Statement:

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Version:

User's Manual V1.0 in English for CK804K8MA series motherboard.

P/N: 91-181-CK8-M1-0E

Symbol description:


Note: refers to important information that can help you to use motherboard better.


Attention: indicates that it may damage hardware or cause data loss, and tells you how to avoid such problems.


Warning: means that a potential risk of property damage or physical injury exists.

More information:

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

Item Checklist:

Thank for your purchasing WinFast CK804K8MA series motherboard. Please check the package; if there are missing or damaged items, contact your distributor as soon as possible.

- ❖CK804K8MA series motherboard (x1)
- ❖WinFast Utility CD (x1)
- ❖User's Manual (x1)
- ❖IDE Ribbon cable (x1)
- ❖FDD Ribbon cable (x1)
- ❖I/O Shield (x1)
- ❖S-ATA Signal Cable (x2)
- ❖S-ATA Power Cable (x1)
- ❖Retention Mechanism (x1)
- ❖USB 2.0 Cable (x1) (optional)

Declaration of conformity

CE

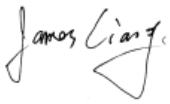
HON HAI PRECISION INDUSTRY COMPANY LTD
66 , CHUNG SHAN RD., TU-CHENG INDUSTRIAL DISTRICT,
TAIPEI HSIEN, TAIWAN, R.O.C.

declares that the product

Motherboard
CK804K8MA

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

☑ EN 55022/A1: 2000	Limits and methods of measurements of radio disturbance characteristics of information technology equipment
☑ EN 61000-3-2/A14:2000	Electromagnetic compatibility (EMC) Part 3: Limits Section 2: Limits for harmonic current emissions (equipment input current <= 16A per phase)
☑ EN 61000-3-3/A1:2001	Electromagnetic compatibility (EMC) Part 3: Limits Section 2: Limits of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current <= 16A
☑ EN 55024/A1:2001	Information technology equipment-Immunity characteristics limits and methods of measurement

Signature :  Place / Date : TAIPEI/2004

Printed Name : James Liang Position/ Title : Assistant President

Declaration of conformity

Trade Name:	WinFast
Model Name:	**CK804K8MA**
Responsible Party:	PCE Industry Inc.
Address:	458 E. Lambert Rd. Fullerton, CA 92835
Telephone:	714-738-8868
Facsimile:	714-738-8838
Equipment Classification:	FCC Class B Subassembly
Type of Product:	Motherboard
Manufacturer:	**HON HAI PRECISION INDUSTRY COMPANY LTD**
Address:	66 , CHUNG SHAN RD., TU-CHENG INDUSTRIAL DISTRICT, TAIPEI HSIEN, TAIWAN, R.O.C.

Supplementary Information:

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

Tested to comply with FCC standards.

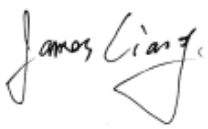
Signature :  Date : 2004

Table of Contents

Table of Contents

Warning:

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

Warning:

We cannot guarantee that your system will operate normally while overclocked. Normal operation depends on the overclock capacity of your device.

Attention:

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

Attention:

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

This manual is suitable for motherboard of CK804K8MA series. Each motherboard is carefully designed for the PC user who wants diverse features.

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

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

For example: 

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

Chapter 1

Thank you for buying WinFast CK804K8MA series motherboard. This series of motherboard is one of our new products, and offers superior performance, reliability and quality, at a reasonable price. This motherboard adopts the advanced nForce4 chipset, providing users a computer platform with a high integration-compatibility-performance price ratio.

This chapter includes the following information:

- Main Features
- Motherboard Layout

Main Features

Size:

- mATX form factor of 9.6” x 9.6”

Microprocessor:

- Supports AMD Athlon™64, Athlon™64FX family processors
- Supports HyperTransport technology

Chipset:

- nVIDIA chipset: nForce4

System Memory

- Two 184-pin DDR DIMM slots
- Supports PC3200/2700/2100 memory
- Supports 128/256/512/1024Mb technology up to 2GB

USB 2.0 Port

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

Onboard Serial ATA

- 150MBps transfer rate
- Supports four S-ATA devices

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

- Supports10/100/1000 (-K optional) Mbps Ethernet
- LAN interface built-in on board

Onboard Audio

- AC’ 97 2.3 Specification Compliant
- Supports S/PDIF output
- Onboard Line-in jack, Microphone-in jack, Line-out jack
- Supports 6-channel audio (setting via software)

BIOS

- Licensed advanced AWARD (Phoenix) BIOS, supports flash ROM, Plug-and-Play
- Supports IDE, CD-ROM, SCSI HDD or USB device boot up

Green Function

- Supports ACPI (Advanced Configuration and Power Interface)
- Supports S0 (normal), S1 (power on suspend), S3 (suspend to RAM), S4 (suspend to disk-depends on OS), and S5 (soft-off) ACPI state

