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Version:

User's Manual V1.1 for 6150/6100K8MA series motherboard.

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
6150/6100K8MA

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



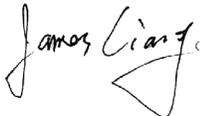
Trade Name: WinFast
Model Name: **6150/6100K8MA**
Responsible Party: PCE Industry Inc.
Address: 458 E. Lambert Rd.
Fullerton, CA 92835
Telephone: 714-738-8868
Facsimile: 714-738-8838

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 : 

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.

 **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 6150/6100K8MA 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 black 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 WinFast 6150/6100K8MA 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® GeForce™ 6150 + nForce™ 430 / GeForce™ 6100+nForce™ 410 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:

- mATX form factor of 9.6" x 9.6"

Microprocessor:

- Supports Socket 939 for AMD Athlon™64 x2 Dual core/Athlon™ 64FX/Athlon™ 64/Sempron processors

HyperTransport Technology:

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

Chipset:

- 6150K8MA Chipset: NVIDIA® GeForce™ 6150+nForce™ 430
- 6100K8MA Chipset: NVIDIA® GeForce™ 6100+nForce™ 410

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 USB 2.0 protocol up to 480Mbps transmission rate

Onboard Serial ATA II (optional)

- nForce 410 supports two Serial ATA II connectors, nForce 430 supports four Serial ATA II connectors.
- Up to 300Mps transfer rates

NVIDIA RAID Technology

- nForce 410 supports RAID 0 and RAID 1, nForce 430 supports RAID 0,RAID 1, RAID 0+1,RAID 5

Onboard 1394 (optional)

- Supports hot-plug
- With rate of transmission at 400Mbps
- Self-configured addressing

Onboard LAN (-L/-K) (optional)

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

Note: The shielded LAN Cables are recommended.

Onboard Audio (-6) (optional)

- AC'97 2.3 Specification Compliant
- Supports SPDIF output
- Onboard Line-in jack, Microphone jack, Line-out jack
- Supports 6-channel audio

Onboard Audio (-8) (optional)

- Supports 8-channel audio
- Supports SPDIF output
- Supports Universal Audio Jack (UAJ)
- AC'97 2.3 Specification Compliant

Onboard Graphics

- Supports integrated VGA display functions

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), 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



Chapter 1 Product Introduction

Expansion Slots

- Three PCI slots
- One PCI Express x16 Graphics slot

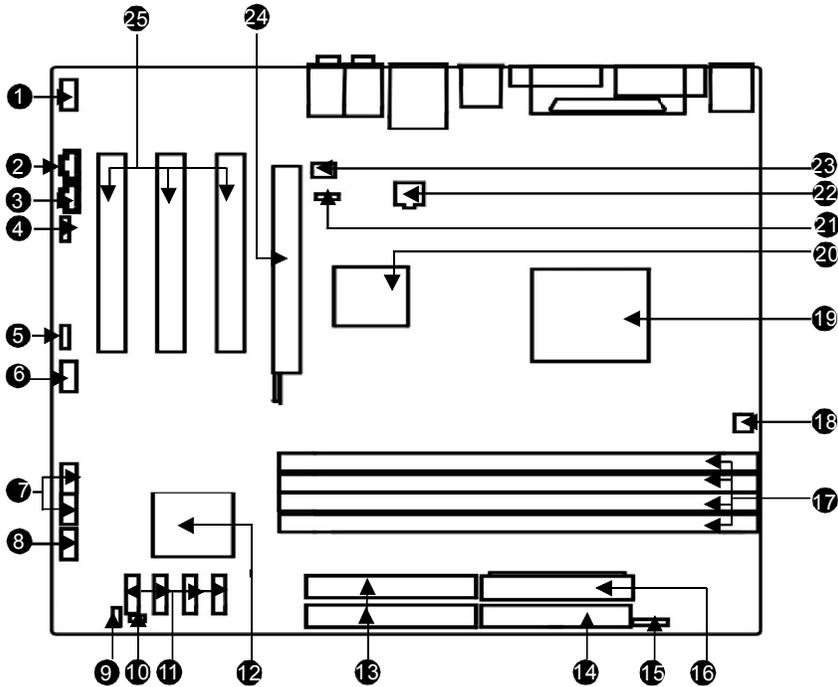
Onboard TV OUT (optional)

- Full NVIDIA nView™ multi-display technology capability, with independent display controllers for the CRT/TV interface

Advanced Features

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

Motherboard Layout



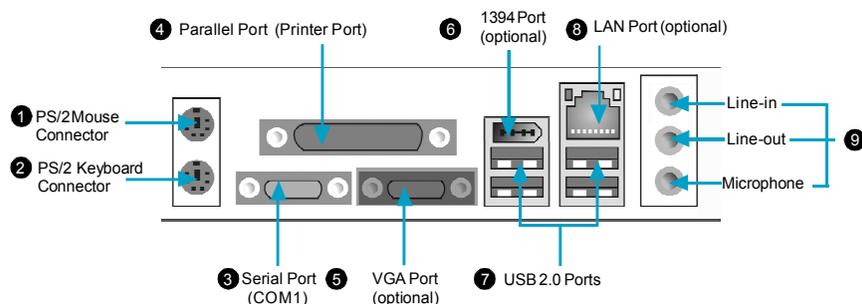
- | | |
|--|--|
| 1. Front Audio Connector | 14. Floppy Drive Connector |
| 2. CD_IN Connector | 15. IrDA Connector |
| 3. AUX_IN Connector (optional) | 16. 24-pin Power Connector |
| 4. SPDIF_OUT Connector | 17. DDR DIMM Slots |
| 5. Speaker Connector | 18. CPU_FAN Connector |
| 6. Front 1394 Connector (optional) | 19. CPU Socket |
| 7. Front USB Connectors | 20. North Bridge: NVIDIA GeForce 6150/
GeForce 6100 |
| 8. Front Panel Connector | 21. TV OUT Connector(optional) |
| 9. Clear CMOS Jumper | 22. 4-pin 12V Power Connector |
| 10. Chassis Intruder Connector | 23. System FAN Connector |
| 11. SATA II Connectors (optional) | 24. PCI Express x16 Slot |
| 12. South Bridge: NVIDIA nForce 430
/nForce 410 | 25. PCI Slots |
| 13. IDE Connectors | |

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

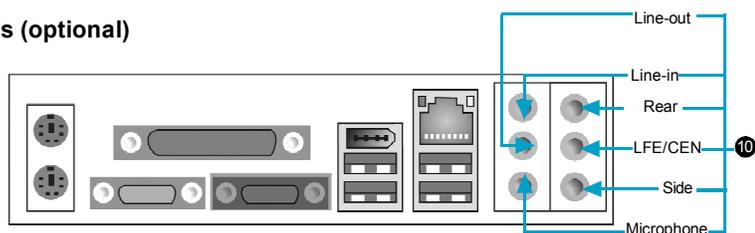
Rear Panel Connectors

This motherboard provides the ports as below:

-6 models (optional)



-8 models (optional)



⑨ Line in, Line out, Microphone Jacks (for -6 models)

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 blue audio output; connect the center speaker/subwoofer to the red Microphone output.

⑩ Line in, Line out, Microphone, Rear, LFE/CEN, Side Jacks (for -8 models)

When using an 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(LFE/CEN) to the orange audio output; connect the side 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

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 Socket 939 for Athlon™ 64 x2 Dual core/ Athlon™ 64FX/Athlon™ 64/Sempron processors and Hyper Transport™ Technology.

i Attention:

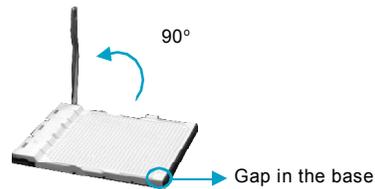
The CPU pins must be properly aligned with the holes in the socket, otherwise the CPU may be damaged.

For the detailed CPU vendor list qualified on this motherboard, please visit the website: <http://www.foxconnchannel.com>

Installation of CPU

Follow these steps to install the CPU.

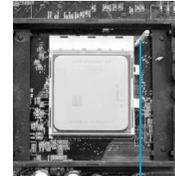
1. Unlock the socket by pressing the lever sideways, then lift it up to a 90° angle.



