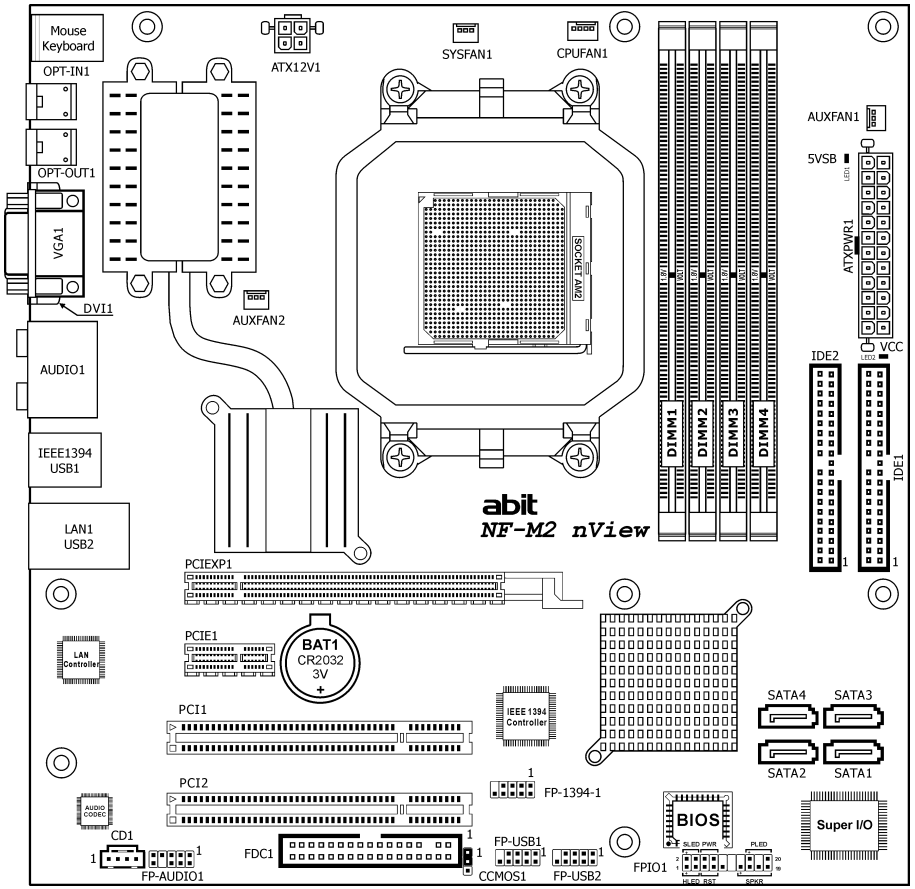

NF-M2 nView

Motherboard
AMD Socket AM2

User's Manual

- ❑ **NVIDIA 6150/NF430**
- ❑ **2GHz HT**
- ❑ **Dual DDR2 800**
- ❑ **NV nView**
- ❑ **GeForce 6150 Graphics**
- ❑ **DVI/VGA Out**
- ❑ **NV GbE**
- ❑ **4x SATA 3Gb/s**
- ❑ **7.1 HD Audio**

NF-M2 nView

User's Manual

English, 1st Edition

August, 2006

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If you do not properly set the motherboard settings, causing the motherboard to malfunction or fail, we cannot guarantee any responsibility.

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1. Introduction

1.1 Features & Specifications

CPU

- Supports Socket 940 AM2 Processor with 2GHz system bus using Hyper-Transport™ Technology
- Supports AMD CPU Cool 'n' Quiet Technology

Chipset

- NVIDIA 6150/NF430

Memory

- Four 240-pin DIMM slots
- Supports Dual Channel DDR2 800 Un-buffered ECC/Non-ECC memory
- Supports maximum memory capacity up to 8GB

Graphics

- Integrated GeForce6150 Graphics
- Support DirectX 9.0, Shader Model 3.0, nView

GbE LAN

- NV Gigabit Ethernet

Serial ATA

- Supports 4 ports NV SATA 3Gb/s RAID 0/1/0+1/5

IEEE 1394

- Supports 2 Ports IEEE 1394a at 400Mb/s transfer rate

Audio

- Onboard 7.1 CH HD Audio CODEC
- Supports auto jack sensing and optical S/PDIF In/Out

Expansion Slots

- 1x PCI Express x16 slot
- 1x PCI Express x1 slot
- 2x PCI slots

Internal I/O Connectors

- 1x Floppy port
- 2x ATA 133/100/66/33 IDE connectors
- 4x SATA 3Gb/s connectors
- 2x USB 2.0 headers
- 1x IEEE1394a header

Rear Panel I/O

- 1x PS/2 Keyboard connector
- 1x PS/2 Mouse connector
- 1x S/PDIF In connector
- 1x S/PDIF Out connector
- 1x D-Sub connector
- 1x DVI connector
- 1x 7.1 HD Audio Connector (Surround-Left / Surround-Right, Rear-Left / Rear-Right, Center / Subwoofer, Mic-In, Line-In, Line-Out)
- 1x IEEE1394a port
- 1x RJ-45 Gigabit LAN port
- 4x USB 2.0 ports

ABIT Engineered

- ABIT SoftMenu™ Technology
- ABIT Silent OTES™ Technology

RoHS Compliancy

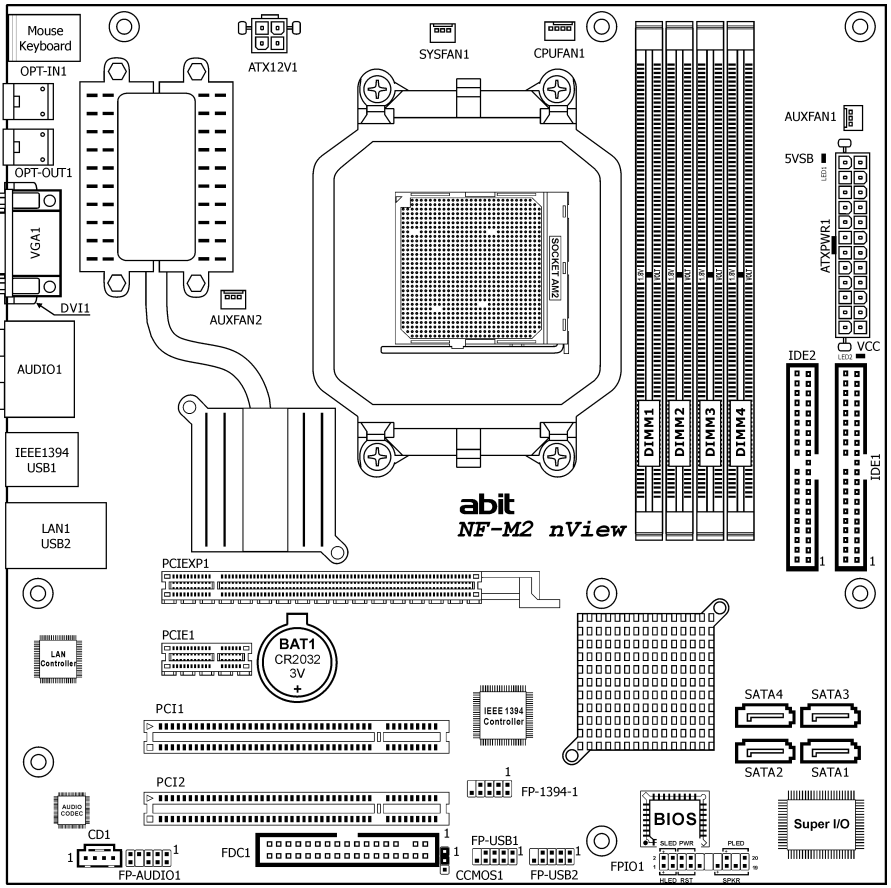
- 100% Lead-free process and RoHS compliancy

Miscellaneous

- Micro ATX form factor (245mm x 245mm)

※ **Specifications and information contained herein are subject to change without notice.**

1.2 Motherboard Layout



2. Hardware Setup

In this chapter we will elaborate all the information you need upon installing this motherboard to your computer system.

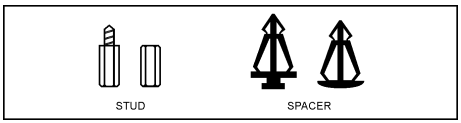
※ **Always power off the computer and unplug the AC power cord before adding or removing any peripheral or component. Failing to so may cause severe damage to your motherboard and/or peripherals. Plug in the AC power cord only after you have carefully checked everything.**

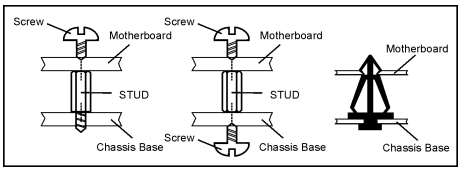
2.1 Choosing a Computer Chassis

- This motherboard carries a Micro ATX form factor of 245 x 245 mm. Choose a chassis big enough to install this motherboard.
- As some features for this motherboard are implemented by cabling connectors on the motherboard to indicators and switches or buttons on the chassis, make sure your chassis supports all the features required.
- If there is possibility of adopting some more hard drives, make sure your chassis has sufficient power and space for them.
- Most chassis have alternatives for I/O shield located at the rear panel. Make sure the I/O shield of the chassis matches the I/O port configuration of this motherboard. You can find an I/O shield specifically designed for this motherboard in its package.

2.2 Installing Motherboard

Most computer chassis have a base with many mounting holes to allow the motherboard to be securely attached, and at the same time, protected the system from short circuits. There are two ways to attach the motherboard to the chassis base:



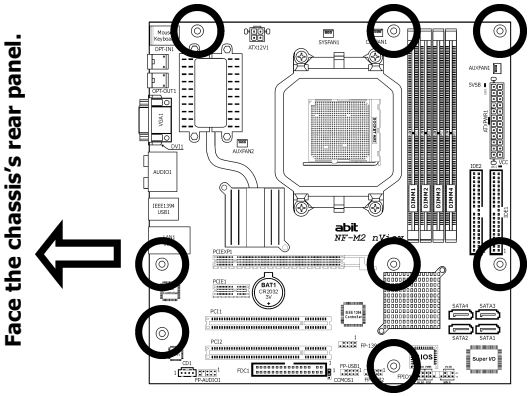


1. with studs,
2. or with spacers

In principle, the best way to attach the board is with studs. Only if you are unable to do this should you attach the board with spacers. Line up the holes on the board with the mounting holes on the chassis. If the holes line up and there are screw holes, you can attach the board with studs. If the holes line up and there are only slots, you can only attach with spacers. Take the tip of the spacers and insert them into the slots. After doing this to all the slots, you can slide the board into position aligned with slots. After the board has been positioned, check to make sure everything is OK before putting the chassis back on.

To install this motherboard:

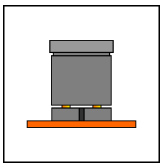
1. Locate all the screw holes on the motherboard and the chassis base.
2. Place all the studs or spacers needed on the chassis base and have them tightened.
3. Face the motherboard's I/O ports toward the chassis's rear panel.
4. Line up all the motherboard's screw holes with those studs or spacers on the chassis.
5. Install the motherboard with screws and have them tightened.

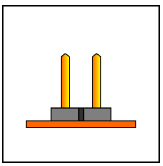


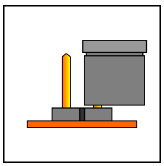
※ **To prevent shorting the PCB circuit, please REMOVE the metal studs or spacers if they are already fastened on the chassis base and are without mounting-holes on the motherboard to align with.**

2.3 Checking Jumper Settings

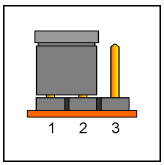
For a 2-pin jumper, plug the jumper cap on both pins will make it CLOSE (SHORT). Remove the jumper cap, or plug it on either pin (reserved for future use) will leave it at OPEN position.


SHORT

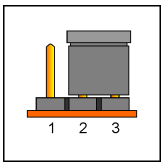

OPEN


OPEN

For 3-pin jumper, pin 1~2 or pin 2~3 can be shorted by plugging the jumper cap in.



Pin 1~2 SHORT



Pin 2~3 SHORT

2.3.1 CMOS Memory Clearing Header and Backup Battery

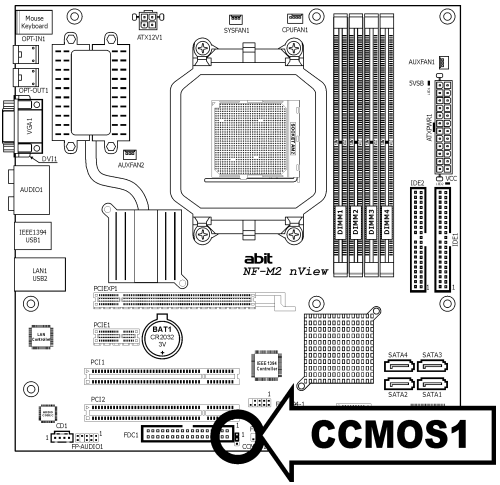
The time to clear the CMOS memory occurs when (a) the CMOS data becomes corrupted, (b) you forgot the supervisor or user password preset in the BIOS menu, (c) you are unable to boot-up the system because the CPU ratio/clock was incorrectly set in the BIOS menu, or (d) whenever there is modification on the CPU or memory modules.

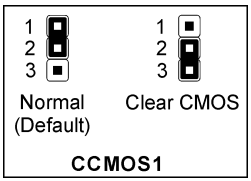
This header uses a jumper cap to clear the CMOS memory and have it reconfigured to the default values stored in BIOS.

- **Pins 1 and 2 shorted (default):** Normal operation.
- **Pins 2 and 3 shorted:** Clear CMOS memory.

