WinFast® K8N/K8N Pro

Socket 754 Motherboards

User's Manual

Leadtek®

We Make Dreams a Reality

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WinFast® K8N User's Manual
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1. Introduction

WinFast® K8N is a compelling Desktop solution as a Socket 754/AMD Athlon 64 ATX motherboard.

WinFast K8N, integrating NVIDIA chipset, supports the AMD Athlon 64 processor whose performance is bound to exceed expectation of both consumer and corporate users alike. The WinFast K8N also supports PC1600/PC2100/PC2700/ PC3200 DDR memories, and the latest graphics devices through the AGP 3.0 8X interface; and it supports serial ATA port RAID, IEEE1394, USB2.0 and 6-channel audio feature.

WinFast K8N Pro integrated eNOVA X-Wall LX64 chipset that offer data security for your hard disk data.

Accessories:

- Ultra ATA 66/100/133 IDE cable x 1; FDD cable x 1
- User's manual
- USB module and cable (optional)
- 1 I/O shield
- Driver CD
- 4 x SATA cable
- 1 x two ports 1394 module (K8N)
- 1 x three ports 1394 module (K8N Pro)

Motherboard Software Pack CD:

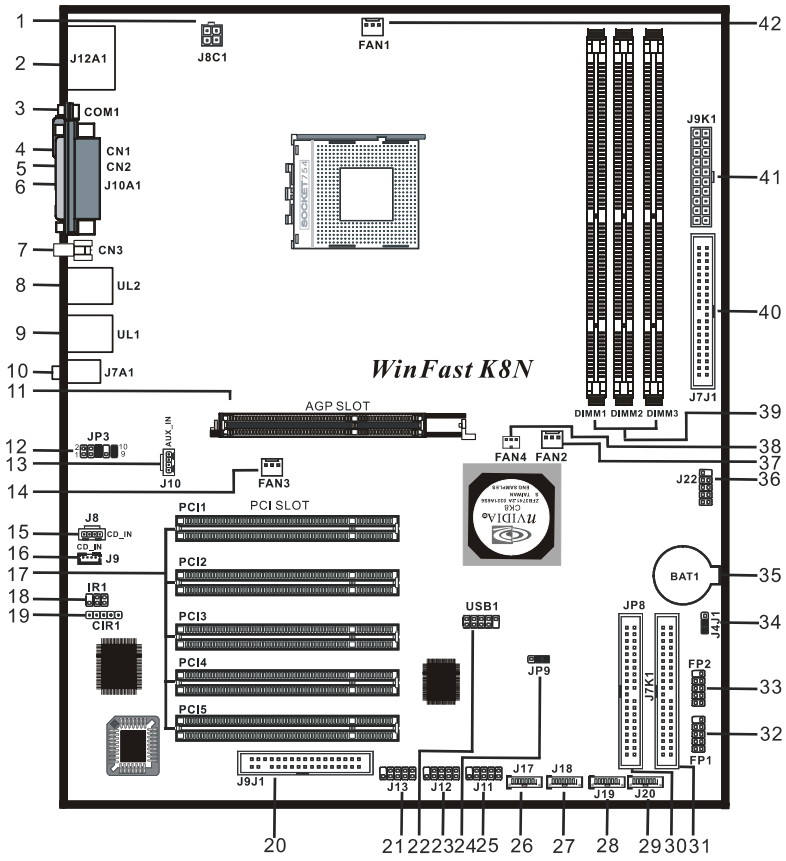
- Chipset driver
- GIGA LAN driver
- SATA driver
- Speed Gear II
- AWARD flash utility
- User's manual
- Technical support request form

1.1. Specifications

CPU	Socket 754 for AMD athlon 64 processor
Chipset	NVIDIA nForce3 150
Expansion slots	1 x AGP 8X, 5 x PCI
Audio	ALC 658 6 channel output, S/PDIF out interface
IEEE 1394	3 x port at 400 Mbps transfer rate
System Bus	Scalable Hyper-Transport Bus
Storage	2 x UltraDMA 133/100 1 x UltraDMA 133 for data security (K8N Pro) Silicon image sil3114 S-ATA controller Support 4 x serial ATA Provide RAID0, RAID1, RAID0+1 function
Memory	Supports PC3200/PC2700/PC2100/PC1600 DDR SDRAM unbuffered DIMMs 3 x 184-pin DDR DIMM sockets for up to 2GB memory
LAN	CK8 MAC+Realtek RTL8201BL PHY (10/100 Mb) Realtek RTL8110S (10/100/1000 Mb)
USB2.0	Integrated 6 USB2.0 ports
OverclockFeatures	Jumperfree Memory, AGP, CPU and chipset voltage adjustable SFS (Stepless Frequency Selection) from 200MHz up tp 300MHz at 1MHz increment
Internal I/O connectors	Secure key (K8N Pro only) 20-pin ATX power connector 4-pin ATX 12V power connector CPU/System/Chipset FAN connector CD/AUX audio in IEEE1394 connector IrDA connector CIR connector
Special Features	Speed Gear II X-BIOS II Supports S/PDIF out interface OTS (Over temperature shut down)

Back Panel I/O Ports	1 x Parallel 1 x Serial 1 x PS/2 Keyboard 1 x PS/2 Mouse 1 x Audio I/O (Line out, line in, mic in) 2 x Audio line out 2 x RJ-45 Port 1 x SPDIF output
Form Factor	ATX form factor: 12 in x 9.6 in (30.5 cm x 24.5 cm)
Industry standard	PCI 2.3, USB2.0
Manageability	WOL by PME, WOR by PME
BIOS Features	4Mb Flash EEPROM Phoenix BIOS with enhanced ACPI, DMI, PnP, Green
X-WALL IDE	Protect confidential data Buy Insurance for business confidentiality Corporation confidentiality management Security for private secret 64 bits length data encrytion

2. Quick Setting



2.1. Jumper Position

1.	J8C1	12. JP3	22.USB1	33.	FP2
2.	J12A1	13. J10	23. J12	34.	J4J1
3.	COM1	14. FAN3	24. JP9	35.	BAT1
4.	CN1	15. J8	25. J11	36.	J22
5.	CN2	16. J9	26. J17	37.	FAN2
6.	J10A1	17. PCI1-5	27. J18	38.	FAN4
7.	CN3		28. J19	39.	DIMM1-3
8.	UL2	18. IR1	29. J20	40.	J7J1
9.	UL1	19. CIR1	30. JP8	41.	J9K1
10.	J7A1	20. J9J1	31. J7K1	42.	FAN1
11.	AGP	21. J13	32. FP1		

2.2. Jumper/Connector Listing

Jumper/Connector	Description
1. J8C1	12V CPU vcore power connector
2. J12A1	PS2 keyboard and mouse ports
3. COM1	COM1 connector
4. CN1	Surround left and right
5. CN2	Center and bass
6. J10A1	Print port connector
7. CN3	SPDIF out connector
8. UL2	USB ports and 10/100 LAN connector
9. UL1	USB ports and 1000 LAN connector
10. J7A1	Mic in, Line in, Line out
11. AGP	AGP slot
12. JP3	Audio front panel header
13. J10	AUX input connector
14. FAN3	System fan connector
15. J8	CD input connector
16. J9	CD input connector
17. PCI1-5	PCI slots
18. IR1	IR connector
19. CIR1	CIR connector
20. J9J1	Floppy disk connector
21. J13	IEEE1394 connectors
22. USB1	USB Connector
23. J12	IEEE1394 connectors
24. JP9	SATA selection
25. J11	IEEE1394 connectors
26. J17	SATA connectors
27. J18	SATA connectors
28. J19	SATA connectors
29. J20	SATA connectors
30. JP8	Hard disk connectors (X-Wall IDE)
31. J7K1	Hard disk connectors (Primary IDE)
32./33. FP1/FP2	Case Signal Connector: PWR SWITCH, RESET, KEY LOCK, SPEAKER, IDE_LED, ACPILED
34. J4J1	Clear CMOS data
35. BAT1	Battery
36. J22	Secure key connector
37. FAN2	Chipset fan connector

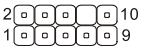
38. FAN4	Chipset fan connector
39. DIMM1-3	Memory module connectors
40. J7J1	Hard disk connectors (Secondary IDE)
41. J9K1	ATX power connector
42. FAN1	CPU fan connector

2.3. Jumper Settings

Clear CMOS Data

Jumper	Setting	
J4J1	Clear CMOS	
	Normal (Default)	

Audio output selection

Jumper	Setting	
JP3	From back panel (Default)	
	From front panel	

SATA Select

Jumper	Setting	
JP9	Enable (Default)	
	Disable	

3. Hardware Setup

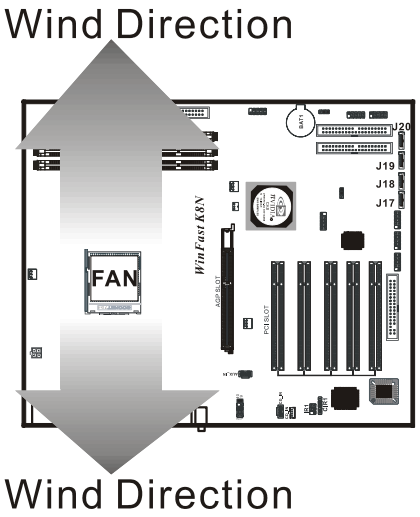
⚠ **Static Precautions**
Static discharge can damage electronic components. To prevent that, it is important to handle it carefully. The following measures will suffice your equipment from static.

- Use a grounded wrist strap designed for static discharge.
- Touch a grounded metal object before you remove the board from the anti-static bag.
- Handle the board by its edges only; do not touch its components, peripheral chips, memory modules, or gold contacts. Do not touch pins on chips or modules.
- Put the system board and peripherals back in anti-static bags when they are not in use.
- For grounding purposes, be sure your computer chassis provides excellent conductibility between its power supply, case, the mounting fasteners, and the system board.

3.1. CPU Installation

Please refer to the instruction manual of the CPU for how to install the CPU.

NOTE: As the user select CPU fan, we suggest you to purchase CPU fan that can guide the wind direction to Power MOS and RAM – this way can increase the performance of the heat sink and the stability of the motherboard.



3.2. Memory Installation

The motherboard provides three 184-pin DIMM (Double In-Line Memory Module) sockets, DIMM1, DIMM2, and DIMM3. Total memory is up to 2GB. K8N (Pro) supports DDR200, DDR266, DDR333 and DDR400 memory.

NOTE: WinFast K8N (Pro) has special design for the users. The original setup of AMD Athlon64 only provides 2 RAM DIMM slots, if you have 3 DIMM RAM module, please refer to the following steps to proceed installing setup.

Step 1: IF you use 1 or 2 DIMM RAM module, please plug in DIMM1 slot and DIMM2 slot. (purple)

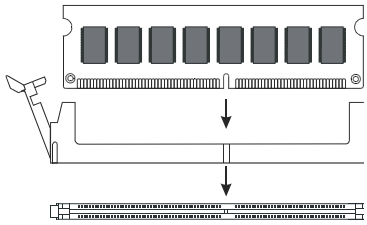
Step 2: If you have 3 DIMM RAM module, please refer to the following list to install it.

