FT61

Pentium 4/Celeron , 478-pin Processor Based MAIN BOARD

Shuttle® FT61

Pentium 4/Celeron , 478-pin Processor Based Mainboard
Manual Version 1.1

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M885

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: FT61
> S/N: N/A
> CPU:
>> External Frequency: 100 MHz
>>> Intel Pentium4: 1.6/ 1.8/ 2.0/2.2/2.4 GHz
>> External Frequency: 133 MHz
>>> Intel Pentium4: 2.26/ 2.40/ 2.53/ 2.66/ 2.80/ 3.06 GHz
>> External Frequency: 200 MHz
>>> Intel Pentium4: 2.8/ 3.0/ 3.2 GHz
> Serial Port: one ports with 9 pins
> VGA Port: one port with 15 pins
> Keyboard Port: one port with 6 pins
> Mouse Port: one port with 6 pins
> S-Video Port: one port with 7 pins
> USB 2.0 Port: four ports with 4 pins respectively
> 1394 Port: one port with 6 pins respectively
> LAN Port: one port with 8 pins (10Mbps/100Mbps)
> Center/Bass-Out & Line-Out & Line-In Ports: one port for each
> Mic-In Ports: two ports
> DIMM Memory (optional): DDR 400 256 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	CPU Open/Close
1	100MHz	P4 2.40 GHz	Close
2	100MHz	P4 2.40 GHz	Open
3	133MHz	P4 3.06 GHz	Close
4	133MHz	P4 3.06 GHz	Open

| 5 | 200MHz | P4 3.20 GHz | Close |
| 6 | 200MHz | P4 3.20 GHz | Open |

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

Remedy: N/A

EMI Interference:

Crystal : 14.318MHz(X1)/ 24.576MHz(X4)/ 25.00MHz(X5)/ 32.768KHz(X2)

25.00MHz(X3)/ 24.576MHz(X6)

Clock Generator: CLK1

(D) Supported Host Peripherals:

Host Peripheral	Product Name	Model Name	S/N	FCC ID
#1	Case	FT61	N/A	
#2	Power Supply (300W)	AM630BS20S	0005596	D33047
#3	Maxtor HDD (40 GB)	D740X-6L	N/A	3902B975
#4	Panasonic FDD	JU-257A606P		
#5	Pioneer DVD Player	DVD-116	AAMS027197WL	3892D029

(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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WHAT'S IN THE MANUAL

Quick Reference

About This Manual

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 FT61 mainboard.

Experienced DIY User

Congratulate on your purchase of the Shuttle FT61 mainboard. You will find that installing your new Shuttle FT61 mainboard is just easy. Bundled with an array of onboard functions, the highly-integrated FT61 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 FT61 to construct your system. Shuttle FT61 incorporates all the state-of-the-art technology of the RS300 + IXP150 chipset from ATI. 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 FT61 mainboard to make sure nothing is missing. The complete package should include:

✸ One piece of Shuttle FT61 Mainboard
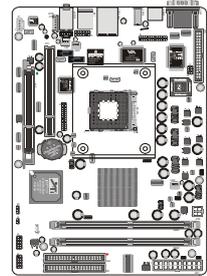
✸ One piece of ATA100/66/33 Ribbon Cable

✸ One piece of Floppy Ribbon Cable

✸ One piece of twin ports USB Cable (optional)
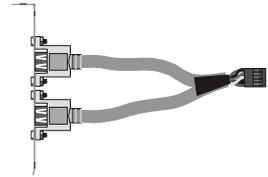
✸ One piece of Serial ATA Cable

✸ FT61 User's Manual
✸ SiI3512 RAID User's Manual
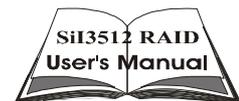
✸ One piece of Bundled CD-ROM with containing:
  ➢ FT61 user's manual saved in PDF format
  ➢ Install ATI Chipset Driver
  ➢ Install ATI VGA Driver
  ➢ Install Realtek Audio Driver
  ➢ Install Broadcom LAN Driver
  ➢ Install Broadcom Advanced control Suite
  ➢ Install Silicon RAID Driver
  ➢ Install Silicon RAID configuration
  ➢ Install ATI USB 2.0 Driver
  ➢ Install Card Reader Driver (ST61G4 only)
  ➢ Award Flashing Utility

2 FEATURES

FT61 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**

Intel Pentium 4/Celeron, 478-pin supports both Northwood and Prescott processors with 400/533/800MHz FSB.

✳ **Chipset**

Features ATI RS300 N.B. and ATI IXP150 S.B..

Onboard Lan

BCM4401 support 10Mb/s and 100Mb/s operation.

Onboard 1394a

VIA VT6307, support 400Mb/s, 200Mb/s, or100Mb/s data transfer rate.

Onboard SATA

Sil3512 supports 2 serial ATA connectors (devices) with Raid 0/1 function. SATA host controller support Generation 1 up to 1.2Gb/s (150MB/S).

✳ **Jumperless CPU Configuration**

Soft-configuration FSB (The FSB speed is software configurable from (100MHz to 233MHz) of BIOS setup program.

✳ **On Board 6 Channel AC97 Audio**

Realtek ALC650 supports 18bits ADC and DAC resolution and 6 channel slot selec table DAC Output for multi-channel applications.
Compliant with AC'97 2.2 specifications.

✳ **Versatile Memory Support**

Features the dual-channel mode of 128 bit data transfer rate.
Two 184-pin DIMM slots to support up to 2GB of PC1600,PC2100, PC2700 or PC3200 compliant DDR SDRAM module.

✳ **AGP Expansion Slot**

Provides one 32-bit AGP slot which supports 8X AGP device.

✳ **PCI Expansion Slot**

Provides one 32-bit PCI slot.

✳ **6 USB 1.1/2.0 Complaint Interface Onboard**

➢ 2 x USB connectors on back-panel and two sets of dual 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.

➢ 1 x DB15 VGA connector.

➢ 1 x AV & S-Video connector.

➢ 1 x 1394a connector.

➢ 2 x USB 1.1/2.0 ports.

➢ 1 x RJ45 LAN connector.

➢ 1 x PS/2 Mouse connector.

➢ 1 x PS/2 Keyboard connector.

➢ 1 x Front-Out port.

➢ 1 x Rear-Out port.

➢ 1 x Bass/Center port.

✳ PCI Bus Master IDE Controller Onboard

Two Ultra DMA 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 100/66/33 MB/sec and also supports Enhanced PIO Modes.

80-pin Cable Backward Compatible Legacy ATAPI Devices, 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 Small from factor ATX specification.

Board dimension: 254mm x 185mm.

✸ Advanced Features

➢ Low EMI - Built in spread spectrum 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 AutoGuardian - This SMART Bios enabled 3 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 FT61

PS/2 Keyboard/Mouse Connectors
Wireless KB/MS Connector-**J3**
AGP Fan Connector-**FAN3**
Center/Bass/Rear-Out/Front-Out Header
SPDIF IN/OUT Connector-**J10**

Auxiliary CD-IN Connecto r-**J11**
CD-IN Connector-**J9**
CPU Fan Connector -**FAN1**
One PCI Slot
Serial ATA Connectors -**SATA1/SATA2**
AGP Proof LED **(Red)**
Multi-Front Panel Connector-**J5**
One AGP Slot
SOCKET 478

ATI IXP150 Chipset
Clear CMOS-**JP1**
General Propose I/O-**J2**
Extended USB 2.0 Headers-**J4**
Front-Panel Connector-**J8**

LAN & USB 2.0 Connectors
1394a Port
TV-Out Connector
Paralle Port Connector-**J6**
COM1 & VGA Connectors

One Floppy Connector
IrDA Connector-**J7**

System Fan Connector-**FAN2**
ATX +12V Power Connector-**ATX2**
Two 184-pin DDR-SDRAM DIMM Sockets

Two IDE Connectors-**IDE1/IDE2**
DIMM Power LED **(Green)**
ATX Power Connector-**ATX1**
ATI RS300 Chipset

Step 1

CPU Installation:

This mainboard supports Intel Pentium 4/Celeron Socket 478 series CPU. Please follow the steps as follows to finish CPU installation.

Note the CPU orientation when you plug it into CPU socket.

1. Pull up the CPU socket lever to 90-degree angle.
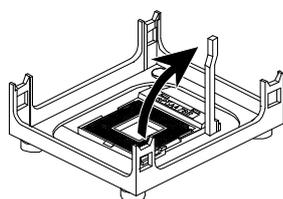
CPU socket lever up to 90-degree angle

2. Locate Pin 1 in the socket and look for a black dot or cut edge on the CPU upper interface. Match Pin 1 and cut edge, and insert the CPU into the socket.
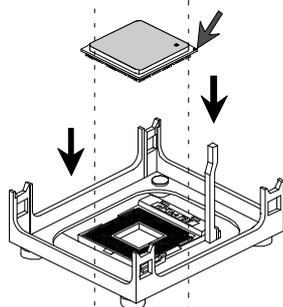
CPU Pin 1 and cut edge

3. Press down the CPU socket lever and finish CPU installation.
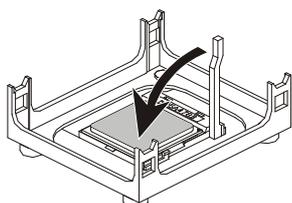
Note: The CPU might be damaged if you do not match the CPU socket Pin 1 and cut edge well.

4. Intel Pentium 4/Celeron processors require a set of heatsink and fan to cool down the processor. You need to purchase a heatsink and fan if they are not bundled with your CPU. Required is that install the set and plug its cable in the CPU fan power connector. Note that there are kinds of CPU fan connectors. Normally, if your mainboard supports a hardware monitoring function, a 3-pin fan power connector can have your system detect the CPU fan's speed. A CPU fan with a 2-pin or 4-pin fan power connector does not support the detection of the CPU fan's speed, and must directly be connected to the system's power supply unit.

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.

Do not remove memory modules while DIMM LED is on. It might cause short or other unexpected damages due to the 2.5V stand by voltage. Remove memory modules only when AC Power cord is disconnected.

DDR SDRAM　　　　　　　**DIMM Power LED**

DIMM Power LED
(Green)
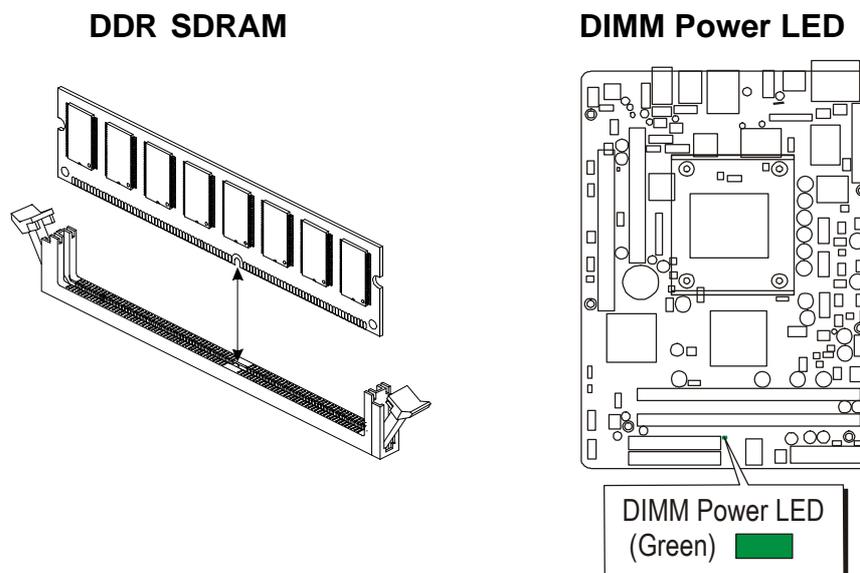
Step 4

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.
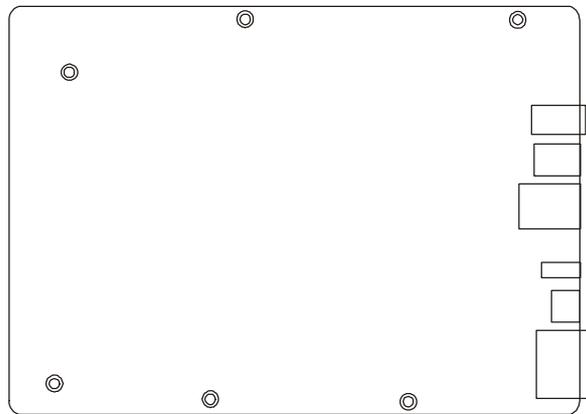
2. After deciding on the proper mounting holes, position the studs between the frame of the chassis and the mainboard. The studs are used to fix the mainboard and to keep a certain distance between the system's chassis and the mainboard, in order to avoid any electrical shorts between the board and the 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 LEDs/Switches/USBs

