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Version:

User manual V1.0 in English for 875A02 series

P/N:91-181-U75-10-00

Symbol description:

Note: refers to important information that can help you 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 Foxconn's website:

Foxconn: www.foxconnchannel.com

Item Checklist:

Thanks for your purchasing Foxconn's 875A02 series motherboard. Please check the package; if there are missing or damaged items, contact your distributor as soon as possible.

- 875A02 series motherboard (x1)
- Foxconn Utility CD (x1)
- User manual (x1)
- SATA RAID user manual (x1)
- IDE ribbon cable (x1)
- Floppy ribbon cable (x1)
- I/O shield (x1)
- S-ATA signal cable (x1) (optional)
- S-ATA power cable (x1) (optional)
- SPDIF cable (x1) (optional)
- USB 2.0 cable (x1) (optional)
- Intel ICH5R RAID Installation Support Disk (x1)
- Silicon 3112A RAID Installation Support Disk (x1)

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

Mainboard

875A02 series

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 : James Liang Place / Date : TAIPEI/2003

Printed Name : James Liang Position/ Title : Assistant President

Declaration of conformity

Trade Name:	FOXCONN
Model Name:	875A02
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:	Mainboard
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 : James Liang Date : 2003

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 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 re moving expansion cards or other peripherals, especially when you insert or remove a memory module. Failure to switch off the DC power supply may result in serious damage to your system or memory module.

Warning:

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

Note:

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.

Note:

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

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Chapter 1

Thank you for buying Foxconn's 875A02 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 Intel®875P+ICH5R chipset, providing users a computer platform with a high integration-compatibility-performance price ratio.

This chapter includes the following information:

- Motherboard Features
- 875A02 Layout

Main Features

Size:

- ATX form factor of 12” x 9.6”

Microprocessor:

- Supports Intel® Pentium®4 Socket 478 (Willamette/Northwood/Prescott) processors
- Supports Intel® Celeron® Socket 478 (Willamette/Northwood) processors
- Supports FSB at 400MHz/533MHz/800MHz
- Supports Hyper-Threading technology

Chipset:

- Intel® Chipset: Intel® 875P (NorthBridge) +ICH5R (SouthBridge)

System Memory:

- Provides four 184-pin DDR DIMM Sockets
- Supports for ECC (Error Checking and Correcting) and non-ECC memory
- Supports for PC3200/2700/2100
- Supports for 128/256/512Mb/1Gb technology up to 4GB
- Supports Dual-channel DDR

Attention:

1. Use the same memory modules for Dual-Channel.
2. The memory operating frequency is 320MHz while FSB800 CPU works with DDR333.

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, such as HDD, etc.
- Supports Raid0, Raid1 (SATA1/2 supported by ICH5R (SouthBridge), SATA3/4 supported by Silicon 3112A Raid controller)

Attention:

If you want to use Raid0 or Raid1 function, please use the same type SATA HDDs to SATA 1,2 or SATA 3,4 connectors

Onboard 1394 (Optional):

- Supports hot-plug
- With rate of transmission at 400Mbps
- Self-configured addressing
- Supports two independent 1394 units (1 rear, 1 front) synchronously at most, such as HDD, CD-ROM

Onboard LAN (Optional):

- LAN interface built-in onboard
- 10M/100M/1G LAN interface

Onboard Audio:

- AC' 97 2.2 Specification Compliant
- Supports S/PDIF output
- Onboard Line-in jack, Microphone-in jack, Line-out jack
- Supports 5.1 channels 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 five system modes-S0 (normal), S1 (power on suspend), S3 (suspend to RAM), S4 (suspend to disk-depends on OS), and S5 (soft-off)

Expansion Slots:

- 5 PCI slots
- 1 AGP slot

AGP 8X support:

- AGP 8X (AGP 3.0) is the VGA interface specification that enabled enhanced graphics performance with high handwidth speeds up to 2.12 GB/s.

Advanced Features:

- PCI 2.3 Specification Compliant
- Supports Windows98/2000/ME/XP soft-off
- Supports Wake-on-LAN function
- Supports PC Health function (capable of monitoring system voltage, CPU, system temperature, and fan speed)

Intel® Performance Acceleration Technology (PAT) :

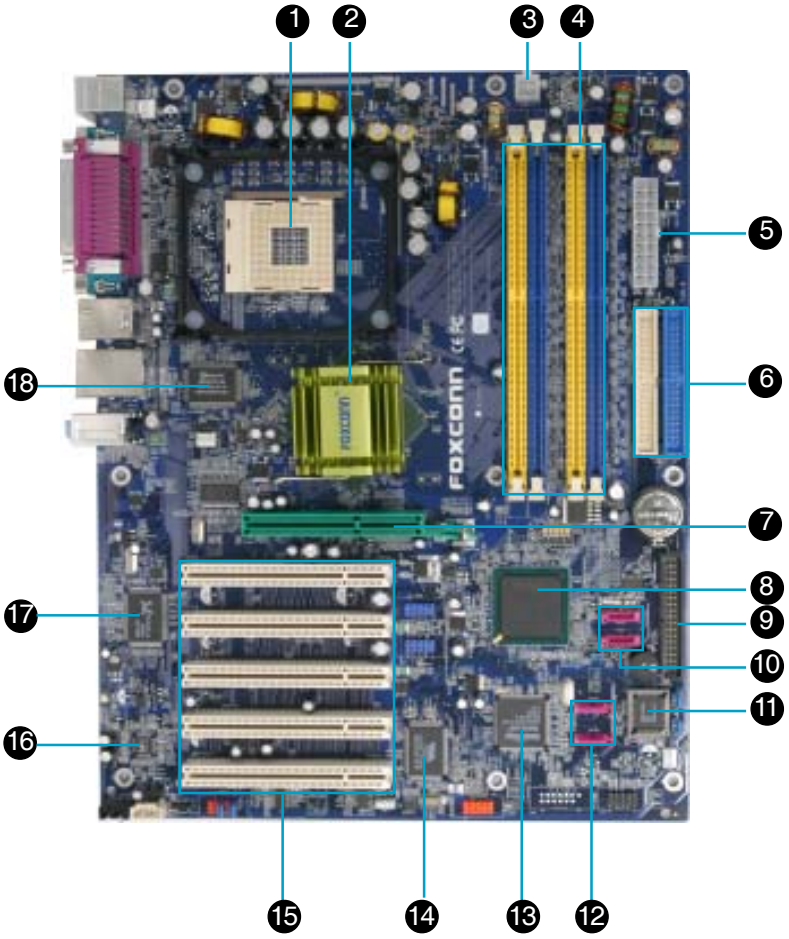
- The Intel® Performance Acceleration Technology deliver additional system-level performance by optimizing memory access between CPU and system memory on 800-MHz FSB and Dual Channel DDR400 configuration.

Attention:

Enabling the functionality of Hyper-Threading Technology for your computer system requires all of the following platform components:

- CPU: An Intel® Pentium® 4 Processor with HT Technology
- Chipset: An Intel® Chipset that supports HT Technology
- BIOS: a BIOS that supports HT Technology and has it enabled
- O/S: An operating system that has optimizations for HT Technology
- For more information go www.intel.com/info/hyperthreading

875A02 Layout



1 CPU socket

A 478-pin surface mount, Zero Insertion Force (ZIF) Socket for the intel® Pentium® 4 processor (and Intel's future Prescott CPU) Supports 800/533/400 MHz system bus and allows up to 6.4GB/s data transfer rates.

2 North bridge controller

The Intel® 875P Memory Controller Hub(MCH) provides the processor interface with 800/533/400 MHz frequency, system memory interface at 400/333/266MHz operation, and 1.5V AGP interface that supports AGP 3.0 specification including 8X Fast Write protocol.

3 ATX 12V connector

This power connector connects the 4-pin 12V plug from the ATX 12V power supply.

4 DDR DIMM sockets

These four 184-pin DIMM sockets support up to 4GB system memory using unbuffered ECC and Non-ECC PC3200/2700/2100 DDR DIMMs.

5 ATX power connector

This 20-pin connector connects to an ATX power supply. The power supply must have at least 1A on the +5V standby lead (+5VSB).

6 IDE connectors

These 2-channel bus master IDE connectors support Ultra DMA 100/66/33, PIO Modes 3 & 4 IDE devices. Both the primary (blue)and secondary (white) connectors are slotted to prevent incorrect insertion of the IDE ribbon cable.

7 AGP slot

This Accelerated Graphics Port (AGP) slot supports 1.5V AGP8X mode Graphic card for 3D graphical applications.

❽ South bridge

The Intel ICH5R are subsystem that integrate various I/O functions including 2-channel ATA100 bus master IDE controller, SATA RAID controller (Supported by ICH5R only), up to eight USB 2.0/1.1 ports, I/O APIC, AC'97 2.2 interface, and PCI 2.3 interface.

❾ Floppy disk connector

This connector accommodates the provided ribbon cable for the floppy disk drive. One side of the connector is slotted to prevent incorrect insertion of the floppy disk cable.

❿ SATA 1/2 connectors

These two 7-pin connectors of ICH5R accommodate the thin cables for Serial ATA devices.

⓫ Flash ROM

This 4Mb flash ROM contains the programmable BIOS program.

⓬ SATA 3/4 connectors

These two 7-pin connectors of Sil3112A accommodate the thin cables for Serial ATA devices.

⓭ SATA 3/4 controller

The Silicon Image Sil3112A is a single-chip solution for a PCI to Serial ATA controller. It accepts host commands through the PCI bus, processes them and transfers data between the host and Serial ATA devices. It can be used to control SATA3 and SATA4 two independent Serial ATA channels. Each channel has its own Serial ATA bus and will support one Serial ATA device. The Sil3112A supports a 32-bit 66 MHz PCI bus and the Serial ATA Generation 1 transfer rate of 1.5 Gb/s (150 MB/s), supported Raid0, Raid1.

⓮ 1394 controller (optional)

VT6307 is the controller for IEEE1394a on Motherboard. The VT6307 is a complete small package single chip PCI solution at 400Mbps, low power seamless plug and play connections to the latest IEEE 1394 enabled devices

⓯ PCI Slots

These five 32-bit PCI 2.3 expansion slots support bus master PCI cards like SCSI or LAN cards with 133MB/s maximum throughput.

⓰ Audio CODEC

The ALC650 is an AC'97 CODEC that allows 6-channel audio playback. The audio CODEC provides six DAC for 5.1 surround sound, S/PDIF output, AUX and CD-IN, Line-in, Line-out and Speaker out.

⓱ 1G LAN controller (Optional)

The 8110S Gigabit Ethernet is a single-chip solution for LAN on Motherboard (LOM) applications, and supports 10/100/1000 Mbps data transfer rates.

⓲ Super I/O

The Winbond W83627HF Low Pin Count (LPC) interface provides the commonly used Super I/O functionality. The chip supports a high-performance floppy disk controller for a 360k/720K/1.44M/2.88M floppy disk drive, a multi-mode parallel port, two serial ports, the mouse and keyboard interface and the LPC (Low Pin Count) interface.

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 component.
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 accepts Intel socket 478 processors (CPUs) with a front side bus (FSB) of 400/533/800 MHz Processors with Hyper-Threading technology are supported.

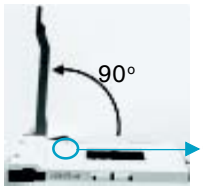
Attention:

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.



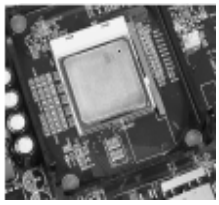
2. Align the cut edge to the gap in the base of the socket. Carefully insert the CPU into the socket until it fits in place.

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.

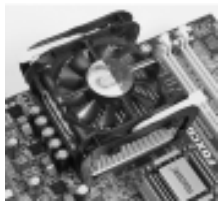
1. Locate the CPU retention mechanism base (surrounds the CPU socket).



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. Attach the fan to the base.



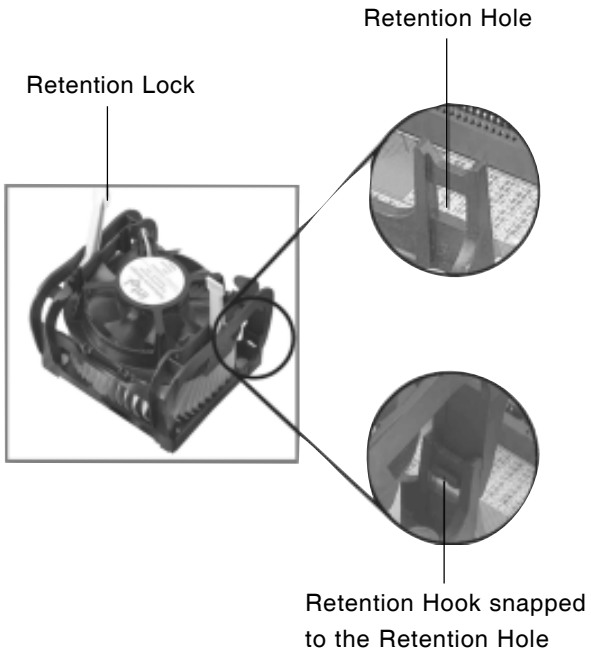
4. Connect the fan's power cable to the appropriate 3-pin terminal on the motherboard.

Warning:

Excessive temperatures will severely damage the CPU and system. Therefore, make sure that the cooling fan works normally at all times in order to prevent overheating and damage.

Attention:

1. Position the fan with the retention mechanism on top of the heatsink. Align and snap the four hooks of the retention mechanism to the holes on each corner of the module base.
2. Make sure that the fan and retention mechanism assembly perfectly fits the headtsink and module base, otherwise you cannot snap the hooks into the holes.



Warning:

Keep the retention locks lifted upward while fitting the retention mechanism to the module base.

Attention:

1. Push down the locks on the retention mechanism to secure the heatsink and fan to the module base.
2. When secure,the retention locks should point to opposite directions.

CPU Qualified Vendor List

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

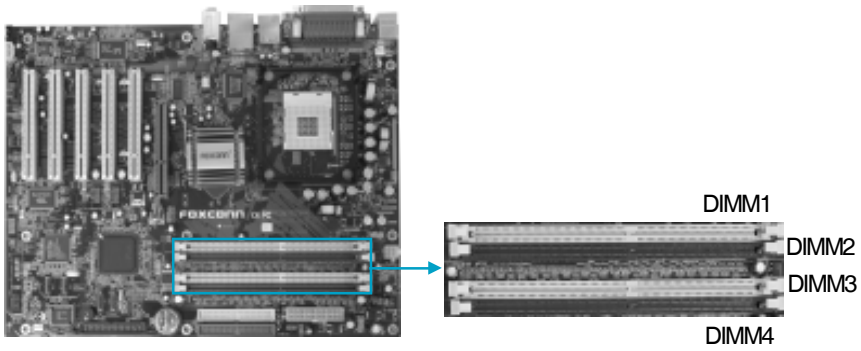
Vendor	Type	FSB	Frequency
Intel	Pentium(Willamete)	400	1.8G
Intel	Celeron(Northwood)	400	2.2G,2.6G
Intel	Pentium(Northwood)	533	2.4G,2.53G,2.8G
Intel	Pentium(Northwood) (HT)	533	3.06G
Intel	Pentium(Prescott)	533	2.13G
Intel	Pentium(Northwood)	800	2.4G
Intel	Pentium(Northwood) (HT)	800	3.2G, 3.4G
Intel	Pentium(Prescott)	800	2.80G, 3.0G, 3.2G
Intel	Pentium(P4EE)	800	3.0G

Note:

1. Make sure to use only the tested and qualified CPUs listed above. Other CPUs manufactured by other vendors may not be suitable for this motherboard.
2. When use the Willamette CPU, please refer to the “CPU Model Selection Jumper: CN1” of page 39.

Memory

This motherboard includes four 184-pin slots with 2.6V Double Data Rate (DDR) Dual Inline Memory Module (DIMM) sockets, so you can install PC3200/2700/2100 memory. You must install at least one memory bank to ensure normal operation.



DDR Memory

The DDR SDRAM technology evolved from the mainstream PC66, PC100, PC133 memory known as Single Data Rate (SDR) SDRAM. DDR memory, however, has the ability to perform two data operations in one clock cycle, thus providing twice the throughput of SDR memory.

A DDR DIMM has the same physical dimensions as an SDR DIMM, but it has a 184-pin footprint compared to the 168-pin of the SDR DIMM. Also, a DDR DIMM is single notched while an SDR DIMM is double notched.

Therefore, a DDR DIMM is not backward compatible with SDR, and should be installed only in a socket specially designed for DDR DIMMs.