To clear the CMOS memory and load in the default values:

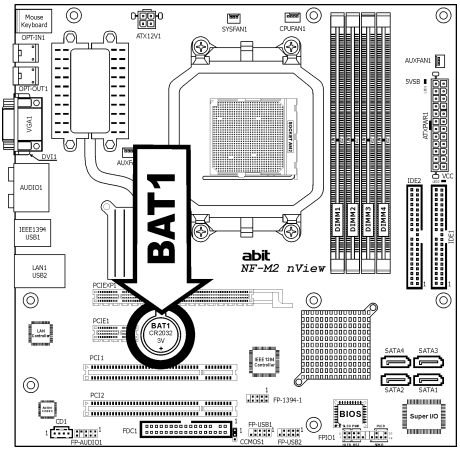
1. Power off the system and disconnect with AC power source.
2. Set pin 2 and pin 3 shorted by the jumper cap. Wait for a few seconds. Set the jumper cap back to its default settings --- pin 1 and pin 2 shorted.
3. Power on the system.
4. For incorrect CPU ratio/clock settings in the BIOS, press <Del> key to enter the BIOS setup menu right after powering on system.
5. Set the CPU operating speed back to its default or an appropriate value.
6. Save and exit the BIOS setup menu.





CMOS Backup Battery:

An onboard battery saves the CMOS memory to keep the BIOS information stays on even after disconnected your system with power source. Nevertheless, this backup battery exhausts after some five years. Once the error message like "**CMOS BATTERY HAS FAILED**" or "**CMOS checksum error**" displays on monitor, this backup battery is no longer functional and has to be renewed.



To renew the backup battery:

1. Power off the system and disconnect with AC power source.
2. Remove the exhausted battery.
3. Insert a new CR2032 or equivalent battery. Pay attention to its polarity. The "+" side is its positive polarity.
4. Connect AC power source and power on the system.
5. Enter the BIOS setup menu. Reconfigure the setup parameters if necessary.

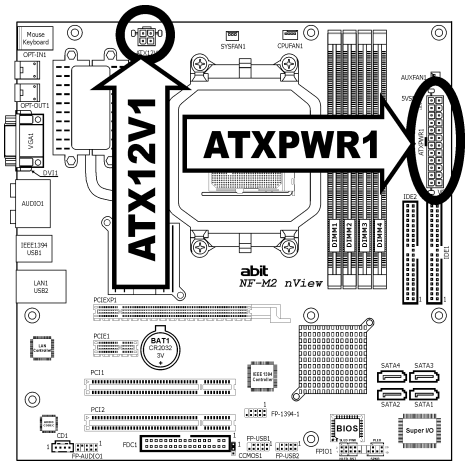
CAUTION:

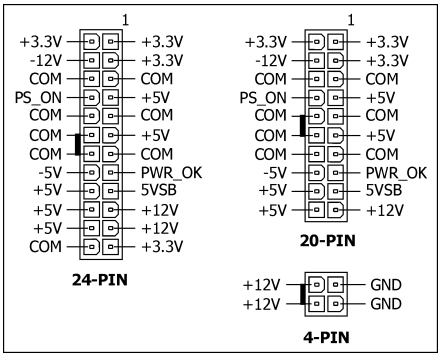
- ※ **Danger of explosion may arise if the battery is incorrectly renewed.**
- ※ **Renew only with the same or equivalent type recommended by the battery manufacturer.**
- ※ **Dispose of used batteries according to the battery manufacturer's instructions.**

2.4 Connecting Chassis Components

2.4.1 ATX Power Connectors

These connectors provide the connection from an ATX power supply. As the plugs from the power supply fit in only one orientation, find the correct one and push firmly down into these connectors.





ATX 24-Pin Power Connector:

The power supply with 20-pin or 24-pin cables can both be connected to this 24-pin connector. Connect from pin-1 for either type. However, a 20-pin power supply may cause the system unstable or even unbootable for the sake of insufficient electricity. A minimum power of 300W or higher is recommended.

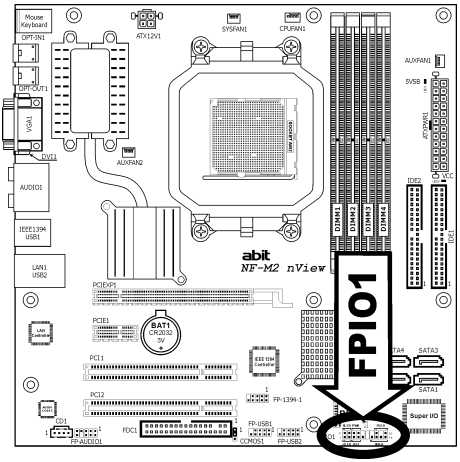
ATX 12V 4-Pin Power Connector:

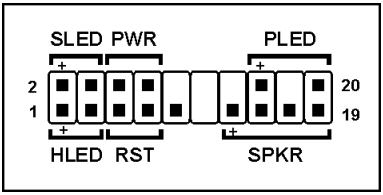
This connector supplies power to CPU. The system will not start without connecting power to this one.

2.4.2 Front Panel Switches & Indicators Headers

This header is used for connecting switches and LED indicators on the chassis front panel.

Watch the power LED pin position and orientation. The mark "+" align to the pin in the figure below stands for positive polarity for the LED connection. Please pay attention when connecting these headers. A wrong orientation will only cause the LED not lighting, but a wrong connection of the switches could cause system malfunction.





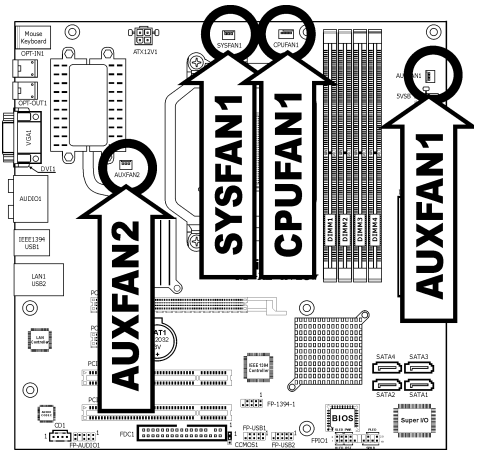
- **HLED (Pin 1, 3):**
  Connects to the HDD LED cable of chassis front panel.
- **RST (Pin 5, 7):**
  Connects to the Reset Switch cable of chassis front panel.
- **SPKR (Pin 13, 15, 17, 19):**
  Connects to the System Speaker cable of chassis.
- **SLED (Pin 2, 4):**
  Connects to the Suspend LED cable (if there is one) of chassis front panel.
- **PWR (Pin 6, 8):**
  Connects to the Power Switch cable of chassis front panel.
- **PLED (Pin 16, 18, 20):**
  Connects to the Power LED cable of chassis front panel.

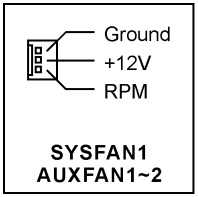
2.4.3 FAN Power Connectors

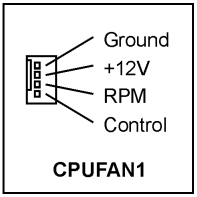
These connectors each provide power to the cooling fans installed in your system.

- **CPUFAN1:** CPU Fan Power Connector
- **SYSFAN1:** System Fan Power Connector
- **AUXFAN1~2:** Auxiliary Fan Power Connector

※ **These fan connectors are not jumpers. DO NOT place jumper caps on these connectors.**







※ **In the situation when connecting a 3-pin CPU fan assembly, and you still want the speed control function to take effect, you must:**

1. **Plug the 3-pin CPU fan assembly to "SYSFAN1" fan power connector.**
2. **In the "PC Health Status" of the BIOS Setup Menu, set the "SYS FanEQ Reference Temp." from the default "System" to "CPU".**

2.5 Installing Hardware

※ **DO NOT scratch the motherboard when installing hardware. An accidentally scratch of a tiny surface-mount component may seriously damage the motherboard.**

2.5.1 CPU Socket AM2

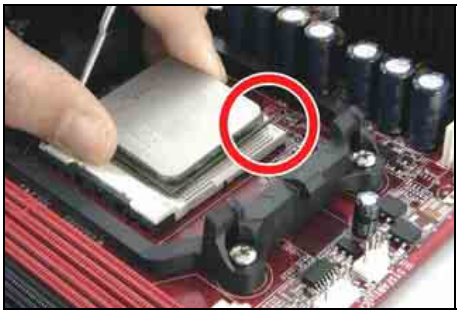
※ **DO NOT touch or bend the delicate pins on the CPU whenever you are holding it.**

The installation procedures vary with different types of CPU fan-and-heatsink assembly. The one shown here is served for **DEMO** only. For detailed information on how to install the one you bought, refer to its installation guidelines.

1. Pull out the socket lever away from the socket and fully lift it up over 90-degree angle.

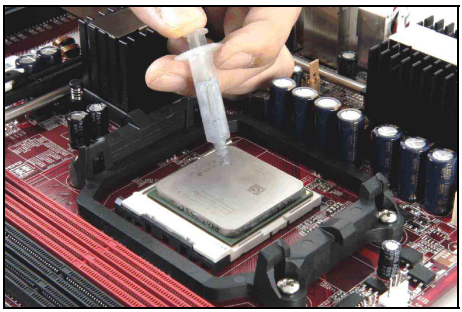
   Locate and align the triangle mark with both the CPU and the socket body. Vertically place the CPU with its pin-side down into the socket.

   Be careful to insert the CPU into the socket. The CPU only fits in one orientation with the socket. DO NOT force the CPU into the socket.



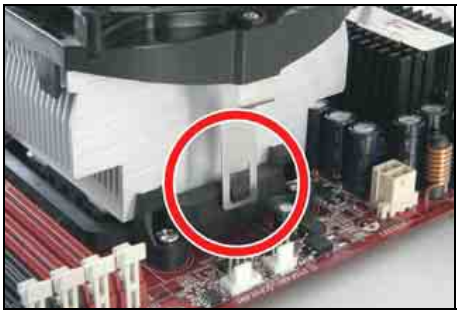
2. After placing the CPU into position, push the socket lever down into its locked position to secure the CPU. The lever clicks when it's locked into position.

3. The heatsink for CPU may have thermal interface material attached to its bottom. If not, applying a few squeeze of thermal paste to the CPU die will help to increase the contact.

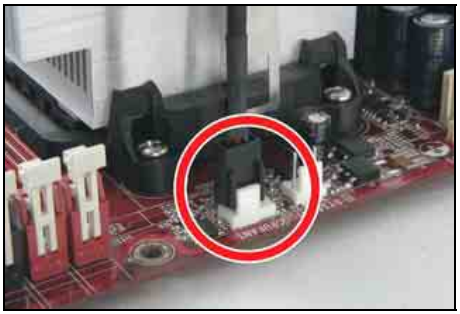


4. Place the heatsink and fan assembly onto the retention frame. Match the heatsink clip with the socket mounting-lug. Hook the spring clip to the mounting-lug.

5. On the other side, push the retention clip straight down to lock into the plastic lug on the retention frame.



6. Connect the CPU cooling fan power cable to the CPUFAN1 connector on this motherboard.



※ **The "CPUFAN1" connector can be connected either with a 3-Pin or 4-Pin CPU cooling fan. For a 3-Pin connection, there will be no speed control available in the BIOS setup menu; the CPU fan will run at full speed.**

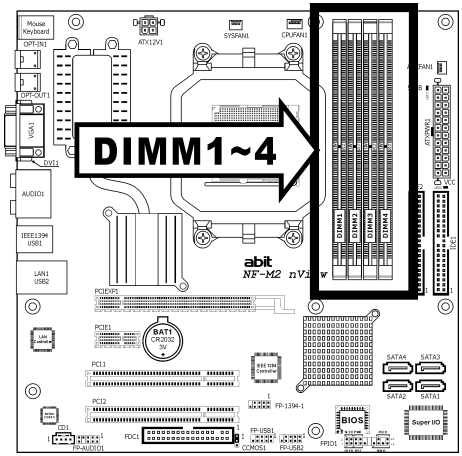
Also, please watch out for the orientation when inserting 3-Pin plug into this 4-Pin fan connector.

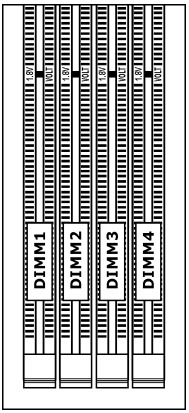
※ **The motherboard in this illustration is served for DEMO only, may not be the same type or model as the one described in this user's manual.**

※ **A higher fan speed will be helpful for better airflow and heat-dissipation. Nevertheless, stay alert to touch any heatsink since the high temperature generated by the working system is still possible.**

2.5.2 DDR2 Memory Slots

This motherboard provides four 240-pin DIMM slots for Dual Channel DDR2 800 memory modules with memory expansion size up to 8GB.





To reach the performance of Dual Channel DDR2, the following rules must be obeyed:

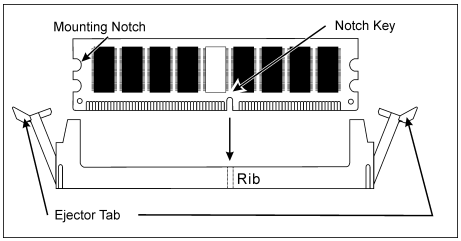
- **For a 2-DIMM dual-channel installation:**
  Populate DIMM modules of the same type and size on slots [**DIMM1**]+[**DIMM2**], or slots [**DIMM3**]+[**DIMM4**].
- **For a 4-DIMM dual-channel installation:**
  Populate 2 DIMM modules of the same type and size on slots [**DIMM1**]+[**DIMM2**], and another 2 DIMM modules of the same type and size on slots [**DIMM3**]+[**DIMM4**].

※ [**DIMM1**] and [**DIMM2**] slots are made of the same color.
[**DIMM3**] and [**DIMM4**] are made of another same color.

Usually there is no hardware or BIOS setup required after adding or removing memory modules, but you will have to clear the CMOS memory first if any memory module related problem occurs.

To install system memory:

1. Power off the computer and unplug the AC power cord before installing or removing memory modules.
2. Locate the DIMM slot on the board.
3. Hold two edges of the DIMM module carefully, keep away from touching its connectors.
4. Align the notch key on the module with the rib on the slot.

