



Electronic Emission Notices

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions contained in this manual, may cause harmful interference to radio and television communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- REORIENT OR RELOCATE THE RECEIVING ANTENNA
- INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND THE RECEIVER
- CONNECT THE EQUIPMENT INTO AN OUTLET ON A CIRCUIT DIFFERENT FROM THAT OF THE RECEIVER
- CONSULT THE DEALER OR AN EXPERIENCED AUDIO/TELEVISION TECHNICIAN

NOTE:

Connecting this device to peripheral devices that do not comply with Class B requirements, or using an unshielded peripheral data cable, could also result in harmful interference to radio or television reception.

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

To ensure that the use of this product does not contribute to interference, it is necessary to use shielded I/O cables.

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NVIDIA MCP73V/PV Motherboard

Thank you for buying this motherboard. This motherboard offers the tools and performance PC users' demand.

Motherboard Specifications

Size

Micro ATX form factor of 9.6 inch x 7 inch

Microprocessor support

Celeron®, Pentium®, Pentium® D, Core™ 2 Duo

Operating systems:

Supports Windows XP 32bit/64bit and Windows Vista 32bit/64bit

System Memory support

Supports DDRII533/DDRII667/DDRII800(only MCP73PV support). Supports up to 4GBs DDRII memorys.

Eight USB 2.0 Ports

- ❖ Supports hot plug and play
- ❖ Eight USB 2.0 ports (four rear panel ports, four onboard USB headers)
- ❖ Supports wake-up from S1
- ❖ Supports USB 2.0 protocol up to 480 Mbps transmission rate

Onboard Serial ATA II

- ❖ Independent DMA operation on four ports (optional).
- ❖ Data transfer rates of 3Gb/s.

Onboard LAN

- ❖ LAN interface built-in onboard
- ❖ Supports 10/100Mbps Ethernet

Onboard Audio(optional)

- ❖ Azalia High-Definition audio
- ❖ Supports 6-channel/8-channel audio
- ❖ Supports Jack-Sensing function

Triple PCI Express x16 Support

- ❖ 1 x16 PCI Express 2.0
- ❖ Low power consumption and power management features

Green Function

- ❖ Supports ACPI (Advanced Configuration and Power Interface)

- ❖ RTC timer to power-on the system
- ❖ AC power failure recovery

❑ Expansion Slots

- ❖ One PCI Express x1 slot(optional)
- ❖ One PCI Express x16 Graphics slot
- ❖ Two PCI bus master slots - ver.2.3 compliant

INTEL Motherboard

The motherboard is with the NVIDIA MCP73V/PV processors. Figure 1 shows the motherboard and Figures 2 shows the back panel connectors.

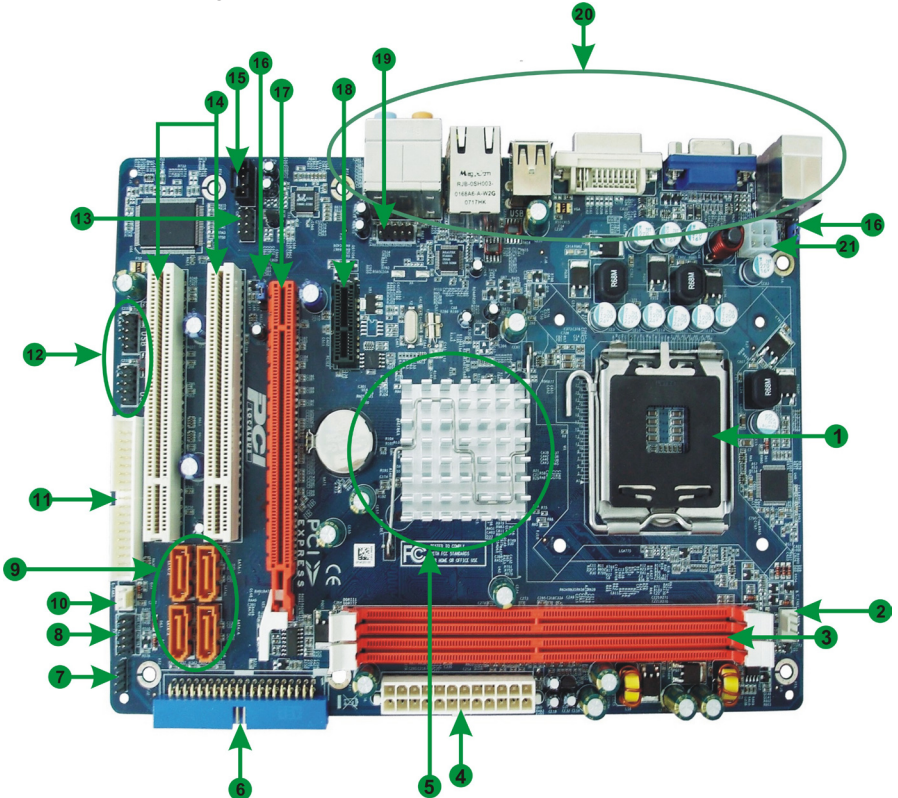
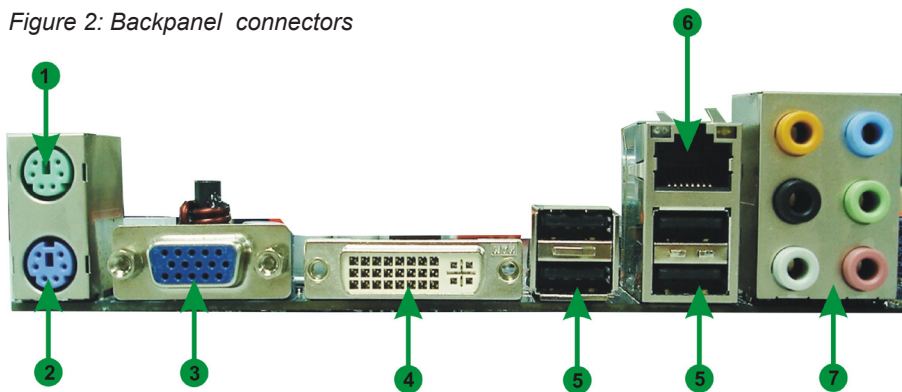


Figure 1. Board Layout

- | | | |
|---------------------------------|-----------------------------------|-----------------------------------|
| 1. CPU Socket | 11. Floppy Disk Drive Connector | 21. 4-pin ATX_12V power connector |
| 2. CPU fan connector | 12. USB Connectors | |
| 3. DDRII DIMM Sockets | 13. SPDIF-OUT/SPDIF-IN Connector | |
| 4. 24-pin ATX Power Connector | 14. PCI Slots | |
| 5. North Bridge | 15. CD-IN Connector | |
| 6. Hard disk connector | 16. Jumper setting | |
| 7. SPK Connector | 17. PCI Express x16 slot | |
| 8. Front Panel Connector | 18. PCI Express x1 slot(optional) | |
| 9. Serial-ATA (SATA) Connectors | 19. FP_S1 Front Panel | |
| 10. SYS Fan connector | 20. Backpanel connectors | |

Figure 2: Backpanel connectors



1. PS/2 Mouse Port

2. PS/2 Keyboard Port

3. VGA Connector

4. DVI Connector(optional)

5. USB Connector

6. LAN Connector

7. Port	2-Channel	4-Channel	6-Channel/8-Channel
Blue	Line-In	Line-In	Line-In
Green	Line-Out	Front Speaker Out	Front Speaker Out
Pink	Mic In	Mic In	Mic In
Orange	--	--	Center/Subwoofer
Black	--	Rear Speaker Out	Rear Speaker Out
Grey	--	--	Side Speaker Out

8. Lan Port with LEDs to indicate status.

- Yellow/Light Up/Blink = 10 Mbps/Link/Activity
- Yellow and Green/Light Up/Blink = 100 Mbps/link/Activity

Hardware Installation

This section will guide you through the installation of the motherboard. The topics covered in this section are:

- Preparing the motherboard
 - ❖ Installing the CPU
 - ❖ Installing the CPU fan
 - ❖ Installing the memory

- Installing the motherboard

- Connecting cables and setting switches

Safety Instructions

To reduce the risk of fire, electric shock, and injury, always follow basic safety precautions.

Remember to remove power from your computer by disconnecting the AC main source before removing or installing any equipment from/to the computer chassis.

Preparing the Motherboard

The motherboard shipped in the box does not contain a CPU and memory. You need to purchase these to complete this installation.

Installing the CPU

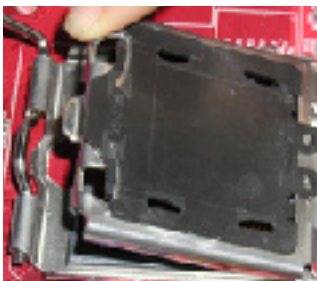
Be very careful when handling the CPU. Make sure not to bend or break any pins on the back. Hold the processor only by the edges and do not touch the bottom of the processor.

Use the following procedure to install the CPU onto the motherboard.

1. Unhook the socket lever by pushing down and away from the socket.
2. Lift the load plate. There is a protective socket cover on the load plate to protect the socket when there is no CPU installed.
3. Remove the protective socket cover from the load plate.
4. Remove the processor from its protective cover, making sure you hold it only by the edges. It is a good idea to save the cover so that whenever you remove the CPU, you have a safe place to store it.
5. Align the notches in the processor with the notches on the socket.
6. Lower the processor straight down into the socket with out tilting or sliding it into the socket.

Note: *Make sure the CPU is fully seated and level in the socket.*

7. Close the load plate over the CPU and press down while you close and engage the socket lever.



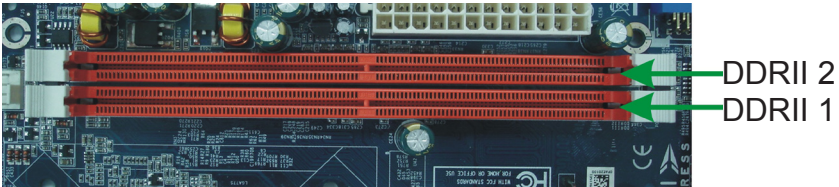
Installing the CPU Fan

There are many different fan types that can be used with this motherboard. Follow the instruction that came with your fan assembly. Be sure that the fan orientation is correct for your chassis type and your fan assembly.

Installing Memory DIMMs

Your new motherboard has two 1.8V 240-pin slots for DDR2 memory. These slots support 256 Mb, 512 Mb, 1Gb and 2Gb DDR2 technologies for x8 and x16 devices. There must be at least one memory bank populated to ensure normal operation. Use the following the recommendations for installing memory. (See Figure 1 on page 7 for the location of the memory slots.)

- One DIMM:** Install into slot 1 or 2. You can install the DIMM into any slot, however, slot 1 is preferred.
- Two DIMMs:** Install into either slots 1 and 2. The idea is to not have the DIMMs in adjacent slots.



Use the following procedure to install memory DIMMs into the slots on the motherboard. Note that there is only one gap near the center of the DIMM slot. This slot matches the slot on the memory DIMM to ensure the component is installed properly.

1. Unlock a DIMM slot by pressing the module clips outward.
2. Align the memory module to the DIMM slot, and insert the module vertically into the DIMM slot. The plastic clips at both sides of the DIMM slot automatically lock the DIMM into the connector.

Installing the Motherboard

The sequence of installing the motherboard into the chassis depends on the chassis you are using and if you are replacing an existing motherboard or working with an empty chassis. Determine if it would be easier to make all the connections prior to this step or to secure the motherboard and then make all the connections. It is normally easier to secure the motherboard first.

Use the following procedure to install the I/O shield and secure the motherboard into the chassis.

Note: *Be sure that the CPU fan assembly has enough clearance for the chassis covers to lock into place and for the expansion cards. Also make sure the CPU Fan assembly is aligned with the vents on the covers.*

Installing the I/O Shield

The motherboard kit comes with an I/O shield that is used to block radio frequency transmissions, protects internal components from dust and foreign objects, and promotes correct airflow within the chassis.

Before installing the motherboard, install the I/O shield from the **inside** of the chassis. Press the I/O shield into place and make sure it fits securely. If the I/O shield does not fit into the chassis, you would need to obtain the proper size from the chassis supplier.

