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Version:

User's Manual V1.0 in English for NF4SLI7AA series motherboard.
P/N: 91-181-NF4-7A-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>



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
NF4SLI7AA

is in conformity with

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

- EN 55022: 1998/A2: 2003 Limits and methods of measurements of radio disturbance characteristics of information technology equipment
- EN 61000-3-2: 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: 1998/A2:2003 Information technology equipment-Immunity characteristics limits and methods of measurement

Signature :

Place / Date : TAIPEI/2005

Printed Name : James Liang

Position/ Title : Assistant President

Declaration of conformity



Trade Name: FOXCONN
Model Name: NF4SLI7AA
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 : James Liang

Date : 2005

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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 overclocked. Normal operation depends on the overclock capacity of your device.

i 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.

i 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 NF4SLI7AA series.
Each motherboard is carefully designed for the PC user who
wants diverse features.

- L with onboard 10/100M LAN
- K with onboard Gigabit 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 10/100M
LAN (-L), SATA function (-S).

Chapter 1

Thank you for buying FOXCONN NF4SLI7AA 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 Crush 19+MCP-04 chipset, providing users a computer platform with a high integration-compatibility-performance price ratio.

This chapter includes the following information:

- ❖ Main Features
- ❖ Motherboard Layout
- ❖ Rear Panel Connectors

Main Features

Size:

- ATX form factor of 11.6" x 9.6"

Microprocessor:

- Supports Intel® Pentium® Extreme Edition, Pentium® D, Pentium® 4, Celeron® D processor in an LGA775 package
- Supports FSB at 533MHz/800MHz/1066 MHz
- Supports Hyper-Threading technology

Chipset:

- Chipset: NVIDIA Crush 19+MCP-04

System Memory

- Four 240-pin DDR2 DIMM slots
- Supports Dual channel DDR2 400/533/667 memory
- Supports 256/512/1024Mb technology up to 4GB

USB 2.0 Port

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

Onboard Serial ATA II

- Compliant with the Serial ATA II specification
- MCP-04 support four Serial ATA II connectors, Silicon Image Sil3132 support two Serial ATA II connectors
- Up to 300MB/s transfer rates

Chapter 1 Product Introduction

Onboard 1394b

- Supports hot-plug
- Two 1394b port with rate of transmission at 800Mbps
- Self-configured addressing

Onboard LAN (-K)

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

Note: We recommend you use shielding Lan line

Onboard Audio

- Supports 8-channel audio
- AC' 97 2.3 Specification Compliant
- Supports SPDIF output

BIOS

- Licensed advanced AWARD (Phoenix) BIOS, supports flash ROM, Plug-and-Play
- Supports IDE HDD, 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) ACPI state

Expansion Slots

- Two PCI slots
- Two PCI Express x1 slots
- Two PCI Express x16 Graphics slots



Chapter 1 Product Introduction

PCI Express x16 graphics support

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

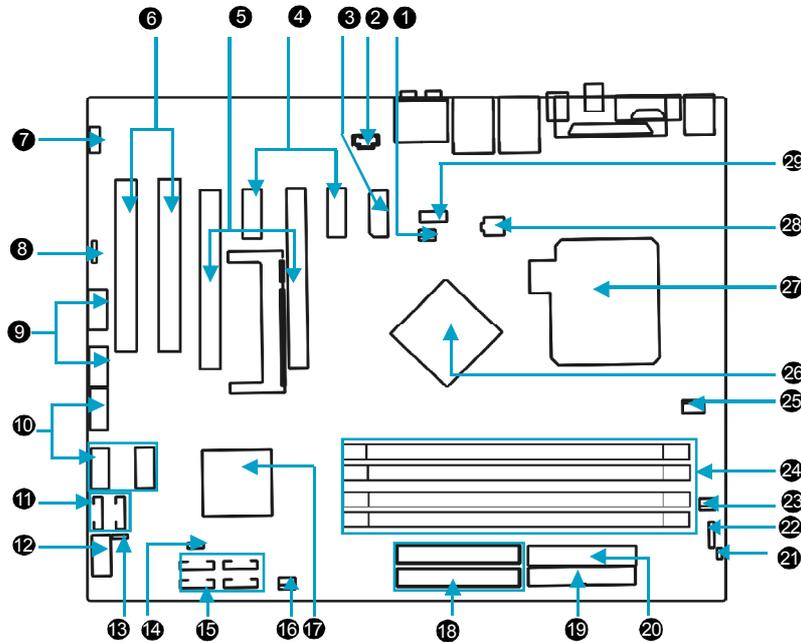
PCI Express x1 support

- Supports 250 MB/sec (500MB/sec concurrent) bandwidth
- Low power consumption and power management features

Advanced Features

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

Motherboard Layout

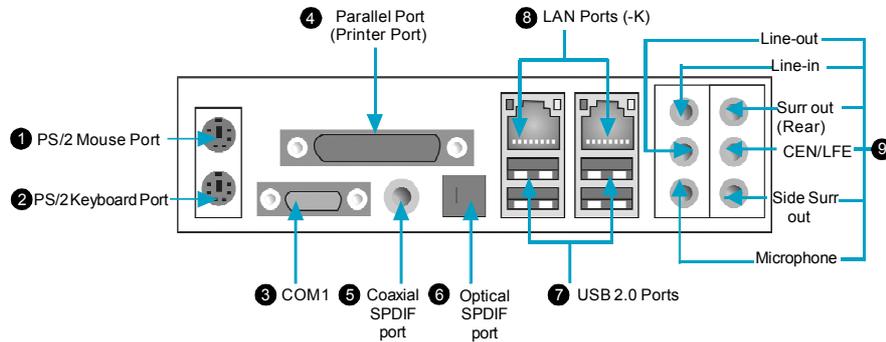


Note: The above motherboard layout is provided for reference only; please refer to the physical motherboard.

- | | |
|---------------------------------------|--------------------------------|
| 1. FAN1 Connector | 16. SYS_FAN Connector |
| 2. CD_IN Connector | 17. NVIDIA MCP-04 Chipset |
| 3. Auxilialy PEX Power Connector | 18. IDE Connectors |
| 4. PCI Express x1 Slots | 19. Floppy Connector |
| 5. PCI Express x16 Graphics Slots | 20. 24-Pin ATX Power Connector |
| 6. PCI Slots | 21. Chassis Intruder Connector |
| 7. Front Audio Connector | 22. IrDA Connector |
| 8. Speaker Connector | 23. PWR_FAN |
| 9. F_1394b Connectors | 24. DDR DIMM Slots |
| 10. Front USB Connectors | 25. CPU_FAN |
| 11. SATA Connectors(Sil3132 support) | 26. NVIDIA Crush 19 Chipset |
| 12. Front Panel Connector | 27. CPU Socket |
| 13. BIOS TBL Enable Jumper | 28. ATX 12V Power Connector |
| 14. Clear CMOS Jumper | 29. COM2 Connector(optional) |
| 15. SATA Connectors(MCP-04 support) | |

Rear Panel Connectors

This motherboard provides the following ports as below:



9 Line in, Line out, Microphone, Surr out(Rear), CEN/LFE, Side Surr out(for -8 Models)

When using a 8-channel sound source, connect the front speaker to the green audio output; connect the Surr out(Rear) sound speaker to the black audio output; connect the center speaker/subwoofer(LFE/CEN) to the yellow audio output; connect the side Surr out sound speaker to the blue audio output.

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, connection of hard drive and floppy drive data cables, and setting up various other feature 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
- ❖ Other Connectors
- ❖ Expansion Slots
- ❖ Jumpers

Chapter 2 Installation Instructions

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.

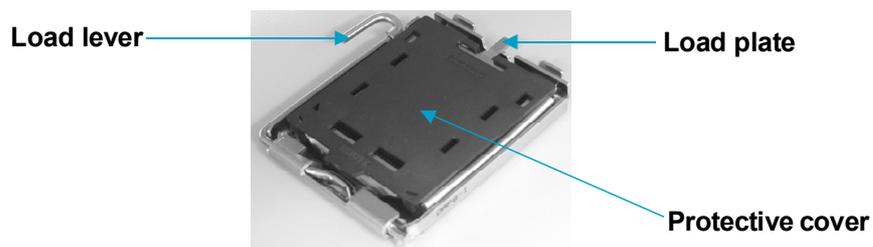
Chapter 2 Installation Instructions

CPU

This motherboard Supports Intel® Pentium® Extreme Edition, Pentium® D, Pentium® 4, Celeron® D processor in an LGA775 package. It also supports Hyper-Threading Technology .

Installation of CPU

Below is the CPU socket illustration. Follow these procedures to install a CPU.

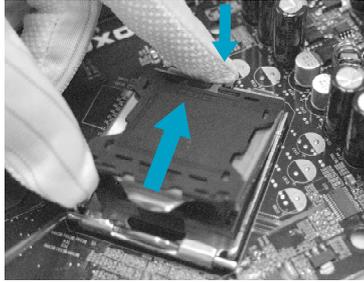


1. Use thumb and forefinger to hold the hook of the load lever and pull the lever down and away from socket to unlock it. Lift the load lever.

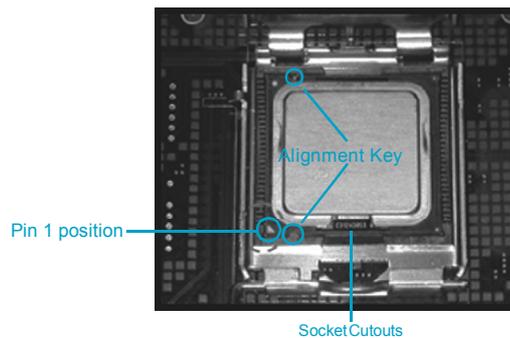


2. Push down the rear tab with your forefinger to bring the front end of the load plate up slightly. Open the load plate with thumb. Be careful not to touch the contacts.