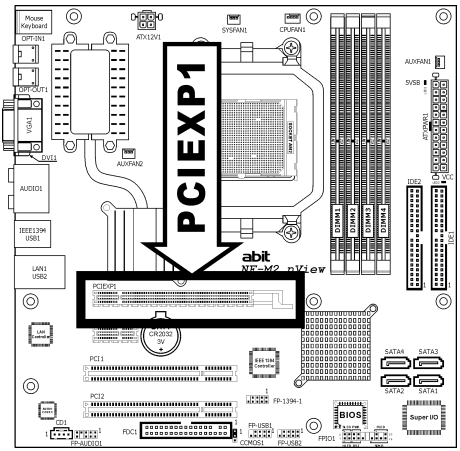


5. Firmly press the module into the slots until the ejector tabs at both sides of the slot automatically snap into the mounting notch. Do not force the DIMM module in with extra force as the DIMM module only fits in one direction.
6. To remove the DIMM modules, push the two ejector tabs on the slot outward simultaneously, and then pull out the DIMM module.

※ **Static electricity can damage the electronic components of the computer or optional boards. Before starting these procedures, ensure that you are discharged of static electricity by touching a grounded metal object briefly.**

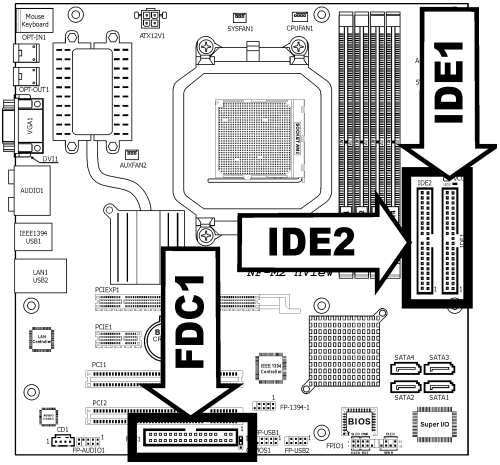
2.5.3 PCI Express X16 Add-on Slot (For add-on graphics card)

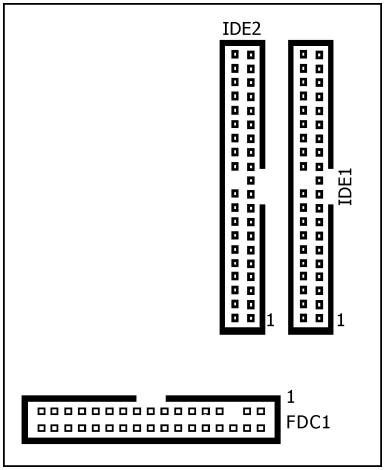
This slot supports one PCI-Express X16 graphics card that complies with PCI Express specifications. Insert your PCI-Express X16 graphics card into this slot.



2.6 Connecting Peripheral Devices

2.6.1 Floppy and IDE Disk Drive Connectors



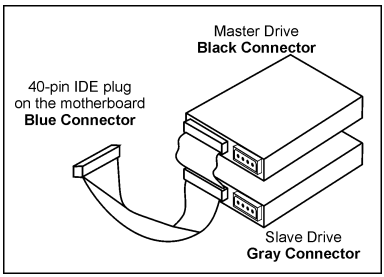


The FDC1 connector connects up to two floppy drives with a 34-wire, 2-connector floppy cable. Connect the single end at the longer length of ribbon cable to the FDC1 on the board, the two connectors on the other end to the floppy disk drives connector. Generally you need only one floppy disk drive in your system.

※ The red line on the ribbon cable must be aligned with pin-1 on both the FDC1 port and the floppy connector.

Each of the IDE port connects up to two IDE drives at Ultra ATA/100 mode by one 40-pin, 80-conductor, and 3-connector Ultra ATA/66 ribbon cables.

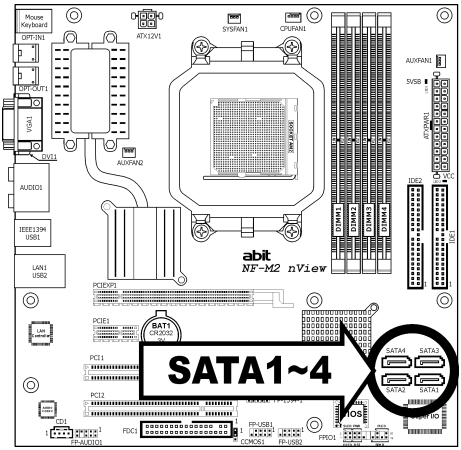
Connect the single end (blue connector) at the longer length of ribbon cable to the IDE port of this board, the other two ends (gray and black connector) at the shorter length of the ribbon cable to the connectors of your hard drives.

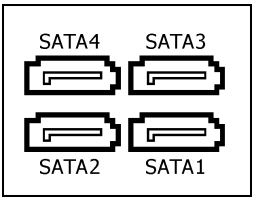


※ Make sure to configure the "Master" and "Slave" relation before connecting two drives by one single ribbon cable. The red line on the ribbon cable must be aligned with pin-1 on both the IDE port and the hard-drive connector.

2.6.2 Serial ATA Connectors

Each SATA connector serves as one single channel to connect one SATA device by a thin SATA cable.





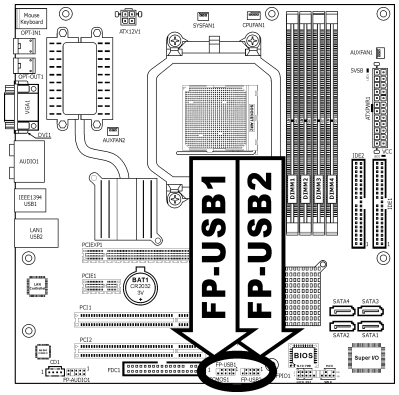
To connect SATA device:

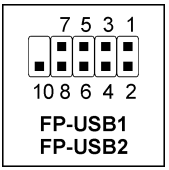
1. Attach either end of the signal cable to the SATA connector on motherboard. Attach the other end to SATA device.
2. Attach the SATA power cable to the SATA device and connect the other end from the power supply.

※ The motherboard in this illustration is served for DEMO only, may not be the same type or model as the one described in this user's manual.

2.6.3 Additional USB 2.0 Port Headers

Each header supports 2x additional USB 2.0 ports by connecting bracket or cable to the rear I/O panel or the front-mounted USB ports of your chassis.



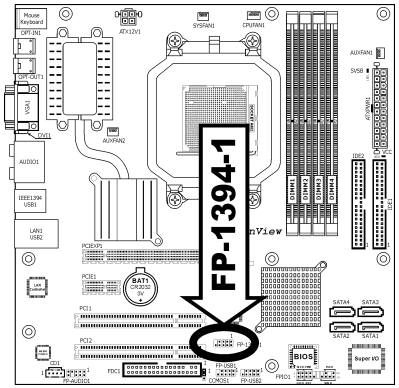


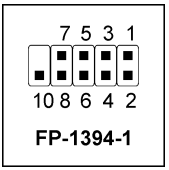
Pin	Pin Assignment	Pin	Pin Assignment
1	VCC	2	VCC
3	Data0 -	4	Data1 -
5	Data0 +	6	Data1 +
7	Ground	8	Ground
		10	NC

※ Make sure the connecting cable bears the same pin assignment.

2.6.4 Additional IEEE1394 Port Header

Each header supports 1x additional IEEE1394 port by connecting bracket or cable to the rear I/O panel or the front-mounted IEEE1394 port of your chassis.



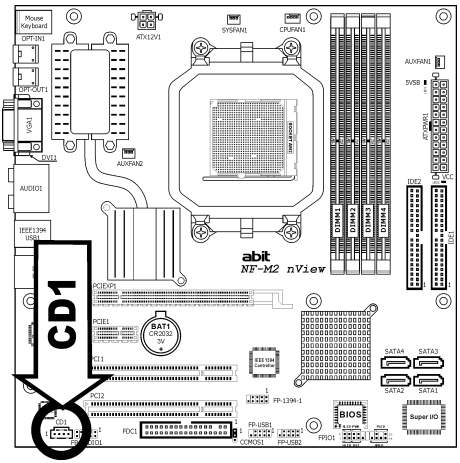


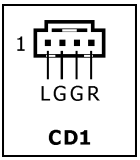
Pin	Pin Assignment	Pin	Pin Assignment
1	TPA0 +	2	TPA0 -
3	Ground	4	Ground
5	TPB0 +	6	TPB0 -
7	+12V	8	+12V
		10	Ground

※ Make sure the connecting cable bears the same pin assignment.

2.6.5 Internal Audio Connectors

This connector connects to the audio output of internal CD-ROM drive or add-on card.

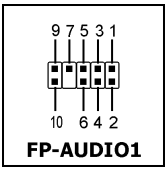


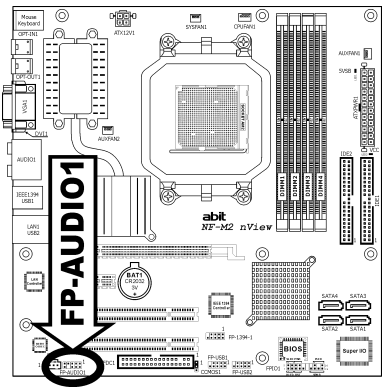


2.6.6 Front Panel Audio Connection Header

This header provides the front panel connection for HD (High Definition) Audio, yet for AC'97 Audio CODEC connection, you must carefully check the pin assignment before connecting from the front panel module. An incorrect connection may cause malfunction or even damage the motherboard.

※ **Please do not connect the "Ground" cable or "USB VCC" cable from the front panel module to the Pin 4 "AVCC" of this header.**





Pin	Pin Assignment (HD AUDIO)
1	MIC2 L
2	AGND
3	MIC2 R
4	**AVCC**
5	FRO-R
6	MIC2_JD
7	F_IO_SEN
9	FRO-L
10	LINE2_JD

Pin	Pin Assignment (AC'97 AUDIO)
1	MIC In
2	GND
3	MIC Power
4	NC
5	Line Out (R)
6	NC
7	NC
9	Line Out (L)
10	NC

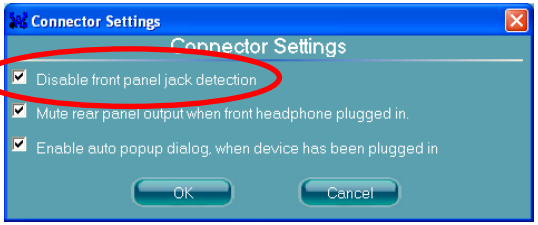
Driver Configuration for AC'97 audio connection:

The audio driver is originally configured to support HD Audio. For AC'97 audio connection, you may:

1. Right-click the "Realtek HD Audio Manager" icon in system tray.

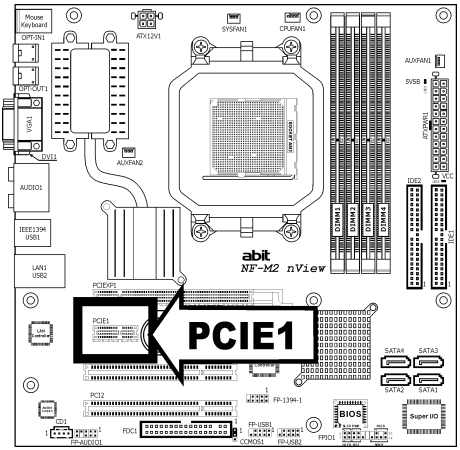
2. Click "Audio I/O" tab, and then click "Connector Settings".

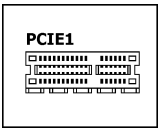
3. Click "**Disabled front panel jack detection**", and then click "OK" to confirm.



2.6.7 PCI Express X1 Add-on Slot

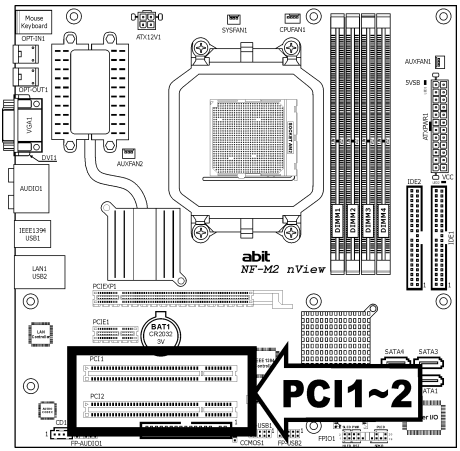
This slot provides the connection of add-on cards that comply with PCI Express specifications.

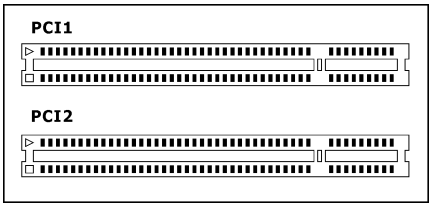




2.6.8 PCI Add-on Slots

These slots provide the connection of add-on cards that comply with PCI specifications.





2.7 Onboard Status Display

2.7.1 Power Source Indicators

These indicators work as a reminding device to display the power status of this motherboard with power source connected.

- **5VSB:**

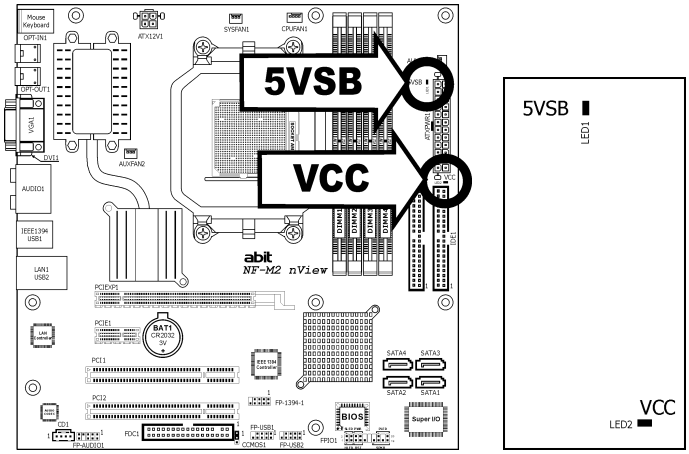
  Lights On: Your ATX power supplier is connected with power source, and its power switch is on.