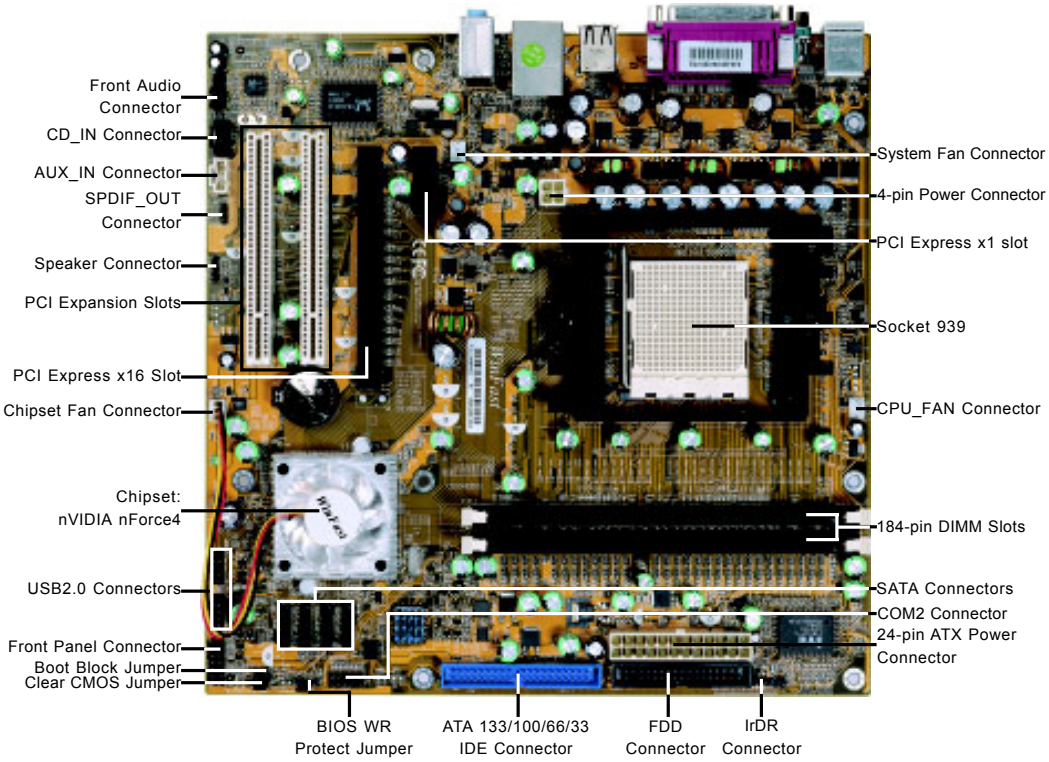
Expansion Slots

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

Advanced Features

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

Motherboard Layout



Note:

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

Chapter 2

This chapter introduces the hardware installation process, including the installation of the CPU and memory. It also addresses the connection of your power supply, use of the rear panel connectors, connection of hard drive and floppy drive data cables, and setting up various other feature of the motherboard. Caution should be exercised during the installation process. Please refer to the motherboard layout prior to any installation and read the contents in this chapter carefully.

This chapter includes the following information:

- CPU
- Memory
- Power Supply
- Rear Panel Connectors
- Other Connectors
- Expansion Slots
- Jumpers

Notes:

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

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

CPU

This motherboard supports Athlon™ 64, Athlon™ 64FX family processors with HyperTransport ™ Technology.

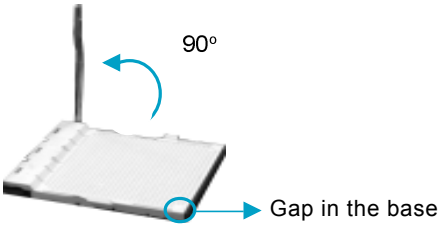
Attention:

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

Installation of CPU

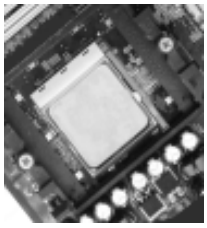
Follow these steps to install the CPU.

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



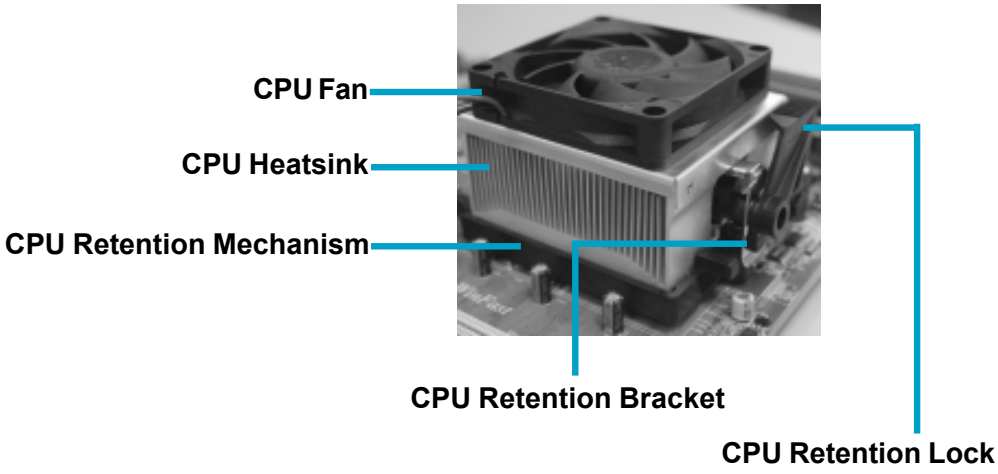
2. Align the cut edge to the gap in the base of the socket. Carefully insert the CPU into the socket until it fits in place.

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



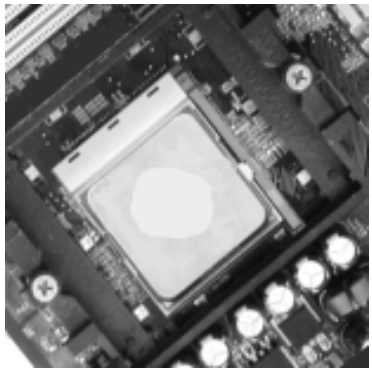
Installation of CPU Fan

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



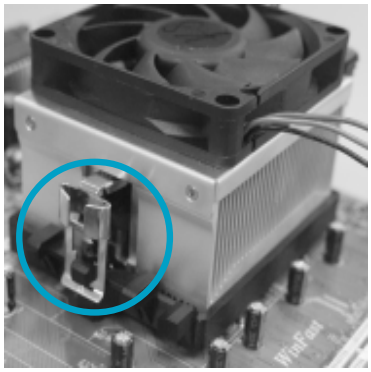
1.Locate the CPU retention mechanism base (surrounds the CPU socket).

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

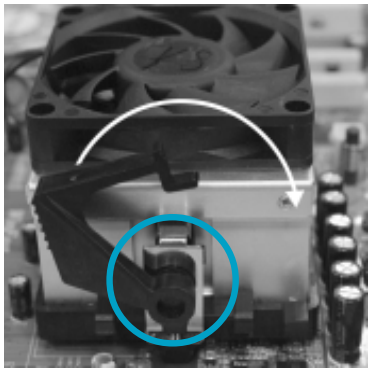


NOTE: The CPU heatsink may have a pre-applied thermal compound. In that case, the silica gel is not required.