Memory configurations

You may install 128MB, 256MB, 512MB, and 1GB DDR DIMMs into the DIMM sockets using the memory configurations in this section.

The following is important information on memory configurations:

1. Installing DDR DIMMs other than the recommended configurations may cause memory sizing errors or system boot failures. Use any of the recommended configurations in the following table.

Mode	Sockets			
	DIMM1	DIMM2	DIMM3	DIMM4
Single-channel	Populated	x	x	x
	x	Populated	x	x
	x	x	Populated	x
	x	x	x	Populated
	Populated	Populated	x	x
	x	Populated	Populated	x
	x	x	Populated	Populated
	Populated	x	x	Populated
Dual-channel	Populated	x	Populated	x
	x	Populated	x	Populated
	Populated	Populated	Populated	Populated

Note:

1. Use **only** identical DDR DIMM pairs
2. For dual-channel configuration, you may install identical DIMMS in all four sockets or install identical DIMM pairs in DIMM1 and DIMM3 (yellow sockets), and identical DIMM pairs in DIMM2 and DIMM4 (blue sockets).

2. In dual-channel configurations, install only identical (the same type and size) DDR DIMMs for each channel.
3. Always install DIMMs with the same CAS latency. For optimum compatibility, it is recommended that you obtain memory modules from the same vendor. See the following list of qualified vendors. The following table lists the PC3200/2700/2100 memory modules that have been tested and qualified for use with this motherboard.

Vender	Type	Size
Transcend	PC2700 (DDR 333)	512M
Transcend	PC3200 (DDR 400)	256M, 512M
RAMBO	PC2700 (DDR 333)	256M, 512M
RAMBO	PC3200 (DDR 400)	256M
Geil	PC3200 (DDR 400)	256M
TwinMos	PC3200 (DDR 400)	256M
Samsung	PC2700 (DDR 333)	1G
Samsung	PC3200 (DDR 400)	1G
VDATA	PC3200 (DDR 400)	256M
HLX	PC3200 (DDR 400)	256M
Apacer	PC2700 (DDR 333)	512M
Apacer	PC3200 (DDR 400)	256M
Hynix	PC2100 (DDR 266)	256M,512M
Hynix	PC2700 (DDR 333)	256M
Hynix	PC3200 (DDR 400)	256M

Note:

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

4. Make sure that the memory frequency matches the CPU FSB (Front Side Bus). Refer to the following table.

CPU FSB	DDR DIMM Type	Memory Frequency
800 MHz	PC3200/PC2700/PC2100	400/333/266 MHz
533 MHz	PC2700/PC2100	333/266 MHz
400 MHz	PC2100	266 MHz

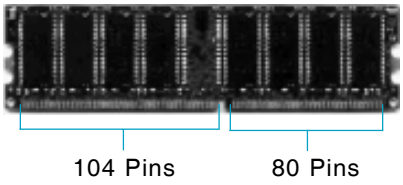
Note:

1. When using 800MHz CPU FSB,PC2700DDR DIMMs may run only at 320MHz(not 333MHz) due to chipset limitation.
2. The following FSB/DDR ratios are not supported:400/333, 400/400,533/400.
3. FSB/DDR setting 800/333 is recognized as FSB/DDR 800/320.

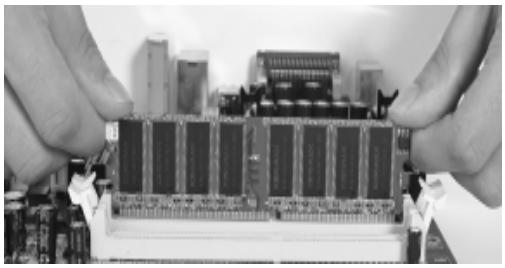
5. DIMMs installed into any three sockets will function in single Channel mode.
6. When all four sockets are populated with 1GB DIMMs (total 4GB), the system may detect over 3GB (a little less than 4GB) to ICH5R resource allocation.
7. It is recommended to use the yellow DIMM slots first.

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.

Power Supply

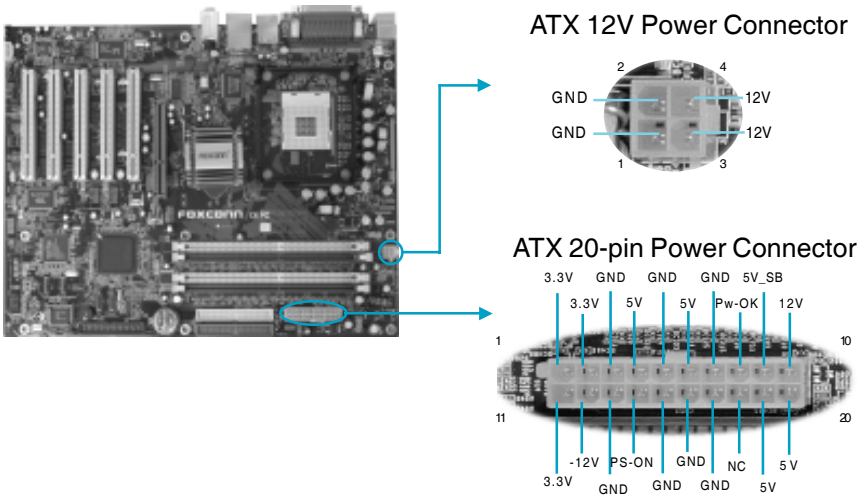
This motherboard uses an ATX power supply. In order to avoid damaging any devices, make sure that they have been installed properly prior to connecting the power supply.

ATX 12V Power Connector: PWR2

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

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.

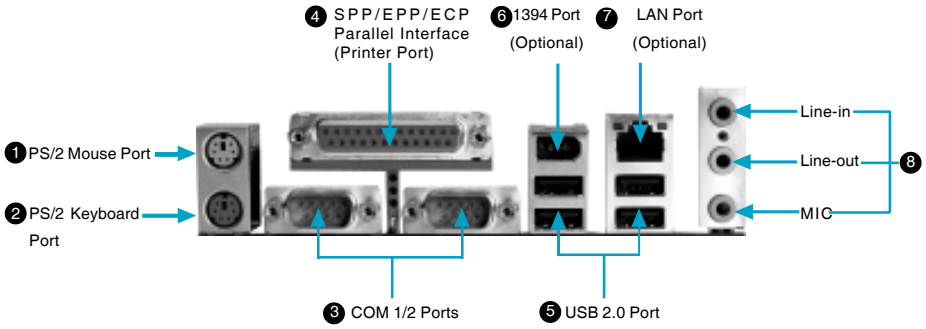


Attention:

You have to press the power button for more than four seconds if you change the default Instant-off setting to “Delay 4 Sec” for the soft-off by Power Button option in the BIOS Power Management Setup.

Rear panel Connectors

This motherboard provides the following ports, as below:



❶ PS/2 Mouse Port

This motherboard includes one standard PS/2 mouse port. You can connect the PS/2 mouse directly into this port.

❷ PS/2 Keyboard Port

This motherboard includes one standard PS/2 keyboard port. If you use a standard AT keyboard, then you will need a converter to use this port.

❸ Serial ports: COM1/COM2

This motherboard includes two 9-pin common adapters for serial ports COM1/COM2. The ports are the 16550 high-speed communication interface used to transfer and receive 16-byte FIFO. You can connect the sequential mouse or other sequential devices directly to the ports.

❹ Parallel Port (Printer Port)

This motherboard includes one 25-pin mother connector for LPT. The parallel port is a standard printer port which supports the enhanced parallel port (EPP), ECP mode, etc.

❺ USB 2.0 Ports

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

❻1394 port (optional)

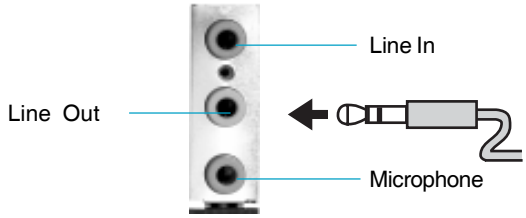
This digital interface supports electronic devices such as digital cameras, scanners, and printers.

❼RJ45 10M/100M/1G LAN Port (optional)

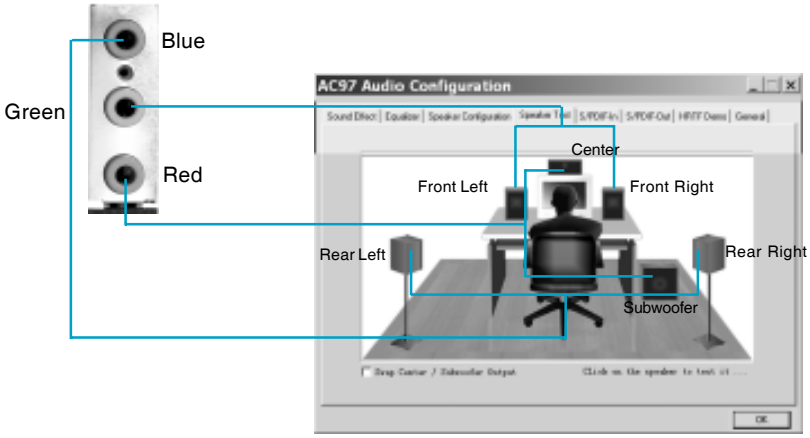
If you have purchased the built-in LAN function, the port will be located on the rear panel.

❽Audio Port

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 MIC 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 central speaker/sub woofer to the red MIC input, as being shown in the following figure:

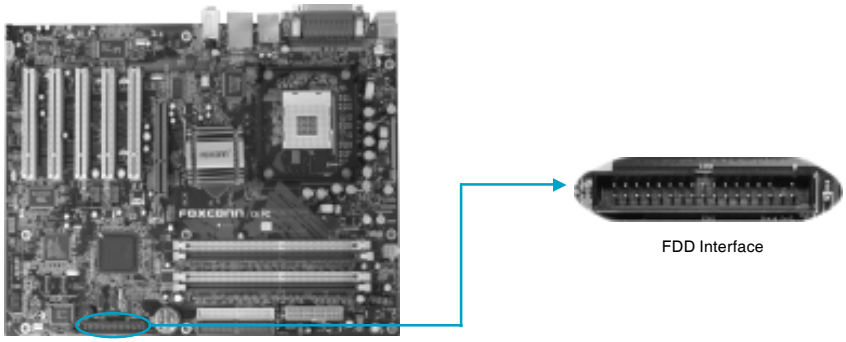


Other Connectors

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

FDD

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

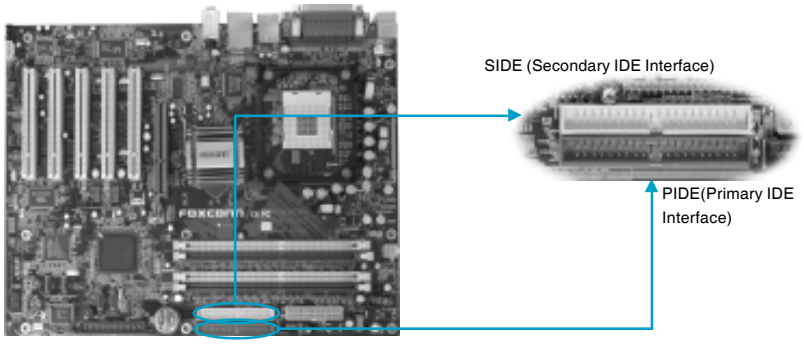


HDD connectors: PIDE & SIDE

These connectors support the provided UltraDMA 100/66/33 IDE hard disk ribbon cable. Connect the cable's blue connector to the primary (recommended) or secondary IDE connector, then connect the gray connector to the Ultra DMA 100/66/33 slave device (hard disk drive) and the black connector to the Ultra DMA 100/66/33 master device. If you install two hard disks, you must configure the second drive as a slave device by setting its jumper accordingly. Refer to the hard disk documentation for the jumper settings.

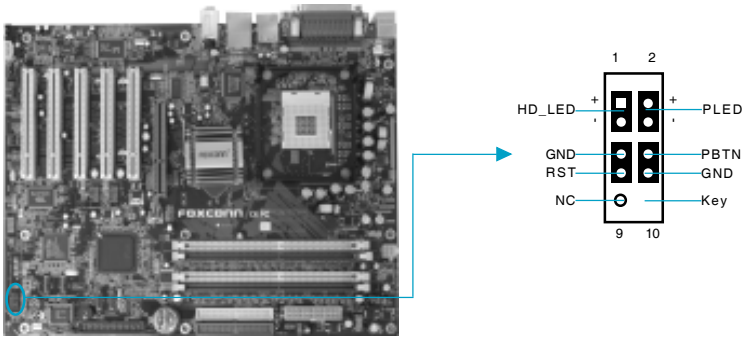
Attention:

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



Front Panel Connector: FP1

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



HD_LED Connector

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

Reset Switch

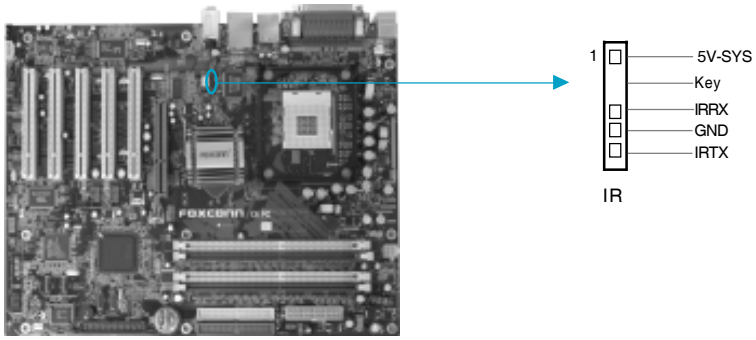
Attach the connector to the Reset switch on the front panel of the case; the system will restart when the switch is pressed.

Power LED Connector

Attach the connector to the power LED on the front panel of the case. The Power LED indicates the power supply status, and will be lit during normal system operation. The Power LED will blink while the system is in the S1 mode, and will be turned off when the system is in either S3 or S5 mode.

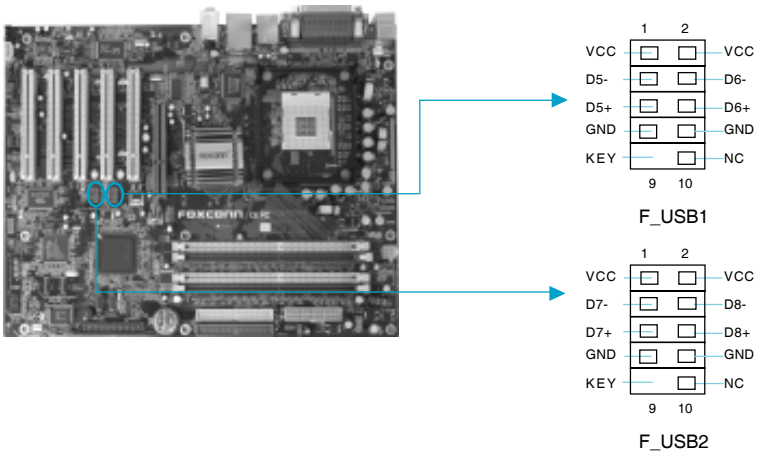
IrDA Header: IR

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



USB Header: F_USB1, F_USB2

If the USB ports on the rear panel are inadequate, a USB header is available for additional USB ports. The USB header complies with USB 2.0 specification that supports up to 480 Mbps connection speed. This speed advantage over the conventional 12 Mb on USB 1.1 allows faster Internet connection, interactive gaming, and simultaneous running of high-speed peripherals.

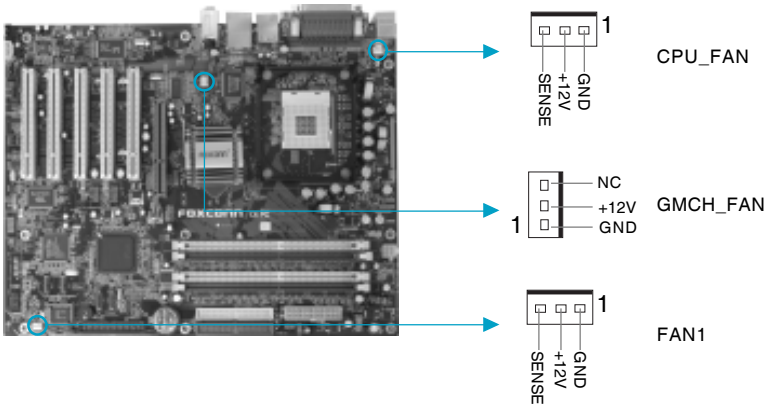


Note:

1. You must install the driver before you can use the USB 2.0 function.
2. NEVER connect a 1394 cable to the F_USB1 or F_USB2 connectors. Doing so will damage the motherboard!
3. The USB cable is an optional item.

