



1. **Please read the users guide before proceeding with your installations. Serious damage may occur if the procedure is not followed properly.**
2. 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.
3. 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.
4. An ATX12V power supply is required for the system to operate normally. (Preferably 350 watts for minimal loading or 400 watts for fully loaded system).
5. If you have any problem getting your system to work, please follow the troubleshooting tips in your user manual.
6. For answers to Technical questions, please visit SOYO tech support link at <http://www.soyousa.com/support> and <http://www.soyousa.com/kb>.



# **SY-CK8 DRAGON Plus Motherboard**

\*\*\*\*\*

mPGA Socket 754 Processor supported

Ali M1687 AGP/PCI

800 MHz Front Side Bus supported

ATX Form Factor

\*\*\*\*\*

## **User's Manual**

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**About This Guide:**

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

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

**Edition: June 2004**

**Version 1.0**

**CK8 DRAGON Plus 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

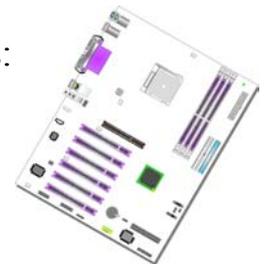
The **SY-CK8 DRAGON Plus** AGP/PCI Motherboard is a high-performance Socket 754 processor, ATX form-factor system board. **SY-CK8 DRAGON Plus** uses the nVIDIA nForce 3 150 Chipset technology. This Motherboard is fully compatible with industry standards and adds many technical enhancements.

### 1-2 UNPACKING THE MOTHERBOARD

When unpacking the Motherboard, check for the following items:

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◆ The SY-CK8 DRAGON Plus AGP/PCI Motherboard



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◆ The user manual



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◆ The Installation and SOYO Bonus Pack CD-ROM



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◆ One IDE Device ATA 133 Flat Cable



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◆ One Floppy Disk Drive Flat Cable



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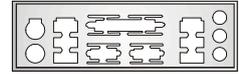
◆ One Serial ATA cable



- 
- ◆ One Heat Sink Compound



- 
- ◆ One Back Panel



**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

<b>CPU</b>	<p>Supports AMD K8 Athlon 64 Processor mPGA Socket 754 processors :</p> <ul style="list-style-type: none"> <li>➤ Athlon K8 AMD 64 Processor</li> <li>➤ SOYO COMBO Setup CMOS setup menu for complete and easy changing of your CPU settings in CMOS setup, making jumpers obsolete.</li> </ul>
<b>Chipset</b>	nVIDIA nForce3 150 Chipset
<b>Memory</b>	<ul style="list-style-type: none"> <li>➤ Supports PC2100, PC2700 and PC3200 DDR memory modules.</li> <li>➤ SOYO COMBO Setup menu, to fully configure your memory settings.</li> </ul>
<b>AGP</b>	1x AGP master 4x/8x slot (1.5v only)
<b>PCI</b>	6x 32-bit bus master PCI slots
<b>Super I/O</b>	<p>ITE IT8712F Super I/O controller supporting:</p> <ul style="list-style-type: none"> <li>➤ Floppy disk controller</li> <li>➤ Parallel port (SPP, EPP and ECP compliant)</li> <li>➤ 2x 16550A compatible RS232 serial ports</li> <li>➤ IrDA compatible infrared port</li> <li>➤ Gameport header</li> <li>➤ PS/2 Keyboard and mouse</li> <li>➤ Hardware monitor for monitoring temperatures, voltages and fan speeds in the system.</li> </ul>
<b>Storage</b>	<ul style="list-style-type: none"> <li>➤ nForce 3 150 Integrated Parallel ATA controller supporting up to 4x UDMA 33/66/100/133 Parallel ATA devices.</li> <li>➤ nForce 3 150 Serial ATA RAID controller supporting up to 2x UDMA 150 hard disks</li> </ul>
<b>USB 2.0</b>	6x USB 2.0 compliant ports (4x on rear IO panel, 2x motherboard connectors).
<b>Sound</b>	Onboard C-Media CMI9739A 6 channel Audio Codec
<b>Network</b>	10/100 MBps/100Base-T Ethernet controller, supporting Wake-On-Lan (WOL)

<b>BIOS</b>	<ul style="list-style-type: none"><li>➤ Power Failure resume function to allow the system to turn on or off after a power failure, which is indispensable for server systems.</li><li>➤ 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.</li><li>➤ Multiple boot, allowing your system to boot from for example CD-ROM</li></ul>
<b>Software</b>	SOYO Hardware Doctor allowing you to fully monitor and control your system
<b>Industry standards</b>	This motherboard is compliant with the following industry standards : <ul style="list-style-type: none"><li>➤ Microsoft PC99</li><li>➤ FCC</li><li>➤ ACPI</li></ul>

## 1-4 HANDLING THE MOTHERBOARD

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

- Before handling the Motherboard, ground yourself by grasping an unpainted portion of the system's metal chassis.
- Remove the Motherboard from its anti-static packaging. Hold the Motherboard by the edges and avoid touching its components.
- Check the Motherboard for damage. If any chip appears loose, contact your dealer or our tech support immediately.



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

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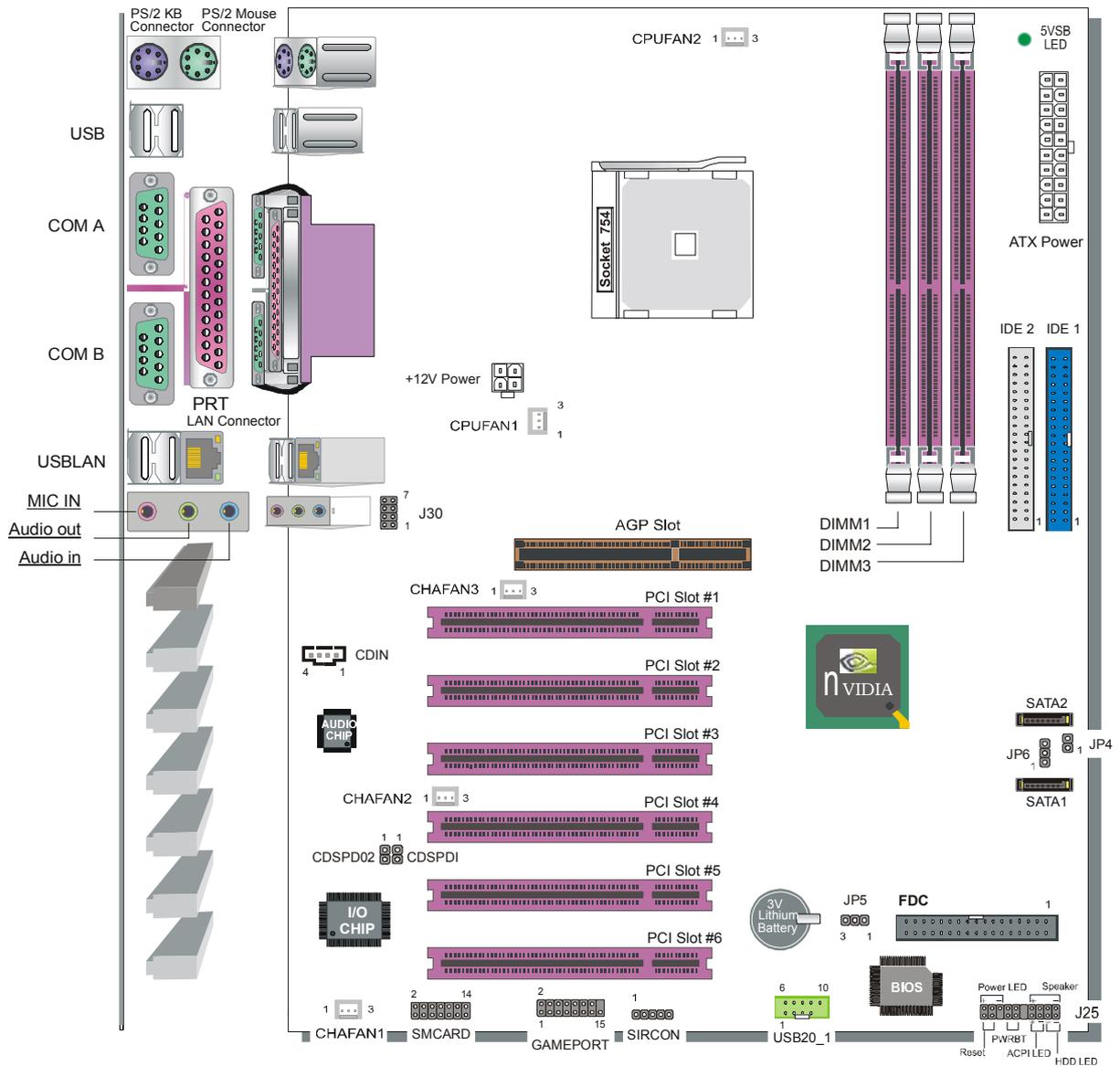
## 1-5 ELECTROSTATIC DISCHARGE PRECAUTIONS

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.

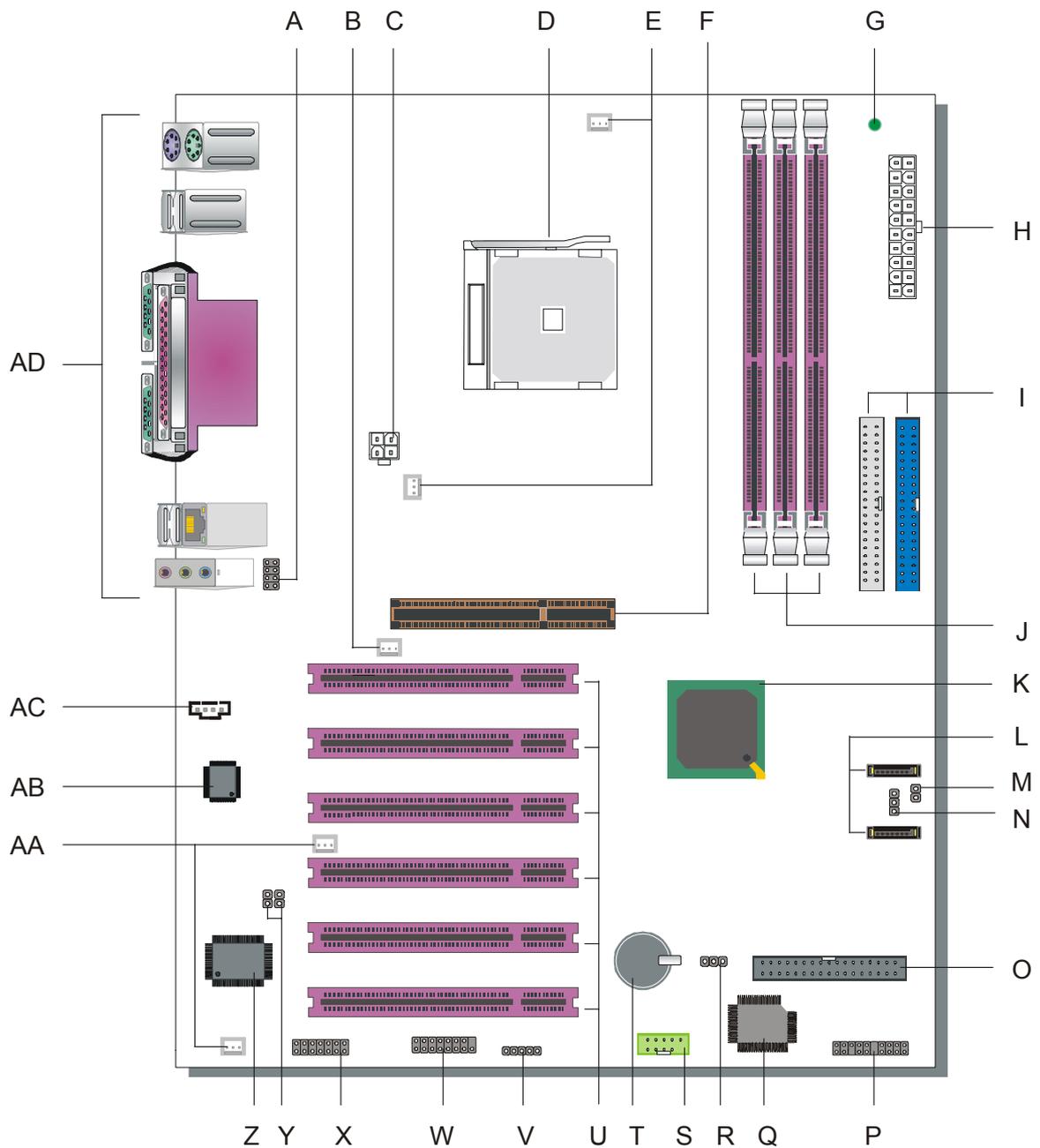
## 1-6 SY-CK8 DRAGON Plus MOTHERBOARD LAYOUT



Back Panel

SY-CK8 DRAGON Plus Platform

## 1-7 SY-CK8 DRAGON Plus MOTHERBOARD COMPONENTS



A	<p><b>Earphone, Microphone and LAN Status LED Connector (J30)</b> This connector allows you to extend your microphone connector and LAN Status LED to your front panel. Check the <b>MIC &amp; LED Connector (J30)</b> paragraph on page 32 for a lay-out of this header.</p>
B	<p><b>Chassis Cooling Fan (CHAFAN 3) Connector</b> This connector is to connect your chassis fan to your motherboard. This motherboard supports up to 3 chassis fans. Please check the <b>Chassis Cooling Fan (CHAFAN1, CHAFAN2, CHAFAN3)</b> paragraph on page 31 for more details.</p>
C	<p><b>+12V Power Connector</b> This is where the Power Supply's +12V ATX connector goes. For a lay-out of this connector please check the <b>F. ATX12V Power Supply</b> paragraph on page 34.</p>
D	<p><b>Socket 754 Connector</b> This is the Zif (Zero Insertion Force) socket for your AMD 64 CPU. For more information, check the <b>Step 1 Install the CPU</b> paragraph on page 13.</p>
E	<p><b>CPU Cooling Fan (CPUFAN1, 2) connectors</b> 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 <b>CPU Cooling Fan (CPUFAN1, CPUFAN2)</b> paragraph on page 30.</p>
F	<p><b>AGP Slot</b> 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 <b>AGP Slot</b> paragraph on page 18.</p>
G	<p><b>5V Stand-By Indicator LED</b> 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.</p>
H	<p><b>ATX Power Supply connector</b> 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 <b>F. ATX12V Power Supply</b> paragraph on page 34</p>

I	<p><b>Bus Mastering EIDE/ATAPI Ports</b></p> <p>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 <b>IDE Device Installation (HDD, CD-ROM)</b> paragraph on page 19 for more details.</p>
J	<p><b>DDR DIMM Banks</b></p> <p>These 2, 184 pin memory slots are to install your system memory in. They support up to 2 GB of memory. For more details check the <b>Step 2 Install Memory Module</b> paragraph on page 16.</p>
K	<p><b>nVIDIA nForce3 150 Chipset</b></p>
L	<p><b>SATA Connectors (SATA1/SATA2)</b></p> <p><i>These connectors allow you to attach one UDMA 150 hard disk to each connector. For more information on these connectors check the <b>Serial ATA connectors</b> paragraph on page 20.</i></p>
M	<p><b>SATA2 Settings (JP4)</b></p> <p><i>Please check the <b>Serial ATA connectors</b> chapter on page 20 for more details.</i></p>
N	<p><b>SATA1 Settings (JP6)</b></p> <p><i>Please check the <b>Serial ATA connectors</b> chapter on page 20 for more details.</i></p>
O	<p><b>Floppy Disk Drive (FDD) connector</b></p> <p>This 34 pins connector is to connect your floppy drive to. Check for more details in the <b>B. Floppy Drive Installation</b> paragraph on page 22.</p>
P	<p><b>Front Panel connectors (J25)</b></p> <p>This header allows you to connect the switches and LEDs on your front panel. Please check the <b>C. Front Panel Connections</b> chapter on page 23 for more details and lay-outs.</p>
Q	<p><b>Flash BIOS</b></p> <p>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 <a href="http://www.soyousa.com">http://www.soyousa.com</a>. For details on how to setup your BIOS, please go to the <b>QUICK BIOS SETUP</b> chapter on page 38.</p>
R	<p><b>CMOS Clear Jumper (JP5)</b></p> <p>This jumper allows you to clear your CMOS RAM contents in order to reset your system configuration. . For more details on this check the <b>G. CMOS Clear (JP5)</b> paragraph on page 36.</p>

S	<p><b>USB 2.0 connector (USB20_1)</b> This connector supports 1 USB 2.0 ports per connector. For details on the lay-out, please check the <b>Universal Serial Bus (USB1/USB2, USB20_1)</b> paragraph on page 28.</p>
T	<p><b>3V Lithium Battery</b> 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 <b>G. CMOS Clear (JP5)</b> paragraph on page 36.</p>
U	<p><b>32 bit PCI slots</b> These are the motherboard's 3.3v busmastering PCI slots, compliant to PCI specification v2.2.</p>
V	<p><b>Serial Infrared (IrDA) device header</b> This header allows you to connect an IrDA receiver to the motherboard. You can find the lay-out in the <b>Standard Infrared (SIRCON)</b> paragraph on page 29.</p>
W	<p><b>GAMEPORT connector (GAME)</b> 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 29.</p>
X	<p><b>Smart Card Reader connector (SIRCON)</b> This connector allows you to connect a smart card reader to the PC/SC, ISO 7816 compliant onboard smart card reader. The paragraph <b>Smart Card Reader</b> on page 33 contains more information on the lay-out of this header.</p>
Y	<p><b>CD SPDIF In/Out connector (CDSPDI/CDSPD02)</b> This connector is to connect the Digital SPDIF out of your CDRom to your mainboard. For information on the pinout, please check the <b>CDSPDI/CDSPD02</b> paragraph on page 33.</p>
Z	<p><b>ITE IT8712F-A Super I/O Chip</b> 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.</p>



AA	<b>Chassis Cooling Fan (CHAFAN1, 2) Connectors</b> This connector is to connect your chassis fan to your motherboard. This motherboard supports up to 3 chassis fans. Please check the <b>Chassis Cooling Fan (CHAFAN1, CHAFAN2, CHAFAN3)</b> paragraph on page 31 for more details.
AB	<b>CMedia CMI 9761A AC97 Codec audio chip</b> The CMI 9761A chip is a 2/4/6 Channel AC97 audio chip.
AC	<b>CD-IN1 connector</b> This connector is to attach your analog audio output channel from your CDROM or DVD drive to your motherboard. Please check the <b>CD Line-in (CDIN)</b> paragraph on page 32 for more details.
AD	<b>Back panel connectors</b> These connectors allow you to attach the external devices to the back of your PC. Please check the <b>D. Back Panel Connections</b> paragraph on page 26 for more details.

