



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-K8USA DRAGON Ultra 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: December 2003

Version 1.2

K8USA DRAGON Ultra 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-K8USA DRAGON Ultra** AGP/PCI Motherboard is a high-performance Socket 754 processor, ATX form-factor system board. **SY-K8USA DRAGON Ultra** uses the Ali M1687/ M1563 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 K8USA Motherboard



◆ The user manual



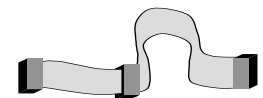
◆ The Installation CD-ROM



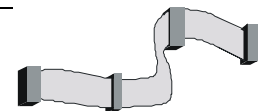
◆ SOYO Bonus Pack CD-ROM



◆ Two IDE Device ATA 133 Flat Cable



◆ One Floppy Disk Drive Flat Cable



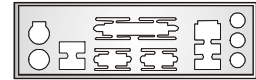
◆ Two Serial ATA cables



-
- ◆ One SPDIF Audio Connector Card (optional)



-
- ◆ One Back panel



-
- ◆ Σ BOX (optional)



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	<p>Supports AMD K8 Athlon 64 Processor mPGA Socket 754 processors :</p> <ul style="list-style-type: none"> ➤ Athlon K8 Athlon 64 ➤ SOYO COMBO Setup CMOS setup menu for complete and easy changing of your CPU settings in CMOS setup, making jumpers obsolete.
Chipset	M1687 / M1563 Chipset
Memory	<ul style="list-style-type: none"> ➤ Supports PC2100, PC2700 and PC3200 DDR memory modules. ➤ SOYO COMBO Setup menu, to fully configure your memory settings.
AGP	1x AGP master 4x/8x/Pro slot (1.5v only)
PCI	5x 32-bit bus master PCI slots
Super I/O	<p>ITE IT8705F-A Super I/O controller supporting:</p> <ul style="list-style-type: none"> ➤ 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.

Storage	<ul style="list-style-type: none"> ➤ ALi M5283 Serial ATA RAID controller supporting up to 2x UDMA 150 hard disks in normal or RAID (0 or 1) mode. ➤ ALi M5283 Parallel ATA RAID controller supporting up to 2x UDMA 33/66/100/133 Parallel ATA devices mode in normal or RAID (0 or 1) mode. ➤ ALi M1563 Integrated Parallel ATA controller supporting up to 4x UDMA 33/66/100/133 Parallel ATA devices.
USB 2.0	6x USB 2.0 compliant ports (4 on rear IO panel, 2x motherboard connectors).
Sound	Onboard CMedia CMI9739A 6 channel AC97 Audio Codec
Network	Onboard VIA 100Base-T and 1000BASE-T (Gigabit) Ethernet controller, supporting Wake-On-Lan (WOL)
IEEE1394	Onboard VIA IEEE1394 Firewire controller with 2x motherboard connectors.
BIOS	<ul style="list-style-type: none"> ➤ Wake On Ring and Power On by Alarm to allow your system to wake up from suspend or power on through the modem or RTC alarm. ➤ Multiple boot, allowing your system to boot from for example CD-ROM
Software	<ul style="list-style-type: none"> ➤ SOYO Hardware Doctor allowing you to fully monitor and control your system ➤ SOYO Bonus Pack CD-ROM containing free bonus software.
Industry standards	<p>This motherboard is compliant with the following industry standards:</p> <ul style="list-style-type: none"> ➤ Microsoft PC99 ➤ FCC ➤ ACPI

1-4 HANDLING THE MOTHERBOARD

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

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



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

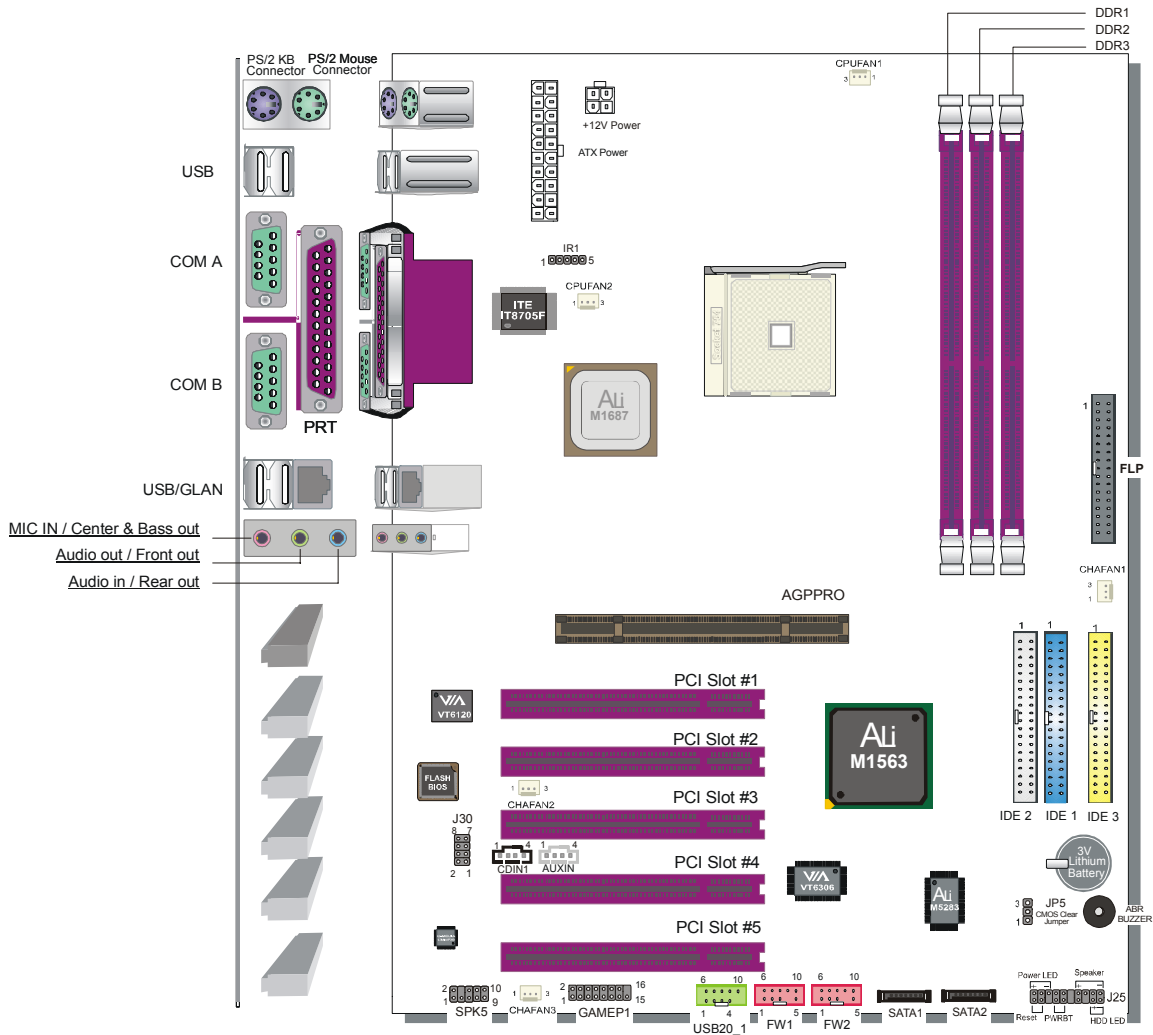
1-5 ELECTROSTATIC DISCHARGE PRECAUTIONS

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

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

- Do not remove the anti-static packaging until you are ready to install.
- Ground yourself before removing any system component from its protective anti-static packaging. (To ground yourself, grasp the expansion slot covers or other unpainted portions of the computer chassis.)
- Frequently ground yourself while working or use a grounding strap.
- Handle the Motherboard by its edges and avoid touching its components.

