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Version:

User Manual V1.0 in English for NFPIK8AA series motherboard.
P/N: 91-181-K84-A2-0E

Symbol description:

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

More information:

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

Item Checklist:

Thank for your purchasing WinFast NFPIK8AA series motherboard. Please check the package; if there are missing or damaged items, contact your distributor as soon as possible.

- ❖ NFPIK8AA Series Motherboard (x1)
- ❖ WinFast Utility CD (x1)
- ❖ User's Manual (x1)
- ❖ Raid User Guide (x1) (optional)
- ❖ IDE Cable (x2)
- ❖ FDD Cable (x1)
- ❖ I/O Shield (x1)
- ❖ USB2.0 Cable (x1)
- ❖ S-ATA Signal Cable (x8)
- ❖ S-ATA Power Cable (x4)
- ❖ 1394a Cable (x1) (optional)
- ❖ 1394b Cable (x1) (optional)
- ❖ COM2+MIDI Cable (x1) (optional)
- ❖ SLI Bridge Board (x1) (optional)
- ❖ SLI Clip and Bracket (x1) (optional)
- ❖ NVRAID Driver Floppy Disk (x1) (optional)
- ❖ Multilingual installation guide (x1) (optional)
- ❖ nVIDIA SLI Multi-GPU Flyer (x1) (optional)

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
NFPIK8AA

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/2004

Printed Name : James Liang

Position/ Title : Assistant President

Declaration of conformity



Trade Name: WinFast
Model Name: **NFPIK8AA**
Responsible Party: PCE Industry Inc.
Address: 458 E. Lambert Rd.
Fullerton, CA 92835
Telephone: 714-738-8868
Facsimile: 714-738-8838

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

Supplementary Information:

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

Tested to comply with FCC standards.

Signature :

A handwritten signature in black ink that reads "James Liang".

Date : 2004

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 **Warning:**

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

 **Warning:**

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

 **Attention:**

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

 **Attention:**

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

This manual is suitable for motherboard of NFPIK8AA series.
Each motherboard is carefully designed for the PC user who
wants diverse features.

- L with onboard 10/100M LAN
- K with onboard 1G LAN
- 6 with 6-channel audio
- 8 with 8-channel audio
- E with 1394
- S with SATA
- R with RAID

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

For example:



On the blue mark of the PPID label, it means the
motherboard supports 6-channel Audio (-6), 1394 port(-E),
onboard 10/100M LAN (-L), SATA function(-S).

Chapter 1

Thank you for buying WinFast NFPIK8AA 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 CK8-04-PRO + CK8-04-IO4 chipset, providing users a computer platform with a high integration-compatibility-performance price ratio.

This chapter includes the following information:

- ❖ Main Features
- ❖ Motherboard Layout

Main Features

Size:

- ATX form factor of 12" x 9.6"

Microprocessor:

- Supports Socket 940 for AMD Opteron™ 100 & 200 series processors

HyperTransport Technology:

- High-speed, differential, low voltage interface
- Communication with the AMD Opteron CPU
- ×16 up and ×16 down links
- Up to 1.0 GHz for a total bandwidth of 8.0 GT/s

Chipset:

- Chipset: CK8-04-PRO + CK8-04-IO4
- Supports NVIDIA® SLI™ (Scalable Link Interface) technology

System Memory

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

USB 2.0 Port



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

Onboard Serial ATA II

- Compliant with the Serial ATA specification
- Supports up to eight S-ATA II devices, such as HDD, etc
- 3 Gb/s per direction per channel

NVIDIA RAID Technology

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

Onboard 1394 (optional) IEEE 1394

- Supports hot-plug
- 1 x IEEE 1394b port with rate of transmission at 800Mbps
- 2 x IEEE 1394a ports with rate of transmission at 400Mbps
- Self-configured addressing

Onboard LAN (-K)

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

Onboard Audio channel

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

BIOS

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

Expansion Slots

- One PCI slot
- Two PCI Express x1 slots
- One PCI Express x4 slot
- Two PCI Express x16 Graphics slots

PCI Express x16 support

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

PCI Express x4 support

- Supports 1 GB/sec (2GB/sec concurrent) bandwidth
- Low power consumption and power management features

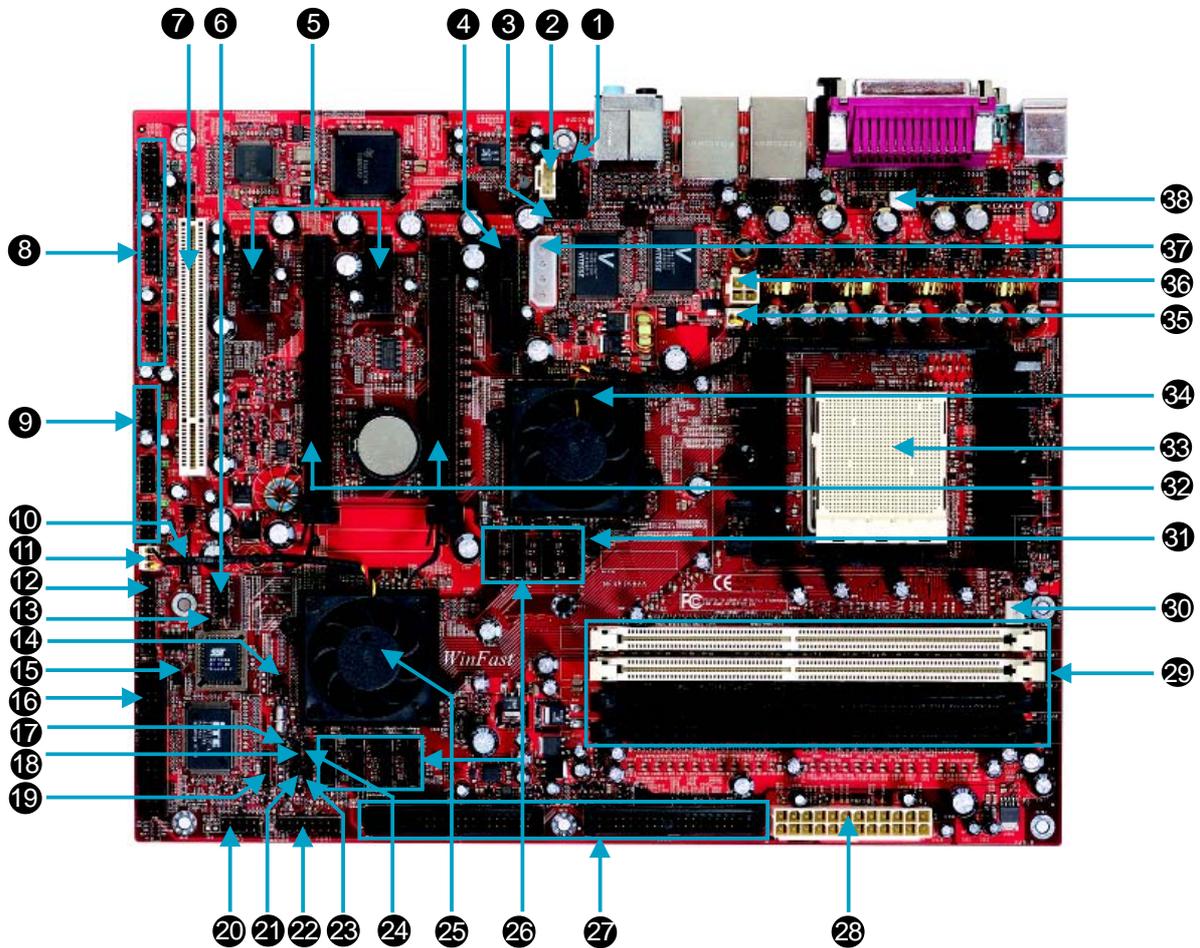
PCI Express x1 support

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

Advanced Features

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

Motherboard Layout



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

1. CD_IN Connector
2. AUX_IN Connector
3. Front Audio Connector
4. PCI Express x4 Slot
5. PCI Express x1 Slots
6. COM2 Connector
7. PCI Slot
8. F_1394 Connectors (optional)
9. Front USB Connectors
10. Speaker Connector
11. FAN1 Connector
12. TPM Connector
13. Recovery Jumper
14. PE_REFCLK Select Jumper
15. BIOS TBL Enable Jumper
16. Floppy Connector
17. Clear CMOS Jumper
18. Chassis Intruder Connector
19. IrDA Connector
20. Front Panel Connector
21. Termination Enable Jumper
22. Game Port Connector
23. ROM TABLE Select Jumper
24. Common Mode Level Select Jumper
(for CK8-04-PRO)
25. NVIDIA CK8-04-PRO Chipset
26. SATA Connectors
27. IDE Connectors
28. 24-pin ATX Power Connector
29. DDR DIMM Slots
30. CPU_FAN Connector
31. Common Mode Level Select Jumper
(for CK8-04-IO4)
32. PCI Express x16 Slots
33. CPU Socket
34. NVIDIA CK8-04-IO4 Chipset
35. FAN2 Connector
36. ATX 12V Power Connector
37. AUX PEX Power Connector
38. SYS_FAN Connector

Chapter 2

This chapter introduces the hardware installation process, including the installation of the CPU and memory. It also addresses the connection of your power supply, use of the rear panel connectors, connection of hard drive and floppy drive data cables, and setting up various other 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
- ❖ Rear Panel Connectors
- ❖ Other Connectors
- ❖ Expansion Slots
- ❖ Jumpers

 **Notes:**

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

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

CPU

This motherboard supports Socket 940 for AMD Opteron™ processors running at 1GHz for extremely high throughput (8.0GB/sec) and Hyper Transport™ Technology.

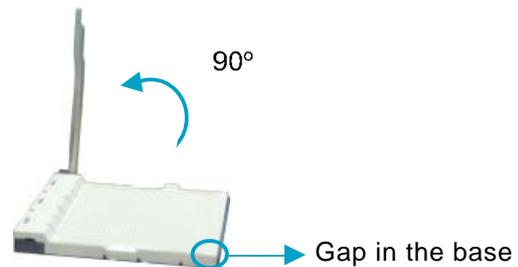
Attention:

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

Installation of CPU

Follow these steps to install the CPU.

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

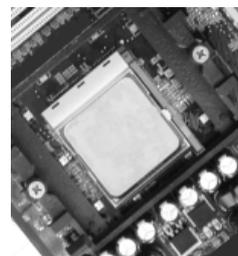


2. Align the cut edge to the gap in the base of the socket. Carefully insert the CPU into the socket until it fits in place.



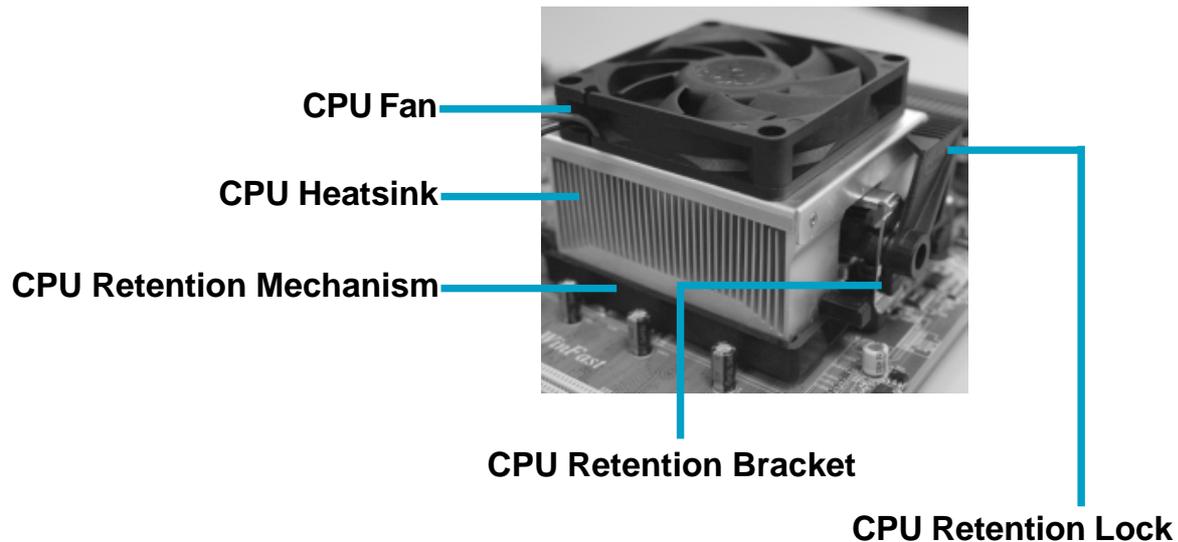
Push down the socket lever to secure the CPU.

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

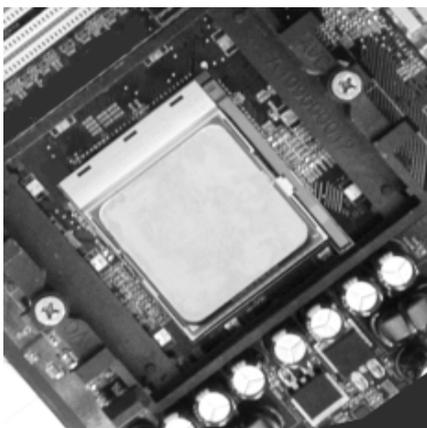


Installation of CPU Fan

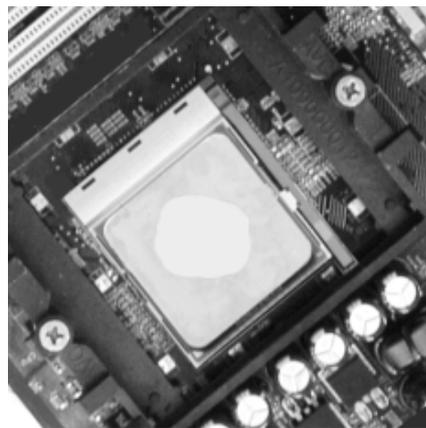
New technology allows processors to run at higher and higher frequencies. To avoid problems arising from high-speed operation, for example, overheating, you need to install the proper fan. The following procedure is provided for reference only, please refer to your CPU fan user guide for the actual procedure.



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

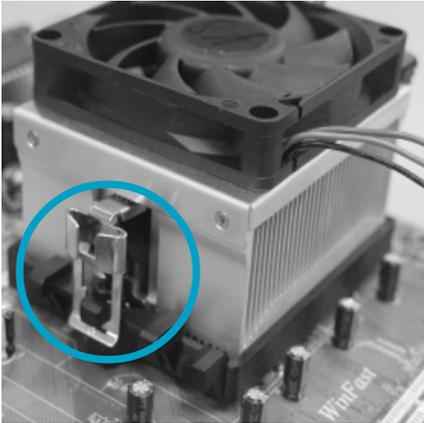


2. If required, apply a light coating of silica gel to the top of the CPU.

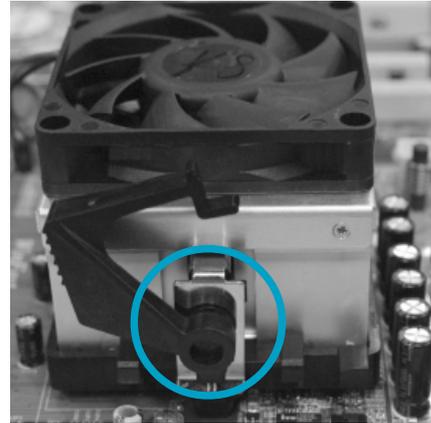


NOTE: The CPU heatsink may have a pre-applied thermal compound. In that case, the silica gel is not required.

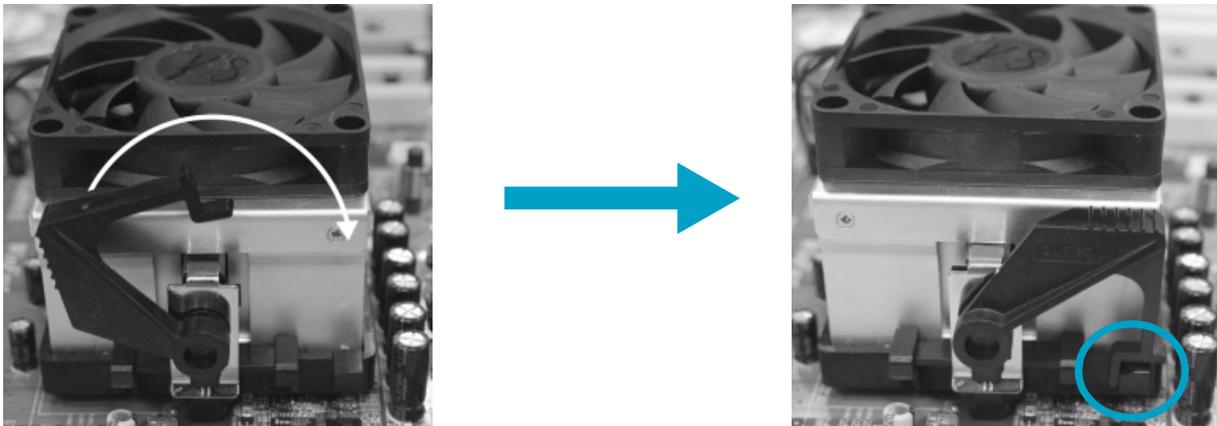
3. Place the cooling set onto the retention mechanism. Attach one end of the retention bracket to retention mechanism.



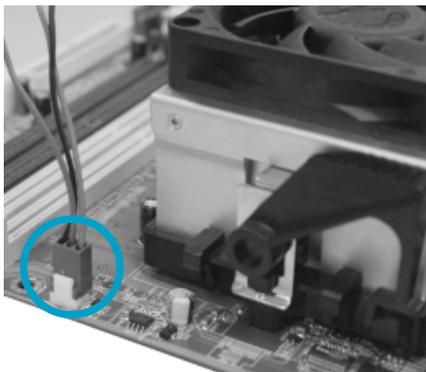
4. Align the other end of the retention bracket to fasten the cooling set on the top of the retention mechanism.



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



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



CPU Qualified Vendor List

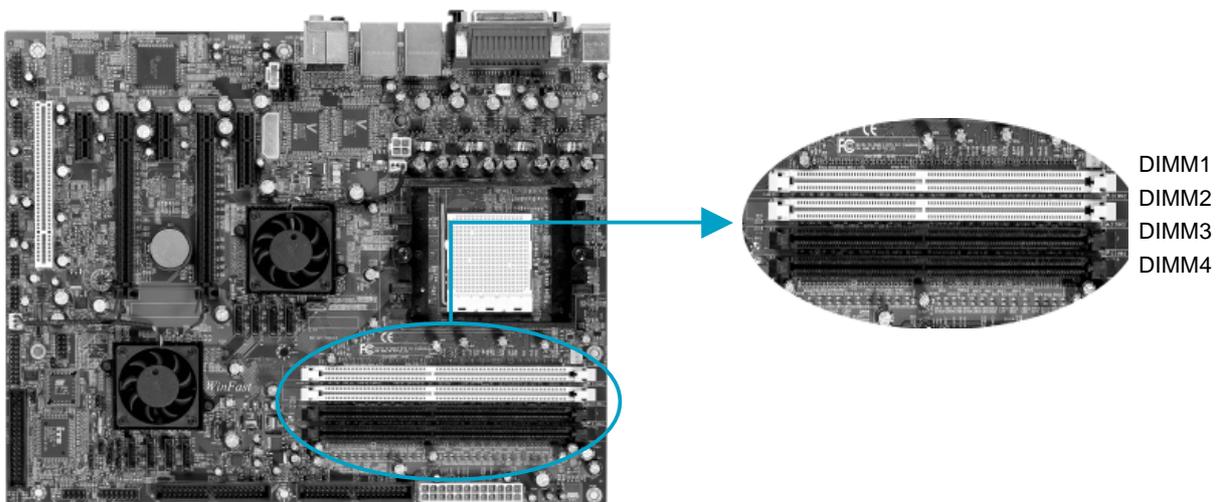
The following table lists the CPUs that have been tested and qualified for use with this motherboard.

