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Version:

User Manual V1.0 in English for NF4UK8AA series motherboard.

P/N: 91-181-CK8-AA-0E

Symbol description:

-  **Note:** refers to important information that can help you to use motherboard better.
-  **Attention:** indicates that it may damage hardware or cause data loss, and tells you how to avoid such problems.
-  **Warning:** means that a potential risk of property damage or physical injury exists.

More information:

If you want more information about our products, please visit the following website: <http://www.foxconnchannel.com>

Item Checklist:

Thank for your purchasing WinFast NF4UK8AA series motherboard. Please check the package; if there are missing or damaged items, contact your distributor as soon as possible.

- ❖ NF4UK8AA Series Motherboard (x1)
- ❖ WinFast Utility CD (x1)
- ❖ NVRAID Driver Disk (x1) (optional)
- ❖ User Manual (x1)
- ❖ IDE Cable (x2)
- ❖ FDD Cable (x1)
- ❖ I/O Shield (x1)
- ❖ SPDIF Cable (x1) (optional)
- ❖ USB2.0 Cable (x1)
- ❖ S-ATA Signal Cable (x4)
- ❖ S-ATA Power Cable (x2)
- ❖ 1394 Cable (x1) (optional)
- ❖ Retention Mechanism (x1)

Declaration of conformity



HON HAI PRECISION INDUSTRY COMPANY LTD
66 , CHUNG SHAN RD., TU-CHENG INDUSTRIAL DISTRICT,
TAIPEI HSIEN, TAIWAN, R.O.C.

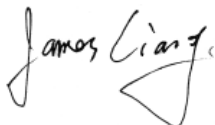
declares that the product

Motherboard
NF4UK8AA

is in conformity with

(reference to the specification under which conformity is declared in
accordance with 89/336 EEC-EMC Directive)

- EN 55022/A1: 2000 Limits and methods of measurements of radio disturbance characteristics of information technology equipment
- EN 61000-3-2/A14:2000 Electromagnetic compatibility (EMC)
Part 3: Limits
Section 2: Limits for harmonic current emissions
(equipment input current \leq 16A per phase)
- EN 61000-3-3/A1:2001 Electromagnetic compatibility (EMC)
Part 3: Limits
Section 2: Limits of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current \leq 16A
- EN 55024/A1:2001 Information technology equipment-Immunity characteristics limits and methods of measurement

Signature : 

Place / Date : TAIPEI/2004

Printed Name : James Liang

Position/ Title : Assistant President

Declaration of conformity



Trade Name: WinFast
Model Name: **NF4UK8AA**
Responsible Party: PCE Industry Inc.
Address: 458 E. Lambert Rd.
Fullerton, CA 92835
Telephone: 714-738-8868
Facsimile: 714-738-8838

Equipment Classification: FCC Class B Subassembly
Type of Product: Motherboard
**Manufacturer: HON HAI PRECISION INDUSTRY
COMPANY LTD**
Address: 66 , CHUNG SHAN RD., TU-CHENG
INDUSTRIAL DISTRICT, TAIPEI HSIEN,
TAIWAN, R.O.C.

Supplementary Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Tested to comply with FCC standards.

Signature :

A handwritten signature in black ink that reads "James Liang". The signature is written in a cursive style with a large, sweeping flourish at the end.

Date : 2004

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 **Warning:**

1. Attach the CPU and heatsink using silica gel to ensure full contact.
2. It is suggested to select high-quality, certified fans in order to avoid damage to the motherboard and CPU due to high temperature.
3. Never turn on the machine if the CPU fan is not properly installed.
4. Ensure that the DC power supply is turned off before inserting or removing expansion cards or other peripherals, especially when you insert or remove a memory module. Failure to switch off the DC power supply may result in serious damage to your system or memory module.

 **Warning:**

We cannot guarantee that your system will operate normally while over-clocked. Normal operation depends on the over-clock capacity of your device.

 **Attention:**

Since BIOS programs are upgraded from time to time, the BIOS description in this manual is just for reference. We do not guarantee that the content of this manual will remain consistent with the actual BIOS version at any given time in the future.

 **Attention:**

The pictures of objects used in this manual are just for your reference. Please refer to the physical motherboard.

This manual is suitable for motherboard of NF4UK8AA series. Each motherboard is carefully designed for the PC user who wants diverse features.

- L with onboard 100M LAN
- K with onboard 1G LAN
- 6 with 6-channel audio
- 8 with 8-channel audio
- E with 1394
- S with SATA
- R with RAID

You can find PPID label on the motherboard. It indicates the functions that the motherboard has.

For example:



On the blue mark of the PPID label, it means the motherboard supports 6-channel Audio (-6), 1394 port(-E), onboard 100M LAN (-L), SATA function(-S).

Chapter 1

Thank you for buying WinFast NF4UK8AA series motherboard. This series of motherboard is one of our new products, and offers superior performance, reliability and quality, at a reasonable price. This motherboard adopts the advanced NVIDIA nForce4 Ultra chipset, providing users a computer platform with a high integration-compatibility-performance price ratio.

This chapter includes the following information:

- ❖ Main Features
- ❖ Motherboard Layout

Main Features

Size:

- ATX form factor of 12" x 9.6"

Microprocessor:

- Supports Socket-939 for AMD K8 Athlon™ 64FX/Athlon™ 64 processors

HyperTransport Technology:

- 16 x 16 link running at 1GHz for extremely high throughput (8.0GB/sec)
- Differential lines with low voltage swings

Chipset:

- NVIDIA Chipset: NVIDIA nForce4 Ultra

System Memory

- Four 184-pin DDR DIMM slots
- Supports DDR 266/333/400 memory
- Supports 128/256/512/1024Mb technology up to 4GB

USB 2.0 Port

- Supports hot-plug
- Eight USB 2.0 ports (four rear panel ports, two onboard USB connectors providing four extra ports)
- Supports wake-up from S1 and S3 mode
- Supports USB 2.0 protocol up to 480Mbps transmission rate

Onboard Serial ATA

- Supports up to four S-ATA devices, such as HDD, etc
- Dual controller architecture providing full 3Gb/s bandwidth to each disk

NVIDIA RAID Technology

- supports RAID 0, RAID 1, RAID 0+1 and JBOD
- Cross-controller RAID uniquely supports both SATA and PATA disk devices within a single array

Onboard 1394 (optional) IEEE 1394

- Supports hot-plug

- With rate of transmission at 400Mbps
- Self-configured addressing
- Supports two independent 1394 units synchronously at most, such as HDD, CD-ROM

Onboard LAN (-K)

- Supports 10/100/1000 (-K) Mbps Ethernet
- LAN interface built-in on board

Onboard Audio



- Supports 8-channel audio
- Supports SPDIF output
- Supports Universal Audio Jack (UAJ)
- Supports high quality differential CD input

BIOS

- Licensed advanced AWARD (Phoenix) BIOS, supports flash ROM, Plug-and-Play
- Supports IDE, CD-ROM, SCSI HDD or USB device boot up

Green Function

- Supports ACPI (Advanced Configuration and Power Interface)
- Supports S0 (normal), S1 (power on suspend), S3 (suspend to RAM), S4 (suspend to disk—depends on OS), and S5 (soft-off) ACPI state

PCI Express x16 support

- Supports 4 GB/sec (8GB/sec concurrent) bandwidth
- Low power consumption and power management features

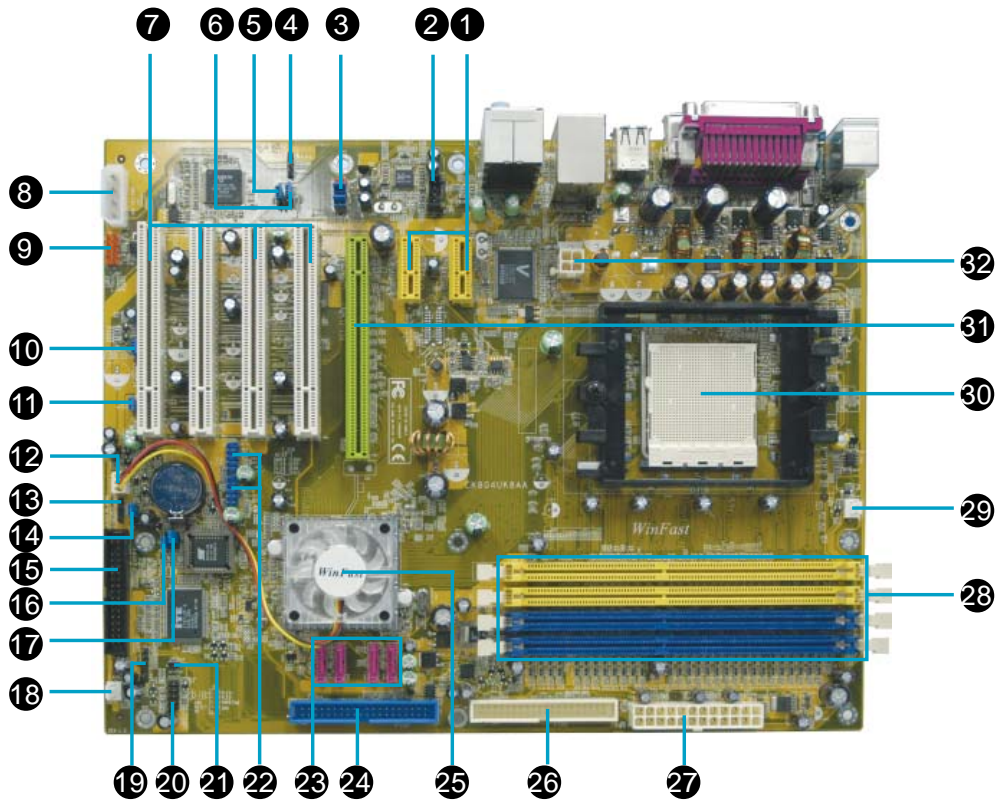
Expansion Slots

- Four PCI slots
- Two PCI Express x1 slots
- One PCI Express x16 Graphics slot

Advanced Features

- PCI 2.3 Specification Compliant
- Supports PC Health function (capable of monitoring system voltage, CPU/system temperature, and fan speed)

Motherboard Layout



- | | |
|-----------------------------------|-------------------------------------|
| 1. PCI Express x1 slots | 2. CD_IN connector |
| 3. Front Audio connector | 4. SPDIF_OUT connector |
| 5. PE_REFCLK select jumper | 6. Termination enable jumper |
| 7. PCI slots | 8. Auxiliary PEX power connector |
| 9. F_1394 connector (optional) | 10. ROM Table Select jumper |
| 11.Recovery jumper | 12. FAN1 connector |
| 13.Speaker connector | 14. Common mode select level jumper |
| 15. Floppy drive connector | 16. BIOS TBL Enable jumper |
| 17. Clear CMOS jumper | 18. FAN2 connector |
| 19. IrDA connector | 20. Front Panel connector |
| 21. Intruder connector | 22. Front USB connectors |
| 23. SATA connectors | 24. Primary IDE connector |
| 25. Chipset: NVIDIA nForce4 Ultra | 26. Secondary IDE connector |
| 27. 24-pin power connector | 28. DDR DIMM slots |
| 29. CPU_FAN connector | 30. CPU Socket |
| 31. PCI Express x16 slot | 32. 12V CPU power connector |

Chapter 2

This chapter introduces the hardware installation process, including the installation of the CPU and memory. It also addresses the connection of your power supply, use of the rear panel connectors, connection of hard drive and floppy drive data cables, and setting up various other features of the motherboard. Caution should be exercised during the installation process. Please refer to the motherboard layout prior to any installation and read the contents in this chapter carefully.

This chapter includes the following information:

- ❖ CPU
- ❖ Memory
- ❖ Power Supply
- ❖ Rear Panel Connectors
- ❖ Other Connectors
- ❖ Expansion Slots
- ❖ Jumpers

 **Notes:**

Take note of the following precautions before you install components or change settings.

1. Use a grounded wrist strap or touch a safely grounded object, such as an attached power supply, before handling components to avoid damaging them due to static electricity.
2. Unplug the power cord before opening your chassis or touching any components.
3. Hold components by their edges to avoid touching any exposed integrated circuits (ICs).
4. Whenever you uninstall a component, place it on a grounded anti-static pad or into the antistatic bag that it came in.

CPU

This motherboard supports Athlon™ 64FX/Athlon™ 64 processors running at 1GHz for extremely high throughput (8.0GB/sec) and Hyper Transport™ Technology.

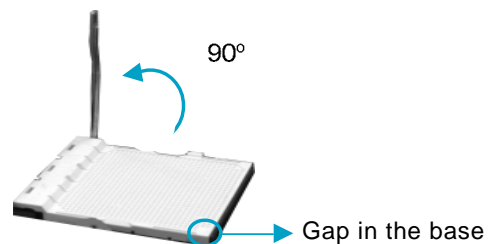
i Attention:

The CPU pins must be properly aligned with the holes in the socket, otherwise the CPU may be damaged.

Installation of CPU

Follow these steps to install the CPU.

1. Unlock the socket by pressing the lever sideways, then lift it up to a 90° angle.



2. Align the cut edge to the gap in the base of the socket. Carefully insert the CPU into the socket until it fits in place.



Cut edge



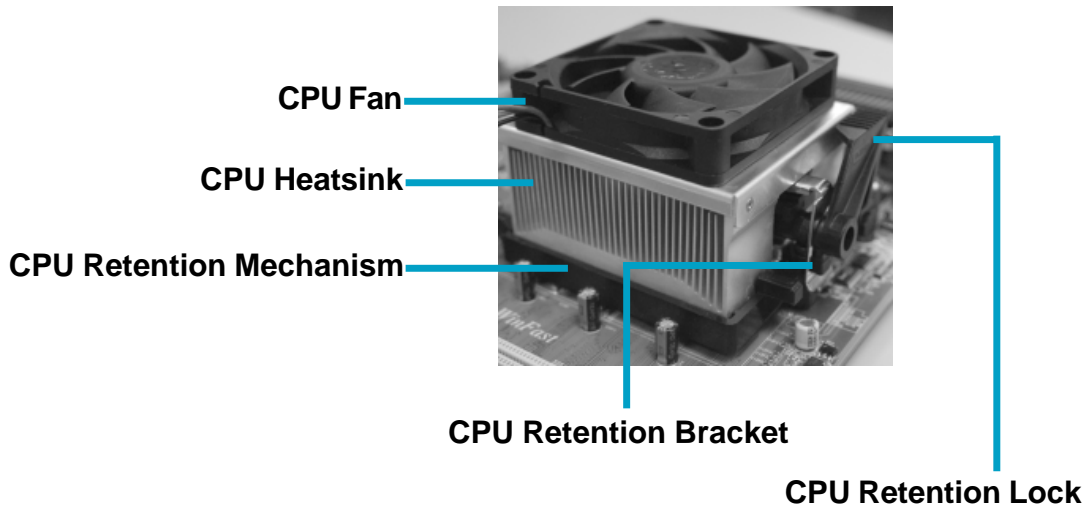
Push down the socket lever to secure the CPU.

3. When the CPU is in place, press it firmly on the socket while you push down the socket lever to secure the CPU. The lever clicks on the side tab to indicate that it is locked.



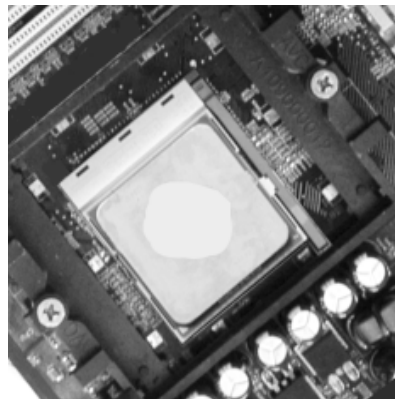
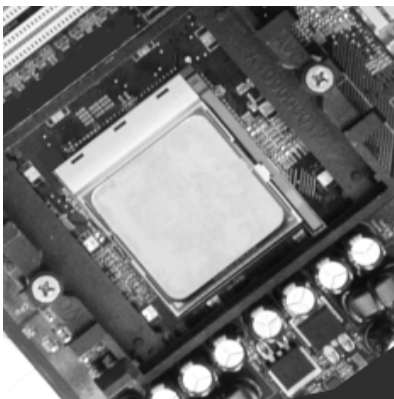
Installation of CPU Fan

New technology allows processors to run at higher and higher frequencies. To avoid problems arising from high-speed operation, for example, overheating, you need to install the proper fan. The following procedure is provided for reference only, please refer to your CPU fan user guide for the actual procedure.



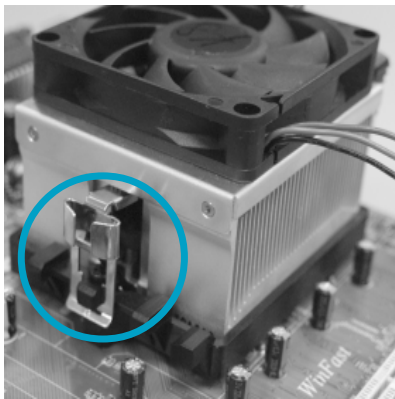
1. Locate the CPU retention mechanism base (surrounds the CPU socket).

2. If required, apply a light coating of silica gel to the top of the CPU.

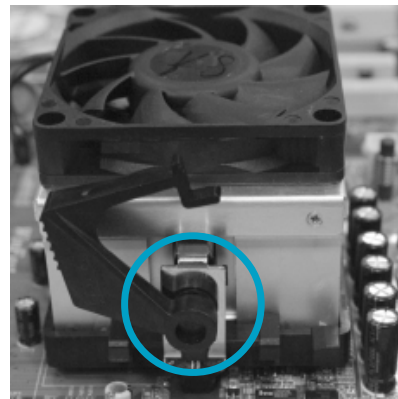


NOTE: The CPU heatsink may have a pre-applied thermal compound. In that case, the silica gel is not required.