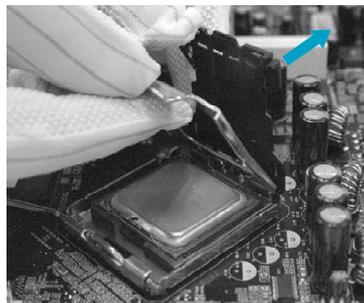
Chapter 2 Installation Instructions



3. Hold CPU with thumb and forefinger. Ensure fingers align to socket cutouts. Match the CPU triangle marker to Pin 1 position as shown below. The alignment key also provides the orientation directed function. Lower the CPU straight down without tilting or sliding the CPU in the socket.



4. After installing the CPU, remove the protective cover from load plate. The protective cover is used to protect the contacts of the socket. Do not discard the protective cover. Always replace the socket cover if the CPU is removed from the socket.



Chapter 2 Installation Instructions

5. Close the load plate, and slightly push down the tongue side.



6. Lower the lever and lock it to the load plate, then the CPU is locked completely.



Note :

Excessive temperatures will severely damage the CPU and system. Therefore, you should install CPU cooling fan and make sure that the cooling fan works normally at all times in order to prevent overheating and damaging to the CPU. Please refer to your CPU fan user guide to install it properly.

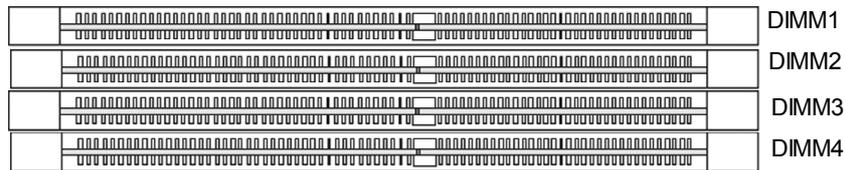
For more detailed information about the qualified CPU vendor list , please visit our website:

<http://www.foxconnchannel.com>

Chapter 2 Installation Instructions

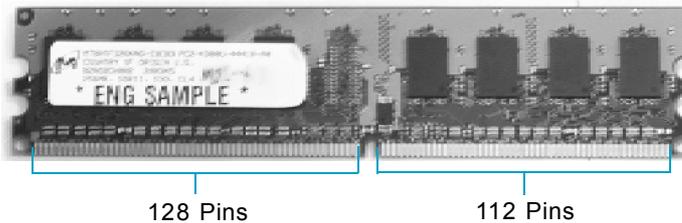
Memory

This motherboard includes four 240-pin slots with 400/533/667 MHz Dule Channel DDR2 DRAM interface. All DIMMs in a system must be of the same type. You must install at least one memory module to ensure normal operation. If you install two or more modules, they must be the same speed. Mixing memory modules from different manufactures are not recommended.



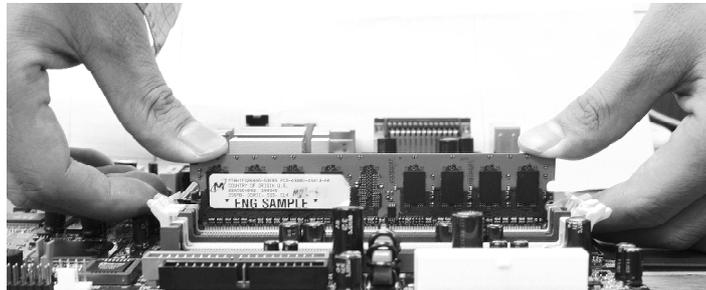
Installation of DDR2 Memory

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.



Chapter 2 Installation Instructions

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.

Note:

Installing DDR2 DIMMs other than the recommended configurations may cause memory sizing error or system boot failure.

For more detailed information about the qualified memorys vendor list , please visit our website:

<http://www.foxconnchannel.com>

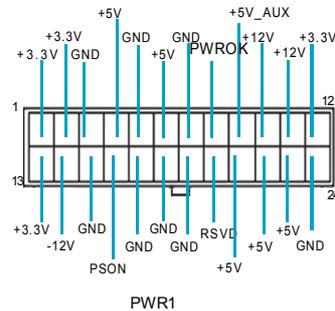
Chapter 2 Installation Instructions

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.

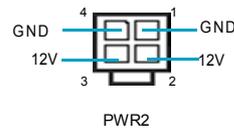
24-pin ATX Power Connector: PWR1

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.



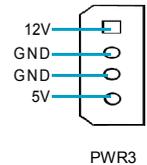
ATX 12V Power Connector: PWR2

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



AUX PEX PWR Connector: PWR3

The connector is auxiliary power which mainly supplies 12V and 5V power for the motherboard.



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.



Chapter 2 Installation Instructions

Other Connectors

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

FDD connector: FLOPPY

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

IDE Connectors: PIDE & SIDE

These connectors support the Ultra ATA 100/66/ 33 IDE hard disk ribbon cable. 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.

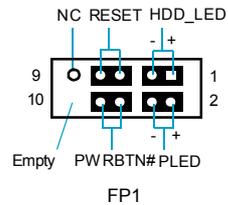
Attention:

Ribbon cables are directional, therefore, make sure to always connect with the cable on the same side as pin 1 of the PIDE/SIDE or FLOPPY connector on the motherboard.

Chapter 2 Installation Instructions

Front Panel Connector: FP1

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 status, the LED is off.

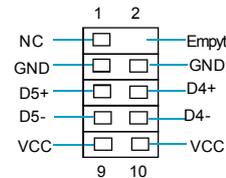
Power Switch Connector (PWRBTN#)

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.

Chapter 2 Installation Instructions

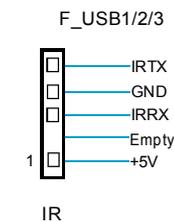
USB Connectors: F_USB 1, F_USB 2, F_USB 3

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



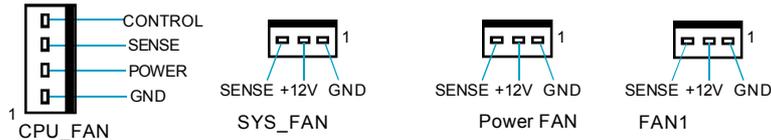
IrDA Connector: IR

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.



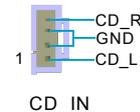
Fan Connectors: CPU_FAN, SYS_FAN, Power FAN, FAN1

There are four fan connectors on this motherboard.



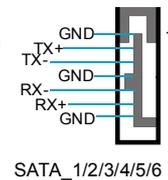
Audio Connectors: CD_IN

CD_IN are Sony standard CD audio connectors, they can be connected to the CD-ROM drive through a CD audio cable.



Serial ATA II Connectors: SATA_1, SATA_2, SATA_3, SATA_4, SATA-5, SATA-6

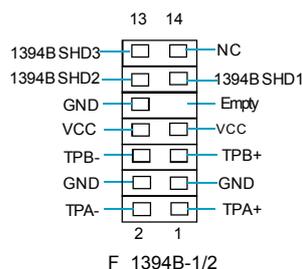
These Serial ATA II connectors are used to connect the Serial ATA II devices to the motherboard. These connectors support the thin Serial ATA II cables for Serial ATA II devices. The current Serial ATA II interface allows up to 3Gb/s transfer rate. Refer to RAID manual on how to set up SATA RAID configurations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



Chapter 2 Installation Instructions

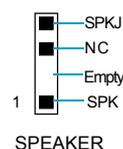
1394b Connectors: F_1394B-1, F_1394B-2

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.



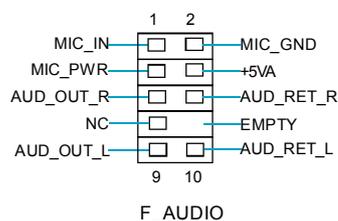
Speaker Connector: SPEAKER

The speaker connector is used to connect speaker of the chassis.



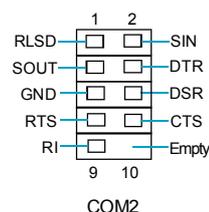
Front Audio Connector: F_AUDIO

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.



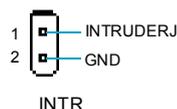
COM2 Connector: COM2

This motherboard attached a serial connector for your computer, you only need connect it with cable, then link devices to cable port.



Chassis Intruder Connector: INTR

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 “Advanced BIOS Features” section of the CMOS Setup. Save and exit, then boot the operating system once to make sure this function takes effect.



Chapter 2 Installation Instructions

Expansion Slots

This motherboard includes two 64-bit Master PCI bus slots, two PCI Express x1 slots, two PCI Express x16 Graphics slot.

PCI Slot

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 Slot

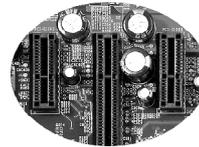
Chapter 2 Installation Instructions

PCI Express Slots

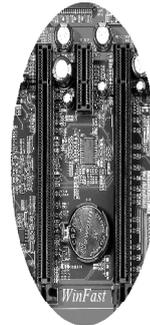
PCI Express will offer the following design advantages over the PCI and AGP interface:

- 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.

The motherboard supports one PCI Express x16 Graphics card or two SLI-ready PCI Express x16 Graphic cards that comply with the PCI Express specifications.