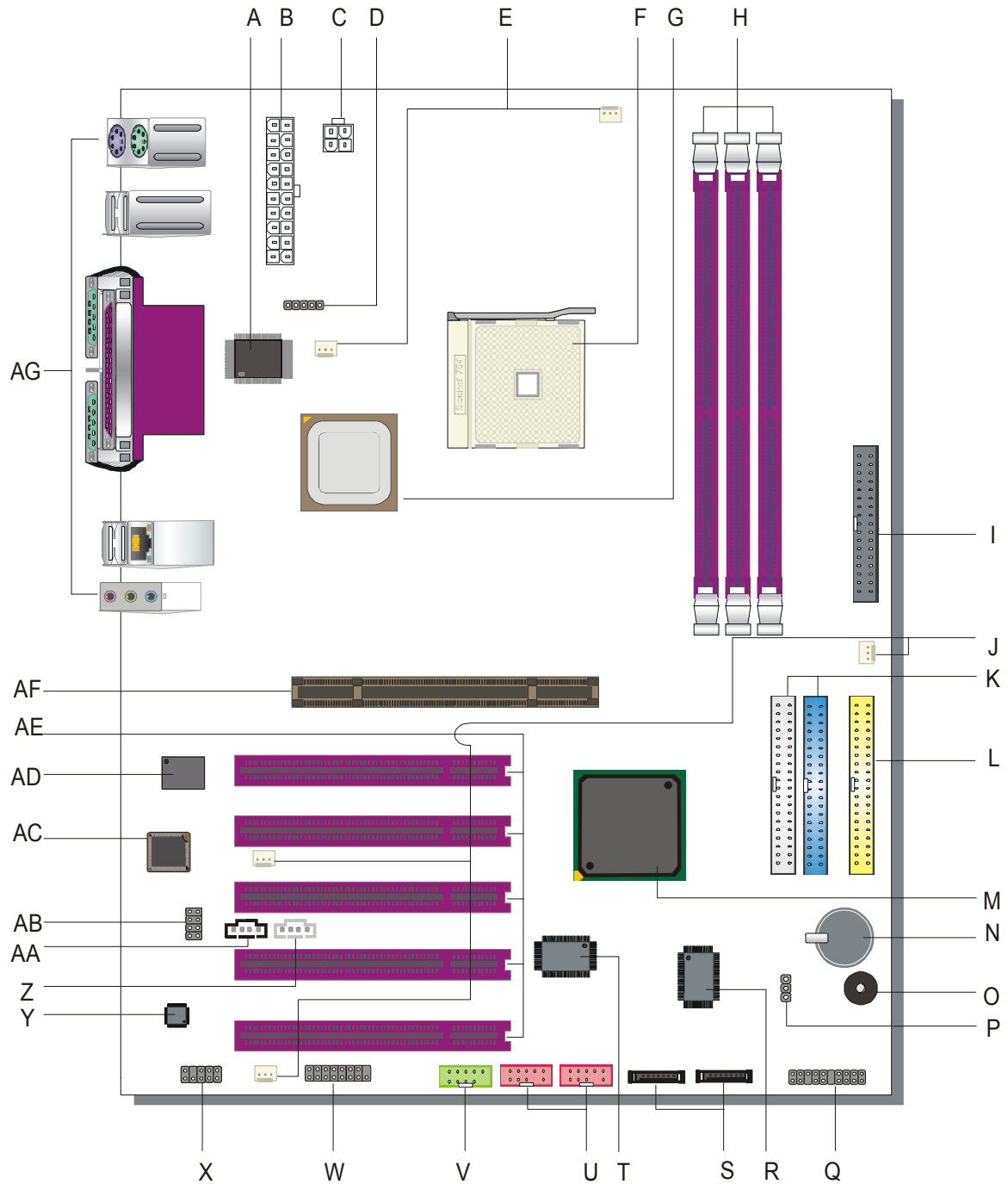
1-6 SY-K8USA DRAGON Ultra MOTHERBOARD LAYOUT



Back Panel

SY-K8USA DRAGON Ultra Platform

1-7 SY-K8USA DRAGON Ultra MOTHERBOARD COMPONENTS



A	<p>ITE IT8705F-A Super I/O Chip The IT8705F-A is a Low Pin Count Interface-based highly integrated Super I/O. The IT8705F 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 IT8705F meets the 'Microsoft® PC98 & PC99 System Design Guide' requirements, and is ACPI & LANDesk compliant.</p>
B	<p>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 38</p>
C	<p>+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 38.</p>
D	<p>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 31.</p>
E	<p>CPU Cooling Fan (CPUFAN1, 2) connectors With these connectors you can attach the CPU fan or fans to your motherboard. They supply power and (in the case of CPUFAN1) allow you to monitor the speed of the FAN via the SOYO Hardware Monitor software or via CMOS setup. For more details on the lay-out of these connectors, check the (1) CPU Cooling Fan (CPUFAN1, CPUFAN2) paragraph on page 32.</p>
F	<p>Socket 754 Connector This is the Zif (Zero Insertion Force) socket for your AMD 64 CPU. For more information, check the Step 1 Install the CPU paragraph on page 14.</p>
G	<p>ALi M1687 AGP Controller Bridge The AMD-1687 TM HyperTransport™ AGP3.0 Graphics Tunnel is a HyperTransport technology tunnel developed by AMD that provides an AGP 3.0 compliant (8x transfer rate) bridge.</p>

H	<p>DDR DIMM Banks</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 Step 2 Install Memory Module paragraph on page 18.</p>
I	<p>Floppy Disk Drive (FDD) connector</p> <p>This 34 pins connector is to connect your floppy drive to. Check for more details in the B. Floppy Drive Installation paragraph on page 24.</p>
J	<p>Chassis Cooling Fan (CHAFAN1, 2, 3) Connectors</p> <p>This connector is to connect your chassis fan to your motherboard. This motherboard supports up to 3 chassis fans. Please check the (2) Chassis Cooling Fan (CHAFAN1, CHAFAN2, CHAFAN3) paragraph on page 33 for more details.</p>
K	<p>Bus Mastering EIDE/ATAPI Ports</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 IDE Device Installation (HDD, CD-ROM) paragraph on page 22 for more details.</p>
L	<p>IDE RAID Ports</p> <p>This IDE port (IDE 3) can be used as normal IDE port or in a RAID configuration and are controlled by ALi M5283 chip. ATAPI devices will not work on these ports. For more details, please check the IDE Device Installation (HDD, CD-ROM) paragraph on page 22.</p>
M	<p>ALi M1563 SouthBridge Chipset</p> <p>The M1563 integrates AC-Link Host Controller, ACPI support, green function, 2-channel dedicated Ultra-133 IDE Master controller, USB 2.0/1.1 Host controllers with 6 ports in total, SMBus 2.0 controller, Real Time Clock, IO APIC controller, and HTT (HyperTransport Technology) v1.03 interface.</p>
N	<p>3V Lithium Battery</p> <p>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 40.</p>
O	<p>Buzzer</p> <p>On-board ABR buzzer.</p>

P	<p>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 40.</p>
Q	<p>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 25 for more details and lay-outs.</p>
R	<p>ALi M5283 Serial ATA/IDE RAID chip The M5283 provides personal computer systems with PCI device solution of the highest integration: It includes two Serial-ATA Host controllers for supporting a total of 2 ports, one fully Parallel-ATA Host controller for supporting a single channel and a Flash ROM controller..</p>
S	<p>SATA Connectors These connectors allow you to attach one UDMA 150 hard disk to each connector. Note that SATA 3 and 4 are controlled by the ALi M5283 chip, and can support RAID 0 and 1. For more information on these connectors check the IDE Device Installation (HDD, CD-ROM) paragraph on page 22.</p>
T	<p>VIA IEEE1394 Firewire chip The IEEE 1394 OHCI Host Controller provides high performance serial connectivity. It implements the Link and Phy layers for IEEE 1394-1995 High Performance Serial Bus and 1394a Draft 4.0. It is compliant with 1394 Open HCI 1.0 and 1.1 with DMA engine support for high performance data transfer via a 32-bit bus master PCI host bus interface.</p>
U	<p>IEEE1394 Firewire connector These connectors allow you to attach IEEE 1394 connectors or devices to the motherboard. The lay-out can be found in the 8. IEEE 1394 (Firewire) Connector (FW1/FW2) paragraph on page 37.</p>
V	<p>USB 2.0 connectors This connector supports 1 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) paragraph on page 30.</p>
W	<p>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.</p>

X	<p>SPK5 connector</p> <p>This connector is to connect the speaker attached to your case to your motherboard. Please check the 7. SPK5 paragraph on page 36 for more details.</p>
Y	<p>CMedia CMI 9739A AC97 Codec audio chip</p> <p>The CMI 9739A chip is a 2/4/6 Channel AC97 audio chip. It is SB Pro compatible and supports SPDIF IN/OUT. It also has a DLS (DownLoadable Sound) wave table music synthesizer, which supports DirectMusic.</p>
Z	<p>AUX-IN connector</p> <p>This connector allows you to attach a second CDROM analog audio out output to your mainboard. Please check the 5. AUX-IN (AUXIN) paragraph on page 34 for more details.</p>
AA	<p>CD-IN1 connector</p> <p>This connector is to attach your analog audio output channel from your CDROM or DVD drive to your motherboard. Please check the 4. CD Line-in (CDIN) paragraph on page 34 for more details.</p>
AB	<p>Earphone, Microphone and LAN Status LED Connector (J30)</p> <p>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 35 for a lay-out of this header.</p>
AC	<p>Flash BIOS</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 http://www.soyousa.com. For details on how to setup your BIOS, please go to the QUICK BIOS SETUP chapter on page 42.</p>
AD	<p>VIA VT6120 LAN chip</p> <p>The VIA VT6120 family of controllers are highly integrated Platform LAN Connect devices combining 10BASE-T, 100BASE-TX and 1000BASE-T (Gigabit) physical layer capabilities. It supports a single interface fully compliant with the IEEE 802.3/802.3u/802.3 standard. The IEEE 802.3 standard for 1000BASE-TX defines networking over two pairs of Category 5 unshielded twisted pair cable.</p>
AE	<p>32 bit PCI slots</p> <p>These are the motherboard's 3.3v busmastering PCI slots, compliant to PCI specification v2.2.</p>

AF	AGP Pro 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 20.
AG	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 28 for more details.

Chapter 2

HARDWARE INSTALLATION

Congratulations on your purchase of **SY-K8USA DRAGON ULTRA** 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.