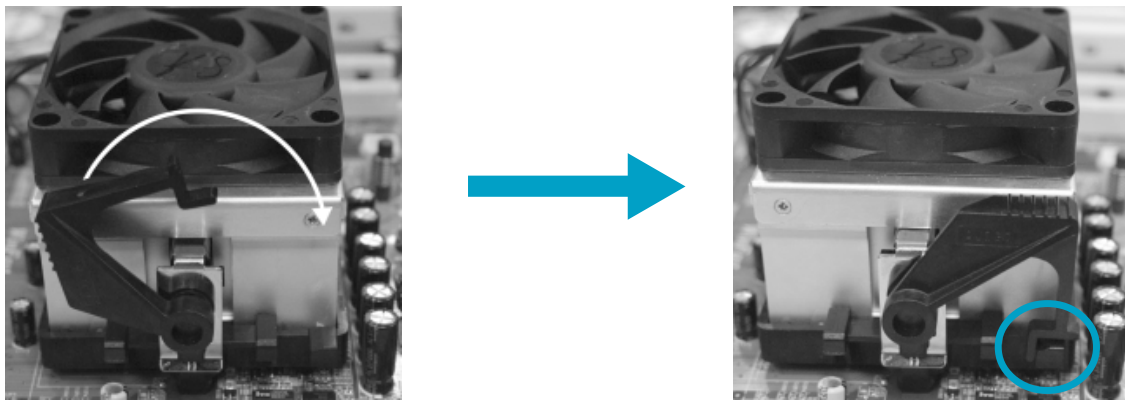
3. Place the cooling set onto the retention mechanism. Attach one end of the retention bracket to retention mechanism.



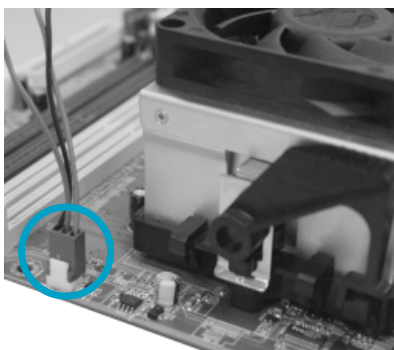
4. Align the other end of the retention bracket to fasten the cooling set on the top of the retention mechanism.



5. Push down the retention bracket lock on the retention mechanism to secure the heatsink and fan to module base.



6. Connect the fan's power cable to the appropriate 3-pin terminal on the motherboard.



CPU Qualified Vendor List

The following table lists the CPUs that have been tested and qualified for use with this motherboard.

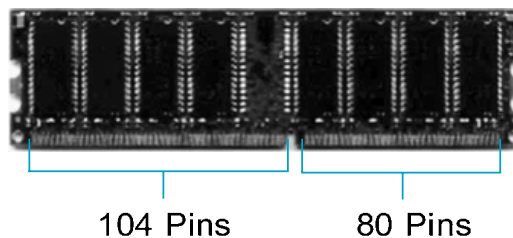
Package	Cache Size	Frequency	Model Number
Socket 939	512KB	2200 MHz	Athlon64 3500+
Socket 939	512KB	2400 MHz	Athlon64 3800+
Socket 939	1MB	2400 MHz	Athlon64 4000+
Socket 939	1MB	2400 MHz	Athlon64 FX53
Socket 939	1MB	2600 MHz	Athlon64 FX55

Memory

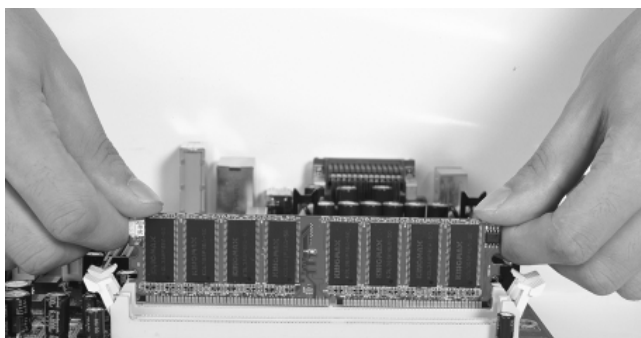
This motherboard includes four 184-pin slots with 266/333/400 MHz Dual Channel DDR DRAM interface. You must install at least one memory module to ensure normal operation. If you install four modules, they must be the same speed. Mixing memory modules from different manufacturers are not recommended.

Installation of DDR Memory

1. There is only one gap in the center of the DIMM slot, and the memory module can be fixed in one direction only.
2. Align the memory module to the DIMM slot, and insert the module vertically into the DIMM slot.



3. The plastic clips at both sides of the DIMM slot will lock automatically.



 **Note:**

Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, especially the memory devices, otherwise your motherboard or the system memory might be seriously damaged.

Recommended Memory Configurations

The following table list is the recommended memory configurations. Please install the memory according to the list.

Mode	DIMM0	DIMM1	DIMM2	DIMM3
Signal-channel	Populated	—	—	—
	—	—	Populated	—
	Populated	—	Populated	—
Dual-channel	Populated	Populated	—	—
	—	—	Populated	Populated
	Populated	Populated	Populated	Populated

 **Note:**

Installing DDR DIMMs other than the recommended configurations may cause memory sizing error or system boot failure.

Memory Qualified Vendor List

The following table list is the memory modules that have been tested and qualified for use with this motherboard.

Vendor	Type	Size
INFINEON	PC3200(DDR400)	256M
INFINEON	PC2700(DDR333)	1G
SAMSUNG	PC3200(DDR400)	256M
KINGMAX	PC2100(DDR266)	256M
HLX	PC2700(DDR333)	256M
NANYA	PC2700(DDR333)	1G
TWINMOS	PC3200(DDR400)	1G
K-DATA	PC3200(DDR400)	512M

 **Note:**

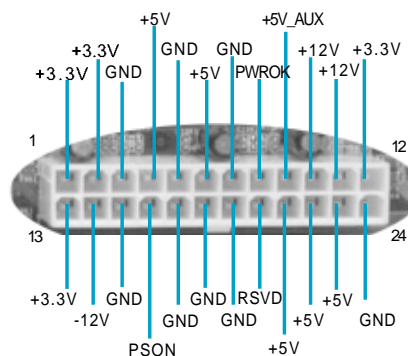
Make sure to use only the tested and qualified DDR modules listed above. Other DDR modules manufactured by other vendors may not be suitable for this motherboard.

Power Supply

This motherboard uses an ATX power supply. In order to avoid damaging any devices, make sure that they have been installed properly prior to connecting the power supply.

ATX Power Connector: PWR1

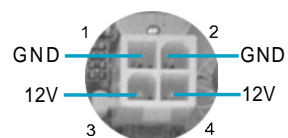
PWR1 is the ATX power supply connector. Make sure that the power supply cable and pins are properly aligned with the connector on the motherboard. Firmly plug the power supply cable into the connector and make sure it is secure.



ATX 24-pin Power Connector

ATX 12V Power Connector: PWR2

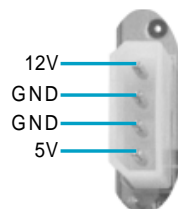
The 4 pin ATX 12V power supply connects to PWR2 and provides power to the CPU.



ATX 12V Power Connector

AUX PEX PWR connector: J2A1

This connector is auxiliary power which mainly supplies for PXE function.



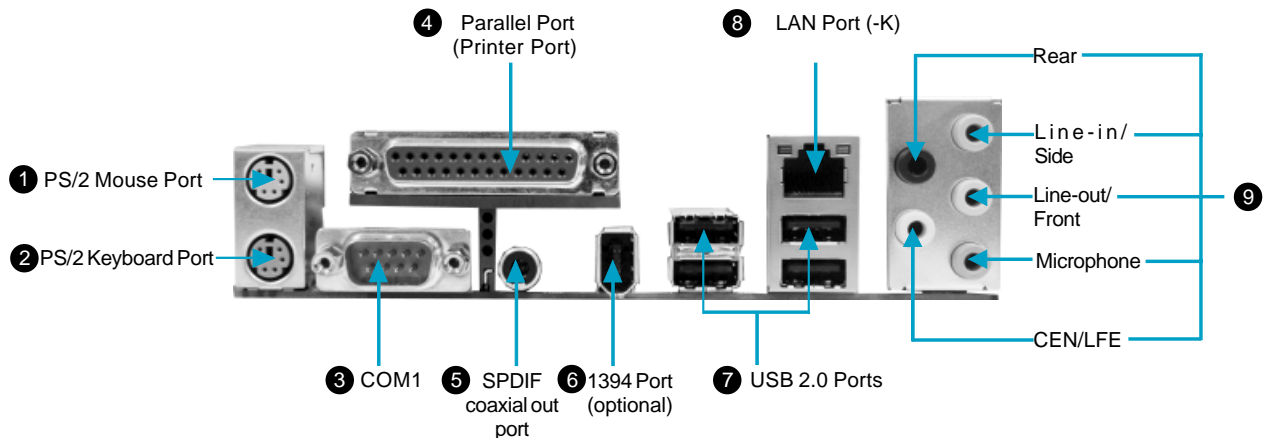
i Attention:

We strongly recommend you use 24-pin power supply. If you want to use 20-pin power supply, you need to align the ATX power connector according to the right picture.



Rear Panel Connectors

This motherboard provides the following ports as below:



❶ PS/2 Mouse Port

This green 6-pin connector is for a PS/2 mouse.

❷ PS/2 Keyboard Port

This purple 6-pin connector is for a PS/2 keyboard.

❸ Serial Port: COM1

This 9-pin COM1 port is for pointing devices or other serial devices.

❹ Parallel Port: Printer Port

The 25-pin port connects a parallel printer, a scanner, or other devices.

❺ SPDIF Coaxial Out Port

This port connects to external audio output devices with coaxial cable connectors.

❻ 1394 Port (optional)

This digital interface supports electronic devices such as digital cameras, scanners, and printers.

❼ USB 2.0 Ports

These four Universal Serial Bus (USB) ports are available for connecting USB 2.0/1.1 devices.

❽ LAN Port (-K)

This port allows connection to a Local Area Network (LAN) through a network hub.

9 Rear, Line in/side, Line out, Microphone, CEN/LFE

When using a 2-channel sound source, the Line out jack is used to connect to speaker or headphone; the Line in jack connects to an external CD player, tape player or other audio device. The Microphone jack is used to connect to the microphone.

When using a 6-channel sound source, connect the front speaker to the green audio output; connect the surround sound speaker to the black audio output; connect the center speaker/subwoofer to the yellow audio output.

When using a 8-channel sound source, connect the front speaker to the green audio output; connect the rear sound speaker to the black audio output; connect the center speaker/subwoofer to the yellow audio output; connect the side sound speaker to the blue audio output.

Other Connectors

This motherboard includes connectors for FDD devices, IDE HDD devices, SATA devices, USB devices, 1394 devices, IR module, CPU fan, system fan, and others.

FLOPPY

This motherboard includes a standard FLOPPY interface, supporting 360 K, 720 K, 1.2 M, 1.44 M, and 2.88 M FDDs.

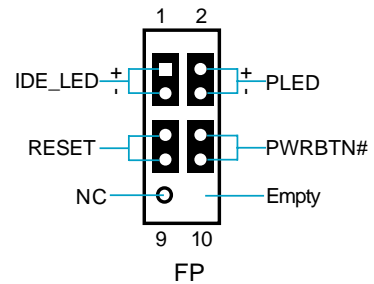
HDD Connectors: PIDE & SIDE

These connectors support the provided UltraDMA133/100/66 IDE hard disk ribbon cable and you can configure as a disk array through NVIDIA nForce4 Ultra IDE RAID controller. Refer to chapter 5 for details on how to set up RAID configurations.

Connect the cable's blue connector to the primary (recommended) or secondary IDE connector, then connect the gray connector to the slave device (hard disk drive) and the black connector to the master device. If you install two hard disks, you must configure the second drive as a slave device by setting its jumper accordingly. Refer to the hard disk documentation for the jumper settings.

Front Panel Connector: FP

This motherboard includes one connector for connecting the front panel switch and LED indicator.



Hard Disk LED Connector (IDE_LED)

Attach the connector to the IDE_LED on the front panel of the case; the LED will flash while the HDD is in operation.

Reset Switch (RESET)

Attach the connector to the Reset switch on the front panel of the case; the system will restart when the switch is pressed.

Power LED Connector (PLED)

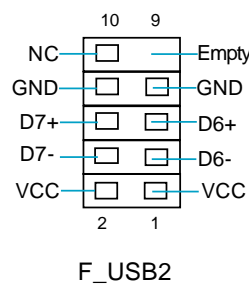
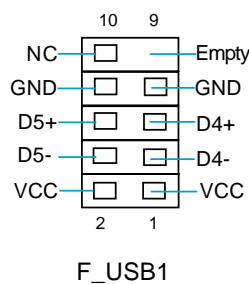
Attach the connector to the Power LED on the front panel of the case. The Power LED indicates the power supply status. When the system is in S0 status, the LED is on. When the system is in S1 status, the LED is blink. When the system is in S3, S4, S5 status, the LED is off.

Power Switch Connector (PWRBTN#)

Attach the connector to the power button of the case. Pushing this switch allows the system to be turned on and off rather than using the power supply button.

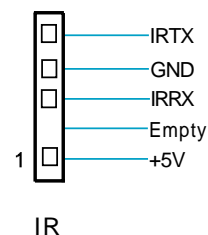
USB Connectors: F_USB 1, F_USB 2

Besides four USB ports on the rear panel, the series of motherboards also have two 10-pin connectors on board which may connect to the front panel USB cable to provide additional four USB ports.



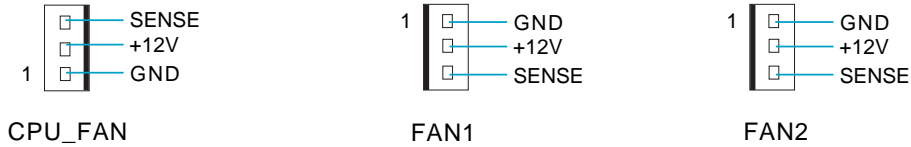
IrDA Connector: IR

The IrDA infrared transmission allows your computer to send and receive data via an infrared ray. The relevant parameters for the BIOS Integrated Peripherals should be set prior to using this function.



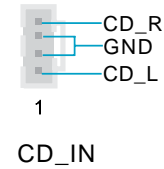
Fan Connectors: CPU_FAN, FAN1, FAN2

There are three fan connectors on this motherboard.



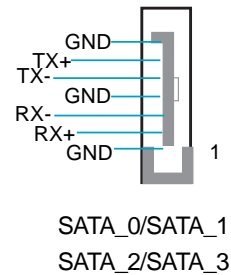
Audio Connector: CD_IN

CD_IN is Sony standard CD audio connectors, to receive audio input from the CD-ROM, attach its audio connector to the CD_IN audio connectors on the motherboard.



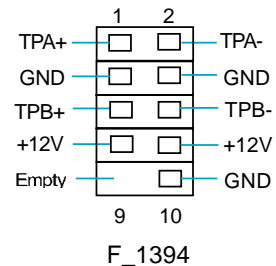
S-ATA Connectors: SATA_0, SATA_1, SATA_2, SATA_3

The Serial ATA connectors are used to connect the S-ATA devices to the motherboard. These connectors support the thin Serial ATA cables for primary internal storage devices. The current S-ATA interface allows up to 3Gb/s data transfer rate. Refer to RAID manual on how to set up SATA RAID configurations for details.



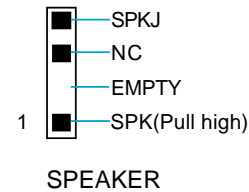
1394 Connector: F_1394 (optional)

The 1394 expansion cable can be connected to either the front (provided that the front panel of your chassis is equipped with the appropriate interface) or the rear panel of the chassis.



Speaker Connector

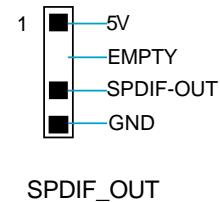
The speaker connector is used to connect speaker of the chassis



SPDIF Out Connector: SPDIF_OUT

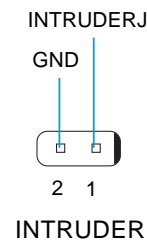
The S/PDIF out connector is capable of providing digital audio to external speakers or compressed AC3 data to an external Dolby digital decoder.

Note: The empty pin of SPDIF cable should be aligned to empty pin of SPDIF out connector.



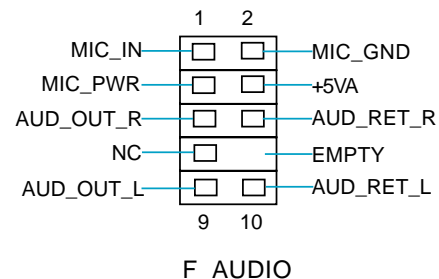
Chassis Intruder Connector: INTRUDER

The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the connector has been closed once, the system will send a message. To utilize this function, set “Intruder Detection” to “Enabled” in the “Power Management Setup” section of the CMOS Setup. Save and exit, then boot the operating system once to make sure this function takes effect.



Front Audio Connector: F_AUDIO

The audio port includes two parts – the Front Audio and Rear Audio. Their priority is sequenced from high to low (Front Audio to Rear Audio). If headphones are plugged into the front panel of the chassis (using the Front Audio), then the Line Out (Rear Audio) on the rear panel will not work. If you do not want to use the Front Audio, pin 5 and 6, pin 9 and 10 must be short, and then the signal will be sent to the rear audio port.



Expansion Slots

This motherboard includes four 32-bit Master PCI bus slots, two PCI Express x1 slots, and one PCI Express x16 slot.

PCI Slots

The expansion card can be installed in the PCI slot. When you install or take out such card, you must make sure that the power plug has been pulled out. Please read carefully the instructions provided for such card, and install and set the necessary hardware and software for such card, such as the jumper or BIOS setup.

PCI Express Slots

PCI Express will offer the following design advantages over the PCI and AGP interface:

- Compatible with existing PCI drivers and software and Operating Systems.
- High Bandwidth per Pin. Low overhead. Low latency.
- PCI Express supports a raw bit-rate of 2.5 Gb/s on the data pins. This results in a real bandwidth per pair of 250 MB/s.
- A point to point connection, allows each device to have a dedicated connection without sharing bandwidth.
- Ability to comprehend different data structure.
- Low power consumption and power management features.

PCI Express will take two forms, x16 and x1 PCI Express slots. Whereas the x16 slot is reserved for graphic/video cards, the x1 slots are designed to accommodate less bandwidth-intensive cards, such as a modem or LAN card.

The difference in bandwidth between the x16 and x1 slots are not able to be sure, with the x16 slot pushing 4GB/sec (8GB/sec concurrent) of bandwidth, and the x1 PCI Express slot offering 250MB/sec.

Warning:

If a performance graphics card was installed into x16 PCI Express slot, 2X12 pin power supply was strongly recommended since that card may draw 75W power.

Installing an expansion card

1. Before installing the expansion card, read the documentation that came with it and make the necessary hardware settings for the card.
2. Make sure to unplug the power cord before adding or removing expansion cards.
3. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
4. Secure the card to the chassis with the screw you removed earlier.

PCI Express x16 Graphics Cards Qualified Vendor List

The following table lists the PCI Express x16 graphics cards that have been tested and qualified for use with this motherboard.