CPU	Kernel	Revision	Host Bus Speed (MHz)
Opteron148 (OSA148CEP5AT)	SledgeHammer	CG	2.2G
Opteron150 (OSA150CEP5AT)	SledgeHammer	CG	2.4G
Opteron248 (OSA248CEP5AU)	SledgeHammer	CG	2.2G
Opteron250 (OSA250CEP5AU)	SledgeHammer	CG	2.4G
Opteron250 (OSA250FAA5BL)	SledgeHammer	E0	2.4G
Opteron252 (OSA252FAA5BL)	SledgeHammer	E0	2.6G

Memory

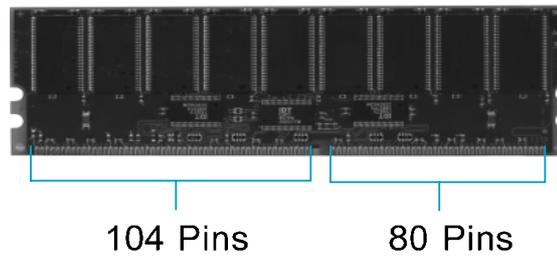
This motherboard includes four 184-pin slots with 266/333/400 MHz Dule Channel DDR DRAM interface (registered), You must install at least one memory module to ensure normal operation. If you install two or more modules, they must be the same speed. Mixing memory modules from different manufactures are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

The processor (CPU) model supported by this motherboard includes a system memory controller. Therefore overclocking the CPU frequency will also overclock the system memory frequency. Please make sure your memory is rated to perform at the overclocked frequency, e.g. if you overclock the CPU frequency to 240MHz, the system memory should be capable of operating at 480MHz level or above, effectively at DDR480 level or above.

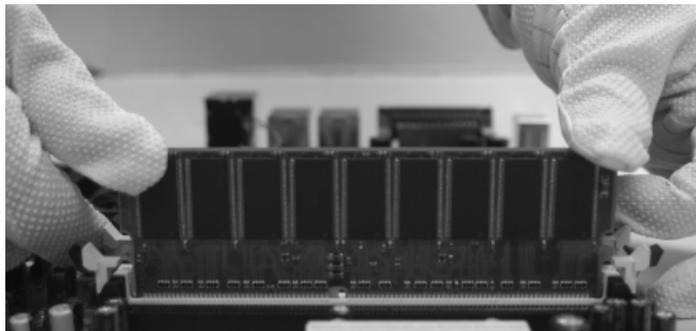


Installation of DDR Memory

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.

Memory Qualified Vendor List

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

Vender	Module Part No.	Size	SS/DS	Speed (Mhz)
INFINEON	HYB250128800AT-7	128MB	DS	266
INFINEON	HYS72D128521GR-7F-B	256MB	DS	266
INFINEON	HYS72D32300GBR-6-C	256MB	SS	333
HYNIX	HY5DU56822BT-D43	256MB	SS	400
MT	MT46V64M4TG-75	512MB	DS	266
MT	MT36VDDT12872G-265B1	1GB	DS	266
MT	MT18VDDF12872G-40BD4	1GB	DS	400
MT	MT9VDDF6472G-40BD4	512MB	SS	400
SAMSUNG	K4H560838C-TCBO	256MB	DS	266
SAMSUNG	K4H560838C-TCBO	512MB	DS	266
KINGSTON	KVR266X72RC25/512	512MB	DS	266
KINGSTON	KVR266X72RC25/256	256MB	DS	266
KINGSTON	KVR266X72RC25/512D	512MB	DS	266
KINGSTON	KVR333X72RC25/512	512MB	DS	333

Note:

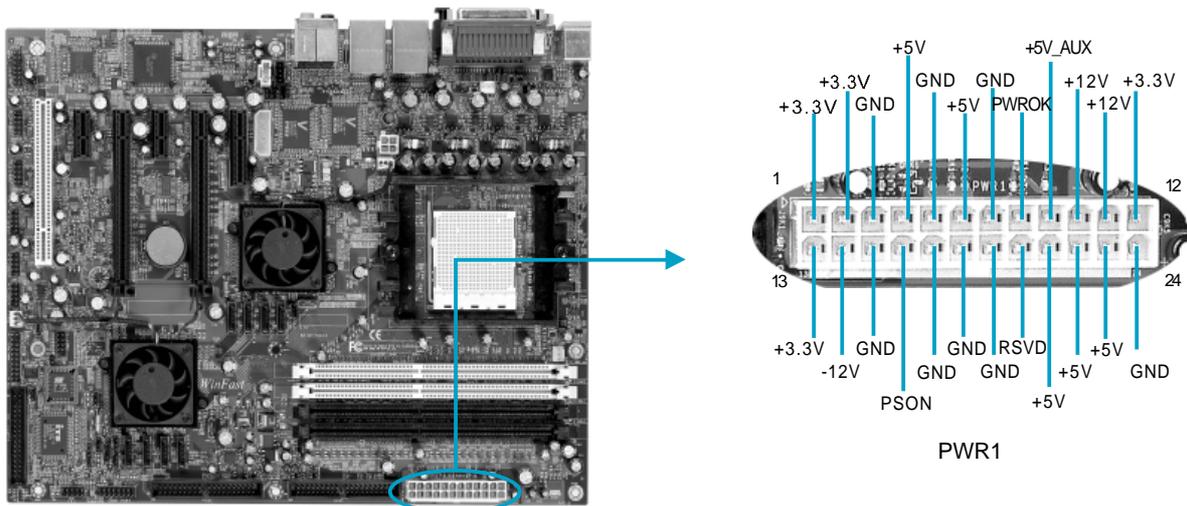
Make sure to use only the tested and qualified DDR modules listed above. Other DDR modules manufactured by other vendors may not be suitable for this motherboard.

Power Supply

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

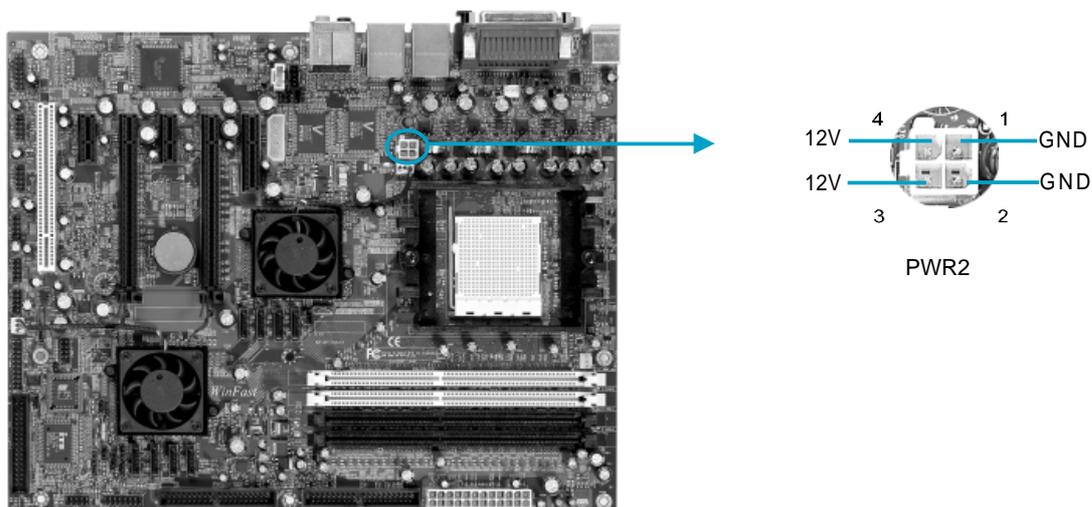
24-pin ATX Power Connector: PWR1

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



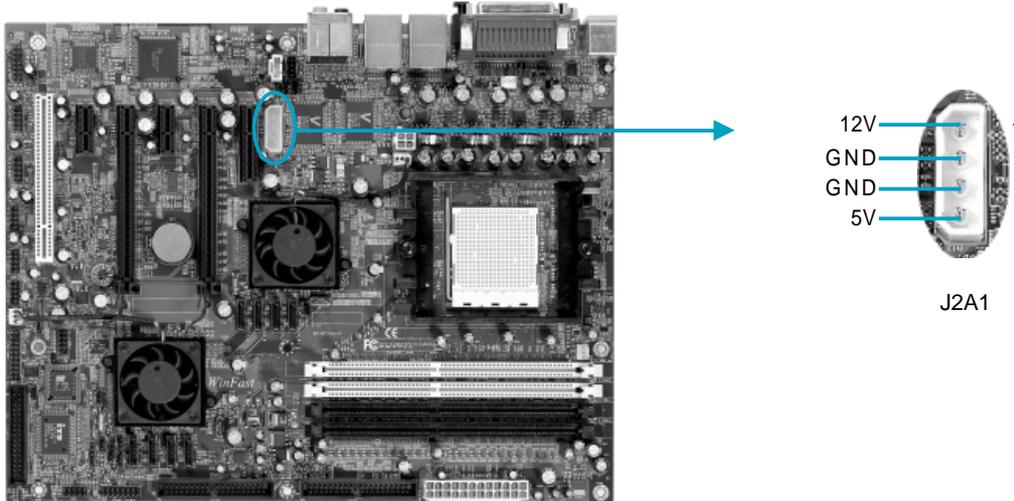
ATX 12V Power Connector: PWR2

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



AUX PWR connector: J2A1

This connector is a auxiliary power for the motherboard.



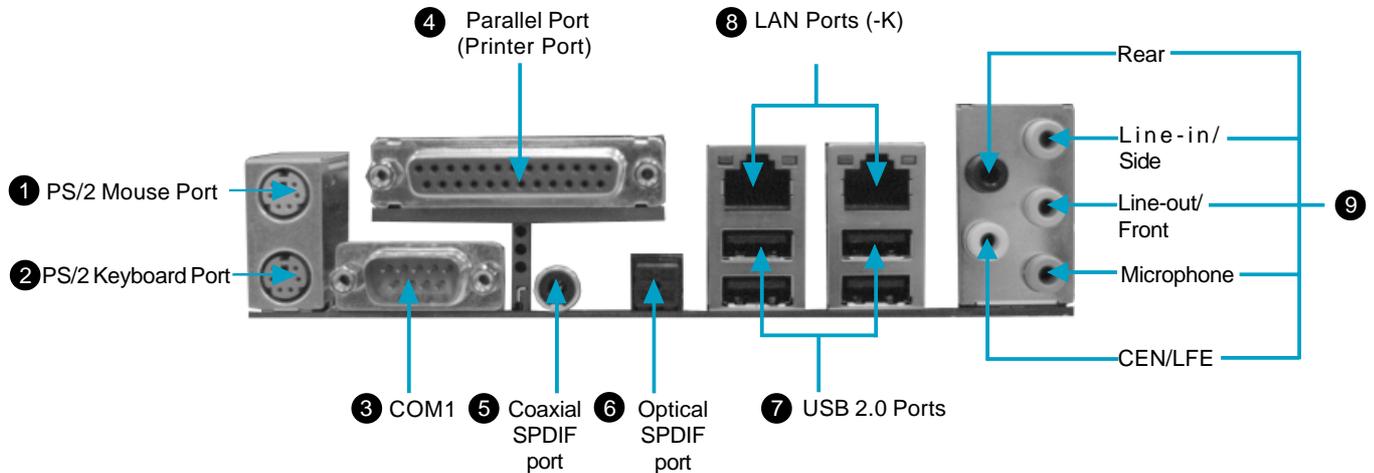
i Attention:

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



Rear Panel Connectors

This motherboard provides the following ports as below:



1 PS/2 Mouse Port

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

2 PS/2 Keyboard Port

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

3 Serial Port: COM1

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

4 Parallel Port: Printer Port

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

5 Coaxial SPDIF Port

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

6 Optical SPDIF Port

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

7 USB 2.0 Ports

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

8 LAN Ports (-K)

These ports allow connection to a Local Area Network (LAN) through a network hub.

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

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

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

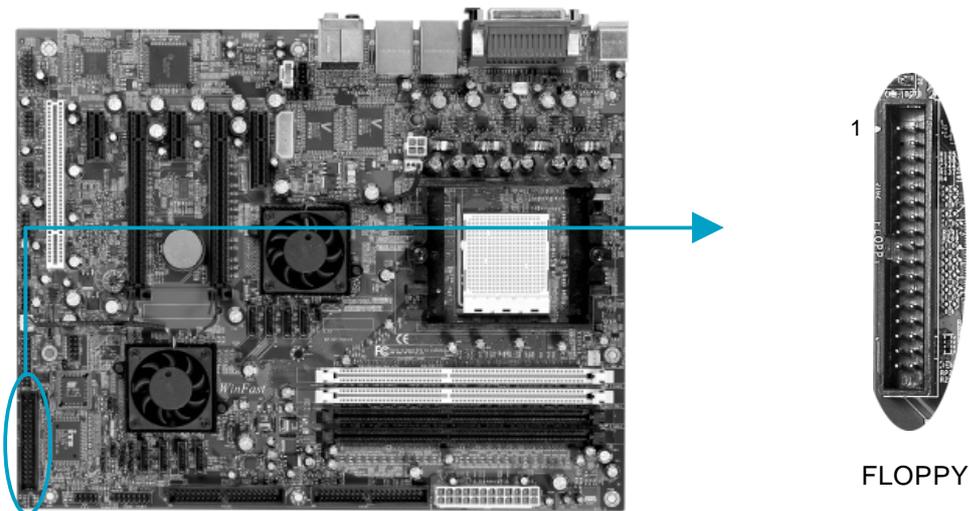
When using a 8-channel sound source, connect the front speaker to the green audio output; connect the rear sound speaker to the black audio output; connect the center speaker/subwoofer to the yellow audio output; connect the side sound speaker to the blue audio output.

Other Connectors

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

FDD connector: FLOPPY

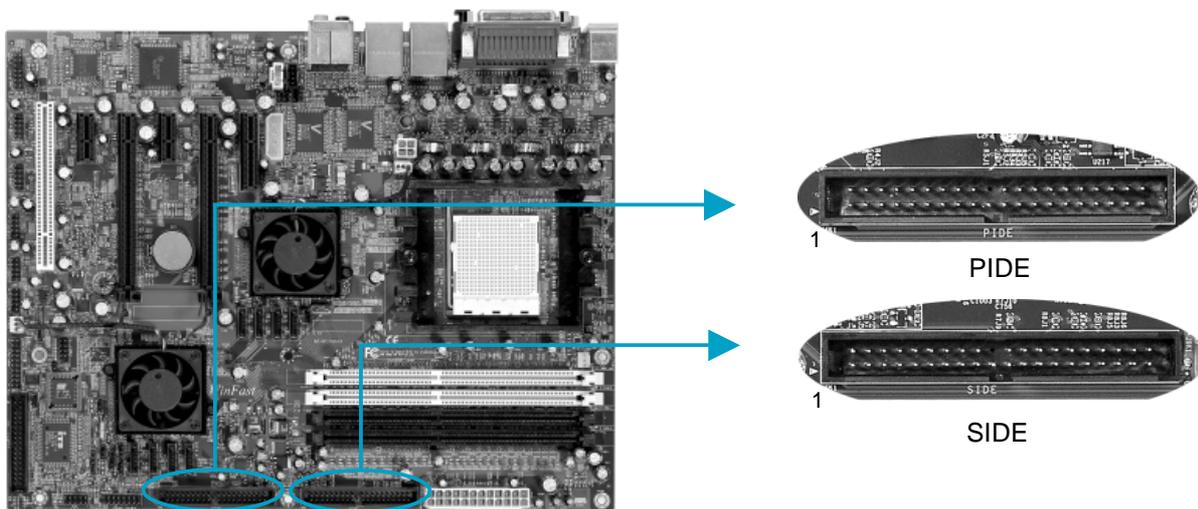
This motherboard includes a standard FLOPPY interface, supporting 360 K, 720 K, 1.2 M, 1.44 M, and 2.88 M FDDs.



IDE Connectors: PIDE & SIDE

These connectors support the provided UltraDMA133/100/66 IDE hard disk ribbon cable and you can configure as a disk array. Refer to **Raid User Guide** for details on how to set up RAID configurations.

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

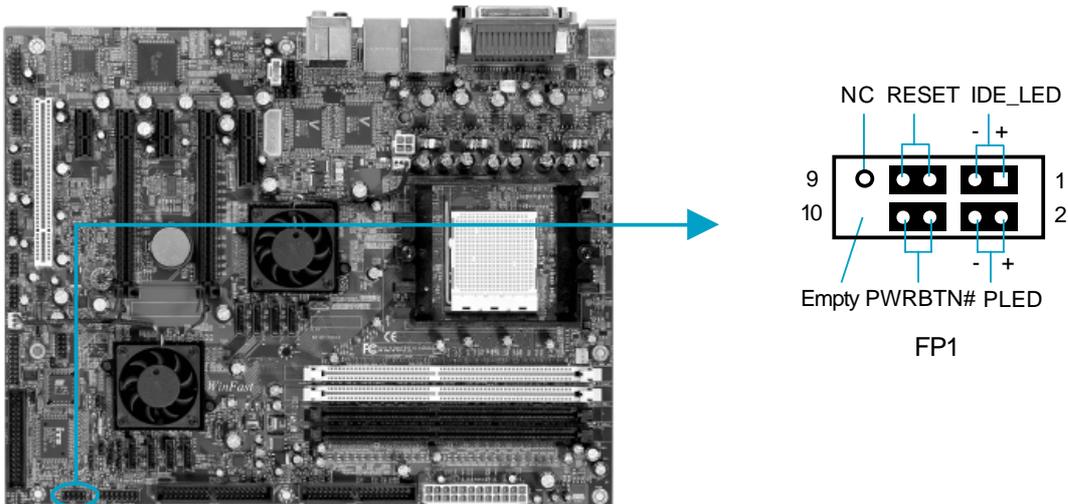


i Attention:

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 FLOPPY 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 (IDE_LED)

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

Reset Switch (RESET)

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

Power LED Connector (PLED)

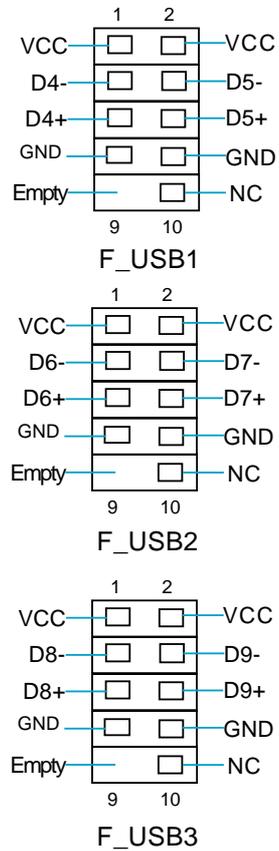
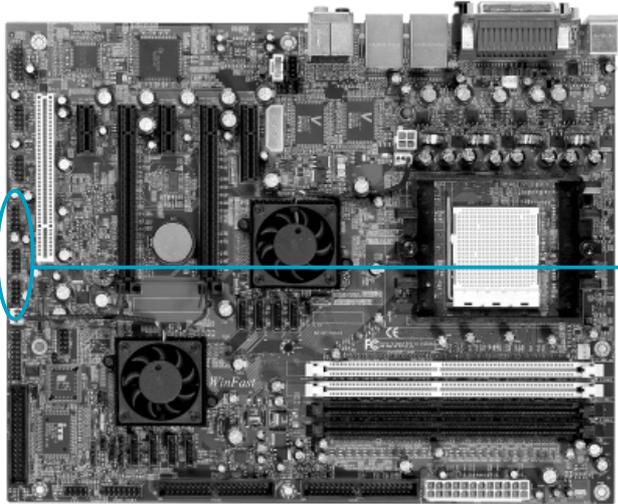
Attach the connector to the Power LED on the front panel of the case. The Power LED indicates the power supply status. When the system is in S0 status, the LED is on. When the system is in S1 status, the LED is blink. When the system is in S3, S4, S5 status, the LED is off.