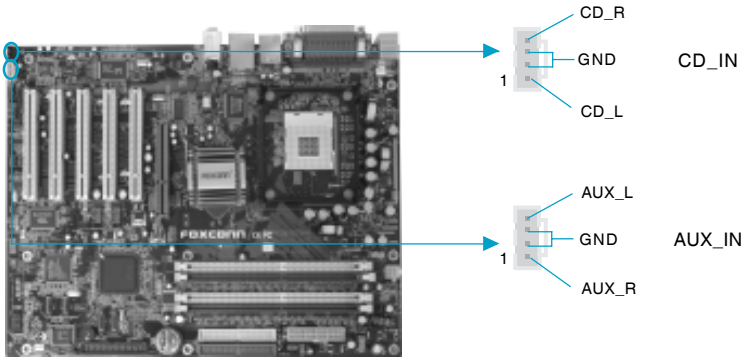
Fan Connectors: CPU_FAN, GMCH_FAN, FAN1

There are three fan headers on this motherboard. The fans are always turned ON in S0/S1 modes and OFF in S3/S4/S5 modes. The CPU/system fan speed can be monitored in the PC Health section of the BIOS.



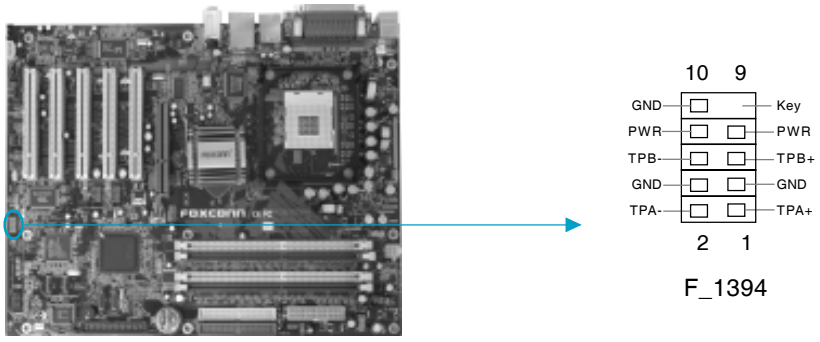
Audio Connectors: CD_IN, AUX_IN

To receive audio input from the CD-ROM, attach its audio connector to the CD_IN/ AUX_IN audio headers on the motherboard.



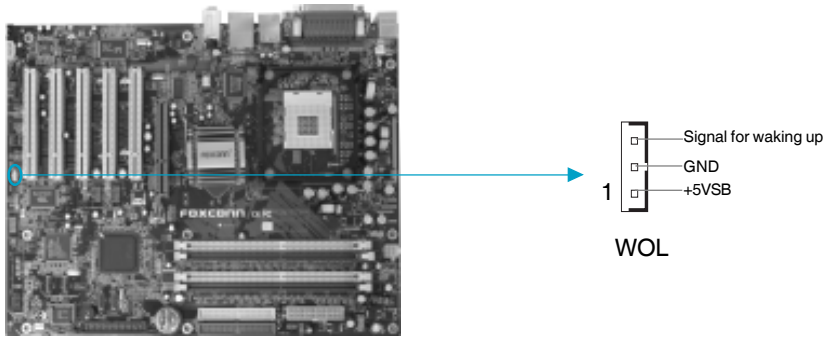
1394 Header: F_1394 (Optional)

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



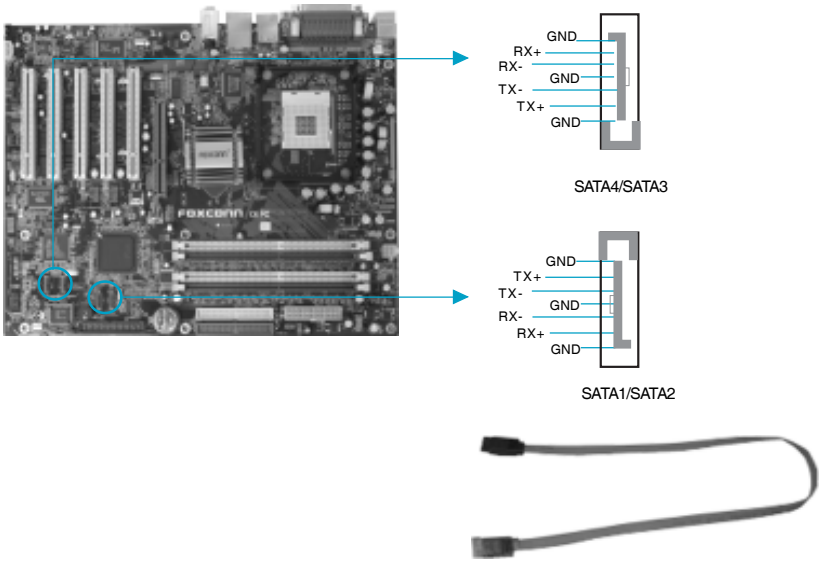
Wake-up On LAN: WOL

Through the Wake-Up On LAN function, a wake event occurring from the network can wake up the system. To utilize this function, please be sure to use an ATX 12V power supply with a 5VSB line capable of delivering a current of at least 720mA, and a LAN adapter which supports this function. Then connect the header to the relevant connector on the LAN adapter, set “Wake up by PCI Card” to enabled in the “POWER MANAGEMENT SETUP” section of the CMOS SETUP. Save and exit, then boot the operating system once to make sure this function takes effect.



S-ATA Connectors: SATA1, SATA2, SATA3, SATA4

The S-ATA header is used to connect the S-ATA device 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, faster than the standard parallel ATA with 133MB/s (Ultra ATA/133).



Serial ATA solution:

1. In legacy operating system (Win98, WinME, WinNT, DOS) enviromemt, using Serial ATA will disable one of the IDE channels. See the BIOS section for correct settings.
2. The Serial ATA cable is smaller and more flexible allowing easier routing inside the chassis. The lower pin count of the Serial ATA cable eliminates the problem caused by the wide, flat ribbon cables of the Parallel ATA interface.
3. The IAA-RAID driver is available for WinXP/2000 only.
4. RAID 0 and RAID 1 are supported.
5. Install WinXP Service Pack1 when using Serial ATA.

Parallel ATA and Serial ATA device configurations:

Following are the Parallel ATA and Serial ATA device configurations supported by Intel ICH5R specifications.

Operating System	P-ATA		S-ATA	
	Primary (2 devices)	Secondary (2 devices)	Port 0 (1 device)	Port1 (1 device)
1.Windows 2000/XP	✓	✓	✓	✓
2.Windows 98/ME/NT4.0				
Configuration 1	✓	×	✓	✓
Configuration 2	×	✓	✓	✓
Configuration 3	✓	✓	×	×

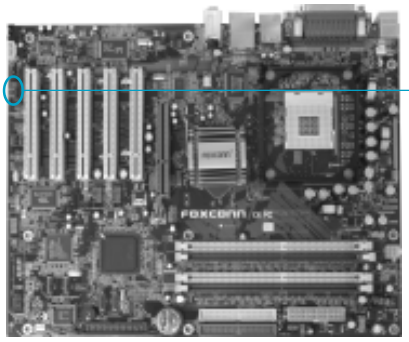
NOTE:

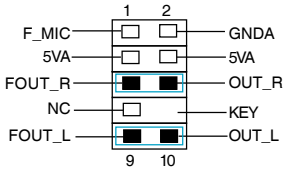
✓ Supported

× Disabled

Audio Header: 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 Speaker Out (Rear Audio) on the rear panel will not work. If you do not want to use the Front Audio, pin 5 , 6, 9 and 10 must be short connected, and then the signal will be sent to the rear audio port.

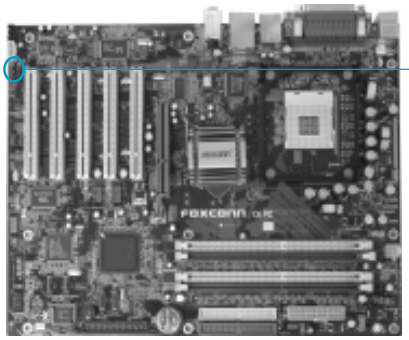


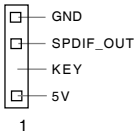


F_Audio

S/PDIF Out Connector: SPDIF

The SPDIF_OUT output is capable of providing digital or 6 channel audio to external speakers, or compressed AC3 data to an external Dolby digital decoder. The motherboard is equipped with one bracket.





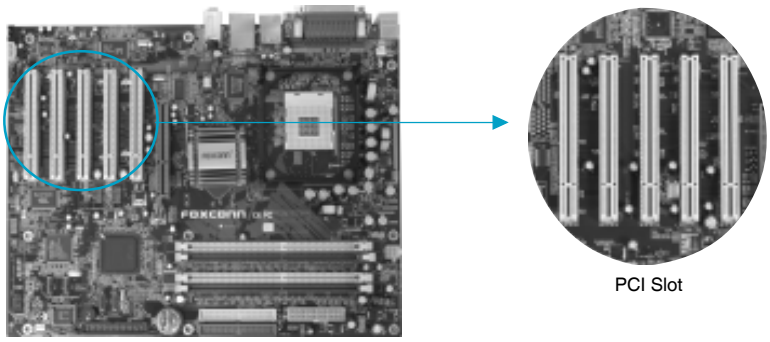
SPDIF_OUT

Expansion Slots

This motherboard includes five 32-bit Master PCI bus slots and one AGP slot.

PCI Slots

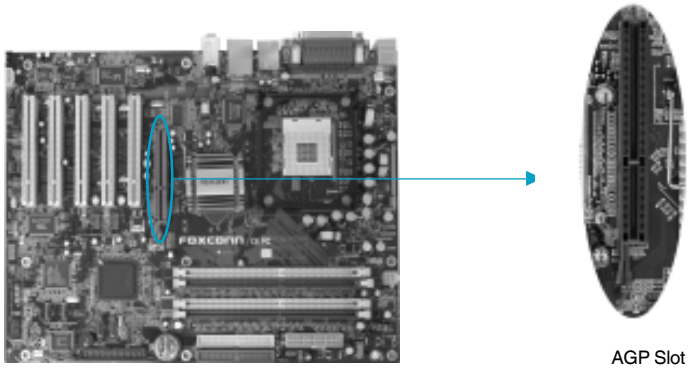
The expansion cards can be installed in the five PCI slots. When you install or take out such cards, you must make sure that the power plug has been pulled out. Please read carefully the instructions provided for such cards, and install and set the necessary hardware and software for such cards, such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



PCI Slot

AGP Slot (Accelerated Graphic Port)

This motherboard has Accelerated Graphics Port (AGP) slot that only Supports +1.5V AGP cards. When you use an AGP card, make sure that your AGP card with +1.5V specification. Note the notches on the card Golden fingers to ensure that they fit the AGP slot on your motherboard.



AGP Slot

Installing an expansion card

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

Warning:

The motherboard may be damaged if a 3.3V AGP card is used. Make sure that your AGP card is 1.5V specification. Note the notches on the card golden fingers to ensure that they fit the AGP slot on your motherboard.

AGP Qualified Vendor List

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

Vender	Type	Video Memory
GIGABYTE	GA-GF1280 Geforce 2 MX	32MB DDR
UNIKA	UNIKA 7917 Geforce 4 MX440	64MB DDR
ELSA	ELSA 920	64MB DDR
MSI	MSI Ti 4200 8X	128MB DDR
ATI	ATI 9700 pro 8X	128MB DDR
ATI	ATI 9800 pro 8X	128MB DDR
ATI	ATI 9500 8X	128MB DDR
ATI	ATI 7000	128MB DDR
YING TONG	Ying Tong A96 ATI 9600 8X	128MB DDR
QDI	QDI FX5200	128MB DDR
ASUS	ASUS V9280/TD 8X	128MB DDR

Note:

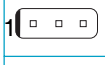
Make sure to use only the tested and qualified AGP cards listed above. Other AGP cards manufactured by other vendors may not be suitable for this motherboard.

Jumpers

Users can change the jumper settings on this motherboard if needed. 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

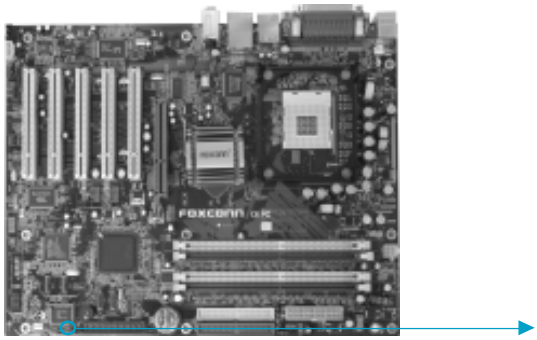
1. For the jumpers on this motherboard, pin 1 can be identified by the silkscreen printed "▲" next to it. However, in this manual, pin 1 is simply labeled as "1".
2. The following table provides some explanation of the jumper pin settings. Users should refer to this when adjusting jumper settings.

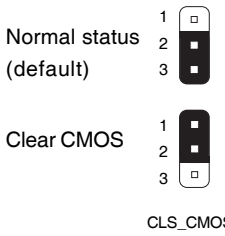
Jumper	Diagram	Definition	Description
		1-2	Set pin 1 and pin 2 closed
		2-3	Set pin 2 and pin 3 closed
		Closed	Set the pin closed
		Open	Set the pin opened

Clear CMOS Jumper: CLS_CMOS

This motherboard uses the CMOS RAM to store all the set parameters. The CMOS can be cleared by removing the CMOS jumper. How to clear CMOS?

1. Turn off the AC power supply and connect pins 1 and 2 together using the jumper cap.
2. Return the jumper setting to normal (pins 2 and 3 locked together with the jumper cap).
3. Turn the AC power supply back on.





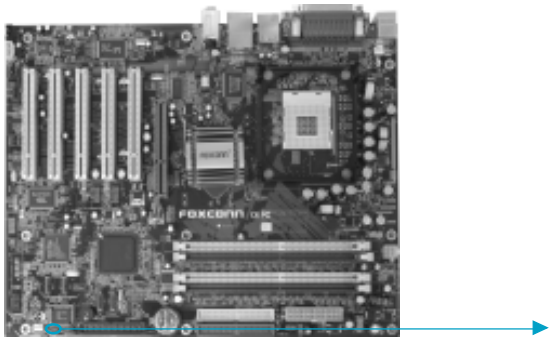
(Unplug the AC power supply)

Warning:

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

Anti-virus BIOS Write Protect Jumper: FWH_EN

To protect the system BIOS from viruses, this motherboard is designed with a BIOS write-protection jumper (FWH_EN). Close pins 1 and 2 on FWH_EN and disable SuperBIOS-Protect in the BIOS, and then the BIOS can be flashed. (Note: the default setting for pins 2 and 3 on FWH_EN is “closed”.)



Flash Write disable

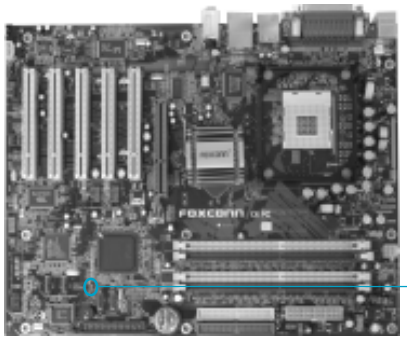
FWH_EN

Flash Write enable (default)

FWH_EN

LAN Disabled Jumper: LAN_DIS

Close pins 1 and 2 on LAN_DIS and enable the onboard lan. If LAN_DIS is set pins 2 and 3 at closed, then the onboard lan is disabled.



Onboard LAN Enable

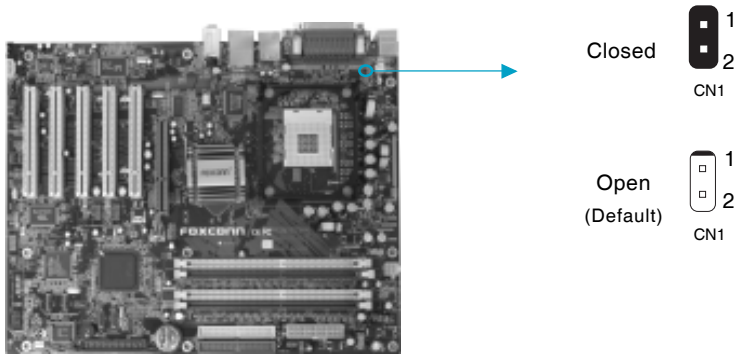
LAN_DIS

Onboard LAN Disable

LAN_DIS

CPU Model Selection Jumper: CN1

The default status for CN1 is Open, which supports the Prescott and Northwood CPU. If CN1 is set at Closed, then it supports the Willamette CPU.