You can find there are several cables existing in the system case and originating from the front-panel devices (HDD LED, Green LED, Reset switch, and USB devices etc.). These cables serve to connect the front-panel LEDs, switches, and USB connectors to J8 and J4/J5, as shown below.
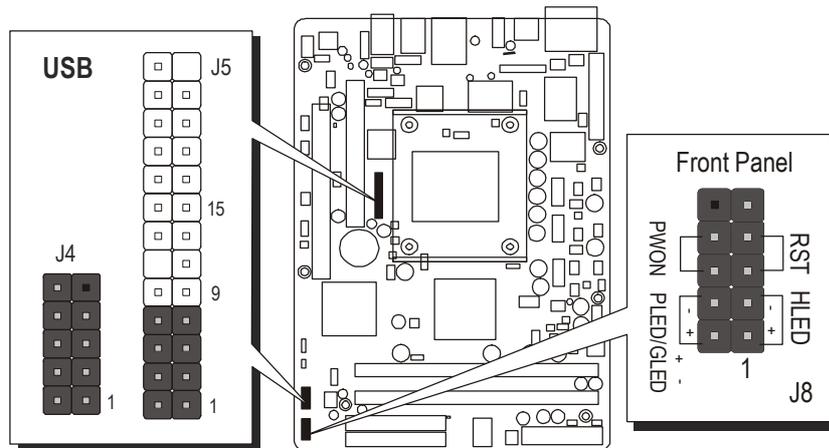
1. ATX Soft Power On/Off (PWON)

2. HDD-LED (HLED)

3. Power-LED and Green-LED (PLED/GLED)

4. Hardware Reset Switch Button (RST)

5. Extended USB Header (J4/J5)
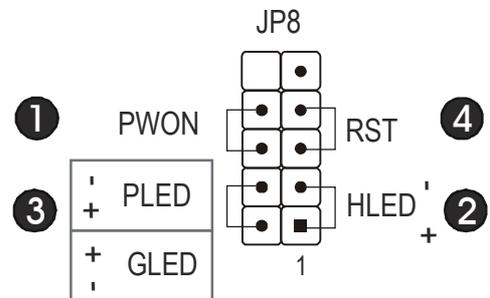
Extended USB Header
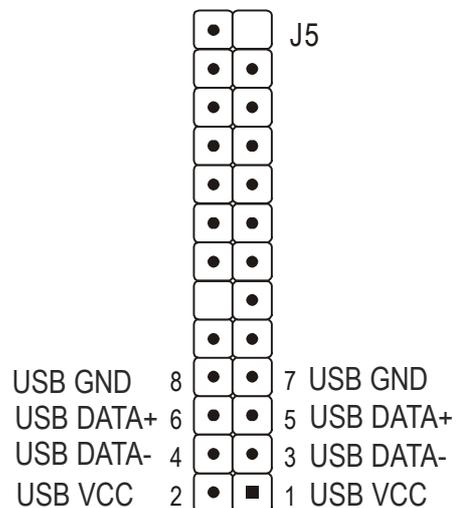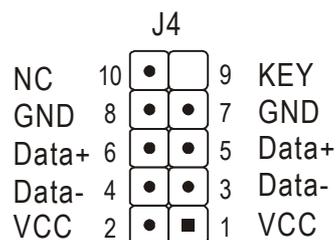
Step 7

Connect IDE, Floppy, and Serial ATA Disk Drives

1. IDE cable connector
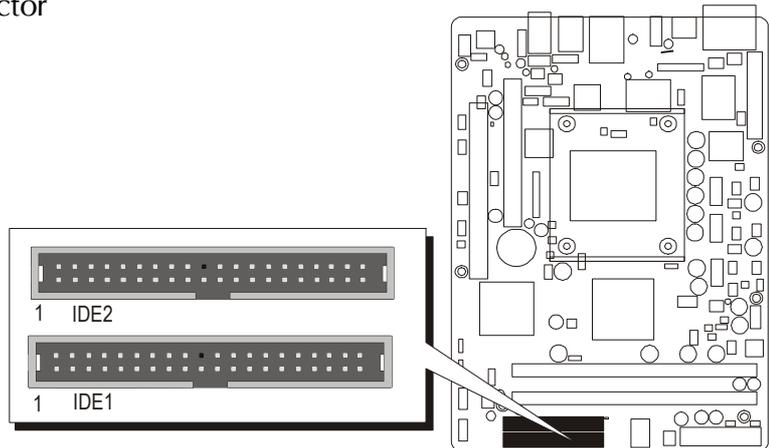
2. Floppy cable connector
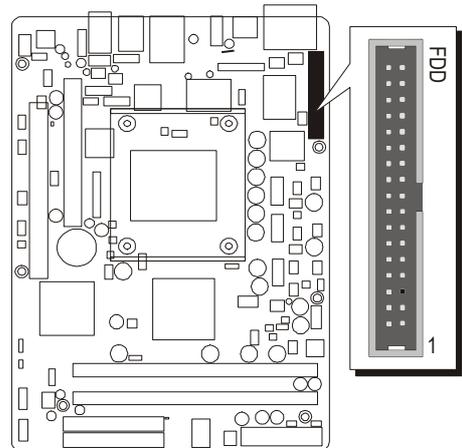
3. Serial ATA connector
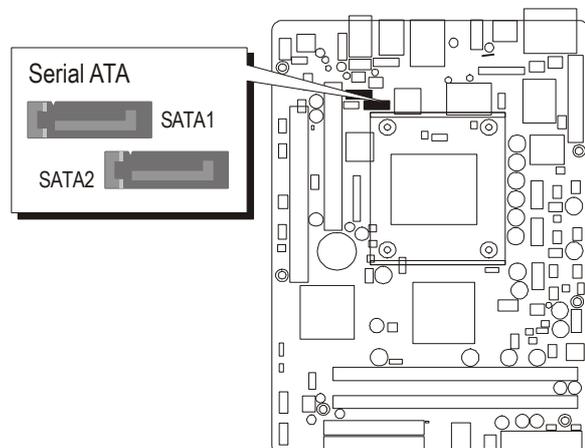
Step 8

Connect Other Internal Peripherals
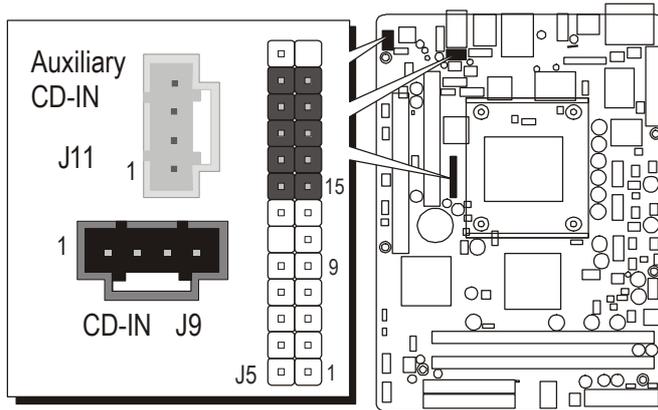
1. CD-IN Header (J9)
   Auxiliary CD-IN Header (J11)
   Front panel audio header (J5)

2. IrDA Header (J7)
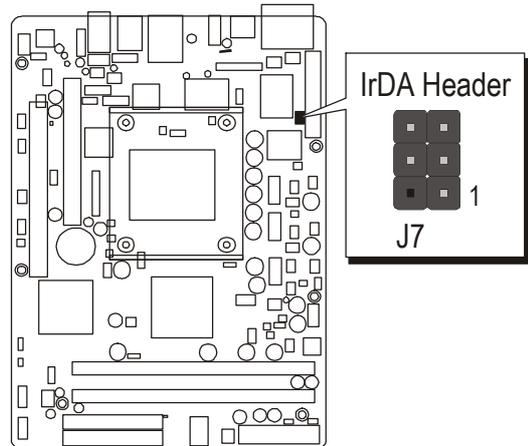
3. Wireless Keyboard and Mouse Headers (J3)
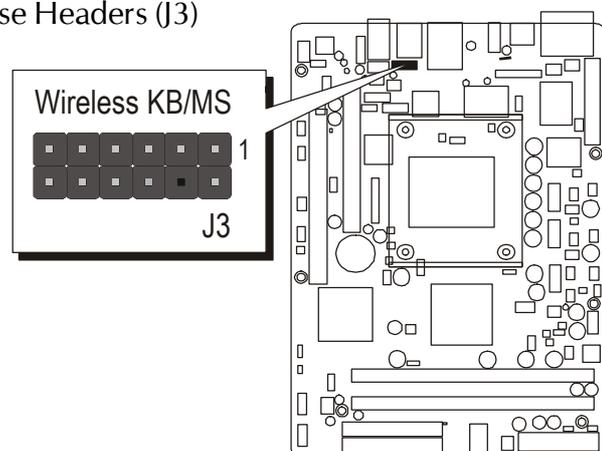
4. SPDIF_Out /IN Header (J10)

SPDIF_Out/In

1

J10

5. Front panel 1394a header (J5)

15

9

J5   1

6. Parallel Port Header (J6)

Paralle Port Connector   1
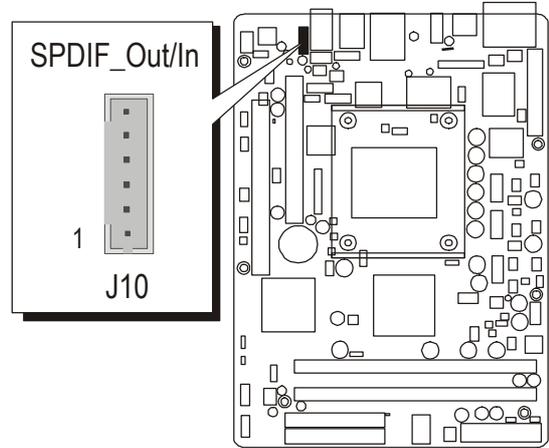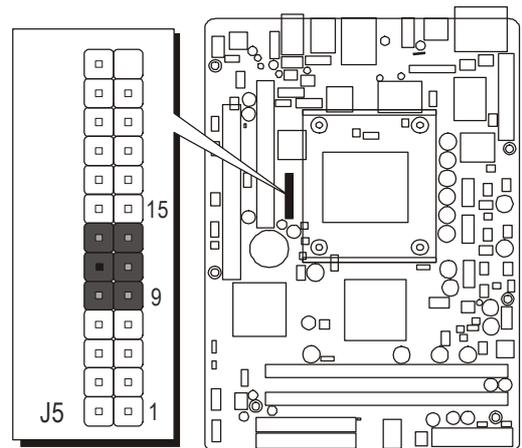
J6
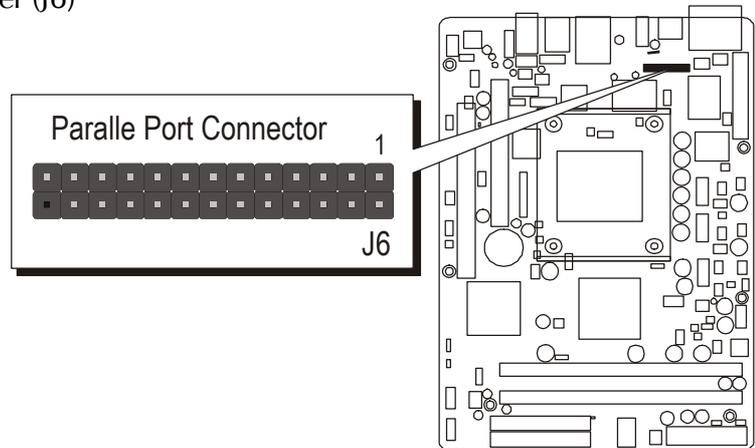
Step 9

Install Add-on Cards in Expansion Slots

1. Accelerated Graphics Port (AGP) Card

AGP proof LED: Serving as a smart bur-
nout protection for the motherboard, this
red LED lights up if you plug in any 3.3V
AGP card into the AGP slot. When this
LED is Lit, there is no way you can turn
on the system power even if you press
the power button. The red LED(AGP
proof) is a smart protection from
motherboard burn out caused by an in-
correct AGP card. If you plug in any
3.3V AGP card into the 1.5V AGP slot,
this LED lights up thus preventing the
system to power up. This LED remains
off if you plug in a 1.5V AGP card.