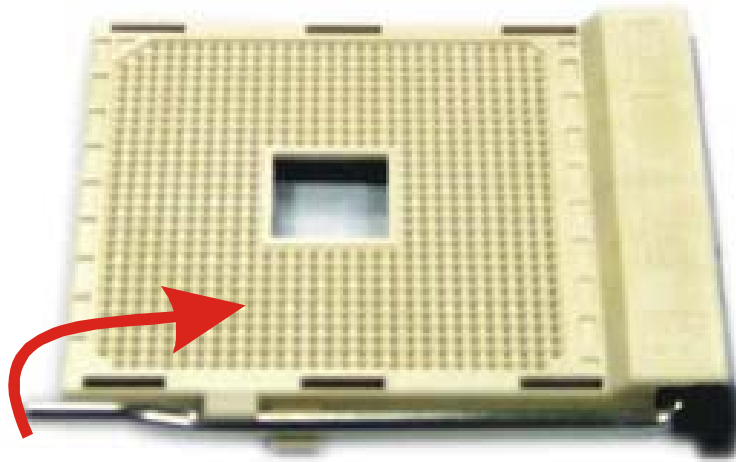
Warning: Turn off the power to the Motherboard, system chassis, and peripheral devices before performing any work on the Motherboard or system.

BEGIN THE INSTALLATION

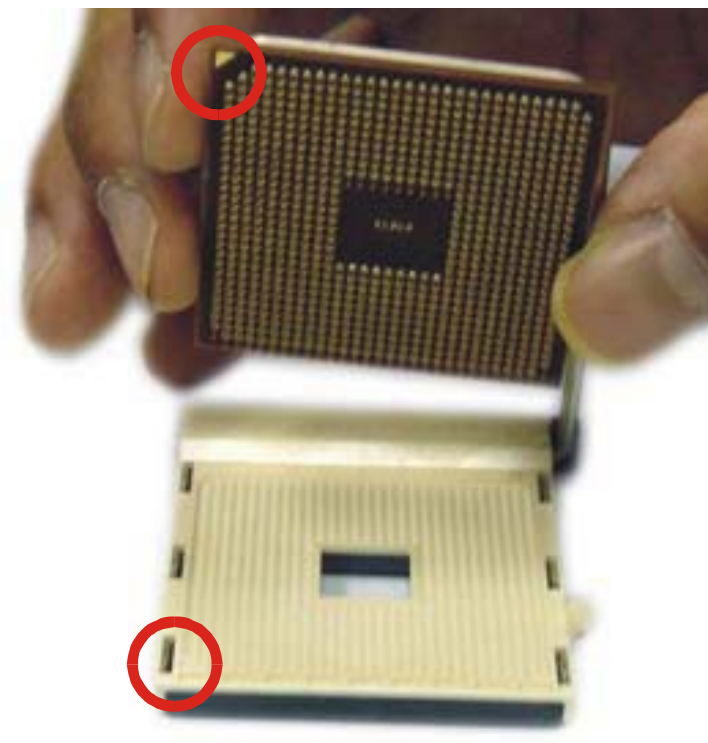
Step 1 Install the CPU

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

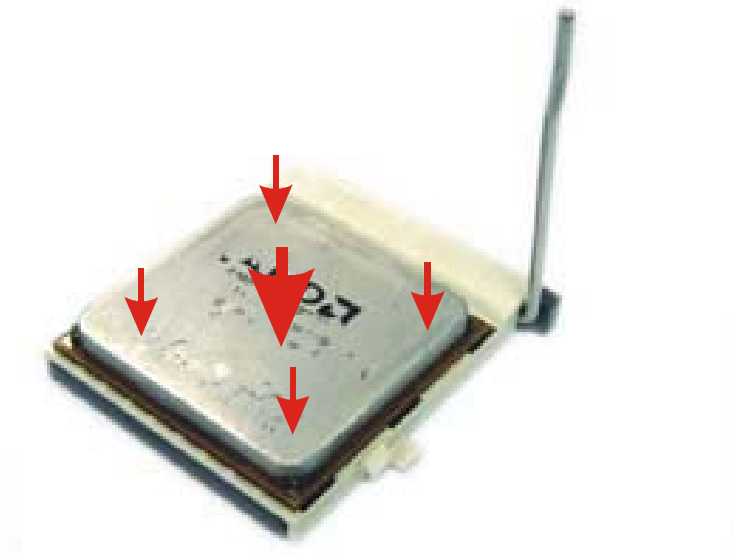
1. Lift the socket handle up to a vertical position.



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.



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 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.



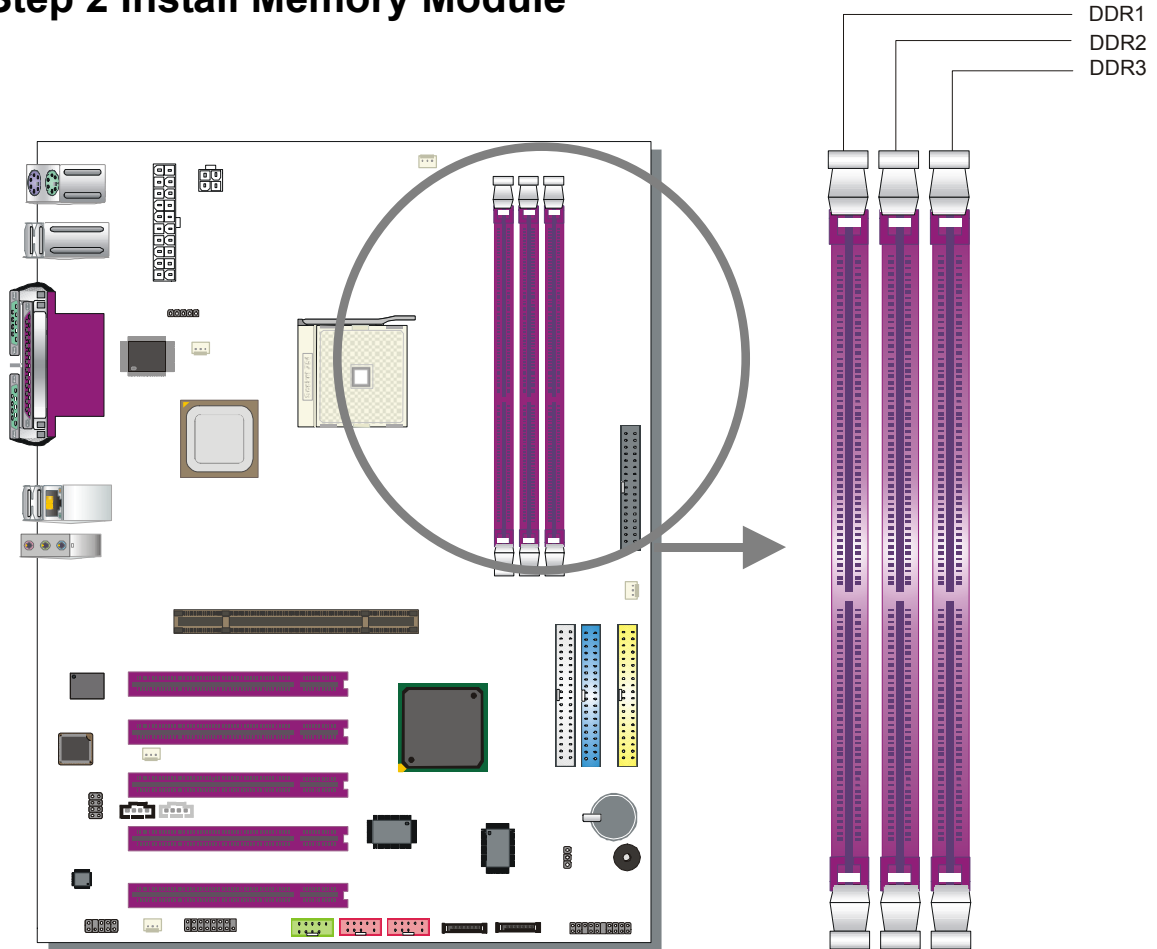
Note: Remember to connect the fan to the appropriate power source.

ABR (Anti Burn Regulator)

SOYO's ABR (Anti Burn Regulator) is specially designed hardware circuits that works hand in hand with the CPU's internal sensor in monitoring the temperature of the CPU and prevent it from overheating.

Once the heat accumulated in the CPU is over the set limit. ABR will automatically shut down the system power and warns you with a beeping sound. To de-activate the beeping sound, **un-plug the AC power cord**. We recommend you to check the cause of the overheating and let the processor cool down before powering on the system.

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.

ECC and Non-registered memory are supported in the motherboard.



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 Pro slot and 5 PCI slots.

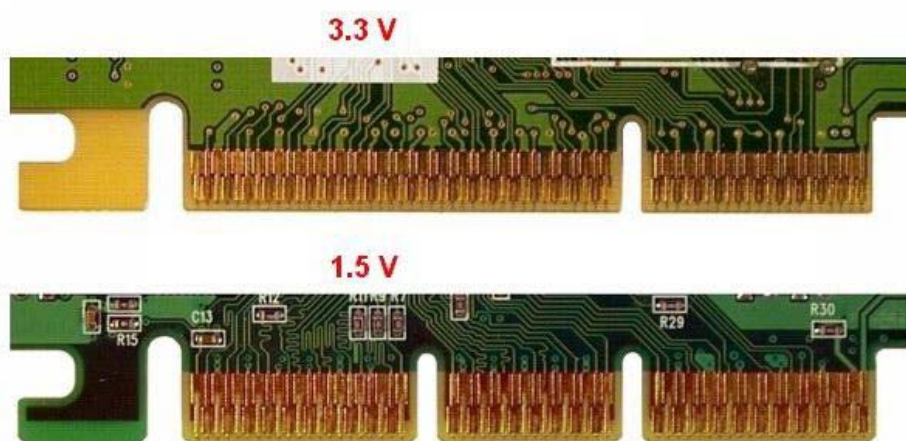
1. Read the related expansion card's instruction document before inserting the expansion card into the computer.
2. Press the expansion card firmly into the expansion slot on the motherboard.
3. Make sure the metal contacts on the card are seated in the slot.
4. Replace the screw to secure the slot bracket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

AGP Pro Slot

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



DO NOT remove the safety tab underneath it if you will be using an AGP card without a retention notch. Removing may cause the card to shift and may cause damage to your card, slot, and motherboard. Remove ONLY when you will be using an AGP Pro card. You can use a pen tip to remove the tab from the bay.