Power Switch Connector (PWRBTN#)

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

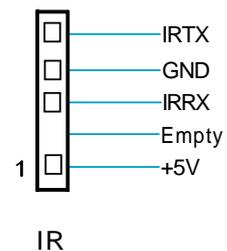
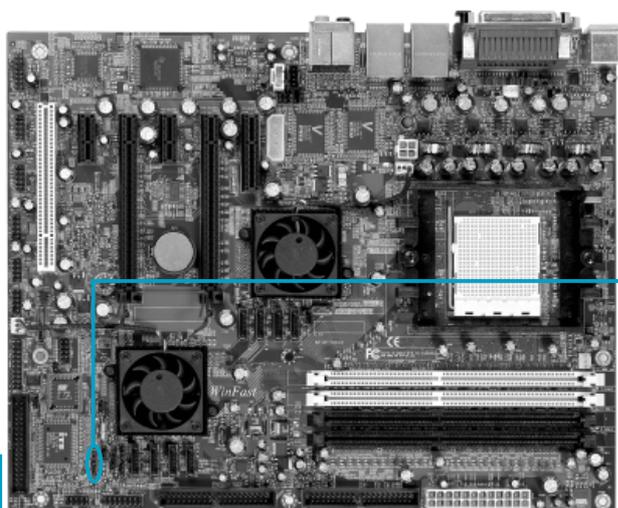
USB Connectors: F_USB 1, F_USB 2, F_USB 3

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



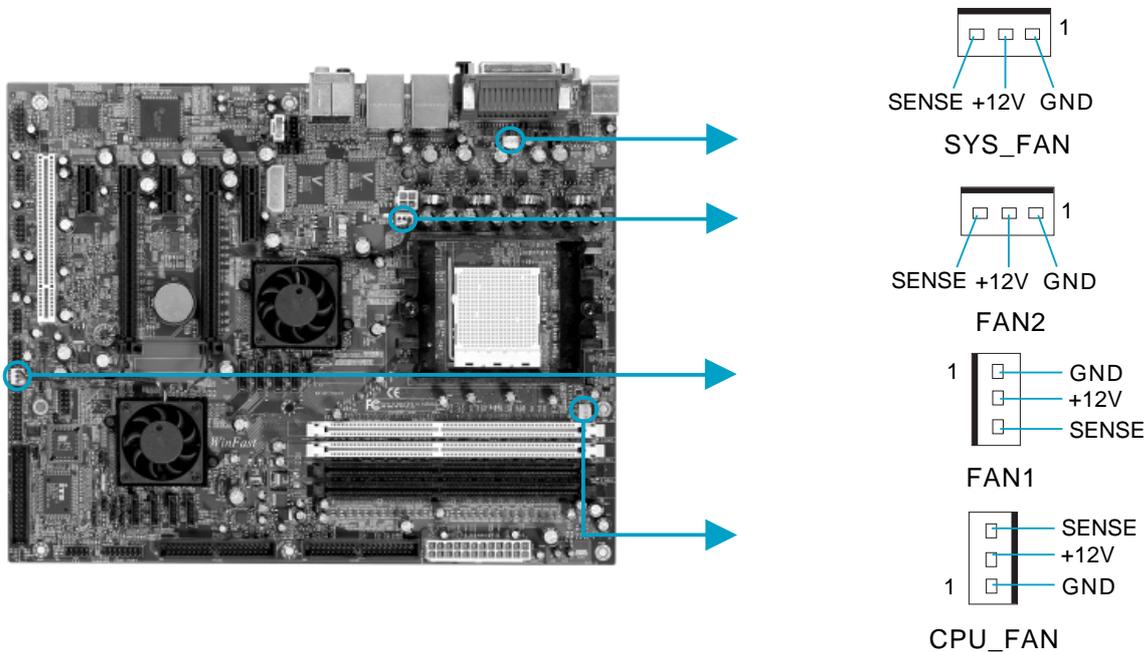
IrDA Connector: IR

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



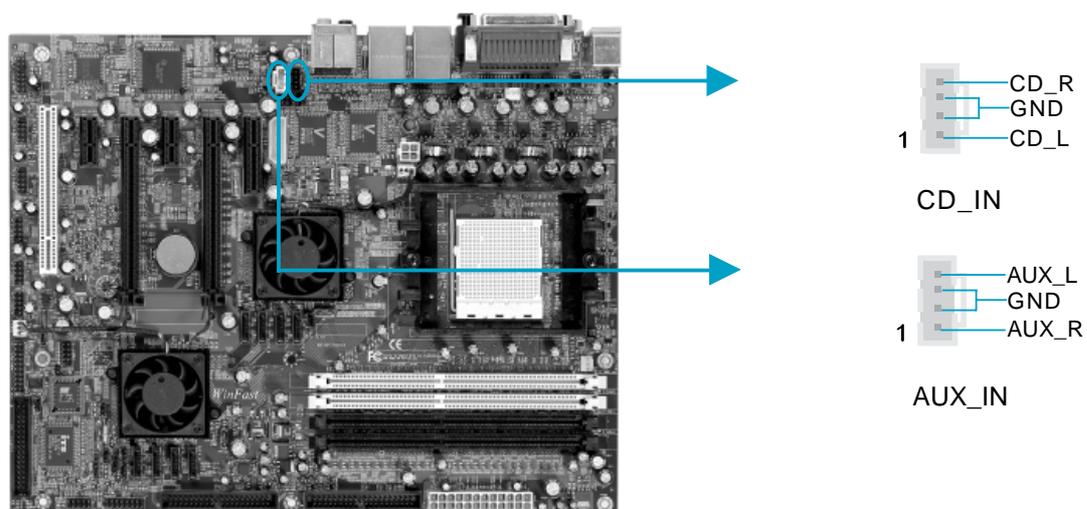
Fan Connectors: CPU_FAN, SYS_FAN, FAN1, FAN2

There are four fan connectors on this motherboard. You can connect the CPU fan to CPU_FAN connector, connect the system fan to SYS_FAN connector.



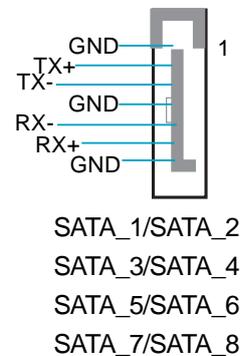
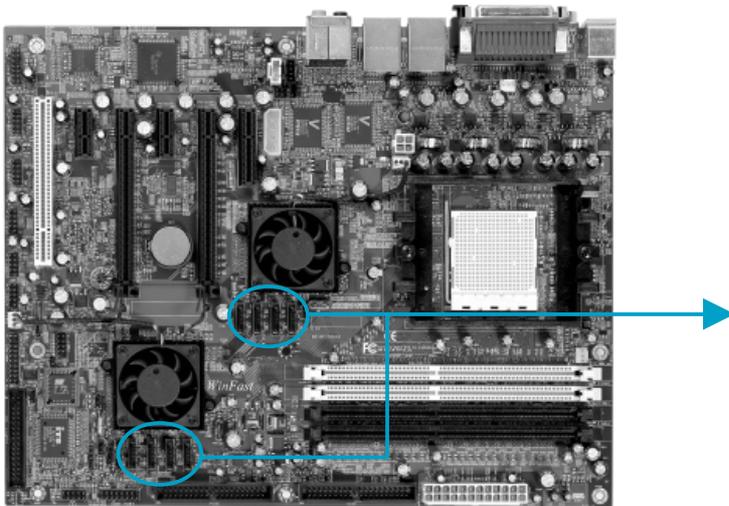
Audio Connectors: CD_IN, AUX_IN

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



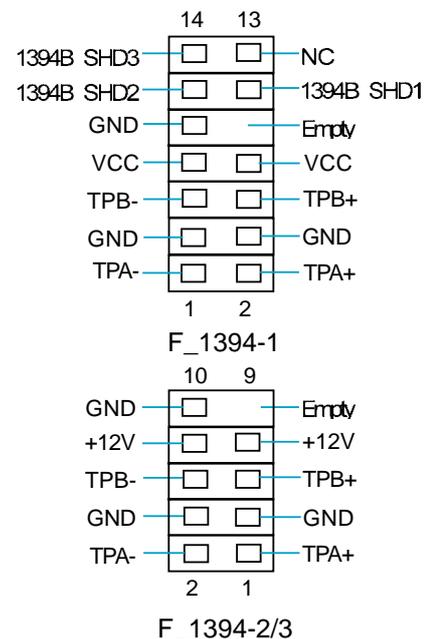
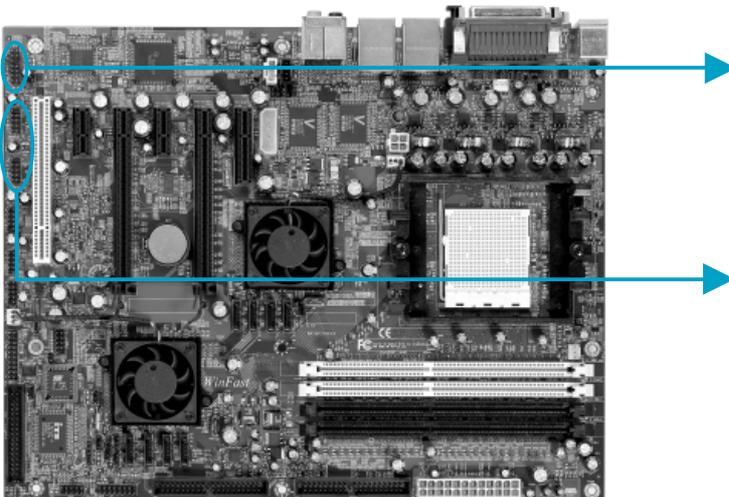
S-ATA Connectors: SATA_1, SATA_2, SATA_3, SATA_4, SATA_5, SATA_6, SATA_7, SATA_8

These Serial ATA connectors are used to connect the S-ATA devices to the motherboard. These connectors support the thin Serial ATA cables for S-ATA devices. The current S-ATA interface allows up to 3Gb/s transfer rate. Refer to RAID manual on how to set up SATA RAID configurations for details. SATA_1, SATA_2, SATA_3, SATA_4 are controlled by NVIDIA CK8-04-PRO chipset, SATA_5, SATA_6, SATA_7, SATA_8 are controlled by NVIDIA CK8-04-IO4 chipset.



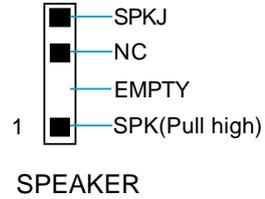
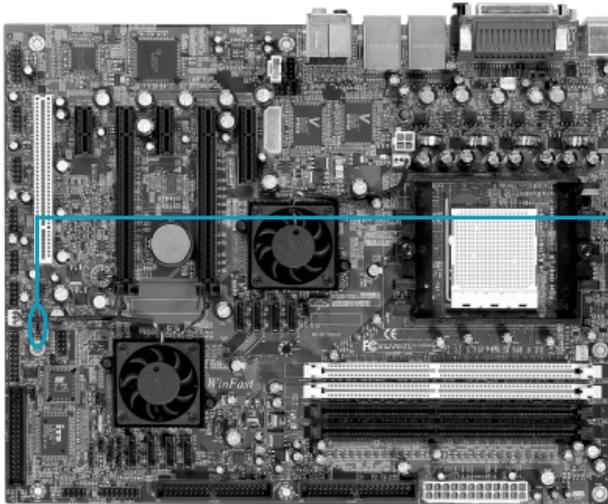
1394 Connectors: F_1394-1, F_1394-2, F_1394-3

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



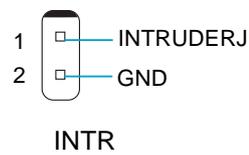
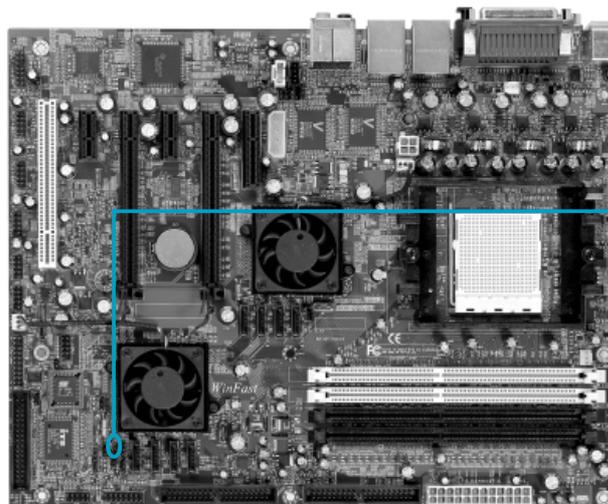
Speaker Connector: SPEAKER

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



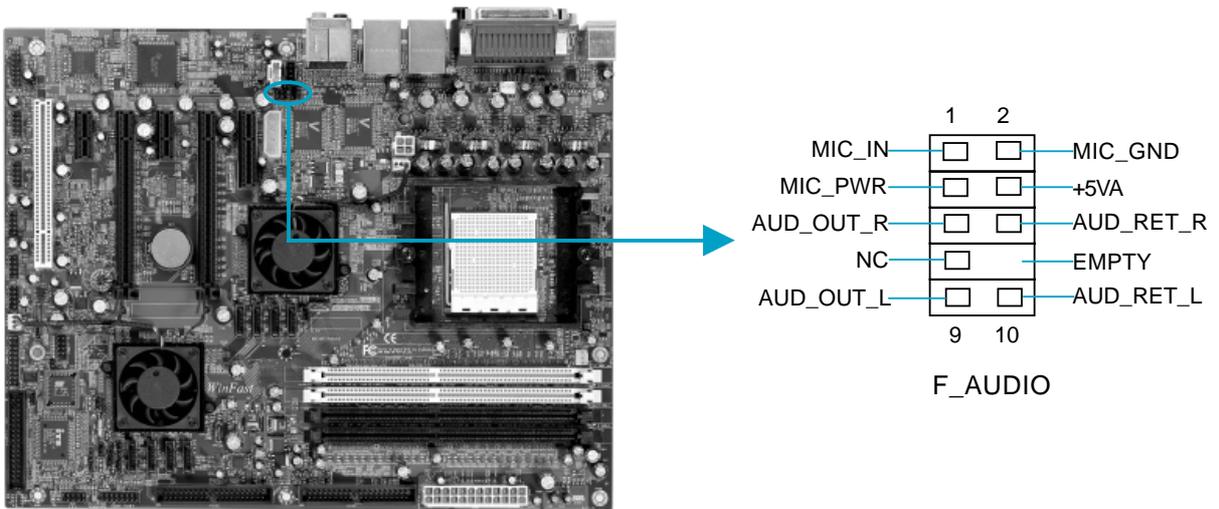
Chassis Intruder Connector: INTR

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



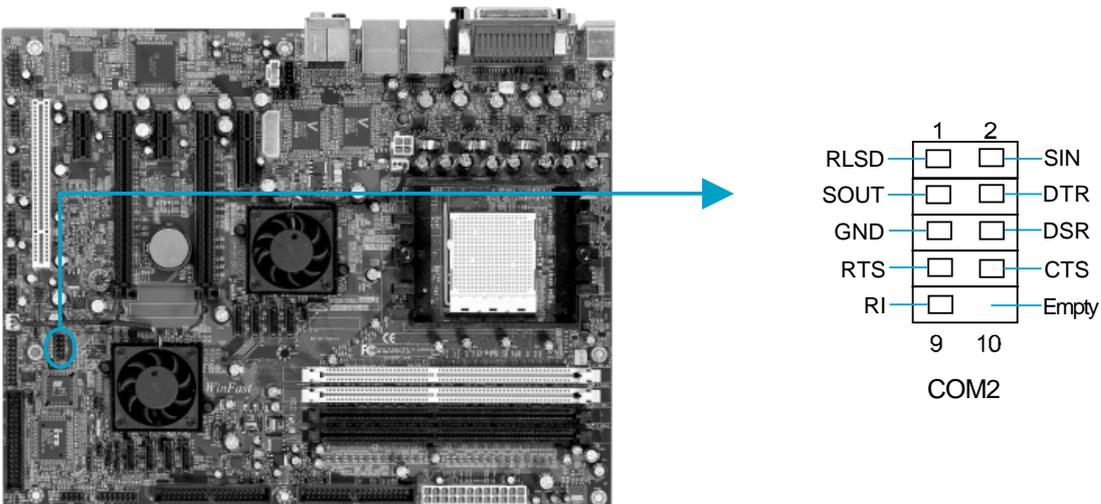
Front Audio Connector: F_AUDIO

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



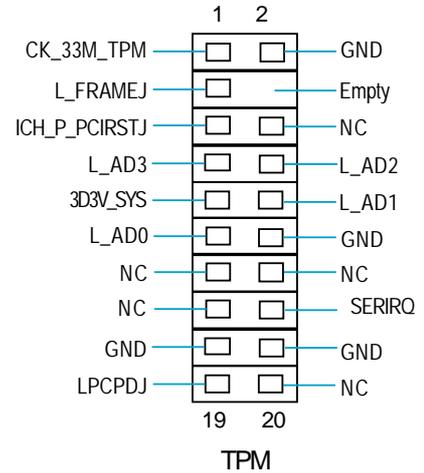
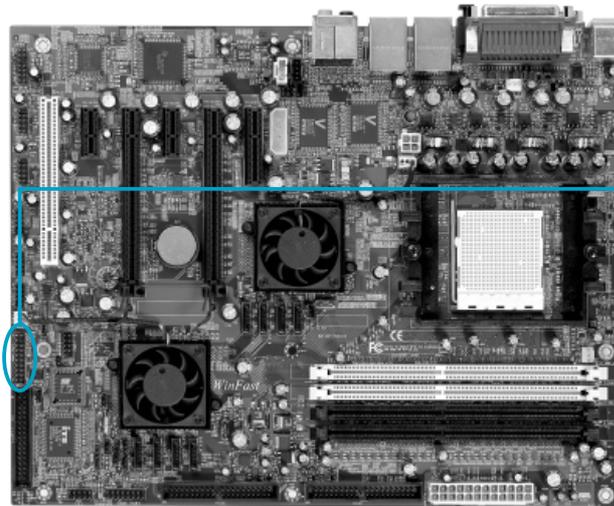
COM2 Connector: COM2

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



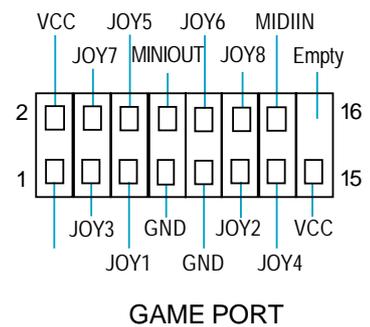
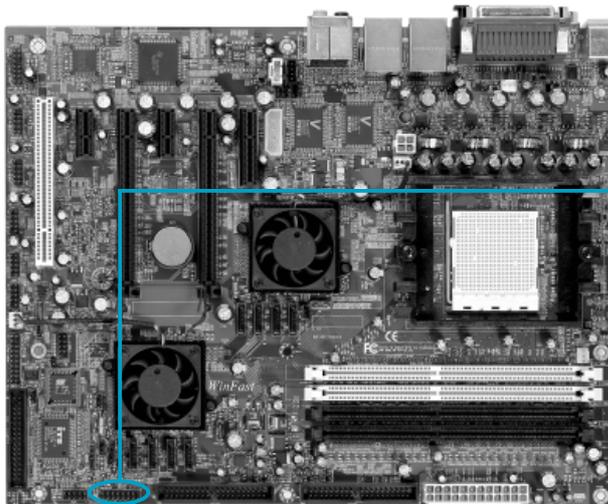
TPM Connector: TPM

The TPM (Trusted Platform Module) provides the ability to the PC to run applications more secure and to make transactions and communication more trustworthy. To utilize this function, you should purchase additional devices and install the driver.