AGP Proof
LED (Red)
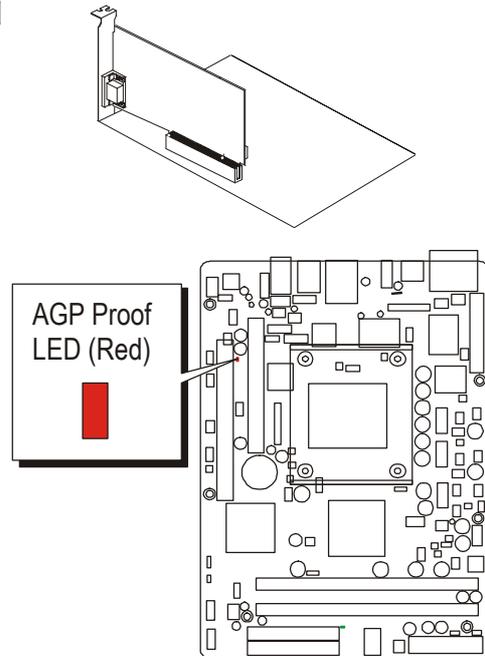
2. PCI Card
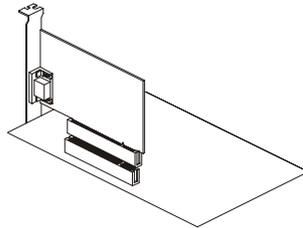
Step 10

Connect the Power Supply

1. System power connector (ATX1/ATX2)

ATX12V

1

ATX2

1

ATX1   ATXPWR
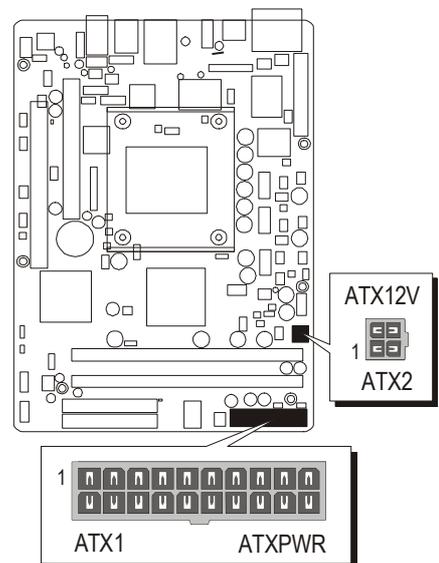
Step 11

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 Port
4. 1394a Port
5. LAN Port
6. USB 0/1 Ports
7. PS/2 Mouse
8. PS/2 Keyboard
9. Audio Bass/Center Port
10. Audio Rear-Out Port
11. Audio Front-Out Port
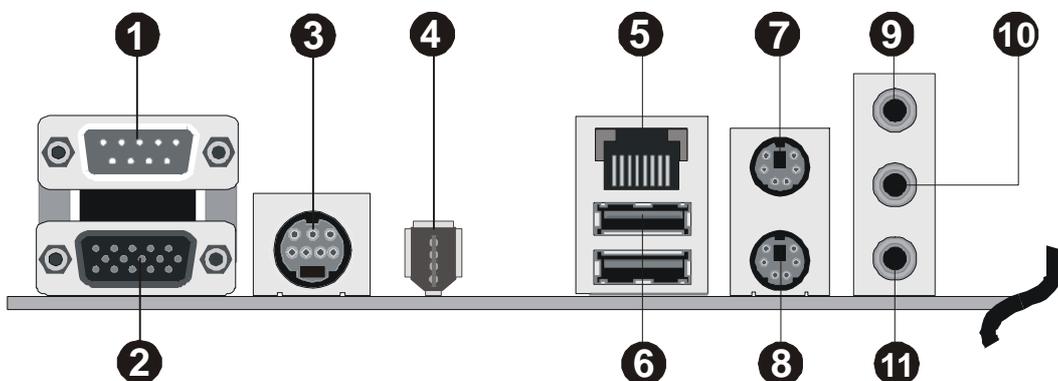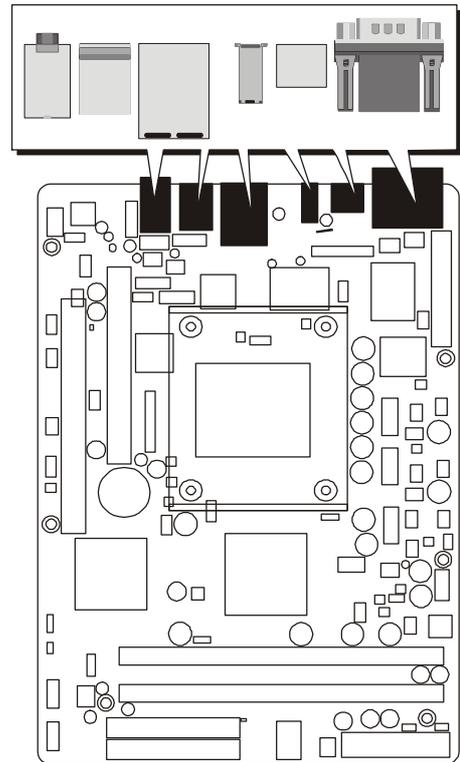
Step 12

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 FT61 bundled CD-ROM into your CD-ROM drive.
    The autorun program will display the drivers main installation window on screen.
2. Choose "Install ATI Chipset Driver" and complete it.
3. Choose "Install ATI VGA Driver" and complete it.
4. Choose "Install Realtek Audio Driver" and complete it.
5. Choose "Install Broadcom LAN Driver" and complete it.
6. Choose "Install Broadcom Advanced control Suite" and complete it.
7. Choose "Install Silicon RAID Driver" and complete it.
8. Choose "Install Silicon RAID configuration" and complete it.
9. Choose "Install ATI USB 2.0 Driver" and complete it.
10. Choose "Install Card Reader Driver" and complete it. (ST61G4 only)
11. 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 jumper caps to connect jumper pins to the mainboard. Pin #1 could be located at any corner of each jumper; you just find a location marked with a while right angle, which stands for pin1#. There are several types of pin 1# shown as below:

3-pin and multi-pin (＞3) jumpers show as follows:

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 jumper cap 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 the top of its original packaging film and 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:
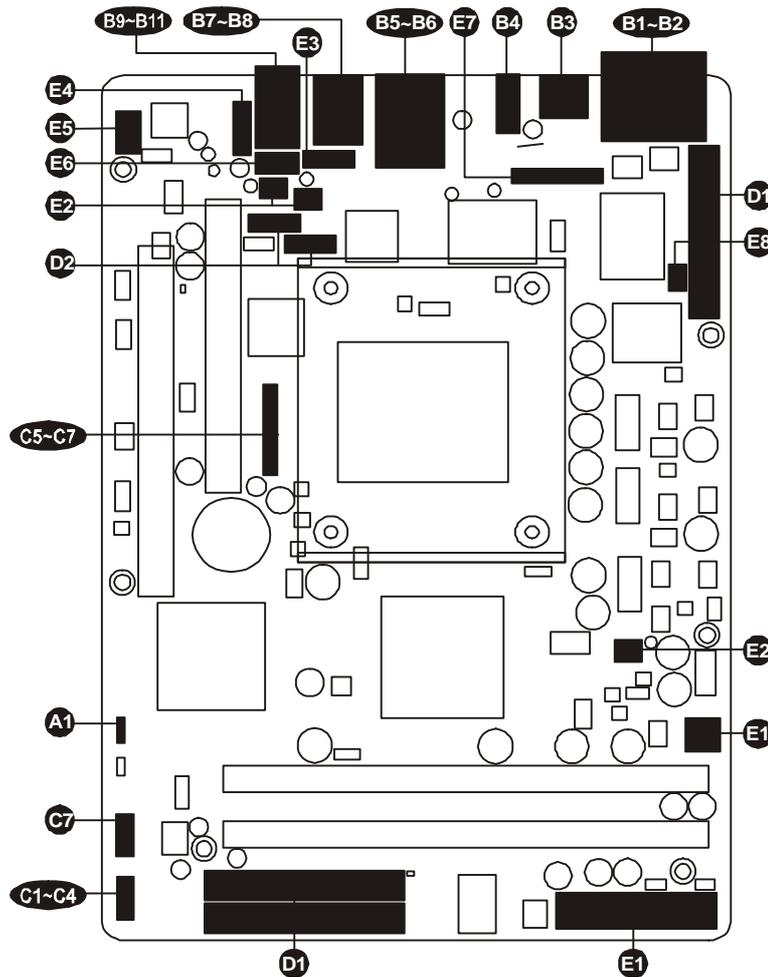
CPU/Memory/Expansion Slots

Socket478   : CPU Socket for Pentium 4/Celeron processors

DIMM1/2   : Two 184-pin DIMM Slots for 64,128, 256, 512 MB, and 1GB of 2.5V DDR SDRAM
(The total installed memory does not exceed 2GB)

AGP   : One 8X AGP 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) TV-Out Port : TV-Out Port (AV & S-Video)
(B4) 1394a : 1394a Port
(B5) LAN : LAN Port
(B6) USB : 2 USB 2.0/1.1 (0/1) (Universal Serial Bus) Ports
(B7) MS : PS/2 mouse Port
(B8) KB : PS/2 keyboard Port
(B9) BASS/CENTER : Audio Bass/Center-Out Port
(B10) Rear-OUT : Audio Rear-Out Port
(B11) Front-OUT : Audio Front-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) J5 : Front panel audio header
(C6) J5 : Front panel 1394a header
(C7) J4/J5 : Extended USB headers

Internal Peripherals Connectors

(D1) FDD : Floppy disk drive interface
(D1) IDE1 : IDE primary interface (Dual-channel)
(D1) IDE2 : IDE secondary interface (Dual-channel)
(D2) SATA1/SATA2 : Serial ATA Connectors

Other Connectors

E1   ATX1/ATX2   : ATX/ATX+12V power Connectors

E2   FAN1/2/3   : CPU/ System/ AGP Fan Connectors

E3   J3   : Wireless Keyboard and Mouse Connector

E4   J10   : SPDIF In/Out Port

E5   J11   : Auxiliary CD_IN Connector

E6   J9   : CD_IN Connector

E7   J6   : Parallel port Header

E8   J7   : IrDA Header

☞ *Jumpers*

Ⓐ **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 2-3 (Clear CMOS)

Pin 1-2 (Default)

Clear CMOS

1   JP1
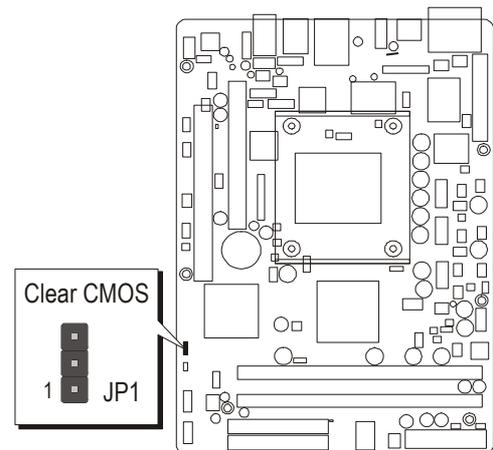
Step 1. Turn off the system power (PC-> Off).

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*

Ⓑ❶ 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.

COM1 Port
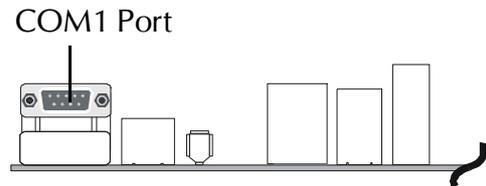
Ⓑ❷ VGA Connector

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

VGA Port
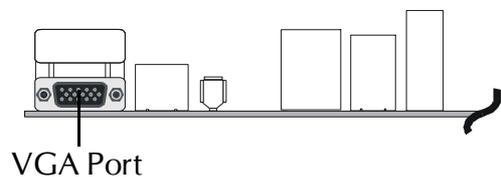
Ⓑ❸ TV-Out Connector

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

TV-Out Port
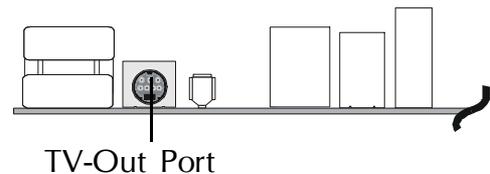
Ⓑ❹ IEEE 1394a Port Connector

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

IEEE1394a Port
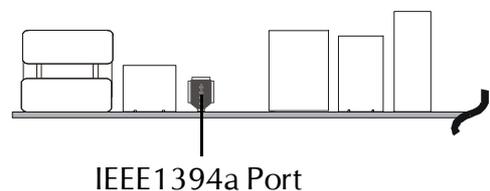
Ⓑ❺ LAN Port Connector

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

LAN Port
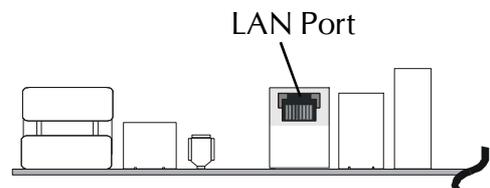
Ⓑ❻ USB Port 0/1 Connectors

Two female connectors USB0/USB1 share the same USB(Universal Serial Bus)bracket at the rear panel of your mainboard. Plug each USB device jack into an available USB0/USB1 connector.

USB Port 0/1
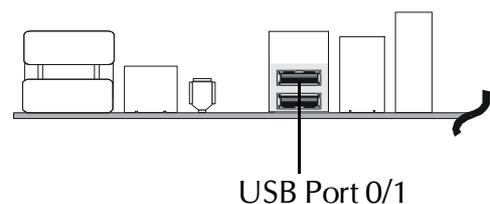
ⓑ⑦ PS/2 Keyboard & PS/2 Mouse Connectors

ⓑ⑧ 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.

PS/2 Mouse

PS/2 keyboard
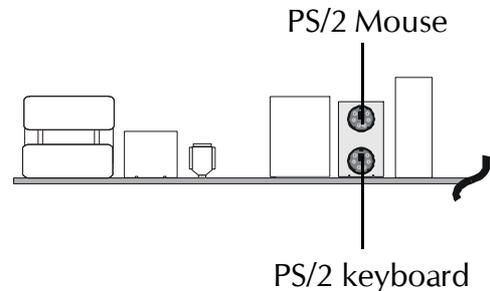
ⓑ⑨ Bass/Center-Out Port Connector

Bass/Center-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 bass/center amplified speakers.

