ACP-945GDS Motherboard
User Guide

Safety Information

Read the following precautions before setting up a Avalue product.

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

CAUTION

Incorrectly replacing the battery may damage this computer. Replace only with the same or its equivalent as recommended by Avalue. Dispose used battery according to the manufacturer's instructions.

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1 Function Introduction

English

■ 1.1 Model Specifications

CPU Support	● Supports Mobile Atom Processor N270 Single Core in the FCBGA 437 package. ● Supports C0/C1, FSB 533MHz, on die 512-KB, 8-way L2 cache. ● Support for IA 32-bit architecture.
Chipsets	● North Bridge: Intel 945GSE ● South Bridge: ICH7M
Memory	● 1 x 200pins DDR2 SODIMM, system Memory up to 1.0 GB. ● SPD memory only, single Channel non-ECC DDR2 SODIMM only. ● Supports Memory Frequency DDR2 400/533 MHz.
Display Features	● Intel GMA 950 (Built in Intel 945GSE) ● Analog Display Support – Built-in Intel® GMA950 graphics, 400MHz Integrated 24bit RAMDAC. – Up to 2048x1536@75Hz refresh, supports Hot Plug and Display. ● Digital Display Support – Dual 18bit LVDS channel,Graphics core speeds up to 166 MHz. – One SDVO port, support multiple graphics display options. ● HDMI Support (Silicon Image: Sil1392) – Supports Intel SDVO interface and use integrated GMA950. – Compliant with DVI 1.0 and HDMI 1.2a specification.
Audio	● ALC888 5.1 channel, high-quality analog differential CD input. ● DACs supports 44.1k/48k/96k/192kHz sample rate. ● ADCs support 44.1k/48k/96k sample rate. ● Supports jack detection function, legacy analog mixer architecture. ● Software selectable boost gain (+10/+20/+30dB) for analog microphone input. ● 16/20/24-bit SPDIF-IN/OUT supports 44.1k/48k/96k/192kHz sample rate.
LAN	● Intel 82574L, PCI Express base specification 1.1 compliant. ● IEEE 802.3u/ab, and 802.1Q support. ● Full/Half duplex operation at 10/100/1000 Mbps. ● Auto MDI, MDI-X crossover at all speeds. ● Wake-up enable with unique MAC address. ● Compliant to ACPI 2.0 specification.

Storage Interface	● South Bridge	(2) On board SATA 1.5Gb/s connectors (1) UltraDMA 100 IDE channel connector (Master) (1) CF connector (Slave)(Option)

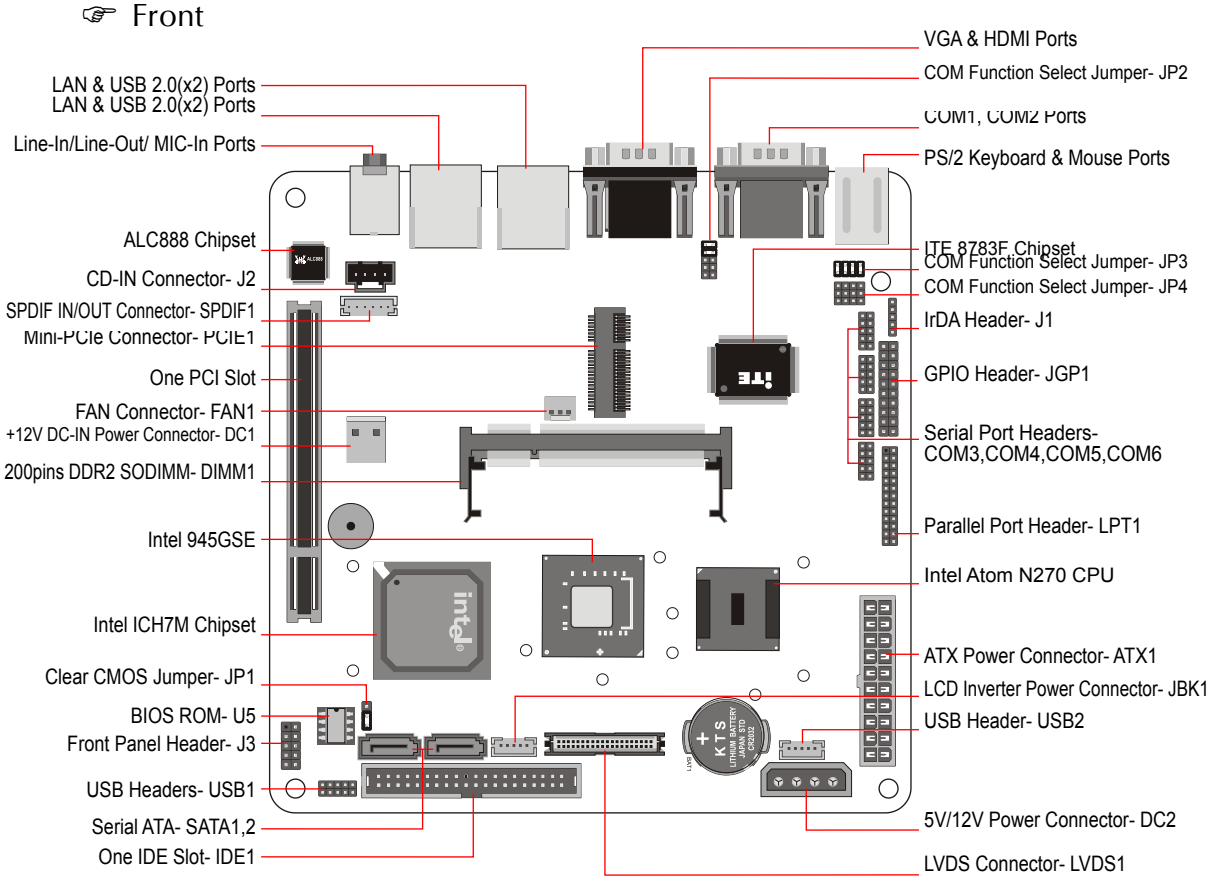
On Board Connectors	(2) Serial-ATA connectors (1) ATA100 Bus IDE Connector (1) ATX Power Connector (1) 1x4 Pins 5V/12V Power Connector (1) 1x2 Pins +12V DC–IN Power Connector (1) 200 Pins DDR2 SODIMM Socket (1) 50 Pins CF Slot (Bottom Side) (1) 32 Bits with 33MHz PCI Slot (1) Mini-PCIe Connector (1) 3 Pins Fan Connector (1) 4 Pins CD-IN Connector (1) 2x20 Pins LVDS Connector (1) 1x5 Pins LCD Inverter power connector (1) 1x5 Pins IrDA Header (1) 2x5 Pins USB Header (1) 1x5 Pins USB Header (1) 2x10 Pins GPIO and SMBus Header (1) 2x13 Pins Parallel Port Header (4) 2x5 Pins Serial Ports Headers (1) 2x5 Pins COM1,2 Pin9 Function Select Jumper (1) 2x4 Pins COM3,4,5,6 Pin9 Function Select Jumper (1) 3x4 Pins COM3,4,5,6 Pin9 Function Select Jumper (1) 2x5-10 Pins header for front panel switch and power/HD LEDs (1) 1x3 Pins header for clear CMOS function

Rear Panel Connectors	(1) PS/2 Keyboard Port	(1) PS/2 Mouse Port
	(2) Serial Ports	(1) VGA Port
	(1) HDMI Port	(4) USB 2.0 Ports
	(2) 10/100/1000Mbps LAN Ports	(1) LINE Out Port
	(1) LINE In Port	(1) MIC In Port

