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

- 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 below. Check the CPU specification before you insert it in the CPU socket.

- 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.

- 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.

- An ATX 12V 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).

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

- 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.)

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

SY-P4I865PE Plus DRAGON 2 Motherboard

****

mPGA Socket 478 Processor supported

Intel 865PE AGP/PCI

400/533/800 MHz Front Side Bus supported

ATX 12V Form Factor

****

User's Manual

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Disclaimer:
Please be advised that some SOYO motherboards are designed with overclocking features and may allow users to run the components beyond manufacturer's recommended specifications. Overclocking beyond manufacturer's specifications is not recommended nor endorsed by SOYO, Inc. and will void your manufacturer's warranty. Overclocking beyond manufacturer's specifications is not encouraged and should be assumed at the user's own risk. Unsafe overclocking can damage the user's system or cause serious personal injury. If the user is unsure or in doubt about overclocking, please seek professional advise. SOYO, Inc. is not responsible for any direct or indirect damage resulting from overclocking.

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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.soyousa.com"**.

Edition: May 2003
Version 1.0
P4I865PE Plus DRAGON 2 SERIAL

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

100% POST CONSUMER
RECYCLED PAPER

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Chapter 1

MOTHERBOARD DESCRIPTION

1-1 INTRODUCTION

The **SY-P4I865PE Plus DRAGON 2** AGP/PCI Motherboard is a high-performance Socket 478 processor supported ATX 12V form-factor system board. **SY-P4I865PE Plus DRAGON 2** uses the Intel 865PE 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-P4I865PE Plus DRAGON 2 Motherboard
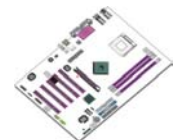
◆ The Quick Start Guide

◆ The Installation CD-ROM

◆ SOYO Bonus Pack CD-ROM

◆ One IDE Device ATA 100 flat cables
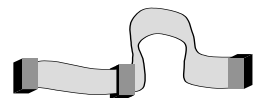
◆ One Floppy Disk Drive flat cable
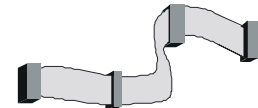
◆ One Serial ATA cables

◆ One bag of Heat Sink Compound

1

◆   One Back panel

> **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 (400/533/800MHz 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:** CPUs with higher than 1.6 volts are not supported.
Chipset	Intel® 865PE / ICH5 Chipset
Memory	➢ The SY-P4I865PE Plus DRAGON 2 supports PC2100, PC2700 and PC3200 DDR (non-registered and non-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 ➢ ICH5 Integrated Parallel ATA controller supporting up to 4x UDMA 33/66/100 Parallel ATA devices.
USB 2.0	8 x USB 2.0 compliant ports (4 on rear IO panel, 4 x motherboard connectors.
Sound	Onboard AC97 6 channel Audio Codec
Network	Onboard 10/100 Mbps 100Base-T Ethernet controller, supporting Wake-On-Lan (WOL)
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
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 there is damage to the board, 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-P4I865PE PLUS DRAGON 2 MOTHERBOARD LAYOUT
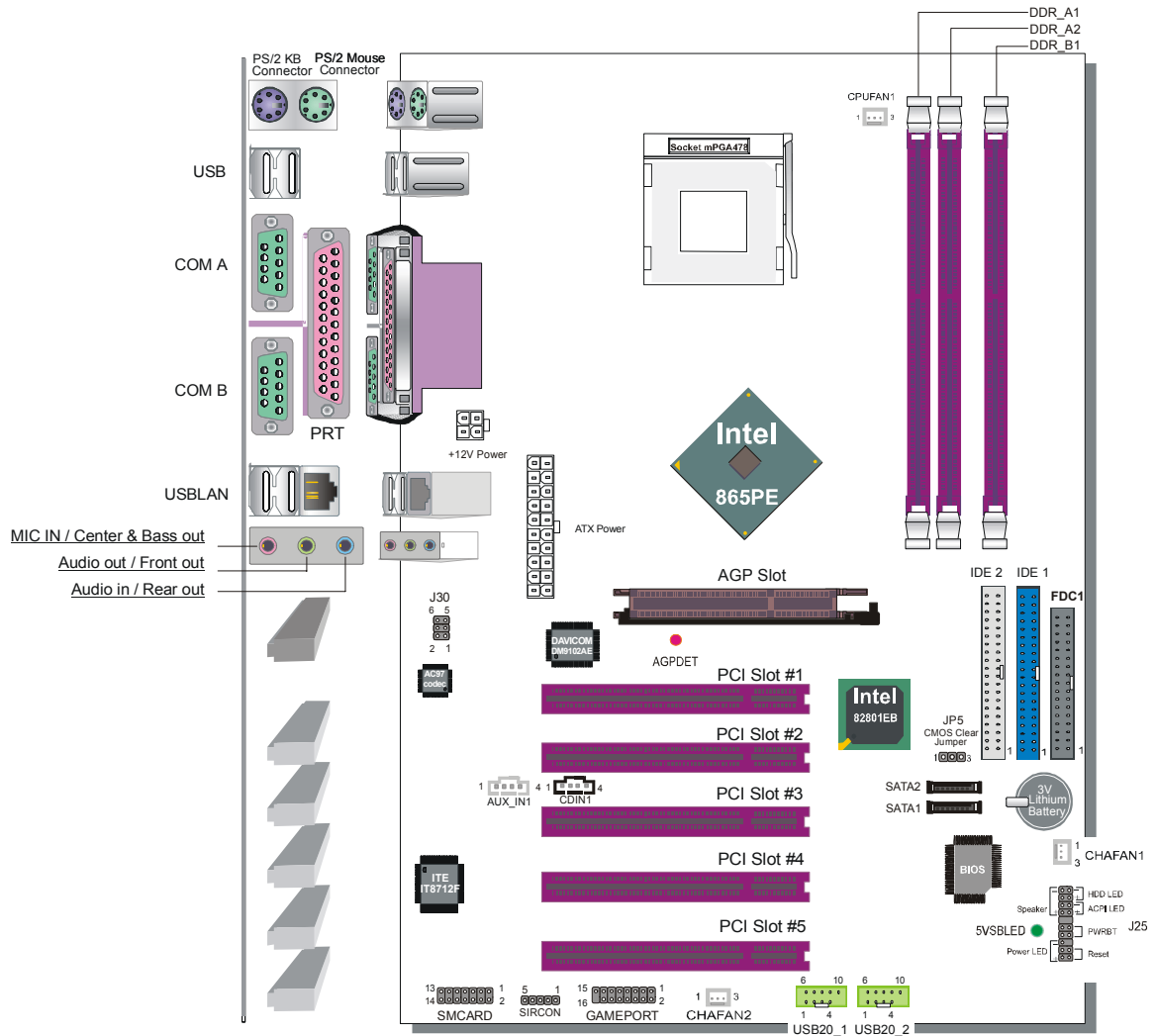
Back Panel **SY-P4I865PE Lite DRAGON 2 Platform**

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1-7 SY-P4I865PE PLUS DRAGON 2 MOTHERBOARD COMPONENTS

A	**+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 35.
B	**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 35.
C	**Davicom Onboard Lan Chip**
D	**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 19.
E	**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.
F	**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 14.
G	**Intel 865PE North Bridge Chip** The Intel® 865PE 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 865PE chipset adds intelligence to help manage and prioritize multiple threads received from the microprocessor.

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H	**CPU Cooling Fan (CPUFAN1) 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 **(1) CPU Cooling Fan (CPUFAN1)** paragraph on page 31
I	**DDR DIMM Banks** These 4, 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 17.
J	**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 **A.IDE Device Installation (HDD, CD-ROM)** paragraph on page 20 for more details.
K	**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 23.
L	**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.
M	**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 **G. CMOS Clear (JP5)** paragraph on page 37.
N	**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 **G. CMOS Clear (JP5)** paragraph on page 37.

O	**Chassis Cooling Fan (CHAFAN1) connector** This connector is to connect your chassis fan to your motherboard. This motherboard supports up to 2 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)** paragraph on page 31 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 41.
Q	**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 23 for more details and lay-outs.
R	**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.
S	**SATA Connectors** These connectors allow you to attach one UDMA 150 hard disk to each connector. For more information on these connectors check the **A.IDE Device Installation (HDD, CD-ROM)** paragraph on page 20.
T	**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 29.
U	**Chassis Cooling Fan (CHAFAN2) connector** This connector is to connect your chassis fan to your motherboard. This motherboard supports up to 2 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)** paragraph on page 31 for more details.

V	**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 30.
W	**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 30.
X	**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 33 contains more information on the lay-out of this header.
Y	**32 bit PCI slots** These are the motherboard's 3.3v busmastering PCI slots, compliant to PCI specification v2.2.
Z	**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.
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 (CDIN1)** paragraph on page 33 for more details.
AB	**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 (AUXIN1)** paragraph on page 34 for more details.

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AC	**AC97 Onboard Audio Chip**
AD	**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 **6. MIC & LED Connector (J30)** paragraph on page 34 for a lay-out of this header.
AE	**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 26 for more details.

Chapter 2

HARDWARE INSTALLATION

Congratulations on your purchase of **SY-P4I865PE Plus 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 built-in CPU cooling fan. (CPUs with Vcore higher than 1.6 volts are not supported)
2. DDR RAM memory module(s)
3. Computer case and chassis with 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.

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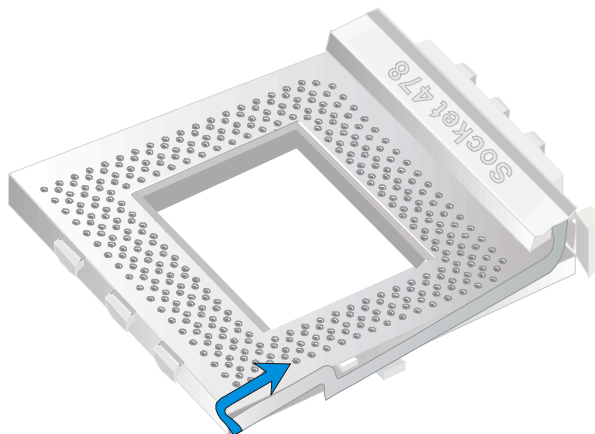
2. Align the blunt edge of the CPU with the matching pinhole distinctive edge on the socket.
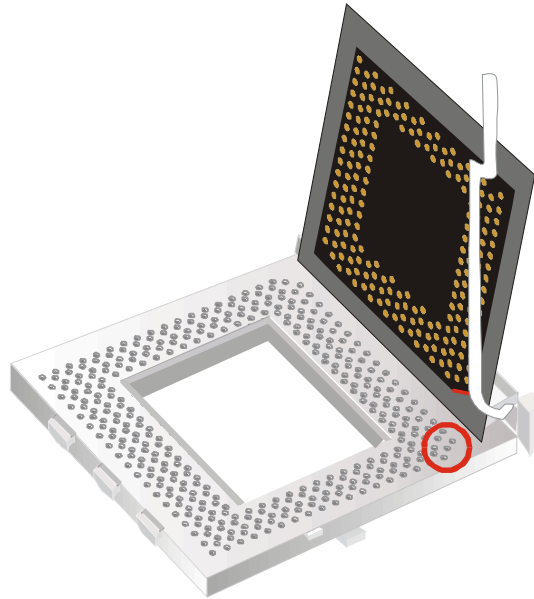
3. Seat the processor in the socket completely and without forcing.
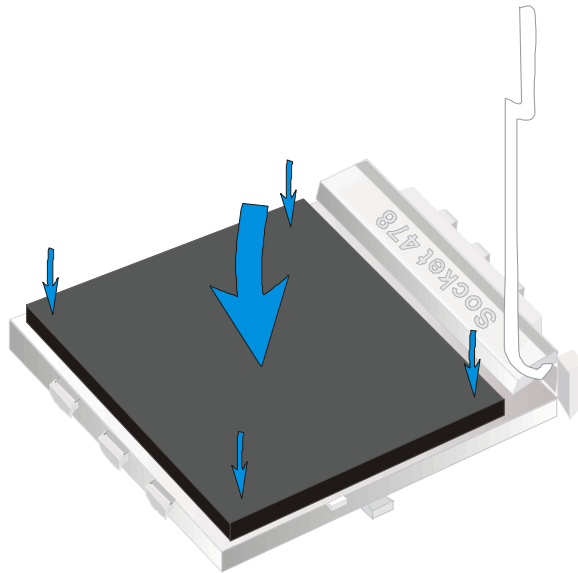
4. Then close the socket handle to secure the CPU in place.
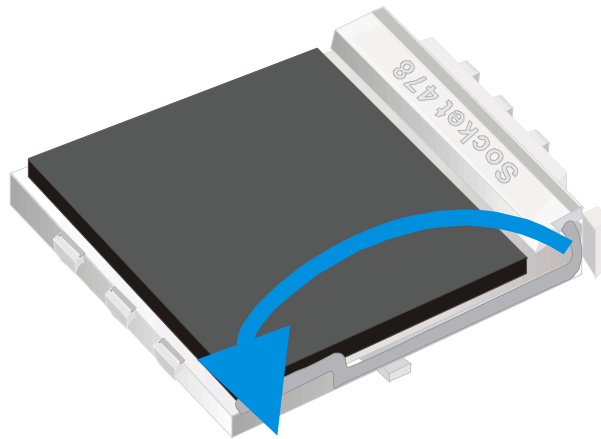
Remember to connect the CPU Cooling Fan to the appropriate power connector on the Motherboard. *The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.*

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.