## Chapter 2

# HARDWARE INSTALLATION

Congratulations on your purchase of **SY-CK8 DRAGON Plus** 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 mPGA754 processor with CPU cooling fan.
2. DDR memory module(s)
3. A computer case with an adequate power supply unit (350W for a minimally loaded system or 400W for a fully loaded system).
4. Monitor
5. Keyboard
6. Pointing Device (mouse)
7. Disk Drives: HDD, CD-ROM, Floppy drive...
8. External Peripherals: Printer and Modem (optional)
9. VGA Card (AGP or PCI)

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

## 2-2 INSTALLATION GUIDE

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

- Step1-** Install the Central Processing Unit (CPU).
- Step2-** Install memory modules.
- Step3-** Install expansion cards.
- Step4-** Connect cables, case wires, and power supply.
- Step5-** Power on and enter BIOS setup.
- Step6-** Install supporting software tools. See Chapter 4 for more info.



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

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**BEGIN THE INSTALLATION**

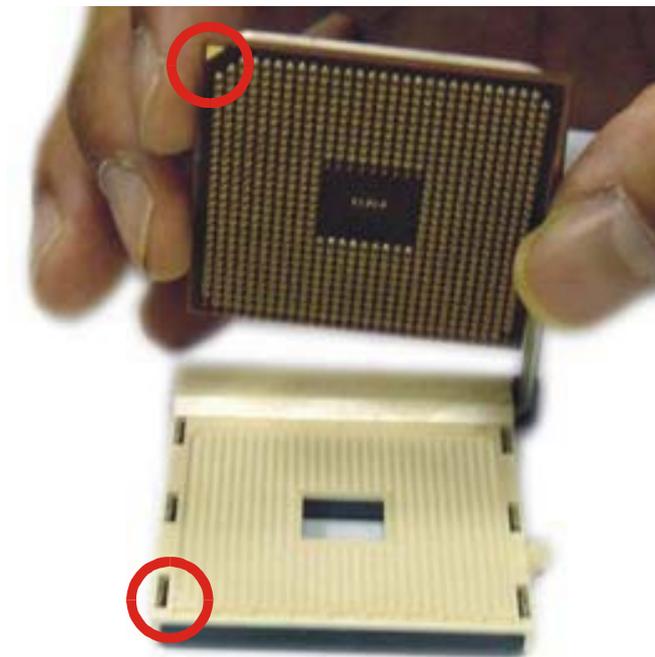
### Step 1 Install the CPU

**CPU Mount Procedure:** To mount the K8 Athlon 64 Processor Socket mPGA754 processor that you have purchased separately, follow these instructions.

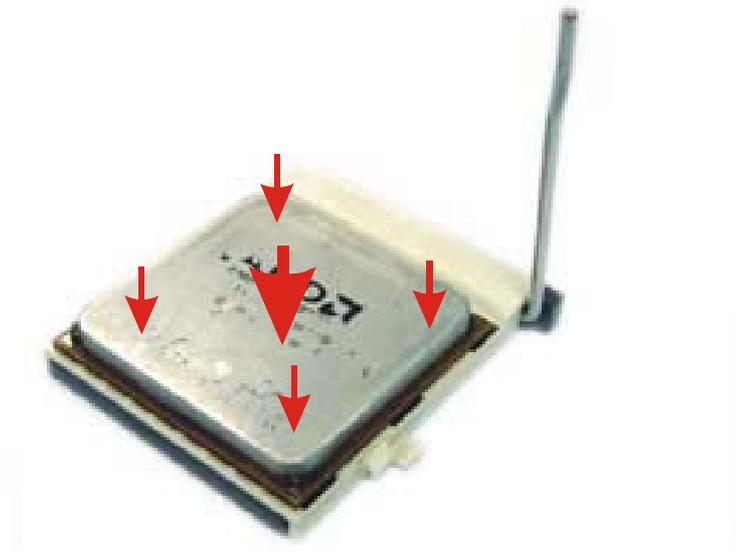
1. Lift the socket handle up to a vertical position.



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.



**HOT**

---

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.*

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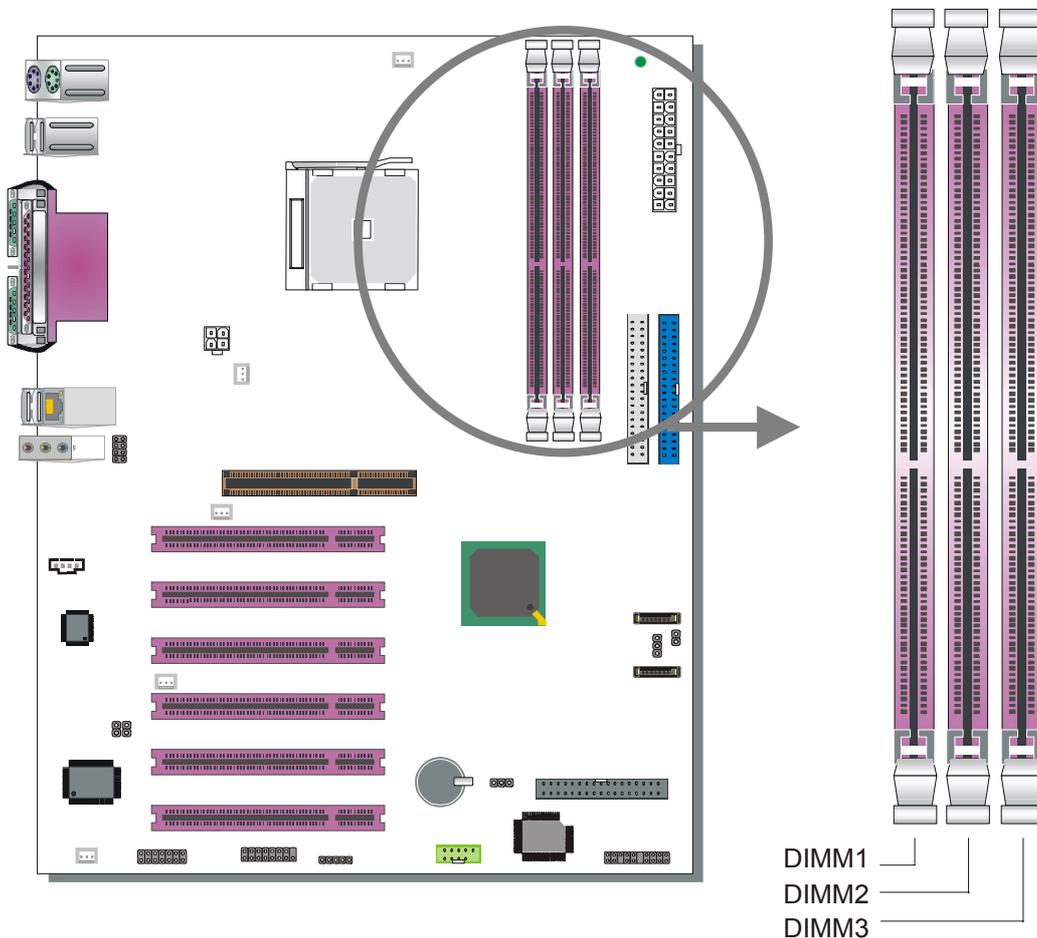
## CPU Fan Installation

Your Socket 754 processor kit comes with a cooling fan. Mount the fan on the processor according to the instructions provided by the manufacturer. The fan is a key component that will ensure system stability. The fan prevents overheating, therefore prolonging the life of your CPU.



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

## Step 2 Install Memory Module



Your board comes with three DIMM sockets, providing support for up to 3GB of main memory. On this motherboard, DRAM speed can be set independent from the CPU FSB speed.

This M/B can support ECC and registered memory module if PC2100 or PC2700 DIMM are used. Registered and ECC memory module cannot be used if you plan to use PC3200 memory.

### *Memory Configuration Table*

Memory Specification	DIMM 1	DIMM 2	DIMM 3
PC2100 / PC2700	S / D	S / D	X
PC2100 / PC2700	S / D	S	S
PC3200	S / D	S / D	X

Note:

S = single sided DIMM supported

D = double sided DIMM supported

**X = not populated**

### Step 3 Installation of Expansion Cards

The motherboard has 1 AGP slot and 6 PCI slots.

1. Read the related expansion card's instruction document before inserting the expansion card into the computer.
2. Press the expansion card firmly into the expansion slot on the motherboard.
3. Make sure the metal contacts on the card are seated in the slot.
4. Replace the screw to secure the slot bracket of the expansion card.
5. Install required driver for the operating system you use.

#### AGP Slot

This motherboard supports AGP 4x/8x VGA CARD.

Insert the AGP VGA card into the AGP slot. Then connect the monitor information cable to the AGP card back plane external connector.




---

**Note:** AGP cards working on 3.3V are not supported. Only AGP cards working on 1.5V can be used in this M/B. For AGP card voltage specification, please check the AGP card manual or contact your AGP card's manufacturer.

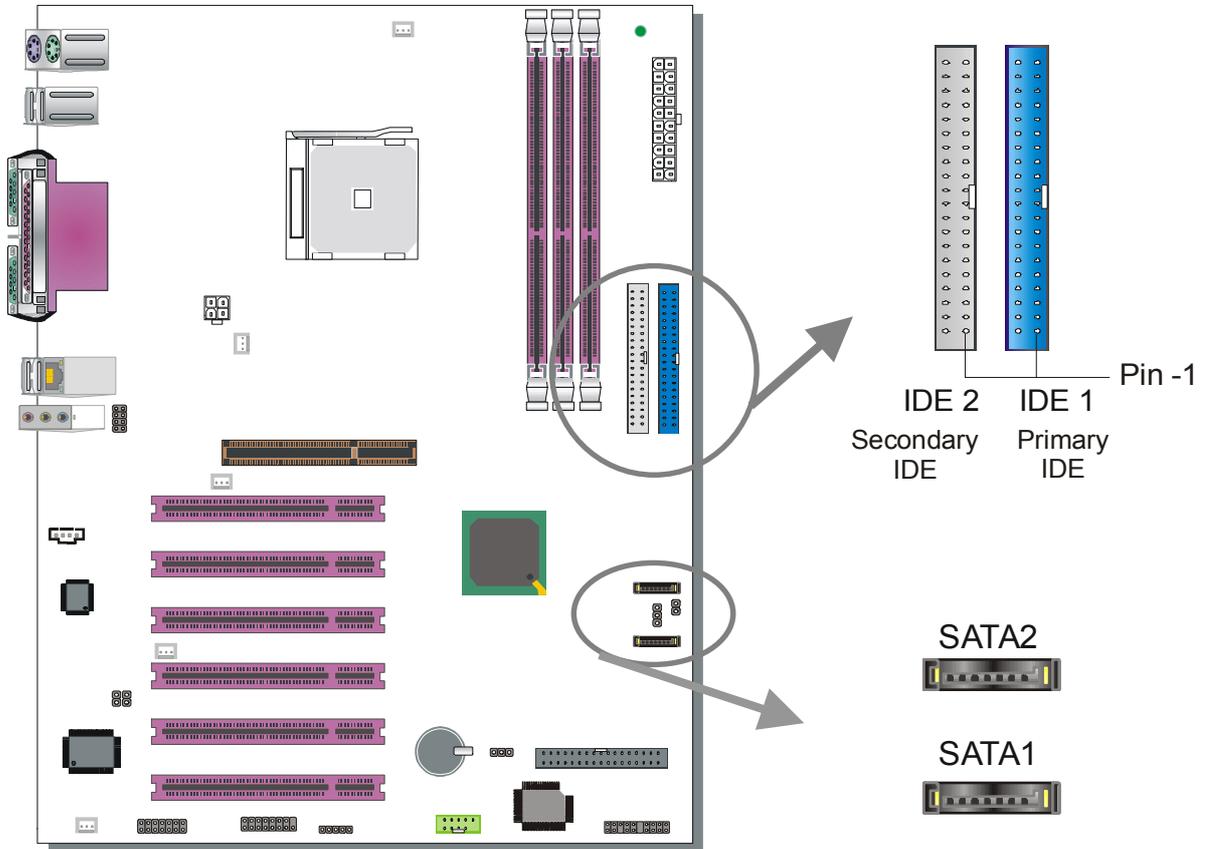
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#### Assigned Interrupt Table for PCI Device

PCI Device	INT
AGP	E
PCI slot 1/5	Y
PCI slot 2/6	Z
PCI slot 3	W
PCI slot 4	X

## Step 4 Connect cables, case wire and power supply

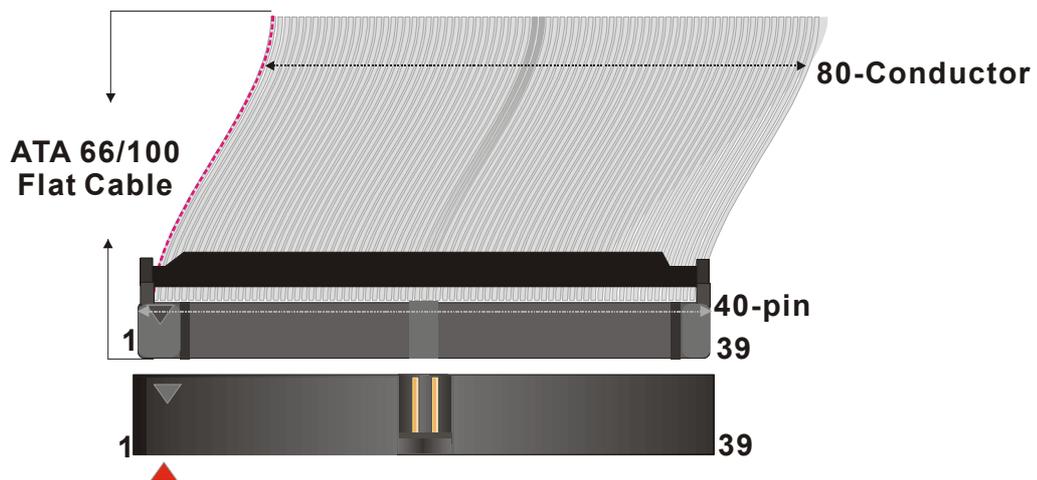
### A. IDE Device Installation (HDD, CD-ROM)



This Motherboard offers two IDE connectors (IDE1, IDE2) and 2 serial ATA ports. IDE1 and IDE2 can support up to four high-speed Ultra DMA 33/66/100/133 HDD or CD-ROM. SATA1 and SATA2 can support up to two 150 SATA hard disks. This Motherboard can support up to 6 HDDs.

