

FX83

Socket 754

AMD Athlon™ 64 Processor

Based DDR MAINBOARD

User's Manual

Shuttle® FX83

Socket 754

AMD Athlon™ 64 Processor

Based DDR Mainboard

Manual Version 1.0

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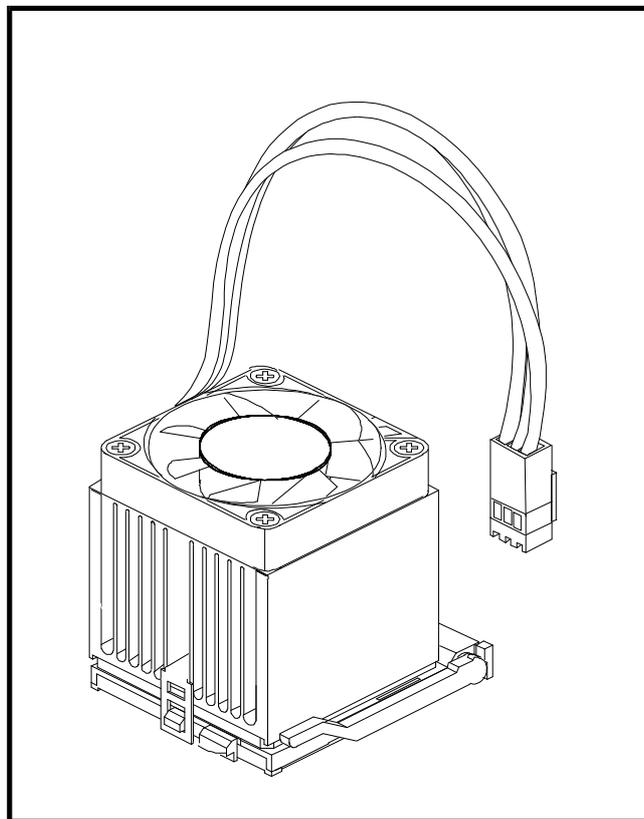
General Notice: Other product names used in this manual are ascribed to their respective owners and acknowledged.

WARNING

Thermal issue is highly essential for processors with a speed of 600MHz and above. Hence, we recommend you to use the CPU fan qualified by AMD or motherboard manufacturer. Meanwhile, please make sure CPU and fan are securely fastened well. Otherwise, improper fan installation not only gets system unstable but also could damage both CPU and motherboard because insufficient thermal dissipation.

If you would like to know more about thermal topic please see **AMD website** for detailed thermal requirement through the address:

<http://www.amd.com>



NOTICE

If you've changed your CPU or overclocked your system, the system may fail to boot up, even with a Clear CMOS jumper physically reset. The reason is that NVIDIA's new nForce2 chipset introduces a way to reset a Clear CMOS jumper without removing a chassis. Please follow the steps listed below:

1. Turn off your computer and unplug the power cable. Reconnect it after 30 seconds;
2. Press <Insert > and then press your computer's start button. Continue holding <Insert> until the system begins the POST (Power-On Self Test);
3. Immediately press to enter the BIOS;
4. Select 'Load Optimized Defaults' to return your system to a bootable condition; then select 'SAVE to CMOS and EXIT';
5. Reboot your system.

Moreover, if your system fails to boot up after you reset the CPU FSB, select "SAVE to CMOS and EXIT" in the BIOS. After the system restarts, there is on screen a message warning you not to reset or turn off your computer:

**Warning! New setting is updating now
Do not Reset or Shutdown the system**

Your system works after the BIOS is updated.

Statement of Shuttle Mainboard via the EMI Test

Shuttle mainboards have been via the EMI test in terms of series of regulations: EN55022/ CISPR22/AS/NZS3548 Class B, EN55024 (1998/AS/NZS), EN4252.1 (1994), EN61000, ANSI C63.4 (1992), CFR47 Part 15 Subpart B, and CNS13438 (1997). The items tested are illustrated as follows:

(A) Voltage: AC 110V/60HZ & AC 230V/50HZ

(B) Tested Product Information:

Product Name: PC Mainboard

Status: Sample

Model Name: FX83

S/N: N/A

CPU:

External Frequency: 200 MHz AMD K8 3400+

Keyboard Port: one port with 6 pins

Mouse Port: one port with 6 pins

USB 2.0 Port: six ports with 4 pins

Parallel Port: one port with 9 pins

LAN Port: one port with 8 pins

1394 Port: one port with 6 pins respectively

1394 Port: one port with 4 pins respectively

VGA Port: one port with 15 pins

LAN Port: one port with 8 pins

Mic-Out & Line-In & Headphones Ports: one port for each

SPDIF_In/ Out: one port for each

DDR Memory: DDR 400 128 MB *2

Power Cable: Detachable and Shielded (with a GND pin)

Monitor: CRT

Maximum Resolution: 1280 X 1024 V:60Hz

All CPUs have completely been tested, and values offered by the worst EMI combination of CPU external frequency are listed as follows:

Test Mode	External Frequency	CPU	Open/Close
1	200MHz	200 MHz AMD K8 3400+	Close
2	200MHz	200 MHz AMD K8 3400+	Open

(C) Remedy for the Tested Product & Its EMI Interference:

Remedy: N/A

EMI Interference:

Crystal: 14.318 MHz(Y2)/14.318 MHz(Y3)/24.576 MHz(X4)/24.576 MHz(X5)/
25.00 KHz(Y4)/32.768 MHz(X1)/25.00 MHz(X1)

Clock Generator: U11

(D) Supported Host Peripherals:

Host Peripheral	Product Name	Model Name
#1	Case	FX83
#2	Shuttle Power Supply	PC35I2402
#3	IBM HDD (82.3GB)	IC35L080AVVA07-0
#4	CODE DVD Player	DVD-116
#5	Panasonic FDD	JU-257A606P

(E) Notices for Assembling Computers:

1. Cases should be made of iron or other metal that has good electric conductivity.
2. Cylinders in a case should be made of metal, and as having a mainboard mounted in a case, make sure screws are all utilized and fastened on a mainboard.
3. An I/O shielding should be contacted with I/O metallic parts of a mainboard.
4. Cables should appropriately be arranged and fixed in a case. Follow instructions:
 - Leave IDE cables not crossed upon CPU and SDRAM;
 - Leave power cables minimum in length, and not crossed upon a mainboard;
 - Leave CPU fan cables minimum in length, and not near CPU;
 - Leave cables on panels and other spare cables tied in a computer case.
5. Make sure an EMI shielding attached to a case has properly been installed.
6. Make sure a 5.25" or 3.5" FDD and screws are fastened to an EMI shielding.
7. Make sure a case is closely in contact with EMI connected points.
8. Make sure there is no cleft in a case which is not deformed.
9. Make sure a PCI or AGP door is bound to a case.
10. Make sure cables of other devices (fans or some others) are fixed in a case.

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1 INTRODUCTION

1.1 To Different Users

First-Time DIY System Builder

Welcome to the DIY world! Building your own computer system is not as difficult as you may think. To make your first computer DIY experience successful, right from the start, we have designed the 3.1 Hardware Installation section in a step-by-step fashion for all the first-time DIY system builders. Prior to installation, we also suggest you to read the whole manual carefully to gain a complete understanding of your new Shuttle FX83 mainboard.

Experienced DIY User

Congratulate on your purchase of the Shuttle FX83 mainboard. You will find that installing your new Shuttle FX83 mainboard is just easy. Bundled with an array of onboard functions, the highly-integrated FX83 mainboard provides you with a total solution to build the most stable and reliable system. Refer to sections 3.2 Jumper Settings and Chapter 4 Drivers/Software Utilities to find out how to get the best out of your new mainboard. Chapter 5 BIOS Setup also contains the relevant information on how to tune up your system to achieve higher performance.

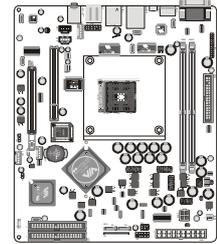
System Integrator

You have wisely chosen Shuttle FX83 to construct your system. Shuttle FX83 incorporates all the state-of-the-art technology of the VIA K8M800 + VT8237 chipset from VIA. It integrates the most advanced functions you can find to date in a compact Small Form Factor ATX board.

1.2 Item Checklist

Check all items with your FX83 mainboard to make sure nothing is missing.
The complete package should include:

- * One piece of Shuttle FX83 Mainboard



- * One piece of ATA 133/100/66/33 Ribbon Cable



- * One CD-ROM Cable



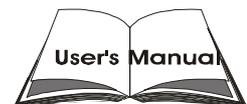
- * One TV-Out Cable



- * One piece of Serial ATA Cable



- * FX83 User's Manual



- * One piece of Bundled CD-ROM with containing:

- FX83 user's manual saved in PDF format.
- Install VIA 4in1 driver.
- Install VIA VGA driver.
- Install VIA LAN driver.
- Install Realtek Audio driver.
- Install VIA RAID driver.
- Install VIA USB 2.0 driver.
- Award Flashing Utility.



2 FEATURES

FX83 mainboard is carefully designed for the demanding PC user who wants high performance and maximum intelligent features in a compact package.

2.1 Specifications

* CPU Support

Supports AMD Althon™ 64, 754 pin processor with 200 MHz FSB.

* Chipset

Features VIA K8M800 N.B. and VT8237 S.B..

Integrated Graphics/Video Accelerator.

8X AGP3.0 interface at 533MHz.

Processor interface via Hyper Transport bus.

* Jumperless CPU Configuration

Soft-configuration FSB (The FSB speed is software configurable from 200MHz to 232MHz in the Frequency / Voltage Control of BIOS setup program.)

* On Board 5.1 Channel AC97 Audio

Realtek ALC650 compliant with AC'97 2.2 specifications.

5.1 channel slot selectable DAC Output for multi-channel applications.

* Versatile Memory Support

Two 184-pin DIMM slots to support up to 2GB of PC1600, PC2100, PC2700 or PC3200 compliant DDR SDRAM module.

* AGP Expansion Slot

Supports AGP3.0 0.8V signaling for 8X and 4X modes.

Supports AGP2.0 1.5V signaling for 4X and 2X modes.

* PCI Expansion Slots

PCI 2.2 specification compliance.

Provides one 32-bit PCI slot.

* 8 USB 2.0/1.1 Complaint Interface Onboard

➤ 4 x USB 2.0 connectors on back-panel.

➤ 2 x USB 2.0 connectors on front-panel.

➤ 2 x USB port headers on mid-board.

* I/O Interface

Provides a variety of I/O interfaces:

- 1 x Floppy interface for 3.5-inch FDD with 720KB, 1.44MB, or 2.88MB format or for 5.25-inch FDD with 360K or 1.2MB format.
- 1 x DB9 Serial connector 16550 UART compatible.
- 1 x VGA connector.
- 1 x TV-OUT connector.
- 4 x USB2.0 ports.
- 1 x RJ45 LAN connector.
- 1 x IEEE 1394a connector.
- 1 x PS/2 Mouse connector.
- 1 x PS/2 Keyboard connector.
- 1 x Center/Bass port.
- 1 x Rear-Out port.
- 1 x Line-Out port.

* PCI Bus Master IDE Controller Onboard

Two Ultra DMA 133/100/66/33 Bus Master Dual-channel IDE ports provide support to a maximum of four IDE devices (one Master and one Slave per channel). The IDE Bus implements data transfer speeds of up to 133/100/66/33 MB/sec and also supports Enhanced PIO Modes.

80-pin Cable Backward Compatible Legacy ATAPI Devices, DVD-ROM, DVD Dual, ATAPI IDE CD-ROM, CD-R, CD-RW, and LS-120 Supports.

* ATX Power Supply Connector

ATX power supply unit can connect to the onboard 20-pin Pentium 4 standard ATX power connectors, supporting Suspend and Soft-On/Off by dual-function power button.

The Pentium 4 ATX power include other 4-pin + 12V ATX power connector.

* Advanced Configuration and Power Interface

Features four power saving modes: S1 (Snoop), S3 (Suspend to RAM), S4 (Suspend to DISK), and S5 (Soft-Off). ACPI provides more efficient Energy Saving Features controlled by your operating system that supports OS Direct Power Management (OSPM) functionality.

* **System BIOS**

Provides licensed Award BIOS V6.0 PG on 4Mb Flash core and supports Green PC, Desktop Management Interface (DMI).

* **Form Factor**

System board conforms to Shuttle specification.

Board dimension: 254mm x 185mm.

* **Advanced Features**

- Low EMI - Built in spread spectrum and automatic clock shut-off of unused PCI/SDRAMS slots to reduce EMI.
- Dual Function Power Button - The system can be in one of two states, one is Suspend mode and the other is Soft-Off mode. Pushing the power button for less than 4 seconds places the system into Suspend mode. When the power button is pressed for longer than 4 seconds, the system enters Soft-Off mode.
- Modem Ring Power-On - The system can be powered on automatically by the activation of modem ringing.

* **Intelligent Features**

- Voltage Monitoring - Monitors various voltages of key elements, such as the CPU, and other critical system voltage levels to ensure stable current passing through mainboard components.
- Fan Status Monitoring - To prevent CPU from overheating, the CPU fan is monitored for RPM and failure. (CPU Cooling FAN with RPM sensor is required.)
- Temperature Monitoring - This item allows users to make sure whether the CPU or system runs in a suitable temperature.
- CPU Fan Speed Control - This SMART Bios enabled 4 phase Variable Fan Speed and CPU temperature Control feature.

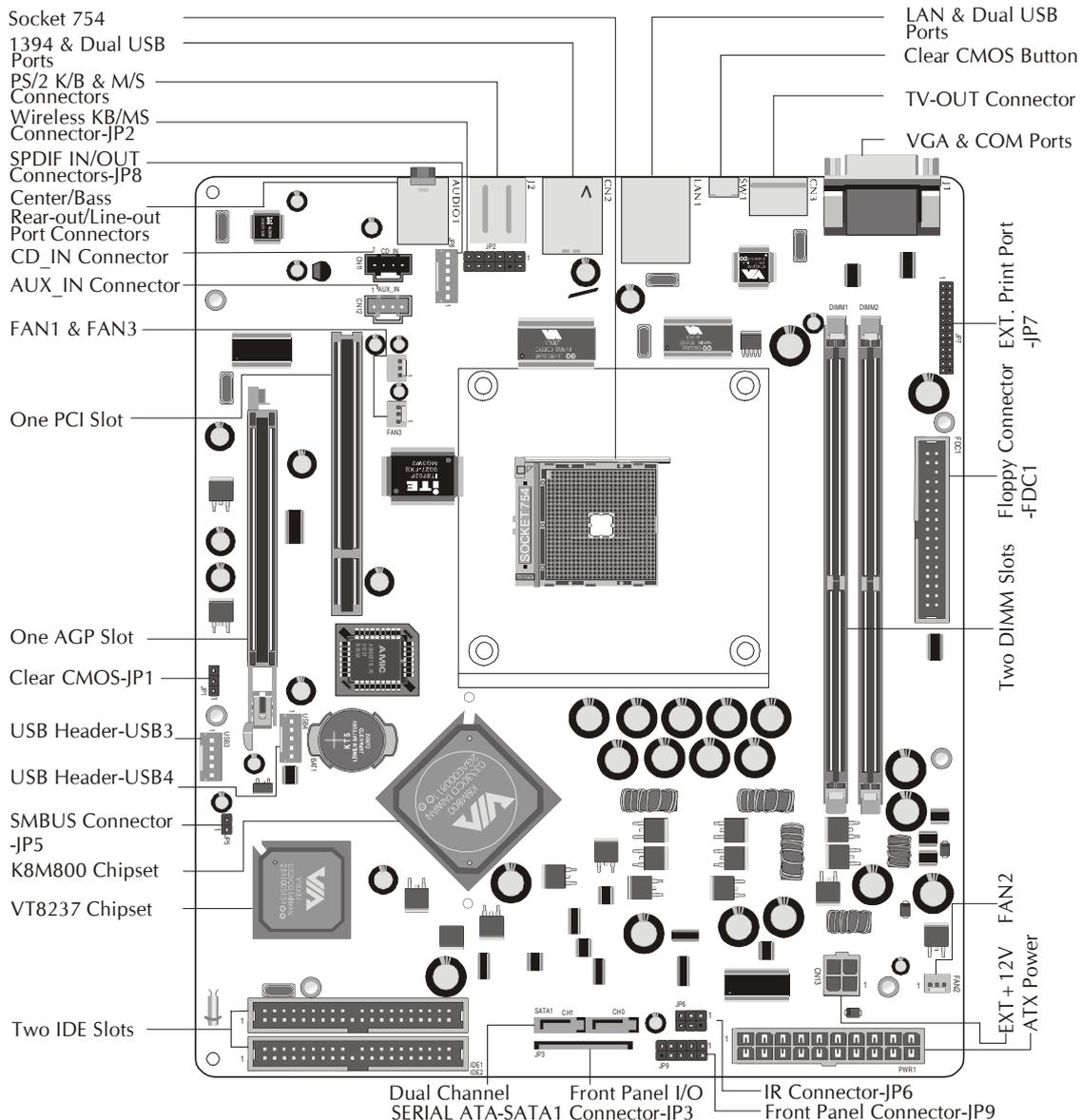
3 HARDWARE INSTALLATION

Before removing or installing any of these devices including CPU, DIMMs, Add-On Cards, Cables, please make sure to unplug the onboard power connector.