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Step 2 Install Memory Module

DDR_A1
DDR_A2
DDR_B1
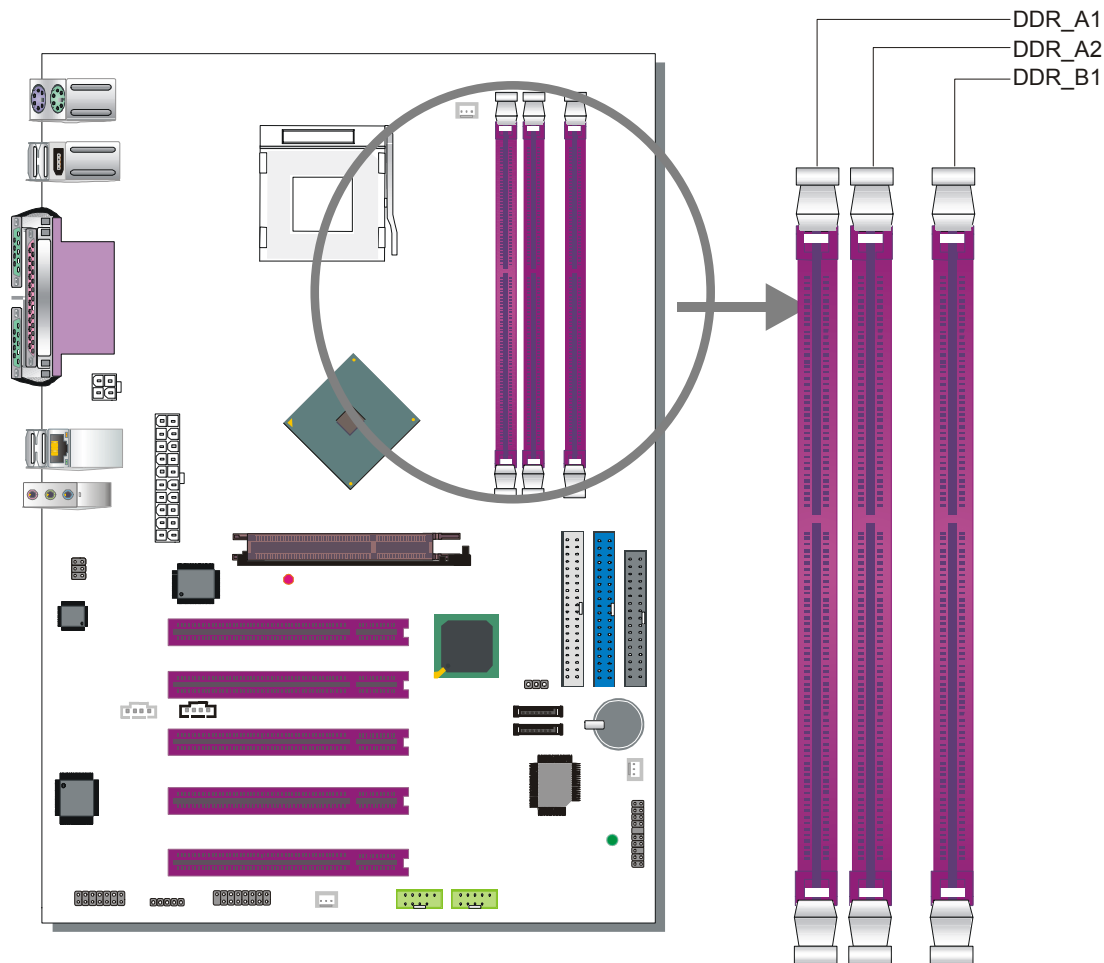
This motherboard supports one Dual Channel to your memory, Note that you can use normal DDR memory for Dual Channel to work. Also note that for Dual Channel to work 2 modules of equal size and specifications have to be installed.

The largest memory capacity possible is 3 GB. On this motherboard, DRAM speed can be set independent form the CPU front side bus speed. Note that when installing 3GB of memory, your total memory will be less than 3GB. 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
128 bit	*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.

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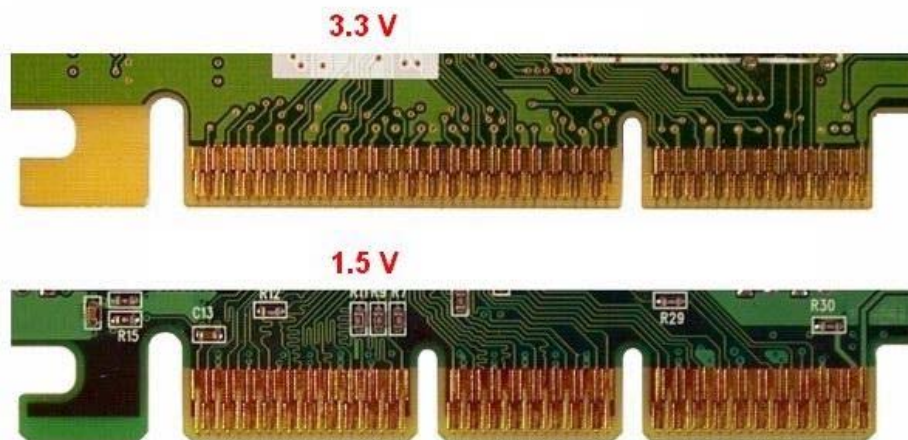
This motherboard only support 1.5V AGP card (4X/8X card). If 3.3V AGP card is used, the system will not boot-up and the AGPDET LED will lit.

19
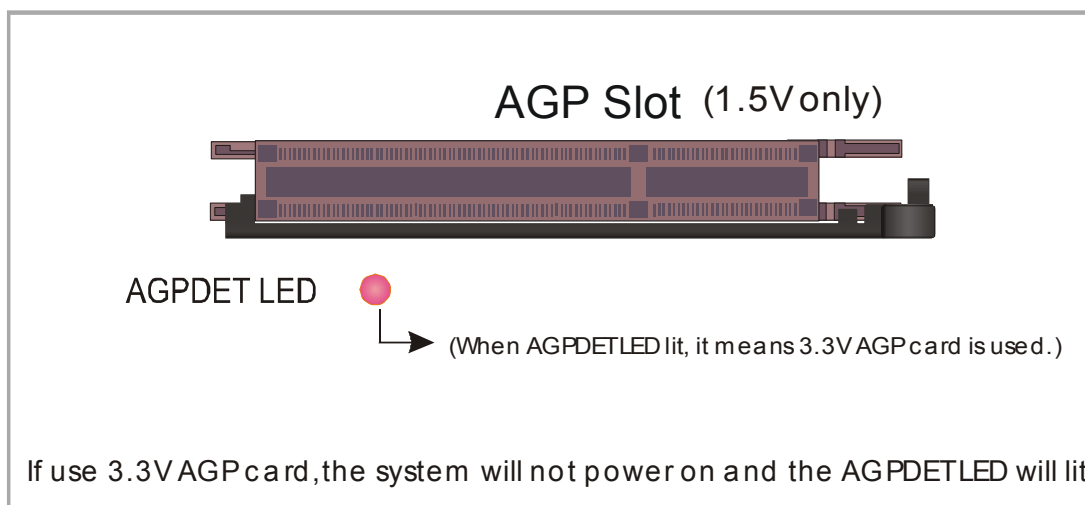
Step 4 Connect cables, case wire, and power supply
A.IDE Device Installation (HDD, CD-ROM)

IDE 2
Secondary
IDE

IDE 1
Primary
IDE

Pin 1

SATA2
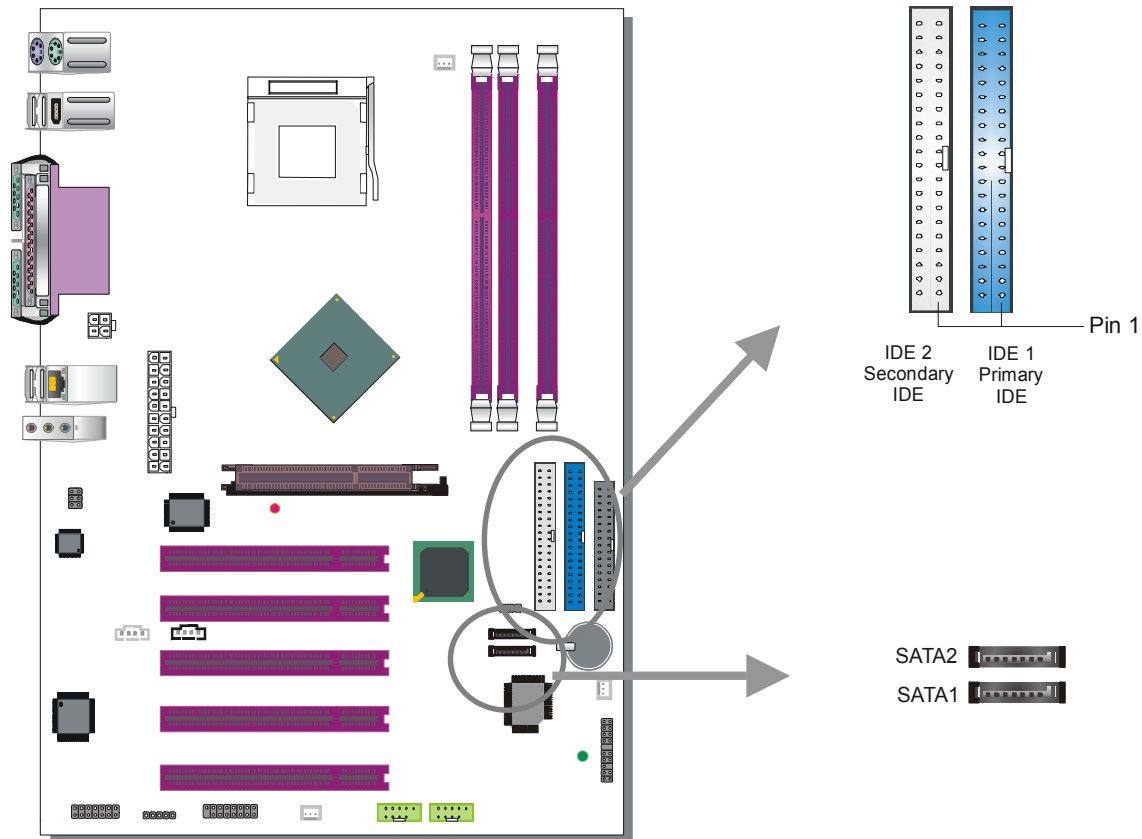
SATA1

This Motherboard offers 1 primary (IDE1) IDE device connectors, 1 secondary IDE device connectors (IDE2) and 2 tertiary serial ATA ports. IDE1 and IDE2 can support up to four high-speed Ultra DMA 33/66/100 HDD or CD-ROM. SATA1~2 can support up to 2 ATA 150 SATA hard disks.

IDE1, 2 are controlled by the 82801EB (ICH5), SATA1, 2 are controlled by the 82801EB (ICH5).

There are 4 parallel ATA HDD connectors (IDE1, IDE2) and 2 serial ATA connectors on the motherboard. SATA1 and SATA2 are provided for standard SATA function. This Motherboard can support up to 6 HDDs.

The other end of the SATA cable goes into your SATA device.

Note: IDE2 and SATA2 are not bootable, SATA1 and IDE1 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:

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) or secondary (IDE2) directionally keyed IDE connector on the Motherboard. The ATA66/100 cable is backward compatible with ATA33 HDDs.

	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 50 for more details.

