1. **Please read the users guide before proceeding with your installations. Serious damage may occur if the procedure is not followed properly.**

2. This motherboard does not support CPUs with a Vcore higher than 1.6 volts. Please make sure the CPU you are using 1.6 volts or is below. Check the CPU specification before you insert it in the CPU socket.

3. AGP cards running at 3.3v are not supported. Only AGP cards running at 1.5v (most 4x or 8x AGP cards) are supported on this motherboard.

4. Please make sure that your memory modules are inserted correctly. They can go in only one way, and should fit completely in the socket without sticking out. Failure to do so will damage your motherboard and memory module.

5. An ATX12V power supply (Power supply for Pentium 4 system) is required for the system to operate normally. (Preferably 350 watts for minimal loading or 400 watts for fully loaded system).

6. If you have any problem getting your system to work, please follow the troubleshooting tips in your user manual.

7. On some motherboards, the actual chipset cooler may differ from the chipset cooler as shown on the picture or on the box. However, the chipset fan on the motherboard is of the same quality and will work just as well as the one shown in the picture. (The chipset cooler is as sufficient as the chipset fan based on a different design.)

8. For answers to Technical questions, please visit SOYO tech support link at http://www.soyousa.com/support and http://www.soyousa.com/kb.

SY-P4I875P DRAGON 2

Motherboard

****

mPGA Socket 478 Processor supported

Intel 875P AGP/PCI

533/800 MHz Front Side Bus supported

ATX Form Factor

****

User's Manual

SOYO™   SY-P4I875P DRAGON 2

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About This Guide:
This Quick Start Guide can help system manufacturers and end users in setting up and installing the Motherboard. Information in this guide has been carefully checked for reliability; however, to the correctness of the contents there is no guarantee given. The information in this document is subject to amend without notice.

For further information, please visit our **Web Site** on the Internet. The address is **"http://www.soyo.com".**

Edition: April 2003
Version 1.0
P4I875P DRAGON 2 Black Edition SERIAL

FC Tested To Comply
With FCC Standards
FOR HOME OR OFFICE USE

100% POST CONSUMER
RECYCLED PAPER

Table of Contents

Chapter 1

MOTHERBOARD DESCRIPTION

1-1   INTRODUCTION

The **SY-P4I875P DRAGON 2** AGP/PCI Motherboard is a high-performance Socket 478 processor, ATX form-factor system board. **SY-P4I875P DRAGON 2** uses the Intel 875P Chipset technology. This Motherboard is fully compatible with industry standards and adds many technical enhancements.

1-2   UNPACKING THE MOTHERBOARD

When unpacking the Motherboard, check for the following items:

◆   The SY-P4I875P DRAGON 2 Intel 875P AGP/PCI Motherboard

◆   The Quick Start Guide

◆   The Installation CD-ROM

◆   SOYO Bonus Pack CD-ROM

◆   Three IDE Device ATA 100 Flat Cable

◆   One Floppy Disk Drive Flat Cable
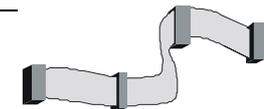
◆   Four Serial ATA cables

◆   One SPDIF Audio Connector Card (optional)

◆   One plastic bag with Heat Sink Compound

◆   One Back panel
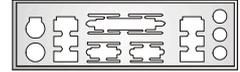
◆ Σ BOX (optional)

STOP   ***Warning***: Do not unpack the Motherboard from its anti-static packaging until you are ready to install it.

Like most electronic equipment, your Motherboard may be damaged by electrostatic discharge. To avoid permanent damage to components ground yourself while working by using a grounding strap. Otherwise, ground yourself frequently by touching the unpainted portion of the computer chassis to drain the static charges.

Handle the Motherboard carefully, holding it by the edges. You are now ready to start the installation.

1-3 KEY FEATURES

CPU	Supports Intel® mPGA Socket 478 processors : ➢ Pentium® 4 with and without Hyperthreading, Northwood, Prescott (533/800MHz FSB) ➢ Pentium® 4 Celeron ➢ SOYO COMBO Setup CMOS setup menu for complete and easy changing of your CPU settings in CMOS setup, making jumpers obsolete. **Note:** CPU with higher than 1.6 volts are not supported.
Chipset	Intel® 875P / ICH5 Chipset
Memory	➢ The SY-P4I875P DRAGON 2 supports PC2700 and PC3200 DDR (non-registered and ECC) memory modules. ➢ SOYO COMBO Setup menu, to fully configure your memory settings.
AGP	1x AGP master 4x/8x slot (1.5v only)
PCI	5x 32-bit bus master PCI slots
Super I/O	ITE IT8712F-A Super I/O controller supporting : ➢ Floppy disk controller ➢ Parallel port (SPP, EPP and ECP compliant) ➢ 2x 16550A compatible RS232 serial ports ➢ IrDA compatible infrared port ➢ PS/2 Keyboard and mouse ➢ Hardware monitor for monitoring temperatures, voltages and fan speeds in the system. ➢ PC/SC (Personal Computer Smart Card Working Group) Standard compliant smart card controller

Storage	➢ ICH5 integrated Serial ATA controller supporting up to 2x UDMA 150 hard disks ➢ Silicon Image Sil3112ACT144 Serial ATA RAID controller supporting up to 2x UDMA 150 hard disks in normal or RAID (0 or 1) mode. ➢ ICH5 Integrated Parallel ATA controller supporting up to 4x UDMA 33/66/100 Parallel ATA devices. ➢ HighPoint 372N PCI to IDE RAID controller for support for up to 4x UDMA 33/66/100/133 parallel ATA hard disks in normal or RAID (0, 1 or 0+1) mode.
USB 2.0	8x USB 2.0 compliant ports (4 on rear IO panel, 4x motherboard connectors.
Sound	Onboard CMedia CM8738 6 channel PCI Hardware Audio
Network	Onboard Intel 10/100 MBps 100Base-T Ethernet controller, supporting Wake-On-Lan (WOL)
IEEE1394	Onboard VIA VT6306 IEEE1394 Firewire controller with 1x rear IO panel connector and 2x motherboard connectors.
BIOS	➢ Power Failure resume function to allow the system to turn on or off after a power failure, which is indispensable for server systems. ➢ Wake On Ring and Power On by Alarm to allow your system to wake up from suspend or power on through the modem or RTC alarm. ➢ Multiple boot, allowing your system to boot from for example CD-ROM
Software	➢ SOYO Hardware Doctor allowing you to fully monitor and control your system ➢ SOYO Bonus Pack CD-ROM containing free bonus software.
Industry standards	This motherboard is compliant with the following industry standards : ➢ Microsoft PC99 ➢ FCC ➢ ACPI

1-4 HANDLING THE MOTHERBOARD

To avoid damage to your Motherboard, follow these simple rules while unpacking:

➢ Before handling the Motherboard, ground yourself by grasping an unpainted portion of the system's metal chassis.

➢ Remove the Motherboard from its anti-static packaging. Hold the Motherboard by the edges and avoid touching its components.

➢ Check the Motherboard for damage. If any chip appears loose, contact your dealer or our tech support immediately.

Warning: Do not apply power if the Motherboard appears damaged. If the motherboard is damaged, contact your dealer immediately.

1-5 ELECTROSTATIC DISCHARGE PRECAUTIONS

Make sure to ground yourself before handling the Motherboard or other system components. Electrostatic discharge can easily damage the components. Note that you must take special precautions when handling the Motherboard in dry or air-conditioned environment.

To protect your equipment from electrostatic discharge, take the following precautions:

➢ Do not remove the anti-static packaging until you are ready to install.

➢ Ground yourself before removing any system component from its protective anti-static packaging. (To ground yourself, grasp the expansion slot covers or other unpainted portions of the computer chassis.)

➢ Frequently ground yourself while working or use a grounding strap.

➢ Handle the Motherboard by its edges and avoid touching its components.

1-6 SY-P4I875P DRAGON 2 MOTHERBOARD LAYOUT
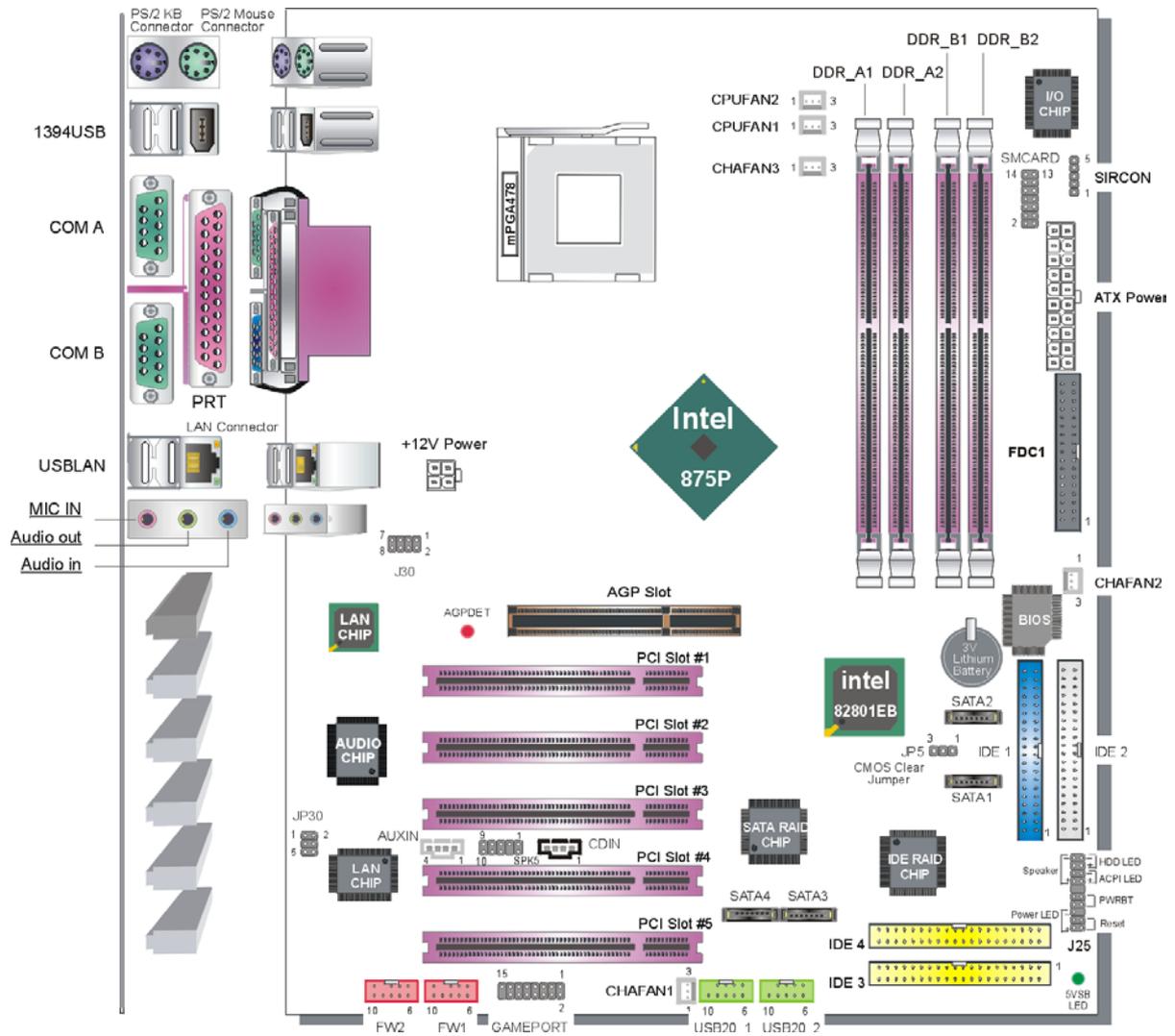
Back Panel   SY-P4I875P DRAGON 2 Platform

1-7 SY-P4I875P DRAGON 2 MOTHERBOARD COMPONENTS

A	**Microphone and LAN Status LED Connector (J30)** This connector allows you to extend your microphone connector and LAN Status LED to your front panel. Check the **MIC & LED Connector (J30)** paragraph on page 41 for a lay-out of this header.
B	**+12V Power Connector** This is where the Power Supply's +12V ATX connector goes. For a lay-out of this connector please check the **F. ATX12V Power Supply** paragraph on page 44.
C	**AGP Slot** This is the AGP expansion slot for your video card. Note that it can only work with 1.5v AGP cards. For more information, check the Step 3 Installation of Expansion Cards paragraph on page 24.
D	**Socket 478 Connector** This is the Zif (Zero Insertion Force) socket for your Pentium 4 or Celeron CPU. For more information, check the Step 1 Install the CPU paragraph on page 20.
E	**Intel 875P North Bridge Chip** The Intel® 875P chipset features support for an 800 MHz Front Side Bus (FSB) and implements Intel® Performance Acceleration Technology (PAT) with dual-channel DDR400 memory configurations to get incredible performance from the memory interface. Optimized to support the Intel® Pentium® 4 Processor with Hyper-Threading Technology[†], the 875P chipset adds intelligence to help manage and prioritize multiple threads received from the microprocessor.
F	**3V Lithium Battery** This battery supplies power to the CMOS RAM. As long as the battery supplies enough power, the contents of your CMOS RAM will be valid. CMOS RAM contents are configured by CMOS setup, and can be cleared by JP5. For more details on this check the **H. CMOS Clear (JP5)** paragraph on page 47.
G	**CPU Cooling Fan (CPUFAN1, 2) connectors** With these connectors you can attach the CPU fan or fans to your motherboard. They supply power and (in the case of CPUFAN1) allow you to monitor the speed of the FAN via the SOYO Hardware Monitor software or via CMOS setup. For more details on the lay-out of these connectors, check the **2. Cooling Fan Installation** paragraph on page 38.

H	**Chassis Cooling Fan (CHAFAN2) connectors** This connector is to connect your chassis fan to your motherboard. This motherboard supports up to 3 chassis fans. Please check the **(2) Chassis Cooling Fan (CHAFAN1, CHAFAN2, CHAFAN3)** paragraph on page 39 for more details.
I	**DDR DIMM Banks** These 3, 184 pin memory slots are to install your system memory in. They support up to 4 GB of memory. For more details check the Step 2 Install Memory Module paragraph on page 23.
J	**ITE IT8712F-A Super I/O Chip** The IT8712F-A is a Low Pin Count Interface-based highly integrated Super I/O. The IT8712F-A provides the most commonly used legacy Super I/O functionality plus the latest Environment Control initiatives, such as H/W Monitor, Fan Speed Controller, ITE's 'SmartGuardian' function and Smart Card Reader Interface. The device's LPC interface complies with Intel 'LPC Interface Specification Rev. 1.0'. The IT8712F-A meets the 'Microsoft® PC98 & PC99 System Design Guide' requirements, and is ACPI & LANDesk compliant.
K	**Serial Infrared (IrDA) device header** This header allows you to connect an IrDA receiver to the motherboard. You can find the lay-out in the **1. Standard Infrared (SIRCON)** paragraph on page 37.
L	**Smart Card Reader connector** This connector allows you to connect a smart card reader to the PC/SC, ISO 7816 compliant onboard smart card reader. The paragraph **3. Smart Card Reader** on page 40 contains more information on the lay-out of this header.
M	**ATX Power Supply connector** This connector is to connect the ATX connector of your ATX12V compliant power supply to the motherboard. For more details on this connector, please check the **F. ATX12V Power Supply** paragraph on page 44.
N	**Floppy Disk Drive (FDD) connector** This 34 pins connector is to connect your floppy drive to. Check for more details in the **B. Floppy Drive Installation** paragraph on page 30.

O	**Chassis Cooling Fan (CHFAN3) connector** This connector is to connect your third chassis fan to your motherboard. This motherboard supports up to 3 chassis fans. Please check the **(2) Chassis Cooling Fan (CHAFAN1, CHAFAN2, CHAFAN3)** paragraph on page 39 for more details.
P	**Flash BIOS** This chip contains the system BIOS firmware, and is software upgradable. It's size is 4Mbit. For updates of your Flash BIOS, please go to http://www.soyousa.com. For details on how to setup your BIOS, please go to the **BIOS SETUP UTILITY** chapter on page 51.
Q	**Bus Mastering EIDE/ATAPI Ports** These connectors are to attach your IDE devices to. Each connector can support up to 2 IDE devices, 1 master and 1 slave. Please check the **IDE Device Installation (HDD, CD-ROM)** paragraph on page 27 for more details.
R	**HighPoint 372N IDE RAID chip** This chip controls IDE 3 and 4. It supports up to UDMA 133 hard disks and can work as normal IDE port or in a RAID (0, 0+1 or 1) configuration. ATAPI devices are not supported by this chip.
S	**Front Panel connectors (J25)** This header allows you to connect the switches and LEDs on your front panel. Please check the **C. Front Panel Connections** chapter on page 31 for more details and lay-outs.
T	**5V Stand-By Indicator LED** The ATX 12V power supply will always supply a 5V standby voltage to your motherboard so that it can power on via for example Wake On Lan technology. This LED shows that your ATX 12V power supply is supplying this standby voltage to your motherboard.
U	**CMOS Clear Jumper (JP5)** This jumper allows you to clear your CMOS RAM contents in order to reset your system configuration. . For more details on this check the **H. CMOS Clear (JP5)** paragraph on page 47.
V	**IDE RAID Ports** These IDE ports (IDE 3 and IDE 4) can be used as normal IDE port or in a RAID configuration and are controlled by the HighPoint 372N chip. ATAPI devices will not work on these ports. For more details, please check the **IDE Device Installation (HDD, CD-ROM)** paragraph on page 27.

W	**Intel 82801EB South Bridge chip** ICH5 platforms enable the next generation desktop storage interface with integration of Serial ATA (SATA). The ICH5 also supports eight, high-speed USB 2.0 ports and integrates an Alert Standard Format (ASF) System Management controller for network manageability. The ICH5 includes enhancements for ACPI 2.0 compliant power management logic.
X	**SATA Connectors** These connectors allow you to attach one UDMA 150 hard disk to each connector. Note that SATA 3 and 4 are controlled by the Silicon Image Sil3112 chip, and can support RAID 0 and 1. For more information on these connectors check the **IDE Device Installation (HDD, CD-ROM)** paragraph on page 27.
Y	**USB 2.0 connectors** These connectors support 2 USB 2.0 ports per connector. For details on the lay-out, please check the **5. Universal Serial Bus (USB1/USB2, USB3/USB4, USB20_1/USB20_2)** paragraph on page 36.
Z	**Chassis Cooling Fan (CHAFAN1) connector** This connector is to connect your chassis fan to your motherboard. This motherboard supports up to 3 chassis fans. It allows you to monitor the speed of CHAFAN1 in CMOS setup or by using the SOYO Hardware Monitor software. Please check the **(2) Chassis Cooling Fan (CHAFAN1, CHAFAN2, CHAFAN3)** paragraph on page 39 for more details.
AA	**CD-IN connector** This connector is to attach your analog audio output channel from your CDROM or DVD drive to your motherboard. Please check the **4. CD Line-in (CDIN)** paragraph on page 40 for more details.
AB	**GAMEPORT connector** This connector is to attach your gameport connector to. Gameports are used to connect for example joysticks to. For more details check the paragraph on page 36.
AC	**SPK5 connector** This connector is to connect the speaker attached to your case to your motherboard. Please check the **7. SPK5** paragraph on page 42 for more details.

AD	**IEEE1394 Firewire connector** These connectors allow you to attach IEEE 1394 connectors or devices to the motherboard. The lay-out can be found in the **8. IEEE 1394 (Firewire) Connector (FW1/FW2)** paragraph on page 43.
AE	**VIA VT6306 IEEE1394 Firewire chip** The VT6306 IEEE 1394 OHCI Host Controller provides high performance serial connectivity. It implements the Link and Phy layers for IEEE 1394-1995 High Performance Serial Bus and 1394a Draft 4.0. It is compliant with 1394 Open HCI 1.0 and 1.1 with DMA engine support for high performance data transfer via a 32-bit bus master PCI host bus interface.
AF	**Center & Bass select connector (JP30)** Because some speaker manufacturers connect their center and bass speakers different, this jumper allows you to select how your center and bass speakers are connected. See the **G. Center & Bass Select Connector (JP30)** paragraph on page 46 for more details.
AG	**AUX-IN connector** This connector allows you to attach a second CDROM analog audio out output to your mainboard. Please check the **5. AUX-IN (AUXIN)** paragraph on page 41 for more details.
AH	**CMedia CMI 8738 PCI 6 Channel hardware audio chip** The CMI 8738 chip is a 2/4/6 Channel PCI hardware audio chip, which uses the HRTF 3D positional audio technology. It is SB Pro compatible and supports SPDIF IN/OUT. It also has a DLS (DownLoadable Sound) wave table music synthesizer which supports DirectMusic.
AI	**32 bit PCI slots** These are the motherboard's 3.3v busmastering PCI slots, compliant to PCI specification v2.2.
AJ	**Silicon Image Sil3112 Serial ATA RAID chip** The SiI 3112 enables OEMs to support new Serial ATA devices for the highest data transfer rates (1.5 Gbps burst), simpler disk drive cabling and easier PC assembly. Featuring a 32-bit 33/66 MHz PCI interface, the SiI 3112 supports two independent Serial ATA devices, capable of working as a normal IDE or in a RAID 0 or RAID 1 configuration.

AK	**Intel 82562EZ LAN chip**
	The Intel® 82562 family of controllers are highly integrated Platform LAN Connect devices combining 10BASE-T and 100BASE-TX physical layer capabilities, and providing a core ingredient of the enabling solution for the integrated networking connectivity in Intel® I/O Controller Hub based platforms. It supports a single interface fully compliant with the IEEE 802.3/802.3u standard. The IEEE 802.3u standard for 100BASE-TX defines networking over two pairs of Category 5 unshielded twisted pair cable.
AL	**AGP DET LED**
	This LED lights up when an AGP 3.3v card is inserted in the system. If this LED lights up, your system will not work, since AGP 3.3v cards are not supported.
AM	**Back panel connectors**
	These connectors allow you to attach the external devices to the back of your PC. Please check the **D. Back Panel Connections** paragraph on page 34 for more details.

Chapter 2

HARDWARE INSTALLATION

Congratulations on your purchase of **SY-P4I875P DRAGON 2** Motherboard.
You are about to install and connect your new Motherboard.

Note: Do not unpack the Motherboard from its protective anti-static packaging until you have made the following preparations.

2-1 PREPARATIONS

Gather and prepare all the following hardware equipment to complete the installation successfully:

1. Socket mPGA478 processor with CPU cooling fan. (CPUs with a VCORE higher than 1.6 volts are not supported)

2. DDR memory module(s)

3. A computer case with an adequate power supply unit (350W for a minimally loaded system or 400W for a fully loaded system).

4. Monitor

5. Keyboard

6. Pointing Device (mouse)

7. Disk Drives: HDD, CD-ROM, Floppy drive…

8. External Peripherals: Printer and Modem (optional)

9. VGA Card (AGP or PCI)

Note: **This M/B only supports 1.5V AGP VGA cards! 3.3V AGP cards are not supported !**

2-2 INSTALLATION GUIDE

We will now begin the installation of the Motherboard. Please follow the step-by-step procedure designed to lead you to a complete and correct installation.

Step1- Install the Central Processing Unit (CPU).

Step2- Install memory modules.

Step3- Install expansion cards.

Step4- Connect cables, case wires, and power supply.

Step5- Power on and enter BIOS setup.

Step6- Install supporting software tools. See Chapter 4 for more info.

> **STOP** *Warning:* Turn off the power to the Motherboard, system chassis, and peripheral devices before performing any work on the Motherboard or system.

BEGIN THE INSTALLATION

Step 1 Install the CPU

CPU Mount Procedure: To mount the Pentium® 4 Socket mPGA478 processor that you have purchased separately, follow these instructions.

1. Lift the socket handle up to a vertical position.

2. Align the blunt edge of the CPU with the matching pinhole distinctive edge on the socket.
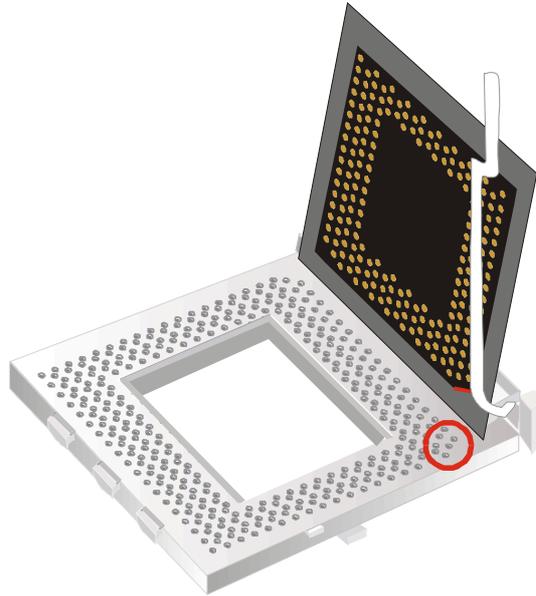
3. Seat the processor in the socket completely and without forcing.
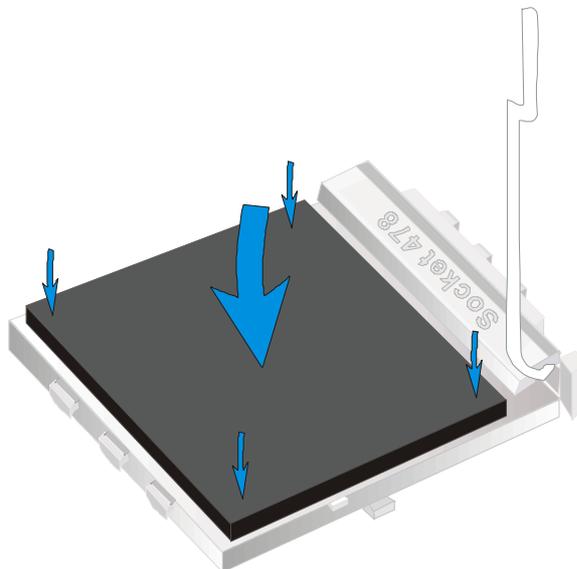
4. Then close the socket handle to secure the CPU in place.
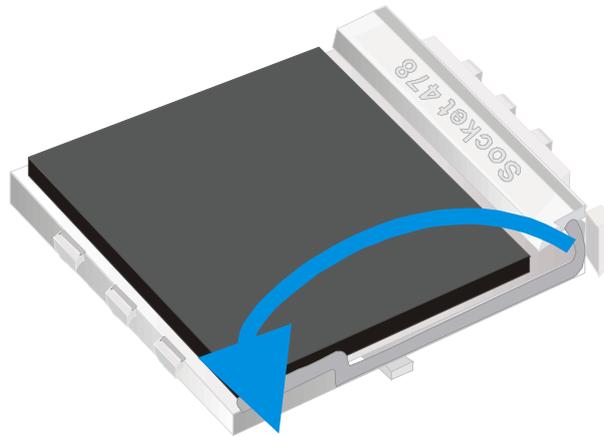
Remember to connect the CPU Cooling Fan to the appropriate power connector on the Motherboard. *The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.*

CPU Fan Installation

Your Socket 478 processor kit comes with a cooling fan. Mount the fan on the processor according to the instructions provided by the manufacturer. The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.