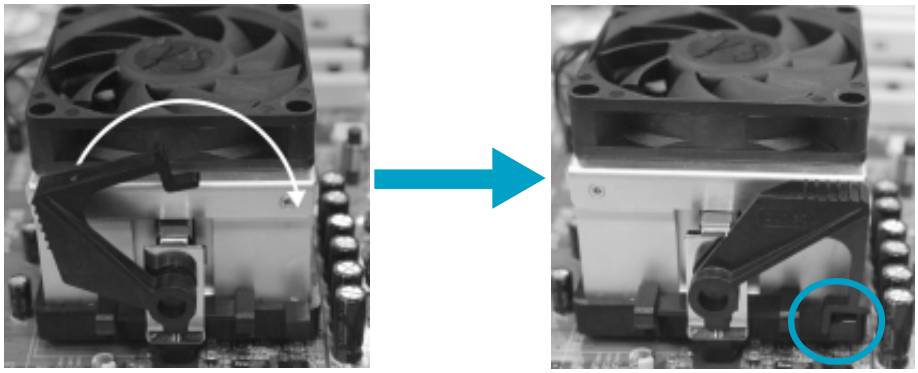
3. Place the cooling set onto the retention mechanism. Attach one end of the retention bracket to retention mechanism.



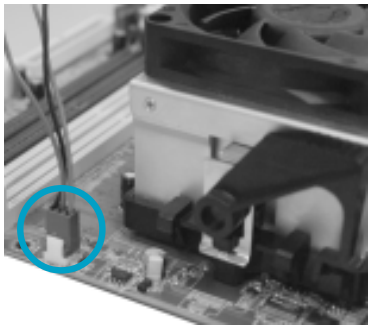
4. Align the other end of the retention bracket to fasten the cooling set on the top of the retention mechanism.



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



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



CPU Qualified Vendor List

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

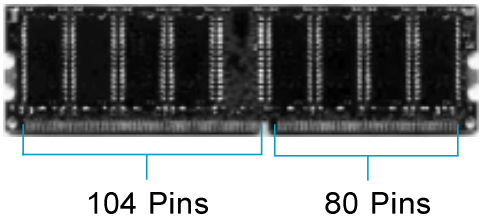
Vendor	Description
AMD	Athlon 64 3000+
AMD	Athlon 64 3500+
AMD	Athlon 64 3800+
AMD	Athlon 64 4000+
AMD	Athlon 64 FX53

Memory

This motherboard includes two 184-pin slots with 266/333/400 MHz Dual Channel DDR DRAM interface, You must install at least one memory module to ensure normal operation and install to DIMM1 at first. If you install two modules, they must be the same speed. Mixing memory modules from different manufactures are not recommended.

Installation of DDR Memory

1. There is only one gap in the center of the DIMM slot, and the memory module can be fixed in one direction only.
2. Align the memory module to the DIMM slot, and insert the module vertically into the DIMM slot.



3. The plastic clips at both sides of the DIMM slot will lock automatically.

Note:

Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, especially the memory devices, otherwise your motherboard or the system memory might be seriously damaged.

Memory Qualified Vendor List

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

Vendor	Type	Size
Apacer	(PC3200)DDR 400	256MB
Geil	(PC2700)DDR 333	256MB
hynix	(PC2700)DDR 333	256MB
hynix	(PC3200)DDR 400	512MB
kingBox	(PC3200)DDR 400	512MB
KingMAX	(PC2700)DDR 333	256MB
KingMAX	(PC3200)DDR 400	512MB
CORSA2R	(PC3200)DDR 400	512MB
KingMAX	(PC3200)DDR 400	256MB
Kingston	(PC3200)DDR 400	256MB
Infineon	(PC3200)DDR 400	256MB
hynix	(PC3200)DDR 400	256MB
kingBox	(PC2700)DDR 333	256MB
KingMAX	(PC3200)DDR 400	512MB
Apacer	(PC3200)DDR 400	512MB
Kingston	(PC3200)DDR 400	512MB
NANYA	(PC2700)DDR 333	256MB
Infineon	(PC3200)DDR 400	512MB
TwinMOS	(PC2700)DDR 333	256MB

Note:

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

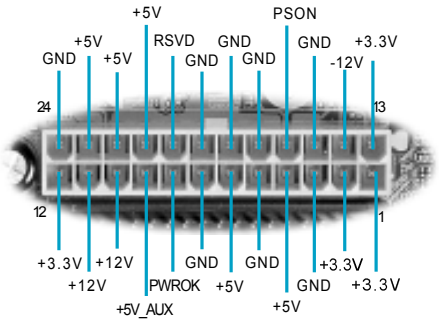
Power Supply

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

24-pin ATX Power Connector: PWR1

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

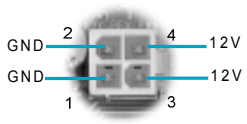
24-pin ATX Power Connector



4-pin ATX 12V Power Connector: PWR2

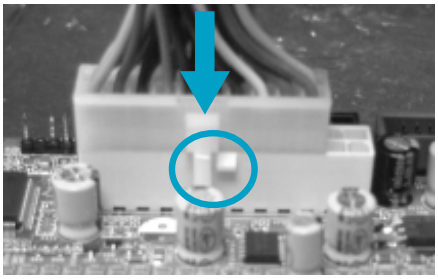
The 4 pin ATX 12V power supply connects to PWR2 and provides power to the CPU.

4-pin ATX 12V Power Connector



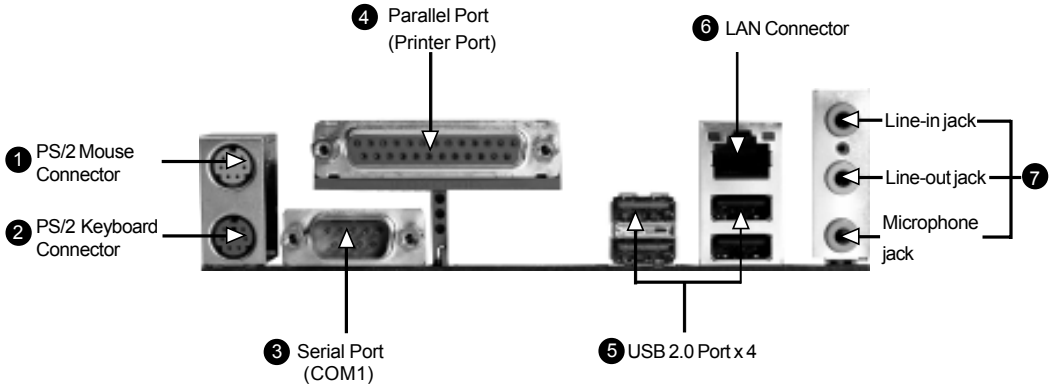
Attention:

