisor / User Password:
Use this menu to set User and Supervisor Passwords. See section 9 for the details.

Save & Exit Setup:
Save CMOS value changes to CMOS and exit setup. See section 10 for the details.

Exit Without Save:
Abandon all CMOS value changes and exit setup. See section 10 for the details.

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3.3 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

Date (mm:dd:yy):	Mon, Aug 4 2003	Item Help
Time (hh:mm:ss):	16:19:20	
➢ IDE Primary Master	13579 MB	Menu Level ➢
➢ IDE Primary Slave	None	
➢ IDE Secondary Master	None	Change the day, month, year and century
➢ 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

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

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

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

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

IDE Secondary Master: Options are in its sub menu (described in 3.4)
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: Option N/A
Displays the amount of conventional memory detected during boot up.

Extended Memory: Option N/A
Displays the amount of extended memory detected during boot up

Total Memory: Option N/A
Displays the total memory available in the system

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3.4 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	Auto	Menu Level ➢➢
Access Mode	Auto	
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 Primary Master: Options 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: Options Normal, 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.

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The following options are selectable only if the ‘IDE Primary Master’ item is set to ‘Manual’

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 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

CPU Internal Cache	Enabled	Item Help
External Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	
Processor Number Feature	Enabled	Menu Level ➢
Quick Power On Self Test	Enabled	
➢ Boot Sequence	Press Enter	
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	
Video BIOS Shadow	Enabled	
Small Logo (EPA) 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

CPU Internal Cache / External Cache:
These two categories speed up memory access. However, it depends on CPU/chipset design.

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

CPU L2 Cache ECC Checking:
This item allows you to enable/disable CPU L2 Cache ECC checking.

The choice: Enabled, Disabled.

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Processor Number Feature:
This item will show Pentium® III or later CPU new feature. The default is "Enabled".

Enabled---Processor serial number readable.
Disabled---Processor serial number disabled

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

Boot Sequence:

Phoenix - AwardBIOS CMOS Setup Utility

Boot Sequence

First Boot Device	Floppy	Item Help
Second Boot Device	HDD-0	
Third Boot Device	LS-120	Menu Level ➢➢
Boot Other Device	Enabled	Select Your Boot Device Priority
↑↓→←Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults		

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

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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.

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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.

Video BIOS Shadow:
Enabling this function will allow the Graphic card's BIOS setting to be imaged onto the RAM for a better performance.

The choice: Enabled, Disabled.

Small Logo (EPA) Show:
Set the Logo (EPA) show or not.

The choice: Enabled, Disabled.

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3.6 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

➢ DRAM Clock/Drive Control	Press Enter	Item Help
➢ AGP & P2P Bridge Control	Press Enter	
➢ CPU & PCI Bus Control	Press Enter	Menu Level ➢
System BIOS Cacheable	Disabled	
Video RAM Cacheable	Disabled	
Disk On Chip Address	DC000H-DFFFFH	
Power-Supply Type	ATX	
VGA Share Memory Size	32M	
Select Display Device	CRT	
Panel Type	00	
Panel Outport Port	Di0	
Panel Clock Mode	Single	
Panel Bus width	24 Bits	
Memory Parity/ECC Check	Disabled	

↑↓→←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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DRAM Clock/Drive Control:

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DRAM Clock/Drive Control

Current FSB Frequency	133 MHz	Item Help
Current DRAM Frequency	133 MHz	
DRAM Clock	By SPD	Menu Level ➢
DRAM Timing	By SPD	
DRAM CAS Latency	2.5	
Bank Interleave	Disabled	
Precharge to Active (Trp)	3T	
Active to Precharge (Tras)	6T	
Active to CMD (Trcd)	3T	
DRAM Command Rate	2T Command	

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

Current FSB / DRAM Frequency: Option N/A
This item can display the current FSB / DRAM Frequency.