This motherboard only supports 1.5V AGP cards (4X/8X cards). Using 3.3V AGP card might damage your motherboard.

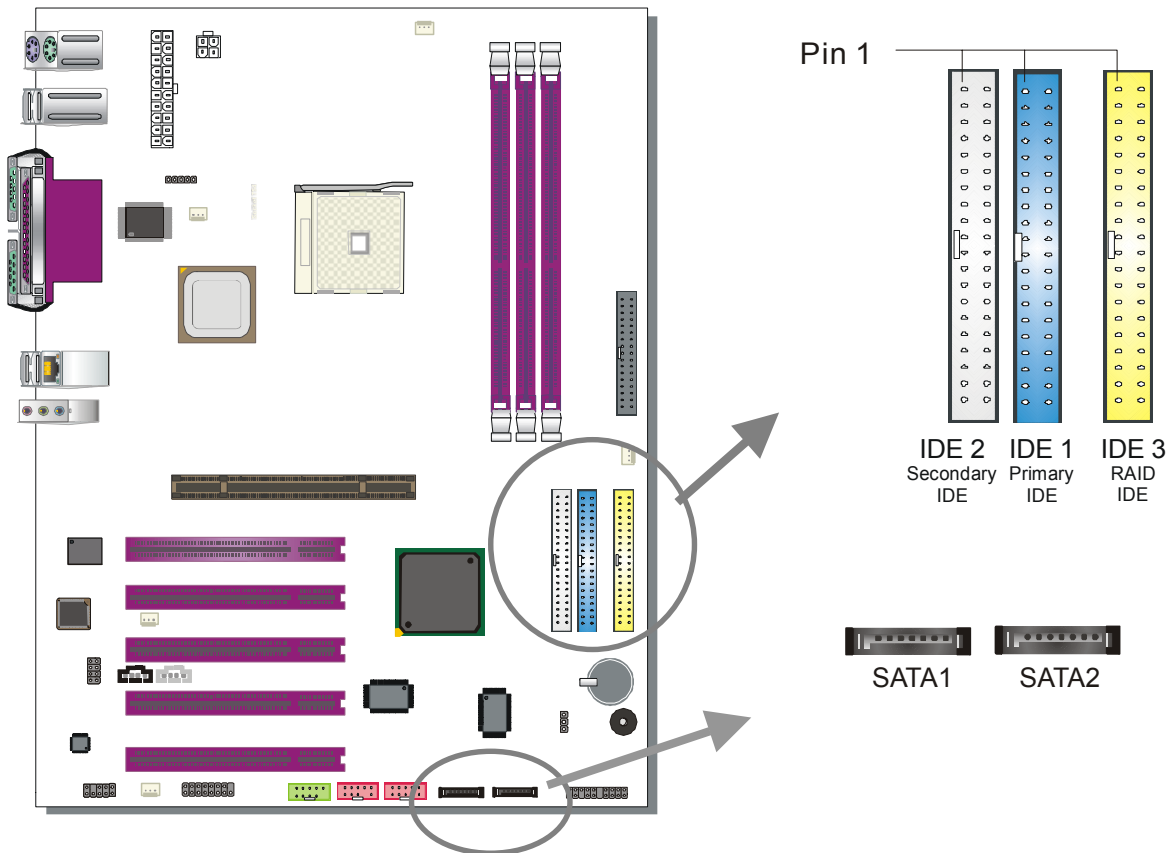
**PCI Slots***PCI IRQ Assignment*

The following table shows which onboard device uses which PCI IRQs.

	A	B	C	D	E	F	G
AGP	•						
ALi M5283 Serial ATA Controller						•	
VIA IEEE1394 Chip					•		
VIA VT6120 10/100/1G Ethernet							•
PCI Slot 1		•					
PCI Slot 2			•				
PCI Slot 3				•			
PCI Slot 4		•					
PCI Slot 5			•				

Step 4 Connect cables, case wire and power supply

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



This Motherboard offers Three IDE connectors (IDE1, IDE2, IDE3) 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. IDE3 can support up to two DMA 33/66/100/133 HDD. CD-ROM is not supported on IDE3. SATA1 and SATA2 can support up to 2 ATA 150 SATA hard disks.

IDE1,2 are controlled by M1563. IDE3, SATA1,2 are controlled by the ALi M5283 controller. IDE3, SATA1 and SATA2 are provided for RAID or ATA function. This Motherboard can support up to 8 HDDs.

Note:



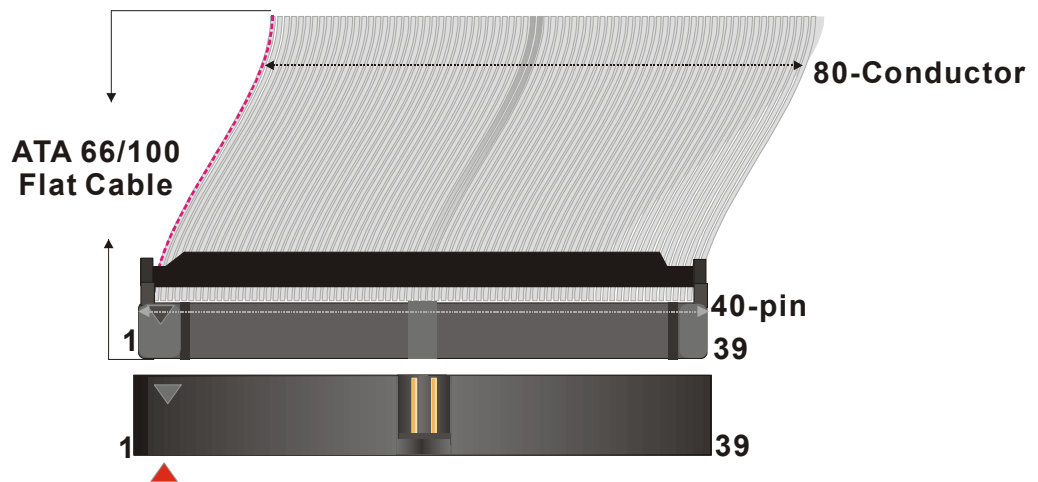
Creating a RAID 0, 1 array on IDE 3 is possible

Creating a RAID 0, 1 array on SATA1/2 is possible.

Creating a RAID 0, 1 array between IDE 3 and SATA1/SATA2 is not possible.

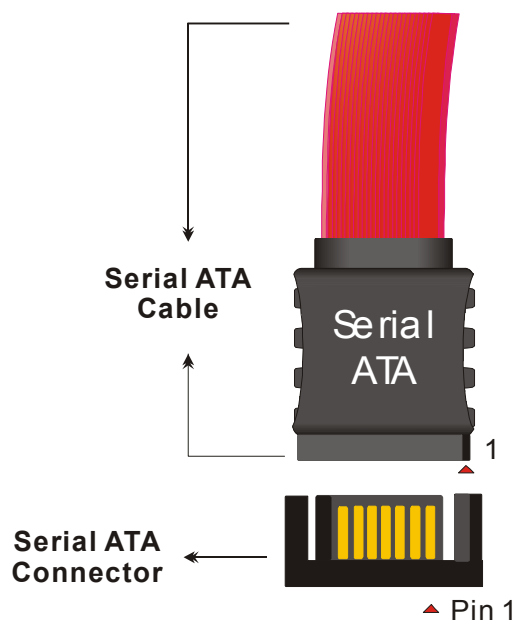
Parallel ATA connectors

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, IDE3) or secondary (IDE2) directionally keyed IDE connector on the Motherboard. The ATA66/100/133 cable is backward compatible with ATA33 HDDs.