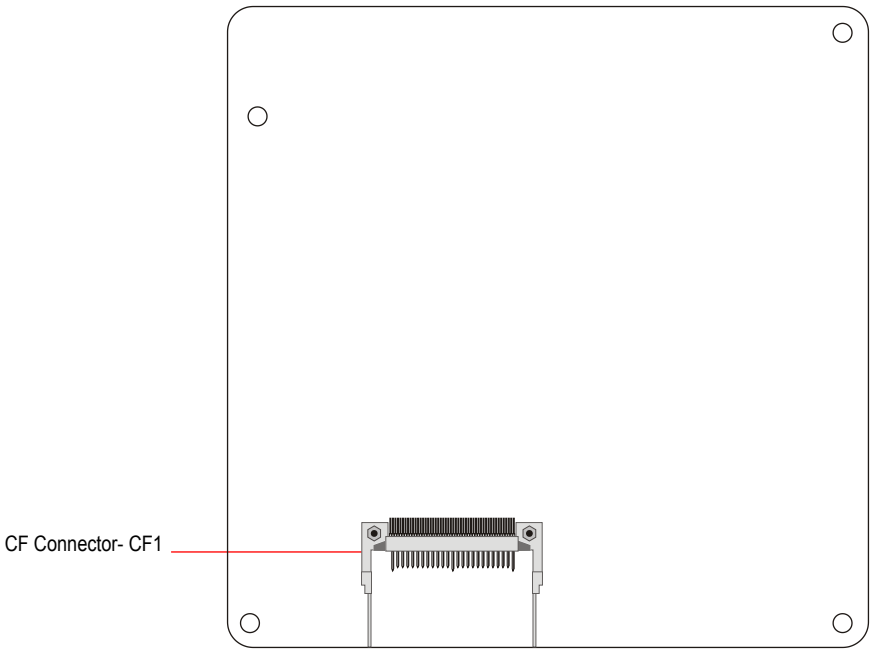
Form Factor	● ITX Form Factor 170 x 170 (mm)

■ 1.2 ACP-945GDS Mainboard illustration

☞ Front



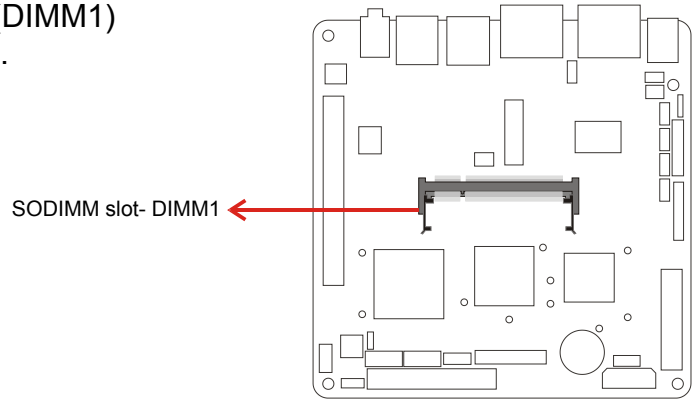
☞ Back



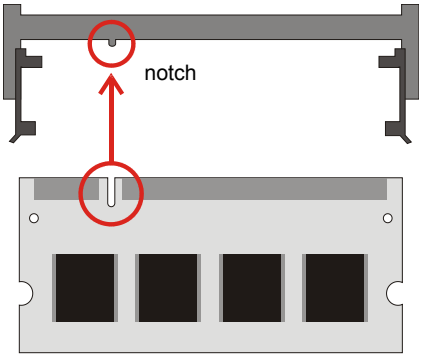
■ 1.3 Memory Module Installation

The ACP-945GDS provide one 200pins SODIMM slot for DDR2 400/533MHz SDRAM memory modules and supports memory sizes up to 1GB.

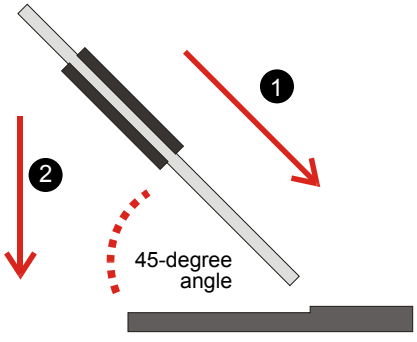
Step 1. Locate the SODIMM (DIMM1) slot on the mainboard.



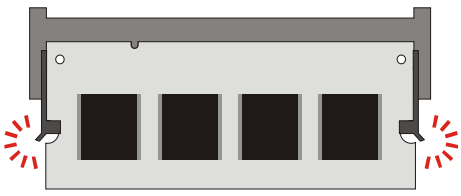
Step 2. Align the notch of the memory module with that of the memory slot.



Step 3. Gently insert the module into the slot at a 45-degree angle.

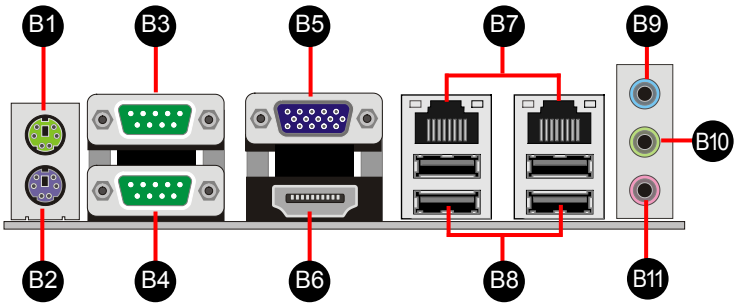


Step 4. Push the memory down until it snaps into the locking mechanism.

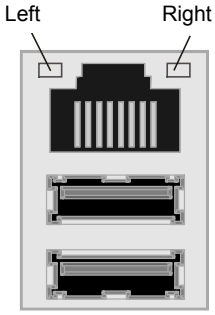


■ 1.4 Back Panel Connector

B1. PS/2 Mouse Port
B2. PS/2 Keyboard Port
B3. COM2 Port
B4. COM1 Port
B5. VGA Port
B6. HDMI Port
B7. 10/100/1000Mbps LAN ports
B8. USB 2.0 Ports
B9. LINE-IN Port
B10. LINE-OUT Port
B11. MIC-IN Port



■ 1.5 RJ-45 LAN Connector LEDs



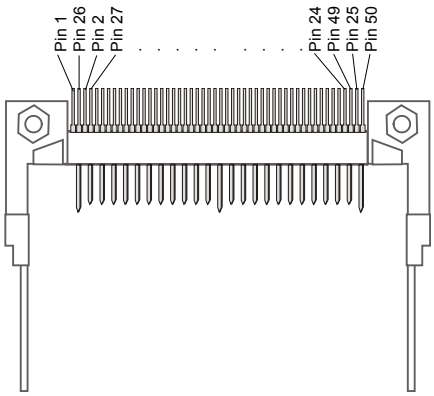
Side	LED	Color	State
Left	Green/Orange	Off	10Mbps data rate.
		Green	100Mbps data rate.
		Orange	1000Mbps data rate.
Right	Orange	Off	LAN link is not established.
		On	LAN link is established.
		Blinking	LAN activity is occurring.

■ 1.6 Connectors & Jumpers Guide

CF Connector

Pin Assignments (CF1)(Slave):

1 = GND	2 = PDD3	3 = PDD4
4 = PDD5	5 = PDD6	6 = PDD7
7 = PDCS1-	8 = GND	9 = GND
10 = GND	11 = GND	12 = GND
13 = 5V	14 = GND	15 = GND
16 = GND	17 = GND	18 = PDA2
19 = PDA1	20 = PDA0	21 = PDD0
22 = PDD1	23 = PDD2	24 = NC
25 = NC	26 = NC	27 = PDD11
28 = PDD12	29 = PDD13	30 = PDD14
31 = PDD15	32 = PDCS3-	33 = NC
34 = PDIOR-	35 = PDIOW-	36 = 5V
37 = IDEIRQ	38 = 5V	39 = CF Slave.
40 = NC	41 = IDESRT-	42 = PIORDY
43 = PDREQ	44 = PDDACK-	45 = CF ACTIVITY-
46 = P66DETECT	47 = PDD8	48 = PDD9
49 = PDD10	50 = GND	

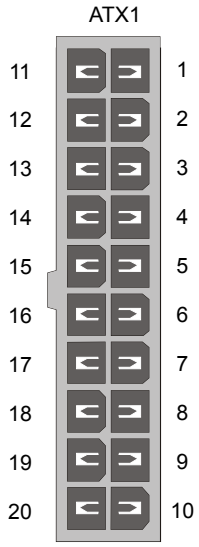


Power Connectors

- ATX Power Connector- ATX1

Pin Assignments (ATX1):

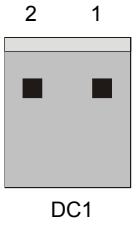
1 = +3.3V	2 = +3.3V
3 = GND	4 = +5V
5 = GND	6 = +5V
7 = GND	8 = PWR-OK
9 = 5V Stand-by	10 = +12V
11 = +3.3V	12 = -12V
13 = GND	14 = PS-ON#
15 = GND	16 = GND
17 = GND	18 = -5 (NC)
19 = +5V	20 = +5V