Connecting Cables and Setting Switches

This section takes you through all the connections and switch settings necessary on the motherboard. This will include:

- Power Connections
 - ❖ 24-pin ATX power (**PW1**)
 - ❖ 4-pin ATX 12V power (**PW2**)
- Internal Headers
 - ❖ Front panel
 - ❖ USB Headers
 - ❖ Audio
 - ❖ Speaker
- Serial ATA II
- Chassis Fans
- Rear panel USB 2.0 Adapter
- Expansion slots
- CMOS jumper settings

See Figure 1 to locate the connectors and jumpers referenced in the following procedure.

24-pin ATX Power (PW1)

PW1 is the main power supply connector located along the edge of the board next to the DIMM slots. Make sure that the power supply cable and pins are properly aligned with the connector on the motherboard. Firmly plug the power supply cable into the connector and make sure it is secure.

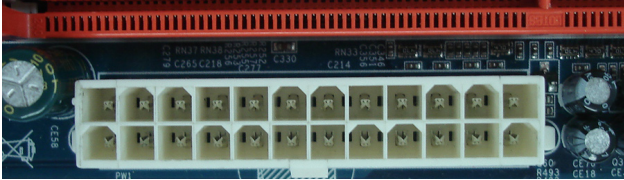
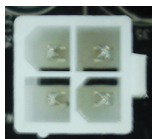


Table 1. PW1 Pin Assignments

<u>Connector</u>	<u>Pin</u>	<u>Signal</u>	<u>Pin</u>	<u>Signal</u>
	1	+3.3V	13	+3.3V
	2	+3.3V	14	-12V
	3	GND	15	GND
	4	+5V	16	PS_ON
	5	GND	17	GND
	6	+5V	18	GND
	7	GND	19	GND
	8	PWROK	20	-5V
	9	+5V_AUX	21	+5V
	10	+12V	22	+5V
	11	+12V	23	+5V
	12	+3.3V	24	GND

4-pin ATX 12V Power (PW2)

PW2, the 4-pin ATX 12V power connection, is used to provide power to the CPU. Align the pins to the connector and press firmly until seated.

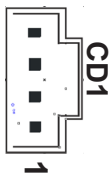
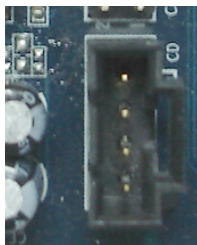


PW2 - Pin Definition

PIN	Assignment
1	GND
2	GND
3	+12V
4	+12V

CD-IN Connector - CD1 (optional)

The connector is for CD-ROM Drive.



CD1 - Pin Definition

PIN	Assignment
1	CD-L
2	GND
3	GND
4	CD-R

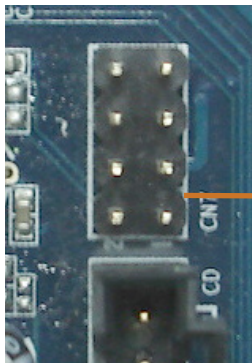


SPK - Pin Definition

PIN	Assignment
1	VCC
2	NC
3	NC
4	SPK-

SPDIF-In/Out Header - CN7 (optional)

This header provides a SPDIF (Sony/Philips Digital Interface) Input & output to digital multimedia device through fiber or coaxial connector.



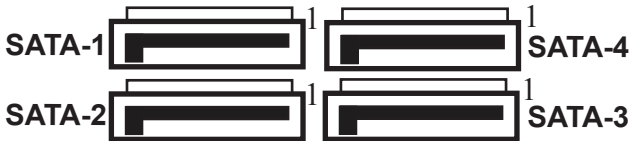
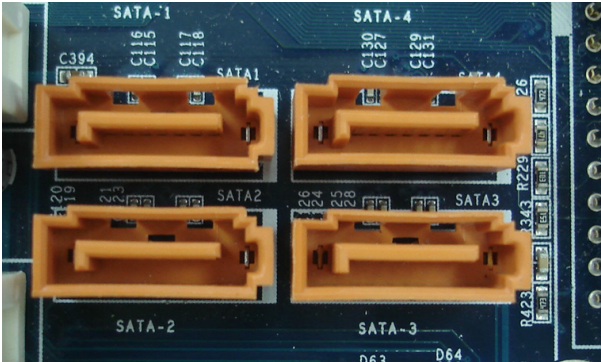
CN7 - Pin Definition

PIN	Assignment
1	SPDIF-out
2	SPDIF-in
3	+3.3V
4	+3.3V
5	NC
6	NC
7	GND
8	GND

Connecting Serial ATA Cables(SATA-1, SATA-4 Optional)

The Serial ATA II connector is used to connect the Serial ATA II device to the motherboard. These connectors support the thin Serial ATA II cables for primary storage devices. The current Serial ATA II interface allows up to 3Gb/s data transfer rate.

There are four serial ATA connectors on the motherboard that support AHCI and RAID configurations.



SATA-1/SATA-2/SATA3/SATA4- Pin Definition

PIN	SIGNAL
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

Connecting Internal Headers

Front Panel Header

The front panel header on this motherboard is one connector used to connect the following four cables (see Table 2 for pin definitions):

PWRLED

Attach the front panel power LED cable to these two pins of the connector. The Power LED indicates the system's status.



Note: Some chassis do not have all four cables. Be sure to match the name on the connectors to the corresponding pins.

PWR SW

Attach the power button cable from the case to these two pins. Pressing the power button on the front panel turns the system on and off rather than using the power supply button.

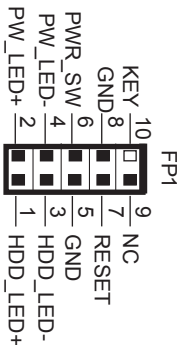
HDD LED

Attach the hard disk drive indicator **LED** cable to these two pins. The HDD indicator **LED** indicates the activity status of the hard disks.

RST SW

Attach the Reset switch cable from the front panel of the case to these two pins. The system restarts when the **RESET** switch is pressed.

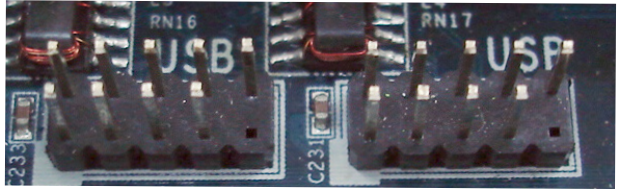
Front Panel Header Pins



USB Headers

This motherboard contains four USB 2.0 ports that are exposed on the rear panel of the chassis(Figure 2). The motherboard also contains two 10-pin internal header connectors onboard.

1. Secure the bracket to either the front or rear panel of your chassis (not all chassis are equipped with the front panel option).



FP-U1/FP-U2 - Pin Definition

PIN	Assignment
1	VCC
2	VCC
3	USBP0-
4	USBP1-
5	USBP0+
6	USBP1+
7	GND
8	GND
9	KEY
10	OC#

Audio

The audio connector supports HD audio standard and provides two kinds of audio output choices: the Front Audio, the Rear Audio. The front Audio supports re-tasking function.



FP - S1 Pin Definition

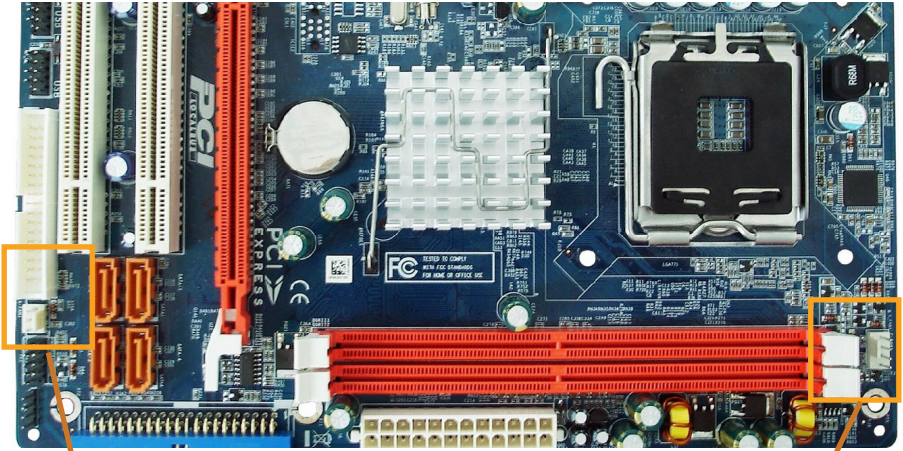
PIN	Assignment
1	MIC2(L)
2	GND
3	MIC(R)
4	-ACZ-DET
5	Front Audio(R)
6	Reserved
7	FAVDIO - JD
8	Key (No pin)
9	Front Audio(L)
10	Reserved

Note:

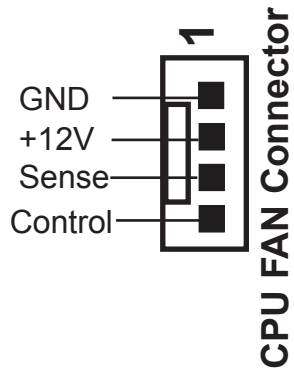
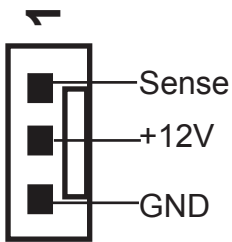
In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assignment on the cable is the same as the pin assignment on the mainboard header. To find out if the chassis you are buying supports a front audio connector, please contract your dealer.

Fan Connections

There are two fan connections on the motherboard. The fan speed can be detected and viewed in the PC Health Status section of the CMOS Setup.

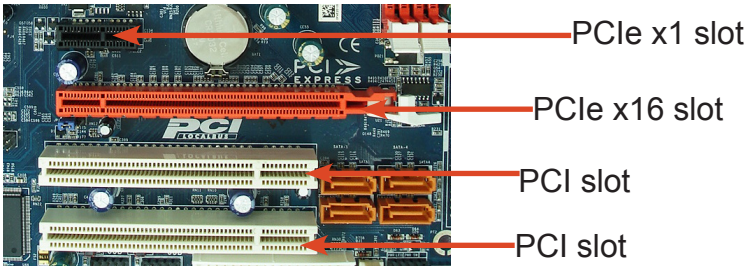


SYS FAN Connector



Expansion Slots

The nVIDIA MCP73V/PV motherboard contains four expansion slots, two PCI Express slots and two PCI slots. For a full list of PCI Express x16 graphics card supported by this motherboard.



PCI Slots

The two PCI slots support many expansion cards such as a LAN card, USB card, SCSI card and other cards that comply with PCI specifications. When installing a card into the PCI slot, be sure that it is fully seated. Secure the card's metal bracket to the chassis back panel with the screw used to hold the blank cover.

PCI Express x16 Slots

There is one PCI Express x16 slot reserved for graphics or video cards. The bandwidth of the x16 slot is up to 4GB/sec.

PCI Express x1 Slots(optional)



There is one PCI Express x1 slot that is designed to accommodate less bandwidth-intensive cards, such as a modem or LAN card. The x1 slot provides 250 MB/sec bandwidth.

When installing a PCI Express x16 card, be sure the retention clip snaps and locks the card into place. If the card is not seated properly, it could cause a short across the pins. Secure the card's metal bracket to the chassis back panel with the screw used to hold the blank cover.



Jumper Setting

This chapter explains how to configure the motherboard's hardware. Before using your computer, make sure all jumpers and DRAM modules are set correctly. Refer to this chapter whenever in doubt.

JP1-CMOS Clear

JCMOS1	Selection
1  1-2*	Normal*
1  2-3	CMOS Clear

JP2 - P/S Port 5V Standby Power Selection

JP2	Selection
1  1-2*	5V standby power input*
1  2-3	5V power input

 Close  Open * = Default setting.

If you want to clear the system configuration, use the JP1 (Clear CMOS Jumper) to clear data.

Notice:

1. Be sure to save the CMOS setting when exit the CMOS.
2. If the CPU is frequency multiplier locked, no CPU speed change will be seen even if the frequency multiplier setting in CMOS setup is changed.

Configuring the BIOS

This section discusses how to change the system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided.

This section includes the following information:

- Enter BIOS Setup
- Main Menu
- Standard CMOS Features
- Advanced BIOS Features
- Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PnP/PCI Configurations
- Pc health status
- Frequency/Voltage Control

Enter BIOS Setup

The BIOS is the communication bridge between hardware and software. Correctly setting the BIOS parameters is critical to maintain optimal system performance.