Vendor	Type	Video Memory
ATI	Radeon X300	128MB
ATI	Radeon X800	128MB
WinFast	6600	128MB
WinFast	PCOX5750	128MB

 **Note:**




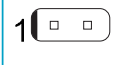


Make sure to use only the tested and qualified PCI Express x16 graphics cards listed above. Other graphics cards manufactured by other vendors may not be suitable for this motherboard.

Jumpers

Users can change the jumper settings on this motherboard if necessary. This section explains how to use the various functions of this motherboard by changing the jumper settings. Users should read the following contents carefully prior to modifying any jumper settings.

Description of Jumpers

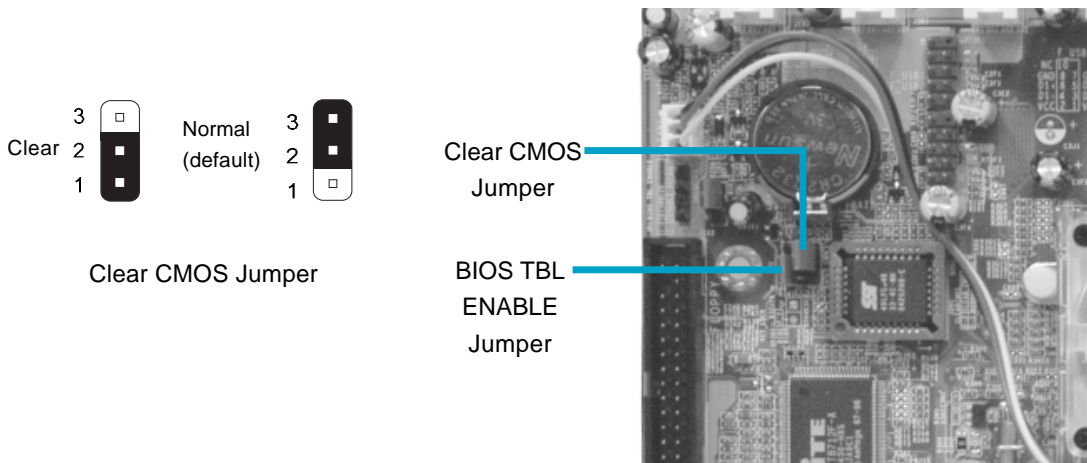
1. For the jumpers on this motherboard, pin 1 can be identified by the silk-screen printed “△” next to it. However, in this manual, pin 1 is simply labeled as “1”.
2. The following table provides some explanations of the jumper pin settings. Users should refer to the table while adjusting jumper settings.

Jumper	Diagram	Definition	Description
		1-2	Set pin 1 and pin 2 closed
		2-3	Set pin 2 and pin 3 closed
		Closed	Set the pin closed
		Open	Set the pin opened

Clear CMOS Jumper: J2H1

This motherboard uses the CMOS RAM to store all the set parameters. The CMOS can be cleared by removing the CMOS jumper. Reference the following process.

1. Turn off the AC power supply and short pins 1 and 2 on the jumper.
2. Return the jumper to the normal setting (locking pins 2 and 3 together with the jumper cap).
3. Turn on the system. The BIOS is returned to the default settings.

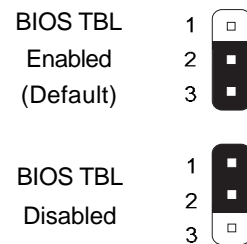


Warning:

1. Disconnect the power cable before adjusting the jumper settings.
2. DO NOT clear the CMOS while the system is turned on.

BIOS TBL ENABLE Jumper: JP1

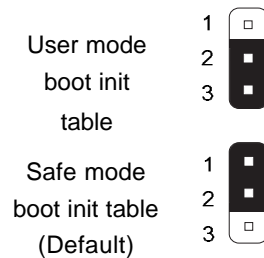
The system cannot boot, if the BIOS failed to be flashed in conventional flash BIOS process. You will have no such worry when using the BIOS TBL function, which is used to protect BIOS “Top Boot Block”. By using this function, the system still can boot even if the flash BIOS fails and show some information to recover the BIOS. To utilize this function, you just leave this jumper as default (short pin 2 and 3 with the jumper cap).



BIOS TBL ENABLE Jumper

ROM TABLE SELECT Jumper: J1B1

This jumper is used to select between a user table and a safe table for booting initialization parameters.



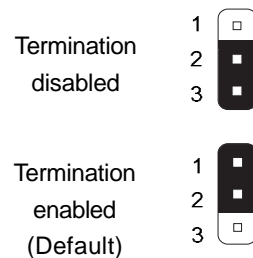
ROM TABLE SELECT Jumper

Warning:

The following four jumpers set only for technical support. We strongly recommend that users not make any change to these jumpers, otherwise it may cause serious damage to the board. The function descriptions herein are just for your reference only.

Termination Enable Jumper: J3A2

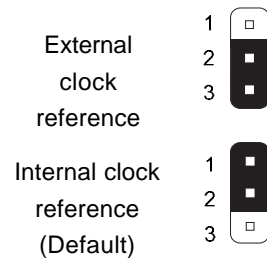
This jumper is used to enable or disable internal differential termination for PCI Express reference clock input pins.



Termination Enable Jumper

PE_REFCLK Select Jumper: J3A1

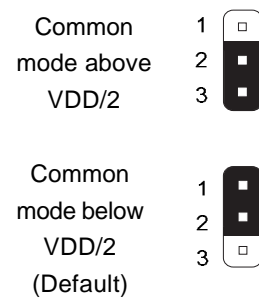
This jumper is used to select the resource for PCI Express PLL reference clock.



PE_REFCLK Select Jumper

Common Mode Level Select Jumper: J1G1

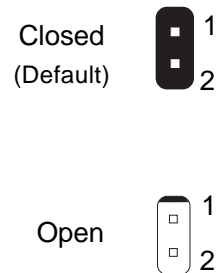
This jumper is used to select common-mode level range for PCI Express external reference clock input pins.



Common Mode Level Select Jumper

Recovery Jumper: J1E1

This jumper is reserved for technology support, please do not change the jumper.



Recovery Jumper

Starting up for the first time

1. After making all the connections, replace the system case cover.
2. Make sure that all switches are turned off.
3. Turn on the devices in the following order.
 - a. Monitor
 - b. External SCSI devices (starting with the last device on the chain)
 - c. System power
4. After powering on, LED on the system front panel case lights up. For ATX power supplies, the system LED lights up when you press the ATX power switch. If your monitor complies with green standards or if it has a power standby feature, the monitor LED may light up or switch between orange and green after the system LED turns on. The system then enters the Power-On Self Test (POST) routines. While the tests are running, the BIOS beeps or additional messages appear on the screen. If you do not see anything within 30 seconds from the time you turned on the power, the system may have failed a power-on test. Check the jumper settings and connections or call your retailer for assistance.
5. After the POST routines are completed, press the key to access the BIOS Setup Utility. For detailed instructions, please refer to Chapter 3.

Powering off the computer

1. Using the OS shut down function

If you use windows 98/ME/2000/XP, click Start and select Shut Down, then click the OK button to shut down the computer. The power supply should turn off after Windows shuts down.
2. Using the dual function power switch

While the system is ON, pressing the power switch for less than 4 seconds puts the system in sleep mode or soft-off mode, depending on the BIOS setting. Pressing the power switch for more than 4 seconds lets the system enter the soft-off mode regardless of the BIOS setting.

Chapter 3

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

You have to run the Setup Program when the following cases occur:

1. An error message appears on the screen during the system POST process.
2. You want to change the default CMOS settings.

This chapter includes the following information:

- ❖ Enter BIOS Setup
- ❖ Main Menu
- ❖ Standard CMOS Features
- ❖ SuperBIOS Features
- ❖ Advanced BIOS Features
- ❖ Advanced Chipset Features
- ❖ Integrated Peripherals
- ❖ Power Management Setup
- ❖ PnP/PCI Configurations
- ❖ PC Health Status (O.T.S)
- ❖ Load Best Defaults
- ❖ Set Supervisor/User Password
- ❖ Save & Exit Setup
- ❖ Exit Without Saving

Enter BIOS Setup

The BIOS is the communication bridge between hardware and software, correctly setting up the BIOS parameters is critical to maintain optimal system performance. Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press the key to enter the Award BIOS CMOS Setup Utility.

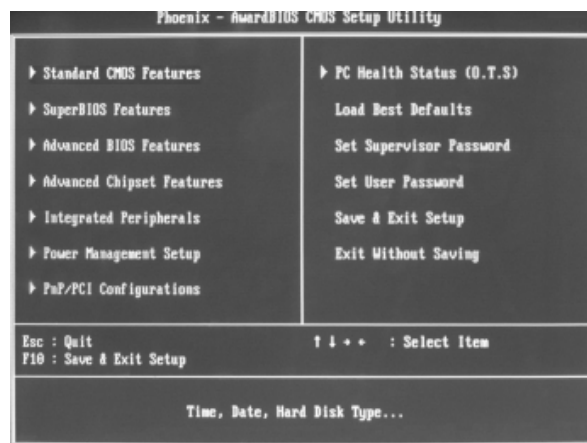
Press TAB to show POST screen, DEL to enter SETUP, ESC to Enter Boot Menu.

Note:

We do not suggest that you change the default parameters in the BIOS Setup, and we shall not be responsible for any damage that results from any changes that you make.

Main Menu

The main menu allows you to select from the list of setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept or go to the sub-menu.



Main Menu

The items in the BIOS Setup main menu are explained below:

Standard CMOS Features

The basic system configuration can be set up through this menu.

SuperBIOS Features

The general system features can be set up through this menu.

Advanced BIOS Features

The advanced system features can be set up through this menu.

Advanced Chipset Features

The values for the chipset can be changed through this menu, and the system performance can be optimized.

Integrated Peripherals

All onboard peripherals can be set up through this menu.

Power Management Setup

All the items of Green function features can be set up through this menu.

PnP/PCI Configurations

The system's PnP/PCI settings and parameters can be modified through this menu.

PC Health Status (O.T.S)

This will display the current status of your PC.

Load Best Defaults

The best performance settings can be loaded through this menu, however, the stable default values may be affected.

Set Supervisor/User Password

The supervisor/user password can be set up through this menu.

Save & Exit Setup

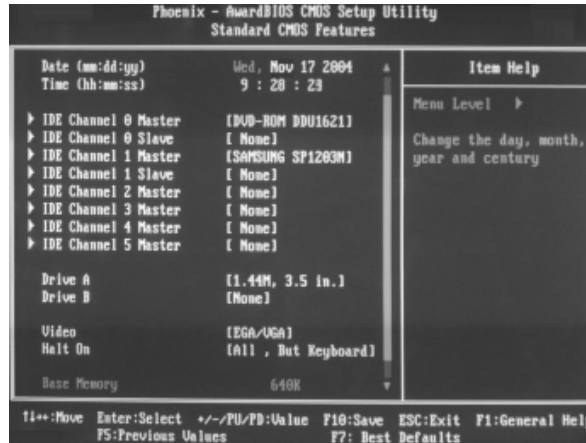
Save CMOS value settings to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

Standard CMOS Features

This sub-menu is used to set up the standard CMOS features, such as the date, time, HDD model and so on. Use the arrow keys select the item to set up, and then use the <PgUp> or <PgDn> key to choose the setting values.



Standard CMOS Features Menu

Date

This item allows you to set the desired date (usually as the current date) with the <day><month><date><year> format.

- day weekday from Sun. to Sat., defined by BIOS (read-only).
- month month from Jan. to Dec.
- date date from 1st to 31st, can be changed by using the keyboard.
- year year, set up by users.

Time

This item allows you to set up the desired time (usually as the current time) with <hour><minute><second> format.

IDE Channel 0/1/ Master/Slave & IDE Channel 2/3/4/5 Master

These categories identify the HDD types of 6 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and Manual. “None” means no HDD device is installed or set; “Auto” indicates the system can automatically detect and configure the hard disk when booting up; If it fails to find a device, choose “Manual” and change Access Mode to “CHS”, then manually configure the drive by entering the characteristics of the drive directly from the keyboard and pressing < Enter>:

Cylinder	number of cylinders	Head	number of heads
Precomp	write pre-compensation	Landing Zone	Landing Zone
Sector	number of sectors		

Award (Phoenix) BIOS can support 4 HDD modes: CHS, LBA and Large or Auto mode.

CHS	For HDD<528MB
LBA	For HDD>528MB & supporting LBA (Logical Block Addressing)
Large	For HDD>528MB but not supporting LBA
Auto	Recommended mode

Drive A/B

This item allows you to select the kind of FDD to be installed, including [None], [360K, 5.25in], [1.2M, 5.25in], [720K, 3.5in], [1.44M, 3.5in] and [2.88 M, 3.5in].

Video

The following table is provided for your reference in setting the display mode for your system.

EGA/VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

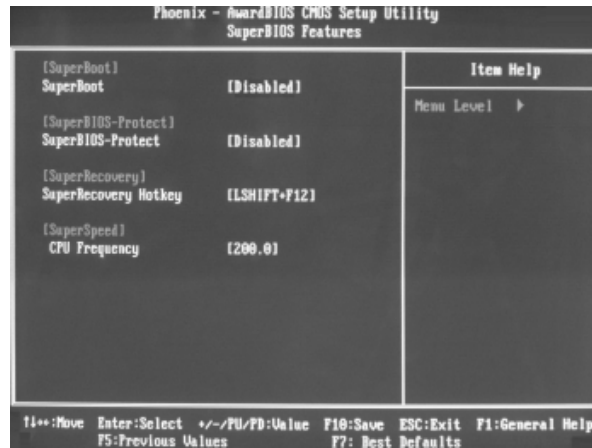
All Errors	Whenever the BIOS detects a nonfatal error, the system will stop and you will be prompted.
No Errors	The system boot will not stop for any errors that may be detected.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette	The system boot will not stop for a diskette error; but it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or a disk error, but it will stop for all other errors.

Memory

This is a Displays-Only Category, determined by POST (Power On Self Test) of the BIOS.

Base Memory	The BIOS POST will determine the amount of base (or conventional) memory installed in the system.
Extended Memory	The BIOS determines how much extended memory is present during the POST.
Total Memory	Total memory of the system.

SuperBIOS Features



SuperBIOS Features Menu

❖ [SuperBoot] SuperBoot (Default: Disabled)

SuperBoot allows system-relevant information to be stored in CMOS upon the first normal startup of your PC, and the relevant parameters will be restored to help the system start up more quickly on each subsequent startup.

❖ [SuperBIOS-Protect] SuperBIOS-Protect (Default: Disabled)

SuperBIOS-Protect function protects your PC from being affected by viruses, e.g. CIH.

❖ [SuperRecovery] SuperRecovery Hotkey (Default: LSHIFT+F12)

SuperRecovery provides the users with an excellent data protection and HDD recovery function.

❖ [SuperSpeed] CPU Frequency (Default: Depend on CPU)

The conventional overclock method uses the jumpers on the motherboard, and it is both troublesome and apt to errors. By using SuperSpeed, the CPU can be overclocked by keying in the desired value in the CPU clock range.

⚠ Warning:

Make sure your selection is right. Overclocking CPU can adversely affect the reliability of the system and introduce errors into your system. We will not be responsible for any damage caused.

Advanced BIOS Features



Advanced BIOS Features Menu

❖ Hard Disk Boot Priority

This item is used to select the priority for HDD startup. After pressing <Enter>, you can select the HDD using the <PageUp>/<PageDn> or Up/Down arrow keys, and change the HDD priority using <+> or <->. To exit this option, press <Esc>.

❖ Virus Warning (Default: Disabled)

This item is used to set up the virus warning message for the IDE HDD boot sector. When enabled, a warning message will appear on the screen if any program intends to write information to the boot sector.

Note: Such function provides protection to the startup sector only; it does not protect the entire hard disk.

❖ CPU Internal Cache (Default: Enabled)

This item is used to turn on or off the CPU internal cache. Leave this item at the default value for better performance.

❖ External Cache (Default: Enabled)

This item is used to turn on or off the CPU external cache. Leave this item at the default value for better performance.

❖ First/Second/Third/Fourth Boot Device (Default: Floppy/Hard Disk/CDROM/Disabled)

These items allow you to set the boot device sequence.

❖ Swap Floppy Drive (Default: Disabled)

If this item is enabled, it allows you to swap the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.

❖ Boot Up Floppy Seek (Default: Disabled)

If it is set to Enabled, BIOS will activate the floppy drive during the system boot, and the drive's indicator will flash after the activation. The magnetic head will move back and forth from A to B.

❖ Boot Up NumLock Status (Default: On)

This item defines if the keyboard Num Lock key is active when your system is started. When it is set to On, the NumLock will be activated during system startup. When it is set to Off, users can use the number keys instead of the arrow keys to move the cursor.

❖ Gate A20 Option (Default: Fast)

This item is used to set up the A20 signal control necessary for access to the 1MB memory.

❖ Security Option (Default: Setup)

When it is set to Setup, a password is required to enter the CMOS Setup screen; when it is set to System, a password is required not only to enter CMOS Setup, but also to start up your PC.

❖ APIC Mode (Default: Enabled)

This item is used to enable or disable APIC mode.

❖ MPS Version Control For OS (Default: 1.4)

This item is used to set up the version of MPS Table used in NT4.0 OS.

❖ OS Select For DRAM > 64MB (Default: Non-OS2)

This item is only required if you have installed more than 64 MB of memory and you are running the OS/2 operating system. Otherwise, leave this option at the default.

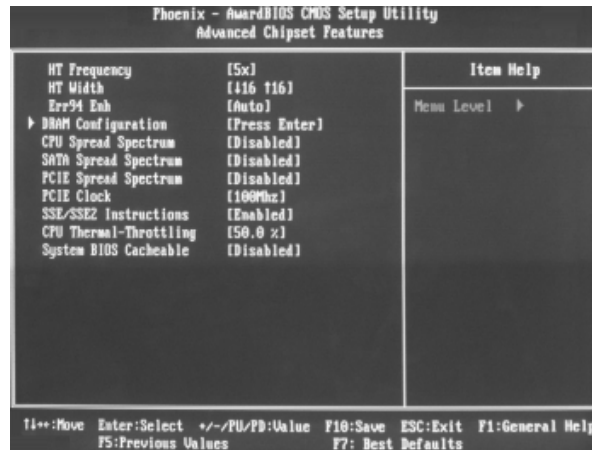
❖ Full Screen LOGO Show (Default: Enabled)

This item allows you to enable or disable the full screen logo.