Unbuffered DIMM Support

DIMM1	DIMM2	DIMM3	Max Speed
x 8 single rank or x 16	x 8 single rank or x 16	x 8 single rank or x 16	DDR333
x 8 single rank or x 16	x 8 single rank or x 16	x 8 double rank	DDR200
x 8 single rank or x 16	x 8 double rank	x 8 single rank or x 16	DDR200
x 8 single rank or x 16	x 8 double rank	x 8 double rank	DDR200
x 8 double rank	x 8 single rank or x 16	x 8 single rank or x 16	DDR333
x 8 double rank	x 8 single rank or x 16	x 8 double rank	DDR200
x 8 double rank	x 8 double rank	x 8 single rank or x 16	DDR200
x 8 double rank	x 8 double rank	x 8 double rank	DDR200

DIMM Installation Procedures

The DIMM slot has one key marked "2.5V", thus making the module only fit in one direction. Note that the module must be a 2.5 V unbuffered DIMM.



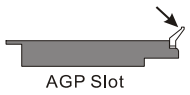
Step 1: Insert the module vertically into the DIMM socket, and then push it in.

Step 2: The plastic clip at the side of the DIMM socket will automatically close.

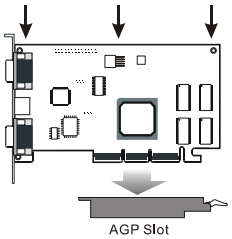
3.3. AGP Display Adapter Installation

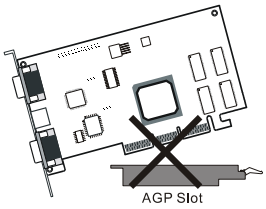
The AGP slot on WinFast K8N supports only 1.5 V AGP device. To install an AGP display adapter, follow these steps:

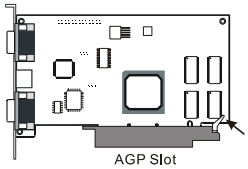
Step 1: Push the clip at the end of AGP slot.
Step 2: Position the AGP card over the AGP slot. Do not tilt the card. Insert the bus connector in the slot and gently press the bus connector down.
Step 3: Push the clip back to close it.



Step 1







Step 2 **Step 3**

3.4. Configuring an Expansion Card

A. IRQ assignments for this motherboard

	PCI INT A	PCI INT B	PCI INT C	PCI INT D
PCI Slot 1	INT D	INT A	INT B	INT C
PCI Slot 2	INT C	INT D	INT A	INT B
PCI Slot 3	INT B	INT C	INT D	INT A
PCI Slot 4	INT A	INT B	INT C	INT D
PCI Slot 5	INT D	INT A	INT B	INT C
AGP Slot	INT E	INT B	—	—
Onboard SATA	INT B	—	—	—
Onboard 1394	INT A	—	—	—
Onboard GIGA LAN	INT C	—	—	—

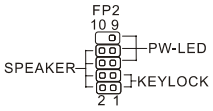
NOTE: When using PCI cards on shared slots, endure the driver support "Share IRQ" or that the cards do not need IRQ assignments. Otherwise, conflicts will arise between the two PCI groups, making the system unstable and the card inoperable.

B. Request/Grant assignments for this motherboard

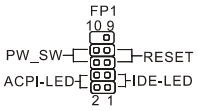
PCI_REQ0	PCI_REQ1	PCI_REQ2	PCI_REQ3	PCI_REQ4	PCI_REQ5
Onboard GIGA LAN	PCI 5	PCI 4	On board 1394	On board SATA	PCI 1 PCI 2 PCI 3

3.5. Connecting Instructions

How each connector is connected and what it does is described here in detail. See Chapter 2 to locate connectors.



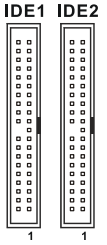
Case Signal Connectors (FP1 & FP2).



FP2:
Pins [1&3] KEYLOCK: Keyboard lock switch lead. It connects to the case-mounted keylock switch, allowing you to disable the keyboard function for security purpose.
Pins [5&7&9] PW-LED: Power LED. Always lit when system power is on.
Pins [2&4&6&8] SPEAKER: Connects to the speaker on system's case.

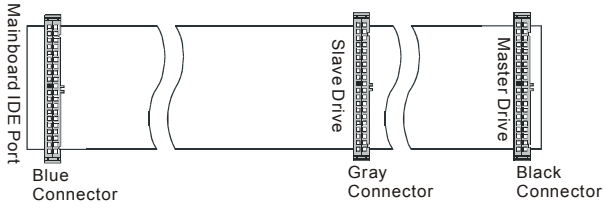
FP1:
Pins [1&3] IDE-LED: IDE hard disk LED shows the activity of a hard disk drive.
Pins [2&4] ACPI-LED: For ACPI LED connection on the case.
Pins [5&7] RESET: Connects to the reset button on the case. The reset button is used to "cold-boot" the system without actually turning off the power, reducing wear and tear on the power supply. Avoid rebooting the system when the HDD LED is blinking.
Pins [6&8] PW_SW: Allows connecting to the power button on the case.

Hard Disk Connector



The on-board Enhanced IDE controller can support up to 4 IDE hard drives or other ATAPI devices, such as CD-ROMs. This controller, as with all Enhanced IDE controllers, consists of both Primary (IDE 1) and Secondary (IDE 2) ports. Each port has an associated connector and cable, which can support up to 2 ATAPI devices each.

All IDE devices have jumpers, which allow the user to configure the device as either "Master" or "Slave". A Master device is one that is ALONE on the IDE cable, whereas a Slave device is installed as a SECOND device on the same cable. Keep in mind that the Master device will appear before the Slave device in the CMOS Setup, as well as the Operating System software.
*Refer to the device documentation for jumper settings.



The Secondary IDE port can be used for up to 2 additional ATAPI devices.
Normally it's recommended that you connect your first hard drive to the Primary port, and the first CD-ROM to the Secondary.

Make sure to align the RED stripe on the ribbon cable with Pin-1 on the motherboard IDE connector. On most hard drives and CD-ROMs, the RED stripe should be oriented towards the power connector of the device.

When using Ultra ATA 66/100 IDE cable (as shown above), the black color connector on the cable is for Master drive, gray color is for Slave drive and blue color is for connecting to IDE port onboard.

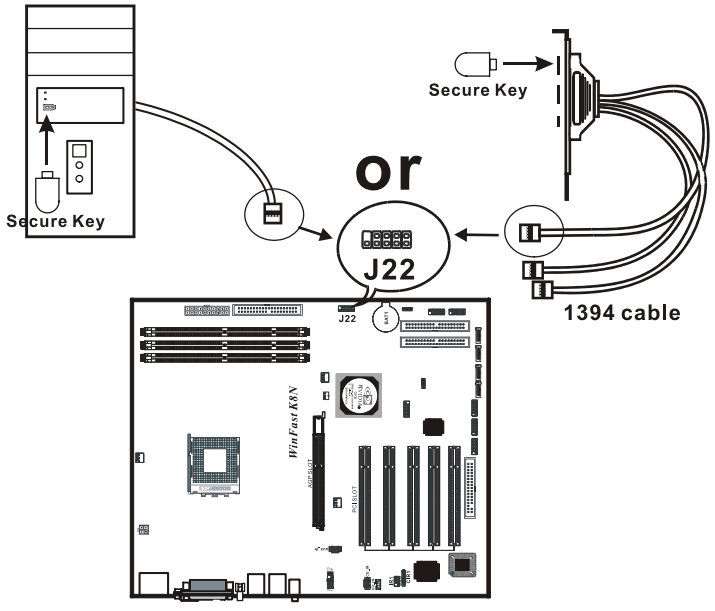
X-Wall IDE

The X-Wall IDE requires no device driver and is independent from and invisible to all operating systems. As long as the driver is Ultra ATA 66/100/133 compliant, X-Wall IDE will work in the system. Once authenticated, its operation is completely transparent to all users who do not require managing usually seen complex Graphical User's Interface (GUI) of other solutions.

The X-Wall IDE comes with a pair of portable *X-Wall Secure Keys* that loads device status and most importantly, the DES/TDES "Secret Key". The X-Wall Secure Key serves as an exclusive device for authentication from which the X-Wall Secure Key must present itself to activate the X-Wall IDE.

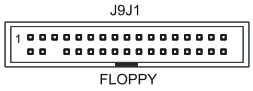
The user can use X-WALL to proceed the data security. You can connect J22 to any 6-pin 1394 connector, please refer to the following figure.

But if you connect J22 to the attached 1394 slot of the case, the 1394 cable of WinFast K8N (Pro) can connect to J11/J12/J13, and then 1394 device can use it.



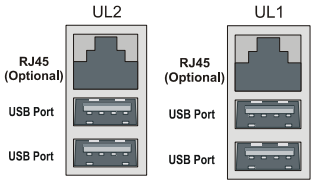
NOTE: 1. ***Does not support ATAPI devices such as CD-ROM, CD-R, CD-RW, DVD-ROM or DVD-RW. 2. Please keep these two keys carefully. In security enable condition, you will not read the hard disk data if you miss the keys.***

Floppy Disk Connector (J9J1)



The on-board floppy controller supports 2 floppy disk drives. Make sure the RED stripe on the ribbon cable is oriented towards Pin-1. Notice the "twist" between the sets of connectors on the floppy cable. The floppy drive "A" position is at the END of the cable, whereas floppy drive "B" is hooked to one of the connectors on the other side of the twist.

RJ45 Ethernet Connector and USB Connectors (UL1, UL2)



RJ45 LAN connector and USB peripheral devices connectors.

UL1 provides 1000 Mbps LAN.
UL2 provides 10/100 Mbps LAN.

WinFast K8N (Pro) supports 10/100/1000 Mbps LAN. When UL1 and UL2 transfer in different network, please refer to the represent meaning of the light as below:

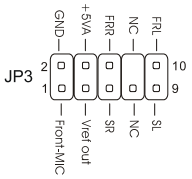
	10 Mbps	100 Mbps	1000 Mbps
UL1 (1000)	Yellow	Green	
UL2 (10/100)	No light	Green	Red/Orange

Cooling Fans (FAN1, FAN2, FAN3, FAN4)

CPU fan (FAN1), Chipset fan (FAN2), system fan (FAN3) and Chipset fan (FAN4) are small 3-pin Header Connectors that provide 12-Volt power for CPU fan, power fan, and system fan. Plug in the fan cable to the connector.

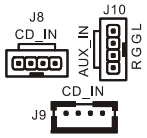
Audio Out Selection (JP3)

JP3 can let you select audio out from the front panel or back panel. Please refer to Chapter 2.3 Jumper Settings to set it.



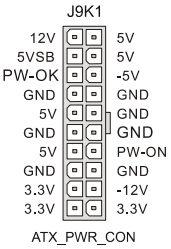
Stereo Audio/Video In Connectors (J8, J9, J10)

J8 and J9 allow you to receive stereo audio input from internal CD ROM drives. J10 is for connecting other auxiliary audio sources.