This section outlines how to install and configure your mainboard. Refer to the following mainboard layout to help you to identify various jumpers, connectors, slots, and ports. Then follow these steps designed to guide you through a quick and correct installation of your system.

3.1 Step-by-Step Installation

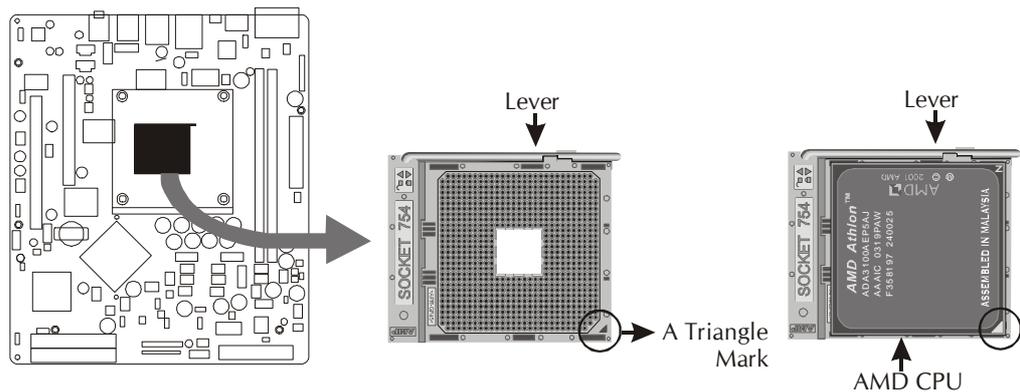
Accessories Of FX83



Step 1

Install the CPU:

1. Locate the CPU ZIF (Zero Insertion Force) socket on the upper-right sector of your mainboard (between the back panel connectors and the DIMM memory slots).
2. Pull the CPU ZIF socket lever slightly sideways away from the socket to unlock the lever, and then bring it to an upwardly vertical position.
3. Place your AMD Athlon™ 64 processor in the socket. Note that the CPU's edges have been purposely designed non-symmetrically to prevent from inserting the processor in the wrong direction. The following diagram demonstrates the correct placement of the CPU in the ZIF socket.



4. Slightly push the AMD Athlon™ 64 processor into the socket without applying excessive force while making sure there is no gap between CPU and socket. Then lower the socket-lever all the way down to its horizontal position and lock it to secure the CPU in place.
5. The AMD Athlon™ 64 processor requires a set of heatsink/fan to ensure proper cooling of the processor. If heatsink/fan have not been already mounted on your CPU, you must purchase the heatsink/fan separately and have it installed. Plug the cable through the heatsink/fan in the CPU fan power connector located nearby. Note that there are several types of CPU fan connectors. Normally, if your mainboard supports the hardware monitoring function, a 3-pin fan power connector should allow your system to detect the CPU fan's speed. The CPU fan can also run with a 2-pin fan power connector, however, detection of CPU fan's speed is not supported. An other type of CPU fan may feature a large 4-pin fan power connector, which does not support CPU fan's speed detection and must be directly connected to the system's power supply unit. Please refer to the following diagram.

Step 2

Set Jumpers

This mainboard is jumperless! The default jumper settings have been set for the common usage standard of this mainboard. Therefore, you do not need to reset the jumpers unless you require special adjustments as any of the following cases:

1. Clear CMOS

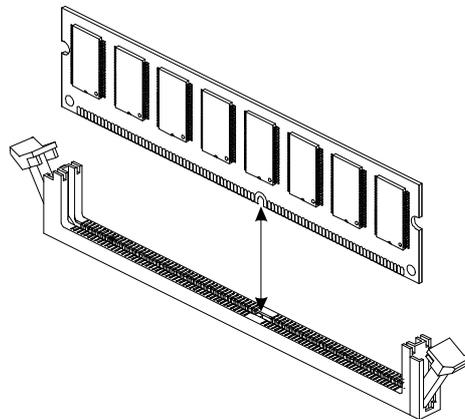
For first-time DIY system builders, we recommend that you do not change the default jumper settings if you are not totally familiar with the mainboard configuration procedures. The factory-set default settings are tuned for optimum system performance. For the advanced users who wish to customize their system, section 3.2 Jumper Settings will provide detailed information on how to configure your mainboard manually.

Step 3

Install DDR SDRAM System Memory

To install memory, insert DDR SDRAM memory module(s) in DIMM slot(s). Note that DDR SDRAM modules are directional and will not go in the DIMM slots unless properly oriented. After the module is fully inserted into the DIMM slots, lift the clips of both sides of the DIMM slot to lock the module in place.

DDR SDRAM



Step 4

Install Internal Peripherals in System Case

Before you install and connect the mainboard into your system case, we recommend that you first assemble all the internal peripheral devices into the computer housing, including but not limited to the hard disk drive (IDE HDD), floppy disk drive (FDD), CD-ROM drive, and ATX power supply unit. This will greatly facilitate in making the connections to the mainboard described below.

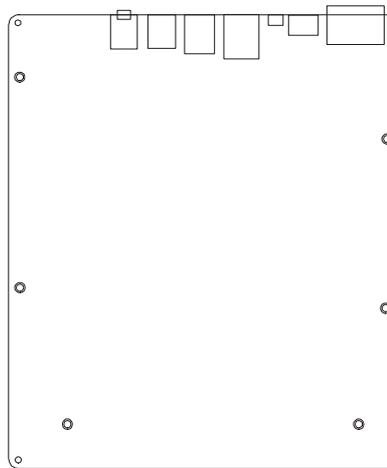
To install IDE & FDD drives, follow this procedure:

1. Set the required jumpers on each device according to the instructions provided by the manufacturer. (IDE devices, HDD and CD-ROM, have to set jumpers to Master or Slave mode depending on whether you install more than one device of each kind.)
2. Connect IDE cable and FDD cable on the back-panel of the internal peripheral devices to the corresponding headers on board. Note that the cable should be oriented with its colored stripe (usually red or magenta) connected to pin#1 both on the mainboard IDE or FDD connector and on the device as well.
3. Connect an available power cable from your system power supply unit to the back-panel of each peripheral device. Note that the power cable is directional and cannot fit in if not properly positioned.

Step 5

Mount the Mainboard on the Computer Chassis

1. You may find that there are a lot of different mounting hole positions both on your computer chassis and on the mainboard. To choose correct mounting holes, the key point is to keep the back-panel of the mainboard in a close fit with your system case, as shown below.



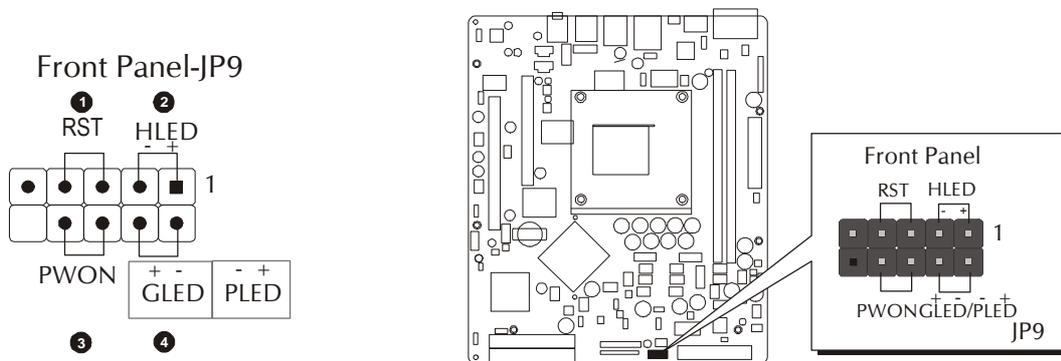
2. After deciding on the proper mounting holes, position the studs between the frame of the chassis and the mainboard. The studs are used to fix the mainboard and to keep a certain distance between the system's chassis and the mainboard, in order to avoid any electrical shorts between the board and the metal frame of the chassis. (If your computer case is already equipped with mounting studs, you will need to tighten screws to attach the mainboard.)

Note: In most computer housings, you will be able to find 4 or more attachment points to install mounting studs and then fix the mainboard. If there aren't enough matching holes, then make sure to install at least 4 mounting studs to ensure proper attachment of the mainboard.

Step 6

Connect Front Panel Switches/LEDs

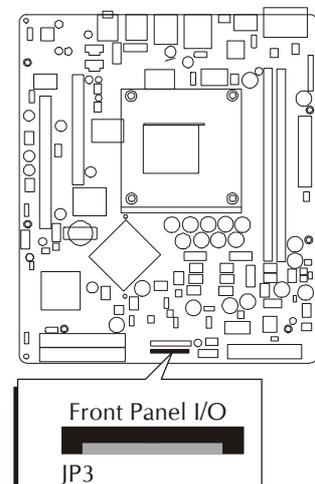
You can find there are several different cables already existing in the system case and originating from the computer's front-panel devices (HDD LED, Power LED or Reset Switch devices etc.) These cables serve to connect the front-panel switches and LEDs connectors to the mainboard's front-panel connectors group, as shown below.



1. ATX Soft Power On/Off (PWON)
2. HDD-LED (HLED)
3. Green-LED and Power-LED (GLED/PLED)
4. Hardware Reset Switch Button (RST)

Connect Front Panel

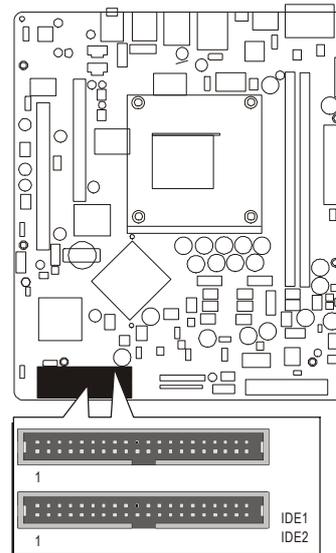
You can find there are several different cables already existing in the system case and originating from the computer's front-panel devices. These cables serve to connect the connectors (HDD LED, Power LED, Reset Switch, USB, Front Audio or 1394 devices etc.) to the mainboard's front-panel connectors group, as shown below.



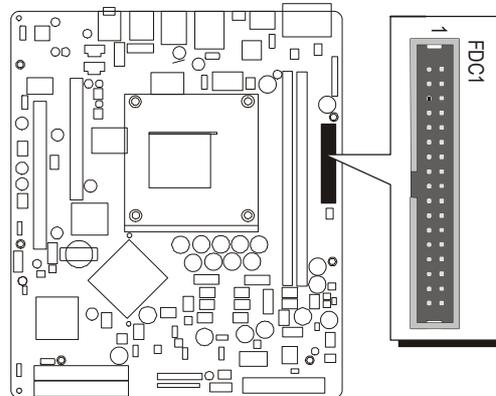
Step 7

Connect IDE, Floppy and Serial ATA Disk Drives

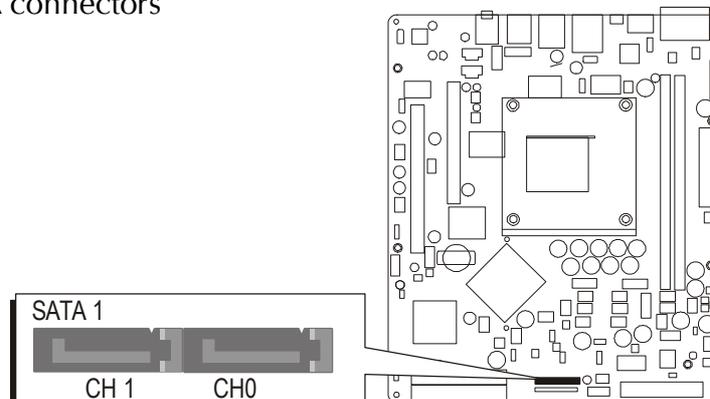
1. IDE cable connectors



2. Floppy cable connector



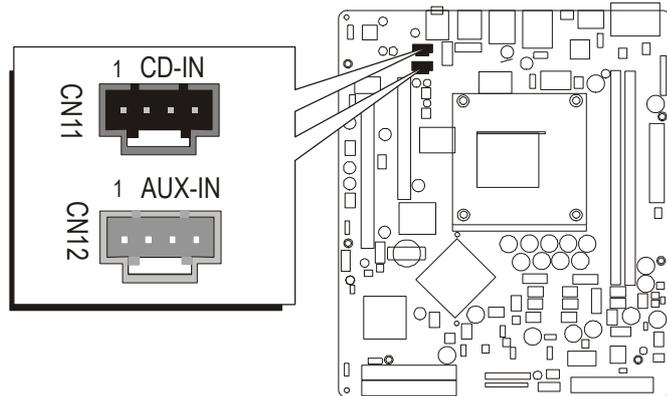
3. Serial ATA connectors



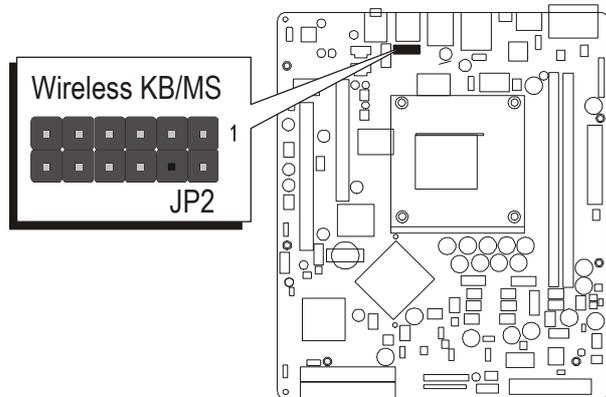
Step 8

Connect Other Internal Peripherals

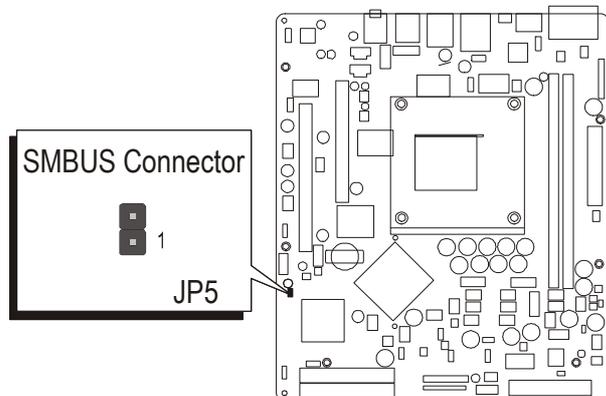
1. CD-IN/AUX_IN headers (CN11/CN12)



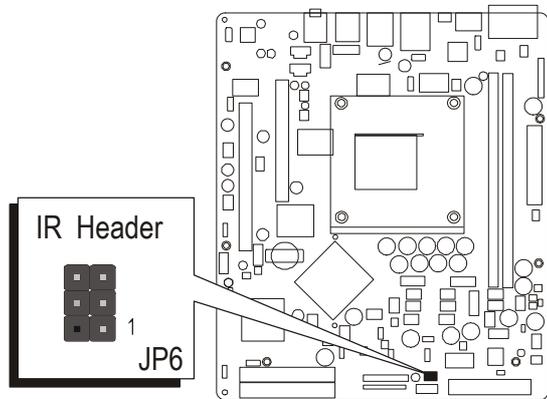
2. Wireless keyboard and mouse header (JP2)