- +12V DC-IN Power Connector- DC1

Pin Assignments (DC1):

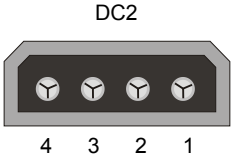
1 = DC 12V in
2 = GND



- 5V/12V Power Connector- DC2

Pin Assignments (DC2):

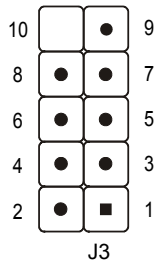
1 = +12V
2 = GND
3 = GND
4 = +5V



Front Panel Header

Pin Assignments (J3):

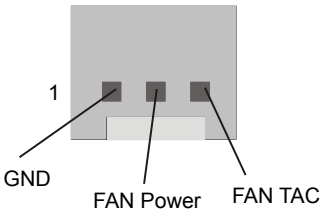
1 = HD_LED +	2 = PWR LED + /SLP LED-
3 = HD_LED-	4 = PWR LED-/SLP LED +
5 = Reset SW-	6 = PWR SW +
7 = Reset SW +	8 = PWR SW-
9 = NC	10 = KEY



Fan Connector

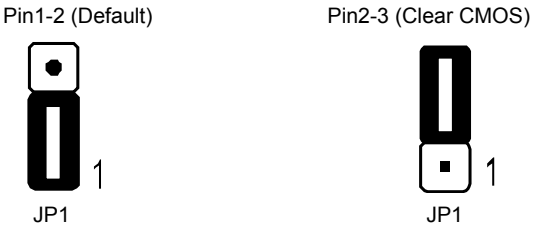
Pin Assignments (FAN1):

1 = GND
2 = Fan Power
3 = Fan TAC



Both cable wiring and type of plug may vary depending on the fan maker.

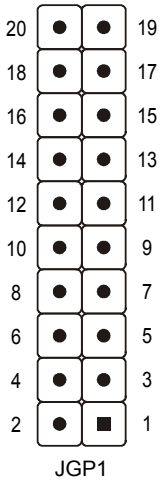
Clear CMOS Jumper



GPIO Header

Pin Assignments (JGP1):

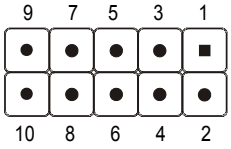
1 = GPIO50	2 = GPIO51
3 = GPIO52	4 = GPIO53
5 = GPIO54	6 = GPIO55
7 = GPIO56	8 = GPIO57
9 = GPIO16	10 = GPIO17
11 = GPIO33	12 = GPIO37
13 = GPIO40	14 = GPIO41
15 = GPIO42	16 = GPIO43
17 = SMBus Clock	18 = SMBus Data
16 = GND	20 = + 5V



USB Headers

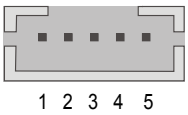
Pin Assignments (USB1):

1 = 5V	2 = GND
3 = USB A-	4 = GND
5 = USB A +	6 = USB B +
7 = GND	8 = USB B-
9 = GND	10 = 5V



Pin Assignments (USB2):

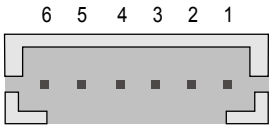
1 = GND
2 = GND
3 = USB +
4 = USB-
5 = 5V



SPDIF IN/OUT Connector

Pin Assignments (SPDIF1):

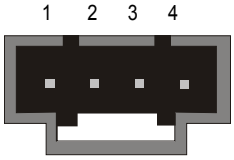
1 = SPDIF IN
2 = GND
3 = + 5V
4 = GND
5 = + 5V
6 = SPDIF OUT



CD-IN Header

Pin Assignments (J2):

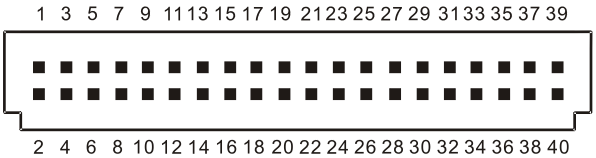
1 = CD-Left
2 = CD-GND
3 = CD-GND
4 = CD-Right



LVDS Connector

Pin Assignments (LVDS1):

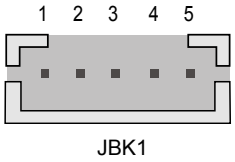
1 = 3.3V	2 = 5V
3 = 3.3V	4 = 5V
5 = DDC CLK	6 = DDC DAT
7 = GND	8 = GND
9 = LDC1 +	10 = LDC0 +
11 = LDC1-	12 = LDC0-
13 = GND	14 = GND
15 = NC	16 = LDC2 +
17 = NC	18 = LDC2-
19 = GND	20 = GND
21 = LDC5 +	22 = LDC4 +
23 = LDC5-	24 = LDC4-
25 = GND	26 = GND
27 = NC	28 = LDC6 +
29 = NC	30 = LDC6-
31 = GND	32 = GND
33 = LDC_CLK2 +	34 = LDC_CLK1 +
35 = LDC_CLK2-	36 = LDC_CLK1-
37 = GND	38 = GND
39 = + 12V	40 = + 12V



LCD Inverter Power Connector

Pin Assignments (JBK1):

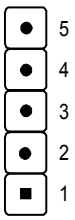
1 = +12V
2 = GND
3 = BKLT_EN
4 = BKLT_CTL
5 = VCC (+5V)



IrDA Header

Pin Assignments (J1):

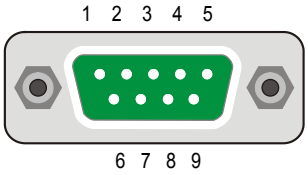
1 = +5V
2 = NC
3 = IR RX
4 = IR TX
5 = GND



Back Panel COM1 Connector

Pin Assignments (COM1):

1 = DCD1# / 422TX- / 485-
2 = SIN1 / 422TX+ / 485+
3 = SOUT1 / 422RX-
4 = DTR1# / 422RX+
5 = GND
6 = DSR1#
7 = RTS1#
8 = CTS1#
9 = RI1# /+5V /+12V



Serial Port Headers (COM3, COM4, COM5, COM6)

Pin Assignments (COM3):

1 = DCD3#
2 = SIN3
3 = SOUT3
4 = DTR3#
5 = GND
6 = DSR3#
7 = RTS3#
8 = CTS3#
9 = RI3# /+5V /+12V
10 = NC

Pin Assignments (COM4):

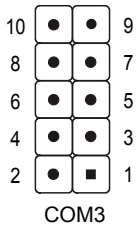
1 = DCD4#
2 = SIN4
3 = SOUT4
4 = DTR4#
5 = GND
6 = DSR4#
7 = RTS4#
8 = CTS4#
9 = RI4# /+5V /+12V
10 = NC

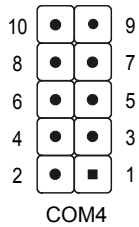
Pin Assignments (COM5):

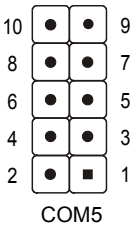
1 = DCD5#
2 = SIN5
3 = SOUT5
4 = DTR5#
5 = GND
6 = DSR5#
7 = RTS5#
8 = CTS5#
9 = RI5# /+5V /+12V
10 = NC

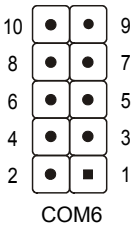
Pin Assignments (COM6):

1 = DCD6# / 422 TX- or 485-
2 = SIN6 / 422 TX+ or 485+
3 = SOUT6 / 422 RX-
4 = DTR6# / 422RX+
5 = GND
6 = DSR6#
7 = RTS6#
8 = CTS6#
9 = RI6# /+5V /+12V
10 = NC





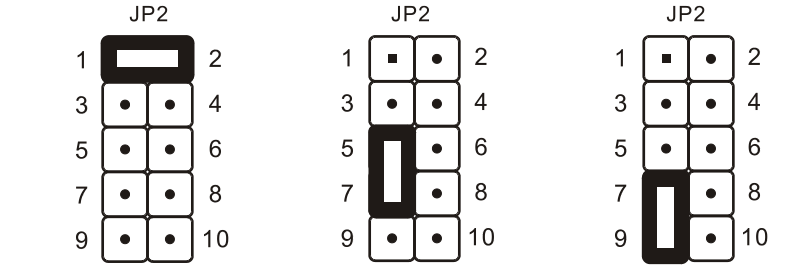




COM1 & COM2 Pin9 Function select Jumper (JP2)