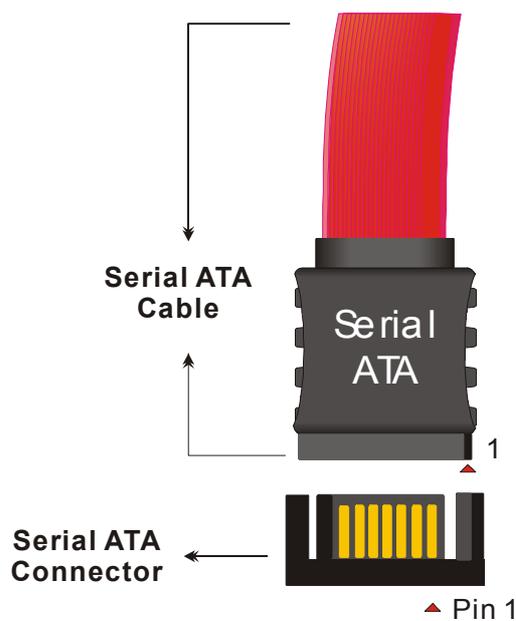
***Parallel ATA connectors***

Connect the black end of the ATA66/100/133 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 ATA66/100/133 cable is backward compatible with ATA33 HDDs.



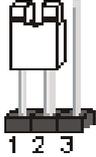
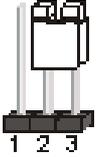
***Serial ATA connectors***

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.



### SATA1 Settings (JP6)

Set JP6 to Master/Slave if a SATA hard disk is present on SATA2. If not, then set the JP6 to Master

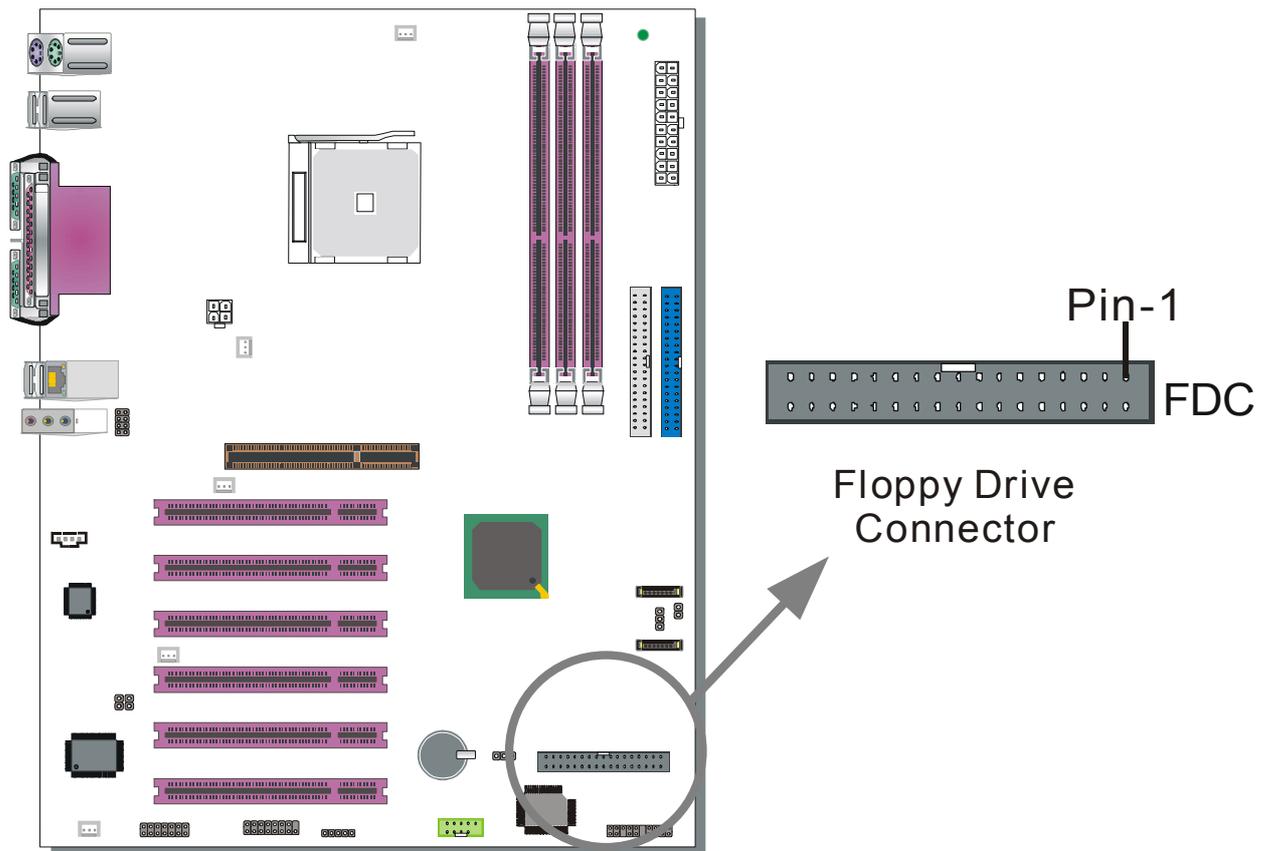
	MASTER/SLAVE	MASTER
JP6 Setting	Short pin 1-2 	Short pin 2-3 

### SATA2 Settings (JP4)

If no SATA hard disk is present in SATA2 connector, set the JP4 to disable.

	Enabled	Disabled
JP4 Setting		

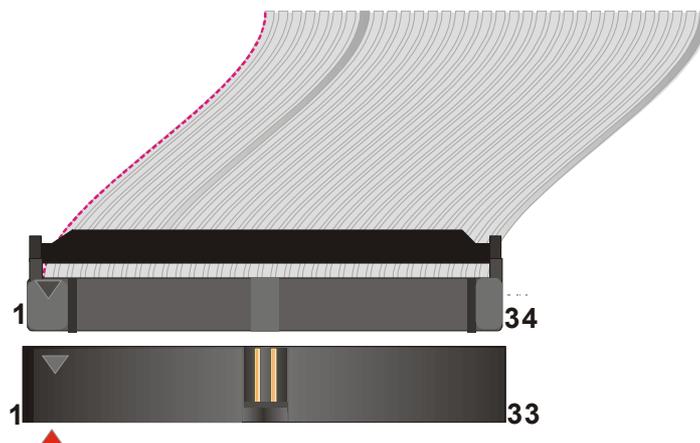
## B. Floppy Drive Installation



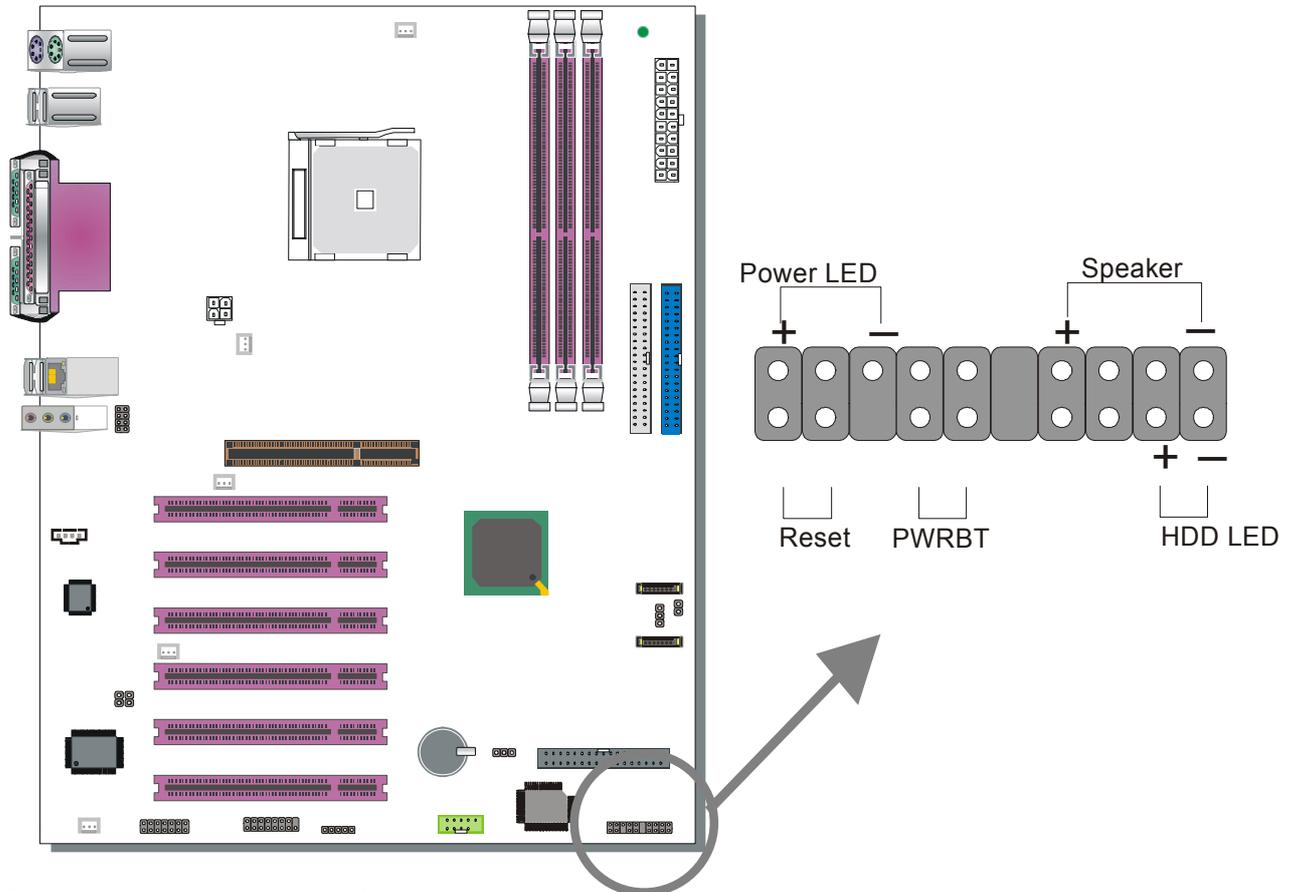
The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB. In addition, this Motherboard supports a 3-mode (720KB/1.2MB/1.44MB) floppy commonly used in Japan.

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

This Motherboard can support only one floppy drive.



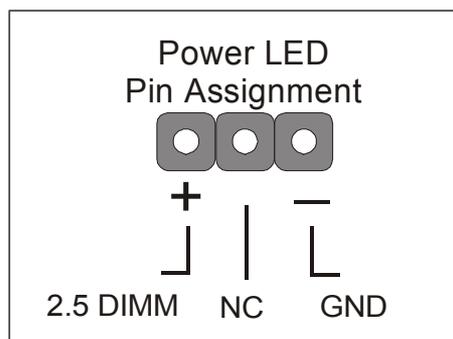
### C. Front Panel Connections



Plug the computer case's front panel devices to the corresponding headers on the Motherboard.

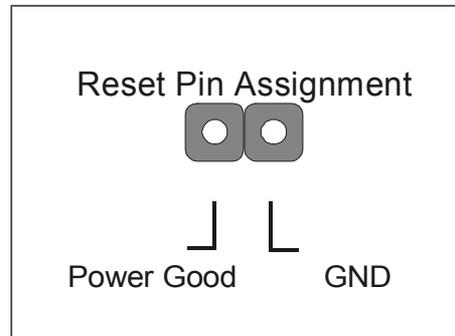
#### 1. Power LED

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



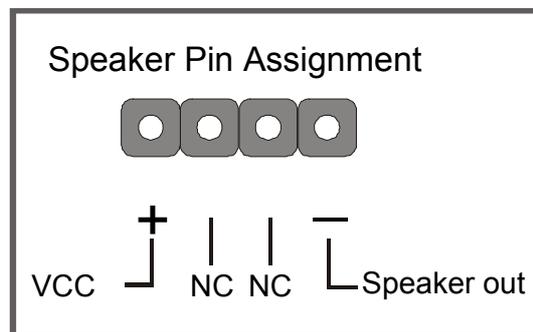
## 2. Reset

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



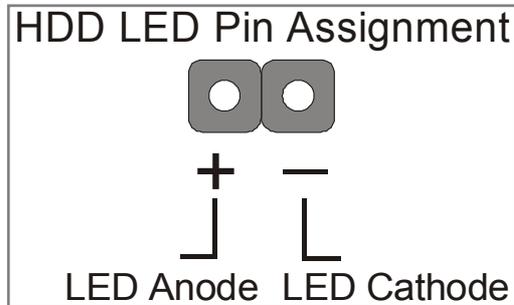
## 3. Speaker

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



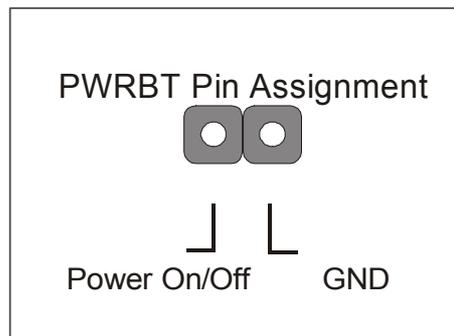
#### 4. IDE LED

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



#### 5. 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.

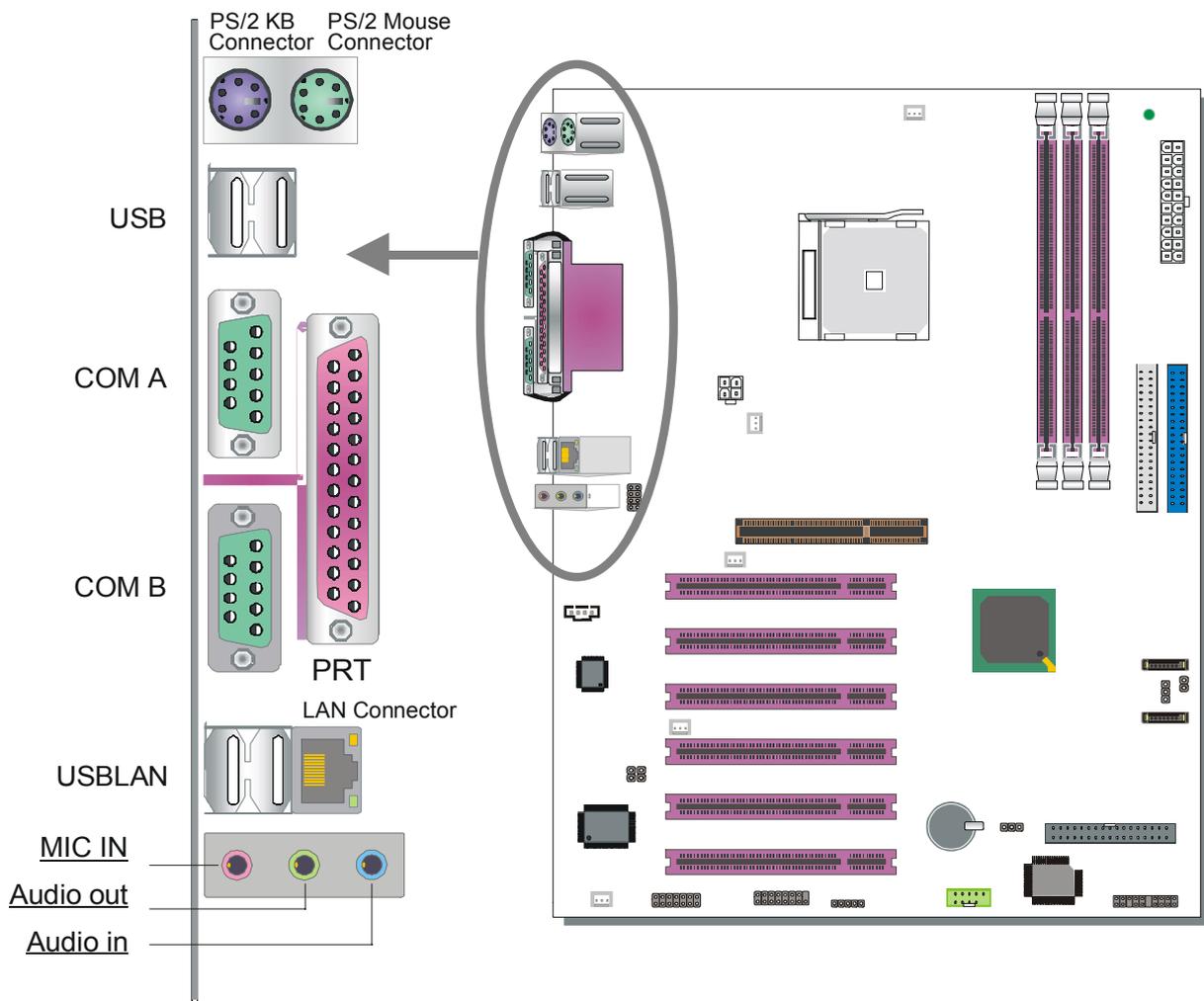


### D. Back Panel Connections

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) mouse
- modem

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

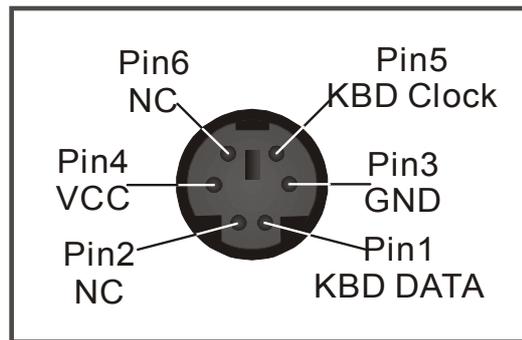
### 2. Parallel Port PRT

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.