PCI-E (x1) Slots



PCI-E(16x)
Slot

For more detailed information about the qualified Graphics cards vendor list , please visit our website:

<http://www.foxconnchannel.com>

Warning:

If a performance graphics card was installed into x16 PCI Express slot, 2X12 pin power supply was strongly recommended.

Chapter 2 Installation Instructions

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.

 **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

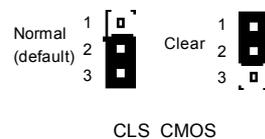
1. For the jumpers on this motherboard, pin 1 can be identified by the silk-screen printed “ Δ ” next to it. However, in this manual, pin 1 is simply labeled as “1”.
2. The following table provides some explanations of the jumper pin settings. Users should refer to the table while adjusting jumper settings.

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: CLS_CMOS

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.

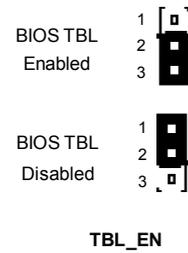


Warning:

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: TBL_EN

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 short pin 2 and 3 with the jumper cap.



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.

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
- ❖ BIOS Features
- ❖ Advanced BIOS Features
- ❖ Advanced Chipset Features
- ❖ Integrated Peripherals
- ❖ Power Management Setup
- ❖ PnP/PCI Configurations
- ❖ PC Health Status
- ❖ Load Fail-Safe Defaults
- ❖ Load Optimized 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 key to enter the Award BIOS CMOS Setup Utility.

Press TAB to show POST Screen, DEL to enter SETUP.

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 result 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.

BIOS 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

This will display the current status of your PC.

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> keys to choose the setting values.



Standard CMOS Features Menu

Date

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

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

These categories identify the HDD types of 4 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 is installed or set; “Auto” means the system can auto-detect the hard disk when booting up; by choosing “Manual” and changing Access Mode to “CHS”, the related information should be entered manually. Enter the information directly from the keyboard and press < Enter>:

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

Chapter 3 BIOS Description

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

Floppy Drive A

This option 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 Setting

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 Setting

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.

Chapter 3 BIOS Description

Memory

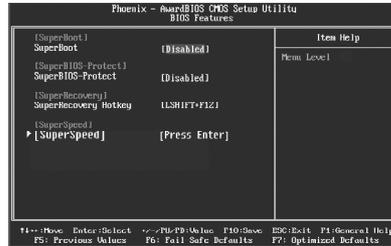
This is a Displays-Only Category, determined by POST(Power On Self Test) of the BIOS.

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.

BIOS ID

This option Displays the BIOS ID.If users have not any data about the motherboard,we can confirm the motherboard type using the BIOS ID number.

BIOS Features



BIOS Features Menu

❖ [SuperBoot] SuperBoot

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

Super-BIOS Protect function protects your PC from being affected by viruses, e.g. CIH. The available setting values are: Disabled and Enabled.

❖ [SuperRecovery] SuperRecovery Hotkey

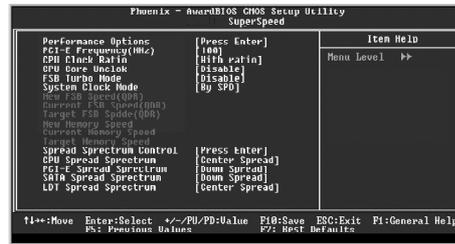
SuperRecovery provides the users with an excellent data protection and HDD recovery function.

❖ [SuperSpeed] SuperSpeed

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

⚡ Warning:

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



SuperSpeed Menu

❖ Performance Options

This option is used to set Performance options.

❖ PCI-E Frequency(MHz)

This option is used to set PCI-E Frequency.

❖ CPU Clock Ratio

This option is used to set the CPU Clock Ratio.

❖ CPU Core Unlock

This option is used to set the ratio of an unlock CPU.

❖ FSB Turbo Mode

The Turbo Mode us a special sort of optimization mode.This option is used to set the FSB Turbo Mode to reduce the delitescence between memory to FSB.

❖ System Clock Mode

This option is used to set System Clock mode.

❖ New/Current/Target FSB Speed(QDR)

This option is used to set the New/Current/Target FSB speed.

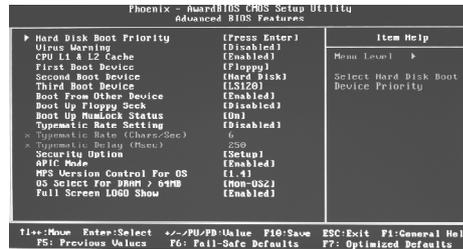
❖ New/Current/Target Memory Speed

This option is used to set the New/Current/Target Memory speed.

❖ Spread Spectrum Control

If you enable spread spectrum,it can significantly reduce the EMI(Electro-Magnetic Interference)generated by the system.

Advanced BIOS Features



Advanced BIOS Features Menu

❖ Hard Disk Boot Priority

This option 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 <->; you can exit this menu by pressing <Esc>.

❖ Virus Warning

This option is used to set up the virus warning message for the IDE HDD boot sector. When set to Enabled, a warning message will appear on the screen if any program wants to write any information to this sector, and will give an audible warning.

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

❖ CPU L1&L2 Cache

This item is used to turn on or off the CPU L1 and L2 cache.

❖ Hyper-Threading Technology

This option is used to turn on or off the Hyper-Threading function of the CPU.

Note: This function will not be displayed until a CPU that supports Hyper-Threading has been installed.

❖ First/Second/Third Boot Device

This option allows you to set the boot device sequence.

❖ Boot From Other Device

With this function set to enabled, the system will boot from some other devices if the first/second/third starting devices failed.

❖ **Boot Up Floppy Seek**

This option controls whether the BIOS checks for a floppy drive while booting up. If it cannot detect one (either due to improper configuration or physical unavailability), it will appear an error message. Disable this option, POST will not detect the floppy.

❖ **Boot Up NumLock Status**

This item defines if the keyboard Num Lock key is active when your system is started.

❖ **Typematic Rate Setting**

If this item is enabled, you can use the following two items to see the typematic rate and the typematic delay settings for your keyboard.

❖ **Typematic Rate (Chars/Sec)**

Use this item to define how many characters per second a held-down key generated.

❖ **Typematic Delay (Msec)**

Use this item to define how many milliseconds must elapse before a held-down key begins generating repeat characters.

❖ **Security Option**

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 startup your PC, as well.

❖ **APIC Mode**

This option is used to enable or disable APIC function.

❖ **MPS Version Control For OS**

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

❖ **OS Select For DRAM>64MB**

This item is only required if you have installed more than 64MB of memory and you are running the OS/2 operating system.

❖ **Full Screen LOGO Show**

This item allows you to enable or disable the Full Screen logo.

Advanced Chipset Features



Advanced Chipset Features Menu

❖ Memory Timing

This option is used to set the memory timing.

❖ Addressing Modes

This option is used to set the Addressing Modes.

❖ SLI Broadcast Aperture

This option is used to set the SLI Broadcast Aperture.

❖ LDT Frequency

This option is used to set the LDT(Lightning Data Transfer) Frequency.

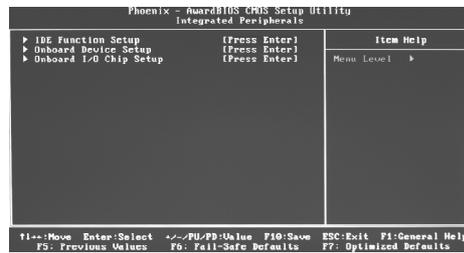
❖ System BIOS Cacheable

Select "Enabled" to allow caching of the system BIOS which may improve performance. If any other program writes to this memory area, a system error may result.

❖ Video RAM Cacheable

Select "Enable" to allow caching of the system RAM which may improve performance. If any other program writes to this memory area, a system error may result.

Integrated Peripherals



Integrated Peripherals Menu

❖ IDE Function Setup

Press enter to set IDE Function Setup. Please refer to page 37.

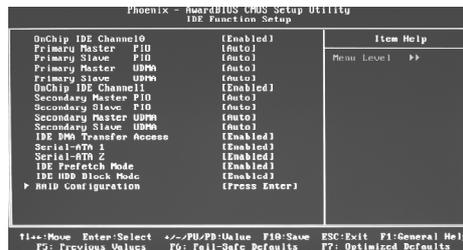
❖ Onboard Device Setup

Press enter to set onboard Device Setup. Please refer to page 39.

❖ Onboard I/O Chip Setup

Press enter to set onboard chip I/O Chip device. Please refer to page 40.

Chapter 3 BIOS Description



IDE Function Setup

❖ OnChip IDE Channel 0/1

This option is used to set the ports of onboard IDE.

❖ IDE Primary /Secondary Master/Slave PIO

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 the best or select a PIO mode from 0-4.

❖ Primary/Secondary Master/Slave UltraDMA

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

This option is used to enable or disable IDE DMA transfer access.

❖ Serial-ATA 1/2

This option is used to enable or disable Serial-ATA 1/2.

❖ IDE Prefetch Mode

This option is used to set the IDE Prefetch mode.

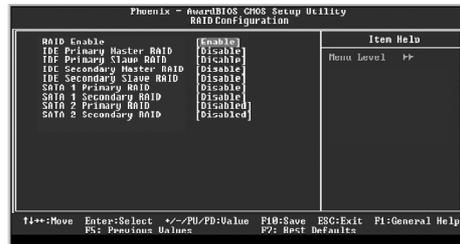
❖ IDE HDD Block Mode

This option is used to set whether the IDE HDD block mode is allowed.