  Lights Off: Your ATX power supplier is not connected with power source, or connected with power source but its power switch is off.

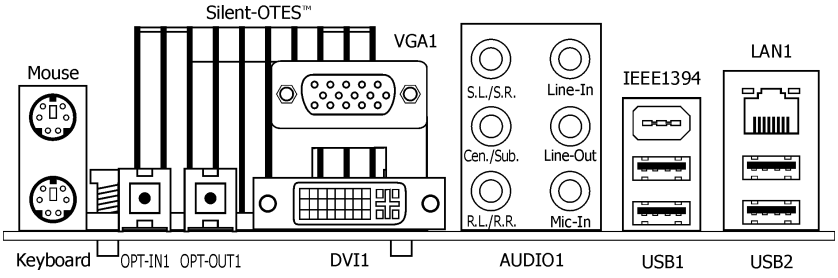
- **VCC:**

  Lights On: The system power is on.

  Lights Off: The system power is off.



2.8 Connecting I/O Devices



- **Mouse:** Connects to PS/2 mouse.
- **Keyboard:** Connects to PS/2 keyboard.
- **Silent OTES™:** The Silent OTES™ (Silent Outside Thermal Exhaust System) is a device specifically designed to silently cool the motherboard's North Bridge chipset. (Keep the area for outgoing heat wave open.)
- **OPT-IN1:** This connector provides an S/PDIF-In connection through optical fiber to digital multimedia devices.
- **OPT-OUT1:** This connector provides an S/PDIF-Out connection through optical fiber to digital multimedia devices.
- **VGA1/DVI1:** Connects to monitor input.
- **AUDIO1:**

  S.L./S.R. (Surround Left / Surround Right): Connects to the surround left and surround right channel in the 7.1 channel audio system.

  Cen./Sub. (Center / Subwoofer): Connects to the center and subwoofer channel in the 7.1 channel audio system.

  R.L./R.R. (Rear Left / Rear Right): Connects to the rear left and rear right channel in the 7.1 channel audio system.

  Line-In: Connects to the line out from external audio sources.

  Line-Out: Connects to the front left and front right channel in the 7.1-channel or regular 2-channel audio system.

  Mic-In: Connects to the plug from external microphone.
- **IEEE1394:** Connects to devices of IEEE1394 protocol
- **LAN1:** Connects to Local Area Network.
- **USB1/USB2:** Connects to USB devices such as scanner, digital speakers, monitor, mouse, keyboard, hub, digital camera, joystick etc.

3. BIOS Setup

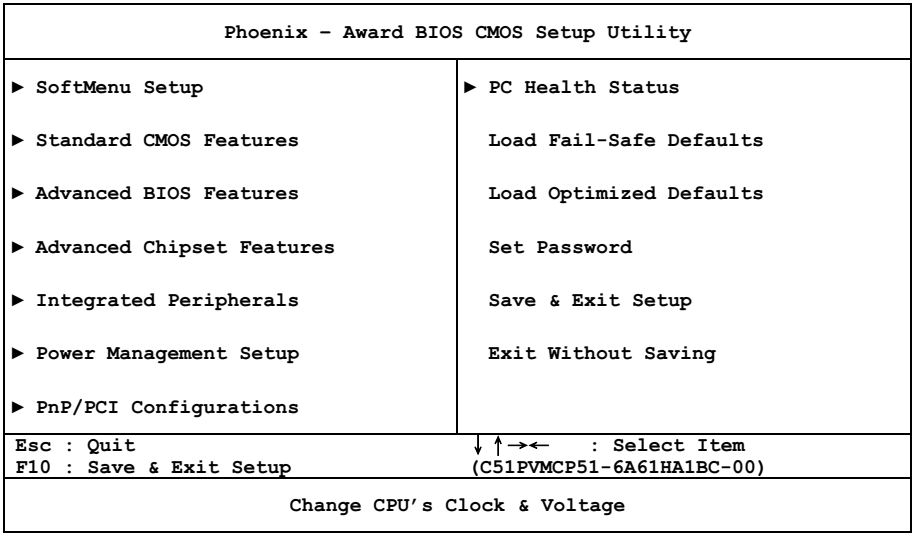
This motherboard provides a programmable EEPROM so that you can update the BIOS utility. The BIOS (Basic Input/Output System) is a program that deals with the basic level of communication between processor and peripherals. Use the BIOS Setup program only when installing motherboard, reconfiguring system, or prompted to "Run Setup". This chapter explains the Setup Utility of BIOS utility.

After powering up the system, the BIOS message appears on the screen, the memory count begins, and then the following message appears on the screen:

PRESS DEL TO ENTER SETUP

If this message disappears before you respond, restart the system by pressing <Ctrl> + <Alt> + <Del> keys, or by pressing the Reset button on computer chassis. Only when these two methods fair should you restart the system by powering it off and then back on.

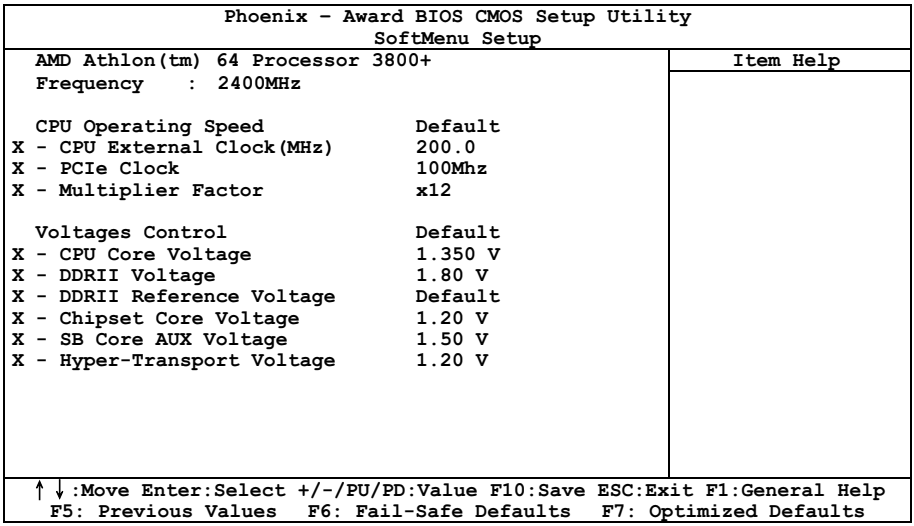
After pressing <Del> key, the main menu screen appears.



※ **In order to increase system stability and performance, our engineering staff is constantly improving the BIOS menu. The BIOS setup screens and descriptions illustrated in this manual are for your reference only, and may not completely match with what you see on your screen.**

3.1 SoftMenu Setup

The SoftMenu utility is ABIT's exclusive and ultimate solution in programming the CPU operating speed. All the parameters regarding CPU FSB speed, multiplier factor, the AGP & PCI clock, and even the CPU core voltage are all available at your fingertips.



Brand Name

This item displays the CPU model name.

Frequency

This item displays the CPU internal clock speed.

CPU Operating Speed

This item displays the CPU operating speed according to the type and speed of your CPU. You can also select the [User Define] option to enter the manual option.

User Define:

※ The wrong settings of the multiplier and external clock in certain circumstances may cause CPU damage. Setting the working frequency higher than the PCI chipset or processor specs, may cause abnormal memory module functioning, system hangs, hard disk drive data lose, abnormal functioning of the VGA card, or abnormal functioning with other add-on cards. Using non-specification settings for your CPU is not the intention of this explanation. These should be used for engineering testing, not for normal applications.

※ **There will be no guaranty for the settings beyond specification, any damage of any component on this motherboard or peripherals result therein is not our responsibility.**

- **CPU External Clock(MHz)**

This item selects the external clock frequency. Due to the specification limit of the CPU you installed, the speed you set over its standard bus speed is supported, but not guaranteed.

- **PCIe Clock**

This item selects the PCI Express frequency.

- **Multiplier Factor**

This item displays the multiplier factor for the CPU you installed.

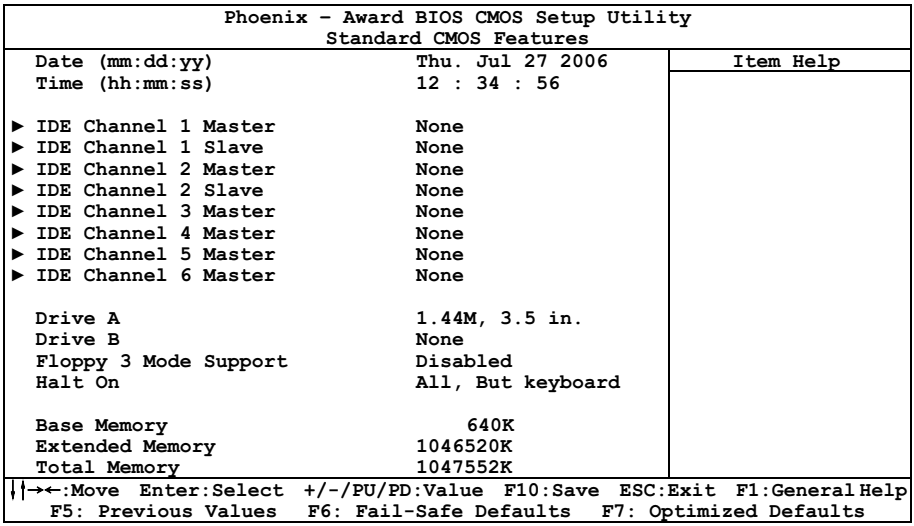
Voltage Control

This option allows you to switch between the default and user-defined voltages. Leave this setting to default unless the current voltage setting cannot be detected or is not correct. The option "**User Define**" enables you to select the following voltages manually.

- **CPU Core Voltage**
- **DDRII Voltage**
- **DDRII Reference Voltage**
- **Chipset Core Voltage**
- **SB Core AUX Voltage**
- **Hyper-Transport Voltage**

※ **A wrong voltage setting may cause the system unstable or even damage the CPU. Please leave it to default settings unless you are fully aware of its consequences.**

3.2 Standard CMOS Features



Date (mm:dd:yy)

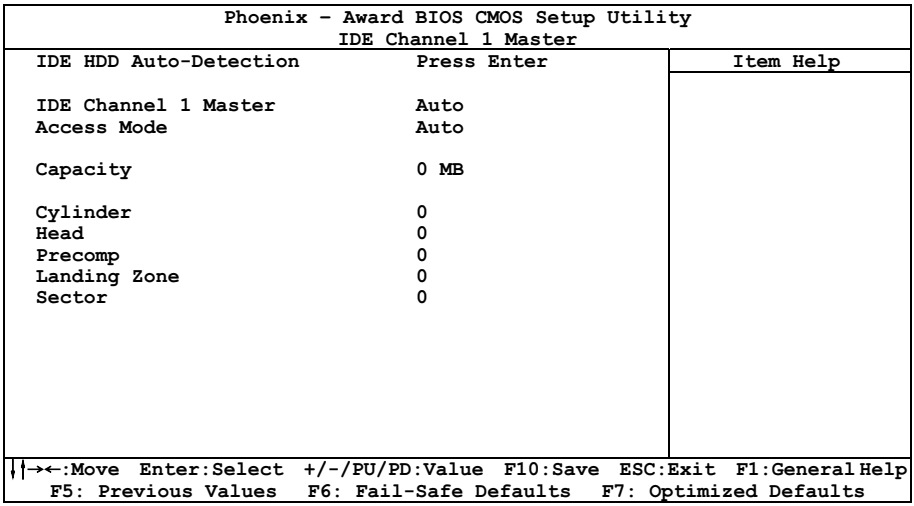
This item sets the date you specify (usually the current date) in the format of [Month], [Date], and [Year].

Time (hh:mm:ss)

This item sets the time you specify (usually the current time) in the format of [Hour], [Minute], and [Second].

IDE Channel 1 Master/Slave, IDE Channel 2 Master/Slave, IDE Channel 3 Master, IDE Channel 4 Master, IDE Channel 5 Master, IDE Channel 6 Master:

Click <Enter> key to enter its submenu:



IDE HDD Auto-Detection

This item allows you to detect the parameters of IDE drives by pressing <Enter> key. The parameters will be shown on the screen automatically.

IDE Channel 1 Master/Slave, IDE Channel 2 Master/Slave, IDE Channel 3 Master, IDE Channel 4 Master/IDE Channel 5 Master/IDE Channel 6 Master

When set to [Auto], the BIOS will automatically check what kind of IDE drive you are using. If you want to define your own drive by yourself, set it to [Manual] and make sure you fully understand the meaning of the parameters. Please refer to the instruction manual provided by the device's manufacturer to get the setting right.

Access Mode

This item selects the mode to access your IDE devices. Leave this item at its default [Auto] setting to detect the access mode of your HDD automatically.

Capacity

This item displays the approximate capacity of the disk drive. Usually the size is slightly greater than the size of a formatted disk given by a disk-checking program.

Cylinder

This item configures the number of cylinders.

Head

This item configures the number of read/write heads.

Precomp

This item displays the number of cylinders at which to change the write timing.

Landing Zone

This item displays the number of cylinders specified as the landing zone for the read/write heads.

Sector

This item configures the number of sectors per track.

↳ Back to Standard CMOS Features Setup Menu:

Drive A & Drive B

This item sets the type of floppy drives (usually only Drive A) installed.

Floppy 3 Mode Support

This item allows you to use "3 Mode Floppy Drive" in Japanese computer system by selecting drive A, B, or both. Leave this item at its default [Disabled] setting if you are not using this Japanese standard floppy drive.

Halt On

This item determines whether the system stops if an error is detected during system boot-up.

[All Errors]: The system-boot will stop whenever the BIOS detect a non-fatal error.