21
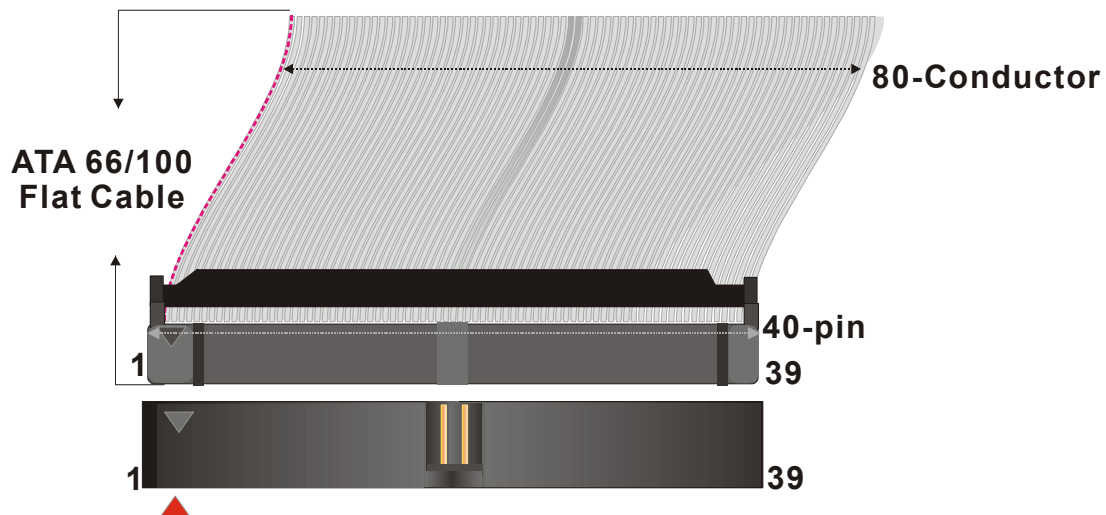
Serial ATA connectors

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

FDC
Floppy Drive
Connector

Pin 1
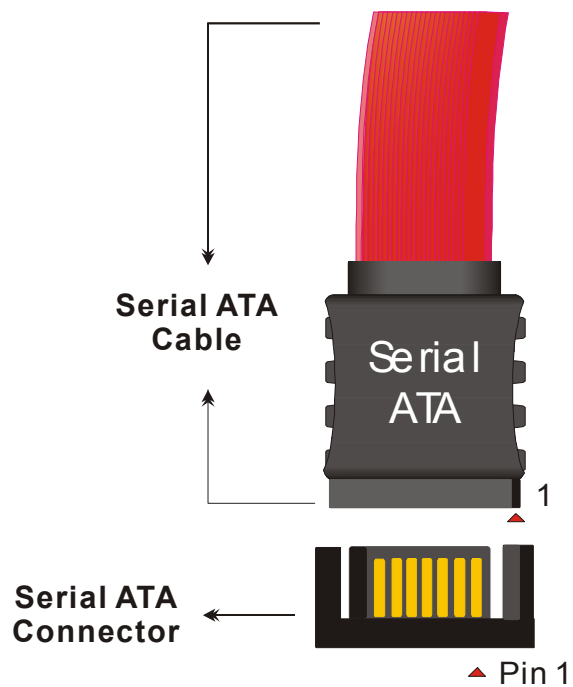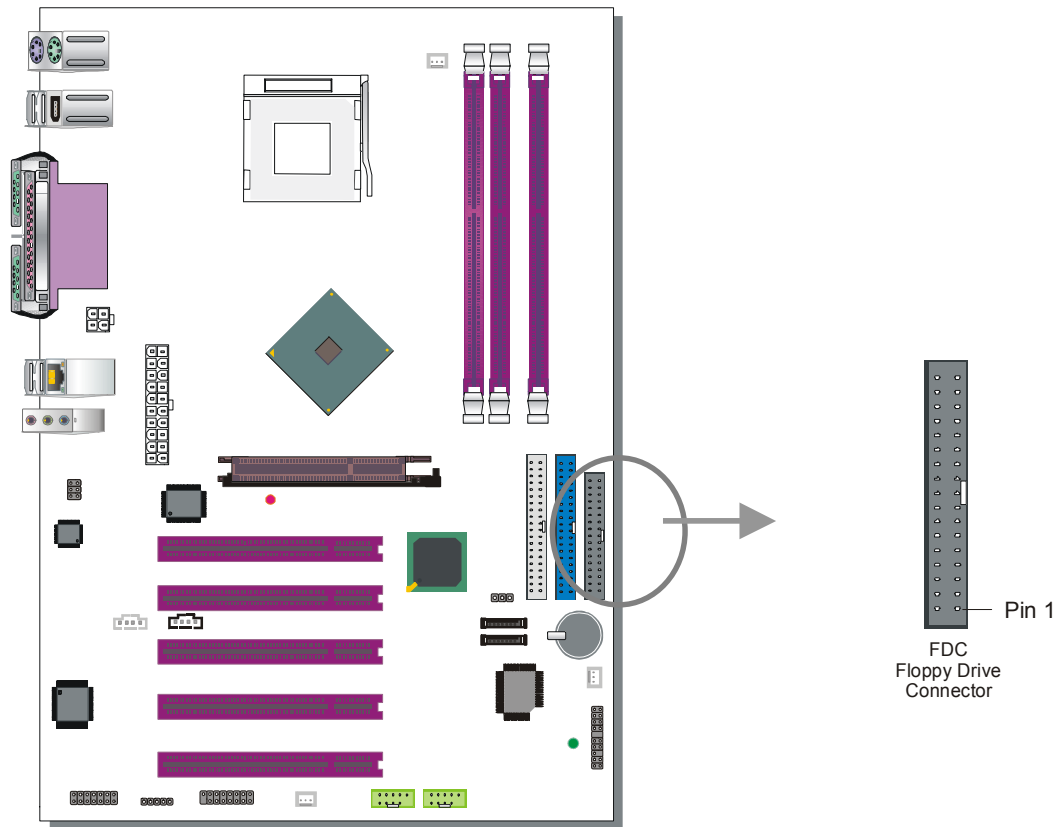
The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB. In addition, this Motherboard supports a 3-mode (720KB/1.2MB/1.44MB) floppy commonly used in Japan.

Connect one side of the 34-pin flat cable to the floppy drive and plug the other end in the floppy drive connector on the Motherboard.

This Motherboard can supports only 1 floppy drive.

23
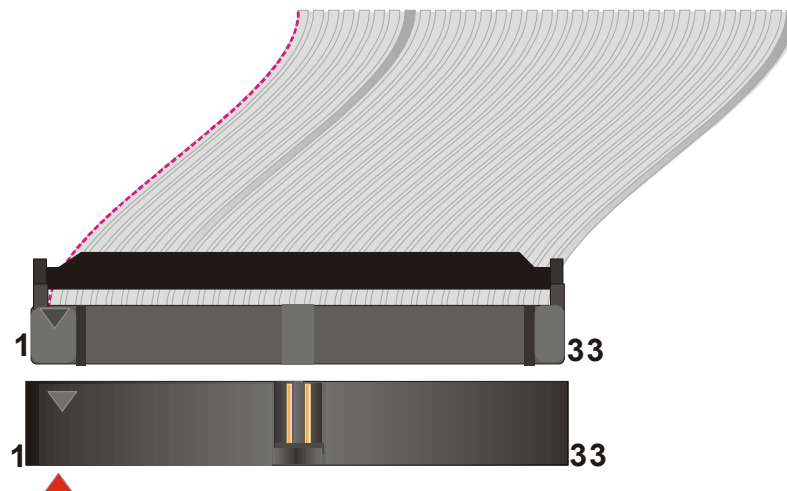
C. Front Panel Connections
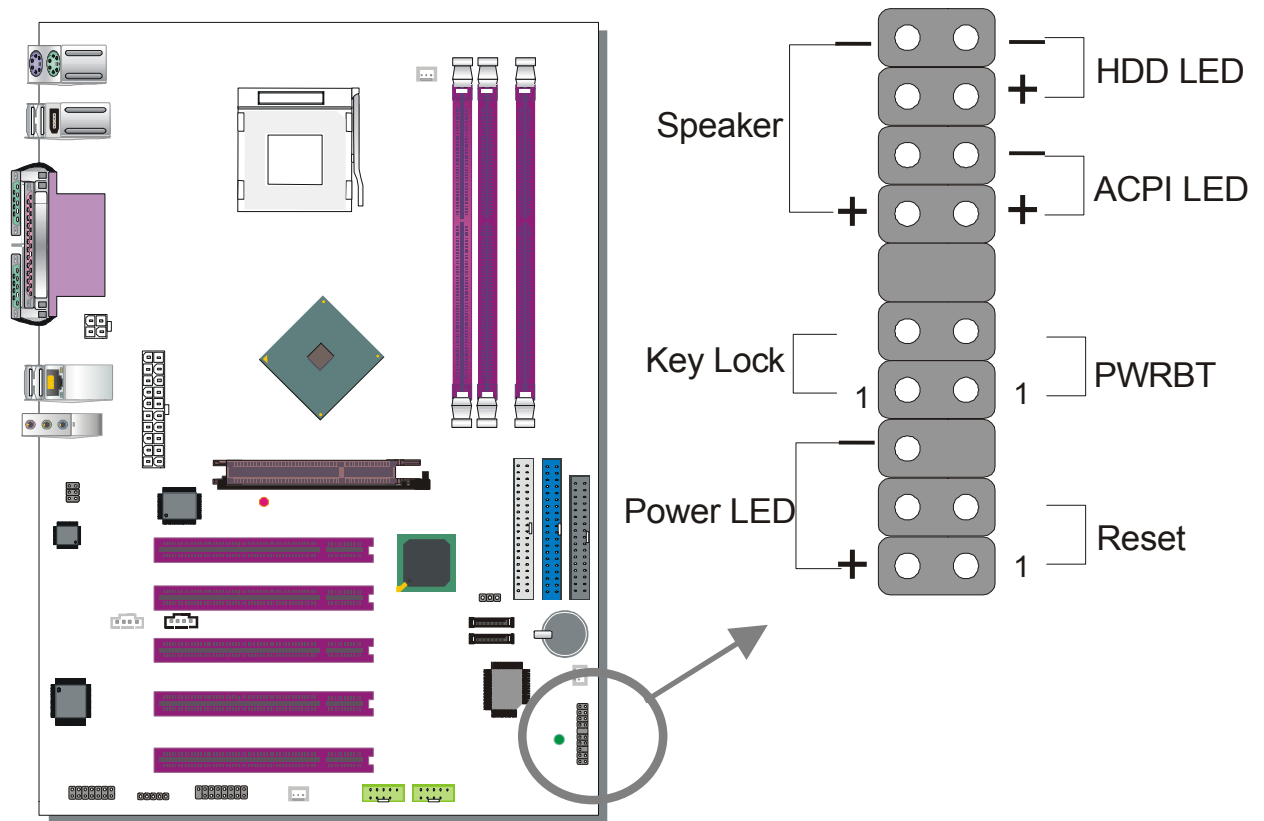
Plug the computer case's front panel devices to the corresponding headers on the Motherboard.

1. Power LED

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

24
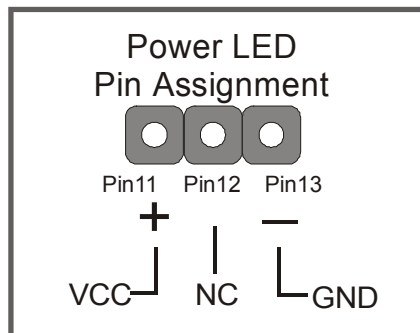
2. Reset

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

   Pin1  Pin2

Power Good    GND
```
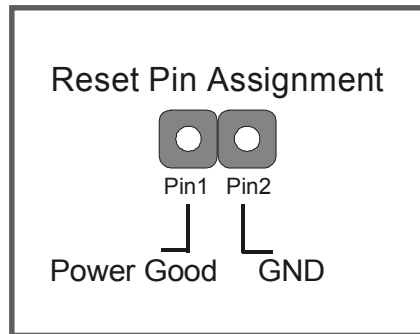
3. Speaker

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
```
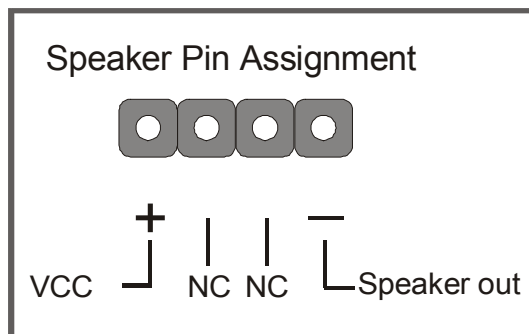
4. ACPI LED

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 for PC99 requirements.

```
ACPI LED Pin Assignment

    +        —
2.5V_DDR    Control Pin
```
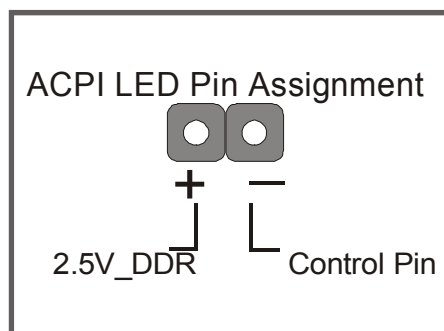
5. IDE LED