Starting up for the first time

1. After making all the connections, replace the system case cover.
2. Be sure that all switches are 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 applying power 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 runs the Power On Self Tests. 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. At power on, hold down <Delete> to enter BIOS Setup. Follow the instructions in Chapter 3.

Powering off the computer

1. Using the OS shut down function
   If you use windows 98SE/ME/2000/XP, click the Start button, click Shut Down, then 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 to sleep mode or to 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 introduces the 875A02 motherboard's CMOS Setup program, which allows users to configure optimized system settings.

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

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

This chapter includes the following information:

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

Enter BIOS Setup

After the computer is powered on, the BIOS will self -diagnose the basic hardware on the motherboard (POST process), set up the time sequence parameters for hardware, detect the hardware devices, etc.. After the POST process is completed, control of the system will be transferred to the operating system. Since the BIOS is the communication bridge between hardware and software, correctly setting up the BIOS parameters is critical to maintain optimal system performance. In general, when the computer is turned on and while BIOS is executing the POST process, the following message will appear in the lower left corner of the screen:

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

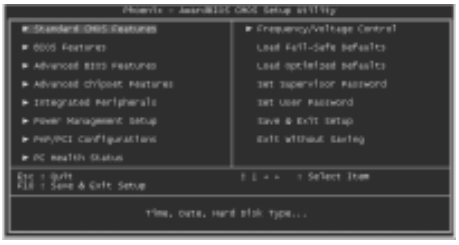
If you want to enter the BIOS, you must press the <Del> button within 3-5 seconds of the appearance of the above message.

Remark:

If you want to enter the BIOS, you must press the <Del> button within 3-5 seconds of the appearance of the above message.

Main Menu

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



Main Menu

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

Standard CMOS Features

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

BIOS Features

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

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

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

Integrated Peripherals
Special settings for peripheral devices can be modified through this menu.

Power Management Setup
The system's power management setting can be modified 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.

Frequency/Voltage Control
Frequency and voltage setting can be adjusted through this menu.

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 Password
The supervisor password can be set up through this menu.

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

Save & Exit Setup
Save the change(s) made to the CMOS settings and exit Setup.

Exit Without Saving
Abandon the change(s) made to the CMOS settings 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> keys to choose the setting values.

Date

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

IDE Channel 0/1 Master/Slave (First channel master/slave HDD/second master/slave HDD)

You can select this option by pressing the <Enter> key, and the BIOS will detect the current HDD model. The HDD type can be selected using <PgUP>/<+> or <PgDn>/<-> . “None” means that no HDD is currently installed; “Auto” means that the BIOS will automatically detect and set the HDD type after the system is started up with HDD; when “Manual” is selected and the Access Mode is changed to CHS, the system will request you to key in the following HDD parameters:

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 3 HDD modes: CHS, LBA and Large or Auto mode.

CHS	For HDD<528MB
LBA	For HDD>828MB & supporting LBA (Logical Block Addressing)
Large	For HDD>528MB but not supporting LBA
Auto	Recommended mode

Drive A/B (FDD A/B)

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

Video (Display Card)

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 option can be used to set your PC to stop if any error(s) occur after the system has started.

All errors	The system will stop and display the prompt whenever an error is detected.
No errors	The system will start as usual even if an error is detected
All, But Keyboard	The system will stop when any error other than keyboard error occurs
All, But Diskette	The system will stop when any error other than disk error occurs
All, But Disk/Key	The system will stop when any error other than keyboard or disk error occurs

Memory

This displays the system storage information detected by BIOS during the Power on self test (POST).

Base Memory	The basic memory capacity loaded in the system is determined by BIOS during the POST.
Extended Memory	The extended memory capacity is determined by BIOS during the POST.
Total Memory	The total of all memory capacities.

BIOS Features

BIOS Features Menu

❖ **[SuperBoot] SuperBoot (Default: Disabled)**

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

Note: Disabled and Enabled have the same meaning if in the following sections of this Manual.

❖ **[SuperBIOS-Protect] Super-BIOS Protect (Default: Disabled)**

Super-BIOS Protect Funtion protects PC from viruses,e.g. CIH, by using a HW/SW double BIOS lock technology. 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 settings, and the default setting is LSHIFT+F12.

❖ **[SuperSpeed] CPU Clock (Depending on the specification of the CPU)**

The conventional over-clock 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. If you use FSB 400 MHz CPU, the setting range is from 100 MHz to 132 MHz; FSB 533 MHz CPU, the setting range is from 133 MHz to 165 MHz; FSB 800 MHz CPU, the setting range is from 200 MHz to 232 MHz.

Warning:

Be sure your selection is right. CPU over speed will be dangerous! We will not be responsible for any damages caused.

Advanced BIOS Features

Advanced BIOS Features Menu

❖CPU Feature

Press <Enter> to set the items of CPU feature. Please refer to page 51.

❖Hard Disk Boot Priority

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

❖CPU L1 & L2 Cache (Default: Enabled)

This option is used to turn on or off the CPU L1 and L2 cache. The available setting values are: Disabled and Enabled.

❖CPU L3 Cache (Default: Enabled)

This option is used to turn on or off the L3 CPU cache. The available setting values are: Disabled and Enabled.
Note: This function will not be displayed until a CPU with CPU L3 cache has been installed.

❖Hyper-Threading Technology (Default: Enabled)

This option is used to turn on or off the Hyper-threading function of the CPU. The available setting values are: Disabled and Enabled.
Note: This function will not be displayed until a CPU that supports Hyper-Threading has been installed.

❖Quick Power On Self Test (Default: Enabled)

With this function enabled, the system will skip the normal test while starting up, therefore reducing the overall start up time. The available setting values are: Disabled and Enabled.

❖**First/Second/Third Boot Device (Default: Floppy/Hard Disk/LS120)**

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 device if the first/second/third starting devices failed.

❖**Swap Floppy Drive (Default: Disabled)**

If it is set to Enabled, the label of FDD A and B can be exchanged. The available setting values are: Disabled and Enabled.

❖**Boot Up Floppy Seek (Default: Enabled)**

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

❖**Boot Up NumLock Status (Default: On)**

This option is used to set up the NumLock status after the startup. When it is set to On, the NumLock will be activated during system startup. When it is set to Off, users can use the number keys instead of the arrow keys to move the cursor. The available setting values are: On and Off.

❖**Gate A20 Option (Default: Fast)**

This option is used to set up the A20 signal control necessary for access to the 1MB memory. The available setting values are: Normal and Fast.

❖**Typematic Rate Setting (Default: Disabled)**

When it is set to Enabled, the 2 subsequent options can be activated; when it is set to Disabled, the 2 subsequent options will be closed.

❖**Typematic Rate (Chars/Sec) (Default: 6)**

Used to set the repeat rate for keyboard input of the same letter.

❖**Typematic Delay (Msec) (Default: 250)**

Used to set the repeat keyboard input rate when pressing a key continuously.

❖**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 startup your PC, as well.

❖**APIC Mode (Default: Enabled)**

This option is used to open or lock the APIC mode built into the chipset. The available setting values are: Disabled and Enabled.

❖**MPS Version Control For OS (Default: 1.4)**

This option is used to set up the version of MPS Table used in NT4.0 OS.

❖**OS Select For DRAM > 64MB (Default: Non-OS2)**

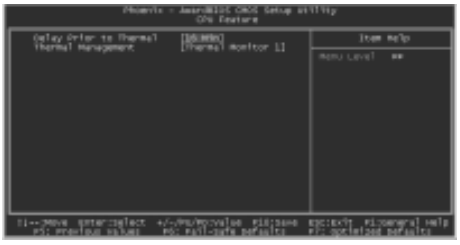
With it set to Non-OS/2, you cannot execute the OS/2 in the system with the memory > 64MB; with OS/2 selected, you are allowed to execute the OS/2 in the system with the memory > 64MB.

❖**Report No FDD For WIN 95 (Default: No)**

FDD Set whether BIOS reports Windows 95 or not loading floppy disk drive. The available setting values are: No and Yes.

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

Determines whether the small logo (EPA) will be displayed during system startup. The available setting values are: Disabled and Enabled.



CPU Feature Menu

❖**Delay Prior to Thermal (Default: 16 Min)**

This option is used to set up the time for CPU to enter the energy-saving mode.

❖**Thermal Management (Default: Thermal Monitor 1)**

This option is used to manage Prescott CPU thermal.

Note: This function will not be displayed until a Prescott CPU has been installed.

Advanced Chipset Features

Advanced Chipset Features Menu

❖DRAM Timing Selectable (Default: By SPD)

This option is used to set the signal time sequence of the DRAM. The “By SPD” DRAM speed is controlled by the DRAM data register, and the “By Manual” DRAM speed is controlled by the user.

❖CAS Latency Time (Default: depend on memory)

This item determines CAS Latency. The available setting values are: 2, 2.5 and 3.

❖Active to Precharge Delay (Default: depend on memory)

This item allows you to select DRAM Active to Precharge Delay. The available setting values are: 8, 7, 6 and 5.

❖DRAM RAS# to CAS# Delay (Default: depend on memory)

This item allows you to select a delay time between the CAS and RAS strobe signals. The available setting values are: 4, 3, and 2.

❖DRAM RAS# Precharge (Default: depend on memory)

This item allows you to select the DRAM RAS# precharge time. The available setting values are: 4, 3, and 2.

❖Memory Frequency For (Default: Auto)

It sets the frequency for memory.

Note: The operating frequency will be 320MHz when a 800MHz CPU and a DDR333MHz are used jointly.

❖System BIOS Cacheable (Default: Enabled)

This option is used to determine whether the system BIOS is written into the buffer memory. The available setting values are: Disabled and Enabled.

❖Video BIOS Cacheable (Default: Disabled)

This option is used to determine whether the Video BIOS is written into the buffer memory. The available setting values are: Disabled and Enabled.

❖Memory Hole At 15M-16M (Default: Disabled)

This option is used to determine whether the 15M-16M address field of memory is reserved for the ISA expansion card. The available setting values are: Disabled and Enabled.

❖AGP Aperture Size (MB) (Default: 128)

This option is used to set up the memory size occupied by AGP card.
Note: This function does not work when Onboard VGA is used.

❖Init Display First (Default: AGP)

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

❖DRAM Data Integrity Mode (Default: ECC)

This option is used to set the DRAM data integrity mode. The available setting values are: ECC and Non-ECC.

❖Fast Chip Select (Default: Auto)

This option allows you to set the Intel® PAT function, select “Enabled” for the Intel® PAT function is OK. The available setting values are: Auto and Enabled.

Integrated Peripherals

Integrated Peripherals Menu

Use the arrow keys to select your options; press the <Enter> key to enter the setup menu. The options and setting methods are discussed below:

Onchip IDE Device Menu

❖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 DMA transfer access (Default: Enabled)

This option is used to set up the IDE transfer access—with it set to Enabled, the IDE Transfer Access uses the DMA mode; with it set to Disabled, the IDE Transfer Access uses the PIO mode.

❖On-Chip Primary PCI IDE (Default: Enabled)

This option is used to set whether the On-chip Primary PCI IDE interface is used. The available setting values are: Disabled and Enabled.

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

This option is used to set the PIO transfer mode under the IDE Primary Master/Slave Controller. PIO transfer mode options include Auto/0/1/2/3/4. Set the transfer mode according to the IDE specification. It is recommended to set it to Auto for the auto-test by BIOS.

❖**IDE Primary Master/Slave UDMA (Default: Auto)**
This option is used to set whether the IDE Primary Master/Slave Unit supports Ultra DMA. With it set to Auto, BIOS will automatically test whether IDE sup ports Ultra DMA; with it set to Disabled, the Ultra DMA function will be locked.

❖**On-Chip Secondary PCI IDE (Default: Enabled)**
This option is used to set whether the On-chip Secondary PCI IDE is used. The available setting values are: Disabled and Enabled.

❖**IDE Secondary Master/Slave PIO (Default: Auto)**
This option is used to set the PIO transfer mode under the IDE Secondary Master/ Slave Controller. With it set to Auto, BIOS will automatically detect whether IDE supports the Ultra DMA; with it set to Disabled, the Ultra DMA function will be locked.

❖**IDE Secondary Master/Slave UDMA (Default: Auto)**
This option is used to set whether the second group of primary/secondary equipment supports Ultra DMA. If the setting is Auto, BIOS will automatically detect whether the IDE hard disk supports Ultra DMA; if the setting is Disabled, it will be locked

❖**SATA Mode(Default: IDE)**
This option is used to set the SATA mode. When it is set to IDE, the mode will be IDE only. The available setting values are: IDE and RAID.
Note:If want to use Raid Function, On-Chip Serial ATA must be set Enhance mode.

❖**On-Chip Serial ATA (Default: Auto)**
This option is used to set the On-chip Serial ATA function. When it is set to Disabled, the function will be locked; when it is set to Auto, the BIOS will lock the function; with it set to Combined Mode, four HDDs at most will be supported; with it set to Enhanced Mode, six HDDs at most will be supported (for those under Windows 2000 and WindowsXP only); with it set to S-ATA Only, only the S-ATA HDD can be used.

❖**Serial ATA Port 0/1 Mode (Default: SATA0/1 master)**
This option is used to set the Serial ATA Port 0/1 Mode.With the mode set to Primary Master/Slave, the Primary IDE cannot be used; only the secondary IDE and SATA ports 0/1 will be available. With the mode set to Secondary Master/Slave, the secondary IDE will be unavailable; only the primary IDE and SATA ports 0/1 can be used. With the mode set to Primary/Secondary Master, and the option SATA Only selected, the SATA HDD acts as both the primary and secondary drive. With the mode set to SATA 0/1 Master and the option SATA Enhanced Mode selected, both IDE ports and both SATA ports will be available.

Onboard Device Menu

❖**USB Controller (Default: Enabled)**

This option is used to set whether the USB Controller is enabled. The available setting values are: Disabled and Enabled.

❖**USB 2.0 Controller (Default: Enabled)**

This option is used to set whether the USB 2.0 Controller is enabled. The available setting values are: Disabled and Enabled.

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

This option is used to set whether the USB Keyboard Controller is enabled under the conventional operating system. The available setting values are: Disabled and Enabled.

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

This option is used to set whether the USB Mouse Controller is enabled under the conventional operating system. The available setting values are: Disabled and Enabled.

❖**AC97 Audio (Default: Auto)**

This item allows you select AC97 Audio chip to support Audio. Disable this item if you are going to install a PCI audio added on card. The available setting values are: Disabled and Auto.

❖**Onboard Lan Controller (Default: Enabled)**

This option allows you to enable or disable the onboard LAN function. The available setting values are: Disabled and Enabled.

❖**Onboard Lan Boot ROM (Default: Disabled)**

This option allows you to enable or disable the onboard Lan Boot ROM function. The available setting values are: Disabled and Enabled.

Super IO Device Menu

❖**POWER On Function (Default: BUTTON ONLY)**

This option is used to set the power on method for your PC. Setting values include: Button Only, Password, Hot-key, Mouse Left, Mouse Right, Any Key and Keyboard 98 (keyboard is consistent with Windows 98 Standard).

❖**KB Power ON Password (Default: Enter)**

This option is used to set the PC Startup with Keyboard function. You will be prompted to enter the password after pressing the <Enter> key.
Note: This function will only work when the Power On function is set to Password, or you can not change it.

❖**Hot Key Power ON (Default: Ctrl-F1)**

This option is used to set which hot keys will be used for the Power On Function (when it is set to Hot Key for Startup). The available setting values are: Ctrl+F1-F12.

❖**Onboard FDC Controller (Default: Enabled)**

This option is used to set whether the Onboard FDC Controller is enabled. The available setting values are: Disabled and Enabled.

❖**Onboard Serial Port 1/2 (Default: 3F8/IRQ4/2F8/IRQ3)**

This option is used to set the signal requested for address and interruption for the Onboard Serial Port 1/2. Setting values include 2F8/IRQ3, 3F8/IRQ4, 3E8/IRQ4, 2E8/IRQ3, Auto and Disabled.
Note: Do not try to set the same values for serial ports 1 and 2.

❖**UART Mode Select (Default: Normal)**

Use this option to select the UART mode. Setting values include Normal, IrDA, and ASKIR. The setting value is determined by the infrared module installed on the board. When it is set to IrDA and ASKIR, the UART supports communication with the MB by means of the infrared module; when it is set to Normal, the infrared function is unavailable.