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



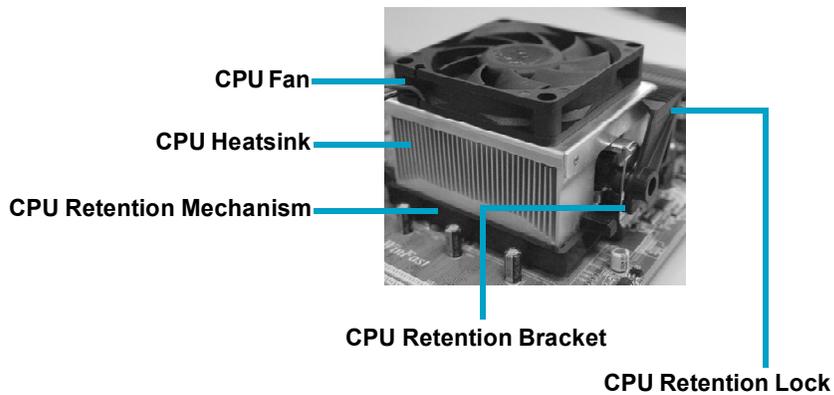
Push down the socket lever to secure the CPU.

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.



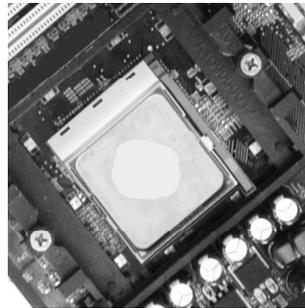
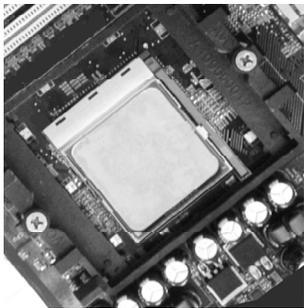
Installation of CPU Fan

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).

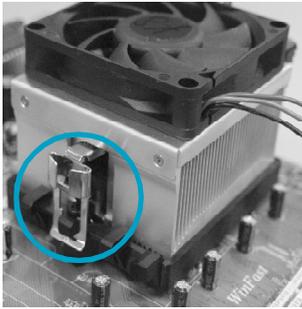
2. If required, apply a light coating of silica gel to the top of the CPU.



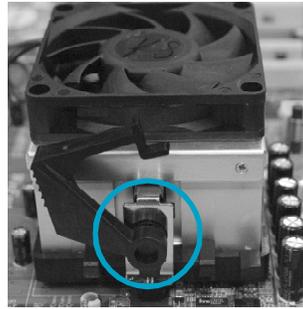
NOTE: The CPU heatsink may have a pre-applied thermal compound. In that case, the silica gel is not required.

Chapter 2 Installation Instructions

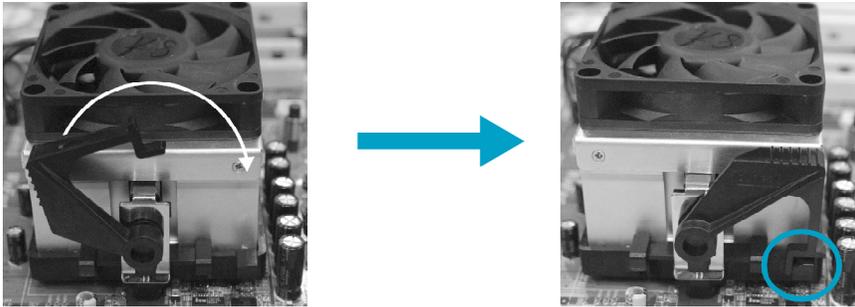
3. Place the cooling set onto the retention mechanism. Attach one end of the retention bracket to retention mechanism.



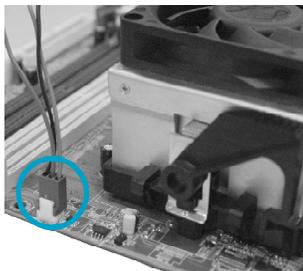
4. Align the other end of the retention bracket to fasten the cooling set on the top of the retention mechanism.



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

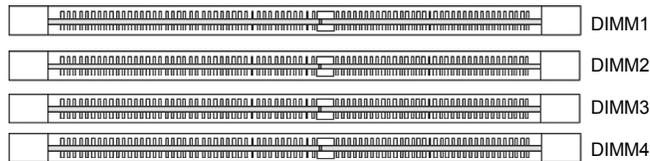


6. Connect the fan's power cable to the appropriate 3-pin terminal on the motherboard.



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 more than two modules, they must be the same speed. Mixing memory modules from different manufactures are not recommended.

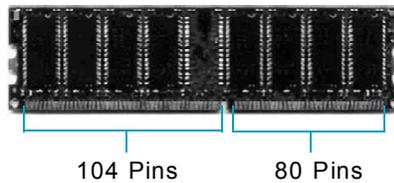


For the latest memory modules support list, please visit the website:

<http://www.foxconnchannel.com>

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	DIMM1	DIMM2	DIMM3	DIMM4
Signal-channel	Populated	—	—	—
	—	—	Populated	—
	Populated	—	Populated	—
Dual-channel	Populated	Populated	—	—
	—	—	Populated	Populated
	Populated	Populated	Populated	Populated

 **Note:**

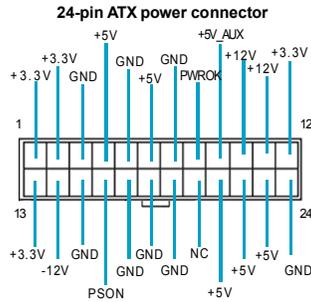
Installing DDR DIMMs other than the recommended configurations may cause memory sizing error or system boot failure.

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 12V Power Connector: PWR2

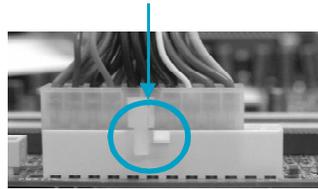
The 4 pin ATX 12V power supply connects to PWR2 and provides power to the CPU.

4-pin ATX_12V power connector



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 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.

IDE Connectors: PIDE & SIDE

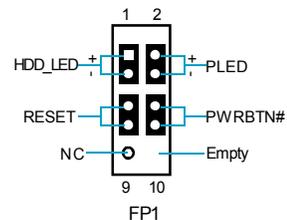
These connectors support the Ultra DMA133/100/66 IDE hard disk ribbon cable. Connect the cable's blue connector to the primary (recommended) or secondary IDE connector, then connect the gray connector to the slave device (hard disk drive) and the black connector to the master device. If you install two 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.

i 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 FDD connector on the motherboard.

Front Panel Connector: FP1

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



Hard Disk LED Connector (HDD_LED)

Attach the connector to the HDD_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.

Chapter 2 Installation Instructions

Power LED Connector (PLED)

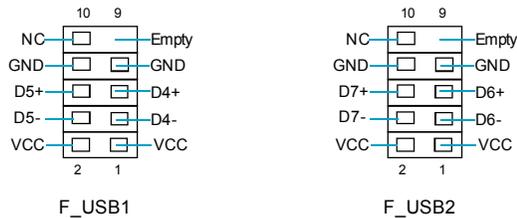
Attach the connector to the Power LED on the front panel of the case. The Power LED indicates the power supply status. When the system is in S0 status, the green LED is on. When the system is in S1 status, the green LED is blink. When the system is in S3, the yellow LED is blink. When the system is in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

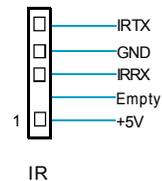
USB Connectors: F_USB 1, F_USB 2

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, SYS_FAN

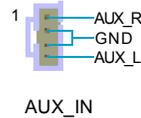
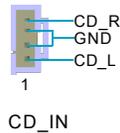
There are two fan connectors on this motherboard.



Chapter 2 Installation Instructions

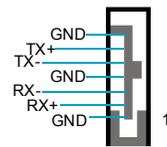
Audio Connector: CD_IN, AUX_IN (optional)

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



Serial ATA II Connectors: SATA_1, SATA_2, SATA_3(optional), SATA_4(optional)

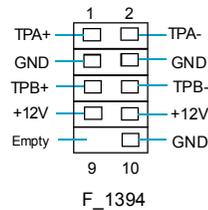
The Serial ATA II connectors are used to connect the S-ATA II devices to the motherboard. These connectors support the thin Serial ATA II cables for primary internal storage devices. The current Serial ATA II interface allows up to 300MB/s data transfer rate.



SATA_1/SATA_2/
SATA_3/SATA_4

1394 Connector: F_1394 (optional)

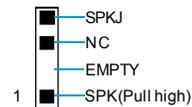
The 1394 expansion cable can be connected to either the front (provided that the front panel of your chassis is equipped with the appropriate interface) or the rear panel of the chassis.



F_1394

Speaker Connector

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

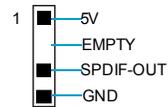


SPEAKER

SPDIF Out Connector: SPDIF_OUT

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

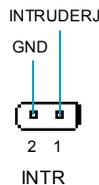
Note: The empty pin of SPDIF cable should be aligned to empty pin of SPDIF out connector.