Use the following procedure to verify/change BIOS settings.

1. Power on the computer.,
2. Press the **Del** key when the following message briefly displays at the bottom of the screen during the Power On Self Test (POST).

Press F1 to continue, DEL to enter Setup.

Pressing **Del** takes you to the Phoenix-Award BIOS CMOS Setup Utility.

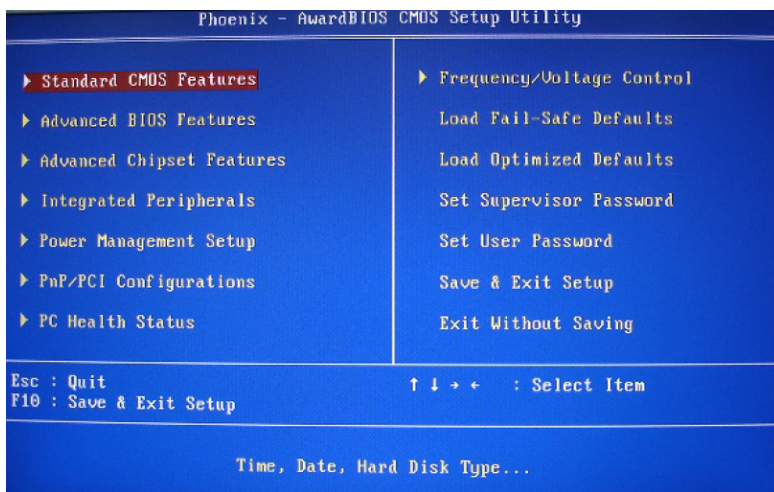
Note: It is strongly recommended that you do not change the default BIOS settings. Changing some settings could damage your computer.

If you do not find the setting you want in the Main Menu or a submenu, Press <Ctrl>+<F1> to access more advanced options.

Main Menu

The main menu allows you to select from the list of setup functions and two exit choices. Use the **Page Up** and **Page Down** keys to scroll through the options or press **Enter** to display the associated submenu. Use the **↑ ↓** arrow keys to position the selector in the option you choose. To go back to the previous menu, press **Esc**.

Note: *that on the BIOS screens all data in white is for information only, data in yellow is changeable, data in blue is non-changeable, and data in a red box is highlighted for selection.*



Standard CMOS Features

Use this menu to set up the basic system configuration.

Advanced BIOS Features

Use this menu to set up the advanced system features and boot sequence.

Advanced Chipset Features

Use this menu to optimize system performance.

Integrated Peripherals

Use this menu to set up onboard peripherals such as IDE, RAID, USB and LAN control.

Power Management Setup

Use this menu to configure power management, power on, and sleep features.

PnP/PCI Configurations

Use this menu to modify the system's Plug-and-Play and PCI configurations.

Pc health status

Use this menu to monitor the real-time system status of your PC.

The following items on the CMOS Setup Utility main menu are commands rather than submenus:

Load Optimized Defaults

Load default system settings.

Set Supervisor and User Password

Use this command to set, change, and disable the password used to access the system and the BIOS menu.

Save & Exit Setup

Use this command to save settings to CMOS and exit setup.

Exit Without Saving

Use this command to abandon all setting changes and exit setup.

Standard CMOS Features Menu

The Standard CMOS Features menu is used to configure the standard CMOS information, such as the date, time, HDD model, and so on. Use the **Page Up** and **Page Down** keys to scroll through the options or press **Enter** to display the sub-menu. Use the **↑ ↓** arrow keys to position the selector in the option you choose. To go back to the previous menu, press **Esc**.

The information shown in **Item Help** corresponds to the option highlighted.

Phoenix - AwardBIOS CMOS Setup Utility		Item Help
Standard CMOS Features		
Date (mm:dd:yy)	Mon, Mar 31 2008	
Time (hh:mm:ss)	17 : 25 : 2	
▶ IDE Channel 0 Master	[None]	Menu Level ▶
▶ IDE Channel 0 Slave	[None]	
▶ IDE Channel 2 Master	[None]	Change the day, month, year and century
▶ IDE Channel 2 Slave	[None]	
▶ IDE Channel 3 Master	[None]	
▶ IDE Channel 3 Slave	[None]	
Drive A	[1.44M, 3.5 in.]	
Drive B	[None]	
Video	[EGA/UGA]	
Halt On	[All , But Keyboard]	
Base Memory	640K	
Extended Memory	1046528K	
Total Memory	1047552K	
↑↓←→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

Note: Note that all data in white is for information only, data in yellow is changeable, data in blue is non-changeable, and data in a red box is highlighted for selection.

Date and Time

Using the arrow keys, position the cursor over the month, day, and year. Use the Page Up and Page Down keys to scroll through dates and times. Note that the weekday (Sun through Sat) cannot be changed. This field changes to correspond to the date you enter. Note that the hour value is shown in a 24-hour clock format. Time is represented as **hour : minute : second**.

IDE Channel

Use these functions to detect and configure the individual IDE channels. Select a channel and press Enter to display the IDE sub-menu.

Press **Enter** to auto-detect IDE channels in the system. Once the channel is detected, the values for Capacity, Cylinder, Head, Precomp, Landing Zone, and Sector are automatically filled in.

None

There is no HDD installed or set.

Auto

The system can auto-detect the hard disk when booting up.

Manual

When you set the channel to **[Manual]** and change **Access Mode** to **[CHS]**, you can then enter the number of cylinders, heads, Precomp, landing zone, and sector.

Video

Use this option to choose the mode of Video, as EGA/VGA, CGA 40, CGA 80, MONO.

Drive A

The **Drive A** option allows you to select the kind of FDD to install.

Halt On

Halt On determines whether or not the computer stops if an error is detected during power on. Use the **Page Up** and **Page Down** keys to scroll through the options or press **Enter** to display the **Halt On** sub-menu. Use the ↑ ↓ arrow keys to position the selector in the option you choose. Press **Enter** to accept the changes and return to the Standard CMOS Features menu.

All Errors

Whenever the BIOS detects a nonfatal error, the system stops and prompts you.

No Errors

System boot does not stop for any detected errors.

All, But Keyboard

System boot does not stop for keyboard errors, but does stop for all other errors.

All, But Diskette

The system boot does not stop for a diskette error but will stop for all other errors.

All, But Disk/Key

These field are read-only and are determined by the BIOS POST.

Memory

These settings are *display-only values* that are determined by the BIOS POST (Power-On Self Test).

Base Memory

BIOS POST determines the amount of base (or conventional) memory installed in the system.

Extended Memory

BIOS determines how much extended memory is present during the POST.

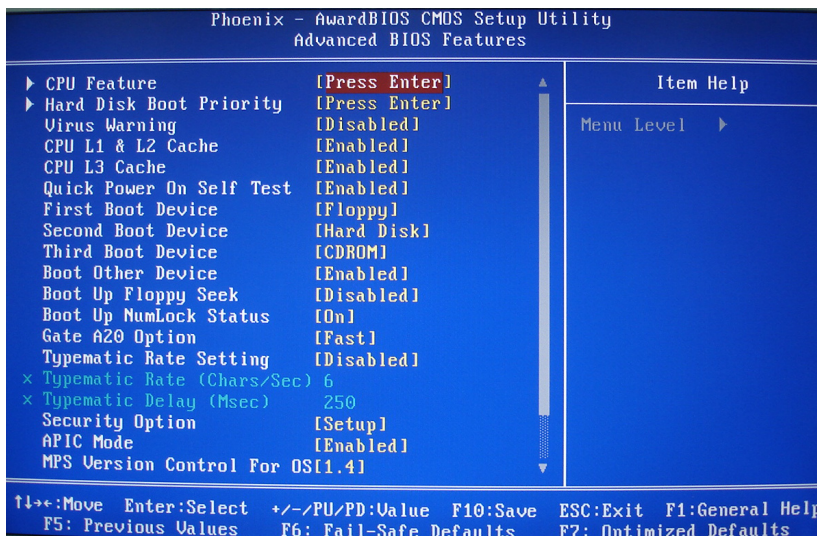
Total Memory

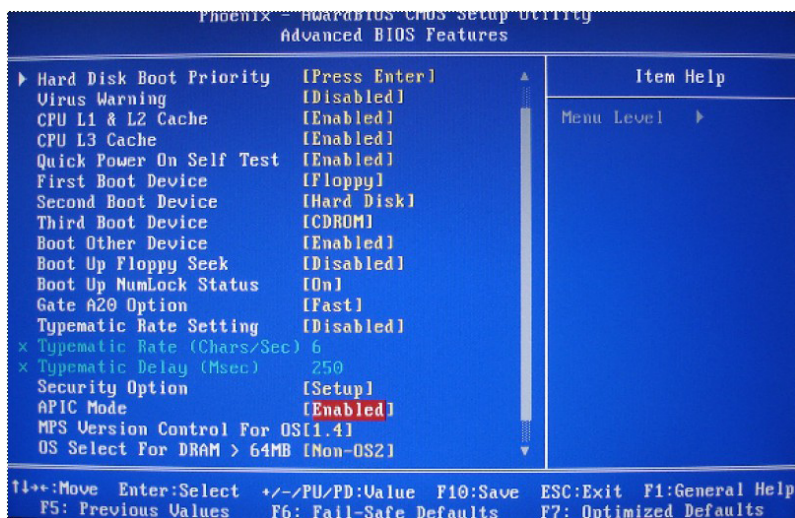
This value represents the total memory of the system.

Advanced BIOS Features

Access the Advanced BIOS Features menu from the CMOS Utility Setup screen. Use the **Page Up** and **Page Down** keys to scroll through the options or press **Enter** to display the sub-menu. Use the **↑ ↓** arrow keys to position the selector in the option you choose. To go back to the previous menu, press **Esc**.

Note: The options that have associated sub-menus are designated by a ►, which precedes the option. Press **Enter** to display the sub-menus.

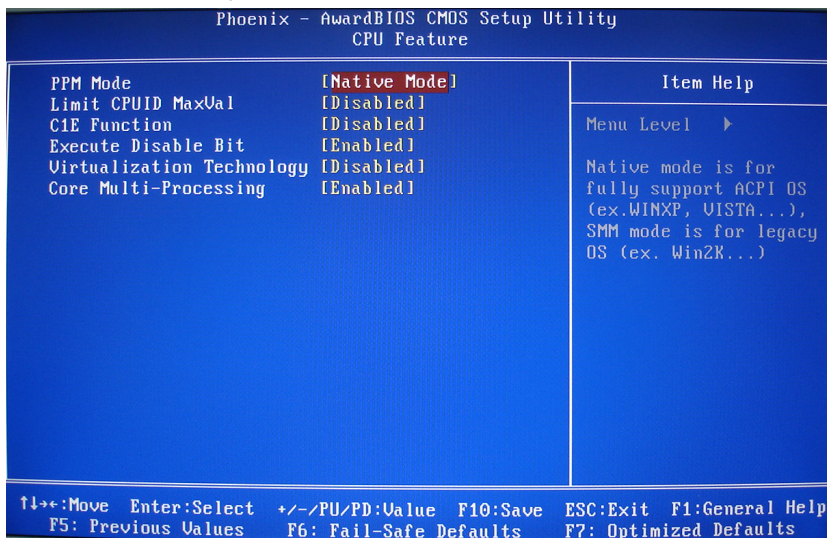




Note: Note that all data in white is for information only, data in yellow is changeable, data in blue is non-changeable, and data in a red box is highlighted for selection.

CPU Feature

Press Enter to display the CPU Feature menu.



PPM Mode

Use this option to choose the mode of PPM.

Limit CPUID MaxVal

Use this option to enable or disable the function of Limiting CPUID MaxVal

CIE Function

Select CPU CIE function.