❖ Raid Configuration

Press enter to set the Raid Configuration.

Chapter 3 BIOS Description



RAID Configuration manu

❖ RAID Enable

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

❖ IDE Primary /Secondary Master/Slave RAID

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

❖ SATA 1/2 Primary/Secondary RAID

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

Chapter 3 BIOS Description



Onboard Device Setup menu

❖ OnChip USB

This option is used to set turn on/off the USB port.

❖ USB Memory Type

This option is used to set the USB Memory type.

❖ USB Keyboard Support

This option is used to set USB keyboard support.

❖ USB Mouse Support

This option is used to set USB Mouse support.

❖ AC97 Audio

This option is used to enable or disable AC97 audio.

❖ MAC /Marvell GigaBit Lan

These options are used to set Onboard MAC/Marvell Gigabit Lan.

❖ MAC/Marvell GigaBit Lan Rom

These options are used to set Onboard MAC/Marvell Gigabit Lan Boot Rom.

❖ MAC Media Interface

This option is used to set Onboard MAC Media Interface.

❖ OnBoard Sil3132 RAID

This option is used to set Onboard Sil3132 RAID.

❖ OnBoard Sil3132 Mode

This option is used to set Onboard Sil3132 Mode.



Onboard I/O Chip Device Menu

❖ Onboard FDC Controller

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

❖ Onboard Serial Port 1/2

These options are used to assign the I/O address and interrupt request (IRQ) for the onboard serial port 1/2.

Note: Do not try to set the same values for serial port 1 and 2.

❖ UART Mode Select

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

❖ RXD, TXD Active

Use this option to consult your IR peripheral documentation to select the correct setting of the RXD AND TXD signal.

❖ IR Transmission Delay

This option is used to enable or disable the IR Transmission delay.

❖ UR2 Duplex Mode

This option is available when UART 2 mode is set to either ASKIR or IRDA. This option enables you to determine the infrared function of the onboard infrared chip.

❖ Use IR Pins

This option is used to select the IR Pins.

❖ Onboard Parallel Port

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

Chapter 3 BIOS Description

❖ Parallel Port Mode

Select an address and corresponding interrupt request for the onboard parallel port.

❖ ECP Mode Select/Use DMA

Select ECP mode or select a DMA channel for the parallel port when using the ECP mode. This field is only configurable if Parallel Port Mode is set to ECP.

Power Management Setup



Power Management Setup Menu

❖ ACPI function

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

This option 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 previous status when the STR function wakes. When you select “S1 & S3” mode, the system will automatically select the delay time.

❖ Power Management

This option is used to set the power management scheme.

❖ Video Off Option

This option is used to set video off option. The setting values are Always On, Suspend -> Off, Susp,Stby -> Off, All Modes -> Off.

❖ HDD Down In Suspend

This option is used to set the idle time before the system enters into sleep status.

Chapter 3 BIOS Description

❖ **Soft off by PWR-BTTN**

This option is used to set the Soft off by PWR-BTTN mode. If you select instant-off, the PC will shutdown immediately. Select delay 4 sec, the system will enter the suspend mode if you press the power switch less than 4sec.

❖ **WOL(PME#) From soft-off**

This option is used to set whether use the WOL port to wake the system.

❖ **Power-On by Alarm**

This option is used to set the Power-On by Alarm.

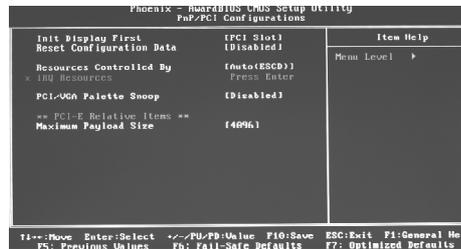
❖ **POWER On Function**

This option is used to set the POWER On Function.

❖ **PWRON After PWR-Fail**

This option is used to set the PWRON after PWR-Fail.

PnP/PCI Configurations



PnP/PCI Configurations Menu

❖ Init Display First

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

❖ Reset Configuration Data

This option is used to set whether the system is permitted to automatically distribute IRQ DMA and I/O addresses when each time the machine is turned on.

❖ Resources Controlled By

This option 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

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).

❖ Maximum Payload Size

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

PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility		PC Health Status	
Shutdown Temperature	[Disabled]	Item Help	
CPU Warning Temperature	[Disabled]		
Current System Temperature	33°C / 91°F	Home Level	→
Current CPU Temperature	50°C / 122°F		
System Fan	0 RPM		
CPU Fan	1034 RPM		
Power Fan	0 RPM		
Vcore	1.22V		
+12V	11.98V		
VCC 5 (5V)	5.08V		
VCC 3.3 (3V)	3.30V		
V Battery (V)	3.12V		
5USB (V)	5.08V		
Smart SYSFAN Temperature	[40°C/104°F]		
SYSFAN Tolerance Value	[5]		
Smart CPU FAN Temperature	[60°C/140°F]		
CPU FAN Tolerance Value	[5]		

F1: Move Enter: Select ~~~/F10: Save ESC: Exit F1: General Help
 F5: Previous Values F6: Fall-Safe Defaults F7: Optimized Defaults

PC Health Status Menu

❖ **Shutdown Temperature**

The option is used to set the Shutdown Temperature of CPU. When the temperature of CPU reach the setting value, the system will be shutdown.

❖ **CPU Warning Temperature**

The option is used to set the CPU Warning Temperature. Select the combination of lower and upper limits for the CPU temperature. If the CPU temperature extends beyond either limit, any warning mechanism programmed into your system will be activated.

❖ **Current System/CPU Temperature, System/CPU/Power Fan, Vcore, +12, VCC 5/3.3 ,V Battery, 5USB.**

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

❖ **Smart SYSFAN Temperature**

This option is used to set the Smart SYSFAN Temperature.

❖ **SYSFAN Tolerance Value**

This option is used to set the SYSFAN Tolerance Value.

❖ **Smart CPU FAN Temperature**

This option is used to set the Smart CPU FAN Temperature.

❖ **CPU FAN Tolerance Value**

This option is used to set the CPU FAN Tolerance Value.

Load Fail-Safe Defaults

Select this option to press <Enter>, it will pop out a dialogue box to allow you to load default set by BIOS. Select <Y> and then press Enter to load default. Select <N> and press <Enter>, it will not load. The defaults set by BIOS have set the basic functions of system in order to ensure the stability of system. But if your computer fails to properly run, you may load the default to make the system recover normal, then carry out failure testing in next step. If you only want to load the default in an option, you can select this option and press the key <F6>.

Load Optimized Defaults

Select this option and press Enter, it will pop out a dialogue box to let you load the optimized defaults set by BIOS. Select <Y> and then press <Enter> to load the optimized defaults. Select <N> and press <Enter>, it will not load. The defaults set by BIOS have set the optimized performance parameters of system to improve the performances of system components. But if the optimized performance parameters to be set cannot be supported by your hardware devices, it will cause system to make mistakes or not stable. If you only want to load the optimized defaults in an option, you can select this option and press the key <F7>.

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 the settings. 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 settings.

When you select Set Supervisor / User Password, it will appear the following message in the center of screen, which will help you to set password.

Enter Password:

Enter your password, not exceeding 8 characters, then press <Enter>, the password you have entered now will replace the previous password. When the system requires you to determine this password, you can enter this password and press <Enter>.

If you do not need this setting, you can press <Enter> when the screen prompts you to enter password, and the screen will appear the following message to show this function invalid. In this case, you can freely enter into system and CMOS setting program.

PASSWORD DISABLED!!!
Press any key to continue...

Chapter 3 BIOS Description

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 option and press <Enter>, it will show the following message in the center of screen:

SAVE to CMOS and EXIT (Y/N)? Y

At this time, press <Y> to save your amendment in CMOS and exit from this program; press <N>/<ESC> to return main menu.

Exit Without Saving

Select this option and press <Enter>, it will show the following message in the center of screen:

Quit Without Saving (Y/N)? Y

At this time, press <Y> to exit CMOS but it does not save your amendment in CMOS; press <N>/<ESC> to return main menu.

Chapter 4

The utility CD that comes 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

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 sequentially, from first to last.

- A. nVIDIA nForce Chiset System
- B. Dirlltx 9.0

2. Accessories

Use this option to install additional software programs.

- A. SuperUtility
 - a. SuperStep

Superstep is powerful and easy-to-operate tool for overclocking. You can quickly increase your CPU's working frequency through its user-friendly interface. It will enhance your CPU's performance and meet all kinds of DIY requirements.
 - b. SuperLogo

SuperLogo can display user-designed graphics and pictures, such as a company logo or personal photos, thus making your PC more personalized and friendly.
 - c. SuperUpdate

SuperUpdate function can help to update the BIOS through Internet.
- B. Adobe Reader
- C. Norton Internet Security

3. Manual

Click here to browse manual.

4. Browse CD

Click to browse this CD.

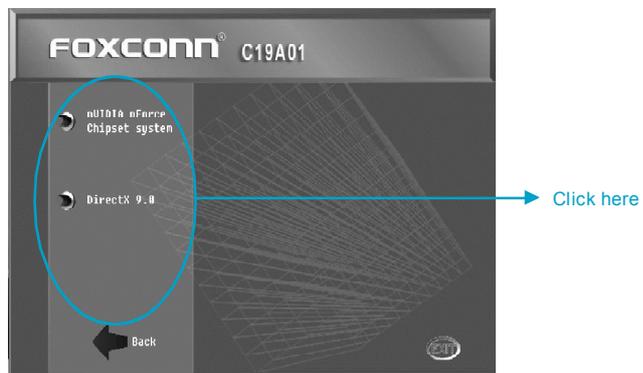
5. Homepage

Click here to visit FOXCONN motherboard homepage.