❖ Small Logo (EPA) Show (Default: Enabled)

This item allows you to enable or disable the EPA logo.

Advanced Chipset Features



Advanced Chipset Features Menu

❖ HT Frequency (Default: 5x)

This item specifies the maximum operating frequency of the link's transmitter clock.

❖ HT Width (Default: 16, 16)

This item specifies the maximum up and down bandwidth of the link's transmitter.

❖ Err94 Enh (Default: Auto)

This item is used to set Err94 Enh.

❖ DRAM Configuration

Press <Enter> to set the items about DRAM Configuration. Please refer to page 35.

❖ CPU/SATA/PCIE Spread Spectrum (Default: Disabled)

If you enable these items, it can significantly reduce the EMI (Electro-Magnetic Interface) generated by the CPU/SATA/PCIE.

❖ PCIE Clock (Default: Depend on the PCIE)

It is used to set PCI express clock.

❖ SSE/SSE2 Instructions (Default: Enabled)

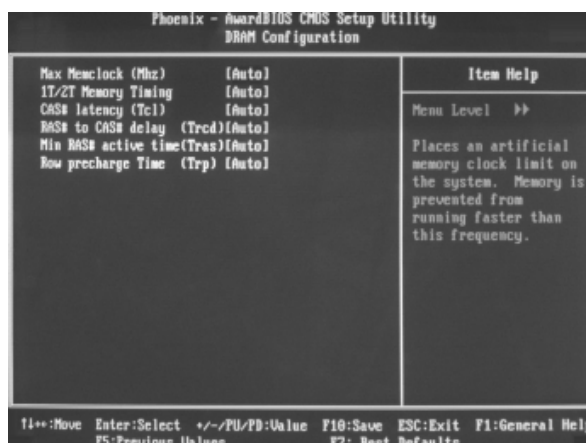
It is used to set enable or disable Intel SSE/SSE2 instructions.

❖ CPU Thermal-Throttling (Default: 50.0%)

This item is used to specify the CPU speed (at percentage) to slow down the CPU when it reaches the predetermined overheated temperature.

❖ System BIOS Cacheable (Default: Disabled)

Select “Enabled” to allow catching of the system BIOS which may improve performance. If any other program writes to this memory area, a system error may result. The available setting values are: Disabled and Enabled.



DRAM Configuration Menu

❖ Max Memclock (MHz) (Default: Auto)

User can place an artificial memory clock limit on the system. Memory is prevented from running faster than this frequency.

❖ 1T/2T Memory Timing (Default: Auto) (Optional)

This item controls the SDRAM command rate. Selecting [Auto] allows SDRAM signal controller to run at 1T (T=clock cycles) rate. Selecting [1T] makes SDRAM signal controller run at 2T rate. 1T is faster than 2T.

❖ CAS# Latency (Tcl) (Default: Auto)

This item controls the CAS latency, which determines the timing delay (in clock cycles) before SDRAM starts a read command after receiving it.

❖ RAS# to CAS# delay (Trcd) (Default: Auto)

When DRAM is refreshed, both rows and columns are addressed separately. This setup item allows you to determine the timing of the transition from RAS (row address strobe) to CAS (column address strobe). The less the clock cycles, the faster the DRAM performance.

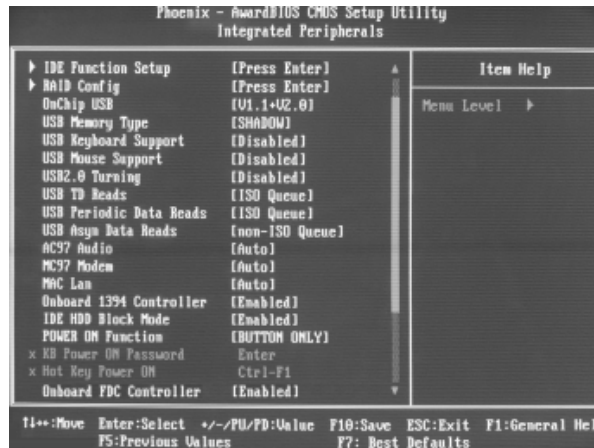
❖ Min RAS# active time (Tras) (Default: Auto)

This item determines the time RAS takes to read from and write to a memory cell.

❖ Row Precharge Time (Trp) (Default: Auto)

This item controls the number of cycles for Row Address Strobe (RAS) to be allowed to precharge. If insufficient time is allowed for the RAS to accumulate its charge before DRAM refresh, refreshing may be incomplete and DRAM may fail to retain data. This item applies only when synchronous DRAM is installed in the system.

Integrated Peripherals



Integrated Peripherals Menu

❖ IDE Function Setup

Press <Enter> to set the items about IDE function. Please refer to page 40.

❖ RAID Config

Press <Enter> to set RAID Config. Please refer to page 41.

❖ Onchip USB (Default: V1.1+V2.0)

This item is used to enable or disable the onboard USB controller.

Selecting V1.1+V2.0 enables the system to support both USB 1.1 and USB 2.0 specification.

❖ USB Memory Type (Default: SHADOW)

This item is used to set the type of USB Memory when data were save in USB.

❖ USB Keyboard/Mouse Support (Default: Disabled)

These items are used to set whether the USB keyboard/mouse controller is enabled in a legacy operating system (such as DOS).

❖ USB2.0 Turning (Default: Disabled)

This item is used to enable or disable USB2.0 Turning.

❖ USB TD Reads (Default: ISO Queue)

This item is used to set the USB TD Reads.

❖ USB Periodic Data Reads (Default: ISO Queue)

This item is used to set the USB Periodic Data Reads.

❖ USB Asyn Data Reads (Default: non-ISO Queue)

This item is used to set the USB Asyn Data Reads.

❖ AC97 Audio (Default: Auto)

This item is used to set whether onboard AC97 audio is enabled. Disabled the controller if you want to use other controller cards to connect an audio device.

❖ MC97 Modem (Default: Auto)

This item is used to set whether onboard MC97 modem is enabled.

❖ MAC Lan (Default: Auto)

Setting to Auto allows the BIOS to auto-detect the NVIDIA LAN controller and enable it.

❖ Onboard 1394 Controller (Default: Enabled)

This item allows you to enable or disable the onboard IEEE 1394 controller.

❖ IDE HDD Block Mode (Default: Enabled)

This item is used to set whether the IDE HDD Block Mode is allowed.

❖ POWER ON Function (Default: BUTTON ONLY)

This item is used to set the power on method for your PC.

❖ KB Power ON Password

When the POWER ON Function is set to Keyboard, use this item to set the password.

❖ Hot Key Power ON (Default: Ctrl-F1)

When the POWER ON Function is set to Hot KEY, use this item to set the hot key combination that turns on the system.

❖ Onboard FDC Controller (Default: Enabled)

This item is used to set whether the onboard FDC controller is enabled.

❖ Onboard Serial Port 1 (Default: 3F8/IRQ4)

This item is used to assign the I/O address and interrupt request (IRQ) for the onboard serial port 1. This item cannot be adjusted.

❖ Onboard Serial Port 2 (Default: 2F8/IRQ3)

This item is used to assign the I/O address and interrupt request (IRQ) for the onboard serial port 2. This item cannot be adjusted.

❖ UART Mode Select (Default: IrDA)

Use this item to select the UART mode. Setting values include Normal, IrDA, ASKIR. The setting value is determined by the infrared module installed on the board.

❖ UR2 Duplex Mode (Default: Half)

This item is available when UART Mode Select is set to either ASKIR or IrDA. This item enables you to determine the infrared function of the onboard infrared chip.

❖ Onboard Parallel Port (Default: 378/IRQ7)

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

❖ Parallel Port Mode (Default: SPP)

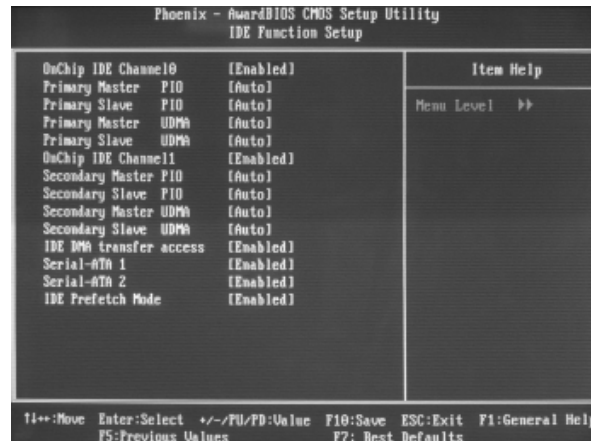
This item is used to assign data transport protocols of parallel port. The available options: SPP, EPP, ECP, ECP+EPP and Normal. Normal mode supports data output only; ECP and EPP mode support data input and output in bidirectional mode, but they just fit known ECP and EPP devices.

❖ ECP Mode Use DMA (Default: 3)

Select a DMA Channel for the parallel port when using the ECP mode. This field is configured only if Parallel Port Mode is set to ECP.

❖ PWRON After PWR-Fail (Default: Off)

This item is used to set what action the PC will take with the power supply when it resumes after a sudden power failure. The available options are: Off (remain in turn off status), On (auto power on) and Former-Sts (resume with the previous status).



IDE Function Setup Menu

❖ OnChip IDE Channel0/1 (Default: Enabled)

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

❖ Primary/Secondary Master/Slave PIO (Default: Auto)

These four items let you assign which kind of PIO (Programmer Input/Output) is used by IDE devices. Choose "Auto" to let the system auto detect which PIO mode is best.

❖ Primary/Secondary Master/Slave UDMA (Default: Auto)

UltraDMA technology provides faster access to IDE devices. If you install a device that supports UltraDMA, change the appropriate items on this list to Auto.

❖ IDE DMA transfer access (Default: Enabled)

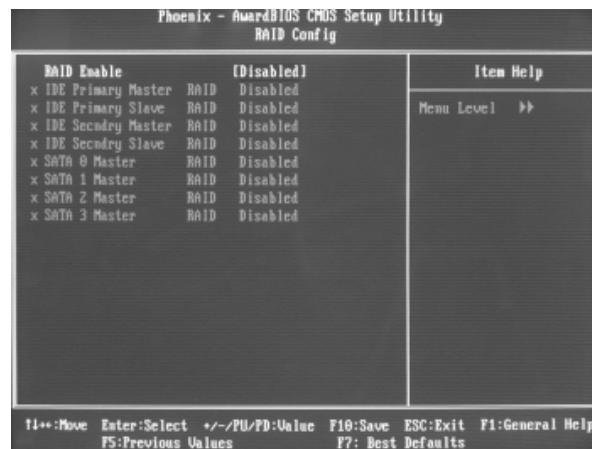
This item is used to enable or disable the DMA transfer function of the IDE Hard Drive.

❖ Serial-ATA 1/2 (Default: Enabled)

This item is used to enable or disable onchip Serial-ATA controller 1/2.

❖ IDE Prefetch Mode (Default: Enabled)

The onboard IDE drive interfaces support IDE prefetching, for faster drive accesses. When you install a primary and/or secondary add-in IDE interface, set this option to Disabled if the interface does not support prefetching.



RAID Config Menu

❖ RAID Enable (Default: Disabled)

This item is available for you to enable or disable the onboard RAID function.

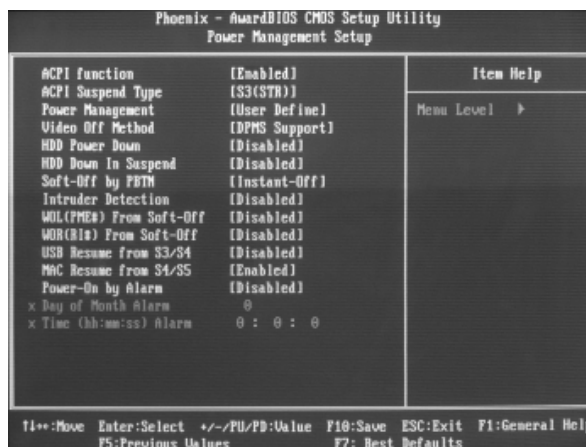
❖ IDE Primary/Secondary/Mater/Slave RAID (Default: Disabled)

These features allow user to enable or disable the RAID function for each IDE hard disk drive.

❖ SATA 0/1/2/3 Master RAID (Default: Disabled)

These features allow user to enable or disable the RAID function for each SATA hard disk drive.

Power Management Setup



Power Management Setup Menu

❖ ACPI function (Default: Enabled)

ACPI stands for “Advanced Configuration and Power Interface”. ACPI is a standard that defines power and configuration management interfaces between an operating system and the BIOS. In other words, it is a standard that describes how computer components work together to manage system hardware. In order to use this function the ACPI specification must be supported by the OS (for example, Windows2000 or WindowsXP).

❖ ACPI Suspend Type (Default: S3(STR))

This item is used to set the energy saving mode of the ACPI function. When you select “S1 (POS)” mode, the power will not shut off and the supply status will remain as it is, in S1 mode the computer can be resumed at any time. When you select “S3 (STR)” mode, the power will be cut off after a delay period. The status of the computer before it enters STR will be saved in memory, and the computer can quickly return to the previous status when the STR function wakes. When you select “S1 & S3” mode, the system will automatically select the delay time.

❖ Power Management (Default: User Define)

This item is used to set the power management scheme.

❖ Video Off Method (Default: DPMS Support)

This item is used to define the video off method. “Blank Screen” mode means that after the computer enters power saving mode, only the monitor will close, however, the vertical and horizontal scanning movement of the screen continues. When you select the “V/H SYNC + Blank” mode the vertical and horizontal scanning movement of screen stops when the computer enters power saving mode. “DPMS Support” mode is a new screen power management system, and it needs to be supported by the monitor you’re using.

❖ HDD Power Down (Default: Disabled)

If HDD is not detected for the length of time specified in this field, the hard disk drive will be powered down while all other devices remain active.

❖ HDD Down In Suspend (Default: Disabled)

This item determines whether the hard disk drive will be turned off during suspend mode.

❖ Soft-Off by PBTN (Default: Instant-Off)

This item is used to set the power down method. This function is only valid for systems using an ATX power supply.

When “Instant-Off” is selected, press the power switch to immediately turn off power. When “Delay 4 Sec.” is selected, press and hold the power button for four seconds to turn off power.

❖ Intruder Detection (Default: Disabled)

This item enables or disables the features of recording the chassis intrusion status and issuing a warning message if the chassis is once opened.

❖ WOL (PME#) From Soft-Off (Default: Disabled)

When set to Enabled, the feature allows your system to be awakened from the power saving modes through any event on PME (Power Management Event)

❖ WOR (RI#) From Soft-Off (Default: Disabled)

If this item is enabled, it allows the system to resume from a software power down or power saving mode whenever there is an incoming call to an installed fax/modem. This function needs to be supported by the relevant hardware and software.

❖ USB Resume From S3/S4 (Default: Disabled)

This item is used to set the system to wake up by USB equipment when it is in S3/S4 mode.

❖ MAC Resume From S4/S5 (Default: Enabled)

This item is used to set the system to wake up by MAC equipment when it is in S4/S5 mode.

❖ Power-On by Alarm (Default: Disabled)

This item is used to set the timing of the start-up function. In order to use this function, the start-up password function must be cancelled and the PC power source must not be turned off.

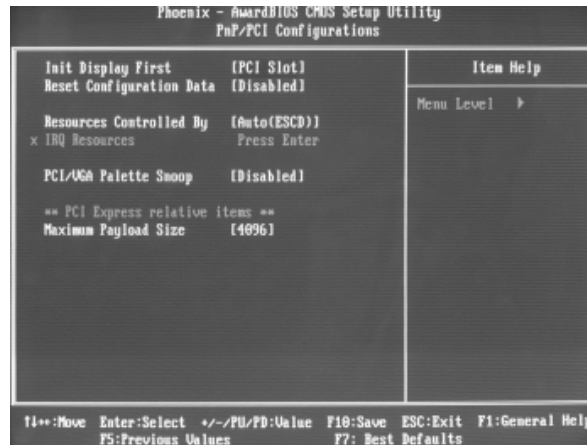
❖ Day of Month Alarm

When the Power-On by Alarm set as Enabled, this option will be modified. It is used to set the timing for the start-up date.

❖ Time (hh:mm:ss) Alarm

When the Power-On by Alarm set as Enabled, this option will be modified. It is used to set the timing for the start-up time.

PnP/PCI Configurations



PnP/PCI Configurations Menu

❖ Init Display First (Default: PCI Slot)

This item is used to set which display device will be used first when your PC starts up.

❖ Reset Configuration Data (Default: Disabled)

This item is used to set whether the system is permitted to automatically distribute IRQ DMA and I/O addresses each time the machine is turned on. The setting values are: Disabled and Enabled.

❖ Resources Controlled By (Default: Auto (ESCD))

This item is used to define the system resource control scheme. If all cards you use support PnP, then select Auto (ESCD) and the BIOS will automatically distribute interruption resources. If the ISA cards you installed not supporting PnP, you will need to select “Manual” and manually adjust interruption resources in the event of hardware conflicts. However, since this motherboard has no ISA slot, this option does not apply.

❖ IRQ Resources

Press the <Enter> key, then manually set IRQ resources.

❖ PCI/VGA Palette Snoop (Default: Disabled)

If you use a non-standard VGA card, use this option to solve graphic acceleration card or MPEG audio card problems (e.g., colors not accurately displayed). The setting values are: Disabled and Enabled.

❖ Maximum Payload Size (Default: 4096)

This item is used to set maximum TLP payload size for PCI Express devices. The unit is byte.

PC Health Status (O.T.S)

Shutdown Temperature [Disabled]		Item Help
CPU	Temperature 82°C	Menu Level ▸
SYSTEM	Temperature 33°C	
CPU	Fan Speed 3183 RPM	
Chipset	Fan Speed 6250 RPM	
System	Fan Speed 6026 RPM	
CPU	Vcore 1.75V	
HyperTransport	Vcore 1.18V	
Memory	Vcore 2.67V	
Chipset	Vcore 1.75V	
+3.3V	3.21V	
+5V	4.99V	
+12V	11.07V	
5VSB(V)	4.99V	
VBAT(V)	2.86V	

F1: Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
 F5: Previous Values F7: Best Defaults

PC Health Status (O.T.S) Menu

❖ Shutdown Temperature (Default: Disabled)

This item is used to set the system temperature upper limit. When the temperature exceeds the setting value, the motherboard will automatically cut off power to the computer.

❖ CPU/SYSTEM Temperature, CPU/Chipset/System Fan Speed, CPU/Hyper Transport/Memory/Chipset Vcore, +3.3V, +5V, +12V, 5VSB(V), VBAT(V)

These items display the current status of all of the monitored hardware devices/components such as CPU voltage, temperatures and all fan's speeds.