Execute Disable Bit

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

Virtualization Technology

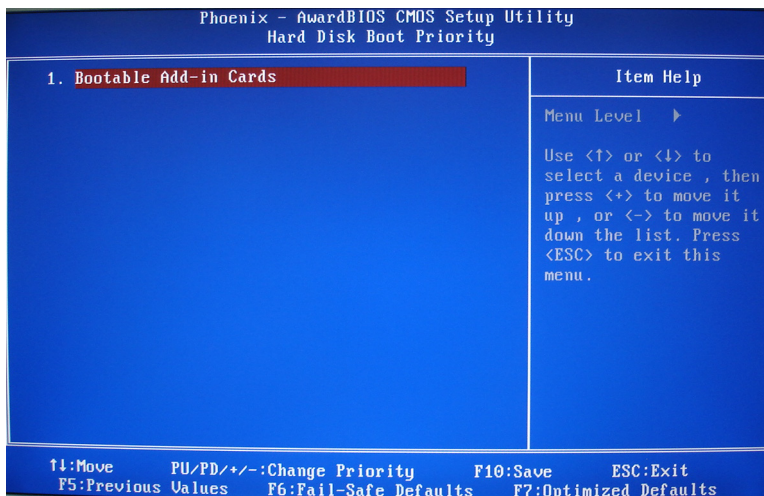
Use this option to enable or disable Virtualization Technology.

Core Multi-Processing

Use this option to enable or disable Core Multi-Processing.

Hard Disk Boot Priority

Press Enter to display the Hard Disk Boot Priority.



Bootable Add-in Cards

Use this option to bootable add-in cards.

Virus Warning

Allow you to choose the Virus Warning feature for IDE Hard Disk boot sector protection.

CPU L1&L2 Cache/CPU L3 Cache

Use these options to disable or enable L1/L2/L3 cache.

Quick Power On Self Test

Enabling this option allows the system to skip certain test while booting, which reduces the time needed to boot the system.

First/Second/Third Boot Device

Use this option to set the priority sequence of the devices booted at power on. Use the **Page Up** and **Page Down** keys to scroll through the options or press **Enter** to display the sub-menu. Use the ↑ ↓ arrow keys to position the selector in the option you choose.

Boot Other Device

With the option set to **Enable**, the system boots from some other device if the first/second/third boot devices fail.

Boot Up Floppy Seek

Enabled tests floppy drives to determine whether they have 40 or 80 tracks.

Boot Up NumLock Status

This option allows you to select the power-on state of **NumLock**. Select **On** to activate the keyboard **NumLock** when the system is started. Select **Off** to disable the **NumLock** key.

Gate A20 Option

Use this option to choose Gate A20 menu.

Typematic Rate Setting

Use this option to set keystrokes repeat. if Enabled, display options as follows:

- ❖ Typematic Rate
- ❖ Typematic delay

Security Option

The Security Options allows you to require a password every time the system boots or only when you enter setup. Select **Setup** to require a password to gain access to the CMOS Setup screen. Select **System** to require a password to access the CMOS Setup screen and when the system boots.

APIC Mode

Use this function to enable or disable the Advanced Programmable Interrupt Controller (APIC). If you disable this option, you also disable the MPS Version Control for OS option.

MPS Version Control For OS

Use this function to select the Multi-Processor Specification (MPS) version that BIOS passes to the operating system. Use the **Page Up** and **Page Down** keys to scroll through the options.

Full Screen LOGO Show

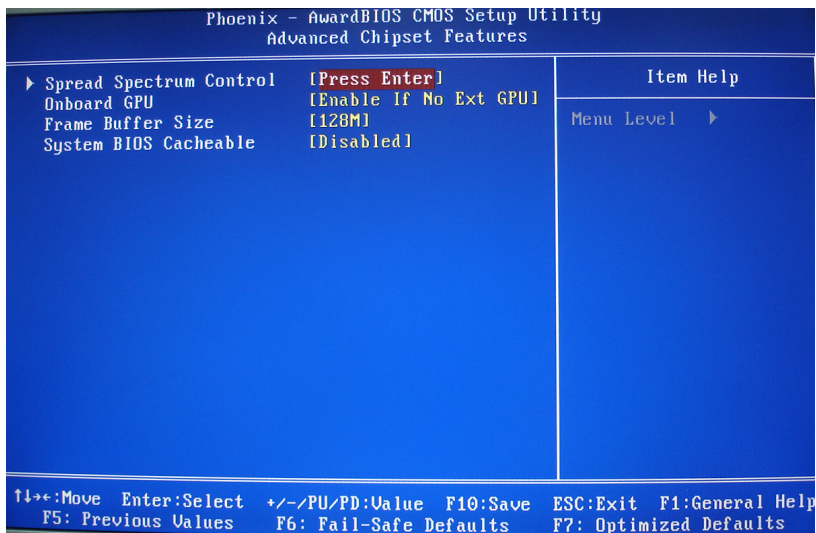
This option allows you to enable or disable the display of the full-screen logo when the system boots. Use the **Page Up** and **Page Down** keys to toggle between **Enable** and **Disable**.

Small LoGo (EPA) Show

This option allows you to enable or disable the display of the Small LoGo when the system boots.

Advanced Chipset Features

Select Advanced Chipset Features from the CMOS Setup Utility menu and press Enter to display the functions of the Advanced Chipset Functions menu.



Spread Spectrum Control

Use this option to set Spread Spectrum

Onboard GPU

Use this option to set Onboard GPU

Frame Buffer Size

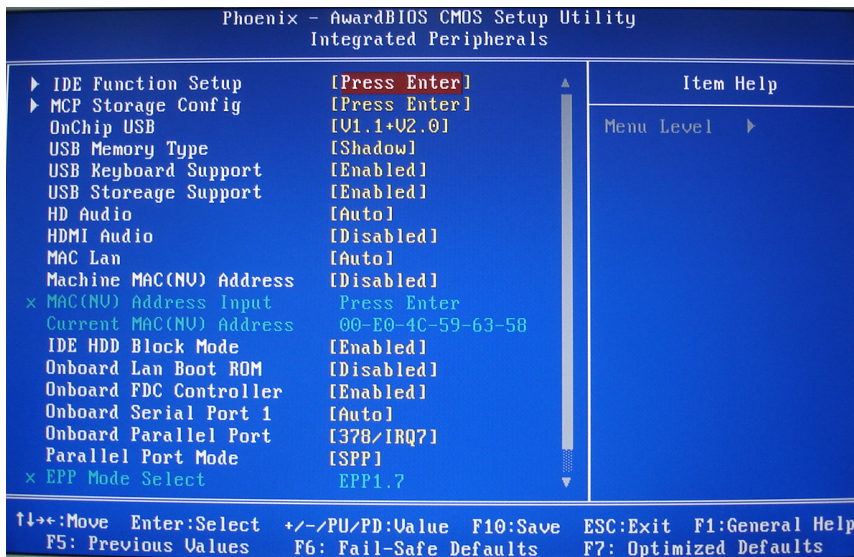
Use this option to change Buffer Size

System BIOS Cacheable

Use this option to enable or disable the System BIOS Cacheable

Integrated Peripherals Menu

Select **Integrated Peripherals** from the CMOS Setup Utility menu and press **Enter** to display the Integrated Peripherals menu.



IDE Function Setup

Use this option to set IDE function

MCP Storage Config

Use this option to set MCP Storage

OnChip USB

Use this option to set OnChip USB

USB Memory Type

Use this option to change USB Memory Type

USB Keyboard Support

Use this option to enable or disable USB Keyboard

USB Storage Support

Use this option to enable or disable USB Storage

HD/HDMI Audio

Use this option to set HD/HDMI Audio

MAC Lan

Use this option to set MAC Lan

Machine MAC(NV) Address

When set this option to "Enable", you can set a new address for current MAC(NV)

IDE HDD Black Mode

Use this option to enable or disable IDE HDD Black Mode

Onboard Lan Boot Rom

Use this option to enable or disable Onboard Lan Boot Rom

Onboard FDC Controller

Use this option to enable Onboard FDC Controller

Onboard Serial PortI

Use this option to change serial port setting

Onboard Parallel port

Use this option to change parallel port setting

Parallel Port Mode

Use this option to change Parallel Port Mode

Power Management Setup Menu

Select **Power Management Setup** from the CMOS Setup Utility menu and press Enter to display the Power Management Setup menu.

Phoenix - AwardBIOS CMOS Setup Utility		Item Help
Power Management Setup		Menu Level ▶
ACPI function	[Enabled]	
ACPI Suspend Type	[S1(POS)]	
Power Management	[User Define]	
Video Off Method	[DPMS Support]	
HDD Power Down	[Disabled]	
HDD Down In Suspend	[Disabled]	
Soft-Off by PBTN	[Instant-Off]	
PowerOn After Pwr-Fail	[Off]	
WOL(PME#) From Soft-Off	[Disabled]	
WOR(RI#) From Soft-Off	[Disabled]	
MAC Resume from Soft-Off	[Enabled]	
USB Resume from Soft-Off	[Disabled]	
Power-On by Alarm	[Disabled]	
× Day of Month Alarm	0	
× Time (hh:mm:ss) Alarm	0 : 0 : 0	
POWER ON Function	[BUTTON ONLY]	
× KB Power ON Password	Enter	
× Hot Key Power ON	Ctrl-F1	
HPET Support	[Enabled]	

↑↓: 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 function on the Power Management Setup menu allows you to enable or disable the ACPI function.

Power Management

Use this option to set the mode for Power Management

Video Off Method

Use this option to set a Method for Video off.

HDD Power Down

Use this option to enable or disable a mode of HDD Power down.

Soft-Off by PBNT

This function on the Power Management Setup menu allows you to set Soft-Off by PBNT to **[Instant-Off]** or **[Delay 4 Sec]**.

PowerOn after PWR-fail

Use this option to change its setting

USB Resume from Soft-off

This function on the Power Management Setup menu allows you to enable or disable the Power-on by Ring function. Allows the system to be awakened from an ACPI sleep state by a Wake-Up signal from a modem that supports Wake-Up function.

USB Resume From Soft-off

Use this option to disable or enable the function of USB Resume From Soft-off.

Power-On by Alarm

Determines whether to power on the system at a desired time. If enable set the date and time as following:

❖ **Date(of Month) Alarm:** Turn on the system at a specific time on each day or on a specific day in a month.

❖ **Time(hh:mm:ss) Alarm:** Set the time at which the system will be Powered on automatically.

PowerOn Function

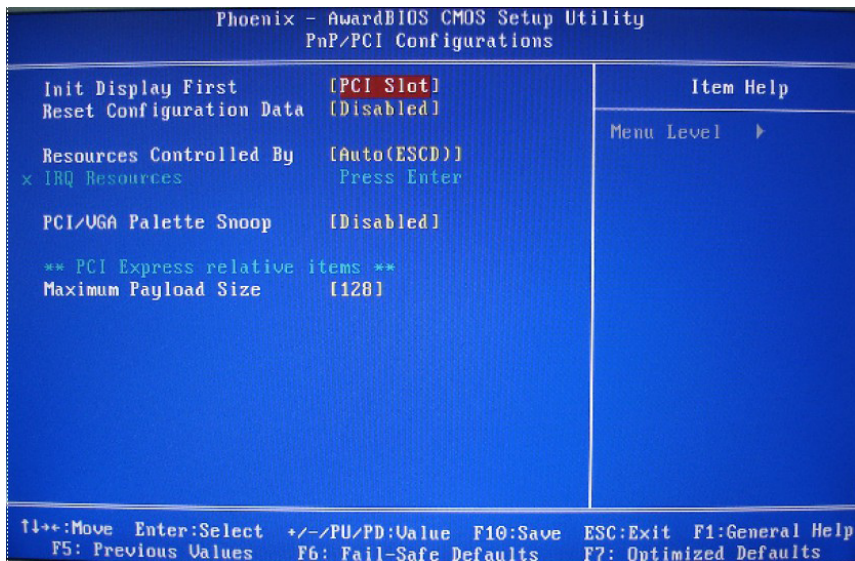
Use this option to Power On Mode(by button only, keyboard 98, mouse left/right, hot key, password or any key.)

HPET Support

Use this option to enable or disable HPET Support; if enable, HPET Mode display. We can select.

PnP/PCI Configuration Menu

Select **PnP/PCI Configuration** from the CMOS Setup Utility menu and press **Enter** to display the PnP/PCI Configuration menu.



Init Display First

This function on the PnP/PCI Configuration menu allows you to define if the initial display is in the PCI slot, onboard or PCI Express slot. Options are **[PCI Slot]**, **[Onboard]** and **[PCIEx]**.

Reset Configuration Data

This function on the PnP/PCI Configuration menu allows you to enable or disable the resetting of Extended System Configuration Data (ESCD) when you exit Setup. Set this to **[Enabled]** if you have installed a new add-on and the system reconfiguration has caused a serious conflict that prevents the OS from booting. The default setting is **[Disabled]**.