- COM1 Pin9 Function Jumper (JP2)

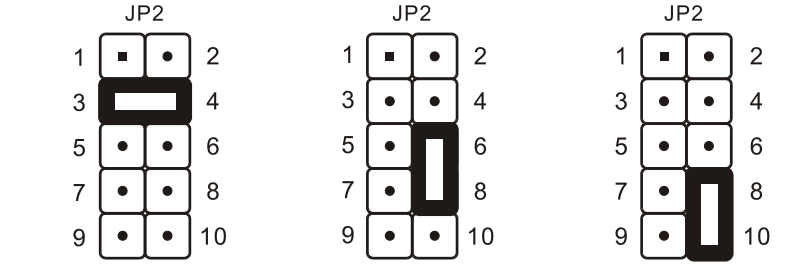
Pin	COM1 Pin9 function
JP2 (1-2)	RI# (Default)
JP2 (5-7)	+5V
JP2 (7-9)	+12V



Pin1-2 RI# (Default) Pin5-7 +5V Pin7-9 +12V

- COM2 Pin9 Function Jumper (JP2)

Pin	COM2 Pin9 function
JP2 (3-4)	RI# (Default)
JP2 (6-8)	+5V
JP2 (8-10)	+12V

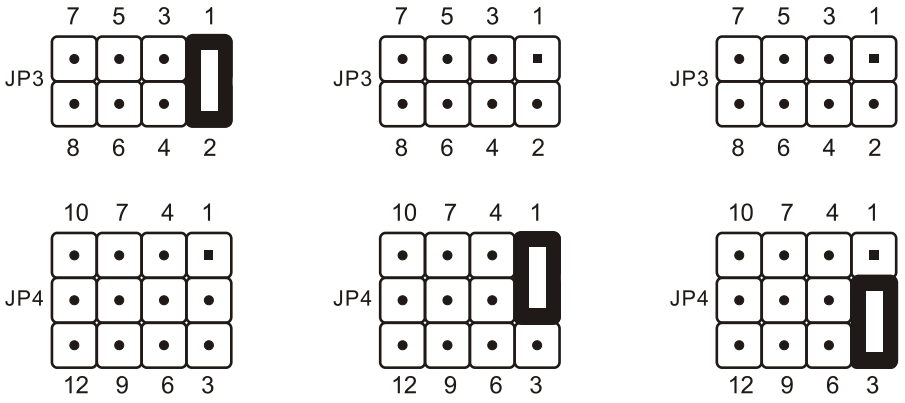


Pin3-4 RI# (Default) Pin6-8 +5V Pin8-10 +12V

COM3&COM4&COM5&COM6 Pin9 Function select Jumper (JP3&JP4)

- COM3 Pin9 Function Jumper (JP3 & JP4)

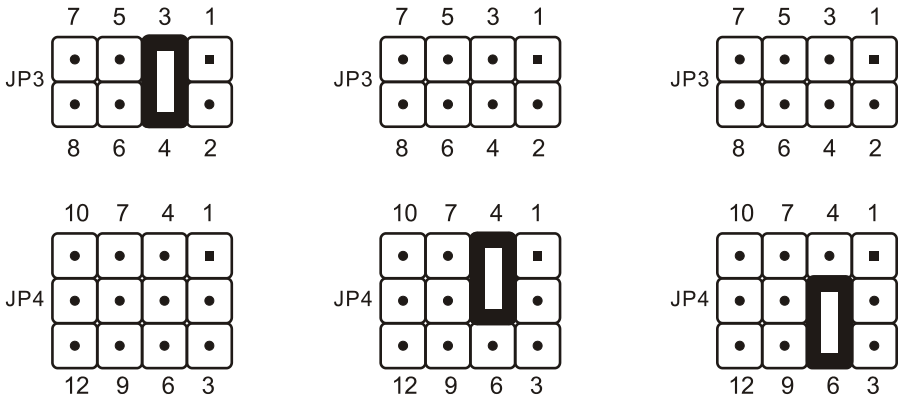
Pin	COM3 Pin9 function
JP3 (1-2)	RI# (Default)
JP4 (1-2)	+12V
JP4 (2-3)	+5V



JP3 (Pin1-2) RI# (Default) JP4 (Pin1-2) +12V JP4 (Pin2-3) +5V

- COM4 Pin9 Function Jumper (JP3 & JP4)

Pin	COM4 Pin9 function
JP3 (3-4)	RI# (Default)
JP4 (4-5)	+12V
JP4 (5-6)	+5V



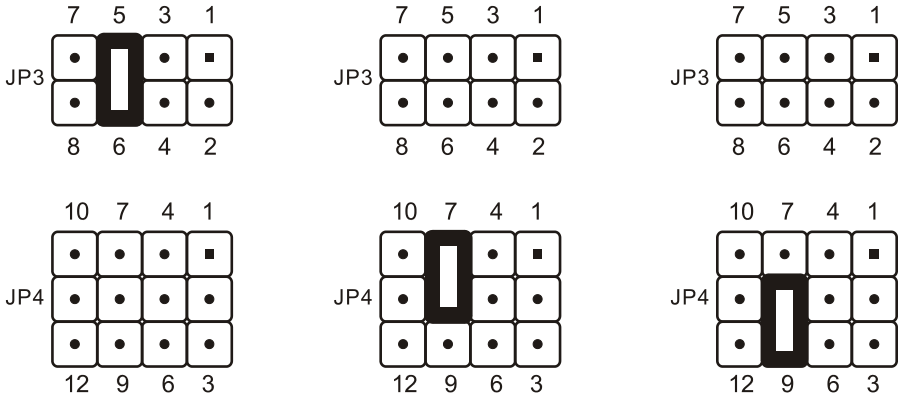
JP3 (Pin3-4) RI# (Default)

JP4 (Pin4-5) +12V

JP4 (Pin5-6) +5V

- COM5 Pin9 Function Jumper (JP3 & JP4)

Pin	COM5 Pin9 function
JP3 (5-6)	RI# (Default)
JP4 (7-8)	+12V
JP4 (8-9)	+5V



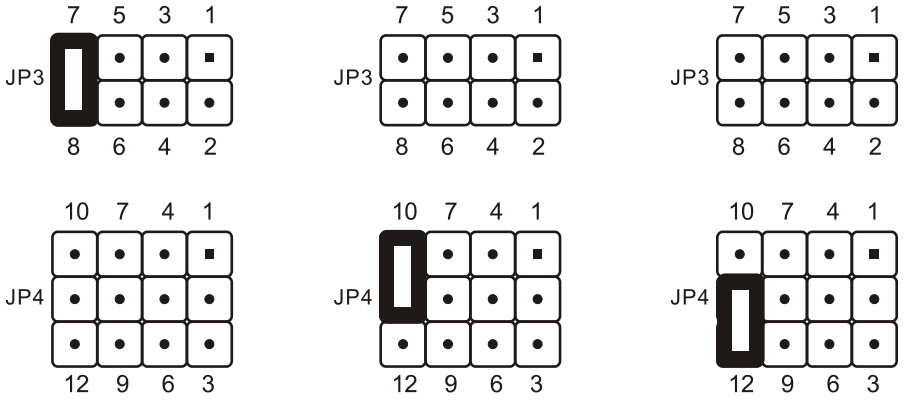
JP3 (Pin5-6) RI# (Default)

JP4 (Pin7-8) +12V

JP4 (Pin8-9) +5V

- COM6 Pin9 Function Jumper (JP3 & JP4)

Pin	COM6 Pin9 function
JP3 (7-8)	RI# (Default)
JP4 (10-11)	+12V
JP4 (11-12)	+5V



JP3 (Pin7-8) RI# (Default)

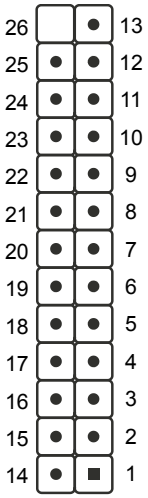
JP4 (Pin10-11) +12V

JP4 (Pin11-12) +5V

Parallel Port Header (LPT1)

Pin Assignments:

1 = P_-STB	14 = P_-AFD
2 = PD0	15 = P_-ERR
3 = PD1	16 = P_-INIT
4 = PD2	17 = P_-SLIN
5 = PD3	18 = GND
6 = PD4	19 = GND
7 = PD5	20 = GND
8 = PD6	21 = GND
9 = PD7	22 = GND
10 = P_-ACK	23 = GND
11 = P_BUSY	24 = GND
12 = P_PE	25 = GND
13 = P_SLCT	26 = KEY



■ 2.1 Motherboard Driver CD

> ⚠ The CD contents attached in ACP-945GDS motherboard are subject to change without notice.