Bass/Center-Out Port
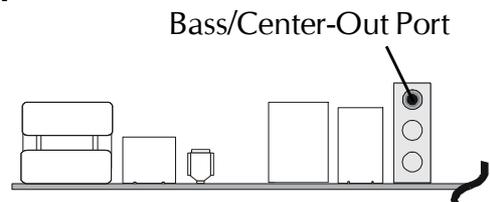
ⓑ⑩ Rear-Out Port Connector

Stereo out of rear (surround) channel.

Rear-Out Port
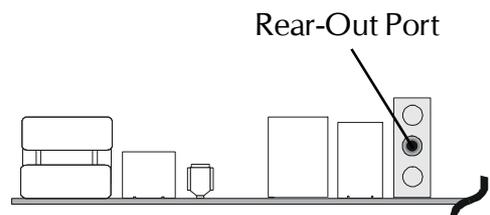
ⓑ⑪ Front-Out Port Connector

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-Out Port
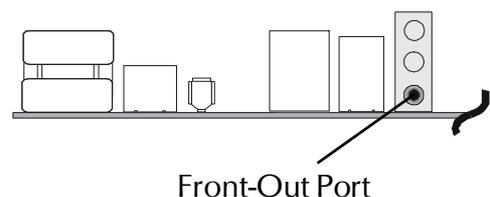
☞ *Front-Panel Connectors*

ⓒ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.
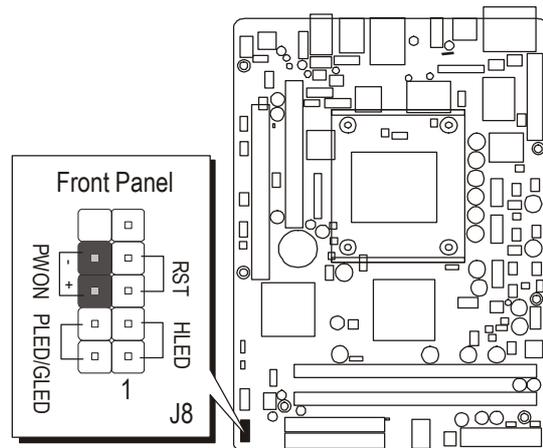
ⓒ2 **HDD LED Connector (HLED)**

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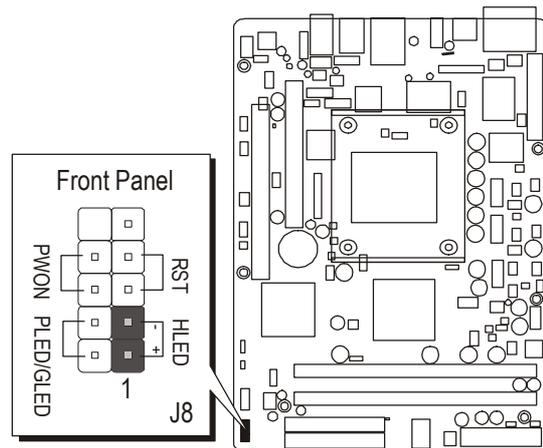
Note ： Please notice all the LED connectors are directional. If your chassis's LED does not light up during running, please simply change to the opposite direction.

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

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 Power LED/Green LED cable to (PLED/GLED) header.
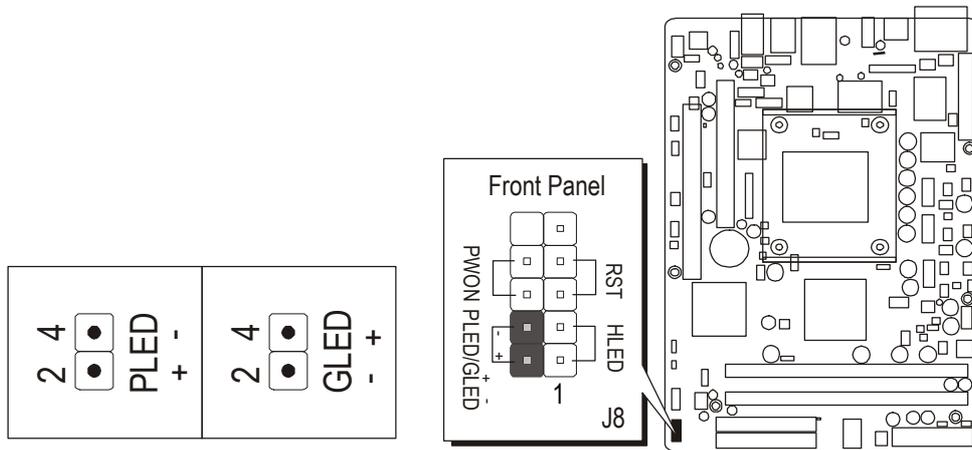
ⓒ Hardware Reset Connector (RST)

Attach the 2-pin hardware reset switch cable to the (RST) header. Pressing the reset switch causes the system to restart.
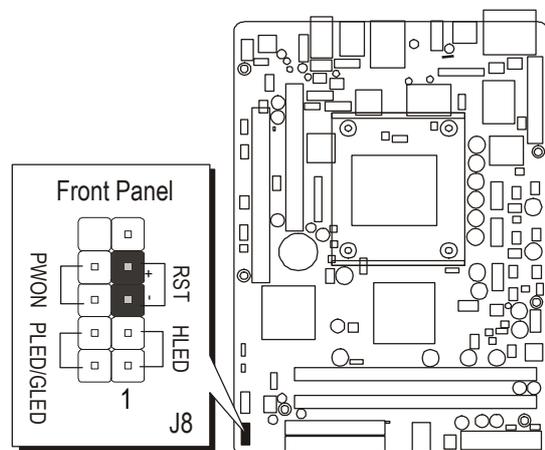
⑤ Front Panel Audio Header (J5)

This header allows users to install an auxiliary Front-Oriented Audio port for easier access. Either the Line-Out port connector on back-panel or the Audio header is available at the same time. If you would like to use the Audio header on front-panel, please remove all jumpers from it and install your special extra audio cable instead. Two mini jumpers must be setted on pins 21-22 and pins 23-24 when this header is not used.
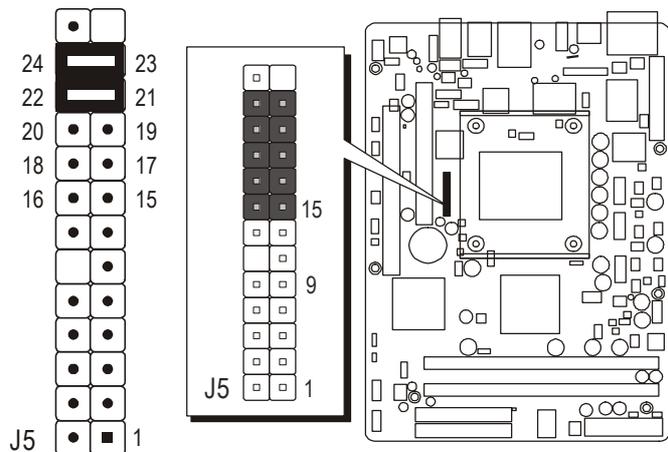
Pin Assignments:

15 = AUDIO GND	16 = AUDIO GND	17 = FRONT MICIN	18 = MIC POWER
19 = LINE IN_L	20 = LINE IN_R	21 = EAR IN_R	22 = EAR OUT_R
23 = EAR IN_L	24 = EAR OUT_R		

⑥ Front Panel 1394a Header (J5)

The header is used to connect the cable attached to the 1394a connector which is mounted on front panel or back panel.

Pin Assignments:

9 = 1394 TX+

10 = 1394 TX-

11 = 1394 GND

12 = Key

13 = 1394 RX+
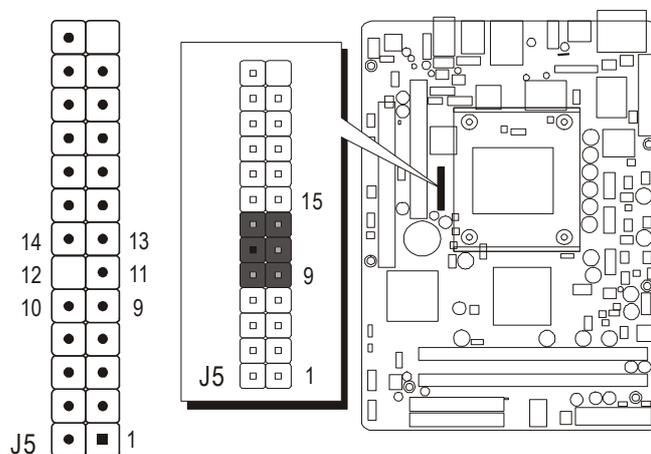
14 = 1394 RX-

⑦ Extended USB Headers (J4/J5)

Headers J4 and J5 are used to connect cables to USB connectors mounted on front-panel or back-panel. The USB cable is optional at the time of purchase.
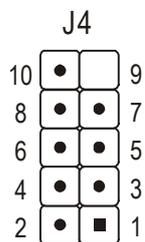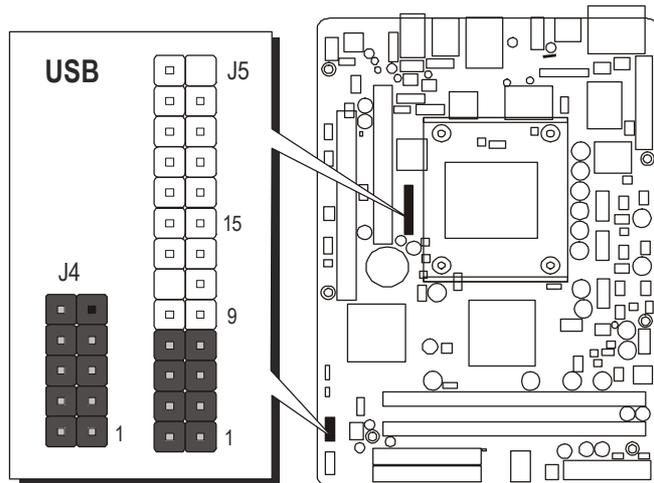
Pin Assignments:

1 = VCC	2 = VCC
3 = Data-	4 = Data-
5 = Data +	6 = Data +
7 = GND	8 = GND
9 = KEY	10 = NC
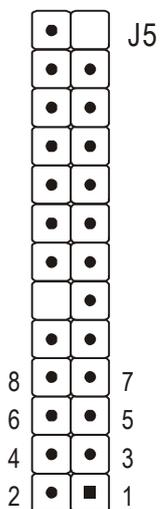
Pin Assignments:

1 = USB VCC	2 = USB VCC
3 = USB DATA-	4 = USB DATA-
5 = USB DATA +	6 = USB DATA +
7 = USB GND	8 = USB GND

☞ *Internal Peripherals Connectors*

ⓓ₁ Enhanced IDE, 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.

1   IDE2

1   IDE1

FDD

1
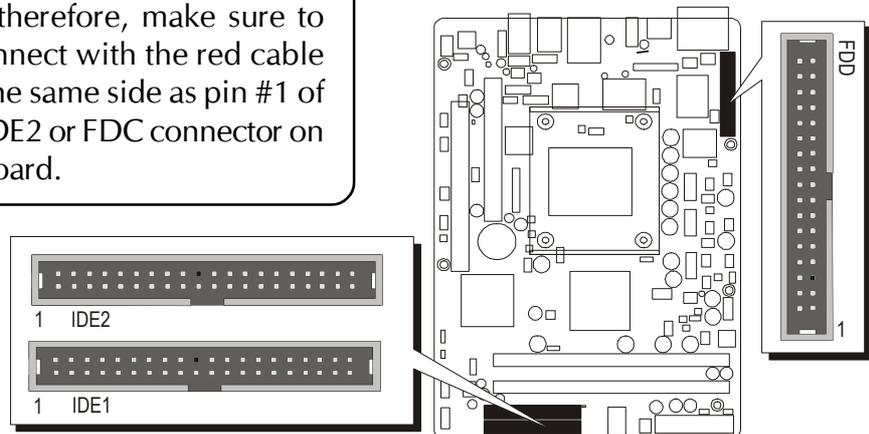
ⓓ₂ Serial ATA Connectors

The Serial ATA is an enolutionary replacement for the Parallel ATA physical storge 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 removeable devices, zip drivers, and CDRW's. The Serial ATA interface supports data transfer rates up to 150MB/s.

Serial ATA

SATA1

SATA2
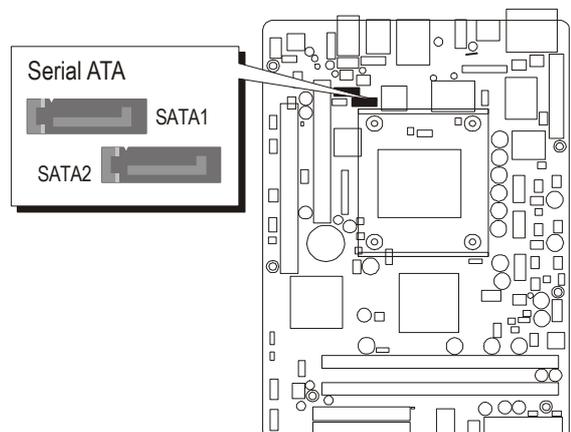
☞ **Other Connectors**

❸ **ATX Power Supply Connectors (ATX1 and ATX2)**

This motherboard uses 20-pin (ATX1) Pentium 4 standard ATX power header, and ATX2 with 1X4-pin +12V PC ATX power supply headers. Please make sure you plug in the right direction.