DRAM Clock:
This selecting option allows you to control the DRAM speed.
The choice: 100 MHz, 133 MHz and By SPD.

DRAM Timing:
The function allows you to enable or disable the DRAM timing by SPD.
The choice: Manual, By SPD.

DRAM CAS Latency:
When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
The choice: 2, and 2.5.

Bank Interleave:
The item allows you to set how many banks of SDRAM support in your SBC card.
The choice: Disabled, 2 Bank and 4 Bank

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Precharge to Active (Trp):
This item refers to the number of cycles required to return data to its original location to close the bank or the number of cycles required to page memory before the next band activate command can be issued.

The choice: 2T, 3T.

Active to Precharge (Tras):
Select the operating system that is active to precharge delay.

The choice: 5T, 6T.

Active to CMD (Trcd):
This item sets the timing parameters for the system memory such as the CAS (Column Address Strobe) and RAS (Row Address Strobe).

The choice: 2T, 3T.

DRAM Command Rate:
Setup the timing at each cycle. Please leave the default setting at 2T command for a stable system operation.

The choice: 2T Command, 3T Command.

AGP & P2P Bridge Control:

Phoenix - AwardBIOS CMOS Setup Utility
AGP & P2P Bridge Control

AGP Aperture Size	64M	Item Help
AGP Driving Control	Auto	
AGP Driving Value	DA	
AGP Fast Write	Disabled	Menu Level ➢
AGP Master 1 WS Write	Disabled	
AGP Master 1 WS Read	Disabled	

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

AGP Aperture Size:
This field determines the effective size of the Graphic Aperture used for a particular GMCH configuration.

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

AGP Driving Control:
This function allows you to manually select the AGP driving force.

The choice: Auto, Manual.

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AGP Driving Value:
This function allows you to manually select the AGP driving value.
Options Min = 0000, Max = 00FF

AGP Fast Write:
Select Enabled to allow Fast Write Protocol for 4X AGP to function.
The choice: Enabled, Disabled.

AGP Master 1 WS Write / Read:
Writes/Read to the AGP (Accelerated Graphics Port) are executed with one wait states.
The choice: Enabled, Disabled.

CPU & PCI Bus Control:

Phoenix - AwardBIOS CMOS Setup Utility
CPU & PCI Bus Control

CPU & PCI Write Buffer	Enabled	Item Help
PCI Master 0 WS Write	Enabled	
PCI Delay Transaction	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

CPU & PCI Write Buffer:
This item can enable CPU to PCI bus POST write.
The choice: Enabled, Disabled.

PCI Master 0 WS Write:
When Enabled, Writes to the PCI bus are commanded with zero wait states.
The choice: Enabled, Disabled.

PCI Delay Transaction:
The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select “Enabled” to support compliance with PCI specification version 2.1.
The choice: Enabled, Disabled.

System BIOS Cacheable:
This item allows the system to be cached in memory for faster execution.
The choice: Enabled, Disabled.

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Video RAM Cacheable:
This option allows the CPU to cache read/writes of the video RAM.
The choice: Enabled, Disabled.

Disk On Chip Address:
Select this item allows the Disk On Chip address at D0000H-D3FFFH.
The choice: D0000H-D3FFFH, D4000H-D7FFFH, D8000H-DBFFFH and DC000H-DFFFFH.

Power-Supply Type:
Select the Power Supply type.
The choice: AT, ATX.

VGA Share Memory Size:
Select this item allows you to control the VGA share memory size.
The choice: 16M, 32M and 64M.

Select Display Device:
This item allows you to select the display device.
The choice: CRT, LCD and CRT+LCD.

Panel Type:
This item allows you to select the panel type.
Options Min = 0000, Max = 00FF

Panel Outport Port
This item allows you to select the panel outport Port.
The choice: DI0, DI1

Panel Clock Mode:
This item allows you to select panel clock mode.
The choice: Single, Dual

Panel Bus Width:
This item allows you to select panel bus width.
The choice: 12 Bits, 24 Bits.