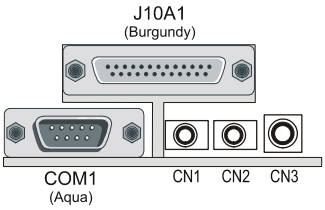
Power Supply Connector (J9K1)

This motherboard features an ATX-style Power Supply Connector. This connector is keyed to prevent connection in the wrong direction. Line up the locking mechanism on the connector from the Power Supply with the tab on the motherboard connector. Press down until the two connectors are locked.



Serial, Parallel and Audio Ports (J10A1)

Includes one 25-pin D-Sub header, 9-pin D-Sub header (COM1), and CN1 (Surround Left/Right) /CN2 (Center/Bass) /CN3 (SPDIF Out).

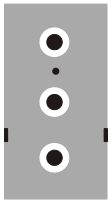


MIC, Line In, Line Out

Mic: Allows microphones to be connected for inputting sound.

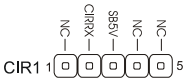
Line In: Allows tape players or other audio sources to be recorded by your computer or played through the Line Out.

Line Out: Connected to headphones or speakers with amplifier.



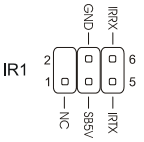
WinFast K8N(Pro) supports 6 channel output, the user can connect line out and CN1 (Surround Left/Right)/CN2 (Center/Bass) to enjoy the best sound effect

* If CN1 and CN2 cannot output the voice, please don't tick "Rear Speakers connected to Line IN" and "Center Speaker and subwoofer connected to Microphone" in volume option of the controller.



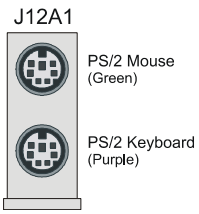
IrDA-Compliant Infrared Module Connector (IR1, CIR1)

The IrDA connector brackets hook directly to these connectors on the motherboard. These connectors provide support for the optional wireless transmitting and receiving infrared module. CIR1 connector is for CIR; IR1 connector is for IR.

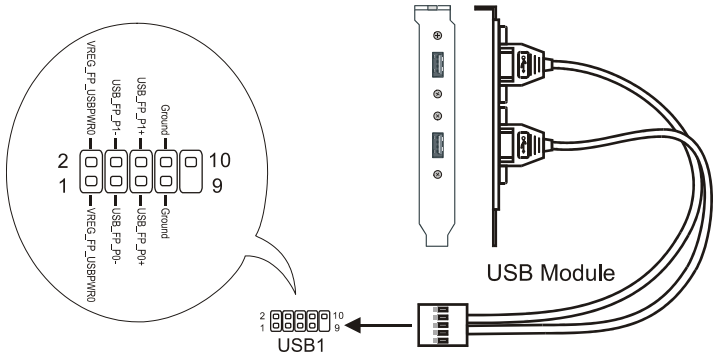


PS/2 Keyboard and Mouse Connector (J12A1)

These two connectors are located on the back panel of the motherboard.



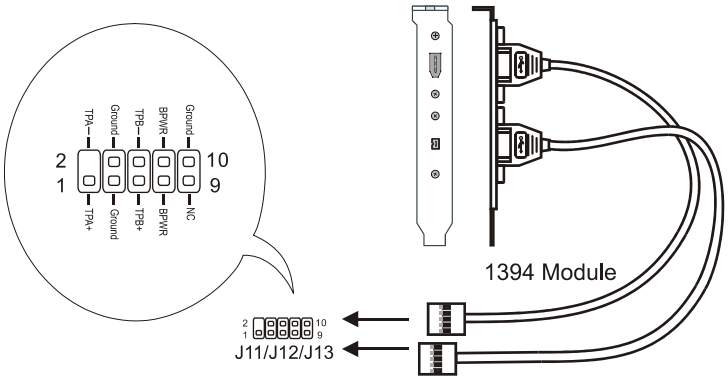
USB Connectors (USB1) (optional)
Each of these connectors is for connecting an optional USB module to provide two additional USB connectors.



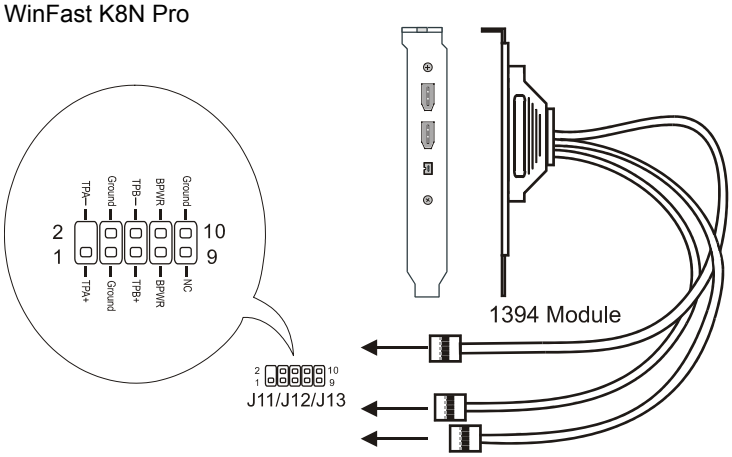
NOTE: Never connect one USB1 cable to 1394 connector that will damage the motherboard.

1394 Connectors (J11/J12/J13)
WinFast K8N offers 3 1394 connectors (J11/J12/J13). You can use the attached 1394 module and connect it to 1394 module of the case.

WinFast K8N

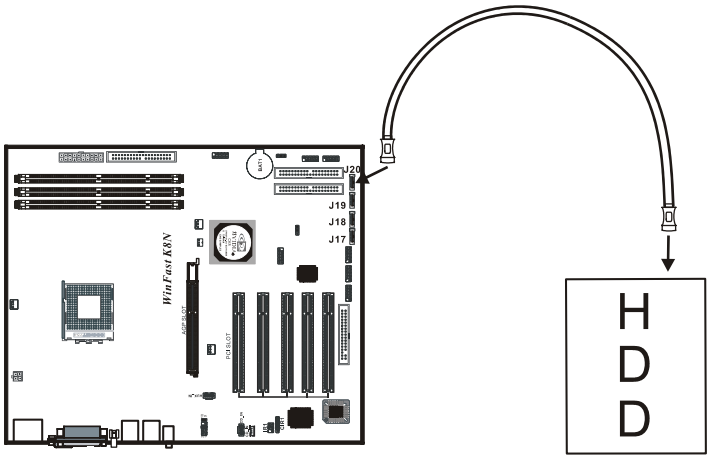


WinFast K8N Pro



NOTE: Never connect a 1394 cable to USB1 connector that will damage the motherboard.

SATA Connectors (J17/J18/J19/J20)
WinFast K8N(Pro) offers 4 SATA connectors that can support SATA RAID0, RAID1 and RAID0+1. Please refer to the following figure about the connecting way:



4. BIOS Setup

To enter the Award BIOS program's main menu:
Turn on or reboot the system.

After the diagnostic checks, press the [Del] to enter the Award BIOS Setup Utility.

To select items:
Use the arrow keys to move between items and select fields.

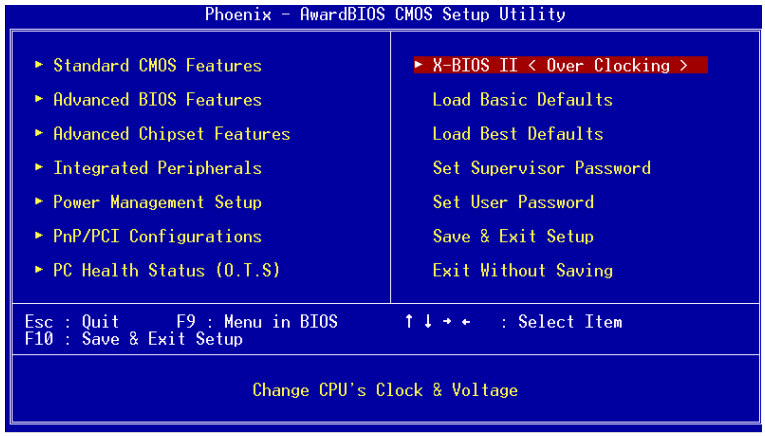
From the Main Menu, press arrow keys to enter the selected submenu.

To modify selected items:
Use the [Up]/[Down] keys to modify values within the selected fields. Some fields let you enter values directly.

4.1. Main Menu

NOTE: If users find that there is any different from your installing screen while installing the driver, please follow the steps in actual situation to operate.

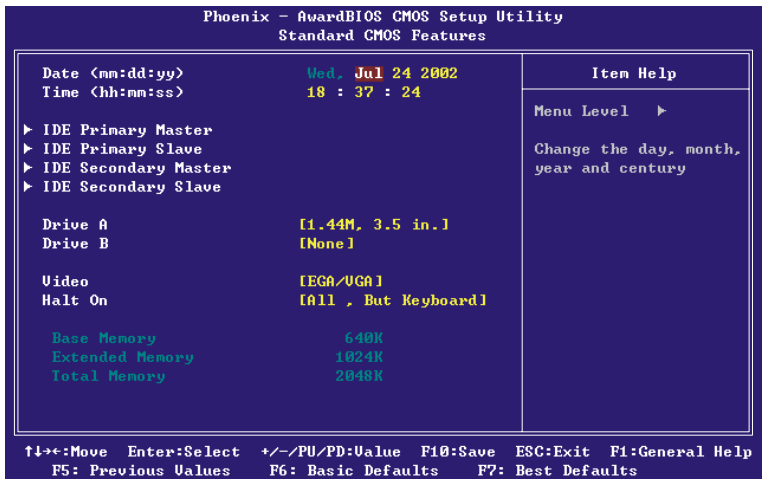
Once you enter the AwardBIOS CMOS Setup Utility, the Main Menu appears on the screen. Main Menu presents you the Setup functions included two exit choices. You could use the arrow keys to select among the items and then press Enter to the submenu.



* Description of selected item is shown in the column on the bottom of the screen.

4.2. Standard CMOS Features

The Standard CMOS Features allows you to choose the options in the setting item for basic system configuration.



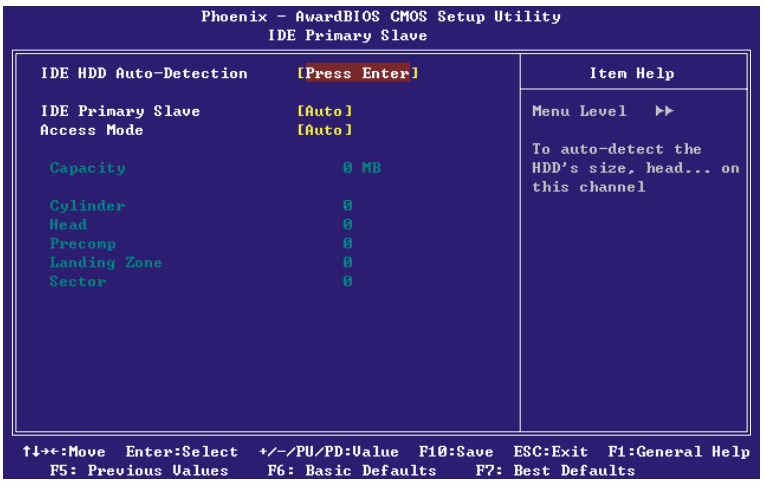
* The Item Help column contains the description of selected item.