Game Port Connector: GAME PORT

This motherboard attached a Game port connector for your computer, you can link it to the relative device with cable.

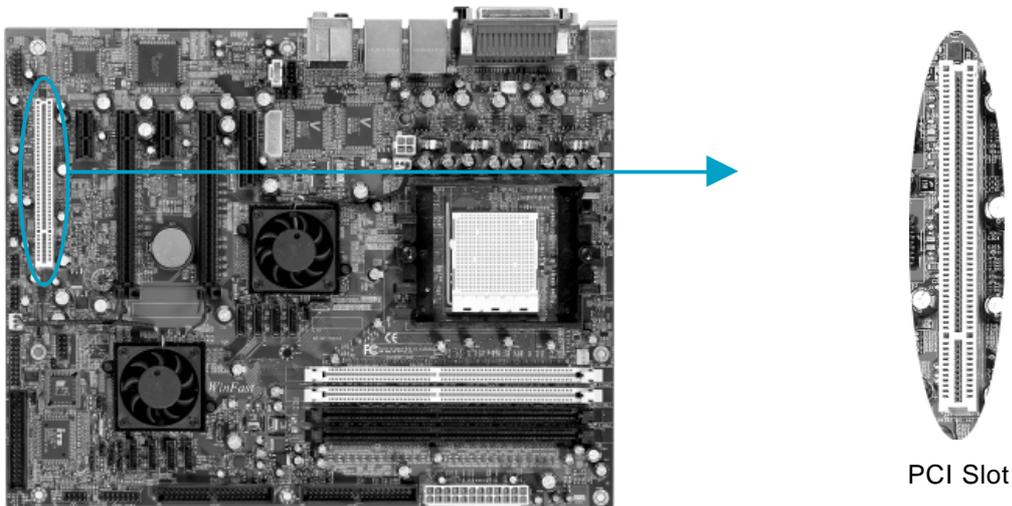


Expansion Slots

This motherboard includes one 32-bit Master PCI bus slots, two PCI Express x1 slots, one PCI Express x4 slots and two PCI Express x16 slot.

PCI Slot

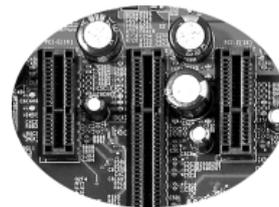
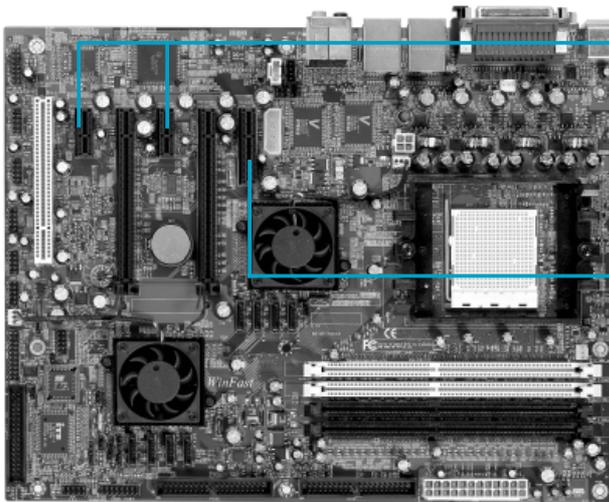
The expansion card can be installed in the PCI slot. When you install or take out such card, you must make sure that the power plug has been pulled out. Please read carefully the instructions provided for such card, and install and set the necessary hardware and software for such card, such as the jumper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



PCI 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.

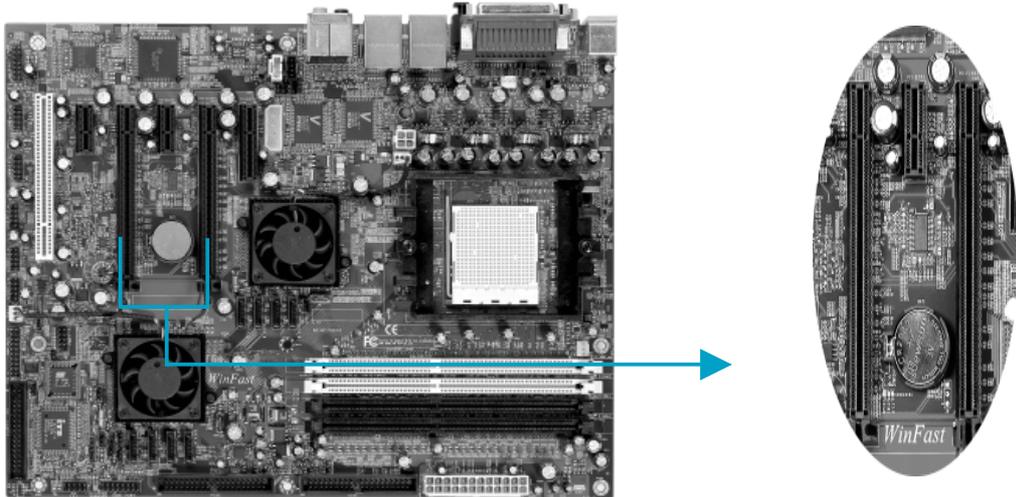


PCI-E (x1) Slots



PCI-E (x4) Slot

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



PCI-E (x16) Slots

Warning:

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

Installing an expansion card

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

PCI Express x16 Graphics Cards Qualified Vendor List

The following table lists the PCI Express x16 graphics cards that have been tested and qualified for use with this motherboard. The NVIDIA GeForce 6800 series GPU/NVIDIA GeForce 6600GT can be used to SLI configuration.

Vendor	Type	Video Memory
NVIDIA	GeForce PCX5750	256MB
NVIDIA	GeForce 6200	128MB
NVIDIA	GeForce 6600	128MB
NVIDIA	GeForce 6800 Ultra	256MB
ATI	RADEON X300SE	128MB
ATI	RADEON X800SE	128MB
ASUS	GeForce PCX5750	128MB
ASUS	RADEON X300(0X5860)	128MB
ASUS	RADEON X600XT	128MB
ASUS	RADEON X600 PRO	128MB
ASUS	GeForce 6600GT	128MB
WinFast	GeForce 6600	128MB
NVIDIA	GeForce 6200	128MB
Leadtek	Winfast PX6800GT	256MB
Leadtek	Winfast P06800 Ultra	256MB

Note:

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

Jumpers

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

Description of Jumpers

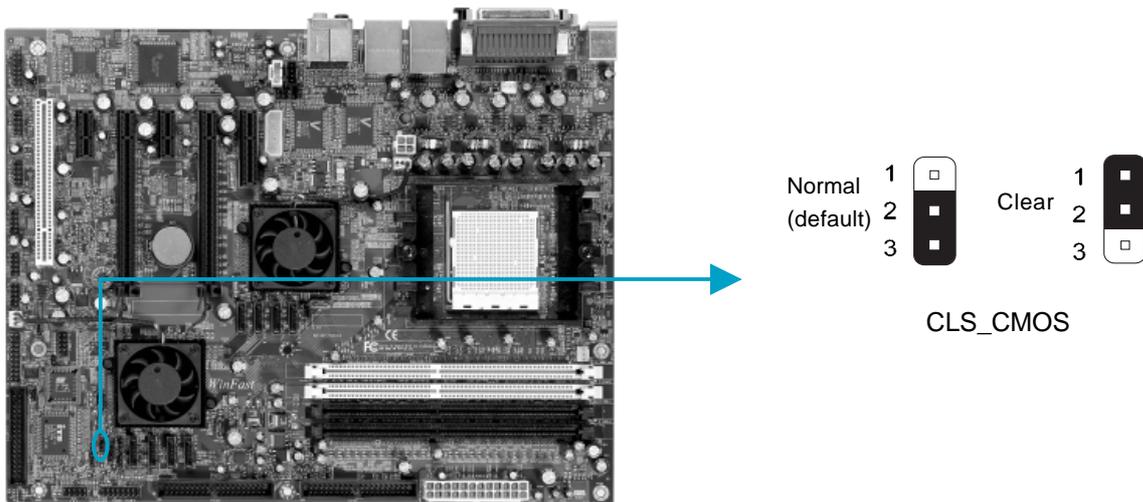
1. For the jumpers on this motherboard, pin 1 can be identified by the silk-screen printed “△” next to it. However, in this manual, pin 1 is simply labeled as “1”.
2. The following table provides some explanations of the jumper pin settings. Users should refer to the table while adjusting jumper settings.

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

Clear CMOS Jumper: CLS_CMOS

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

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

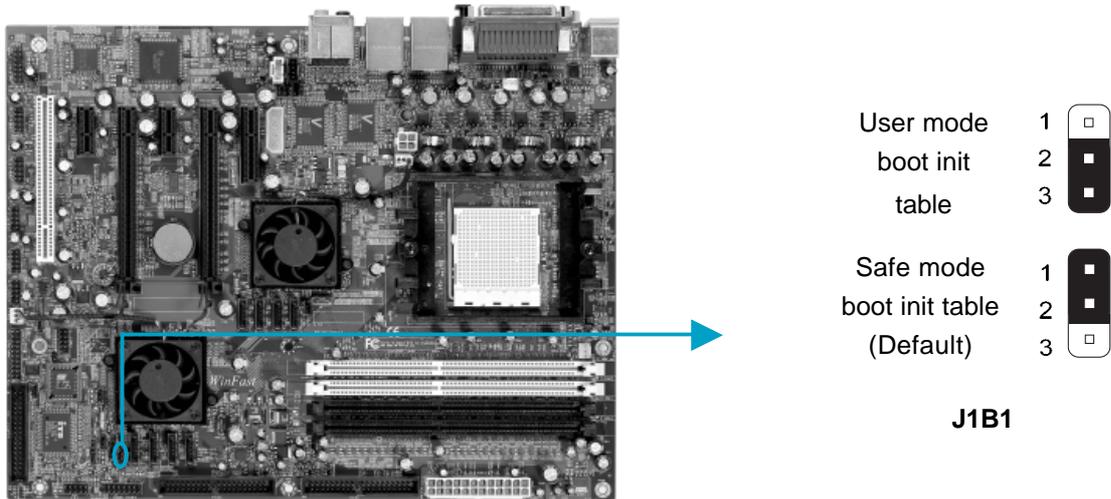


Warning:

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

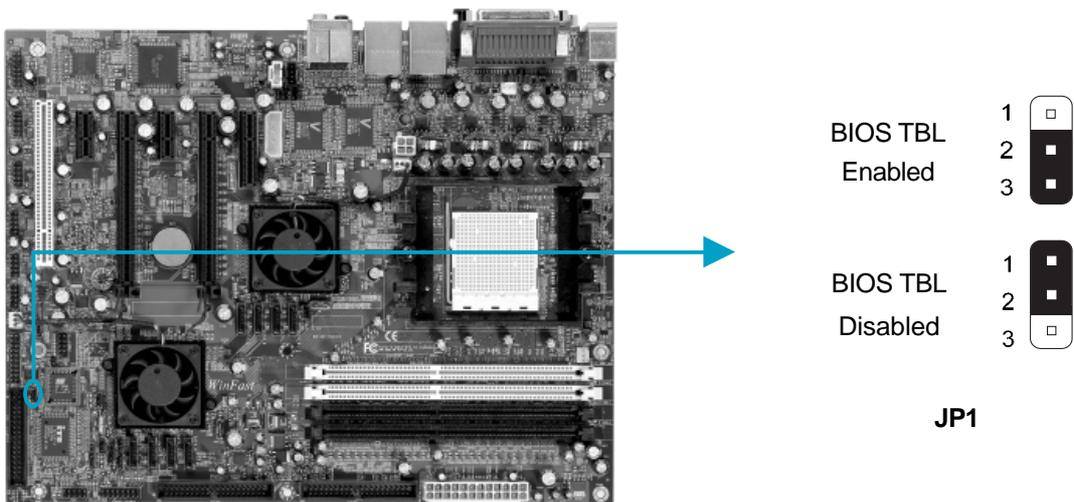
ROM TABLE SELECT Jumper: J1B1

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



BIOS TBL ENABLE Jumper: JP1

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

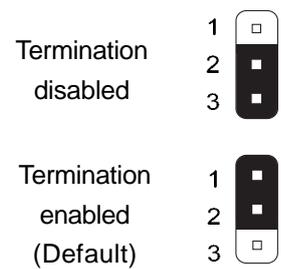
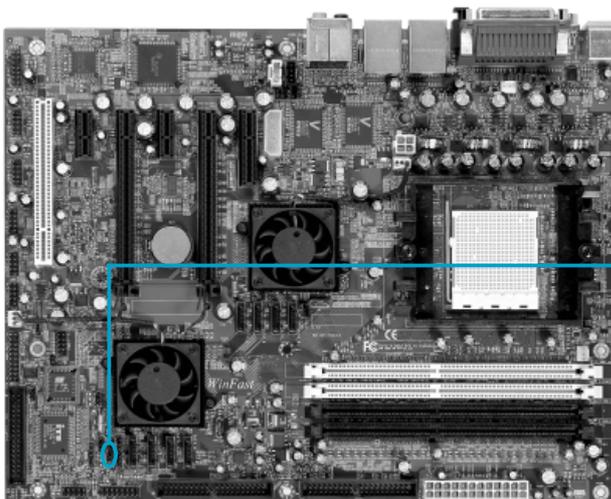


Warning:

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

Termination Enable Jumper: J3A2

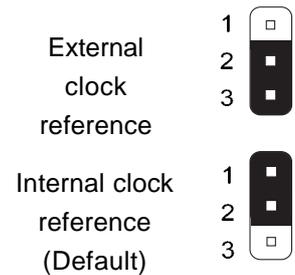
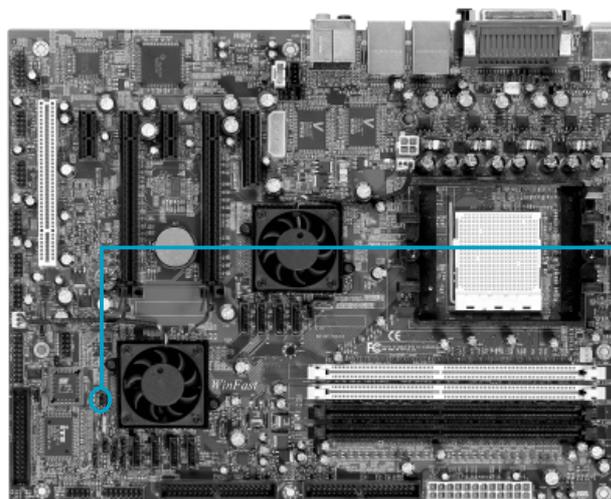
This jumper is used to enable or disable internal differential termination for PCI Express reference clock input pins.



J3A2

PE_REFCLK Select Jumper: J3A1

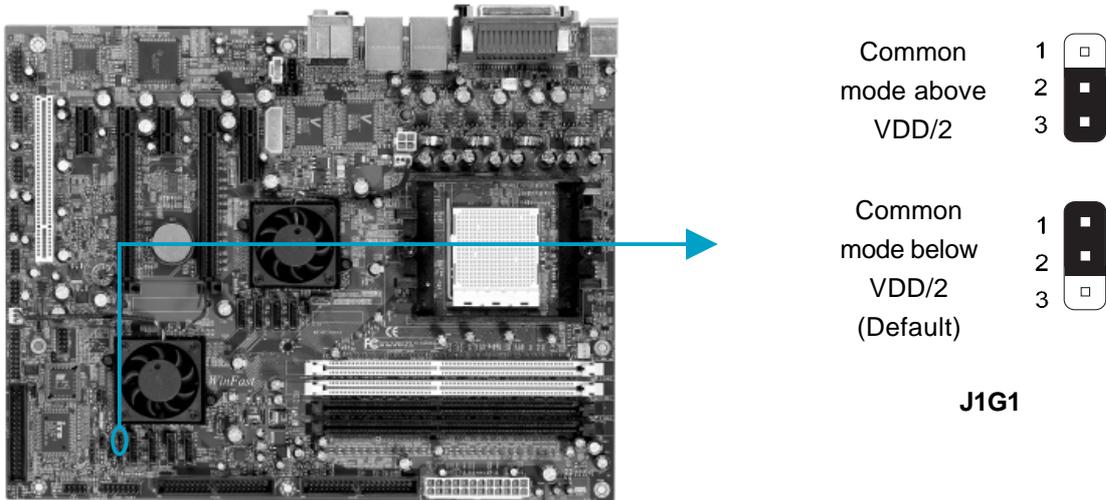
This jumper is used to select the resource for PCI Express PLL reference clock.