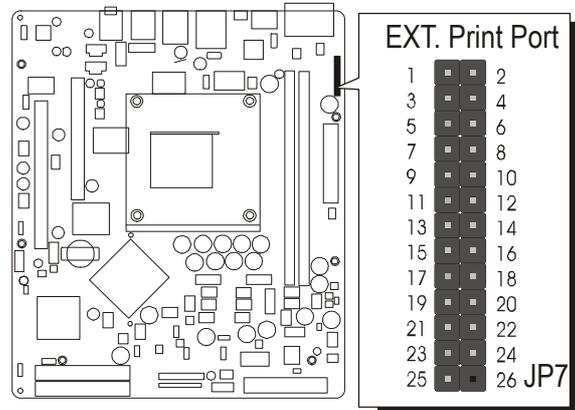
3. SMBUS connector (JP5)



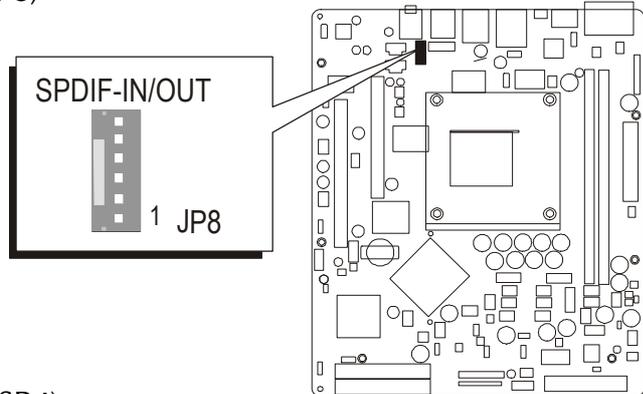
4. IR header (JP6)



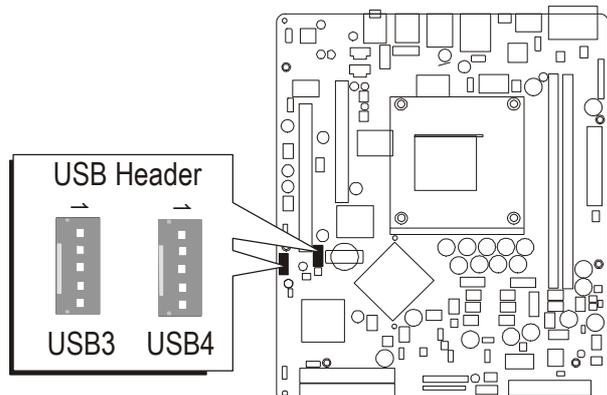
5. EXT. Print port (JP7)



6. SPDIF_Out/IN port (JP8)



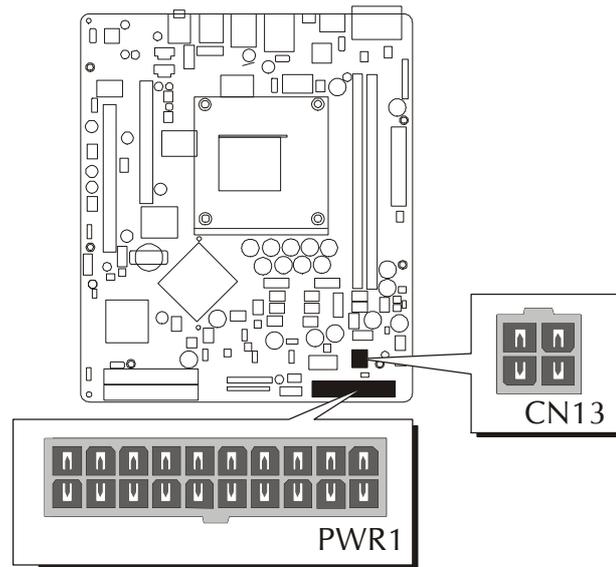
7. USB headers (USB3/USB4)



Step 9

Connect the Power Supply

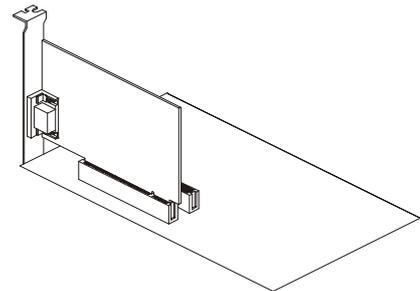
1. System power connectors (PWR1/CN13)



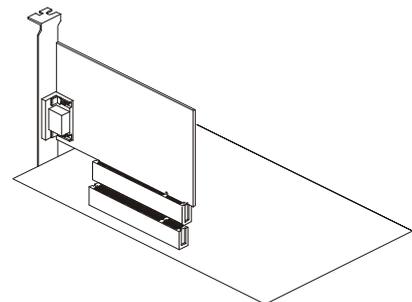
Step 10

Install Add-on Cards in Expansion Slots

1. Accelerated Graphics Port (AGP) Card



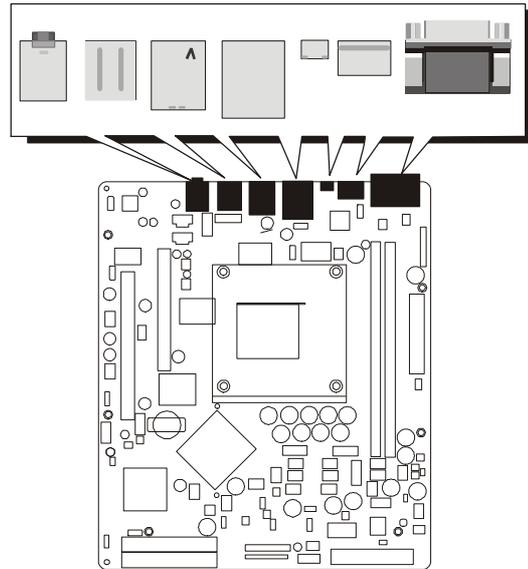
2. PCI Card



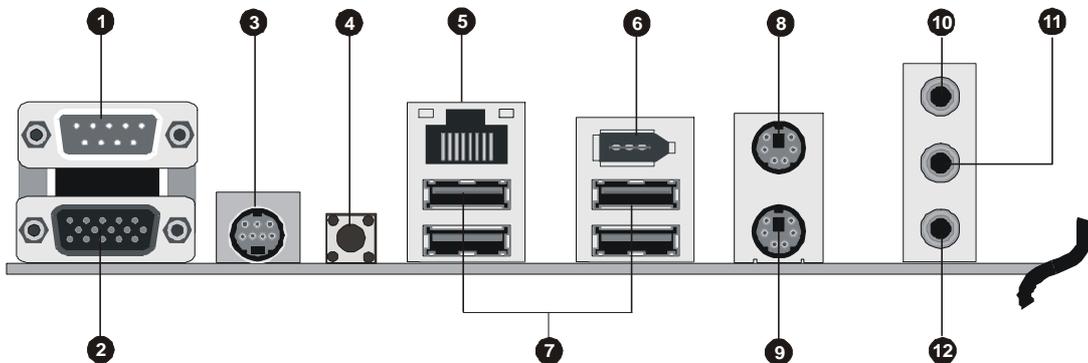
Step 11

Connect External Peripherals to Back-Panel

You are now ready to put the computer case back together and get on to the external peripherals connections to your system's back-panel.



1. COM1 Port
2. VGA Port
3. TV-OUT Connector
4. Clear CMOS Button
5. LAN Port
6. IEEE 1394a Port
7. USB 0/1/2/3 Ports
8. PS/2 Mouse Port
9. PS/2 Keyboard Port
10. Audio Center/Bass Port
11. Audio Rear-Out Port
12. Audio Line-Out Port



Step 12

First Time System Boot Up

To assure the completeness and correctness of your system installation, you may check the above installation steps once again before you boot up your system for the first time.

1. Insert a bootable system floppy disk (DOS 6.2x, Windows 95/98/NT, or others) which contains FDISK and FORMAT utilities into the FDD.
2. Turn on the system power.
3. First, you must use the FDISK utility to create a primary partition of the hard disk. You can also add an extended partition if your primary partition does not use all of the available hard disk space. If you choose to add an extended partition, you will have to create one or more logical partitions to occupy all the space available to the extended partition. The FDISK utility will assign a drive letter (i.e., C:, D:, E:,...) to each partition which will be shown in the FDISK program. After FDISK procedure, reboot your system by using the same system floppy disk.

Note: DOS 6.2x and Windows 95A can only support up to 2.1GB of HDD partition. If you use the FDISK utility with one of the operating systems mentioned above, you can only install your HDD into partitions no larger than 2.1GB each.

4. Now, use the FORMAT utility to format all the partitions you've created. When formatting the primary partition (C:), make sure to use the `FORMAT C: /S` command.

Note: `FORMAT C: /S` can transfer all the necessary system files into the primary partition of your hard disk. Then, your HDD will become a bootable drive.

5. Install all the necessary drivers for CD-ROM, Mouse, etc.
6. Setup the complete operating system according to your OS installation guide.

Step 13

Install Drivers & Software Components

Please note that all the system utilities and drivers are designed for Win 9x/2000/ME/XP/NT operating systems only. Make sure your operating system is already installed before running the drivers installation CD-ROM programs.

1. Insert the FX83 bundled CD-ROM into your CD-ROM drive. The autorun program will display the drivers main installation window on screen.
2. Choose "Install VIA 4in1 Chipset Driver" and complete it.
3. Choose "Install VIA VGA Driver" and complete it.
4. Choose "Install VIA LAN Driver" and complete it.
5. Choose "Install Realtek Audio Driver" and complete it.
6. Choose "Install VIA RAID Driver" and complete it.
7. Choose "Install VIA USB2.0 Driver" and complete it.
8. Choose "View the User's Manual" and complete it.
9. Exit from the autorun drivers installation program.

⊗ Please refer to section Chapter 4 Software Utility to install driver.

3.2 Jumper Settings

Several hardware settings are made through the use of mini jumpers to connect jumper pins on the mainboard. Pin #1 could be located at any corner of each jumper, you just find the location with a white right angle which stands for pin 1#. There are several types of pin 1# shown as below:

3-pin and multi (> 3) pin jumpers shown as following:

Pin #1 to the left:



Pin #1 on the top:



Pin #1 to the right:



Pin #1 on the bottom:



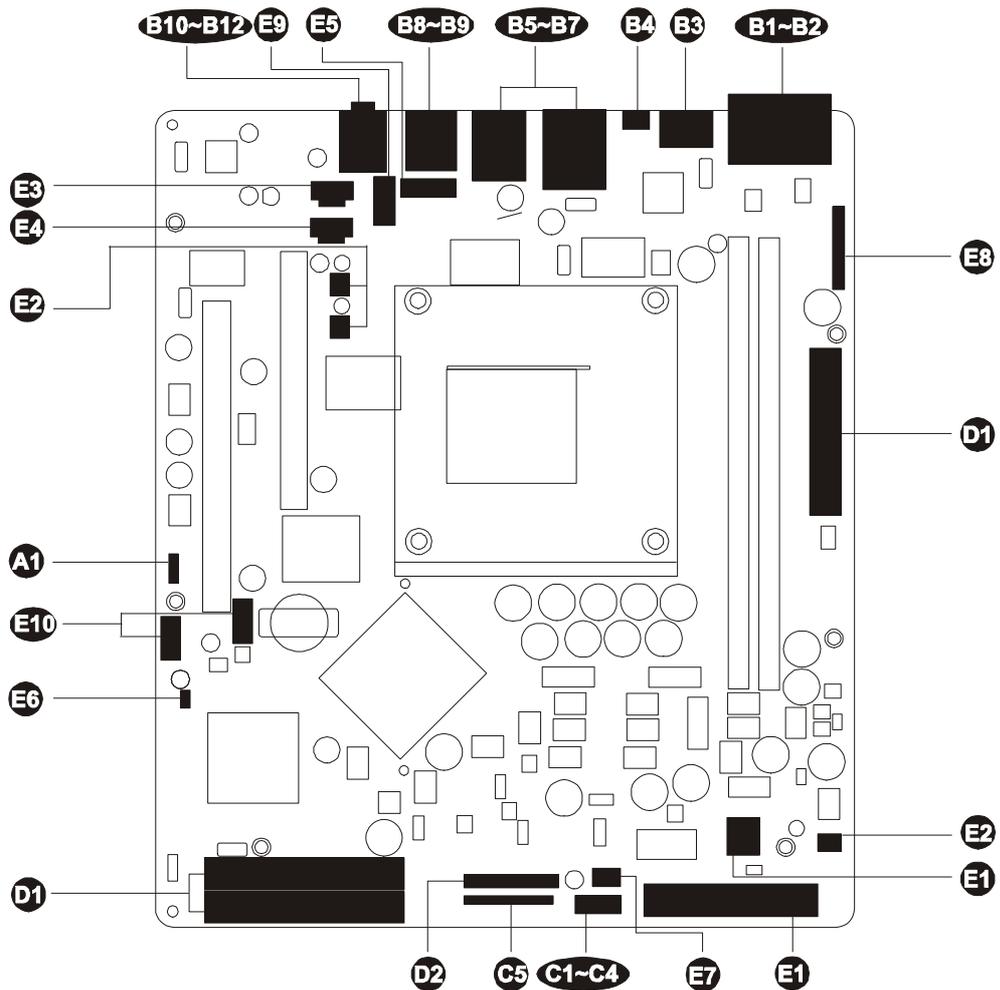
Jumpers with two pins are shown as  for Close [On] or  for Open [Off]. To Short jumper pins, simply place a plastic mini jumpers over the desired pair of pins.

Caution!

1. Do not remove the mainboard from its antistatic protective packaging until you are ready to install it.
2. Carefully hold the mainboard by its edges and avoid touching its components. When putting the mainboard down, place it on top of its original packaging film, on an even surface, and components side up.
3. Wear an antistatic wrist strap or take other suitable measures to prevent electrostatic discharge (ESD) whenever handling this equipment.

Jumpers & Connectors Guide

Use the mainboard layout on page 11 to locate CPU socket, memory banks, expansion slots, jumpers and connectors on the mainboard during the installation. The following list will help you to identify jumpers, slots, and connectors along with their assigned functions:



CPU/Memory/Expansion Slots

- | | |
|------------|---|
| Socket 754 | : CPU Socket for AMD Athlon™ 64, 754 pin processor |
| DIMM 1/2 | : Two 184-pin DIMM Slots for 64, 128, 256, 512 MB, and 1 GB of 2.5V DDR SDRAM
(The total installed memory does not exceed 2GB) |
| AGP | : One AGP 2X/4X/8X Slot |
| PCI | : One 32-bit PCI Expansion Slot |

Jumpers

A1 JP1 : Clear CMOS setting

Back Panel Connectors

B1 COM1 : Serial Port (DB9 male)
B2 VGA : VGA Port (DB15 female)
B3 CN3 : TV-OUT Connector
B4 SW1 : Clear CMOS Button
B5 LAN : 10/100 base-T LAN Port
B6 1394 : IEEE 1394a Port Connector
B7 USB1&2 : 4 USB 2.0/1.1 (0/1/2/3) (Universal Serial Bus) Ports
B8 MS : PS/2 Mouse Port
B9 KB : PS/2 Keyboard Port
B10 Center/Bass : Audio Center/Bass Port
B11 Rear-Out : Audio Rear-Out Port
B12 Line-Out : Audio Line-Out Port

Front Panel Connectors

C1 PWON : ATX power on/off momentary type switch
C2 HLED : IDE drive active LED
C3 GLED/PLED : Green LED (ON when system stays in power saving mode) / System power LED
C4 RST : Hardware reset switch
C5 JP3 : Front Panel I/O connector

Internal Peripherals Connectors

D1 FDC1 : Floppy disk drive interface
D1 IDE1 : IDE primary interface (Dual-channel)
D1 IDE2 : IDE secondary interface (Dual-channel)
D2 SATA1 : Serial ATA connector

Other Connectors

E1 PWR1/CN13 : ATX/ATX + 12V power connectors
E2 FAN1/2/3 : CPU/System/Chipset fan connectors
E3 CN11 : Audio CD_IN connector
E4 CN12 : Audio AUX_IN connector
E5 JP2 : Wireless Keyboard and Mouse connector
E6 JP5 : SMBUS connector
E7 JP6 : IR header

E8	JP7	: EXT. Print port
E9	JP8	: SPDIF In/Out port
E10	USB 3/4	: USB headers

Jumpers

A1 Clear CMOS Setting (JP1)

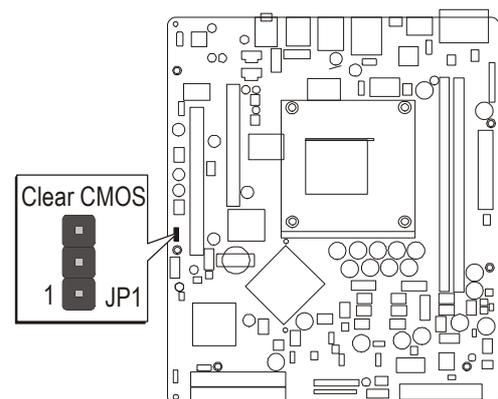
JP1 is used to clear CMOS data. Clearing CMOS will result in the permanently erasing previous system configuration settings and the restoring original (factory-set) system settings.