Date [mm:dd:yy]
The BIOS determines the day of the week from other date information. It is for information only.

Time [hh:mm:ss]
The time format is <hour> <minute> <second>. The time is calculated based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

IDE Primary Master/Primary Slave/Secondary Master/Secondary Slave
After pressing [Enter], a menu window appears as shown on below:

The BIOS supports up to four IDE drives. This section does not show information about other IDE devices, such as a CD-ROM and SCSI drives.



* The Item Help column contains the description of selected item.

IDE HDD Auto-Detection

The "IDE HDD Auto-Detection" utility is a very useful tool especially when you do not know the type of hard disk you are using. You can use this utility to detect the correct disk type installed in the system automatically. The BIOS will automatically detect the hard disk size and model during POST.

The Award BIOS supports 3 HDD modes: NORMAL, LBA and LARGE modes. The Generic access mode, neither BIOS nor IDE controller, will make transformations during accessing.

NOTE: There must be some software involved to support LBA or LARGE mode of HDDs. All the software needed is located in the Award HDD Service Routine (INT 13h). It may fail to access a HDD with LBA (LARGE) mode selected if you are running under an Operating System, which replaces the whole INT 13h. UNIX operating system do not support either LBA or LARGE, and must utilize the Standard mode. UNIX can support drives larger than 528MB.

Under the AUTO Mode, the BIOS can automatically detect the specifications and optimal operating mode of almost all IDE drives. When you select type Auto for a hard drive, the BIOS detects its specifications during POST, every time the system boots.

IT IS RECOMMENDED THAT YOU SELECT THE TYPE AUTO FOR ALL DRIVES.

Drive A /Drive B [1.44M, 3.5 in.]
Select the correct specifications for the diskette drive(s) installed on your system.

Video [EGA/VGA]
Select the type of primary video subsystem on your system. The BIOS usually detects the correct video type automatically, and supports a secondary video subsystem that cannot be selected in Setup.

Halt On [All, But Keyboard]
During the power-on self test (POST), the system stops if the BIOS detects a hardware error. You can ask the BIOS to ignore certain errors and continue the process. There are the options:

***All Errors*:** If the BIOS detects any non-fatal error, POST stops and prompts you to take corrective action.

No Errors: POST does not stop for any error.

All, But Keyboard: POST does not stop for keyboard error, but stops for all other errors.

All, But Diskette: POST does not stop for diskette drive errors, but stops for all other errors.

***All, But Disk/Key*:** POST does not stop for a keyboard or disk error, but stops for all other errors.

Memory
You can not change the value in the Memory fields which are information only. The setting item shows the total installed random access memory (RAM) and amounts allocated to base memory, extended memory, and other (high) memory.

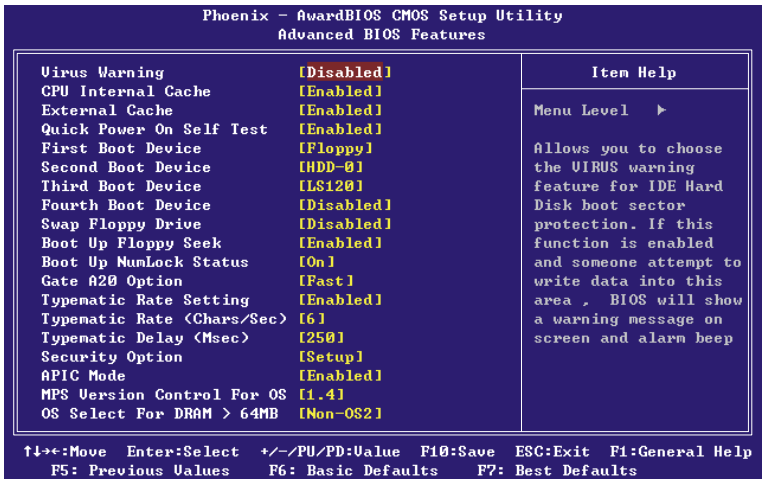
RAM is the computer's working memory where the computer stores programs and data currently being used, so they are accessible to CPU.

Base Memory: Typically 640 KB is also called conventional memory. The DOS operating system and conventional applications use this area.

Extended Memory: The memory is over the 1MB boundary.

Total Memory: Total memory available from the system.

4.3. Advanced BIOS Features



* The Item Help column contains the description of selected item.

Virus Warning [Disabled]
The BIOS will halt on the system. Then the warning message appears as follows if there is virus.

!PBVA WARNING!
Paragon Boot Virus analyzer has
detected virus activity on hard disk
We recommend you to press:
[Enter] Boot from clean disk
[C] Continue Boot

NOTE: When this item is enabled, the monitoring boot sector virus only happens at the booting period. After you enter the system, this function is disabled automatically. So you can run any kind of program, such as many disk diagnostic programs, which attempt to access boot sectors or the partition table of hard disk drive when it is running.

CPU Internal/External Cache
Cache memory is additional memory that is much faster than conventional DRAM (system memory). When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. Select *Enabled* to enable cache.

External Cache [Enabled]
The options are: *Enabled* and *Disabled.*

Quick Power On Self Test [Enabled]
Select Enabled to reduce the amount of time required to run the POST. A quick POST skips certain steps. We recommend that you normally disable quick POST. Better to find a problem during POST than lose data during your work.

First, Second, Third, Fourth Boot Device [HDD-0, Floppy, SCSI, Disabled]
Thiese setup fields determine which drive to be searched first, second or third for the disk operating system (i.e. DOS). You can select your priority bootup drives as Floppy drive A, IDE Hard Disk Drive C, D, E, F, or SCSI.

Swap Floppy Drive [Disabled]
This field is effective only in system with two floppy drives. This item allows you to determine whether to enable the swap floppy drive or not (i.e. physical floppy disk A assigned to logical drive B or physical drive B to logical drive A).

Boot Up Floppy Seek [Enabled]
During the “POST” process, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K-type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks. Because few modern PCs have 40-track floppy drives, we recommend that you set this field to *Disabled* to save time.

Boot Up NumLock Status [On]
This field allows you to determine the default state of the numeric keypad. “On”: keypad is number keys after boot up. “Off”: keypad is arrow keys after boot up.

Gate A20 Option [Fast]
Gate A20 refers to the way the system addresses memory above 1MB (extended memory). When set to *Fast*, the system chipset controls Gate A20. When set to *Normal*, a pin in the keyboard controller controls Gate A20. Setting to *Fast* improves system speed, particularly with OS/2 and Windows.

Typematic Rate Setting [Enabled]
Setting Enabled allows you to adjust both settings. You can use this feature to accelerate cursor movement with the arrow keys. When this item is set Disabled, keep holding down a key will let the system to use the default typematic rate delay of 250 msec, and typematic rate of 6 chars/sec to input repeatedly.

Typematic Rate (Chars/Sec) [6]
When “Typematic Rate Setting” is Enabled, its selections allow you to select the rate at which character repeats when you hold down a key.

Typematic Delay (Msec) [250]
When “Typematic Rate Setting” is Enabled, its selections allow you to select the

delay before key strokes begin to repeat.

Security Option [Setup]
If you have set a password at USER PASSWORD option in main menu, select whether the password is required every time the System boots, or only when you enter Setup. The options include: System and Setup.

APIC Mode [Enabled]
The options are: Enabled and Disabled.

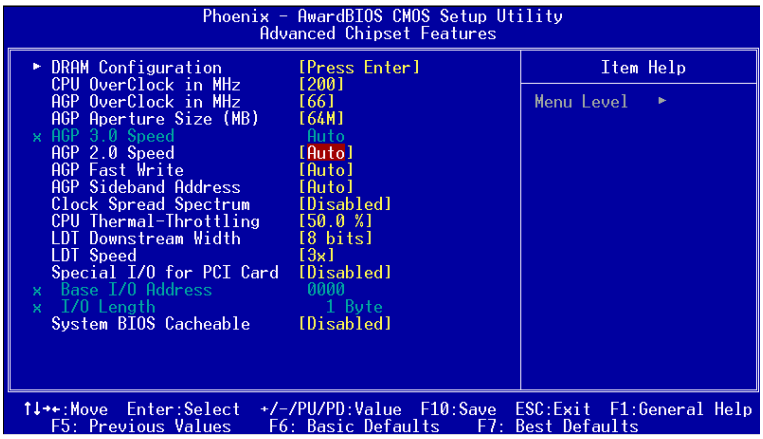
MPS Version Control For OS [1.4]
The options are: 1.1 & 1.4.

OS Select For DRAM > 64MB [Non-OS2]
Allow you to access memory that is over 64MB in OS/2. Choose OS2 when you are using OS2 and SDRAM size greater than 64 MB. Choose Non-OS2 for other operating systems. The options are: *Non-OS2*, *OS2*.

HDD S.M.A.R.T. Capability [Disabled]
The options are: Enabled and Disabled.

Small Logo (EPA) Show [Enabled]
The options are: Enabled and Disabled.

4.4. Advanced Chipset Features



* The Item Help column contains the description of selected item.

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates

communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered.

The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

DRAM Configuration [Press Enter]
DDR Timing Setting by [Auto] & [Manual].

[Manual]: Max Memclock (MHz)-100/133/166/200.

CPU Overclock in MHz [200]
The options are: 200~ 300.

AGP Overclock in MHz [66]
The options are: 66~ 100.

AGP Aperture size (MB) [64M]
The options are: 32M, 64M, 128M, 256M, and 512M.

AGP 3.0 Speed [Auto]
The options are: Auto, 4x, and 4x8x

AGP Fast Write [Auto]
The options are: Auto & Disable.

AGP Sideband Address [Auto]
The options are: Auto & Disable.

Clock Spread Spectrum [Disable]
The options are: Enable and Disable.

CPU Thermal-Throttling [50.0%]
The options are: Disable, 12.5%, 25.0%, 37.5%, 50.0%, 62.5%, 75.0%, and 87.5%.

LDT Downstream Width [8bits]
The options are: Auto & 8bits.

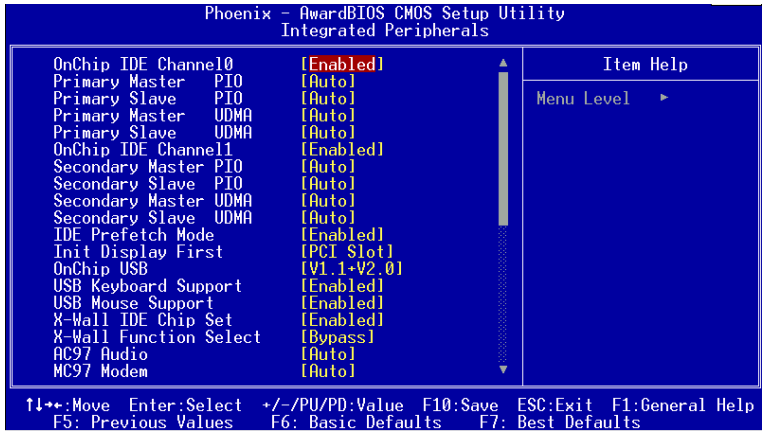
LDT Speed [3x]
The options are: 1x, 2x, 2.5x, 3x, and 4x.