P4 ATX Power supply headers

ATX1　　**ATX2**

ATX12V

1 ATX2

1 ATX1 ATXPWR
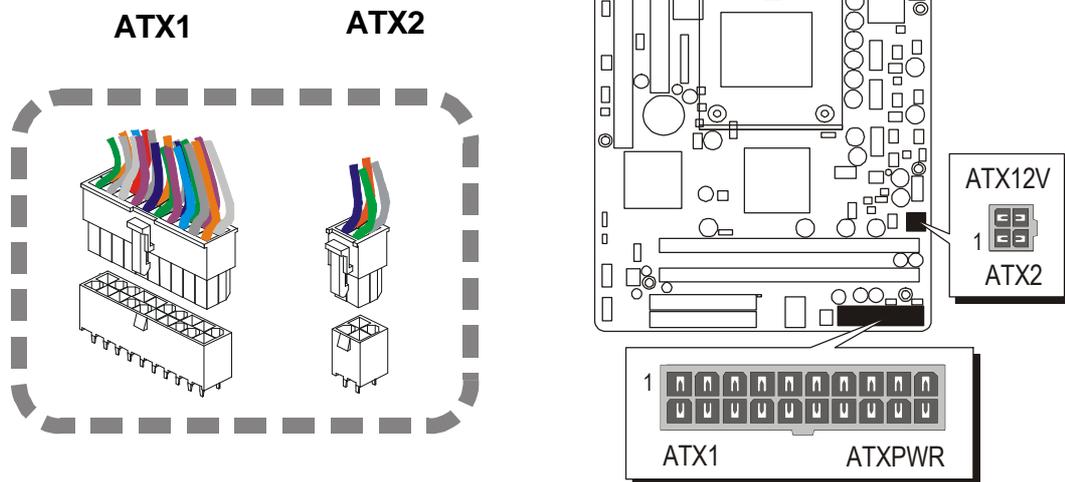
Note1: The ATX power connector is directional and will not go in unless the guides match perfectly making sure that pin#1 is properly positioned.

Note2: Make sure the latch of the ATX power connector clicks into place to ensure a solid attachment.

Note3: Your ATX power supply must be supplied to ACPI +5V standby power and at least 720mA compatible.

Note4: Make sure your power supply have enough power for higher speed processor installed.

CPU, System and AGP Fan Connectors - FAN1/2/3

The mainboard provides three onboard 12V cooling fan power connectors to support CPU (FAN1), System (FAN2), or AGP (FAN3) cooling fans.
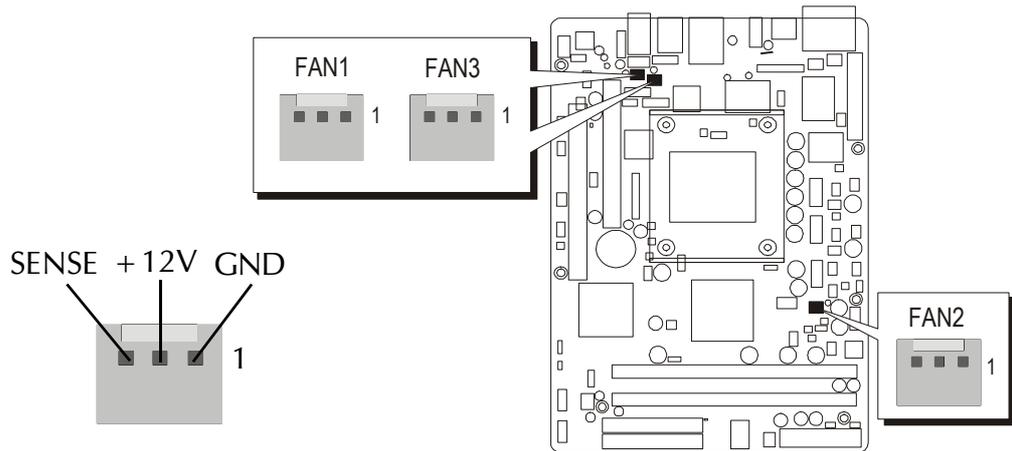
> Note : Both cable wiring and type of plug may vary , which depends on the fan maker. Keep in mind that the red wire should always be conected to the +12V header and the black wire to the ground (GND) header.

Wireless Keyboard and Mouse Connectors (J3)

Port J3 can be used to connect wireless keyboard and mouse device. 4 mini Jumper must be setted on pin 5-6, 7-8, 9-10 and 11-12 when this header is not used.
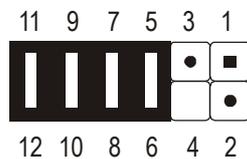
Pin Assignments:

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
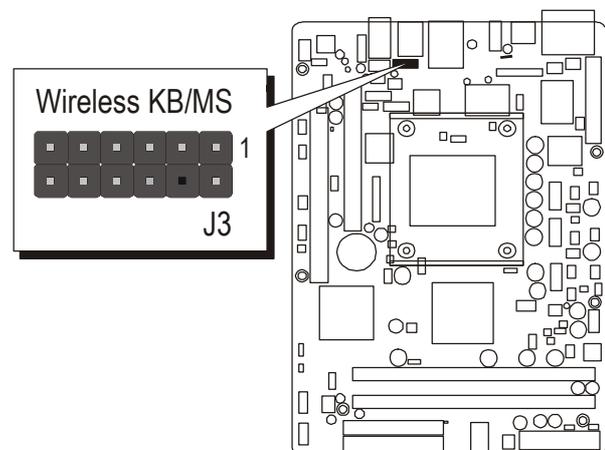
E4 SPDIF_Out/In Header (J10)

Port J10 can be used to connect special device.

J10
SPDIF

6
5
4
3
2
1

SPDIF_Out/In

1

J10
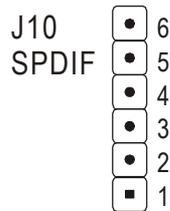
Pin Assignments:

1 = SPDIF IN   2 = GND

3 = VCC   4 = GND

5 = VCC   6 = SPDIF OUT
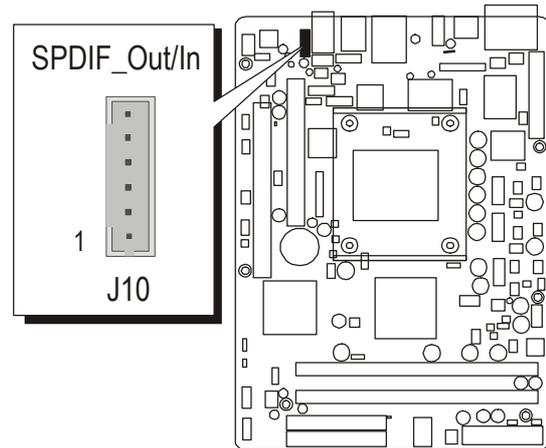
E5 AUXILIARY CD_IN Connector (J11) (White)

E6 Audio CD_IN Connector (J9) (Black)

Port J11 (White) and J9 (Black) can be used to connect a stereo audio input from CD-ROM,TV-tuner or MPEG card.

Pin Assignments (J11):

1 = Aux-in left

2 = AGND

3 = AGND

4 = Aux-in right

AUX_IN Right \ / AUX_IN Left
GND

J11

4
3
2
1

Auxiliary
CD-IN

J11   1

1

CD-IN   J9
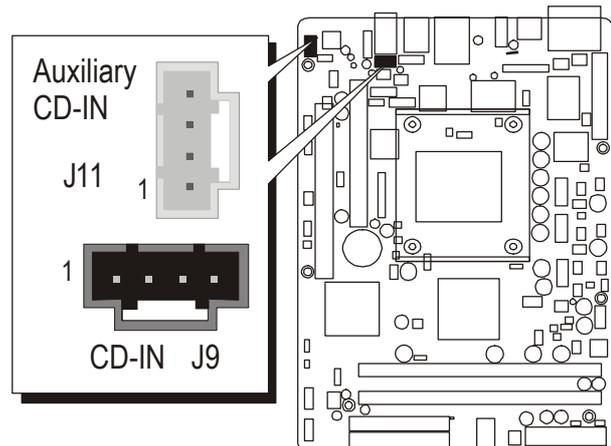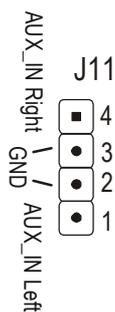
Pin Assignments (J9):

1 = CD-in left

2 = CD-GND

3 = CD-GND

4 = CD-in right

1 2 3 4

J9

CD_IN Left \ / CD_IN Right
GND
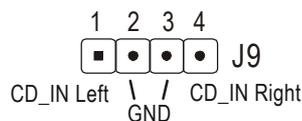
ⓔ7 Parallel Port Header-EXT. Print Port (J6)

One DB25 male parallel 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 is optional at the time of purchase.

Paralle Port Connector
1
J6

25 23 21 19 17 15 13 11 9 7 5 3 1

26 24 22 20 18 16 14 12 10 8 6 4 2
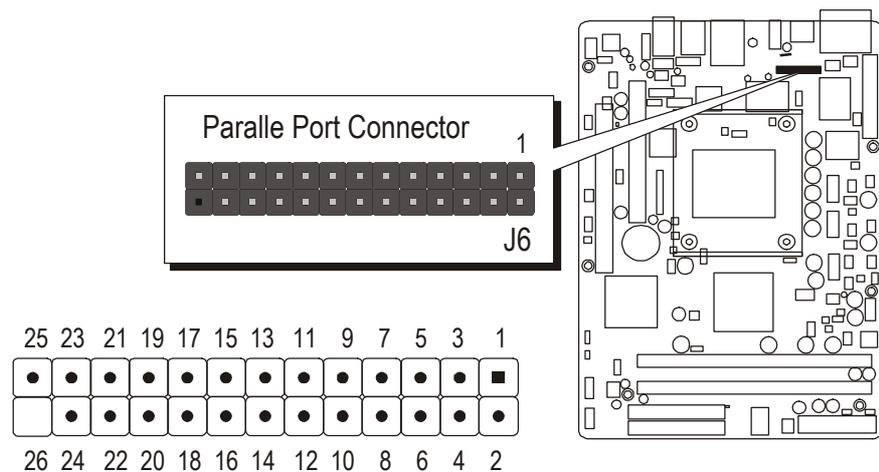
Pin Assignments:

1 = STROBE#	2 = DATA0	3 = DATA1
4 = DATA2	5 = DATA3	6 = DATA4
7 = DATA5	8 = DATA6	9 = DATA7
10 = ACK#	11 = BUSY#	12 = PE#
13 = SELECT#	14 = Auto Feed#	15 = ERROR#
16 = INIT#	17 = SLCT IN#	18 = GND
19 = GND	20 = GND	21 = GND
22 = GND	23 = GND	24 = GND
25 = GND	26 = GND	

E8 IrDA Header (J7)

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

```
        J7
    6  •  •  5
    4  •  •  3
    2 [   ■ ] 1
```
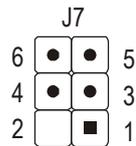
Pin Assignment:

1 = NA   2 = KEY

3 = VCC   4 = GND

5 = IRTX   6 = IRRX

IrDA Header

J7
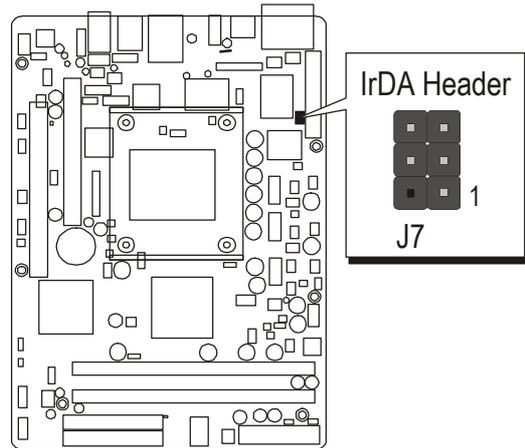
Note : Before connect your IR device, please be sure each IR on board pin allocation is matchable with the pin of the IR device. Other wise, incorrect IR connection may do damage to your IR device.

Step1 : Attach the 6-pin infrared device cable to J7.
        (Refer to the above diagram for IR pin assignment.)
Step2 : This mainboard support IrDA, or Normal transfer modes.

3.3 System Memory Configuration

The FT61 mainboard has two 184-pin DIMM slots that allow you to install from 32MB 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 compliant 2.5V single (1 Bank) or double (2 Bank) side 64-bit wide data path DDR SDRAM modules.