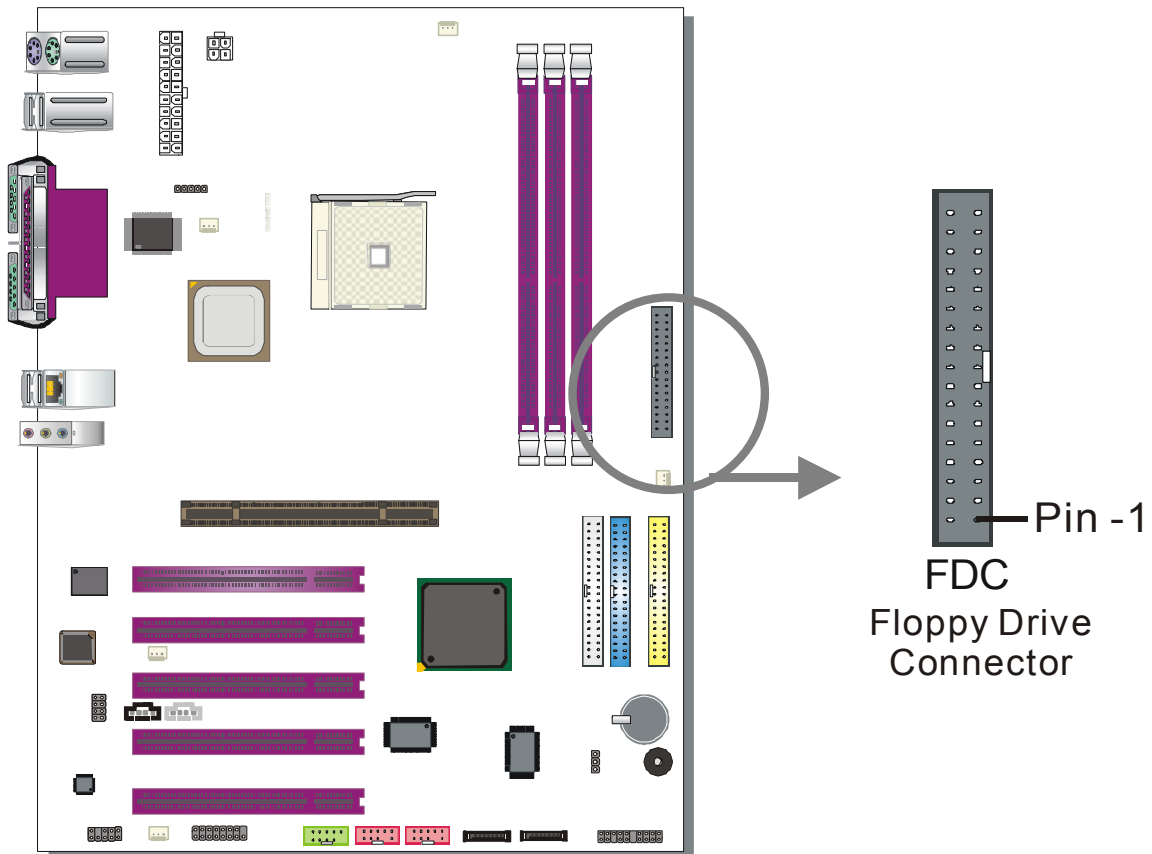


Serial ATA connectors

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.



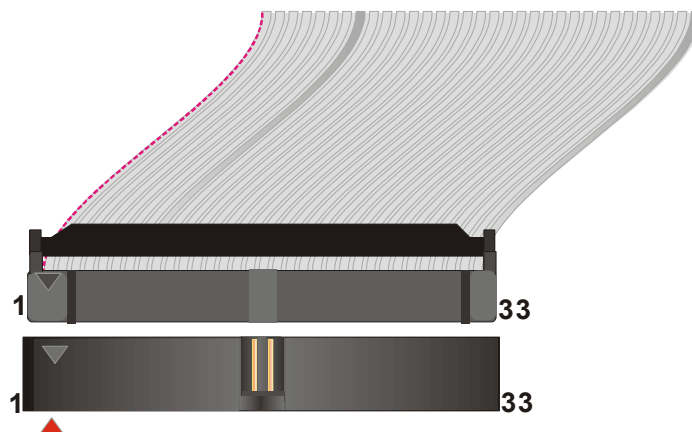
B. Floppy Drive Installation



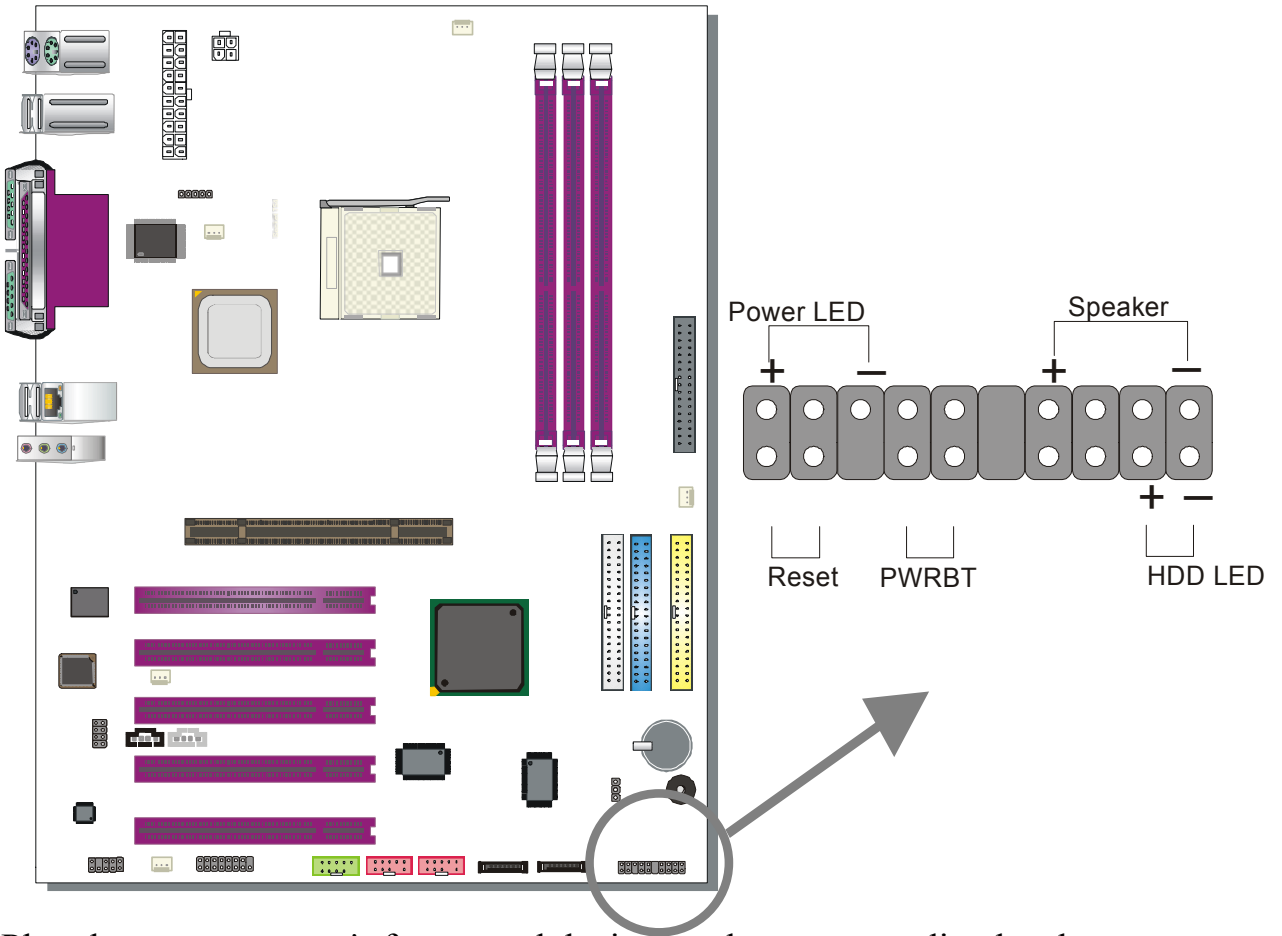
The system supports 5 possible floppy drive types: 720 KB, 1.2 MB, 1.44 MB, 2.88 MB. In addition, this Motherboard supports a 3-mode (720KB/1.2MB/1.44MB) floppy commonly used in Japan.

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.



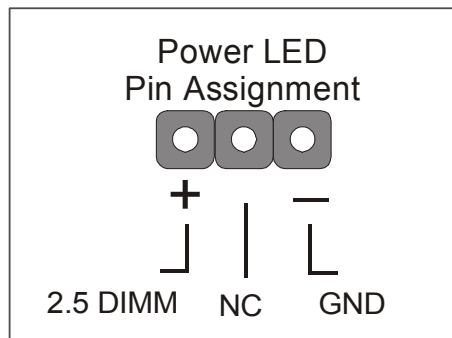
C. Front Panel Connections



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

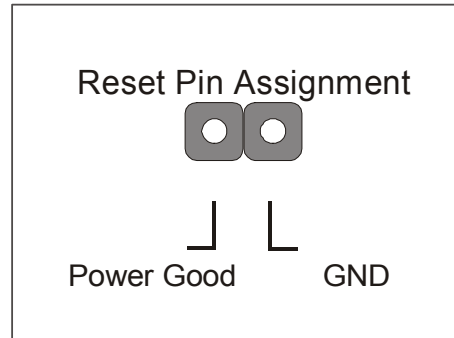
1. Power LED

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



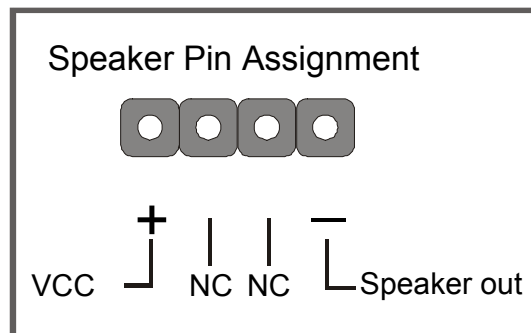
2. Reset

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.



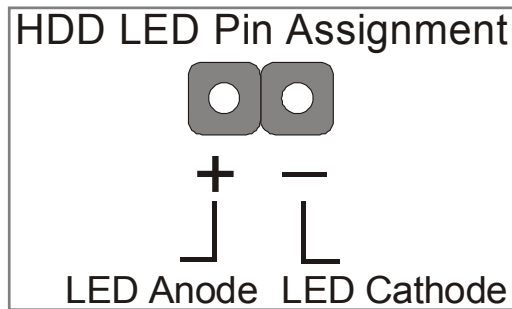
3. Speaker

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



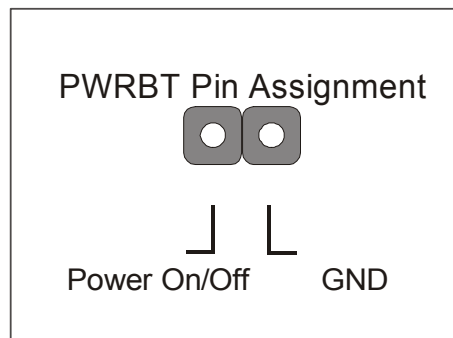
4. IDE LED

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.