J3A1

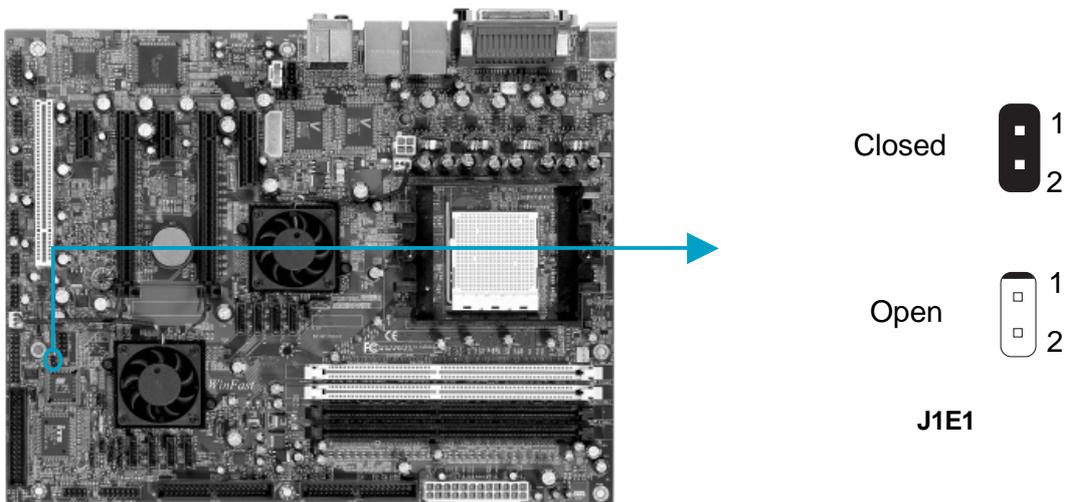
Common Mode Level Select Jumper(for CK8-04-PRO): J1G1

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



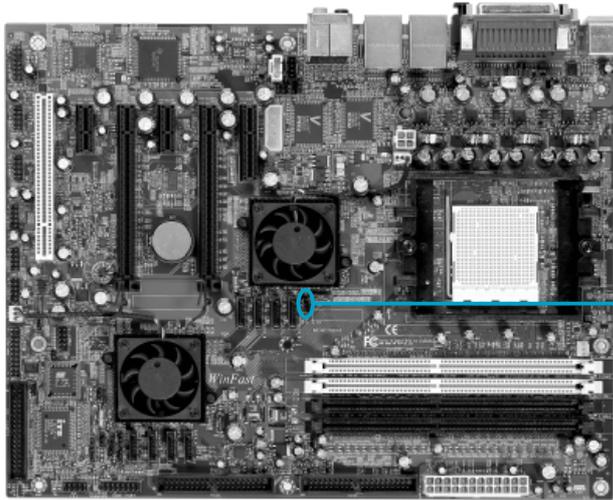
Recovery Jumper: J1E1

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



Common Mode Level Select Jumper (for CK8-04-I04): J7

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



Common mode above VDD/2

1	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>
3	<input type="checkbox"/>

Common mode below VDD/2 (Default)

1	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>

J7

Starting up for the first time

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

Powering off the computer

1. Using the OS shut down function

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

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

Chapter 3

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

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

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

This chapter includes the following information:

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

Enter BIOS Setup

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

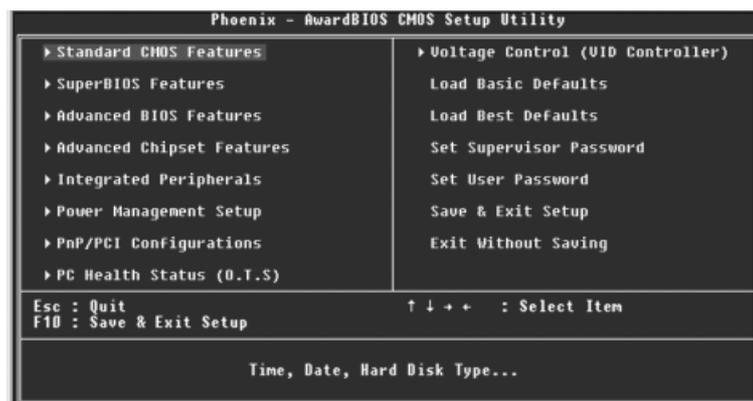
Press TAB to show POST screen, DEL to enter SETUP, ESC to Enter Boot Menu.

Note:

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

Main Menu

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



Main Menu

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

Standard CMOS Features

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

SuperBIOS Features

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

Advanced BIOS Features

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

Advanced Chipset Features

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

Integrated Peripherals

All onboard peripherals can be set up through this menu.

Power Management Setup

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

PnP/PCI Configurations

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

PC Health Status (O.T.S)

This will display the current status of your PC.

Voltage Control (VID Controller)

Voltage settings can be adjusted through this menu.

Load Basic Defaults

The basic BIOS settings can be loaded through this menu.

Load Best Defaults

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

Set Supervisor/User Password

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

Save & Exit Setup

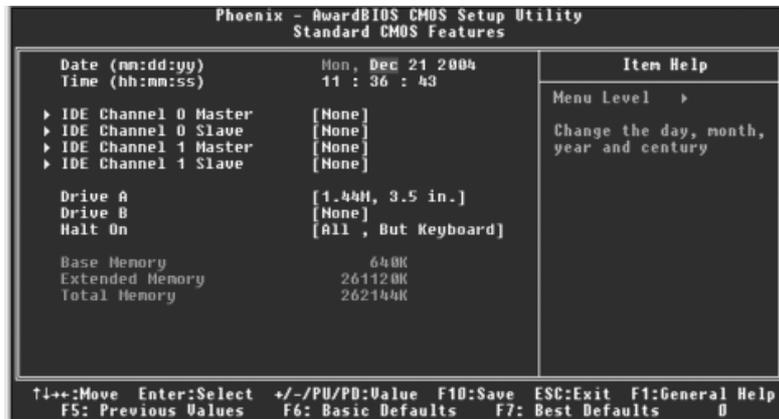
Save CMOS value settings to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

Standard CMOS Features

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



Standard CMOS Features Menu

Date

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

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

Time

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

IDE Channel 0/1/ Master/Slave

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

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

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

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

Drive A/B

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

Halt On

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

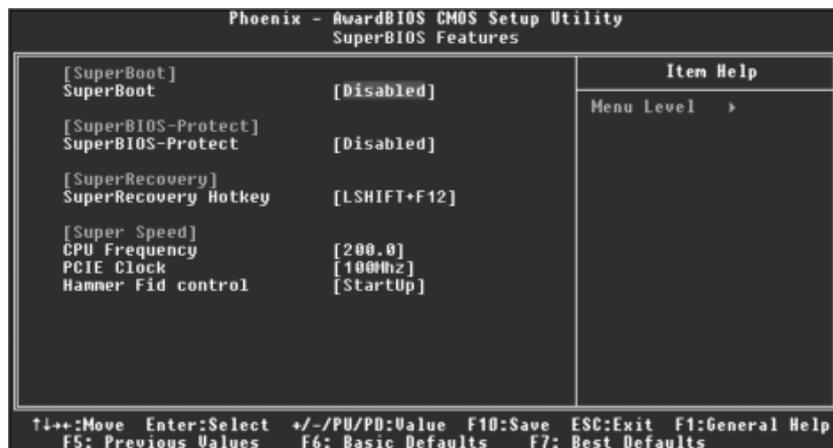
All Errors	Whenever the BIOS detects a nonfatal error, the system will stop and you will be prompted.
No Errors	The system boot will not stop for any errors that may be detected.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette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

Memory

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

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

SuperBIOS Features



SuperBIOS Features Menu

- ❖ **[SuperBoot] SuperBoot (Default: Disabled)**
SuperBoot allows system-relevant information to be stored in CMOS upon the first normal startup of your PC, and the relevant parameters will be restored to help the system start up more quickly on each subsequent startup.
- ❖ **[SuperBIOS-Protect] SuperBIOS-Protect (Default: Disabled)**
SuperBIOS-Protect function protects your PC from being affected by viruses, e.g. CIH.
- ❖ **[SuperRecovery] SuperRecovery Hotkey (Default: LSHIFT+F12)**
SuperRecovery provides the users with an excellent data protection and HDD recovery function.
- ❖ **[SuperSpeed] CPU Frequency (Default: Depend on CPU)**
The conventional overclock method uses the jumpers on the motherboard, and it is both troublesome and apt to errors. By using SuperSpeed, the CPU can be overclocked by keying in the desired value in the CPU clock range.
- ❖ **PCIE Clock (Default: 100Mhz)**
This option is used to set PCI express clock.
- ❖ **Hammer Fid control (Default: StartUp)**
This option is used to set ratio clock.

Warning:

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

Advanced BIOS Features



Advanced BIOS Features Menu

❖ Removable Device Priority

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

❖ Hard Disk/CD-ROM Boot Priority

This item is used to select the priority for hard disk/CD-ROM 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>.

❖ Network Boot Priority

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

❖ First/Second/Third Boot Device (Default: Removable/CDROM/Hard Disk)

These items allow you to set the boot device sequence.

❖ Boot Other Device (Default: Disabled)

The item allow you disable or enable to set the other boot device.

❖ Swap Floppy Drive (Default: Disabled)

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

❖ Boot Up Floppy Seek (Default: Disabled)

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

❖ Boot Up NumLock Status (Default: On)

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

❖ Security Option (Default: Setup)

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

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

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

❖ Init Display First (Default: PCI Slot)

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

❖ USB Keyboard/Mouse Support (Default: Enabled/Disabled)

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

❖ Intruder Detection (Default: Disabled)

This item is used to enable or disable the feature of recording the chassis intrusion status and issuing a warning message if the chassis is once opened.

❖ K8 Cool'n' Quiet control (Default: Auto)

This feature is especially designed for AMD K8 processor, which provides a CPU temperature detecting function to prevent your CPU from overheating due to the heavy working loading.

❖ Full Screen LOGO Show (Default: Enabled)

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

Advanced Chipset Features



Advanced Chipset Features Menu

❖ HT Frequency (Default: 5x)

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

❖ HT Width (Default: ↓ 16, ↑ 16)

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

❖ Err94 Enh (Default: Auto)

This item is used to set Err94 Enh.

❖ DRAM Configuration

Press <Enter> to set the items about DRAM Configuration. Please refer to page 50.

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

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

❖ SSE/SSE2 Instructions (Default: Enabled)

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

❖ System BIOS Cacheable (Default: Disabled)

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



DRAM Configuration Menu

❖ 1T/2T Memory Timing (Default: Auto)

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

❖ Memclock index value (Mhz) (Default: Auto)

This item is used to set memclock value.

❖ CAS# latency (Tcl) (Default: Auto)

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

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

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

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

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

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

This item controls the number of cycles for Row Address Strobe (RAS) to be allowed to precharge. If insufficient time is allowed for the RAS to accumulate

its charge before DRAM refresh, refreshing may be incomplete and DRAM may fail to retain data. This item applies only when synchronous DRAM is installed in the system.

❖ **Row cycle Time (Trc) (Default: 12T)**

This item is used to set Row cycle time.

❖ **Bottom of 32-bit [31:24] IO (Default: D0)**

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

❖ **S/W memory hole Remapping (Default: Disabled)**

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

❖ **MTRR mapping mode (Default: Continuous)**

This item is used set MTRR mapping mode. The setting values are: Continuous and Discrete.

❖ **DRAM ECC feature control (Default: Disabled)**

This item is used to enable or disable the DRAM ECC feature control.

❖ **ECC memory Interlock (Default: At least One)**

This item controls is used to set ECC memory Interlock. The setting values are: At least One and All are.

❖ **ECC MCE enable (Default: Disabled)**

This item is used to enable or disable ECC MCE enable.

❖ **Chip-Kill mode enable (Default: Disabled)**

This item is used to enable or disable the Chip-Kill mode enable.

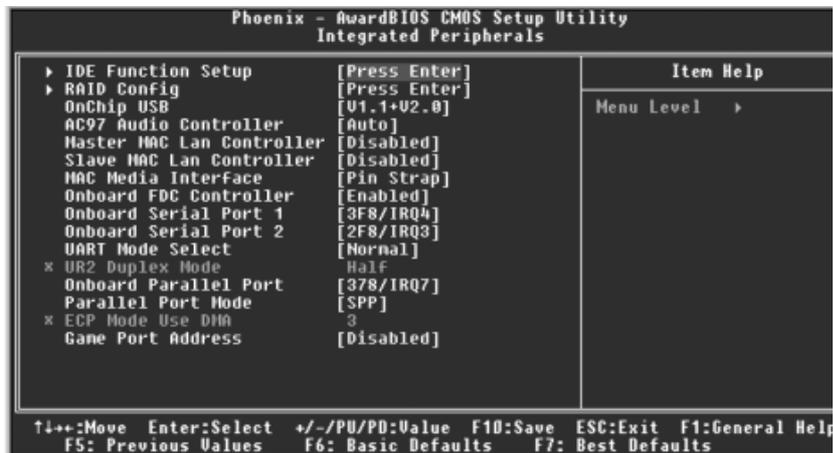
❖ **ECC Redirection (Default: Disabled)**

This item is used to enable or disable ECC Redirection.

❖ **DRAM/L2 cache/DCache background scrubber (Default: Disabled)**

This item is used to set the DRAM/L2 cache/DCache background scrubber. The setting values are: Disabled and 40.0ns.

Integrated Peripherals



Integrated Peripherals Menu

❖ IDE Function Setup

Press <Enter> to set the items about IDE function. Please refer to page 54.

❖ RAID Config

Press <Enter> to set RAID Config. Please refer to page 55.

❖ Onchip USB (Default: V1.1+V2.0)

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

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

❖ AC97 Audio Controller (Default: Auto)

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

❖ Master/Slave MAC Lan Controller (Default: Disabled)

This item is used to enable or disable the master/salve MAC Lan controller.

❖ MAC Media Interface (Default: Pin Strap)

This item is used to set the MAC media interface. The setting values are: Pin Strap, MII and RGMII.

❖ Onboard FDC Controller (Default: Enabled)

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

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

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

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

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

❖ UART Mode Select (Default: Normal)

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

❖ UR2 Duplex Mode (Default: Half)

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

❖ Onboard Parallel Port (Default: 378/IRQ7)

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

❖ Parallel Port Mode (Default: SPP)

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

❖ ECP Mode Use DMA (Default: 3)

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

❖ Game Port Address (Default: Disabled)

This item is used to set the game port address.



IDE Function Setup Menu

❖ OnChip IDE Channel0/1 (Default: Enabled/Enabled)

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

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

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

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

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

❖ IDE DMA transfer access (Default: Enabled)

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

❖ Serial-ATA 1/2/3/4 (Default: Enabled)

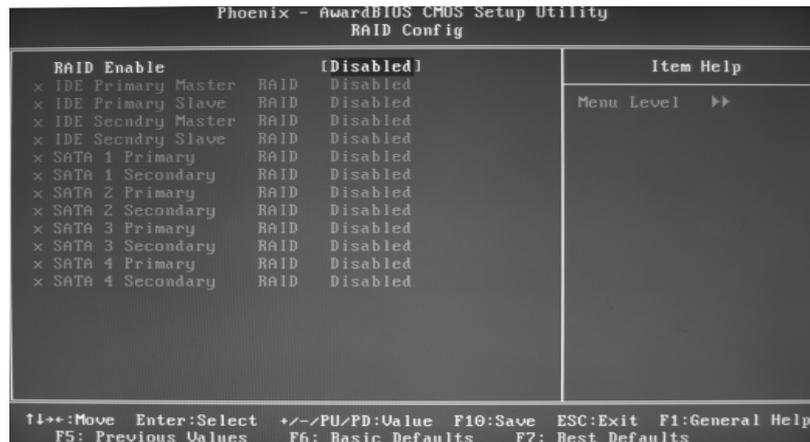
This item is used to enable or disable onchip Serial-ATA controller 1/2/3/4.

❖ IDE Prefetch Mode (Default: Disabled)

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

❖ IDE HDD Block Mode (Default: Disabled)

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



RAID Config Menu

❖ RAID Enable (Default: Disabled)

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

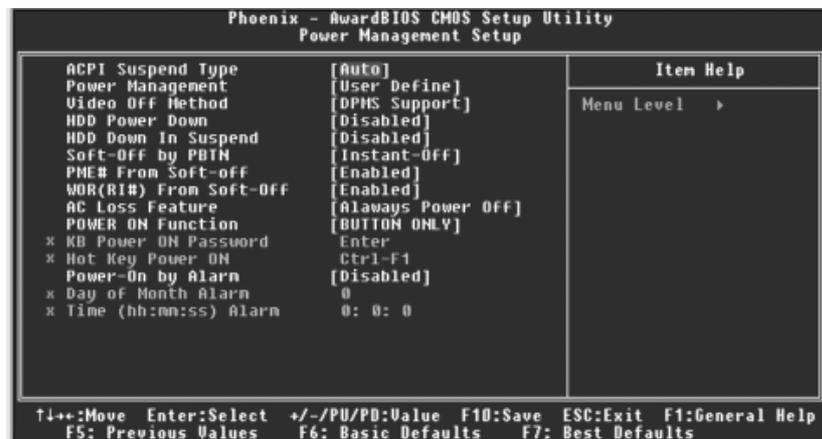
❖ IDE Primary/Secondary/Mater/Slave RAID (Default: Disabled)

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

❖ SATA 1/2/3/4 Primary/Secondary RAID (Default: Disabled)

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

Power Management Setup



Power Management Setup Menu

❖ ACPI Suspend Type (Default: Auto)

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

❖ Power Management (Default: User Define)

This item is used to set the power management scheme.

❖ Video Off Method (Default: DPMS Support)

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

❖ HDD Power Down (Default: Disabled)

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

❖ HDD Down In Suspend (Default: Disabled)

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

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

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

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

❖ PME# From Soft-Off (Default: Enabled)

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

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

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.

❖ AC Loss Feature (Default: Always Power Off)

This item is used to set the AC Loss feature.

❖ POWER ON Function (Default: BUTTON ONLY)

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

❖ KB Power ON Password

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

❖ Hot Key Power ON (Default: Ctrl-F1)

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

❖ Power-On by Alarm (Default: Disabled)

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

❖ Day of Month Alarm

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

❖ Time (hh:mm:ss) Alarm

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

PnP/PCI Configurations



PnP/PCI Configurations Menu

❖ Reset Configuration Data (Default: Disabled)

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

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

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

❖ IRQ Resources

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

❖ PCI/VGA Palette Snoop (Default: Disabled)

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

❖ Maximum Payload Size (Default: 4096)

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

PC Health Status (O.T.S)



PC Health Status (O.T.S) Menu

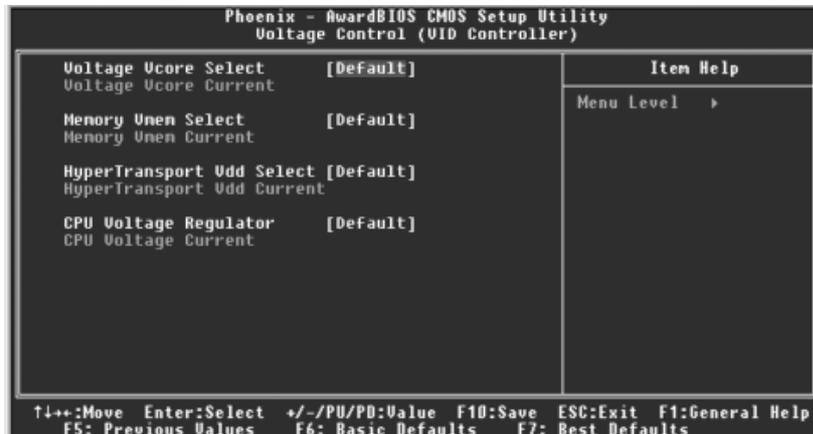
❖ Shutdown Temperature (Default: Disabled)

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

❖ CPU Vcore, Core Voltage +1.5V, +3.3V/ +5.0V/+12.0V, Voltage LDT +1.2V, VDDR, 5VSB, VBAT, CPU Temperature, CPU Fan Speed, FAN1 Speed

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

Voltage Control (VID Controller)



Voltage Control (VID Controller) Menu

Note: We suggest you set the following options as default.

❖ **Chipset Vcore/Memory Vmem/HyperTransport Vdd Select (Default: Default/Default/Default)**

This item is used to set Chipset Vcore/Memory Vmem/HyperTransport Vdd.

❖ **Chipset Vcore/Memory Vmem/HyperTransport Vdd Current**

This item is used to display the current Chipset Vcore/Memory Vmem/HyperTransport Vdd.

❖ **CPU Voltage Regulator (Default: Default)**

This item is used to set CPU Voltage.

❖ **CPU Voltage Current**

This item is used to display the current CPU voltage.

 **Warning:**

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

Load Basic Defaults

Press <Enter> to select this option. A dialogue box will pop up that allows you to load the default BIOS settings. Select <Y> and then press <Enter> to load the defaults. Select <N> and press <Enter> to exit without loading. The defaults set by BIOS set the basic system functions in order to ensure system stability. But if your computer cannot POST properly, you should load the fail-safe defaults to restore the original settings. Then carry out failure testing. If you only want to load the defaults for a single option, you can select the desired option and press the <F6> key.

Load Best Defaults

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

Set Supervisor/User Password

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

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

Enter Password:

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

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

PASS WORD DISABLED!!!
Press any key to continue...

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

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

Save & Exit Setup

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

SAVE to CMOS and EXIT (Y/N)?

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

Exit Without Saving

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

Quit Without Saving (Y/N)?