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

```
HDD LED Pin Assignment

        [O] [O]
       Pin9   Pin10
        +      —

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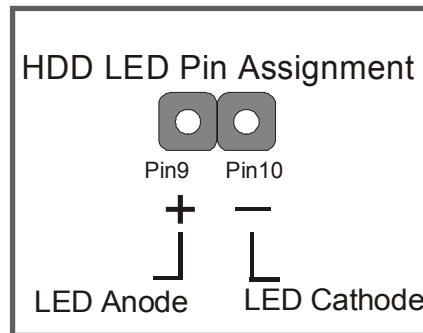
6. ATX Power On/Off Switch

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

        [O] [O]
       Pin4  Pin5

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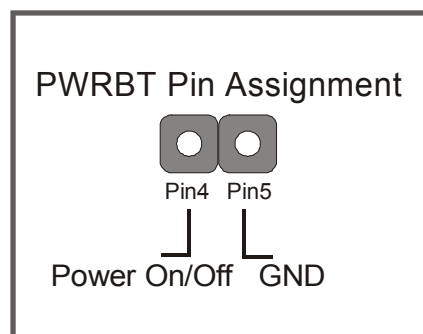
D. Back Panel Connections

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.
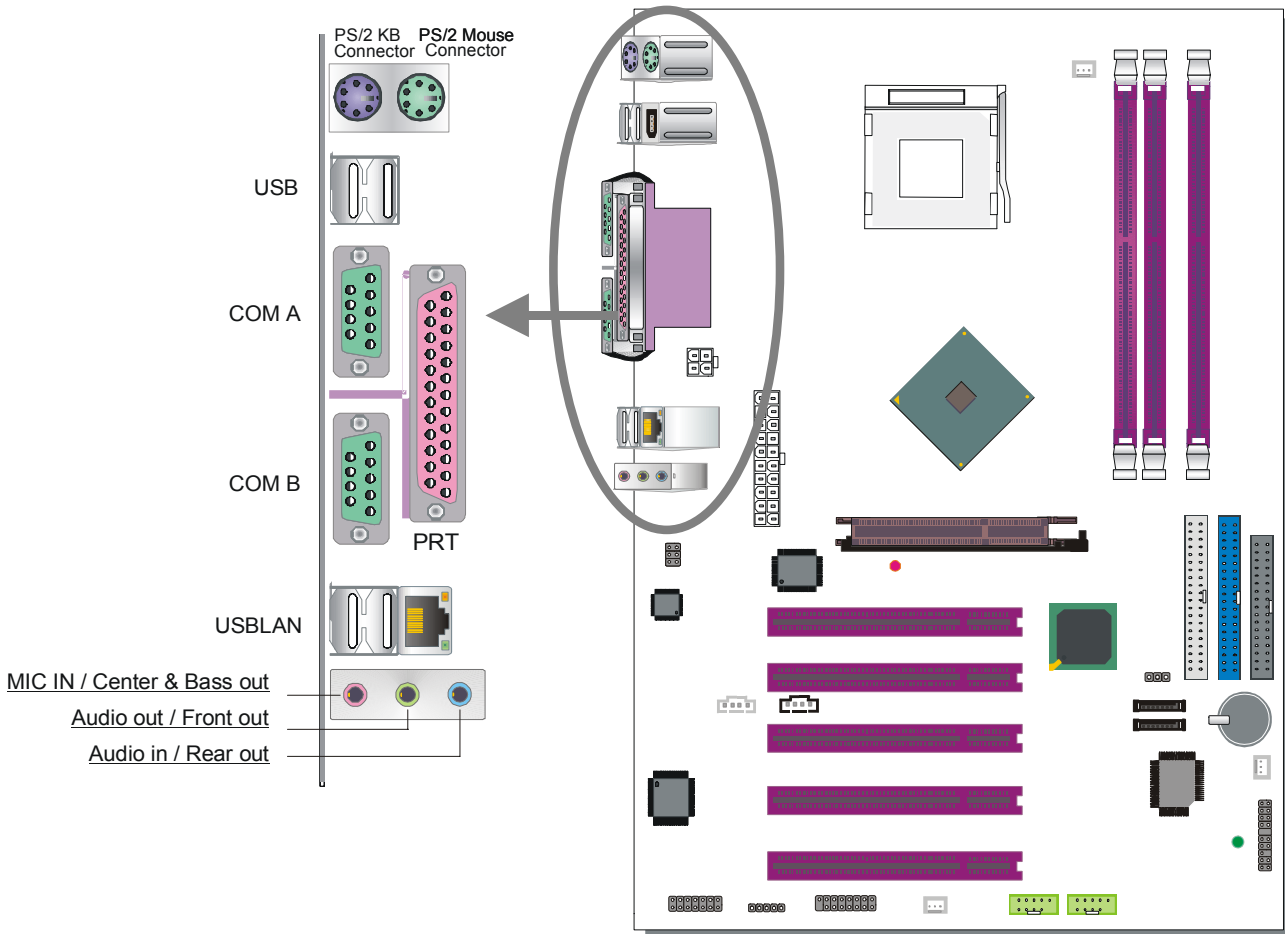
1. Onboard Serial Ports COMA/COMB

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.
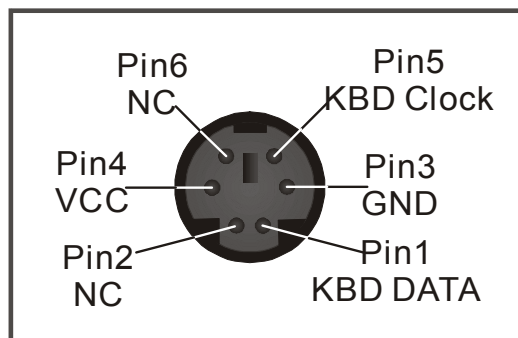
4. PS/2 Mouse

Similarly, plug the mouse jack directly into the 6-pin female PS/2 mouse connector.
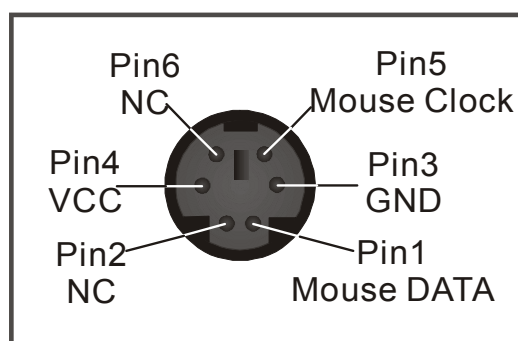
5. Universal Serial Bus (USB1/USB2, USB3/USB4, USB20_1/USB20_2)

This Motherboard provides 8 USB 2.0 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
```
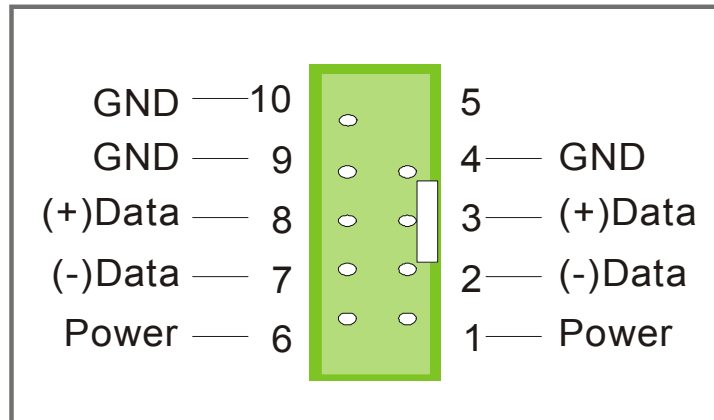
6. Onboard Audio Speakers connections

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 to set the Audio Rack software for 4 channel speaker system. Do not forget to set the Audio Rack software to 4-channel system.

If you are using 6 channel speaker, connect the front **L/R speaker to line out, rear L/R speaker to line-in and center/Bass speaker to Mic-in**, make sure to set the Audio Rack software to 6 channel speaker system.

```
——— Line-in
——— Line-out
——— Mic-in
```

29
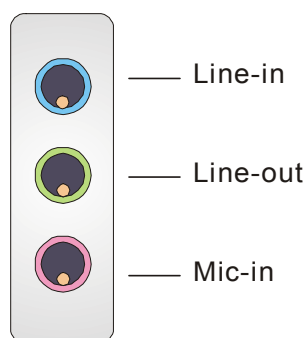
The Gameport has the following lay-out :

```
┌─────────────────────────────────────┐
│            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      │
└─────────────────────────────────────┘
```
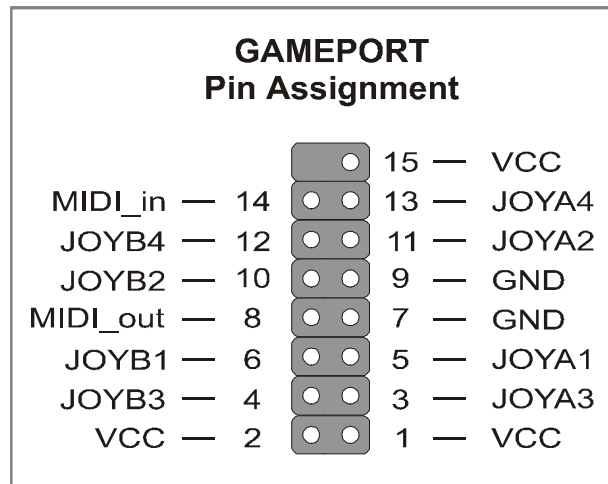
E. Other Connections

1. Standard Infrared (SIRCON)

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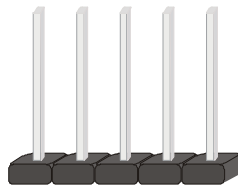
This will enable the infrared transfer function. This Motherboard meets both the ASKIR and HPSIR specifications.

Please install according to the following pin assignment:

```
┌─────────────────────────────────────┐
│       Standard Infrared             │
│      (SIRCON) Connector             │
│     SIRCON Pin Assignment           │
│                                      │
│           1 2 3 4 5                  │
│   VCC ─┘   │ │ │  └─IRTX             │
│          IRRX│ │                     │
│            GND                       │
└─────────────────────────────────────┘
```
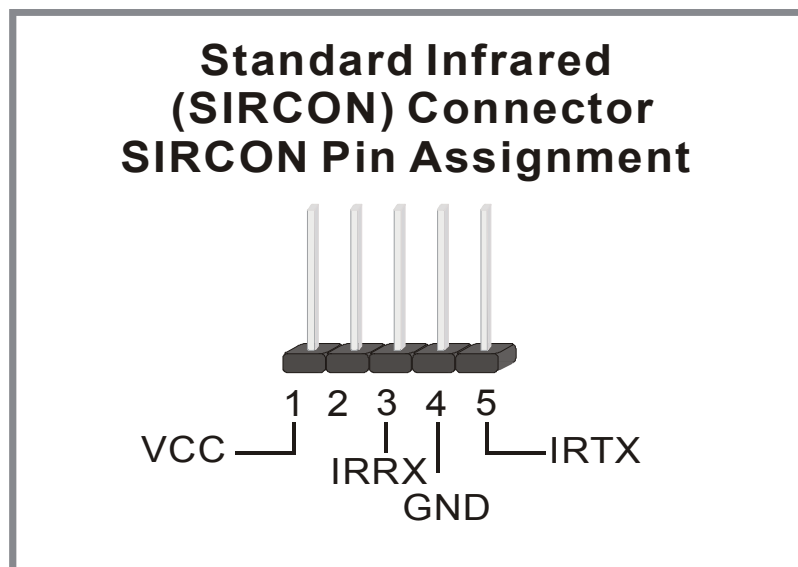
2. Cooling Fan Installation
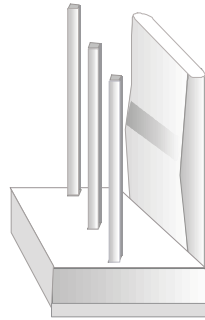
(1) CPU Cooling Fan (CPUFAN1)

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:

**CPU Cooling Fan
CPUFAN1 Pin Assignment**

1   2   3

GND   VCC   SENSOR

2. Cooling Fan Installation

31
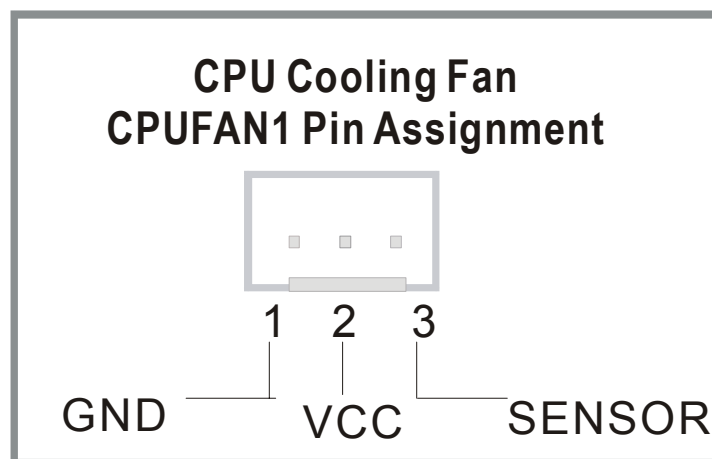
(2) Chassis Cooling Fan (CHAFAN1, CHAFAN2)

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:

```
        Classis Cooling Fan
        (CHAFAN1, CHAFAN2)
       CHAFAN Pin Assignment
            CHAFAN1

          ┌──┐  1 ── GND
          │  │  2 ── VCC
          │  │  3 ── SENSOR
          └──┘
       ............................

            CHAFAN2

          ┌──────┐
          │      │
          └──────┘
           1   2   3
          GND  VCC  NC
```
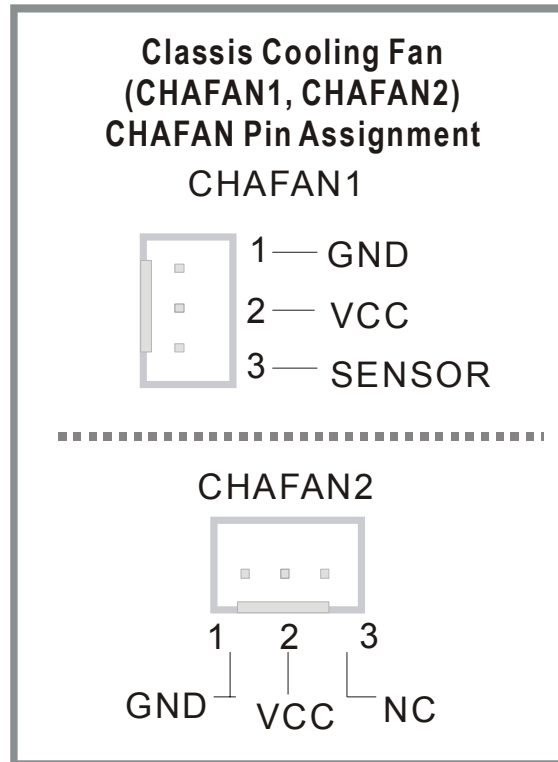
> *Note: CPU cooling fan must be installed to prevent CPU from overheating and ensure system stability. Chassis cooling fan is optional, depending on whether there is cooling fan in your chassis.*

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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	13 —	NC
Scrpres	— 12	11 —	GND
Scrio	— 10	9 —	NC
NC	— 8	7 —	CLK
RST	— 6	5 —	Scrfet
NC	— 4	3 —	NC
NC	— 2	1 —	VCC
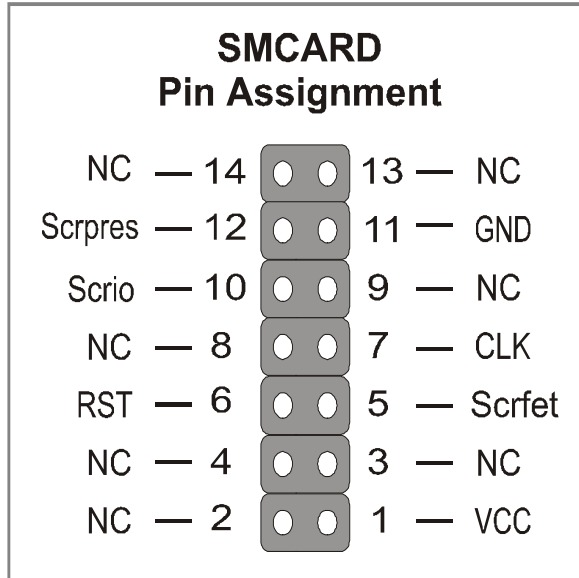
4. CD Line-in (CDIN1)

This Motherboard provides one CD-Line-in connectors. Please connect the 4-pin audio cable from your CD-ROM or DVD ROM drive to CDIN1.