Special I/O for PCI Card [Disable]
The options are: Enable and Disable.

System BIOS Cacheable [Disable]
The options are: Enable and Disable.

4.5. Integrated Peripherals

This Menu Setup allows you to configure your IDE, USB keyboard, Floppy Drive, Parallel Port, Serial Port, and IR function.



* The Item Help column contains the description of selected item.

On-Chip IDE Channel0 [Enabled]
Selecting *Enabled* allows you to adjust the functions of Primary PIO and UDMA.

On-Chip IDE Channel1 [Enabled]
Selecting *Enabled* allows you to adjust the functions of Secondary PIO and UDMA.

Primary Master/Slave PIO, Secondary Master/Slave PIO [Auto]
The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In *Auto* mode, the system automatically determines the best mode for each device. The options are: Auto, Mode 0, Mode 1, Mode 2, Mode 3, and Mode 4.

Primary Master/Slave UDMA, Secondary Master/Slave UDMA [Auto]
Ultra ATA 66/100 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra ATA 66/100, select Auto to enable BIOS support. The options are: Auto and Disabled.

IDE Prefetch Mode [Enabled]
The options are: Enabled and Disabled.

Init Display First [PCI Slot]
If you install an additional PCI display cards, you can select either a PCI display card or the onboard/AGP display to activate the display boot-up screen.

OnChip USB [V1.1+V2.0]
Selecting *Enabled* allows the system Universal Serial Bus (USB) controller when you have USB peripherals. The options are Disabled, V1.1, and V2.0.

USB Mouse Support [Enabled]
If you use a USB keyboard, please choose USB A or USB B.

USB Keyboard Support [Disabled]
The options are: Enabled and Disabled.

Primary AudioCodec at [Onboard]
The options are: Onboard, and AMR/CNR.

X-Wall IDE Chip Set [Enabled]
The options are: Enabled and Disabled.

X-Wall Function [Bypass]
The options are: Bypass and En/Decrypt.

AC97 Audio [Auto]
Selecting *Auto* allows the BIOS to detect the audio device you use.

MC97 Modem [Auto]
The options are: Auto and Disabled.

MAC Lan (nVIDIA) [Auto]
The options are: Auto and Disabled.

IDE HDD Block Mode [Enabled]
Selecting *Enabled* allows automatic detection of the optimal number of block read/writes per sector the drive can support.

Power ON Function [BUTTON ONLY]
Allows you to choose a way to power on. The options include Password, Hot KEY, Mouse Left, Mouse right, Any KEY, BUTTON-ONLY, and Keyboard 98.

KB Power ON Password [Enter]
This setting item allows you to set a password for keyboard powering on.

Hot Key Power ON [Ctrl-F1]
Allows you to choose one of the hot keys to power on from F1 to F12.

Onboard FDC Controller [Enabled]
This setting item allows you to enable or disable the onboard FDC controller.

Onboard Serial Port 1/Port 2
Select an address and corresponding interrupt for the 1st and 2nd serial ports. The choices: 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Disabled, and Auto.

UART Mode Select
Select an infrared port mode. The options are: Normal, IrDA, and ASKIR.

RxD, TxD Active [Hi, Lo]
The options are: Hi,Hi, Hi,Lo, Lo,Hi, and Lo,Lo.

IR Transmission Delay
The options are: Enabled and Disabled.

UR2 Duplex Mode [Half]
This item selects the IR function when the choice of the UART mode is ASKIR. The options are: Full and Half.

Use IR Pins [IR-Rx2Tx2]
The options are: RxD2,TxD2 and IR-Rx2Tx2.

Onboard Parallel Port [378/IRQ7]
This item allows you to determine access onboard parallel port controller with which I/O address. The options are: 378/IRQ7, 278/IRQ5, 3BC/IRQ7, and Disabled.

Parallel Port Mode [SPP]
Select an operating mode for the onboard parallel port. Normal EPP (Extended Parallel Port) ECP (Extended Capabilities Port) ECP+EPP PC AT parallel port Bi-directional port Fast, buffered port Fast, buffered, bi-directional port.

Set to *Normal* unless you are certain your hardware and software both support EPP or ECP mode. The options are: SPP, EPP, ECP, ECP+EPP and Normal.

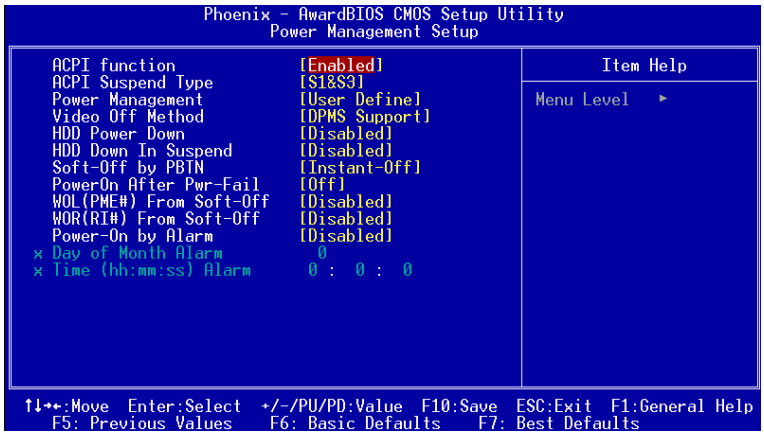
EPP Mode Select [EPP1.7]
The options are: EPP 1.7 and EPP 1.9

ECP Mode Use DMA [3]
This field allows you to select a DMA channel for the port.

The options are: 1 and 3.

PWRON After PWR-Fail [Off]
The options are: Off, On, and Former-Sts.

4.6. Power Management Setup



* The Item Help column contains the description of selected item.

ACPI Function [Enabled]
Selecting Enabled allows this function if you use ACPI compliant OS, such as Windows 98 or Windows 2000.

ACPI Suspend Type [S1(POS)]
Three options are available: S1 (POS) and S3 (STR); and S1&S3. POS stands for Power On Suspend. STR stands for Suspend To RAM.

Power Management [User Define]
This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

There are 4 selections for Power Management, three of which have fixed mode settings.

Disable (default)	No power management. Disables all four modes
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.
Min. Power Saving	Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.

Max. Power Saving	Maximum power management -- **ONLY AVAILABLE FOR SL CPU'S**. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.

Only Power Management field on the Power Management Setup menu is set to User Defined will the following fields be user configurable.

Video Off Method [DPMS Support]
This determines the manner in which the monitor is blanked:

Blank Screen: This option only writes blanks to the video buffer.

V/H SYNC+Blank: This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

DPMS Supported: Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards.

HDD Power Down [Disabled]
This setting item will be able to change when Power Management is set to User Define.

The options are: Enabled and disabled.

HDD Down In Suspend [Disabled]
The options are: Enabled and disabled.

Soft-Off by PBTN [Instant-Off]
This item allows you to set the off function of power button by software control.

The options are: Instant-off and Delay 4 sec.

PowerOn After Pwr-Fail [Off]
The options are: Off, On, and Former-STs.

WOL(PME#) From Soft-off [Disabled]
The options are: Enabled and disabled.

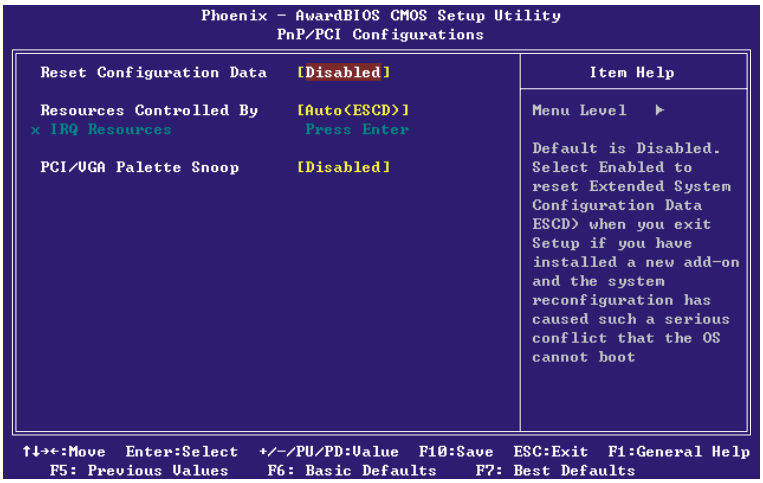
WOR(RI#) From Soft-off [Disabled]
The options are: Enabled and disabled.

Power-On by Alarm [Disabled]
The options are: Enabled and disabled.

Day of Month Alarm [0]
Set a day for the alarm in month.

Time (hh:mm:ss) of Alarm [0 0 0]
Set a time for the alarm in hours, minutes, and seconds.

4.7. PnP/PCI Configurations



* The Item Help column contains the description of selected item.

The PCI Personal Component Interconnect Bus was developed primarily to address two important issues: (a) How to allow peripheral devices to take the fullest advantage of the power of CPU technology, and (b) Provide a simpler installation process for peripheral devices, such as Network cards, EIDE or SCSI controllers.

PCI accomplishes these goals with its 32-bit Data path Local Bus design, and support for Plug&Play. Unlike older expansion bus architectures, PCI provides peripherals with a direct connection to the CPU and memory. The PCI bus runs at 33Mhz and has a maximum transfer capability of 132MBps. With Plug & Play, the system BIOS automatically determines hardware resources for new peripherals, simplifying installation of multiple interface cards.

This Setup Menu provides configuration options for the PCI Bus and its assigned resources.

Reset Configuration Data [Disabled]

Disabled: Normal Setting

Enabled: Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

Resource Controlled By [Auto (ESCD)]

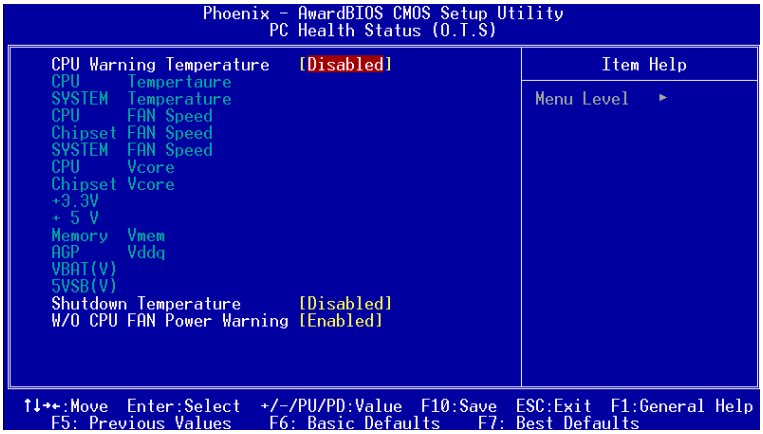
Manual: The field defines that the PNP Card's resource is controlled by manual. You can setup whether IRQ-X or DMA-X is assigned to PCI/ISA PnP or Legacy ISA Cards.