Note: Remember to connect the fan to the appropriate power source.

Step 2 Install Memory Module
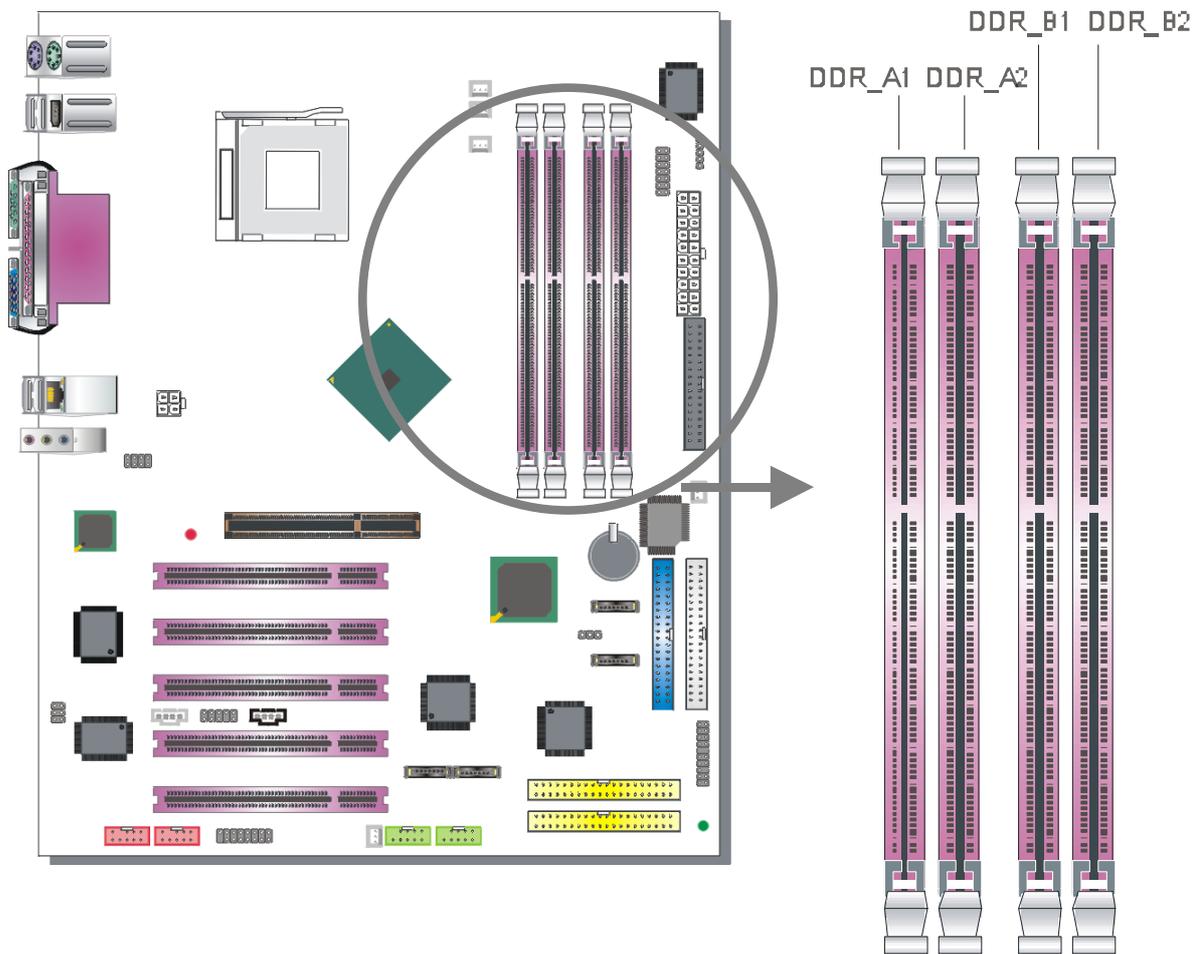
This motherboard supports two Dual Channels to your memory. Note that you can use normal DDR memory for Dual Channel to work. Also note that for Dual Channel to work 2 or 4 modules of equal size and specifications have to be installed.

The largest memory capacity possible is 4GB. On this motherboard, DRAM speed can be set independent from the CPU front side bus speed. Note that when installing 4GB of memory, your total memory will be less than 4GB. The reason for this is that the BIOS, PCI and AGP cards claim part of your CPUs address space.

Memory Configuration Table

If you want to use the Dual Channel feature, please follow the memory configuration table below:

DDR Slots / Performance	DDR_A1	DDR_A2	DDR_B1	DDR_B2
128 bit	*Present*		*Present*	
128 bit		*Present*		*Present*
128 bit	*Present*	*Present*	*Present*	*Present*

Installing your memory in a combination different from the table above will still allow your system to work. The Dual Channel feature will not work then however. This motherboard also supports ECC (error correcting code) memory DDR modules.

Memory frequency Table

Depending on the front side bus (FSB) frequency of the CPU, you can run memory of different speeds. Please look at the table below for details:

CPU FSB (MHz)	Memory Frequency (MHz)	DDR DIMM Type
400	266	PC2100
533	266 or 333	PC2100 or PC2700
800	400 or 320*	PC3200 or PC2700

* When using a 800 MHz FSB CPU and PC2700 DDR DIMMs, the memory frequency runs at 320 MHz (instead of 333 MHz) due to chipset limitations.

Step 3 Installation of Expansion Cards

The motherboard has 1 AGP slot and 5 PCI slots.

1. Read the related expansion card's instruction document before inserting the expansion card into the computer.

2. Press the expansion card firmly into the expansion slot on the motherboard.

3. Make sure the metal contacts on the card are seated in the slot.

4. Replace the screw to secure the slot bracket of the expansion card.

5. Install required driver for the operating system you use.

AGP Slot
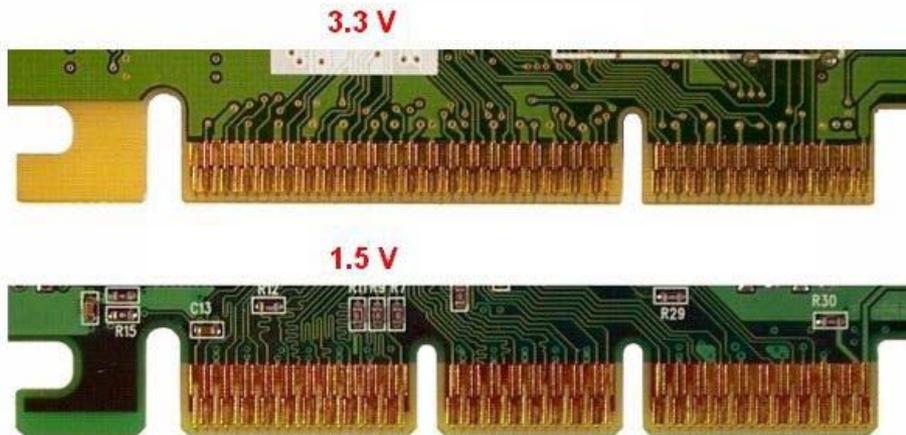
This motherboard only support 1.5V AGP cards (4X/8X cards). If 3.3V AGP card is used, the system will not power-on and the AGPDET LED will lit.

AGP Slot (1.5V only)

AGPDET LED

(When AGPDET LED is lit, it means a 3.3V AGP card is being used.)

If you use a 3.3V AGP card, the system will not power-on and the AGPDET LED will lit.
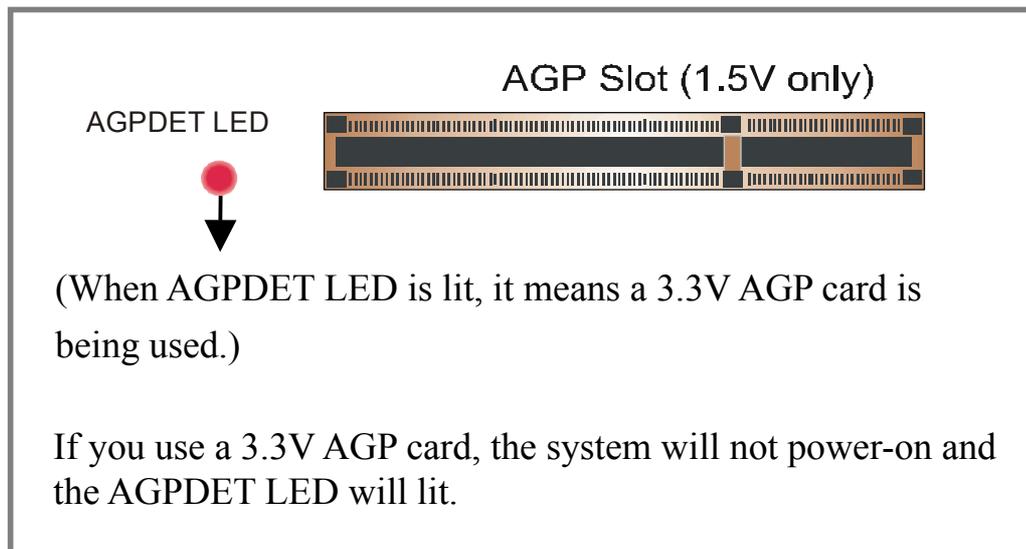
PCI Slots

PCI IRQ Assignment

The following table shows which PCI IRQs are used by which onboard device.

	A	B	C	D	E	F	G
AGP	●						
HighPoint 372N IDE RAID						●	
CMedia 8738 PCI Audio							●
VIA VT6306 IEEE1394				●			
Intel 82562EZ 10/100 Ethernet					●		
PCI Slot 1	●						
PCI Slot 2		●					
PCI Slot 3			●				
PCI Slot 4				●			
PCI Slot 5		●					
Silicon Image Sil3112 SATA RAID					●		
Intel 82801EB (ICH5) USB 2.0					●		

Step 4 Connect cables, case wire and power supply

A. IDE Device Installation (HDD, CD-ROM)
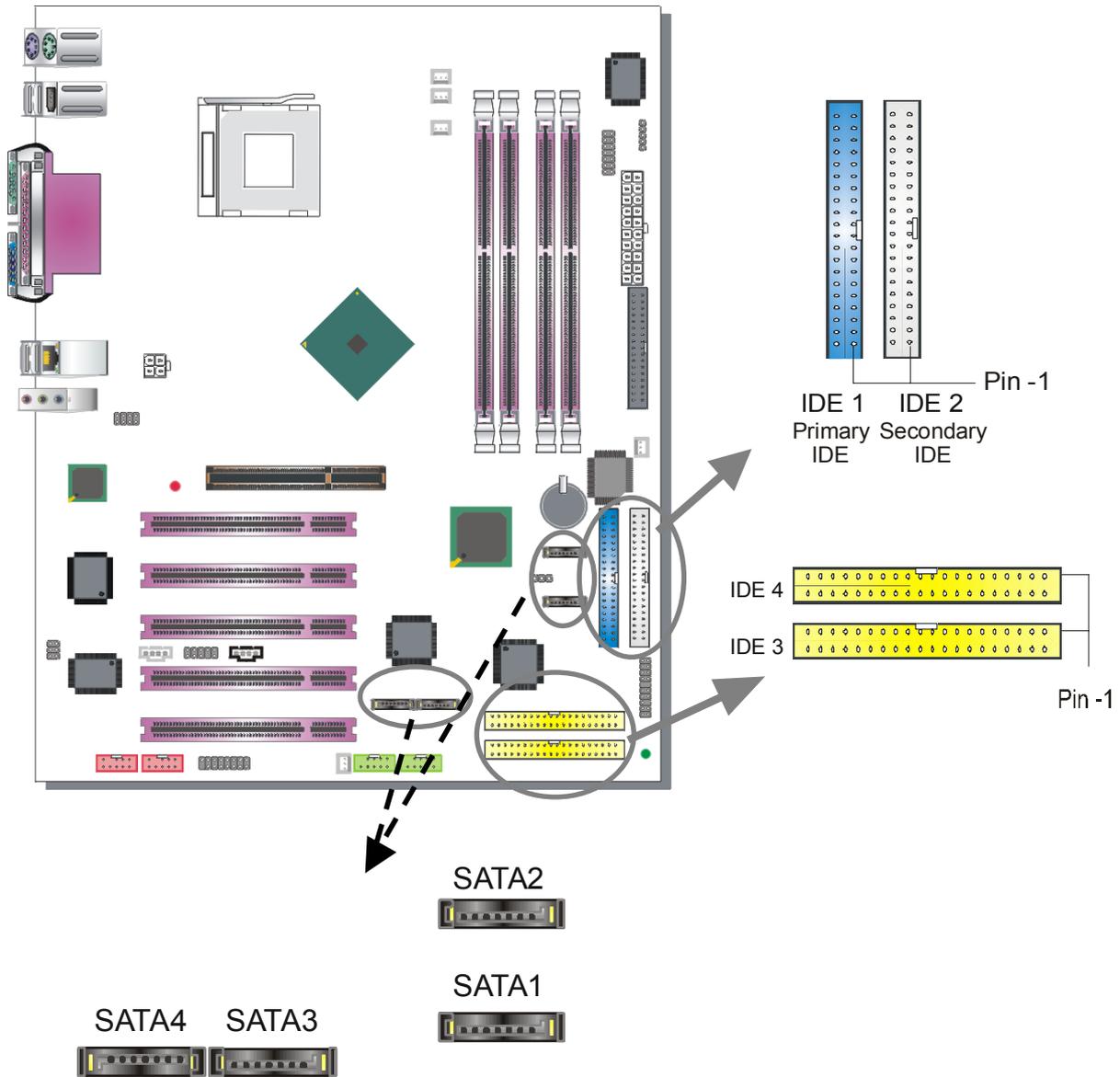
This Motherboard offers two primary (IDE1, IDE3) IDE device connectors, 2 secondary IDE device connectors (IDE2, IDE4) and 4 tertiary serial ATA ports. IDE1 and IDE2 can support up to four high-speed Ultra DMA 33/66/100 HDD or CD-ROM. IDE3 and IDE4 can support up to 4 high speed Ultra DMA 33/66/100/133 HDD. SATA1~4 can support up to 4 ATA 150 SATA hard disks.

IDE1,2 are controlled by the 82801EB (ICH5), IDE3,4 are controlled by the HighPoint 372N, SATA1,2 are controlled by the 82801EB (ICH5) and SATA3,4 are controlled by the Silicon Image Sil3112 controller..

There are 8 parallel ATA HDD connectors (IDE1, IDE2, IDE3, IDE4) and 4 serial ATA connectors on the motherboard. IDE3 and IDE4 are provided for IDE RAID or standard IDE function. SATA1 and SATA2 are provided for standard SATA function. SATA 3 and SATA4 are provided for SATA RAID or standard SATA function. This Motherboard can support up to 12 HDDs.

Note: IDE2 and SATA2 are not bootable, SATA1, SATA3, SATA4 and IDE1, IDE3 and IDE4 are bootable.

Note: Only Windows XP can use SATA1, SATA2, IDE1 and IDE2 at the same time. All other operating systems can use any combination from the following table:

	Enabled devices		
1	SATA1	SATA2	IDE1
2	SATA1	SATA2	IDE2
3	IDE1	IDE2	
4	SATA1	SATA2	

These devices can be enabled in your CMOS setup menu. Please check the OnChip IDE Device paragraph on page 61 for more details.

Parallel ATA connectors

Connect the black end of the ATA66/100 flat cable to the IDE device (HDD or CD-ROM) and plug the blue end to the primary (IDE1, IDE3) or secondary (IDE2, IDE4) directionally keyed IDE connector on the Motherboard. The ATA66/100 cable is backward compatible with ATA33 HDDs.

80-Conductor

**ATA 66/100
Flat Cable**

40-pin

1   **39**

1   **39**
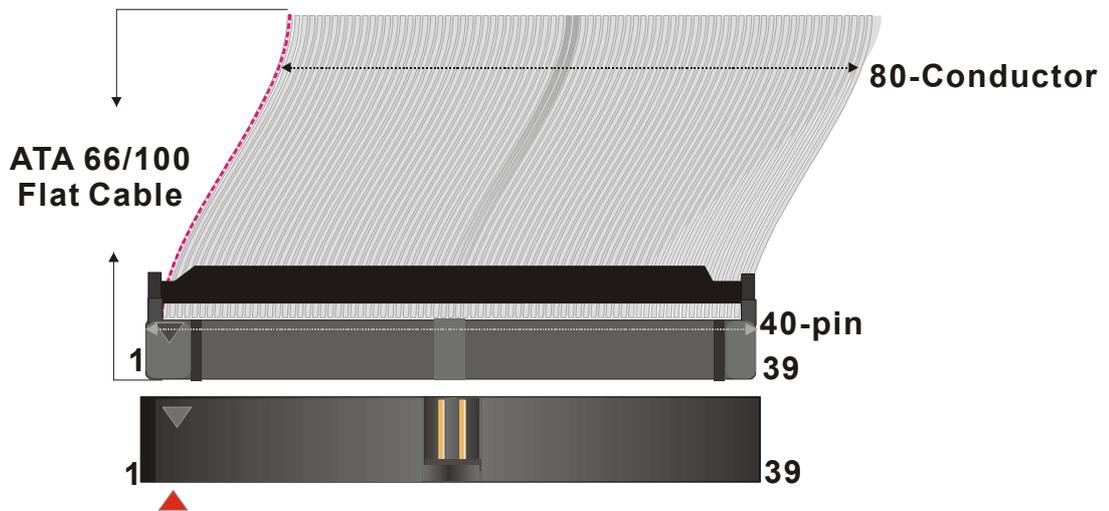
Serial ATA connectors

You can also plug the serial ATA cable into the serial ATA connector of the motherboard. The other end of the SATA cable goes into your SATA device.

**Serial ATA
Cable**

Serial
ATA

1

**Serial ATA
Connector**

▲ Pin 1

B. Floppy Drive Installation

Pin -1

FDC
Floppy Drive
Connector
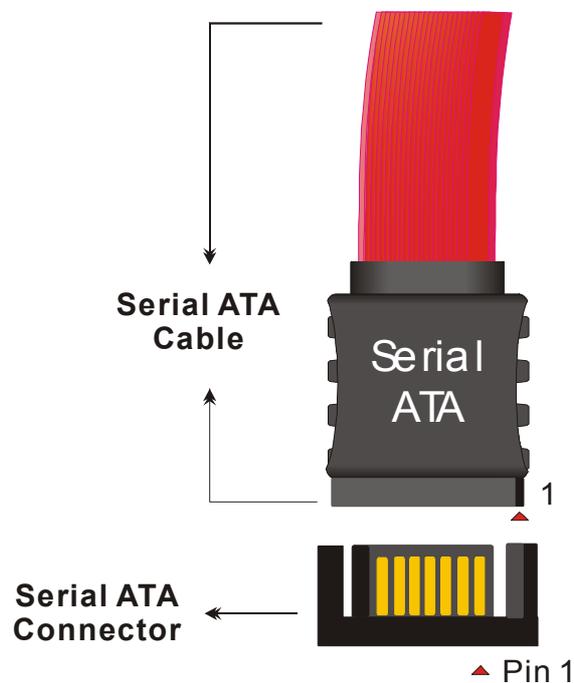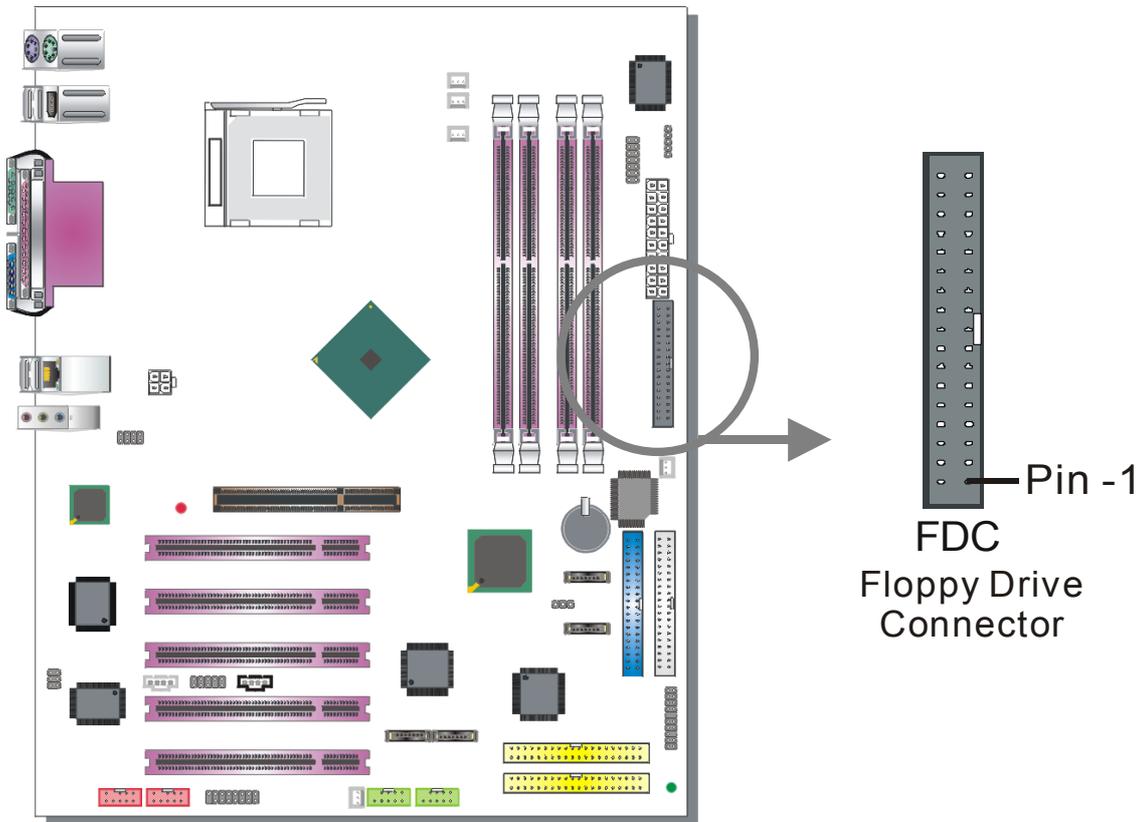
The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB. In addition, this Motherboard supports a 3-mode (720KB/1.2MB/1.44MB) floppy commonly used in Japan.

Connect one side of the 34-pin flat cable to the floppy drive and plug the other end to the floppy drive connector in the Motherboard. The end of the cable that goes into the motherboard is not twisted. The twisted end of the cable goes into the floppy drive.

This Motherboard can support only one floppy drive.
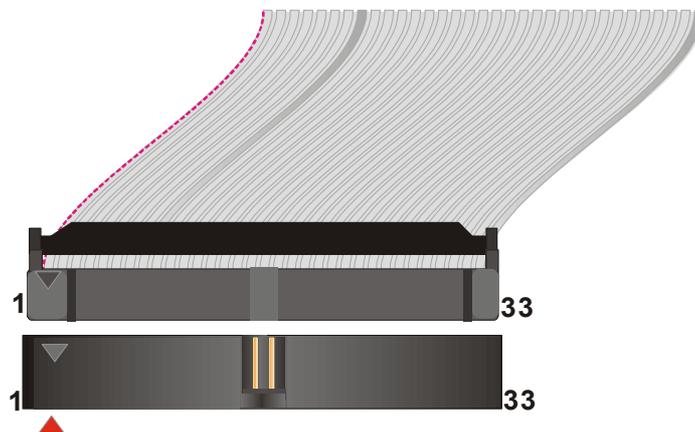
C. Front Panel Connections
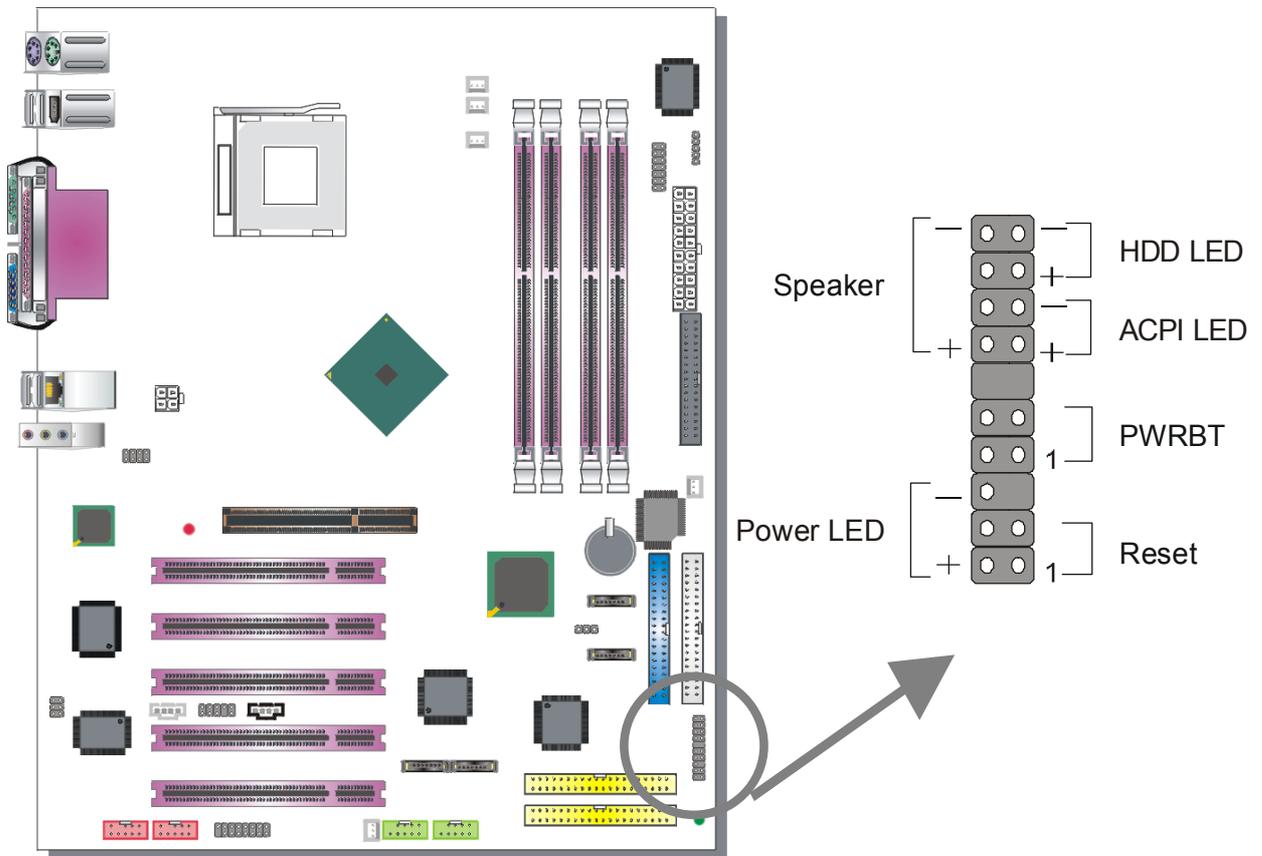
Plug the computer case's front panel devices to the corresponding headers on the Motherboard.