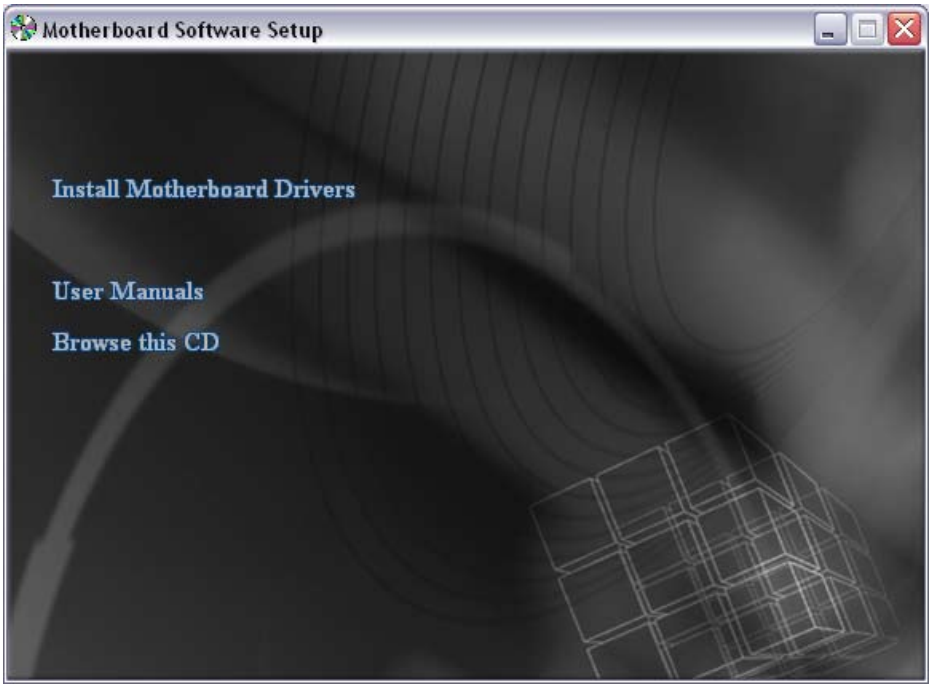
The Motherboard Driver CD contains all the motherboard drivers necessary to optimize the performance of this XPC in a Windows® OS. Install these drivers after installing Microsoft® Windows®.

Navigation Bar Description :

☞ Install Motherboard Drivers - Install Intel Chipset Driver,
Install Intel VGA Driver,
Install HD Audio Bus HotFix Driver(SP1),
Install HD Audio Bus HotFix Driver(SP2),
Install Realtek Audio Driver,
Install Marvell Gigabit LAN Driver.

☞ User Manuals - Install Adobe Reader 8.1, ACP-945GDS Manual.

☞ Browse this CD - Allows you to see contents of this CD.

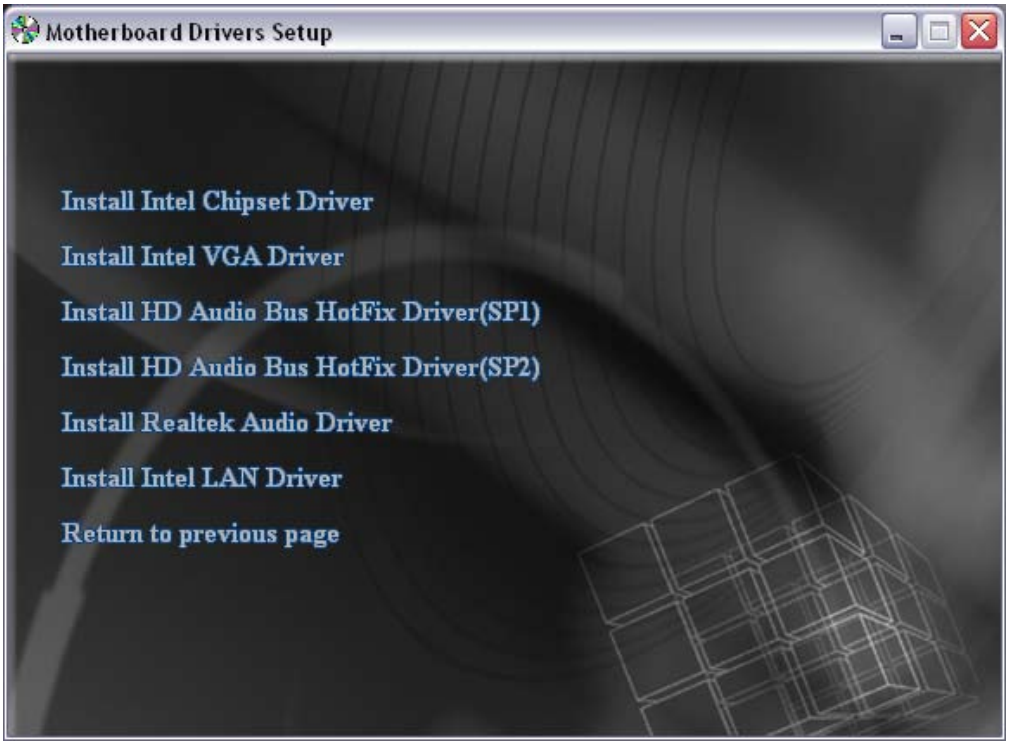


■ 2.1.1 Installing Motherboard Software

Insert the attached CD into your CD-ROM drive. The CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Mainboard Software Setup screen.

Click the “Install Motherboard Drivers“ bar. Individually install the following drivers.

- ☞ Install Intel Chipset Driver
- ☞ Install Intel VGA Driver
- ☞ Install HD Audio Bus HotFix Driver(SP1)
- ☞ Install HD Audio Bus HotFix Driver(SP2)
- ☞ Install Realtek Audio Driver
- ☞ Install Intel LAN Driver



BIOS Settings

The ACP-945GDS BIOS ROM has a built-in Setup program that allows users to modify basic system configuration. This information is stored in battery-backed RAM so that it retains Setup information even if the system power is turned off.

The system BIOS manages and executes variety of hardware related functions including:

System date and time

Hardware execution sequence

Power management functions

Allocation of system resources

Enter the BIOS

To enter the BIOS (Basic Input / Output System) utility, follow these steps:

Step1. Power on the computer. The system will perform its POST (Power-On Self Test) routine checks.

Step2. Press the <Del> key immediately, or at the following message:
Press DEL to enter SETUP, or simultaneously press <Ctrl>,<Alt>, <Esc> keys

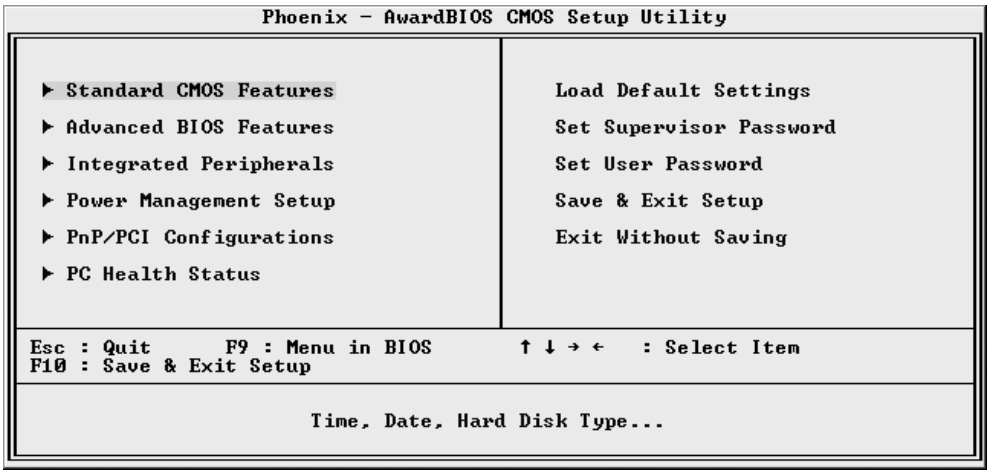
1. If you miss wordings mentioned in step2 (the message disappears before you can respond) and you still wish to enter BIOS Setup, restart the system and try again by turning the computer OFF and ON again or by pressing the <RESET> switch located at the computer's front-panel. You may also reboot by simultaneously pressing the <Ctrl>,<Alt>, <Del> keys simultaneously.
2. If you do not press the keys in time and system does not boot, the screen will prompt an error message, and you will be given the following options:

"Press F1 to Continue, DEL to Enter Setup"

Step3. When you enter the BIOS program, the CMOS Setup Utility will display the Main Menu, as shown in the next section.