Chapter 4 Driver CD Introduction

Start to install drivers

Select <Install Driver> to enter the driver installation menu (as following picture).
Click the relevant button to install the Drivers.



Chapter 5

This chapter will introduce how to use attached software.

This chapter includes the following information:

- ❖ SuperStep
- ❖ SuperUpdate
- ❖ SuperLogo
- ❖ nFune

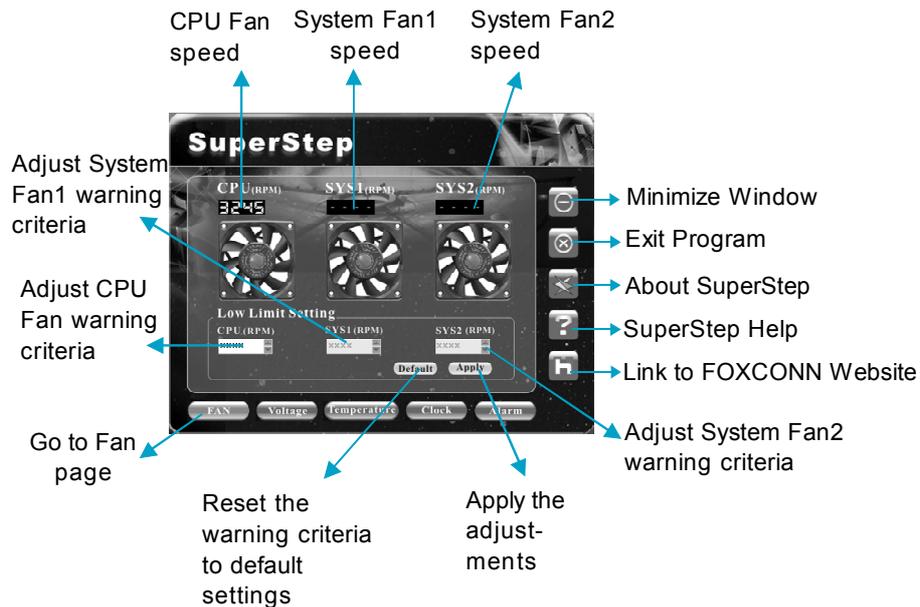
SuperStep

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:



Chapter 5 Directions for Bundled Software

SuperStep

	Value (v)	High (v)	Low (v)
CPU Vcore:	x.xx	x.xxx	x.xxx
VDDR:	x.xx	x.xxx	x.xxx
+3.3V:	x.xx	x.xxx	x.xxx
+5V:	x.xx	x.xxx	x.xxx
+12V:	x.xx	x.xxx	x.xxx
-12V:	- - - -	x.xxx	x.xxx
-5V:	- - - -	x.xxx	x.xxx
5VSB:	x.xx	x.xxx	x.xxx
VBAT:	x.xx	x.xxx	x.xxx

Buttons: FAN, Voltage, Temperature, Clock, Alarm

Annotations:

- Adjust voltages warning criteria (upper limit)
- Adjust voltages warning criteria (Lower limit)
- Apply the adjustments
- Reset the warning criteria to default settings
- Go to Voltage page
- Current voltage readings

SuperStep

CPU Temperature: 0°C to 100°C scale, current value xx.xx, Upper Temperature Threshold xx

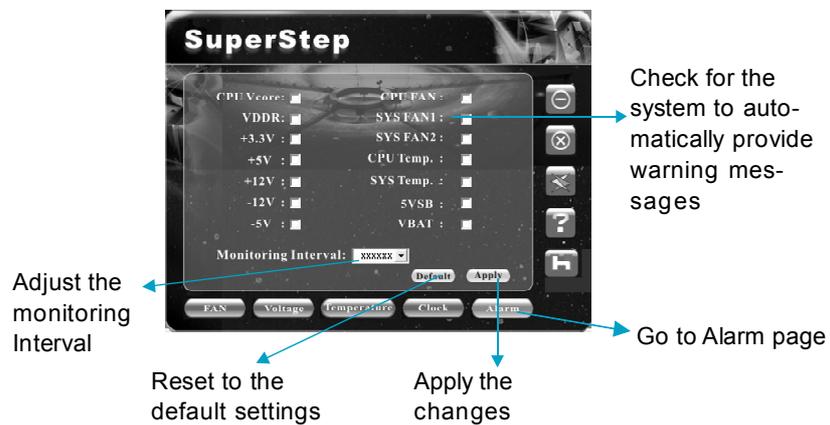
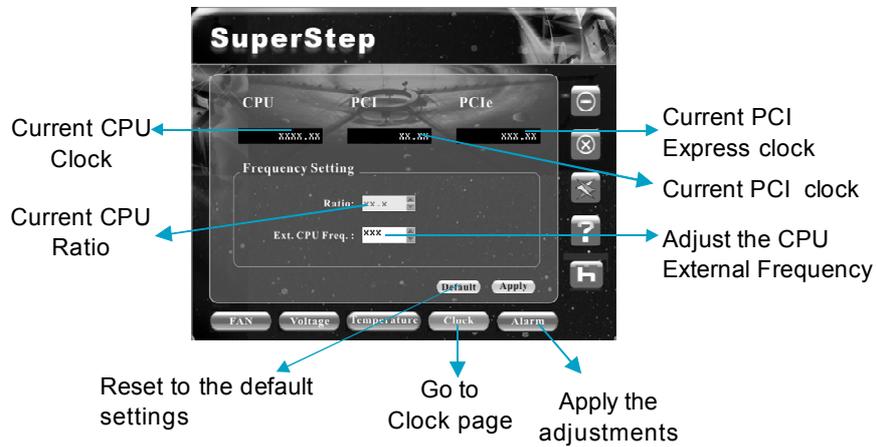
System Temperature: 0°C to 100°C scale, current value xx.xx, Upper Temperature Threshold xx

Buttons: FAN, Voltage, Temperature, Clock, Alarm

Annotations:

- Adjust CPU temperature warning criteria
- Adjust system temperature warning criteria
- Apply the adjustments
- Go to Temperature page
- Reset the warning criteria to default settings
- Current CPU Temperature
- Current system Temperature

Chapter 5 Directions for Bundled Software



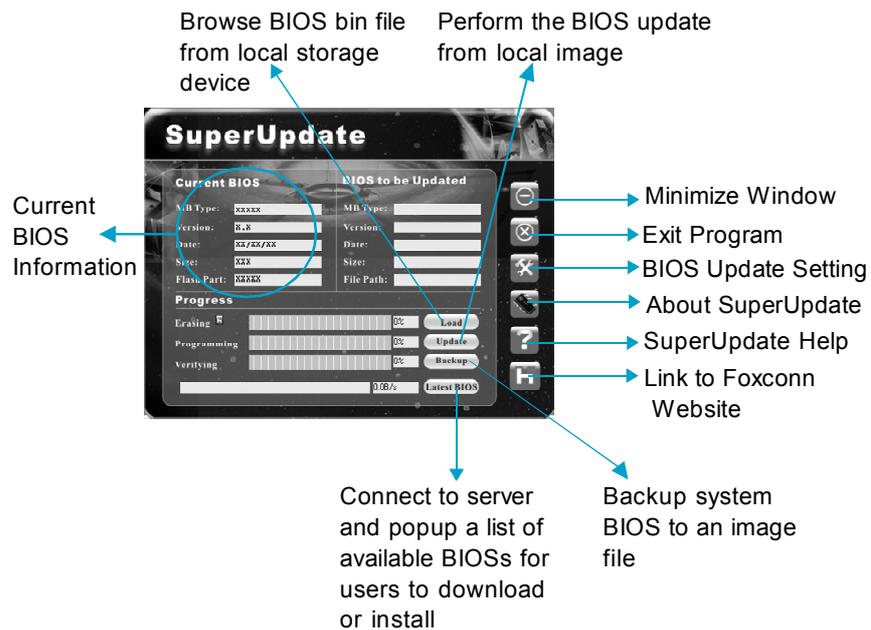
SuperUpdate

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:



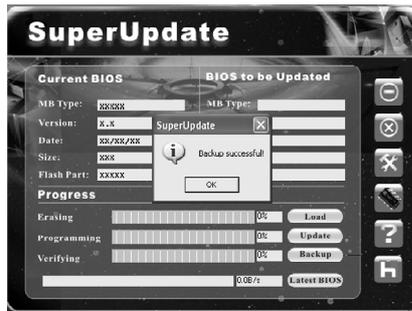
Chapter 5 Directions for Bundled Software

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.