1. Power LED

Please install according to the following pin assignment: pin 1,3 are for Power LED.
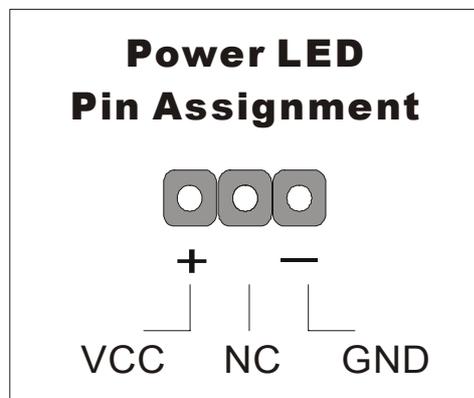
2. Reset

Plug the Reset push-button cable into the 2-pin Reset header on the motherboard. Pushing the Reset button on the front panel will cause the system to restart the boot-up sequence.

```
┌─────────────────────────────────┐
│   Reset Pin Assignment          │
│         ⊙  ⊙                    │
│         1                       │
│         │     └                 │
│   Power Good    GND             │
└─────────────────────────────────┘
```
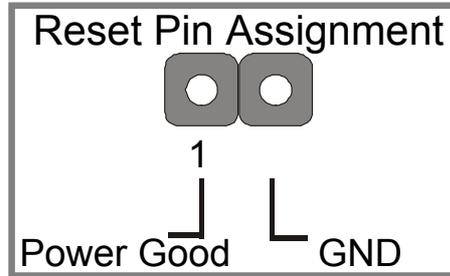
3. Speaker

Attach the 4-pin PC speaker cable from the case to the Speaker header on the Motherboard.

```
┌─────────────────────────────────┐
│   Speaker Pin Assignment        │
│      ⊙  ⊙  ⊙  ⊙                │
│      +  │  │  ─                 │
│  VCC   NC NC  Speaker out       │
└─────────────────────────────────┘
```
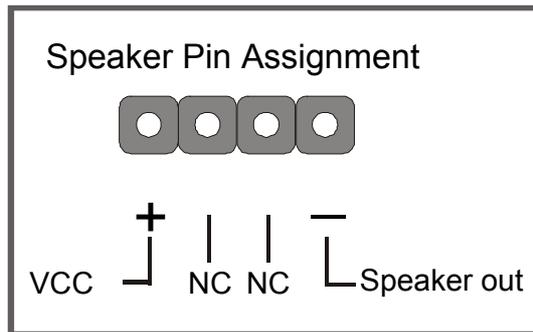
4. ACPI LED

Connecting the 2-pin ACPI LED cable to the corresponding ACPI LED header will cause the LED to light whenever the system is in ACPI mode.
The manufacturer has permanently set this Motherboard in ACPI mode because of PC99 specification requirements.

```
┌─────────────────────────────────┐
│  ACPI LED Pin Assignment        │
│         ⊙  ⊙                    │
│         +  ─                    │
│   2.5V_DDR    Control Pin       │
└─────────────────────────────────┘
```
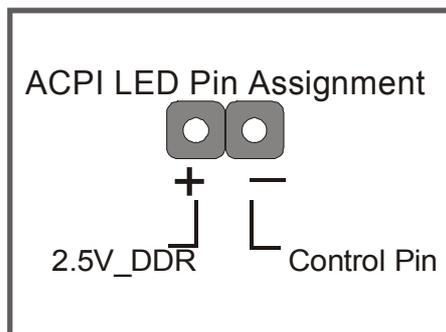
5. IDE LED

Attach the 2-pin IDE device LED cable to the corresponding IDE LED header on the Motherboard. This will cause the LED to light when an IDE1 or IDE2 (HDD, CD-ROM) device is active.

```
HDD LED Pin Assignment

      ┌──┐ ┌──┐
      │ ●│ │ ●│
      └──┘ └──┘
       +    −

   LED Anode  LED Cathode
```
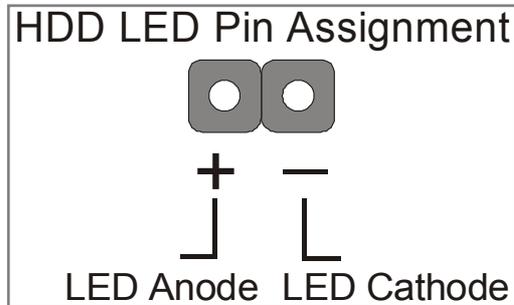
6. ATX Power On/Off Switch

Attach the 2-pin momentary type switch to the PWRBT header for turning On or Off your ATX power supply. Note that 5VSB will always have power, so the 5V standby LED will always be lit.

```
PWRBT Pin Assignment

      ┌──┐ ┌──┐
      │ ●│ │ ●│
      └──┘ └──┘
       1

   Power On/Off     GND
```
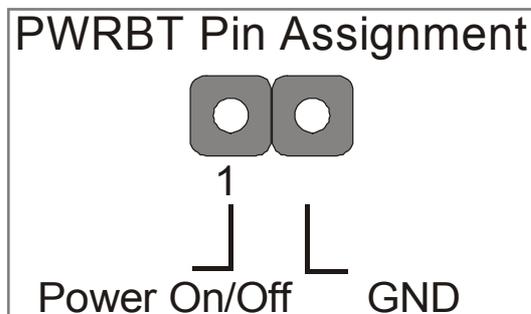
D. Back Panel Connections

All external devices such as the PS/2 keyboard, PS/2 mouse, printer, modem, USB can be plugged directly into the Motherboard back panel.

Only after you have fixed and locked the Motherboard to the computer case can you start connecting the external peripheral devices.

When connecting an external device, use the following figure to locate and identify which back panel connector to plug the device to.
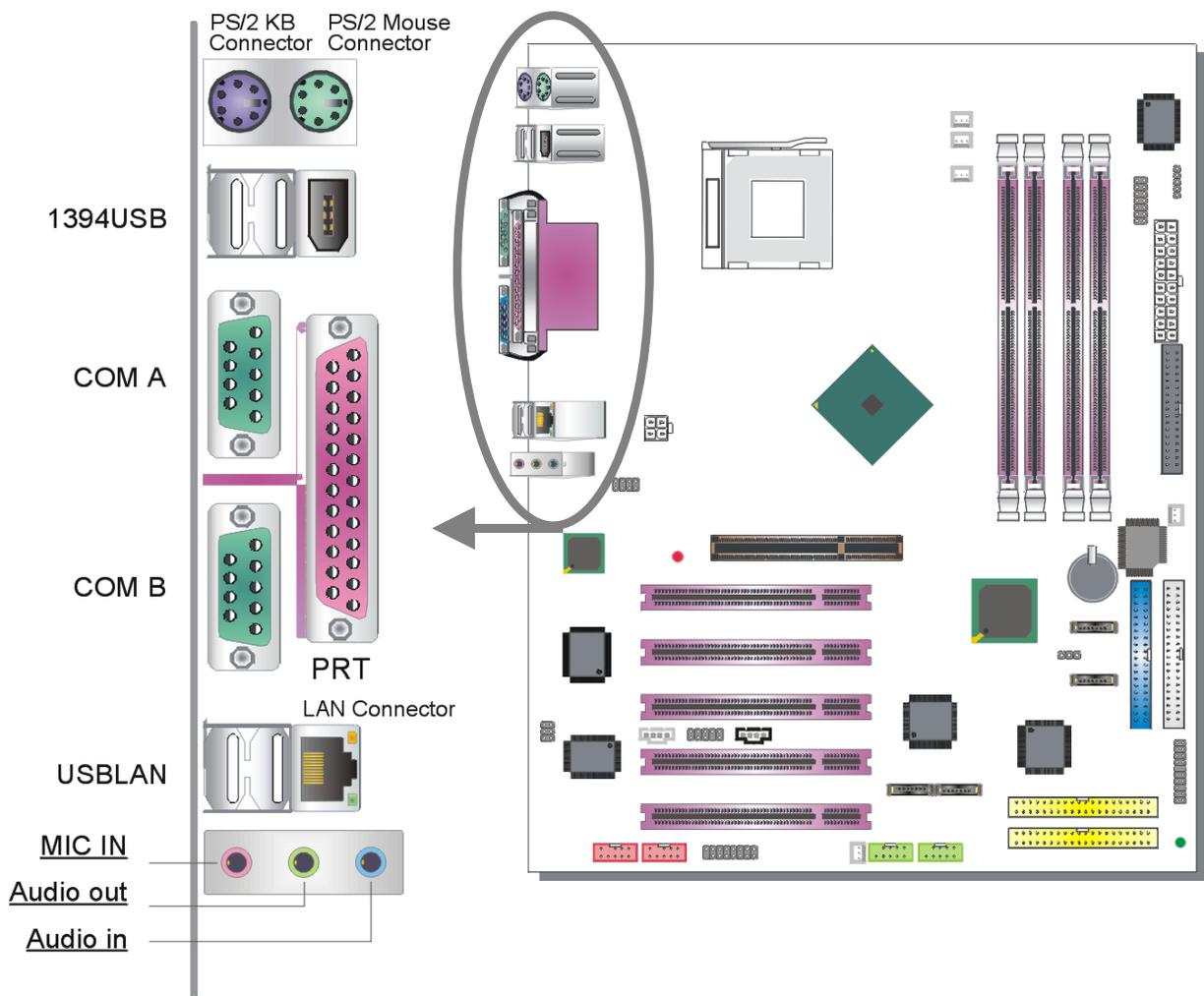
1. Onboard Serial Ports COMA/COMB

External peripherals that use serial transmission scheme include:

➢ serial (RS232) mice

➢ modem

Plug the serial device cables directly into the COMA/COMB 9-pin male connectors located at the rear panel of the Motherboard.

2. Parallel Port PRT

This parallel port is used to connect the printer or other parallel devices.

Plug the parallel device cable into the 25-pin female connector located at the rear panel of the Motherboard.

3. PS/2 Keyboard

Plug the keyboard jack directly into the 6-pin female PS/2 keyboard connector located at the rear panel of the Motherboard.

Pin6
NC

Pin5
KBD Clock

Pin4
VCC

Pin3
GND

Pin2
NC

Pin1
KBD DATA
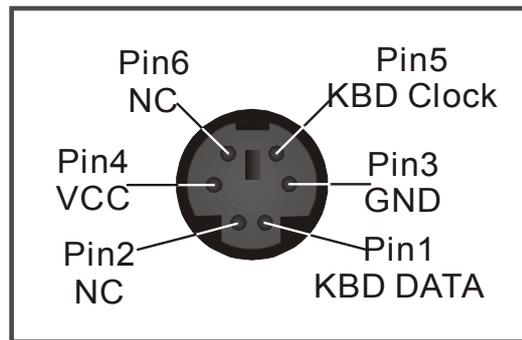
4. PS/2 Mouse

Similarly, plug the mouse jack directly into the 6-pin female PS/2 mouse connector.

Pin6
NC

Pin5
Mouse Clock

Pin4
VCC

Pin3
GND

Pin2
NC

Pin1
Mouse DATA
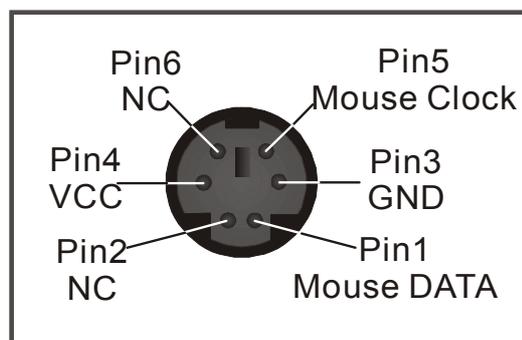
5. Universal Serial Bus (USB1/USB2, USB3/USB4, USB20_1/USB20_2)

This Motherboard provides 8 USB2.0 ports for your additional devices. Plug the USB device jack into the available USB connector USB1, USB2, USB3 and USB4.

USB20_1 and USB20_2 are available. To make use of these USB ports, purchase a USB cable from your dealer. The lay-out of USB20_1/USB20_2 connector is as follows:

```
GND —10       5
GND — 9       4— GND
(+)Data — 8   3— (+)Data
(-)Data — 7   2— (-)Data
Power — 6     1— Power
```
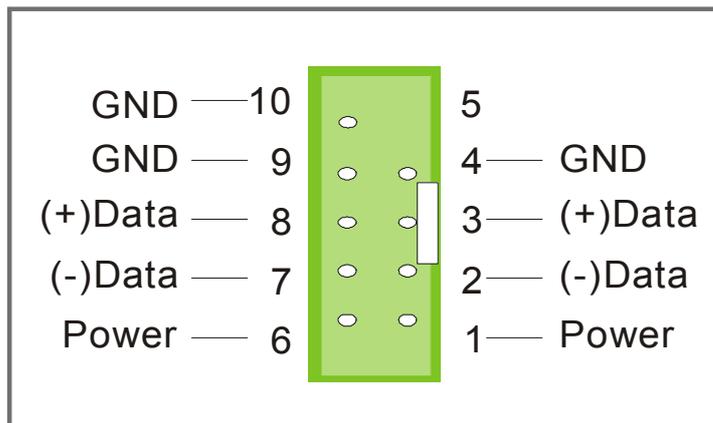
USB20_1 and USB20_2 support USB2.0 devices.

6. Onboard Game port/audio (Audio Speakers connections)

When using 2-channel speaker, connect the speaker cable to Line-out.

If you're using 4 channel speaker, connect the front L/R speakers to Line-out and rear L/R speakers to Line-in. Make sure that the audio software is set for 4 channel speaker system.

Use the SPDIF Card to use 6 channel speaker.

Line-in

Line-out

Mic-in
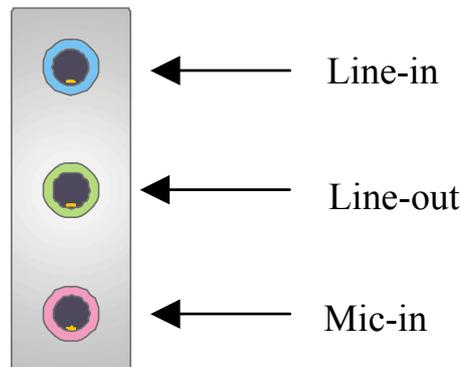
The Gameport has the following lay-out :

GAMEPORT
Pin Assignment

		15 —	VCC
MIDI_in —	14	13 —	JOYA4
JOYB4 —	12	11 —	JOYA2
JOYB2 —	10	9 —	GND
MIDI_out —	8	7 —	GND
JOYB1 —	6	5 —	JOYA1
JOYB3 —	4	3 —	JOYA3
VCC —	2	1 —	VCC
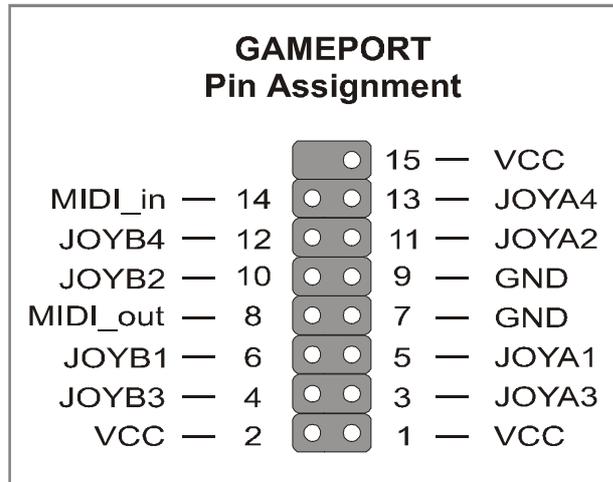
E. Other Connections

1. Standard Infrared (SIRCON)

Plug the 5-pin infrared device cable to the SIRCON header.
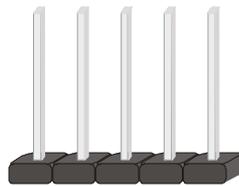
This will enable the infrared transfer function. This Motherboard meets both the ASKIR and HPSIR specifications.

Please install according to the following pin assignment:

Standard Infrared
(SIRCON) Connector
SIRCON Pin Assignment

1 2 3 4 5

VCC — IRRX GND IRTX
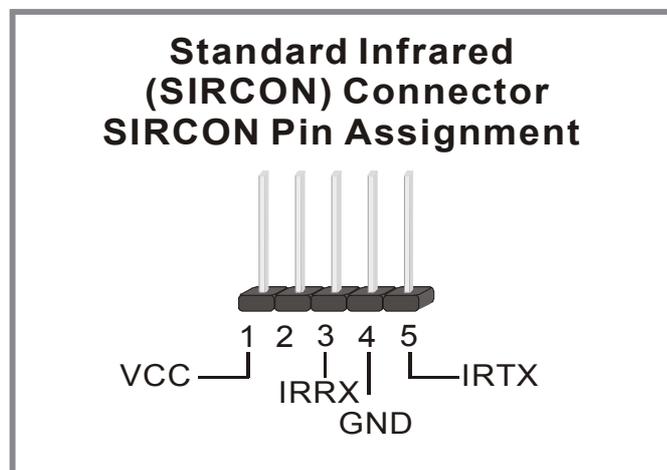
2. Cooling Fan Installation
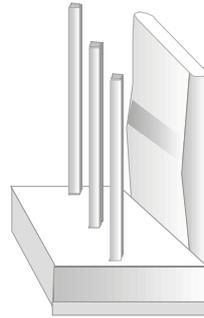
(1) CPU Cooling Fan (CPUFAN1, CPUFAN2)

After you have seated the CPU properly on the processor, attach the 3-pin fan cable to the CPUFAN connector on the Motherboard.

To avoid damage to the system, install according to the following pin assignment:
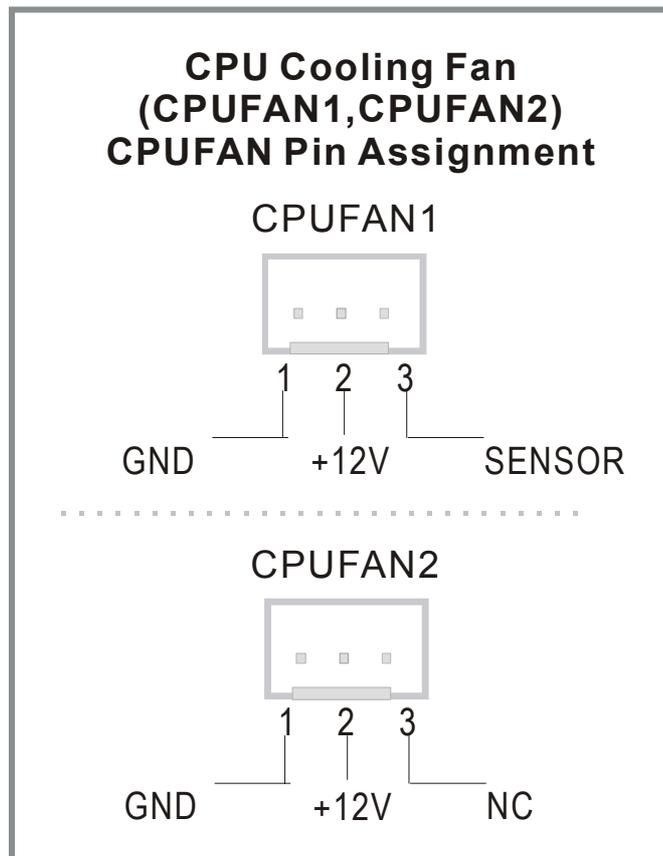
(2) Chassis Cooling Fan (CHAFAN1, CHAFAN2, CHAFAN3)

Some chassis also feature a cooling fan. This Motherboard features a CHAFAN connector to provide 12V power to the chassis fan. Connect the cable from the chassis fan to the CHAFAN 3-pin connector. Install according to the following pin assignment:

**Chassis Cooling Fan
(CHAFAN1,CHAFAN2,CHAFAN3)
CHAFAN Pin Assignment**

CHAFAN1

3 —— SENSOR
2 —— +12V
1 —— GND

CHAFAN2

GND —— 1
+12V —— 2
NC —— 3

CHAFAN3

1 2 3
GND   +12V   NC
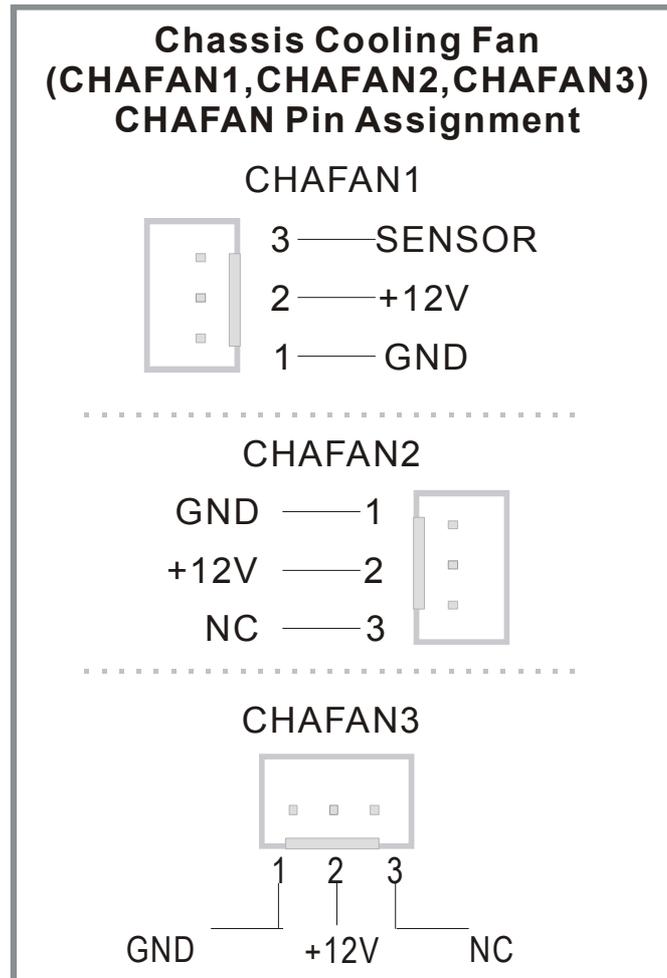
Note: CPU cooling fan must be installed to prevent the CPU from overheating and ensure system stability. Chassis cooling fan is optional, depending on whether there is cooling fan in your chassis.

3. Smart Card Reader

The smart card reader conforms to the PC/SC Working group standard, and has the following lay-out:

```
            SMCARD
         Pin Assignment

    NC — 14  [O O]  13 — NC
 Scrpres — 12  [O O]  11 — GND
   Scrio — 10  [O O]   9 — NC
    NC —  8  [O O]   7 — CLK
   RST —  6  [O O]   5 — Scrfet
    NC —  4  [O O]   3 — NC
    NC —  2  [O O]   1 — VCC
```
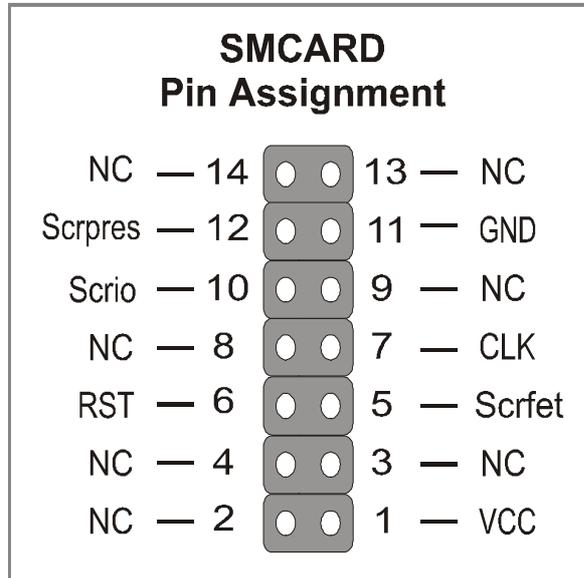
4. CD Line-in (CDIN)

This Motherboard provides one CD Line-in connector. Please connect the 4-pin audio cable from your CD-ROM or DVD ROM drive to CDIN.