SPDIF_OUT

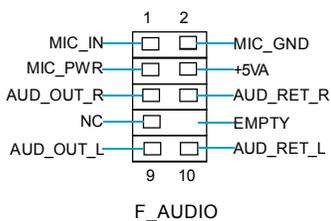
Chassis Intruder Connector: INTR

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 "ICase Open Warning" 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.



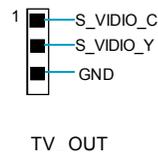
Front Audio Connector: F_AUDIO

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.



TV OUT Connector: TV_OUT (optional)

This connector is for TV out function. Using this function, you can use a TV or projector as display device. The following steps are provided reference only.



Step 1. Install TV out cable to a slot opening at the back of the system chassis (As figure 1).



Figure 1

Note:

The triangle direction on the 3-pin connector should be aligned to 1st pin of the TV out connector on the motherboard.

Chapter 2 Installation Instructions

Step 2. Connect the 3-pin connector (A) of the TV out cable to TV out connector (As figure 2).

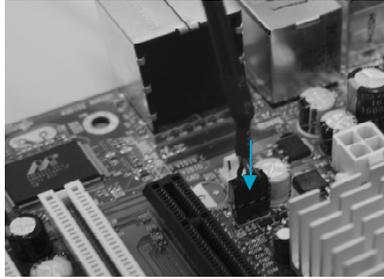


Figure 2

Step 3. Plug the display cable into your S-video port of the TV out cable (B). Then you can use this function.

Note:

1. When VGA port and TV out port are both connected to display devices, the system will define VGA port as default setting. If you want to change the display priority, please go to **Display properties --> Setting --> Advanced --> C51 --> nView display setting** to select the desired display device.
2. When you use TV as display device, please make sure your resolution has been set as 800 x 600 60Hz or 640 x 480 60Hz.
3. Windows XP or Windows 2000 is strongly recommended.

Expansion Slots

This motherboard includes three 32-bit Master PCI bus 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 PCI Express x16 and PCI Express x1 slots are not able to be sure, with the PCI Express x16 slot pushing 4GB/sec (8GB/sec concurrent) of bandwidth, and the PCI Express x1 slot offering 250MB/sec.

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.

For more details on PCI Express x 16 graphics card support list qualified on this motherboard, please visit the website: <http://www.foxconnchannel.com>

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

- 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”.
- 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
1 		Closed	Set the pin closed
		Open	Set the pin opened

Clear CMOS Jumper: CLR_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.

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



Clear CMOS Jumper

Warning:

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

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 the key to enter the Award BIOS CMOS Setup Utility.

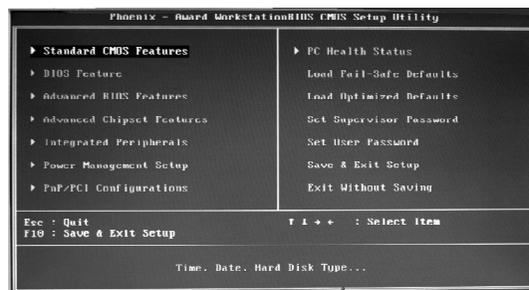
Press TAB to show POST screen, DEL to enter SETUP

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 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.

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.

Load Fail-Safe Defaults

The default BIOS settings can be loaded through this menu.

Load Optimized Defaults

The optimal 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

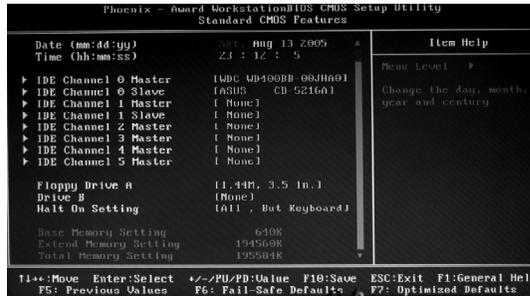
Save CMOS value settings to CMOS and exit setup.

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 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 and 2/3/4/5 Master

These categories identify the HDD types of 2 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		

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

Drive A/B

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

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.

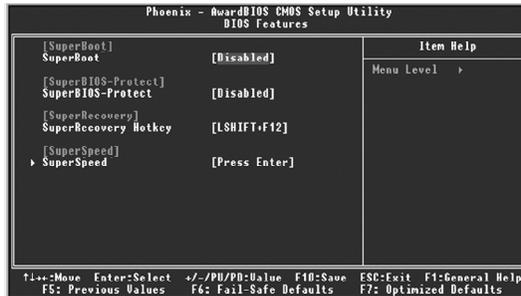
Chapter 3 BIOS Description

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 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

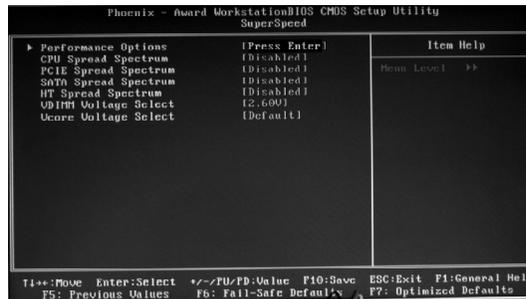
SuperBIOS-Protect function protects your PC from being affected by viruses, e.g. CIH.

❖ [SuperRecovery] SuperRecovery Hotkey

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

❖ [SuperSpeed] SuperSpeed

Press <Enter> to set the items of SuperSpeed. Setting these items are good for overlock.



SuperSpeed Menu

❖ Performance Options

This option is used to select Performance options.

❖ CPU Spread Spectrum

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

❖ PCIE/SATA /HT Spread Spectrum

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

❖ VDIMM Voltage Select

This option is used to set memory voltage.

❖ Vcore Voltage Select

This option is used to set HyperTransport vdd.

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 <->. To exit this option, press <Esc>.

❖ Virus Warning

This option 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

This option is used to turn on or off the CPU L1 and L2 cache. The available setting values are: Disabled and Enabled. Leave this item at the default value for better performance.

❖ External Cache

This option is used to turn on or off the CPU external cache. The available setting values are: Disabled and Enabled. Leave this item at the default value for better performance.

❖ **First/Second/Third Boot Device**

This option allows you to set the boot device sequence.

❖ **Boot From Other Device**

With this item enabled, the system will search all other possible locations if it fails to find one in the devices specified under the first, second and third boot devices.

❖ **Swap Floppy Drive**

If you have two floppy diskette drives in your system, this option allows you to swap the assigned drive letters.

❖ **Boot Up Floppy Seek**

If this option is 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**

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

❖ **Gate A20 Option**

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

❖ **Typematic Rate Setting**

If this option 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 option to define how many characters per second a held-down key generated.

❖ **Typematic Delay (Msec)**

Use this option 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 start up your PC.

❖ **APIC Mode**

This option is used to enable or disable APIC mode.

❖ **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 option 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.

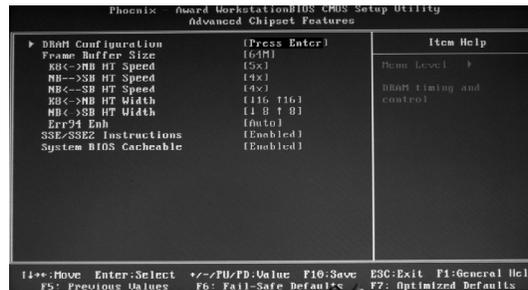
❖ **Full Screen LOGO Show**

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

❖ **Small Logo (EPA) Show**

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

Advanced Chipset Features



Advanced Chipset Features Menu

❖ DRAM Configuration

Press <Enter> to set the items about DRAM Configuration.

❖ Frame Buffer Size

This item is used to set the VGA frame buffer size.

Note: This function does not work when the external display card is used.

❖ K8<->NB/NB->SB/NB<->SB HT Speed

These options are used to set the bandspeed of the link's transmitter of K8 <->NB/NB->SB/NB<->SB .

❖ K8<->NB/NB<->SB HT Width

These options are used to set the bandwidth of the link's transmitter of K8 <->NB/NB<->SB.

❖ Err94 Enh

This option is used to set Err94 Enh.

❖ SSE/SSE2 Instructions

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

❖ System BIOS Cacheable

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.



DRAM Configuration Menu

❖ **Time Mode**

This item is used to set timing mode.

❖ **Memclock index Value**

This option is used to set memclock value. Memclock Index Value is the speed used as a ratio with the CPU Frequency to determine your memory speed.

❖ **CAS# Latency**

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

❖ **Min RAS# active time**

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

❖ **RAS# to CAS# delay (Trcd)**

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.

❖ **Row Precharge Time (Trp)**

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.

❖ **Bottom of 32-bit [31:24] IO**

This item is used to set Bottom of 32-bit [31:24] IO.