Load Best Defaults

Select this item and press <Enter>, it will open a dialogue box that lets you install the best defaults for all appropriate items in the Setup Utility. Select <Y> and press <Enter> to load the best defaults. Select <N> and press <Enter> to not install. The defaults set by BIOS have set the best performance parameters of system to improve the performances of system components. But if the best performance parameters to be set cannot be supported by your hardware devices, it can cause fatal errors or instability. If you only want to load the best defaults for a specific option, you can select this option and press the <F7> key.

Set Supervisor/User Password

The preferential grade of supervisor password is higher than user password. You can use supervisor password to start into system or enter into CMOS setting program to amend setting. You can also use user password to start into system, or enter into CMOS setting menu to check, but if you have set supervisor password, you cannot amend the setting.

Highlight the item Set Supervisor / User Password on the main menu and press <Enter>. The following password dialog box appears:

Enter Password:

Enter your password, not exceeding 8 characters, then press <Enter>, you will be prompted to confirm the password, type in the password again and press <Enter>.

If you are deleting a password that is already installed, just press <Enter> when the password dialog box appears, and the screen will show a message that indicates this password has been disabled. In this case, you can freely enter into system and CMOS setting program.

PASS WORD DISABLED!!!

Press any key to continue...

Under the menu “Advanced BIOS Features Setup”, if you select “System” in Security Option, the screen will prompt you to enter password once the system is started or you want to enter CMOS setting program. If the password is wrong, it will refuse you to continue.

Under the menu “Advanced BIOS Features Setup”, if you select “Setup” in Security Option, the screen will prompt you to enter password only when you enter CMOS setting program.

Save & Exit Setup

Select this item and press <Enter>, the following message will appear on the screen:

SAVE to CMOS and EXIT (Y/N)?

Press <Y> to save the changes that you have made in the Setup Utility and exit the Setup Utility; press <N>/<ESC> to return to the main menu.

Exit Without Saving

Select this item and press <Enter>, it will show the following message on the screen:

Quit Without Saving (Y/N)?

Press <Y> to discard any changes that you have made in the Setup Utility and exit the Setup Utility; press <N>/<ESC> to return to the main menu.

Chapter 4

The utility CD that came with the motherboard contains useful software and several utility drivers that enhance the motherboard features.

This chapter includes the following information:

- ❖ Utility CD content
- ❖ Start to install drivers
 - Install nForce Driver Package
 - Install DirectX 9.0b
 - Install USB2.0 Driver
- ❖ Install SuperUtility (optional)
- ❖ Install Adobe Reader
- ❖ Install Norton Internet Security

Utility CD content

This motherboard comes with one Utility CD. To begin using the CD, simply insert the CD into your CD-ROM driver. The CD will automatically display the main menu screen.



1. Install Driver

Using this option to install all the drivers for your motherboard. You should install the drivers in order, and you need to restart your computer after all the drivers installed.

- A. nForce Driver Package
- B. DirectX 9.0b
- C. USB2.0 Driver

2. Accessories

Use this option to install additional software programs.

- A. SuperUtility (optional)
- B. Adobe Reader
- C. Norton Internet Security

3. Browse CD

Click to browse this CD.

4. Homepage

Click here to visit Foxconn motherboard homepage.

Note:

1. Install the latest patch first if your OS is Windows XP or Windows 2000.
2. Follow the CD screen order to install your motherboard drivers.

Start to install drivers

Select <Install Driver>, and click to enter the install driver screen. You can select the driver that you want to install and begin the setup steps.

Note:

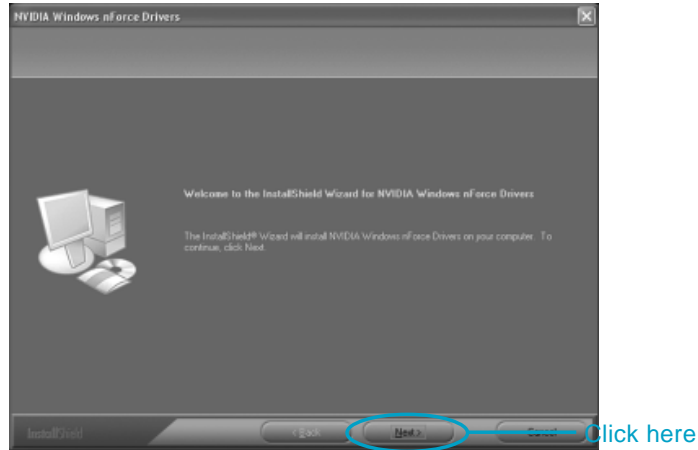
The following setup steps are based on Windows XP environment. There may be some differences with other operating systems.

Install nForce Driver Package

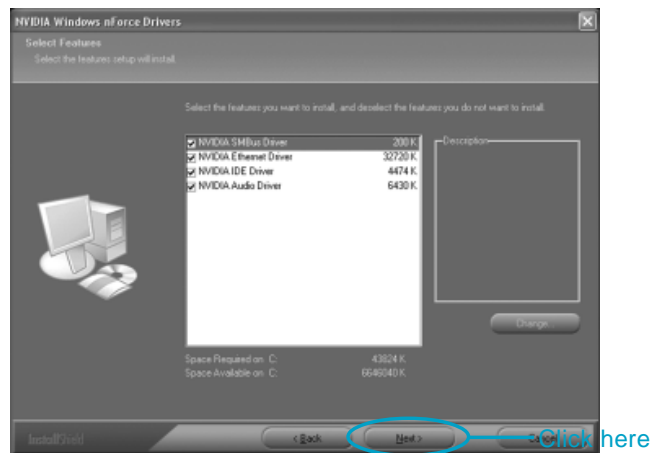
1. Click <Install Driver> from the main menu to bring up the install driver menu. Click <nForce Driver Package> to start the installation.



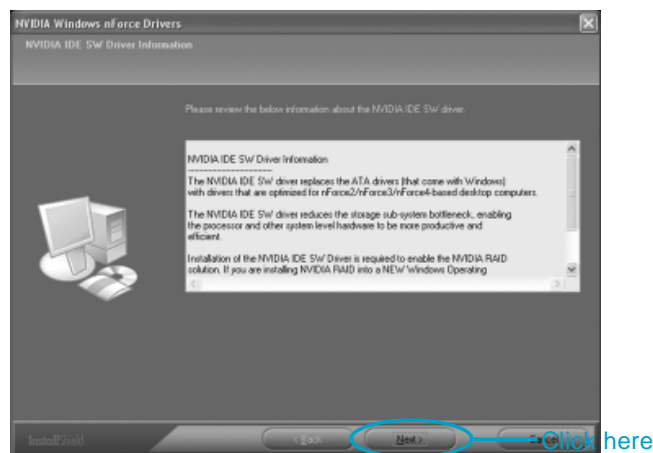
2. Click <Next > to continue the setup.



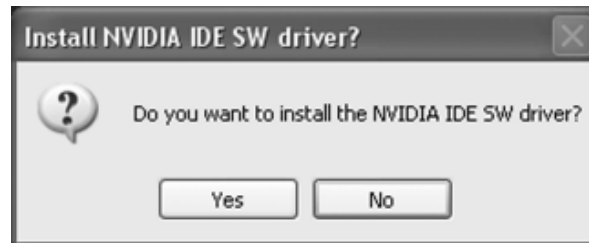
3. Make a click before the driver that you want to install and then click <Next>.



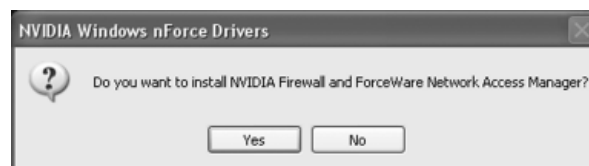
4. After reading the information carefully, click <Next>.



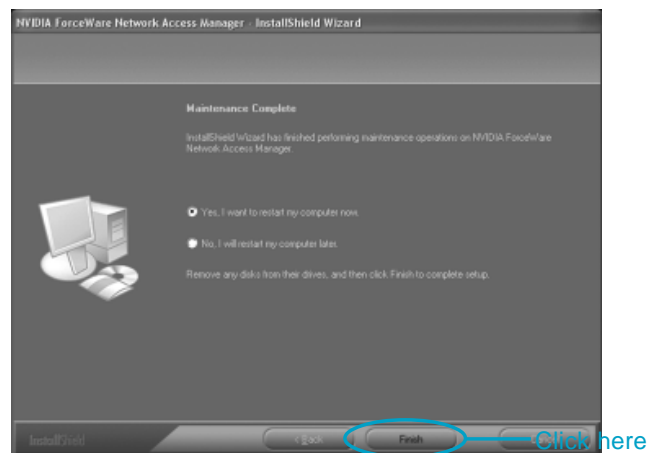
5. During setup, system will ask you whether install the NVIDIA IDE SW driver. If you want to install, click <Yes> or click <No> to ignore it.



6. System will also ask you whether install the NVIDIA Firewall and ForceWare Network Access Manager. If you want to install, click <Yes> or click <No> to ignore it.



7. After installing NVIDIA Firewall and ForceWare Network Access Manager, click <Finish> to end the setup and restart the system.



Install DirectX 9.0b

Click <Install Driver> from the main menu and enter the install driver menu..
Click <DirectX 9.0b> to start the installation.

**Install USB2.0 Driver**

Click <Install Driver> from the main menu and enter the install driver menu. Click <USB2.0 Driver> to open the USB 2.0 Installation guide. Please read the guide carefully and select the relevant installation method.



Install SuperUtility (optional)

From the main menu, select <Accessories>. Click <SuperUtility> to start the setup.



Install Adobe Reader

From the main menu, select <Accessories>. Click <Adobe Reader> to start the setup.



Install Norton Internet Security

From the main menu, select <Accessories>. Click <Norton Internet Security> to start the setup.



Note:

If your system is Windows 98 or Windows ME, please make sure that your Internet Explorer version is 5.01 with service pack 2 or higher.

Chapter 5

This chapter will introduce how to create NVIDIA RAID.

This chapter includes the following information:

- ❖ Basic Configuration Instructions
- ❖ Setting up BIOS
- ❖ Entering the RAID BIOS Setup
- ❖ NVIDIA RAID Utility Installation
- ❖ Initializing and Using the Disk Array
- ❖ Win2K Limitation with Bootable RAID

NVIDIA RAID

RAID Arrays

This section describes the following types of RAID arrays that NVIDIA RAID supports:

- RAID 0

RAID 0 defines a disk striping scheme that improves the disk read and write times for many applications.

- RAID 1

RAID 1 defines techniques for mirroring data.

- RAID 0+1

RAID 0+1 combines the techniques used in RAID 0 and RAID 1 arrays.

- Spanning (JBOD)

JBOD provides a method for combining drives of different sizes into one large disk.

Summary of RAID Configurations

Array	Advantages	Drawbacks	# Hard Disks	Fault Tolerance
RAID 0	High data throughput.	No fault tolerance.	multiple	None
RAID 1	100% data redundancy.	Requires two drives for the storage space of one drive.	2	Yes
RAID 0+1	Optimized for both 100% data redundancy and performance. Allows spare disks.	Requires two drives for the storage space of one drive—the same as RAID level 1.	4+	Yes
JBOD	Combines and uses the capacity of odd size drives.	Decreases performance because of the difficulty in using drives concurrently or to optimize drives for different uses.	multiple	No

Basic Configuration Instructions

The following are the basic steps for configuring NVIDIA RAID:

Non-Bootable RAID Array

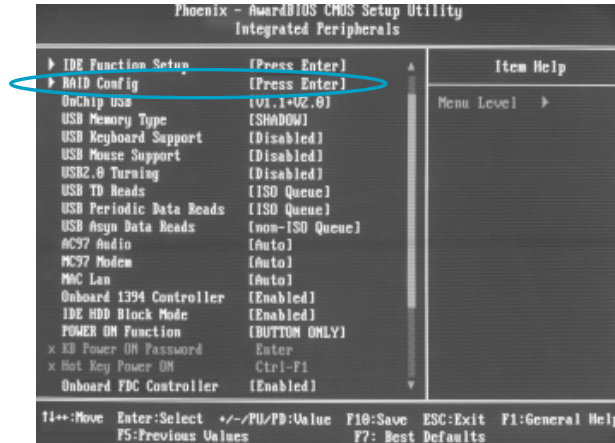
1. Choose the hard disks that are to be RAID enabled in the system BIOS.
2. Specify the RAID level, either Mirroring (RAID 1), Striping (RAID 0), Stripe Mirroring (RAID 0+1), or Spanning (JBOD) and create the desired RAID array.
3. Install the operating system on one hard disk, then reboot the computer.
4. Run the Windows nForce Setup application and install the RAID driver.
5. Initialize the NVRAID Array.

Bootable RAID Array

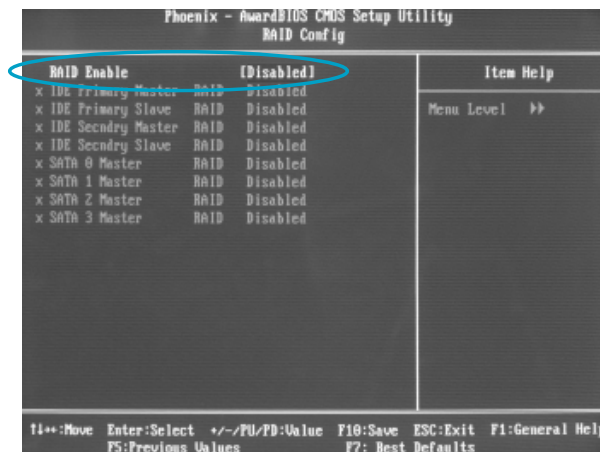
1. Choose the hard disks that are to be RAID enabled in the system BIOS.
2. Specify the RAID level, either Mirroring (RAID 1), Striping (RAID 0), Mirrored Striping (RAID 0+1), or Spanning (JBOD) and create the desired RAID array.
3. Boot from the Windows CD, then press F6 when the Windows Setup appears.
4. Insert the RAID driver floppy to Install the nForce RAID driver.
5. Initialize the NVRAID Array.

Setting Up the BIOS

1. Start up the computer, then press **Delete** to enter the BIOS setup. Use the arrow keys to select **Integrated Peripherals**, then press **Enter**.



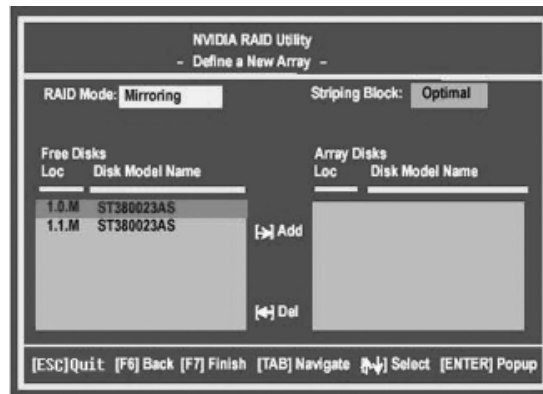
2. Use the arrow keys to select the **RAID Config**, then press **Enter**.



3. From the RAID Config window, enabled the RAID Enable, the other items would be light, then you can enable the disk that you want to use as RAID disks.
4. Press F10 to save the configuration and exit.

Entering the RAID BIOS Setup

1. After rebooting your PC, wait until you see the RAID software prompting you to press **F10**. The RAID prompt appears as part of the system POST and boot process prior to loading OS.
2. Press **<N>**, and the NVIDIA RAID Utility --- **Define a New Array** window will appear. The default **RAID Mode** is set to **Mirroring** and the default **Striping Block** is set to **Optimal**.



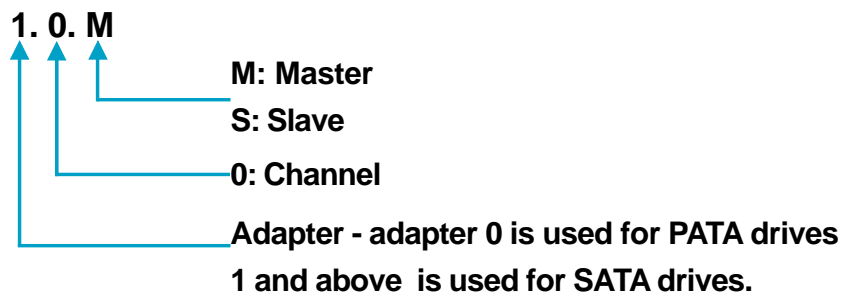
Understanding the “Define a New Array” Window

Use the Define a New Array window to

- Select the RAID Mode
- Set up the Striping Block
- Specify which disks to use for the RAID Array

Depending on the platform used, the system have one or more channels. In a typical system there are usually one controller and multiple channels, and each channel have a slave and a master.

The channel/controller/master/slave status of each hard disk is given in the Loc (location) columns of the Free Disks and Array Disks lists.



In the example above, 1.0.M means the hard drive is attached to Channel 1, Controller 0, and the drive is set to Master. The following is a list of all possible combinations:

Parallel ATA

0.0.M	Adapter 0, Channel 0, Master
0.0.S	Adapter 0, Channel 0, Slave
0.1.M	Adapter 0, Channel 1, Master
0.1.S	Adapter 0, Channel 1, Slave

Serial ATA

1.0.M	Adapter 1, Channel 0, Master
1.1.M	Adapter 1, Channel 1, Master
2.0.M	Adapter 2, Channel 0, Master
2.1.M	Adapter 2, Channel 1, Master

Note: There is no such thing as Slave drive in Serial ATA. All drives are considered to be Master since there is a one to one connection between the drive and the controller.

Using the Define a New Array Window

If necessary, press the tab key to move from field to field until the appropriate field is highlighted.

• Selecting the RAID Mode

By default, this is set to [Mirroring]. Change to a different RAID mode, press the down arrow keys until the mode that you want appears in the RAID Mode box—either [Mirroring], [Striping], [Spanning], or [Stripe Mirroring].

• Selecting the Striping Block Size

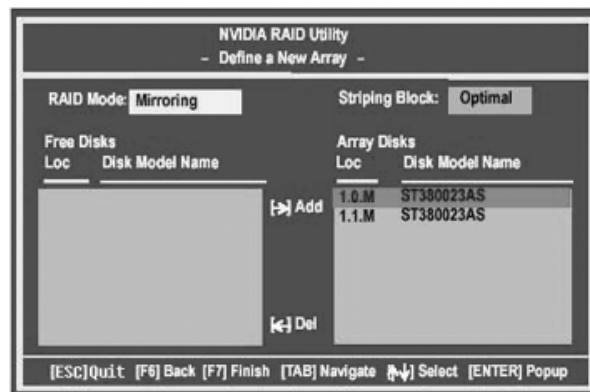
Striping Block size is given in kilobytes, and affects how data is arranged on the disk. It is recommended to leave this value at the default [Optimal], which is 32KB, but the values can be between [4 KB] and [128 KB].