Auto: If your ISA card and PCI card are all PNP cards. Set this field to "Auto". The BIOS will assign the interrupt resource automatically.

IRQ Resources [Press Enter]
Pressing *Enter* will take you to the IRQ Resources setup screen that allows you to assign each IRQ to a device. When the resources are controlled manually, pressing *Enter* will take you to the IRQ Resources setup screen that allows you to assign each system interrupt as a PCI device or reserve the IRQ, depending on the type of device using the interrupt:

PCI/VGA Palette Snoop [Disabled]
Selecting Enabled allows the BIOS to preview VGA Status, and to modify the information delivered from the feature connector of the VGA card to the MPEG card.

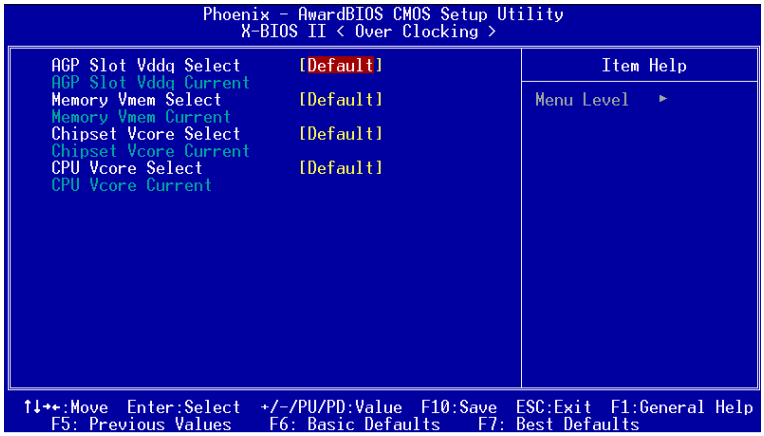
4.8. PC Health Status (O.T.S.)



* The Item Help column contains the description of selected item.

This section helps you to get more information about your system including CPU temperature, FAN speed and voltages. It is recommended that you contact with your motherboard supplier to get proper value about your setting of the CPU temperature.

4.9. X-BIOS II (Over-Clocking)



* The Item Help column contains the description of selected item.

AGP Slot Vddq Select [Default]
The options are: 1.8 V, 1.7 V, and 1.6V.

Memory Vmem Select [Default]
The options are: 2.80 V, 2.70V, Default and 2.50V.

Chipset Vcore Select [Default]
The options are: 1.90 V, 1.80 V, 1.70V and Default.

CPU Vcore Select [Default]
For setting the Vcore voltage. The options include: 0.800V ->1.700V and Default.

4.10. Load Basic Defaults

The BASIC Defaults have been set to provide the minimum requirements for your system to operate. Its performance is lower than the “Load Best Defaults”. We suggest you use “Load Best Default”. If your system card has compatibility issues, use the “Load Basic Defaults”.

4.11. Load Best Defaults

The “Load Best Defaults” function loads the system manufacture default data. This is the default setting from Leadtek. This function will be necessary when the system CMOS data is corrupted or you forget your settings.

4.12. Set Supervisor/User Password

Passwords can be set to provide protection for the BIOS configuration options, or to restrict access to the computer itself.

When enabled, User Password will require all users to enter a password in order to use the system, and/or enter the BIOS setup (but can't change its contents). A Supervisor Password is used to protect the stored CMOS options from being changed by unauthorized users.

Keep in mind that when set, a password is required only when booting the system. It will not provide protection to a system that is already booted.

The password check option is set in BIOS FEATURES SETUP by choosing either System (the password prompt appears every time the system is powered on) or Setup (the password prompt appears only when the user enters the BIOS Setup). The password is stored in CMOS RAM, and can be cleared by removing the battery for a while and then re-installing it back.

To set a password:

- You must first set the Supervisor password by choosing Supervisor Password and pressing [ENTER]. Setup prompts for a password.
- Enter a 1~8 character password using letters, numbers, or a combination of both. The specific characters are not shown as you enter them. Press [ENTER].
- A confirmation box appears asking you to re-enter the password. Enter the password again. Press [ENTER]. Follow the same procedure to set the User Password.

To change a password:

- Select the appropriate password option (Supervisor or User) from the main menu and press [ENTER]. Enter the current password and press [Enter]. The screen does not display the characters entered. Enter in the new password, then the confirmation. You cannot change the current password unless you know it.

To erase a password:

- If you know the current password, but want to disable password checking, follow the procedure for changing the password. When the Setup prompts for the new password, simply press [ENTER]. You will see a message indicating that the password is disabled.
- If you do not know the current password, you can clear the CMOS data by removing the battery for a while and then re-installing it back (this will clear all the user-defined BIOS).

4.13. Save & Exit Setup

The “SAVE & EXIT SETUP” option will bring you back to boot up procedure with all the changes you just recorded in the CMOS RAM.

4.14. Exit Without Saving

The “EXIT WITHOUT SAVING” option will bring you back to normal boot up procedure without saving any data into CMOS RAM, and will not destroy all the old data in CMOS.

5. Driver Installation

5.1. Under Windows 2000/XP

The installations of the chipset driver, GIGA LAN driver, SATA driver under Windows XP/2000 all together take just one click. Follow the steps given below to install all those drivers at once.

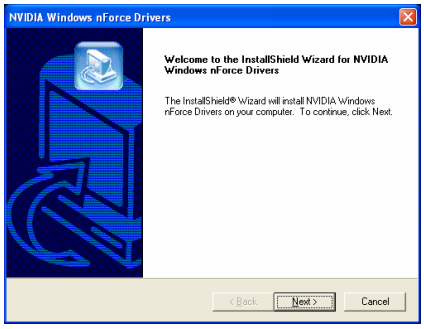
NOTE:The following instructions are for your reference only. If users find that there is any different from your installing screen while installing the driver, please follow the steps in actual situation to operate.

5.1.1. Installing Chipset Driver

Step 1: Insert the "WinFast K8N Driver CD" into the CD-ROM drive.

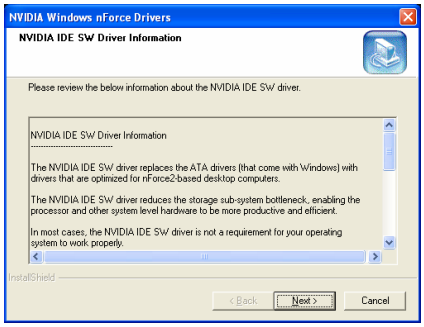
Step 2: Your computer will run the Autorun program automatically and the WinFast K8N setup screen will appear as shown in the figure to the right. Click 'Chipset Driver Setup'.

Step 3: The InstallShield Wizard dialoge box appears (see the first figure to the right). It will guide you through the installation process. Click on 'Next'.

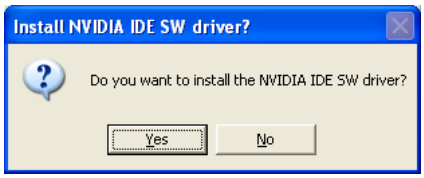


Step 4: The other warning dialogue box about hardware installation pops up. Please ignore it and click on 'Continue Anyway' button.

Step 5: After read the information of NVIDIA IDE SW Driver, click 'Next' to continue the installing process.

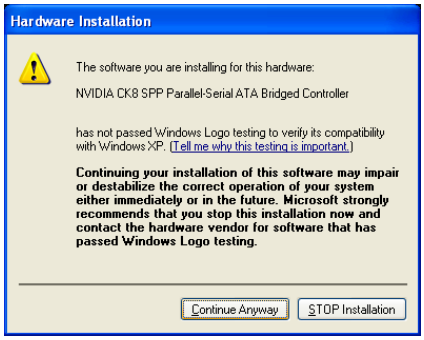


Step 6: Another dialogue appears and ask you to install NVIDIA IDE SW driver, click 'Yes'.



Step 7: The other warning dialogue box about hardware installation pops up. Please ignore it and click on 'Continue Anyway' button.

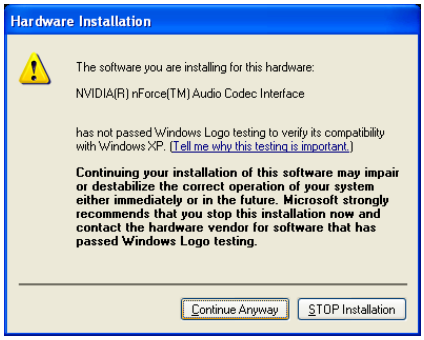
Step 8: The other warning dialogue box about hardware installation pops up. Please ignore it and click on 'Continue Anyway' button.



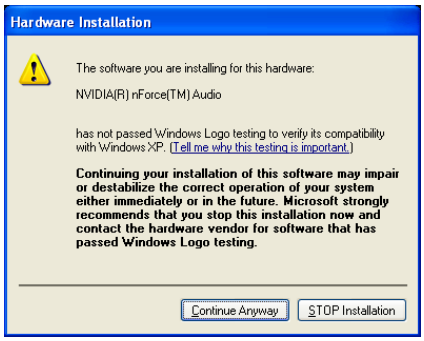
Step 9: The other warning dialogue box about hardware installation pops up. Please ignore it and click on 'Continue Anyway' button.

Step 10: The other warning dialogue box about hardware installation pops up. Please ignore it and click on 'Continue Anyway' button.

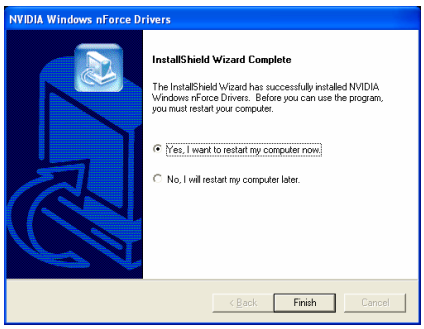
Step 11: The other warning dialogue box about hardware installation pops up. Please ignore it and click on 'Continue Anyway' button.



Step 12: The other warning dialogue box about hardware installation pops up. Please ignore it and click on 'Continue Anyway' button.

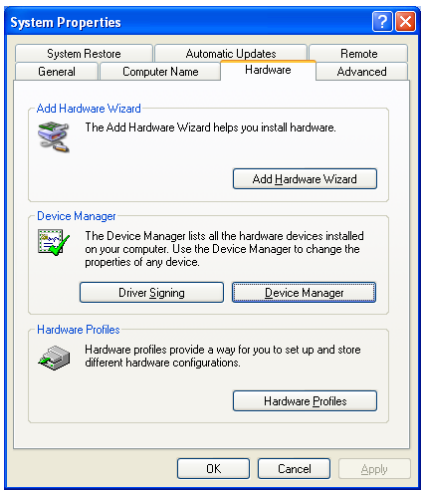


Step 13: The system is now completing chipset driver installation. Please tick ”Yes, I want to restart my computer now” and click ‘Finish’.