❖ **S/W memory hole Remapping**

This item is used to enable or disable the S/W memory hole remapping.

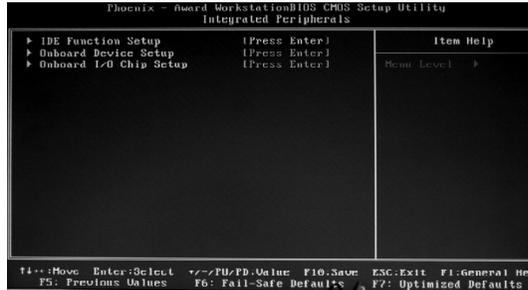
❖ **H/W memory hole Remapping**

This item is used to enable or disable the S/W memory hole remapping.

❖ **MTRR mapping mode**

This item is used to select the MTRR mapping mode.

Integrated Peripherals



Integrated Peripherals Menu

❖ IDE Function Setup

Press Enter to set the items about IDE Function.

❖ Onboard device setup

Press <Enter> to set the Onboard device setup.

❖ Onboard I/O Chip setup

Press <Enter> to set the Onboard I/O Chip setup.



IDE Function Menu

❖ OnChip IDE Channel 0/1

This option is used to set the onchip IDE channel 0/1.

❖ 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 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

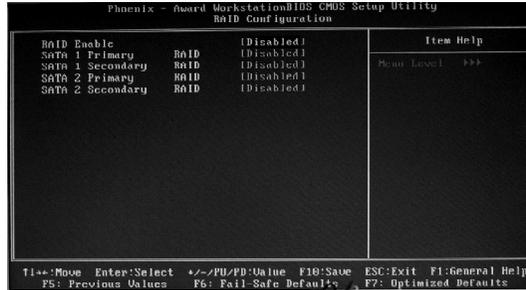
This option is used to set whether the IDE HDD block mode is allowed.

❖ Raid Configuration

Press <Enter> to set the Raid Configuration.

❖ SATA PORT Speed settings

This option is used to set the SATA PORT Speed settings.



RAID Config Menu

❖ RAID Enable

This option is used to disable or enable the RAID function. When enabled, the following grayed items will be activated.

❖ SATA 1/2 Primary/Secondary RAID

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



Onboard Device Setup

❖ Onchip USB

This option is used to set whether the USB Controller is enabled.

❖ USB Memory Type

This option is used to set the USB Memory type.

❖ USB Keyboard Support

This option is used to set whether the USB keyboard controller is enabled in a legacy operating system (such as DOS). The available setting values are: Disabled and Enabled.

❖ USB Mouse Support

This option is used to set whether the USB mouse controller is enabled in a legacy operating system (such as DOS). The available setting values are: Disabled and Enabled.

❖ AC97 Audio Select

This option is used to set whether onboard Azalia/AC97 Audio is enabled. The available setting values are: Disabled and Auto.

❖ MAC LAN

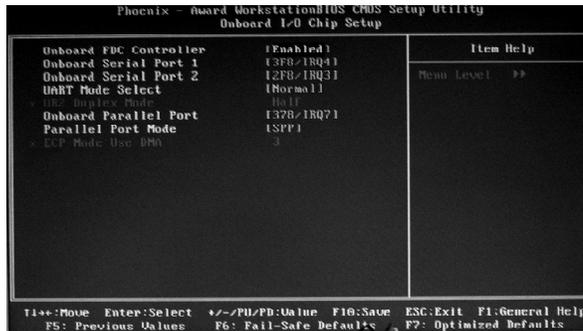
This option is used to set whether MAC LAN device is enabled.

❖ MAC Media Interface

This option is used to set MAC Media Interface.

❖ MAC LAN Boot ROM

This option is used to decide whether to invoke the boot ROM of the MAC LAN chip.



Onboard I/O Chip Setup

❖ 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.

❖ 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.

❖ Onboard Parallel Port

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

❖ Parallel Port Mode

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

❖ ECP Mode Use DMA

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 the 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. Available settings are: User Define, Min Saving and Max Saving.

❖ Video Off Method

This option 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 Supported” mode is a new screen power management system, and it needs to be supported by the monitor you’re using.

❖ **HDD Power Down**

This option is used to turn off hard disk power if the hard disk is idle for a given period of time. The setting values are Disabled and 1Min-15Min.

❖ **HDD Down In Suspend**

This option is used to define the continuous HDD idle time before the HDD enters power saving mode. The setting values are Disabled and Enabled.

❖ **Soft-Off by PBTN**

This option 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.

❖ **WOL(PME#) From Soft-Off**

When set to Enable, 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**

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 S1/S3**

This item is used to set the system to wake up by USB equipment when it is in S1/S3 mode.

❖ **MAC Resume from S4/S5**

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

❖ **Case Open Warning**

This option is used to enable or disable case open warning function.

❖ **Power-On by Alarm**

This option is used to enable or disable the feature of booting up the system on a scheduled time/date.

❖ **Date 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. The setting values contain 0 - 31.

❖ **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 date. The setting values contain hh: 0-23; mm: 0-59; ss: 0-59.

❖ **AMD K8 Cool' n' Quiet control**

This option is used to control AMD K8 Cool' n' Quiet function.

❖ **POWER ON Function**

This option is used to set the POWER ON function.

❖ **Keyboard Power On Password**

This item is used to set Keyboard Power On Password.

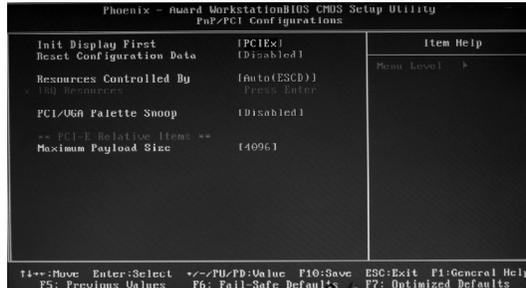
❖ **Hot Key Power On**

This item is used to set Hot Key Power On.

❖ **PWRON Ater 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 interrupt 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 nonstandard 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

Shutdown Temperature	(Disabled)	Item Help
CPU Voltage	+3.3V	
+5V	5.25V	
+12V	11.75V	
+5VSB	4.94V	
Voltage Battery	2.36V	
Current CPU Temperature	49°C	
Current SYS Temperature	35°C	
CPU Fan Speed	3443 RPM	
System Fan Speed	0 RPM	

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

PC Health Status Menu

❖ Shutdown Temperature

This option 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 Vcore, +3.3V, +5V, +12V, +5VSB, Voltage Battery, Current CPU Temperature, Current SYS Temperature, CPU Fan Speed, System FAN Speed

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

Load Fail-Safe Defaults

Select this option and press <Enter>, it will pop up a dialogue box to allow you to install fail-safe defaults for all appropriate items in the Setup Utility. Select <Y> and press <Enter> to load the defaults. Select <N> and press <Enter> to 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 work, 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 for a specific option, you can select this option and press the <F6> key.

Load Optimized Defaults

Select this option and press <Enter>, it will open a dialogue box that lets you install the optimized defaults for all appropriate items in the Setup Utility. Select <Y> and press <Enter> to load the optimized defaults. Select <N> and press <Enter> to not install. 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, you can cause fatal errors or instability. If you only want to load the optimized 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...

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>, 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 option 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

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 Chipset System
- B. Direct X 9.0
- C. Audio Driver
- D. VGA Driver

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
- D. Word Perfect Office 12 (optional)
- E. nTune (optional)

3. Manual

Click to browse the content of 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 pic). Click the relevant button to install nVIDIA nForce Chipset System, DirectX 9.0, Audio Driver, VGA Driver .



Chapter 5

This chapter will introduce how to use attached software.