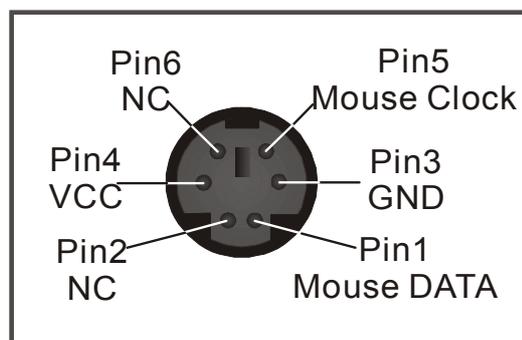
### 3. PS/2 Keyboard

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



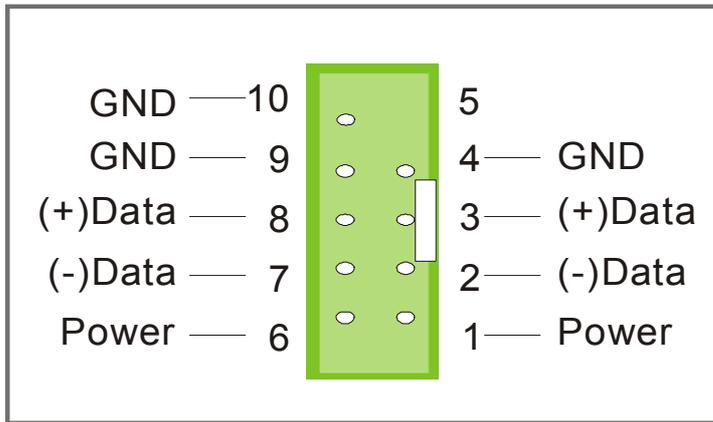
### 4. PS/2 Mouse

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



### 5. Universal Serial Bus (USB1/USB2, USB20\_1)

This Motherboard provides 6 USB2.0 ports for your additional devices. Plug the USB device jack into the available USB connector USB1, USB2, USB20\_1 are available. To make use of these USB ports, purchase a USB cable from your dealer. The lay-out of USB20\_1 connector is as follows:

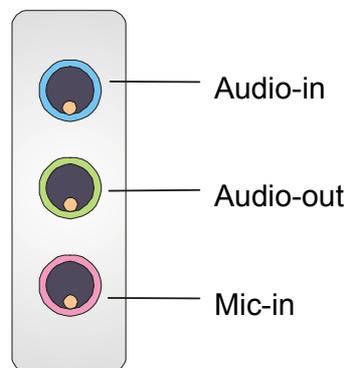


### 6. Onboard Game port/audio (Audio Speakers connections)

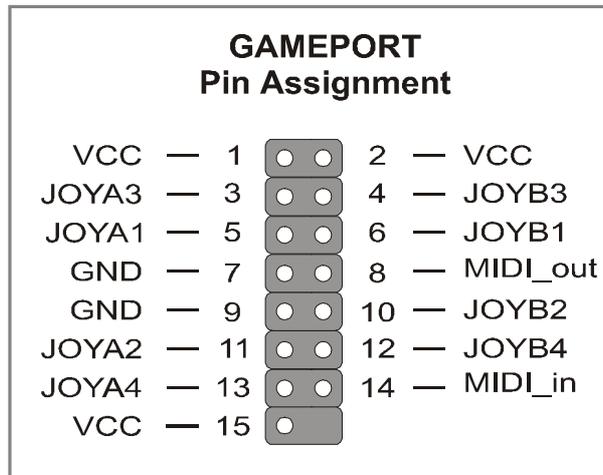
When using 2-channel speaker, connect the speaker cable to Audio-out.

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

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



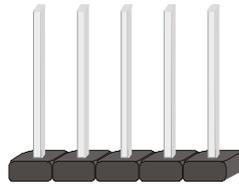
The Gameport has the following lay-out :



### E. Other Connections

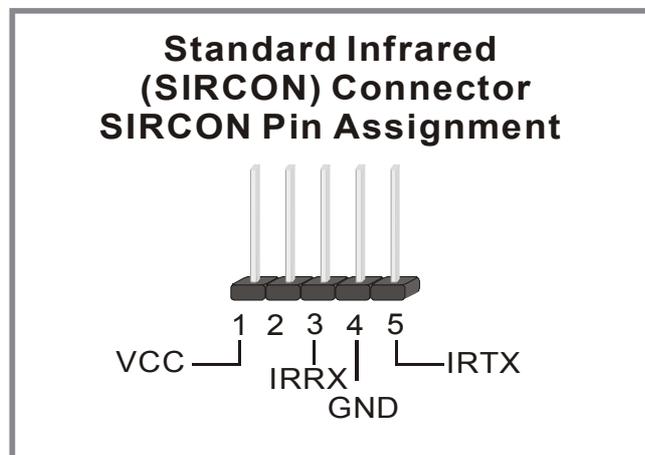
#### 1. Standard Infrared (SIRCON)

Plug the 5-pin infrared device cable to the SIRCON header.

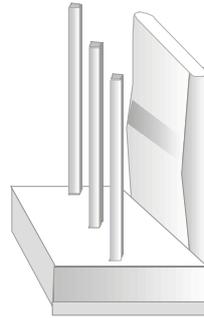


This will enable the infrared transfer function. This Motherboard meets both the ASKIR and HPSIR specifications.

Please install according to the following pin assignment:



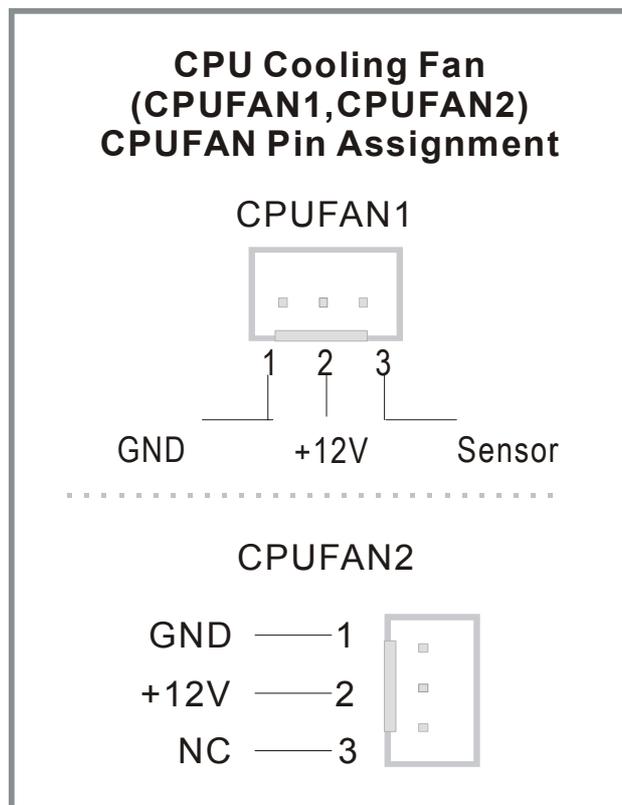
## 2. Cooling Fan Installation



### (1) CPU Cooling Fan (CPUFAN1, CPUFAN2)

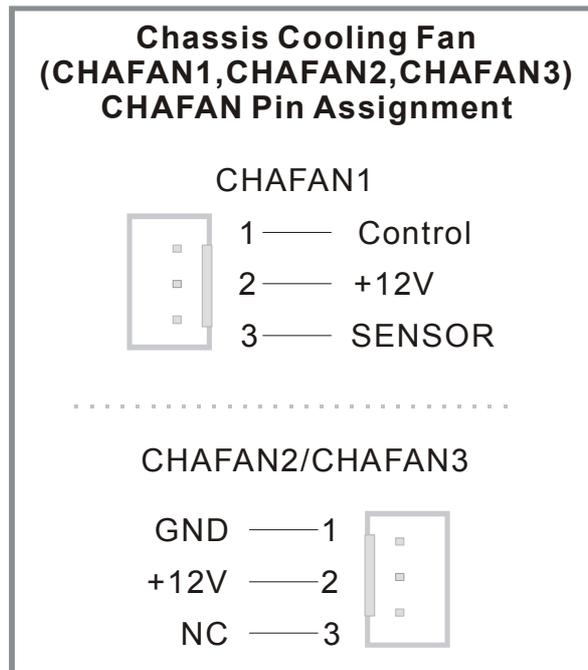
After you have seated the CPU properly on the processor, attach the 3-pin fan cable to the CPUFAN connector on the Motherboard.

To avoid damage to the system, install according to the following pin assignment:



## (2) Chassis Cooling Fan (CHAFAN1, CHAFAN2, CHAFAN3)

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

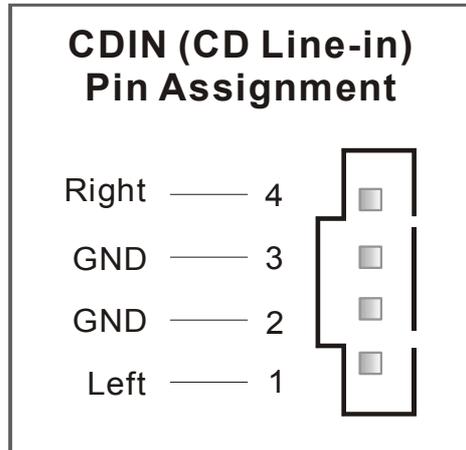


**Note:** CPU cooling fan must be installed to prevent the CPU from overheating and ensure system stability. Chassis cooling fan is optional, depending on whether there is cooling fan in your chassis.

### 3. CD Line-in (CDIN)

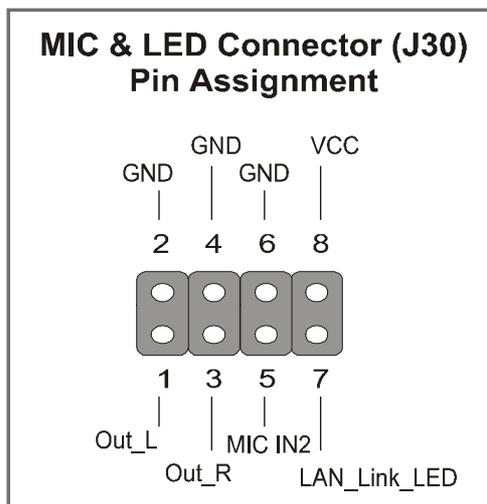
This Motherboard provides one CD Line-in connector. Please connect the 4-pin audio cable from your CD-ROM or DVD ROM drive to CDIN.

Please install according to the following pin assignment:

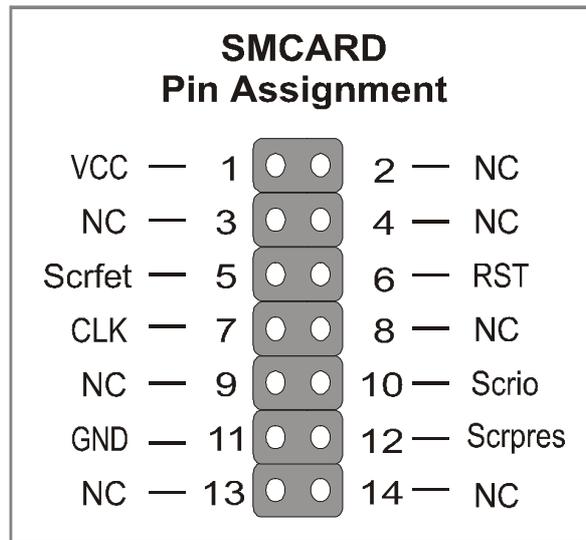


### 4. MIC & LED Connector (J30)

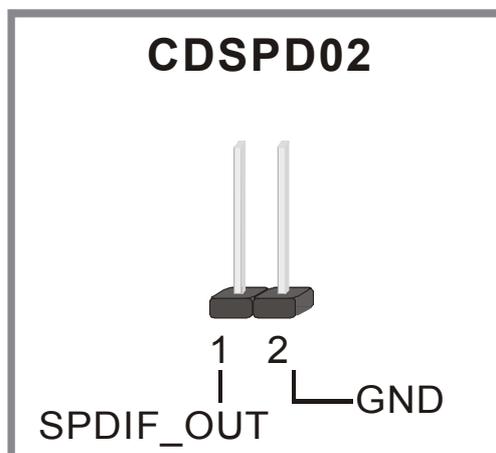
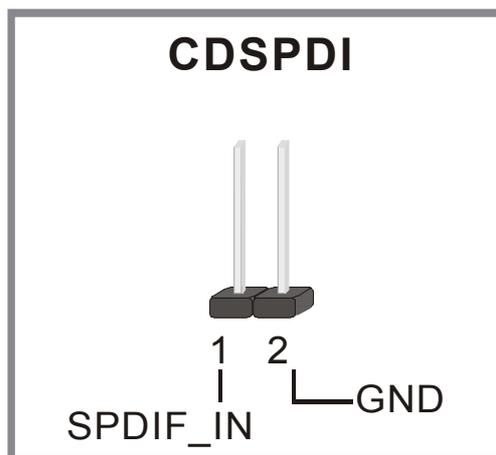
You can connect the Line-out /MIC in/LAN LED to the front panel of your PC case (If this option is available in your PC case). This connector has the following pin assignment:



### 5. Smart Card Reader

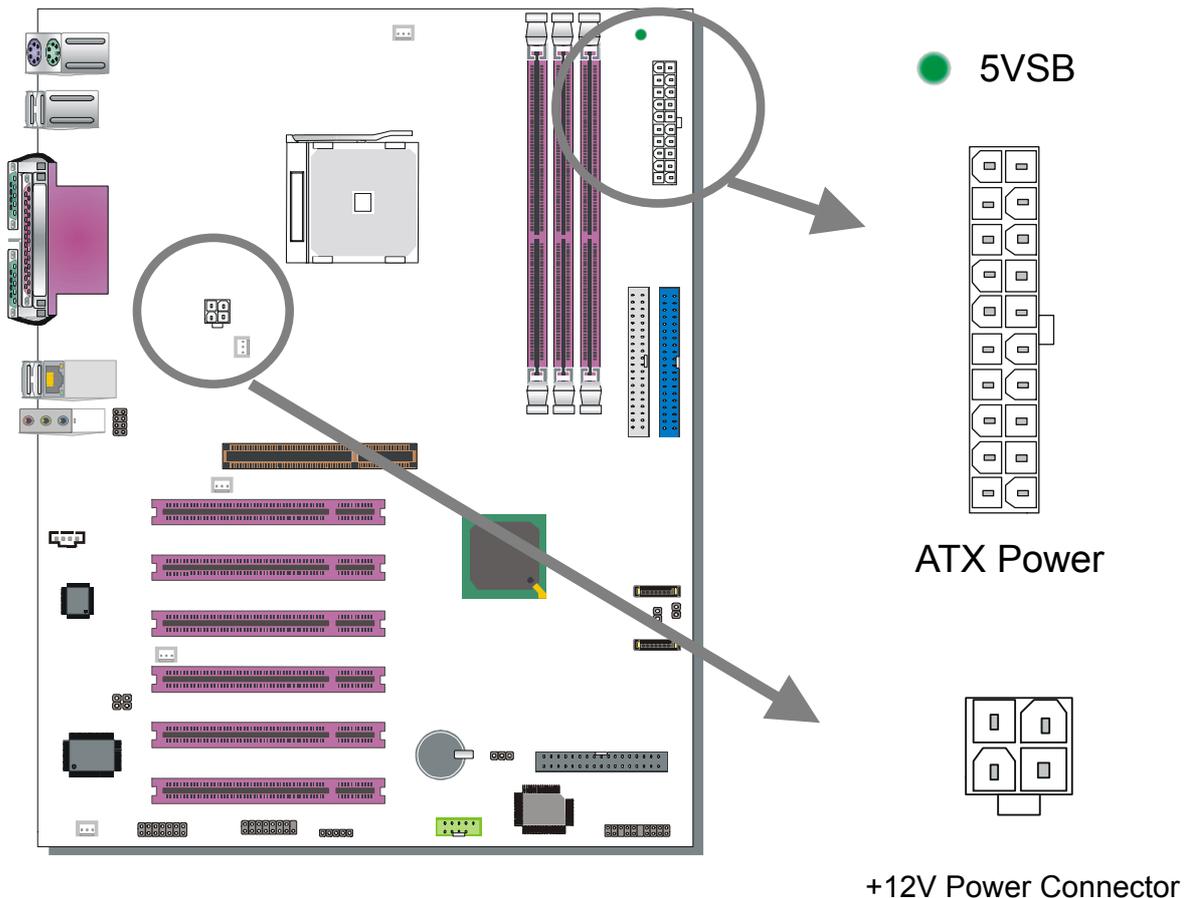


### 6. CDSPDI/CDSPD02



## F. ATX12V Power Supply

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



### Steps:

1. Connect the 20 pin connector to the ATX power connector. See FIG. 1.
2. Connect the 4 pin connector to the +12V power connector. See FIG. 2.