The Main Menu

Once you enter the AwardBIOS(tm) 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.



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.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your power management settings.

PnP / PCI Configurations

This entry appears if your system supports PnP / PCI.

PC Health Status

This entry displays the current system temperature, Voltage, and FAN settings.

Load Default Settomgs

Use this menu to load the BIOS default values that are factory-set for optimal system operation. While Award has designed the custom BIOS to maximize performance, the factory has the right to change these defaults to meet users' needs.

Set Supervisor / User Password

Use this menu to change, set, or disable password protection. This allows you to limit access to the system and Setup, or only to Setup.

Save & Exit Setup

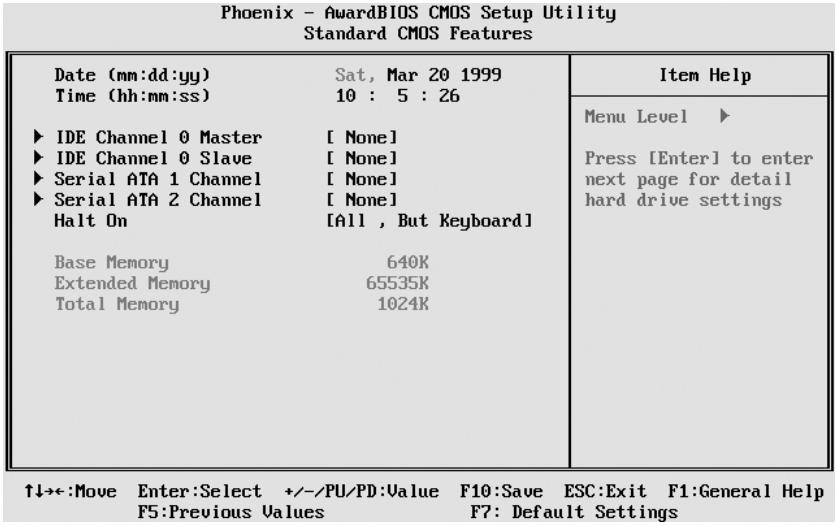
Save CMOS value changes in CMOS and exit from setup.

Exit Without Saving

Abandon all CMOS value changes and exit from setup.

Standard CMOS Features

The items in the Standard CMOS Setup Menu are divided into several categories. Each category includes none, 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.



Date

<Month> <DD> <YYYY>

Set the system date. Note that the 'Day' automatically changes when you set the date.

Time

<HH : MM : SS>

The time is converted based on the 24-hour military-time clock.

For example, 5 p.m. is 17:00:00.

IDE Channel 0 Master/Slave/Serial ATA 1/2 Channel

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Halt On

Select the situation in which you want the BIOS to stop the POST process and notify you.

- The choice: All Errors, No Errors or All, But Keyboard.

Base Memory

Displays the amount of conventional memory detected during boot up.

- The choice: N/A.

Extended Memory

Displays the amount of extended memory detected during boot up.

➢ The choice: N/A.

Total Memory

Displays the total memory available in the system.

➢ The choice: N/A.

****

IDE SATA Adapters

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

IDE SATA HDD Auto-Detection

Press <Enter> to auto-detect HDD on this channel. If detection is successful, it fills the remaining fields on this menu.

➢ Press Enter

IDE Channel 0 Master Slave Serial ATA 1/2 Channel

Selecting 'manual' lets you set the remaining fields on this screen and select the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc., Note: PRECOMP=65535 means NONE !

➢ The choice: None, Auto, or Manual.

Access Mode

Choose the access mode for this hard disk.

➢ The choice: CHS, LBA, Large, or Auto.

Capacity

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.

➢ Auto-Display your disk drive size.

⚠ The following options are selectable only if the 'IDE' item is set to 'Manual', and Access mode set to CHS.

Cylinder

Set the number of cylinders for this hard disk.

- Min = 0, Max = 65535

Head

Set the number of read/write heads.

- Min = 0, Max = 255

Precomp

Warning: Setting a value of 65535 means no hard disk.

- Min = 0, Max = 65535

Landing zone

Set the Landing zone size.

- Min = 0, Max = 65535

Sector

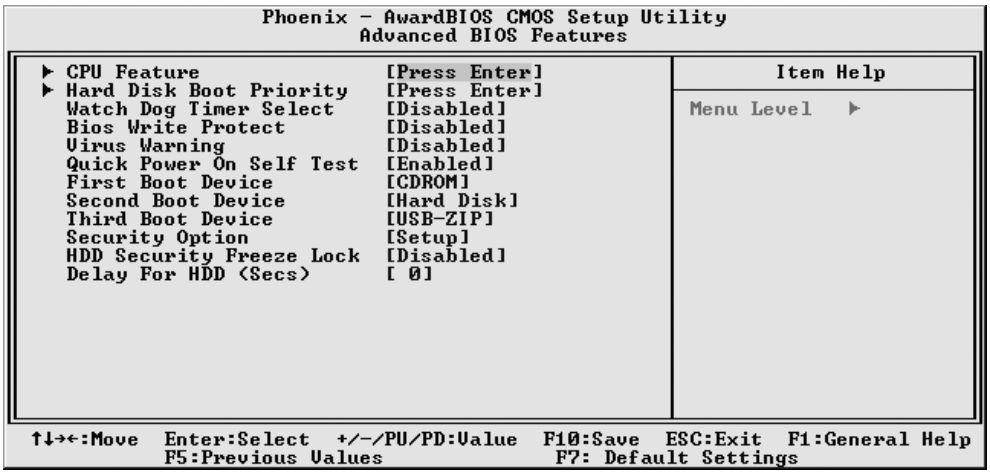
Number of sector per track.

- Min = 0, Max = 255

****

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.



CPU Feature

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Delay Prior to Thermal

This item is select Delay Prior to Thermal.

➢ The Choice: 4Min, 8Min, 16Min or 32 Min.

Limit CPUID MaxVal

Set Limit CPUID MaxVal to 3,Should Be "Disabled" for WinXp.

➢ The Choice: Disabled or Enabled.

> ⚠ Some older O.S.'s (Win98,WinMe..) cannot handle a CPUID MaxVal greater than 3. Please choose "Enabled" if you use one of those O.S. If your O.S. is WinXP or Win2000, we suggest you "Disabled" the item.

C1E Function

When disabled, processor can't transitions to a lower core frequency and voltage.

➢ The Choice: Auto or Disabled.

Execute Disable Bit

When disabled, forces the XD feature flag to always return 0.

- The Choice: Enabled or Disabled.

Hard Disk Boot Priority

This item allows you to select Hard Disk Book Device Priority.

Watch Dog Timer Select

This item allows you to set the Watch Dog Timer Select.

- The choice: 2Min, 10Min, 30Min, 1Hour, 2Hour, 3Hour, 4Hour or Disabled.

Bios Write Protect

This item allows you to enable/disable the Bios Write Protect. Choose [Enabled] to avoid virus destroy BIOS. If you want to flash BIOS, you must set it [Disabled].

- The choice: Enabled, or Disabled.

Virus Warning

This item allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area , BIOS will show a warning message on screen and alarm beep

- The choice: Enabled, or Disabled.

Quick Power On Self Test

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

- The choice: Enabled, or Disabled.

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: LS120, Hard Disk, CDROM, ZIP100, USB-FDD, USB-ZIP,USB-CDROM, LAN or Disabled.