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



Rear Panel Connectors

This motherboard provides the following ports as below:



❶ PS/2 Mouse Connector

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

❷ PS/2 Keyboard Connector

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

❸ Serial Port (COM1)

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

❹ Parallel Port (Printer Port)

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

❺ USB 2.0 Ports

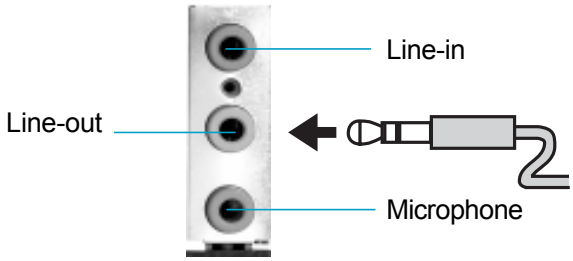
These four Universal Serial Bus (USB) ports are available for connecting USB 2.0/ 1.1 devices.

❻ LAN Connector

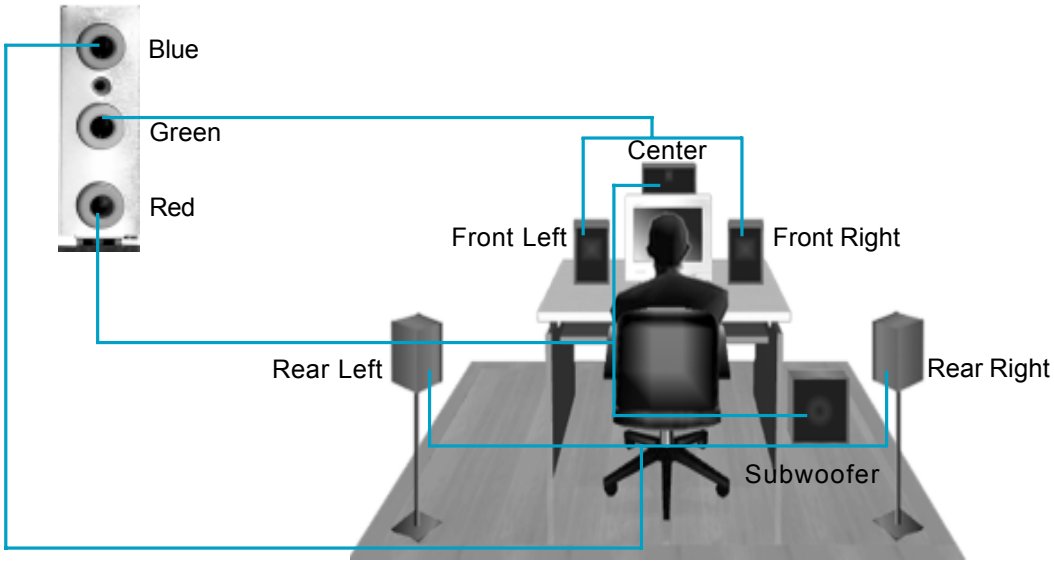
This port allows connection to a Local Area Network (LAN) through a network hub.

❼ Line-in jack, Line-out jack, Microphone jack

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



When using a 6-channel sound source, connect the front speaker to the green audio output; connect the surround sound speaker to the blue audio input; connect the center speaker/subwoofer to the red Microphone input, as shown in the following figure:



Other Connectors

This motherboard includes connectors for FLOPPY, IDE HDD, SATA, USB, IR module, CPU fan, system fan, and others.

Floppy Connector: FLOPPY

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

HDD Connector: PIDE

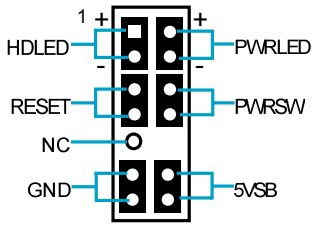
The connector supports the provided Ultra DMA 133/100/66/33 IDE hard disk ribbon cable. Connect the cable's blue connector to the IDE connector, then connect the grey connector to the Ultra DMA 133/100/66/33 slave device and the black connector to the Ultra DMA 133/100/66/33 master device.

Attention:

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

Front Panel Connector: FP1 (J38)

Attach the power LED, IDE LED, reset switch and power switch connectors to the corresponding pins.



FP1 (J38)

Hard Disk LED Connector (HDLED)

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

Reset Switch (RESET)

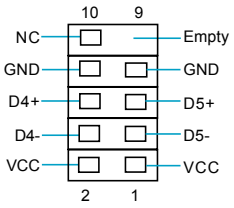
Attach the connector to the Reset switch on the front panel of the case; the system will restart when the switch is pressed.

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

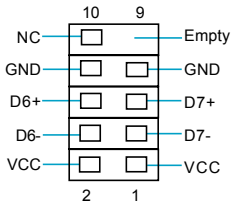
Power Switch Connector (PWRBTN#)
Attach the connector to the power button of the case. Pushing this switch allows the system to be turned on and off rather than using the power supply button.

USB Connectors: F_USB 1, F_USB 2

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



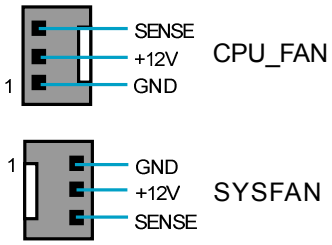
F_USB1



F_USB2

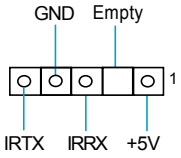
FAN Connectors: CPU_FAN, SYSFAN

Connect the CPU cooling fan cable into the 3-pin CPU_FAN on the motherboard. Connect the system cooling fan cable into the 3-pin SYSFAN on the motherboard.