Install Memory:

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

Density	Device Width	Single/Double	184pin DDR DIMMs
64 Mbit	4M x 16	SS / DS	32 / 64 MB
	8M x 8	SS / DS	64 / 128 MB
128 Mbit	4M x 32	SS / DS	32 / 64 MB
	8M x 16	SS / DS	64 / 128 MB
	16M x 8	SS / DS	128 / 256 MB
256 Mbit	8M x 32	SS / DS	64 / 128 MB
	16M x 16	SS / DS	128 / 256 MB
	32M x 8	SS / DS	256 / 512 MB
512 Mbit	32M x 16	SS / DS	256 / 512 MB
	64M x 8	SS / DS	512 / 1024 MB
1024 Mbit	64M x 16	SS / DS	512 / 1024 MB
	128M x 8	SS / DS	1024 / 2048 MB

Note: Maximum installed memory is 2GB.

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.

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 FT61 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. If the AutoRun screen does not appear, double click or run D:\Autorun.exe (assuming that your CD-ROM drive is drive D:)

Navigation Bar Description:

☞ Install Mainboard Software - Installing ATI Chipset Driver, ATI VGA Driver, Realtek Audio Driver, Broadcom LAN Driver, Broadcom Advanced control Suite, Silicon RAID Driver, Silicon RAID configuration, ATI USB 2.0 Driver, Card Reader Driver (ST61G4 only).

☞ Install Utility - Installing Acrobat Reader, WinFlash Utility.

☞ Manual - FT61 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.
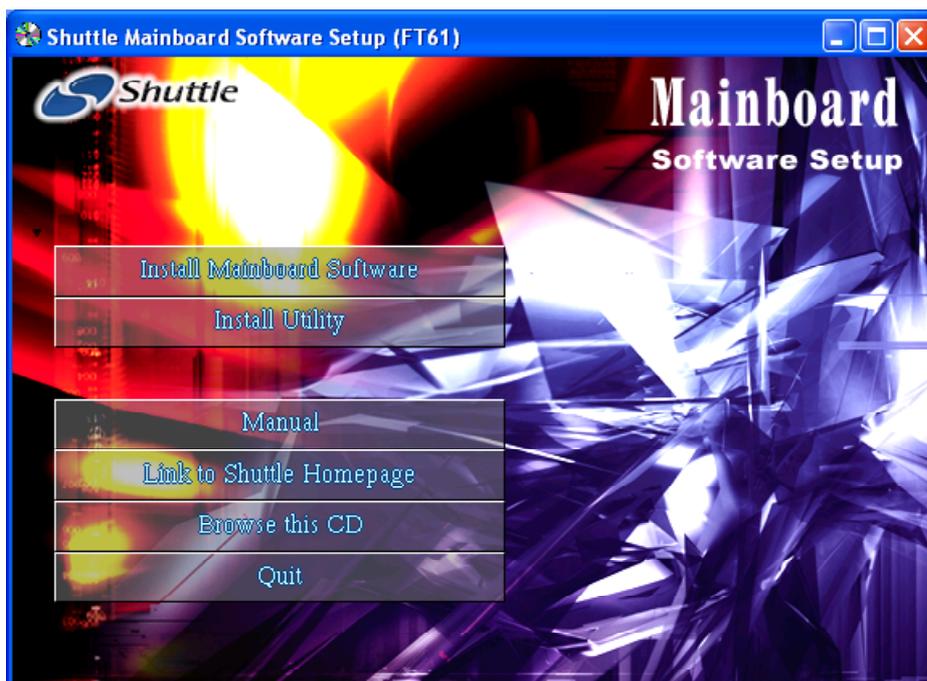
4.2 Install Mainboard Software

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 Mainboard Software" bar to run into sub-menu.

The Mainboard Software include:

[4.2.A]   Install ATI Chipset Driver

[4.2.B]   Install ATI VGA Driver

[4.2.C]   Install Realtek Audio Driver

[4.2.D]   Install Broadcom LAN Driver

[4.2.E]   Install Silicon RAID Driver

[4.2.F]   Install ATI USB 2.0 Driver

[4.2.G]   Install Card Reader Driver (ST61G4 only)
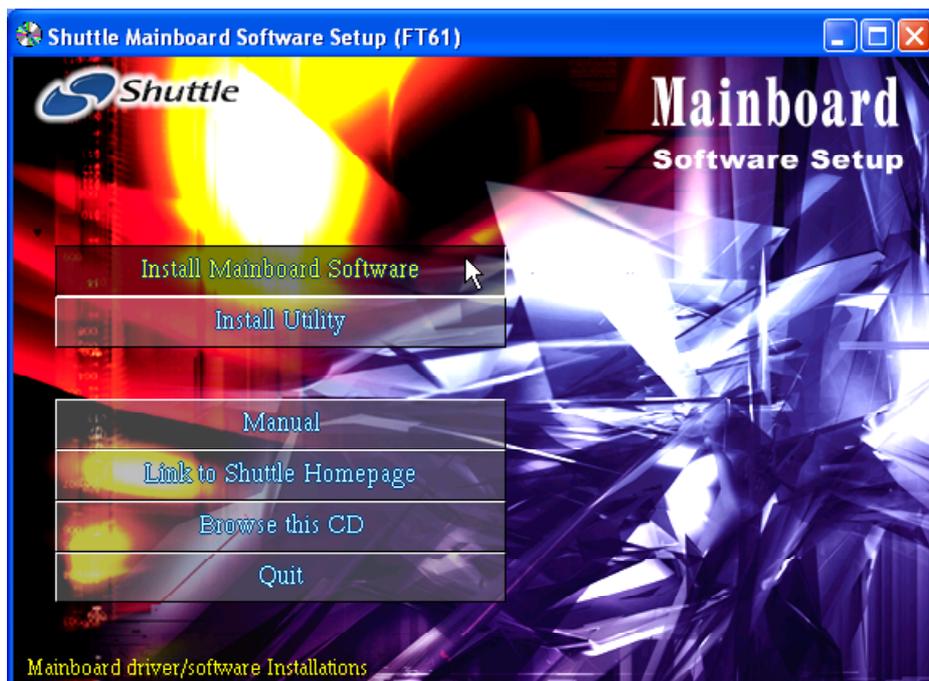
4.2.A Install ATI Chipset Driver

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

Select using your pointing device (e.g. mouse) on the "Install ATI VGA Driver" bar to install ATI VGA Driver.
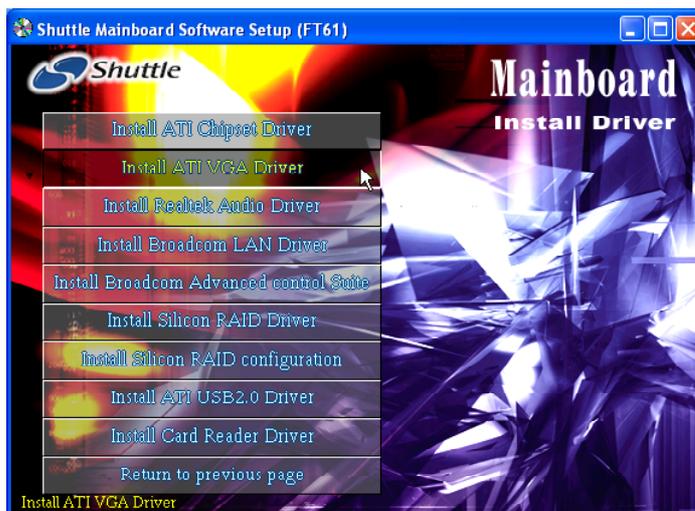
Once you made your selection, a Setup window run the installation automatically. When the copying files is done, make sure you reboot the system to take the installation effect.

4.2.C Install Realtek Audio Driver

Select using your pointing device (e.g. mouse) on the "Install Realtek Audio Driver" bar to install audio driver and AC'97 Sound System Software.

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 Broadcom LAN Driver

Select using your pointing device (e.g. mouse) on the "Install Broadcom 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.

> Important: Under Win 98/Me, please check the "Read me" file and follow steps for manual installation.

4.2.E Install Silicon RAID Driver

Select using your pointing device (e.g. mouse) on the "Install Silicon RAID Driver" bar to install SATA RAID driver.
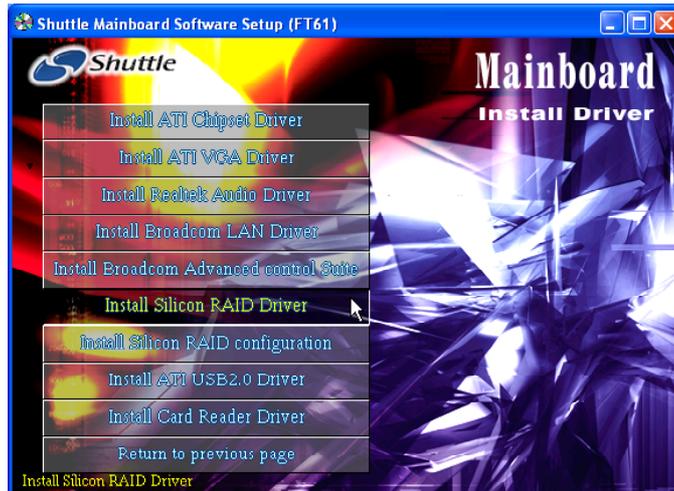
Important: Under Win 98/Me/2K/XP, please check the "Read me" file and follow steps for manual installation.

4.2.F Install ATI USB 2.0 Driver

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

Important: Under Win 2K/XP, please check the "Read me" file and follow steps for manual installation.

4.2.G Install Card Reader Driver (ST61G4 only)

For Win98/Me/2k:
Select using your pointing device (e.g. mouse) on the "Install Card Reader Driver" bar to install Card Reader 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.
Then Online Information windows will appear on your screen. Click on the "Install Acrobe Reader" bar if you need to install acrobe reader.

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

5 BIOS SETUP

FT61 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 <Del> key immediately, or at the following message: Press DEL to enter SETUP, or simultaneously press <Ctrl>, <Alt>, <Esc> keys

Note1.   If you miss trains of words mentioned 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>, <Del> keys simultaneously.

Note2.   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.

```
                Phoenix - Award WorkstationBIOS CMOS Setup Utility
 ┌────────────────────────────────────────┬─────────────────────────────────────┐
 │  ▶ Standard CMOS Features               │    Load Fail-Safe Defaults          │
 │                                         │                                     │
 │  ▶ Advanced BIOS Features               │    Load Optimized Defaults          │
 │                                         │                                     │
 │  ▶ Advanced Chipset Features            │    Set Supervisor Password          │
 │                                         │                                     │
 │  ▶ Integrated Peripherals               │    Set User Password                │
 │                                         │                                     │
 │  ▶ Power Management Setup               │    Save & Exit Setup                │
 │                                         │                                     │
 │  ▶ PnP/PCI Configurations               │    Exit Without Saving              │
 │                                         │                                     │
 │  ▶ PC Health Status                     │                                     │
 ├─────────────────────────────────────────┴─────────────────────────────────────┤
 │ Esc : Quit      F9 : Menu in BIOS      ↑ ↓ ←  : Select Item                   │
 │ F10 : Save & Exit Setup                                                        │
 ├────────────────────────────────────────────────────────────────────────────── │
 │                  Time, Date, Hard Disk Type...                                 │
 └────────────────────────────────────────────────────────────────────────────── ┘
```

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.

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 - Award WorkstationBIOS CMOS Setup Utility
                       Standard CMOS Features
┌─────────────────────────────────────────────────┬──────────────────┐
│  Date (mm:dd:yy)         Wed, Oct 29 2003        │    Item Help     │
│  Time (hh:mm:ss)            2 : 40 : 50          │                  │
│                                                  │  Menu Level   ►  │
│  ► IDE Primary Master       [ None]              │                  │
│  ► IDE Primary Slave                             │  Change the day, month,│
│  ► IDE Secondary Master                          │  year and century│
│  ► IDE Secondary Slave      [ None]              │                  │
│                                                  │                  │
│    Drive A                  [None]               │                  │
│    Drive B                  [None]               │                  │
│                                                  │                  │
│    Video                    [EGA/VGA]            │                  │
│    Halt On                  [All Errors]         │                  │
│                                                  │                  │
│    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 Primary Master
  Options are in its sub-menu.

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

IDE Primary Slave
  Options are in its sub-menu.

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

IDE Secondary Master
  Options are in its sub-menu.

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

IDE Secondary Slave

Options are in its sub-menu.

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

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.