Please install according to the following pin assignment:

CDIN1(CD Line-in)
Pin Assigment

1   2   3   4
Left   GND
GND   Right
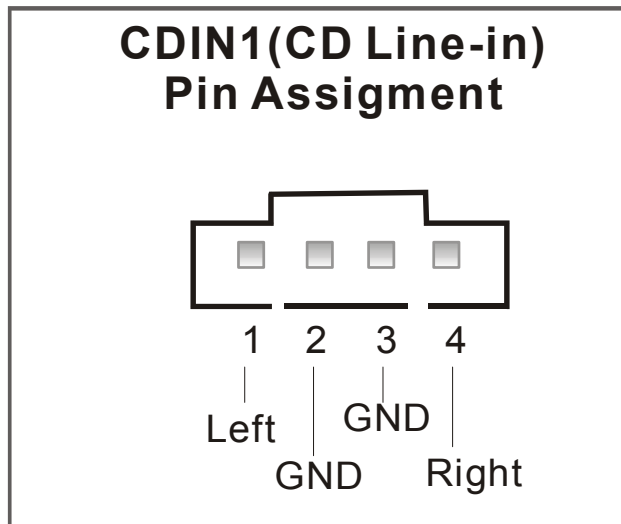
5. AUX-IN (AUXIN1)

This Motherboard provides one AUX-IN connectors. Please connect the 4-pin audio cable from your second CD-ROM or DVD ROM drive to either AUX-IN.

Please install according to the following pin assignment:

AUXIN1
Pin Assigment

1 2 3 4

Left GND

GND Right
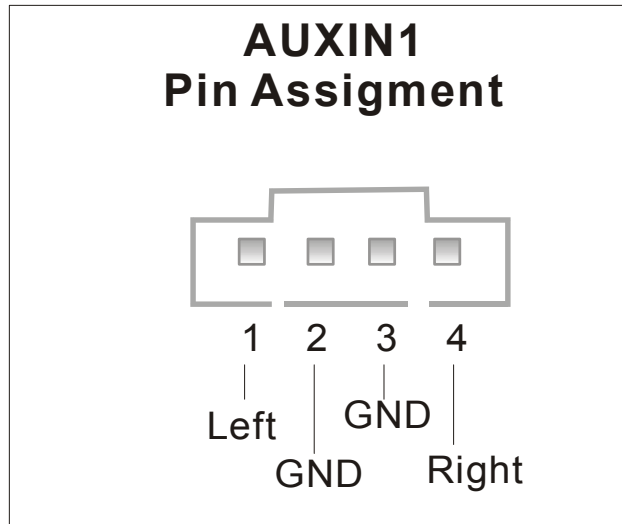
6. MIC & LED Connector (J30)

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)

Line_Out_L —— 1 □ □ 2 —— Line_Out_R
MIC IN —— 3 □ □ 4 —— GND
LAN_Active_LED —— 5 □ □ 6 —— VCC

34
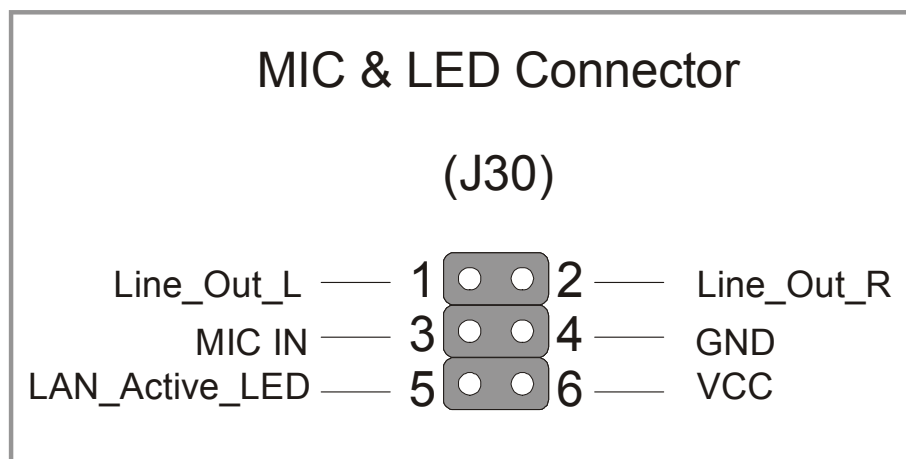
F. ATX12V Power Supply

The power supply connector is the last connection to be made while installing a motherboard. This motherboard requires an ATX 12V power supply (For P4 system), and AT or ATX power supply cannot be used.

+12V Power

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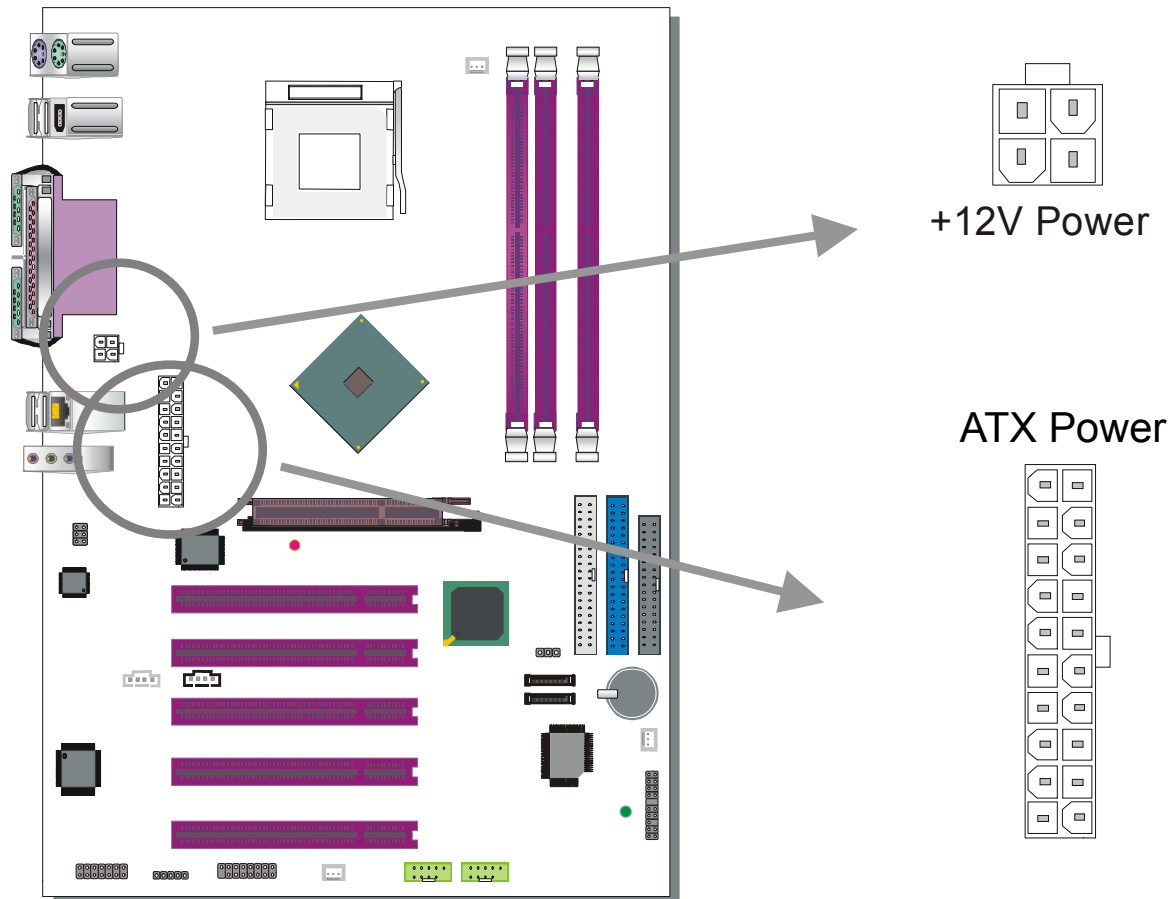
Note 1: *The presence of the +12V power connector indicates that a power supply is ATX12V; the absence of the +12V power connector indicates that a supply is ATX.*

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).*

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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 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
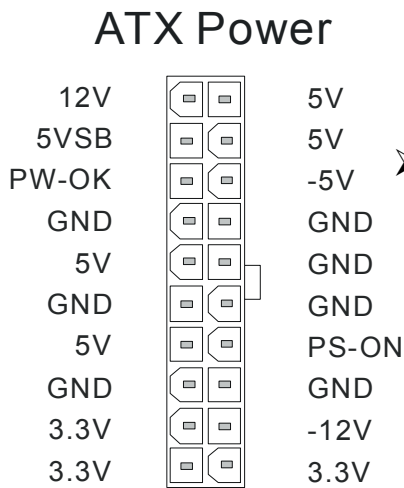
➢ **Pay special care to the directionality.**

+12VDC

Pin3

Pin1

COM
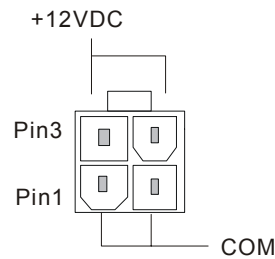
+12V Power Connector

FIG. 1   **FIG. 2**

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G. CMOS Clear (JP5)

**CMOS Clear (JP5)
Pin Assignment**

3 2 1

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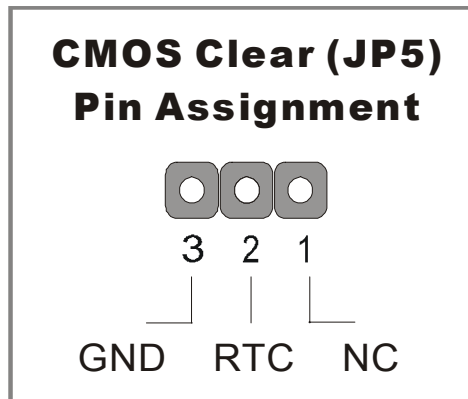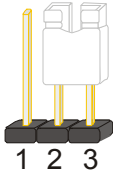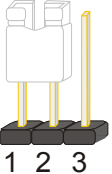
In some cases the CMOS memory may contain wrong data, follow the steps below to clear the CMOS memory.

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 the ATX power supply 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.
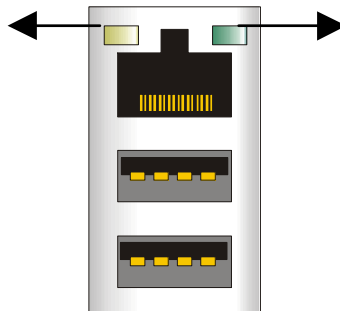
This is the LAN activity LED. It will blink when it is active.

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, 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 in 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.

Step1.　Select [STANDARD CMOS SETUP]

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

Step2.　Select [LOAD OPTIMIZED DEFAULTS]

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

Step3.　Select [SOYO COMBO FEATURE]

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

Step4.　Select [SAVE & EXIT SETUP]

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

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 or press Enter, then select the value.

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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	Returns at anytime and from any location to the Main 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.

```
                    R O M   P C I / I S A   B I O S
                    C M O S   S E T U P   U T I L I T Y
                    A W A R D   S O F T W A R E , I N C .
 S T A N D                 S E T U P            I N T E G R A T E D   P E R I P H E R A L S
 B I O S  F
 C H I P S E
 P O W E R           SAVE to CMOS and EXIT
 P N P / P C
 L O A D  S
 L O A D   B I O S   D E F A U L T S

 E s c   : Q u i t                      ↑ ↓ → ←   : S e l e c t  I t e m
 F 1 0   : S a v e  &  E x i t S e t u p    ( S h i f t ) F 2   : C h a n g e  C o l o r
                 T i m e , D a t e , H a r d   D i s k   T y p e …
```
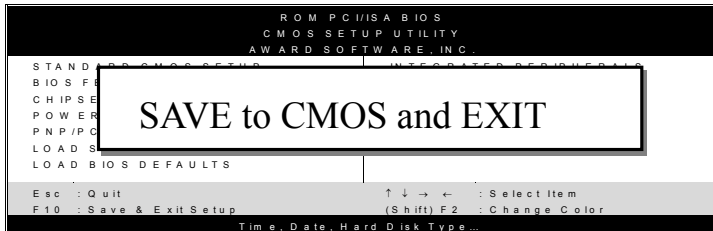
Type [Y] to save the changes and exit or [N] to return to the Main Menu and keep current values.