This chapter includes the following information:

- ❖ SuperStep
- ❖ SuperUpdate
- ❖ SuperLogo
- ❖ nTune

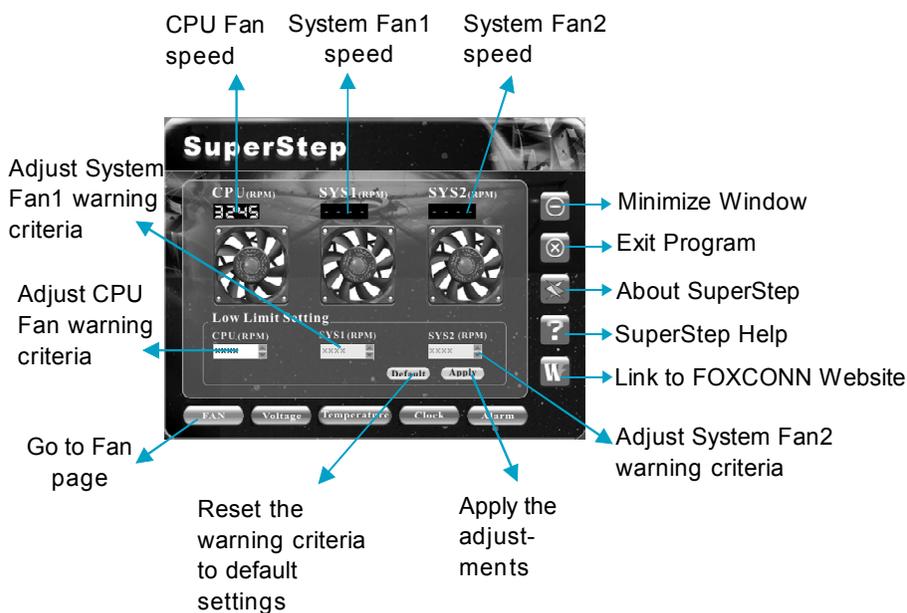
SuperStep

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
-5V :	x.xx	x.xxx	x.xxx
5VSB :	x.xx	x.xxx	x.xxx
VBAT :	x.xx	x.xxx	x.xxx

Buttons: FAN, Voltage, Temperature, Check, Alarm

Annotations:

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

SuperStep

CPU Temperature

0°C | 100°C | xx.xx

Upper Temperature Threshold: xx

System Temperature

0°C | 100°C | xx.xx

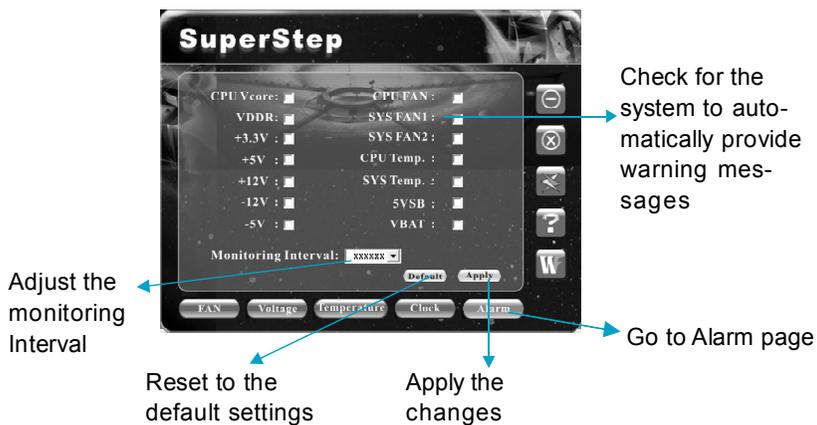
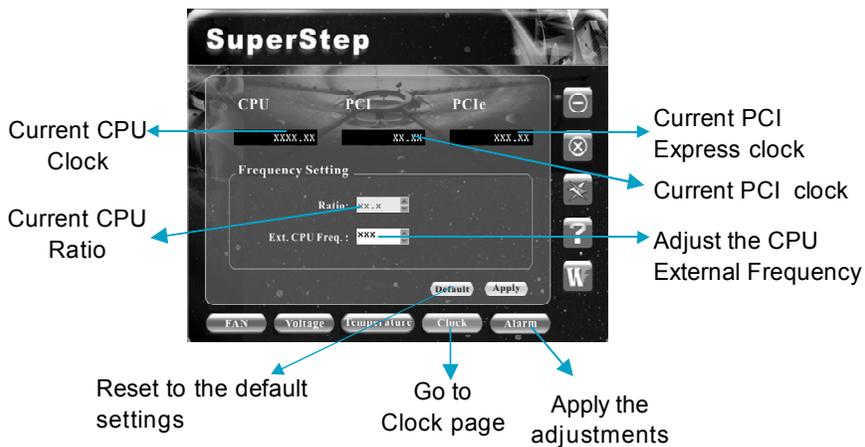
Upper Temperature Threshold: xx

Buttons: FAN, Voltage, Temperature, Check, Alarm

Annotations:

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

Chapter 5 Directions for Bundled Software



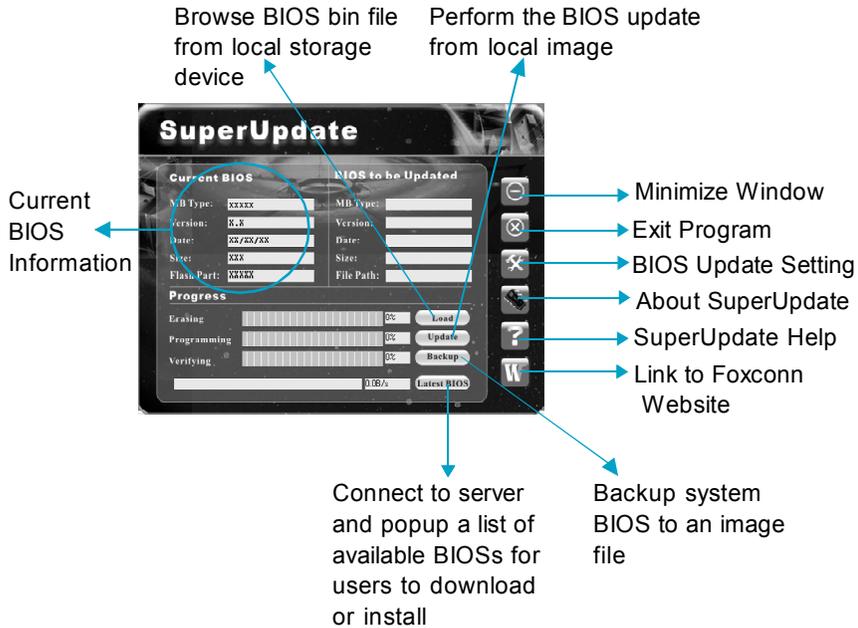
SuperUpdate

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:

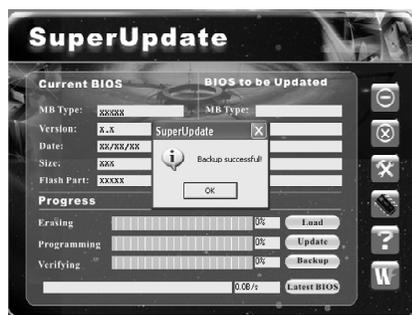


Backup BIOS to local image:

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



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



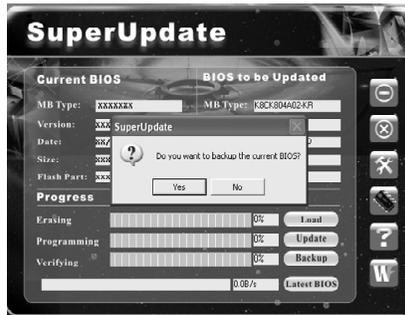
Update BIOS from local image:

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

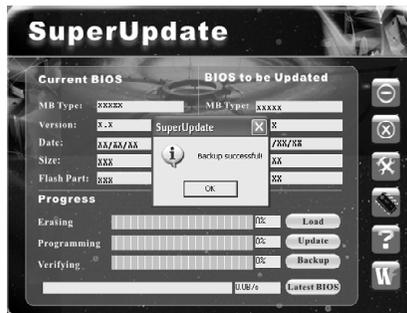


Chapter 5 Directions for Bundled Software

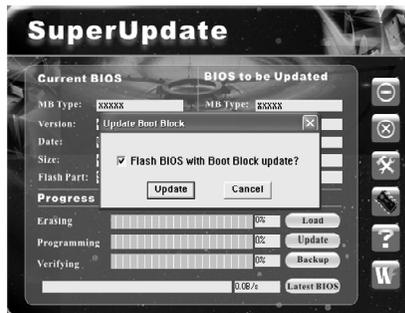
2. Click <Update>, the following message will appear.



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



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

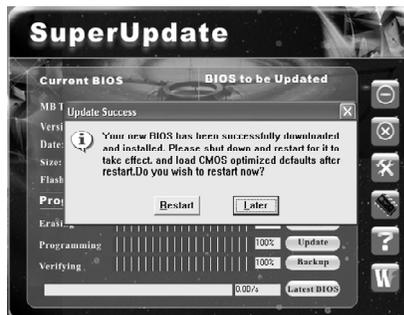


Chapter 5 Directions for Bundled Software

5. Now is updating.



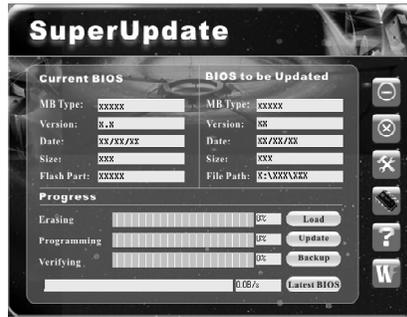
6. Click <Restart>.