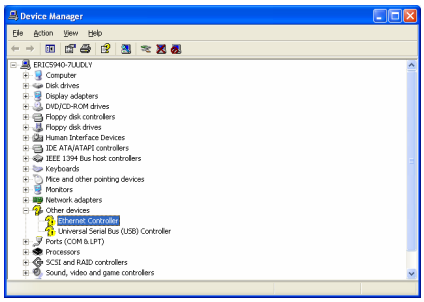


5.1.2. Installing GIGA LAN Driver

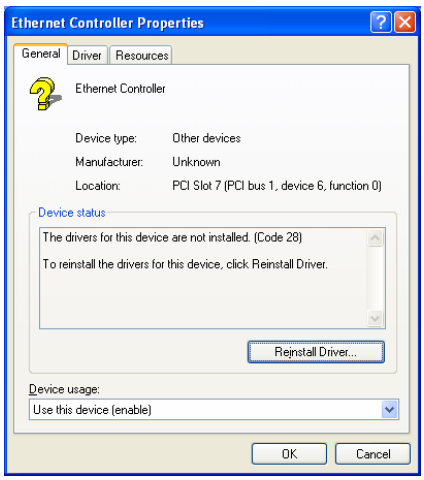
Step 1: Firstly, click the icon “Start” on the down-left corner of the screen, then select “Setup”, “Control Panel”, and “System”. Then the dialogue box ‘System Properties’ pops up. Select “Hardware” this tab and the scrren will shown in the figure to the right. Then click on ‘Device Manager’ button.



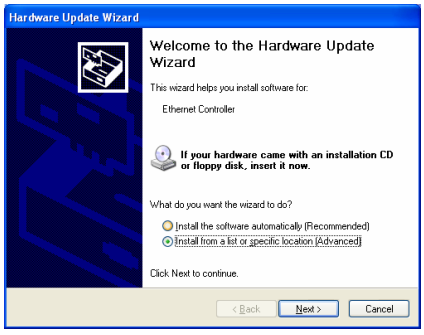
Step 2: In “Device Manager” screen, please select “ Ethernet Controller” in ‘other devices’.



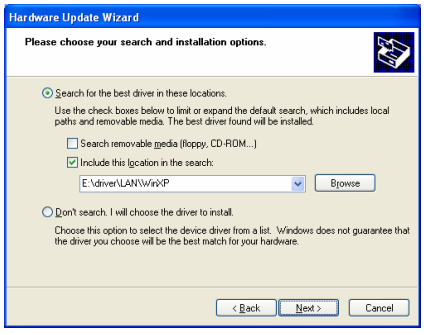
Step 3: In “Ethernet Controller Properties” this screen, select “General” this tab and click ‘Reinstall Driver’ to the next step.



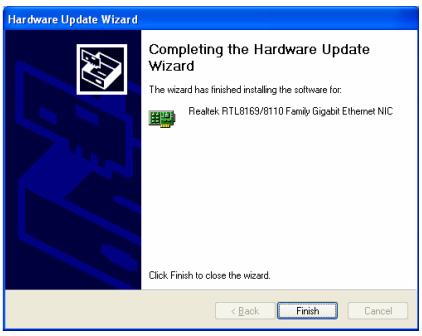
Step 4: The ‘Hardware Update Wizard’ dialog box pops up that says ‘The wizard helps you install software for: Ethernet Controller. Tick ‘Install from a list or specific location (Advanced)’. Then click ‘Next’.



Step 5: Select “Search for the best driver in these locations”, then tick “Include this location in the search”. Click ‘Next’.

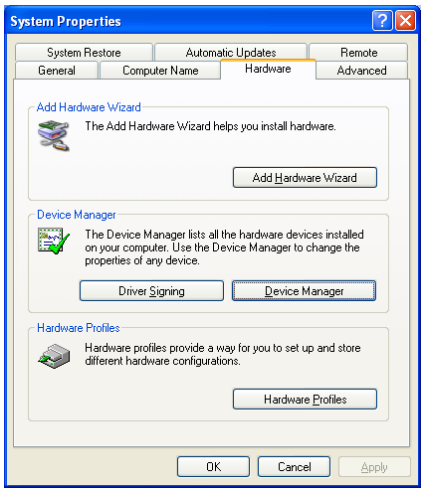


Step 6: The system is now completing Giga Lan driver installation. Click ‘Finish’.

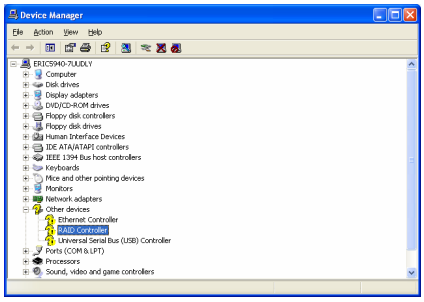


5.1.3. Installing SATA Driver

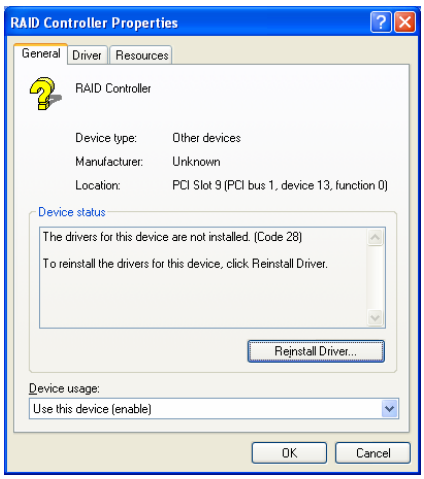
Step 1: Firstly, click the icon “Start” on the down-left corner of the screen, then select “Setup”, “Control Panel”, and “System”. Then the dialogue box ‘System Properties’ pops up. Select “Hardware” this tab and the scrren will shown in the figure to the right. Then click on ‘Device Manager’ button.



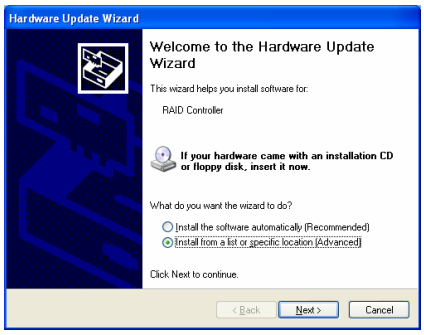
Step 2: In “Device Manager” screen, please select “RAID Controller” in ‘other devices’.



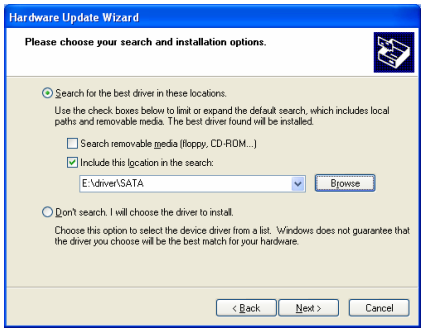
Step 3: In “RAID Controller Properties” this screen, select “General” this tab and click ‘Reinstall Driver’ to the next step.



Step 4: The ‘Hardware Update Wizard’ dialog box pops up that says ‘ The wizard helps you install software for: RAID Controller. Tick ‘Install from a list or specific location (Advanced)’. Then click ‘Next’.

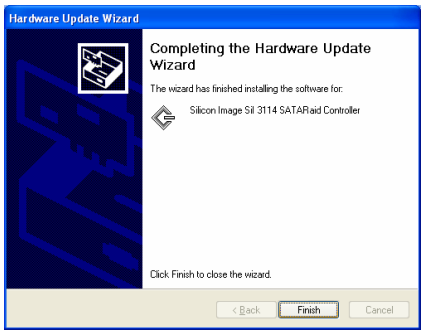


Step 5: Select “Search for the best driver in these locations”, then tick “Include this location in the search”. Click ‘Browse’ to select your CD ROM location. Then click ‘Next’.



Step 6: The other warning dialogue box about hardware installation pops up. Please ignore it and click on 'Continue Anyway' button.

Step 7: The system is now completing Giga Lan driver installation. Click 'Finish'.



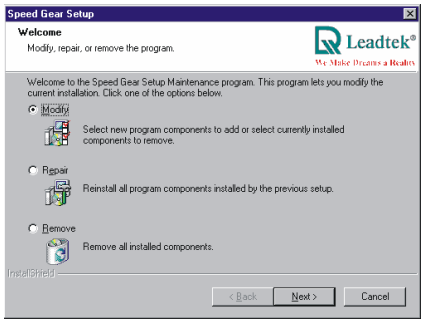
5.2. Installing Speed Gear Over Clock Utility

Step 1: Insert the "WinFast K8N Driver CD" into the CD-ROM drive.

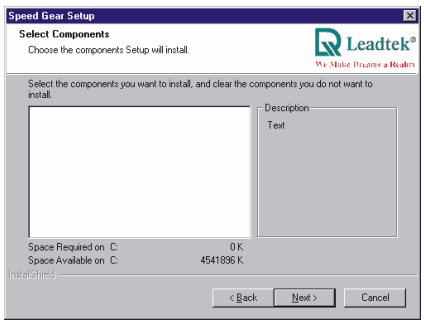
Step 2: Your computer will run the Autorun program automatically and the WinFast K8N setup screen will appear as shown in the figure to the right. Click 'Install Speed Gear Over Clock Utility'.

Step 3: The dialog box appears and asks you to help choose setup language. Please select 'English' and click 'OK'.

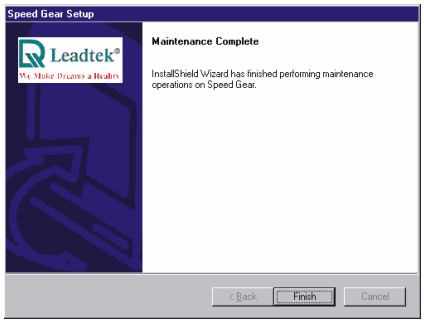
Step 4: The 'Speed Gear Setup' dialog box pops up, that wants you help to choose modity,repair, or remove the program. Please tick 'Modity' and then click 'Next'.



Step 5: The wizard of the right dialog box asks you to select the components. Click the button ‘Next’.



Step 6: The InstallShield Wizard dialog box appears and informs you maintenance has completed. Click ‘Finish’.



5.3. Installing DirectX 8.1

Step 1: Put the software CD in the CD-ROM drive. The WinFast K8N setup screen will appear.

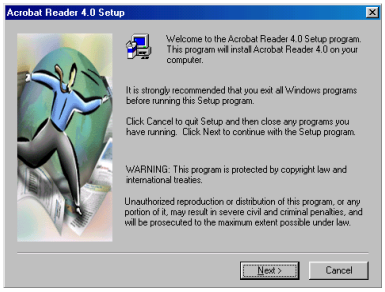
Step 2: Click on “Install DirectX 8.x”, and a dialog box appears. Click “Yes”.

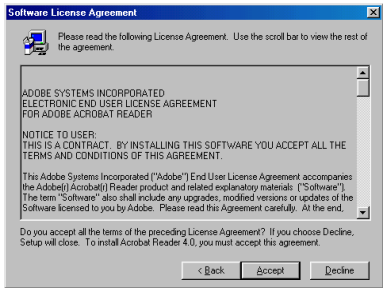
Step 3: The license agreement window appears. Click “Yes”.