Pin 1-2 (Default)



Pin 2-3 (Clear CMOS)

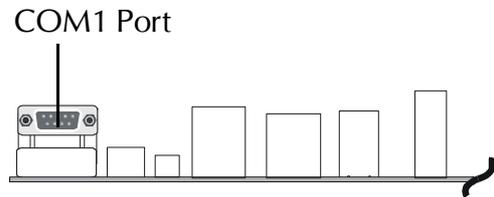


- Step 1. Turn off the system power (PC-> Off).
- Step 2. Remove ATX Power cable from ATX Power connector.
- Step 3. Remove jumper cap from JP1 pins 1-2.
- Step 4. Place the jumper cap on JP1 pin 2-3 for a few seconds.
- Step 5. Return the jumper cap to pin 1-2.
- Step 6. Plug ATX Power cable into ATX Power connector.
- Step 7. Turn on the system power (PC-> On).

Back-Panel Connectors

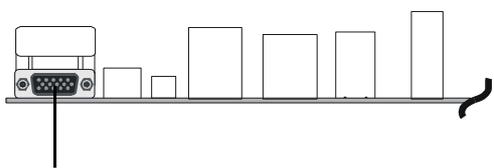
B1 COM1 Port Connector

This mainboard can accommodate two serial device on COM1. Attach a serial device cable to the DB9 serial port COM1 at the back-panel of your computer.



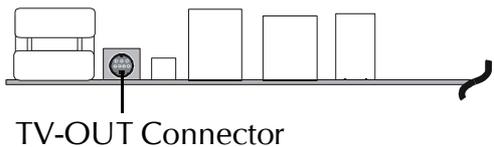
B2 VGA Connector

One 15-pin VGA connector is located at the rear panel of the mainboard.



B3 TV-OUT Connector

This mainboard can accommodate AV and S Video ports on back-panel.



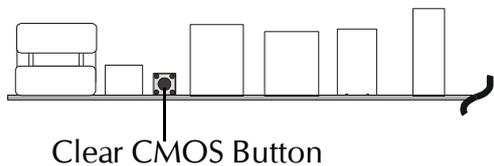
B4 Clear CMOS Button

Please follow the steps as below:

Step 1. Turn off the system power (pc-> off).

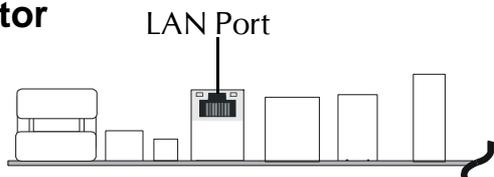
Step 2. Remove ATX Power cable from ATX Power connector.

Step 3. Push the button for a few seconds.



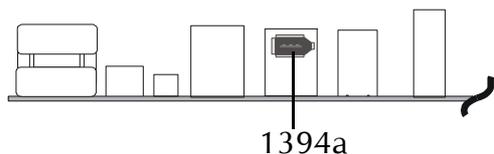
B5 10/100 base-T LAN Port Connector

This mainboard can accommodate one device on LAN. Attach a CAT-5 cable to the LAN port at the back-panel of your computer.



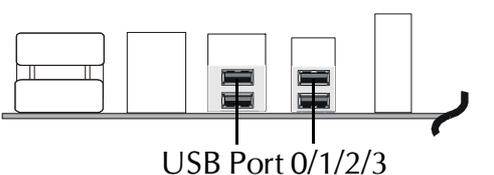
B6 IEEE 1394a Port Connector

This mainboard offers one 1394a port on back panel. Plug device jack into an available 1394a connector.



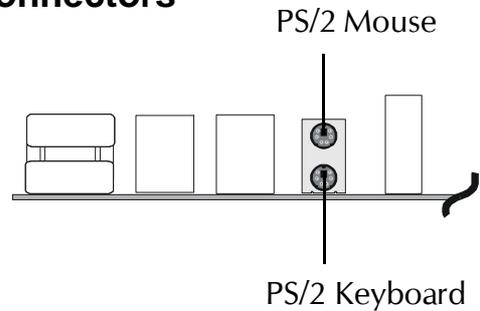
B7 USB 0/1/2/3 Port Connector

The mainboard can offers 4 USB ports on back panel. Plug each USB device jack into an available USB1/2/3/4 connector.



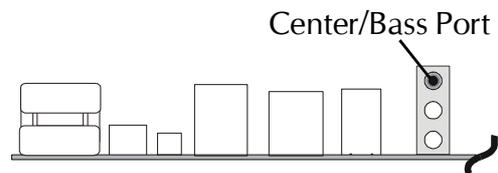
B8 PS/2 Keyboard & PS/2 Mouse Connectors

B9 Two 6-pin female PS/2 keyboard & Mouse connectors are located at the rear panel of the mainboard. Depending on the computer housing you use (desktop or tower), the PS/2 Mouse connector is situated at the top of the PS/2 Keyboard connector when the mainboard is laid into a desktop, as opposed to a tower where the PS/2 Mouse connector is located at the right of the PS/2 Keyboard's. Plug the PS/2 keyboard and mouse jacks into their corresponding connectors.



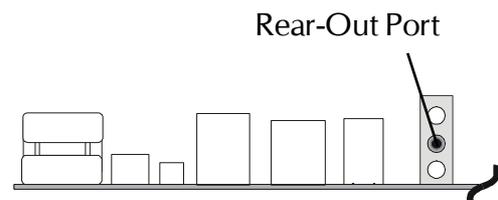
B10 Center/Bass Port Connector

Center/Bass is a stereo output port through which the combined signal of all internal and external audio sources on the board is output. It can be connected to 1/8-inch TRS stereo headphones or to bass/center amplified speakers.



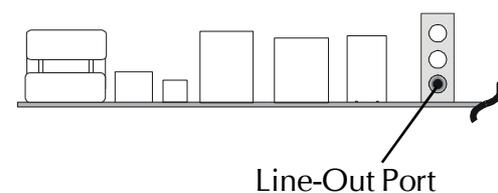
B11 Rear-Out Port Connector

Stereo out of rear (surround) channel.



B12 Line-Out Port Connector

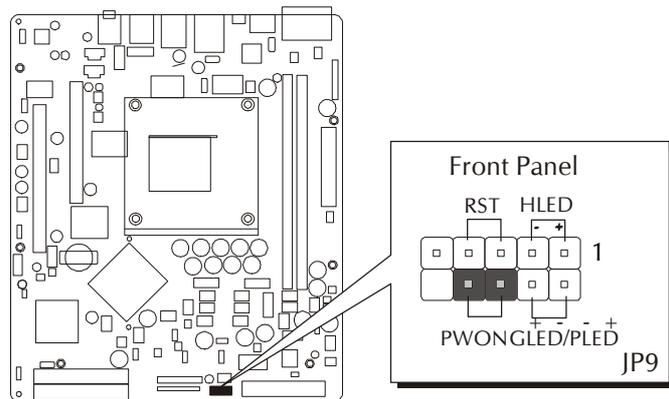
Line-Out is a stereo output port through which the combined signal of all internal and external audio sources on the board is output. It can be connected to 1/8-inch TRS stereo headphones or to amplified speakers.



☞ **Front-Panel Connectors**

① **ATX Power On/Off Switch Connector (PWON)**

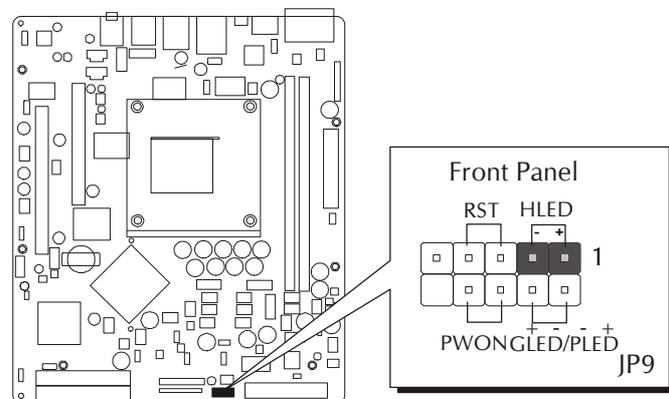
The Power On/Off Switch is a momentary type switch used for turning on or off the system ATX power supply. Attach the connector cable from the Power Switch to the 2-pin (PWON) header on the mainboard.



Note : Please notice all the LED connectors are directional. If your chassis's LED does not light up during running, please simply change to the opposite direction.

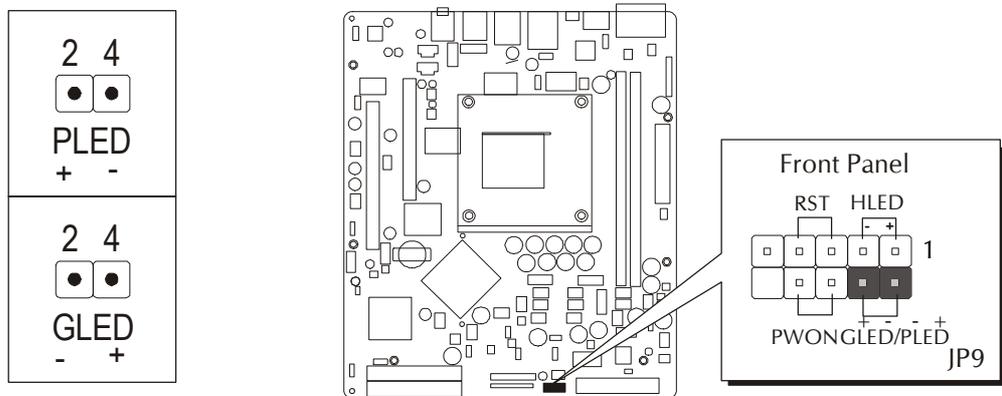
② **HDD LED Connector (HLED)**

Attach the connector cable from the IDE device LED to the 2-pin (HLED) header. The HDD LED lights up whenever an IDE device is active.



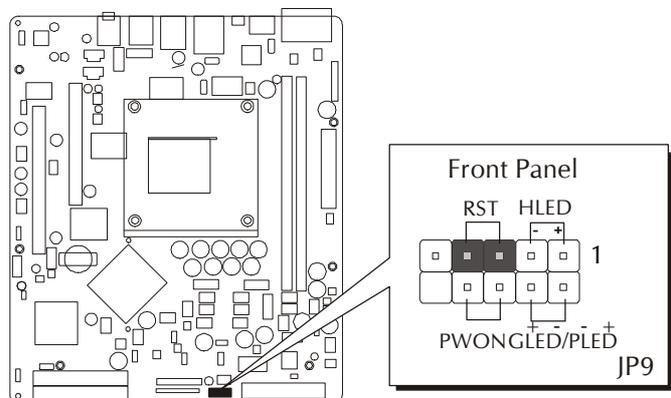
③ Green LED / Power LED Connector (GLED/PLED)

This header is dual color LED function. Dual color LED function is defined by either Power LED or Green LED, the header can be in these states. The Green LED indicates that the system is currently in one of the power saving mode (Doze/Standby/Suspend). When the system resumes to normal operation mode, the Green LED will go off, power LED on. This Power LED will go off during power saving mode. Attach a 2-pin Green LED/Power LED cable to (GLED/PLED) header.



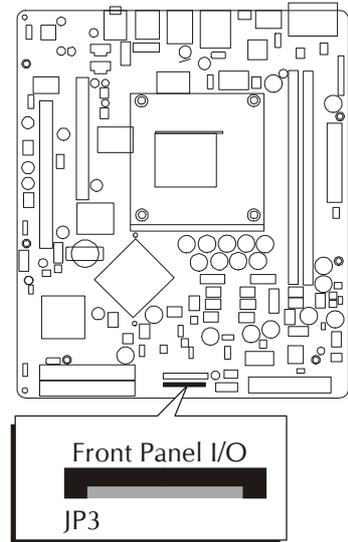
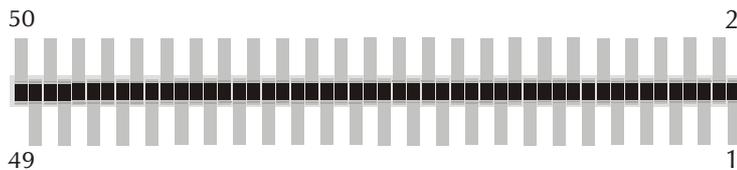
④ Hardware Reset Connector (RST)

Attach the 2-pin hardware reset switch cable to the (RST) header. Pressing the reset switch causes the system to restart.



③ Front Panel I/O Connector (JP3)

Port JP3 can be used to connect special device.



Pin Assignments:

1 = USBVCC	2 = USBVCC	3 = USBVCC
4 = USBVCC	5 = USBVCC	6 = USBVCC
7 = USBVCC	8 = USBVCC	9 = USB4 +
10 = USB4-	11 = GND	12 = GND
13 = USB5 +	14 = USB5-	15 = GND
16 = GND	17 = TPA1 +	18 = TPA1-
19 = GND	20 = GND	21 = TPB1 +
22 = TPB1-	23 = GND	24 = GND
25 = Front MIC	26 = FMIC_Power	27 = Sense 0
28 = GND	29 = LineIn_L	30 = GND
31 = LineIn_R	32 = Sense 1	33 = GND
34 = GND	35 = LineOut_R	36 = FrontOut_R
37 = GND	38 = GND	39 = LineOut_L
40 = FrontOut_L	41 = GND	42 = GND
43 = HDLED_PU	44 = GLEDA	45 = HDLED
46 = GLEDB	47 = Reset_Sw	48 = Power_Sw
49 = VCC	50 = VCC	

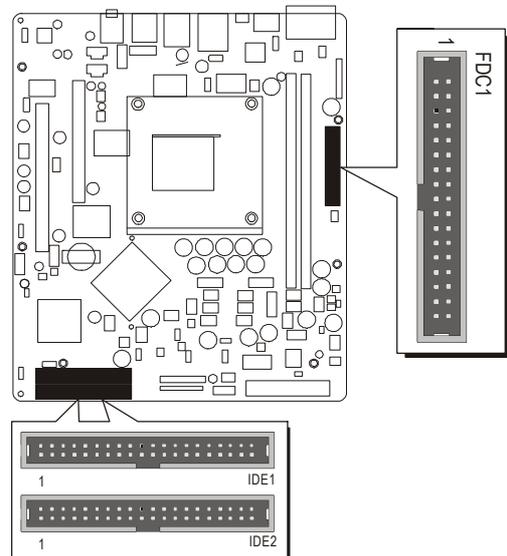
☞ **Internal Peripherals Connectors**

D1 Enhanced IDE and Floppy Connectors

The mainboard features two 40-pin dual-channel IDE device connectors (IDE1/IDE2) providing support for up to four IDE devices, such as CD-ROM and Hard Disk Drives (H.D.D.).

This mainboard also includes one 34-pin floppy disk controller (FDC) to accommodate the Floppy Disk Drive (FDD). Moreover, this mainboard comes with one 80-pin ATA 100/66/33 ribbon cable to connect to IDE H.D.D. and one 34-pin ribbon cable for F.D.D. connection.

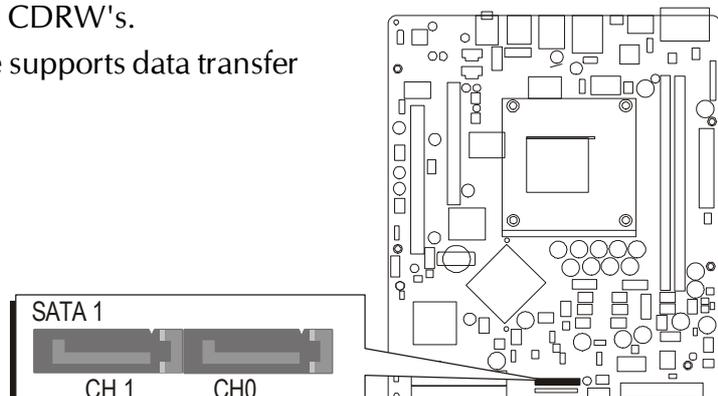
Important:
Ribbon cables are directional, therefore, make sure to always connect with the red cable stripe on the same side as pin #1 of the IDE1/IDE2 or FDC connector on the mainboard.