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



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



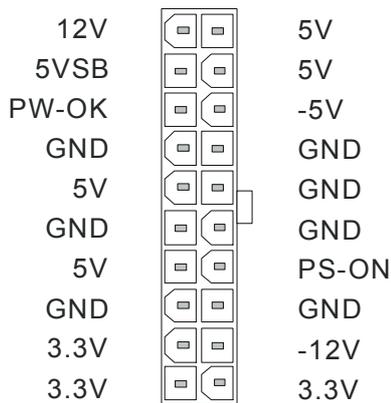
**Note 3:** The minimum recommended wattage is 400W for a fully loaded system or 350W for a minimally loaded system, the system might become unstable if power supply is not enough



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

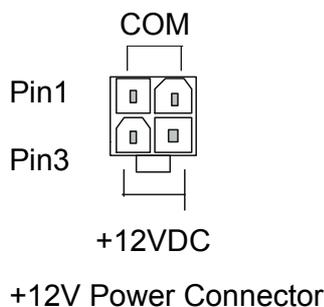
Please install the ATX 12V power according to the following pin assignment:

**ATX Power**



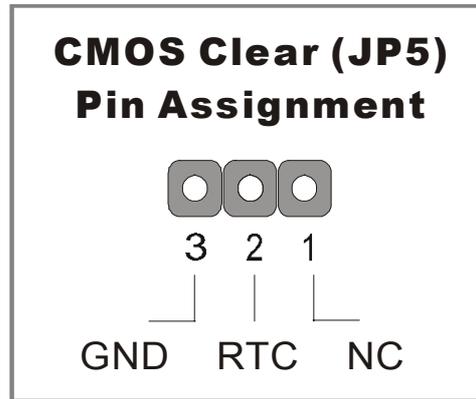
➤ **Pay special care to the directionality.**

**FIG. 1**



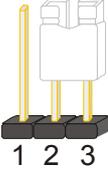
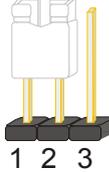
**FIG. 2**

**G. CMOS Clear (JP5)**



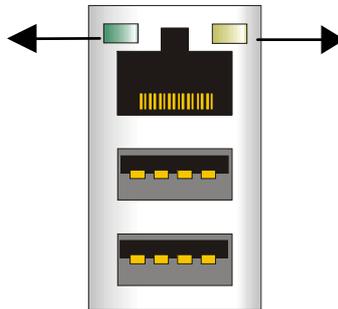
In some cases the CMOS memory may contain wrong data, follow the steps below to clear the CMOS memory.

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
<b>JP5 Setting</b>	Short pin 2-3 for at least 5 seconds to clear the CMOS 	Short pin 1-2 to retain new settings 
<p><i>Note: You must unplug the power cable from your power supply connector when performing the CMOS Clear operation.</i></p>		

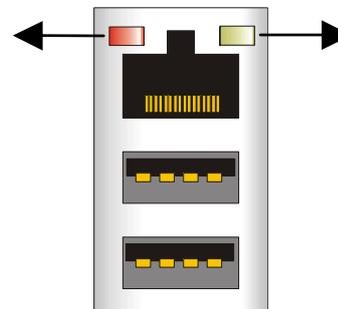
## Onboard LAN LED Definition

When this LED is light (**green sign**), this means the LAN is running at 100 mbps, if it is not light, the Onboard LAN is working at 10 mbps.



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

When this LED is lit (**red sign**), this means the LAN is running at 1 Gbps, if it is not light, the Onboard LAN is working at 10 mbps.



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

## Step 5 Power On

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

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



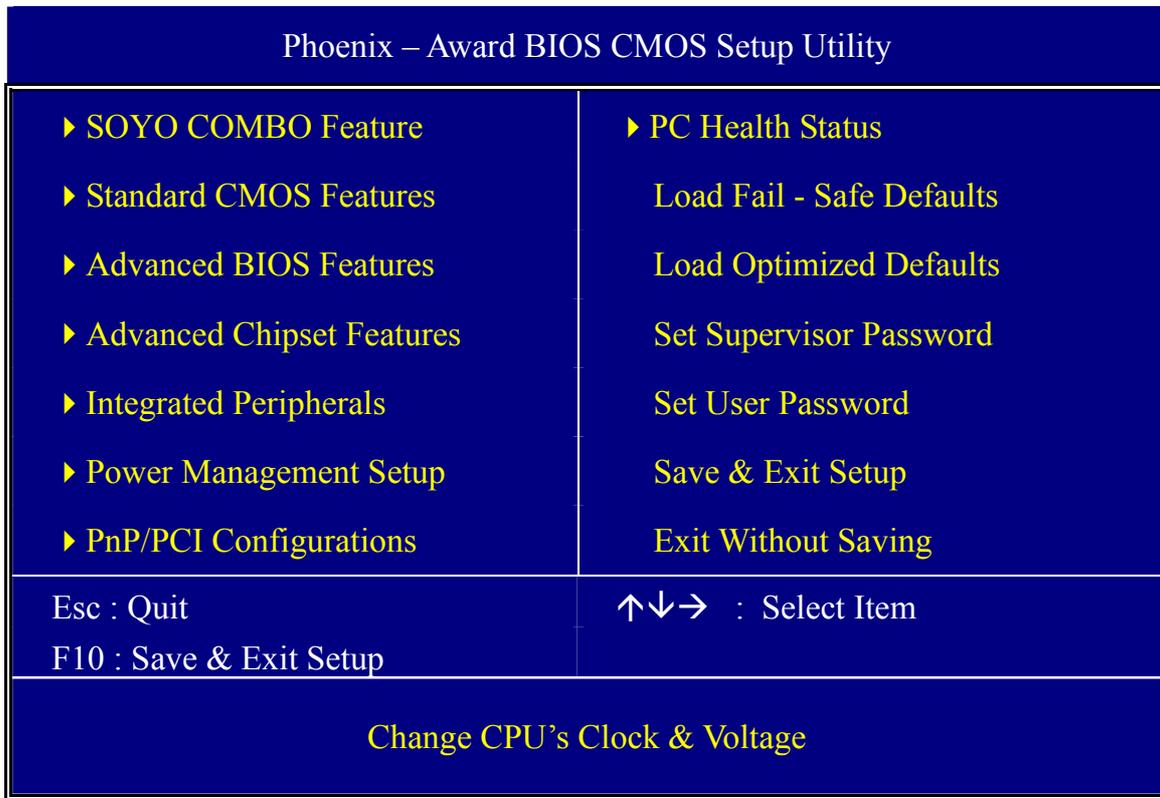
---

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

---

Repeat this operation until you get the following screen.

3. The BIOS Setup screen appears:



## 2-3 QUICK BIOS SETUP

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

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

**Step 1. Select [STANDARD CMOS SETUP]**

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

**Step 2. Select [LOAD OPTIMIZED DEFAULTS]**

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

**Step 3. Select [SOYO COMBO FEATURE]**

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

**Step 4. Select [SAVE & EXIT SETUP]**

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

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

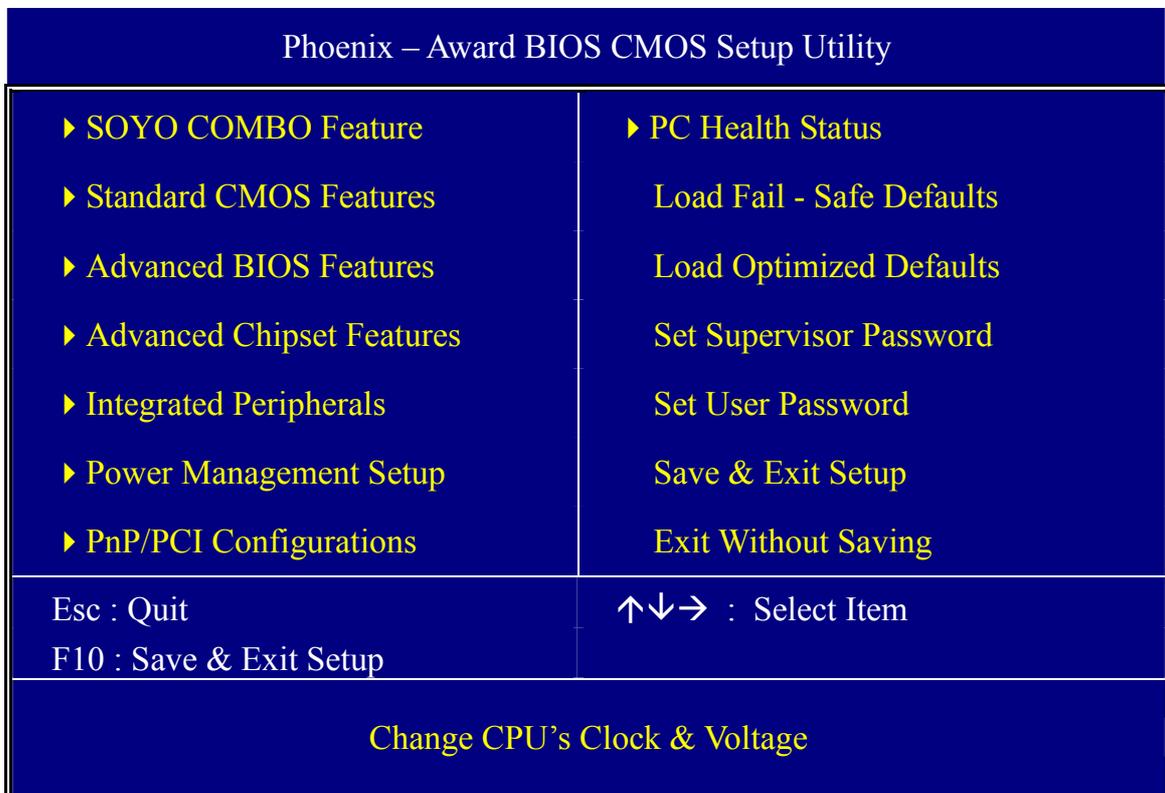
## Chapter 3

# BIOS SETUP UTILITY

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

To enter the Award BIOS program's Main Menu:

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



### Selecting items

- Use the arrow keys to move between items and select fields.
- From the Main Menu press arrow keys to enter the selected submenu.

### Modifying selected items

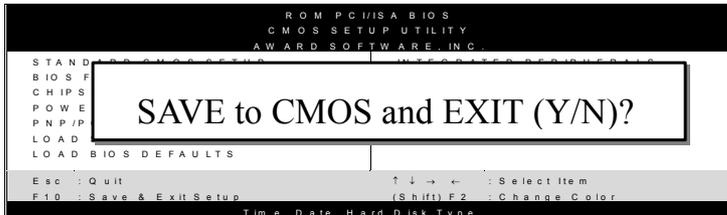
- Use the [Up]/[Down] keys to modify values within the selected fields. Some fields let you enter values directly, others will let you press Enter then select the value.

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

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

## SAVE AND EXIT SETUP

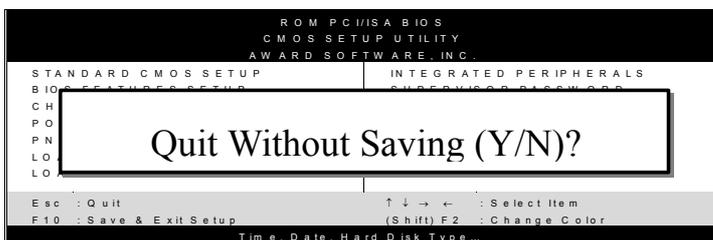
Select the [SAVE & EXIT SETUP] option from the Main Menu to save data to CMOS and exit the setup utility. This option saves all your changes and causes the system to reboot.



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.



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		
CPU OverClock in MHz	200	Item Help
AGP OverClock in MHz	Auto	
System Performance	Normal	Menu Level ▶
CPU Vcore Select	Default	
AGP (1.5V) Voltage Select	Default	
DDR (2.6V) Voltage Select	Default	
CK8 (1.6V) Voltage Select	Default	
▶ DRAM Configuration	Press Enter	
AC97 Audio	Auto	
Onboard LAN	Auto	
First Boot Device	Floppy	
Second Boot Device	Hard Disk	
Third Boot Device	LS120	
↑↓→ Move	Enter:Select	+/-/PU/PD:Value
F5:Previous Values		F6:Fail-Safe Defaults
		F10:Save
		ESC:Exit
		F1:General Help
		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.

**SOYO COMBO Feature**

	Setting	Description	Note
<b>CPU OverClock in MHz</b>	200~250	Press “Page Up” / “Page Down” key to Over Clock the CPU Front Side Bus in 1MHz increment or Press “Enter” key, then type the desired CPU Front Side Bus	
<b>AGP OverClock in MHz</b>	Auto	Press “Page Up” / “Page Down” key to Over Clock the AGP Front Side Bus in 1MHz increment or Press “Enter” key, then type the desired AGP Front Side Bus	Default
	66~99		
<b>System Performance</b>	Normal	Adjust your computer’s performance.	Default
	Fast		
	Turbo		

**Voltage Select**

	Setting	Description	Note
<b>CPU Vcore Select</b>	Default	This function allows you to adjust the CPU voltage.	Default
	0.775V~1.7V		
<b>AGP (1.5V) Voltage Select</b>	Default	This function allows you to adjust the AGP voltage.	Default
	1.6V		
	1.7V		
	1.8V		
<b>DDR (2.6V) Voltage Select</b>	Default	This function allows you to adjust the DDR voltage.	Default
	2.7V		
	2.8V		
	2.9V		
<b>CK8 (1.6V) Voltage Select</b>	Default	This function allow you to adjust the Hyper Transport Voltage.	Default
	1.7V		
	1.8V		
	1.9V		

**Onboard Device**

	Setting	Description	Note
<b>AC97 Audio</b>	Auto	This setting allows you to on-chip Audio.	Default
	Disabled		
<b>Onboard Lan</b>	Auto	This setting allows you to onboard LAN.	Default
	Disabled		

**System Boot Control Settings**

	Setting	Description	Note
<b>First /Second/Third Boot Device</b>	Floppy	Select Your Boot Device Priority	
	LS120		
	Hard Disk		
	CDROM		
	ZIP100		
	Disabled		



### 3-1.1 DRAM Configuration



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

The [DRAM Configuration] option changes the values of the chipset registers. These registers control the system options in the computer.

Phoenix – Award BIOS CMOS Setup Utility		
DRAM Configuration		
DDR Timing Setting by	Auto	Item Help Menu Level ▶
Max Memclock (Mhz)	200	
CAS# latency	Auto	
RAS# to CAS# delay (tRCD)	Auto	
Min RAS# active time (tRAS)	Auto	
Row precharge Time (tRP)	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.