EXIT WITHOUT SAVING

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

```
                    R O M   P C I / I S A   B I O S
                    C M O S   S E T U P   U T I L I T Y
                    A W A R D   S O F T W A R E , I N C .
 S T A N D A R D   C M O S   S E T U P       I N T E G R A T E D   P E R I P H E R A L S
 B I O
 C H
 P O          Quit Without Saving (Y/N)? _
 P N
 L O
 L O

 E s c   : Q u i t                      ↑ ↓ → ←   : S e l e c t  I t e m
 F 1 0   : S a v e  &  E x i t S e t u p    ( S h i f t ) F 2   : C h a n g e  C o l o r
                 T i m e , D a t e , H a r d   D i s k   T y p e …
```
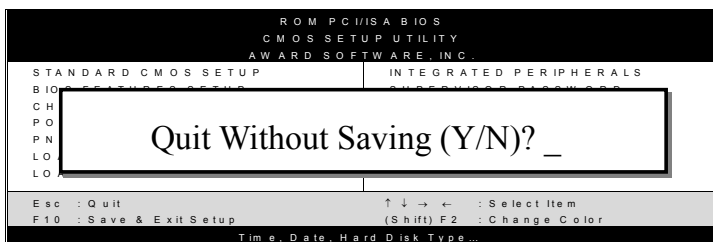
Type [Y] to abandon changes and exit or [N] to return to the Main Menu and keep current values.

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

    CPU Voltage 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.

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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.	
	Auto		Default
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		

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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 changes the values of the chipset registers. These registers control the system options in the computer.

Phoenix – Award BIOS CMOS Setup Utility
Onboard Device

		Item Help
AC97 Audio	Auto	
LAN Chip	Enabled	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
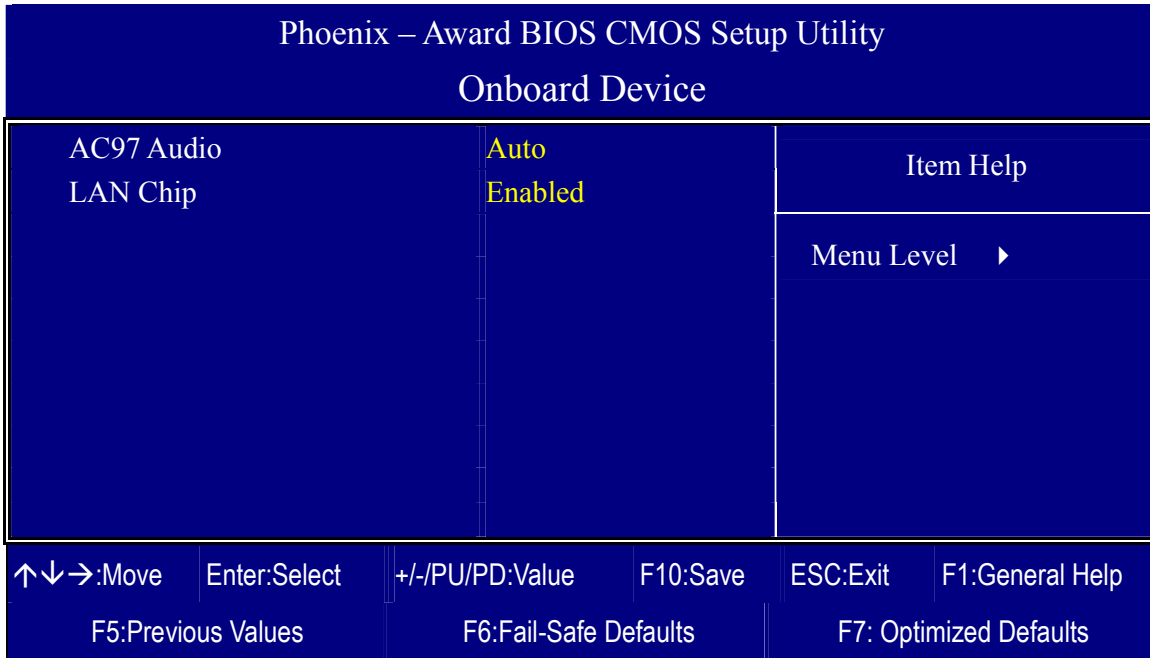
After you have completed the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

Onboard Settings

	Setting	Description	Note
AC97 Audio	Enabled	This setting allows you to enabled or disabled onboard Audio.	Default
	Disabled		
LAN Chip	Enabled	This setting allows you to enabled or disabled onboard LAN.	Default
	Disabled		

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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

		Item Help
IDE 1,2 /SATA 1,2	IDE only	
IDE HDD Block Mode	Enabled	
IDE DMA transfer access	Enabled	Menu Level ▶
On-Chip Primary PCI IDE	Enabled	[Disabled]: Disabled SATA Controller.
IDE Primary Master PIO	Auto	
IDE Primary Slave PIO	Auto	[Auto]: Auto arrange by BIOS.
IDE Primary Master UDMA	Auto	[Combined Mode]: PATA
IDE Primary Slave UDMA	Auto	and SATA are combined.
On-Chip Secondary PCI IDE	Enabled	Max. of 2 IDE drives in
IDE Secondary Master PIO	Auto	each channel.
IDE Secondary Slave PIO	Auto	[Enhanced Mode]: Enable
IDE Secondary Master UDMA	Auto	both SATA and PATA. Max.
IDE Secondary Slave UDMA	Auto	of 6 IDE drives are supported.
		[SATA Only]: SATA is
*** On-Chip Serial ATA Setting ***		operating in legacy mode.
x On-Chip Serial ATA	Disabled	
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 complete the changes, press [Esc] and follow the instructions on your screen to save your settings or exit without saving.

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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.	
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		

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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 auto detect 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
┌─────────────────────────────┬──────────────────────────────┐
│  First Boot Device    Floppy   │         Item Help           │
│  Second Boot Device   IDE1/SATA1                             │
│  Third Boot Device    LS120    ├──────────────────────────────┤
│  Boot Other Device    Enabled  │  Menu Level    ▶            │
│                                │                              │
│                                │  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.

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System Boot Control Settings

	Setting	Description	Note
First /Second/Third Boot Device	Floppy	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).	
	LS120		
	IDE1/SATA1		
	CDROM		
	ZIP100		
	Other Device		
	Disabled		
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

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
┌──────────────────────────────────────┬──────────────────────────┐
│  Date (mm:dd:yy)        Mon, May 7 2003│        Item Help          │
│  Time (hh:mm:ss)        2 : 30 : 20    │                          │
│                                        │  Menu Level      ▶       │
│  ▶ IDE Primary Master   None           │                          │
│  ▶ IDE Primary Slave    None           │  Change the day, month, year│
│  ▶ IDE Secondary Master None           │  and century.            │
│  ▶ 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

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Hard Disks Type & Mode

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

Primary (Secondary) Master & Slave	Setting	Description	Note
IDE HDD Auto-Detection	Press Enter	To auto-detect the HDD's size, head… 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 disk)	

> *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

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.	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
Gate A20 Option	Fast	VIRUS warning feature for
Typematic Rate Setting	Disabled	IDE Hard Disk boot sector
x Typematic Rate (Chars/Sec)	6	protection. If this function is
x Typematic Delay (Msec)	250	enabled and someone attempt
Security Option	Setup	to write data into this area,
APIC Mode	Enabled	BIOS will show a warning
MPS Version Control For OS	1.1	message on screen and alarm
OS Select For DRAM > 64MB	Non-OS2	beep.
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.

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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

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Boot Up NumLock Status

	Setting	Description	Note
Boot Up NumLock 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 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]

	Setting	Description	Note
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

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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

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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

LOGO Show

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3-4   ADVANCED CHIPSET FEATURES

STOP *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




↑↓→ 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 complete 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

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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 ▶ SuperIO Device	Press Enter Press Enter	Item Help 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		
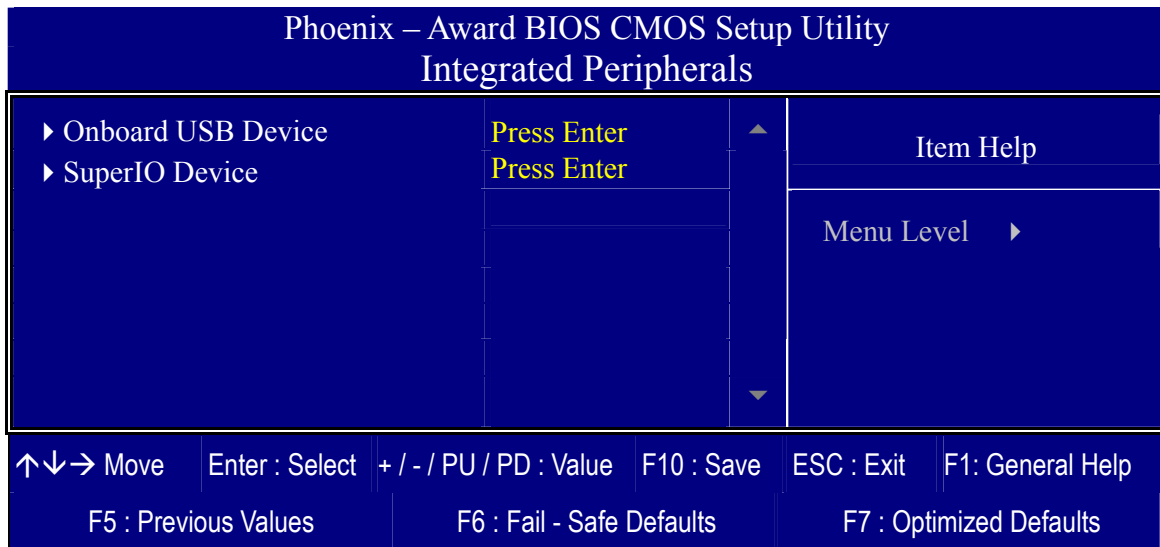
The following tables describe each field in the INTEGRATED PERIPHERALS Menu and provide instructions on how to configure the IDE controls, FDC controls, and the onboard serial and parallel ports.

3-5.1 Onboard USB Device

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

The following screen shows setup default setting.
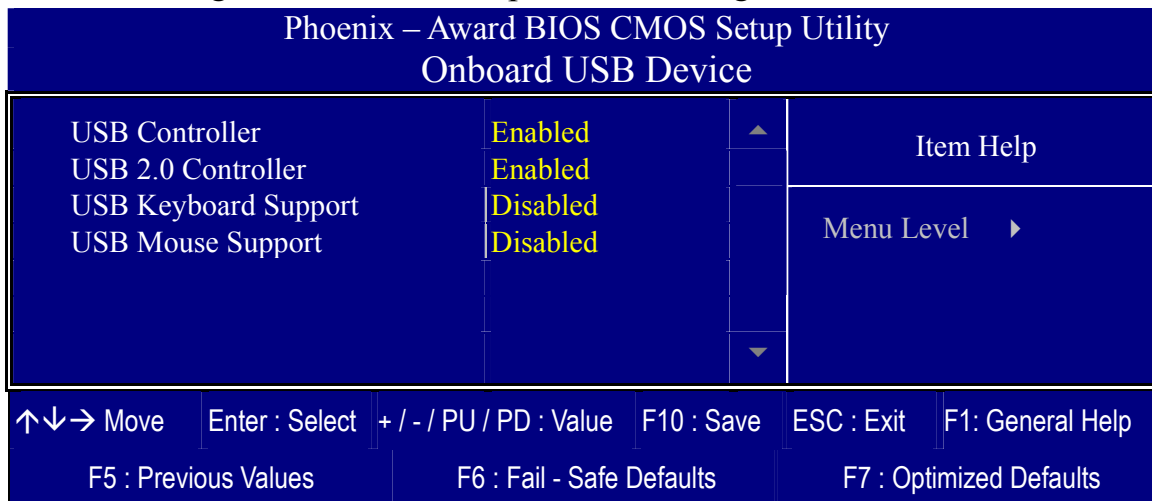
Phoenix – Award BIOS CMOS Setup Utility Onboard USB Device		
USB Controller	Enabled	Item Help
USB 2.0 Controller	Enabled	
USB Keyboard Support	Disabled	Menu Level ▶
USB Mouse Support	Disabled	

↑↓→ 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		

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3-5.2 SuperIO Device

> *Caution:* Change these settings only if your 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
   Game Port Address          201
   Midi Port Address          330
   Midi Port IRQ              10

↑↓→: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)	
Game Port Address	Disabled	Set the I/O base address for the ON board game port.	
	201		Default
	209		
Midi Port Address	Disabled	Set the I/O address for the on board Midi port here.	
	330		Default
	300		
If [Midi Port Address] is set to [330]/[300] mode			
Midi Port IRQ	5	Select the IRQ that the Midi port uses.	
	10		Default

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)	Item Help
x Run VGABIOS if S3 Resume	Auto	
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.	

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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.	