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

Chapter 4

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

This chapter includes the following information:

- ❖ Utility CD content
- ❖ Start to install drivers
 - Install nVIDIA nForce Chipset system
 - Install DirectX 9.0c
 - Install USB2.0 Driver
 - Install 1394b Driver
- ❖ Install SuperUtility
- ❖ Install Adobe Reader
- ❖ Install Norton Internet Security
- ❖ Word Perfect Office 12
- ❖ nTune

Utility CD content

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



1. Install Driver

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

- A. nVIDIA nForce Chipset system
- B. DirectX 9.0c
- C. USB2.0 Driver
- D. 1394b Driver

2. Accessories

Use this option to install additional software programs.

- A. SuperUtility
- B. Adobe Reader
- C. Norton Internet Security
- D. Word Perfect Office 12
- E. nTune

3. Browse CD

Click to browse this CD.

4. Homepage

Click here to visit Foxconn motherboard homepage.

Note:

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

Start to install drivers

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

Note:

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

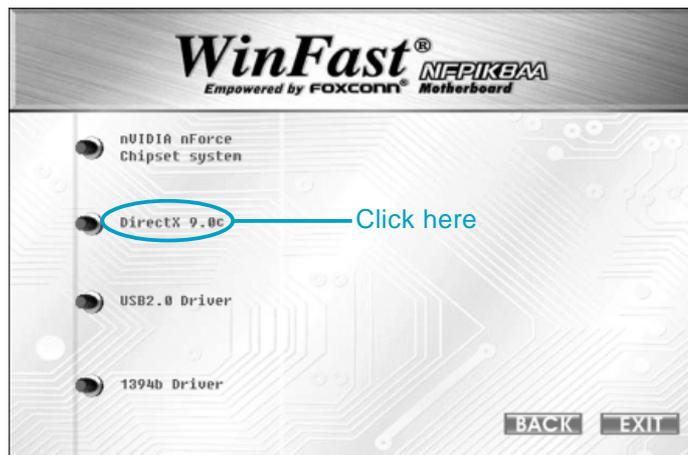
Install nVIDIA nForce Chipset system

Click <Install Driver> from the main menu to bring up the install driver menu. Click <nVIDIA nForce Chipset system> to start the installation.



Install DirectX 9.0c

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



Install USB2.0 Driver

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



Install 1394b Driver

Click <Install Driver> from the main menu and enter the install driver menu. Click <1394b driver> to start the Installation guide. Please read the guide carefully and select the relevant installation method.



Install SuperUtility

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



Install Adobe Reader

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



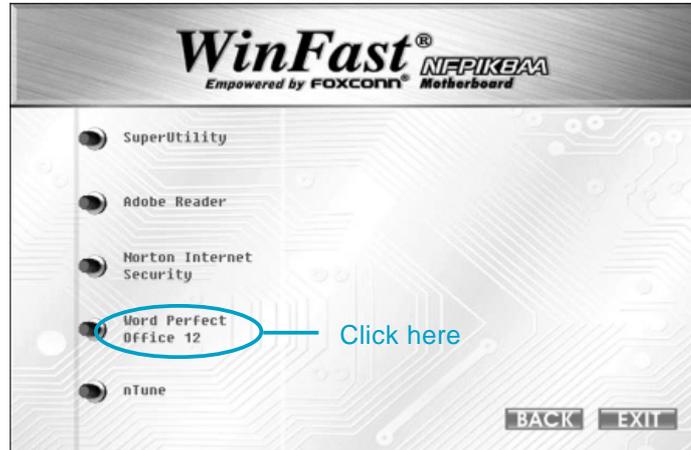
Install Norton Internet Security

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



Install Word Perfect Office 12

From the main menu, select <Accessories>. Click <Word Perfect Office 12> to start the setup.



Install nTune

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



 **Note:**

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

Chapter 5

This chapter will introduce how to use attached software.

This chapter includes the following information:

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

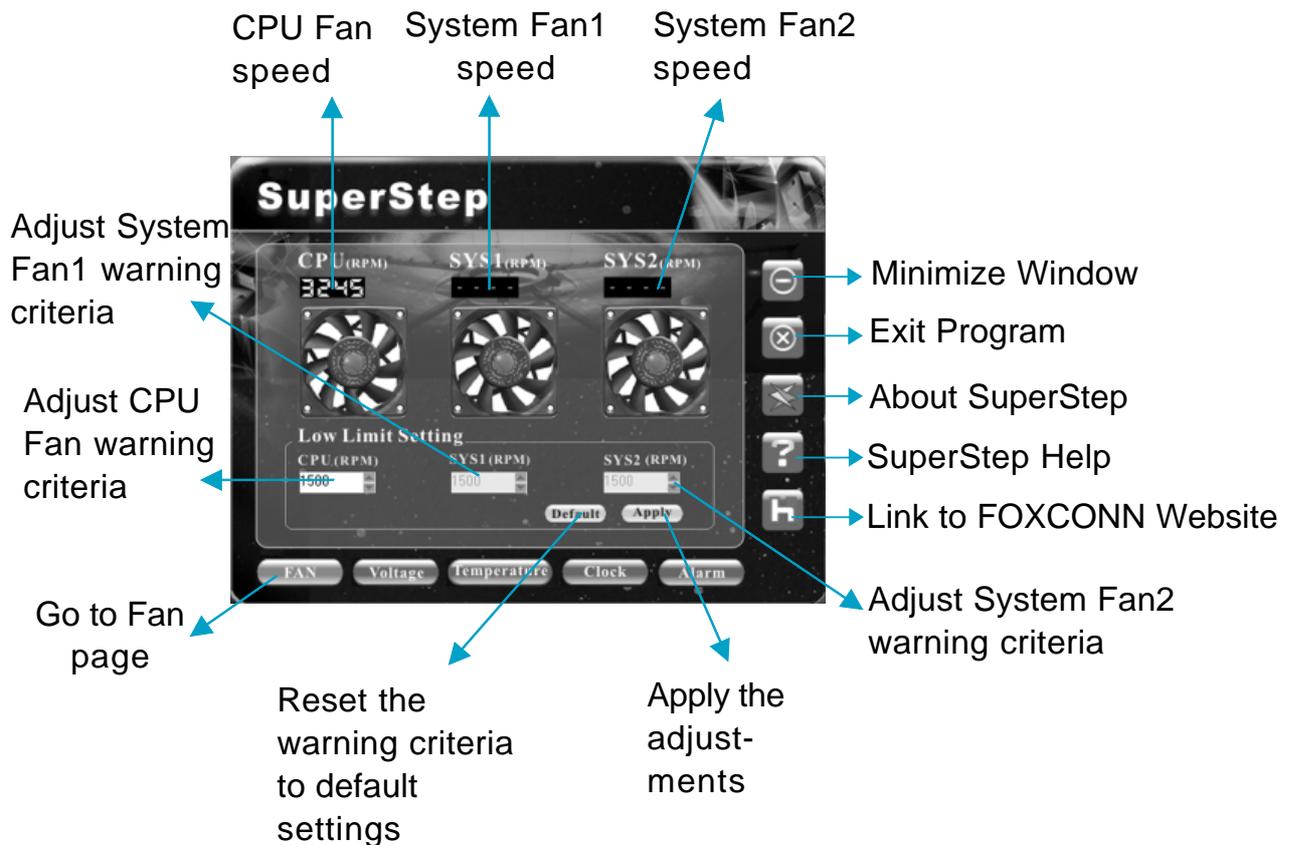
SuperStep

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:



SuperStep

	Value (v)	High (v)	Low (v)
CPU Vcore:	1.50	1.800	1.200
VDDR:	2.59	3.000	1.400
+3.3V:	3.20	3.960	2.640
+5V:	5.02	6.000	4.000
+12V:	11.58	13.200	10.800
-12V:	-----	10.800	-13.200
-5V:	-----	4.500	-5.500
5VSB:	4.97	6.000	4.000
VBAT:	2.88	3.960	2.640

Buttons: FAN, Voltage, Temperature, Clock, 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: 40.00°C, Upper Temperature Threshold: 70

System Temperature: 36.00°C, Upper Temperature Threshold: 70

Buttons: FAN, Voltage, Temperature, Clock, 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

SuperStep

CPU	PCI	PCIe
2400.00	33.33	100.00

Frequency Setting

Ratio: 12.0

Ext. CPU Freq.: 200

Default Apply

FAN Voltage Temperature Clock Alarm

Annotations:

- Current CPU Clock
- Current CPU Ratio
- Current PCI Express clock
- Current PCI clock
- Adjust the CPU External Frequency
- Reset to the default settings
- Go to Clock page
- Apply the adjustments

SuperStep

CPU Vcore: <input type="checkbox"/>	CPU FAN: <input type="checkbox"/>
VDDR: <input type="checkbox"/>	SYS FAN1: <input type="checkbox"/>
+3.3V: <input type="checkbox"/>	SYS FAN2: <input type="checkbox"/>
+5V: <input type="checkbox"/>	CPU Temp.: <input type="checkbox"/>
+12V: <input type="checkbox"/>	SYS Temp.: <input type="checkbox"/>
-12V: <input type="checkbox"/>	5VSB: <input type="checkbox"/>
-5V: <input type="checkbox"/>	VBAT: <input type="checkbox"/>

Monitoring Interval: 2000ms

Default Apply

FAN Voltage Temperature Clock Alarm

Annotations:

- Adjust the monitoring Interval
- Reset to the default settings
- Apply the changes
- Go to Alarm page
- Check for the system to automatically provide warning messages

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:

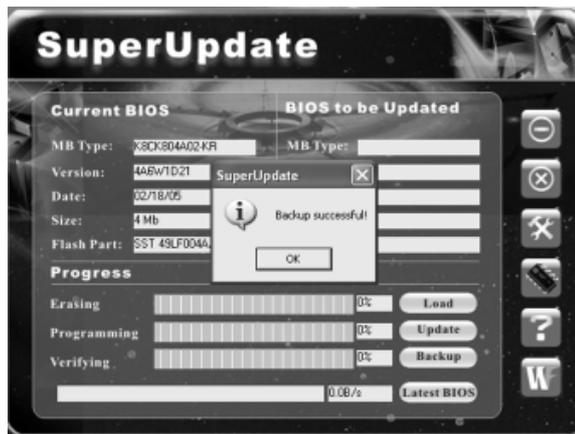
The screenshot shows the SuperUpdate utility window. It features a 'Current BIOS' section on the left with fields for MB Type, Version, Date, Size, and Flash Part. A 'Progress' section at the bottom shows three progress bars for Erasing, Programming, and Verifying, along with a 'Latest BIOS' button. On the right, there is a vertical toolbar with icons for Minimize, Exit, Settings, About, Help, and a website link. Labels with arrows point to these elements: 'Current BIOS Information' points to the 'Current BIOS' section; 'Browse BIOS bin file from local HDD' points to the 'Load' button; 'Perform the BIOS update from local image' points to the 'Update' button; 'Upgrading BIOS via internet automatically' points to the 'Latest BIOS' button; 'Backup system BIOS to an image file' points to the 'Backup' button; 'Minimize Window' points to the minimize icon; 'Exit Program' points to the close icon; 'BIOS Update Setting' points to the settings icon; 'About SuperUpdate' points to the about icon; 'SuperUpdate Help' points to the help icon; and 'Link to Foxconn Website' points to the website icon.

Backup BIOS to local image:

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



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

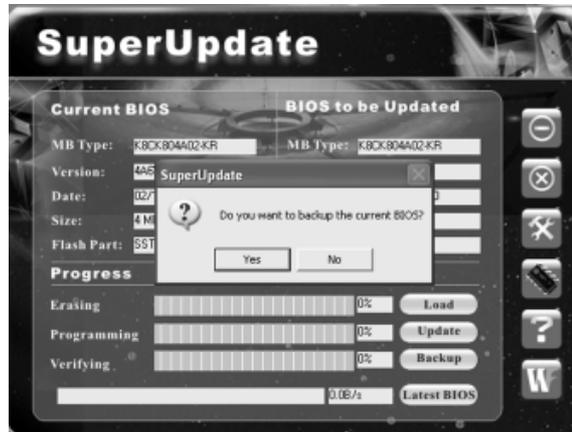


Update BIOS from local image:

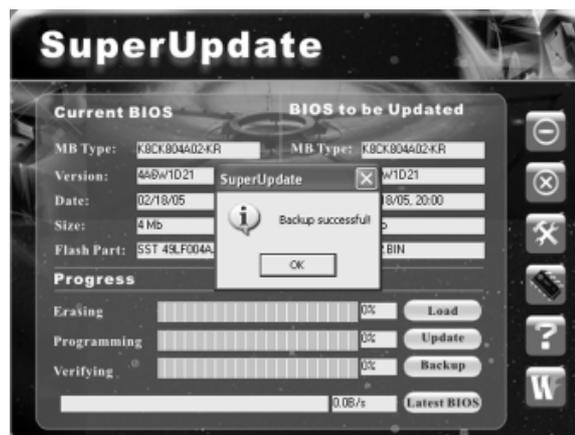
1. Click <Load> to load the BIOS file.



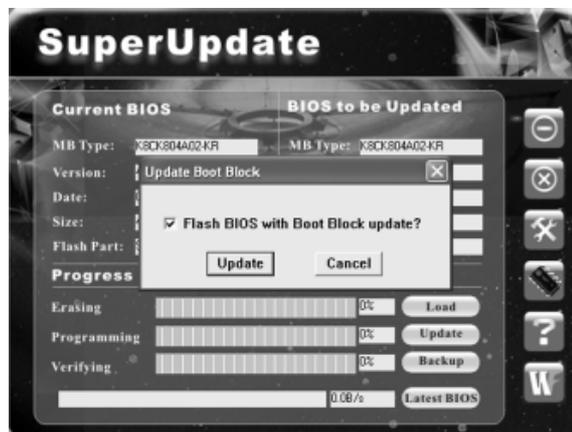
2. Click <Update>, the following message will appear.



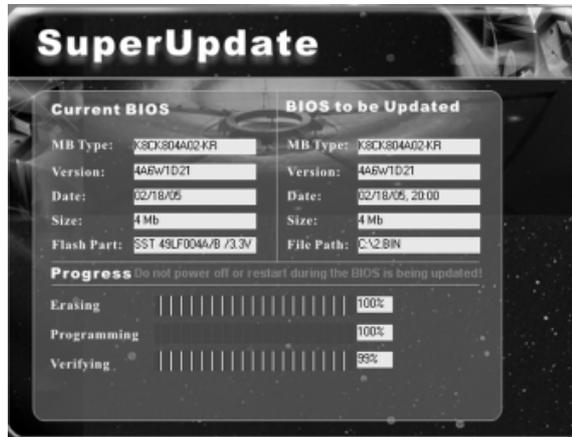
3. Click <Yes> to backup the current BIOS, then the following picture will appear.



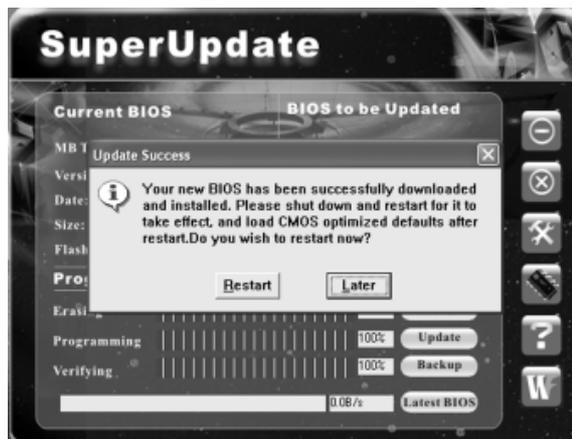
4. Click <OK >, then click <Update>.



5. Now is updating.

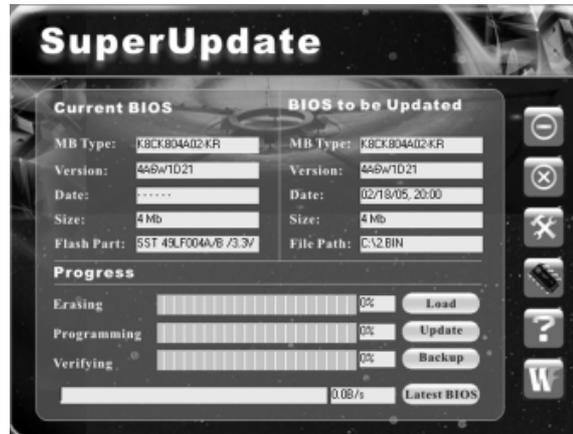


6. Click <Restart>.



Update BIOS On-line:

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



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

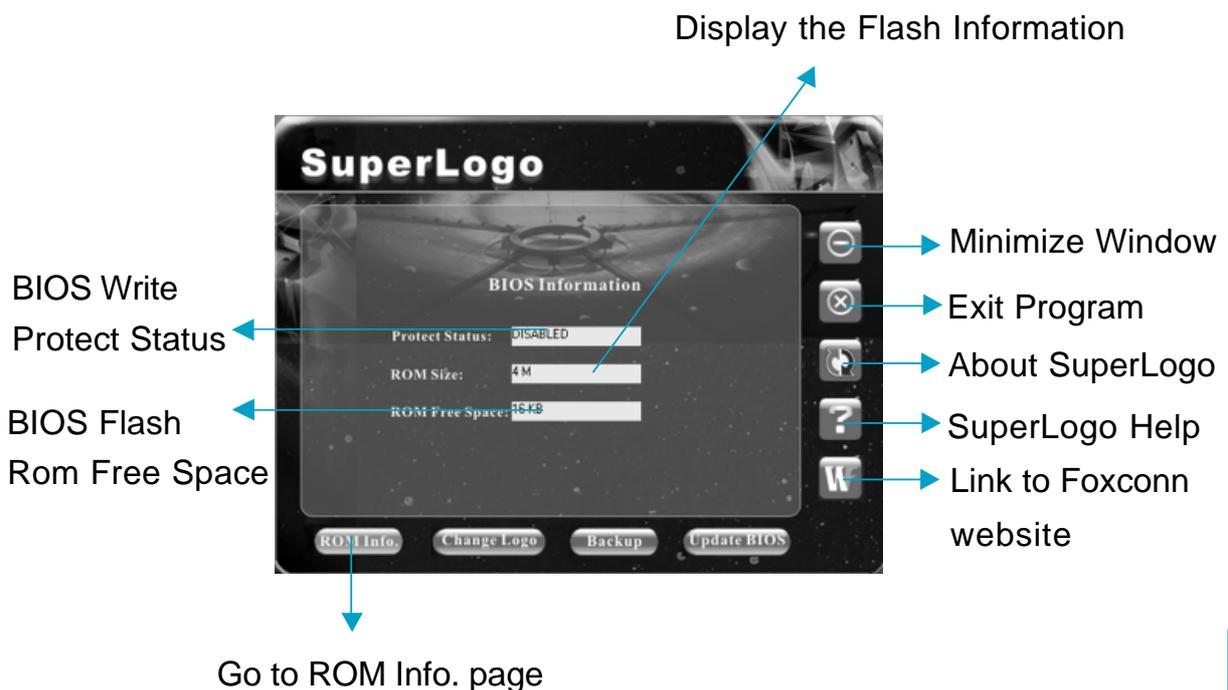
SuperLogo

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:





Full screen mode

Top-Right mode

Boot without logo

Follow the Wizard to complete the

Go to Change Logo page

This screenshot shows the 'Step 1: Select Logo Position' screen in the SuperLogo utility. It features three radio button options: 'Full screen', 'Top right', and 'None'. A 'Next >>' button is located at the bottom right of the main panel. Below the main panel are four buttons: 'ROM Info', 'Change Logo', 'Backup', and 'Update BIOS'. A vertical toolbar on the right side contains icons for back, close, refresh, help, and the SuperLogo 'W' logo. Blue arrows point from the text labels to the corresponding UI elements.