Please install according to the following pin assignment:

```
      CDIN (CD Line-in)
        Pin Assignment

      [ ▢  ▢  ▢  ▢ ]

        4   3   2   1

      Right     GND
            GND     Left
```
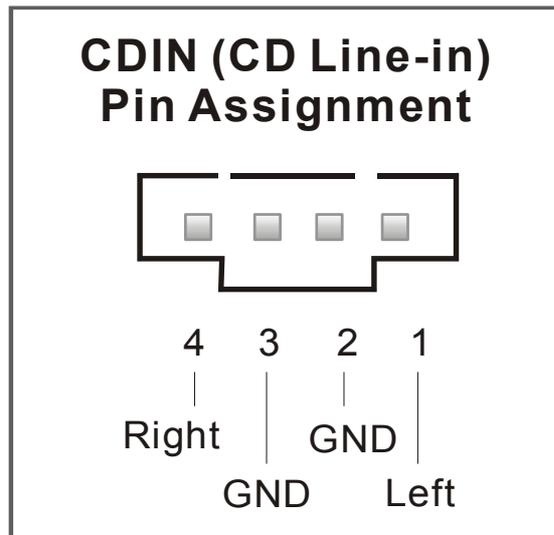
5. AUX-IN (AUXIN)

This Motherboard provides one AUX-IN connector. Please connect the 4-pin audio cable from your second CD-ROM or DVD ROM drive to AUX-IN. Please install according to the following pin assignment:

```
            AUXIN
        Pin Assignment

         ┌──┐ ┌──┐
       ┌─┤  ├─┤  ├──┐
       │  ■   ■   ■   ■  │
       └──┐          ┌──┘
          └──────────┘

         4    3    2    1
         │    │    │    │
       Right      GND
              GND      Left
```
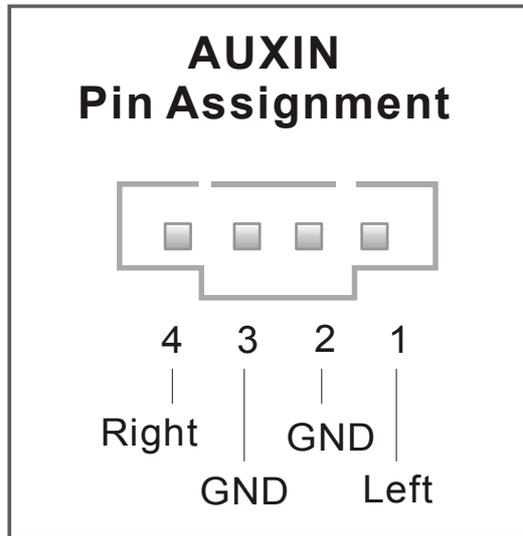
6. MIC & LED Connector (J30)

You can connect the Line-out /MIC in/LAN LED to the front panel of your PC case (If this option is available in your PC case). This connector has the following pin assignment:

```
     MIC & LED Connector (J30)
          Pin Assignment

    ACTLED      Out_R
         │  MIC  │   Out_L
         │   │   │    │
         7   5   3    1
       ┌───┬───┐ ┌───┬───┐
       │ ○   ○ │ │ ○   ○ │
       │ ○   ○ │ │ ○   ○ │
       └───┴───┘ └───┴───┘
         8   6   4    2
         │   │   │    │
            GND     GND
      3.3VSB    GND
```
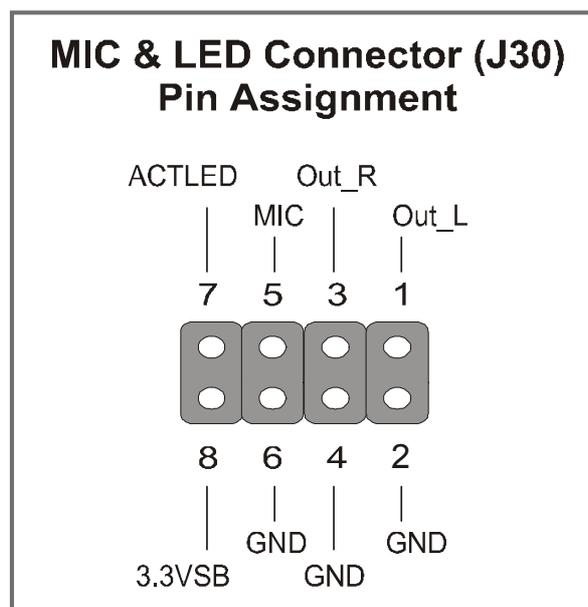
7. SPK5

Connect the end of the SPDIF Audio connector card cable to the SPK5 connector on the motherboard.

Please refer to C-Media sound solution for more information on the AUDIO function.
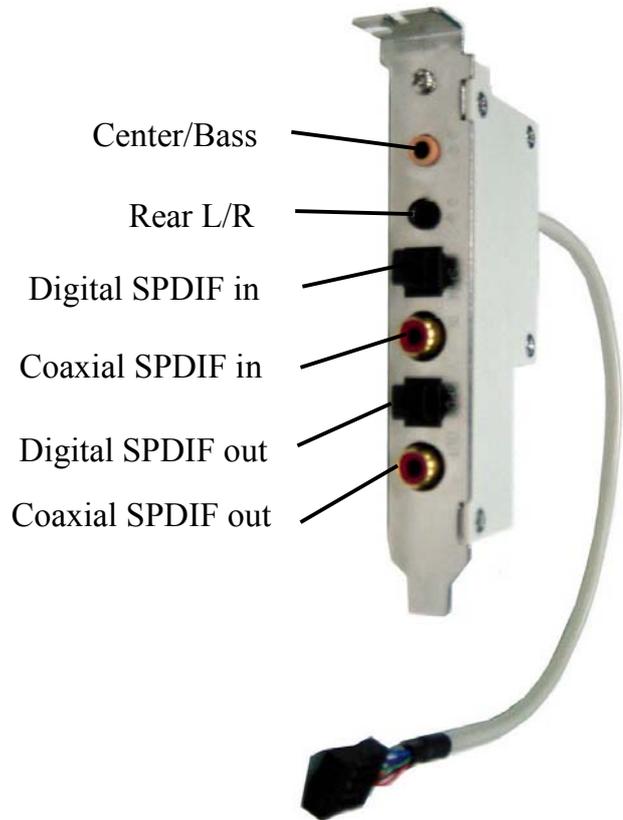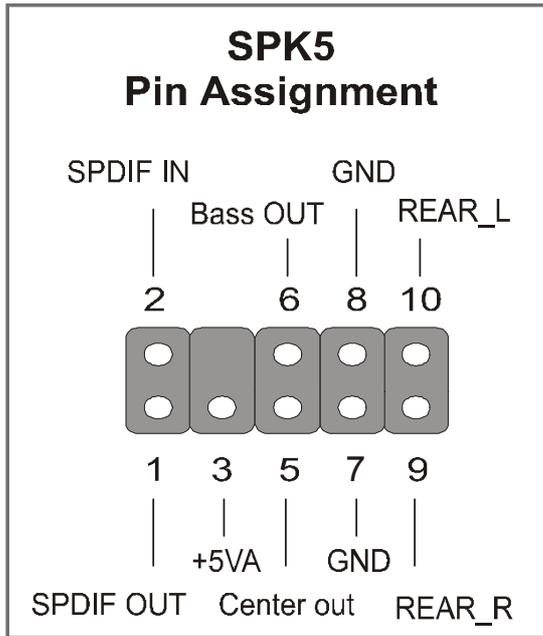
Note: Some 5.1 speakers have different center/base assignment. Please use the C-media Multi-Channel Audio demo software to check if sounds coming from the center/base speaker are correct. Adjust JP30 accordingly if not.

8. IEEE 1394 (Firewire) Connector (FW1/FW2)

This motherboard provides 3 IEEE 1394 ports for your Firewire devices. Standard drivers are supplied with the operating system for commonly used Firewire devices.

FW1 and FW2 are available. You can connect them to a 1394 bracket or Σ BOX to use them. The layout out of the FW1 and FW2 Firewire connector is as follows:

FW1 Pin Assignment

CGND — 10		5 — PWR0
PWR0 — 9		
B0MC — 8		3 — B0PC
CGND — 7		2 — GND
A0MC — 6		1 — A0PC

FW2 Pin Assignment

CGND — 10		5 — PWR1
PWR1 — 9		
B1MC — 8		3 — B1PC
CGND — 7		2 — GND
A1MC — 6		1 — A1PC
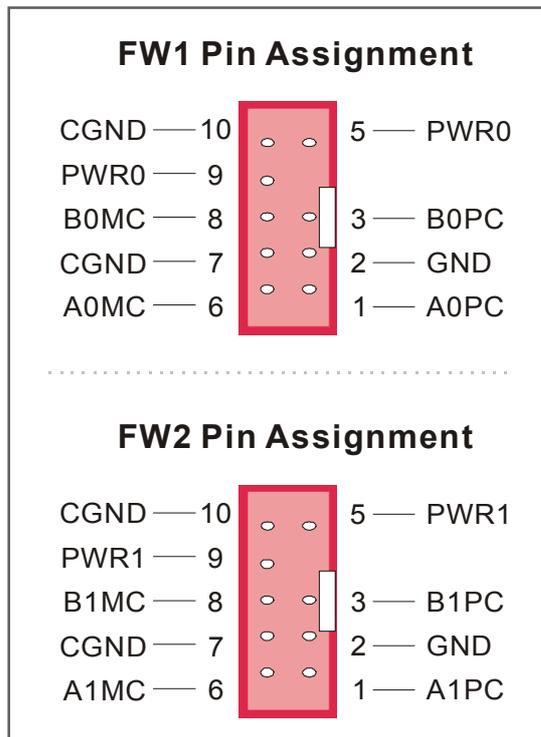
F. ATX12V Power Supply

The power supply connector is the last connection to be made when installing a motherboard. This motherboard requires an ATX 12V power supply. AT or ATX power supplies cannot be used. We recommend a power supply of at least 350W, or 400W under full loading.

Steps:

1. Connect the 20 pin connector to the ATX power connector. See FIG. 1.

2. Connect the 4 pin connector to the +12V power connector. See FIG. 2.

ATX Power

+12V Power Connector
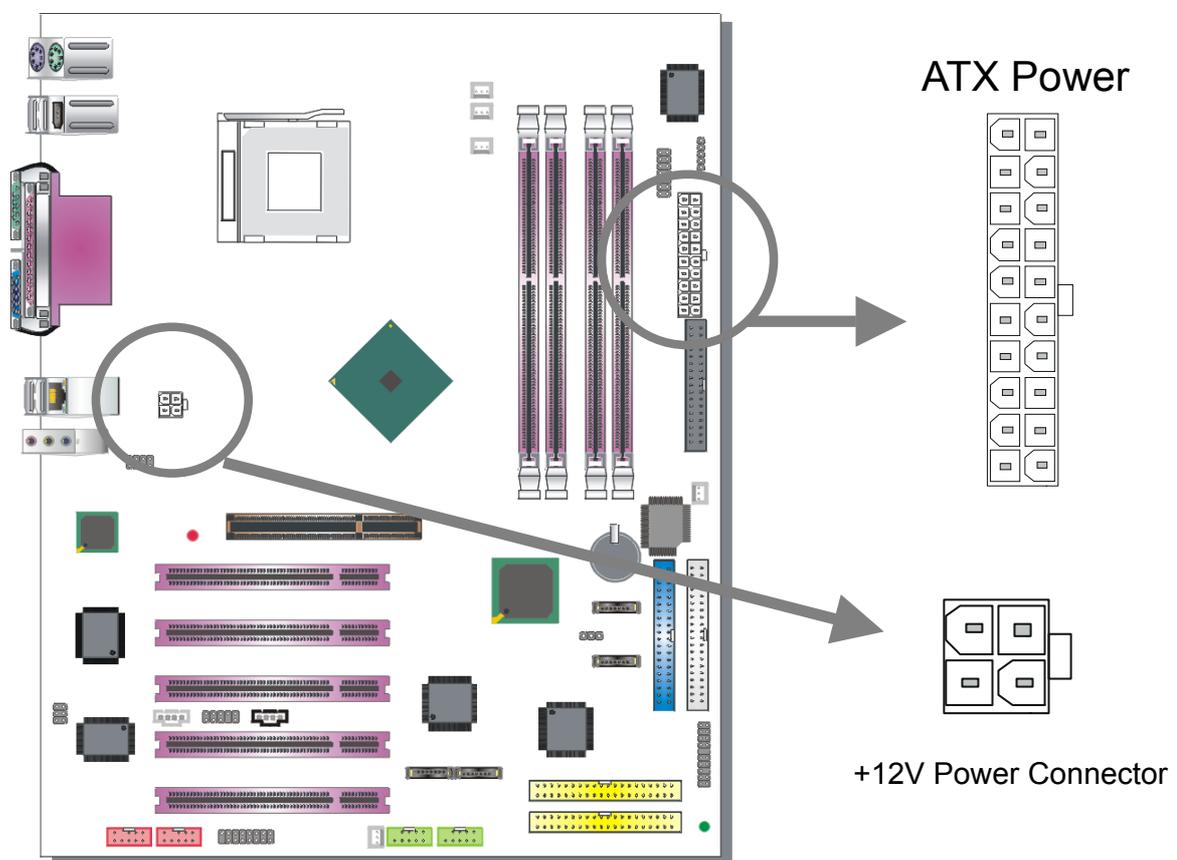
Note 1: The presence of the +12V power connector indicates that a power supply is ATX12V; the absence of the +12V power connector indicates that a supply is ATX.

Note 2: When using the Power-On by Keyboard function, please make sure the ATX 12V power supply is able to provide at least 1220mA on the 5V Standby lead (5VSB).

Note 3: The minimum recommended wattage is 400W for a fully loaded system or 350W for a minimally loaded system, the system might become unstable if power supply is not enough

Note 4: The 4 pin ATX 12V must be connected to the motherboard. Without this connector, the system cannot boot.

Please install the ATX 12V power according to the following pin assignment:

ATX Power

12V		5V
5VSB		5V
PW-OK		-5V
GND		GND
5V		GND
GND		GND
5V		PS-ON
GND		GND
3.3V		-12V
3.3V		3.3V
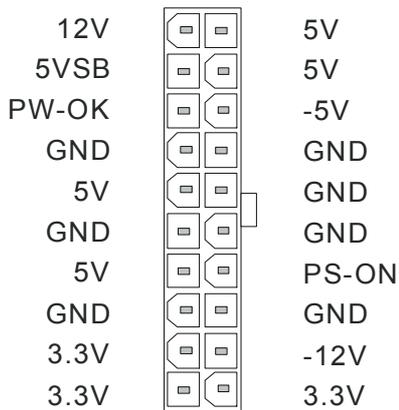
➤ **Pay special care to the directionality.**

FIG. 1

Pin1   Pin3

COM   +12VDC
COM   +12VDC

+12V Power Connector

FIG. 2

G. Center & Bass Select Connector (JP30)

**Center & Bass Select Connector
(JP30) Pin Assignment**

Center — 1	○ ○	2 — Bass
Center out — 3	○ ○	4 — Bass out
Bass — 5	○ ○	6 — Center
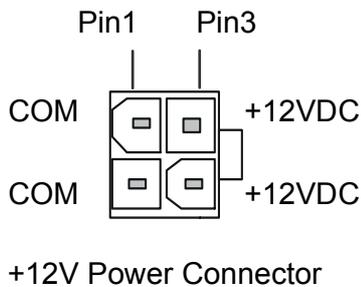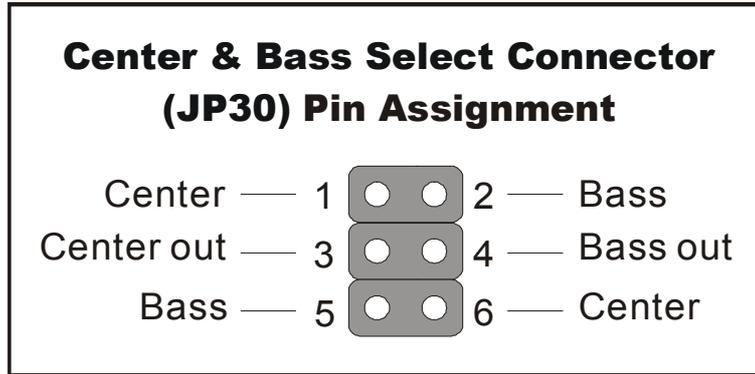
The 4 pin block jumper can be set to 1,2,3,4 or 3,4,5,6. The position this jumper block should be set to depends on your speakers. If during usage you find that your center and base channels are swapped set this jumper to the other position.

Center & Bass select	Normal	Reverse (Default)
JP30 Setting	Short pin 1-3/2-4	Short pin 3-5/4-6
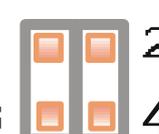
H. CMOS Clear (JP5)

CMOS Clear (JP5)
Pin Assignment

3   2   1

GND   RTC   NC
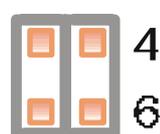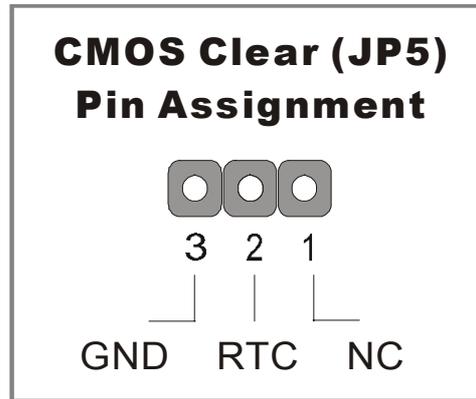
In some cases the CMOS memory may contain wrong data, follow the steps below to clear the CMOS memory.

1. Clear the CMOS memory by momentarily shorting pin 2-3 on jumper JP5. This jumper can be easily identified by its white colored cap.
2. Then put the jumper back to 1-2 to allow writing of new data into the CMOS memory.

CMOS Clearing	Clear CMOS Data	Retain CMOS Data
JP5 Setting	Short pin 2-3 for at least 5 seconds to clear the CMOS 1 2 3	Short pin 1-2 to retain new settings 1 2 3
Note: You must unplug the power cable from your power supply connector when performing the CMOS Clear operation.		
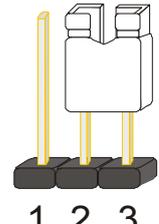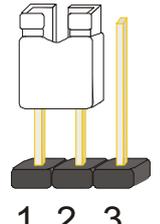
Onboard LAN LED Definition

When this LED is lit, this means the LAN is running at 100 mbps, if it is not lit, the Onboard LAN is working at 10 mbps.
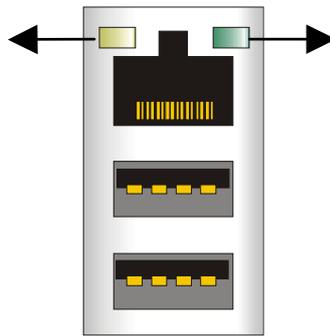
This is the LAN activity LED. It will blink when it is active.

Step 5 Power On

You have now completed the hardware installation of your Motherboard successfully.

1. Turn the power on

2. To enter the BIOS Setup Utility, press the <DEL> key while the system is performing the diagnostic checks,

> *Note:* If you have failed to enter the BIOS Setup utility, wait until the boot up sequence is completed. Then push the RESET button and press <DEL> key again at the beginning of boot-up, during diagnostic checks.

Repeat this operation until you get the following screen.

3. The BIOS Setup screen appears:

Phoenix – Award BIOS CMOS Setup Utility	
▸ SOYO COMBO Feature	▸ PC Health Status
▸ 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
Esc : Quit	↑↓→ : Select Item
F10 : Save & Exit Setup	
Change CPU's Clock & Voltage	

2-3 QUICK BIOS SETUP

This Motherboard does not use any hardware jumpers to set the CPU frequency. Instead, CPU settings are software configurable with the BIOS **[SOYO COMBO FEATURE].** The [SOYO COMBO FEATURE] combines the main parameters that you need to configure, all in one menu, for a quick setup of the BIOS.

After the hardware installation is complete, turn the power switch on, then press the **<DEL>** key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will be shown on the screen. Then, follow these steps to configure the CPU settings.

Step 1.   Select [STANDARD CMOS SETUP]

Set [Date/Time] and [Floppy drive type], then set [Hard Disk Type] to "Auto".

Step 2.   Select [LOAD OPTIMIZED DEFAULTS]

Select the "LOAD OPTIMIZED DEFAULTS" menu and type "Y" at the prompt to load the BIOS optimal setup.

Step 3.   Select [SOYO COMBO FEATURE]

Set the **[CPU Frequency Select]** field to "Manual", to be able to change the CPU frequency 1 MHz stepping.

Step 4.   Select [SAVE & EXIT SETUP]

Press <Enter> to save the new configuration to the CMOS memory, and continue the boot sequence.

You are now ready to configure your system with the BIOS setup program. Go to *Chapter 3: BIOS SETUP*

Chapter 3

BIOS SETUP UTILITY

This Motherboard's BIOS setup program uses the ROM PCI BIOS program from Award Software Inc.

To enter the Award BIOS program's Main Menu:

1.　Turn on or reboot the system.
2.　After the diagnostic checks, press the [Del] key to enter the Award BIOS Setup Utility.

Phoenix – Award BIOS CMOS Setup Utility	
▶ SOYO COMBO Feature	▶ PC Health Status
▶ 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
Esc : Quit F10 : Save & Exit Setup	↑↓→ : Select Item
Change CPU's Clock & Voltage	

Selecting items

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

●　From the Main Menu press arrow keys to enter the selected submenu.
Modifying selected items

●　Use the [Up]/[Down] keys to modify values within the selected fields. Some fields let you enter values directly, others will let you press Enter then select the value.

Hot Keys: Function keys give you access to a group of commands throughout the BIOS utility.

Function	Command	Description
F1	General Help	Gives the list of options available for each item.
F5	Previous Values	Restore the old values. These are the values that the user started the current session with.
F6	Load Fail-Safe Defaults	Loads all items with the most conservative values.
F7	Load Optimized Defaults	Loads all options with the optimize values.
F10	Save	Saves your changes and reboots the system.
[Esc]	Exit	Return to the previous menu.
[Enter]	Select	Will display a overlapping window with all options for the current item.
[+/–/PU/PD]	Value	Using the +, –, Page Up and Page Down keys the user can toggle the value of the current item.

SAVE AND EXIT SETUP

Select the [SAVE & EXIT SETUP] option from the Main Menu to save data to CMOS and exit the setup utility. This option saves all your changes and causes the system to reboot.

```
                    ROM  PCI/ISA BIOS
                 CMOS SETUP UTILITY
                 AWARD SOFTWARE, INC.
STANDARD CMOS SETUP              INTEGRATED PERIPHERALS
BIOS F
CHIPS
POWE        SAVE to CMOS and EXIT (Y/N)?
PNP/P
LOAD
LOAD BIOS DEFAULTS

Esc  : Quit                        ↑ ↓ → ←   : Select Item
F10  : Save & Exit Setup         (Shift) F2  : Change Color
                 Time, Date, Hard Disk Type...
```
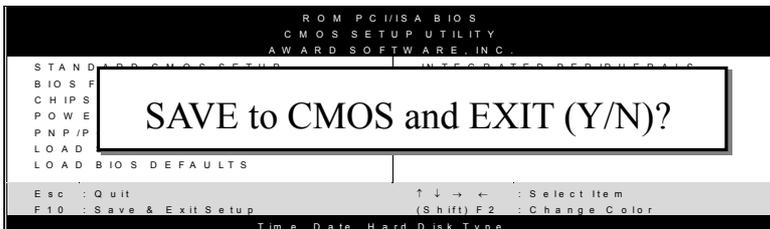
Type [Y] to save the changes and exit or [N] to return to the Main Menu and keep current values.

EXIT WITHOUT SAVING

Selecting the [EXIT WITHOUT SAVING] option allows you to abandon all changes and exit setup.

```
                    ROM  PCI/ISA BIOS
                 CMOS SETUP UTILITY
                 AWARD SOFTWARE, INC.
STANDARD CMOS SETUP              INTEGRATED PERIPHERALS
BIO                              SUPERVISOR PASSWORD
CH
PO
PN         Quit Without Saving (Y/N)?
LO
LO

Esc  : Quit                        ↑ ↓ → ←   : Select Item
F10  : Save & Exit Setup         (Shift) F2  : Change Color
                 Time, Date, Hard Disk Type...
```
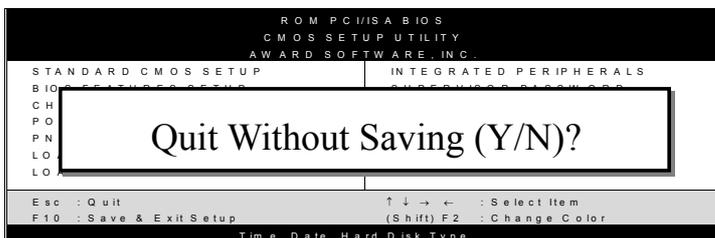
Type [Y] to abandon changes and exit or [N] to return to the Main Menu and keep current values.

3-1 SOYO COMBO FEATURE

This motherboard does not use any hardware jumpers to set the CPU frequency. Instead, CPU settings are software configurable with the BIOS **[SOYO COMBO Feature].**

After the hardware installation is complete, turn the power switch on, then press the <DEL> key during the system diagnostic checks to enter the Award BIOS Setup program. The CMOS SETUP UTILITY will display on screen. Then, select the [SOYO COMBO Feature] option from the main menu and press the <Enter> key.

```
        Phoenix – Award BIOS CMOS Setup Utility
                  SOYO COMBO Feature

   System Performance        Normal          Item Help
   CPU Clock Ratio           13X

   CPU Frequency Select      Auto          Menu Level  ▶
 x Frequency 1MHz Stepping   100MHz
   Async AGP/PCI CLK         Disabled
   DRAM:CPU Ratio            Auto
   DRAM Frequency            333 MHz
   Quick Power On Self Test  Enabled
   C.I.H. 4-WAY Protection   Disabled

   CPU Vcore Select          Default
   DDR Voltage Select        Default
   AGP Voltage Select        Default

 ▶ Advanced DRAM Control     Press Enter
 ▶ Onboard Device            Press Enter
 ▶ OnChip IDE Device         Press Enter

 ▶ Boot Device Order         Press Enter

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

The [SOYO COMBO Feature] menu combines the main parameters that you need to configure, all in one menu, for a quick setup in BIOS.

System Performance

	Setting	Description	Note
System Performance	Normal	Adjust your computer's performance.	Default
	Fast		
	Turbo		

SOYO COMBO Feature

	Setting	Description	Note
CPU Clock Ratio	8X~ 50X	The available CPU ratio you can select will depends on your CPU ID.	
CPU Frequency Select	Manual	Choose the pre-defined CPU frequency setting or auto for auto detecting your CPU frequency. For experienced overclocker, set the field to "Manual" and use the CPU Freq. by 1 MHz stepping manual to overclock the CPU. Don't forget to set the correct CPU to PCI divider.	Default
	Auto		
Frequency 1MHz Stepping	100 ~ 255	Press "Page Up" / "Page Down" key to overclock the CPU Front Side Bus in 1MHz increment or Press "Enter" key, then type the desired CPU Front Side Bus.	
Async AGP/PCI CLK	Disabled	Allows you to set your AGP/PCI clock regardless of what your FSB and memory are.	Default
	66/33 MHz		
	73/36 MHz		
	80/40 MHz		
DRAM:CPU Ratio	Auto	Choose the pre-defined DRAM frequency setting or auto for experienced overclocker, set the field to "x1.33" or "x1.25" DRAM frequency.	Default
	x1.33		
	x1.25		
DRAM Frequency		This item shows you the DRAM frequency.	

SOYO COMBO Feature (Continue)

	Setting	Description	Note
Quick Power On Self Test	Disabled		
	Enabled	Provides a fast POST at boot-up.	Default
C.I.H. 4-WAY Protection	Enabled	This item allows you write-protect your BIOS chip. If you want to flash your BIOS, set this option to disabled. Write protecting your BIOS protects you against some viruses.	
	Disabled		Default

Voltage Select

	Setting	Description	Note
CPU Vcore Select	Default	This function allows you to adjust the CPU voltage.	Default
	1.600		
	1.550		
	1.500		
	1.450		
	1.400		
	1.350		
	1.300		
DDR Voltage Select	Default	This function allows you to adjust the DDR voltage.	Default
	2.9V		
	2.8V		
	2.7V		
AGP Voltage Select	Default	This function allows you to adjust the AGP voltage.	Default
	1.8V		
	1.7V		
	1.6V		

3-1.1 Advanced DRAM Control

Caution: Change these settings only if you are already familiar with DRAM timing parameters.

The [Advanced DRAM Control] option changes the values of the chipset registers. These registers control the timings of your memory.