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**.

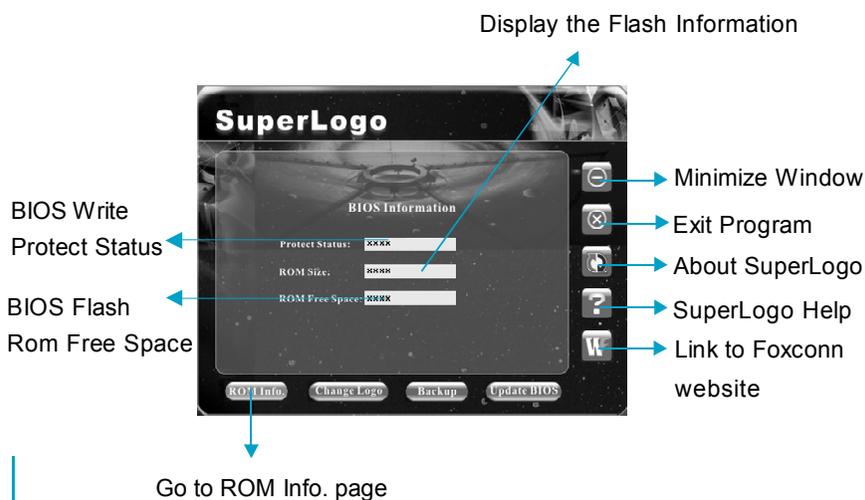
SuperLogo

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.

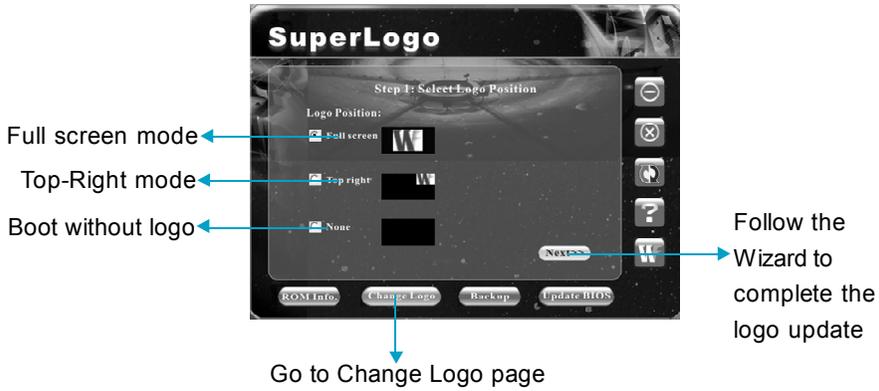
SuperLogo features:

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



nTune

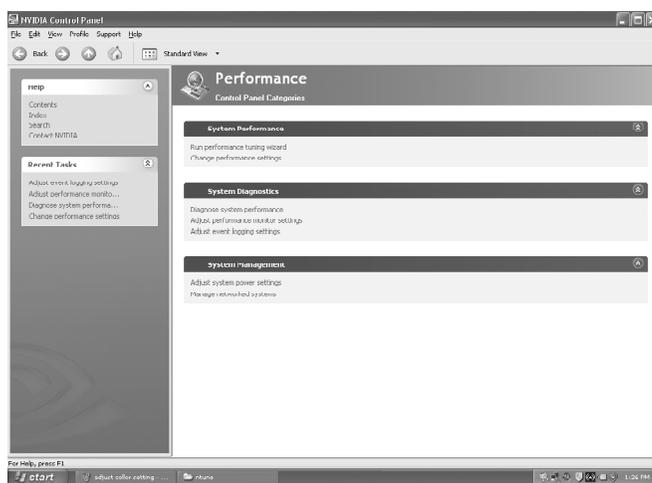
NVIDIA nTune™ is a full-featured application for easily modifying system settings and testing them without the need for rebooting your system.

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.
5. Support windows XP, windows Longhorn.

Using nTune:

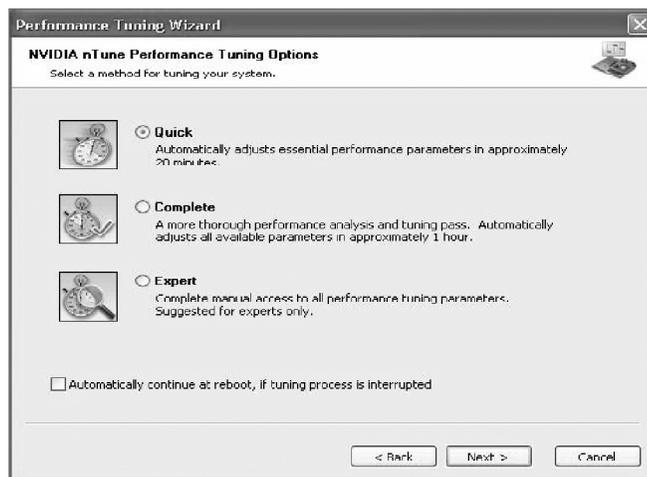
To start the NVIDIA nTune from the Desktop. Select start ->All programs->NVIDIA Corporation->nTune->nTune. Then select Performance category, the task list is presented.



System Performance

Run Performance Tuning Wizard

The Performance Tuning Wizard is used to guide the user through automated tuning of the system. Click the “Run Performance Tuning Wizard” to set the performance tuning. The user will be presented with three tuning options.



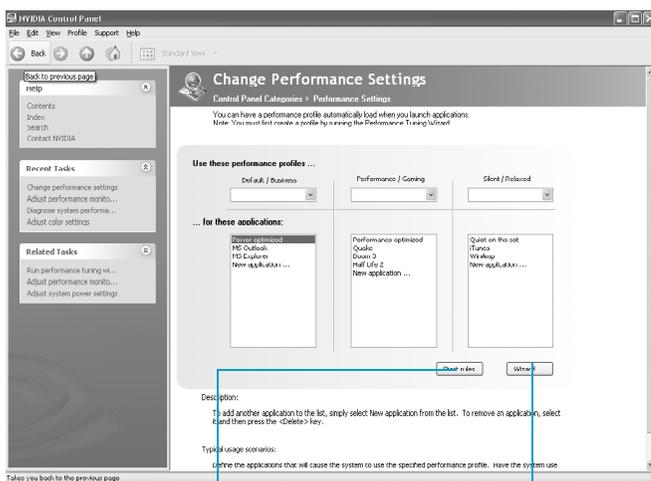
Select “next” to continue, The user will select Tune to begin the tuning process. After it completes, the user should select Next to view the performance gain data. Then the user may view either specific details of the tuning or a general performance graph. The complete the tuning process, the user should select Next. The performance tuning process has been completed and the performance profiles created. The user may select Finish.

Change Performance Settings

Selecting this task will open a simple mechanism for managing the performance of the system. It displays the current profile assigned for a given performance category (Business, Gaming, or Relaxed), and the actions that invoke the profile.

 **Note:**

It is necessary to first run the NVPE(NVPerformance Examiner) wizard before trying the manage system performance, since it will create the profiles used.



Use new application and profile

Launch the NV Profile Manager wizard

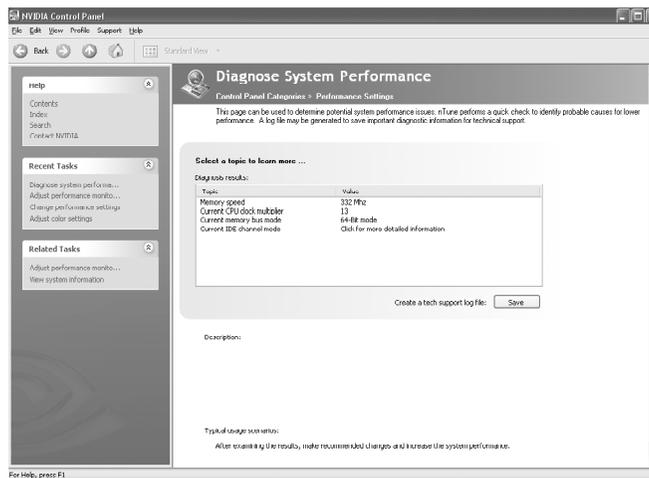
The user may pull-down the profile menu, and select a different profile. The list will be built from profiles currently existing in the profile directory. The user may also select “Choose profile”, which will launch an explorer window.

The user may also add applications to the action list by selecting “New application” from the list window, which will launch an explorer window. Finally, they may remove any action by selecting it and deleting it from the list.