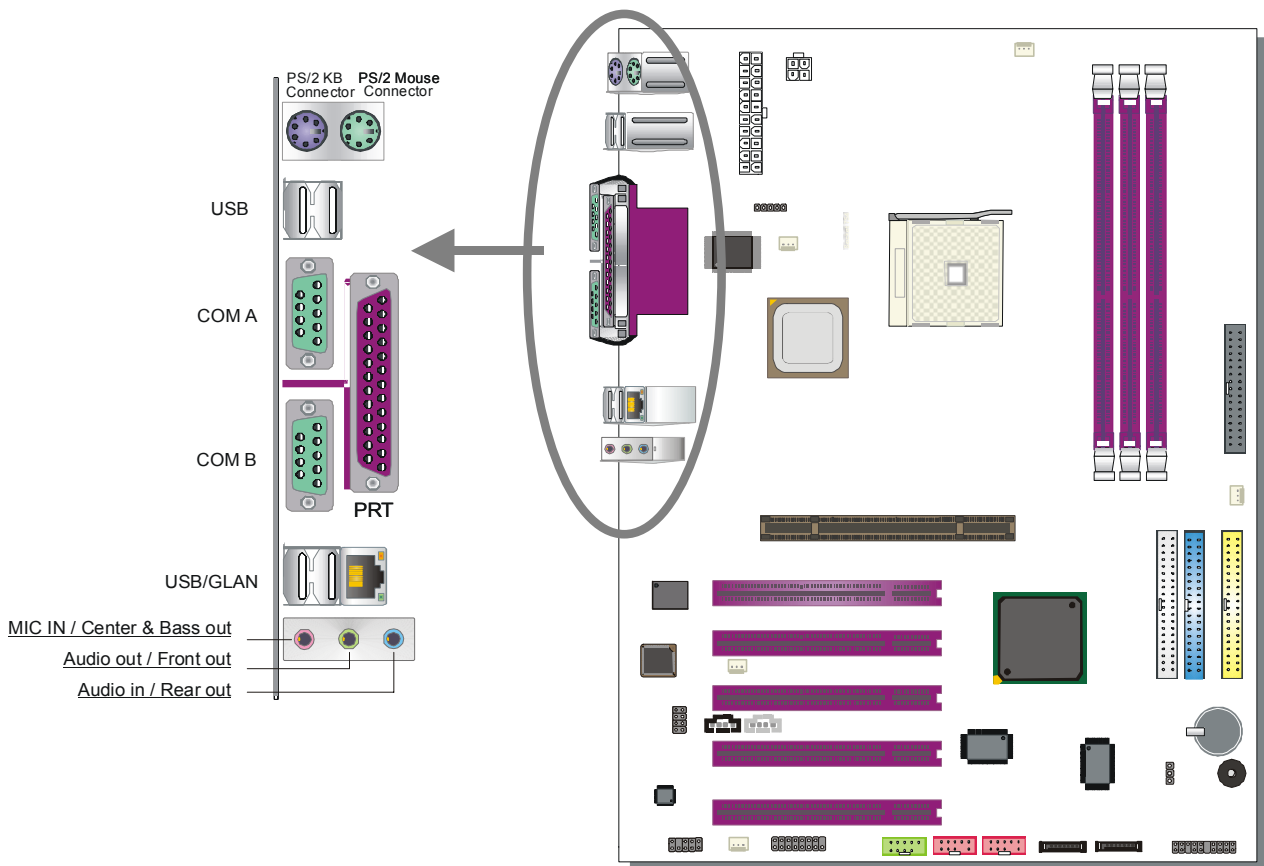


D. Back Panel Connections

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.

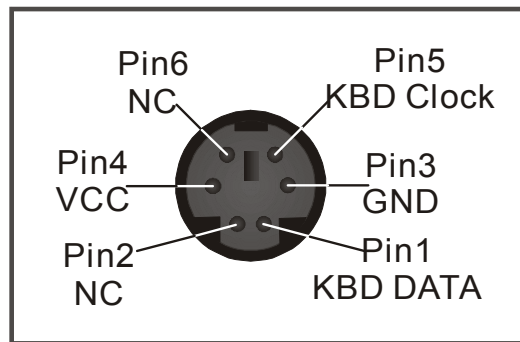
2. Parallel Port PRT

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.

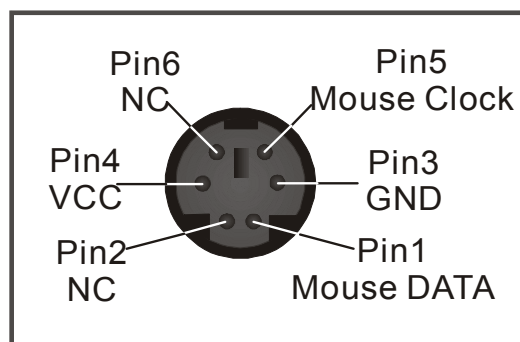
3. PS/2 Keyboard

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

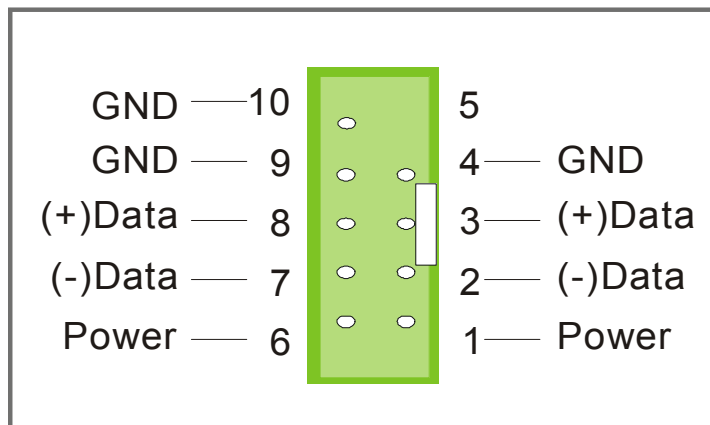
Similarly, plug the mouse jack directly into the 6-pin female PS/2 mouse connector.



5. Universal Serial Bus (USB1/USB2, USB3/USB4, 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, USB3 and USB4.

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:

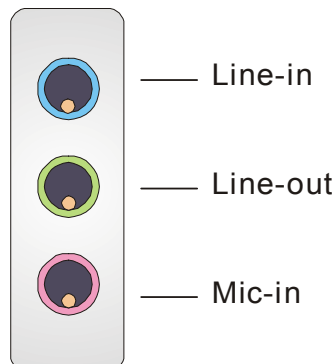


6. Onboard Game port/audio (Audio Speakers connections)

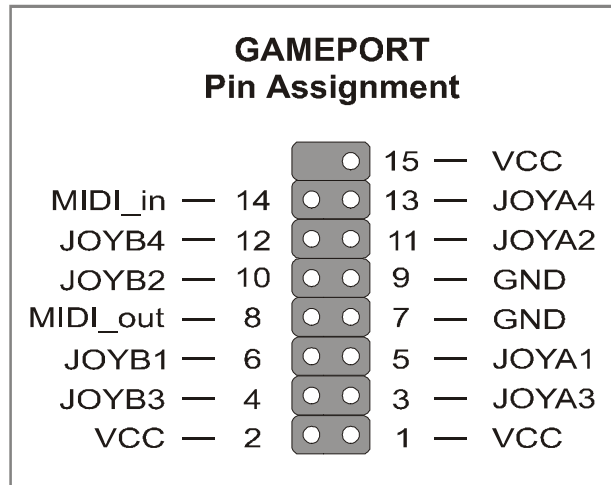
When using 2-channel speaker, connect the speaker cable to Line-out.

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

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.



The Gameport has the following lay-out :



E. Other Connections

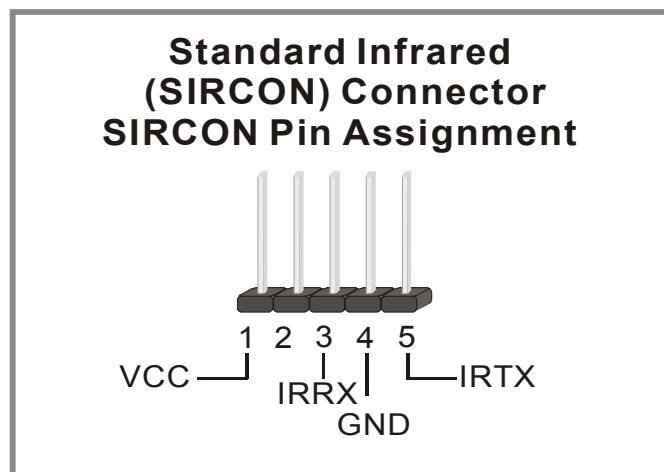
1. Standard Infrared (SIRCON)

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

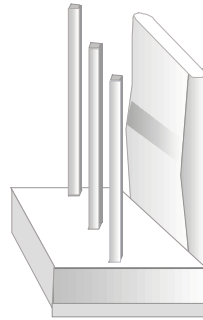


This will enable the infrared transfer function. This Motherboard meets both the ASKIR and HPSIR specifications.