• Assigning the Disks

The disks that you enabled from the RAID Config BIOS setup page appear in the **Free Disks** block. These are the drives that are available for use as RAID array.

To designate a free disk to be used as a RAID array:

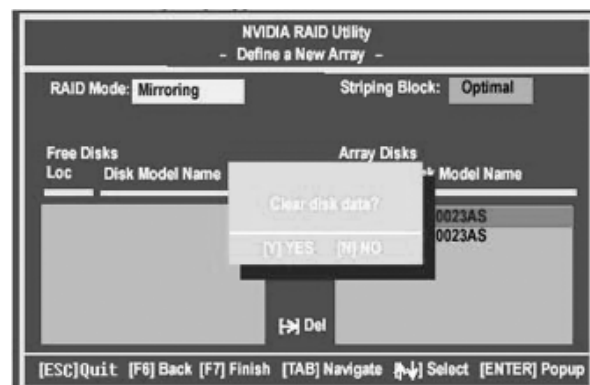
1. Tab to the **Free Disks** section. The first disk in the list is selected.
2. Move it from the Free Disks block to the Array Disks block by pressing the right arrow key (→). The first disk in the list is moved, and the next disk in the list is selected and ready to be moved.
3. Continue pressing the right-arrow key (→) until all the disks that you want to use as RAID array appear in the **Array Disks** block.



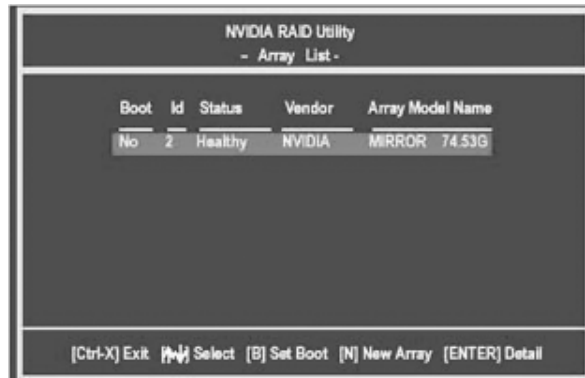
It shows that two disks have been assigned as RAID1 array disks in the figure above.

Completing the RAID BIOS Setup

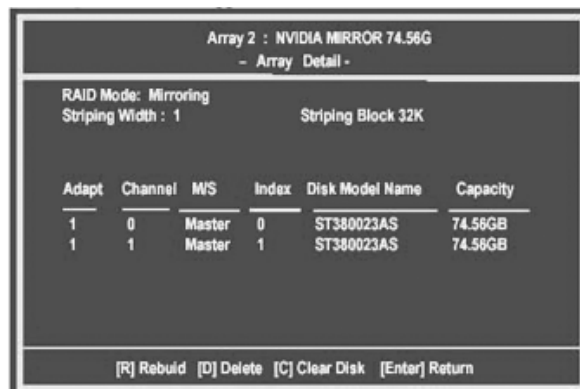
1. After assigning your RAID array mode, press **F7**. The Clear disk data windows prompt appears.



2. Press **Y** if you want to wipe out all the data from the RAID array, otherwise press **N**. You must choose **Yes** if the drives were previously used as RAID drives. The **Array List** window appears, where you can review the RAID arrays that you have set up.



3. Use the arrow keys to select the array that you want to set up, then press **Enter**. The **Array Detail** window appears.



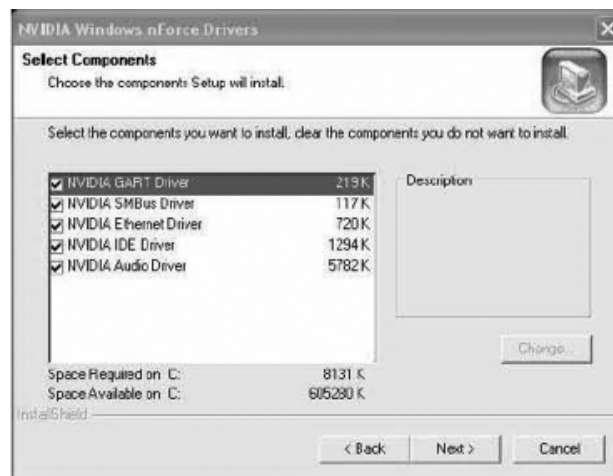
4. If you want to mark this disk as empty and wipe out all its contents then press **C**.
 5. At the prompt, press **Y** to wipe out all the data, otherwise press **N**.
 6. Press **Enter** again to go back to the previous window and then press **[Ctrl+X]** to exit the RAID setup.

NVIDIA RAID Utility Installation

Installing the NVIDIA RAID Software Under Windows (for Non-bootable RAID Array)

This section describes how to setup the application and install the RAID software which will upgrade the Windows IDE driver and install the RAID driver.

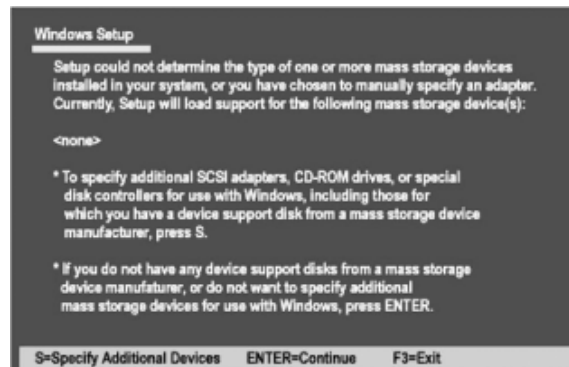
1. Start the nForce Setup program to open the NVIDIA Windows nForce Drivers page.



2. Select the modules that you want to install. Select the relative options that you have configured.
3. Click **Next** and then follow the instructions.
4. After the installation is completed, be sure to reboot the PC.
5. After the reboot, initialize the newly created array.

Installing the RAID Driver (for bootable RAID Array)

1. After you complete the RAID BIOS setup, boot from the Windows CD, and the Windows Setup program starts.
2. Press **F6** and wait 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. The Windows Setup screen appears as below:



- (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**. The following Windows Setup screen appears listing both drivers:



4. Press Enter to continue with operating system Installation. Be sure to copy the files from the floppy is complete, then take out the floppy.
5. Follow the instructions on how to install operating system. During the GUI portion of the installation 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.

Note: Each time you add a new hard drive to a RAID array, the RAID driver will have to be installed under Windows once for that hard drive. After that, the driver will not have to be installed.

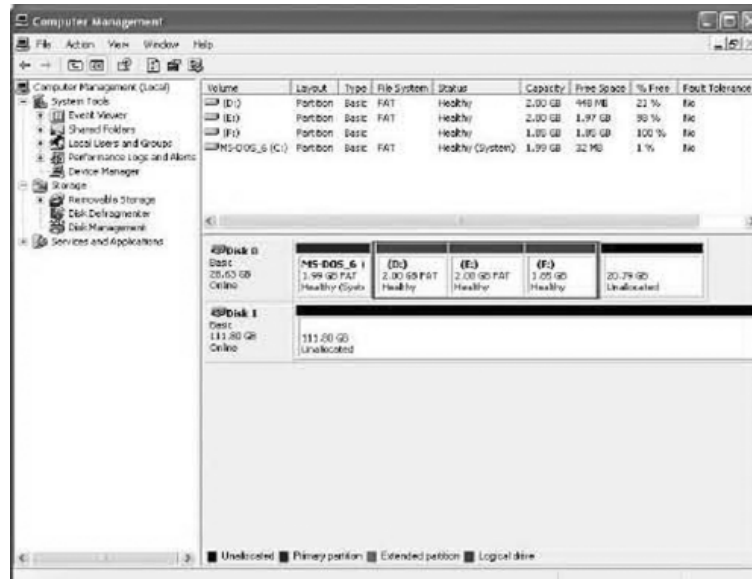
Initializing and Using the Disk Array

The RAID array is now ready to be initialized under Windows.

1. Launch Computer Management by clicking “Start” → “Settings” → “Control Panel” then open the “Administrative Tools” folder and double click on “Computer Management”.



2. Follow screen instructions to install. While finished, the “Computer Management” window appears.



The actual disks listed will depend on your system, and the unallocated partition is the total combined storage of two hard disks. You must format the unallocated disk space in order to use it.

3. Format the unlocated disk space. Right click “Unallocated space”, select “New Partition...” and follow the wizard. After the drive has been formatted, it is ready for use.

Win2K Limitation with Bootable RAID

In Windows 2000 (Service Pack 2 or previous versions), the end user cannot install this operating system to a bootable RAID volume.

There are two solutions to resolve this issue.

I) Use the NVRAID Tool to convert the boot volume to a RAID array.

Here are the detailed step by step instructions:

1. Install Windows 2000 on a selected hard drive.
2. Download and install Windows 2000 Service Pack 4 from Microsoft's website.
3. Reboot the system, press the **DEL** key as the system is rebooting to enter into the system BIOS.
4. Select **Integrated Peripherals** → **RAID Config**.
5. Enable RAID Config for the selected drive (the one containing the Windows 2000 operating system). Then press **F10** to exit and save settings in the system BIOS (This action reboots the System).
6. Press **F10** as the system is rebooting to go into the RAID ROM(The system directs you into the NVIDIA RAID Utility).
7. Select **Striping** under **RAID Mode**. Press **TAB** to go into the **Free Disk menu**. You can use the Right Arrow key to add the desired disk.
8. After that, Press **F7** to finish. Select **N (NO)** when asked to **Clear Disk Data**.
9. Then Press **Ctrl-X** to exit. The system reboots into Windows 2000.
10. Install the NVIDIA nForce Driver Package while in Windows 2000. Then reboot the system.
11. Go to **START>Programs>NVIDIA Corporation** and select **NVRAID Manager**. You should see the single disk RAID array (in striping mode) that was created from the boot disk.
12. Select the single boot disk RAID Array by clicking on it.
13. Select **Convert Array** under the **System Tasks**. The **Convert Array** wizard is displayed. Then Select **Next**.

14. Select the desired type of RAID array you want to convert. Then Select **Next**.

15. You are prompted to select the desired **Free Disk(s)** to add to the bootable RAID array. Click **Finish**.

At this point, NVRAID starts converting the single disk RAID array into a multi-disk RAID array in a bootable format.

Note: Conversion may take 1-2 hours depending on disk size.

II) The user must create a combination installation CD that includes Windows 2000 and SP3 or SP4 fixes integrated in. To create the combination installation CD, refer to the following website:

<http://www.microsoft.com/windows2000/downloads/servicepacks/sp4/HFdeploy.htm>

Note: If the end user chooses not to install Windows 2000 Service Pack 3 or 4, RAID is still supported on Windows 2000. However, the end user will not be able to create a bootable RAID volume.

Chapter 6

This chapter will introduce how to use attached software.

This chapter includes the following information:

- ❖ SuperStep
- ❖ SuperUpdate (optional)
- ❖ SuperLogo (optional)

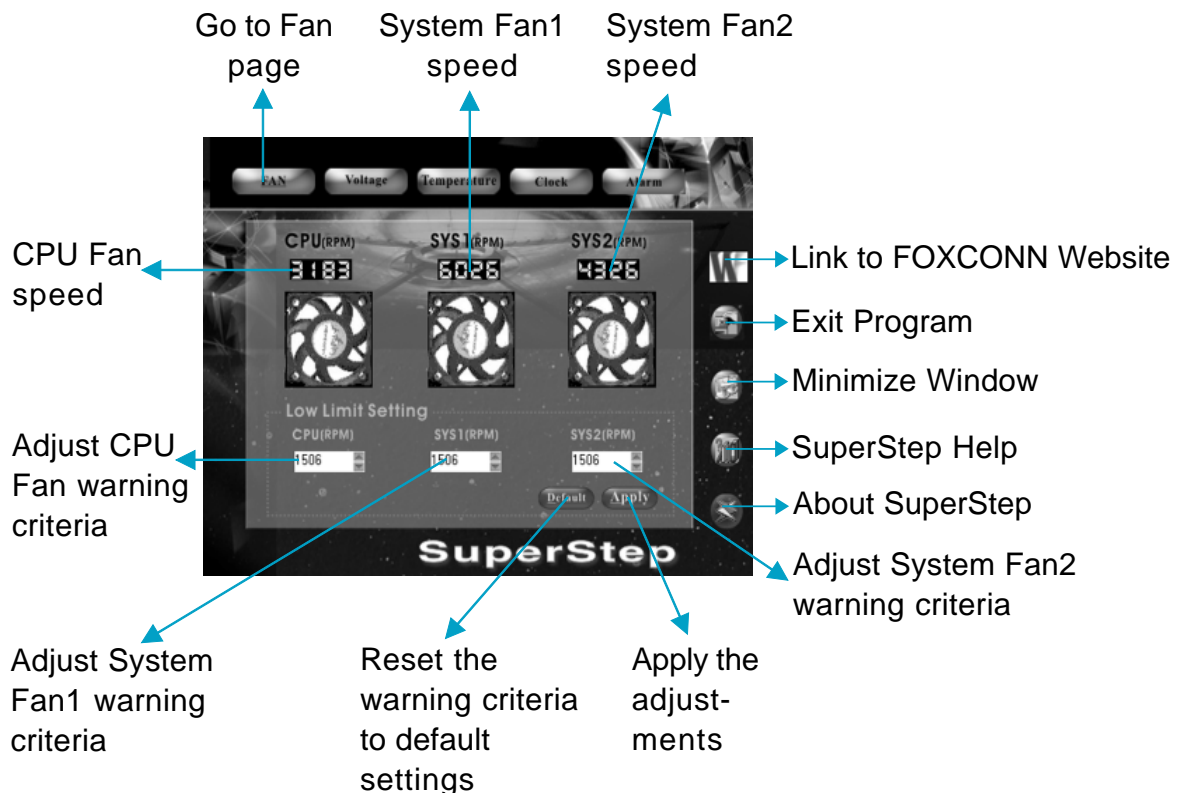
SuperStep

SuperStep is a utility that allows users to change the frequency of the CPU. It also displays system health introduction including CPU temperature, CPU voltage, and PCI/PCI Express clock.

SuperStep features:

1. Supports Win2000 and WinXP.
2. Automatic alarm mechanism when system runs irregularly
3. Adjusts the CPU frequency to speed up your system and achieve better system performance.
4. Simple and easy to operate, with a user-friendly graphics interface.

Using SuperStep:



Go to Voltage page Adjust voltages warning criteria (upper limit)

	Value (V)	High (V)	Low (V)
CPU Vcore:	1.48	1.792	1.200
VDDR:	1.44	1.088	1.200
+3.3V:	3.28	3.936	2.624
+5V:	4.91	5.994	4.005
+12V:	11.52	13.184	10.816
-12V:	-----	-10.800	-13.500
-5V:	-----	-4.500	-5.500
5VSB:	5.00	5.484	4.489
VBAT:	2.92	1.120	0.000

Current voltage readings

Reset the warning criteria to default settings

Apply the adjustments

Adjust voltages warning criteria (Lower limit)

Go to Temperature page

Current CPU Temperature

Current system Temperature

Adjust CPU temperature warning criteria

Adjust system temperature warning criteria

Reset the warning criteria to default settings

Apply the adjustments

Go to Clock page

Current CPU Clock

Current CPU Ratio

Current PCI Express clock

Current PCI clock

Adjust the CPU External Frequency

Reset to the default settings

Apply the adjustments

Go to Alarm page

Check for the system to automatically provide warning messages

Adjust the monitoring Interval

Reset to the default settings

Apply the changes

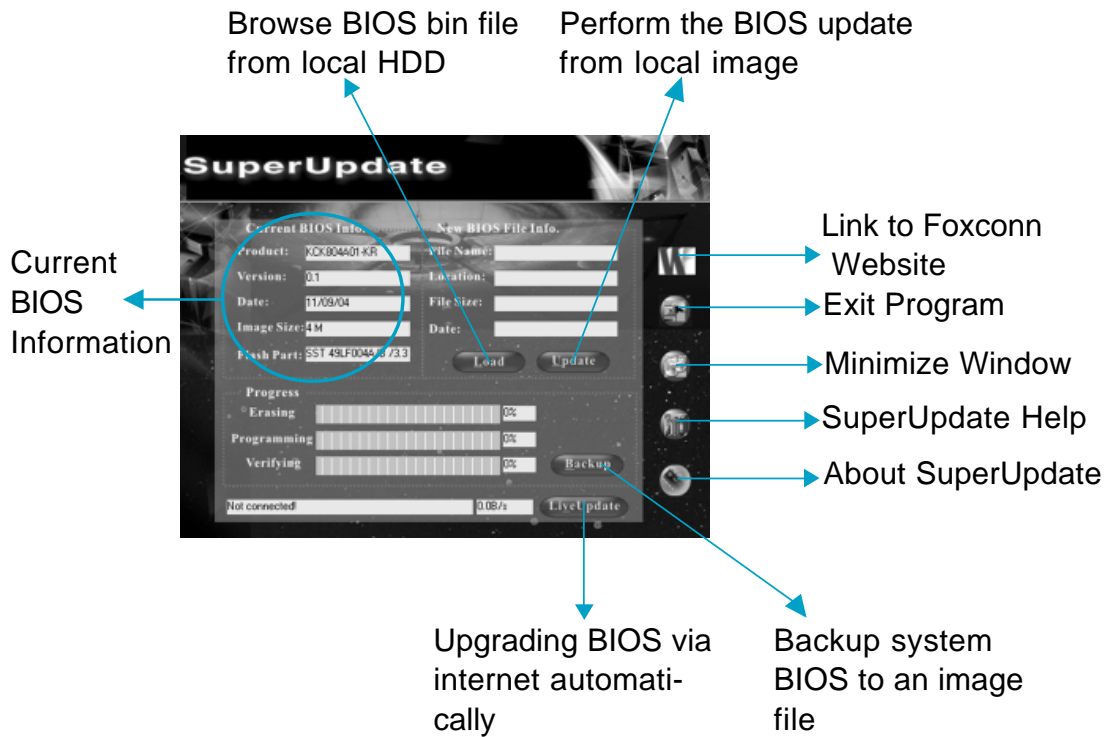
SuperUpdate (optional)

SuperUpdate is a Windows utility that allows users to backup and upgrade the system BIOS.