D2 Serial ATA Connector

The Serial ATA is an evolutionary replacement for the Parallel ATA physical storage interface. Serial ATA is scalable and will allow future enhancements to the computing platform. The Serial ATA supports all ATA and ATAPI device, including CDs, DVDs, tapes devices, high capacity removable devices, zip drivers, and CDRW's.

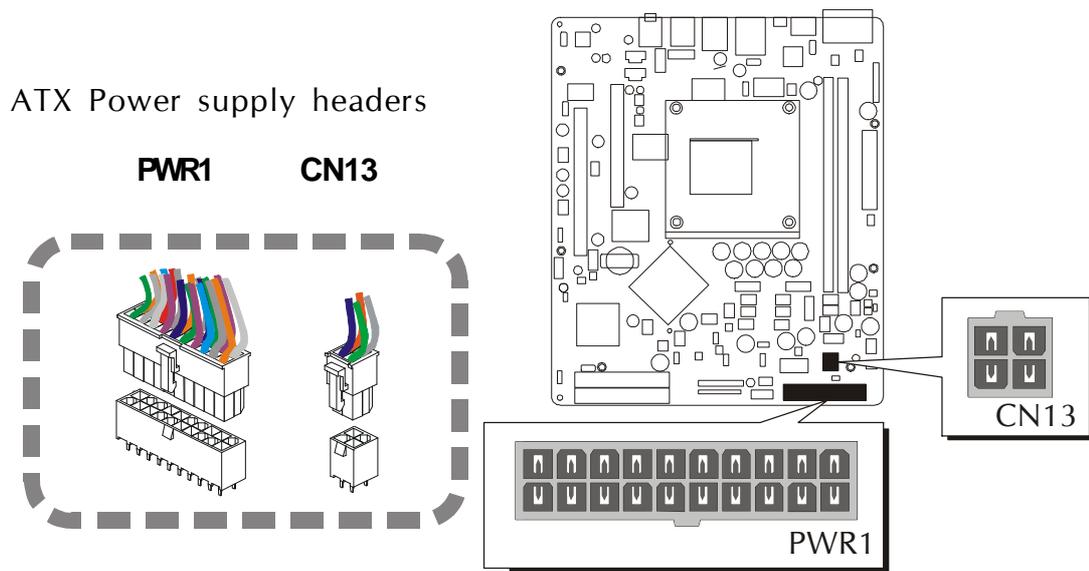
The Serial ATA interface supports data transfer rates up to 150MB/s.



☞ **Other Connectors**

Ⓜ ATX Power Supply Connectors (PWR1 and CN13)

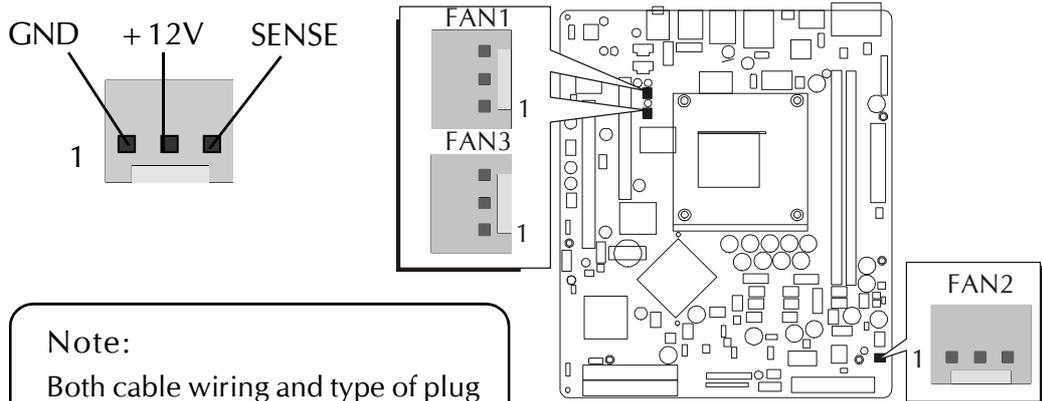
This motherboard uses 20-pin (PWR1) Pentium 4 standard ATX power header and CN13 with 1X4-pin + 12V PC ATX power supply headers. Please make sure you plug in the right direction.



- Note 1: The ATX power connector is directional and will not go in unless the guides match perfectly making sure that pin#1 is properly positioned.
- Note 2: Make sure the latch of the ATX power connector clicks into place to ensure a solid attachment.
- Note 3: Your ATX power supply must be supplied to ACPI +5V standby power and at least 720mA compatible.
- Note 4: Make sure your power supply have enough power for higher speed processor installed.

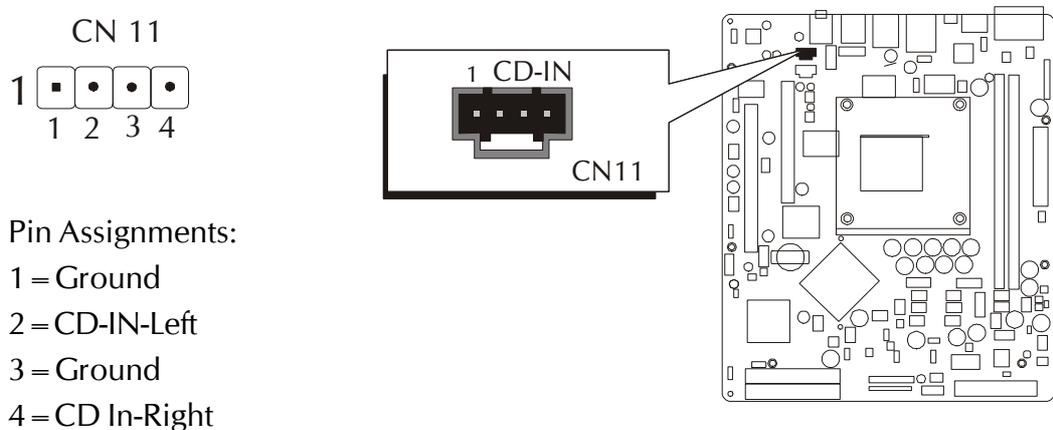
E2 CPU, Sytesm and Chipset Fan Connectors - FAN1/2/3

The mainboard provides three onboard 12V cooling fan power connectors to support CPU (FAN1), System (FAN2) or Chipset (FAN3) cooling fans.



E3 Audio CD_IN Connector (CN11) (Black)

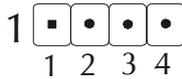
Port CN11 (Black) can be used to connect a stereo audio input from CD-ROM.



E4 Audio AUX_IN Connector (CN12)(White)

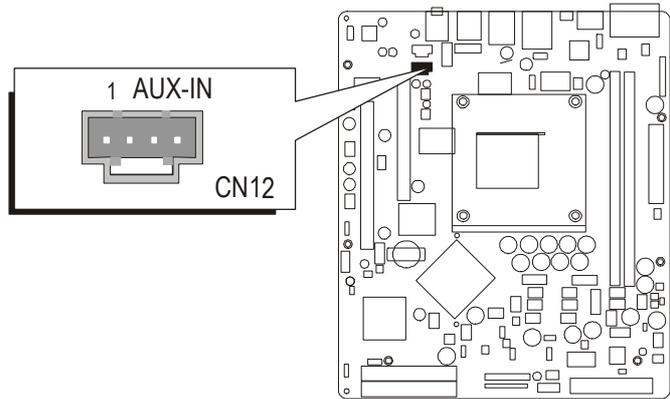
Port CN12 (White) can be used to connect a stereo audio input from CD-ROM, TV-tuner or MPEG card.

CN 12



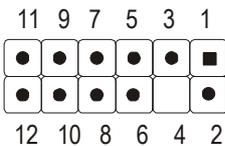
Pin Assignments:

- 1 = AUX-IN-Left
- 2 = Ground
- 3 = Ground
- 4 = AUX-IN-Right



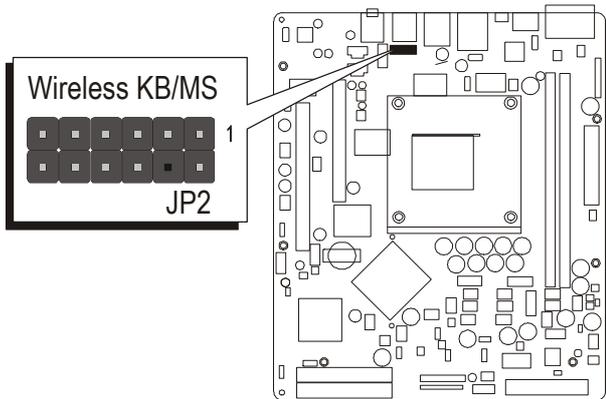
E5 Wireless Keyboard and Mouse Connector (JP2)

Port JP2 can be used to connect wireless keyboard and mouse device.



Pin Assignments:

- 1 = KB_PWR 2 = KB_PWR
- 3 = GND 4 = KEY
- 5 = MSCLK 6 = MS_CK
- 7 = MSDATA 8 = MS_DT
- 9 = KBCLK 10 = KB_CK
- 11 = KBDATA 12 = KB_DT



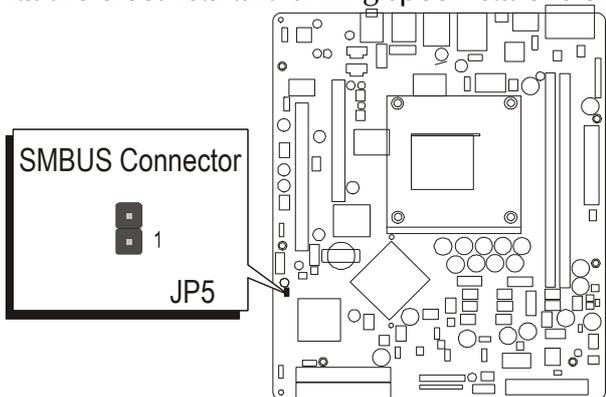
E6 SMBUS Connector (JP5)

The System Management Bus may share the same host device and physical bus with components provides that the electrical and timing specifications of this document are adhered to.



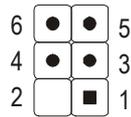
Pin Assignments:

- 1 = SMBDT2
- 2 = SMBCK2



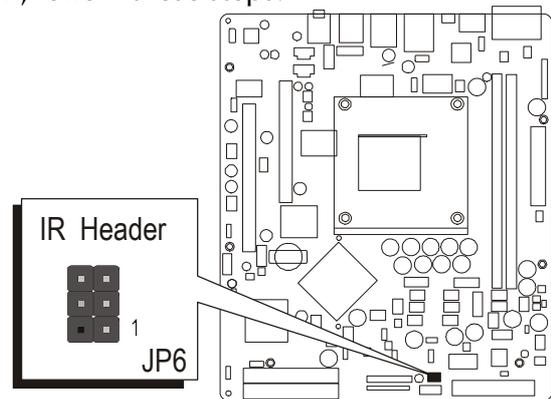
E7 IR Header (JP6)

If you have an infrared device, this mainboard can implement IR transfer function. To enable the IR transfer function, follow these steps:



Pin Assignments:

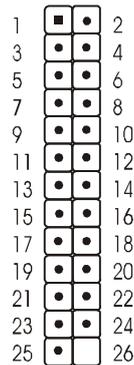
1 = NC 2 = KEY
 3 = VCC 4 = GND
 5 = IRTX 6 = IRRX



Note: Before connect your IR device, please be sure each IR on board pin allocation is matchable with the pin of the IR device. Other wise, incorrect IR connection may do damage to your IR device.

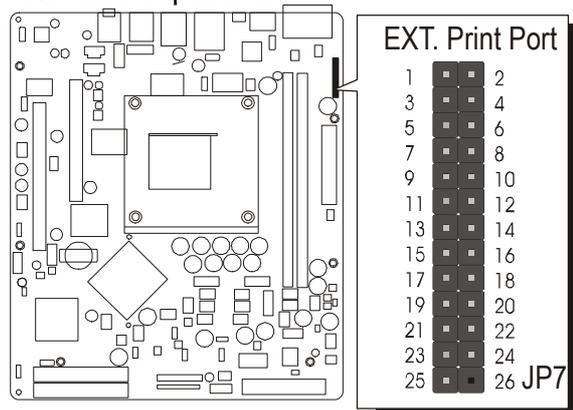
E8 Parallel Port Header-EXT. Print Port (JP7)

One 26 pins port header is located at the rear panel of the maiboard. The header is used to connect the cable attached to parallel connector. But the parallel cable and connector are optional at the time of purchase.



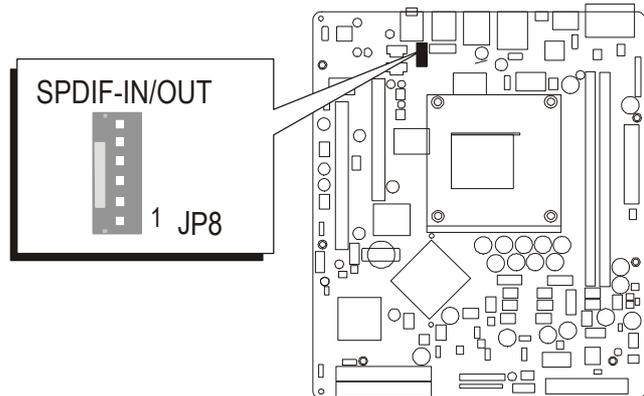
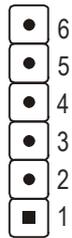
Pin Assignments:

1 = P_-STB 2 = P_PPD0 3 = P_PPD1 4 = P_PPD2
 5 = PPPD3 6 = P_PPD4 7 = P_PPD5 8 = P_PPD6
 9 = PPPD7 10 = P_-ACK 11 = P_-BUSY 12 = P_PE
 13 = P_SLCT 14 = P_-AFD 15 = P_-ERR 16 = P_-INIT
 17 = P_-SLIN 18 = GND 19 = GND 20 = GND
 21 = GND 22 = GND 23 = GND 24 = GND
 25 = GND 26 = KEY



E9 SPDIF IN/OUT Port (JP8)

Port JP8 can be used to connect special device.

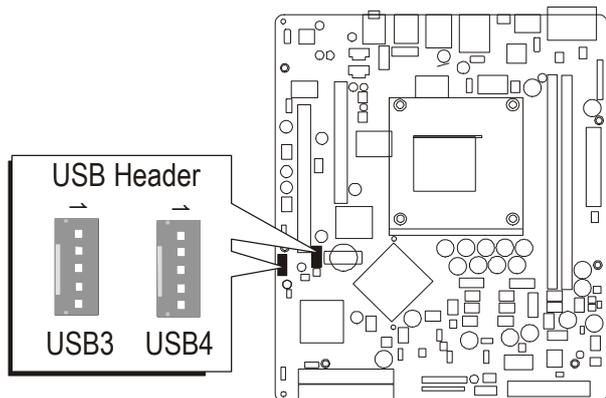


Pin Assignments:

1 = SPIDIF_IN	2 = GND
3 = VCC	4 = GND
5 = VCC	6 = SPIDIF_OUT

E10 USB Headers (USB3/USB4)

The headers are used to connect the cable attached to USB connectors which are mounted on front panel or back panel. But the USB cable is optional at the time of purchase.



USB3 Pin Assignments:

1 = GND
2 = GND
3 = USB6 +
4 = USB6 -
5 = VCC

USB4 Pin Assignments:

1 = GND
2 = GND
3 = USB7 +
4 = USB7 -
5 = VCC

3.3 System Memory Configuration

The FX83 mainboard has two 184-pin DIMM slots that allow you to install from 64MB up to 2GB of system memory. Each 184-pin DIMM (Dual In-line Memory Module) slot can accommodate 64MB, 128MB, 256MB, 512MB, and 1GB of PC1600, PC2100, PC2700 or PC3200 (2.6V) compliant 2.5V single (1 Bank) or double (2 Bank) side 64-bit wide data path DDR SDRAM modules.

1. Install Memory :

Install memory in any or all of the banks. The combination shown as follows.