IrDA Connector: J47

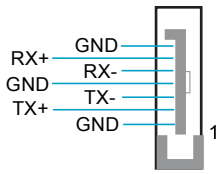
The IrDA infrared transmission allows your computer to send and receive data via an infrared ray. The relevant parameters for the BIOS Integrated Peripherals should be set prior to using this function.



J47

S-ATA Connectors: SATA0, SATA1, SATA2, SATA3

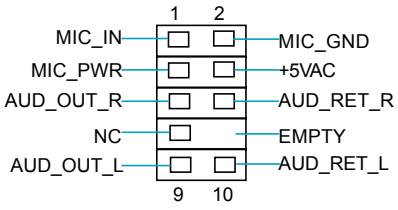
The Serial ATA connectors are used to connect the Serial ATA devices to the motherboard. These connectors support the thin Serial ATA cables for primary internal storage devices. The current Serial ATA interface allows up to 150MB/s data transfer rate.



SATA0/1/2/3

Front Audio Connector: F_AUDIO

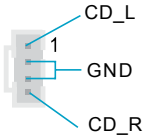
The audio port includes two parts – the Front Audio and Rear Audio. Their priority is sequenced from high to low (Front Audio to Rear Audio). If headphones are plugged into the front panel of the chassis (using the Front Audio), then the Line Out (Rear Audio) on the rear panel will not work. If you do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



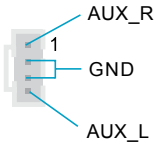
F_AUDIO

Audio Connectors: CD_IN, AUX_IN (optional)

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



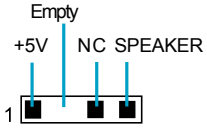
CD_IN



AUX_IN

Speaker Connector: SPEAKER

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



SPEAKER

S/PDIF Out Connector: SPDIF_OUT

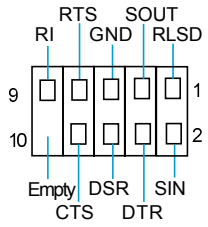
The S/PDIF out connector is capable of providing digital audio to external speaker or compressed AC3 data to an external Dolby digital decoder.

SPDIF_OUT

Note: If you want to use this function, please install the Realtek audio driver firstly. The download address is as below: http://www.foxconnchannel.com

COM2 Connector: COM2 (optional)

This connector accommodates a second serial port using an optional serial port bracket. Connect the bracket cable to this connector then install the bracket into a slot opening at the back of the system chassis.



COM2

Expansion Slots

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

PCI Slots

The expansion cards can be installed in the two PCI slots. When you install or remove such cards, please make sure that the power cord has been unplugged from the power supply. Please read carefully the instructions provided for such cards, then install and set the necessary hardware and software for such cards, such as the jumper or BIOS settings.

PCI Express Slots

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

-Compatible with existing PCI drivers and software and Operating Systems.
-High Bandwidth per Pin. Low overhead. Low latency.
-PCI Express supports a raw bit-rate of 2.5GB/s on the data pins. This results in a real bandwidth per pair of 250MB/s.
-A point to point connection, allows each device to have a dedicated connection without sharing bandwidth.
-Ability to comprehend different data structure.
-Low power consumption and power management features.

PCI Express will take two forms, x16 and x1 PCI Express slots. Whereas the x16 slot is reserved for graphic/video cards, the x1 slots are designed to accommodate less bandwidth-intensive cards, such as a modem or LAN card.

The difference in bandwidth between the x16 and x1 slots are notable to be sure, with the x16 slot pushing 4 GB/sec (8 GB/sec concurrent) of bandwidth, and the x1 PCI Express slot offering 250 MB/sec.

Warning:

If a performance graphics card was installed to 16x PCI Express slot, 2x12 pin power supply was strongly recommended, since that card maybe drawn 75W power.

AGP Qualified Vendor List

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

Vendor	Type	Video Memory
ATI R38A 128M	RADEONX600XT	128M
ATI RV370SE	RX30S128D	128M
WINFAST	GEFORCE PCX 5750	256M
ATI R38 256M	RADEONX600XT	256M
GIGABYTE	RADEONX600 PRO	128M

Note:

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

Jumpers

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

Description of Jumpers

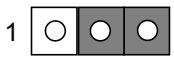
1. For the jumpers on this motherboard, pin 1 can be identified by the silk-screen printed "△" next to it. However, in this manual, pin 1 is simply labeled as "1".
2. The following table provides some explanations of the jumper pin settings. Users should refer to the table while adjusting jumper settings.

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

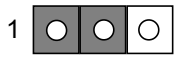
Clear CMOS Jumper: CLS_CMOS (J49)

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

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



Normal Status (Default)



Clear CMOS

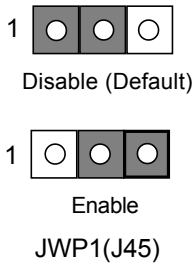
CLS_CMOS (J49)

Warning:

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

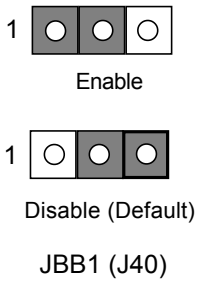
BIOS WR Protect Jumper: JWP1 (J45)

If the jumper J45 set as enable (pin 2 & pin 3), the system BIOS is protected from being attacked by a serious virus, such as the CIH virus. You will be unable to flash the BIOS to the motherboard when the system BIOS is protected.



BIOS Boot Block Jumper: JBB1 (J40)

The system cannot boot if flash the BIOS fail in conventional flash BIOS process. You will no such worry when you use the BIOS boot block jumper. It is used to protect BIOS "Top Boot Block". The system still can boot by using this function and show some information to recover the BIOS even if flash BIOS fail. To utilize this function, you just set this jumper as enable (pin 1 & pin 2).



Starting up for the first time

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

Powering off the computer

1. Using the OS shut down function
   If you use windows 98/ME/2000/XP, click Start and select Shut Down, then click the OK button to shut down the computer. The power supply should turn off after Windows shuts down.
2. Using the dual function power switch
   While the system is ON, pressing the power switch for less than 4 seconds puts the system in sleep mode or soft-off mode, depending on the BIOS setting. Pressing the power switch for more than 4 seconds lets the system enter the soft-off mode regardless of the BIOS setting.