➢ Press Enter

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.

```
         Phoenix - Award WorkstationBIOS CMOS Setup Utility
                       Advanced BIOS Features
  ┌──────────────────────────────────────────────┬──────────────────────────┐
  │ ▶ CPU Feature            [Press Enter]    ▲   │        Item Help         │
  │ ▶ Hard Disk Boot Priority [Press Enter]       │                          │
  │   Bios Write Protect     [Disabled]           │  Menu Level    ▶         │
  │   Virus Warning          [Disabled]           │                          │
  │   CPU L1 & L2 Cache      [Enabled]            │                          │
  │   CPU L3 Cache           [Enabled]            │                          │
  │   Hyper-Threading Technology[Enabled]         │                          │
  │   Quick Power On Self Test  [Enabled]         │                          │
  │   First Boot Device      [CDROM]             │                          │
  │   Second Boot Device     [Hard Disk]         │                          │
  │   Third Boot Device      [USB-ZIP]           │                          │
  │   Boot Other Device      [Enabled]           │                          │
  │   Swap Floppy Drive      [Disabled]           │  optimized for Hyper     │
  │   Boot Up Floppy Seek    [Disabled]           │  Threading Technology    │
  │   Boot Up NumLock Status [Off]                │  and "Disable" for       │
  │   Gate A20 Option        [Fast]               │  other OS(OS not         │
  │   Typematic Rate Setting [Enabled]           │  optimized for Hyper     │
  │   Typematic Rate (Chars/Sec)[6]               │  Threading Technology)   │
  │   Typematic Delay (Msec) [250]                │                          │
  │   Security Option        [System]             │                          │
  │   APIC Mode              [Enabled]           │                          │
  │   MPS Version Control For OS[1.4]             │                          │
  │   OS Select For DRAM > 64MB [Non-OS2]         │                          │
  │   HDD S.M.A.R.T. Capability [Disabled]        │                          │
  │   Small Logo(EPA) Show   [Enabled]       ▼   │                          │
  ├──────────────────────────────────────────────┴──────────────────────────┤
  │ ↑↓:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help│
  │    F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults │
  └───────────────────────────────────────────────────────────────────────────┘
```

CPU Feature

Option are in its sub-menu.

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

Thermal Management
Use these items to set the Thermal Management.
➢ The choice: Thermal Monitor 1 or Thermal Monitor 2.

TM2 Bus Ratio
Use these items to set the TM2 Bus Ratio.
➢ Min = 0, Max = 255

TM2 Bus VID
Use these items to set the TM2 Bus VID. This feature ranges from 0.8375V to 1.6000V, in an increment of 0.0125V.
➢ The choice: 0.8375V ~ 1.6000V.

Hard Disk Boot Priority

This item allows you to select Hard Disk Book Device Priority.

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 enables 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 L1&L2&L3 Cache

All processors that can be installed in this mainboard use internal level1(L1) , external 2(L2) cache memory and (L3) to imporve performance.

Leave this item at the default value for better performance.

➢ The choice: Enabled or Disabled.

Hyper-Threading Technology

The latest Intel application defines a high-speed calculating ability to optimize your system by two CUPs supported(one virtual, one physical) in a multi-task environment.

➢ 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.

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, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, USB- HDD, 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 you have two floppy diskette drives in your system, this item allows you to swap the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.

➢ 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.

Gate A20 Option

This entry allows you to select how the Gate A20 is handled. The gate A20 is a device used for above 1MByte of address memory. Initially, the gate A20 was handled via a pin on the keyboard. Today, while a keyboard still provides this support, it is more common and much faster in setting to fast for the system chipset to provide support for gate A20.

➢ The choice: Normal or Fast.

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.

HDD S.M.A.R.T. Capability

Whether report no FDD runs for Win 95 or not.

➢ The choice: Enabled or Disabled.

Small Logo＜EPA＞ Show

This item allows you to enable or 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 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.

```
         Phoenix - Award WorkstationBIOS CMOS Setup Utility
                      Advanced Chipset Features
   ████  Now CPU Frequency████                    ┌──────────────────
 CPU Clock Ratio              [50 X]             │     Item Help
 CPU FSB Clock                [Auto]             │
 CPU Over Clock By            [+15MHz]           │ Menu Level    ▶
 VDIMM Voltage                [Auto]             │
 VAGP Voltage                 [1.7 V]            │
 CPU Voltage set              [1.5875V]          │
   ████  Now DDR Frequency████                   │
 Memory Frequency For         [SYNC]             │
 DRAM Over Clock By           [  7 MHz]          │
 Memory Timing Parameter      [Manual]           │
 CAS Latency Time             [1]                │
 DRAM RAS# to CAS# Delay      [1]                │
 DRAM RAS# Precharge          [4]                │
 Active to Precharge Delay    [1]                │
 Memory Hole                  [Disabled]         │
 System BIOS Cacheable        [Disabled]         │
 Spectrum Spreading Amount    [Disabled]         │
                                                 │
 ** On-Chip VGA Setting **                       │
 AGP Aperture Size            [None]             │
 UMA Frame Buffer Size        [8MB]              │
 Video Display Devices        [Auto]             │
 Tv Standard                  [NTSC-JAP]         ▼
──────────────────────────────────────────────────────────────────
 ↑↓←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
     F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults
```

------ Now CPU Frequency -----

It shows current frequency of CPU Clock.

CPU Clock Ratio

This item allows the user to adjust CPU Clock Ratio.

➢ The Choice: 8X ~ 50X.

CPU FSB Clock

This item allows the user to adjust CPU FSB Clock.

➢ The Choice: Auto, 100MHz, 133MHz, 166MHz, 200MHz.

FSB Over Clock By

This item allows the user to fine tuning CPU Clock.

➢ The Choice: 0 ~ +15MHz.

VDIMM Voltage

This item allows you to set VDIMM Voltage.

➢ The Choice: Auto, 2.6V, 2.7V, 2.8V.

Note: Over voltage may damage DDR module.

VAGP Voltage

This item allows you to set VAGP Voltage.

➢ The Choice: Auto, 1.6V, 1.65V, 1.7V.

Note: Over voltage may damage AGP Card.

CPU Voltage set

This item allows you to set CPU Voltage.

➢ The Choice: Auto, 0.8250V ~ 1.5875V.

Note: Over voltage may damage CPU.

------ Now DDR Frequency -----

It shows current frequency of DDR Clock.

Memory Frequency For

This item allows the user to adjust Memory Frequency.

➢ The Choice: Auto, SYNC, DDR-200, DDR-266, DDR-333
or DDR-400.

DRAM Over Clock By

This item allows the user to fine tuning Memory Clock.

➢ The Choice: 0 ~ 15MHz.

Memory Timing Parameter

The value in this field depends on performance parameters of the installed memory chips(DRAM). Don't change the value from the factory setting unless you install new memory that has a different performance rating than the original DRAMs.

➢ The Choice: Auto or Manual.

CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Don't change this field from the default value specified by the system designer.

➢ The Choice: 1, 1.5, 2, 2.5, 3, 3.5 or 4.

DRAM RAS# to CAS# Delay

This field lets you insert a timing delay between the CAS and RAS strobe signals, and you can use it when DRAM is written to, read from, or re-freshed. Faster performance is gained in high speed, more stable perfor-mance, in low speed. This field is applied only when synchronous DRAM is installed in the system.

➢ The Choice: 1, 2, 3 or 4.

DRAM RAS# Precharge

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be-incompleted, and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field is applied only when synchro-nous DRAM is installed in the system.

➢ The Choice: 1, 2, 3 or 4.

Active to Precharge Delay

The precharge time is the number of cycles it takes for DRAM to accumu-late its charge before refresh.

➢ The Choice: 1, 2, 3, 4, 5, 6, 7, or 8.

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 peripher-als that need to use this area of system memory usually discusses their memory requirements.

➢ The Choice: Enabled or Disabled.

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.

Spectrum Spreading Amount

This item allows you to set the spectrum spreading amount.

➢ The Choice : 0.25%, 0.50%, 0.75%, 1.00%, 1.25%, 1.50%, 1.75%, or Disabled.

** On-Chip VGA Setting **

AGP Aperture Size

This item defines the size of the aperture if you use an AGP graphics adapter. The AGP aperture refers to section of the PCI memory address range used for graphics memory. We recommend that you leave this item at the default value.

➢ The Choice: None, 32MB, 64MB, 128MB, 256MB, 1GB or 2GB.

UMA Frame Buffer Size

This item is select UMA Frame Buffer Size.

It will be shared from system memory.

➢ The Choice: 8M,16M, 32M, 64M, or 128M.

Video Display Devices

You can select boot display device as CRT/TV.

➢ The Choice: Auto, CRT Only or TV Only.

TV Standard

You can select TV mode for Windows.

➢ The Choice: NTSC, PAL, NTSC-JAP or PAL-N.

✍ *Integrated Peripherals*

```
         Phoenix - Award WorkstationBIOS CMOS Setup Utility
                       Integrated Peripherals
  ┌─────────────────────────────────────────┬──────────────────────┐
  │ ► SB200 OnChip IDE Device   [Press Enter]│      Item Help       │
  │ ► SB200 OnChip PCI Device   [Press Enter]│                      │
  │   Init Display First        [PCI Slot]   │ Menu Level    ►      │
  │   USB EHCI Controller       [Enabled]    │                      │
  │   OnChip USB Controller     [Enabled]    │                      │
  │   OnChip USB KBC Controller [Enabled]    │                      │
  │   USB Mouse Support         [Enabled]    │                      │
  │   IDE HDD Block Mode        [Enabled]    │                      │
  │   Onboard Lan Boot ROM      [Disabled]   │                      │
  │   Silicon Image Raid ROM    [Disabled]   │                      │
  │   Onboard FDC Controller    [Disabled]   │                      │
  │   Onboard Serial Port 1     [3F8/IRQ4]   │                      │
  │   Onboard Infrared Port     [Disabled]   │                      │
  │   UART Mode Select          [IrDA]       │                      │
  │   UR2 Duplex Mode           [Half]       │                      │
  │   Onboard Parallel Port     [378/IRQ7]   │                      │
  │   Parallel Port Mode        [SPP]        │                      │
  │   ECP Mode Use DMA          [3]          │                      │
  ├─────────────────────────────────────────┴──────────────────────┤
  │ ↑↓←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
  │    F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults   │
  └─────────────────────────────────────────────────────────────────┘
```

SB200 OnChip IDE Device

Option are in its sub-menu.

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

OnChip IDE Channel 0/1

Use these items to enable or disable the PCI IDE channels that are integrated on the mainboard.

➢ 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/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) items let you set a PIO mode (0-4) for each of the four IDE devices. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

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

Primary/Secondary Master/Slave UDMA

If you install a device that supports UltraDMA that provides faster access to IDE devices, change the item to Auto.

➢ The choice: Disabled or Auto.

SB200 OnChip PCI Device

Option are in its sub-menu.

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

Onboard AC97 Audio

This item allows you to control the onboard AC97 Audio.
➢ The Choice: Auto or Disabled.

Init Display First

This item allows you to decide to activate whether PCI slot or AGP first.
➢ The Choice: PCI Slot or AGP/Onboard.

USB EHCI Controller

Select Enabled if your system contains a USB2.0 device on this mainboard.
➢ The choice: Enabled or Disabled.

OnChip USB Controller

Set enabled if your system has a USB device installed.
➢ The choice: Enabled or Disabled.

OnChip USB KBC Controller

Enable this item if you need to use a keyboard connected through the USB port in a legacy operating system (such as DOS) that does not support Plug and Play.
➢ The Choice: Enabled or Disabled.

USB Mouse Support

Enable this item if you need to use a mouse connected through the USB port in a legacy operating system (such as DOS) that does not support Plug and Play.
➢ The Choice: Enabled or Disabled.

IDE HDD Block Mode

The chipset contains a PCI IDE interface with support for two IDE channels. Select enabled to activate the primary and/or secondary IDE interface. Select disabled to de-activate this interface, in case that you install a primary and/or secondary add-in IDE interface.
➢ The choice: Enabled or Disabled.

Onboard LAN Boot ROM

Decide whether to invoke the Boot ROM of the Onboard LAN chip.
➢ The choice: Disabled or Enabled.

Silicon Image Raid ROM

Decide whether to invoke the Raid ROM of the Silicon Image RAID chip. If you want to boot from Serial ATA harddisk, you should set this item enabled.

➢ The choice: Disabled or Enabled.

Onboard FDC Controller

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

➢ The choice: Disabled or Enabled.

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 field is available if the Onboard Serial Port 2 field is set to any option but disabled. UART Mode Select enables you to select the infrared communication protocol-Normal (default), IrDA, or ASKIR. IrDA is an infrared communication protocol with a maximum baud rate up to 115.2K bps. ASKIR is Sharp's infrared communication protocol with a maximum baud rate up to 57.6K bps.

➢ The choice: SCR, IrDA, or ASKIR.

UR2 Duplex Mode

This item is available when UART 2 mode is set to either ASKIR or IrDA. This item enables you to determin the infrared function of the onboard infrared chip. The options are Full and Half (default).

Full-duplex means that you can transmit and send information simultaneously. Half-duplex is the transmission of data in both directions, but only one direction at a time.

➢ 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*

```
            Phoenix - Award WorkstationBIOS CMOS Setup Utility
                        Power Management Setup
  ┌──────────────────────────────────────────────┬──────────────────────┐
  │  ACPI function              Enabled           │     Item Help        │
  │  ACPI Suspend Type          [S1<POS>]         │                      │
  │  Power Management Option     [User Define]     │  Menu Level    ▶     │
  │  HDD Power Down             [15 Min]          │                      │
  │  Video Off Option           [Suspend -> Off]   │                      │
  │  Video Off Method           [Blank Screen]     │                      │
  │  MODEM Use IRQ              [3]               │                      │
  │  Soft-Off by PWRBTN         [Instant-Off]      │                      │
  │  PowerOn by PCI Card        [Disabled]         │                      │
  │  PowerOn by Ring            [Disabled]         │                      │
  │  USB Wake up                [Enabled]          │                      │
  │  RTC Alarm Resume           [Disabled]         │                      │
  │ x Date <of Month>             7                │                      │
  │ x Resume Time (hh:mm:ss)    16 :  0 :  0       │                      │
  │  PS2 Keyboard Power ON       [Disabled]        │                      │
  │  KB Power ON Password▓       [Enter]           │                      │
  │  Hot Key Power ON           [Any Key]          │                      │
  │  PS2 Mouse Power ON          [Disabled]        │                      │
  ├──────────────────────────────────────────────┴──────────────────────┤
  │ ↑↓←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help│
  │    F5: Previous Values     F6: Fail-Safe Defaults   F7: Optimized Defaults  │
  └──────────────────────────────────────────────────────────────────────┘
```

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, 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: Disabled or 1 Min ~ 15 Min.