Reload Global Timer Events

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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 if
INT Pin 1 Assignment	Auto	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 the
INT Pin 5 Assignment	Auto	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]

	Setting	Description	Note
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 (Continued)

	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)

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3-8 PC HEALTH STATUS

This option sets the Motherboard's PC Health Status.

```
              Phoenix – Award BIOS CMOS Setup Utility
                         PC Health Status

                                                         Item Help

       CPU Vcore                    1.72 V
       +3.3V                        3.21 V         Menu Level    ▶
       +5V                          5.02 V
       +12V                        11.77 V
       DRAM Voltage                 2.59 V
       AGP Voltage                  1.53 V
       CPU Temperature        46°C / 114°F
       CHA Temperature         28°C / 82°F

       CPUFAN1Speed                 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 CPUFAN operating speed.	
CHAFAN1 Speed	RPM	Show you the current CHAFAN operating speed.	

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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.
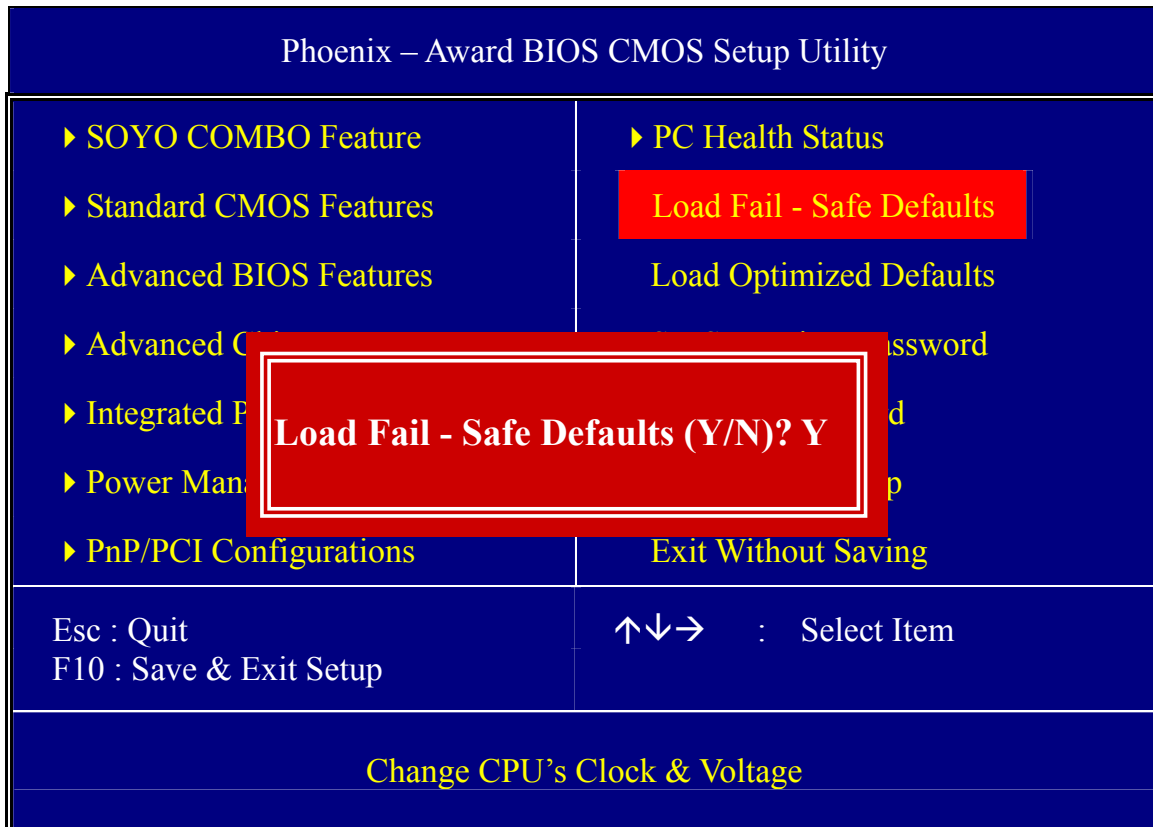
Phoenix – Award BIOS CMOS Setup Utility	
▶ SOYO COMBO Feature	▶ PC Health Status
▶ Standard CMOS Features	Load Fail - Safe Defaults
▶ Advanced BIOS Features	Load Optimized Defaults
▶ Advanced C...	...ssword
▶ Integrated P... **Load Fail - Safe Defaults (Y/N)? Y** ...d	
▶ Power Mana...	...p
▶ PnP/PCI Configurations	Exit Without Saving
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.

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3-10 LOAD OPTIMIZED DEFAULTS

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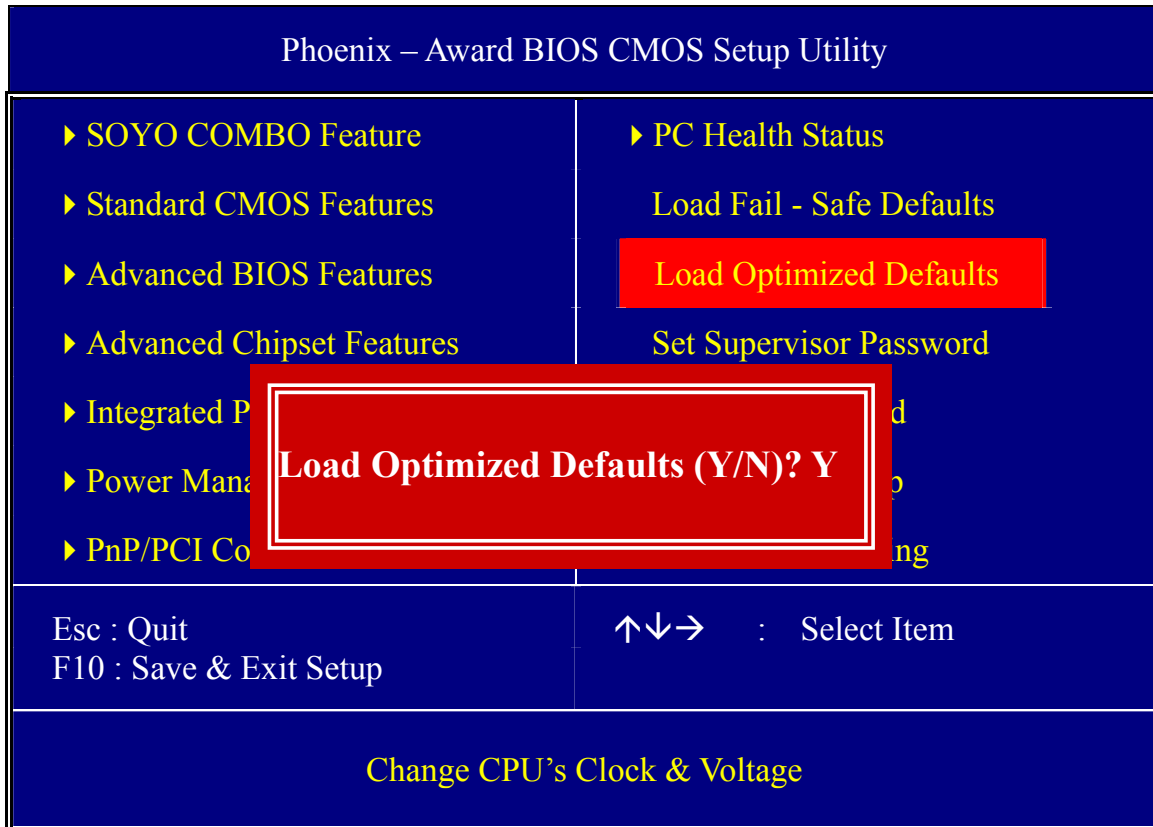
```
          Phoenix – Award BIOS CMOS Setup Utility

  ▶ 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
              Load Optimized Defaults (Y/N)? Y
  ▶ Power Mana                              p

  ▶ PnP/PCI Co                              ng

  Esc : Quit              ↑↓→   :   Select Item
  F10 : Save & Exit Setup

          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.

STOP *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>

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

> Confirm Password:

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

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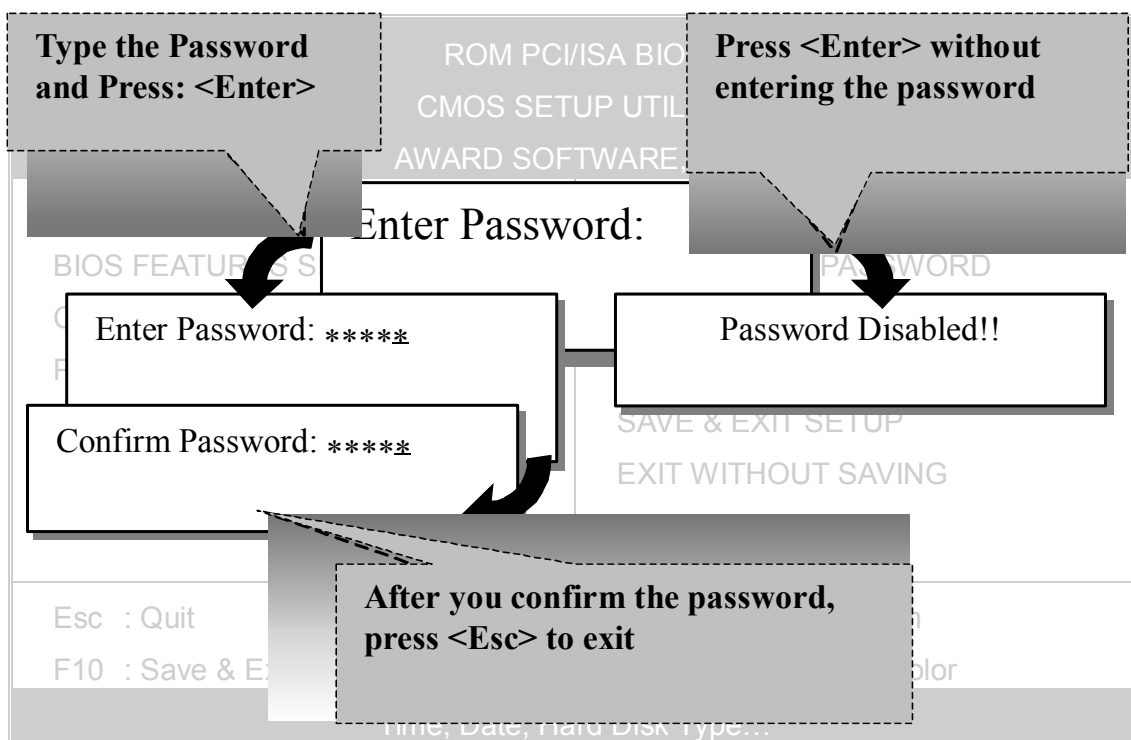
3-12 USER PASSWORD