SuperUpdate features:

- 1. Supports Win2000 and WinXP.
- 2. Supports 4Mb size flash parts; flash write method is independent of flash type.
- 3. Simple and easy to operate, with a user-friendly graphics interface.

Using SuperUpdate:

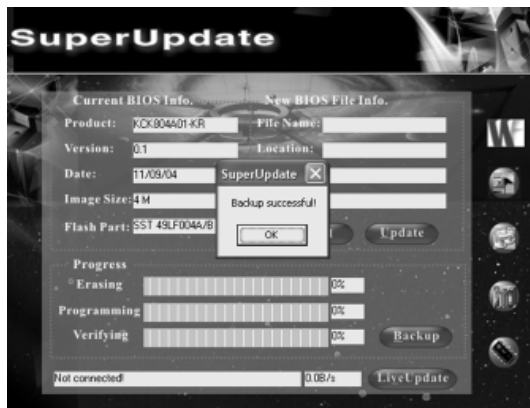


Backup BIOS to local image:

1. Click <Backup> and name your BIOS binary file to backup current BIOS.



2. Click <OK> to finish the backup process.



Update BIOS from local image:

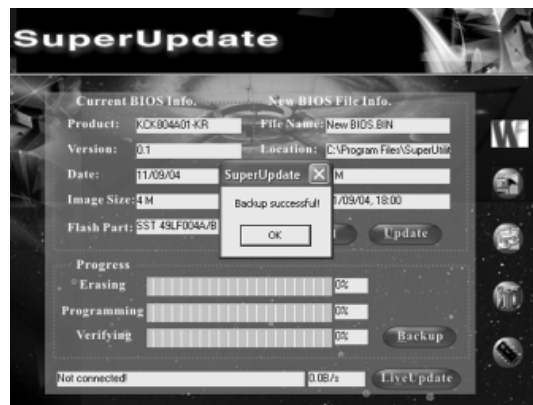
1. Click <Load> to load the BIOS file.



2. Click <Update>, the following message will appear.



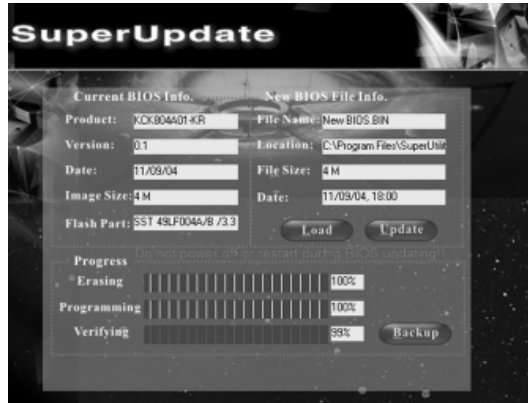
3. Click <Yes> to backup the current BIOS, then the following picture will appear.



4. Click <OK >, then click <Update>.



5. Now is updating.

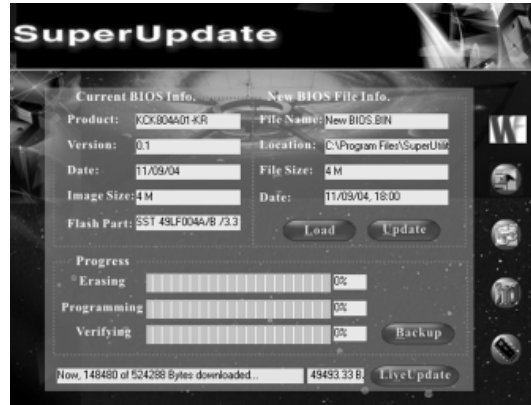


6. Click <Restart>.



Update BIOS On-line:

1. Click <Liveupdate> to automatically update the BIOS from the Internet.



2. The following procedure is the same as **Update BIOS from local image**.

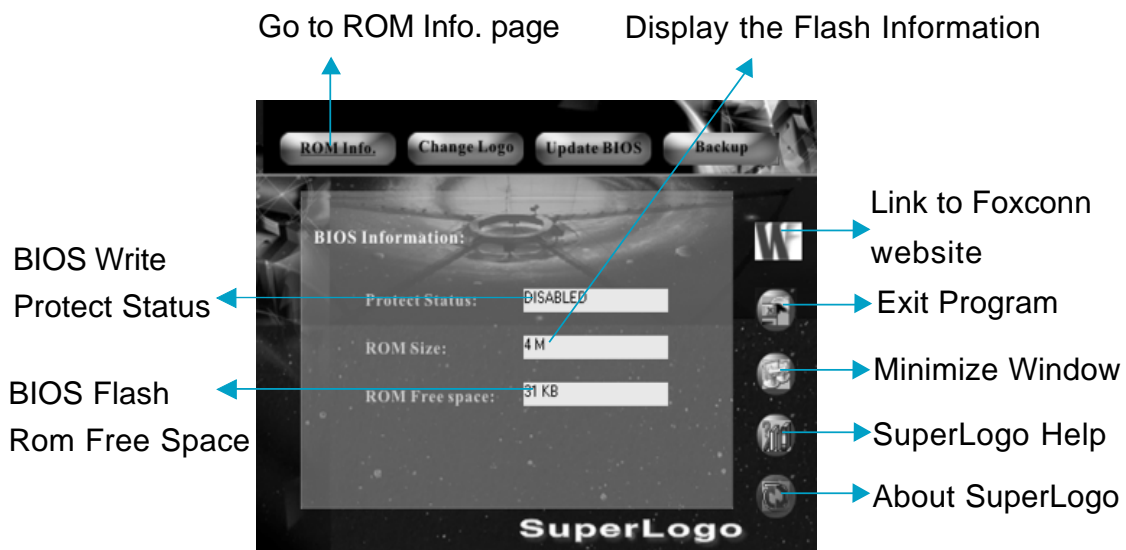
SuperLogo (optional)

SuperLogo is a Windows utility that allows users to change the BIOS sign on logo. The utility is able to replace and backup the BIOS logo, and update and backup the BIOS image within the Windows environment.


SuperLogo features:

1. Supports Win2000 and WinXP.
2. Supports 4Mb size flash parts, flash write method is independent with flash type.
3. Simple and easy to operate, with a user-friendly graphics interface.
4. Supports BMP and JPEG graphic format files. The best color is 16 or 256 colors. The best resolution is 136 x 84 for top-right logo and 640 x 480 or 800 x 600 for full screen logo.

Using SuperLogo:



Go to Change Logo page



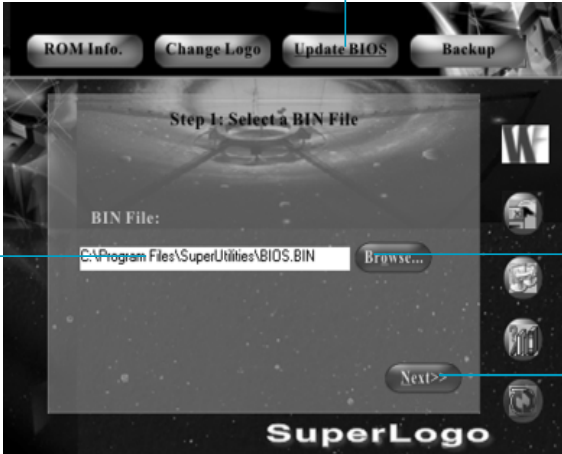
Full screen mode

Top-Right mode

Boot without logo

Follow the Wizard to complete the logo update

Go to Update BIOS page



BIOS image file location

Browse a BIN file for updating BIOS

Follow the Wizard to complete the BIOS function

Go to Backup page



Backup whole BIOS image

Backup Logo

Follow the Wizard to complete the backup function

Chapter 7

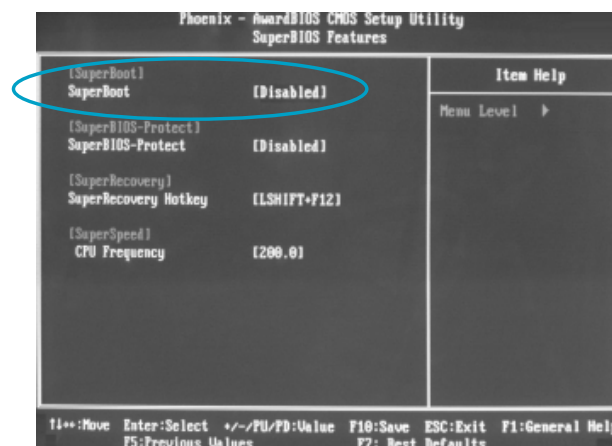
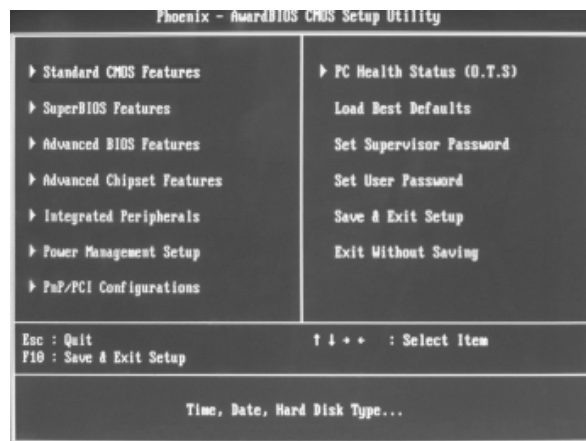
This chapter will introduce new functions of BIOS and how to use them in detail. It can further exert the max potential of motherboard to bring you super-value enjoyment.

This chapter introduces the following new functions of BIOS:

- ❖ SuperBoot
- ❖ SuperBIOS-Protect
- ❖ SuperSpeed
- ❖ SuperRecovery

SuperBoot

SuperBoot technology greatly reduces the long boot process time of computers. A BIOS without SuperBoot has to perform many routines every time when the system starts, such as checking the system core and initializing system peripherals. Now with SuperBoot, a PC can boot up without any unnecessary. SuperBoot is quite easy to use: choose the right option in CMOS setup (refer to SuperBIOS Features), SuperBoot saves the information when the PC boots up at the first time and restores the parameters for the system, thus letting the PC boot freely and rapidly.

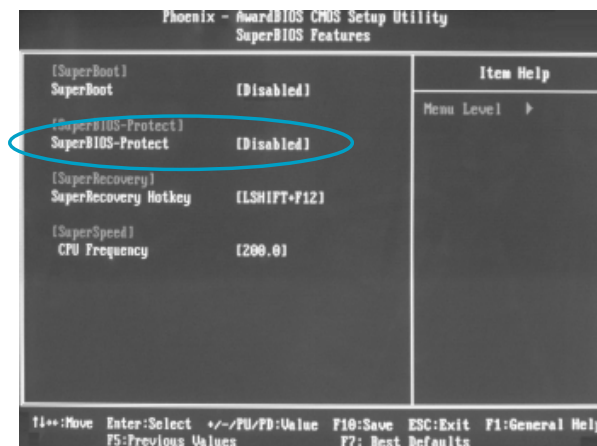
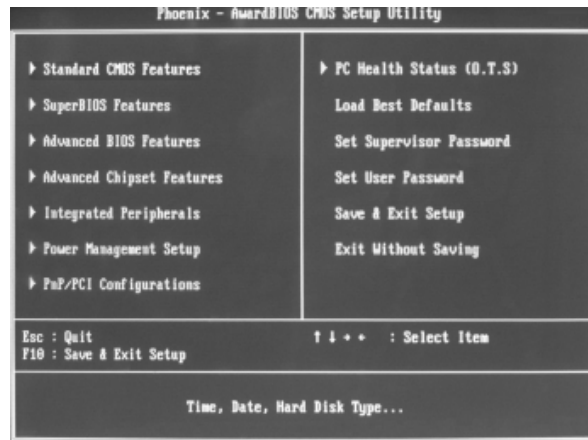


Notes:

1. If the previous boot was not completed, then the BIOS will perform a normal POST, even if SuperBoot is enabled.
2. No matter SuperBoot is enabled or not, the BIOS will perform normal POST if CMOS fails.

SuperBIOS-Protect

The BIOS of the motherboard is contained inside the Flash ROM. Severe viruses such as CIH virus are so dangerous that it may overwrite the BIOS of the motherboard. If the BIOS has been damaged, the system will be unable to boot. We provide the following solution which protects the system BIOS from being attacked by such viruses.



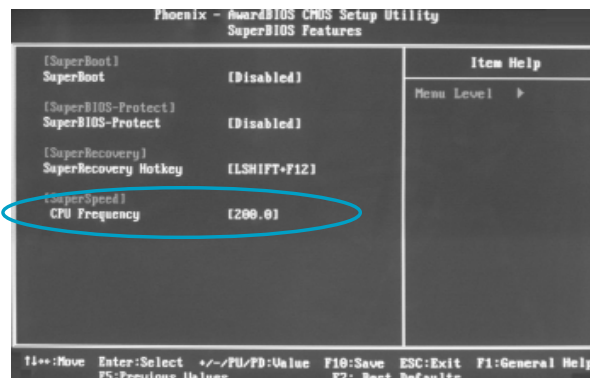
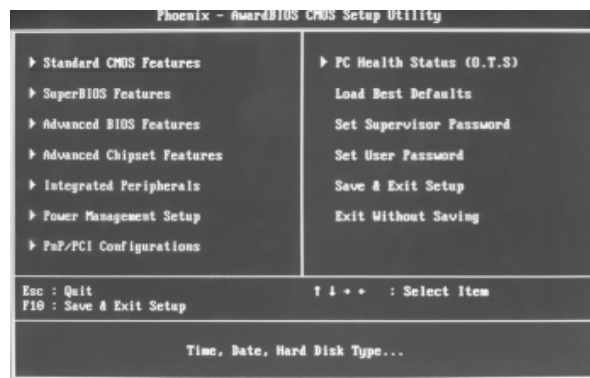
The way to implement this function, set “SuperBIOS-Protect” as “Enabled”, the BIOS will be protected.

SuperSpeed

SuperSpeed is a powerful and efficient Easy Technology for PC DIY fans. It offers a friendly interface. The users can also realize in the BIOS setup the CPU core voltage adjustability.

Procedures:

1. Correctly install your CPU.
2. Plug in other configurations and restore the system.
3. Switch on power to the system and press the key to enter BIOS Setup.
4. Enter the <SuperBIOS Features>\<CPU Frequency> menu to set the CPU frequency.
5. Save and exit BIOS Setup; your system will now boot successfully.



BIOS provides you a set of basic values for your processor selection instead of the jumper settings. The processor speed can be manually set from the <SuperBIOS Features> menu screen.

⚡ Warning:

Be sure your selection is right. CPU overlock can be dangerous!
We will not be responsible for any damage caused.

SuperRecovery

SuperRecovery is an easy-to-operate tool for backing up or recovering your hard disk data. It offers simplified user interfaces with hotkey access and allows you to experience unprecedented high security and reliability with extra functions, such as hotkey launch, and powerful anti-virus protection.

Features:

1. **Password Protection:**

You can set a password for each HDD.

2. **Data Protection:**

Hidden partitions can only be accessed during data back up or recovery. Even reformatting the disk using FDISK or PQMAGIC will not allow access to the disk. This means that data backed up in a hidden partition is very secure.

3. **Intelligent Menu:**

Unavailable items will be displayed in gray. For example, if you haven't divided a hidden partition, items like "Release Hidden Partition", "Back up" and "Recovery" will be displayed in gray and can't be selected. And, when you select an item, the related information will appear on the bottom of the screen.

Disclaimer:

Please study this software program's specification carefully before using it. The vendor should not be liable for any damage arising out of or in connection with the use of this program, including liability for lost profit or data, or any other damage whatsoever.

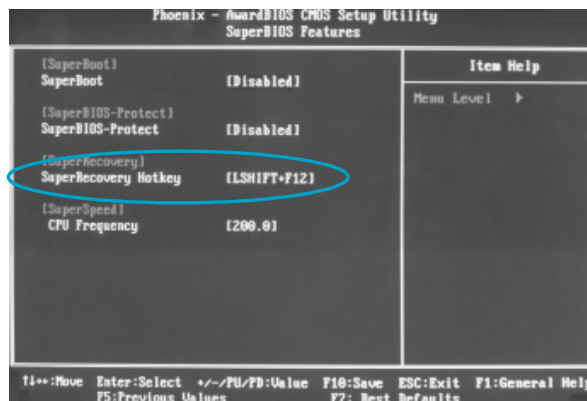
System Requirements:

1. ATA5 or above compliant IDE HDD.
2. FAT16, FAT32, NTFS files system.
3. PS/2 keyboard or USB keyboard.

Hotkey Selection:

You should enter the CMOS setup interface first by pressing during (POST Power On Self Test). Then select the "SuperRecovery Hotkey" option to adjust the hotkey settings in the "BIOS Features" menu.

There are 12 options: LSHIFT (Left Shift) + F1~F12. LSHIFT+F12 is the default setting.



Hard Disk Selection:

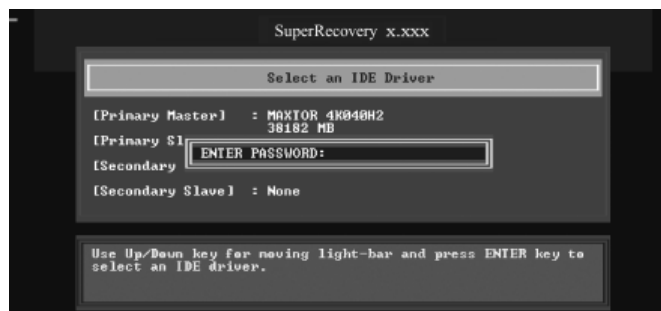
The hard disk selection menu will be displayed after you press the hotkey, listing all the IDE HDDs installed in your system. You can switch the highlight bar to make a selection and press “Enter” to confirm it.

Attention:

- 1) Make sure that you have selected a HDD before entering the main menu.
- 2) Make sure that the HDD you selected is ATA5 or higher. For the HDDs lower than ATA5, there will be a message of “No Support” in the HDD list menu listing beside the name of it.
- 3) Only one HDD can be operated at a time.

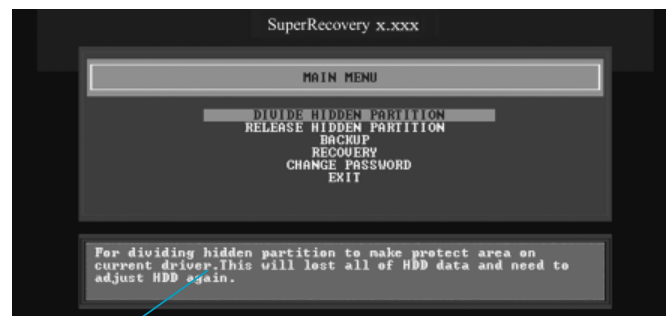


Note: If you have assigned a password to the selected HDD, you will be prompted to provide it before proceeding.