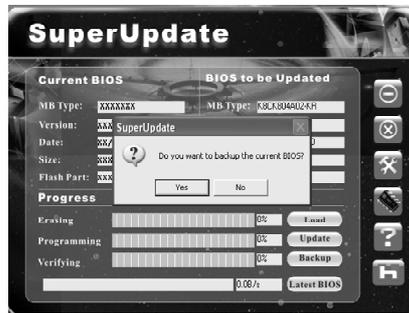
Update BIOS from local image:

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

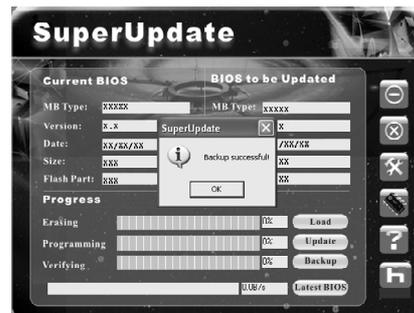


Chapter 5 Directions for Bundled Software

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



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

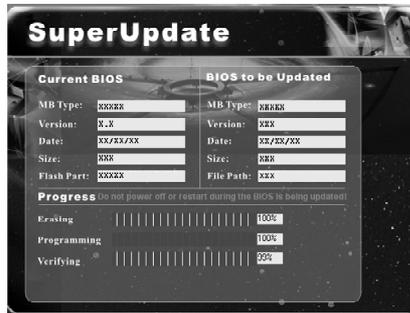


4. Click <OK >, then click <Update>.

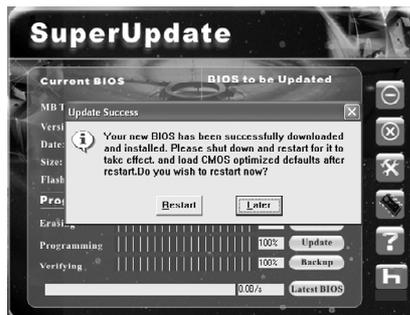


Chapter 5 Directions for Bundled Software

5. Now is updating.



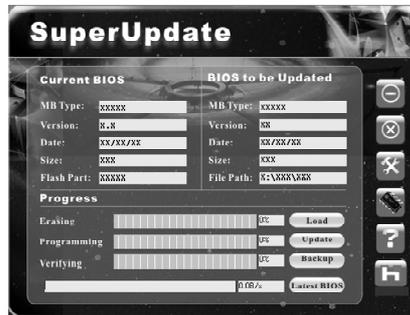
6. Click <Restart>.



Chapter 5 Directions for Bundled Software

Update BIOS:

1. Click <Latest BIOS> to automatically update the BIOS from the server.



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

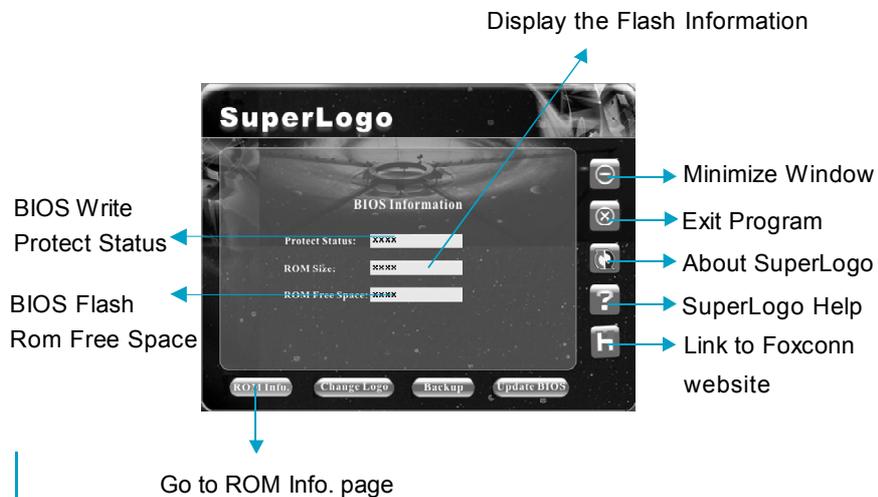
SuperLogo

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:



Chapter 5 Directions for Bundled Software



Full screen mode

Top-Right mode

Boot without logo

Follow the Wizard to complete the logo update

Go to Change Logo page

The screenshot shows the 'SuperLogo' interface at 'Step 1: Select Logo Position'. It features three radio button options: 'Full screen', 'Top right', and 'None'. A 'Next' button is located at the bottom right of the main panel. At the bottom of the screen, there are four buttons: 'ROM Info', 'Change Logo', 'Backup', and 'Update BIOS'. A blue arrow points from the 'Change Logo' button to the text 'Go to Change Logo page'.



Backup whole BIOS image

Backup Logo

Follow the Wizard to complete the backup function

Go to Backup page

The screenshot shows the 'SuperLogo' interface at 'Select Backup Object'. It features two radio button options: 'BIOS' and 'Logo'. A 'Next' button is located at the bottom right of the main panel. At the bottom of the screen, there are four buttons: 'ROM Info', 'Change Logo', 'Backup', and 'Update BIOS'. A blue arrow points from the 'Backup' button to the text 'Go to Backup page'.



BIOS image file location

Browse a BIN file for updating BIOS

Follow the Wizard to complete the BIOS function

Go to Update BIOS page

The screenshot shows the 'SuperLogo' interface at 'Step 1: Select a BIN File'. It features a text input field labeled 'BIN File:' containing 'XXXXXX\XXXX' and a 'Browse...' button to its right. A 'Next' button is located at the bottom right of the main panel. At the bottom of the screen, there are four buttons: 'ROM Info', 'Change Logo', 'Backup', and 'Update BIOS'. A blue arrow points from the 'Update BIOS' button to the text 'Go to Update BIOS page'.

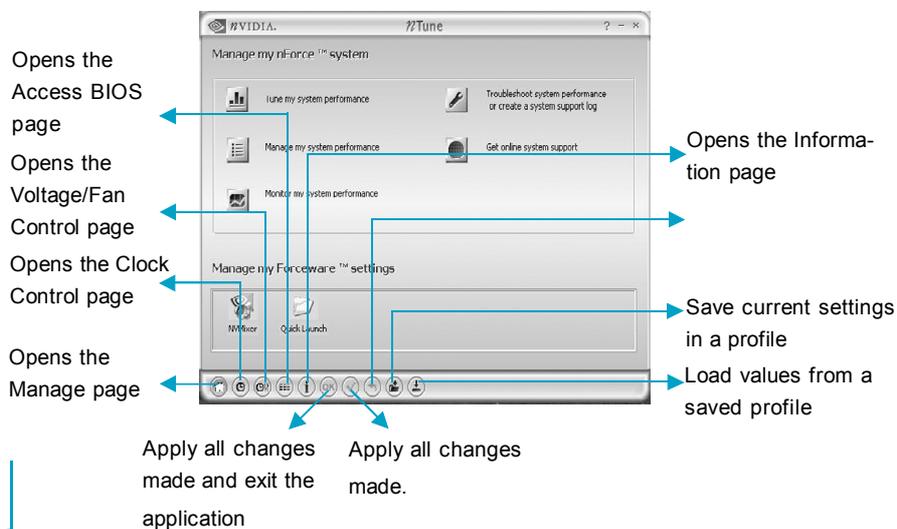
nTune

NVIDIA nTune™ is a full-featured application for easily modifying system settings and testing them without the need for rebooting your system.

nTune features:

1. Modify system performance settings, such as bus speeds, CPU voltages, fan speed, and other system performance options that are supported by the BIOS.
2. Save the modifications to a profile so that you can quickly apply settings to suit specific application environments.
3. Monitor hardware temperature, voltage, timing, and fan speed.
4. View other information about your system, such as hardware and software revisions and other capabilities.

Using nTune:

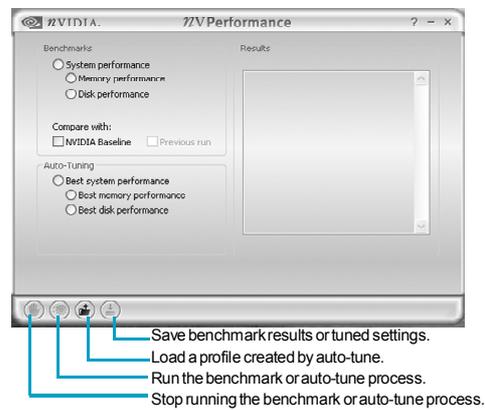


Chapter 5 Directions for Bundled Software

NVPerformance Examiner

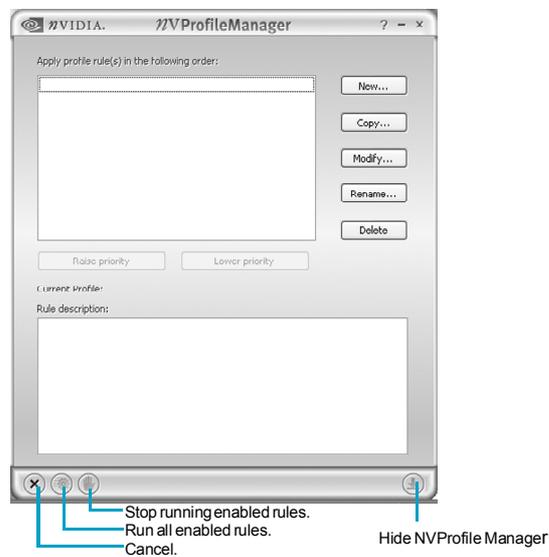
This feature is available only with BIOS support from the motherboard manufacturer, otherwise the icon is not visible.

Click the text **“Benchmark and automatically tune my system”** to launch the NVPerformance Examiner application that lets you tune the system based on the current performance level.



NVProfile Manager

Click the text **“Manage my profiles”** to launch the NVProfile Manager application that lets you create rules for how to use the profiles created by nTune or NVPerformance Examiner.

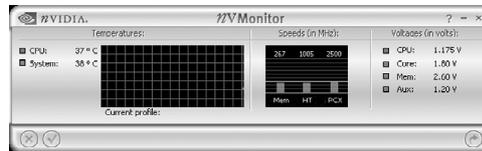


Chapter 5 Directions for Bundled Software

NVMonitor

This feature is available only with BIOS support from the motherboard manufacturer.