Chapter 3

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

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

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

This chapter includes the following information:

- Enter BIOS Setup
- Main Menu
- Standard CMOS Features
- BIOS Feature
- Advanced BIOS Features
- Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PnP/PCI Configurations
- PC Health Status
- Load Fail-Safe Defaults
- Load Optimized Defaults
- Set Supervisor/User Password
- Save & Exit Setup
- Exit Without Saving

Enter BIOS Setup

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

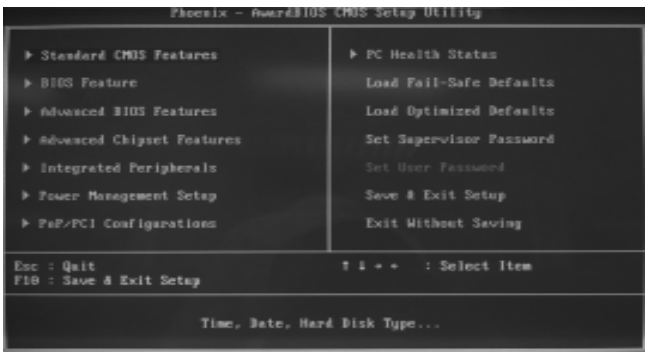
Press TAB to show POST screen, DEL to enter SETUP.

Note:

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

Main Menu

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



Main Menu

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

Standard CMOS Features

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

BIOS Feature

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

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

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

Integrated Peripherals
All onboard peripherals can be set up through this menu.

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

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

PC Health Status
This will display the current status of your PC.

Load Fail-Safe Defaults
The default BIOS settings can be loaded through this menu.

Load Optimized Defaults
The optimal performance settings can be loaded through this menu, however, the stable default values may be affected.

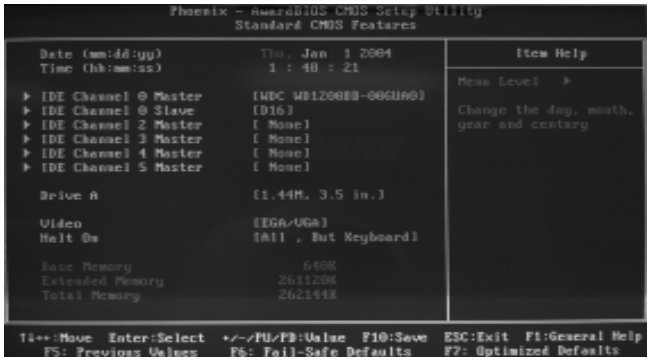
Set Supervisor/User Password
The supervisor/user password can be set up through this menu.

Save & Exit Setup
Save CMOS value settings to CMOS and exit setup.

Exit Without Saving
Abandon all CMOS value changes and exit setup.

Standard CMOS Features

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



Standard CMOS Features Menu

Date

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

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

Time

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

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

These categories identify the HDD types of 1 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and Manual. “None” means no HDD device is installed or set; “Auto” indicates the system can automatically detect and configure the hard disk when booting up; If it fails to find a device, choose “Manual” and change Access Mode to “CHS”, then manually configure the drive by entering the characteristics of the drive directly from the keyboard and pressing < Enter>:

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

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

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

Drive A

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

Video

The following table is provided for your reference in setting the display mode for your system.

EGA/VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.

Halt On

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

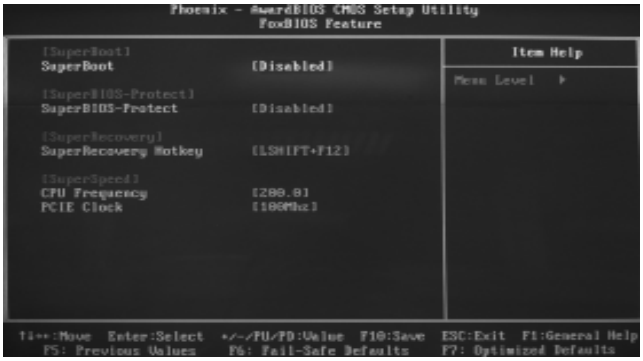
All Errors	Whenever the BIOS detects a nonfatal error, the system will stop and you will be prompted.
No Errors	The system boot will not stop for any errors that may be detected.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette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

Memory

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

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

BIOS Feature



BIOS Feature Menu

❖ **[SuperBoot] SuperBoot (Default: Disabled)**
SuperBoot allows system-relevant information to be stored in CMOS upon the first normal start-up of your PC, and the relevant parameters will be restored to help the system start up more quickly on each subsequent start-up. The available setting values are: Disabled and Enabled.

❖ **[SuperBIOS-Protect] SuperBIOS-Protect (Default: Disabled)**
SuperBIOS-Protect function protects your PC from being affected by viruses, e.g. CIH. The available setting values are: Disabled and Enabled.

❖ **[SuperRecovery] SuperRecovery Hotkey (Default: LSHIFT+F12)**
SuperRecovery provides the users with an excellent data protection and HDD recovery function. There are 12 optional hotkey and the default hotkey is LSHIFT+F12.

❖ **[SuperSpeed] CPU Frequency (Depending on the specification of the CPU)**
The conventional overclock method uses the jumpers on the motherboard, and it is both troublesome and apt to errors. By using SuperSpeed, a CPU can be overclocked by keying in the desired in the CPU frequeny range.

❖ **PCIE Clock (Depending on the specification of the PCIE)**
It is used to set PCI express clock.

Warning:

Advanced BIOS Features

Advanced BIOS Features Menu

❖**Removable Device Priority**

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

❖**Hard Disk Boot Priority**

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

❖**CDROM Boot Priority**

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

❖**Virus Warning (Default: Disabled)**

This option is used to set up the virus warning message for the IDE HDD boot sector. When enabled, a warning message will appear on the screen if any program intends to write information to the boot sector. The available setting values are: Disabled and Enabled.

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

❖**First/Second/Third/Fourth Boot Device (Default: Floppy/Hard Disk/CDROM)**

This option allows you to set the boot device sequence. The available setting values are: Floppy, LS120, Hard Disk, CDROM, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, LAN, and Disabled.

❖**Boot Other Device (Default: Enabled)**

With this function set to Enabled, the system will boot from some other devices if the first/second/third boot devices failed. The available setting values are: Disabled and Enabled.