```
          Phoenix – Award BIOS CMOS Setup Utility
                   Advanced DRAM Control

    DRAM Timing Selectable     By SPD
  x CAS Latency Time           2.5               Item Help
  x Active to Precharge Delay  7
  x DRAM RAS# to CAS# Delay    4         Menu Level  ▶
  x DRAM RAS# Precharge        4
    Refresh Mode Select        Auto


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

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

CHIPSET FEATURES SETUP

	Setting	Description	Note
DRAM Timing Selectable	By SPD	If enable the DRAM will auto detect the DRAM timing.	Default
	Manual		
CAS Latency Time	1.5	This item allows you to control the DRAM CAS Latency time.	
	2		
	2.5		Default
	3		
Active to Precharge Delay	5	This item allows you to control the DRAM Percharge Delay time.	
	6		
	7		Default
	8		

CHIPSET FEATURES SETUP (Continue)

	Setting	Description	Note
DRAM RAS# to CAS# Delay	2	This item allows you to control DRAM RAS to CAS delay time.	
	3		
	4		Default
DRAM RAS# Precharge	2	This item allow you to control DRAM RAS percharge time.	
	3		
	4		Default
Refresh Mode Select	7.8 us	This item allows you to set the interval between consecutive refresh cycles.	
	15.6 us		
	64 us		
	Auto		Default

3-1.2 Onboard Device

The [Onboard Device] option allows you to select which devices you want to enable and which you want to disable in your computer.
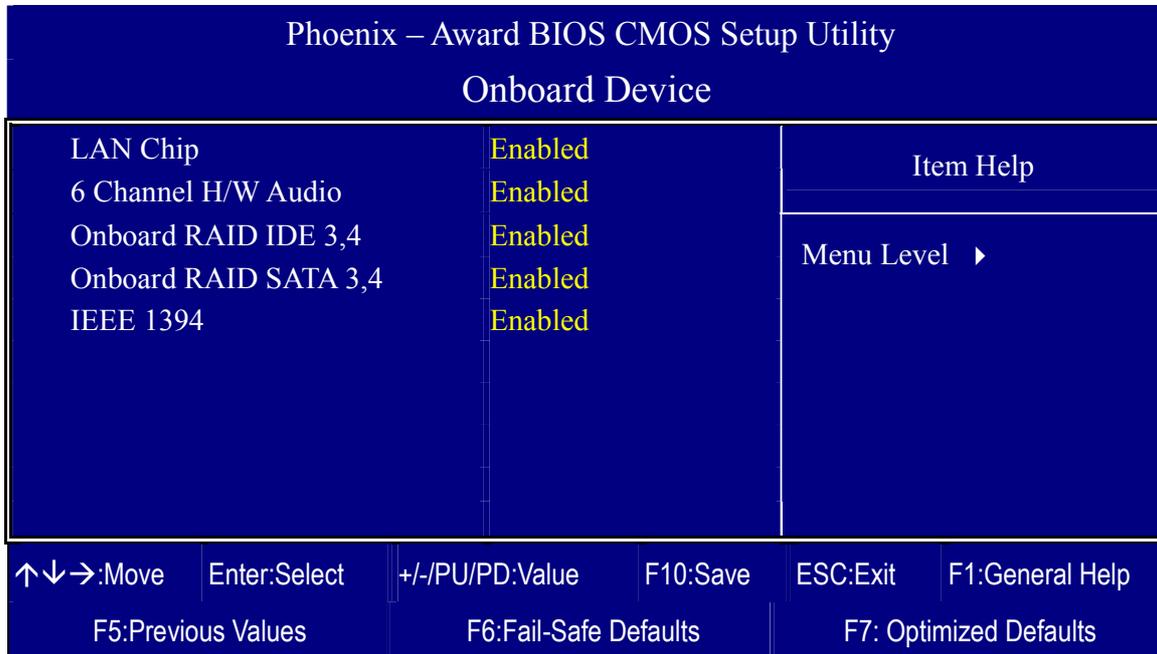
```
           Phoenix – Award BIOS CMOS Setup Utility
                        Onboard Device

  LAN Chip                    Enabled              Item Help
  6 Channel H/W Audio         Enabled
  Onboard RAID IDE 3,4        Enabled
  Onboard RAID SATA 3,4       Enabled        Menu Level    ▶
  IEEE 1394                   Enabled




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

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

Onboard Settings

	Setting	**Description**	**Note**
LAN Chip	Enabled	This setting allows you to enabled or disabled onboard LAN.	Default
	Disabled		
6 Channel H/W Audio	Enabled	This setting allows you to enabled or disabled onboard 6Ch H/W Audio.	Default
	Disabled		
Onboard RAID IDE 3,4	Enabled	This setting allows you to enabled or disabled onboard IDE RAID.	Default
	Disabled		

Onboard Settings (Continue)

	Setting	Description	Note
Onboard RAID SATA 3,4	Enabled	This setting allows you to enabled or disabled onboard SATA (Silicon Image Sil3112). **Note:** That if onboard IDE RAID is disabled, this setting is also disabled.	Default
	Disabled		
IEEE 1394	Enabled	This setting allows you to enabled or disabled onboard IEEE1394.	Default
	Disabled		

3-1.3   OnChip IDE Device

STOP *Caution:* Change these settings only if you are already familiar with the IDE settings.

The [OnChip IDE Device] option changes the settings of the 82801EB (ICH5) IDE controller. These settings do not influence the HighPoint 372N or Silicon Image Sil3112 controllers.

The following screen shows setup default settings.

```
              Phoenix – Award BIOS CMOS Setup Utility
                         OnChip IDE Device

    IDE 1,2 /SATA 1,2          IDE only
    IDE HDD Block Mode         Enabled                Item Help
    IDE DMA transfer access    Enabled
    On-Chip Primary   PCI IDE  Enabled        Menu Level  ▶
    IDE Primary Master PIO     Auto           [Disabled]: Disabled SATA
    IDE Primary Slave PIO      Auto           Controller.
    IDE Primary Master UDMA    Auto           [Auto]: Auto arrange by
    IDE Primary Slave UDMA     Auto           BIOS.
    On-Chip Secondary PCI IDE  Enabled        [Combined Mode]: PATA
    IDE Secondary Master PIO   Auto           and SATA are combined.
    IDE Secondary Slave PIO    Auto           Max. of 2 IDE drives in each
    IDE Secondary Master UDMA  Auto           channel.
    IDE Secondary Slave UDMA   Auto           [Enhanced Mode]: Enable
                                              both SATA and PATA. Max.
                                              of 6 IDE drives are
      *** On-Chip Serial ATA Setting ***      supported.
                                              [SATA Only]: SATA is
    On-Chip Serial ATA         Disabled       operating in legacy mode.
  x Serial ATA Port0 Mode      Primary Master
  x Serial ATA Port1 Mode      Primary Slave


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

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

CHIPSET FEATURES SETUP

	Setting	Description	Note
IDE 1,2 /SATA 1,2	IDE only	Only enabled IDE1,2. SATA1,2 are disabled	Default
	SATA only	Only enable SATA1,2. IDE1,2 are disabled.	
	Pri IDE+SATA	IDE1 and SATA1,2 are enabled. IDE2 is disabled.	
	SATA+Sec IDE	IDE2 and SATA 1,2 are enable. IDE1 is disabled.	
	IDE + SATA	IDE1,2 AND sata1,2 are all enabled.	
	Manual	Manually select which IDE ports to enabled.	
IDE HDD Block Mode	Disabled		
	Enabled	Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.	Default
IDE DMA transfer access	Enabled	This option allows the 82801EB (ICH5)'s IDE controller to directly transfer data to memory without intervention or the CPU if enabled.	Default
	Disabled		

IDE Device Controls

	Setting	Description	Note
On-Chip PCI IDE ➢ **Primary** ➢ **Secondary**	Disabled	Turn off the on-board IDE	
	Enabled	Use the on-board IDE	Default
IDE ➢ **Primary Master PIO** ➢ **Primary Slave PIO** ➢ **Secondary Master PIO** ➢ **Secondary Slave PIO**	mode 0-4	0 is the slowest speed 4 is the fastest speed	
	Auto	For better performance and stability, we suggest you use the Auto setting to set the HDD control timing.	Default
IDE ➢**Primary Master UDMA** ➢**Primary Slave UDMA** ➢**Secondary Master UDMA** ➢**Secondary Slave UDMA**	Disabled		
	Auto	Select auto to autodetect UDMA support, or disabled to use DMA/PIO.	Default

3-1.4 Boot Device Order

The [Boot Device Order] option allows you to change the order in which your system scans for devices to boot from.

Note: That SATA 1 and SATA 2 are not bootable.

```
         Phoenix – Award BIOS CMOS Setup Utility
                    Boot Device Order
```

		Item Help
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS120	Menu Level ▶
Boot Other Device	Enabled	
Other Device Boot Order	IDE3/IDE4,SCSI	Allows the system to skip certain tests while booting. This will decrease the time needed to boot the system.

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

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

System Boot Control Settings

	Setting	Description	Note
First /Second/Third Boot Device	Floppy LS120 IDE1/SATA1 CDROM ZIP100 Other Device Disabled	Selects the order in which your system scans for devices to boot from (First the first boot device, then the second, etc…). For booting from the HighPoint 372N or Silicon Image Sil3112 controller, set this option to SCSI).	
Boot Other Device	Disabled	Selects if the system should try to find any other bootable devices if the first, second and third boot device cannot be booted from.	
	Enabled		Default
Other Device Boot Order	IDE3/IDE4,SCSI	Selects whether your system should first try to boot from any PCI SCSI or ATA controllers (SCSI) or first from the on booted SATA/ATA controllers.	Default
	SCSI,IDE3/IDE4		
	SATA3/SATA4,SCSI		

3-2 STANDARD CMOS SETUP

Select the [STANDARD CMOS SETUP] option from the Main Menu and press [Enter] key.

Phoenix – Award BIOS CMOS Setup Utility
Standard CMOS Features

		Item Help
Date (mm:dd:yy)	Fri, Mar 7 2003	Menu Level ▶
Time (hh:mm:ss)	2 : 30 : 20	
▶ IDE Primary Master	None	Change the day, month, year and century.
▶ IDE Primary Slave	None	
▶ IDE Secondary Master	None	
▶ IDE Secondary Slave	None	
Drive A	1.44M, 3.5 in.	
Floppy 3 Mode Support	Disabled	
Video	EGA/VGA	
Halt On	All Errors	
Base Memory	640K	
Extended Memory	326656K	
Total Memory	327680K	

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

This screen allows you to modify the basic CMOS settings.

After you have completed the changes, press [Esc] key to return to the Main Menu.

Date & Time

	Display	Setting	Please Note
Date	mm/dd/yyyy	Type the current date	You can also the PUp/PDn keys to toggle
Time	hh:mm:ss	Type the current time	24-hour clock format 3:15 PM is displayed as 15:15:00

Hard Disks Type & Mode

Choose the type and mode for the hard disks that you have already installed.

	Setting	Description	Note
IDE HDD Auto-Detection	Press Enter	To auto-detect the HDD's cylinders, head, sectors and size on this channel	
IDE Primary Slave (User Type)	Auto	BIOS detects hard disk type automatically.	Default
	User	User defines the type of hard disk.	
	None		
Access Mode	Auto	BIOS detects hard disk mode automatically.	Default
	CHS	Normal IDE hard disk	<528MB
	LBA	Enhanced IDE hard disk	>528MB
	Large	Large IDE hard disk (for certain hard disks)	

> *Note:* If you have any questions on your hard disk type or mode, ask your hard disk provider or previous user for details.

Floppy Drives

	Setting	Description	Note
Drives A	360KB, 5.25 in.		
	1.2MB, 5.25 in.		
	720KB, 3.5 in.		
	1.44MB, 3.5 in.		Default
	2.88MB, 3.5 in.		
	None	Not installed	
Floppy 3-Mode Support	Disabled		Default
	Drive A	Supports 3-mode floppy diskette: 740KB/1.2MB/ 1.44MB on selected disk drive.	Special disk drive commonly used in Japan

Others Optional

	Setting	Description	Note
Video	EGA/VGA	Select the video mode, supported by your VGA Card and memory.	Default
	CGA 40		
	CGA 80		
	MONO (Monochrome)		
Halt On	ALL Errors	When the BIOS detects system errors, this function will stop the system. Select which type of error will cause the system halt.	Default
	No Errors		
	All, But Keyboard		
	All, But Diskette		
	All, But Disk/Key		

3-3 ADVANCED BIOS FEATURES

Select the [Advanced BIOS Features] option from the Main Menu and press [Enter] key.

Phoenix – Award BIOS CMOS Setup Utility		
Advanced BIOS Features		
Virus Warning	Disabled	**Item Help**
CPU L1 & L2 Cache	Enabled	
CPU L2 Cache ECC Checking	Enabled	Menu Level ▶
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
x Typematic Rate (Chars/Sec)	6	
x Typematic Delay (Msec)	250	
Security Option	Setup	
APIC Mode	Enabled	
MPS Version Control For OS	1.1	
OS Select For DRAM > 64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
Report No FDD For WIN 95	No	
Full Screen LOGO Show	Enabled	
EPA LOGO SELECT	LOGO-0	
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		

After you have completed the changes, press [Esc] key and follow the instructions on your screen to save your settings or exit without saving.

Virus Warning

	Setting	Description	Note
Virus Warning	Disabled	Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep. Sound a warning beep.	Default
	Enabled		

Cache Memory Options

	Setting	Description	Note
CPU L1 & L2 Cache	Disabled	Because the CPU is faster than memory, the CPU after has to wait to complete memory access. By enabling L2 caching you will let the CPU write or read first from a very fast internal memory (the CPU cache) before accessing main memory, thereby increasing the speed of your system. The CPU will automatically update main memories from the cache.	
	Enabled		Default
CPU L2 Cache ECC Checking	Enabled	Allows your CPU to check for ECC when transferring data from to the L2 cache some performance.	Default
	Disabled		

Boot Up Floppy Seek

	Setting	Description	Note
Boot Up Floppy Seek	Disabled	Seeks disk drives during boot up. Disabling speeds boot up.	
	Enabled		Default

Boot Up Num Lock Status

	Setting	Description	Note
Boot Up Num Lock Status	On	Numeric keypad in numeric mode at boot-up.	Default
	Off	Puts numeric keypad in arrow key mode at boot-up.	

Gate A20 Options

	Setting	Description	Note
Gate A20 Options	Normal	A pin in the keyboard controller controls GateA20.	
	Fast	Lets the chipset control GateA20.	Default

Typematic Settings

	Setting	Description	Note
Typematic Rate Setting	Disabled	Keystrokes repeat at a rate determined by the keyboard.	Default
	Enabled	When enabled , the typematic rate and typematic delay can be selected.	
The following [Typematic Rate] and [Typematic Delay] fields are active only if [Typematic Rate Setting] is set to [Enabled]			
Typematic Rate	6 (Char/sec) 8 (Char/sec) 10 (Char/sec) 12 (Char/sec) 15 (Char/sec) 20 (Char/sec) 24 (Char/sec) 30 (Char/sec)	Choose the rate at which a character is repeated when holding down a key.	Default
Typematic Delay	250 (msec) 500 (msec) 750 (msec) 1000 (msec)	Choose how long after you press a key down the character begins repeating.	Default

Security Option

Use this feature to prevent unauthorized system boot-up or use of BIOS Setup. The following table describes the security settings.

	Setting	Description	Note
Security Option	Setup	If a password is set, the password prompt only appears when you attempt to enter the BIOS Setup program.	Default
	System	If a password is set, prompt appears both when entering CMOS setup and during system POST.	
APIC Mode	Disabled	Enabled the Advanced Programmable Interrupt Controller (APIC) mode. On operating systems that support it you will have more IRQs available when enabled.	
	Enabled		Default
MPS Version Control for OS	1.1	Allows you to choose the Multi Processor Specification (MPS) version.	Default
	1.4		

Other Control Options

	Setting	Description	Note
OS Select for DRAM>64MB	OS2	When using an OS2 operating system.	
	Non-OS2	When using another, non-OS2 operating system.	Default
HDD S.M.A.R.T. Capability	Enabled	Enabled this field when your HDD supports the S.M.A.R.T. function. Consult your HDD provider for details.	
	Disabled		Default
Report No FDD For WIN 95	Yes	Windows will release IRQ line 6 (normally used by the Floppy Disk Drive) after you disable your on-board FDD and set this field to [Yes].	
	No	Windows will reserve INT 6 for your FDD, whether it is disabled or not.	Default

LOGO Show

	Setting	Description	Note
Full Screen LOGO Show	Disabled	Set Enabled to Show Logo (DRAGON).	
	Enabled		Default
EPA LOGO SELECT	LOG0	Allows user to display SOYO logo or own logo. Logo-0 shows SOYO logo, Logo-1 shows user logo.	Default
	LOG1		
Small Logo(EPA) Show	Disabled	Set Enabled to Show Logo(EPA).	
	Enabled		Default

3-4 ADVANCED CHIPSET FEATURES

Caution: Change these settings only if you are already familiar with the Chipset.

The [Advanced Chipset Features] option changes the values of the chipset registers. These registers control the system options in the computer.

Phoenix – Award BIOS CMOS Setup Utility		
Advanced Chipset Features		
System BIOS Cacheable	Disabled	Item Help
Video BIOS Cacheable	Disabled	
Delay Prior to Thermal	16 Min	Menu Level ▶
AGP Aperture Size (MB)	64	
Init Display First	AGP	
DRAM Data Integrity Mode	Non-ECC	
↑↓→ Move Enter : Select + / - / PU / PD : Value F10 : Save ESC : Exit F1: General Help		
F5 : Previous Values F6 : Fail - Safe Defaults F7 : Optimized Defaults		

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

The following table describes each field in the Advanced Chipset Features Menu and how to configure each parameter.

CHIPSET FEATURES SETUP

	Setting	Description	Note
System BIOS Cacheable	Disabled		Default
	Enabled	The ROM area F0000H-FFFFFH is cacheable.	
Video BIOS Cacheable	Disabled		Default
	Enabled	The video BIOS area at C0000H-C7FFFH is cacheable.	
Delay Prior to Thermal	4Min	Set the time for the system to decrease performance to avoid reaching maximum thermal temp. Ex. If you set it to 16 minutes the system will start decreasing the performance 16 minutes before reaching max thermal temp.	
	8Min		
	16Min		Default
	32Min		
AGP Aperture Size (MB)	256M	Select the size of Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the system memory address range dedicated for graphics memory address space. (for when your VGA card runs out of memory) Host cycles that hit the aperture range are forwarded to the memory without any translation.	
	128M		
	64M		Default
	32M		
Init Display First	PCI Slot	Choose which card – AGP Display card or PCI VGA card – to initialize first.	
	AGP		Default
DRAM Data Integrity Mode		Auto-Detect whether your DDR RAM is ECC or not.	

3-5 INTEGRATED PERIPHERALS

Caution: Change these settings only if you are already familiar with the Chipset.

The [INTEGRATED PERIPHERALS] option changes the values of the chipset registers. These registers control the system options in the computer. The following screen shows setup default settings.

Phoenix – Award BIOS CMOS Setup Utility		
Integrated Peripherals		
▶ Onboard USB Device	Press Enter	Item Help
▶ SuperIO Device	Press Enter	
		Menu Level ▶
↑↓→ Move Enter : Select + / - / PU / PD : Value F10 : Save ESC : Exit F1: General Help		
F5 : Previous Values F6 : Fail - Safe Defaults F7 : Optimized Defaults		
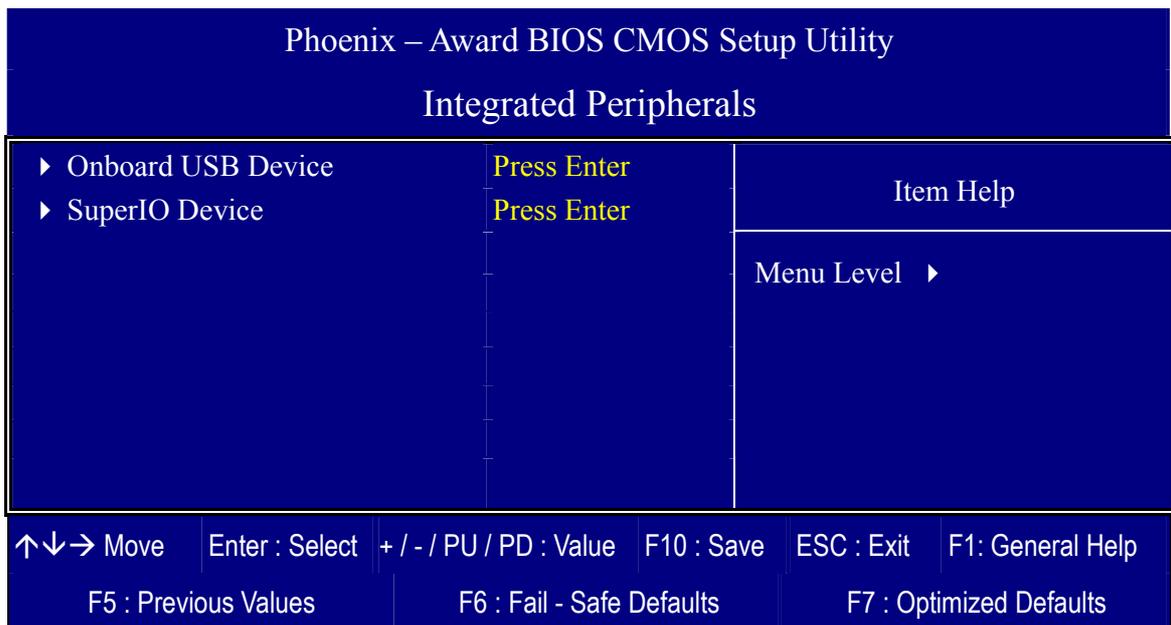
The following tables describe each field in the [INTEGRATED PERIPHERALS] Menu and provide instructions on how to configure the IDE controls, FDC controls, and the onboard serial and parallel ports.

3-5.1 Onboard USB Device

The [Onboard USB Device] option changes the values of the onboard USB controller.

The following screen shows setup default settings.
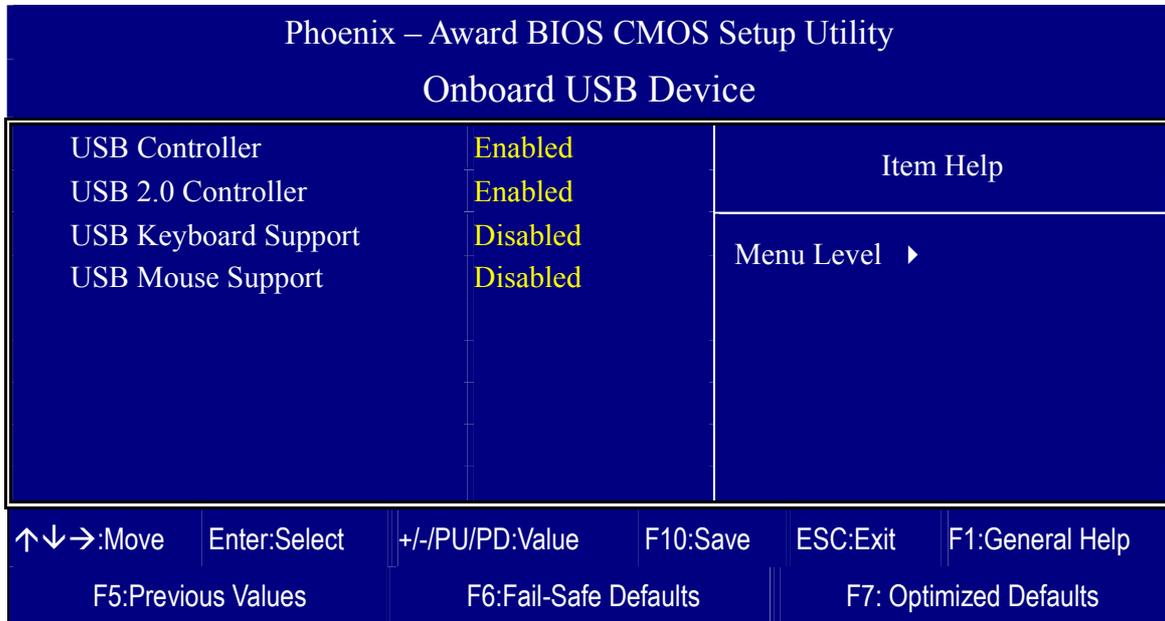
Phoenix – Award BIOS CMOS Setup Utility		
Onboard USB Device		
USB Controller	Enabled	Item Help
USB 2.0 Controller	Enabled	
USB Keyboard Support	Disabled	Menu Level ▶
USB Mouse Support	Disabled	
↑↓→:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5:Previous Values F6:Fail-Safe Defaults F7: Optimized Defaults		

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

Keyboard Controls

	Setting	Description	Note
USB Controller	Disabled		
	Enabled	Select *Enabled* if you want to use your onboard Universal Serial Bus (USB) controller and you have USB peripherals.	Default
USB 2.0 Controller	Disabled	Select Enabled if you have USB 2.0 peripherals.	
	Enabled		Default
USB Keyboard Support	Disabled	Select Enabled if you want to use USB Keyboard in DOS.	Default
	Enabled		
USB Mouse Support	Disabled	Select Enabled if you want to use USB Mouse in DOS.	Default
	Enabled		

3-5.2 SuperIO Device

STOP | *Caution:* Change these settings only if you are already familiar with the Chipset.