Please install according to the following pin assignment:



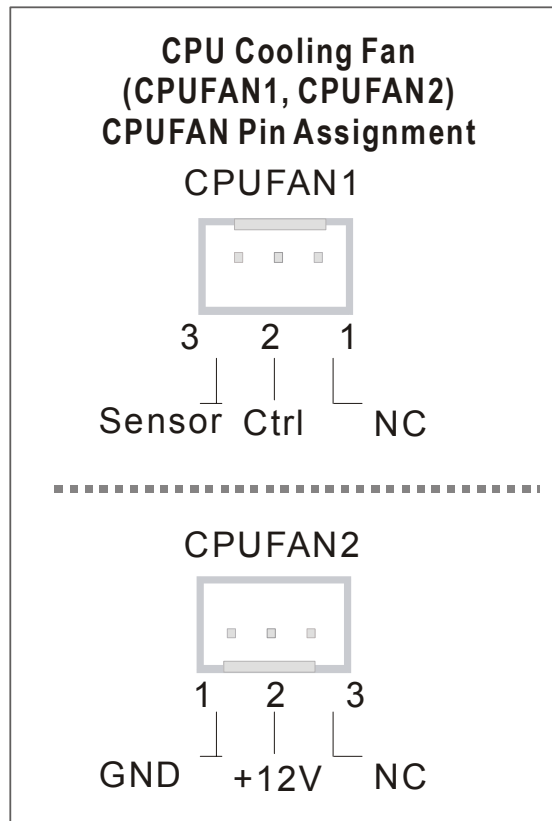
2. Cooling Fan Installation



(1) CPU Cooling Fan (CPUFAN1, CPUFAN2)

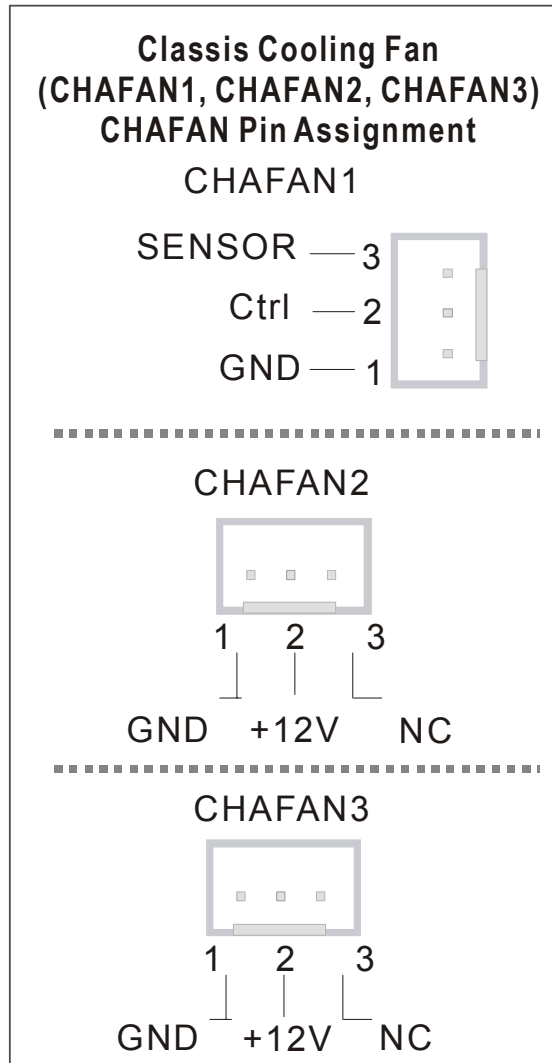
After you have seated the CPU properly on the processor, attach the 3-pin fan cable to the CPUFAN connector on the Motherboard.

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:

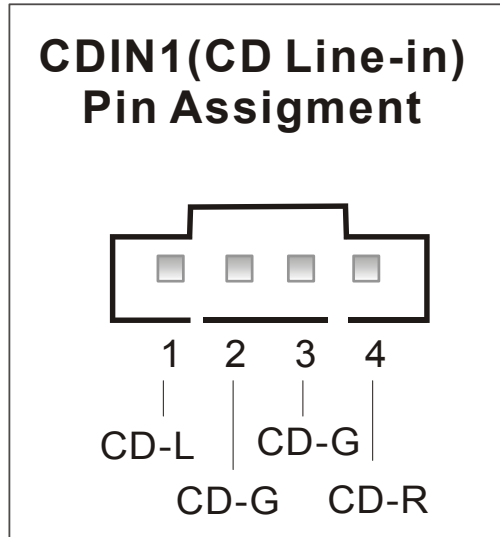


Note: CPU cooling fan must be installed to prevent the CPU from overheating and ensure system stability. Chassis cooling fan is optional, depending on whether there is cooling fan in your chassis.

4. CD Line-in (CDIN)

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

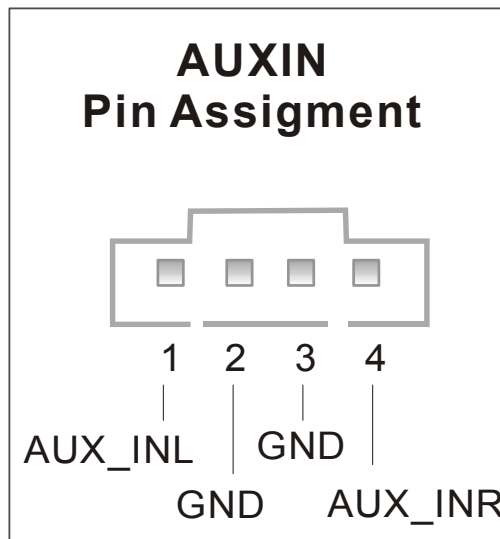
Please install according to the following pin assignment:



5. AUX-IN (AUXIN)

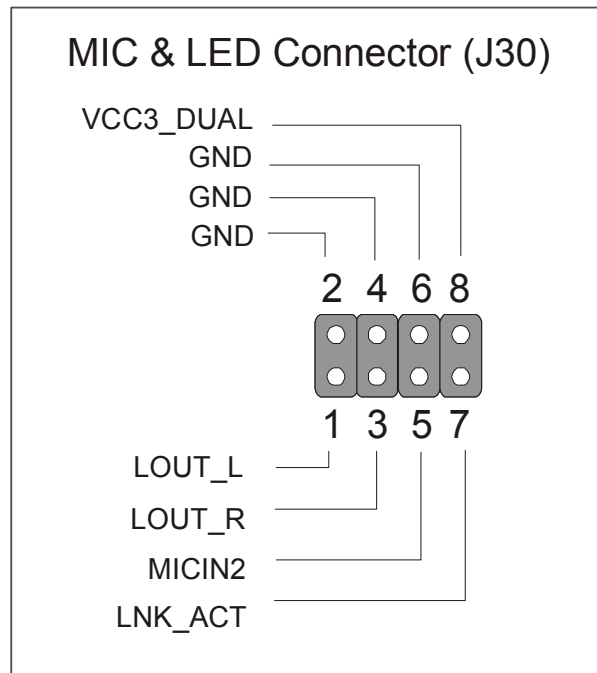
This Motherboard provides one AUX-IN connector. Please connect the 4-pin audio cable from your second CD-ROM or DVD ROM drive to AUX-IN.

Please install according to the following pin assignment:



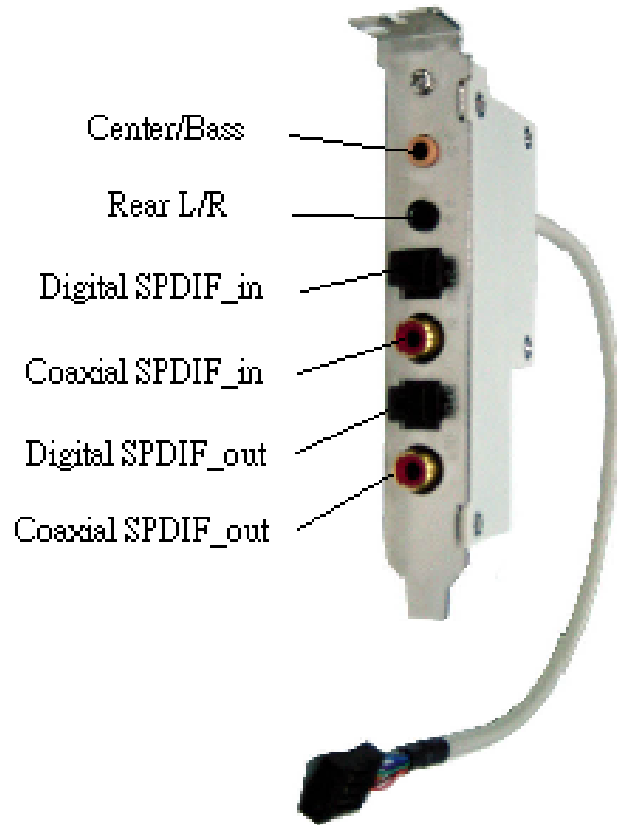
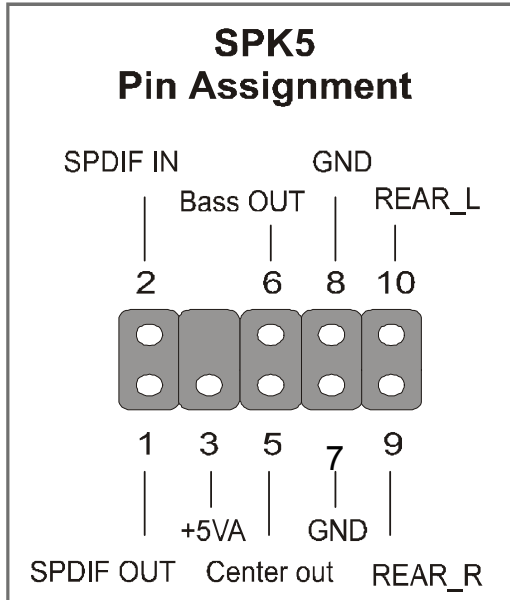
6. MIC & LED Connector (J30)