❖**Security Option (Default: Setup)**

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

Advanced Chipset Features

Advanced Chipset Features Menu

❖**DRAM Configuration (Default: Press Enter)**

Press <Enter> to set the items about DRAM Configuration. Please refer to page 35.

❖**CPU Spread Spectrum (Default: Center Spread)**

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

❖**SATA Spread Spectrum (Default: Disabled)**

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

❖**PCIE Spread Spectrum (Default: Down Speed)**

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

❖**SSE/SSE2 Instructions (Default: Enabled)**

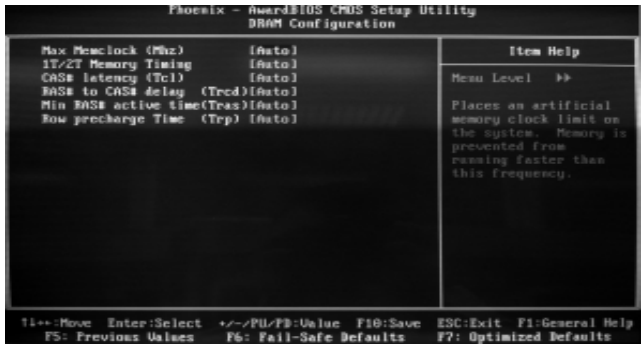
It is used to set enable or disable Intel SSE/SSE2 instructions.

❖**CPU Thermal-Throttling (Default: 50.0%)**

This item is used to specify the CPU speed (at percentage) to slow down the CPU when it reaches the predetermined overheat temperature.

❖**System BIOS Cacheable (Default: Disabled)**

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



DRAM Configuration Menu

❖**Max Memclock (MHz) (Default: Auto)**

User can place an artificial memory clock limit on the system. Memory is prevented from running faster than this frequency.

❖**1T/2T Memory Timing (Default: Auto)**

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

❖**CAS# Latency (Tcl) (Default: Auto)**

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

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

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

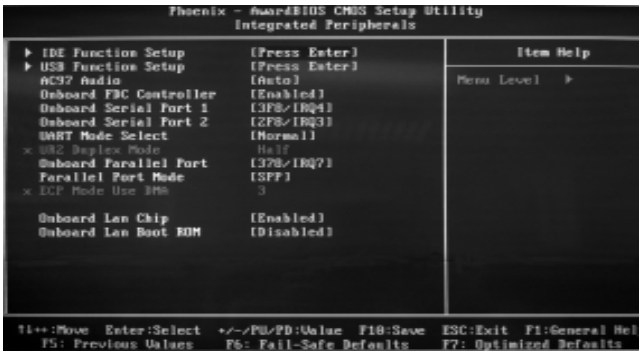
❖**Min RAS# active time (Tras) (Default: Auto)**

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

❖**Row Precharge Time (Trp) (Default: Auto)**

This item controls the number of cycles for Row Address Strobe (RAS) to be allowed to precharge. If insufficient time is allowed for the RAS to accumulate its charge before DRAM refresh, refreshing may be incomplete and DRAM may fail to retain data. This item applies only when synchronous DRAM is installed in the system.

Integrated Peripherals



Integrated Peripherals Menu

❖IDE Function Setup

Press Enter to set the items about IDE function. Please refer to page 37.

❖USB Function Setup

Press <Enter> to set the items of USB function. Please refer to page 38.

❖AC97 Audio (Default: Auto)

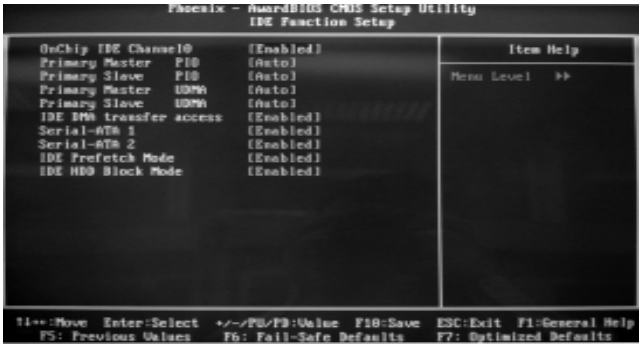
This option is used to set whether onboard AC97 Audio is enabled. Disabled the controller if you want to use other controller cards to connect an audio device.

❖Onboard Lan Chip (Default: Enabled)

This option is used to set whether the onboard LAN chip is enabled. The available setting values are: Disabled and Enabled.

❖Onboard Lan Boot ROM (Default: Disabled)

This option is used to decide whether to invoke the boot ROM of the onboard LAN chip. The available setting values are: Disabled and Enabled.



IDE Function Setup Menu

❖**OnChip IDE Channel 0 (Default: Enabled)**
This option is used to set the onchip IDE channel 0/1. The available setting are: Disabled and Enabled.

❖**Primary Master/Slave PIO (Default: Auto)**
These two items let you assign which kind of PIO (Programmer Input/Output) is used by IDE devices. Choose “Auto” to let the system auto detect which PIO mode is best, or select a PIO mode from 0-4.

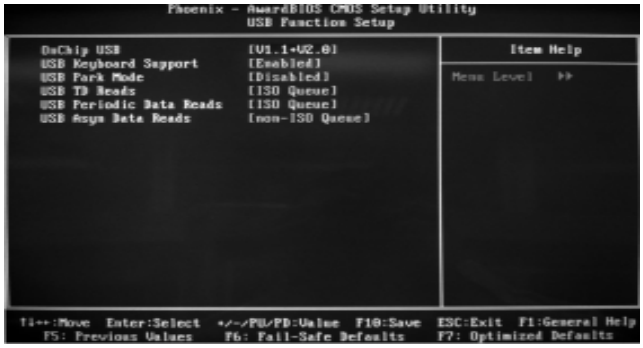
❖**Primary Master/Slave UDMA (Default: Auto)**
UltraDMA technology provides faster access to IDE devices. If you install a device that supports UltraDMA, change the appropriate items on this list to Auto. The available setting values are: Disabled and Auto.

❖**IDE DMA transfer access (Default: Enabled)**
This option is used to enable or disable IDE DMA transfer access.