Backup whole BIOS image

Backup Logo

Follow the Wizard to complete the backup function

Go to Backup page

This screenshot shows the 'Select Backup Object' screen. It has two radio button options: 'BIOS' and 'Logo'. A 'Next >>' button is at the bottom right of the main panel. The bottom navigation bar and right-side toolbar are identical to the previous screen. Blue arrows point from the text labels to the 'BIOS' and 'Logo' options and the 'Next >>' button.



BIOS image file location

Browse a BIN file for updating BIOS

Follow the Wizard to complete the BIOS function

Go to Update BIOS page

This screenshot shows the 'Step 1: Select a BIN File' screen. It includes a text field for the 'BIN File' path, a 'Browse...' button, and a 'Next >>' button. The bottom navigation bar and right-side toolbar are consistent with the previous screens. Blue arrows point from the text labels to the 'Browse...' button and the 'Next >>' button.

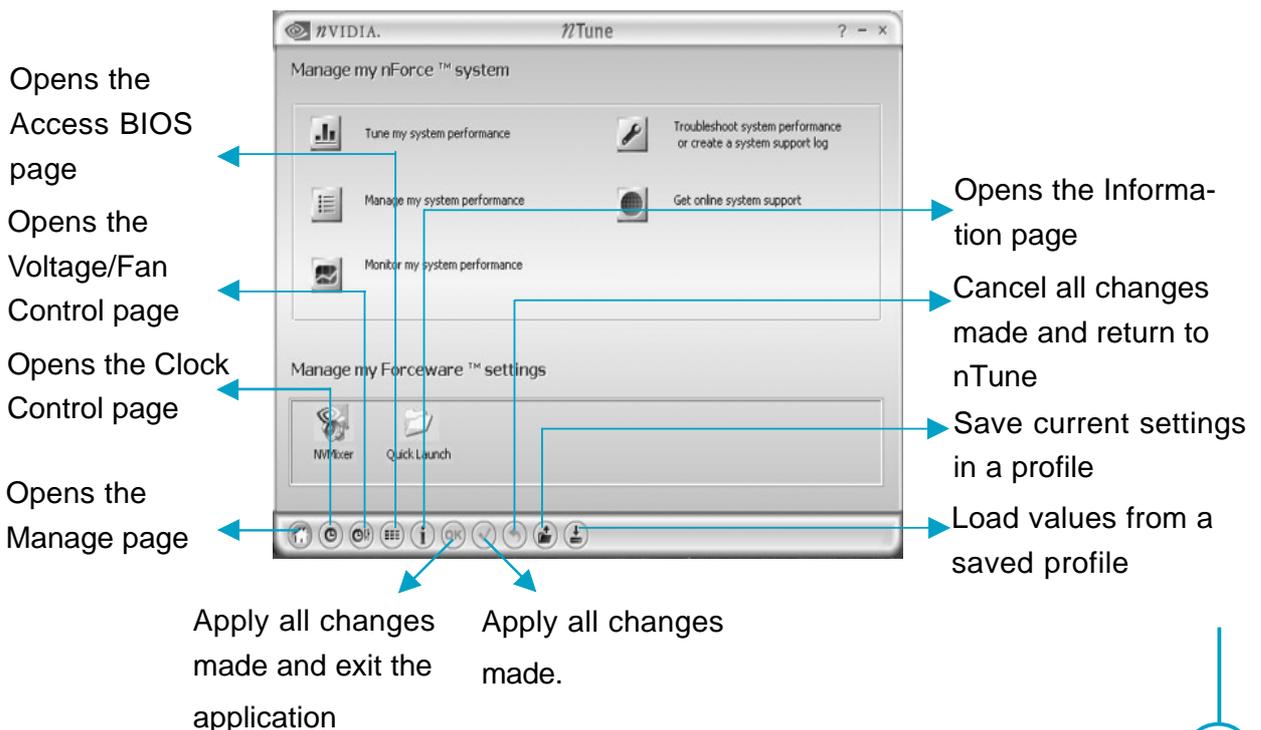
nTune

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

nTune features:

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

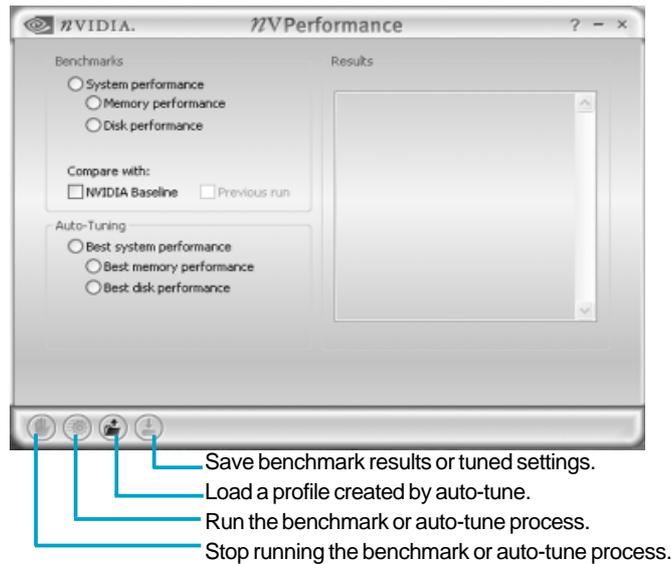
Using nTune:



NVPerformance Examiner

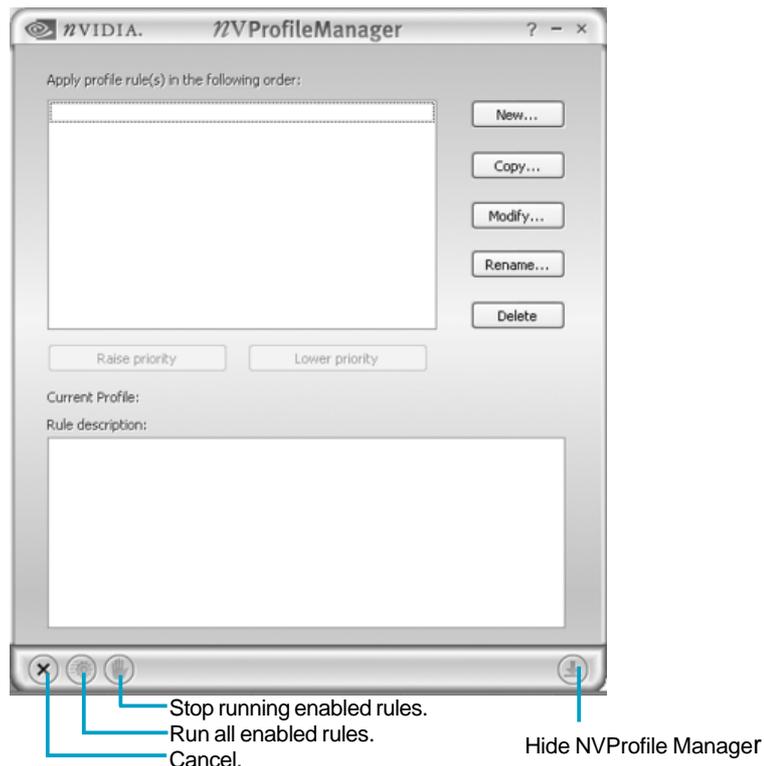
This feature is available only with BIOS support from the motherboard manufacturer, otherwise the icon is not visible.

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



NVProfile Manager

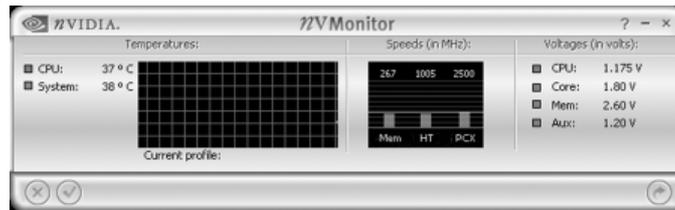
Click the text “**Manage my profiles**” to launch the NVProfile Manager application that lets you create rules for how to use the profiles created by nTune or NVPerformance Examiner.



NVMonitor

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

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



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

Options Page

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



Troubleshooting

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

Troubleshoot System Performance

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

of performance problems:

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

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

Create a Support Log

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

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

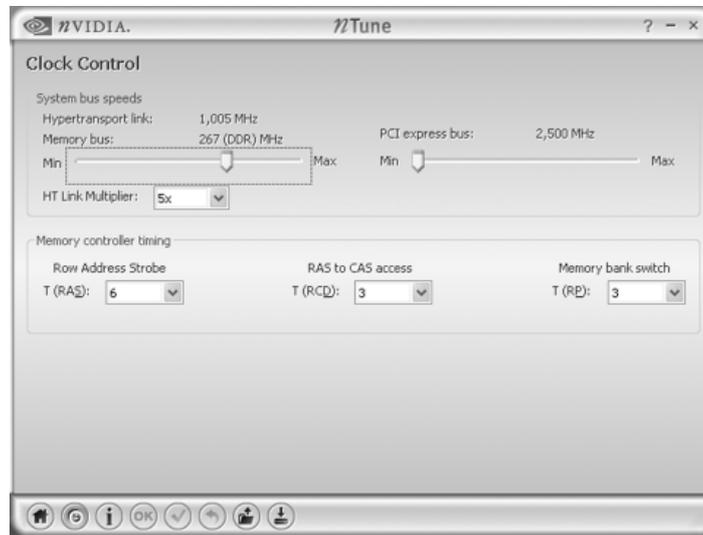
Choose a filename and location for saving the information, or choose the defaults.

Online Support

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

Clock Control Page

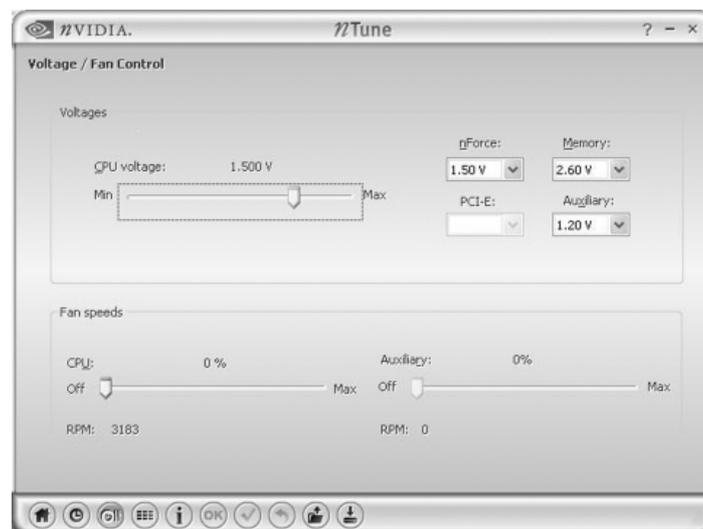
To open the Clock Control page, click the Clock Control page icon from the toolbar.



Voltage/Fan Control Page

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

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



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

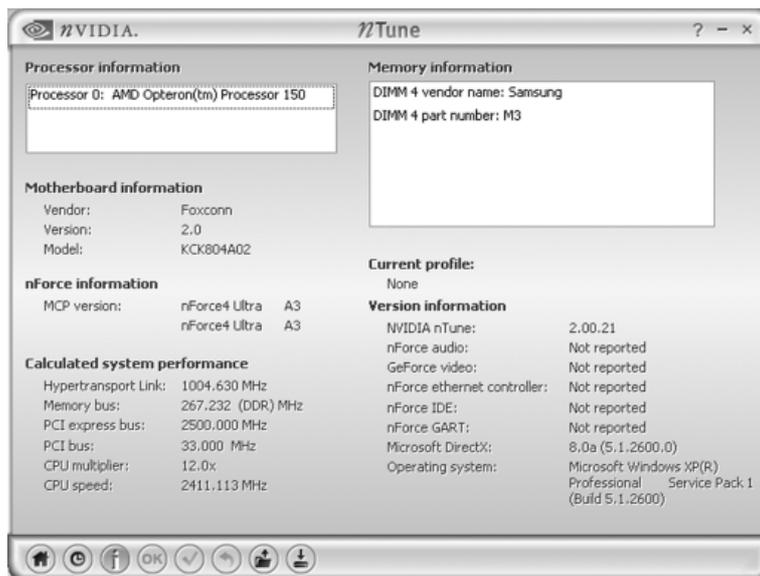
Access BIOS Page

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



Viewing the Information Page

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



Chapter 6

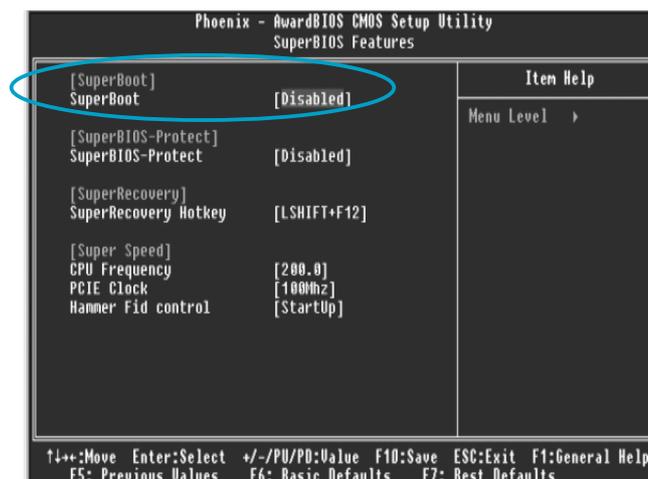
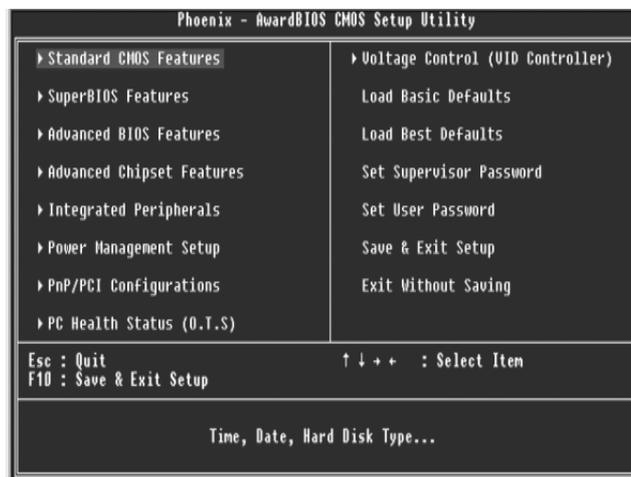
This chapter will introduce new functions of BIOS and how to use them in detail. It can further exert the max potential of motherboard to bring you super-value enjoyment.

This chapter introduces the following new functions of BIOS:

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

SuperBoot

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

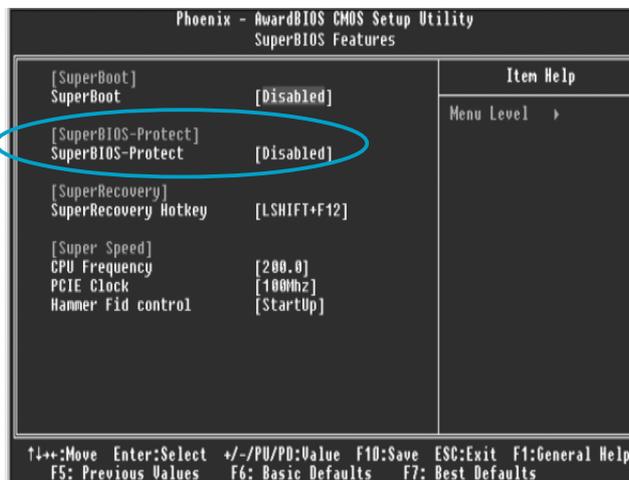
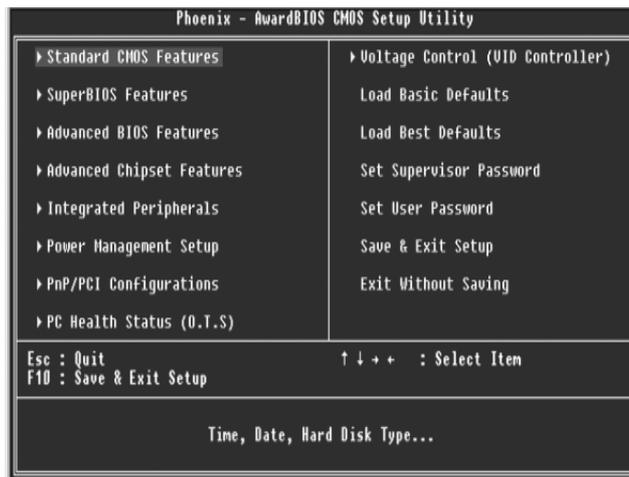


Notes:

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

SuperBIOS-Protect

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



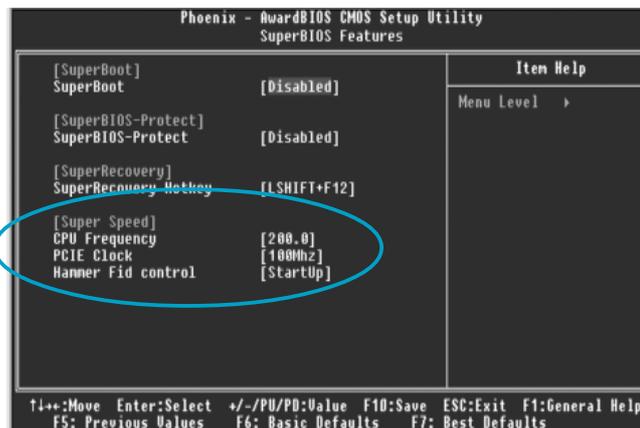
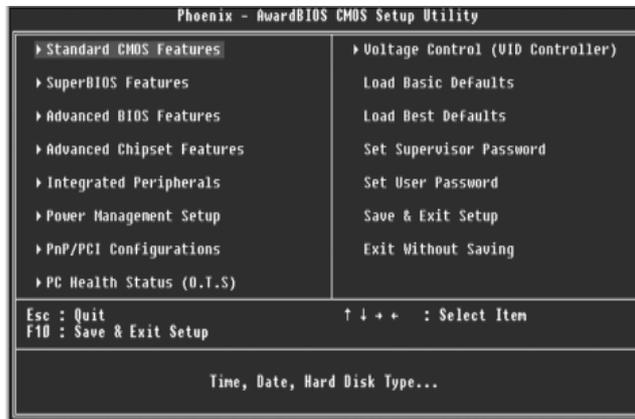
The way to implement this function, set “SuperBIOS-Protect” as “Enabled”, the BIOS will be protected.

SuperSpeed

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

Procedures:

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



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

Warning:

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

SuperRecovery

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

Features:

1. **Password Protection:**

You can set a password for each HDD.