**DRAM Configuration**

	Setting	Description	Note
<b>DDR Timing Setting by</b>	Manual	This item allows you to control the DRAM speed by SPD or ITEM.	Default
	Auto		
<b>Max Memclock (Mhz)</b>	100	This item allows you to control the DRAM speed. Memory is prevented from running faster than this frequency.	Default
	133		
	166		
	200		
<b>CAS# Latency</b>	Auto	This item allows you to control the DRAM CAS Latency time.	Default
	CL = 2.0		
	CL = 2.5		
	CL = 3.0		
<b>RAS# to CAS# delay (tRCD)</b>	Auto	This item allows you to control DRAM RAS to CAS delay time.	Default
	2 Bus Clocks		
	3 Bus Clocks		
	4 Bus Clocks		
	5 Bus Clocks		
	6 Bus Clocks		
	7 Bus Clocks		
<b>Min RAS# active time (tRAS)</b>	Auto	This item allow you to control DRAM RAS percharge time.	Default
	5 Bus Clocks		
	6 Bus Clocks		
	7 Bus Clocks		
	8 Bus Clocks		
	9 Bus Clocks		
	10 Bus Clocks		
	11 Bus Clocks		
	12 Bus Clocks		
	13 Bus Clocks		
	14 Bus Clocks		
	15 Bus Clocks		

**DRAM Configuration (Continue)**

	Setting	Description	Note
<b>Row precharge Time (tRP)</b>	Auto	This item allow you to control DRAM Row precharge timing.	Default
	2 Bus Clocks		
	3 Bus Clocks		
	4 Bus Clocks		
	5 Bus Clocks		
	6 Bus Clocks		



### 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) Time (hh:mm:ss)	Fri, Mar 7 2003 2 : 30 : 20	Item Help
▶ IDE Channel 0 Master ▶ IDE Channel 0 Slave ▶ IDE Channel 1 Master ▶ IDE Channel 1 Slave ▶ IDE Channel 2 Master ▶ IDE Channel 2 Slave	None None None None None None	Menu Level ▶  Change the day, month, year and century.
Drive A Floppy 3 Mode Support	1.44M, 3.5 in. Disabled	
Video Halt On	EGA/VGA All Errors	
Base Memory Extended Memory Total Memory	640K 326656K 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
<b>Date</b>	mm/dd/yyyy	Type the current date	You can also the PUp/PDn keys to toggle
<b>Time</b>	hh:mm:ss	Type the current time	24-hour clock format 3:15 PM is displayed as 15:15:00

## Hard Disks Type & Mode

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

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



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

## Floppy Drives

	Setting	Description	Note
<b>Drives A</b>	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	
<b>Floppy 3-Mode Support</b>	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
<b>Video</b>	EGA/VGA	Select the video mode, supported by your VGA Card and memory.	Default
	CGA 40		
	CGA 80		
	MONO (Monochrome)		
<b>Halt On</b>	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		
CPU Internal Cache	Enabled	Item Help  Menu Level ▶  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.
External Cache	Enabled	
Quick Power On Self Test	Enabled	
Boot Up Floppy Seek	Disabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
x Typematic Rate (Chars/Sec)	6	
x Typematic Delay (Msec)	250	
Security Option	Setup	
APIC Mode	Enabled	
MPS Version Control For OS	1.1	
OS Select For DRAM > 64MB	Non-OS2	
HDD S.M.A.R.T. Capability	Disabled	
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.

### Cache Memory Options

	Setting	Description	Note
<b>CPU Internal Cache</b>	Enabled	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.	Default
	Disabled		
<b>External Cache</b>	Enabled	Allows your CPU to check for ECC when transferring data from to the L2 cache some performance.	Default
	Disabled		

### Quick Power On Self Test

	Setting	Description	Note
<b>Quick Power On Self Test</b>	Disabled	Provides a fast POST at boot-up.	Default
	Enabled		

### Boot Up Floppy Seek

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

### Boot Up Num Lock Status

	Setting	Description	Note
<b>Boot Up Num Lock Status</b>	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
<b>Gate A20 Options</b>	Normal	A pin in the keyboard controller controls GateA20.	
	Fast	Lets the chipset control GateA20.	Default

### Typematic Settings

	Setting	Description	Note
<b>Typematic Rate Setting</b>	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]			
<b>Typematic Rate</b>	6 (Char/sec)	Choose the rate at which a character is repeated when holding down a key.	Default
	8 (Char/sec)		
	10 (Char/sec)		
	12 (Char/sec)		
	15 (Char/sec)		
	20 (Char/sec)		
	24 (Char/sec)		
	30 (Char/sec)		
<b>Typematic Delay</b>	250 (msec)	Choose how long after you press a key down the character begins repeating.	Default
	500 (msec)		
	750 (msec)		
	1000 (msec)		

## 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
<b>Security Option</b>	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.	
<b>APIC Mode</b>	Disabled	Enabled the Advanced Programmable Interrupt Controller (APIC) mode. On operating systems that support it you will have more IRQs available when enabled.	Default
	Enabled		
<b>MPS Version Control for OS</b>	1.1	Allows you to choose the Multi Processor Specification (MPS) version.	Default
	1.4		

## Other Control Options

	Setting	Description	Note
<b>OS Select for DRAM&gt;64MB</b>	OS2	When using an OS2 operating system.	
	Non-OS2	When using another, non-OS2 operating system.	Default
<b>HDD S.M.A.R.T. Capability</b>	Enabled	Enabled this field when your HDD supports the S.M.A.R.T. function. Consult your HDD provider for details.	Default
	Disabled		

**LOGO Show**

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



### 3-4 ADVANCED CHIPSET FEATURES



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

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

Phoenix – Award BIOS CMOS Setup Utility		
Advanced Chipset Features		
AGP Aperture Size (MB)	64M	Item Help
x AGP 3.0 Speed	Auto	Menu Level ▶
AGP 2.0 Speed	Auto	
AGP Fast Write	Auto	
AGP Sideband Address	Auto	
LDT Downstream Width	Auto	
LDT Speed	3x	
Special I/O for PCI Card	Disabled	
x Base I/O Address	0000	
x I/O Length	1 Byte	
System BIOS Cacheable	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.

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

**CHIPSET FEATURES SETUP**

	Setting	Description	Note
<b>AGP Aperture Size (MB)</b>	512M	Select the size of Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.	
	256M		
	128M		
	64M		Default
	32M		
<b>AGP 2.0 Speed</b>	Auto	The speed at which your AGP bus is running.	Default
	1x		
	1x2x		
	1x2x4x		
<b>AGP Fast Write</b>	Auto	Enabled/Disabled AGP fast write capability.	Default
	Disabled		
<b>AGP Sideband Address</b>	Auto	Select these signals are used by the master to place only in side-band transactions or addresses into the AGP request queue.	Default
	Disabled		
<b>LDT Downstream Width</b>	Auto	Indicate the physical width of the incoming side of the hyper transport link implemented by this device.	Default
	8 bits		
<b>LDT Speed</b>	1x	Select the maximum operating frequency of the kink's transmitter clock.	
	2x		
	2.5x		
	3x		Default
<b>Special I/O for PCI Card</b>	Enabled	Enabled/Disabled the south bridge supports 32-bit I/O addressing.	Default
	Disabled		

**CHIPSET FEATURES SETUP (Continue)**

	Setting	Description	Note
<b>Base I/O Address</b>	0000~FFFF	The Base I/O Address is 0000~FFFF.	
<b>I/O Length</b>	1 Byte	Address range that is used by the bridge to determine when to for word memory mapped or I/O transactions from one interface to the other.	Default
	4 Bytes		
	8 Bytes		
	16 Bytes		
	32 Bytes		
	64 Bytes		
	128 Bytes		
	256 Bytes		
<b>System BIOS Cacheable</b>	Disabled		Default
	Enabled	The ROM area F0000H-FFFFFH is cacheable.	

### 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		
		Item Help
▶ IDE Function Setup	Press Enter	Menu Level ▶
▶ Hard Disk Boot Priority	Press Enter	
On-Chip IDE Channel0	Enabled	
Primary Master PIO	Auto	
Primary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
On-Chip IDE Channell	Enabled	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Secondary Master UDMA	Auto	
Secondary Slave UDMA	Auto	
IDE Prefetch Mode	Enabled	
Init Display First	AGP Slot	
On-Chip USB	V1.1+V2.0	
USB Keyboard Support	Disabled	
USB Mouse Support	Disabled	
IDE DMA transfer access	Enabled	
IDE HDD Block Mode	Enabled	
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	
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	

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.

### IDE Device Controls

	Setting	Description	Note
<b>On-Chip IDE Channel0/Channel1</b>	Disabled	Turn off the on-board IDE	
	Enabled	Use the on-board IDE	Default
<b>IDE</b> ➤ 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
<b>IDE</b> ➤ Primary Master UDMA ➤ Primary Slave UDMA ➤ Secondary Master UDMA ➤ Secondary Slave UDMA	Disabled		
	Auto	Select Auto to enable Ultra DMA Mode support.	Default
<b>IDE Prefetch Mode</b>	Disabled	Enabling this option allows reads from the IDE controller to be prefetched to cache to speed up accesses to it.	Default
	Enabled		
<b>Init Display First</b>	PCI Slot	Choose which card – AGP Display card or PCI VGA card – to initialize first.	Default
	AGP		

### Keyboard Controls

	Setting	Description	Note
<b>On-Chip USB</b>	Disabled	Your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.	Default
	V1.1+V2.0		
	V1.1		
<b>USB Keyboard Support</b>	Disabled	Turn off the on-board IDE.	Default
	Enabled	Use a USB keyboard.	
<b>USB Mouse Support</b>	Disabled	Turn off the on-board IDE.	Default
	Enabled	USB a USB Mouse.	

### IDE HDD Mode

	Setting	Description	Note
<b>IDE DMA transfer access</b>	Enabled	This option allows the 82801ER (ICH5R)'s IDE controller to directly transfer data to memory without intervention or the CPU if enabled.	Default
	Disabled		
<b>IDE HDD Block Mode</b>	Disabled	Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.	Default
	Enabled		

### FDC Controls

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



**Onboard Serial Ports**

	Setting	Description	Note
<b>Onboard Serial Port 1 / Serial Port 2</b>	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 address except for Disabled or Auto.	Default (port 2)
	3E8/IRQ4		
	2E8/IRQ3		
	Auto		
<b>UART Mode Select</b>	Normal	The second serial port offers these InfraRed interface modes.	Default
	IrDA		
	ASKIR		
If [UART Mode Select] is set to [IrDA]/[ASKIR]			
<b>UR2 Duplex Mode</b>	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
<b>Onboard Parallel Port</b>	Disabled	Choose the printer I/O address.	
	378/IRQ7		Default
	3BC/IRQ7		
	278/IRQ5		
<b>Parallel Port Mode</b>	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			
<b>ECP Mode use DMA</b>	3	Choose DMA3	Default
	1	Choose DMA1	

**Others Optional**

	Setting	Description	Note
<b>Game Port Address</b>	Disabled	Set the I/O address for the onboard game port.	
	201		Default
	209		
<b>Midi Port Address</b>	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			
<b>Midi Port IRQ</b>	5	Select the IRQ that the Midi port uses under this them.	
	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  Menu Level ▶
Power Management	User Define	
Video Off Method	DPMS	
HDD Power Down	Disabled	
HDD Down In Suspend	Disabled	
Soft-Off by PBTN	Instant-Off	
PowerOn After Pwr-Fail	Off	
WOL(PME#) From Soft-Off	Disabled	
WOL(RI#) From Soft-Off	Disabled	
Power On By Alarm	Disabled	
x Date of Month Alarm	0	
x Time (hh:mm:ss) Alarm	0 : 0 : 0	

↑↓→ 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		
<b>ACPI Suspend Type</b>	S1(POS)	This item allows you select suspend mode.	Default		
<b>Power Management</b>	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
<b>Video Off Method</b>	V/H Sync+Blank	Selects the method by which the monitor is blanked.			
	Blank screen				
	DPMS		Default		
<b>HDD Power Down</b>	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.		
<b>HDD Down In Suspend</b>	Disabled		Default		
	1Min-1Hour	When the set time has elapsed, BIOS sends a command to the system to enter suspend Mode.			
<b>Soft-Off by PBTN</b>	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.			

**Power Management Controls (Continue)**

	Setting	Description	Note
<b>PowerOn After Pwr-Fail</b>	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)	
<b>WOL(PME#) From Soft-Off</b>	Disabled	This item specifies whether the system will be awakened from power saving modes (S1, S4) when activity or input signal of the specified hardware peripheral is detected.	Default
	Enabled		
<b>WOL(RI#) From Soft-Off</b>	Disabled	The system will self-power on when the modem is ringing.	Default
	Enabled		
<b>Power-On by Alarm</b>	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.	

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



### 3-7.1 IRQ Resources

This option sets the IRQ Resources.

Phoenix – Award BIOS CMOS Setup Utility		
IRQ Resources		
IRQ-3 assigned to	PCI Device	Item Help Menu Level ▶
IRQ-4 assigned to	PCI Device	
IRQ-5 assigned to	PCI Device	
IRQ-7 assigned to	PCI Device	
IRQ-9 assigned to	PCI Device	
IRQ-10 assigned to	PCI Device	
IRQ-11 assigned to	PCI Device	
IRQ-12 assigned to	PCI Device	
IRQ-14 assigned to	PCI Device	
IRQ-15 assigned to	PCI Device	

↑↓→ 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.



**PNP/PCI Configuration Controls**

	Setting	Description	Note
<b>Reset Configuration Data</b>	Disabled	Retain PnP configuration data in BIOS.	Default
	Enabled	Reset PnP configuration data in BIOS.	
<b>Resources Controlled By</b>	Manual	BIOS does not manage PCI PnP card IRQ assignment. Required to assign IRQ-# and DMA-# to PCI 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]			
<b>IRQ-# assigned to:</b>	PCI device	Choose IRQ# assigned to PCI/ISA PnP card.	Default
	Reserved	Reserved IRQ for Legacy cards.	
<p>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:</p> <ol style="list-style-type: none"> <li>1. IRQs 0, 1, 2, 6, 8, 13 can NOT be assigned, because they are fixed.</li> <li>2. IRQs 5, 9, 10, 11 are available</li> <li>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:</li> </ol>			

## PNP/PCI Configuration Setup (Continue)

	Setting	Description	Note
Interrupt	How to set the BIOS to release the IRQ to the PnP Interrupt pool:		
Line	PnP / PCI configuration	Integrated Peripherals	
IRQ 15	IRQ 15: <b>PCI PnP</b>	On-Chip Secondary PCI IDE	
IRQ 14	IRQ 14: <b>PCI PnP</b>	On-Chip Primary PCI IDE	
IRQ 12	IRQ 12: <b>PCI PnP</b>	<i>Interrupt 12 will be released by the PnP BIOS automatically if the PS/2 Mouse Port is not used.</i>	
IRQ 11	IRQ 4: <b>PCI PnP</b>	Onboard Device	
IRQ 10	IRQ 4: <b>PCI PnP</b>	Onboard Device	
IRQ 9	IRQ 4: <b>PCI PnP</b>	Onboard Device	
IRQ 7	IRQ 7: <b>PCI PnP</b>	Onboard parallel port	
IRQ 5	IRQ 4: <b>PCI PnP</b>	Onboard Device	
IRQ 4	IRQ 4: <b>PCI PnP</b>	Onboard Serial port 1	
IRQ 3	IRQ 3: <b>PCI PnP</b>	Onboard Serial port 2	
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.			
<b>Assign IRQ For VGA/USB</b>	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.			
<b>INT Pin 1~4 Assignment</b>	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
<b>LPT1</b>	378H	7	SPP
<b>COMA</b>	3F8H	4	
<b>COMB</b>	2F8H	3	



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



### 3-8 PC HEALTH STATUS

This option shows the Motherboard's PC Health Status.

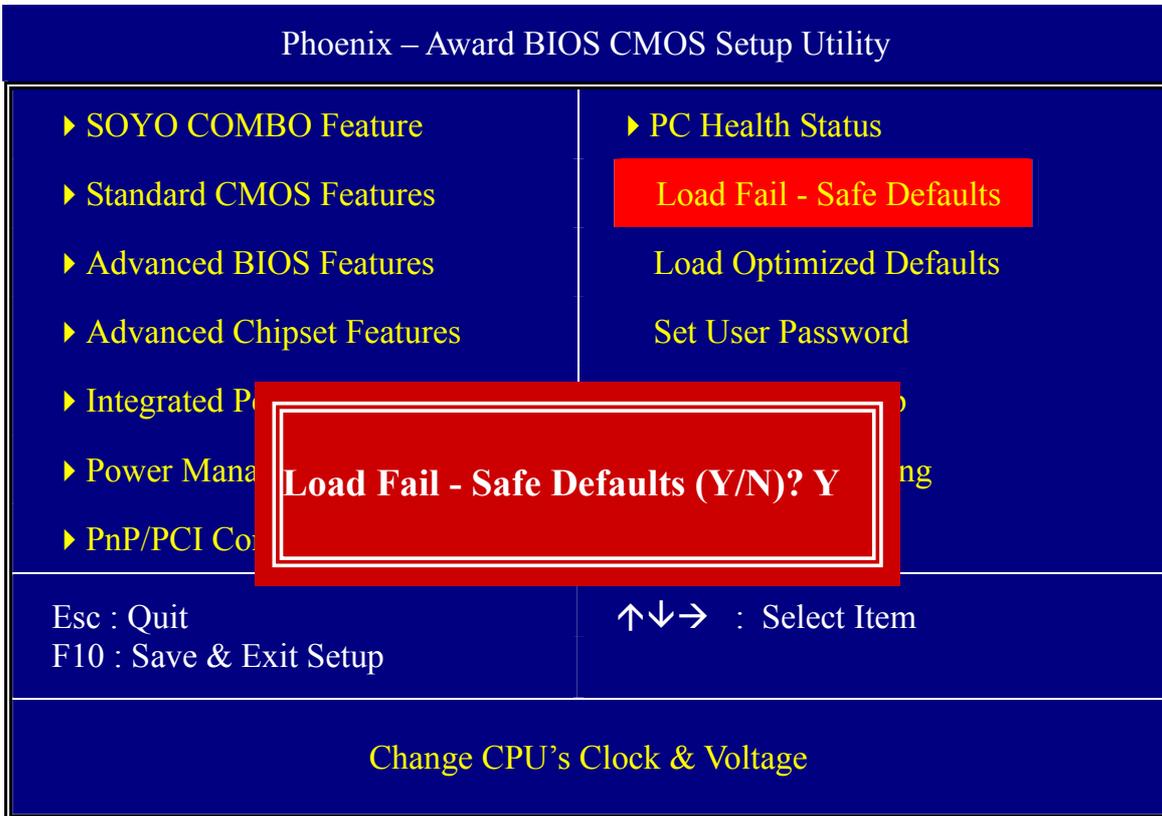
Phoenix – Award BIOS CMOS Setup Utility														
PC Health Status														
CPU Vcore	1.48 V	Item Help  Menu Level ▶												
+ 3.3V	3.29 V													
+ 5V	4.94 V													
+ 12V	11.77 V													
DRAM Voltage	2.59 V													
AGP Voltage	3.05 V													
CPU Temperature	66°C / 150°F													
CHA Temperature	70°C / 158°F													
CPUFAN1 Speed	4687 RPM													
CHAFAN1 Speed	0 RPM													
<table border="0"> <tr> <td>↑↓→ Move</td> <td>Enter:Select</td> <td>+/-/PU/PD:Value</td> <td>F10:Save</td> <td>ESC:Exit</td> <td>F1:General Help</td> </tr> <tr> <td>F5:Previous Values</td> <td colspan="2">F6:Fail-Safe Defaults</td> <td colspan="3">F7: Optimized Defaults</td> </tr> </table>			↑↓→ Move	Enter:Select	+/-/PU/PD:Value	F10:Save	ESC:Exit	F1:General Help	F5:Previous Values	F6:Fail-Safe Defaults		F7: Optimized Defaults		
↑↓→ 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**

	<b>Setting</b>	<b>Description</b>	<b>Note</b>
<b>Vcore, +3.3V, +5V, +12V, DRAM Voltage, AGP Voltage</b>	V	Show the current voltage status.	
<b>CPU Temperature</b>	°C/°F	Show the current status of CPU temperature.	
<b>CHA Temperature</b>	°C/°F	Show the current status of the System temperature.	
<b>CPUFAN1/ CHAFAN1 Speed</b>	RPM	Show the current status of CPU/CHA Fan.	