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 promptly.

Setup The system will boot, but access to Setup will be denied if the correct password is not entered promptly.

➢ The choice: System or Setup.

> To disabled security, select PASSWORD SETTING at Main Menu, and then you will be asked to enter password.
>
> Don't 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.

HDD Security Freeze Lock

This item allows you to enable/disable the HDD Security Freeze Lock. Enabled - prevents any external application from locking Hard drive except for BIOS.

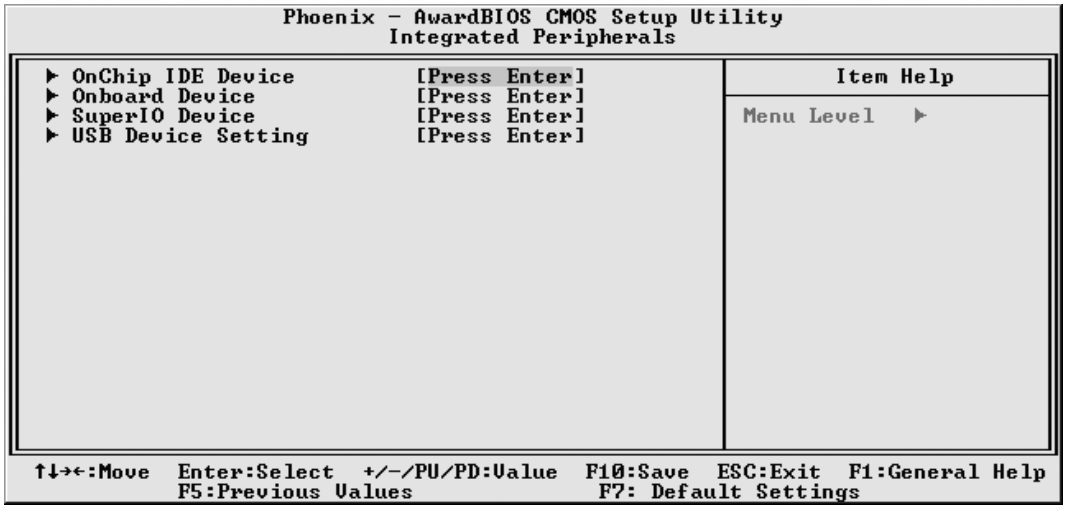
➢ The choice: Enabled or Disabled.

Delay For HDD (Secs)

This item selects the Delay time waiting for HDD ready.

➢ The choice: Min=0 or Min=15.

Integrated Peripherals



OnChip IDE Device

Option are in its sub-menu.

Press < Enter > to enter the sub-menu of detailed options.

IDE HDD Block Mode

If your IDE hard disk drive supports block mode (most new drives do), select Enabled to automatic detect the optimal number of block read and writes per sector that the drive can support and improves the speed of access to IDE devices.

- The choice: Enabled, or Disabled.

IDE DMA transfer access

This item allows to enable/disable DMA(Direct Memory Access) support for all IDE devices.

- The choice: Enabled, or Disabled.

On-Chip Primary PCI IDE

Use these items to enable or disable the PCI IDE channels that are integrated on the mainboard.

- The choice: Enabled or Disabled.

IDE Primary Master/Slave PIO

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input / Output) is used by IDE devices. Choose Auto to let the system auto detect which PIO mode is best or select a PIO mode from 0-4.

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

Onboard Device

Option are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Onboard Lan1/Lan2 Boot ROM

Decide whether to invoke the boot ROM of the onboard LAN chip.

- The choice: Disabled or Enabled.

High Definition Audio

This item allows you to set the High Definition Audio.

- The choice: Enabled or Disabled.

Onboard Lan1/Lan2 Function

This item allows you to set the Onboard Lan Function.

- The choice: Disabled or Enabled.

**********Onborad VGA Set**********

On-Chip Frame Buffer Size

This item allows you to set the onboard VGA share memory size.

- The Choice: 1MB or 8MB.

DVMT Mode

This item allows you to set the DVMT Mode.

- The choice: DVMT, BOTH or FIXED.

DVMT/FIXED Memory Size

This item allows you to set the DVMT/FIXED Memory Size.

- The choice: 64MB, 128MB or 224MB.

Init Display First

This item is used to determine initial device when system power on.

- The choice: PCI Slot or Onboard.

Boot Display

This item allows you to set the Boot Display.

- The choice: D-SUB + DVI, DVI, D-SUB or LVDS.

SuperIO Device

Option are in its sub-menu.

Press < Enter > to enter the sub-menu of detailed options.

LCD Resolution

This item selects LCD resolution.

- The choice: 640x480, 800x600, 1024x768, 1280x1024, 1400x1050,1600x1200, 1366x768, 1680x1050, 1920x1200, 1280x800, 1024x600, or 800x480

LCD Backlight Brightness

This item adjusts LCD backlight brightness.

- The choice: Level 1 ~ Level 4

**********Onborad Serial Port **********

Serial Port 1/6 Function

These items select COM1/COM6 signal type.

- The choice: RS232,RS422,RS485.

Onboard Serial Port 1 ~ 6

This option is used to assign the I/O address and interrupt request (IRQ) for the onboard serial port 1 ~ 6.

- The choice: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ5, 2E8/IRQ7, 2ED/IRQ10, 2F0/IRQ11.

**********Onborad Parallel Port **********

Onboard Parallel Port

This item allows you to determine onboard parallel port controller I/O address and interrupt request (IRQ).

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

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,ECP+EPP.

ECP Mode Use DMA

When the onboard parallel is set to ECP mode, the parallel port can use DMA3 or DMA1.

- The choice: 1 or 3.

USB Device Setting

Option are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

USB 1.0/2.0 Controller

Enable or Disable Universal Host Controller Interfacefor Universal Serial Bus.

- The choice: Enabled or Disabled.

USB Operation Mode

Auto decide USB device operation mode.

High speed: If USB device was high speed device, then it operated on high speed mode.If USB device was full/low speed device, then it operated on full/low speed mode.

Full/Low Speed: All of USB device operated on full/low speed mode.

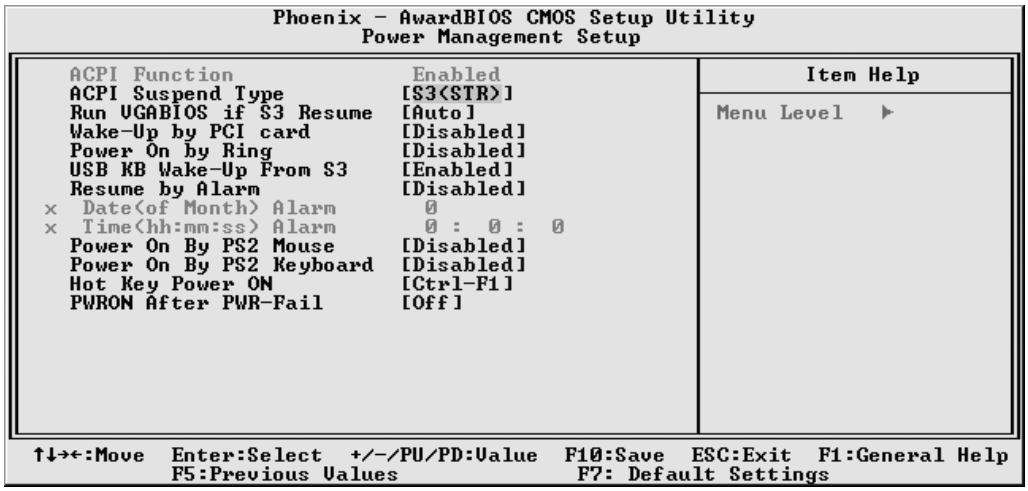
- The choice: High speed or Full/Low Speed.

USB Storage Function

Enable or Disable Legacy support of USB USB Mass Storage.

- The choice: Enabled or Disabled.

Power Management Setup



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

ACPI Function

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

- Always "Enabled".

ACPI Suspend Type

This item allows you to select sleep state when suspend.

- The choice: S1(POS) or S3(STR).

Run VGABIOS if S3 Resume(Auto)

This item allows the system to initialize the VGA BIOS from S3(Sus-pend to RAM) sleep state.

- The choice: Auto, Yes or No.

Wake-Up by PCI card

This item allows you to set the Wake-Up by PCI card.