Memory Parity/ECC Check:
Enabled to add a parity check to the boot-up memory tests. Select Enabled only if the system DRAM contains parity.
The choice: Enabled, Disabled.

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3.7 Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals

➢ VIA OnChip IDE Device	Press Enter	Item Help
➢ VIA On-Chip PCI Device	Press Enter	
➢ Super IO Device	Press Enter	
Init Display First	PCI Slot	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

VIA OnChip IDE Device:

VIA OnChip IDE Device

IDE Prefetch Mode	Enabled	Item Help
IDE HDD Block Mode	Enabled	
Onchip IDE Channel0	Enabled	
IDE Primary Master PIO	Auto	Menu Level ➢
IDE Primary Slave PIO	Auto	If your IDE hard drive supports block mode select Enabled for automatic detection of the optimal number of block read/write per sector the drive can support
IDE Primary Master UDMA	Auto	
IDE Primary Slave UDMA	Auto	
Onchip IDE Channel1	Enabled	
IDE Secondary Master PIO	Auto	
IDE Secondary Slave PIO	Auto	
IDE Secondary Master UDMA	Auto	
IDE Secondary Slave UDMA	Auto	

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

IDE Prefetch Mode:
Selecting Enabled reduces latency between each drive read/write cycle, but may cause instability in IDE subsystems that cannot support such fast performance. If you are getting disk drive errors, try setting this value to Disabled. This field does not appear when the Internal PCI/IDE field, above, is Disabled.

The choice: Enabled, Disabled

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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

OnChip IDE Channel 0 / 1:
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.

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.

VIA On-Chip PCI Device:

Phoenix - AwardBIOS CMOS Setup Utility
VIA On-Chip PCI Device

Realtek ALC650	Enabled	Item Help
Onchip USB Controller	All Enabled	
Onchip EHCI Controller	Enabled	
USB Keyboard Support	Disabled	Menu Level ➢
USB Mouse Support	Disabled	

↑↓→←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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Realtek ALC650:
This item allows you to auto or disable to support AC97 Audio.
The choice: Auto, Disabled.

Onchip USB Controller:
Select “Enabled” if your system contains a USB controller and you have USB peripherals.
The choice: All Disabled, All Enabled, 1&2 USB Port, 1&3 USB Port and 1 USB Port

Onchip EHCI Controller:
This item allows you to enabled or disable EHCI Controller.
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.

Super I/O Device

Phoenix - AwardBIOS CMOS Setup Utility
Super I/O Device

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	Menu Level ➢
X RxD, TxD Active	Hi, Lo	
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	

↑↓→←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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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 Serial Port 1 / Port 2:
Select an address and corresponding interrupt for the first and second serial ports.
The choice: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled and Auto.

UART Mode Select:
This item allows you to select UART mode.
The choice: IrDA, ASKIR and Normal.

RxD, TxD Active:
This item allows you to determine the active of RxD, TxD.
The Choice: “Hi, Hi”, “Lo, Lo”, “Lo, Hi” and “Hi, Lo”.

IR Transmission Delay:
This item allows you to enable/disable IR transmission delay.
The choice: Enabled, Disabled.

UR2 Duplex Mode:
This item allows you to select the IR half/full duplex function.
The choice: Half, Full.

Use IR Pins:
This item allows you to select IR transmission routes, one is RxD2m, TxD2 (COM Port) and the other is IR-Rx2Tx2.
The choice: IR-Rx2Tx2, RxD2 and TxD2.

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.

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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.

EPP Mode Select:
Select EPP port type 1.7 or 1.9.

The choice: EPP1.7, 1.9.

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

The choice: 3, 1.

Init Display First:
This item allows you to decide to active whether PCI Slot or on-chip VGA first.

The choice: PCI Slot, Onboard.