[No Errors]: The system-boot will not stop for any error detected.

[All, But Keyboard]: The system-boot will stop for all errors except a keyboard error.

[All, But Diskette]: The system-boot will stop for all errors except a diskette error.

[All, But Disk/Key]: The system-boot will stop for all errors except a diskette or keyboard error.

Base Memory

This item displays the amount of base memory installed in the system. The value of the base memory is typically 640K for system with 640K or more memory size installed on the motherboard.

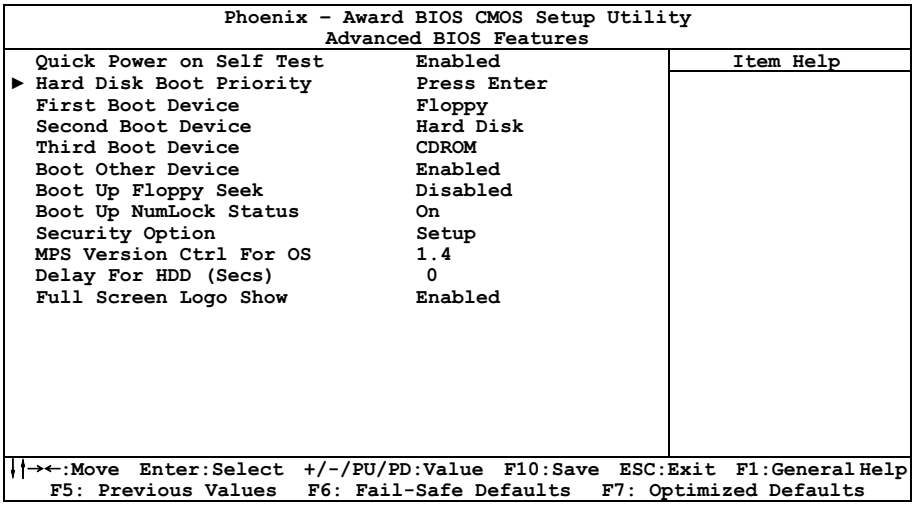
Extended Memory

This item displays the amount of extended memory detected during system boot-up.

Total Memory

This item displays the total memory available in the system.

3.3 Advanced BIOS Features



Quick Power On Self Test

When set to [Enabled], this item speeds up the Power On Self Test (POST) after powering on the system. The BIOS shorten or skip some check during the POST.

Hard Disk Boot Priority

This item selects the hard disks booting priority. By pressing <Enter> key, you can enter its submenu where the hard disks detected can be selected for the booting sequence to boot up system.

This item functions only when there is the option of [Hard Disk] in any one of the First/Second/Third Boot Device items.

First Boot Device / Second Boot Device / Third Boot Device / Boot Other Device

Select the drive to boot first, second and third in the [First Boot Device], [Second Boot Device], and [Third Boot Device] items respectively. The BIOS will boot the operating system according to the sequence of the drive selected. Set [Boot Other Device] to [Enabled] if you wish to boot from another device other than these three items.

Boot Up Floppy Seek

When the computer boots up, the BIOS detects if the system has a FDD or not. When this item is set to *Enabled*, if the BIOS detects no floppy drive, it will display a floppy disk drive error message. If this item is disabled, the BIOS will skip this test. The default setting is *Disabled*.

Boot Up NumLock Status

This item determines the default state of the numeric keypad at system booting up.

[On]: The numeric keypad functions as number keys.

[Off]: The numeric keypad functions as arrow keys.

Security Option

This item determines when the system will prompt for password - every time the system boots or only when it enters the BIOS setup.

[Setup]: The password is required only when accessing the BIOS Setup.

[System]: The password is required each time the computer boots up.

To disable security, select *Set Password* at main menu and then you will be asked to enter the password. Do not type anything and just press the *<Enter>* key and it will disable security. Once security is disabled, the system will boot and you can enter the *BIOS setup menu* freely.

※ **Don't forget your password. If you forget the password, you will have to open the computer case and clear all information in the CMOS before you can start up the system. But by doing this, you will have to reset all previously set options.**

MPS Version Ctrl For OS

This item specifies which version of MPS (Multi-Processor Specification) this motherboard will use. Leave this item at its default setting.

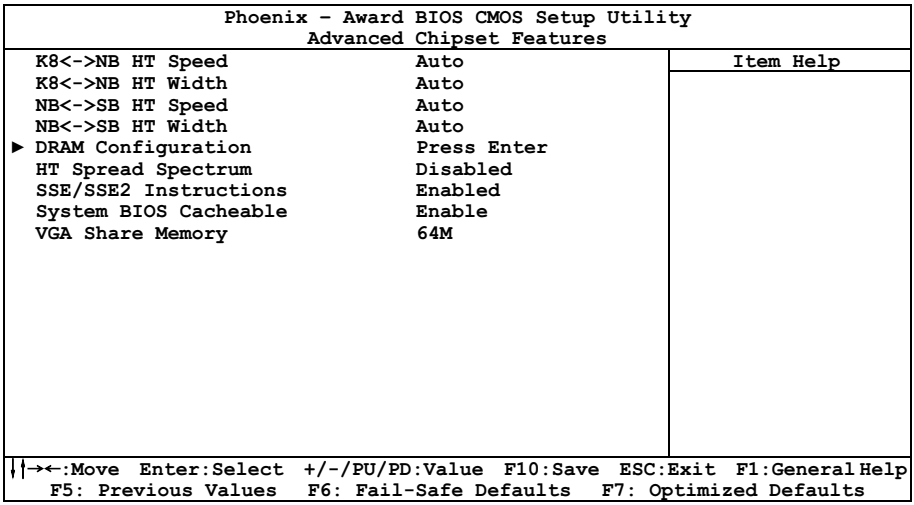
Delay For HDD (Secs)

This item allows the BIOS to support some old or special IDE devices by prolonging this delay time. A larger value will give more delay time to the device for which to initialize and to prepare for activation.

Full Screen LOGO Show

This item determines if the full screen logo is shown when booting.

3.4 Advanced Chipset Features



K8<->NB HT Speed

This item selects the LDT Bus Frequency between CPU and NB.

K8<->NB HT Width

This item selects the LDT Bus Width between CPU and NB.

NB<->SB HT Speed

This item selects the LDT Bus Frequency between NB and SB.

NB<->SB HT Width

This item selects the LDT Bus Width between NB and SB.

DRAM Configuration

Click <Enter> key to enter its submenu.

You may manually set the DRAM timing parameters through the following sub-items, or leave them at their default settings according to the SPD (Serial Presence Detect) data stored in the DRAM.

Phoenix – Award BIOS CMOS Setup Utility DRAM Configuration		
DRAM Timing Selectable	Auto	Item Help
X - DRAM Clock	DDRII 533	
X - TwTr Command Delay	2 Clocks	
X - Trfc0 for DIMM1	105 ns	
X - Trfc1 for DIMM2	75 ns	
X - Trfc2 for DIMM3	75 ns	
X - Trfc3 for DIMM4	75 ns	
X - Write Recovery Time(Twr)	4 Clocks	
X - Precharge Time(Trtp)	2 Clocks	
X - Row Cycle Time(Trc)	17 Clocks	
X - RAS2CAS R/W Delay(Trcd)	4 Clocks	
X - RAS to RAS Delay(Trrd)	2 Clocks	
X - Row Precharge Time(Trp)	4 Clocks	
X - Min. RAS Act-Time(Tras)	12 Clocks	
X - DQS Timing Training	Skip DQS	
X - CKE Base Power Down Mode	Enabled	
X - CKE Base Power Down By	Channel	
X - Memclock Tri-Stating	Disabled	
Bottom of UMA DRAM [31:24]	FC	
Memory Hole Remapping	Enabled	
DRAM ECC Enable	Disabled	
X - DRAM MCE Enable	Disabled	
X - Chip-Kill Mode Enable	Disabled	
X - DRAM ECC Redirection	Disabled	
X - DRAM Scrub Rate	Disabled	
X - L2 Cache Scrub Rate	Disabled	
X - DCache Scrub Rate	Disabled	
Auto Optimize Bottom IO	Enabled	
X - [31:24] IO Space	C0	
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

↳ Back to Advanced Chipset Features Setup Menu:

HT Spread Spectrum

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

SSE/SSE2 Instructions

This item allows you to Enable or Disable the SSE/SSE2 (Streaming SIMD Extensions) instruction set.

System BIOS Cacheable

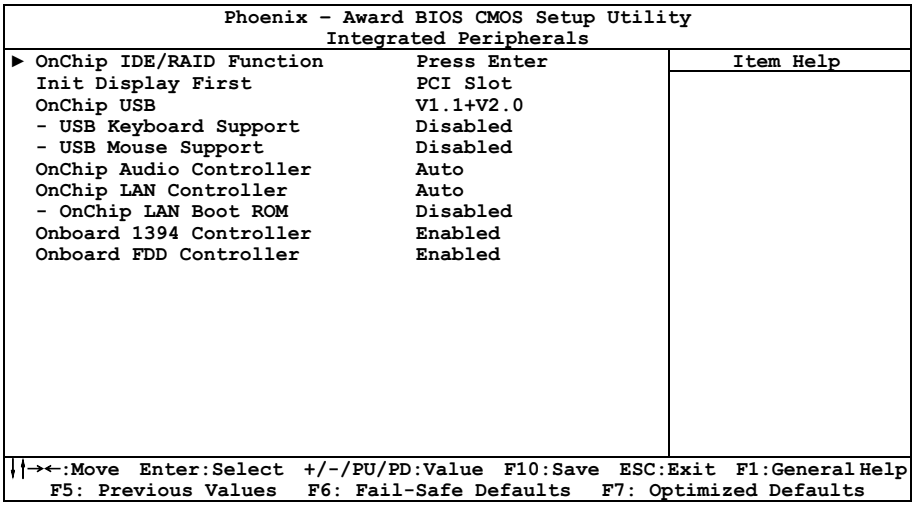
This item enables or disables caching the system BIOS for faster execution.

VGA Share Memory

This item selects the VGA share memory size.

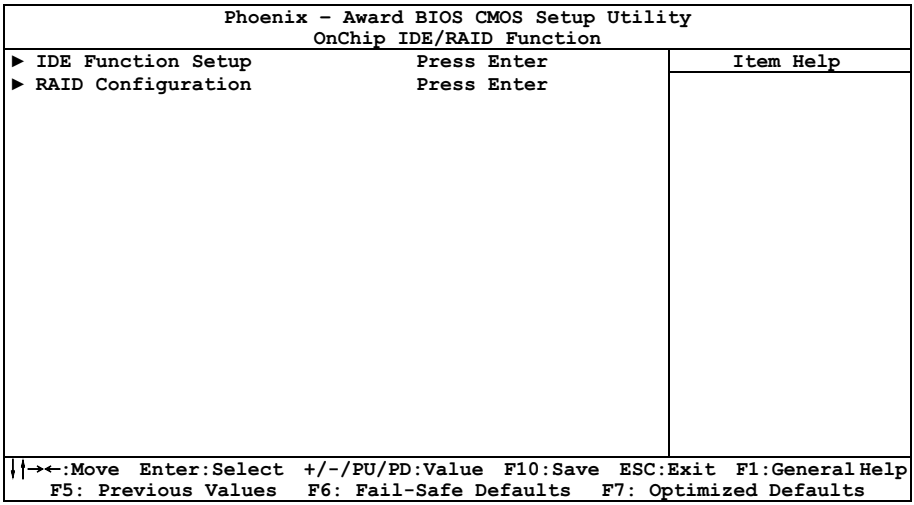
※ **The total system memory must be twice the size of this parameter at least, or else a lesser one will replace this parameter automatically by the BIOS utility itself. For example: In a 256M selection with 256M total system memory size configuration, the BIOS utility will force it down to 128M automatically.**

3.5 Integrated Peripherals



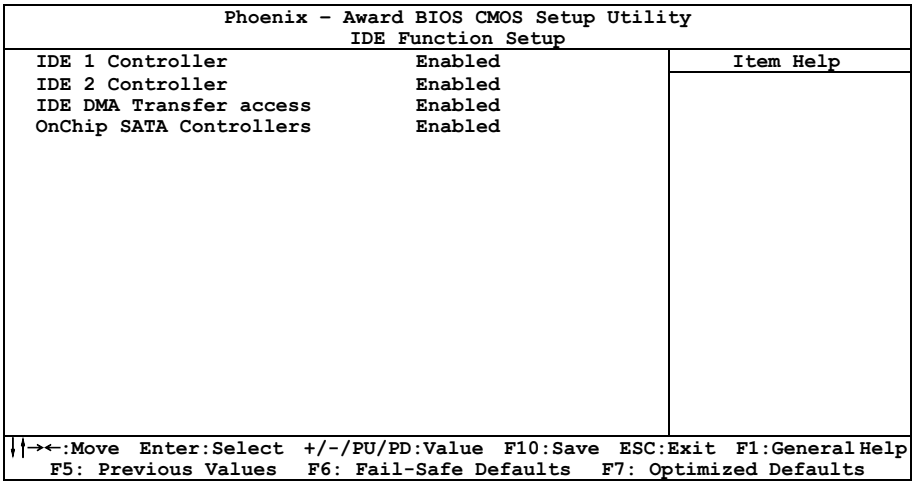
↳ OnChip IDE/RAID Function

Click <Enter> key to enter its submenu:



IDE Function Setup:

Click <Enter> key to enter its submenu:



IDE 1 Controller

This item allows you to enable or disable the IDE1 controller.

IDE 2 Controller

This item allows you to enable or disable the IDE2 controller.