❖**RxD, TxD Active (Default: Hi, Lo)**
This option is used to set the RxD and TxD parameters, for example, Hi/Hi, Hi/Lo, Lo/Hi and Lo/Lo.

❖**IR Transmission Delay (Default: Enabled)**
This option is used to set whether the IR Transmission Delay is enabled. The available setting values are: Disabled and Enabled.

❖**UR2 Duplex Mode (Default: Half)**
When the UART Mode Select option is set as any one than the Normal, you can select this option. This option is used to set the UART operating mode. Setting values include Full (full duplex) and Half (half duplex).
Full duplex means that data can be sent and received synchronously, where as this is not possible in half duplex mode.

❖**Use IR Pins (Default: IR-Rx2Tx2)**
It is recommended not to change the default setting.

❖**Onboard Parallel Port (Default: 378/IRQ7)**
This option is used to define the address for the Onboard Parallel Port and the channel for IRQ. Setting values include Disabled, 378/IRQ7, 278/IRQ5 and 3BC/IRQ7.

❖**Parallel Port Mode (Default: SPP)**
This option is used to specify the data transmission protocol for the Parallel Port, with five options: SPP, EPP, ECP, ECP+EPP and Normal.
The Normal mode only supports data output; ECP and EPP modes support the two-way transmission of data input and output. ECP and EPP modes are applicable only to devices known of the ECP and EPP.

❖**EPP Mode Select (Default: EPP1.7)**
When the Parallel Port Mode is set to either EPP or ECP+EPP, this option can be used to select V1.7 or V1.9 for the EPP mode.

❖**ECP Mode Use DMA (Default: 3)**
When the Parallel Port Mode is set to ECP or ECP+ EPP, this option is used to select the channel for the ECP mode. Setting values are 1 and 3.

❖**PWRON After PWR-Fail (Default: Off)**
This option is used to set what action the PC will take with the power supply when it resumes after a sudden power failure. The available options are Off (remain in turnoff status), On (restart) and Former-Sts (resume with the previous status).

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).

❖ACPI Suspend Type (Default: S1 (POS))

This option is used to set the energy saving mode of the ACPI function. When you select “S1 (P0S)” mode, the power will not shut off and the power supplied status will remain as it is. In S1 mode the computer can be resumed at any time.

When you select “S3 (STR)” mode, the power will be cut off after a delay period. The status of the computer before it enters STR will be saved in memory, and the computer can quickly return to previous status when the STR function waked. When you select “S1 & S3” mode, the system will automatically select the delay time.

❖RUN VGABIOS if S3 Resume (Default: Auto)

This option is used to set video card when waked by S3 mode. It can set as: Auto (automatically initialize display card again), Yes (initialize display card again), No (this function invalid).

❖Power Management (default: User Define)

This option is used to set the power management scheme. Available settings are: User Define (defined by user), Min Saving (minimum saving mode), and Max Saving (maximum saving mode).

❖Video Off Method (Default: DPMS)

This option is used to set the mode.
"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" mode is a new screen power management system, and it needs to be supported by the monitor you're using.

❖Video Off In Suspend (default: Yes)

This option is used to determine whether the audio is turned off when the system enters sleep mode. The setting values are No (not closed) and Yes (closed).

❖Suspend Type (default: Stop Grant)

This option is used to set sleep mode. The setting values are Stop Grant (saves the status of the whole system and then turns off power), and PwrOn Suspend (CPU and core system go to low power mode, keeps power supply).

❖MODEM Use IRQ (default: 3)

This option is used to set the Modem interrupt signal. The system will automatically waked up when the Modem receives an incoming call. At the same time, connect Fax/Modem to WOM joint in main board.

❖Suspend Mode (default: Disabled)

This option is used to set the idle time before the system enters into sleep status. The setting values are Disabled and 1 Min-1 hour.

❖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 1 Min-15 Min.

❖Soft-Off by PWR–BTTN (default: Instant - Off)

This option is used to set the power down method. This function is only valid for power joint using ATX.
When "Instant - Off" is selected, press the power switch to immediately turn off power.
When "Delay 4 Sec" is selected, press the power button for four seconds to turn off power.

❖**CPU THRM – Throttling (default: 50.0%)**

This option is used to protect the CPU from overheating. The CPU will be forced into idle mode after the protection mechanism is turned on. What we want to set is the percent ratio that the idle time of CPU occupies whole operation time. The higher this setting is, the lower the temperature of the CPU decreases. The setting values are 25%, 50% and 75%.

❖**Wake-Up by PCI card (default: Enabled)**

This option is used to set the system to be waked up by PCI card. The setting values are Disabled and Enabled.

❖**Power On by Ring (default: Enabled)**

This option is used to set the system to be waked up by Modem. After turning this function on, remote software can be used to turn on the computer. This function needs to be supported by the relevant hardware and software. The setting values are Disabled and Enabled.

❖**USB KB Wake – Up From S3 (default: Disabled)**

This option is used to set the system to be waked up by USB equipments when it is in S3 (Suspend to RAM) mode. The setting values are Disabled and Enabled.

❖**Resume by Alarm (default: Disabled)**

This option is used to set the timing of the start-up function. In order to use this function, the start-up password function must be canceled.At the same time it must turn on power of host. The setting values are Disabled and Enabled.

❖**Date (of Month) Alarm**

This option is used to set the timing for the start-up date. The setting values contain 0-31.

❖**Time (hh:mm:ss) Alarm**

This option is used to set the timing for the start-up time. The setting values contain hh: 0 – 23; mm:0 – 59; ss:0 – 59.

❖**Primary IDE 0/1, Secondary IDE 0/1 (default: Disabled)**

This option is used to set whether cancels the sleep status of current PC and this IDE when primary/secondary IDE 0/1 equipment has accessing action requirements. The setting values are Disabled and Enabled.

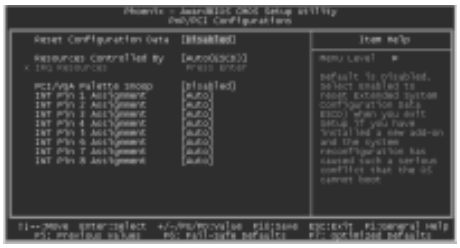
❖**FDD, COM, LPT Port (default: Disabled)**

This option is used to set whether cancels the sleep status of current PC and this IDE when floppy driver, serial equipment and parallel equipment have accessing action requirements. The setting values are Disabled and Enabled.

❖**PCI PIRQ[A-D] # (default: Disabled)**

This option is used to set the system to be waked up by PCI equipment. The setting values are Disabled and Enabled.

PnP/PCI Configurations



PnP/PCI Configurations Menu

❖Reset Configuration Data (default: Disabled)

This option is used to set whether permits the system to automatically distribute IRQ DMA and I/O address when the machine is turned on every time. The setting values are Disabled and Enabled.

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

This option is used to system set resource control style.
If all cards you used support PnP, it can select this option, BIOS automatically distributes interruption resources.
If you install ISA card not supporting PnP, in the case that the system occurs hardware conflict, it needs to select “Manual” and manually adjust interruption resources. For this motherboard has no ISA slot, so it does not consider this option.

❖IRQ Resources

Press the key “Enter”, then the user can manually set IRQ resources.

❖PCI/VGA Palette Snoop (default: Disabled)

If you use non-standard VGA card, if graphic acceleration card or MPEG audio card is not accurate in display of color, it can solve this problem when this item is set. The setting values are Disabled and Enabled.

❖INT Pin 1-8 Assignment (default: Auto)

This option is used to distribute the interruption requirements of various PCI equipment.

PC Health Status

PC Health Status Menu

❖**CPU Warning Temperature (default: Disabled)**
This option is used to set warning temperature of system. When the temperature of CPU is higher than setting value, the motherboard will send warning information, the setting values are Disabled and 50°C/122°F - 70°C/158°F.

❖**Current System Temperature**
The current system temperature automatically detected by the system.

❖**Current CPU Temperature**
The current CPU temperature automatically detected by the system.

❖**System Fan Speed**
The current speed of system fan automatically detected by the system.

❖**CPU Fan Speed**
The current speed of CPU fan automatically detected by the system.

❖**CPU Vcore /+3.3V/+12V**
Display current voltage value including all significant voltages of the motherboard. +3.3V, +12V are voltages from the power supply.

❖**Shutdown Temperature (default: Disabled)**
This option is used to set upper limitation of system temperature. When the temperature is higher than setting values, motherboard will automatically cut off the power of computer. The setting values are Disabled and 60°C/140°F - 75°C/167°F.

Frequency/Voltage Control

Frequency/Voltage Control Menu

❖**Auto Detect PCI Clk (default: Enabled)**

This option is used to set whether closes empty PCI clock to reduce electro magnetic disturbance. The setting values are Disabled and Enabled.

❖**Spread Spectrum (default: Disabled)**

This option is used to set permissible electromagnetic disturbance range. The setting values are 0.35%, 0.50%, 0.75% and 1.00%.

Warning:

Please carefully set working frequency of CPU. We suggest not adjust frequency of CPU higher than normal working range at random. This company will not be responsible for any damage arisen in this case.

Load Fail-Safe Defaults

Select this option to press Enter, it will pop out a dialogue box to allow you to load default set by BIOS. Select <Y> and then press Enter to load default. Select <N> and press Enter, it will 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 run, you may load failure insurance default to make the system recover normal, then carry out failure testing in next step. If you only want to load the default in an option, you can select this option and press the key F6.

Load Optimized Defaults

Select this option and press Enter, it will pop out a dialogue box to let you load the optimized defaults set by BIOS. Select <Y> and then press Enter to load the optimized defaults. Select <N> and press Enter, it will not load. 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, it will cause system to make mistakes or not stable. If you only want to load the optimized default in an option, you can select this option and press the key F7.

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 setting.
When you select Set Supervisor / User Password, it will appear the following message in the center of screen, which will help you to set password.

Enter Password:

Enter your password, not exceeding 8 characters, then press <Enter>, the password you have been enter now will replace the previous password. When the system requires you to determine this password, you can enter this password and press <Enter>.
If you do not need this setting, you can press <Enter> when the screen prompts you to enter password, and the screen will appear the following message to show this function invalid. 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”, 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”, 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, it will show the following message in the center of screen:

Save to CMOS and EXIT (Y/N)?

At this time, press <Y> to save your amendment in CMOS and exit from this program; press <N>/<ESC> to return main menu.

Exit Without Saving

Select this option and press Enter, it will show the following message in the center of screen:

Quit Without Saving (Y/N)?

At this time, press <Y> to exit CMOS but it does not save your amendment in CMOS; press <N>/<ESC> to return main menu.

Chapter 4

This chapter will introduce how to install driver software and application tool software of motherboard, let your motherboard exert the largest effect.

This chapter provides the following information:

- Introduction to content of motherboard driver CD
- Start to install driver and software
  - Install Chipset Software
  - Install IAA-RAID
  - Install USB2.0 driver
  - Install LAN Driver
  - Install and use 4- or 6- channel audio function
  - Install Sil3112 SATARaid
  - Install DirectX
  - Install Norton Internet Security 2004

Utility CD content

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

Main Menu

1.Install Driver

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

A. Chipset Software
B. IAA RAID (optional)
C. USB 2.0 Driver
D. LAN Driver
E. Audio Driver
F. Sil3112 SATARaid
G. DirectX

2.Accessories

Use this option to install additional software programs.

A. SuperUtility
B. Adobe Reader
C. Norton Internet Security 2004

3.Browse CD

Click here to browse CD content.

4. Homepage

Click here to visit Foxconn motherboard homepage.

Note:

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

Start to Install drivers

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

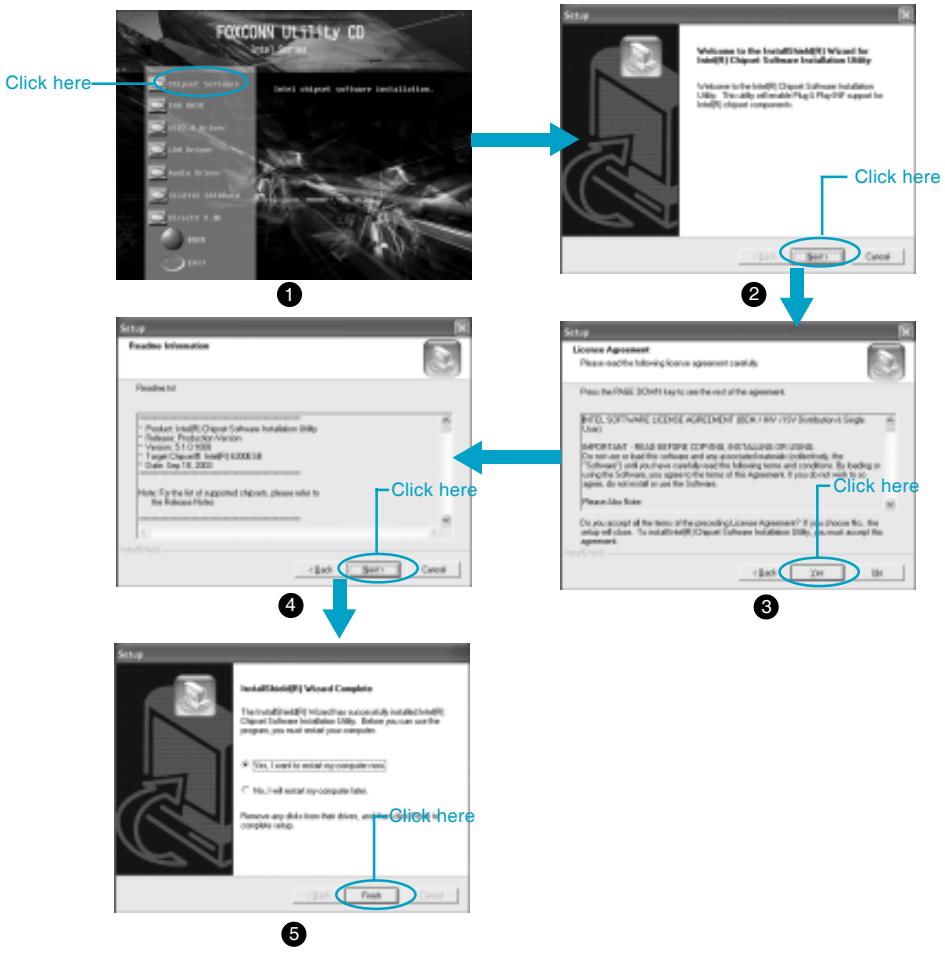
❶

Note:

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

Install Chipset Software

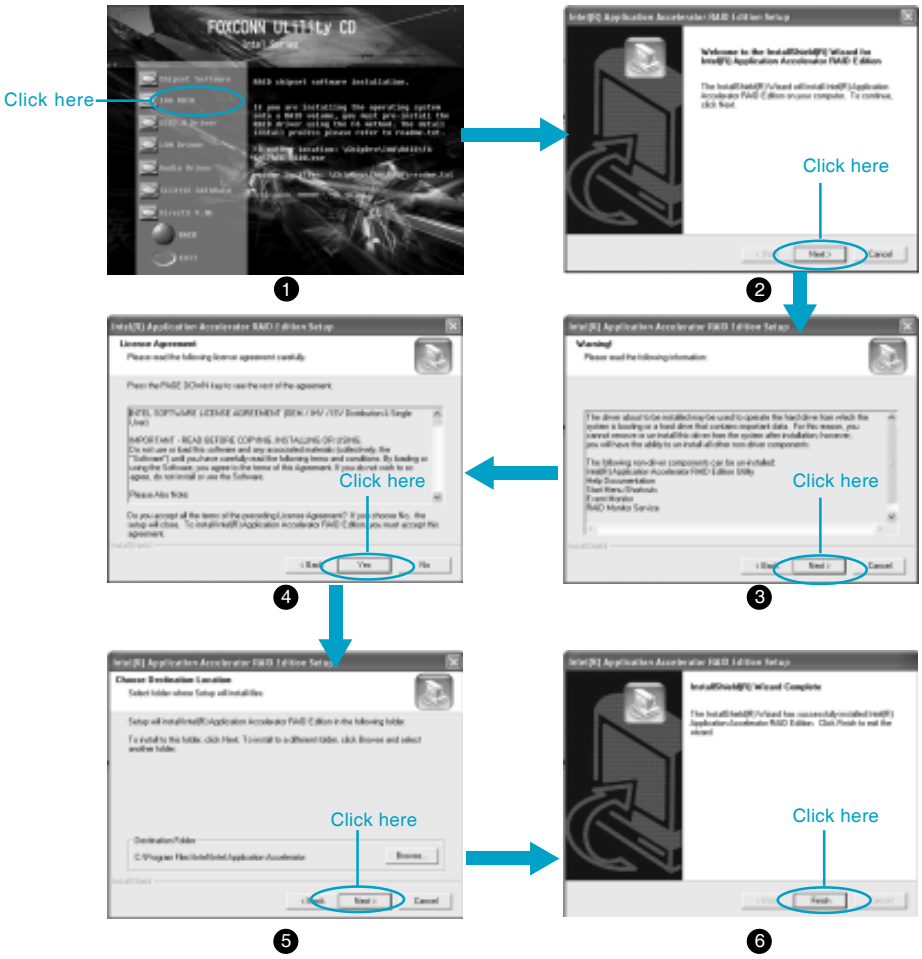
Select <Install Driver> from the main menu and enter the main driver setup menu (as shown in fig. 1). Click <Chipset Software> to start the installation.