The [SuperIO Device] option changes the values of the Super I/O controller. The following screen shows setup default settings.

```
              Phoenix – Award BIOS CMOS Setup Utility
                          SuperIO Device

   POWER ON Function        BUTTON ONLY           Item Help
 x KB Power ON Password     Enter
 x Hot Key Power ON         Ctrl-F1          Menu Level   ▶
   Onboard FDC Controller   Enabled
   Onboard Serial Port 1    3F8/IRQ4
   Onboard Serial Port 2    2F8/IRQ3
   UART Mode Select         Normal
 x UR2 Duplex Mode          Half
   Onboard Parallel Port    378/IRQ7
   Parallel Port Mode       SPP
 x ECP Mode Use DMA         3
   PWRON After PWR-Fail     OFF

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

After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

Others Optional

	Setting	Description	Note
POWER ON Function	Password	Enables you to wake-up the system by entering a password on the keyboard.	
	Hot KEY	You can wake-up the system by pressing the key combination of your choice (Ctrl-F1~F12).	
	Mouse Move	Enables waking up the system by pressing either the right or left mouse button.	
	Mouse Click		
	Any KEY		
	BUTTON-ONLY	Disables the Wake-Up by Keyboard function.	Default
	Keyboard 98	Allows you to power on a system using this type or keyboard.	
If [POWER ON Function] is set to [Password]			
KB Power ON Password	Enter (your password)	Set the password that will wake-up your system.	
If [POWER ON Function] is set to [Hot Key]			
Hot Key Power ON	Ctrl-F1~F12	Choose the key combination that will wake-up the system. [Ctrl-F1 to Ctrl-F12]	

Onboard FDC controller

	Setting	Description	Note
Onboard FDC controller	Disabled	Turn off the on-board floppy controller	
	Enabled	Use the on-board floppy controller	Default

Onboard Serial Ports

	Setting	Description	Note
Onboard Serial Port 1 / Serial Port 2	Disabled		
	3F8/IRQ4	Choose serial port 1 & 2's I/O address.	Default (port 1)
	2F8/IRQ3	Do not set port 1 & 2 to the same setting except for Disabled or Auto.	Default (port 2)
	3E8/IRQ4		
	2E8/IRQ3		
	Auto		

Onboard Serial Ports

	Setting	Description	Note
UART Mode Select	Normal	The second serial port offers several special modes. It can either work as an infrared device (IrDA, ASKIR) or as a Smart Card reader (SCR), or as a normal serial port.	Default
	IrDA		
	ASKIR		
	SCR		
If [UART Mode Select] is set to [IrDA]/[ASKIR]			
UR2 Duplex Mode	Half	Choose [Half] or [Duplex] to set UR2 in half duplex mode or full duplex mode respectively. Refer to your IR device specifications to select the suitable mode.	Default
	Full		

Onboard Parallel Ports

	Setting	Description	Note
Onboard Parallel Port	Disabled	Choose the printer I/O address.	
	378/IRQ7		Default
	3BC/IRQ7		
	278/IRQ5		
Parallel Port Mode	SPP	The mode depends on your external device that connects to this port.	Default
	EPP		
	ECP		
	ECP+EPP		
If [Parallel Port Mode] is set to [ECP] mode			
ECP Mode use DMA	3	Choose DMA3	Default
	1	Choose DMA1	

Others Optional

	Setting	Description	Note
PWRON After PWR-Fail	On	The system will switch on when power comes back after a power failure.	
	Off	The system will remain off when power comes back after a power failure.	Default
	Former-Sts	The system will return to the state it was in before the power failure when power returns. (i.e: If the system was on, it will switch on again, if it was off, it will remain off)	

3-6   POWER MANAGEMENT SETUP

The [POWER MANAGEMENT SETUP] sets the system's power saving functions.

Phoenix – Award BIOS CMOS Setup Utility		
Power Management Setup		
ACPI Suspend Type	S1(POS)	
x Run VGABIOS if S3 Resume	Auto	Item Help
Power Management	User Define	
Video Off Method	DPMS	Menu Level ▶
Video Off In Suspend	Yes	
Suspend Type	Stop Grant	
MODEM Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant-Off	
Wake-Up by PCI card	Disabled	
Power On by Ring	Disabled	
x USB KB Wake-Up From S3	Disabled	
Resume by Alarm	Disabled	
x Date (of Month) Alarm	0	
x Time (hh:mm:ss) Alarm	0 : 0 : 0	
** Reload Global Timer Events **		
Primary IDE 0	Disabled	
Primary IDE 1	Disabled	
Secondary IDE 0	Disabled	
Secondary IDE1	Disabled	
FDD,COM, LPT Port	Disabled	
PCI PIRQ[A-D]#	Disabled	
↑↓→ Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5:Previous Values F6:Fail-Safe Defaults F7: Optimized Defaults		

After you have completed the Power Management Setup, press [Esc] to return to the Main Menu.

Power Management Controls

	Setting	Description			Note
ACPI Suspend Type	S1(POS)	This item allows you select suspend mode.			Default
	S3(STR)				
	S1 & S3				
Run VGABIOS if S3 Resume	Auto	Some OS (win xp/2k) require to load VGABIOS after resume from S3.			Default
	Yes				
	No				
Power Management	User Define	Lets you define the HDD and system power down times.			Default
		Doze timer	Standby timer	Suspend timer	HDD power down
	Min Saving	1 Hour	1 Hour	1 Hour	15 Min
	Max Saving	1 Min	1 Min	1 Min	1 Min
Video Off Method	V/H Sync+Blank	Selects the method by which the monitor is blanked.			
	Blank screen				
	DPMS				Default
Video Off In Suspend	Yes	If the CPU goes into suspend mode, should the monitor also be turned off.			Default
	No				
Suspend Type	Stop Grant	The system can wake up through external events.			Default
	PwrOn Suspend	The system can only wake up through the Power-Button.			
MODEM Use IRQ	3	Selects which IRQ the modem uses to wake up from.			Default
	3-11, NA				
Suspend Mode	Disabled				Default
	1Min-1Hour	When the set time has elapsed, BIOS sends a command to the system to enter suspend Mode.			

Power Management Controls (Continue)

	Setting	Description	Note
HDD Power Down	Disabled		Default
	1-15Min	When the set time has elapsed, BIOS sends a command to the HDD to power down. This turns off the HDD motor.	Some older model HDDs may not support this advanced function.
Soft-Off by PWR-BTTN	Instant-off	Turns off the system power instant after pushing the power button.	Default
	Delay 4 Sec.	Turns off the system power 4 seconds after pushing the power button.	
Wake-Up by PCI card	Disabled	If enabled any PCI card using the PINE signal will wake the system up.	Default
	Enabled		
Power On by Ring	Disabled		Default
	Enabled	The system will self-power on when the modem is ringing.	
USB KB Wake Up From S3	Disabled	When Enabled, this feature allows the USB KB to wake the system up from the S3 (suspend to RAM) state.	Default
	Enabled		
Resume by Alarm	Disabled	The system ignores the alarm.	Default
	Enabled	Set alarm to power on the system by the date (1-31) or time (hh:mm:ss). If the date is set to [0], the system will self-power on by alarm everyday at the set time.	

Reload Global Timer Events

	Setting	Description	Note
IDE0, IDE1 ➢ **Primary** ➢ **Secondary**	Disabled		Default
	Enabled	In effect, the system remains alert for anything which occurs to a device which is configured as *Enabled*.	
FDD, COM, LPT Port	Disabled		Default
	Enabled	In effect, the system remains alert for anything which occurs to a device which is configured as *Enabled*.	
PCI PIRQ [A-D]#	Disabled		Default
	Enabled	The system monitors these elements for activity. The system will resume if [IRQ activity] is detected.	

3-7 PNP/PCI CONFIGURATION SETUP

This option sets the Motherboard's PCI configuration..

Phoenix – Award BIOS 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. Select
PCI/VGA Palette Snoop	Disabled	Enabled to reset Extended
Assign IRQ For VGA	Enabled	System Configuration Data
Assign IRQ For USB	Enabled	(ESCD) when you exit Setup
INT Pin 1 Assignment	Auto	if you have installed a new
INT Pin 2 Assignment	Auto	add-on and the system
INT Pin 3 Assignment	Auto	reconfiguration has caused
INT Pin 4 Assignment	Auto	such a serious conflict that
INT Pin 5 Assignment	Auto	the OS cannot boot.
INT Pin 6 Assignment	Auto	
INT Pin 7 Assignment	Auto	
INT Pin 8 Assignment	Auto	
↑↓→ Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help		
F5:Previous Values F6:Fail-Safe Defaults F7: Optimized Defaults		

Note: Starred (*) items will disappear when the [Resources Controlled By] option is set to [Auto].

After you have completed the PCI Slot Configuration, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

PNP/PCI Configuration Controls

	Setting	Description	Note
Reset Configuration Data	Disabled	Retain PnP configuration data in BIOS.	Default
	Enabled	Reset PnP configuration data in BIOS.	
Resources Controlled By	Manual	BIOS does not manage PCI/ISA PnP card IRQ assignment.	
		Required to assign IRQ-# and DMA-# to PCI or ISA PnP manually. IRQ-3,4,5,7,9,10,11,12,14,15 assigned to: _ DMA-0,1,3,5,6,7 assigned to: _	
	Auto (ESCD)	The Plug-and-Play BIOS auto manages PCI/ISA PnP card IRQ assignment automatically.	Default
If [Resources Controlled By] is set to [Manual]			
IRQ-# assigned to:	PCI device	Choose IRQ# assigned to PCI/ISA PnP card.	Default
	Reserved	Reserved IRQ for Legacy cards.	
Under this item the user can assign an IRQ to a PCI slot. However, there under some conditions the IRQ will not be assigned as selected under this item: 1. IRQs 0, 1, 2, 6, 8, 13 can NOT be assigned, because they are fixed. 2. IRQs 5, 9, 10, 11 are available 3. IRQs 3,4,7,12,14 and 15 will only be assigned if they are free. See the table below on how to free them:			

PNP/PCI Configuration Setup (Continue)

	Setting	Description	Note
Interrupt Line	How to set the BIOS to release the IRQ to the PnP Interrupt pool:		
	PnP / PCI configuration	Integrated Peripherals	
IRQ 15	IRQ 15: **PCI / ISA PnP**	On-Chip Secondary PCI IDE: **disabled**	
IRQ 14	IRQ 14: **PCI / ISA PnP**	On-Chip Primary PCI IDE: **disabled**	
IRQ 12	IRQ 12: **PCI / ISA PnP**	*Interrupt 12 will be released by the PnP BIOS automatically if the PS/2 Mouse Port is not used.*	
IRQ 7	IRQ 7: **PCI / ISA PnP**	Onboard parallel port: **disabled**	
IRQ 4	IRQ 4: **PCI / ISA PnP**	Onboard Serial port 1: **disabled**	
IRQ 3	IRQ 3: **PCI / ISA PnP**	Onboard Serial port 2: **disabled**	
4. Your OS may reassign another interrupt to a PCI slot after BIOS passes control to the OS, especially if you use Windows 95, 98, NT, XP or 2k.			
Assign IRQ For VGA/USB	Enabled	BIOS will assign IRQ for VGA/USB port.	Default
	Disabled	BIOS won't assign IRQ for VGA/USB port.	
5. Your OS may reassign another interrupt to a PCI slot after BIOS passes control to the OS, especially if you use Windows 95, 98, NT, 2k or XP.			
INT Pin 1~8 Assignment	Auto	Set to Auto the BIOS will using IRQs Automatically.	Default

MULTI I/O ADDRESSES

Default settings for multi-I/O addresses are as follows:

Port	I/O Address	IRQ	Status
LPT1	378H	7	ECP/EPP
COM1	3F8H	4	
COM2	2F8H	3	

Warning: If a default I/O address conflicts with other I/O cards such as sound card, you must change one of the I/O addresses to remedy to this address conflict. (I/O addresses can be adjusted from the BIOS Setup Utility)

3-8 PC HEALTH STATUS

This option shows the Motherboard's PC Health Status.

Phoenix – Award BIOS CMOS Setup Utility
PC Health Status

		Item Help
CPU Vcore	1.45V	
+ 3.3V	3.34V	
+ 5V	5.13V	Menu Level ▶
+ 12V	11.90V	
DRAM Voltage	2.59 V	
AGP Voltage	1.53 V	
CPU Temperature	46°C / 114°F	
CHA Temperature	28°C / 82°F	
CPUFAN1 Speed	0 RPM	
CHAFAN1 Speed	0 RPM	

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

CPU Device Monitoring

	Setting	Description	Note
CPU Vcore, +3.3V, +5V, +12V, DRAM Voltage, AGP Voltage	V	Show the current voltage status.	
CPU Temperature	°C/°F	Show the current status of the CPU temperature.	
CHA Temperature	°C/°F	Show the current status of system temperature.	
CPUFAN1 Speed	RPM	Show you the current CHAFAN operating speed.	
CHAFAN1 Speed	RPM	Show you the current CPUFAN operating speed.	

3-9 LOAD FAIL-SAFE DEFAULTS

Select the [Load Fail-Safe Defaults] option from the Main Menu to load a pre-defined safe bios settings. This option is recommended if you have instability issues.
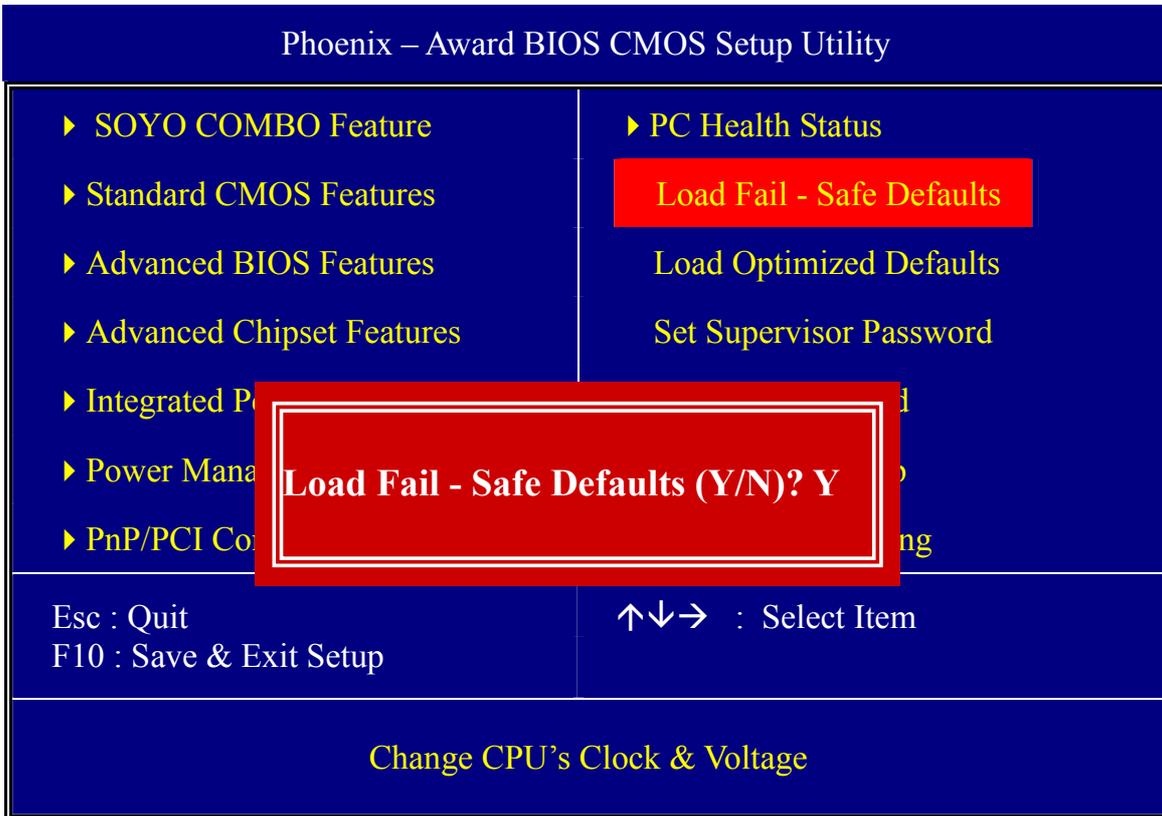
Phoenix – Award BIOS CMOS Setup Utility	
▶ SOYO COMBO Feature	▶ PC Health Status
▶ Standard CMOS Features	Load Fail - Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Advanced Chipset Features	Set Supervisor Password
▶ Integrated P	
▶ Power Mana	**Load Fail - Safe Defaults (Y/N)? Y**
▶ PnP/PCI Co	ng
Esc : Quit F10 : Save & Exit Setup	↑↓→ : Select Item
Change CPU's Clock & Voltage	

Type [Y] to use the Setup Defaults followed by [Enter] or otherwise [N] to return to the Main Menu and keep current values.

3-10 LOAD OPTIMIZED DEFAULTS

Select the [Load Optimized Defaults] option from the Main Menu to load the pre-defined optimized BIOS settings.
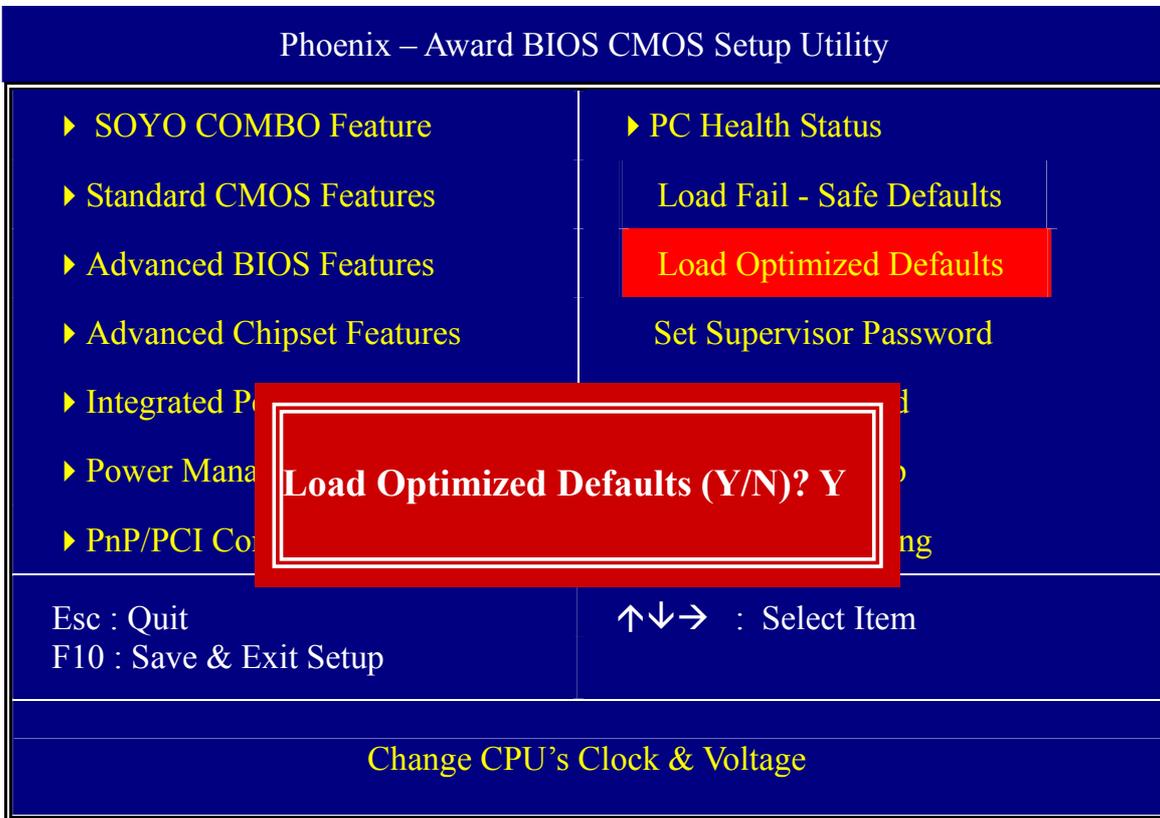
Phoenix – Award BIOS CMOS Setup Utility

▸ SOYO COMBO Feature	▸ PC Health Status
▸ Standard CMOS Features	Load Fail - Safe Defaults
▸ Advanced BIOS Features	Load Optimized Defaults
▸ Advanced Chipset Features	Set Supervisor Password
▸ Integrated P...	...d
▸ Power Mana...	...)
▸ PnP/PCI Co...	...ng

Load Optimized Defaults (Y/N)? Y

Esc : Quit
F10 : Save & Exit Setup

↑↓→ : Select Item

Change CPU's Clock & Voltage

Type [Y] to use the Setup Defaults followed by [Enter] or otherwise [N] to return to the Main Menu and keep current values.

Warning: If you run into any problem after changing the BIOS configuration, please load the Optimized Defaults for optimized performance.

3-11 SUPERVISOR PASSWORD

Based on the setting you have made in the [Security Option] of the [Advanced BIOS Feature] section, the password prevents access to the system or the setup program by unauthorized users. Follow this procedure to set a new password or disable the password:

1. Choose [Advanced BIOS Feature] in the Main Menu and press [Enter]. Select the [Security Options] item and set the field to:
    a. [System]: The password is required every time the system is booted. This means only a person who knows the password can use this computer.
    b. [Setup]: The password is required only when you attempt to enter the BIOS Setup program.

2. Choose [SUPERVISOR PASSWORD] from the Main Menu and press [Enter]. The following prompt appear:

<div style="border:1px solid black; text-align:center;">

Enter Password:

</div>

Warning: If you forget or lose the password, the only way to access the system is to set jumper JP5 to clear the CMOS RAM. All setup information is lost and you must run the BIOS setup program again.

Note: If you do not wish to use the password function, press [Enter] directly and the following message appears:

<div style="border:1px solid black; text-align:center;">

Password Disabled!!

</div>

3.   Enter your new password and press [Enter]. The following message
       appears, prompting to confirm the new password:

<div style="border:1px solid black; text-align:center;">

Confirm Password:

</div>

4.   Re-enter your password and then press [Enter] to exit to the Main Menu.

This diagram outlines the password selection procedure:
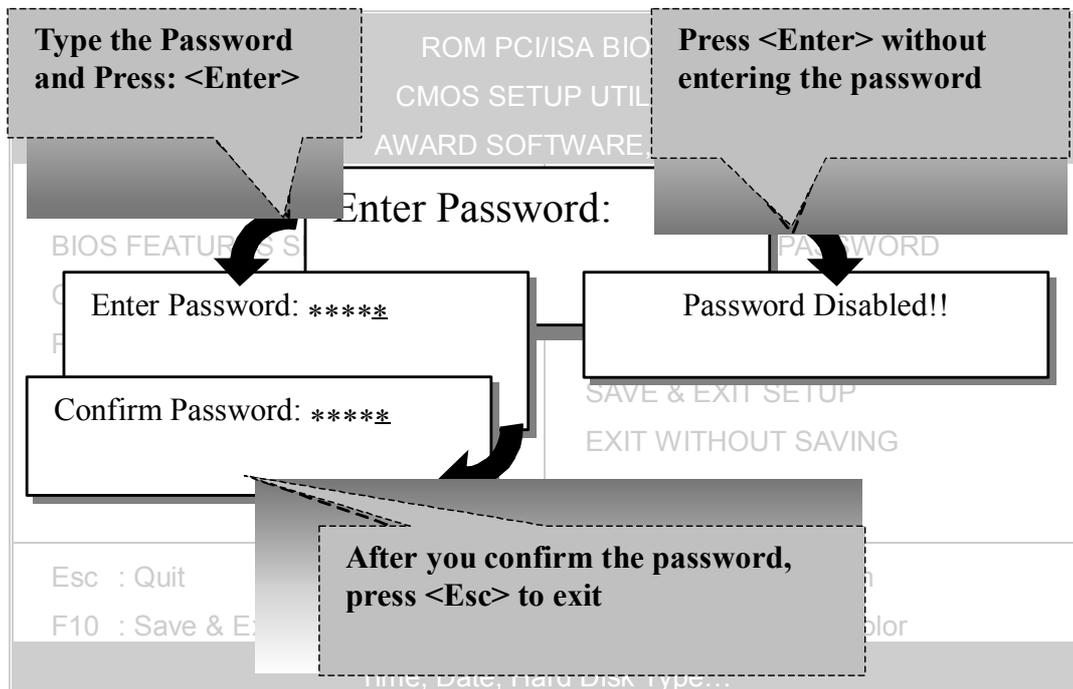
3-12 USER PASSWORD

When the user password option is on, you are not allowed to change any
setting in the [CMOS SETUP UTILITY] except for changing the user's
password. Only the supervisor's password will allow you to make changes in
CMOS setup.

The password setting procedure is similar to that for the [SUPERVISOR
PASSWORD] (Refer to section 3-11).

Boot Menu

Boot Menu enables user to boot-up on different boot device without going into the BIOS setup.

*To enable boot Menu, press **"ESC"** after memory and option ROM (like the HighPoint 372N BIOS) initialization, the user will see a device menu, in which he or she can choose from which device they wish to boot.*

```
                Boot Menu

== Select a Boot First device ==

            Floppy

            LS120
            IDE1/SATA1
            CDROM
            ZIP100
            Other Device