- The choice: Disabled or Enabled.

Power On by Ring

This item determine the system will resume by activating of modem ring.

- The choice: Disabled or Enabled.

USB KB Wake-Up From S3

This item allows to enable/disable USB Keyboard wake up from S3.

- The choice: Disabled or Enabled.

Resume by Alarm

When this item enabled, your can set the date (day of the month) and time to turn on your system.

- The choice: Disabled or Enabled.

Date(of Month) Alarm

This item selects the alarm Date (day of the month).

- Key in a DEC number: Min = 0, Max = 31.

Time(hh : mm : ss) Alarm

This item selects the alarm Time.

[hh] ➢ Key in a DEC number: Min = 0, Max = 23.

[mm/ss] ➢ Key in a DEC number: Min = 0, Max = 59.

Power on By PS2 Mouse

This item allows you to set the Mouse Power On function.
Only supports S4/S5.

- The choice: Disabled or Enabled.

Power on By PS2 Keyboard

This item allows you to set the Keyboard Power On function.
Only supports S4/S5.

- The choice: Disabled, Hot KEY, Any KEY.

Hot Key Power On

This item allows you to set the Hot Key Power On.

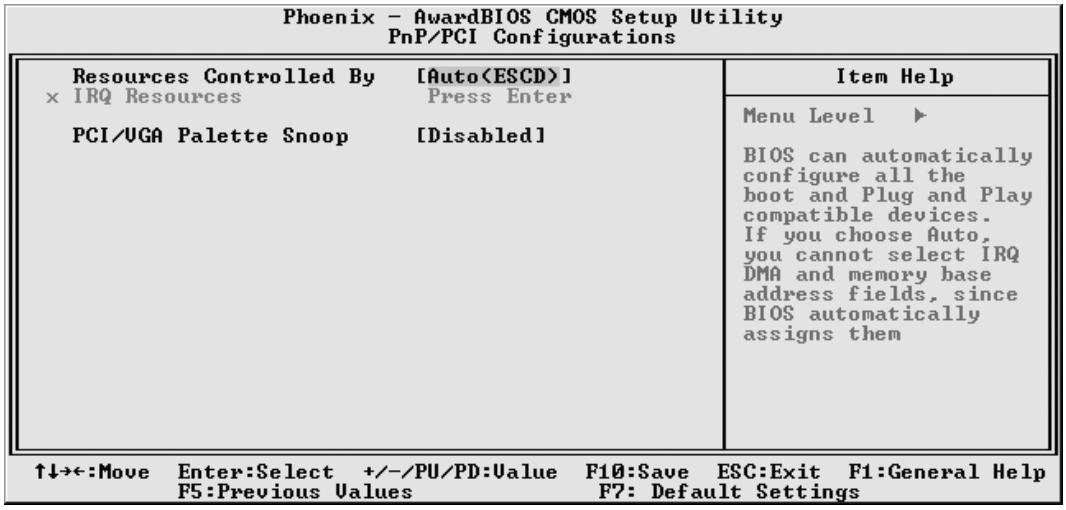
- The choice: Ctrl-F1 ~ Ctrl-F12.

PWRON After PWR-Fail

This item defines if the system will be rebooted after the power fails.

- The choice: Off, On.

PnP/PCI Configurations



This section describes the configuration of PCI bus system. PCI or Personal Computer Interconnection is a system which allows I/O devices to operate at the speed CPU itself keeps when CPU 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.

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.

- The choice: Auto(ESCD) or Manual.

IRQ Resources

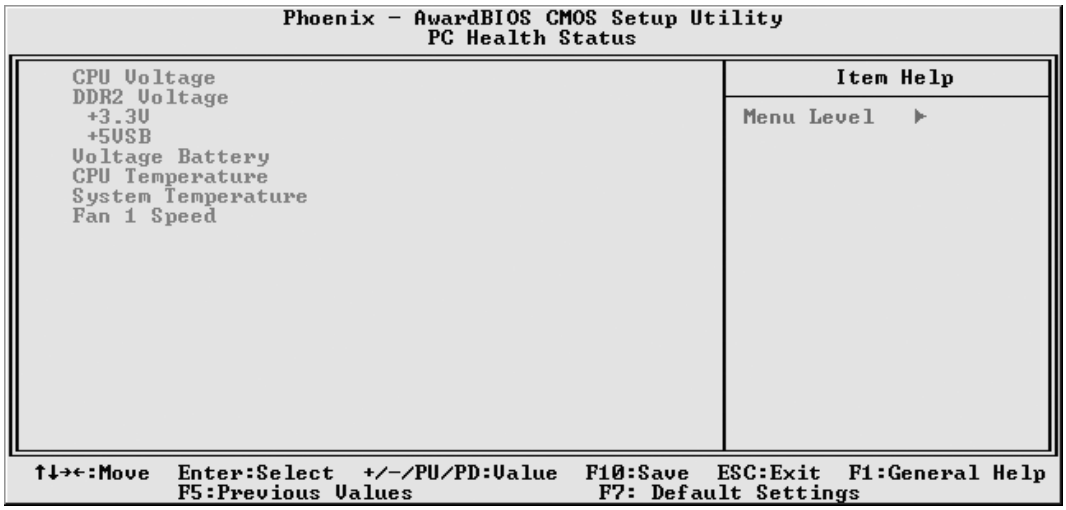
When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

PCI/VGA Paletts Snoop

It determines whether the MPEG ISA/VESA VGA Cards can work with PCI/VGA or not. If you have MPEG ISA/VESA VGA Cards and PCI/VGA Card worked, Enable this field. Otherwise, please Disable it.

- The choice: Disabled or Enabled.

PC Health Status



CPU Voltage

DDR2 Voltage

+3.3V

+5VSB

Voltage Battery

CPU Temperature

System Temperature

Fan 1 Speed

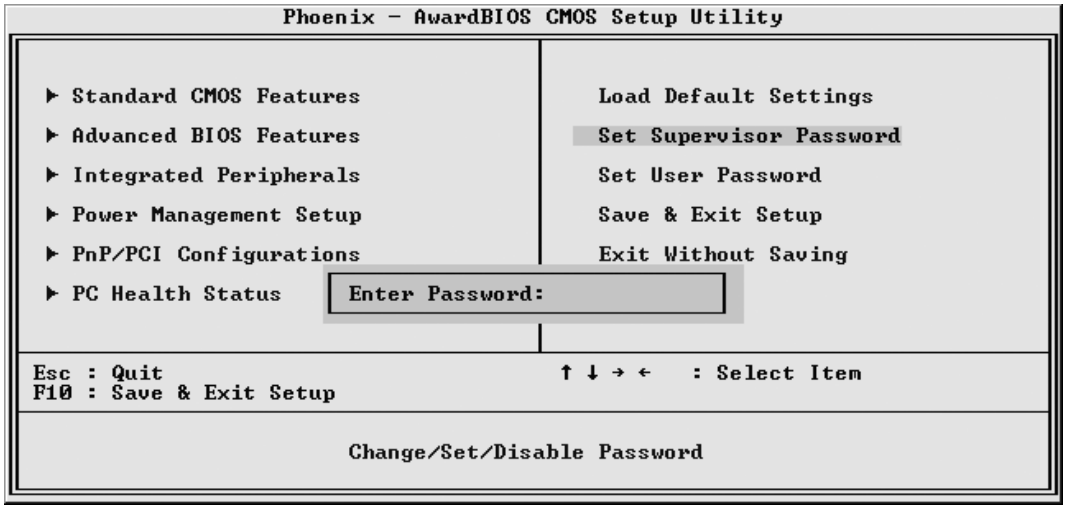
Load Default Settings

When you press <Enter> on this item, you will 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-set for optimal performance system operation.

Set Supervisor/User Password



Steps to set supervisor/user password are described as follows:

New Password Setting:

1. While pressing <Enter> to set a password, a dialog box appears to ask you enter a password.
2. Key in a new password. The password can not exceed eight characters.
3. System will request you to confirm the new password again.
4. When completed, new code takes effect.

No Password Setting:

5. If you want to delete the password, just press the <Enter> key instead of typinga new password. Follow the procedure as ablve.

If You Forget Password:

6. If you forget your password, you must turn off the system and clear CMOS. Please refer to the tech notes at the end of section two for more information.

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 of 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)? N

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