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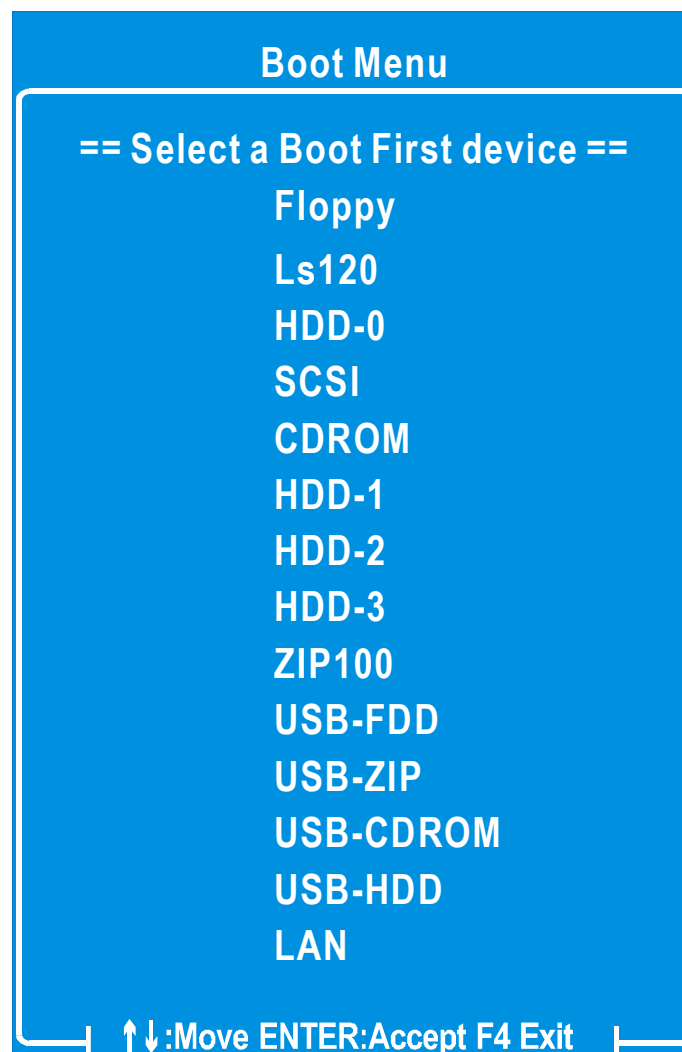
To enable boot Menu, press "ESC" after memory and option ROM (like the HighPoint 372N BIOS) initialization, the user will see a device menu, in which he or she can choose from which device they wish to boot.

```
                    Boot Menu

        == Select a Boot First device ==
                    Floppy
                    Ls120
                    HDD-0
                    SCSI
                    CDROM
                    HDD-1
                    HDD-2
                    HDD-3
                    ZIP100
                    USB-FDD
                    USB-ZIP
                    USB-CDROM
                    USB-HDD
                    LAN

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

Chapter 4

DRIVERS INSTALLATION

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

Your SY-P4I865PE Plus 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 drivers software available for installation, and

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 or 2000, 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.

Please Select Your Board

P4I865PE Plus DRAGON 2

OK   Cancel
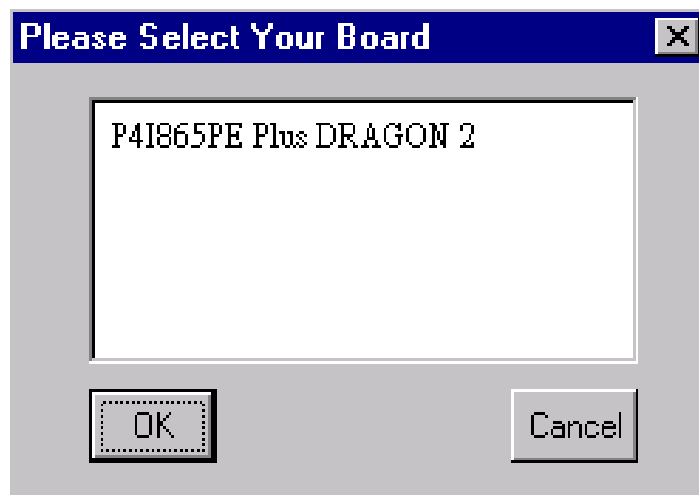
(SOYO CD Start Up Program Menu)

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.

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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 in your system.

Note: The Start Up program automatically detects if the Acrobat Reader utility is already present in 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 drivers 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 98SE/ME** **Intel USB2.0 Driver for Win 2000/XP (click here for installation procedure)** **Davicom Onboard Lan Driver for Win 98SE/ME/2000/XP** **C-MEDIA Audio Driver for Win 98SE/ME/2000/XP** **P4I865PE DRAGON 2 Hardware Monitor for Win 98SE/ME/2000/XP** **ITE SIM Card Reader Driver/Utility for Win 98SE/ME/2000/XP**	

Cancel   OK
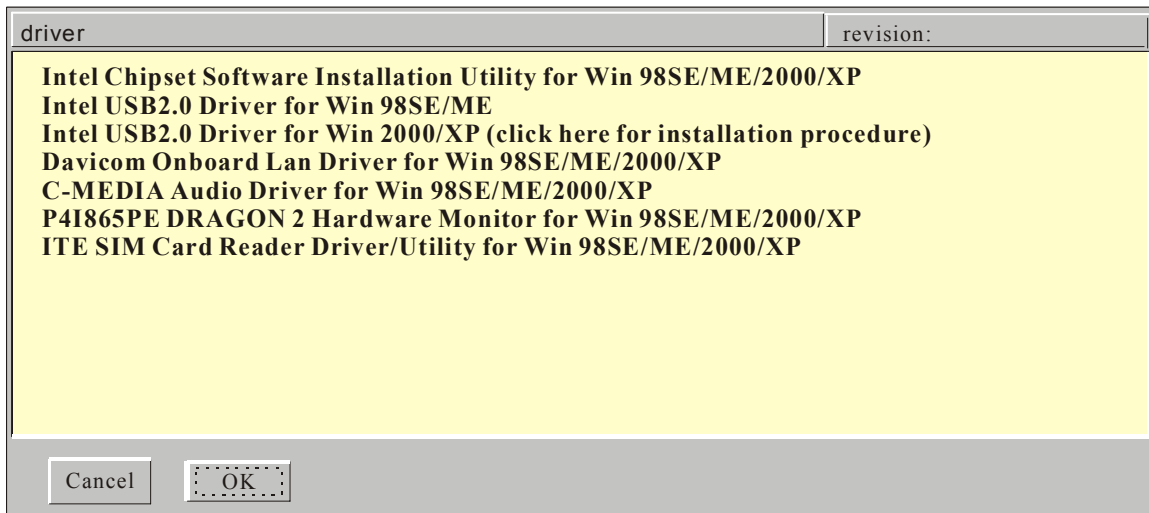
(Driver Installation Menu)

A short description of all available drivers follows:

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

Windows operating system will not recognize the new INTEL 865PE chipset properly. To update the necessary .inf files that will help Windows recognize the 865PE 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.

➢   **Davicom Onboard Lan Driver for Win 9x/ME/NT/2000/XP**

This setup program will install the Driver for Davicom Onboard Lan.

➢ **C-MEDIA Audio Driver for Win 9x/ME/2000/NT/XP**

The driver supports 2/4/6 speakers 3D positional audio.

➢ **P4I865PE DRAGON 2 hardware monitor for Win 9x/ME/2000/NT/ XP**

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

➢ **ITE SIM Card reader Driver/Utility for Win 9X/ME/NT/2K/XP**

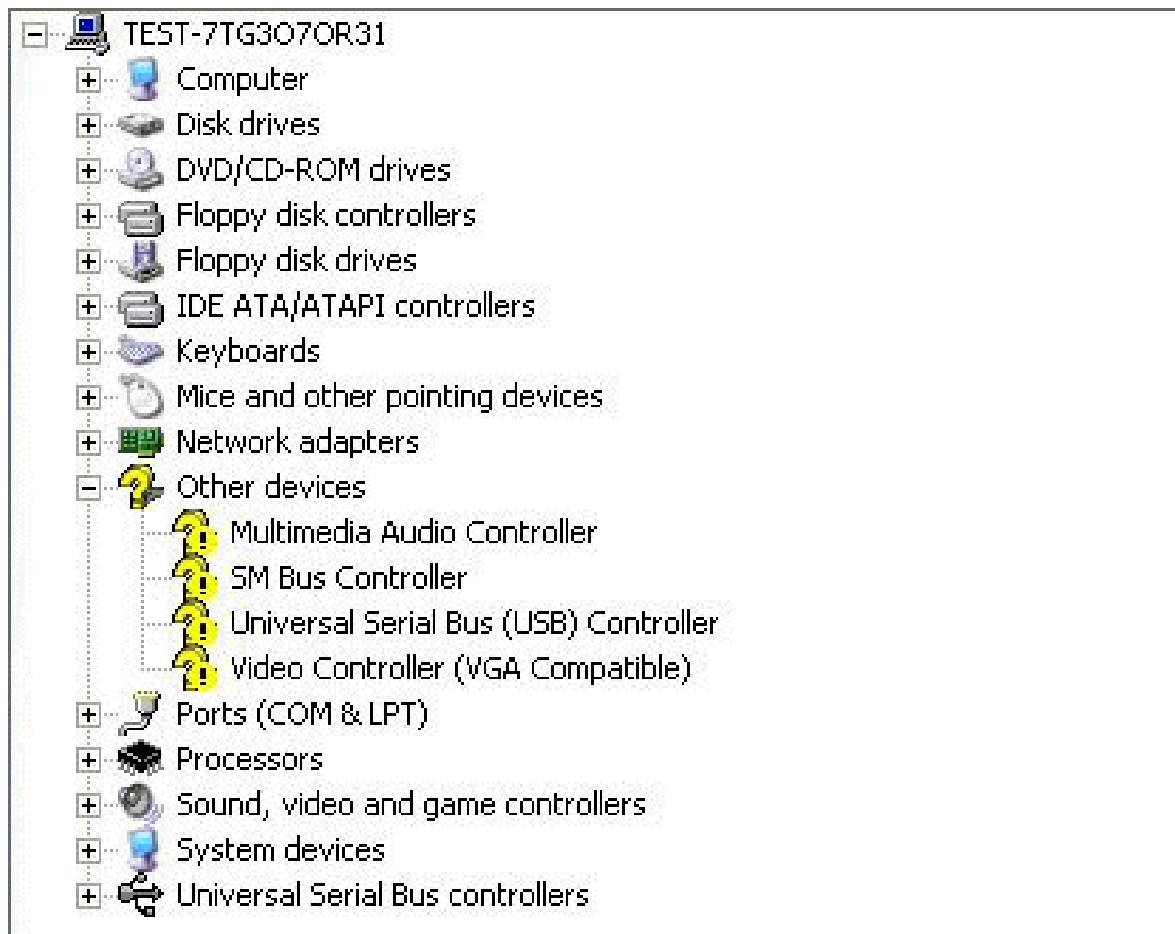Driver to support the smart card reader. You need to install this if you use the SCR.

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 restart or 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 to get your internet connection up before clicking this button.

After Windows XP installation, your device manager should look like this:

- TEST-7TG3O7OR31
  - Computer
  - Disk drives
  - DVD/CD-ROM drives
  - Floppy disk controllers
  - Floppy disk drives
  - IDE ATA/ATAPI controllers
  - Keyboards
  - Mice and other pointing devices
  - Network adapters
  - Other devices
    - Multimedia Audio Controller
    - SM Bus Controller
    - Universal Serial Bus (USB) Controller
    - Video Controller (VGA Compatible)
  - Ports (COM & LPT)
  - Processors
  - Sound, video and game controllers
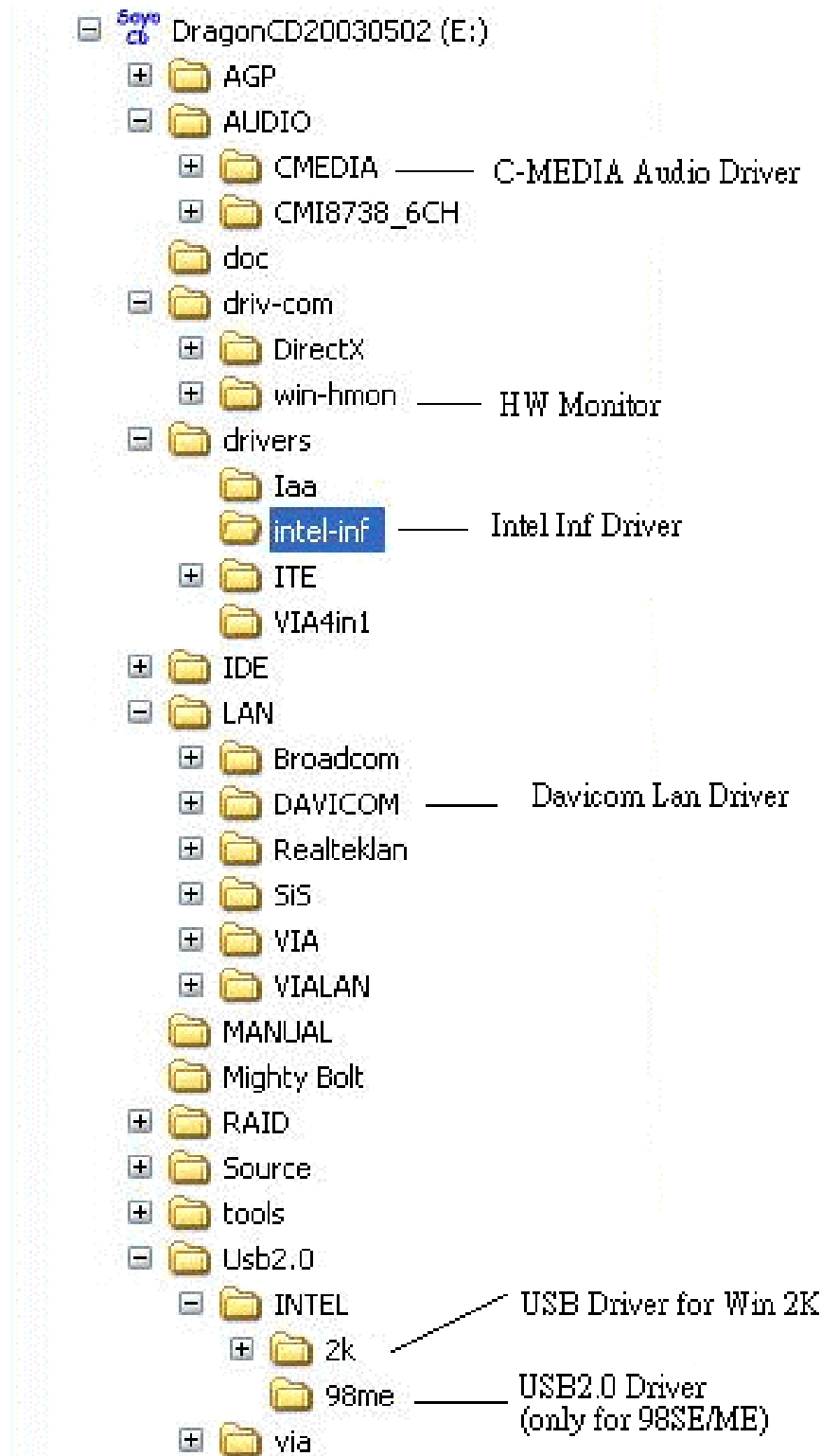 - System devices
  - Universal Serial Bus controllers

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

```
☐ 🖳 DragonCD20030502 (E:)
   ⊞ 📁 AGP
   ☐ 📁 AUDIO
      ⊞ 📁 CMEDIA ———— C-MEDIA Audio Driver
      ⊞ 📁 CMI8738_6CH
      📁 doc
   ☐ 📁 driv-com
      ⊞ 📁 DirectX
      ⊞ 📁 win-hmon ———— HW Monitor
   ☐ 📁 drivers
      📁 Iaa
      📁 intel-inf ———— Intel Inf Driver
      ⊞ 📁 ITE
      📁 VIA4in1
   ⊞ 📁 IDE
   ☐ 📁 LAN
      ⊞ 📁 Broadcom
      ⊞ 📁 DAVICOM ———— Davicom Lan Driver
      ⊞ 📁 Realteklan
      ⊞ 📁 SiS
      ⊞ 📁 VIA
      ⊞ 📁 VIALAN
      📁 MANUAL
      📁 Mighty Bolt
   ⊞ 📁 RAID
   ⊞ 📁 Source
   ⊞ 📁 tools
   ☐ 📁 Usb2.0
      ☐ 📁 INTEL
         ⊞ 📁 2k ———— USB Driver for Win 2K
         📁 98me ———— USB2.0 Driver
                        (only for 98SE/ME)
      ⊞ 📁 via
```

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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].

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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].

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TV manuals search

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