System Diagnostics

Diagnose System Performance

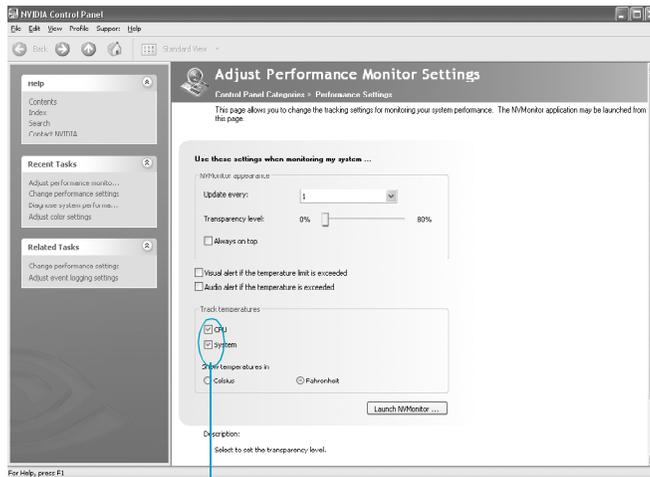
This can be used to determine drags on the host system's performance. It performs a quick check to identify probable causes for lower performance.



Save extensive system information details in a log file, this may be provided to tech-support. The information will be saved in a filename and directory of the user's choosing. The default file name will be sysinfo.txt, and the default location will be "My Documents".

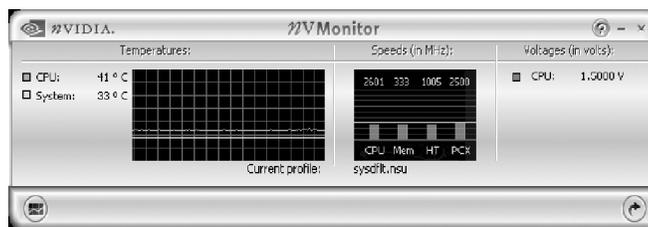
Adjust performance monitor settings

This feature allows the user to customize the monitor for their needs.



Select these items to track temperature

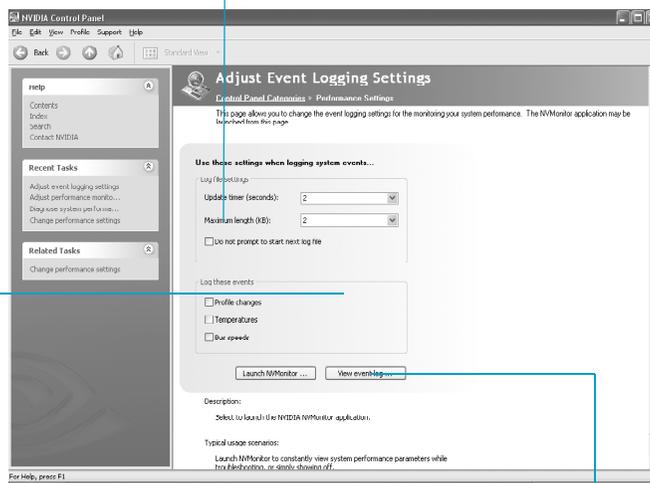
Click the “Launch Monitor” to launch the NV Monitor application that lets you monitor various system temperature, CPU temperature and voltage values.



Adjust event logging settings

The user now has the ability to track temperature, bus speed, and profile changes in a log file. This may be used for debugging of system events.

Select how often the tracked selection is sampled and define the maximum file length in kilobytes



Select any combination of the checkbox items (Profile changes, Bus speeds, Temperatures)

Launch explorer to find and open the requested log file

Note:

To begin logging, NVMonitor must be launched and the event logging button must be selected from the base toolbar.

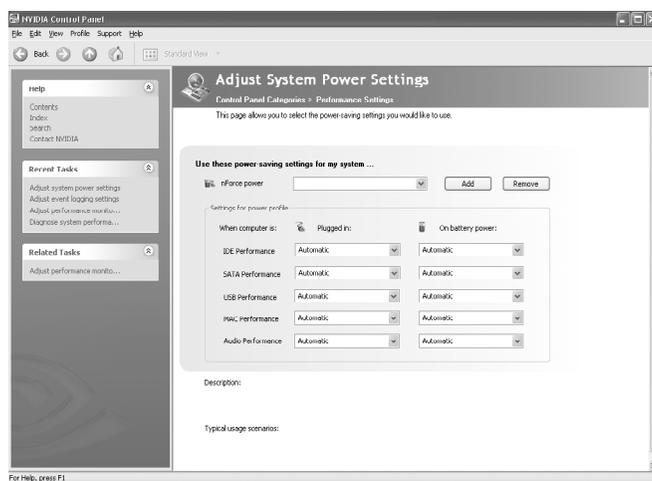
System management

Adjust system power settings

The user may define the performance behavior and power levels of specific components when on AC or battery power. The Settings for power profile will range from Maximum power to Maximum performance. By default, Automatic is selected and NVIDIA manages the performance of the devices. The power profiles may be used by the NVIDIA Profile Management Wizard for even more specific system behavior rules.

 **Note:**

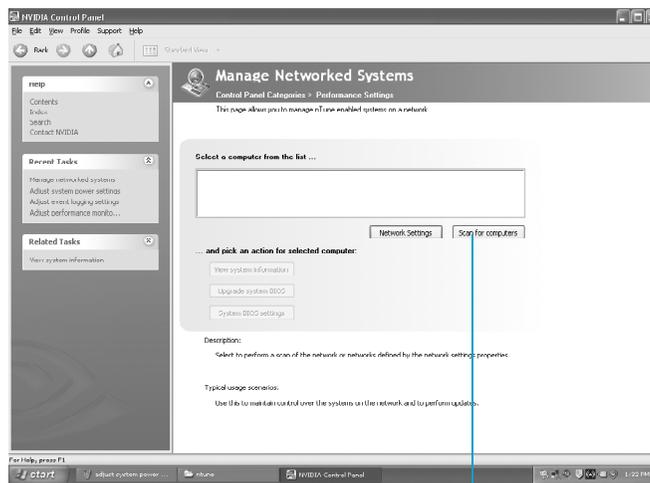
This requires an nForce chipset with PMU (Power Management Unit).



Chapter 5 Directions for Bundled Software

Manage networked system

From this page, an administrator may view information for all nTune-enabled nForce systems on the network. It may also perform BIOS updates remotely.



Start the scan of the network

Chapter 6

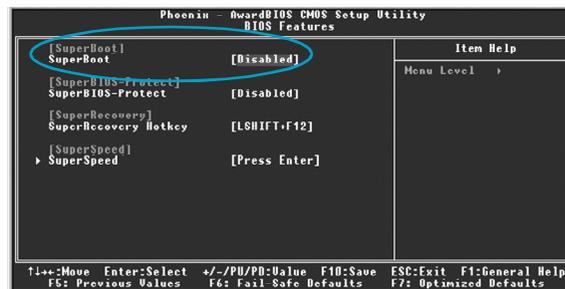
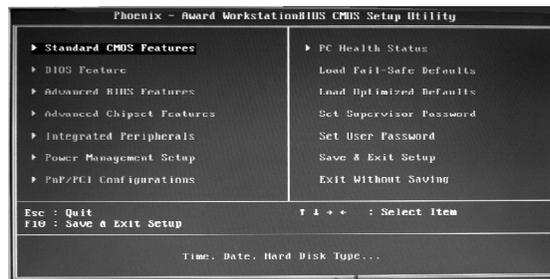
This chapter will introduce new functions of BIOS and how to use them in detail. It can further exert the max potential of motherboard to bring you super-value enjoyment.

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.

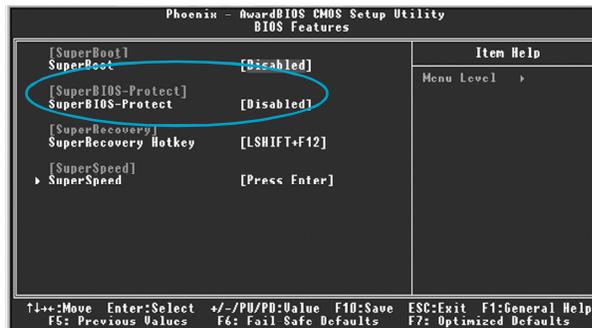
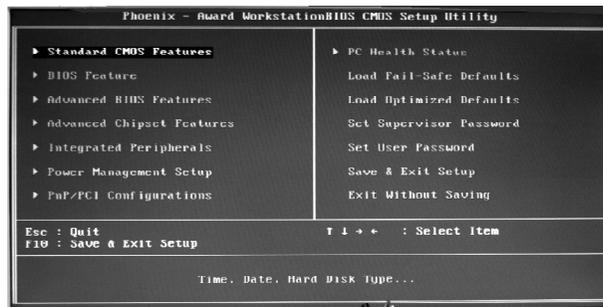


Notes:

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.