Main Menu:

Select a HDD to enter main menu. There are five function items, “DIVIDE HIDDEN PARTITION”, “RELEASE HIDDEN PARTITION”, “BACKUP”, “RECOVERY” and “CHANGE PASSWORD”. You can switch the highlight bar to make a selection on the operation which should be performed on the HDD and confirm your selection by pressing <Enter>. The following operation will be performed on the disk you selected.



On-line help message

Divide Hidden Partition:

1. What's a Hidden Partition:

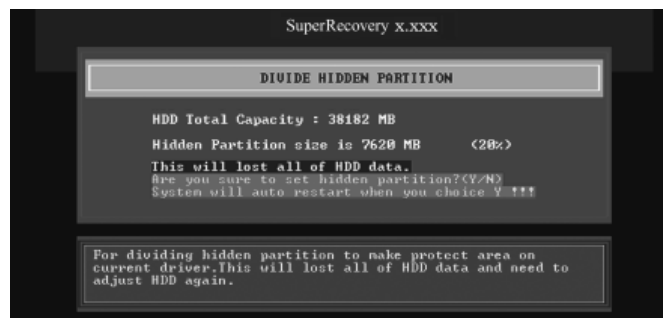
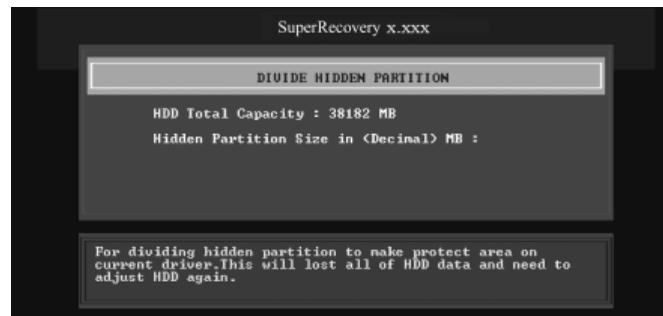
SuperRecovery can be used to divide a hidden partition, which is to be reserved for backing up HDD data. The operation of Division will erase all the old data saved in the HDD, to make sure that the following operations can be continued. Once the division is done, any future variation to the HDD will never affect the area of hidden partition, such as virus, windows system breaking down and data loss. SuperRecovery can recover all the data backed up in hidden partition. The user can therefore easily get the computer on track again.

2. Divide Hidden Partition:

- 1) Enter a percentage of the HDD total capacity or an actual size in MB as the size of the hidden partition, such as “30%” or “3000”. Press <Enter> to confirm your input. As the average rate of compression is 50% or so, you are suggested to divide 30% of the total as the capacity of the hidden partition;
- 2) The system will then prompt you to enter “Y” or “N” for confirmation. Press <Y> to restart the computer, and the division for hidden partition will be taken into effect after the system is restarted.

Attention :

- 1) All the data will be cleared after division is in process. So you'd better do the division against an empty HDD.
- 2) At the same time, the HDD capacity will decrease to make space for the hidden partition, which is unavailable for your normal use.

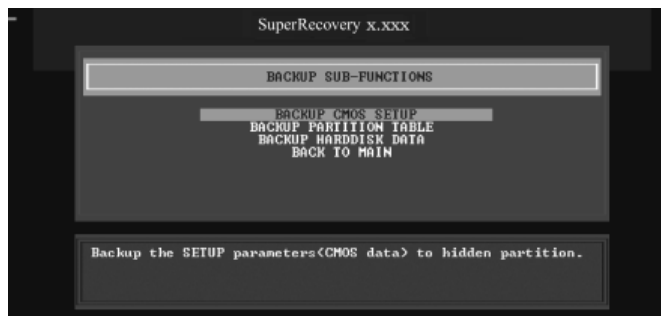
**Release Hidden Partition:**

This is used to release the hidden partition. If you choose this item and press “Y” to confirm, the system will be restarted to release the hidden partition. But the released partition is still unavailable for you after the system is restarted. It's necessary for you to enable it by using FDISK, PQMAGIC, or some other tools.



Backup:

Select BACKUP to enter the Backup interface, where you can find the following three sub-function items: “BACKUP CMOS SETUP”, “BACKUP PARTITION TABLE” and “BACKUP HARDDISK DATA”. Switch the highlight bar by pressing the arrow keys to make a selection and then press “Enter” to confirm your choice.



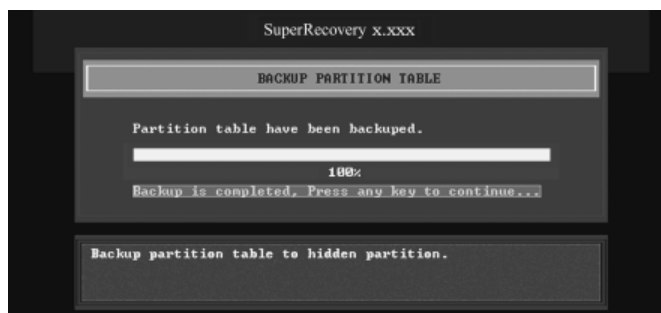
1. Backup CMOS Setup:

- 1) Supports backing up of the CMOS data.
- 2) The backing up or recovery of CMOS data should be operated on a motherboard of the same model.



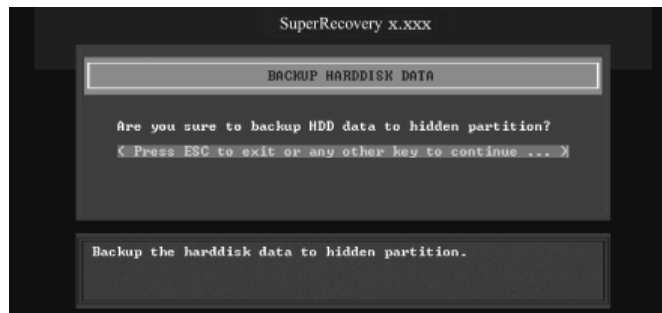
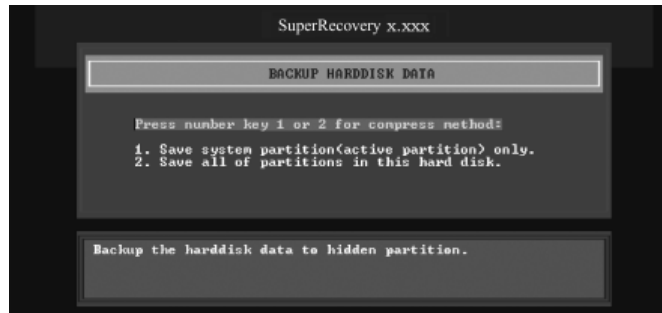
2. Backup Partition Table:

This function can help to backup all partition tables including extended partitions.



3. Backup Harddisk Data:

- 1) If there are active partitions (system partition), you can choose an active partition or the whole disk for backing up. But only one can be taken between the two choices. Old data will be replaced by the newly backed up.



- 2) Backing up with the progress bar showing.



- 3) A report with all the critical data on this operation will be listed after backing up is completed.

Original Size: The data size loaded in selected partition.

Valid Size: The size of valid data.

Elapsed Time: How long the process took to complete.

Compressed Size: The size of data after compression.

Compressed Rate: Compressed Size/Valid Size.

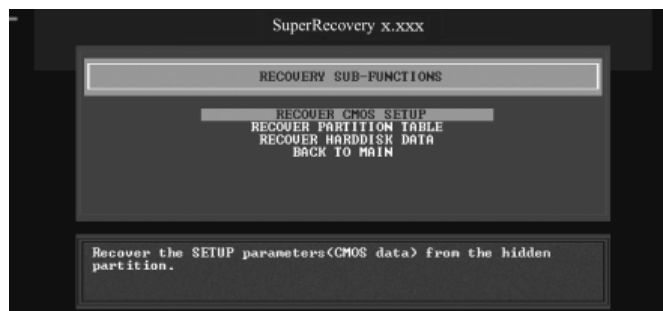


4. Back to Main:

This item is used to quit the Backup interface.

Recovery:

Select RECOVERY to enter the Recovery interface. The following sub-function are available : as RECOVER CMOS SETUP, RECOVER PARTITION TABLE and RECOVER HARDDISK DATA. You can switch the highlight bar by pressing the arrow keys to make a selection and press "Enter" to confirm your selection.



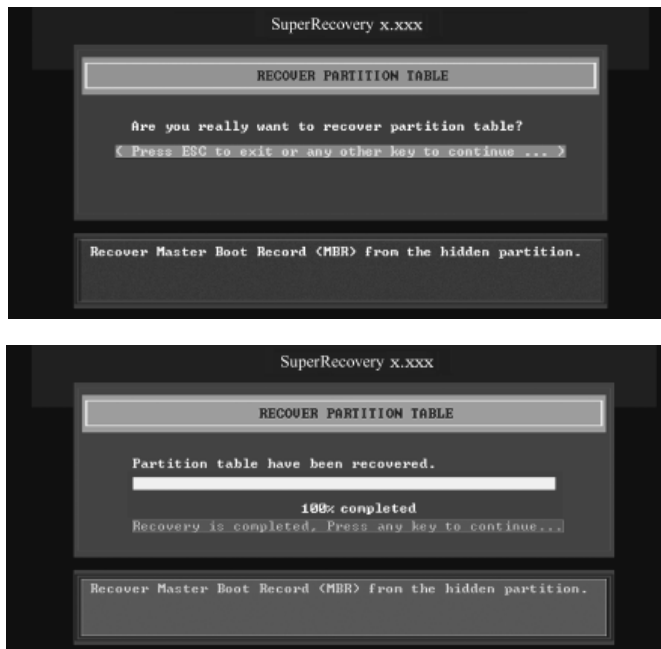
1. Recover CMOS Setup:

This function can help to restore the latest backup of CMOS settings you made.



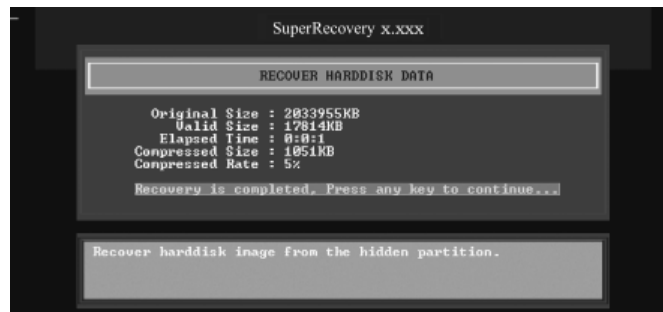
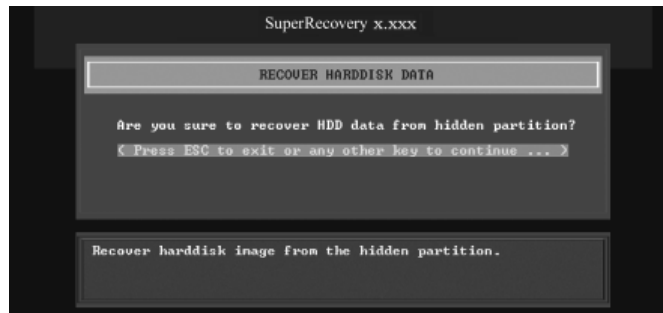
2. Recover Partition Table:

This function can help to recover all partition tables including extended partitions.



3. Recover Hard disk Data:

This option is used to restore the backed up data from the hidden partition.



4. Back to Main:

This option is used to quit the Recovery interface.

CHANGE PASSWORD Introduction:

Select CHANGE PASSWORD to enter the Change Password interface.

- 1) Enter the old password first. Press "ENTER" if password is null.
- 2) Enter the new password. Then enter the same again to confirm it.
- 3) Press "Enter" for null password.
- 4) The password will be saved in the hidden partition.



Using 8-channel Audio

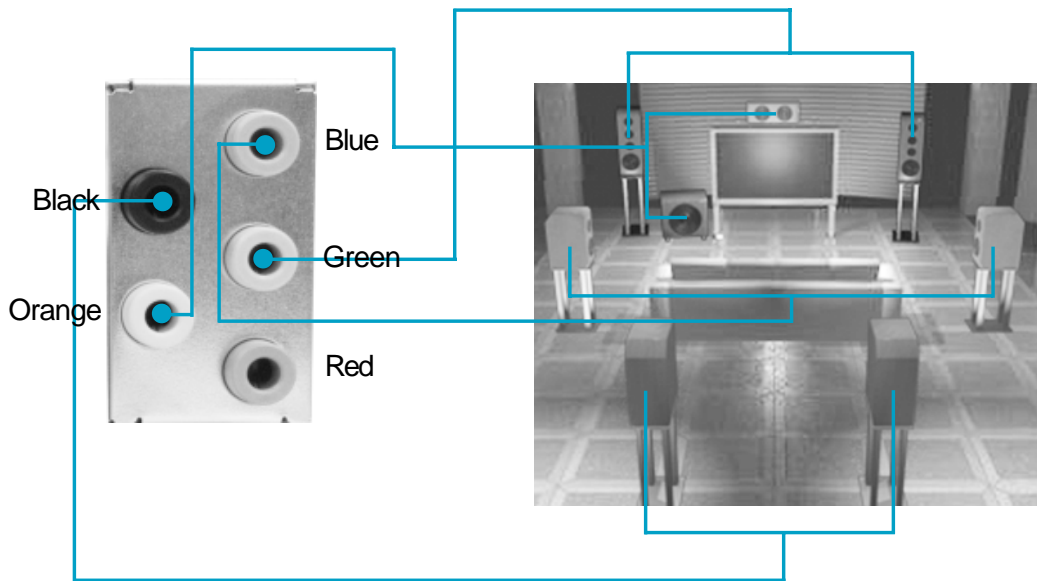
1. Introduction

8-channel audio is the highest surround sound standard available adding two speakers over existing 6-channel audio set-ups. 8-channel surround sound is already a standard feature for premium consumer audio devices, so it only makes sense that as users increasingly use their PCs to listen to the latest multimedia content that 8-channel support makes the migration as a standard PC feature.

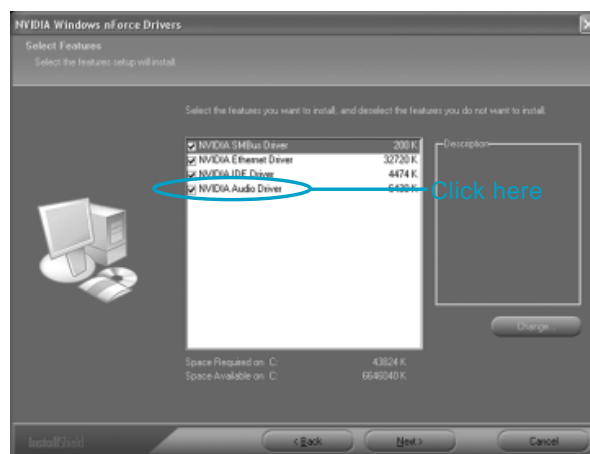
In the 8-channel surround sound configuration there are the standard front, center, LFE (bass) speakers but also two surround speakers are placed at the sides of a listener, and two speakers directly behind the listener. Some formats also support a 8-channel audio configuration wherein there is only one speaker behind the listener. However, since audio connections always come in stereo pairs most PC hardware will automatically support the 8-channel configuration. It is also fully supported in the Windows XP operating system.


2. Using 8-channel Audio

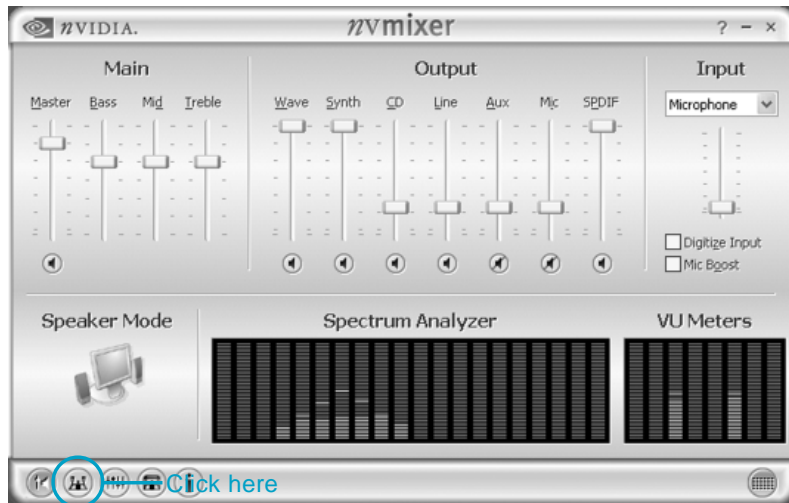
STEP 1. Connect the front channels to green jack, the rear channels to black jack, the Center/Subwoofer channels to orange jack and Side channels to blue jack. Please refer to below figure.




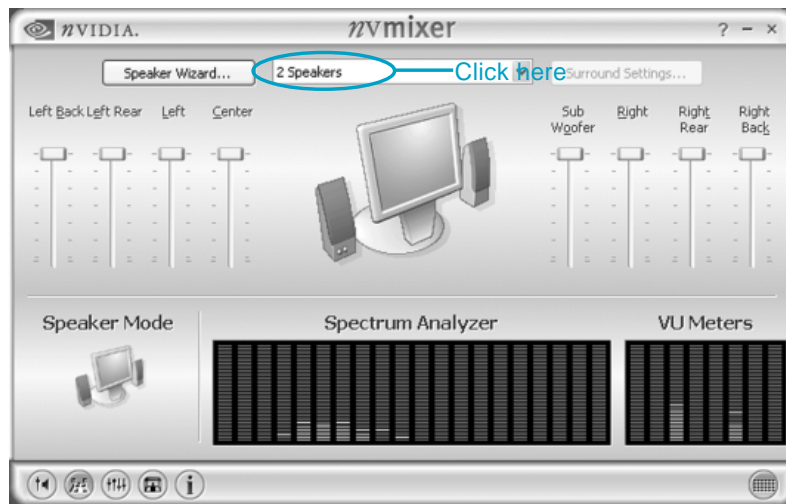
STEP 2. You need to install the driver for the audio chip before you can use the 8-channel audio function.



STEP 3. After installation of the audio driver, you'll find an icon  on the taskbar's status area. Double click the icon, you will see the following picture.



STEP 4. Click  icon. The following picture will appear.



STEP 5. Make sure you select "7.1 Speakers" from the above picture. Now you can enjoy the 8-channel audio function.