### 3-9 LOAD FAIL-SAFE DEFAULTS

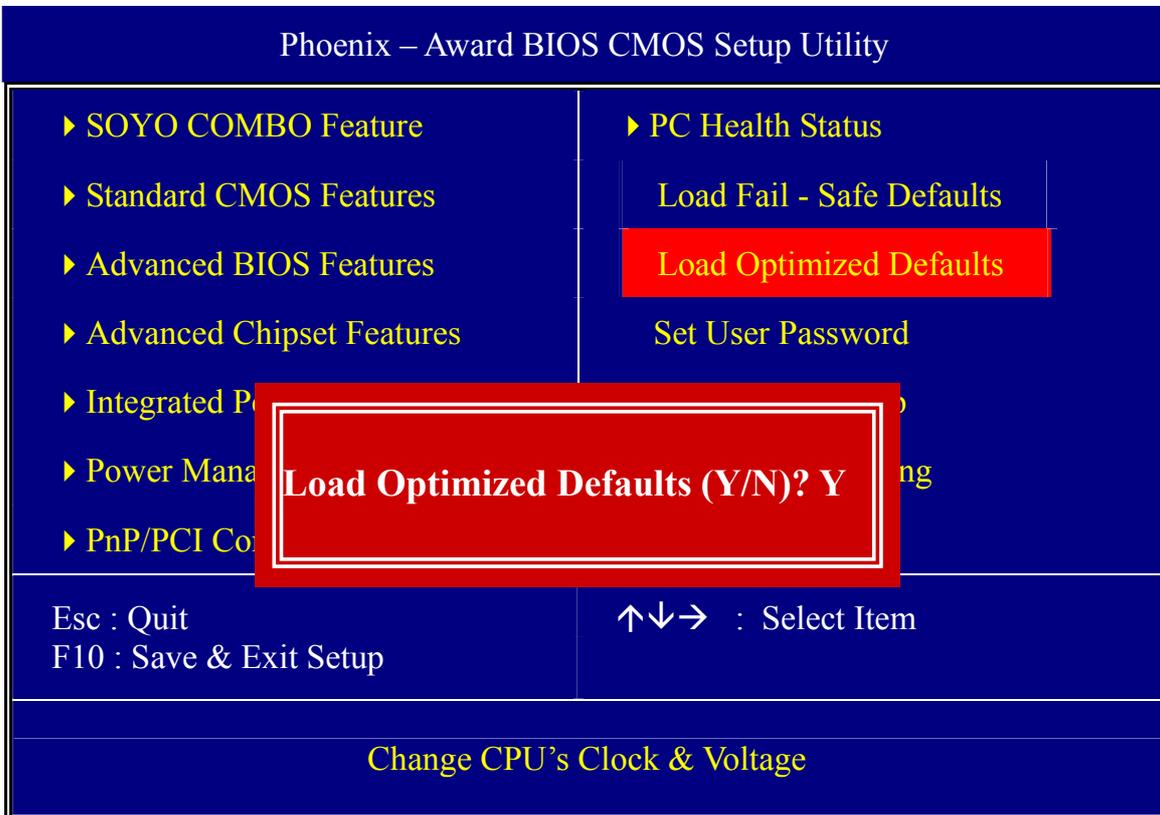
Select the [Load Fail-Safe Defaults] option from the Main Menu to load a pre-defined safe bios settings. This option is recommended if you have instability issues.



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

### 3-10 LOAD OPTIMIZED DEFAULTS

Select the [Load Optimized Defaults] option from the Main Menu to load the pre-defined optimized BIOS settings.



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



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

### 3-11 SUPERVISOR PASSWORD

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

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

Enter Password:



---

**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:

Password Disabled!!

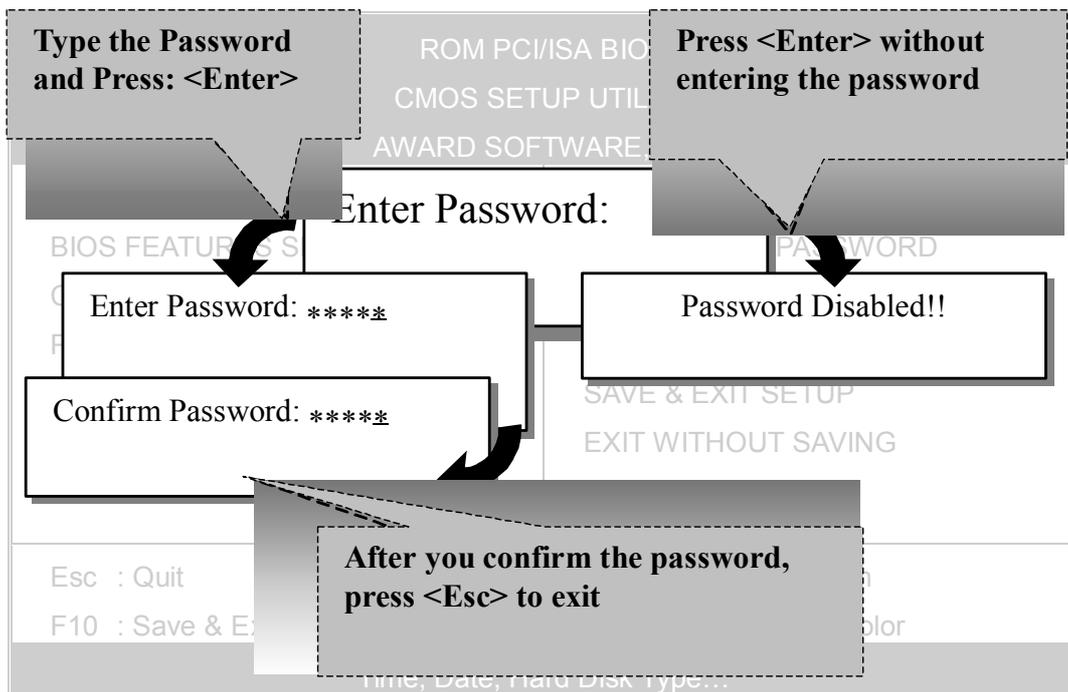
---

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

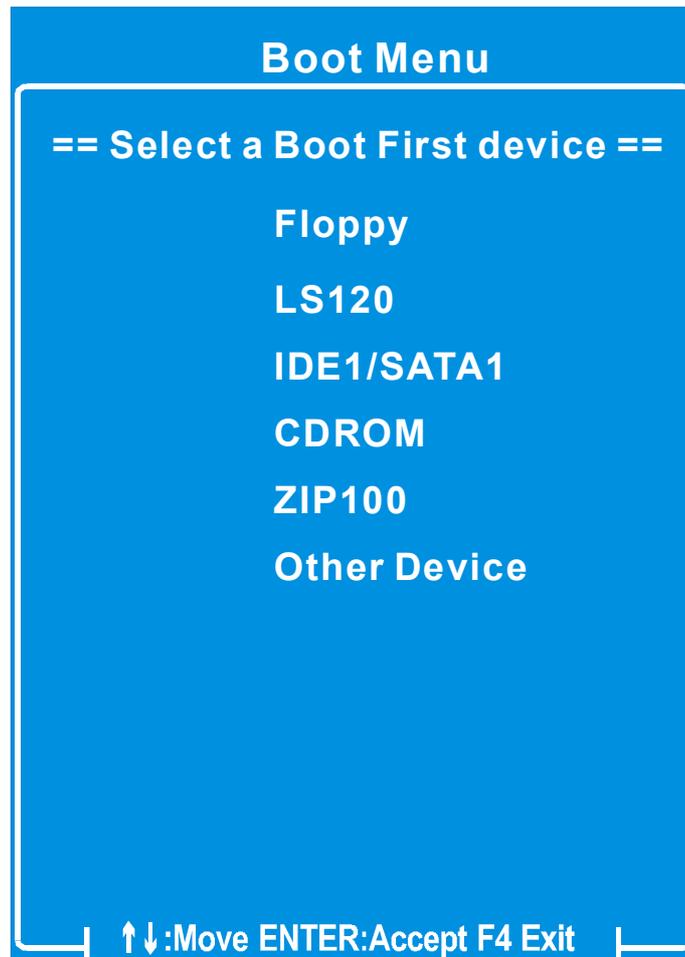
When the user password option is on, you are not allowed to change any setting in the [CMOS SETUP UTILITY] except for changing the user's password. Only the supervisor's password will allow you to make changes in CMOS setup.

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.*



## Chapter 4

# DRIVERS INSTALLATION



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

Your SY-CK8 DRAGON Plus Motherboard comes with a CD-ROM labeled “SOYO CD”. The SOYO CD contains

- a. The user’s manual for your new motherboard in PDF format
- b. The driver software needed for installation
- c. A database in HTML format with information on SOYO motherboards and other products.

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

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



**(SOYO CD Start Up Program Menu)**

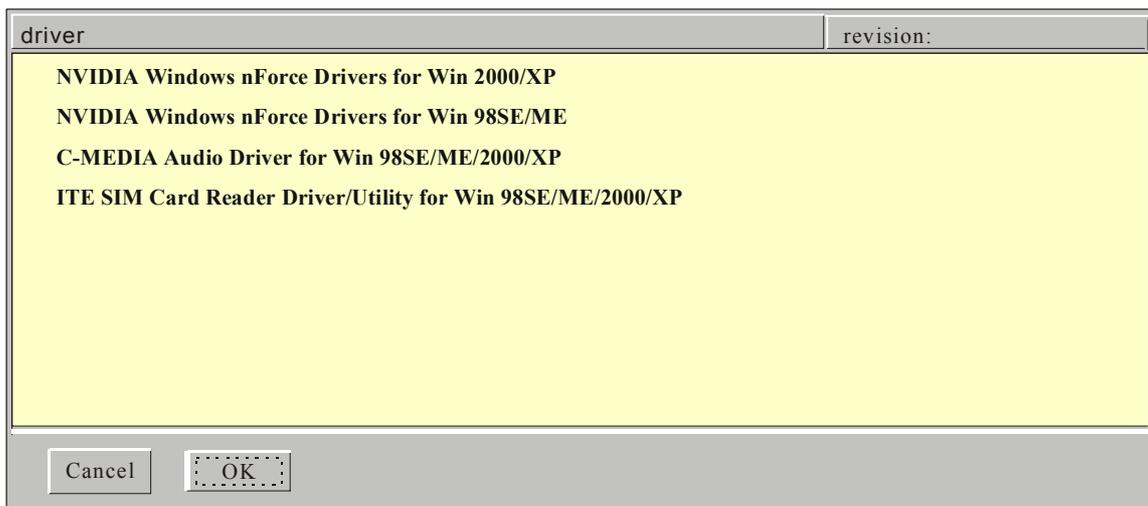


The user's manual files included on the SOYO CD are in PDF (Postscript Document Format). In order to read a PDF file, the appropriate Acrobat Reader software must be installed on your system.

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

## Step 2. Install Drivers and Utilities

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



### (Driver Installation Menu)

A short description of all available drivers follows:

- **NVIDIA Windows nForce Drivers for Win 2000/XP**  
Contains IDE, Ethernet, SMBus and GART driver for Win 2000/XP.
- **NVIDIA Windows nForce Drivers for Win 98SE/ME**  
Contains IDE, Ethernet, SMBus and GART driver for Win 98SE/ME.
- **C-MEDIA Audio Driver for Win 98SE/ME/2000/XP**  
This driver supports 2/4/6 speakers 3D positional audio for the onboard C-Media audio chip.
- **ITE SIM Card Reader Driver/Utility for Win 98SE/ME/2000/XP**  
Driver to support the smart card reader. You need to install this if you use the SCR.

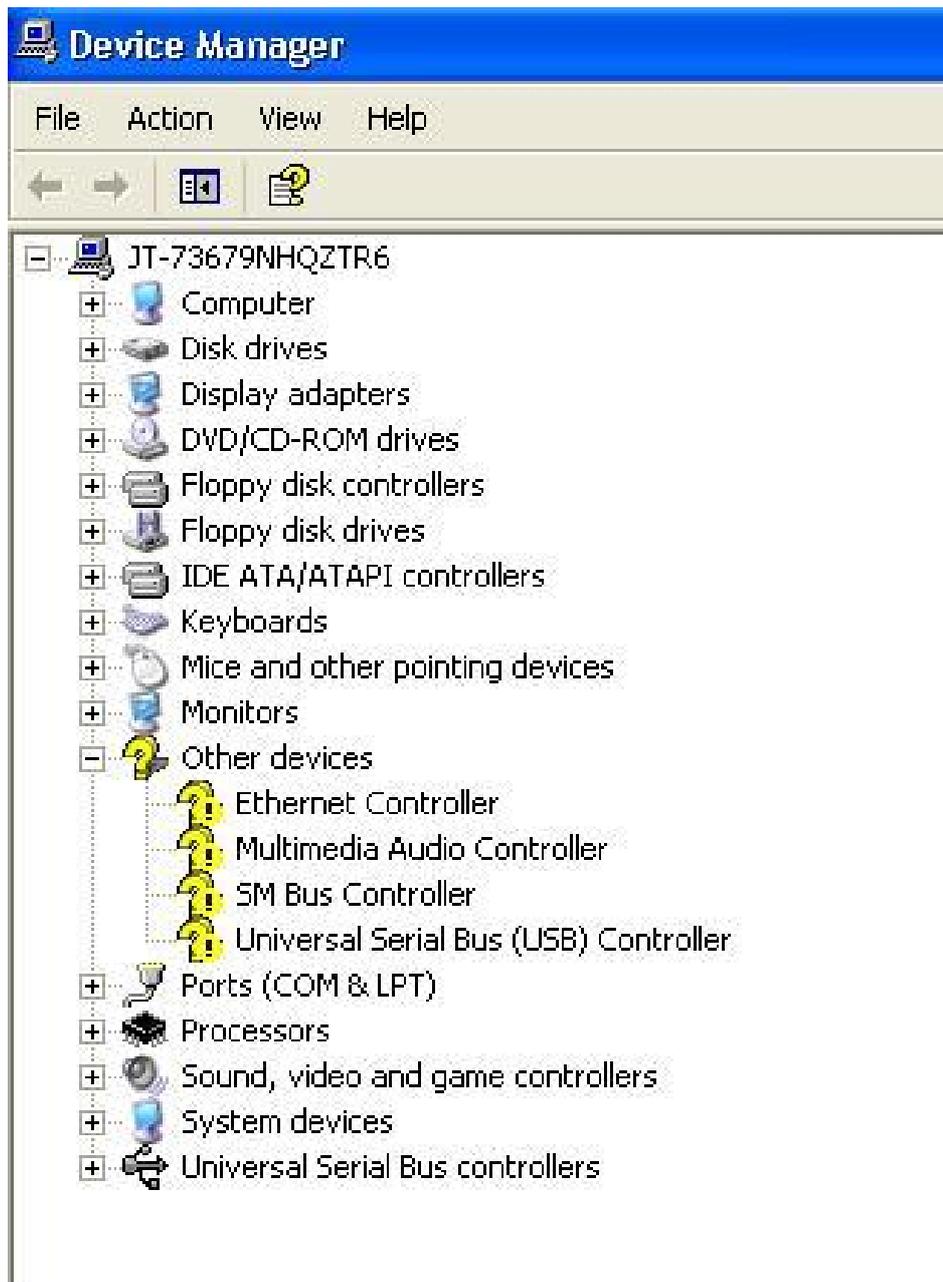
Select which driver you want to install and click **OK**, or click **Cancel** to abort the driver installation and return to the main menu.