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3.8 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

ACPI Function	Enabled	Item Help
Power Management	User Define	
HDD Power Down	Disabled	
Suspend Mode	Disabled	Menu Level ➢
Video Off Option	Suspend->Off	
Video Off Method	V/H SYNC+Blank	
MODEM Use IRQ	3	
Soft-Off by PWRBTN	Instant-Off	
Ac Loss Auto Restart	Off	
➢ IRQ/Event Activity Detect	Press Enter	

↑↓→←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/disable the Advanced Configuration and Power Management (ACPI).
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:

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. and disable.

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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.

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, 6, 8, 10, 20, 30, 40Min and 1hor.

Video Off Option:
When enabled, this feature allows the VGA adapter to operate in a power saving mode.

The choice: Always On, Suspend->Off.

Video Off Method:
This option allows you to select how the power management will disable the video.

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 Support:
Initial display power management signaling.

MODEM Use IRQ:
This determines the IRQ in which the MODEM can use.

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

Soft-Off By PWRBTN:
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.

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Ac Loss Auto Restart
The system will stay of power on after a power interrupts.
The choice: Auto, Off.

IRQ/Event Activity Detect:

Phoenix - AwardBIOS CMOS Setup Utility
IRQ/Event Activity Detect

VGA	OFF	Item Help
LPT & COM	None	
HDD & FDD	Off	
PCI Master	Off	Menu Level ➢
PowerOn By PCI Card	Disabled	
Wake Up On LAN/Ring	Enabled	
RTC Alarm Resume	Disabled	
X Date (of Month) Alarm	0	
X Time (hh:mm:ss) Alarm	0 : 0 : 0	
➢ IRQs Activiy Monitoring	Press Enter	

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

Event Activity Detect:
The 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 “On”, even when the system is in a power down mode.

VGA:
The choice: Off, On.

LPT & COM:
The choice: None, LPT, COM, LPT/COM

HDD & FDD:
The choice: Off, On.

PCI Master:
The choice: Off, On.

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

The choice: Enabled, Disabled.

Wake Up On LAN/Ring:
When set to Enabled, any event occurring to the LAN/Modem Ring will awaken the system, which has been powered down.

The choice: Enabled, Disabled.

RTC Alarm Resume:
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.

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IRQs Activity Monitoring:

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IRQs Activity Monitoring

		Item Help
Primary INTR	On	
IRQ3 (COM 2)	Enabled	Menu Level ➢
IRQ4 (COM 1)	Enabled	
IRQ5 (LPT 2)	Enabled	
IRQ6 (Floppy Disk)	Enabled	
IRQ7 (LPT 1)	Enabled	
IRQ8 (RTC Alarm)	Disabled	
IRQ9 (IRQ2 Rear)	Disabled	
IRQ10 (Reserved)	Disabled	
IRQ11 (Reserved)	Disabled	
IRQ12 (PS/2 Mouse)	Enabled	
IRQ13 (Coprocessor)	Enabled	
IRQ14 (Hard Disk)	Enabled	
IRQ15 (Reserved)	Disabled	

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

Primary INTR:

When set to “On” (default), any event occurring at will awaken a system, which has been powered down.

The choice: On, Off.

IRQs 3-15:

This items allow you to set system to monitor IRQs 3-15 for activity to awaken system from a power management mode.

The choice: Enabled, Disabled.

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3.9 PnP/PCI Configurations

This section describes configuring 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	
Resources Controlled By	Auto (ESCD)	Menu Level ➢
X IRQ Resources	Press Enter	
X DMA Resources	Press Enter	Select Yes if you are using a Play and Play capable operating system Select No if you need the BIOS to configure non-boot devices
PCI/VGA Palette Snoop	Disabled	
Assign IRQ For VGA	Enabled	
Assign IRQ For USB	Enabled	

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

PNP OS Installed:

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

The choice: Yes, No.

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.

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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 "➢").

The choice: Auto (ESCD), Manual.