Resources Controlled By

This function on the PnP/PCI Configuration menu allows you to define if the BIOS can automatically configure all the boot and plug-and-play compatible devices or if you can manually select IRQ, DMA, and memory base address fields. Select **[Auto(ESCD)]** if you want the BIOS to automatically populate these fields. If you select **[Manual]** so you can assign the resources, **IRQ Resources** is enabled for input.

IRQ Resources

To enable this field for input, set **Resources Controlled By to [Manual]**. With this field enabled, press **Enter** to see options.

Use Legacy ISA for devices compliant with the original PC AT Bus specification. Use PCI/ISA PnP for devices compliant with the plug-and-play standard, whether designed for PCI or ISA Bus architecture.

PCI/VGA Palette Snoop

This function on the PnP/PCI Configuration menu allows you to enable or disable the Palette Snoop function.

Maximum Payload Size

This function on the PnP/PCI Configuration menu allows you to set the maximum TLP payload size (in bytes) for the PCI Express devices. Use the **Page Up** and **Page Down** keys to scroll through sizes or enter the number using the keyboard numbers or use the + and – keys to go up and down the list of sizes.

Pc health Status

Select **Pc health Status** from the CMOS Setup Utility menu and press **Enter** to display the System Monitor menu.

Phoenix - AwardBIOS CMOS Setup Utility	
PC Health Status	
	Item Help
Smart Fan Tiger Temperatur [Disabled]	
x CPU Fan Tolerance Value 5	
Current CPU Temperature 34°C / 93°F	Menu Level ▶
Current System Temp 22°C / 71°F	
SYS Fan Speed 0 RPM	
CPU Fan Speed 3276 RPM	
MCP Fan Speed 0 RPM	
CPU Ucore 1.32V	
UDDR Voltage 1.88V	
+1.2V Voltage 1.23V	
+5V Voltage 4.98V	
+12V Voltage 12.14V	
VCC 5.12V	
BAT Voltage 3.15V	
5VSB Voltage 5.15V	

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

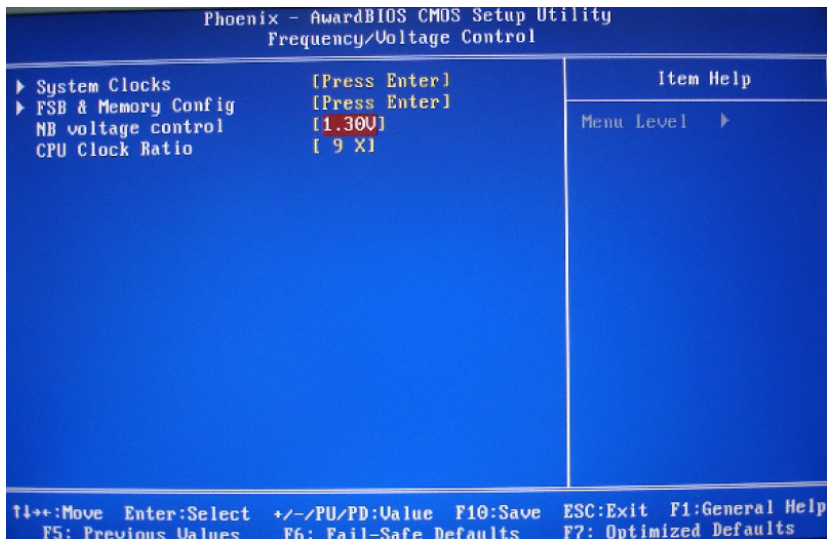
All of the values shown in are dynamic and change as the speed and voltages of the various components change with system usage.

Smart Fan Tiger Temperature

Use this option to change its setting.

Frequency/Voltage Control

Select Frequency/Voltage Control from the CMOS Setup Utility menu and press Enter to display the system Monitor menu.



System Clock

Press "Enter" to display System Clock status

FSB&Memory config

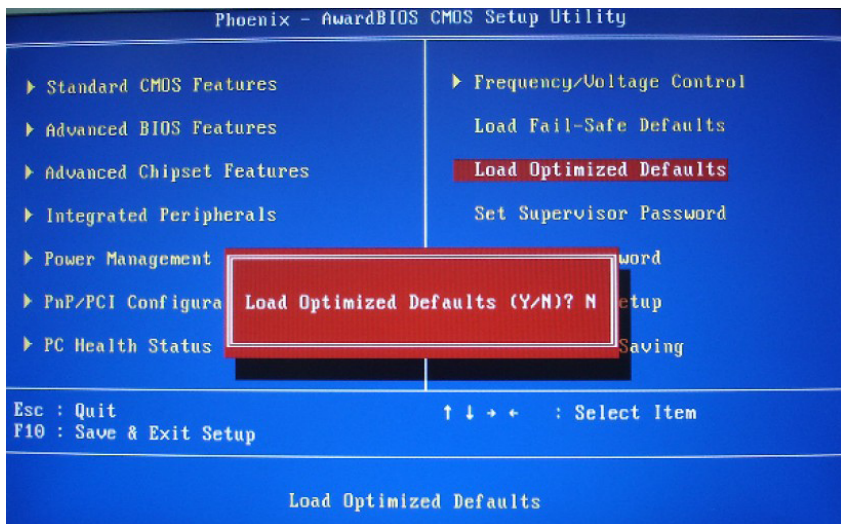
Use this option to change FSB&Memory setting

NB Voltage control

Use this option to set NB Voltage

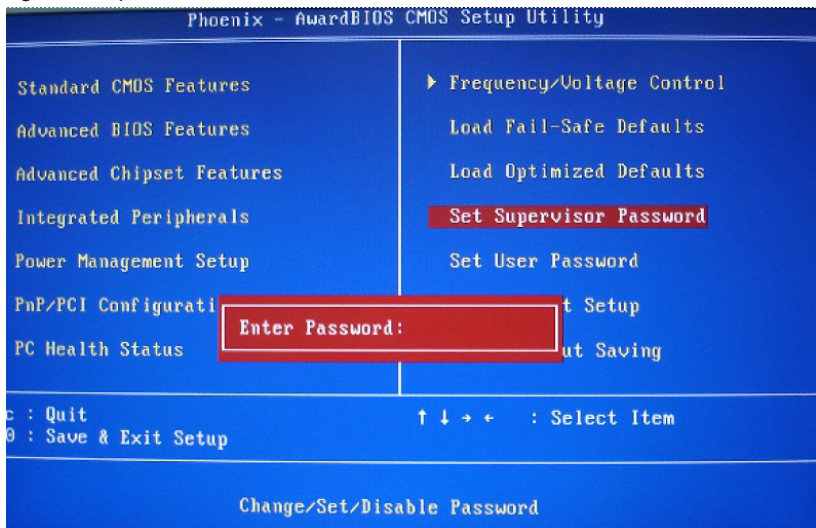
Load Optimized Defaults

Press <Enter> on this item and then press the <Y> key to load the optimal BIOS default settings. The BIOS default settings helps the system to operate in optimum state. Always load the Optimized defaults after updating the BIOS or after clearing the CMOS values.



Set Supervisor/User Password

Press <Enter> on this item and type the password with up to 8 characters and then press <Enter>. You will be requested to confirm the password. Type the password again and press <Enter>.



The BIOS Setup program allows you to specify two separate passwords:

❖ Supervisor Password

When a system password is set and the **Password Check** item in **Advanced BIOS Features** is set to **Setup**, you must enter the supervisor password for entering BIOS Setup and making BIOS changes.

When the **Password Check** item is set to **System**, you must enter the supervisor password (or user password) at system startup and when entering BIOS Setup.

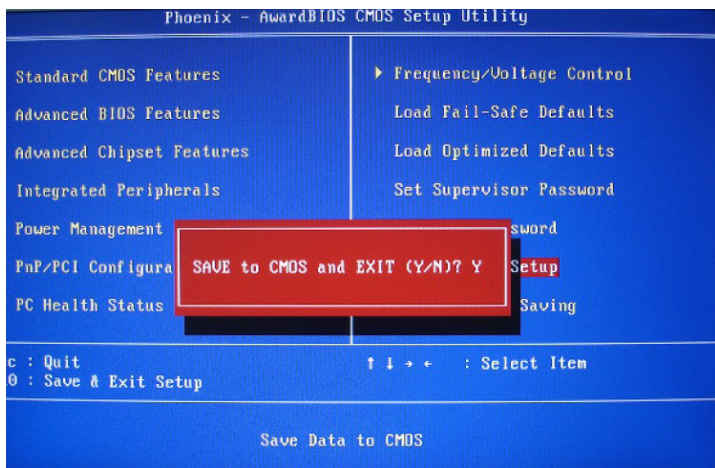
❖ User Password

When the **Password Check** item is set to **System**, you must enter the supervisor password (or user password) at system startup to continue system boot. In BIOS Setup, you must enter the supervisor password if you wish to make changes to BIOS settings. The user password only allows you to view the BIOS settings but not to make changes.

To clear the password, press <Enter> on the password item and when requested for the password, press <Enter> again. The message "PASSWORD DISABLED" will appear, indicating the password has been cancelled.

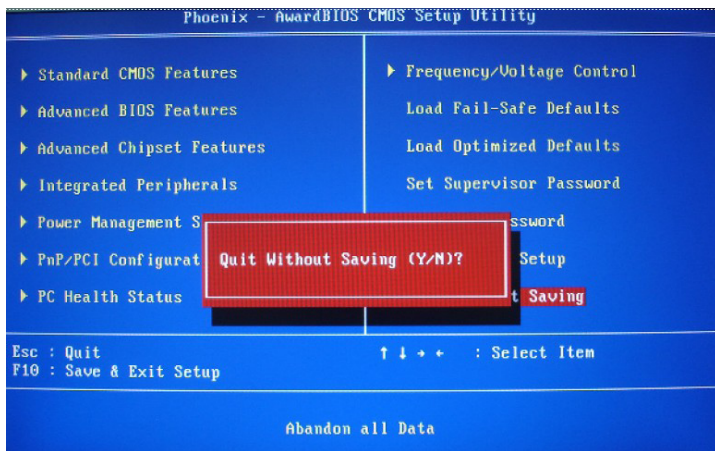
Save & Exit Setup

Press <Enter> on this item and press the <Y> key. This saves the changes to the CMOS and exits the BIOS Setup program. Press <N> or <Esc> to return to the BIOS Setup Main Menu.



Exit Without Saving

Press <Enter> on this item and press the <Y> key. This exits the BIOS Setup without saving the changes made in BIOS Setup to the CMOS. Press <N> or <Esc> to return to the BIOS Setup Main Menu.



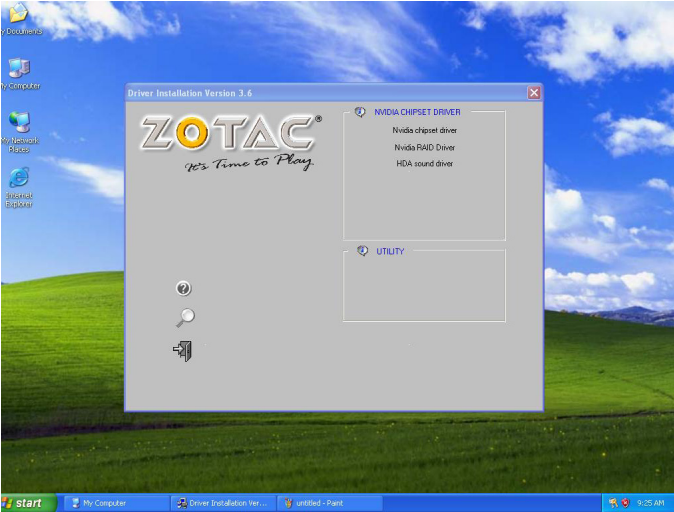
Installing Drivers and Software

Note: It is important to remember that before installing the driver CD that is shipped in the kit, you need to load your operating system. The motherboard supports Windows XP 32bit and 64bit and is Vista-capable.