Video Off Option

When enabled, this feature allows the VGA adapter to operate in a power-saving mode.

Always On   Monitor will remain on during the power-saving mode.

Suspend --> Off   Monitor is blanked when the system enters into the suspend mode.

➢ The choice: Always On or Suspend ->Off.

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-BTTN

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 Delay4 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.

PowerOn by PCI Card

This item Enabled/Disabled PCI Power Management Event to PowerOn system.

➢ The choice: Enabled or Disabled.

Power On by Ring

This item determine the system will resume by activating of modem ring.

➢ The choice: Enabled or Disabled.

USB Wake up

If you are using a USB KB/MS, and the ACPI suspend type is set to S3, you can enable this item to allow a KB/MS to wake up the system from power saving mode.

➢ The choice: Disabled or Enabled.

RTC Alarm Resume

When this item enabled, your 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/ss]
➢ Key in a DEC number:Min = 0, Max = 59.

PS2 Keyboard Power ON

This item allows you to set the PS2 Keyboard Power On function
➢ The choice: Disabled, Password, or Hot KEY.

KB Power ON Password

This item allows you to set the KB Power On Password.
➢ Press" Enter" to set Password.

Hot Key Power On

This item allows you to set the Hot Key Power On.
➢ The choice: Any Key, or Ctrl-F1 ～ Ctrl-F12.

PS2 Mouse Power ON

This item allows you to enable or disable the PS2 Mouse Power On.
➢ The choice: Disabled or Enabled.

✍ *PnP/PCI Configurations*

```
            Phoenix - Award WorkstationBIOS CMOS Setup Utility
                        PnP/PCI Configurations
  ┌─────────────────────────────────────────────┬─────────────────────────┐
  │ Reset Configuration Data   [Disabled]        │        Item Help        │
  │                                              │                         │
  │ Resources Controlled By    [Auto(ESCD)]      │ Menu Level    ▶         │
  │ x IRQ Resources              Press Enter     │                         │
  │                                              │ Default is Disabled.    │
  │ PCI/VGA Palette Snoop      [Disabled]        │ Select Enabled to       │
  │ Assign IRQ For VGA         [Enabled]         │ reset Extended System   │
  │ Assign IRQ For USB         [Enabled]         │ Configuration Data      │
  │ PCI Latency Timer(CLK)     [ 64]             │ ESCD) when you exit     │
  │ INT Pin 1 Assignment       [Auto]            │ Setup if you have       │
  │ INT Pin 2 Assignment       [Auto]            │ installed a new add-on  │
  │ INT Pin 3 Assignment       [Auto]            │ and the system          │
  │ INT Pin 4 Assignment       [Auto]            │ reconfiguration has     │
  │                                              │ caused such a serious   │
  │                                              │ conflict that the OS    │
  │                                              │ cannot boot             │
  │                                              │                         │
  ├──────────────────────────────────────────────┴────────────────────────┤
  │ ↑↓←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help│
  │    F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults  │
  └────────────────────────────────────────────────────────────────────────┘
```

This section describes the configuration of PCI bus system. PCI or Personal Computer Interconnection is a system which allows I/O devices to operate at the speed CPU itself keeps when CPU communicating with its own special components.
This section covers some very technical items, and it is strongly recommended that only experienced users should make any changes to the default settings.

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.

IRQ3/4/5/7/10/11/12/14/15 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 aims at assigning the IRQ line to the VGA on your system. When enabled, activity from the VGA will awaken the system.

➤ The choice: Disabled or Enabled.

Assign IRQ For USB

The item aims at assigning the IRQ line to the USB on your system. When enabled, activity from the USB will awaken the system.

➤ The choice: Disabled or Enabled.

PCI Latency Timer ＜CLK＞

Set the PCI Latency Timer.

➤ Min = 0, Max = 255

INT Pin1~4 Assignment

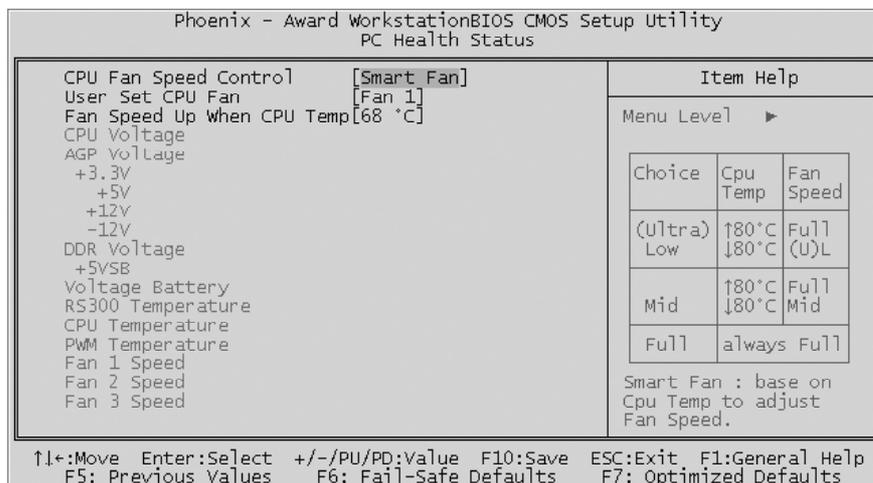Names the interrupt request(IRQ) line assigned to a device connected to the PCI interface on your system.

➤ The choice: Auto, 3, 4, 5, 7, 9, 10, 11, 12, 14, 15.

✎ *PC Health Status*

```
        Phoenix - Award WorkstationBIOS CMOS Setup Utility
                          PC Health Status
  ┌──────────────────────────────────────┬─────────────────────────┐
  │ CPU Fan Speed Control     [Smart Fan] │      Item Help          │
  │ User Set CPU Fan          [Fan 1]     │                         │
  │ Fan Speed Up When CPU Temp[68 °C]     │ Menu Level    ▶         │
  │ CPU Voltage                           │                         │
  │ AGP Voltage                           │                         │
  │  +3.3V                                │ ┌──────┬──────┬──────┐  │
  │   +5V                                 │ │Choice│Cpu   │Fan   │  │
  │  +12V                                 │ │      │Temp  │Speed │  │
  │  -12V                                 │ ├──────┼──────┼──────┤  │
  │ DDR Voltage                           │ │(Ultra)│↑80°C│Full  │  │
  │  +5VSB                                │ │ Low  │↓80°C │(U)L  │  │
  │ Voltage Battery                       │ ├──────┼──────┼──────┤  │
  │ RS300 Temperature                     │ │      │↑80°C │Full  │  │
  │ CPU Temperature                       │ │ Mid  │↓80°C │Mid   │  │
  │ PWM Temperature                       │ ├──────┼──────┼──────┤  │
  │ Fan 1 Speed                           │ │ Full │always Full   │  │
  │ Fan 2 Speed                           │ ├──────┴──────┴──────┤  │
  │ Fan 3 Speed                           │ │Smart Fan : base on │  │
  │                                       │ │Cpu Temp to adjust  │  │
  │                                       │ │Fan Speed.          │  │
  └──────────────────────────────────────┴─────────────────────────┘
  ↑↓←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
    F5: Previous Values    F6: Fail-Safe Defaults    F7: Optimized Defaults
```

CPU Fan Speed Control

> This item allows you to set the CPU Fan Speed.
>
> ➢ The choice: Smart Fan, Ultra-Low , Low , Mid , or Full .

┌───┐
│ Note : Before manually modifying the CPU fan setting, please make   │
│   sure fan connectors are plug into the correct fan connector │
│   designations on the mainboard.   │
└───┘

User Set CPU Fan

> Enabled you to choose one specific fan for further setting.
>
> ➢ The choice: Fan1 or Fan2.

Fan Speed Up When CPU Temp

> Enabled 3 phase smart control to the Selected fan. This feature ranges
> from 40 ^{0}C to 80 ^{0}C, in an increment of 4 ^{0}C.
>
> ➢ The choice: 40 ^{0}C,44 ^{0}C,48 ^{0}C, 52 ^{0}C, 56 ^{0}C, 60 ^{0}C, 64 ^{0}C, 68 ^{0}C,
>   72^{0}C, 76 ^{0}C,80 ^{0}C.

> Take our default Setting for example, 1st and 2nd phase Variable Fan
> Speed and CPU temperature Control is as defined by "Fan Speed Up
> When CPU Temp". If actual CPU temp (reported by BIOS) stays below
> 72 ^{0}C then CPU fan speed will run at a quiet mode (1st phase) of ap-
> proximately 2000 RPM.

But when the actual CPU temp goes above the pre-selected 72 ^{0}C temperature threshold, then CPU fan speed will automatically engage into normal mode (2nd phase) of about 2500 RPM. Automatically by the Smart Bios feature, this increase of fan rotation speed will effectively cool down the CPU temperature. And when the CPU temperature drops back below the 72 ^{0}C temperature threshold, CPU fan speed will again automatically shift back to the quiet mode (1st phase) of about 2000 RPM in order to reduce fan noise level.

Fail-safe mode (4rd phase) Variable Fan Speed and CPU temperature Control is as predefined at user setting offset 10^{0}C. Where in the event of system and CPU operating under extreme working conditions, and if CPU temperature is raised above 82 ^{0}C then the Smart Bios will engage the CPU fan in Fail-safe mode to rotate at about 3500 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.

CPU Voltage
AGP Voltage
+3.3V
+5V
+12V
-12V
DDR Voltage
+5VSB
Voltage Battery
RS300 Temperature
CPU Temperature
PWM Temperature
Fan1 Speed
Fan2 Speed
Fan3 Speed

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.

✎ *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.
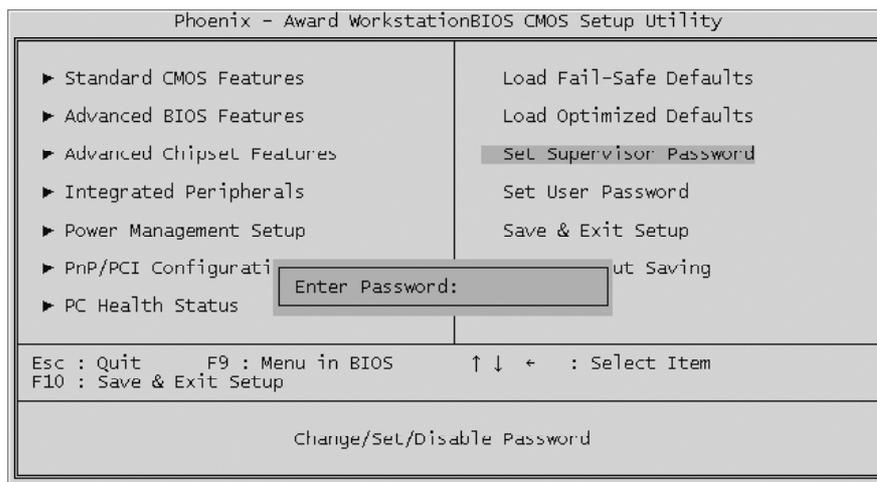
✎ *Load Optimized Defaults*

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*

```
         Phoenix - Award WorkstationBIOS CMOS Setup Utility
  ┌─────────────────────────────────────────────────────────────┐
  │  ▶ Standard CMOS Features          Load Fail-Safe Defaults    │
  │  ▶ Advanced BIOS Features          Load Optimized Defaults    │
  │  ▶ Advanced Chipset Features       Set Supervisor Password    │
  │  ▶ Integrated Peripherals          Set User Password          │
  │  ▶ Power Management Setup           Save & Exit Setup          │
  │  ▶ PnP/PCI Configurati┌─────────────────────────┐ut Saving   │
  │  ▶ PC Health Status   │  Enter Password:         │            │
  │                       └─────────────────────────┘            │
  │ Esc : Quit      F9 : Menu in BIOS      ↑ ↓ ←  : Select Item  │
  │ F10 : Save & Exit Setup                                       │
  ├─────────────────────────────────────────────────────────────┤
  │            Change/Set/Disable Password                        │
  └─────────────────────────────────────────────────────────────┘
```

Steps to set supervisor/user password are described as follows:

New Password Setting:

    1. While pressing <Enter> to set a password, a dialog box appears to ask you enter a password.

    2. Key in a new password. The password can not exceed eight characters.

    3. System will request you to confirm the new password again.

    4. When completed, new code takes effect.

No Password Setting:

    If you want to disable the password, just press <Enter> as a password input is requested.

If You Forget Password:

    If you forget the password, the only way to access the system is to clear

    the CMOS memory. Please refer to page 28 on 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)? N

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.