Install IAA-RAID (optional)

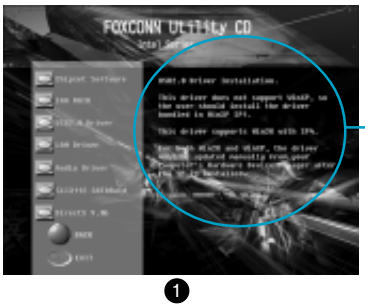
From the main menu, select <Install Driver> as shown in following fig. 1. click <IAA RAID> to start the setup.

Note: IAA RAID is only applicable for the ICH5R chipset.



Install USB 2.0 Driver

From the main menu, select <Install Driver> as shown in following fig. 1. Click <USB 2.0 Driver> to open the USB 2.0 setup window. Please read the setup directions carefully and select the installation method corresponding to the operating system that you are currently using.

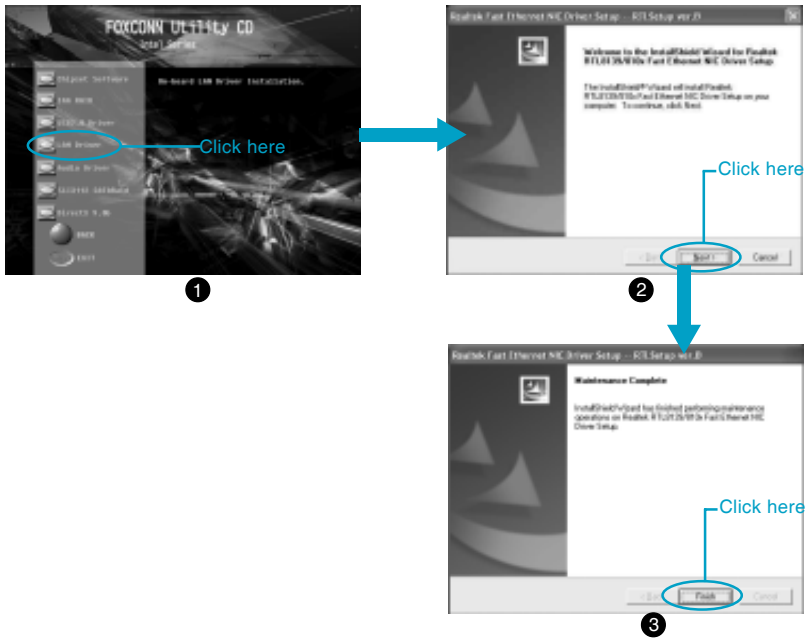


Note:

Use of USB 2.0 requires the support of your operating system. If you are using Windows 98 or Windows Me, you will need to upgrade your operating system to use USB2.0.

Install LAN Driver (For Realtek 10/100/1000M LAN)

From the main menu, select <Install Driver> as shown in fig. 1. click <LAN Driver> to start the setup.



Install and Use 4- or 6- Channel Audio Function

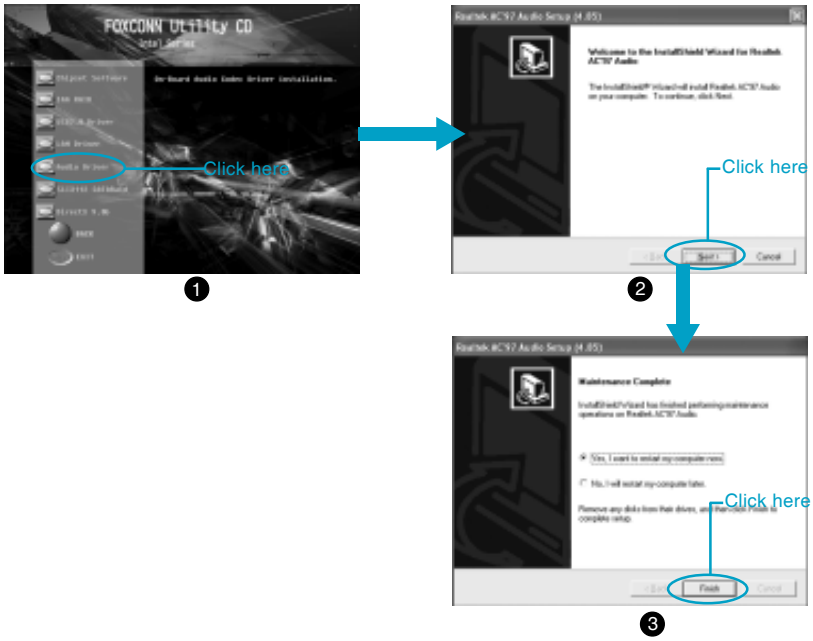
This motherboard integrates Realtek ALC650 chip, provides 6-channel audio output, including 2 front speakers, 2 rear speakers, one central speaker, and one subwoofer. ALC650 can connect 4 or 6 audio boxes to get a better surround sound effect. This chapter tells you how to install and use these audio functions.

Content:

1).Install audio driver
2).Use 4-/6- channel audio functions
3).Test the connected audio boxes
4).Play Karaoke

1).Install Audio Driver

Before using the 4-/6- channel audio functions, you must first install the driver for the Realtek ALC650 chip. Install the driver according to the procedure described below:



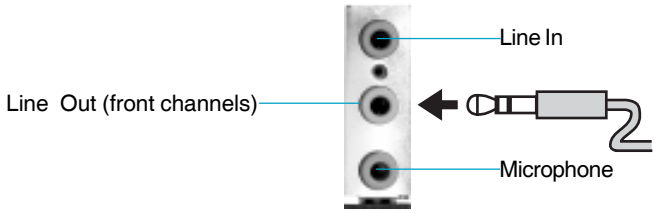
2).Use 4-/6- Channel Audio Functions

After installing the driver, you can use the 4-/6- channel functions. First, connect 4 or 6 speakers corresponding to the audio interfaces and then select the 4 or 6 audio settings in the software.

Connect Audio Box

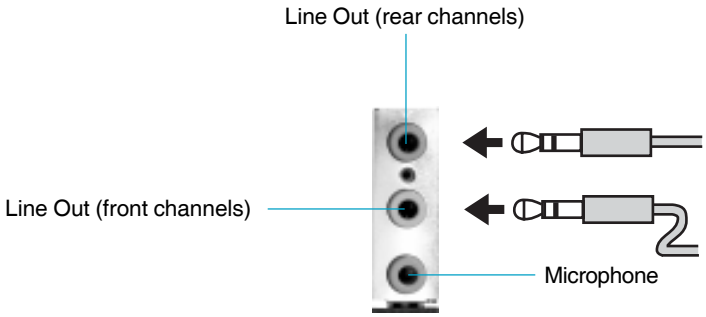
In order to use the multi-channel function, you must connect several speakers to the system. You must connect the same number of speakers as channels selected in the software. The audio interface on the rear panel can only support 2-channel analog audio output function. When you select the correct settings in the software, the audio interface on the rear panel automatically changes into a 4-/6- channel analog audio interface. Please refer to "How to Select 4- or 6- Channel Setting" at the end of this chapter for more setting information.
Ensure all speakers are connected to the Line Out interfaces. Use the interface on the rear panel to use 2-, 4- and 6- channel configuration, described as follows.

2-Channel Analog Audio Interface



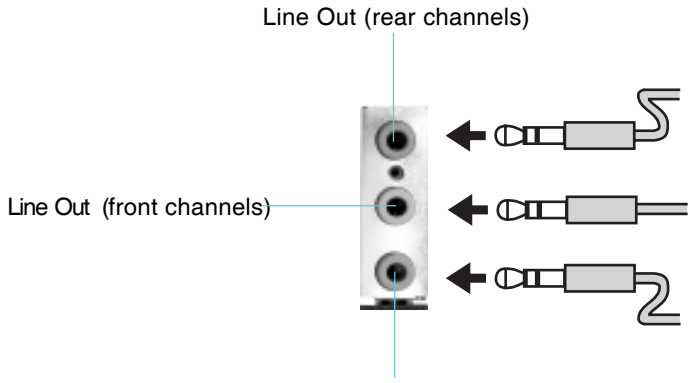
Description: all Line Out, Line In and Microphone functions exist in 2-channel mode.

4-Channel Analog Audio Interface



Description: in the 4-channel setting, Line In is changed to Line Out function.

6-Channel Analog Audio Output

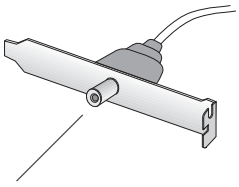


Description: in the 6-channel setting, Line In and Microphone are changed to Line Out function.

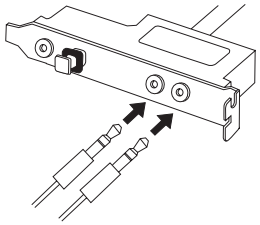
Digital Audio Output

SPDIF CABLE

6CH_BRACKET CABLE (Optinal)



or



Coaxial SPDIF jack

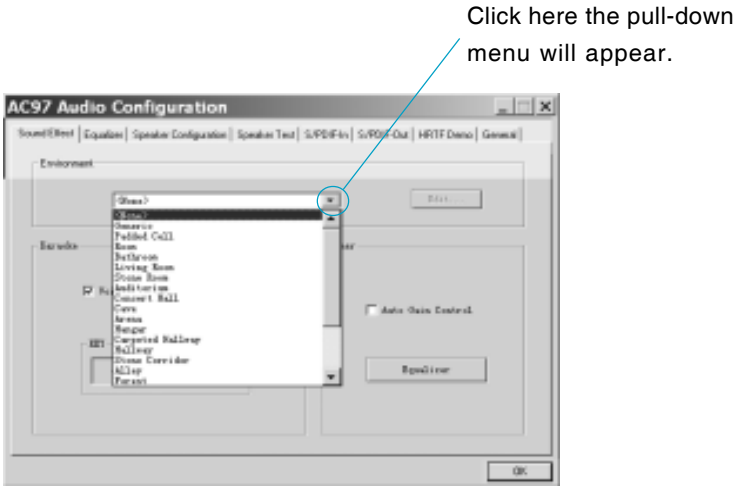
The blank pin of the SPDIF connection cable corresponds to the 9th pin of the 6CH_Bracket.

Description: for digital audio output, use the provided SPDIF interface. Connect the coaxial SPDIF joint to the coaxial SPDIF jack.

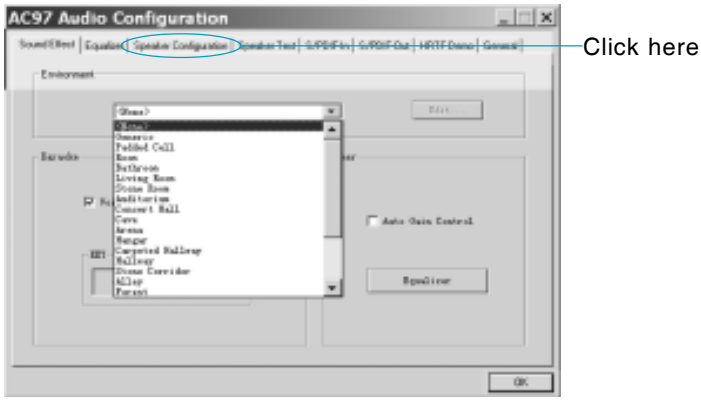
Select 4- Or 6- Channel Setting

A. Click the audio icon from the window tray at the bottom of the screen.

B. In the drop-down menu of sound effect item, select the desired surround sound effect.



C. Click the **Speaker Configuration** tab.



D. The following window appears.

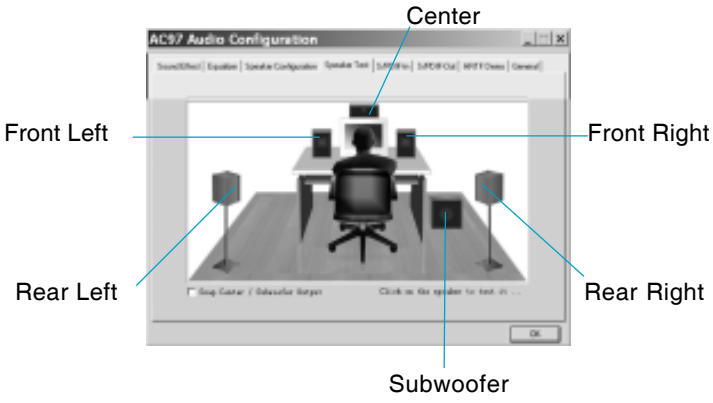
E. Select the multi-channel operation you perfect from No.of Speaker.
F. Click OK.

3).Testing the Connected Speakers

To ensure 4- or 6-channel audio operation works properly, you may need to test each connected speaker to make sure every speaker works properly. If any speaker fails to sound, then check whether the cable is inserted firmly to the connector or replace the bad speakers with good ones.

Testing Each Speaker

1. Click the audio icon from the window tray at the bottom of the screen.
2. Click the **Speaker Test** tab.
3. The following window appears.



4.Select the speaker which you want to test by clicking it.

Note: if you select “6-channel mode for 5.1 speaker output” from the “Speaker configuration” list, six speakers will appear in the “Speaker Testing” window. If you select “4-Channel mode for 4 speaker output”, only four will appear.

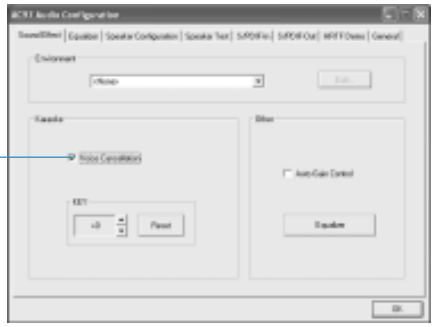
4).Play Karaoke

The Karaoke function will automatically remove the vocals from a track, leaving just the melody for you to sing over. This function can be used in 2-channel mode. Before playing Karaoke, you must select 2-channel mode from the “Speaker configuration” list.

Play Karaoke:

A. Click audio icon in Windows taskbar in the lower-right of the screen.
B. Ensure that “Sound Effect” is selected.
C. Select “Sound Effect” in “Karaoke”.

Click here



D. Click “OK”.

Install Sil3112 SATARaid

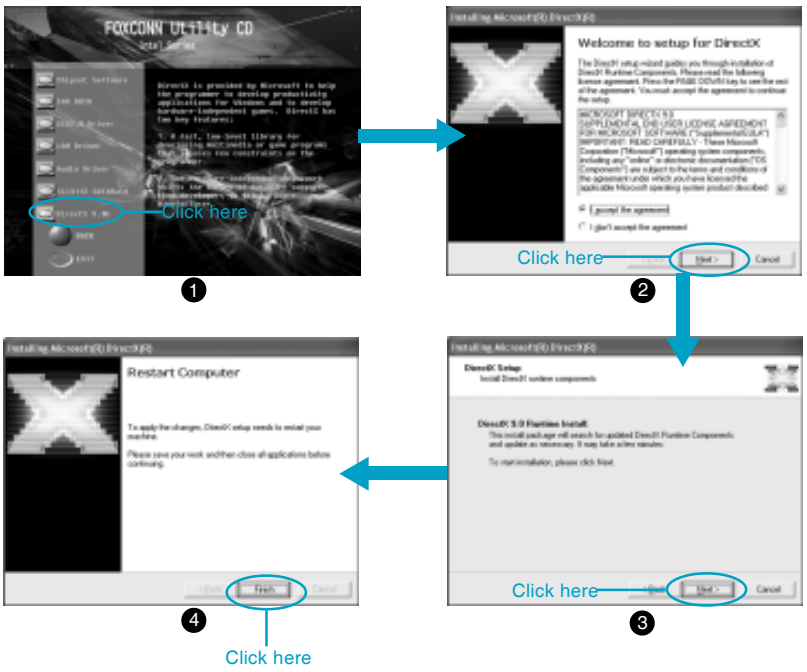
From the main menu, select <Install Driver> as shown in following fig. 1. Click <Sil3112 SATARaid> to open the Sil3112 SATARaid setup window. Please read the setup directions carefully and select the installation method corresponding to the operating system that you are currently using.