Click the text **“Monitor my system”** to launch the NVMonitor application that lets you monitor various system temperature, clock speed, and voltage values.



Click the toggle icon  to switch back and forth between the Monitor page and the Options page.

Options Page

The options page allows the user to customize the NVMonitor page functions.



Troubleshooting

Click the text **“Troubleshoot performance”** or **“create a support log”**, to launch the following applets:

Troubleshoot System Performance

This function performs the following series of quick checks to identify probable causes

of performance problems:

- Check Synchronous vs. Asynchronous modes (NVIDIA recommends Synchronous).
- Check memory balance (partition)
- Check AGP capabilities that are not used
- Check memory speed relative to FSB speed

Chapter 5 Directions for Bundled Software

- Check processor speed relative to memory speed capability.
 - Check for lower than optimal CPU multiplier
- nTune then creates a list of the results, and provides recommendations for improvements.

Create a Support Log

This function saves the following system information details in a log file, which you can provide to tech support:

- Chipset information (marketing names and versions)
- Extensive CPU information
- Extensive memory information, including bank setup
- GPU information
- PCI Device list
- Resource map (device list)
- Audio chip information
- OS and DirectX version information
- nForce and GeForce driver versions

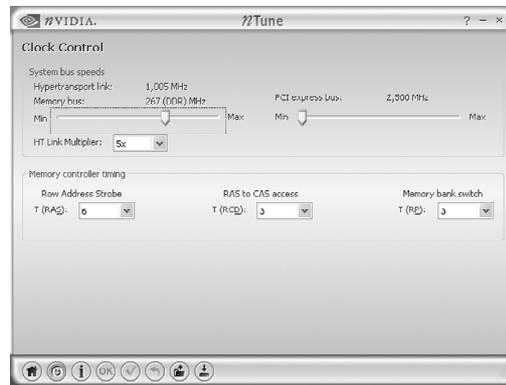
Choose a filename and location for saving the information, or choose the defaults.

Online Support

Click the text “**Get online support**” to open the NVIDIA technical support Web site in your browser.

Clock Control Page

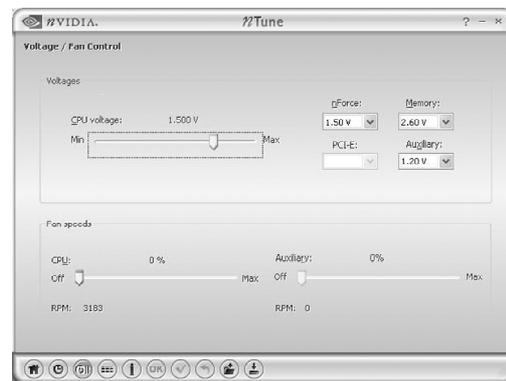
To open the Clock Control page, click the Clock Control page icon from the toolbar.



Voltage/Fan Control Page

Access to this page requires BIOS support from the motherboard manufacturer.

To open the Voltage/Fan Control from any other page, click the Voltage/Fan Control icon from the toolbar.

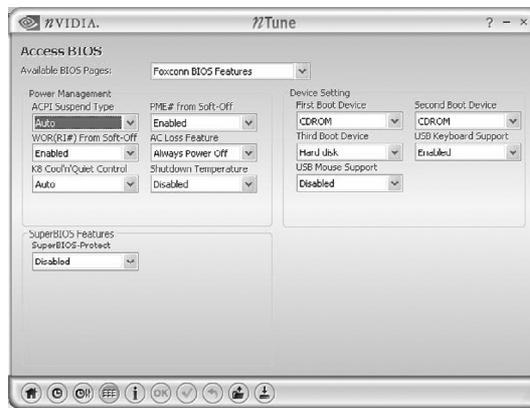


All changes made on **Clock Control Page/Voltage/Fan Control Page** take effect immediately after selecting Apply or OK; however, these setting will remain active only for the current Windows session. Because the changes are not made directly to the BIOS, you can safely return to Windows in the event of a crash, without any possibility of boot issues.

Chapter 5 Directions for Bundled Software

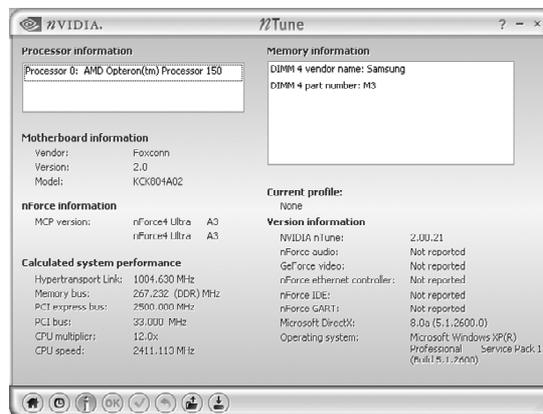
Access BIOS Page

Access to this page requires BIOS support from the motherboard manufacturer. To open the Access BIOS page from any other page, click the Access BIOS page icon from the toolbar.



Viewing the Information Page

To view other system information using NVIDIA nTune, click the Information Page icon from the toolbar.



Chapter 6

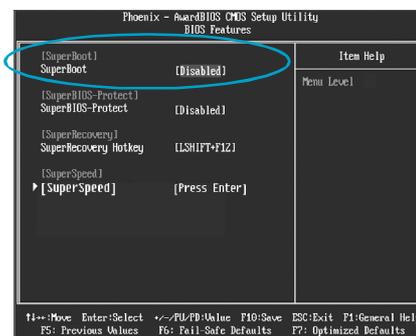
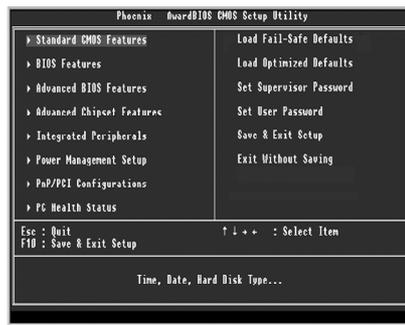
This chapter will introduce new functions of BIOS and how to use them in detail. It can further exert the max potential of motherboard to bring you super-value enjoyment.

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.

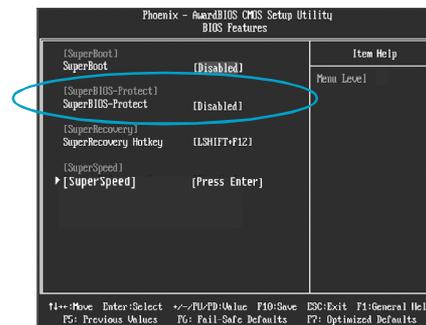
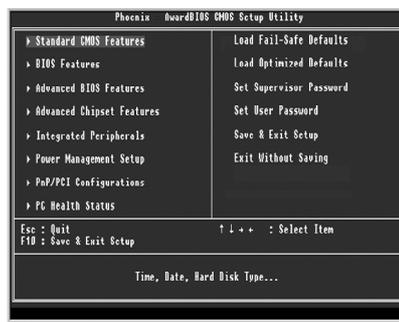


Notes:

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.



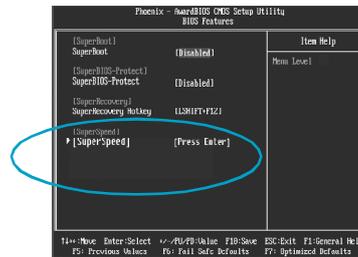
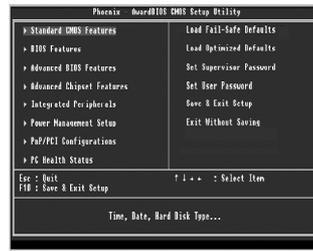
The way to implement this function, set “SuperBIOS-Protect” as “Enabled”, the BIOS will be protected.

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 overclock 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:

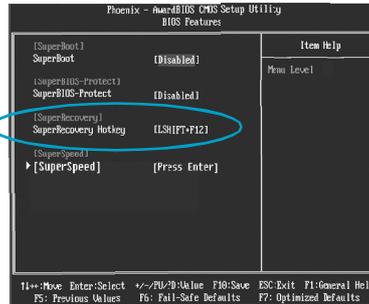
1. ATA5 or above compliant IDE HDD.
2. FAT16, FAT32, NTFS files system.
3. PS/2 keyboard or USB keyboard.

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.

Chapter 6 Special BIOS Functions



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:

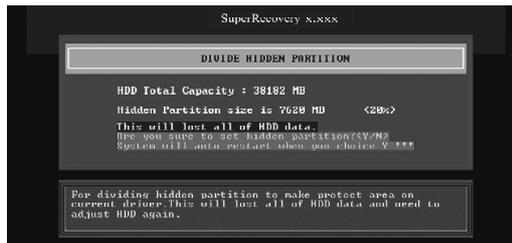
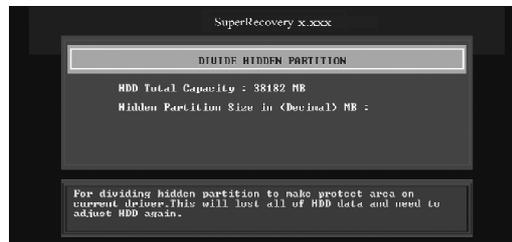
SuperRecovery can be used to divide a hidden partition, which is to be reserved for backing up HDD data. The operation of Division will erase all the old data saved in the HDD, to make sure that the following operations can be continued. Once the division is done, any future variation to the HDD will 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.