2. **Data Protection:**

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

3. **Intelligent Menu:**

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

Disclaimer:

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

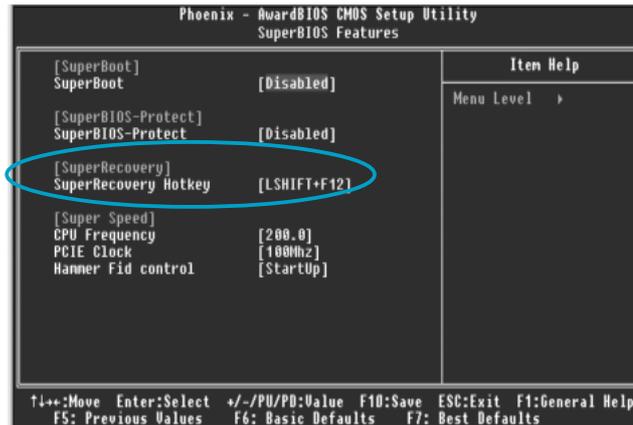
System Requirements:

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

Hotkey Selection:

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

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



Hard Disk Selection:

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

Attention:

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



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



Main Menu:

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



On-line help message

Divide Hidden Partition:

1. What's a Hidden Partition:

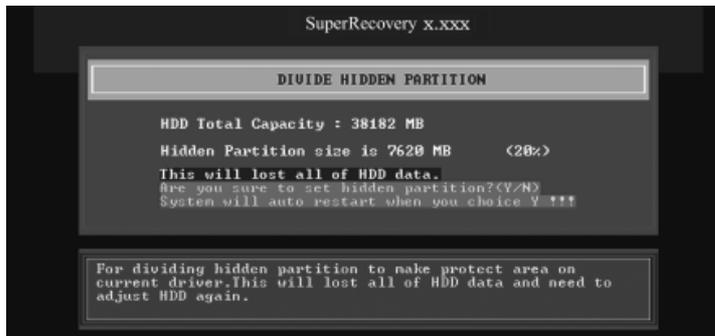
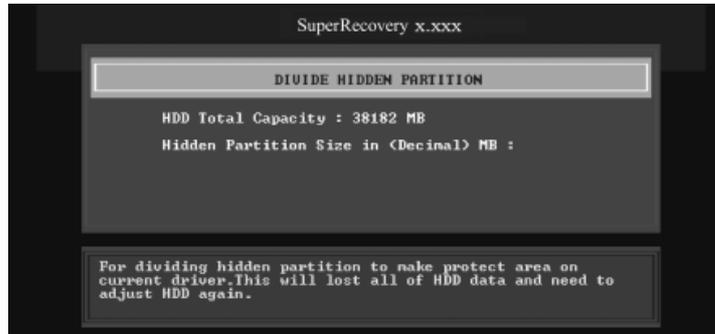
SuperRecovery can be used to divide a hidden partition, which is to be reserved for backing up HDD data. The operation of Division will erase all the old data saved in the HDD, to make sure that the following operations can be continued. Once the division is done, any future variation to the HDD will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

2. Divide Hidden Partition:

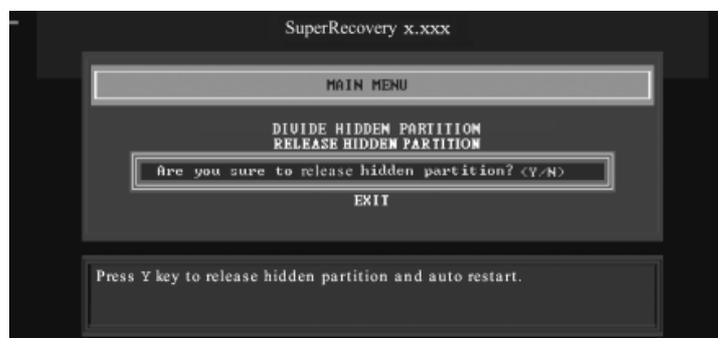
- 1) Enter a percentage of the HDD total capacity or an actual size in MB as the size of the hidden partition, such as “30%” or “3000”. Press <Enter> to confirm your input. As the average rate of compression is 50% or so, you are suggested to divide 30% of the total as the capacity of the hidden partition;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

Attention :

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

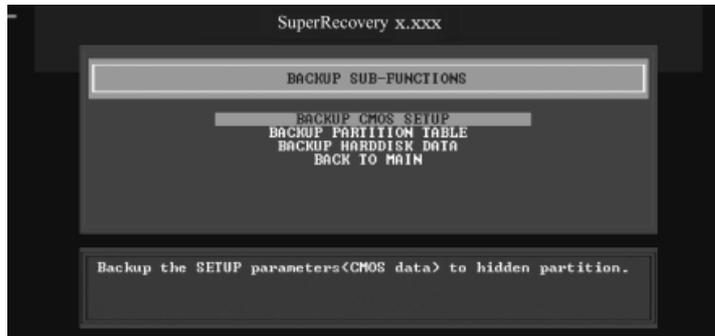
**Release Hidden Partition:**

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



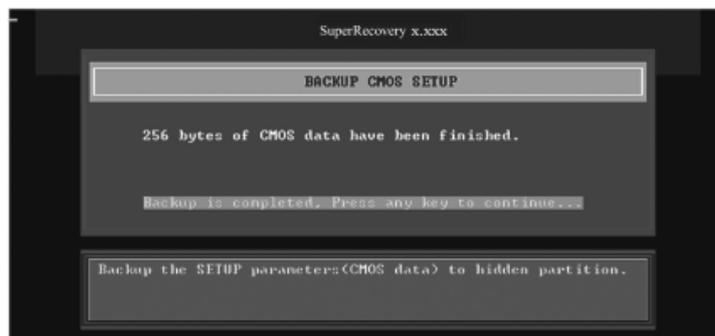
Backup:

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



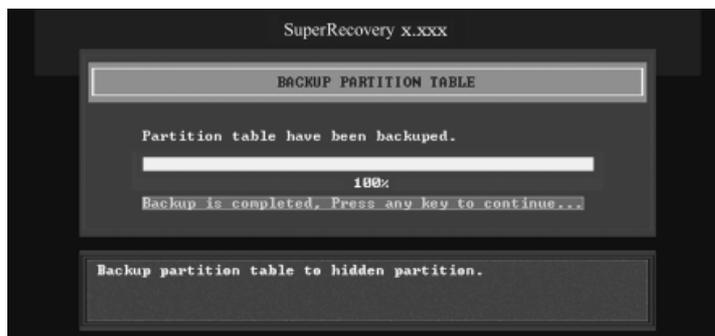
1. Backup CMOS Setup:

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



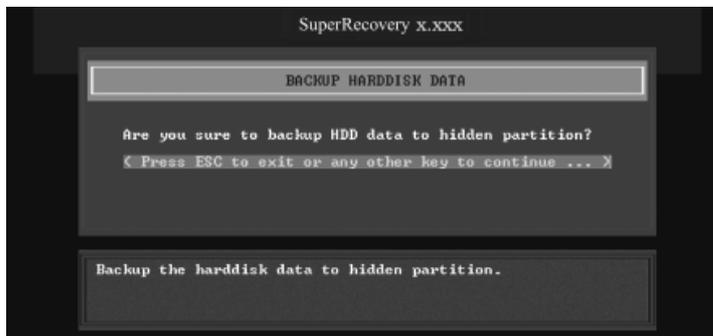
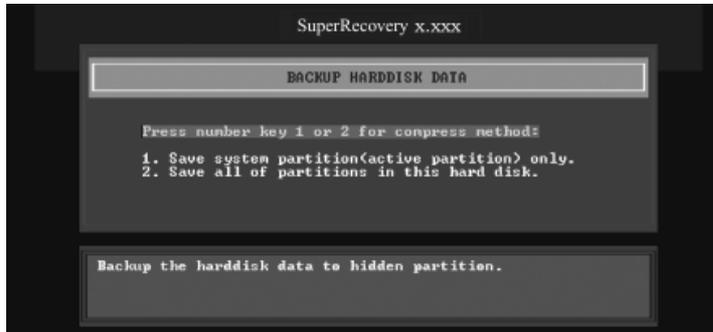
2. Backup Partition Table:

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



3. Backup Harddisk Data:

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



- 2) Backing up with the progress bar showing.



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

Original Size: The data size loaded in selected partition.

Valid Size: The size of valid data.

Elapsed Time: How long the process took to complete.

Compressed Size: The size of data after compression.

Compressed Rate: Compressed Size/Valid Size.

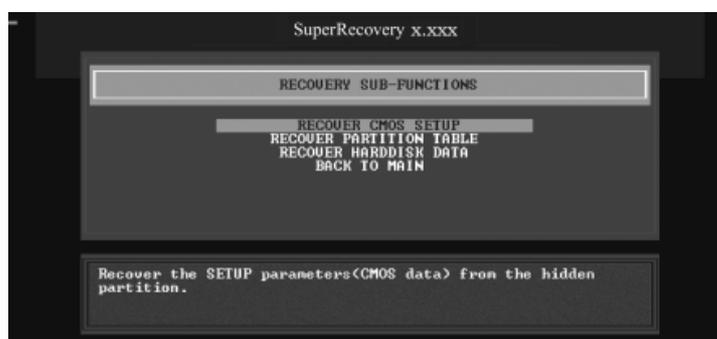


4. Back to Main:

This item is used to quit the Backup interface.

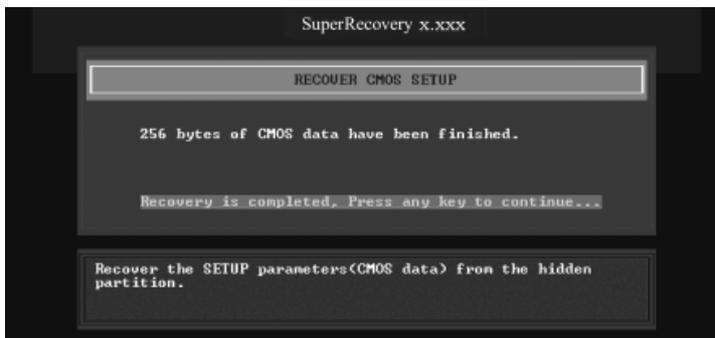
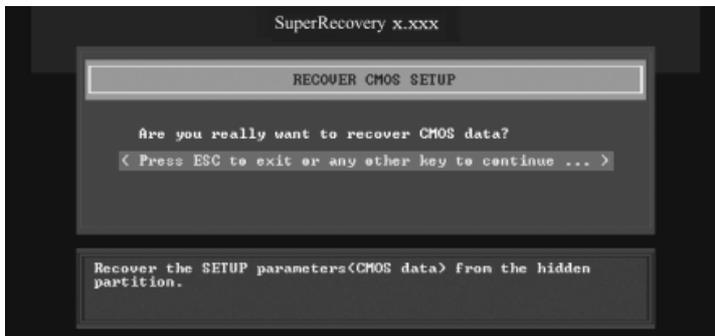
Recovery:

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



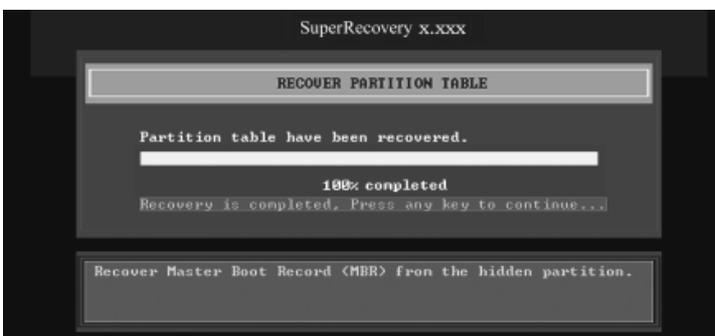
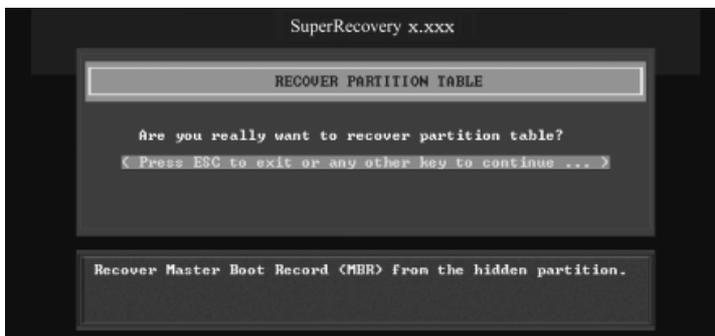
1. Recover CMOS Setup:

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



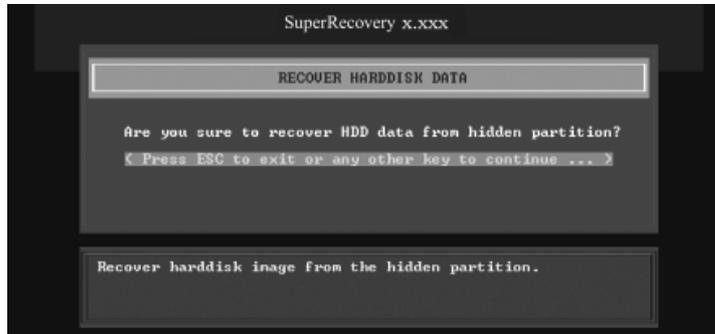
2. Recover Partition Table:

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



3. Recover Hard disk Data:

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



4. Back to Main:

This option is used to quit the Recovery interface.

CHANGE PASSWORD Introduction:

Select CHANGE PASSWORD to enter the Change Password interface.

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



Using 8-channel Audio

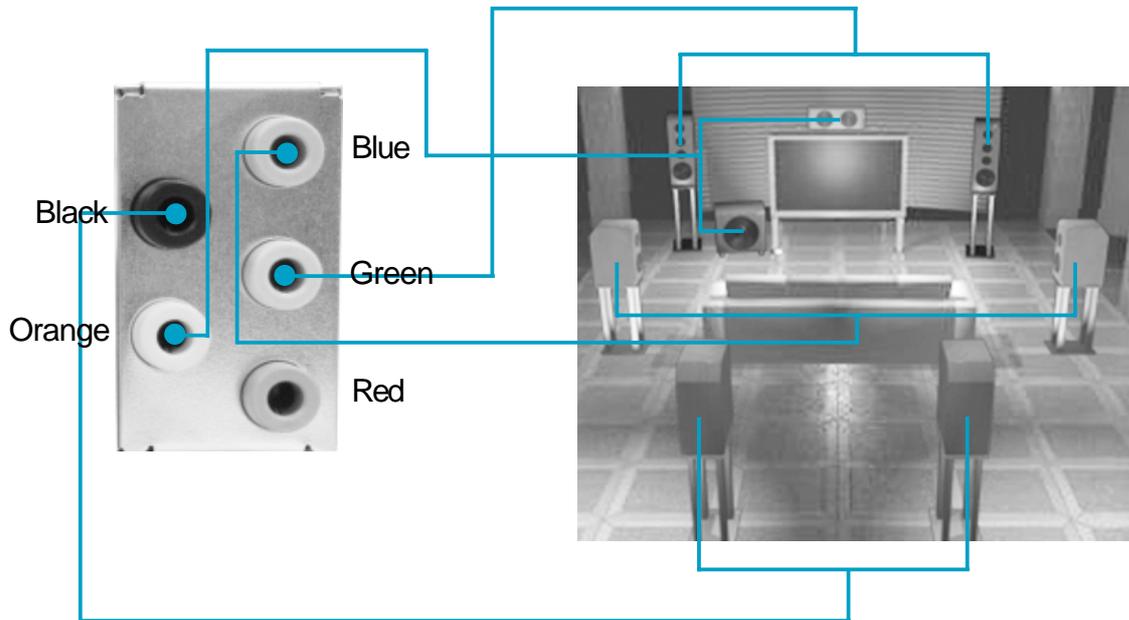
1. Introduction

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

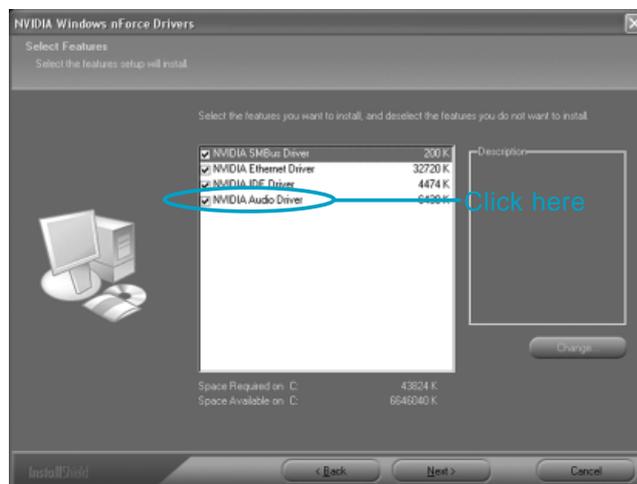
In the 8-channel surround sound configuration there are the standard front, center, LFE (bass) speakers but also two surround speakers are placed at the sides of a listener, and two speakers directly behind the listener. Some formats also support a 8-channel audio configuration wherein there is only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

2. Using 8-channel Audio

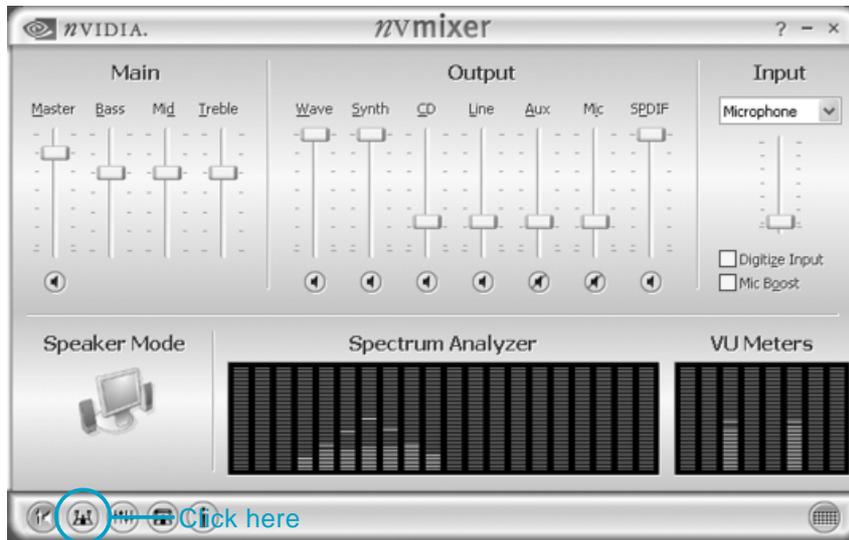
STEP 1. Connect the front channels to green jack, the rear channels to black jack, the Center/Subwoofer channels to orange jack and Side channels to blue jack. Please refer to below figure.



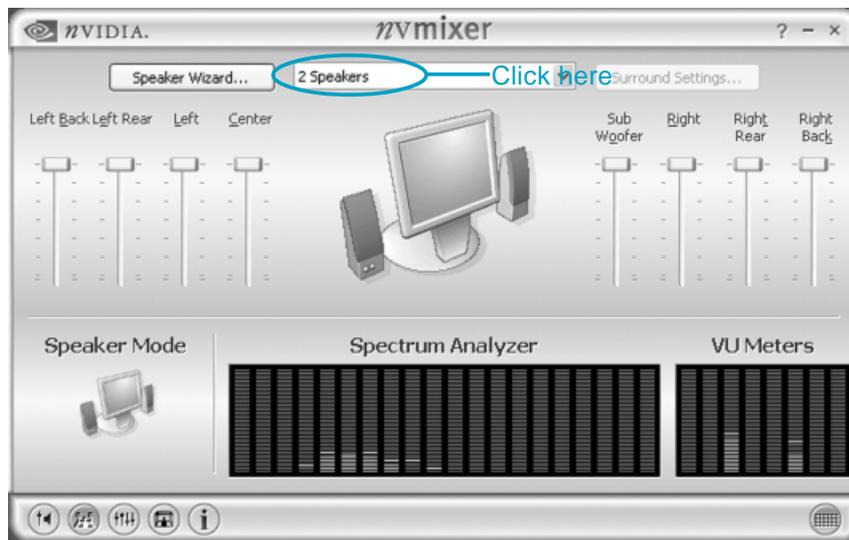
STEP 2. You need to install the driver for the audio chip before you can use the 8-channel audio function.



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



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



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