    ↑↓:Move ENTER:Accept F4 Exit
```
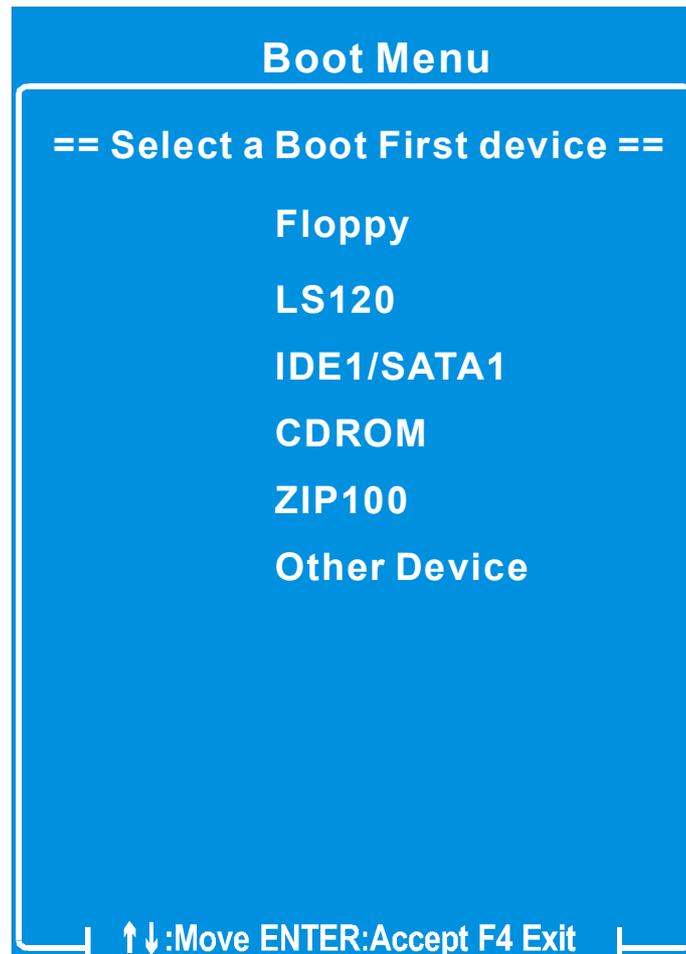
Chapter 4

DRIVERS INSTALLATION

The SOYO-CD will Auto Run only in Windows Based Operating Systems.

Your SY-P4I875P DRAGON 2 Motherboard comes with a CD-ROM labeled "SOYO CD". The SOYO CD contains

a. The user's manual for your new motherboard in PDF format

b. The driver software needed for installation

c. A database in HTML format with information on SOYO motherboards and other products.

Step 1. **Insert the SOYO CD into the CD-ROM drive**

If you use Windows NT, 2000 or XP, the SOYO-CD will not detect your motherboard type. In that case the following dialog will pop up, please choose your motherboard and press OK. Now the SOYO-CD Start Up Menu will be shown.
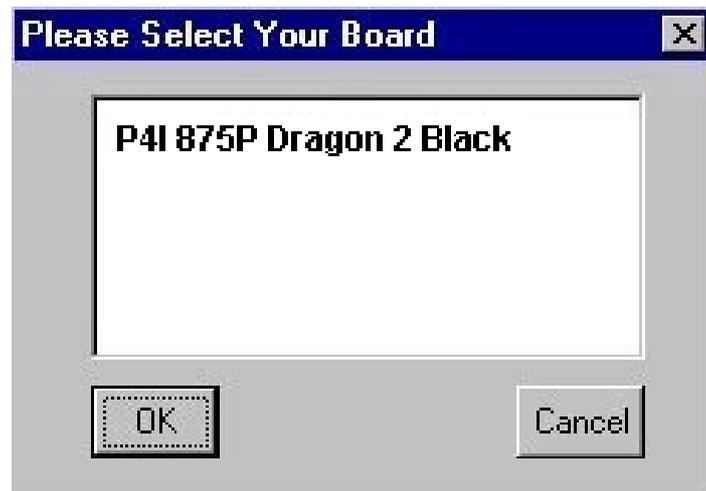
(SOYO CD Start Up Program Menu)

If you use Windows 95/98/98SE/ME, the SOYO CD Start Up Program automatically detects which SOYO Motherboard you own and displays the corresponding model name.

The user's manual files included on the SOYO CD are in PDF (Postscript Document Format). In order to read a PDF file, the appropriate Acrobat Reader software must be installed on your system.

Note: The Start Up program automatically detects if the Acrobat Reader utility is already present on your system, and otherwise prompts you on whether or not you want to install it. You must install the Acrobat Reader utility to be able to read the user's manual file. Follow the instructions on your screen during installation, then once the installation is completed, restart your system and re-run the SOYO CD.

Step 2. **Install Drivers and Utilities**

Highlight the driver you want to install and then click ok. The Start Up program displays the drivers available for the particular model of Motherboard you own. We recommend that you only install those drivers Click the *Install Drivers* button to display the list of driver software that can be installed with your Motherboard. The Start Up program displays the drivers available for the particular model of Motherboard you own. We recommend that you only install those drivers.

driver	revision:
Intel Chipset Software Installation Utility for Win 98SE/ME/2000/XP	
Intel USB2.0 Driver for Win 2000/XP (click here for installation procedure)	
Intel USB2.0 Driver for Win 98SE/ME	
Intel 10/100 Lan Driver for Win 98SE/ME/2000/XP	
C-MEDIA 6-channel Audio Driver for Win 98SE/ME/2000/XP	
SiliconImage SerialATA Driver (click here for installation procedure)	
SiliconImage SerialATA Utility for Win 98SE/ME/2000/XP	
HighPoint IDE Raid Driver (click here for installation procedure)	
HighPoint IDE Raid Utility for Win 98SE/ME/2000/XP	
P4I875P DRAGON 2 Hardware Monitor for Win 98SE/ME/2000/XP	
ITE SIM Card Reader Driver/Utility for Win 98SE/ME/2000/XP	

Cancel   OK

(Driver Installation Menu)

A short description of all available drivers follows:

➢ **Intel Chipset Software Installation Utility for Win 98SE/ME /2000/XP**

Windows operating systems will not recognize the new INTEL 875P chipset properly. To update the necessary .inf files that will help Windows recognize the 875P chipset, please run this utility.

➢ **Intel USB2.0 Driver for Win 98SE/ME**

This program will install the USB 2.0 driver for Windows 98SE and Windows ME.

➢ **Intel 10/100 Lan Driver for Win 98SE/ME/2000/XP**

This program will install Lan driver on your computer.

➢   **C-MEDIA 6-channel Audio Driver for Win 98SE/ME/2000/XP**

This driver supports 2/4/6 speakers 3D positional audio for the onboard C-Media 8738 audio chip.

➢   **SiliconImage SerialATA Utility for Win 98SE/ME/2000/XP**

This utility will allow you to select which RAID mode you want to use for your configuration. It will only change the RAID configuration for the Silicon Image SATA controller (SATA3 and SATA4 IDE ports), not for any of the other IDE controllers.

➢   **HighPoint IDE Raid Utility for Win 98SE/ME/2000/XP**

The RAID Administrator utility is used to monitor or perform maintenance on a RAID Administrator Mirror (RAID 1) or Stripe (RAID 0). Visual messages are available to warn of possible problems with the disk array or controller. Note that this utility only changes RAID settings for IDE3 and IDE4 (the HighPoint RAID ports).

➢   **P4I875P DRAGON 2 Hardware Monitor for Win 98SE/ME /2000/XP**

Your motherboard comes with a hardware monitoring IC. By installing this utility Temperature, Fan speed and Voltages can be monitored.

➢   **ITE SIM Card Reader Driver/Utility for Win 98SE/ME/2000 /XP**

Driver to support the smart card reader. You need to install this if you use the SCR.

Select which driver you want to install and click *OK,* or click *Cancel* to abort the driver installation and return to the main menu.

Note: Once you have selected a driver, the system will automatically exit the SOYO CD to begin the driver installation program. When the installation is complete, most drivers require a restart of your system before they become active.

Step 3. **Check the Latest Releases**

Click the 'Check the latest Releases' button to go the SOYO Website to automatically find the latest BIOS, manual and driver releases for your motherboard. This button will only work if your computer is connected to the internet through a network or modem connection. Make sure that your internet connection is up before clicking this button.

After Windows XP installation, your device manager should look like this:
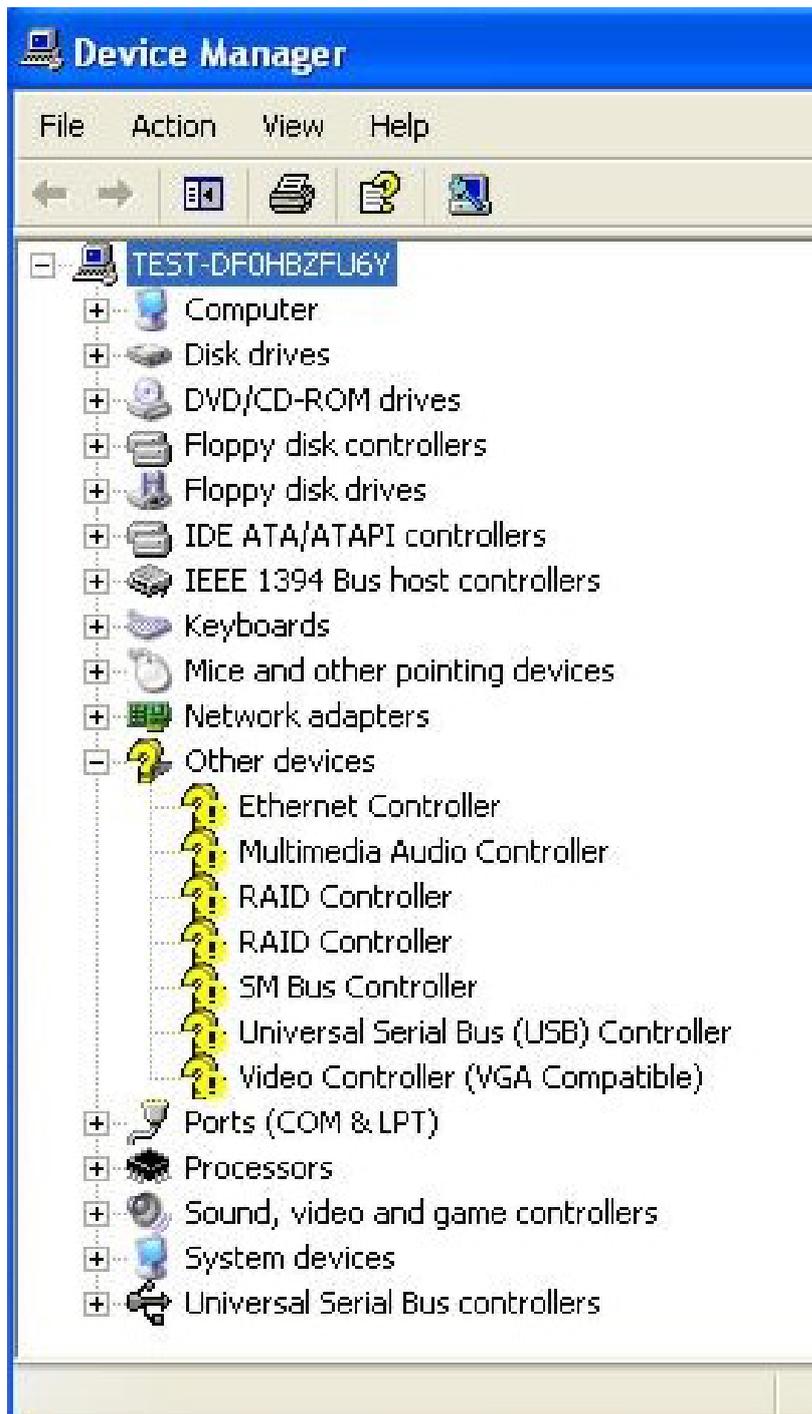
After driver installation, your Windows XP device manager should look like this:
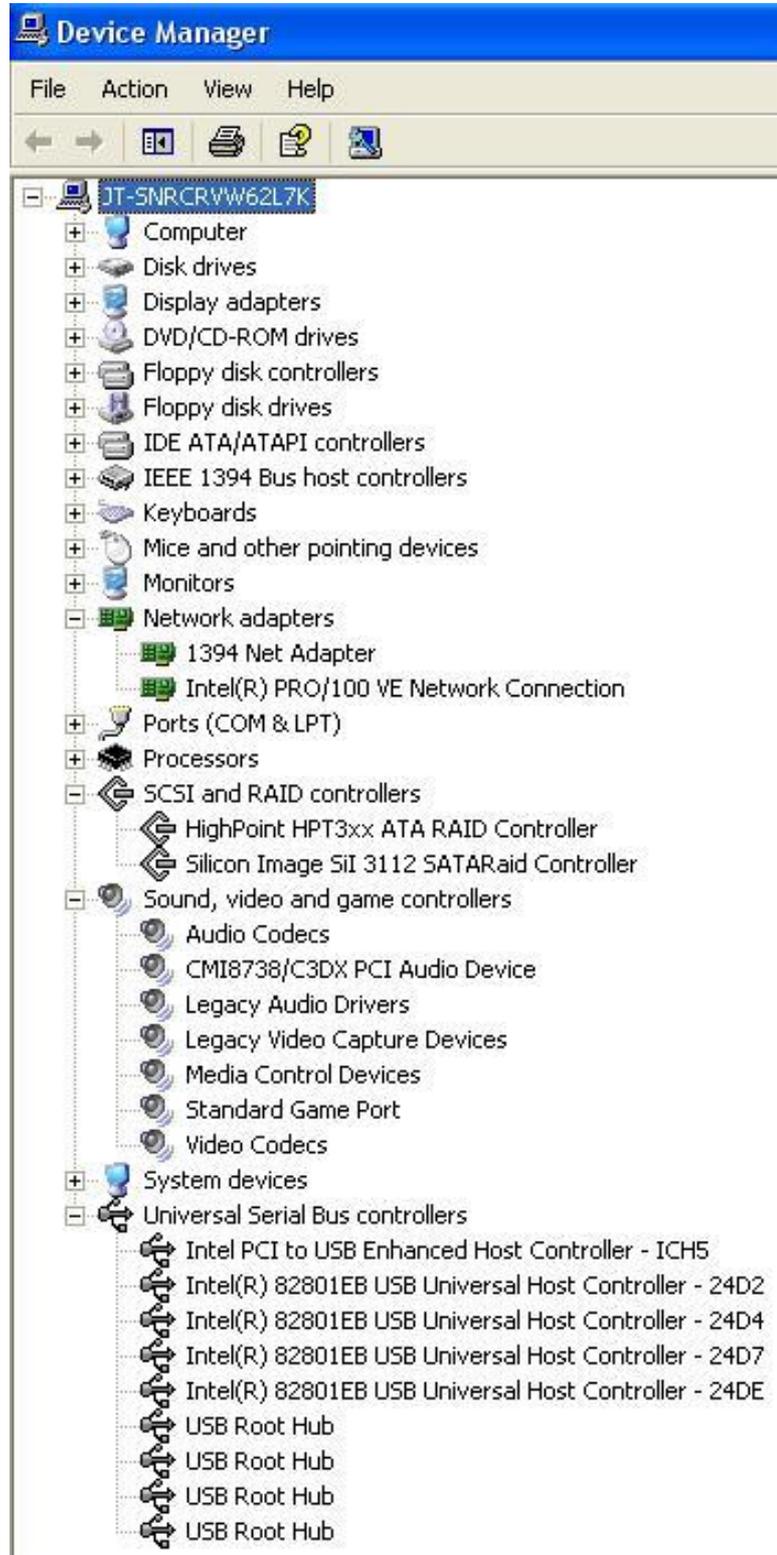
Note: To install the USB 2.0 driver, please update to Windows XP service pack 1, check chapter 5 for more info.

Drivers directory list in the CD driver