Note: Sil3112 SATARaid is only applicable for the Silicon 3112A controller.

1

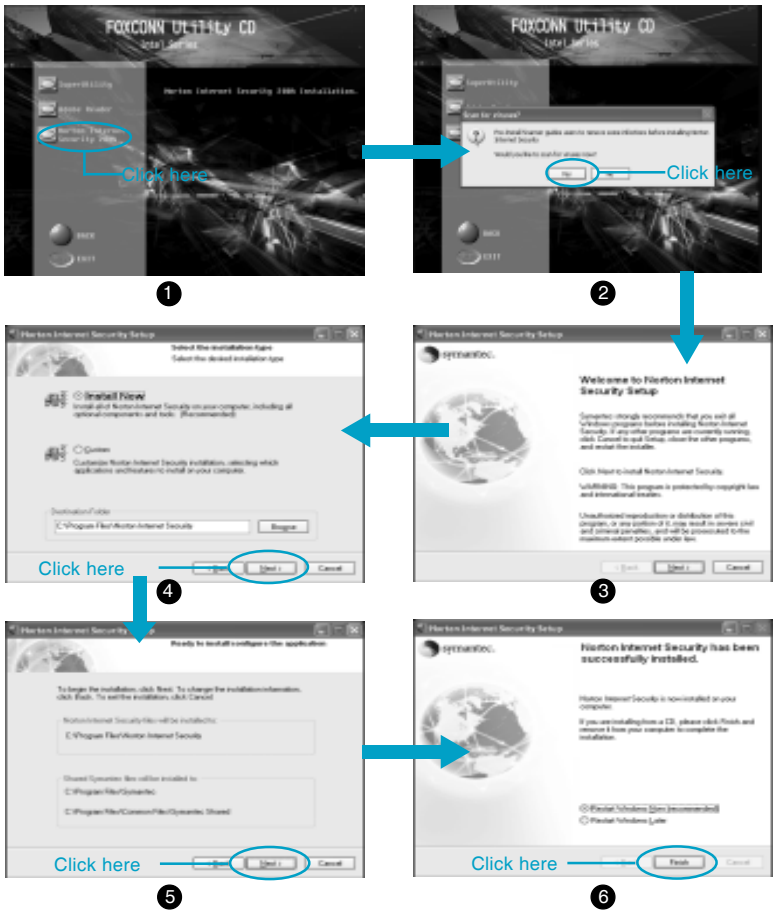
Install DirectX

From the main menu, select <Install Driver> (as shown in following fig. 1), and click <DirectX 9.0b> to start the setup.



Install Norton Internet Security 2004

From the main menu, select <Accessories> as shown in following fig. 1. Click <Norton Internet Security 2004> to start the setup.



Note:

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

Chapter 5

This chapter introduces the pertain to software.

This chapter includes the following information:

- SuperStep
- SuperLogo
- SuperUpdate

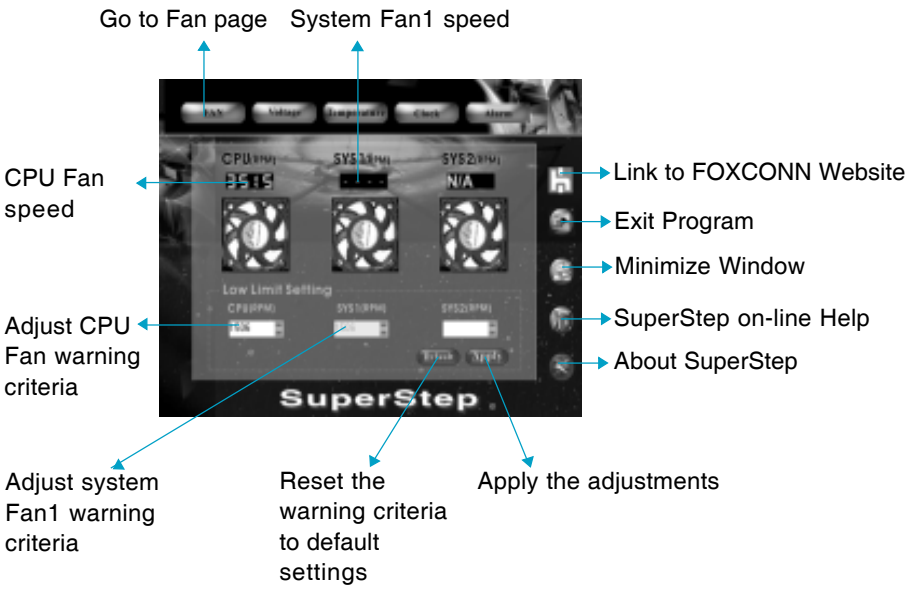
SuperStep

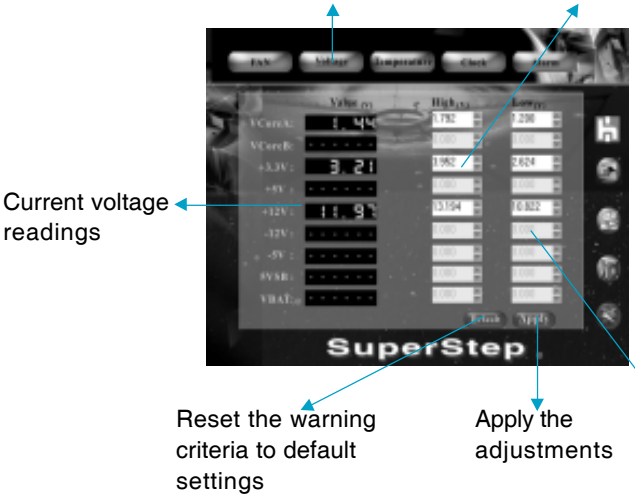
SuperStep is a utility that allows users to change the frequency of the CPU. It also displays system health introduction including CPU temperature, CPU FAN, CPU voltage, and PCI/AGP clock.

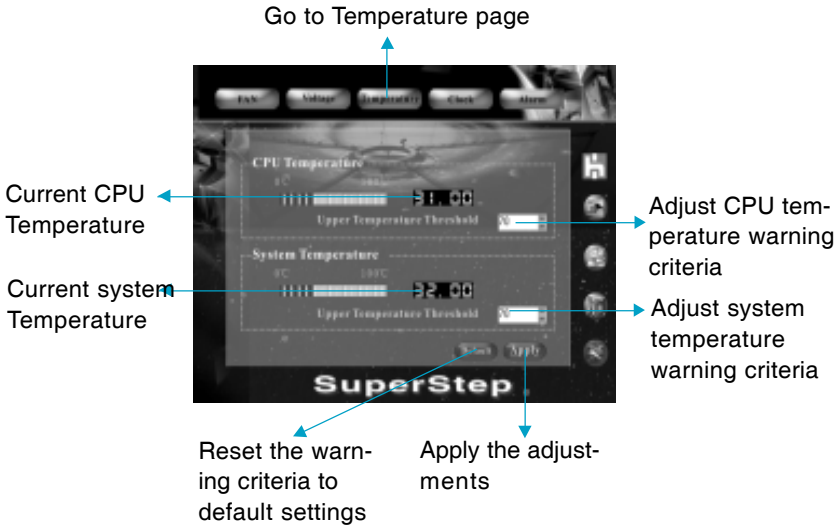
SuperStep features:

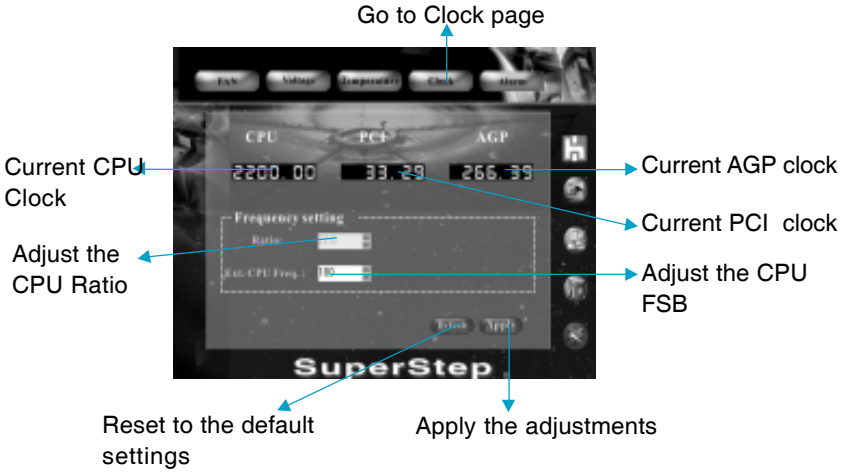
1. Supports Win98SE, WinME, Win2000 and WinXP.
2. Automatic alarm mechanism when system runs irregularly
3. Adjusts the CPU frequency to speed up your system and achieve better system performance.
4. Simple and easy to operate, with a user-friendly graphics interface.

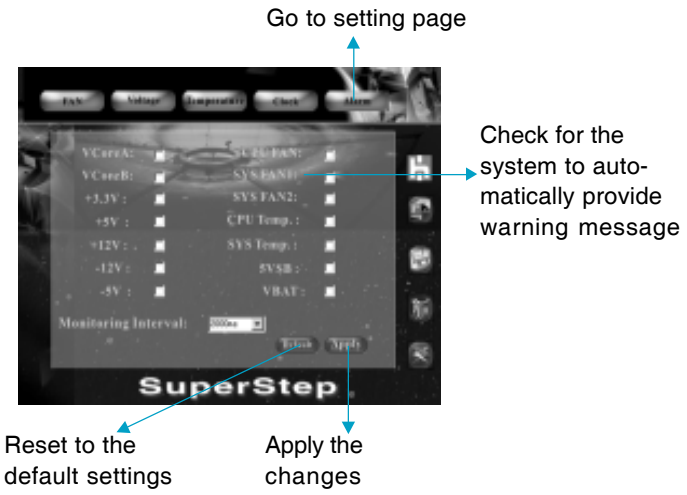
Using the SuperStep:




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


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


Go to Clock page
CPU
PCI
AGP
2200.00
33.29
266.39
Frequency setting
SuperStep
Current CPU Clock
Current AGP clock
Current PCI clock
Adjust the CPU Ratio
Adjust the CPU FSB
Reset to the default settings
Apply the adjustments


Go to setting page
SuperStep
Check for the system to automatically provide warning message
Reset to the default settings
Apply the changes

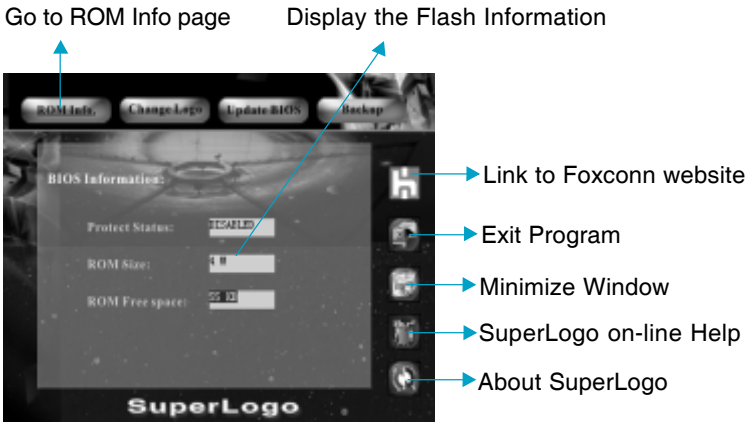
SuperLogo

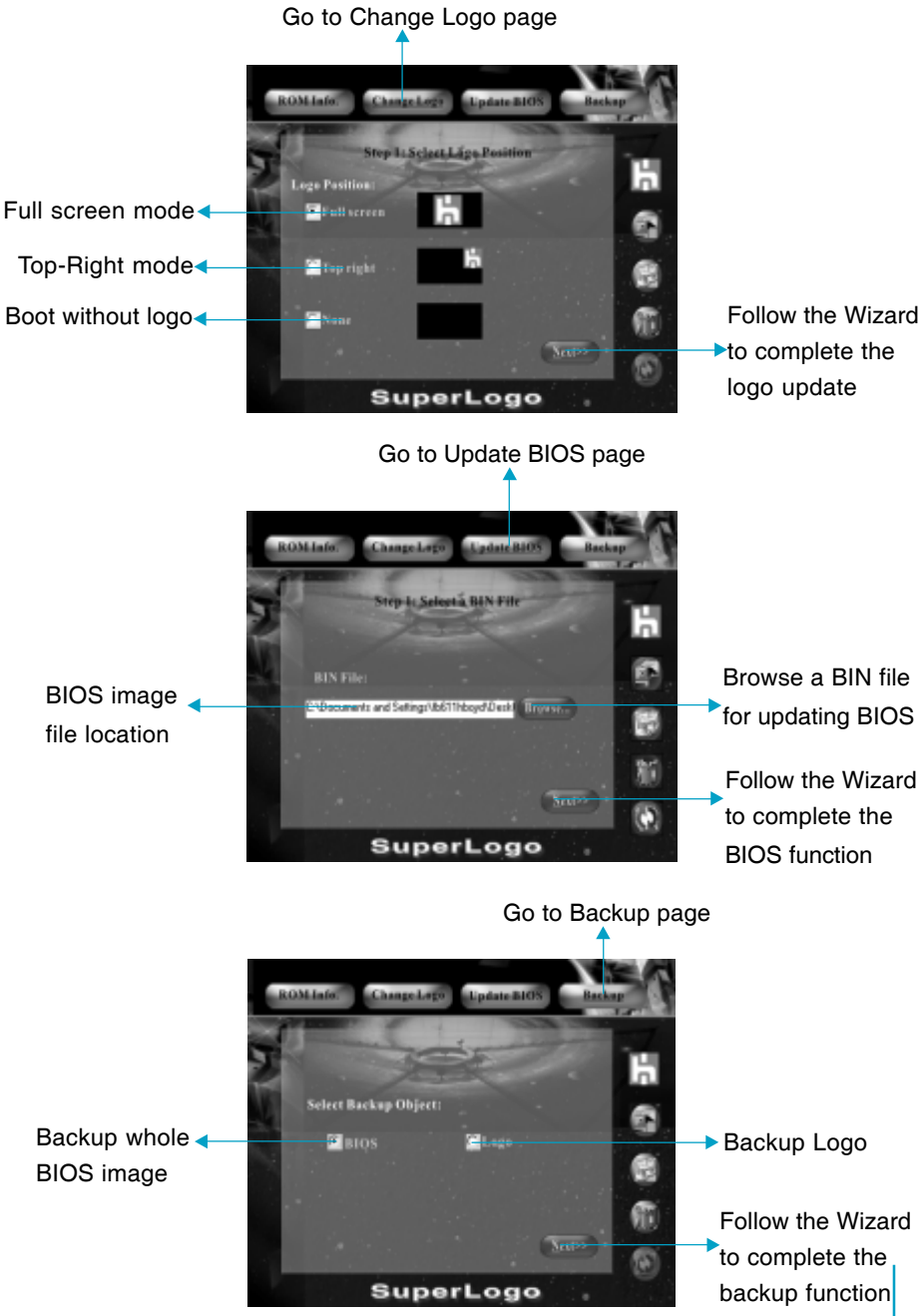
SuperLogo is a Windows utility that allows users to change the BIOS sign on logo. The utility is able to replace and backup the BIOS logo, and update and backup the BIOS image within the Windows environment.

SuperLogo features:

1. Supports Win2000 and WinXP.
2. Supports 4Mb size flash parts, flash write method is independent with flash type.
3. Simple and easy to operate, with a user-friendly graphics interface.
4. Supports BMP and JPEG graphic format files. The best color is 16 or 256 colors. The best resolution is 136x84 for top-right logo and 640x480 or 800x600 for full screen logo.