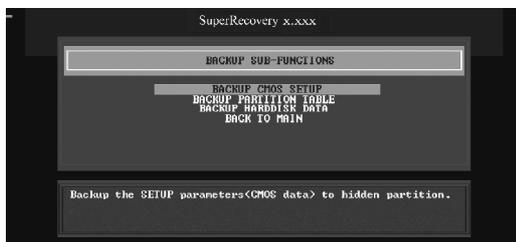
Release Hidden Partition:

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.



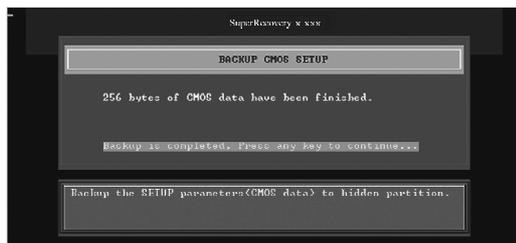
Backup:

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.



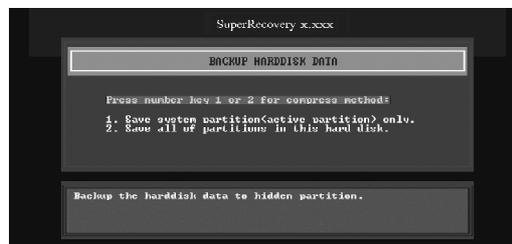
2. Backup Partition Table:

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

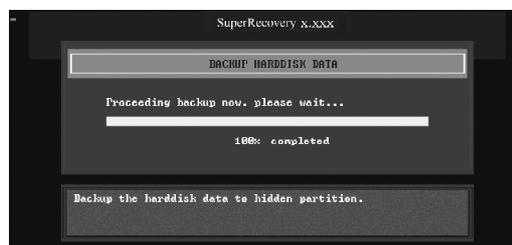


3. Backup Harddisk Data:

- 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.



Chapter 6 Special BIOS Functions

- 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.

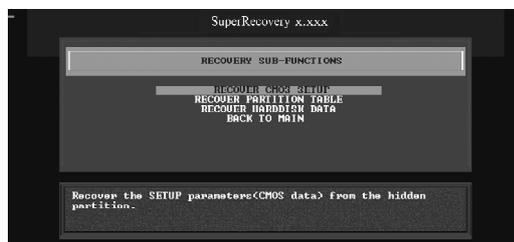


4. Back to Main:

This item is used to quit the Backup interface.

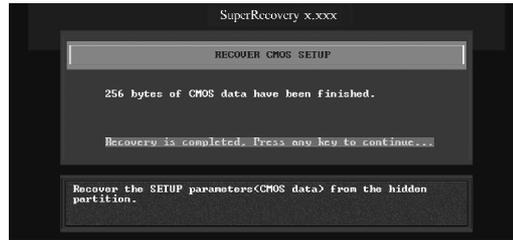
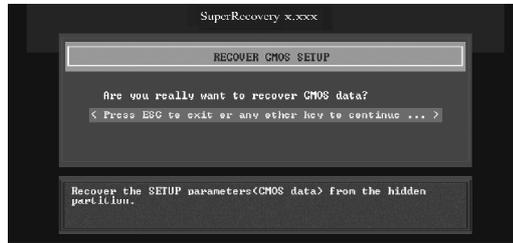
Recovery:

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.



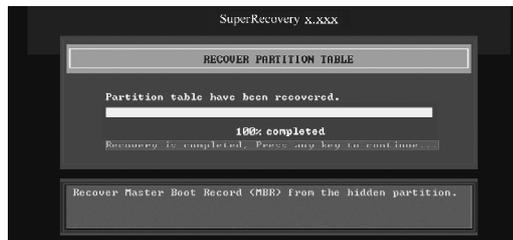
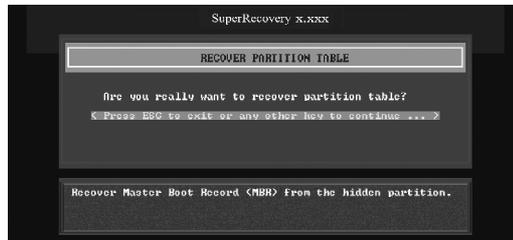
1. Recover CMOS Setup:

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.



About the NVIDIA® SLI™ technology (optional)

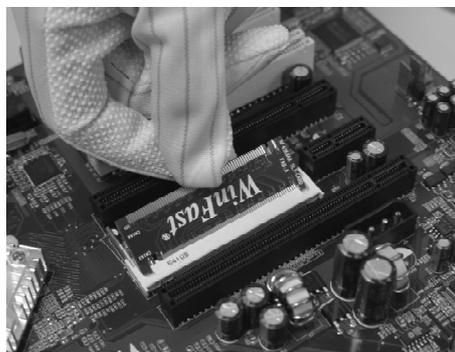
1. Introduction

NVIDIA® SLI™ (Scalable Link Interface) technology takes advantage of the increased bandwidth of the PCI Express™ bus architecture, and features intelligent hardware and software solutions to deliver earth-shattering PC performance in a multi NVIDIA GPU solution. NVIDIA SLI solutions include the PCI Express versions of GeForce 6800 Ultra, GeForce 6800 GT, GeForce 6600 GT, GeForce 6800, and the NVIDIA nForce4 SLI MCPs.

NVIDIA® nForce™4 SLI MCPs (media and communications processors) offer blistering graphics performance and overall PC performance for both AMD and Intel platforms. With the power of SLI™ technology you get the ability to connect two NVIDIA SLI-Ready PCI Express™ graphics cards for mind-blowing gameplay with brilliant and intensive 3D graphics.

2. Install the SLI-Ready Graphics cards

Step1. Locate the SLI-CARD on the motherboard.



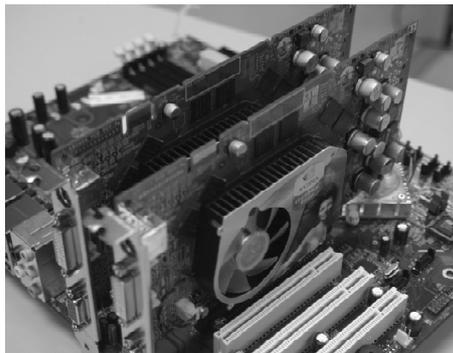
Chapter 6 Special BIOS Functions

Note: The SLI-CARD can set two mode: Normal mode and SLI mode. Normal mode is set for a single graphics card. To use two graphics cards, you must set the SLI-CARD to SLI mode.

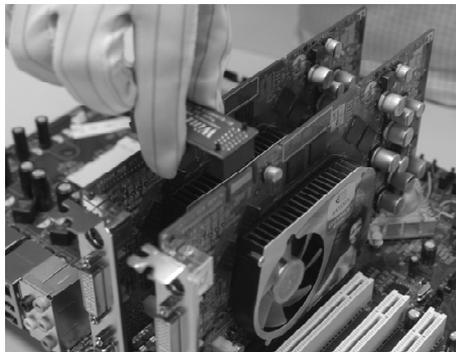


SLI Mode

Step2. Install two SLI-Ready Graphic cards on the two PCI Express x16 slots.



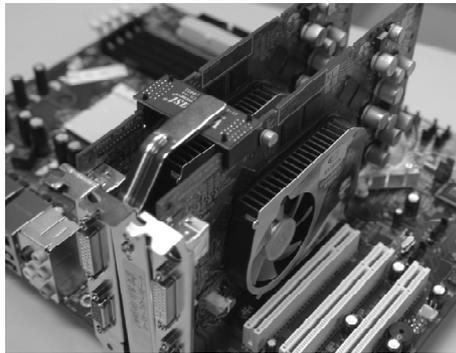
Step3. Install the SLI Bridge Board to the goldfingers on each graphics card. Make sure that the connector is firmly in place.



Chapter 6 *Special BIOS Functions*

Step4. Connect the 4-pin ATX power cable to the Auxiliary power connector to secure the system is stable.

Step5. Install the SLI bracket to firm the two graphics cards.



Using 8-channel Audio (optional)

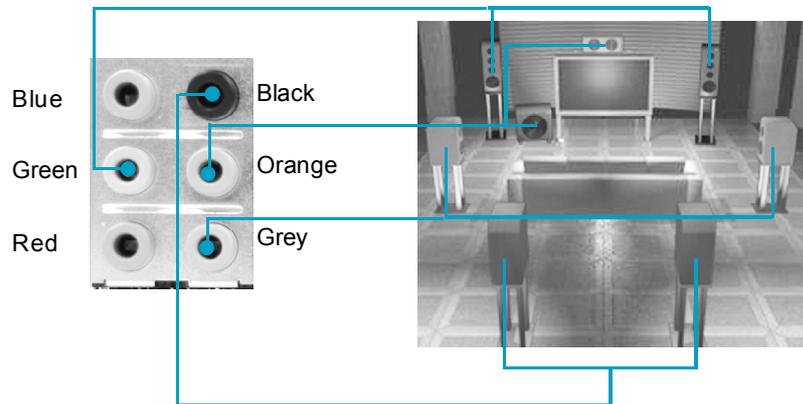
1. Introduction

8-channel audio is the highest surround sound standard available adding two speakers over existing 6-channel (5.1) 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 6.1 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 grey 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 “Speaker configuration”. The following picture will appear.



STEP 5. Make sure you select “8CH Speaker” from the above picture. Now you can enjoy the 8-channel audio function.