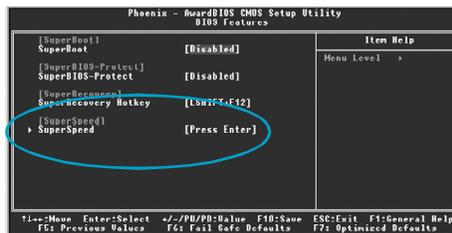
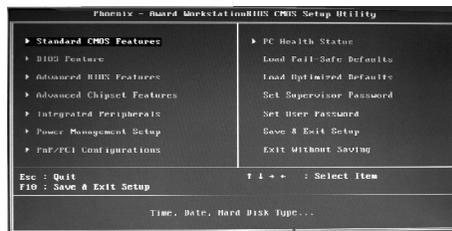
The way to implement this function, set "SuperBIOS-Protect" as "Enabled", the BIOS will be protected.

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.

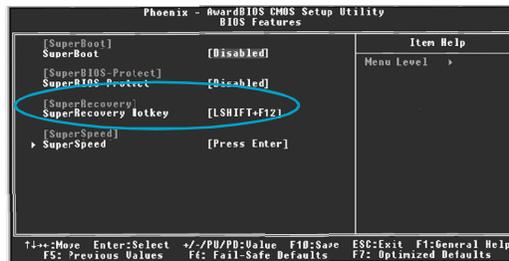
System Requirements:

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.

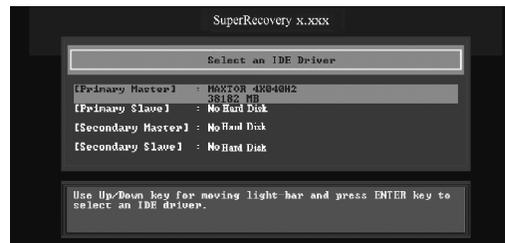


Hard Disk Selection:

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:

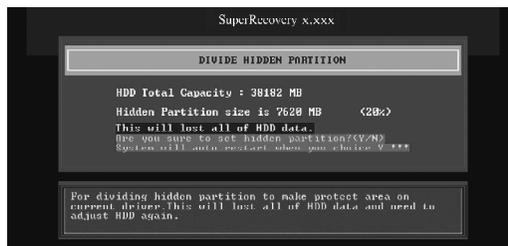
SuperRecovery can be used to divide a hidden partition, which is to be reserved for backing up HDD data. The operation of Division will erase all the old data saved in the HDD, to make sure that the following operations can be continued. Once the division is done, any future variation to the HDD will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



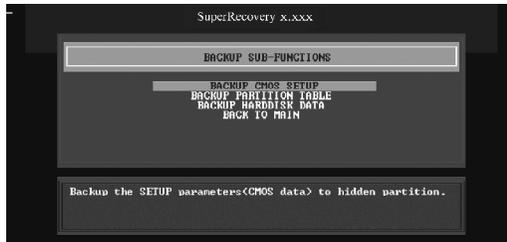
Release Hidden Partition:

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.



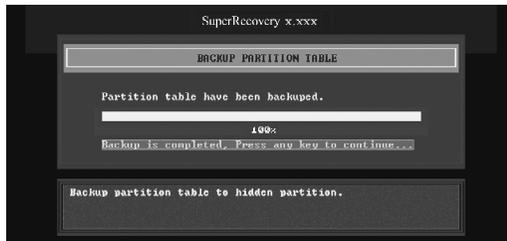
1. Backup CMOS Setup:

- 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.



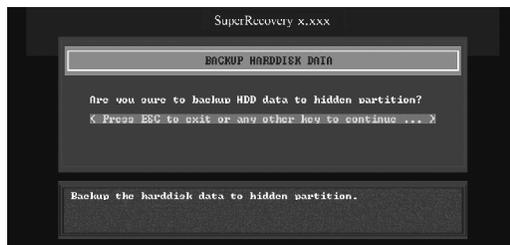
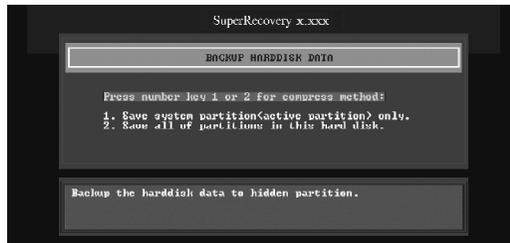
2. Backup Partition Table:

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

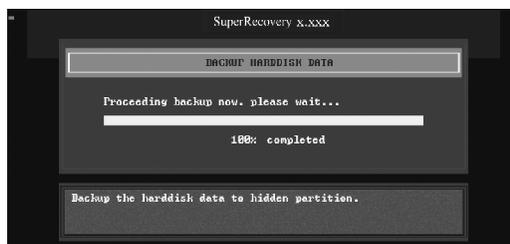


3. Backup Harddisk Data:

- 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.



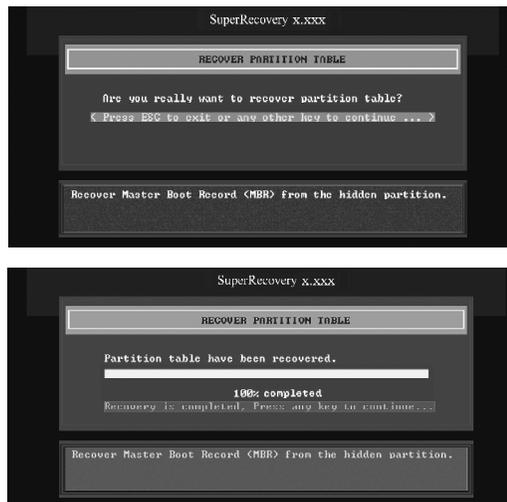
1. Recover CMOS Setup:

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.



Using 8-channel Audio

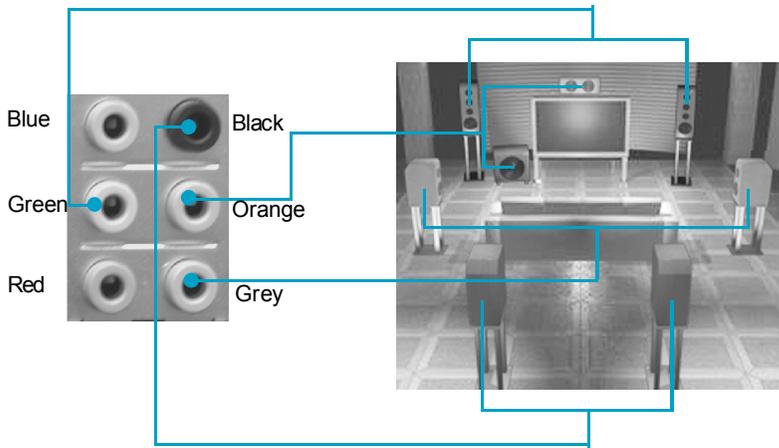
1. Introduction

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.

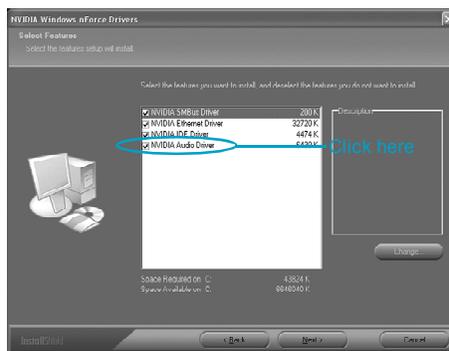
In the 8-channel surround sound configuration there are the standard front, center, LFE (bass) speakers but also two surround speakers are placed at the sides of a listener, and two speakers directly behind the listener. Some formats also support a 8-channel audio configuration wherein there is only 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

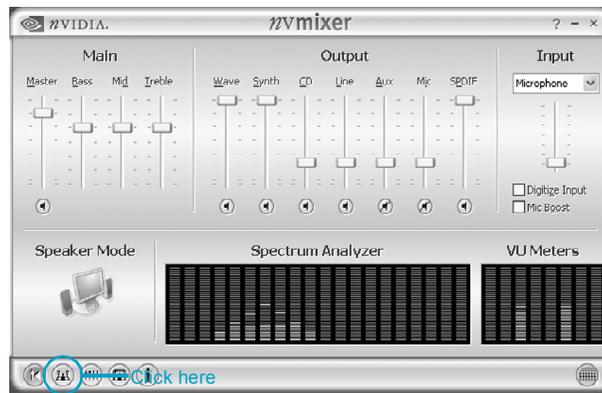
STEP 1. Connect the front channels to green jack, the rear channels to black jack, the Center/Subwoofer channels to orange jack and Side channels to blue jack. Please refer to below figure.



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 "8CH Speakers" from the above picture. Now you can enjoy the 8-channel audio function.