IDE DMA Transfer access

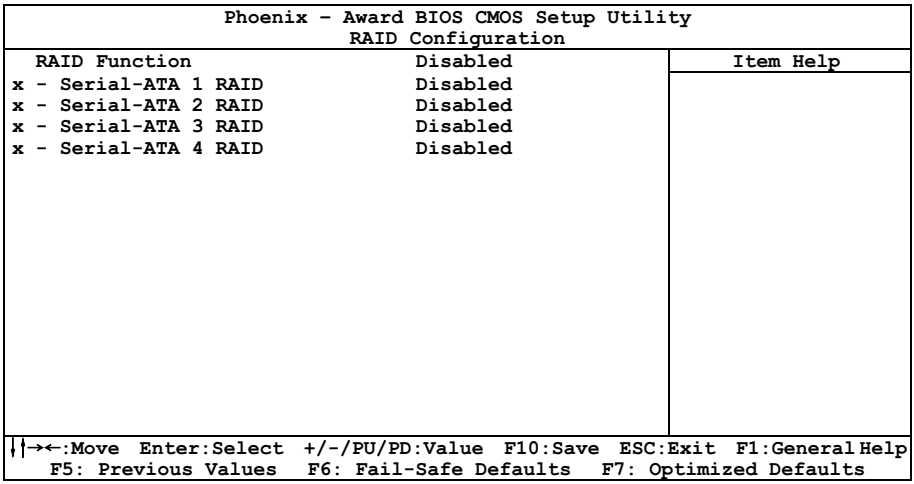
This item selects the DMA mode for devices connected through IDE channels.

OnChip SATA Controllers

This item enables or disables the onchip SATA controllers.

↳ RAID Configuration:

Click <Enter> key to enter its submenu:



RAID Function

This item allows you to enable or disable the RAID function for Serial-ATA 1~4 ports.

- Serial-ATA 1 RAID ~ Serial-ATA 4 RAID

This item allows you to enable or disable the RAID function for each of the Serial-ATA 1~6 port individually.

↳ Back to Integrated Peripherals Setup Menu:

Init Display First

This item selects which display slot to initialize first when the system boots.

OnChip USB

Select the type of USB controller. Three options are available: Disabled ➔ V1.1+V2.0 ➔ V1.1. The default setting is *V1.1+V2.0*. If you choose to disable this item, the "**USB Keyboard Support"** and "**USB Mouse Support**" items will not be available to select in *Integrated Peripherals* menu.

- USB Keyboard Support

Select [**BIOS**] for the legacy operating system (such as DOS) that does not support USB keyboard.

- **USB Mouse Support**

Select [**BIOS**] for the legacy operating system (such as DOS) that does not support USB mouse.

OnChip Audio Controller

This option enables or disables the audio controller.

OnChip LAN Controller

This option enables or disables the LAN controller.

- **Onboard LAN Boot ROM**

This item allows you to use the boot ROM (instead of a disk drive) to boot-up the system and access the local area network directly.

Onboard 1394 Controller

This option enables or disables the IEEE 1394 controller.

Onboard FDD Controller

This option enables or disables the FDD controller.

3.6 Power Management Setup

```
Phoenix – Award BIOS CMOS Setup Utility
Power Management Setup

  ACPI Suspend Type              S3(Suspend-To-RAM)      Item Help
  - USB Resume from S3           Disabled
  Power Button Function          Instant-Off
  Wake up by PME# of PCI         Disabled
  Wake up by OnChip LAN          Enabled
  Wake up by Alarm               Disabled
X - Day of Month Alarm            0
X - Time (hh:mm:ss) Alarm         0: 0 : 0
  Cool'n'Quiet Technology        Auto
  Power On Function              Button Only
X - KB Power On Password         Enter
X - Hot Key Power On             Ctrl-F1
  Restore on AC Power Loss       Power Off

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

ACPI Suspend Type

This item selects the type of Suspend mode.

[S1(PowerOn-Suspend)]: Enables the Power On Suspend function.

[S3(Suspend-To-RAM)]: Enables the Suspend to RAM function.

- USB Resume from S3

When set to [Enabled], this item allows you to use a USB device to wake up a system that is in the S3 (STR - Suspend To RAM) state. This item can be configured only if the item "ACPI Suspend Type" is set to [S3(STR)].

Power Button Function

This item selects the method of powering off your system:

[Delay 4 Sec.]: Pushing the power button for more than 4 seconds will power off the system. This will prevent the system from powering off in case you accidentally hit or pushed the power button.

[Instant-Off]: Pressing and then releasing the power button at once will immediately power off the system.

Wake up by PME# of PCI

When set to [Enabled], access through the add-on PCI card can remotely wake up the system that was in Soft-Off condition. The PCI card must support the wake up function.

Wake up by OnChip LAN

When set to [Enabled], you can remotely wake up a PC in Soft-Off condition via a LAN card that support the wake up function.

Wake up by Alarm

When set to [**Enabled**], you can set the date and time you would like the Soft-Off PC to power-on in the "**Date (of Month) Alarm**" and "**Time (hh:mm:ss) Alarm**" items. However, if the system is being accessed by incoming calls or the network (Resume On Ring/LAN) prior to the date and time set in these items, the system will give priority to the incoming calls or network instead.

- **Day of Month Alarm**

[0]: This option power-on the system everyday according to the time set in the "Time (hh:mm:ss) Alarm" item.

[1-31]: This option selects a date you would like the system to power-on. The system will power-on on the date set, and the time set in the "Time (hh:mm:ss) Alarm" item.

- **Time (hh:mm:ss) Alarm**

This item sets the time you would like the system to power-on.

Cool 'n' Quiet Technology

This option enables or disables the AMD K8 cool and quiet function.

Power On Function

This item selects the way you want your system to power on.

[Password]: Use a password to power on the system, select this option then press <Enter>. Enter your password. You can enter up to 5 characters. Type in exactly the same password to confirm, and then press <Enter>.

[Hot KEY]: Use any of the function keys between <F1> to <F12> to power on the system.

[Mouse Left]: Double click the mouse left button to power on the system.

[Mouse Right]: Double click the mouse right button to power on the system.

[Any KEY]: Use any keyboard keys to power on the system.

[Button Only]: Use only the power button to power on the system.

[Keyboard 98]: Use the power-on button on the "Keyboard 98" compatible keyboard to power on the system.

※ **The mouse wake up function can only be used with the PS/2 mouse, not with the COM port or USB type. Some PS/2 mice cannot wake up the system because of compatible problems. If the specs of your keyboard are too old, it may fail to power on.**

- **KB Power ON Password**

This item sets the password required in order to power on your computer.

※ **Do not forget your password, or you will have to clear the CMOS and reset all parameters in order to utilize this function again.**

- Hot Key Power ON

This item powers on the system by pressing <Ctrl> key plus one of each function key (<F1> ~ <F12>) simultaneously.

Restore on AC Power Loss

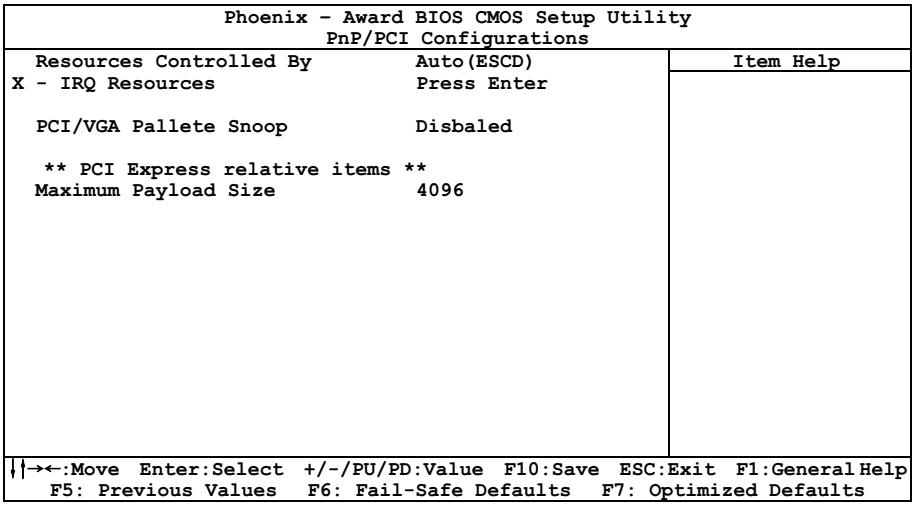
This item selects the system action after an AC power failure.

[Power Off]: When power returns after an AC power failure, the system's power remains off. You must press the Power button to power-on the system.

[Power On]: When power returns after an AC power failure, the system's power will be powered on automatically.

[Last State]: When power returns after an AC power failure, the system will return to the state where you left off before power failure occurs. If the system's power is off when AC power failure occurs, it will remain off when power returns. If the system's power is on when AC power failure occurs, the system will power-on when power returns.

3.7 PnP/PCI Configurations



Resources Controlled By

This item configures all of the boot and Plug-and-Play compatible devices.

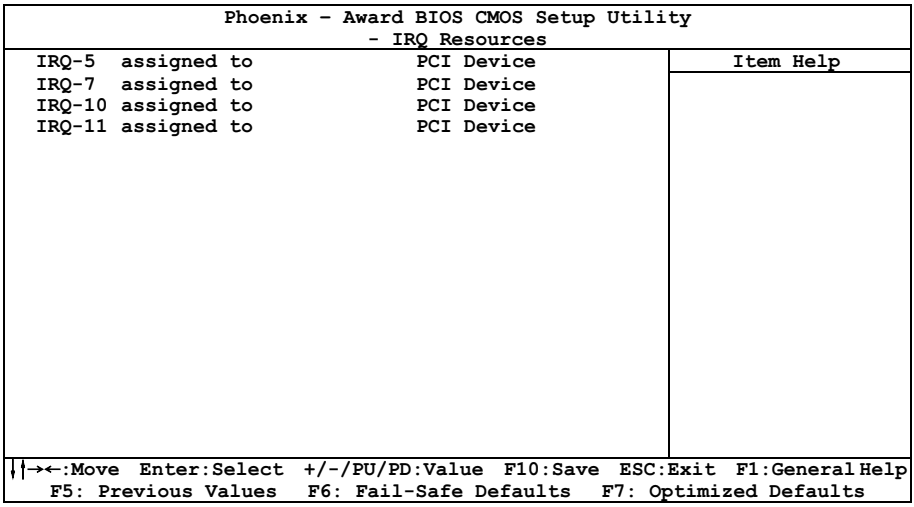
[Auto(ESCD)]: The system will automatically detect the settings.

[Manual]: Choose the specific IRQ resources in the "IRQ Resources" menu.

- IRQ Resources

Click <Enter> key to enter its submenu:

This item sets each system interrupt to either [PCI Device] or [Reserved].



↳ Back to PnP/PCI Configurations Setup Menu:

PCI/VGA Palette Snoop

This item determines whether the MPEG ISA/VESA VGA cards can work with PCI/VGA or not.

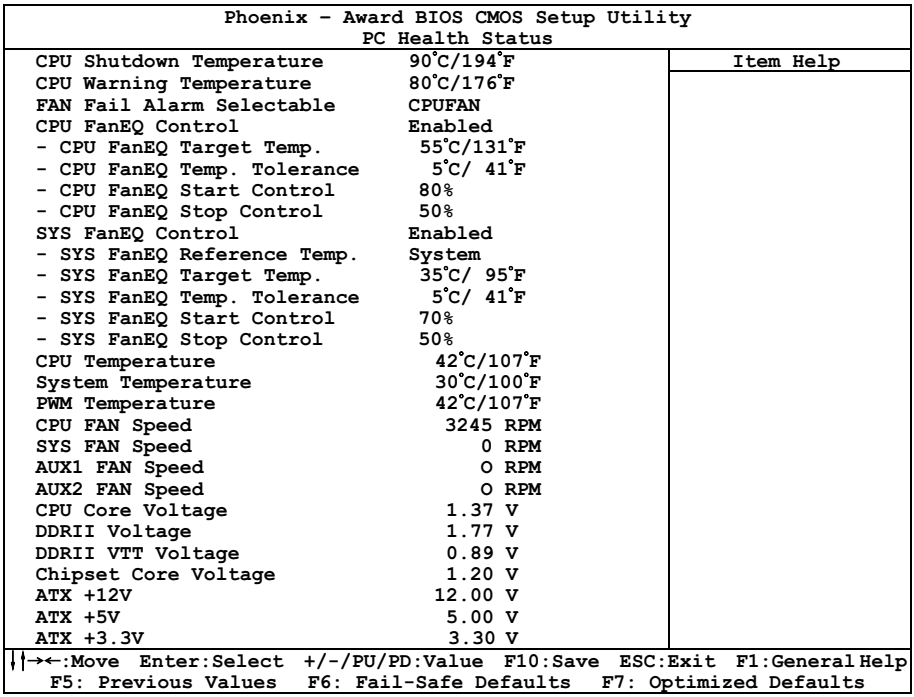
[Disabled]: MPEG ISA/VESA VGA cards do not work with PCI/VGA.

[Enabled]: MPEG ISA/VESA VGA cards work with PCI/VGA.

Maximum Payload Size

This item sets the maximum TLP payload size for the PCI Express devices.

3.8 PC Health Status