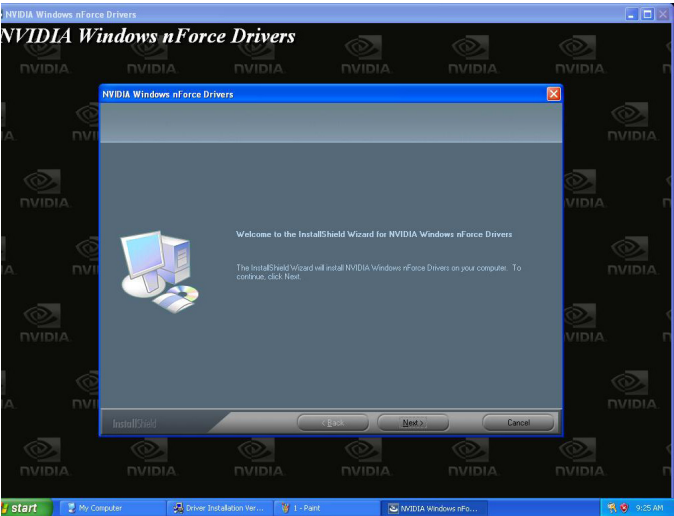
The kit comes with a CD that contains utility drivers and additional software.

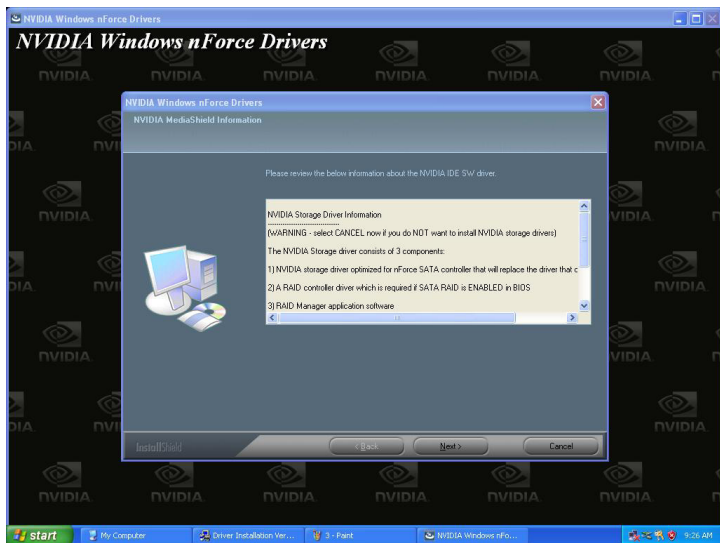
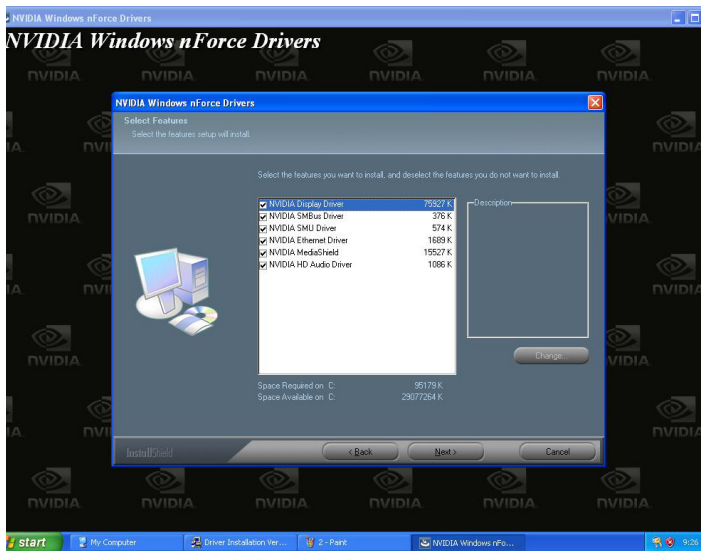
Drivers Installation

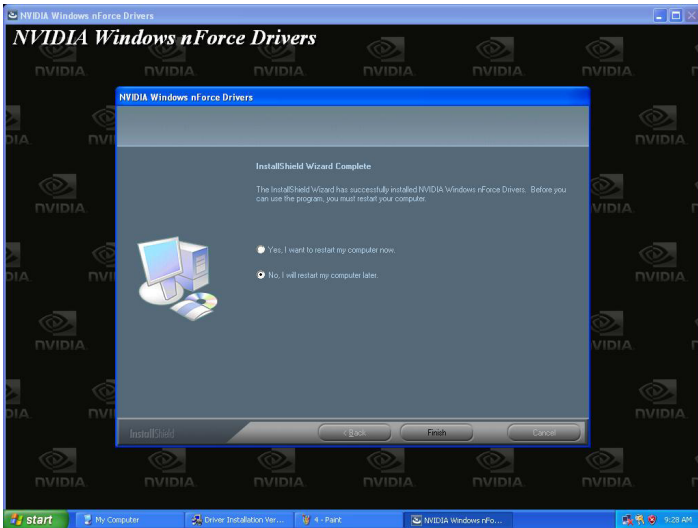
1. Insert the driver CD after loading your operating system. Waiting for one minute you can see blow interface.



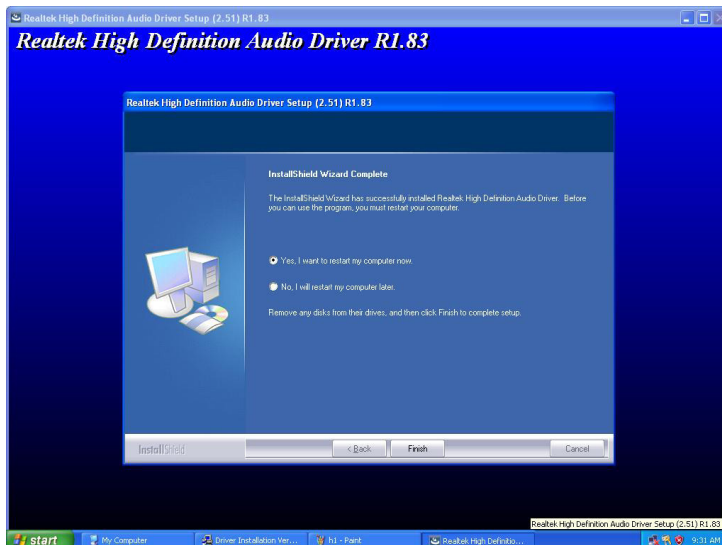
2. Follow the below steps to install driver.



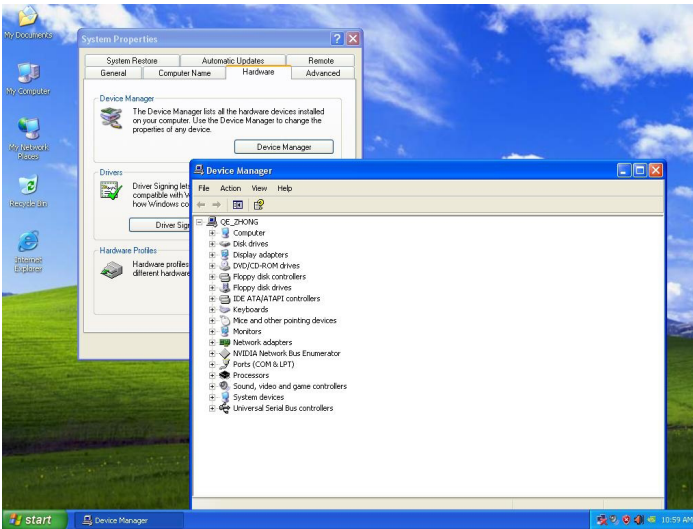




3. Follow the below for HDA sound driver installing.



4. At last, you can open below page that provides information about the hardware devices on this motherboard, and check whether finish your installation.



FLASH Update Procedure

The program AWDFLASH.EXE is included on the driver CD (D:\Utility\AWDFLASH.EXE). Please follow the recommended procedure to update the flash BIOS, as listed below.

1. Create a DOS-bootable floppy diskette. Copy the new BIOS file (just obtained or downloaded) and the utility program AWDFLASH.EXE to the diskette.
2. Allow the PC system to boot from the DOS diskette.
3. At the DOS prompt, type

AWDFLASH<ENTER>

4. Enter the file name of the new BIOS.
5. The question: "Do you want to save BIOS (Y/N)?" is displayed.

**Press "N" if there is no need to save the existing BIOS.
Press "Y" if a backup copy of the existing BIOS is needed.
(A file name has to be assigned to the existing BIOS binary file.)**

6. The message : "Press "Y" to program or "N" to exit" is displayed. Type

"Y"<ENTER>

7. Wait until the flash-update is completed.
8. Restart the PC.

<p>Warning : - Do not turn off or RESET the computer during the flash process. - If you are not sure how to upgrade the BIOS, please take your computer to an Authorized Service Center and have a trained technician do the work for you.</p>

Realtek HD Audio Driver Setup

Getting Started

After Realtek HD Audio Driver being installed (insert the driverCD and follow the on-screen instructions), “Realtek HD Audio Manager” icon will show in System tray as below. Double click the icon and the control panel will appear:



Double click to enable
Realtek HD Audio Manager

Sound Effect

After clicking on the “Sound Effect” tab, 3 sections “Environment”, “Equalizer” and “Karaoke” are available for selection.



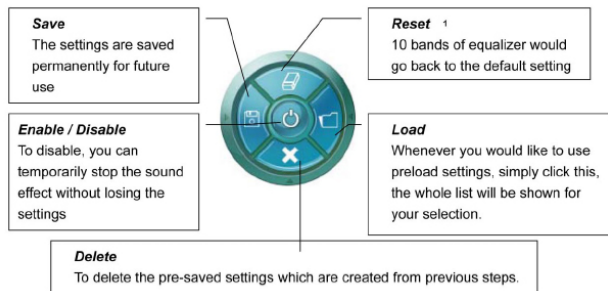
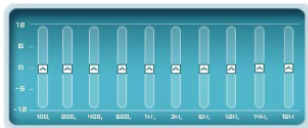
Environment Simulation

You will be able to enjoy different sound experience by pulling down the arrow, totally 23 kinds of sound effect will be shown for selection. Realtek HD Audio Sound Manager also provides five popular settings “Stone Corridor”, “Bathroom”, “Sewer pipe”, “Arena” and “Audio Corridor” for quick enjoyment.

Equalizer Selection

The Equalizer section allows you to create your own preferred settings by utilizing this tool.

In standard 10 bands of equalizer, ranging from 100Hz to 16KHz are available:



Frequently Used Equalizer Setting

Realtek recognizes the needs that you might have. By leveraging our long experience at audio field, Realtek HD Audio Sound Manager provides you certain optimized equalizer settings that are frequently used for your quick enjoyment.

How to Use

Other than the buttons “Pop” “Live” “Club” & “Rock” shown on the page, to pull down the arrow in “Others” , you will find more optimized settings available to you.

Karaoke Mode

Karaoke mode brings Karaoke fun back home by simply using the music you usually play, Karaoke mode can help you eliminate the vocal of the song or adjust the key to accommodate your range.

Vocal Cancellation: Single click on “Voice Cancellation”, the vocals of the songs will be erased, while the background music is still playing which lets you take over the vocal part.

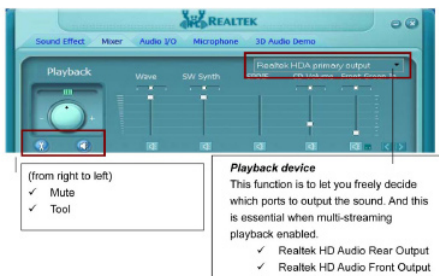
Key Adjustment: Using “Up / Down Arrow” to find a key which better fits your vocal range.

Mixer

Realtek HD Audio Sound Manager integrates Microsoft's "Volume Control" functions into the Mixer page. This gives you the advantage to you to create your favorite sound effect in one single tool.



Playback control



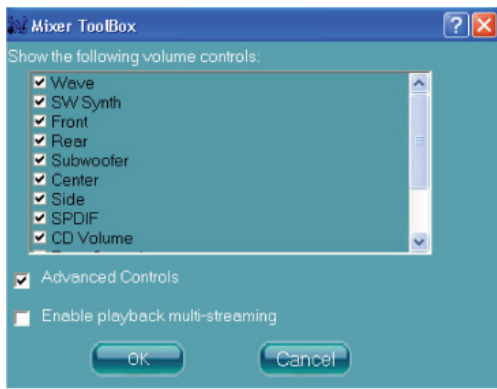
Mute

You may choose to mute single or multiple volume controls or to completely mute sound output.