Desity	64M		128M		256M		512M	
Device width	X8	X16	X8	X16	X8	X16	X8	X16
Single/Double	SS/DS	SS	SS/DS	SS	SS/DS	SS	SS/DS	SS
184pin DDR DIMMs	64/128MB	64/128MB	128/256MB	128/256MB	256/512MB	256/512MB	256/1024MB	256/1024MB

Note: You do not need to set any jumper to configure memory since the BIOS utility can detect the system memory automatically. You can check the total system memory value in the BIOS Standard CMOS Setup menu.

Don't support double-sided X16 DDR DIMMs.

2. Upgrade Memory:

You can easily upgrade the system memory by inserting additional DDR SDRAM modules in available DIMM slots. The total system memory is calculated by simply adding up the memory in all DIMM slots. After upgrade, the new system memory value will automatically be computed and displayed in the field "Standard CMOS Setup" of BIOS setup program.

4 SOFTWARE UTILITY

4.1 Mainboard CD Overview

Note: The CD contents attached in FX83 mainboard are subject to change without notice.

To start your mainboard CD disc, just insert it into your CD-ROM drive and the CD AutoRun screen should appear.

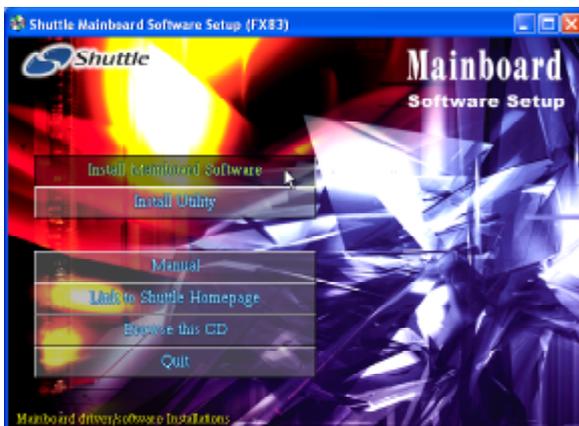
Navigation Bar Description:

- ☞ Install Mainboard FX83 Software - Installing VIA 4in1, VIA VGA, VIA LAN, Realtek Audio, VIA RAID and VIA USB 2.0 drivers.
- ☞ Install Utility - Installing Utility.
- ☞ Manual - FX83 Series mainboard user's manual in PDF format.
- ☞ Link to Shuttle Homepage - Link to shuttle website homepage.
- ☞ Browse this CD - Allows you to see contents of this CD.
- ☞ Quit - Close this CD.



4.2 Install Mainboard Software

Select using your pointing device (e.g. mouse) on the "Install Mainboard Software" bar to install Mainboard Software.



FX83 Software includes:

- [4.2.A] Install VIA 4in1 Driver
- [4.2.B] Install VIA VGA Driver
- [4.2.C] Install VIA LAN Driver
- [4.2.D] Install Realtek Audio Driver
- [4.2.E] Install VIA RAID Driver
- [4.2.F] Install VIA USB 2.0 Driver

4.2.A Install VIA 4in1 Driver

Insert the attached CD into your CD-ROM drive and the CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Select using your pointing device (e.g. mouse) on the "Install VIA 4in1 Driver" bar to install chipset driver.



Once you made your selection, a Setup window run the installation automatically. When the copying files is done, make sure you reboot the system to take the installation effect.

4.2.B Install VIA VGA Driver

Insert the attached CD into your CD-ROM drive and the CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Select using your pointing device (e.g. mouse) on the "Install VIA VGA Driver" bar to install VGA driver.



Once you made your selection, a Setup window run the installation automatically. When the copying files is done, make sure you reboot the system to take the installation effect.

4.2.C Install VIA LAN Driver

Insert the attached CD into your CD-ROM drive and the CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Select using your pointing device (e.g. mouse) on the “Install VIA LAN Driver” bar to install LAN driver.



Once you made your selection, a Setup window run the installation automatically. When the copying files is done, make sure you reboot the system to take the installation effect.

4.2.D Install Realtek Audio Driver

Insert the attached CD into your CD-ROM drive and the CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Select using your pointing device (e.g. mouse) on the “Install Realtek Audio Driver” bar to install Audio driver.



Once you made your selection, a Setup window run the installation automatically. When the copying files is done, make sure you reboot the system to take the installation effect.

4.2.E Install VIA RAID Driver

Insert the attached CD into your CD-ROM drive and the CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Select using your pointing device (e.g. mouse) on the "Install VIA RAID Driver" bar to install RAID driver.



Once you made your selection, a Setup window run the installation automatically. When the copying files is done, make sure you reboot the system to take the installation effect.

4.2.F Install VIA USB2.0 Driver

Insert the attached CD into your CD-ROM drive and the CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on Autorun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Select using your pointing device (e.g. mouse) on the "Install VIA USB 2.0 Driver" bar to install USB 2.0 driver.

Note: Please install WinXP SP1 before install VIA USB 2.0 Driver.

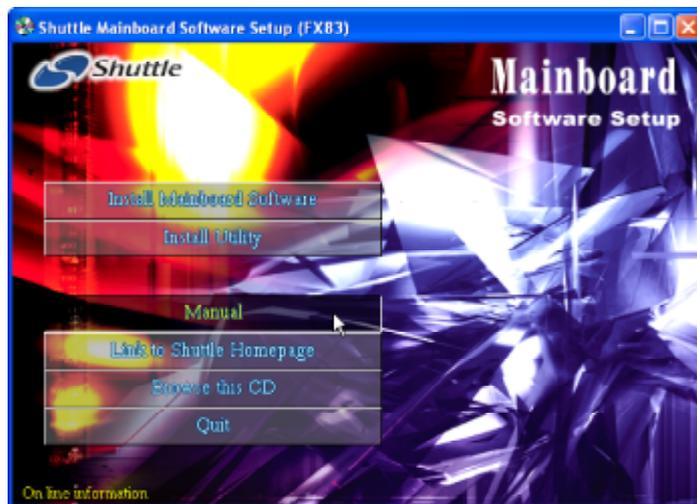


Once you made your selection, a Setup window run the installation automatically. When the copying files is done, make sure you reboot the system to take the installation effect.

4.3 View the User's Manual

Insert the attached CD into your CD-ROM drive and the CD AutoRun screen should appear. If the AutoRun screen does not appear, double click on AutoRun icon in My Computer to bring up Shuttle Mainboard Software Setup screen.

Select using your pointing device (e.g. mouse) on the "Manual" bar. Click on the "Install Acrobat Reader" bar if you need to install it, or click on "Manual" bar to view FX83 user's manual.



Then click on "Manual" bar to view user's manual.

5 BIOS SETUP

FX83 BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This information is stored in battery-backed RAM so that it retains the Setup information even if the system power is turned off.

The system BIOS is managing and executing a variety of hardware related functions in the system, including:

System date and time

Hardware execution sequence

Power management functions

Allocation of system resources

5.1 Enter the BIOS

To enter the BIOS (Basic Input / Output System) utility, follow these steps:

- Step 1. Power on the computer, and the system will perform its POST (Power-On Self Test) routine checks.
- Step 2. Press key immediately or at the following message: Press DEL to enter SETUP" or simultaneously press <Ctrl>, <Alt>, <Esc> keys.

Note 1. If you miss trains of words meationed in step2 (the message disappears before you can respond) and you still wish to enter BIOS Setup, restart the system and try again by turning the computer OFF and ON again or by pressing the <RESET> switch located at the computer's front-panel. You may also reboot by simultaneously pressing the <Ctrl>, <Alt>, keys.

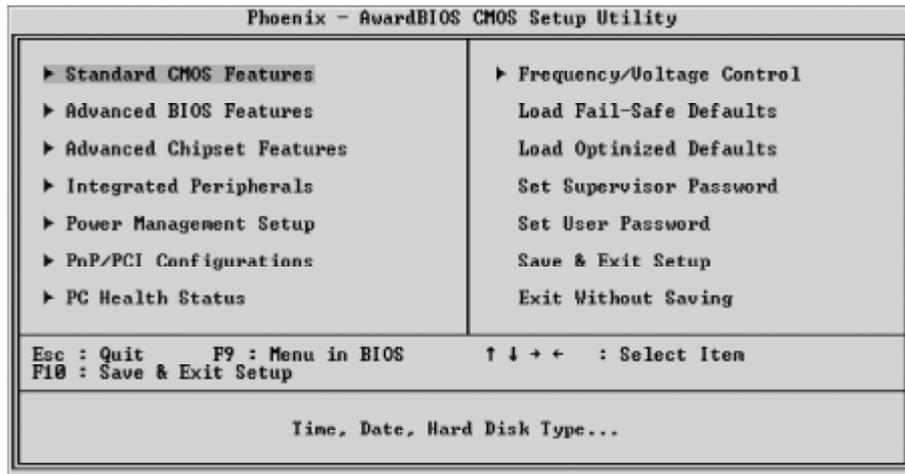
Note 2. If you do not press the keys in time and system does not boot, the screen will prompt an error message, and you will be given the following options:

" Press F1 to Continue, DEL to Enter Setup "

- Step 3. As you enter the BIOS program, the CMOS Setup Utility will prompt you the Main Menu, as shown in the next section.

5.2 The Main Menu

Once you enter the AwardBIOS(tm) CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.



Note that a brief description of each highlighted selection appears at the bottom of the screen.

Setup Items

The main menu includes the following main setup categories. Recall that some systems may not include all entries.

Standard CMOS Features

Use this menu for basic system configuration.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your settings for power management.

PnP / PCI Configurations

This entry appears if your system supports PnP / PCI.

PC Health Status

This entry shows the current system temperature, Voltage and FAN speed.

Frequency/Voltage Control

Use this menu to specify your settings for frequency/voltage control.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance of your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory-set for optimal performance system operation. While Award has designed the custom BIOS to maximize performance, the factory has the right to change these defaults to meet users' needs.

Set Supervisor/User Password

Use this menu to change, set, or disable password. It allows you to limit access to the system and Setup or only to Setup.

Save & Exit Setup

Save CMOS value changes in CMOS and exit from setup.

Exit Without Saving

Abandon all CMOS value changes and exit from setup.

Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into several categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

Phoenix - AwardBIOS CMOS Setup Utility		
Standard CMOS Features		
Date <nn:dd:yy>	Thu, Apr 29 2004	Item Help
Time <hh:mm:ss>	2 : 20 : 41	
▶ IDE Channel 0 Master	[None]	Menu Level ▶
▶ IDE Channel 0 Slave	[None]	Change the day, month, year and century
▶ IDE Channel 1 Master		
▶ IDE Channel 1 Slave		
Drive A	[2.88M, 3.5 in.]	
Drive B	[360K , 5.25 in.]	
Video	[EGA/UGA]	
Halt On	[All , But Keyboard]	
Base Memory	640K	
Extended Memory	64512K	
Total Memory	65536K	
↑↓:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults		

Date

<Month> <DD> <YYYY>

Set the system date. Note that the 'Day' automatically changes when you set the date.

Time

<HH : MM : SS>

The time is converted based on the 24-hour military-time clock. For example, 5 p.m. is 17:00:00.

IDE Channel 0 Master/Slave

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

IDE Channel 1 Master/Slave

Options are none.

Drive A/Drive B

Select the type of floppy disk drive installed in your system.

- The choice: None, 360K, 5.25 in, 1.2M, 5.25 in, 720K, 3.5 in, 1.44M, 3.5 in or 2.88M, 3.5 in.

Video

Select the default video device.

- The choice: EGA/VGA, CGA 40, CGA 80 or MONO.

Halt On

Select the situation in which you want the BIOS to stop the POST process and notify you.

- The choice: All Errors, No Errors, All, But Keyboard, All, But Diskette or All, But Disk/Key.

Base Memory

Displays the amount of conventional memory detected during boot up.

- The choice: N/A.

Extended Memory

Displays the amount of extended memory detected during boot up.

- The choice: N/A.

Total Memory

Displays the total memory available in the system.

- The choice: N/A.

IDE Adapters

The IDE adapters control the hard disk drive. Use a separate sub-menu to configure each hard disk drive.

IDE HDD Auto-Detection

Press <Enter> to auto-detect HDD on this channel. If detection is successful, it fills the remaining fields on this menu.

IDE Primary Master

Selecting 'manual' lets you set the remaining fields on this screen and select the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc., Note: PRECOMP = 65535 means NONE !

- The choice: None, Auto or Manual.

Access Mode

Choose the access mode for this hard disk.

- The choice: CHS, LBA, Large or Auto.

Capacity

Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk checking program.

- Auto-Display your disk drive size.

The following options are selectable only if the 'IDE Primary Master' item is set to 'Manual', and Access mode set to CHS.

Cylinder

Set the number of cylinders for this hard disk.

- Min = 0, Max = 65535

Head

Set the number of read/write heads.

- Min = 0, Max = 255

Precomp

Warning: Setting a value of 65535 means no hard disk.

- Min = 0, Max = 65535

Landing zone

Set the Landing zone size.

- Min = 0, Max = 65535

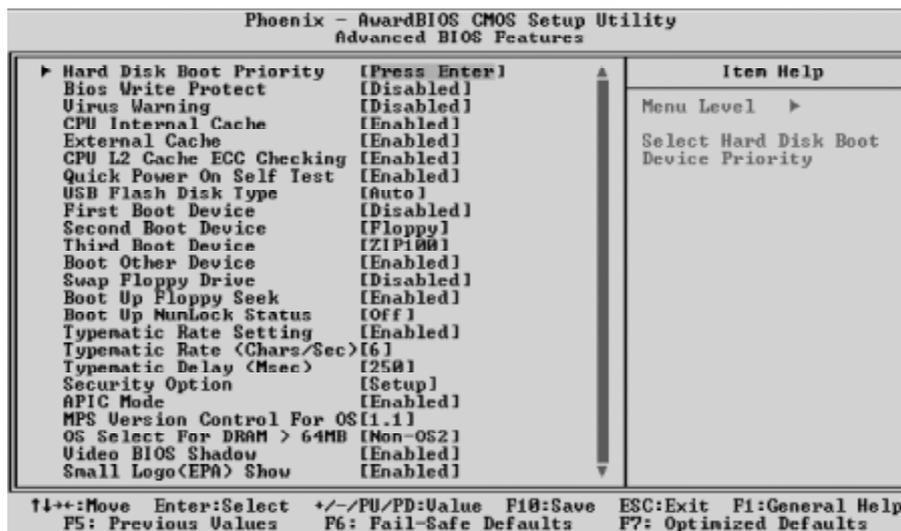
Sector

Number of sector per track.

- Min = 0, Max = 255

Advanced BIOS Features

This section allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing, and security.



Hard Disk Boot Priority

This item allows you to select Hard Disk Boot Priority.

- The choice: Pri. Master/Slave, Sec. Master/Slave, USB HDD 0/1/2 or Bootable Add-in Cards.

Bios Write Protect

This item allows you to enable or disable the Bios Write Protect. If you want to flash BIOS, you must set it Disabled.

- The choice: Enabled or Disabled.

Virus Warning

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen, and an alarm beep.

Enabled Activates automatically when the system boots up, causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Disabled No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

- The choice: Enabled or Disabled.

CPU Internal Cache

All processors that can be installed in this mainboard use internal level1(L1) cache memory to improve performance. Leave this item at the default value for better performance.

- The choice: Enabled or Disabled.

External Cache

Most processors that can be installed in this system use external level 2 (L2) cache memory to improve performance. Leave this item at the default value for better performance.

- The choice: Enabled or Disabled.

CPU L2 Cache ECC Checking

This item to enable or disabled ECC (Error Correction Code) error checking on the CPU cache memory.

- The choice: Enabled or Disabled.

Quick Power On Self Test

This item speeds up Power-On Self Test (POST) after you power on the computer. If it is set to enabled, BIOS will shorten or skip some check items during POST.

- The choice: Enabled or Disabled.

USB Flash Disk Type

This item allows you to select USB Flash Disk Type.

- The choice: Auto, Floppy or HDD.

First/Second/Third Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

- The Choice: Floppy, LS120, Hard Disk, CDROM, ZIP100,USB-FDD, USB-ZIP, USB-CDROM, LAN or Disabled.

Boot Other Device

If BIOS can't load O.S. from First/Second/Third boot device you select above, BIOS will search other devices and attempt to load O.S..

- The choice: Enabled or Disabled.

Swap Floppy Drive

If the system has two floppy drives, you can swap the logical drive name assignment.

- The choice: Enabled or Disabled.

Boot Up Floppy Seek

Seeks disk drives during boot-Up. Disabling speed boots up.