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

DMA Resources:
When resources are controlled manually, assign each system DMA channel a type, depending on the type of device using the DMA channel.

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.

Assign IRQ For VGA:
This item allows BIOS to assign whether IRQ is with VGA or not. If you have not connected the VGA device, you can release the IRQ for other device.

The choice: Enabled, Disabled.

Assign IRQ For USB:
This item allows BIOS to assign whether IRQ is with USB or not. If you have not connected the USB device, you can release the IRQ for other device.

The choice: Enabled, Disabled.

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3.10 PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility
PC Health Status

Current System Temp.	34°C/93°F	Item Help
Current CPU Temp.	40°C/104°F	
Current System Fan Speed	5010RPM	Menu Level ➢
Current CPU Fan Speed	5213RPM	
Vcore (V)	1.72V	
+3.3V (V)	3.28V	
+ 5 V	4.97V	
+12 V	12.03V	
-12 V	-12.36V	
-5V	-4.99V	
VBAT (V)	3.07V	
5VSB (V)	4.63V	
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

Current System Temp:
Show you the current system temperature.

Current CPU Temperature:
Show you the current CPU temperature.

Current System FAN Speed:
Show you the current System fan operating speed.

Current CPU FAN Speed:
Show you the current CPU fan operating speed.

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Vcore (V)
Show you the voltage level of CPU (Vcore).

+3.3V/+5V/+12V/-12V/-5V/5VSB(V):
Show you the voltage of +3.3V/+5V/+12V/-12V/-5V/5VSB(V).

VBAT (V)
Show you the voltage level of the battery.

Shutdown Temperature:
This item allows you to set up the CPU shutdown Temperature. This item is only effective under Windows® 98 ACPI mode.

The choice: Disabled, 60°C / 140°F, 65°C / 149°F, 70°C / 159°F and 75°C / 167°F.

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3.11 Frequency/Voltage Control

Phoenix - AwardBIOS CMOS Setup Utility
Frequency/Voltage Control

Auto Detect DIMM/PCI CLK	Enabled	Item Help
Spread Spectrum	Disabled	
CPU Clock	133MHz	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 DIMM/PCI CLK:
When "Enabled", this item will auto detect if the DIMM and PCI socket have devices and will send clock signal to DIMM and PCI devices. When disabled, it will send the clock signal to all DIMM and PCI socket.

The choice: Enabled, Disabled.

Spread Spectrum:
This item allows you to enable/disable the spread spectrum modulated.

The choice: Disabled, -0.5%, +/-0.5%, +/-0.25%, +/-0.38%

CPU Clock:
This item allows you to select CPU Clock.

The choice: 133 ~ 166 MHz.

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3.12 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.

3.13 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.

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3.14 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.

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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 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.

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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. When sending in damaged products for repair, please attach an RMA application form.
2. All ADLINK products come with a two-year guarantee, free of repair 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 the local dealers

3. Our repair service does not cover the two-year warranty, if damages are cause by the following events:
    a. Damage caused by not following instructions in the user's manual.
    b. Damage caused by carelessness on the users' part during product transportation.
    c. Damage caused by fire, earthquakes, floods, lightening, pollution and incorrect usage of voltage transformers.
    d. Damage caused by unsuitable storage environments with high temperatures, high humidity or volatile chemicals.
    e. Damage caused by leakage of battery fluid when changing batteries.
    f. Damages from improper repair by unauthorized technicians.
    g. Products with altered and damaged serial numbers are not entitled to our service.

Other categories not protected under our guarantees.

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4. Customers are responsible for the fees regarding transportation of damaged products to our company or to the sales office.
5. To ensure the speed and quality of product repair, please download an RMA application form from our company website www.adlinktech.com. Damaged products with RMA forms attached receive priority.

For further questions, please contact our FAE staff.

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Automation Product Segment: Automation@adlinktech.com

Computer & Communication Product Segment: NuPRO@adlinktech.com; NuIPC@adlinktech.com

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