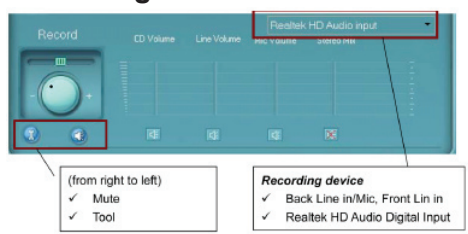
Tool

- ✓ **Show the following volume control**
This is to let you freely decide which volume control items to be displayed, total 13 items to be chosen.
- ✓ **Advanced controls**
- ✓ **Enable playback multi-streaming**

With this function, you will be able to have an audio chat with your friends via headphone (stream 1 from front panel) while still have music (stream 2 from back panel) playing. At any given period, you can have maximum 2 streams operating simultaneously.



Recording control



Mute

You may choose to mute single or multiple volume controls or to completely mute sound input.

Tool

✓ Show the following volume controls

This is to let you freely decide which volume control items to be displayed.

✓ Advanced controls.

Advanced control is a “Microphone Boost” icon.

Once this item is checked, you will find “advanced” icon beside “Front Pink In” & “Mic Volume”. With this, the input signal into “Front Pink In” & “Mic Volume” will be strengthen.

✓ Enable recording multi-streaming

At any given period, you can have maximum 2 streams operating simultaneously.



Audio I/O

Realtek HD Audio Manager frees you from default speaker settings. Different from before, for each jack, they are not limited to perform certain functions. Instead, now each jack is able to be chosen to perform either output (i.e. playback) function or input (i.e. Recording) function, we call this “Retasking”.

Audio I/O aims to help you setting jacks as you wish. Moreover, other than blue to blue, pink to pink, the way that you used to do, Audio I/O would guide you to other right jacks that can also serve as microphone / speaker / headphone.



6 channel or 8 channel



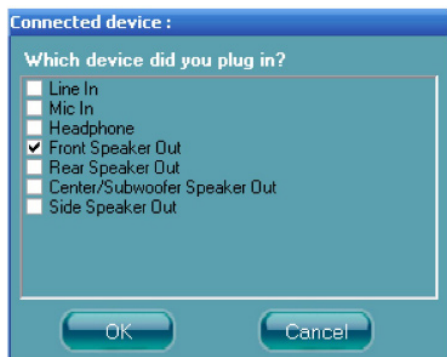
Speaker Configuration

Step 1: Plug in the device in any available jack.

Step 2: Dialogue "connected device" will pop up for your selection. Please select the device you are trying to plug in.

* If the device is being plugged into the correct jack, you will be able to find the icon beside the jack changed to the one that is same as your device.


* If not correct, Realtek HD Audio Manager will guide you to plug the device into the correct jack.

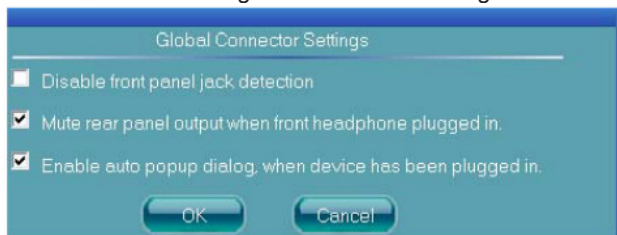


6 channel or 8 channel



Global Connector Settings

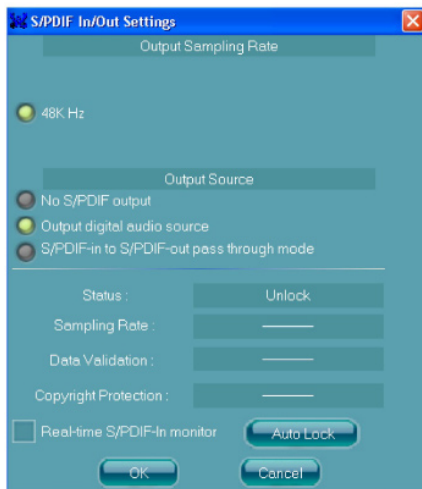
Click  to access global connector settings



- ✓ **Mute rear panel when front headphone plugged in**
Once this option is checked, whenever front headphone is plugged, the music that is playing from the back panel, will be stopped.
- ✓ **Disable front panel jack detection (option)**
Did not find any function on front panel jacks?
Please check if front jacks on your system are so-called AC'97 jacks. If so, please check this item to disable front panel jack detection.
- ✓ **Enable auto popup dialogue, when device has been plugged in.**
Once this item checked, the dialog "Connected device", would not automatically pop up when device plugged in.

S/PDIF

Short for **S**ony/**P**hilips **D**igital **I**nterface, a standard audio file transfer format. S/PDIF allows the transfer of digital audio signals from one device to another without having to be converted first to an analog format. Maintaining the viability of a digital signal prevents the quality of the signal from degrading when it is converted to analog.



√ Output Sampling Rate

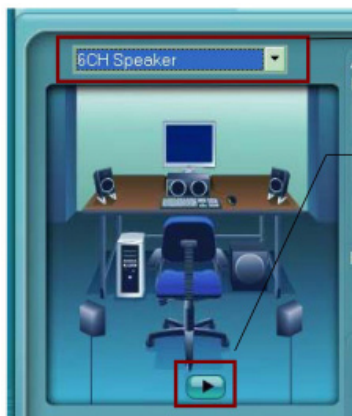
- 44.1KHz: This is recommend while playing CD
- 48KHz: This is recommended while playing DVD or Dolby.
- 96KHz: This is recommended while playing DVD-Audio.

√ Output Source

- Output digital audio source: The digital audio format (such as .wav, .mp3, .midi etc) will come out through S/PDIF-Out.

Speaker Calibration

After you have successfully plugged in speakers and assigned to the right jacks, you are only one more step to go to enjoy the intended sound. We provide "Speaker Calibration" to help you check if the speakers are located in the correct position.



Step1

Select the channel output (headphone / 2 / 4 / 6 / 8 channel)

Step2

Click "play" icon

Step3

Look at the scene; while the speaker appears flashing, you should be able to hear the sound exactly from that direction.

Microphone

This page is designed to provide you better microphone / recording quality.

Below picture indicates both “Noise Suppression” & “Acoustic Echo Cancellation” are both enabled.



Noise Suppression

If you feel that the background noise, especially the sound generated from the fan inside PC, is too loud? Try “Noise Suppression”, which allows you to cut off and suppress disturbing noise.

Beam Forming

Also known as “directional recording”, this option lets you do the following: Once beam forming is enabled; only the sound from certain direction will be recorded. You will get the best quality if you chose 90° position, which we recommend you to use, this effectively means that you speak right into the microphone.

Note: A Stereo Microphone is required when using Beam Forming function.

Acoustic Echo Cancellation

This function prevents playback sound from being recorded by microphone together with your sound. For example, you might have chance to use VOIP function through Internet with your friends. The voice of your friend will come out from speakers (playback). However, the voice of your friend might also be recorded into your microphone then go back to your friend through Internet. In that case, your friend will hear his/her own voice again. With AEC (Acoustic Echo Cancellation) enabled at your side, your friend can enjoy the benefit with less echo.

Audio Demo

The section “3D Audio Demo” grants you another possibility to enjoy your sound. The Audio Demo allows you to listen to sound in an extraordinary way.



Information

Information

Audio Driver Version : 5.10.0.5106

DirectX Version : DirectX 9.0

Audio Controller : HD Audio

Audio Codec : ALC880

Language : Auto

Show icon in system tray

OK

Hardware / Software information of your audio system

Language setting
When “Auto” is chosen, this language setting would accommodate to OS language on your systems

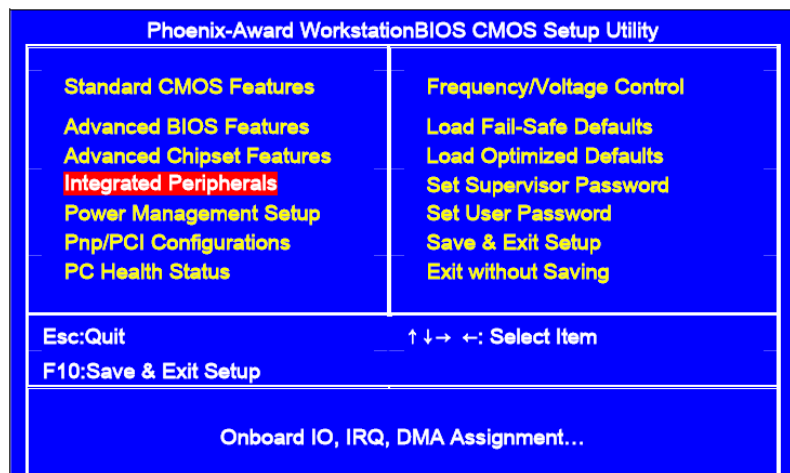
Quick launch button at System tray

This section provides information about your current system audio device.

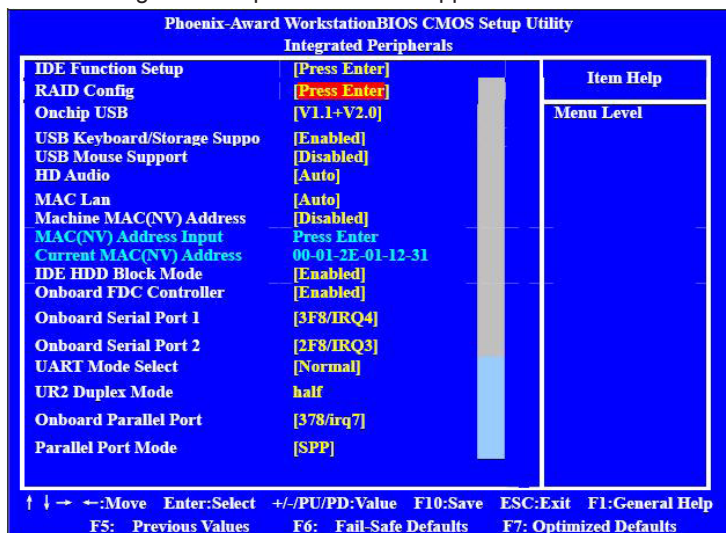
SATA RAID User Manual

Setting up the BIOS

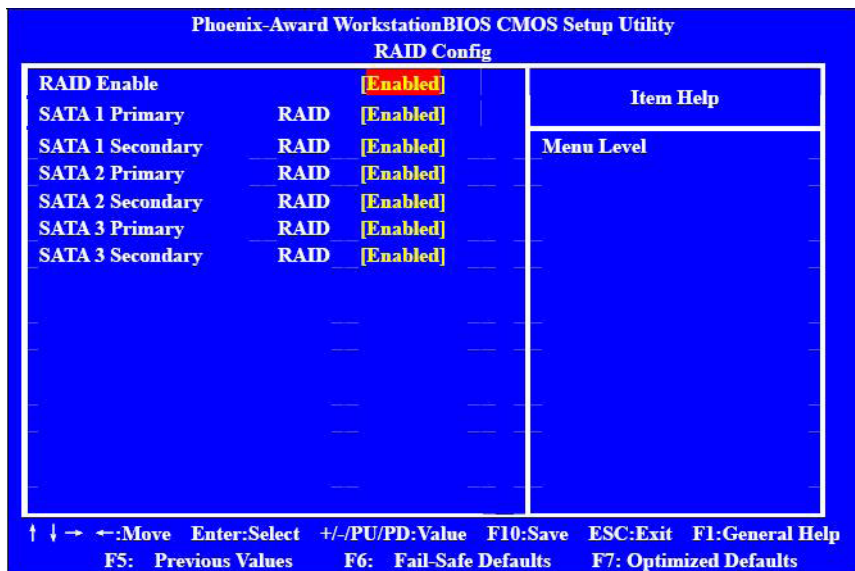
1. Setting your computer, then press Delete to enter the Bios setup. The BIOS CMOS Setup Utility window appears.