```
                    Phoenix – Award BIOS CMOS Setup Utility
                              PC Health Status
  CPU Shutdown Temperature          90°C/194°F          |  Item Help
  CPU Warning Temperature           80°C/176°F          |
  FAN Fail Alarm Selectable         CPUFAN              |
  CPU FanEQ Control                 Enabled             |
  - CPU FanEQ Target Temp.           55°C/131°F         |
  - CPU FanEQ Temp. Tolerance         5°C/ 41°F        |
  - CPU FanEQ Start Control         80%                 |
  - CPU FanEQ Stop Control          50%                 |
  SYS FanEQ Control                 Enabled             |
  - SYS FanEQ Reference Temp.       System              |
  - SYS FanEQ Target Temp.           35°C/ 95°F         |
  - SYS FanEQ Temp. Tolerance         5°C/ 41°F        |
  - SYS FanEQ Start Control         70%                 |
  - SYS FanEQ Stop Control          50%                 |
  CPU Temperature                     42°C/107°F        |
  System Temperature                  30°C/100°F        |
  PWM Temperature                     42°C/107°F        |
  CPU FAN Speed                      3245 RPM           |
  SYS FAN Speed                         0 RPM           |
  AUX1 FAN Speed                        0 RPM           |
  AUX2 FAN Speed                        0 RPM           |
  CPU Core Voltage                   1.37 V             |
  DDRII Voltage                      1.77 V             |
  DDRII VTT Voltage                  0.89 V             |
  Chipset Core Voltage               1.20 V             |
  ATX +12V                          12.00 V             |
  ATX +5V                            5.00 V             |
  ATX +3.3V                          3.30 V             |
↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
  F5: Previous Values   F6: Fail-Safe Defaults   F7: Optimized Defaults
```

CPU Shutdown Temperature

You can set the processor shutdown temperature here. If the processor temperature exceeds the settings value, system will force to shutdown to protect the processor not overheat.

CPU Warning Temperature

This item lets you select the temperature at which you want the system to send out a warning message to the PC speakers of when the temperature goes beyond either limit. You can select the temperatures you want.

FAN Fail Alarm Selectable

This item selects the fan that will be monitored for malfunction.

CPU FanEQ Control

This item allows you to control the CPUFAN speed. When set to [Enabled], the following items become selectable.

- CPU FanEQ Target Temp.

This item sets the temperature mark for the "CPU FanEQ" function to take effect.

- CPU FanEQ Temp. Tolerance

This item sets the temperature tolerance range for the item "CPU FanEQ Target Temp.".

- CPU FanEQ Start Control

This item sets the speed ratio for the 4-pin CPU fan assembly connected at "CPUFAN1" fan power connector to start running.

- CPU FanEQ Stop Control

This item sets the lowest speed ratio for the 4-pin CPU fan assembly connected at "CPUFAN1" fan power connector to run at when the CPU temperature detected is lower than the value of item "CPU FanEQ Target Temp." plus the value of item "CPU FanEQ Temp. Tolerance".

In the situation when the CPU temperature detected is higher than the value of item "CPU FanEQ Target Temp." plus the value of item "CPU FanEQ Temp. Tolerance", the speed ratio for the 4-pin CPU fan assembly connected at "CPUFAN1" fan power connector will first run at the speed ratio set by the item "CPU FanEQ Start Control", and then up to 100%.

※ The 3-pin fan assembly connected at this 4-pin "CPUFAN1" fan power connector will have no speed control function.

SYS FanEQ Control

This item allows you to control the SYSFAN speed. When set to [Enabled], the following items become selectable.

- SYS FanEQ Reference Temp.

This item sets the reference point for taking temperature. The options are "System" and "CPU".

※ In the situation when connecting a 3-pin CPU fan assembly, and you still want the speed control function to take effect, you must:
1. Plug the 3-pin CPU fan assembly to "SYSFAN1" fan power connector.
2. Set the "SYS FanEQ Reference Temp." from the default "System" to "CPU".

- SYS FanEQ Target Temp.

This item sets the temperature mark for the "SYS FanEQ" function to take effect.

- SYS FanEQ Temp. Tolerance

This item sets the temperature tolerance range for the item "SYS FanEQ Target Temp.".

- SYS FanEQ Start Control

This item sets the speed ratio for the 3-pin fan assembly connected at "SYSFAN1" fan power connector to start running.

- SYS FanEQ Stop Control

This item sets the lowest speed ratio for the 3-pin fan assembly connected at "SYSFAN1" fan power connector to run at when the temperature of "SYS FanEQ Reference Temp." detected is lower than the value of item "SYS FanEQ Target Temp." plus the value of item "SYS FanEQ Temp. Tolerance".

In the situation when the temperature of "SYS FanEQ Reference Temp." detected is higher than the value of item "SYS FanEQ Target Temp." plus the value of item "SYS FanEQ Temp. Tolerance", the speed ratio for the 3-pin fan assembly connected at "SYSFAN1" fan power connector will first run at the speed ratio set by the item "SYS FanEQ Start Control", and then up to 100%.

All Voltages, Fans Speed and Thermal Monitoring

These unchangeable items list the current status of the CPU and environment temperatures, fan speeds, and system power voltage.

3.9 Load Fail-Safe Defaults

This option loads the BIOS default values for the most stable, minimal-performance system operations.

3.10 Load Optimized Defaults

This option loads the BIOS default values that are factory settings for optimal-performance system operations.

3.11 Set Password

This option protects the BIOS configuration or restricts access to the computer itself.

3.12 Save & Exit Setup

This option saves your selections and exits the BIOS setup menu.

3.13 Exit Without Saving

This option exits the BIOS setup menu without saving any changes.

4. Driver & Utility CD

The "Driver & Utility CD" that came packed with this motherboard contains drivers, utilities and software applications required for its basic and advanced features.

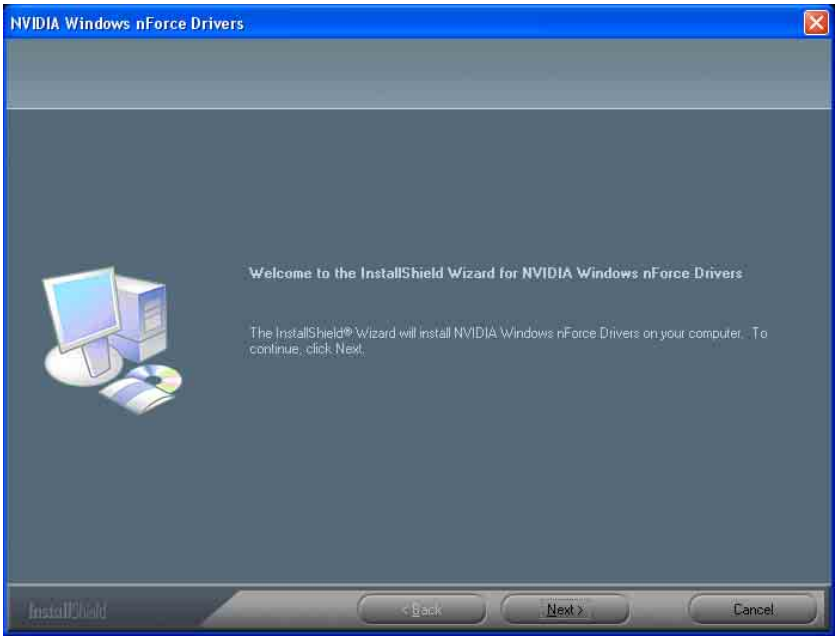
Place the "Driver & Utility CD" into the CD-ROM drive in your system. The following installation auto-run screen appears. If not, browse the root directory of the CD-ROM via the File Manager, and double click the "AUTORUN" file.

- [**Drivers**]: Click to enter the driver installation menu.
- [**Manual**]: Click to enter the user's manual menu.
- [**Utility**]: Click to enter the utilities installation menu.
- [**ABIT Utility**]: Click on this tab to enter the menu for installing utilities exclusively developed by ABIT.
- [Browse CD **Browse CD**]: Click to browse the contents of this "Driver & Utility CD".
- [Close **Close**]: Click to exit this installation menu.

4.1 nVidia nForce Chipset Driver

To install this driver:

1. Click on the [Drivers] tab in the installation menu screen.
2. Click the [nVidia nForce Chipset Driver]. The following screen appears:



3. Follow the prompts on the screen to complete installation.
4. Restart the system for the driver to take effect.

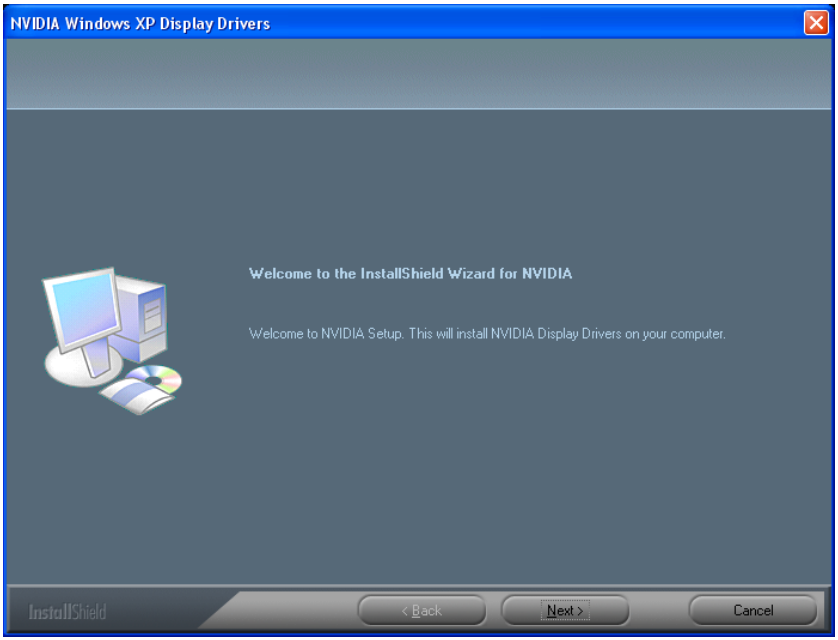
※ **Please install this nVidia nForce Chipset Driver first after having installed the Windows operating system.**

4.2 nVidia Graphics Driver

This driver provides functionality for the on-chip Graphics Controller.

To install this driver:

1. Click on the [Drivers] tab in the installation menu screen.
2. Click the [nVidia Graphics Driver] item. The installation screen appears:

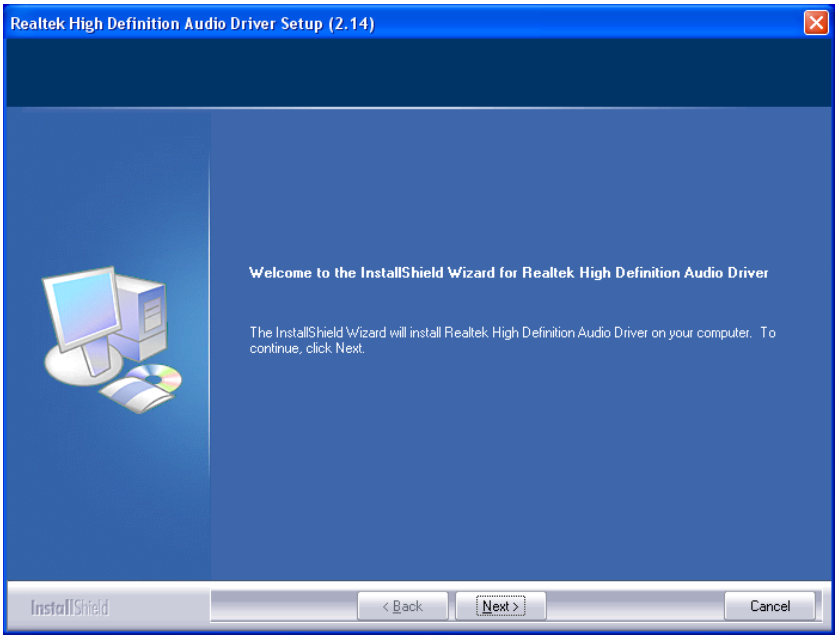


3. Follow the prompts on the screen to complete installation.
4. Restart the system for the driver to take effect.

4.3 Realtek HD Audio Driver

To install this driver:

1. Click on the [Drivers] tab in the installation menu screen.
2. Click the [Realtek HD Audio Driver] item. The following screen appears:



3. Follow the prompts on the screen to complete installation.
4. Restart the system for the driver to take effect.

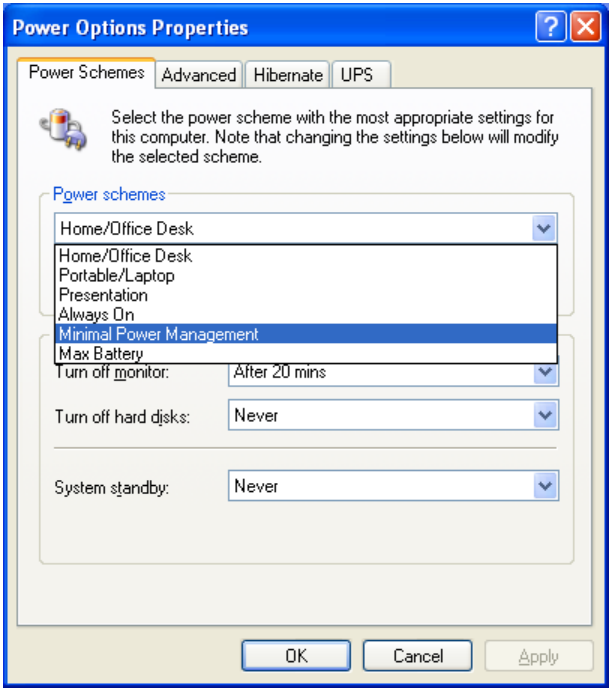
4.4 Cool'n'Quiet Driver

To install this driver:

1. Click on the [Drivers] tab in the installation menu screen.
2. Click the [Cool'n'Quiet Driver] item. The following screen appears:

3. Follow the prompts on the screen to complete installation.
4. Restart the system for the driver to take effect.

5. After the system restarted, open the "Power Options" from the control panel and choose the power scheme "Minimal Power Management" to enable Cool 'n' Quiet.



※ For Windows 2000 or ME system, an AMD Cool 'n' Quiet tab will appear under "Power Options" when the Cool 'n' Quiet software for Windows 2000 and ME is installed. This must be set to "Automatic Mode" for Cool 'n' Quiet to be enabled.

4.5 USB 2.0 Driver

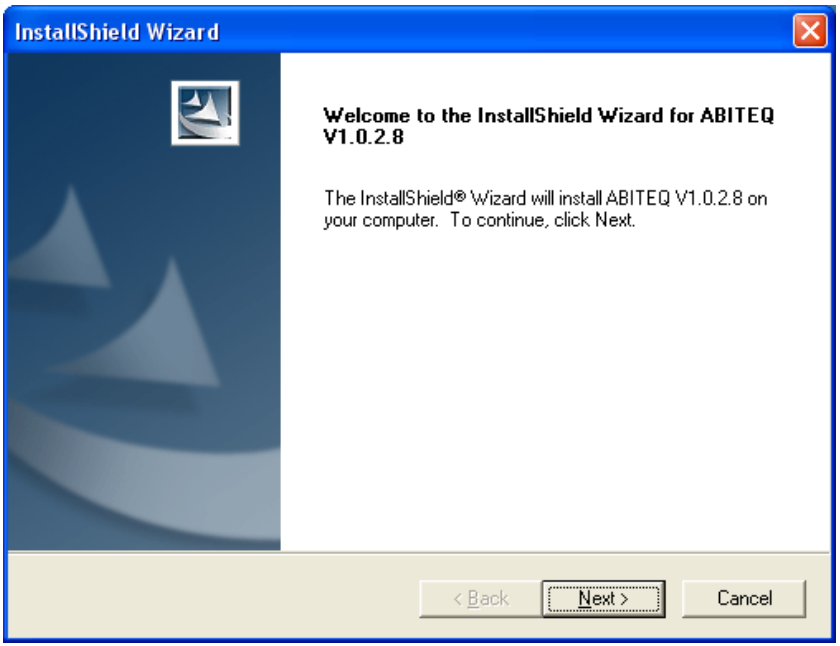
※ There is no need to install this driver for Windows 2000 with Service Pack 4, Windows XP with Service Pack 1, or their later version.

4.6 ABIT EQ (The Hardware Doctor Utility)

ABIT EQ is a self-diagnostic system for PC based on motherboards designed and manufactured by Universal ABIT. It will protect PC Hardware by monitoring critical items of Power Supply Voltage, CPU & System Fans Speed, and CPU & System Temperature.

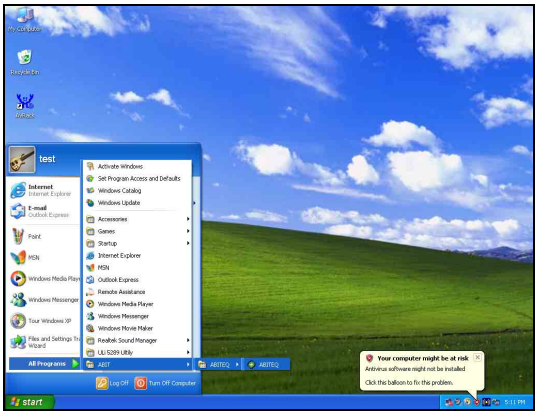
To install this utility:

1. Click on the [ABIT Utility] tab in the installation menu screen.
2. Click the [ABITEQ] item under the [ABIT Utility] tab. The following screen appears:



3. Follow the prompts on the screen to complete installation.
4. Restart the system for the driver to take effect.

5. Execute the ABIT EQ by entering the Windows Menu [Start] ➔ [All Programs] ➔ [ABIT] ➔ [ABIT EQ].



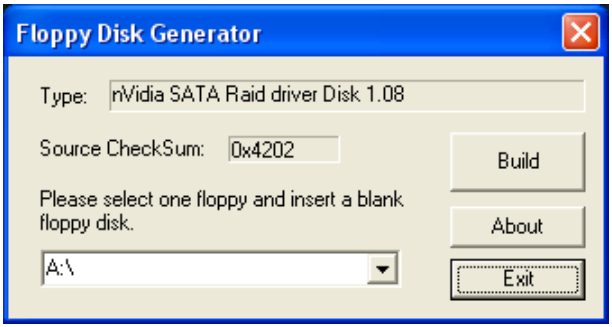
6. ABIT EQ shows you the status of Voltage, Fan Speed, and Temperature readings as well.

4.7 NVRaid Floppy Disk

If you lost or damaged the SATA Driver Disk that came with the package, use the NVRaid Floppy Disk to create another one.

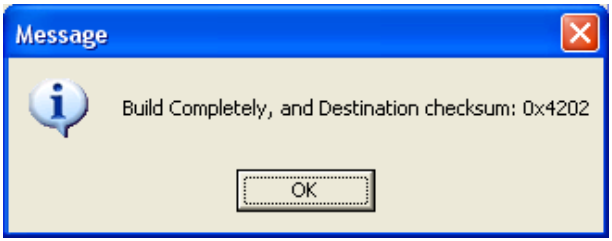