Using the SuperLogo:




Go to Change Logo page
ROM Info
Change Logo
Update BIOS
Backup
Step 1: Select Logo Position
Logo Position:
Full screen
Top right
None
Next>>
SuperLogo
Full screen mode
Top-Right mode
Boot without logo
Follow the Wizard to complete the logo update
Go to Update BIOS page
Step 1: Select a BIN File
BIN File:
Browse...
SuperLogo
BIOS image file location
Browse a BIN file for updating BIOS
Follow the Wizard to complete the BIOS function
Go to Backup page
Select Backup Object:
BIOS
Logo
SuperLogo
Backup whole BIOS image
Backup Logo
Follow the Wizard to complete the backup function

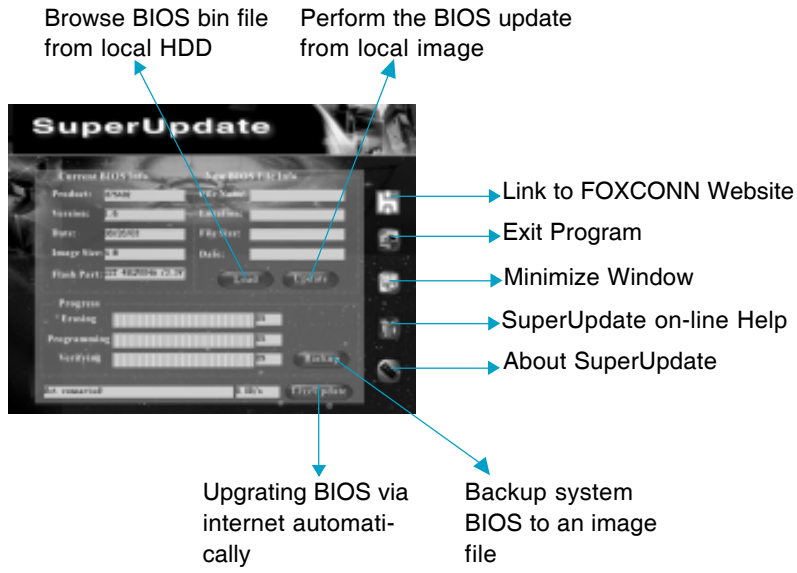
SuperUpdate

SuperUpdate is a Windows utility that allows users to backup and upgrade the system BIOS.

SuperUpdate features:

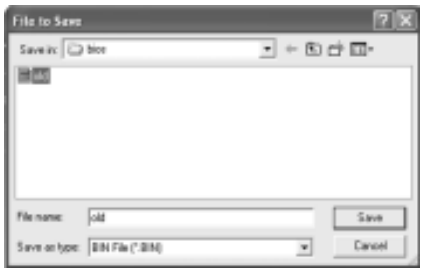
1. Supports Win2000 and WinXP.
2. Supports 4Mb size flash parts; flash write method is independent of flash type.
3. Simple and easy to operate, with a user-friendly graphics interface.

Using SuperUpdate:



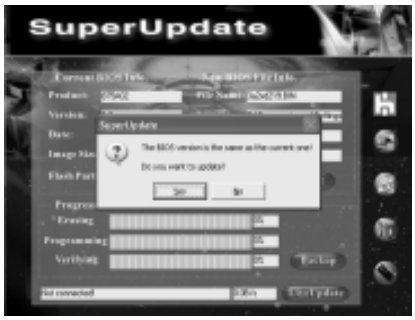
Update BIOS from local image:

1. Click <Backup> to backup the current BIOS to an image file.

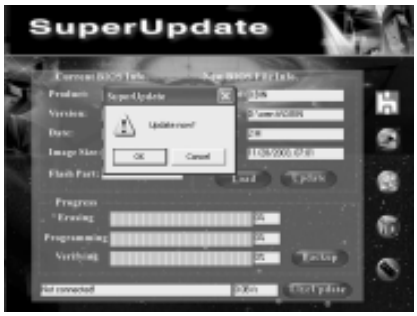


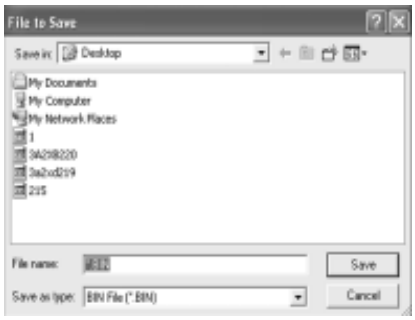
2. Click <Load> to load the BIOS file.

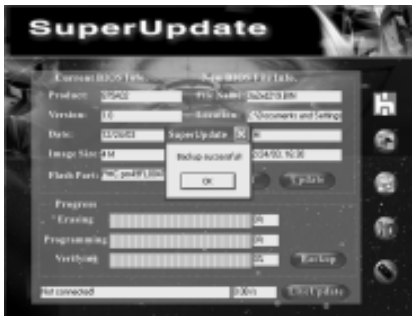
3. Click <Update>.



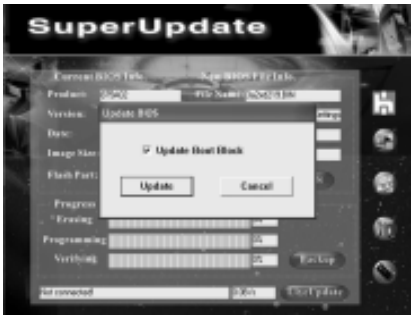
4. Click <Yes>.



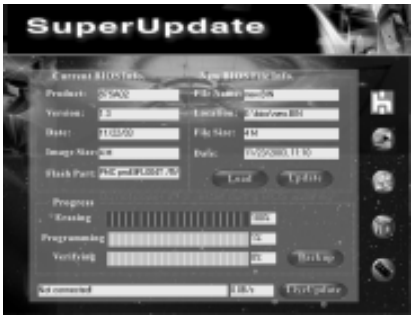




5. Click <OK>.



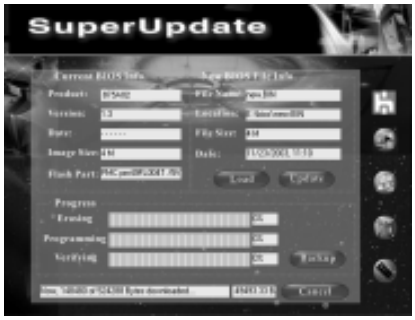
6. Click <OK> to update the current BIOS.



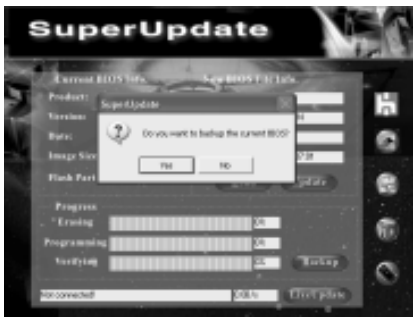
7. Click <Restart >.

Update BIOS On-line:

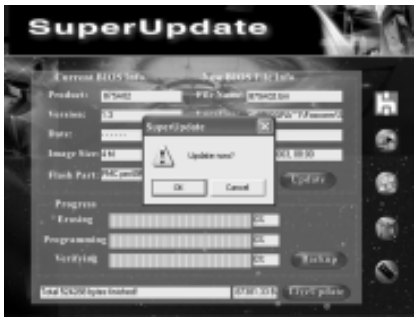
1. Click <Liveupdate> to automatically update the BIOS from the internet.

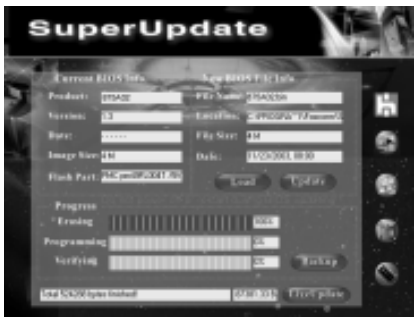


2. Click <Yes> to backup the current BIOS.



3. Click <Ok> to update BIOS.





4. Click <Restart >.

Chapter 6

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

This chapter introduces the following new functions of BIOS:

- SuperSpeed
- SuperBoot
- SuperBIOS-Protect
- SuperRecovery

SuperSpeed

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

Procedures:

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

SuperSpeed Setup Menu

BIOS provides you a set of basic values for your processor selection instead of the jumper settings.

The processor speed can be manually set from the <BIOS Features> menu screen.

BIOS Main menu

BIOS Features Menu

Warning:

Do not set CPU frequency higher than its working frequency. If you do, we can not be responsible for any damages caused.

SuperBoot

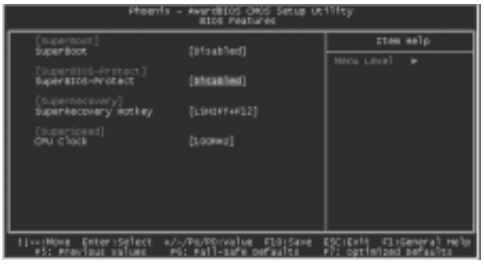
SuperBoot technology enormously improves the long boot process time of computers, reducing the waiting time every user has to suffer from when starting their computer. A BIOS without SuperBoot has to perform many routines every time the system starts, such as checking the system core and initializing system peripherals. With SuperBoot, PCs can boot-up quickly without any redundant waiting to enter the OS. SuperBoot is easy to use. Choose the right option in the CMOS SETUP (refer to Foxconn Innovation features) and the system can boot up quickly and easily. SuperBoot saves the information from the PC's first normal boot-up, and there restores all the parameters for the system and thus let the PC boot freely and rapidly on subsequent boot-ups.

Notes:

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

SuperBIOS-Protect

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



There are two choices which implements this function.

1. Set the jumper (FWH_EN) as Flash Write Disabled (pin 2-3 closed), the BIOS can not be overwritten.
2. Set the jumper (FWH_EN) as Flash Write Enabled (pin 1-2 closed), meanwhile set SuperBIOS-Protect as Disabled in CMOS Setup. In this way, the BIOS can be overwritten.
3. FWH_EN Default is enabled.

SuperRecovery

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

Features:

1. ***Password Protection***:
   You can set a password for each HDD.
2. ***Data Protection:***
   Hidden partitions can only be accessed during data back up or recovery. Even reformatting the disk using FDISK or PQMAGIC will not allow access to the hidden partitons change password. This means that data backed up in a hidden partition is very secure.
3. ***Intelligent Menu***:
   Unavailable items will be displayed in gray. For example, if you haven't divided a hidden partition, items like "Release Hidden Partition", "Back up", "Change Password" and "Recovery" will be displayed in gray and can't be selected. And, when you select an item, the related information will appear on the bottom of the screen.

Disclaimer:

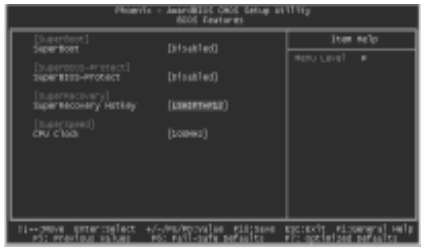
Please study this software program's specification carefully before using it. The vendor should not be liable for any damages arising out of or in connection with the use of this program, including liability for lost profit or data, or any other damages whatsoever.

System Requirements:

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

Hotkey Selection:

You should enter the CMOS setup interface first by pressing <DEL> during POST (Power On Self Test). Then select the "Recovery Easy Hotkey" option to adjust the hotkey settings in the "BIOS Features" menu.
There are 12 options: LSHIFT (Left Shift)+F1~F12. LSHIFT+F12 is the default.

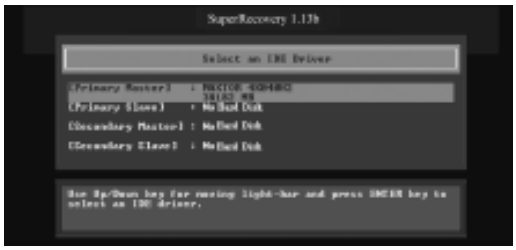


Hard Disk Selection:

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

Attention:

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



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

Main Menu:

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

On-line help message

Divide Hidden Partition:

1. What’s a Hidden Partition:

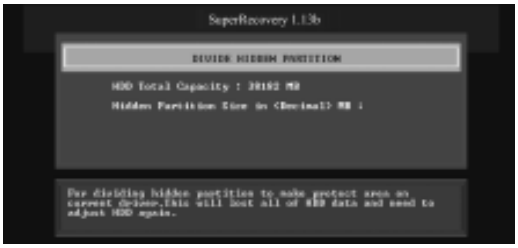
SuperRecovery can be used to divide a hidden partition, which is to be reserved for backing up HDD data. The operation of Division will erase all the old data saved in the HDD, to make sure that the following operations can be continued. Once the division is done, any future variation to the HDD will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

2. Divide Hidden Partition:

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

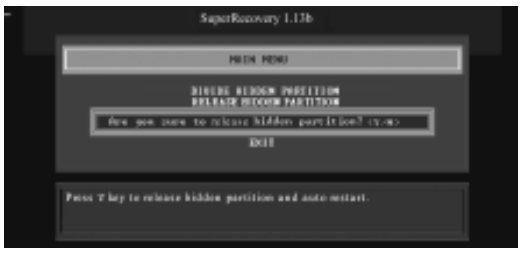
Attention :

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



Release Hidden Partition:

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

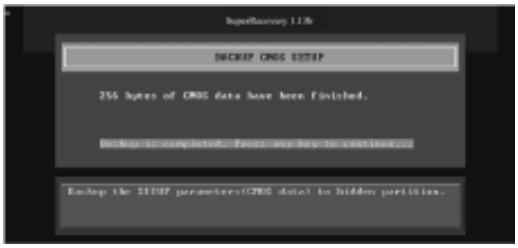


Backup:

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

1. Backup CMOS Setup:

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

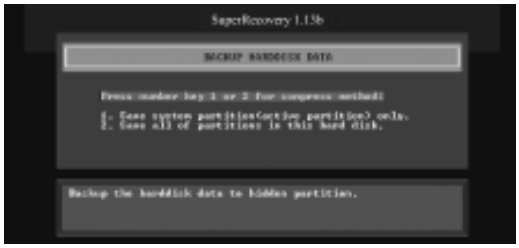


2. Backup Partition Table:

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

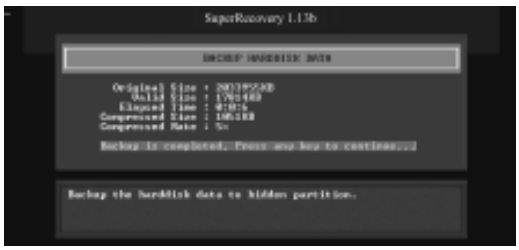
3. Backup Harddisk Data:

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



2) Backing up with the progress bar showing.

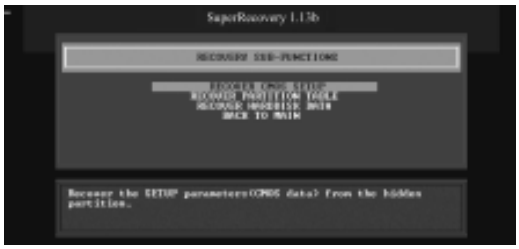
3) A report with all the critical data on this operation will be listed after backing up is completed.
Original Size: The data size loaded in selected partition;
Valid Size: The size of valid data.
Elapsed Time: How long the process took to complete.
Compressed Size: The size of data after compression.
Compressed Rate: Compressed Size/Valid Size.



4. Back to Main:
This item is used to quit the Backup interface.

Recovery:

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

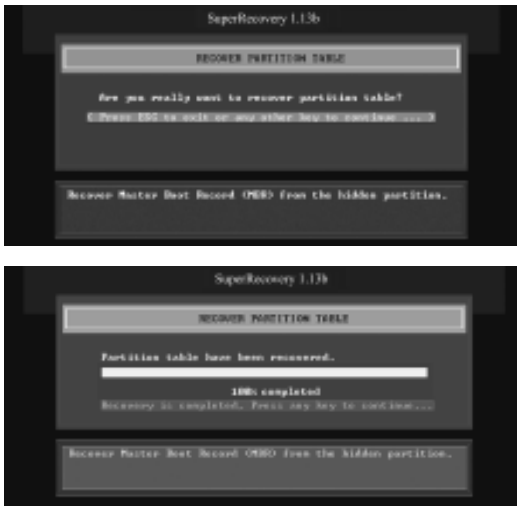


1. Recover CMOS Setup:

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

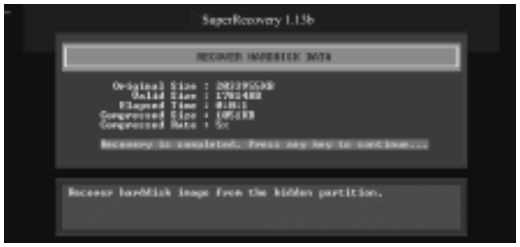
2. Recover Partition Table:

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



3. Recover Hard disk Data:

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



4. Back to Main:

It is used to quit the Recovery interface.

CHANGE PASSWORD Introduction:

Select CHANGE PASSWORD to enter the Change Password interface.

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