Step 4: Once the installation is complete, you will be asked to restart your machine. Click “OK” to restart your computer.

5.4. Installing Acrobat Utility

Step 1: Put the software CD in the CD-ROM drive. The “WinFast K8N Setup” window will appear on the screen.



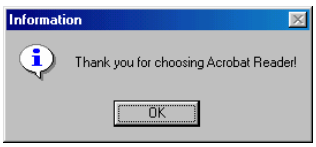


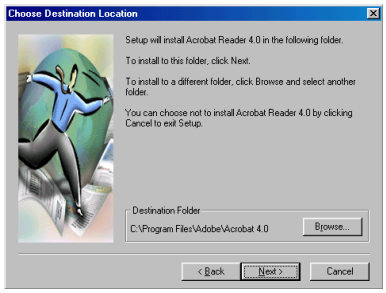
Step 2: Click on “Install Acrobat Utility”, and a dialog box appears. Click “Next”.

Step 3: The software license agreement window appears. Click “Accept”.

Step 4: A window asks you to choose the destination location. Click “Next”.

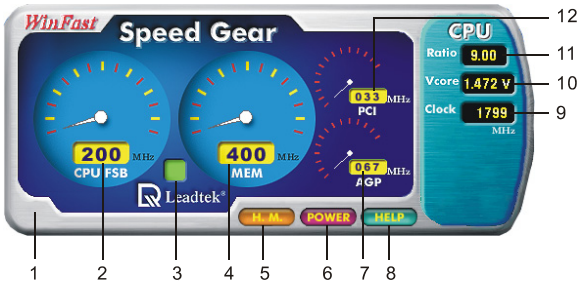
Step 5: When the installation is complete, a dialog box will appear. Click “OK”.



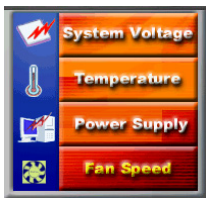


6. Speed Gear Operation

Speed Gear is an over-clocking tool developed by Leadtek, which you can use to conveniently adjust the speeds of your CPU, memory, and PCI. You can install Speed Gear from the software CD. Once it is installed, you can double click the icon in the system tray to bring up the menu. The operation is described below:



1. When this indicator is yellow, the changes are applied to every bootup. When it is red, the setting changes only affect this boot session. You can click on the indicator to switch between yellow and red.
2. The number shows the speed of CPU's FSB. The default value is determined by the value in the <<< X-BIOS II >>> setup screen in BIOS Setup.
3. The ID of the speed combination of CPU's FSB, memory, and PCI as a group. There are three groups: A, B, and C.
4. The number shows the speed of memory. This value changes in proportion to the changes of CPU's FSB.

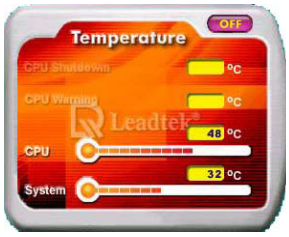


5. <HM> button: Click to bring up a on-screen control panel of four buttons as shown in the first figure to the right.

   <System Voltage>:
   Clicking on the <System Voltage> button brings up another control panel as shown in the figure below.

   There are four meters showing the current Vcore, Vddq, Vmem, and Vchipset each with a reading on the bottom. There is a small yellow triangle arrow below one of the meters.

You can click on the handle bar on the right and hold the mouse button down to change the voltage of the meter pointed at by the triangle. If you wish to make changes to a different meter, simply click on such a meter, then the triangle will move under the meter you just clicked on.



<Temperature>:
Click on the <Temperature> button. There will be an information box, as shown in the first figure to the right, showing you the current CPU Shutdown temperature, CPU temperature and System temperature.

<Power Supply>:

Click on the <Power Supply> button. There will be an information box, as shown in the second figure to the right, showing you the current power supply status.

<Fan Speed>

Click on the <Fan Speed> button. There will be an information box, as shown in the third figure to the right, showing you the current CPU fan speed , AGP fan and system fan speed.

6. Power switch of the Speed Gear utility. Click to close this application.
7. Speed of AGP bus. This value changes in proportion to the change of CPU's FSB.
8. <help> button. Clicking here will bring up a table as shown in the last figure to the right. It shows the range of each group in << X-BIOS II >>.
9. Speed of the CPU. This value is generated by multiplying the value of CPU's FSB and the value of Ratio.
10. Vcore of the CPU. This can only be altered in << X-BIOS II >> menu.
11. As the clock-multiplier of the CPU is locked, the CPU ratio cannot be changed.
12. Speed of PCI bus. This value changes in proportion to the change of CPU's FSB.

7. Appendix

7.1. BIOS Flash Utility

If you get a new floppy disk or CD_ROM from your local dealer which contains a new version of the BIOS binary file, or you obtain the new BIOS binary file directly from our Web Site (www.leadtek.com.tw), please follow the steps below to update the BIOS.

NOTE: Please contact your dealer first to see if you need to update your BIOS. If you update BIOS without contacting your dealer, you might encounter problems and are unable to start the computer.

Step 1: Reboot into DOS mode or select "Command Prompt Only" from the boot menu of Windows 95/98

Step 2: Insert the provided CD into CD-ROM (or floppy disk to Drive A)

Step 3: Copy "AWDFLASH.EXE" to a new directory from X:\FLASH sub-directory (X: being your CD-ROM drive).

Step 4: Copy the new BIOS binary file to the above said new directory.

Step 5: Change to the new directory and type the following command: AWDFLASH [Filename] ([Filename] means the file name of BIOS binary file)

Step 6: A message will display on your screen. Follow the instruction to update BIOS.

NOTE: Do not take any action before finishing the updating, otherwise you may encounter severe problems and need to have it sent for repair.

Step 7: You can also use "AWDFLASH /?" command for help messages.

NOTE: 1. It is recommended that the application is run under DOS prompt. Please do the following to go to DOS prompt. Start your system. Press and hold Ctrl key before Windows starts, and the Startup Menu will appear. Select the "Safe Mode Command Prompt Only" option.

2. Windows users can update your BIOS in Windows by running the program, winflash.exe, at X:\Flash (X:\ being your CD-ROM drive).

7.2. Troubleshooting Procedures

Use the following procedures for troubleshooting. If you have followed all of the procedures below and still need assistance, contact your vendor or our Technical Support staff.

NOTE: Before the over-click action, please make a system boot-up disk that includes awdflash.exe and BIOS file, and add awdflash xxxxxxxx.bin/sn/py/cc/r to autoexec.bat. on the disk. If over clocking fails, the system will not be able to reboot and the floppy disk drive may appear to be in action. When so occurs, insert the disk mentioned above into the disk drive, and your computer will shut down and successfully reboot on its own.

As the CPU is from over-clock to crashed status, please refer to the steps as below:

Step 1: Power off the computer, and then remove the power cord.
Step 2: After one minute, plug the power cord back in.
Step 3: Press the "Insert" key before rebooting the mainboard power. Then CPU will turn back to safety status.

When the floppy disk drive is working, but there is no video shown on the screen -- there are two reasons may cause this situation:
1. As you operate AWDFLASH, the system is power off.
2. Sometimes this situation will happen--the CPU crashes from over-clocking.

In this time, you must follow the following steps to deal with it:

Step 1: Insert the boot-up disk of Note we mentioned above into the disk drive.
Step 2: Reboot your computer.

Before Power On
Step 1: Make sure there is no short circuit between the motherboard and case.
Step 2: Disconnect all the ribbon/wire cables from the motherboard.
Step 3: Remove all the add-on cards except the video graphics card (Make sure the video/graphics card is inserted properly).
Step 4: Install a CPU, the chassis speaker and the power LED to the motherboard (Check all the jumper settings as well).
Step 5: Install a memory module into one bank.
Step 6: Check the power supply voltage monitor 115 V/230 V switch.

No Power
Step 1: Make sure the default jumper is on and the CPU is correctly set up.
Step 2: Turn the power switch on and off to test system.
Step 3: If there's still no power, turn it off and check change the jumper setting again.
Step 4: If it does not help by changing the jumper setting, clear the CMOS data.

Step 5: Check the power supply voltage monitor, especially the power supply 115 V/230 V switch.

No Video
Use the following steps for troubleshooting your system configuration.

Step 1: If you have no video, remove all the add-on cards and cables.
Step 2: Check for shorted connections, especially under the motherboard.
Step 3: Check the jumpers' settings, clock speed, and voltage settings.
Step 4: Use the speaker to determine if any beep codes exist.
Step 5: If you are a system integrator, VAR or OEM, a POST diagnostics card is recommended. For port 80h codes.

7.3. Technical Support

In the event of not finding the solution for your problem, please contact our technical support staff, or E-mail to <service@leadtek.com.tw>, with the following information:

Product name: It will be easier for our staff to answer your question if you know the name of the product. The name of the product is displayed during system booting.
Software driver version: We are updating the version of utilities and drivers from time to time, so it will be a great help for us to understand where the problem lies in. The version number is printed on the diskette label.
Motherboard manufacturer, BIOS version and chipset: It is important to know who manufactured your motherboard, which system BIOS are you using, and what types of chipset are being used on your motherboard.
Computer type and speed: The type of processor you are using and its speed.
Monitor manufacturer and model: Please advise the type and supporting mode of the monitor you are using.
Detailed description of your problem: Please describe in detail all the problems you encountered, including the kind of software and hardware you are using, and the contents of your system files.

7.4. FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. These limits are designed to

provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Shielded interface cables must be used in order to comply with emission limits. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

7.5. Limited Warranty

Leadtek warrants to the original purchaser of this product that it shall be free of defects resulting from workmanship or components for a period of one (1) year from the date of sale. Defects covered by this Limited Warranty shall be corrected either by repair or, at Leadtek's discretion by replacement. In the event of replacement, the replacement unit will be warranted for the remainder of the original one (1) year period or thirty (30) days, whichever is longer. THERE ARE NO OTHER ORAL OR WRITTEN WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This Limited Warranty is nontransferable and does not apply if the product has been damaged by negligence, accident, abuse, misuse, modification, misapplication, shipment to the Manufacturer or service by someone other than the Leadtek Transportation charges to Leadtek are not covered by this Limited Warranty. To be eligible for warranty service, a defective product must be sent to and received by Leadtek within fifteen (15) months of the date of sale and be accompanied with proof of purchase. Leadtek does not warrant that this product will meet your requirements; it is your sole responsibility to determine the suitability of this product for your purposes. Leadtek does not warrant the compatibility of this product with your computer or related peripherals, software.

LEADTEK'S SOLE OBLIGATION AND LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF A DEFECTIVE PRODUCT. THE MANUFACTURER SHALL NOT, IN ANY EVENT, BE LIABLE TO THE PURCHASER OR ANY THIRD PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LIABILITY IN TORT RELATING TO THIS PRODUCT OR RESULTING FROM ITS USE OR POSSESSION.

This limited warranty is governed by the laws of Taiwan.