2. Use the arrow keys to select Integrated Peripherals, then press Enter. The Integrated Peripherals window appears.



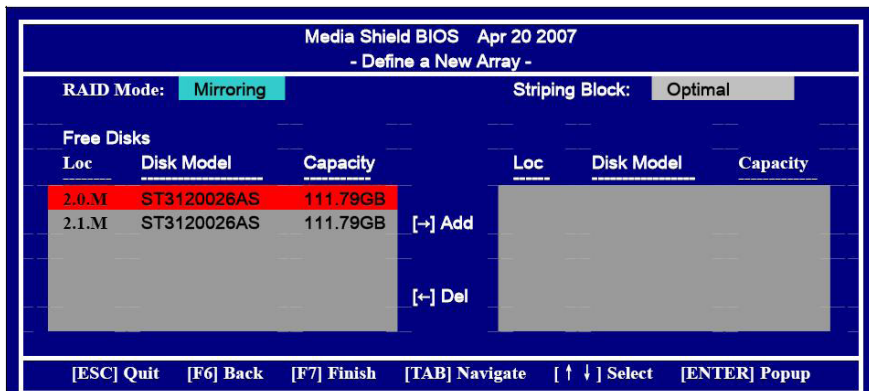
3. Use the arrow keys to select the RAID Config, then press Enter. The RAID Config window appears.



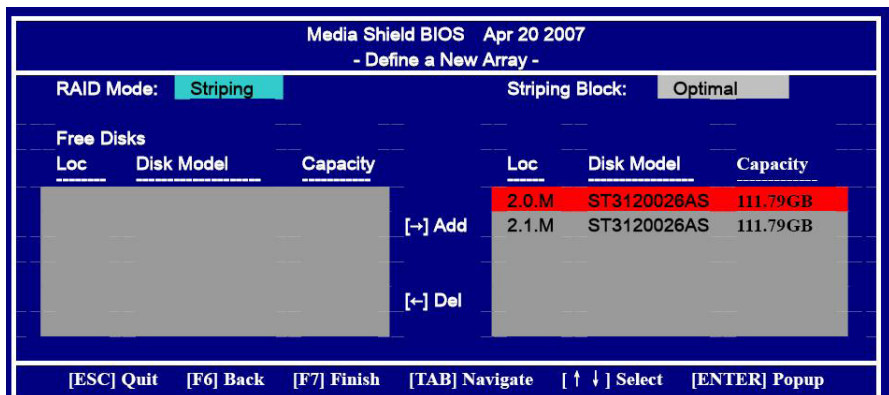
4. From the RAID Config window, enable RAID, then enable the disks that you want to use as RAID disks.
5. Press F10 to save the configuration and exit. The PC reboots.
6. Enter the RAID BIOS Setup by pressing F10 when prompted, and proceed to set up the NVRAID BIOS as described in the next Section.

Entering the RAID BIOS Setup

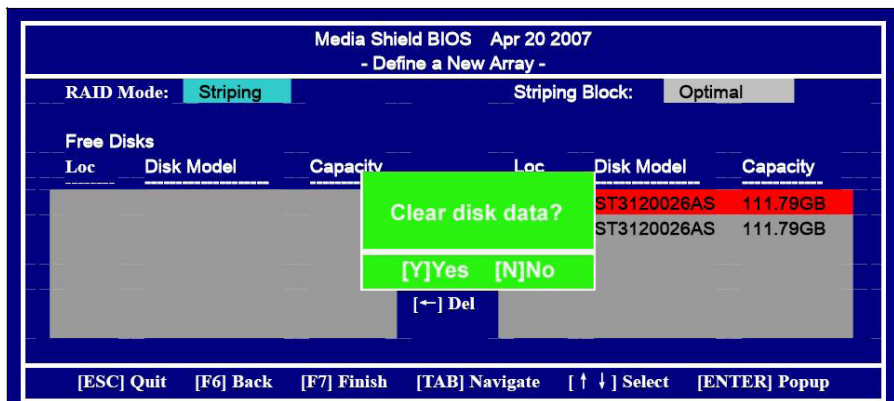
1. After rebooting your computer, wait until you see the RAID software prompt you to press F10.
2. The NVIDIA RAID Utility –Define a New Array window appears



3. In the RAID Mode field, use the UP or Down ARROW key to select a RAID Mode. The supported RAID modes include Mirroring (RAID 1), Striping (RAID 0) and Stripe Mirroring (RAID 0+1), Spanning(JBOD) and RAID 5. The following is an example of RAID 0 array creation.
4. If RAID 0(Striping) is selected, you can manually set the striping block size. in the Striping Block field, use the UP or DOWN ARROW key to set the Striping Block size. The KB is standard unit of Striping Block size. We recommend you leaving it to the default setting-Optimal(64k). The size range is from 4k to 128k.
5. Select the hard drivers which you wish to be included in the disk array. The Free Disks section displays the information about the currently installed SATA hard drives. Press the TAB key to move to the Free Disks section. Select the target hard drives using the UP or DOWN ARROW key and use the RIGHT ARROW key to add the hard drives to the Array Disks section.



6. Press F7 after selecting the target hard disks. A message which says “Clear disk data?” will appear. If you are sure to clear the data in the selected hard drives, press Y. (If the hard drives contain previously created RAID array, you need to press Y to clear the data from the hard drives.)



7. After that, then Array List screen displaying the RAID array you created will appear. If you want to set the disk array as boot device, use the UP or DOWN ARROW key to select the array and press B. The Boot section will show Yes.

Media Shield BIOS Apr 20 2007					
- Array List -					
Boot	Id	Status	Vendor	Array Model Name	
No	2	Healthy	NVIDIA	STRIPE	223.57G

[Ctrl-X] Exit [↑ ↓] Select [B] Set Boot [N] New Array [ENTER] Detail

8. To read more information about the RAID array, press ENTER to enter the Array Detail screen, where you should see detailed information about RAID mode, disk block size, disk model name, and disk capacity, etc.

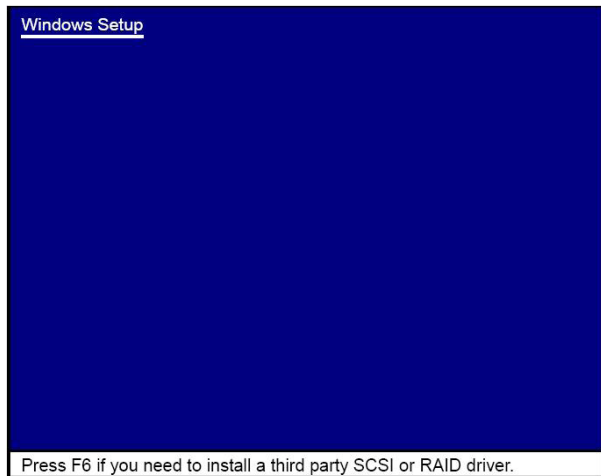
Media Shield BIOS Apr 20 2007					
- Array Detail -					
RAID Mode: Striping			Striping Block:64K		
Striping Width : 1					
Adapt	Channel	M/S	Index	Disk Model	Capacity
1	0	Master	0	ST3120026AS	111.79GB
1	1	Master	1	ST3120026AS	111.79GB

[R] Rebuild [D] Delete [C] Clear Disk [ENTER] Return

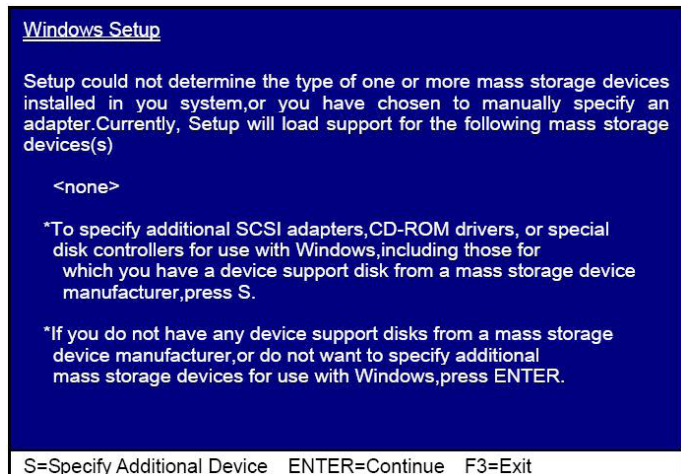
9. To delete the array, press D in the Array Detail screen. When the “Delete this array?” message appears, press Y to confirm or N to cancel. Press ENTER to return to the Array List screen. To exit the Nvidia RAID utility, press ESC in the main menu or Ctrl+X in the Array List screen. Now, you can proceed to install the SATA controller driver and operating system.

Installing the RAID Drivers

1. After you complete the RAID BIOS setup, boot from the windowsXP CD. The Windows Setup program starts.

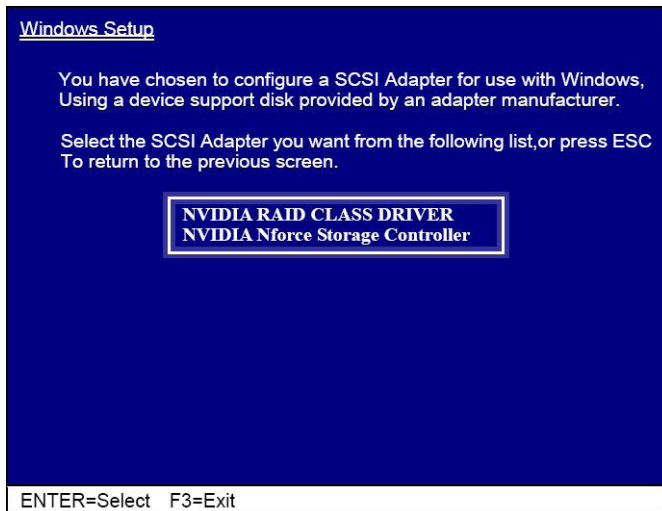


2. Press F6 and wait a few moments for the Windows Setup screen to appear.

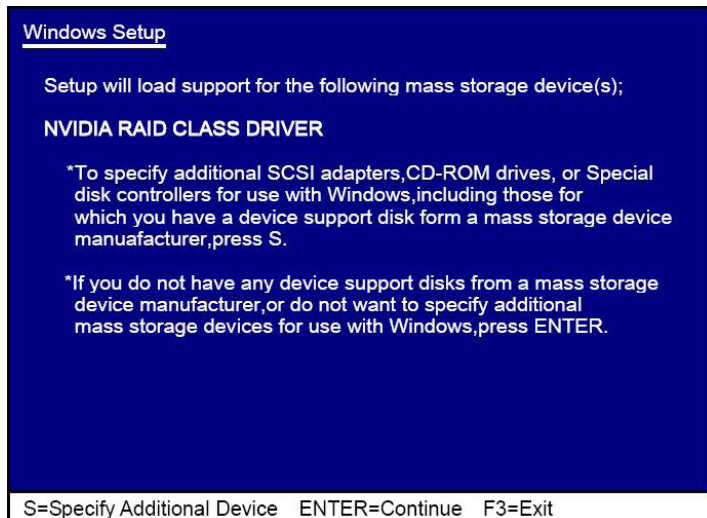


3. Specify the NVIDIA drivers.

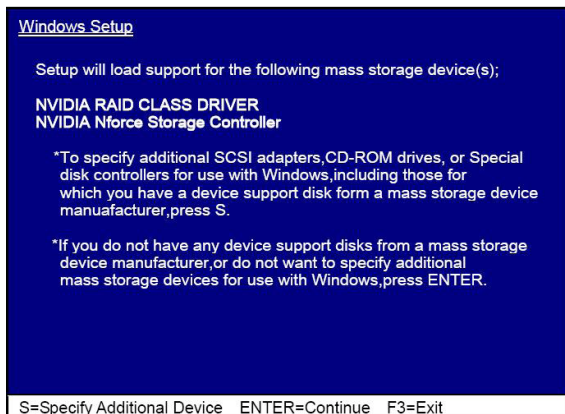
- (1). Insert the floppy that has the RAID driver, press S, then press Enter.



- (2). Select "NVIDIA RAID CLASS DRIVER" and then press Enter.



- (3). Press S again at the Specify Devices screen, then press Enter.
- (4). Select "NVIDIA Nforce Storage Controller" and then press Enter.



4. Press Enter to continue with Windows XP Installation.
Be sure to leave the floppy disk inserted in the floppy drive until the blue screen portion of Windows XP installation is completed, then take out the floppy.
5. Follow the instructions on how to install Windows XP.
During the GUI portion of the install you might be prompted to click Yes to install the RAID driver. Click Yes as many times as needed in order to finish the installation. This will not be an issue with a signed driver.