- The choice: Enabled or Disabled.

Boot Up NumLock Status

Selects power-on state for NumLock.

- The choice: Off or On.

Typematic Rate Setting

Keystrokes repeat at a rate determined by the keyboard controller. When this controller enabled, the typematic rate and typematic delay can be selected.

- The choice: Enabled or Disabled.

Typematic Rate (Chars/Sec)

This item sets how many times the keystroke will be repeat in a second when you hold the key down.

- The choice: 6, 8, 10, 12, 15, 20, 24 or 30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.

- The choice: 250, 500, 750 or 1000.

Security Option

Select whether the password is required every time the system boots or only when you enter setup.

System The system will not boot and access to Setup will be denied if the correct password is not entered promptly.

Setup The system will boot, but access to Setup will be denied if the correct password is not entered promptly.

- The choice: System or Setup.

Note: To disabled security, select PASSWORD SETTING at Main Menu, and then you will be asked to enter password. Don't type anything and just press <Enter> ; it will disable security. Once the security is disabled, the system will boot, and you can enter Setup freely.

APIC Mode

Via the routing, I/O APIC support a total of 24 interrupts. "Enabled" for Windows XP and Windows 2000.

- The choice: Enabled or Disabled.

MPS Version Control For OS

Selects the operating system multiprocessor support version.

- The choice: 1.1 or 1.4.

OS Select For DRAM > 64MB

Selects the operating system that is running with greater than 64MB of RAM in the system.

- The choice: Non-OS2 or OS2.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM. However, it is optional depending on chipset design. Video Shadow will increase the video speed.

- The choice: Enabled or Disabled.

Small Logo(EPA) Show

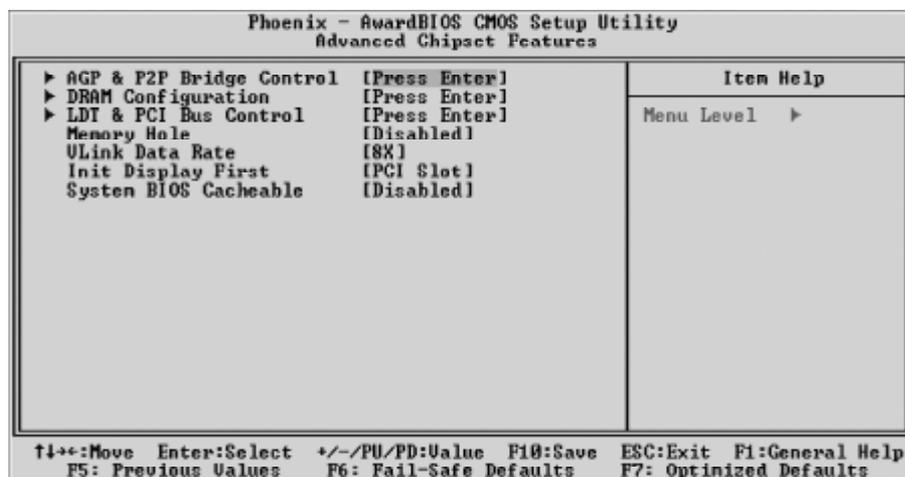
This item allows you to enable/disable the EPA Logo.

- The choice: Enabled or Disabled.

Advanced Chipset Features

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It states that these items should never need to be altered.

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



AGP & P2P Bridge Control

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

AGP Aperture Size

Select the size of Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated to graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.

➤ The Choice: 32M, 64M, 128M, 256M or 1G.

AGP 2.0 Mode

This item allows you to select the AGP Mode.

If you set Onboard VGA or AGP 3.0 Mode AGP Card, the default value is 8X.

➤ The Choice: 1x, 2x or 4x.

AGP Driving Control

This item enables the system to automatically select its output buffer drive strength or make it manually selectable by an end user.

- The Choice: Auto or Manual.

AGP Driving Value

This item enables an end user to manually select the AGP output buffer drive strength.

- Key in a HEX number: Min = 00, Max = FF.

AGP Fast Write

This item enables an end user to manually select the AGP output buffer drive strength.

- The Choice: Enabled or Disabled.

AGP Master 1 WS Write

When this item enabled, writing to the AGP(Accelerated Graphics Port) is executed with one wait state.

- The Choice: Enabled or Disabled.

AGP Master 1 WS Read

When this item enabled, reading from the AGP (Accelerated Graphics Port) is executed with one wait state.

- The Choice: Enabled or Disabled.

AGP 3.0 Calibration Cycle

If you set Onboard VGA or AGP 3.0 Mode AGP Card, the item is enable/disable the AGP calibration cycle.

- The Choice: Enabled or Disabled.

VGA Share Memory Size

This item defines the onboard VGA shared memory size.

- The Choice: Disabled, 16M, 32M or 64M.

Select Display Device

You can select boot display device.

- The Choice: CRT, TV or CRT + TV.

TV_Type

You can select TV mode for Windows.

- The Choice: NTSC, PAL, PALM, PALN or PALNc.

DRAM Configuration

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Current FSB Frequency

This item shows the current CPU Front Side Bus Speed.

Current DRAM Frequency

This item shows the current DRAM speed.

DDR Timing Setting

This item allows you to set DRAM timing.

- The Choice: Auto or Manual.

Max Memclock (MHz)

This item allows you to set DRAM frequency.

- The Choice: 100, 133, 166 or 200.

CAS# latency

This item defines the timing delay in clock cycles before SDRAM starts a read command after receiving it.

- The Choice: Auto, CL = 2.0, CL = 2.5 or CL = 3.0.

RAS# to CAS# delay (tRCD)

This item defines the timing of the transition from RAS (row address strobe) to CAS (column address strobe) as both rows and columns are separately addressed shortly after DRAM is refreshed.

- The Choice: Auto or 2 ~ 7 Bus Clocks.

Min RAS# active time (tRAS)

This precharge time is the number of cycles it takes for DRAM to accumulate its charge before refresh.

- The Choice: Auto or 5 ~ 15 Bus Clocks.

Row Precharge Time (tRP)

This item defines the numbers of cycles for RAS (row address strobe) to be allowed to precharge.

- The Choice: Auto or 2 ~ 6 Bus Clocks.

1T/2T Memory Timing

This item for K8 CPU CG version, allows you to set memory command rate.

- The Choice: Auto, 1T or 2T.

LDT & PCI Bus Control

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Upstream LDT Bus Width

This item allows you to select the LDT upstream width.

➤ The Choice: 8 bit or 16 bit.

Downstream LDT Bus Width

This item allows you to select the LDT downstream width.

➤ The Choice: 8 bit or 16 bit.

LDT Bus Frequency

The item selects the LDT bus frequency.

➤ The Choice: Auto, 200 MHz, 400 MHz, 600 MHz or 800 MHz.

PCI1 Master 0 WS Write

When this item enabled, writing to the PCI bus is executed with zero wait state.

➤ The Choice: Enabled or Disabled.

PCI2 Master 0 WS Write

When this item enabled, writing to the AGP bus is executed with zero wait state.

➤ The Choice: Enabled or Disabled.

PCI1 Post Write

This Item enable/disable AGP post write function, which means when cpu accessing the AGP data, the chipset can queue the instruction when the AGP bus is busy, then write the data when AGP bus is available .

➤ The Choice: Enabled or Disabled.

PCI2 Post Write

This Item enable/disable PCI post write function, which means when cpu accessing the PCI data, the chipset can queue the instruction when the PCI bus is busy, then write the data when AGP bus is available.

➤ The Choice: Enabled or Disabled.

PCI Delay Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

- The Choice: Enabled or Disabled.

Memory Hole

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it can't be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

- The Choice: Disabled or 15M-16M.

VLINK Data Rate

This item allows you to set VLINK Data Rate.

- The Choice: 8x or 4x.

Init Display First

This item allows you to decide to activate whether PCI slot or AGP first.

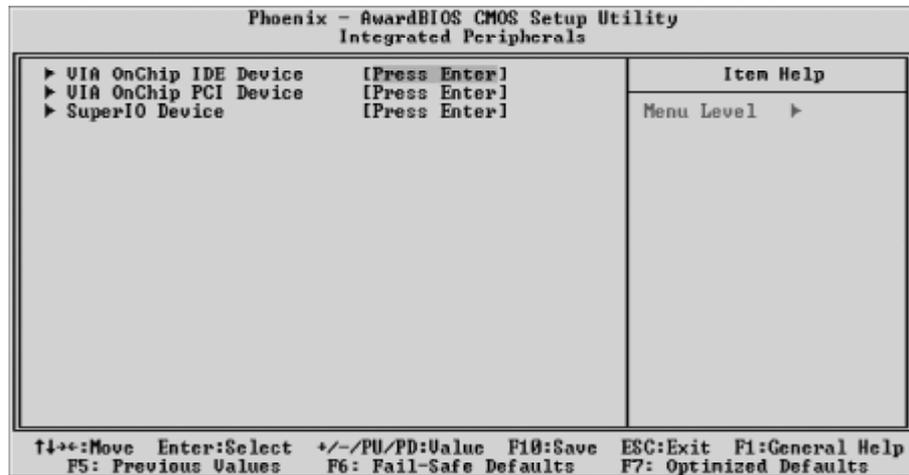
- The choice: PCI Slot or AGP/Onboard.

System BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program is written to this memory area, a system error may result.

- The choice: Enabled or Disabled.

 **Integrated Peripherals**



VIA OnChip IDE Device

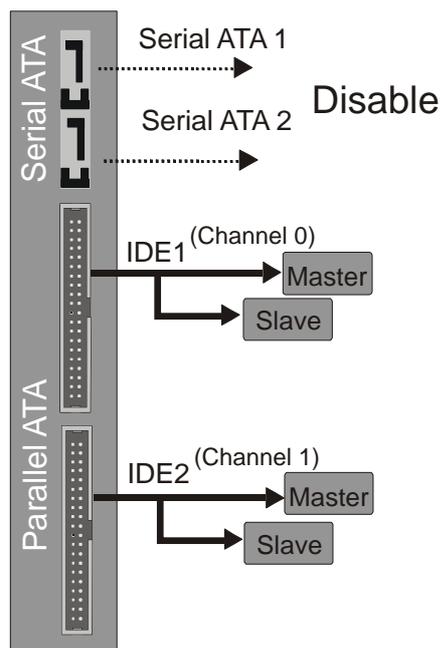
Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

OnChip SATA

The chipset contains a SATA interface with support to on SATA channel. Select Enabled to activate the primary SATA interface. Select Disabled to deactivate the primary interface.

➤ The choice: Disabled or Enabled.



SATA Mode

With both SATA H.D. and set On-chip Serial ATA "Enhanced Mode". You can select SATA Mode as "RAID" to run RAID bios and make raid. ICH5R raid function raid0, support WinXP.

- The choice: IDE or RAID.

IDE DMA transfer access

Use these items to enable or disabled the IDE DMA transfer access that are intergrated on the mainboard.

- The choice: Enabled or Disabled.

OnChip IDE Channel0

The chipset contains a PCI IDE interface with support to two IDE channels. Select Enabled to activate the primary IDE interface; select Disabled to deactivate this interface.

- The choice: Enabled or Disabled.

OnChip IDE Channel1

The chipset contains a PCI IDE interface with support to two IDE channels. Select Enabled to activate the secondary IDE interface; select Disabled to deactivate this interface.

- The choice: Enabled or Disabled.

IDE Prefetch Mode

The onboard IDE drive interfaces support IDE prefetching for faster drive access. If you install a primary and/or secondary add-on IDE interface, set this field to Disabled if the interface does not support prefetching.

- The choice: Enabled or Disabled.

Primary Master/Primary Slave/Secondary Master/ Secondary Slave PIO

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input / Output) is used by IDE devices. Choose Auto to let the system auto detect which PIO mode is best or select a PIO mode from 0-4.

- The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3 or Mode 4.

Primary Master/Primary Slave/Secondary Master/ Secondary Slave UDMA

Each IDE channel supports a master device and a slave device. This mainboard supports UltraDMA technology, which provides faster access to IDE devices.

- The choice: Auto or Disabled.

IDE HDD Block Mode

If your IDE hard disk drive supports block mode (most new drives do), select Enabled to automatic detect the optimal number of block read and writes per sector that the drive can support and improves the speed of access to IDE devices.

- The choice: Enabled or Disabled.

VIA Onchip PCI Device

Option are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

AC97 Audio

This item allows you to select AC 97 audio chip to support Audio. Disable this item. If you are going to install a PCI audio add-on card.

- The Choice: Auto or Disabled.

VIA-3043 Onchip LAN

This item allows you to select onchip LAN.

- The Choice: Enabled or Disabled.

Onboard Lan Boot ROM

Device whether to invoke the boot ROM of the onboard LAN chip.

- The Choice: Enabled or Disabled.

Onchip USB Controller

Select Enabled if your system contains a Universal Serial Bus (USB) port on this mainboard.

- The Choice: All Disabled, All Enabled, 1&2 USB Port, 2&3 USB Port, 1&3 USB Port or 1 ~ 3 USB.

Onchip EHCI Controller

Select Enabled if your system contains a Universal Serial Bus USB2.0 port on this mainboard.

- The choice: Enabled or Disabled.

USB Keyboard Support

Select Enabled if you plan to use a keyboard connected through the USB port in a legacy operating system (such as DOS) that doesn't support Plug and Play.

- The choice: Enabled or Disabled.

SuperIO Device

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

Onboard FDC Controller

This item specifies onboard floppy disk drive controller. This setting allows you to connect your floppy disk drives to the onboard floppy connector.

➤ The choice: Enabled or Disabled.

Onboard Serial Port1

This option is used to assign the I/O address and interrupt request (IRQ) for the onboard serial port1 (COM1).

➤ The choice: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Auto.

Onboard Infrared Port

This option is used to assign the I/O address and interrupt request (IRQ) for the onboard infrared port.

➤ The choice: Disabled, 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Auto.

UART Mode Select

This item allows you to select IrDA infrared through COM2 port.

➤ The choice: IrDA, ASKIR or SCR.

UR2 Duplex Mode

This item allows you to select the IR half or full duplex function.

➤ The choice: Full or Half.

Onboard Parallel Port

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

➤ The choice: 378/IRQ7, 278/IRQ5, 3BC/IRQ7 or Disabled.

Parallel Port Mode

Select an operating mode for the onboard parallel (printer) port. Select Normal, Compatible, or SPP unless you are certain your hardware and software both support one of the other available modes.

➤ The choice: SPP, EPP, ECP or ECP + EPP.

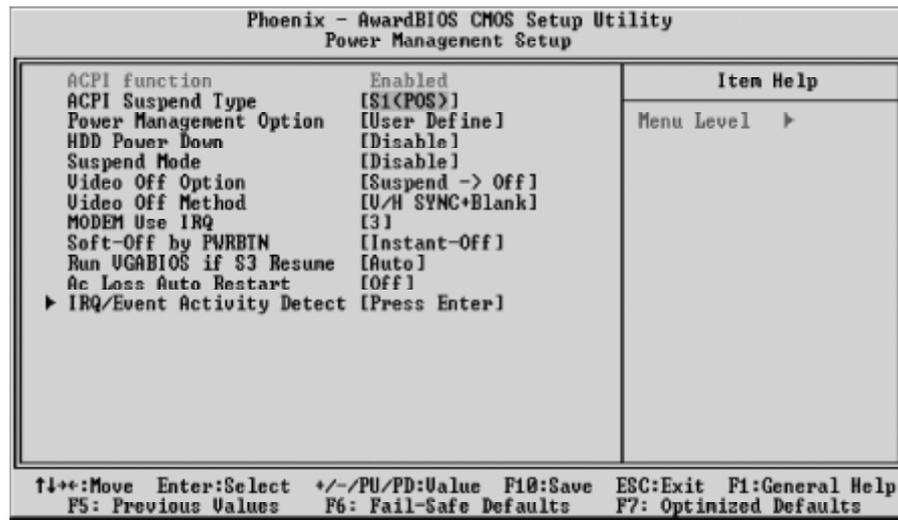
ECP Mode Use DMA

When the onboard parallel is set to ECP mode, the parallel port can use DMA3 or DMA1.

➤ The choice: 1 or 3.

Power Management Setup

The Power Management Setup allows you to configure your system to most effectively saving energy while operating in a manner consistent with your own style of computer use.



ACPI Function

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

- Always "Enabled".

ACPI Suspend Type

This item allows you to select sleep state when suspend.