To create a driver disk:

1. Click on the [ABIT Utility] tab in the installation menu screen.
2. Click the [Generate NVRaid Floppy Disk[32bit]]. The following screen appears:



Insert one blank floppy disk to the selected floppy drive and click [Build].

3. Click [OK] to finish building the SATA Driver Disk.



※ **If you are using a windows 2000 operating system, please update your system to Service Pack 4 before starting to setup the NVIDIA RAID.**

5. Appendix

5.1 Troubleshooting (How to Get Technical Support?)

5.1.1 Q & A

Q: Do I need to clear the CMOS before I use a new motherboard to assemble my new computer system?

A: Yes, we highly recommend that you clear the CMOS before installing a new motherboard. Please move the CMOS jumper from its default 1-2 position to 2-3 for a few seconds, and then back. When you boot up your system for the first time, follow the instructions in the user's manual to load the optimized defaults.

Q: If my system hangs when I update the BIOS or set the wrong CPU parameters, what should I do?

A: Whenever you update the BIOS or if the system hangs due to wrong CPU parameters setting, always clear CMOS jumper before booting up again.

Q: Why does the system fail to boot up again right after a mechanical power-off?

A: Please keep a 30-second interval between each mechanical power On/Off.

Q: Why does the system fail to boot up and nothing displays on the screen after I did some over-clocking or non-standard settings inside the BIOS?

A: It should not cause hardware or permanent damage to motherboard when BIOS settings were changed from default to over-clocking or non-standard status.

We suggest the following three troubleshooting methods to discharge CMOS data, recover the hardware default status, and then making the motherboard work again. There is no need to bother returning the motherboard to where you bought it from or go through an RMA process.

Step 1. Switch off the power supply unit and then switch it on again after one minute. If there is no power-switch on the power supply unit, disconnect its power cord for one minute and then reconnect.

Press and hold the <Insert> key on the keyboard, and press the power-on button to boot up system. If it works, release the <Insert> key and hit <Del> key to enter the BIOS setup page to apply the correct settings.

If the situation remains the same, repeat the procedures in Step 1 for three times, or try Step 2.

Step 2. Switch off the power supply unit or disconnect the power cord. Open the chassis cover. Locate the CCMOS jumper near the button battery. Change the jumper position from default 1-2 to 2-3 for one minute to discharge the CMOS data, and then put it back to default 1-2 position.

Close the chassis and switch on the power supply unit or plug in the power cord. Press the power-on button to boot up system. If it works, hit <Del> key to enter the BIOS setup page to do the correct settings.

If the situation remains the same, try Step 3.

Step 3. The same procedure as Step 2, but while discharging the CMOS data, pull out the ATX power connectors from motherboard and remove the button battery during CMOS discharge.

Q: How to get a quick response for my request on technical support?

A: Please carry out a simple troubleshooting before sending "**Technical Support Form**":

System boot-up fails after the system had been assembled:

Check the motherboard's supporting specifications first to see if all the key components attached in your system can meet.

To do so, you may:

- Remove all the unnecessary add-on devices (except the CPU, VGA card, DRAM, and Power Supply), and then reboot.
- If the trouble still exists, try another VGA card of different brand/model to see if the system will start.
- If the trouble still exists, try another memory module of different brand/model.
- If the trouble still exists, try another CPU and Power Supply.

If the system runs successfully, shut it down and start re-installing the interface cards and devices that were previously installed in the system. Re-install and start the system one at a time until the system won't start.

Malfunction in the OS:

If the system hangs after resuming from S3 or some testing program, if the CPU cannot be recognized properly, if the display resolution mixed, or if a certain program cannot be executed, etc, you may:

- Upgrade the motherboard's latest BIOS version.
- Upgrade the add-on device's latest driver version.
- Check if there is any conflict in the "Control Panel/System Properties".

Q: How to fill in the "Technical Support Form"?

A: To fill in this "**Technical Support Form**", please refer to the following instructions:

- **Region:** Type in your country name.
- **E-mail:** Type in your contact E-mail information.
- **First name:** Type in your first name.
- **Last name:** Type in your last name.
- **Subject:** Type in the model name and the problem of your motherboard.
  Example 1: AA8XE and SCSI 29160 malfunction
  Example 2: AA8XE boot fails, POST code AF
  Example 3: AA8XE (system hang when S3 resume)
- **Motherboard:** Type in the model name and revision number of your motherboard.
  Example: AA8XE REV: 1.00
- **BIOS Version:** Type in the BIOS version of your motherboard. (You can find it on the screen during the POST sequence.)

- **CPU**: Type in the brand name and the speed (MHz) of your CPU. (Illustrate the over-clocking status if you had done so.)
  Example: Intel 650 3.4GHz (OC FSB=220MHz)
- **Memory brand:** Type in the brand and model name of your memory module.
  Example: Memory brand: Kingston (KVR533D2N4/1G)
- **Memory size:** Type in the size of your memory module.
  Example: 512M* 4PCS
- **Memory configuration:** Type in the memory configuration in BIOS setting.
  Example: Memory Timing: 2.5-3-3-7 @533MHz
- **Graphics information:** Note Graphics card's brand, model and driver version
- **Graphics card:** Type in the brand and model name of your graphics card.
  Example: ATI RADEON X850 XT PE
- **Graphics driver version:** Type in the driver version of your graphics card
  Example: Catalyst 5.12V
- **Power supply maker:** Type in the brand and model name of your power supply unit.
- **Power supply wattage:** Type in the power wattage of your power supply unit.
- **Storage devices:** Type in the brand and specifications of your HDD drive and quantity. Specify if it was inserted on IDE (Master or Slave) or SATA ports, including the RAID allocation status.
  Example 1: WD Caviar WD600 60GB (on IDE2 master), Maxtor DiamondMax 10 SATA 300GB (on SATA 3)
  Example 2: Maxtor DiamondMax 10 SATA 300GB *2 (on SATA 3, SATA 4 RAID 1)
- **Optical devices:** Type in the brand and specifications of your optical drives and quantity. Specify if it was inserted on IDE (Master or Slave) or SATA ports.
- **Other devices:** Indicate which add-on cards or USB devices that you *absolutely sure* are related to the problem. If you cannot identify the problem's origin, indicate all the add-on cards or USB devices inserted on your system.
  Example: AHA 29160 (on PCI 2), Sandisk Cruzer mini 256MB USB Flash-disk.
- **Operating system**: Indicate which OS and language version
  Example: Microsoft Windows XP SP2, English version
  Example: Microsoft Media Center Edition 2005, Korean version
- **Problem description:** Describe the problem of your system configuration. Indicate the steps to duplicate problem if possible.

  See the next page for a blank Technical Support Form, or visit our website to fill in the form on line (http://www.abit.com.tw/page/en/contact/technical.php).

Q. Is the motherboard dead? Do I need to return it to where I bought from or go through an RMA process?

A: After you had gone through the troubleshooting procedures, yet the problem still exists, or you find an evident damage on the motherboard. Please contact our RMA center. (http://www2.abit.com.tw/page/en/contact/index.php?pFUN_KEY=18000&pTITLE_IMG)

5.1.2 Technical Support Form

Region:	
E-mail:	
First name:	
Last Name:	
Subject:	
Motherboard:	
BIOS Version:	
CPU:	
Memory brand:	
Memory size:	
Memory configuration:	
Graphics card:	
Graphics driver version:	
Power supply maker:	
Power supply wattage:	
Storage devices:	
Optical devices:	
Other devices:	
Operating system:	
Problem description:	

5.1.3 Universal ABIT Contact Information

Taiwan Head Office

Universal ABIT Co., Ltd.

No. 323, Yang Guang St., Neihu,
Taipei, 114, Taiwan

Tel: 886-2-8751-3380
Fax: 886-2-8751-3381
Sales: sales@abit.com.tw
Marketing: market@abit.com.tw

North America, South America

Universal ABIT (USA) Corporation

2901 Bayview Drive,
Fremont, CA 94538, U.S.A.

Tel: 1-510-623-0500
Fax: 1-510-623-1092

Website: http://www.abit-usa.com

Latin America: ventas@abit-usa.com

RMA Center: http://rma.abit-usa.com

UK, Ireland

Universal ABIT UK Corporation

Unit 3, 24-26 Boulton Road, Stevenage,
Herts SG1 4QX, UK

Tel: 44-1438-228888
Fax: 44-1438-226333

Germany and Benelux (Belgium, Netherlands, Luxembourg), France, Italy, Spain, Portugal, Greece, Denmark, Norway, Sweden, Finland, Switzerland

Universal ABIT NL B.V.

Jan van Riebeeckweg 15, 5928LG,
Venlo, The Netherlands

Tel: 31-77-3204428
Fax: 31-77-3204420

Austria, Czech, Romania, Bulgaria, Slovakia, Croatia, Bosnia, Serbia, Macedonia, Slovenia

Universal ABIT Austria Computer GmbH

Schmalbachstrasse 5, A-2201 Gerasdorf /
Wien, Austria

Tel: 43-1-7346709
Fax: 43-1-7346713

Contact: office@abit-austria.at

Website: http://www.abit-austria.at

Shanghai

Universal ABIT (Shanghai) Co. Ltd.

FL 19 Xuhui Yuan BLOG NO.1089
ZhongShan s 2 RD, ShangHai 200030
The People's Republic of China

Tel: (86-21) 54102211
Fax: (86-21) 54104791

Website: http://www.abit.com.cn

Poland

Universal ABIT Poland (Rep. office)

Strzegomska 310/2, 54-432 Wroclaw

Tel: +48-71-718-12-39

Contact: Grzegorz Morgiel

Russia

Universal ABIT Russia (Rep. office)

Contact: info@abit.ru

Website: www.abit.ru

Turkey

Universal ABIT Turkey (Rep. office)

Tel: 90 532 211 6860

UNIVERSAL ABIT Co., Ltd.

http://www.abit.com.tw

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