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

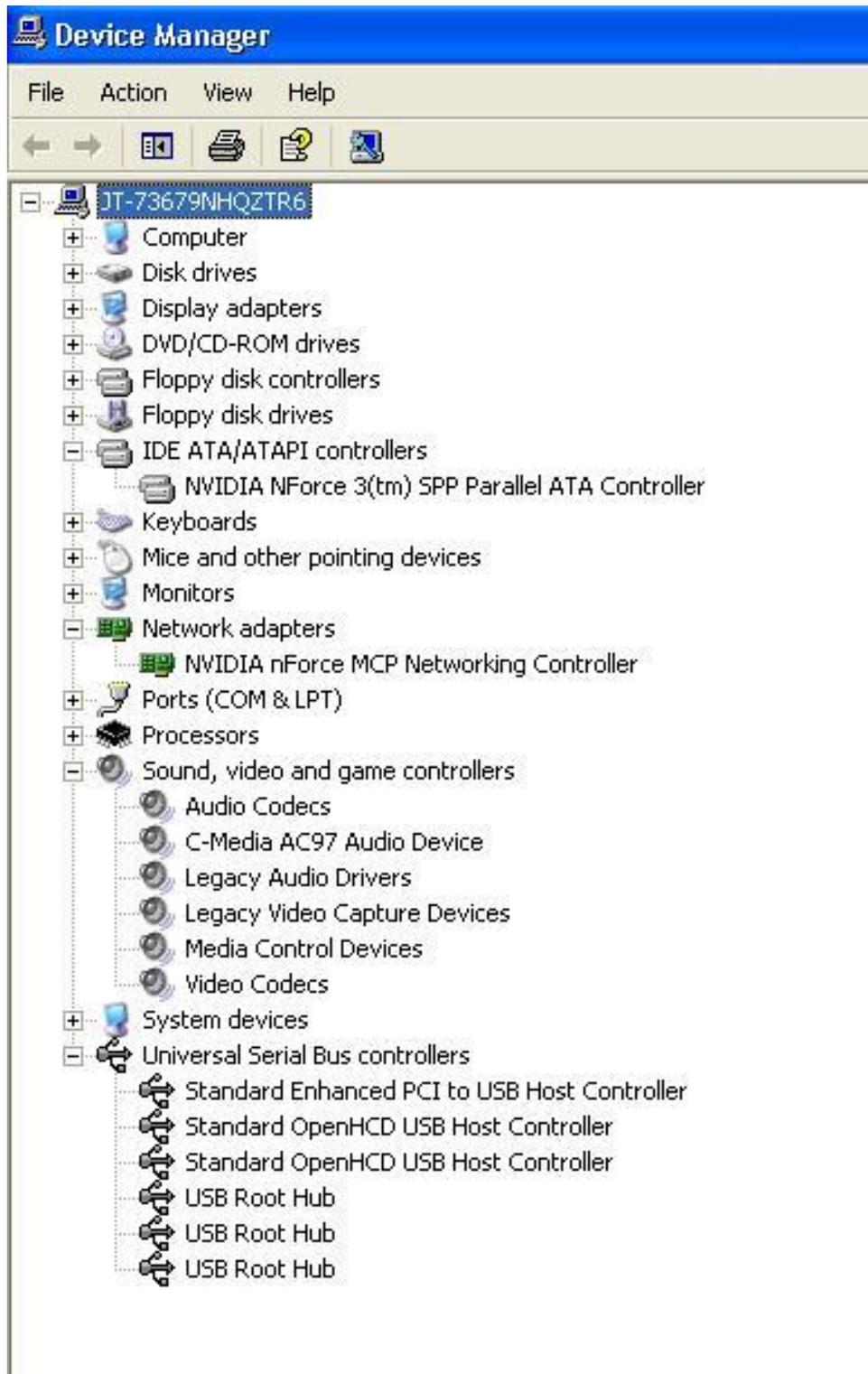
### **Step 3. Check the Latest Releases**

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

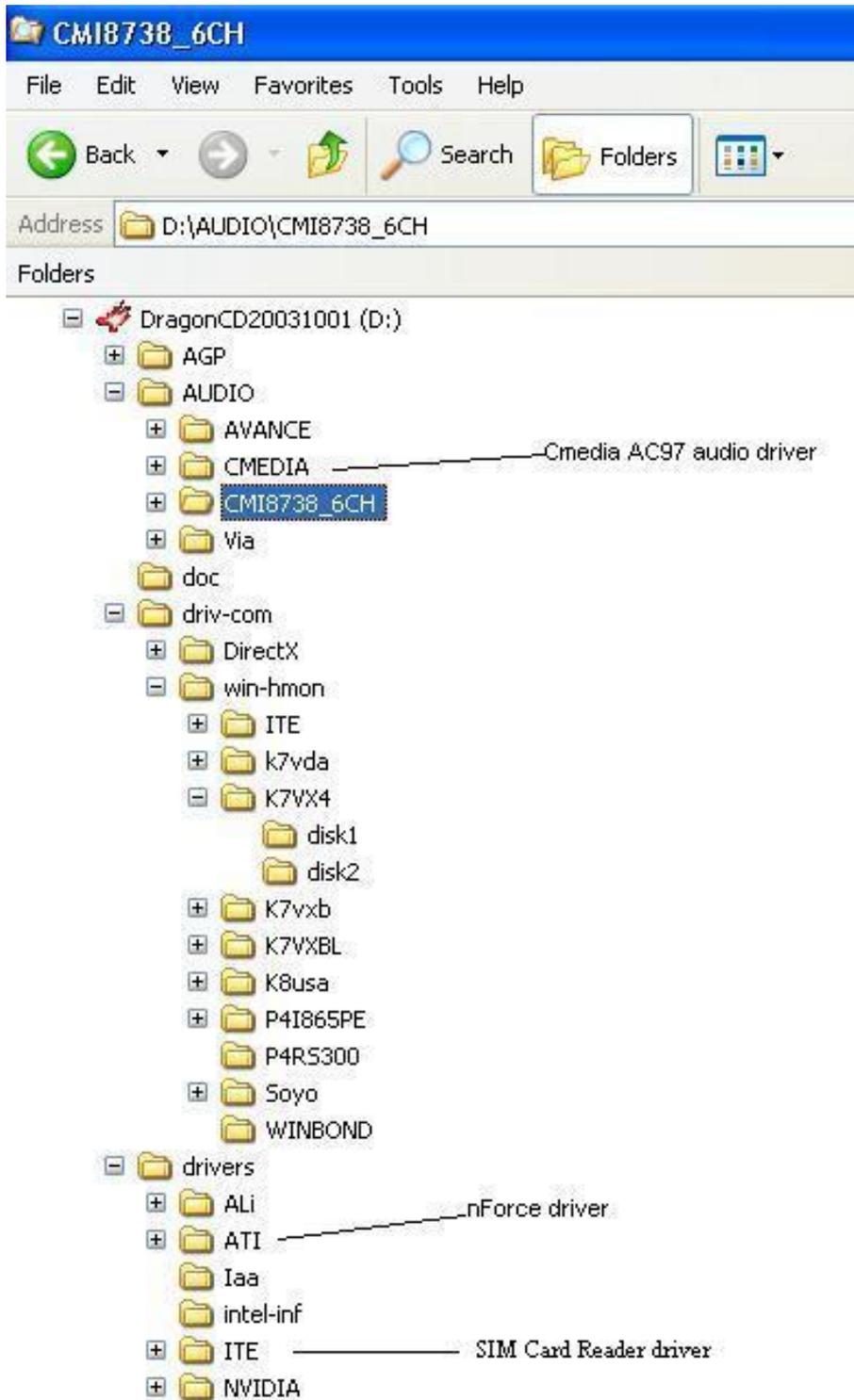
After Windows XP installation, your device manager should look like this:



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



Drivers directory list in the CD driver



## Chapter 5

# USB2.0 Driver Installation

### **USB2.0 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/windowsxp/pro/downloads/servicepacks/sp1/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 ”  Universal Serial Bus (USB) Controller ”
- 3) Restart your system.

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

### **USB2.0 Driver Installation for Windows 2000**

USB 2.0 drivers are available for download using Windows Update for Windows 2000.

For additional information regarding USB 2.0 support in Windows 2000, please visit:

<http://www.microsoft.com/windows2000/downloads/servicepacks/sp4/default.asp>

**(Windows 2000 Service Pack 4 Include USB2.0 Driver)**

## ***APPENDIX A***

# **Troubleshooting**

# Troubleshooting at First Start

## Boot-up Issues

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

1. Check if the power cord is plug into the power source.
2. Check if the power is connected to the M/B.
3. Check if the cable of the case power button is connected to the M/B power button connector (see Connectors and Plug-ins section in this Quick start guide for more info).
4. Make sure the power supply is not defective. Change the power supply. The minimum should be a 350 watts AMD recommended power supply.
5. Remove the M/B from the case and test the system. The M/B might be shorted to the case.

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

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

**The system power-up, no video, beeping heard.**

1. Clear CMOS battery. (JP5 connector, see this Quick start guide for more info on how to clear the CMOS).
2. Check all the jumper settings on the M/B.
3. Check if the memory module and the VGA card (if onboard VGA is not used) are inserted properly in the M/B.
4. If yes, change the memory module, it might be defective. Make sure the memory specification is supported by the M/B. (for more info on this, check our FAQ on the website).

5. Change the VGA card (if used).

**The system turns on for some seconds then shutdown by itself.**

1. Check if the CPU fan is connected to the CPUFAN1 connector.
2. The CPU might be overheating. Check the CPU fan if it is defective, also see if the CPU fan is in contact with the CPU.
3. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS).
4. Make sure the power supply you have on your system support the M/B specification.
5. If you already checked the power supply specification, change the power supply it might be defective. The minimum is 350 watts AMD approved.

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

1. Clear CMOS battery. (JP5 connector, see Quick start guide for more info on how to clear the CMOS).
2. If still has the problem, remove all other add-on cards (use onboard vga) and see if it boots further. Then put peripherals in one by one to identify which one of them causes the lockup.
3. Change the CPU.

**During Boot-up, my computer says CMOS memory Checksum error. What can be the problem?**

1. Clear CMOS memory.
2. Re-flash BIOS. Check on how to flash BIOS on the later part of this guide.
3. Change the CMOS battery, the battery might be drained.
4. The BIOS chip might be failing.

**I hear a 1-2 beeping sound and then the system shut down, what is the problem?**

Verify that the CPU fan is connected to the CPUFAN1 connector.

## **Stability Issues**

**My system intermittently locks up, very unstable**

1. Check the CPU Temperature, your CPU might be overheating. Change the CPU FAN.
2. Do not overclock your CPU

3. Check the specification of the memory module, maybe the M/B does not support it.
4. Go to BIOS setup and load fail safe settings. Please check if the system performance in the BIOS setup is set to Turbo/Maximum. Set it to normal if this is the case
5. Check the website for the latest BIOS update.
6. Check the website for FAQ's regarding instability issues.
7. Change the memory module or CPU.
8. The power supply might not have enough wattage to support all the peripherals. If your system has other peripherals connected, like CD-RW, extra HDD, etc. disconnect them, or use a power supply with a higher wattage.

**My system intermittently locks up, during Windows installation.**

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

## **BIOS Issue**

**Where can I find the BIOS revision of my mainboard?**

It will be displayed on the upper-left corner of the screen during boot-up. It will show as your board type followed by the revision number, such as kvxa\_2BA1 (meaning BIOS revision 2BA1 for the SY-K7V Dragon plus! mainboard) or 6BA+ IV\_2AA2 which means SY-6BA+ IV motherboard, with a 2AA2 BIOS.

**Where can I find the latest BIOS of my motherboard?**

Please go to the technical support page of one of the SOYO websites (Taiwan: [www.soyo.com.tw](http://www.soyo.com.tw), US: [www.soyousa.com](http://www.soyousa.com), Germany: [www.soyo.de](http://www.soyo.de)), and look up your motherboard to find the latest BIOS revision.

**How can I flash the BIOS?**

1. Download the BIOS on our support website.
2. Make a bootable floppy disk with out any memory manager loaded (i.e. himem, emm386, etc. . .).
3. Copy the BIOS file and awdf flash utility to the diskette.

4. On the CMOS setup and disable CIH 4-way protection.
5. Type "awdf flash biosname.bin /sn /py".
6. Reboot.

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

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

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

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

**I'm using a 133MHz FSB CPU, I cannot find the DDR 100MHz option in the BIOS, why?**

The DDR speed should not be lower than the CPU FSB speed.

## **VGA Issue**

**I cannot set my VGA to go higher than 16 color (640x 480).**

1. Install/ re-install the VGA driver.

**After waking up from Suspend to RAM or Standby mode, the screen has no display but I can hear the hard disk operating**

1. Check the VGA card manufacturer for a driver update (if using a different video card then the onboard video), and make sure the VGA card supports the Suspend to Ram function.
2. Update your VGA card's BIOS (in the case of a video card other then the onboard video). Check your VGA card manufacturer for more details.

## **Audio Issue**

**How can I disable the on-board Audio?**

Go to the SOYO Combo Feature in BIOS setup, then set the "AC97 Audio" setup option to disabled.

**I cannot get the sound working on my system.**

1. Check if the speaker wire is connected to the line out connector on the M/B.
2. Check if the speaker power is powered on.
3. Install the audio driver supplied on our driver disc.

4. Check BIOS setup if "AC97 Audio" setup option is enabled.
5. If sound already installed, check our website for audio driver updates.

**The sound is working in my system, but when I play CD music from the CD-ROM, I do not get any sound. What is wrong?**

This is because the 3-wire audio cable from the CD-ROM to the on-board CDIN1 connector in the M/B is not connected. See the beginning of this guide for the location of CDIN1.

**The sound and everything else works fine except that the line-in and microphone do not work. What is wrong?**

1. Please go to sound properties and check if the line-in and microphone in are enabled and not muted.
2. Check if the Microphone is ok.
3. When using 6 speakers the line-in and microphone channels are used for rear, center and bass. 6-Channel audio and microphone/line-in can not be used at the same time.

## **Hard disk/FDD/ CD-ROM issue**

**My Western digital HDD is not detected during boot-up.**

Change the jumper settings to cable select or single.

**Sometimes the system finds my CD-ROM, sometimes not.**

1. Check CD-ROM if it is working properly.
2. The power supply might not have enough wattage to support all the peripherals. If your system has other peripherals connected, like CD-RW, extra HDD, etc. disconnect them.

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

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

## **LAN Issues**

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

Enable the onboard LAN in the BIOS setup.

**I have problem installing Novell NetWare v.50.**

Disable the APIC option in the BIOS.

**For updated FAQs, please check <http://www.soyousa.com/support/>**

## ***APPENDIX B***

# **Contact Information**

## How to contact us:

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

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

### **TAIWAN**

SOYO COMPUTER INC.

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No. 21 Wu-Kung 5 Rd., Hsing  
Chuang City, Taipei Hsien, Taiwan,  
R.O.C.

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TEL: 886-2-22903300

FAX: 886-2-22983322

<http://www.soyo.com/>

Email: [info@mail.soyo.com.tw](mailto:info@mail.soyo.com.tw)

### **GM**

SOYO Deutschland GmbH

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Gewerbepark 8a, 26209 Hatten,  
Germany

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TEL: 49-4482-9740-0

FAX: 49-4482-9740-22

<http://www.soyo.de/>

Email: [sales@soyo.de](mailto:sales@soyo.de)

### **USA**

SOYO INC.

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1420 S. Vintage Ave. Ontario, CA  
91761, USA

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TEL: 909-292-2500

FAX: 909-937-0783

<http://www.soyousa.com/>

<http://www.soyousa.com/kb>

Email: For technical support

[http://www.soyousa.com/support/  
contactsupport.php](http://www.soyousa.com/support/contactsupport.php)