```
⊞ 🗁 My Documents
⊟ 💻 My Computer
   ⊞ 💾 3½ Floppy (A:)
   ⊞ 💿 Local Disk (C:)
   ⊟ 💿 DragonCD20030501 (D:)
      ⊟ 📁 AUDIO ─────────── C-Media Audio Driver
         ⊞ 📁 CMI8738_6CH
         📁 doc
      ⊟ 📁 driv-com
         ⊞ 📁 DirectX
         📁 ITE ──────────── H/W monitor
         ⊞ 📁 win-hmon
      ⊟ 📁 drivers ────────── Intel Inf Driver
         📁 intel-inf
      ⊟ 📁 LAN
         ⊟ 📁 intel
            ⊞ 📁 APPS ─────── Intel Lan Driver
            ⊞ 📁 PRO100
            ⊞ 📁 PRO1000
         📁 MANUAL
      ⊟ 📁 RAID ──────────── HPT 372 RAID driver
         ⊞ 📁 hpt372
         📁 HptUtility
         📁 SiliconImage Driver ─── Sil3112 driver
         📁 SiliconImage Utility
      ⊞ 📁 tools
      ⊟ 📁 Usb2.0
         ⊟ 📁 INTEL ───────── Intel USB2.0 Driver
            ⊞ 📁 2k                (For windows 2K)
            📁 98me ──────────── Intel USB2.0 Driver
                                 (For windows 98/ME)
```

Chapter 5

INTEL USB 2.0 DRIVER INSTALLATION

For Windows XP

USB 2.0 drivers are available for download using Windows Update for Windows XP.

For additional information regarding USB 2.0 support in Windows XP, please visit http://www.microsoft.com/hwdev/bus/USB/default.asp
(Windows XP Service Pack1 Include USB2.0 Driver)

After installing service pack1, please do the following:

1) Go into the device manager.

2) Remove " "

3) Restart your system.

Next time Windows XP starts up a new USB 2.0 controller will be found.

For Windows 2000

1. Click Windows [Start], then move the mouse to stay on [Settings].
2. Click [Control Panel].
3. Double Click [System].
4. Click [Hardware] tab.
5. Click [Device Manager].
6. Right Click [! Universal Serial Bus(USB) Controller] under [Other Devices],   then click [Properties].
7. Click [Driver] tab.
8. Click [Update Driver].
9. Click [Next].
10. Choose [Search for a suitable driver for my device].

11. Click [Next].

12. Choose [Specify a location] under "Optional search locations".

13. Click [Next].

14. Click [Browse] to specify the file path where the driver is,

　　e.g. "SOYO Dragon CD:\USB2.0\INTEL\2k\EHCI Package\".

15. Click [Next].

16. Click [Finish].

Chapter 6

Highpoint HPT 372 Driver Installation

You can use your HPT372 as

1. Normal IDE function.
2. RAID function.

To use IDE3 and IDE4 as normal IDE, please do the following steps

1. Go to the CMOS setup → SOYO COMBO Feature → Onboard Device →and set the "Onboard RAID IDE 3,4" to "Enable".
2. Install the HP372 driver, see driver installation instruction below.

To use IDE3 and IDE4 as RAID controller, please do the following steps

1. Connect 2 hard disk on IDE3/4, set them both as master.
2. Go to the CMOS setup → SOYO COMBO Feature → Onboard Device →and set the "Onboard RAID IDE 3,4" to "Enable".
3. Go to the CMOS setup → SOYO COMBO Feature → and set the "First Boot Device" to "Other Device".
4. Set the "Other Device Boot Order" to "IDE3/IDE4,SCSI".
5. Press "Ctrl+H" when the HighPoint BIOS summary screen appear.
6. Create a disk array, check appendix A for create instructions.
7. Install the HP372 driver, see driver installation instruction below.

To boot from the HPT372 controller, (IDE 3 or IDE 4)

1. Go to the CMOS setup → SOYO COMBO Feature → and set the First Boot Device to "Other Device".
2. Set the "Other Device boot order" to "IDE3/IDE4,SCSI".

Ways to install the HighPoint Driver

1. After installation of an Operating System or on an existing system
2. During Operating System installation.

For more information on the HighPoint Utility Software, please check the HPT372 manual located in "d:\doc" folder in the Soyo driver CD.

Installing Driver on an Existing System

If Windows can not find new hardware, the driver can be installed through the following steps:

Windows XP

1. Right click on **[My Computer]**, select **[Properties]**. This will start up the System Properties.
2. Select **[Hardware] [Device Manager]**
3. You will see 2 **"! RAID Controller"** entries under unknown device, one of them is the Highpoint RAID controller and the other is the Silicon Image RAID controller.

4. Right click **"! RAID controller"** and then update driver

5. Choose **"Install the software automatically (Recommended)"**

What do you want the wizard to do?

⦿ Install the software automatically (Recommended)
○ Install from a list or specific location (Advanced)

Click Next to continue.

< Back   Next >   Cancel

6. Win XP will search and find 4 available drivers. Choose the driver with location "f:\raid\hpt372\win_xp\hpt3xx.inf" (If F:\ is your CD-ROM)

HighPoint HPT3xx ATA RAID Controller

Description	Version	Manufacturer	Location
HighPoint HPT3xx ATA RAID Controller	2.34.0.0	HighPoint	f:\raid\hpt37
HighPoint HPT3xx ATA RAID Controller	2.34.0.0	HighPoint	f:\raid\hpt37
HighPoint HPT3xx ATA RAID Controller	2.34.0.0	HighPoint	f:\raid\hpt37
HighPoint HPT3xx ATA RAID Controller	2.34.0.0	HighPoint	f:\raid\hpt37

7. During installation, Win XP will prompt you **"the driver has not passed windows logo testing to verify it's compatibility with Windows XP"**, click **[Continue Anyway]**

8. Follow the system prompt to finish the installation, and restart the computer.

Windows 2000

1. Insert SOYO CD into CDROM.

2. Click **[Start]-->[Settings]-->[Control Panel]-->[System]
    -->[Device Manager]**.

3. You will see a **"! RAID Controller"** under **"Unknown Devices"**.

4. Double click **"! RAID Controller"-->[Reinstall Driver],** click
    [Next].

5. Choose "**Search for suitable driver for my device
    (Recommanded)"**, click **[Next].**

6. Choose **"Specify a location"**, click **[Next].**

7. Click **[Browse]**, select **"DragonCD (D:)\Raid\hpt372 \Win_2000"**
    folder. click **[OK].**

8. Follow the system prompt to finish the installation, and restart the
    computer.

Windows ME

1. Insert SOYO CD into CDROM.

2. Click **[Start]-->[Settings]-->[Control Panel]-->[System]
    -->[Device Manager].**

3. You will see a **"! PCI RAID Controller"** under **"Unknown
    Devices"**.

4. Double click **"! PCI RAID Controller"-->[Reinstall Driver]
    -->[Next]** and then update driver.

5. Choose "**Specify the location of the driver (Advanced)"**, click
    [Next].

6. Choose **"Specify a location"**, click **[Browse].**

7. Select **"DragonCD (D:)\Raid\hpt372\Win98_ME"** folder. click
    [OK].

8. Follow the system prompt to finish the installation, and restart the
    computer.

Windows 9X

1. Insert SOYO CD into CDROM.
2. Click **[Start]-->[Settings]-->[Control Panel]-->[System] -->[Device Manager]**.
3. You will see a **"! PCI RAID Controller"** under **"Unknown Devices"**.
4. Double click **"! PCI RAID Controller"-->[Reinstall Driver] -->[Next]** and then update driver.
5. Choose **"Search for better driver than the one your driver is using now(Recommanded)"**, click **[Next]**.
6. Choose **"Specify a location"**, click **[Browse].**
7. Select **"DragonCD (D:)\Raid\hpt372\Win98_ME"** folder. click **[OK].**
8. Follow the system prompt to finish the installation, and restart the computer.

Installing HPT 372 during OS Installation

Install driver during Windows XP installation

1. **Go to "d:\raid\hpt372\" directory, (assuming that your CD-ROM is drive d) copy all the files and directory to a floppy disk.**

2. Windows XP will start to inspect your hardware configuration

3. Press "F6" when the message "Press F6 if you need to install a third party SCSI or RAID driver…." Appear. Below the screen

4. Press **S** key to specify additional devices when the **Windows XP Setup** window appears.

5. Insert the floppy disk of driver, then press **Enter** to continue

6. In the follow-on window of device type, please select "**HPT3xx/ICH5/Sil controller for Win XP"** to continue

7. Win XP will prompt you that a message that the driver is newer than the default driver, press S (use the driver on floppy) to continue

8. The follow-on interface will list the devices to be installed, in which "**HPT3xx/ICH5/Sil controller for Win XP"** item should be included. (If users want to install other devices, press "S" at this time.) Press ENTER to continue Windows XP setup.

Install driver during Windows 2000 installation

1. **Go to "d:\raid\hpt372\" directory, (assuming that your CD-ROM is drive d) copy all the files and directory to a floppy disk.**

2. Windows XP will start to inspect your hardware configuration

3. Press "F6" when the message "Press F6 if you need to install a third party SCSI or RAID driver…." Appear.

4. Press **S** key to specify additional devices when the **Windows 2000 Setup** window appears.

5. Insert the floppy disk of driver, then press **Enter** to continue

6. In the follow-on window of device type, please select "**HPT3xx/ICH5/Sil controller for Win 2000**" to continue

7. Win XP will prompt you that a message that the driver is newer than the default driver, press S (use the driver on floppy) to continue

8. The follow-on interface will list the devices to be installed, in which "**HPT3xx/ICH5/Sil controller for Win 2000**" item should be included. (If users want to install other devices, press "S" at this time.) Press ENTER to continue Windows XP setup

Chapter 7

Silicon Image Serial ATA Driver Installation

You can use your Sil3112 as

1. Normal IDE function.

2. RAID function.

To use SATA3 and SATA4 as normal IDE, please do the following steps

1. Go to the CMOS setup → SOYO COMBO Feature → Onboard Device →and set the "On-board RAID SATA3,4" to enable.

2. Install the Sil3112 driver, see driver installation instruction below.

To use SATA3 and SATA4 as RAID controller, please do the following steps

1. Go to the CMOS setup → SOYO COMBO Feature → Onboard Device →and set the "Onboard RAID SATA 3,4" to "Enable".

2. Go to the CMOS setup → SOYO COMBO Feature → and set the "First Boot Device" to "Other Device".

3. Set the "Other Device Boot Order" to "SATA3/SATA4,SCSI".

4. Press "Ctrl+S" or F4 when the Silicon Image BIOS summary screen appear.

5. Create RAID set, check appendix A for more info on creating RAID set.

To boot from the Sil3112 controller, (SATA3 or SATA4)

1. Go to the CMOS setup → SOYO COMBO Feature → and set the First Boot Device to "Other Device".

2. Set the "Other Device Boot Order" to "SATA3/SATA4,SCSI".

For more information on the Silicon Image Utility Software, please check the SATA RAID manual located in "d:\doc" folder in the SOYO driver CD.

Installing Driver on an Existing System

If Windows can not find new hardware, the driver can be installed through the following steps:

Windows XP

1. Click **Start**-->**Setup**-->**Control Panel** --> Switch to classic View → system → hardware →device manager.

2. You will see a "! RAID Controller" under unknown device

3. Right click "! RAID controller" and then update driver

4. Choose "Install the software automatically (Recommended)"

If your hardware came with an installation CD
or floppy disk, insert it now.

What do you want the wizard to do?

◉ Install the software automatically (Recommended)
◯ Install from a list or specific location (Advanced)

Click Next to continue.

| < Back | Next > | Cancel |

5. Windows XP will detect the driver automatically. During installation, Win XP will prompt you "the driver has not passed windows logo testing to verify it's compatibility with Windows XP", just click "continue anyway"

6. Follow the system prompt to finish the installation, and restart the computer.

Windows 2000

1. Insert SOYO CD into CDROM.

2. Click **Start-->Settings-->Control Panel-->system-->device manager.**

3. You will see a **"! RAID Controller"** under unknown device.

4. Double click **"! RAID Controller"-->Reinstall Driver,** click **"Next".**

5. Choose **Search for suitable driver for my device (Recommanded),** click **"Next".**

6. Choose **Specify a location**, click **"Next".**

7. Click **"Browse"**, select **"DragonCD (D:)\Raid\hpt372 \Win_2000"** folder. click **"OK".**

8. Follow the system prompt to finish the installation, and restart the computer.

Windows ME

1. Insert SOYO CD into CDROM.
2. Click **Start-->Settings-->Control Panel-->system-->device manager.**
3. You will see a **"! PCI RAID Controller"** under unknown device.
4. Double click **"! PCI RAID Controller"-->Reinstall Driver-->Next** and then update driver.
5. Choose **Specify the location of the driver(Advanced)**, click **"Next"**.
6. Choose **Specify a location**, click "**Browse".**
7. Select **"DragonCD (D:)\Raid\hpt372\Win98_ME"** folder. click **"OK"**
8. Follow the system prompt to finish the installation, and restart the computer.

Windows 9x

1. Insert SOYO CD into CDROM.
2. Click **Start-->Settings-->Control Panel-->system-->device manager.**
3. You will see a **"! PCI RAID Controller"** under unknown device.
4. Double click **"! PCI RAID Controller"-->Reinstall Driver-->Next** and then update driver.
5. Choose **Search for better driver than the one your driver is using now(Recommanded)**, click **"Next"**.
6. Choose **Specify a location**, click "**Browse".**
7. Select **"DragonCD (D:)\Raid\hpt372\Win98_ME"** folder. click **"OK".**
8. Follow the system prompt to finish the installation, and restart the computer.

Installing Silicon Image SI3112A during OS Installation

Install driver during Windows XP installation

1. Go to **"d:\raid\siliconimage driver\"** directory, (assuming that your CD-ROM is drive d) copy all the files and directory to a floppy disk.

2. Windows XP will start to inspect your hardware configuration

3. Press "F6" when the message "Press F6 if you need to install a third party SCSI or RAID driver…." Appear. below

4. Press **S** key to specify additional devices when the **Windows XP Setup** window appears.

5. Insert the floppy disk of driver, then press **Enter** to continue

6. In the follow-on window of device type, please select "**Silicon Image Sil 3x12 SATARaid controller for windows XP** " to continue

7. Win XP will prompt you that a message that the driver is newer than the default driver, press S (use the driver on floppy) to continue

8. The follow-on interface will list the devices to be installed, in which "**Silicon Image Sil 3x12 SATARaid controller for windows XP**" item should be included. (If users want to install other devices, press "S" at this time.) Press ENTER to continue Windows XP setup

Install driver during Windows 2000 installation

1. Go to **"d:\raid\siliconimage driver\",** (assuming that your CD-ROM is drive d) copy all the files and directory to a floppy disk.

2. Windows XP will start to inspect your hardware configuration

3. Press "F6" when the message "Press F6 if you need to install a third party SCSI or RAID driver…." Appear.

4. Press **S** key to specify additional devices when the **Windows 2000 Setup** window appears.

5. Insert the floppy disk of driver, then press **Enter** to continue

6. In the follow-on window of device type, please select "**Silicon Image Sil 3x12 SATARaid controller for Windows NT and 2000"** to continue

7. Win 2K will prompt you that a message that the driver is newer than the default driver, press S (use the driver on floppy) to continue

8. The follow-on interface will list the devices to be installed, in which "**Silicon Image Sil 3x12 SATARaid controller for Windows NT and 2000"** item should be included. (If users want to install other devices, press "S" at this time.) Press ENTER to continue Windows XP setup

APPENDIX A

HighPoint HPT 372

Introduction

HPT372 is a UDMA/ATA133 RAID controller. You can either use HPT 372 (IDE3, IDE4) as a RAID controller or as a regular IDE controller.

RAID Administrator is a Windows-based RAID management utility for HPT372 RAID Controller. With graphical user interface, RAID Administrator enables users to easily configure, manage hard disk and disk arrays connected to HPT372 RAID controller.

Main Features & Benefits

- Below are the main features and benefits of RAID Administrator.
- Support RAID 0, 1, 0+1 & Span
- Allowed maximum 4 disks connection to every controller (Does not support ATAPI devices)
- Hot-swapping failed hard disk in mirror array
- Support independent use of hard disk
- Support hot spare disk
- Support Operating Systems: DOS/Windows 3.x, Windows 98/Me, Windows NT4.0, Windows 2000, Windows XP.
- Windows-based software for RAID management(compatible with BIOS)
- Disk error alarm mechanism
- Event log for easy trouble shooting
- Plug-and-play

Getting Started

This section is designed to get you started on the setup/installation of your HighPoint HPT372 RAID controller in your system. To use the HPT372 chip as a RAID controller, you need to setup the HDD in the HPT372 BIOS menu (CTRL-H) or use the RAID administrator.

Create a Disk Array

You can create a disk array using:

1. HPT372 BIOS Utility Configuration
   Need to use this utility if you plan to install an operating system on IDE3/4

2. Highpoint ATA RAID Management software
   Recommend using this software if you already have an existing operating system in IDE1/2

HPT372 BIOS Utility Configuration

Enter into BIOS Configuration Utility

When the following information is displayed on screen during the system start-up, press **Ctrl+H** key to enter into BIOS configuration utility.

The main interface of BIOS configuration utility is as below:
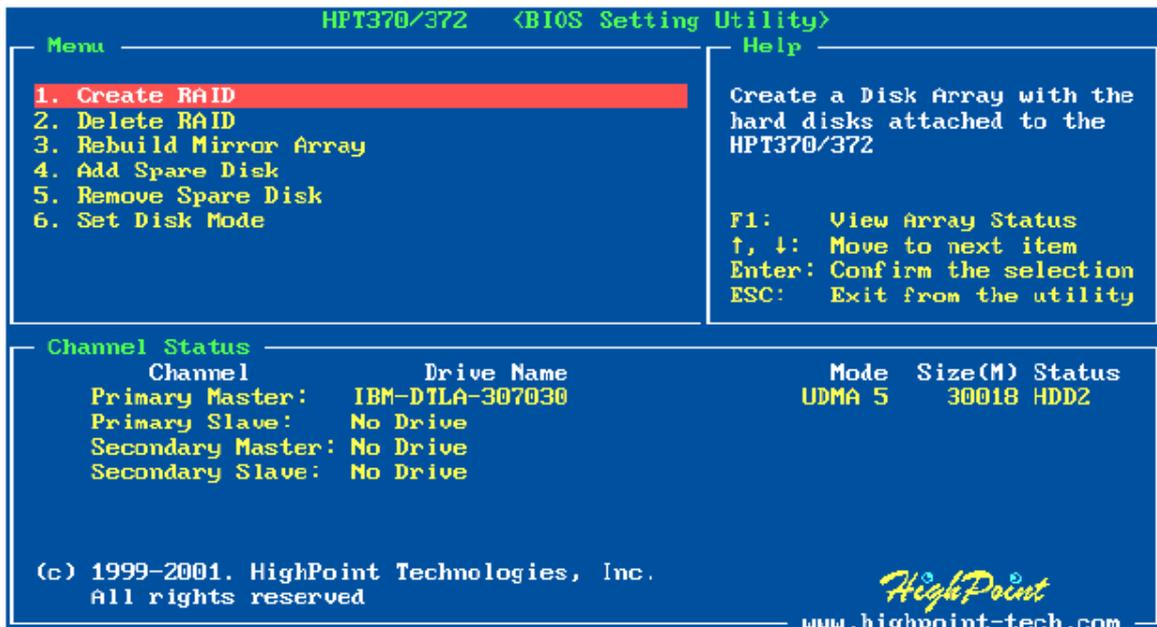
Menu:

It displays all items of the operating command.

Help:

It displays the illustrating information of the current selection and the available operation prompts.

Channel Status:

It displays the status information of all devices in connection. When it is active, users can select the device to be operated.

I. Create RAID

The following steps shall be taken to create RAID in BIOS.

1. Use the arrow key to select **1. Create RAID**.

2. Press **Enter** to confirm and go to next.

3. Select **1. Array Mode** in the next menu and press **Enter**.

4. Select the intended RAID level in the popup selection box and

press **Enter**.

5. Select **2. Select Disk Drives** in the menu and press **Enter**.

6. Select the harddisks to be used for creating the disk array and press **Enter** to confirm.

7. Select **3. Start Creation Process**.

8. Pay attention to the warning message, and press **Y** to finish creation.

Note:

1. If you have selected **Striping (RAID 0) for Performance** in the popup sub-interface after the operation of **1. Array Mode**, you should directly go to **3. Strip Size 64K** and then select **4. Start Creation Process**. The default strip size is **64K**.

2. If user is creating RAID 0+1, then user must select four single disks. All data on these disks will be destroyed after creation of RAID 0+1.

3. Different warning messages appear according to different RAID levels.

II. Delete RAID

The following steps shall be taken to delete RAID.

1. In the menu zone, select **2. Delete RAID**, press **Enter** to confirm this operation and go to next.

2. In the validated channel status, use the arrow key to select the disk array to be deleted and press **Enter** to confirm.

3. Press **Y** when warned **Are you sure you want to remove the disk array?**

III. Rebuild Mirror Array

The following steps shall be taken to rebuild the mirror array.

1. In the menu, select **3. Rebuild Mirror Array**, press **Enter** to confirm.

2. In the menu, select **1. Select Source Disk: None** and press **Enter** to confirm.

3. In the validated channel status, select the source disk of the mirror array and then press **Enter**.

4. In the menu, select **2. Select Target Disk: None** and press **Enter** to confirm.

5. In the validated channel status, select the target disk of the mirror array and then press **Enter**.

6. In the menu, select **3. Start Duplication Process** and press **Enter** to confirm.

7. Press **Y** when asked **The last time rebuild not completed. Continue?**

Note:

When there is no RAID 1 array, system will prompt user **No enough disks** at the second step, and rebuild cannot continue.

IV. Add Spare Disk

The following steps shall be taken to add the spare disk.

1. In the menu, select **4. Add Spare Disk** and press **Enter** to confirm.

2. In menu, select **1. Select Mirror Array: None** and press **Enter** to confirm.

3. In the validated channel status, select the mirror array and press **Enter** to confirm.

4. In the menu, select **2. Select Spare Drive: None** and press **Enter** to confirm.

5. In the validated channel status, select the spare disk to be added and press **Enter** to confirm.

V. Remove Spare Disk

The following steps shall be taken to remove the spare disk.

1. In the menu, select **5. Remove Spare Disk** and press **Enter** to confirm.

2. The **1. Select Mirror Array: None** item appears in the menu.

3. In the validated channel status, select the spare disk to be removed and press **Enter** to confirm.

VI. Set Disk Mode

The following steps shall be taken to set the disk mode.

1. Select **6. Set Disk Mode** in the menu and press **Enter** to confirm.

2. Select the disk mode to be set in the popup selection box and press **Enter** to confirm.

VII. Set Boot Disk.

The following steps shall be taken to set the boot disk:

1. In the menu, select **7. Set Boot Disk** item, press **Enter** to confirm.

2. In the validated channel status zone, use the arrow key to select the boot device and press **Enter** to confirm.
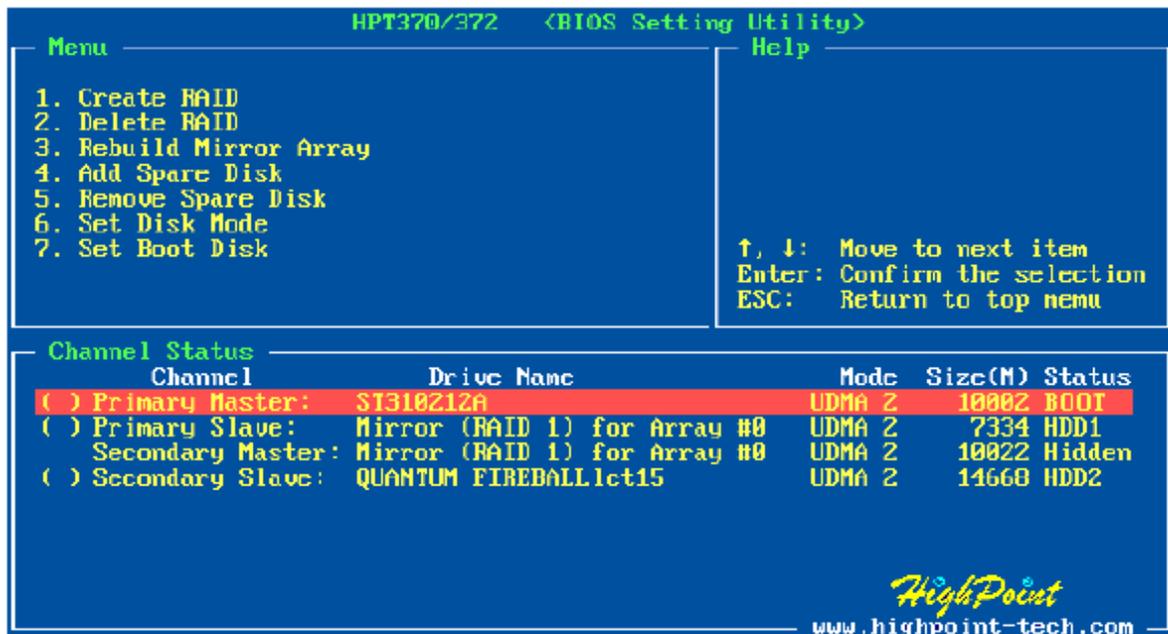
Note:

1. The **Set Boot Disk** item appears on condition that no hard disk is connected to IDE on motherboard.

2. After the boot disk is set, its status will become **Boot**.

APPENDIX B

Silicon Image 3112

CREATING and DELETING RAID SETS

Creating and deleting RAID sets is a function found in the BIOS. During bootup, the following message will appear, pausing for a few moments to allow the user to choose what to do:

Press <CRTL-S> or F4 to enter RAID utility

An easy-to-use screen will appear with the following choices in the top left:

Create RAID Set
Delete RAID Set
Rebuild RAID Set
Resolve Conflicts

Below this will be listed the drives currently installed on the system.

Creating RAID Sets

Because SATARaid supports two drives, creating RAID Sets is a simple procedure.

1. Select "Create RAID Set."
2. Choose either a "Striped" or "Mirrored" RAID Set.
3. Select if you want the utility to Auto Configure the RAID Set or if you want to manually configure the RAID Set. For Striped Sets, you can change the chunk size. For Mirrored Sets, you assign which is the Source and Target drives, as well as if you want Disk Copy.
4. The utility will ask, "Are You Sure?" before completing the configuration.

What is Disk Copy? If the disk assigned as the source disk already has been partitioned and has data stored on it, and then a second disk is added for redundancy. The data on the source drive can be copied to the destination drive, so the disks are identical, and all subsequent data will be written to both drives as a Mirrored set. If, however, the source disk does not have data already stored on it, there is no need for Disk Copy.

APPENDIX C

Flashing BIOS ROM

How to flash your motherboard's system BIOS:

To flash your system BIOS to a different version, follow the following steps:

1. Download the BIOS for your motherboard from our website
2. Copy the BIOS .BIN file onto a clean, formatted floppydisk
3. Insert the floppydisk into your system.
4. Restart your system until you see the Dragon Logo. Press TAB immediately. You should see the following :

5. Press ALT+F2 to start up AWDFLASH. You should see the following screen :

Award Modular BIOS v6.00PG, An Energy Star Ally
Copyright (C) 1984-2000, Award Software, Inc.

P4ICWB-2AA1

Main Processor : Intel Pentium (R) 4   2.00 GHz (100 x 20.0)

Memory Testing : 262144K   OK
    Memory Frequency : DDR 400 (400 MHz)

Decompressing "AWDFLASH.EXE" from BIOS , Please wait.
04/21/2003-Canterwood-6A79739609C-00

6. AWARD flash will now automatically flash your BIOS and reset when it is done.

```
         AwardBIOS Flash Utility V8.22B
(C)Phoenix Technologies Ltd. All Rights Reserved

For  Canterwood-6A6LYS29C-00    DATE: 02/25/2003
Flash Type - SST 39SF020 /5V

File Name to Program :  p4icwb2aa1.bin
              Flashing Complete
Remove Floppy Diskette & Hit <F1> to Continue




    ▒ Write OK    ▒ No Update    ▒ Write Fail
```

APPENDIX D

Troubleshooting

Troubleshooting at First Start

Boot-up Issues

The system does not power-up, no beeping sound heard and the CPU fan does not turn on.

1. Check if the power cord is plugged in the power source.
2. Check if the power is connected to the M/B. (both the ATX 12V and the ATX connector)
3. Check if the cable of the case power button is connected to the M/B power button connector (see connectors and plug-ins in this manual for more info).
4. Make sure the power supply is not defective. Change the power supply. The minimum should be 350 watts for a minimally loaded system or 400 watt for a fully loaded system.
5. Remove the M/B from the case and test the system. The M/B might be shorted to the case.

The system powers up, no video, no beeping sound heard, but the CPU fan is turning.

1. Clear the CMOS RAM. (JP5 connector, see the manual for more info on how to clear the CMOS).
2. Check all the jumper settings on the M/B.
3. Check if the CPU is ok by using another CPU (check the manual for CPU supported on this M/B).
4. Check if the power supply is ok. The minimum should be 350 watts for a minimally loaded system or 400 watt for a fully loaded system.
5. Make sure the CPU fan is connected to CPUFAN1 connector.
6. Remove the M/B from the case and test the system. The M/B might be shorted to the case.

7. Change the VGA card. If you have used a 3.3V AGP card, the AGP DET LED will also lit.

The system powers up, no video, but beeping is heard.
1. Clear the CMOS ram. (JP5 connector, see the manual for more info on how to clear the CMOS).
2. Check if the memory module and the VGA card are inserted properly in the M/B.
3. If yes, change the memory module, it might be defective. Make sure the memory specification is supported by the M/B. (for more info on this, check our FAQ on our website).
4. Change the VGA card. Make sure the AGP card is 1.5v, not 3.3v.

The system turns on for some seconds then shut down by itself.
1. Check if the CPU fan is connected to the CPUFAN1 connector.
2. The CPU might be overheating. Check the CPU FAN if it is defective or see if the CPU fan is in contact with the CPU.
3. Clear the CMOS ram. (JP5 connector, see the manual for more info on how to clear the CMOS).
4. Make sure the power supply you have in your system supports the M/B specification. Example. If you have a P4 M/B, you need to use a P4 power supply. (ATX 12V compliant)
5. If you already checked the power supply specification, change the power supply. It might be defective or to low for your configuration. The minimum is 350 watts for a minimally loaded system or 400 watt for a fully loaded system.

When I boot up my system, everything works fine, it sees my CPU and memory, detects my hard drive, floppy drive and CD-ROM but locks up at "Verify DMI pool data... "it doesn't go any further. What should I do?

1. Clear the CMOS ram. (JP5 connector, see the manual for more info on how to clear the CMOS).
2. If it still has the problem, remove all other add-on cards except the video card see if it boots further. Then put peripherals in one by one to identify which one causes the lockup.
3. Change the CPU.

During Boot-up, my computer says CMOS memory Checksum error. What is the problem? This error occurs if you:

1. Clear CMOS memory.
2. Redo your CMOS setup settings. If your battery is empty the error will occur more frequently. You will need to replace the battery in this case. If the problem persists, re-flash the BIOS. If all fails your BIOS chip is failing and needs to be replaced.
3. Change the CMOS battery.
4. Re-flash BIOS.
5. The BIOS chip might be failing.

Stability Issues

My system intermittently locks up, very unstable.

1. Check the CPU Temp, it might be overheating. Change the CPU FAN. (Check in the health monitor setup menu what your CPU temperature is)
2. Do not overclock your CPU

3. Check the specification of the memory module, maybe the M/B does not support it.
4. Go to BIOS setup and load fail safe settings. Please check if the system performance in the BIOS setup is set to Turbo/Maximum. Set it to normal if so.
5. Check the website for latest BIOS update.
6. Check the website for FAQ's regarding instability issues.
7. Change the memory module or CPU, they might be defective.
8. The power supply might not have enough wattage to support all the peripherals. If your system has other peripherals connected, like CD-RW, extra HDD, etc. disconnect them. And see if the problem is gone then.
9. Install Intel Inf driver.
10. Check if your mainboard is shorting out against the case.
11. Check if your memory module timings set in CMOS setup are supported by your memory module.

My system intermittently locks up, during Windows installation.

1. Go to BIOS and load the optimized defaults.
2. Check our website for any BIOS updates.
3. If it still has the problem, remove all other add-on cards except CPU (and CPU Fan)/ Memory/ Video card/Hard disk. See if you can finish Windows installation. Then put peripherals in one by one to identify which one causes the lockup.

BIOS Issue

Where can I find the BIOS revision of my mainboard?

It will be displayed on the upper-left corner of the screen during boot-up. It will show as your board type followed by the revision number, such as kvxa_2BA1 (meaning BIOS revision 2BA1 for the SY-K7V Dragon plus! board) or 6BA+ IV_2AA2 which means SY-6BA+ IV motherboard with the 2AA2 BIOS.

Where can I find the latest BIOS of my motherboard?
Please go to the technical support page of one of the SOYO websites (Taiwan: www.soyo.com.tw; USA: http://www.soyousa.com/), and look up your motherboard to find the latest BIOS revision.

How can I flash the BIOS?
  You can:
  1. Download the BIOS from our support website.
  2. Make a bootable floppy disk with out any memory manager loaded (i.e. himem, emm386, etc…).
  3. Copy the BIOS file and awdflash utility to the diskette.
  4. Type "awdflash biosname.bin /sn /py".
  5. Then reboot.
  Or:
  1. Download the BIOS from our support website.
  2. Copy the BIOS to an empty floppy disk. (no other files on the disk!)
  3. Press <ALT> <F2> after memory initialization.
  4. The system will now automatically flash and reboot.

  Note: That flashing from the BIOS is only possible if you use a normal floppy drive. It can't flash from any other device.

After flashing the BIOS, my system will not boot-up.

  1. Try clearing the CMOS ram.

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2. The BIOS chip is defective due to an unsuccessful flash, contact your nearest SOYO branch for re-flashing.

Is there a way to reprogram my BIOS after an unsuccessful flash?

No other way, you need to send back the BIOS ROM to your nearest SOYO branch for re-flashing.

I'm using a 400 or 533 MHz FSB CPU, I cannot find the DDR 200MHz option in the BIOS, why?

An 800 MHz CPU should be used if you want your memory to run at DDR 400 (PC3200).

VGA Issue

I cannot set my VGA to go higher than 16 color (640x 480).
1. Make sure that you have installed the Intel Inf driver.
2. Install/ re-install the VGA driver.

After wake-up from Suspend to RAM or Standby mode, the screen has no display but I can hear the hard disk operating
Check the VGA card manufacturer for a driver update and VGA BIOS update, make sure the VGA card supports the Suspend to Ram function.

Audio Issue

How can I disable the on-board Audio?
Go to the SOYO Combo Feature menu in the BIOS setup, then set the "onboard audio" to disable.

I cannot get the sound working on my system.
1. Check if the speaker wire is connected to the line out connector on the M/B. Make sure the SPDIF card cable isn't connected the wrong way around.
2. Check if your speakers are powered on.

3. Install the audio driver supplied on our driver disc.
4. Check BIOS setup if "onboard audio" is enabled.
5. If sound is already installed, check our website for an audio driver update.

The sound is working in my system, but when I play CD music from the CD-ROM, I do not get any sound. What is wrong?
This is because the 4-wire audio cable from the CD-ROM to the on-board CDIN connector or AUX connector on the M/B is not connected. See manual for location of CDIN.

The sound and everything else works fine except that the line-in and/or microphone doesn't work. What is wrong?
1. Please go to sound properties and check if the line-in and/or microphone are enabled.
2. Check if the Microphone/line-in device is ok.
3. If you use the 4-channel option and you are connection your PC (not via the SPDIF card), line–in will be disabled. Line-in works normally when using the SPDIF card for speaker connections in 4-channel mode.

Added PCI Audio Card does not work on this motherboard.
1. Go to SOYO COMBO Setup and Disable "onboard audio".
2. Go to integrated peripherals and Disable "Game port address" and "Midi port address"

Hard disk/FDD/ CD-ROM issues

My Western digital HDD is not detected during boot-up
Change the jumper settings to cable select or single.

Sometimes the system finds my CD-ROM, sometimes not
1. Check CD-ROM if it is working properly.
2. The power supply might not have enough wattage to support all the peripherals. If your system has other peripherals

connected, like CD-RW, extra HDD, etc. disconnect them.

When I boot up my new computer I get "floppy boot failure" and the LED on the floppy stays on

1. Make sure the red wire of floppy ribbon cable goes to Pin1 on the floppy drive side (don't trust the "key lock" or "notch") and use the end-connector of the cable (don't use middle one).

2. Some floppy drivers have their own jumper to make the same twist as the twist on the cable. Make sure this jumper is set not to "twist" the cable while the floppy drive is connected to the twisted end of the cable.

RAID issue

Windows does not detect the on-board RAID.

1. Enable the on-board RAID function in the BIOS.
2. install the RAID driver, see chapter 6 for more info.

Can I use my CD-ROM or other IDE device (except HDD) on IDE 3 & 4, SATA 1-4?

No, the HPT 372N and all SATA ports only support Hard disks.

Can I use IDE 3 & 4 and / or SATA 1-4 as a normal IDE channel?

Yes, no need to change any settings in the BIOS. Just make sure to install the driver, check Chapter 6 for more info.

I cannot get the HDD to boot from IDE 3 or IDE 4, why?

Make sure that the 1st boot device in the BIOS is set to SCSI.

I cannot get the HDD to boot from SATA1 or SATA2, why?

SATA1 and SATA2 are not bootable.

Boot-up from my IDE3/4, I get blue screen upon entering Windows system

Make sure the raid option in the BIOS is enabled.

LAN Issues

During LAN driver installation, the system hangs on 75%, why?

Enable the onboard LAN in the BIOS setup.

I have problem installing Novell NetWare v.50

Disable the APIC option in the BIOS.

For updated FAQs, please check http://www.soyo.com.tw/faq.htm **or** http://www.soyousa.com/faqs.html

APPENDIX E

Contact Information

How to contact us:

- If you are interested in our products, please contact the SOYO sales department in the region you live.
- If you require Technical Assistance, please contact our Technical Support in the region you live.

SOYO prefers Email as communication medium, remember to *always add to the email the country that you live in*.

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