❖**Serial-ATA 1/2 (Default: Enabled)**
This option is used to enable or disable Serial-ATA 1/2.

❖**IDE Prefetch Mode (Default: Enabled)**
This option is used to enable or disable IDE Prefetch Mode.

❖ **IDE HDD Block Mode (Default: Enabled)**
This option is used to set whether the IDE HDD Block Mode is allowed. The available setting values are: Disabled and Enabled.



IDE Function Menu

❖**OnChip USB (Default: V1.1+V2.0)**

This option is used to enable or disable the onboard USB controller. Selecting V1.1+V2.0 enables the system to support both USB 1.1 and USB 2.0 specification. The available setting are: Disabled, V1.1+V2.0, V1.1.

❖**USB Keyboard Support (Default: Enabled)**

This option is used to enable or disable USB keyboard under legacy OS.

Power Management Setup

Power Management Setup Menu

❖ **ACPI function (Default: Enabled)**

ACPI stands for “Advanced Configuration and Power Interface”. ACPI is a standard that defines power and configuration management interfaces between an operating system and the BIOS. In other words, it is a standard that describes how computer components work together to manage system hardware. In order to use this function the ACPI specification must be supported by the OS (for example, Windows2000 or WindowsXP). The available setting values are: Enabled and Disabled.

❖ **ACPI Suspend Type (Default: S3(STR))**

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

❖ **Soft-Off by Power Button (Instant-Off)**

This option is used to set the power down method. This function is only valid for systems using an ATX power supply. When “Instant-Off” is selected, press the power switch to immediately turn off power. When “Delay 4 Sec.” is selected, press and hold the power button for four seconds to turn off power.

❖ **WOL (PME#) From Soft-Off (Default: Disabled)**

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

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

If this option is enabled, it allows the system to resume from a software power down or power saving mode whenever there is an incoming call to an installed fax/modem. This function needs to be supported by the relevant hardware and software.

❖ **Power Management (Default: User Define)**

This option is used to set the power management scheme. Available settings are: User Define, Min Saving and Max Saving.

❖ **Video Off Method (Default: V/H SYNC + Blank)**

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

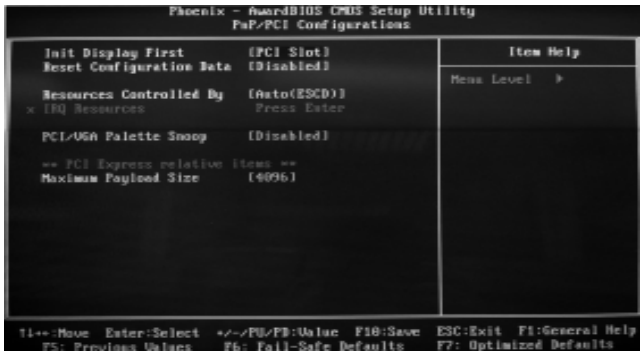
❖ **HDD Power Down (Default: Disabled)**

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

❖ **HDD Down In Suspend (Default: Enabled)**

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

PnP/PCI Configurations



PnP/PCI Configurations Menu

❖ **Init Display First (Default: PCI Slot)**

This option is used to set which display device will be used first when your PC starts up. The available setting values are: PCI Slot, PCIEx.

❖ **Reset Configuration Data (Default: Disabled)**

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

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

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

❖ **IRQ Resources**

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

❖ **PCI/VGA Palette Snoop (Default: Disabled)**

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

❖ **Maximum Payload Size (Default:4096)**

Set maximum TLP payload size for the PCI express devices. The unit is byte.

PC Health Status

PC Health Status Menu

❖ **Shutdown Temperature (Default: Disabled)**

This option is used to set the system temperature upper limit. When the temperature exceeds the setting value, the motherboard will automatically cut off power to the computer. The available setting values are: 80°C/176°F, 85°C/185°F, 90°C/194°F and 95°C/205°F.

❖ **Smart Fan Control (Default: Disabled)**

This option is used to enable or disable smart fan function. The setting values are Disabled and Enabled.

Load Fail-Safe Defaults

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

Load Optimized Defaults

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

Set Supervisor/User Password

The preferential grade of supervisor password is higher than user password. You can use supervisor password to start into system or enter into CMOS setting program to amend setting. You can also use user password to start into system, or enter into CMOS setting menu to check, but if you have set supervisor password, you cannot amend the setting.
Highlight the item Set Supervisor / User Password on the main menu and press <Enter>. The following password dialog box appears:

Enter Password:

Enter your password, not exceeding 8 characters, then press <Enter>, you will be prompted to confirm the password, type in the password again and press <Enter>.
If you are deleting a password that is already installed, just press <Enter> when the password dialog box appears, and the screen will show a message that indicates this password has been disabled. In this case, you can freely enter into system and CMOS setting program.

PASS WORD DISABLED!!!

Press any key to continue...

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

Save & Exit Setup

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

SAVE to CMOS and EXIT (Y/N)?

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

Exit Without Saving

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

Quit Without Saving (Y/N)?

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

Chapter 4

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

This chapter includes the following information:

- Utility CD content
- Start to install drivers

Utility CD content

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

1. Install Driver

Using this option to install all the drivers for your motherboard. You should install the drivers sequentially, from first to last.

A. nVIDIA nForce Chipset System B. DirectX 9.0b
C. LAN Driver

2.Accessories

Use this option to install additional software programs.

A. SuperUtility (optional)
   a. SuperStep
   Superstep is powerful and easy-to-operate tool for overclocking. You can quickly increase your CPU's working frequency through its user-friendly interface. It will enhance your CPU's performance and meet all kinds of DIY requirements.
   b. SuperLogo
   SuperLogo can display user-designed graphics and pictures, such as a company logo or personal photos, thus making your PC more personalized and friendly.
   c. SuperUpdate
   SuperUpdate function can help to update the BIOS through Internet.
B. Adobe Reader
C. Norton Internet Security

3. Browse CD

Click to browse this CD.

4. Homepage

Click here to visit Foxconn motherboard homepage.

Start to install drivers

Select <Install Driver> to enter the driver installation menu (as following pic). Click the relevant button to install nVIDIA nForce Chipset System, DirectX 9.0b, LAN Driver.