- The choice: S1(POS), S3(STR) or S1 & S3.

Power Management Option

This item allows you to decide the timing to enter suspend mode.

- The choice: User Define, Min Saving or Max Saving.

HDD Power Down

When this item enabled and after the set up time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

- The choice: Disable or 1 Min ~ 15 Min.

Suspend Mode

When this item enabled and after the set up time of system inactivity, all devices except the CPU will be shut off.

- The choice: Disable, 1Min, 2Min, 4Min, 6Min, 8Min, 10Min, 20Min, 30Min, 40Min or 1Hour.

Video Off Option

This item specifies on/off for the monitor when it enters the power-saving mode.

- The choice: Suspend-> off or Always On.

Video Off Method

This determines the manner in which the monitor is blanked.

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

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

DPMS Support Initial display power management signaling.

- The choice: V/H SYNC + Blank, DPMS Support or Blank Screen.

MODEM Use IRQ

This determines the IRQ which the MODEM can use.

- The choice: 3, 4, 5, 7, 9, 10, 11 or NA.

Soft-Off by PWR-BTN

Under ACPI you can create a software power down. In a software power down, the system can be resumed by Wake UP Alarms. This item lets you install a software power down that is controlled by the power button on your system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec. then you have to hold the power button down for 4 seconds to cause a software power down.

- The choice: Instant-Off or Delay 4 Sec.

Run VGABIOS if S3 Resume

This item becomes available when the previous item is set to S3(STR) or S1 & S3. The item allows the system to initialize a VGA BIOS from S3 (Suspend to RAM) sleep state.

- The choice: Yes, No or Auto.

PWRON After PWR-Fail

This item select power on function when power fail.

- The choice: Off, On or Former-Sts.

IRQ / Event Activity Detect

Options are in its sub-menu.

Press <Enter> to enter the sub-menu of detailed options.

PS2KB Wakeup Select

Select a hotkey or password to wake up the system.

- The choice: Hot key or Password.
-

PS2KB Wakeup from S3/S4/S5

Set a key to awaken the system from a keyboard.

- The choice: Disable, Ctrl + F1 ~ Ctrl + F12, Power, Wake or Any Key.

PS2MS Wakeup from S3/S4/S5

This item enables or disables the PS/2 mouse to awaken the system.

- The choice: Disabled or Enabled.

USB Resume from S3

When this item is enabled, any activity from the USB device will awaken the system from S3 mode.

- The choice: Disabled or Enabled.

VGA

Select ON to have the VGA awaken the system.

- The choice: OFF or ON.

LPT & COM

This item determines if any activity from LPT, COM, or both wakes up the system.

- The choice: NONE, LPT, COM or LPT/COM.

HDD & FDD

Select ON to have any activity from HDD or FDD wake up the system.

- The choice: OFF or ON.

PCI Master

Select ON to have any activity from the primary PCI wake up the system.

- The choice: OFF or ON.

PowerOn by PCI Card

This item enables/disables the power on function of PCI card.

- The choice: Disabled or Enabled.

Modem Ring Resume

When this item is enabled, any event from Modem Ring will awaken the system which has been powered down.

- The choice: Disabled or Enabled.

RTC Alarm Resume

When this item is enabled, you can set the date and time at which the RTC (real-time clock) alarm awakens the system from suspend mode.

- The choice: Disabled or Enabled.

Data (of Month)

This item selects the alarm date.

➤ Key in a DEC number: Min = 0, Max = 31.

Resume Time (hh:mm:ss)

This item selects the alarm Time.

[hh] ➤ Key in a DEC number: Min = 0, Max = 23.

[mm] ➤ Key in a DEC number: Min = 0, Max = 59.

[ss] ➤ Key in a DEC number: Min = 0, Max = 59.

IRQs Activity Monitoring

Press <Enter> to enter the sub-menu of detailed options.

Primary INTR

Select ON/OFF to enable/disable a specified IRQ.

➤ The choice: OFF or ON.

In the following is a list of IRQs (Interrupt Requests), which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. When on mode exists, activity will neither prevent the system from going into a power management mode nor awaken it.

IRQ3 (COM 2)

IRQ4 (COM 1)

IRQ5 (LPT 2)

IRQ6 (Floppy Disk)

IRQ7 (LPT 1)

IRQ8 (RTC Alarm)

IRQ9 (IRQ2 Redir)

IRQ10 (Reserved)

IRQ11 (Reserved)

IRQ12 (PS/2 Mouse)

IRQ13 (Coprocessor)

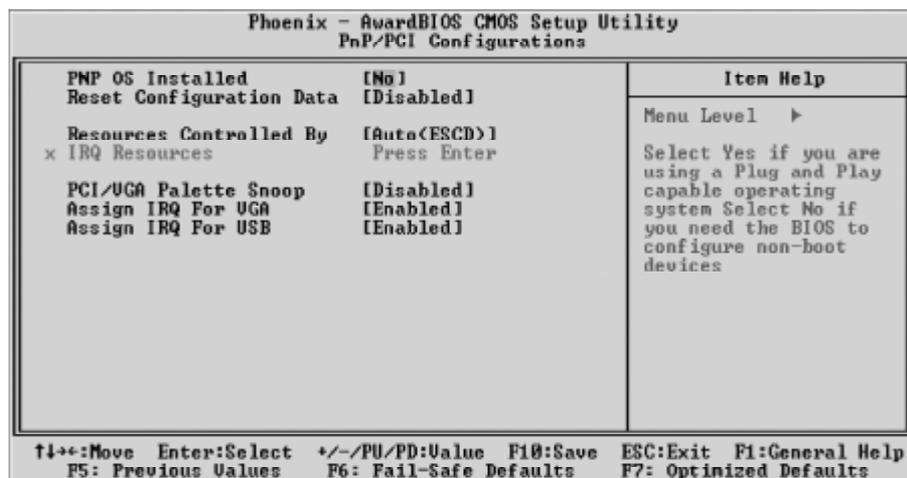
IRQ14 (Hard Disk)

IRQ15 (Reserved)

➤ The choice: Disabled or Enabled.

PnP/PCI Configurations

This section configures how PnP and PCI operate in your system. Correctly setting up the IRQ and DMA (both PnP and PCI use) assignments will make your system work stably. It is strongly recommended that only technical users make changes to the default settings.



PNP OS Installed

This item allows you to determine PnP OS is installed or not.

- The choice: Yes or No.

Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit from Setup if you have installed a new device or software and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

- The choice: Enabled or Disabled .

Resource controlled By

The Award Plug-and-Play BIOS has the capacity to automatically configure all of the boot and Plug-and-Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug-and-Play operating system such as Windows 95.

If you set this field to "manual", choose specific resources by going into each of the sub-menu that follows this field (a sub-menu is proceeded by a ">").

- The choice: Auto (ESCD) or Manual.

IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

IRQ3/4/5/7/9/10/11/12/14/15 assigned

This item allows you to determine the IRQ assigned to the ISA bus and is not available to any PCI slot. Legacy ISA for devices is compliant with the original PC AT bus specification; PCI/ISA PnP for devices is compliant with the Plug-and-Play standard whether designed for PCI or ISA bus architecture.

➤ The choice: PCI Device or Reserved.

PCI/VGA Palette Snoop

It determines whether the MPEG ISA/VESA VGA Cards can work with PCI/VGA or not. If you have MPEG ISA/VESA VGA Cards and PCI/VGA Card worked, Enable this field. Otherwise, please Disable it.

➤ The choice: Enabled or Disabled.

Assign IRQ for VGA

The item allows the user to set VGA IRQ Routing table Enabled or Disabled.

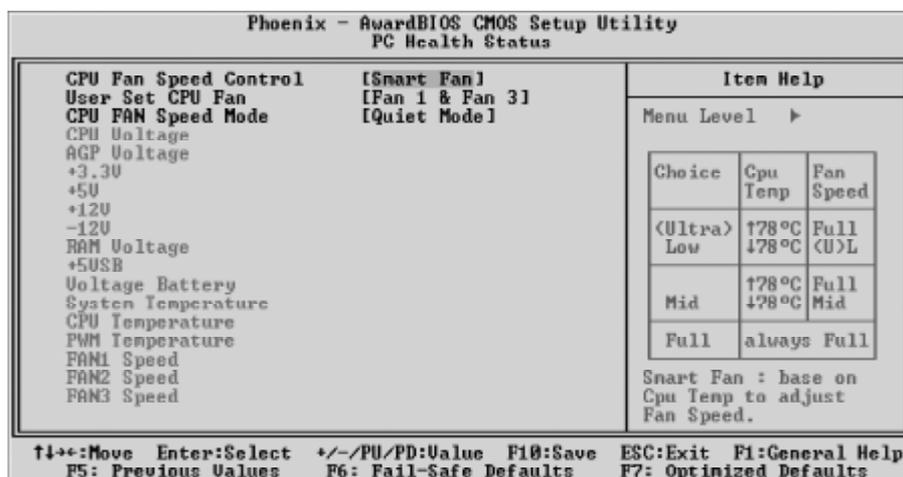
➤ The choice: Enabled or Disabled.

Assign IRQ for USB

The item allows the user the option to assign an IRQ to onboard USB controller. Since the onboard controller is always enabled, if no IRQ is assigned to it, there will be a question mark report on the system device under Windows95/98.

➤ The choice: Enabled or Disabled.

 **PC Health Status**



CPU Fan Speed Control

This SMART Bios enabled 3 phase Variable Fan Speed and CPU temperature Control feature.

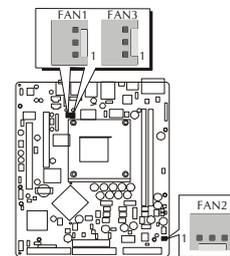
- The choice: Smart Fan, Ultra-Low, Low, Mid or Full.

This feature is controlled via Bios, in which the CPU fan rotational speed sensing/control is governed by CPU temperature setting preselected in Bios.

By default, "CPU Fan AutoGuardian" feature under PC Health Status is enabled.

Note: Before manually modifying the CPU fan setting, please make sure both fan connectors are plug into the correct fan connector designations on the mainboard.

Our default for fan cooler is set to Fan 1.



User Set CPU Fan

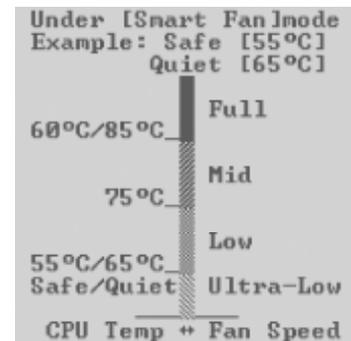
Enabled you to choose one specific fan for further setting.

- The choice: Fan1, Fan2, Fan3 or Fan1 & Fan3.

CPU Fan Speed Mode

This item defines the CPU fan speed mode.

- The choice: Quiet Mode or Safe Mode.



Take default Setting for CPU Fan Speed Control, the Fan Speed and CPU temperature Control is as defined by "Smart Fan Mode".

If you select the Safe mode, the actual CPU temp stays above 55 °C then CPU fan speed will run at a approximately 2500 RPM. But when you select the Quite mode, the actual CPU temp goes above the pre-selected 65 °C temperature threshold, then CPU fan speed will automatically about 2500 RPM.

If you select the Quite/Safe mode, the Variable Fan Speed and CPU temperature Control is as predefined at 75 °C. Where in the event of system and CPU operating under extreme working conditions, and if CPU temperature is raised above 75 °C then the Smart Bios will engage the CPU fan to rotate at about 3000 RPM. Please note that the higher fan speed, the fan cooler will be become slightly noiseier in order to compensate for the increase in CPU temperature.

If you select the Safe mode, the actual CPU temp stays above 60 °C then CPU fan speed will run at a approximately 3500 RPM. But when you select the Quite mode, the actual CPU temp goes above the pre-selected 85 °C temperature threshold, then CPU fan speed will automatically about 3500 RPM.

Warning : It is Strongly recommended to disable CPU Fan Auto Guardian feature, if you wish to use other fan cooler, allowing the fan to run at its default speed.

CPU Voltage
AGP Voltage
+ 3.3V
+ 5V
+ 12V
-12V
RAM Voltage
+ 5VSB

Voltage Battery
System Temperature
CPU Temperature
PWM Temperature
Fan1 Speed
Fan2 Speed
Fan3 Speed



Frequency/Voltage Control

Phoenix - AwardBIOS CMOS Setup Utility		Item Help
Frequency/Voltage Control		Menu Level ▶
Auto Detect PCI Clk	[Enabled]	
Spread Spectrum	[Disabled]	
CPU Clock	[200MHz]	
CPU Voltage Select	[Auto]	
RAM Voltage Select	[Auto]	
AGP Voltage Select	[Auto]	
LDT Voltage Select	[Auto]	

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

Auto Detect PCI Clk

This item allows you to enable/disable auto detection PCI Clock.

- The choice: Enabled or Disabled.

Spread Spectrum

This item allows you to enable or disable the spread spectrum modulation.

- The choice: Disabled or Enabled.

CPU Clock

This item allows you to adjust CPU Host Clock.

Min: 200

Max: 232

- Key in a DEC number: (Between Min and Max.)

CPU Voltage Select

This item allows you to set CPU Voltage.

- The choice: Auto or 0.800V ~ 1.700V.

RAM Voltage Select

This item allows you to set RAM Voltage.

- The choice: Auto, 2.60V, 2.70V or 2.80V.

AGP Voltage Select

This item allows you to set AGP Voltage.

- The choice: Auto, 1.60V, 1.70V or 1.80V.

LDT Voltage Select

This item allows you to set LDT Voltage.

- The choice: Auto, 1.30V, 1.40V or 1.50V.



Load Fail-Safe Defaults

When you press <Enter> on this item, you will get a confirmation dialog box with a message similar to:

Load Fail-Safe Defaults (Y/N) ? N

Pressing 'Y' loads the BIOS default values for the most stable, minimal performance system operations.



Load Optimized Defaults

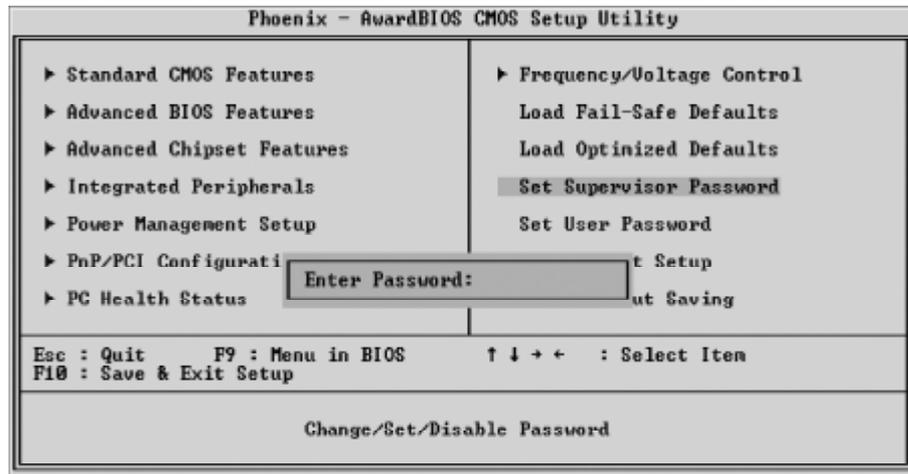
When you press <Enter> on this item, you will get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N) ? N

Pressing 'Y' loads the default values that are factory-set for optimal performance system operation.



Set Supervisor/User Password



This item is to set supervisor password. Please follow below steps.

New Password Setting :

1. While pressing <Enter> key to start setting password function, a dialog box appears to ask you "Enter password: ".
2. Key in a new password now. However, the password can not be over eight characters or numbers.
3. Then system will request you to confirm new password by asking you to key in new password again.
4. Once the confirmation is completed, new code takes effect.

No Password Setting :

5. If you want to delete password, just press <Enter> key instead of new password while password input is requested. And the other procedures are the same as above password setting.

If You Forget Password :

6. While being asked of password, you just forget it and you must access the system. The only way is to turn off system and clear CMOS memory. Please take reference in page 27 for clear CMOS setting.

Save & Exit Setup

Pressing <Enter> on this item asks for confirmation:

Save to CMOS and EXIT (Y/N)? Y

Pressing "Y" stores the selections made in the menus of CMOS - a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit from Setup without storing in CMOS any change. The previous selections remain in effect. This exits from the Setup utility and restarts your computer.