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:



7. SPK5

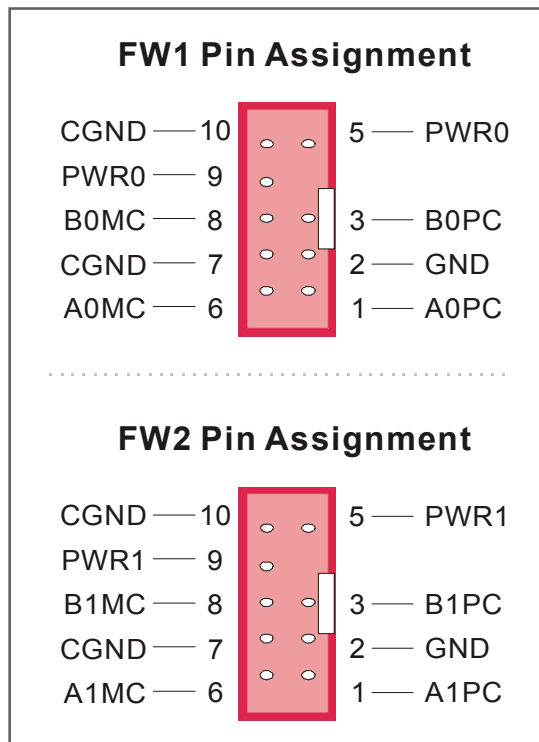
Connect the end of the SPDIF Audio connector card cable to the SPK5 connector on the motherboard. (Optional)



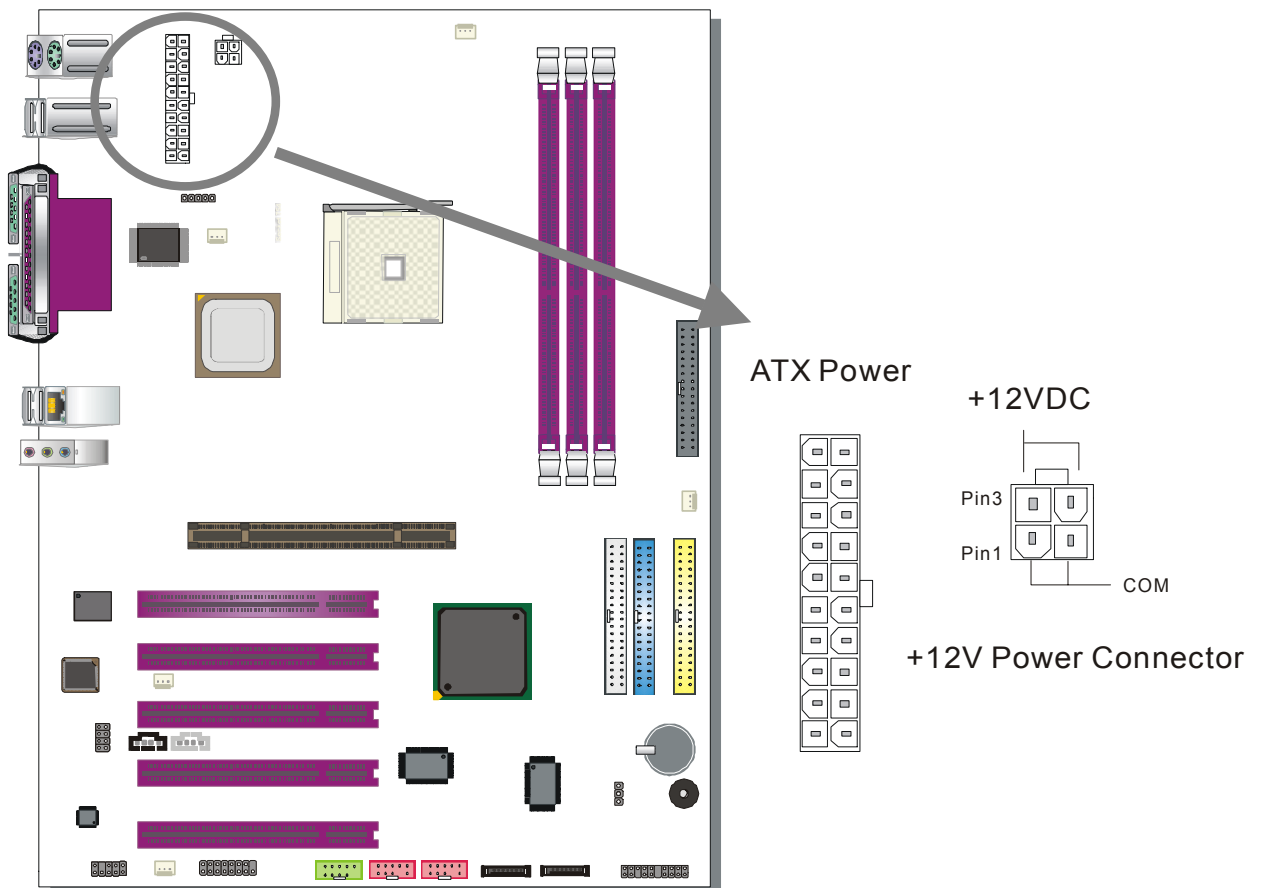
8. IEEE 1394 (Firewire) Connector (FW1/FW2)

This motherboard provides 2 IEEE 1394 ports for your Firewire devices. Standard drivers are supplied with the operating system for commonly used Firewire devices.

FW1 and FW2 are available. You can connect them to a 1394 bracket or Σ BOX (SOYO's Flash Card Reader/ Writer) to use them. The layout out of the FW1 and FW2 Firewire connector is as follows:



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).*



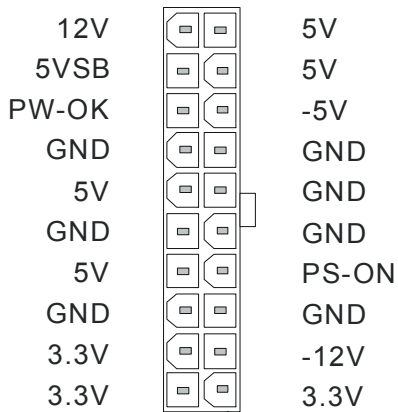
Note 3: The minimum recommended wattage is 400W for a fully loaded system or 350W for a minimally loaded system, the system might become unstable if power supply is not enough



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

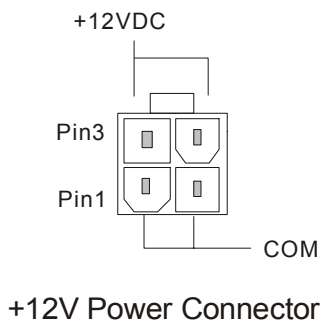
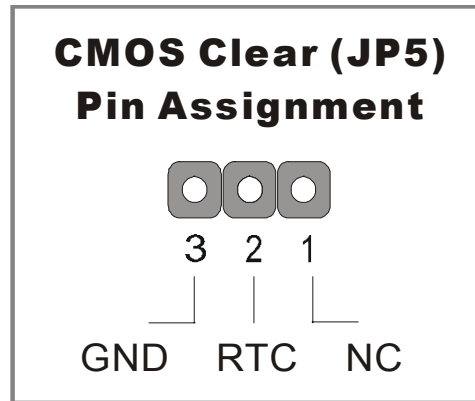


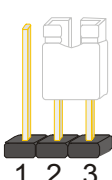
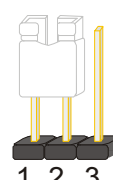
FIG. 2

G. CMOS Clear (JP5)



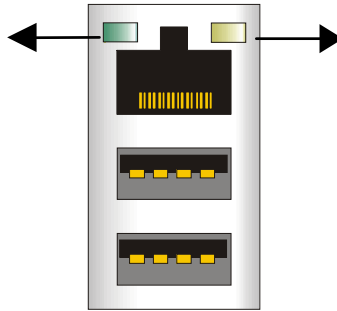
In some cases the CMOS memory may contain wrong data, follow the steps below to clear the CMOS memory.

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

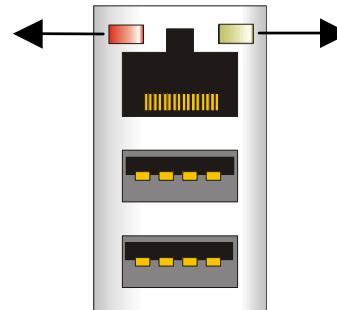
Onboard LAN LED Definition

When this LED is lit (**green sign**), 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.

When this LED is lit (**red sign**), this means the LAN is running at 1 Gbps, 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.

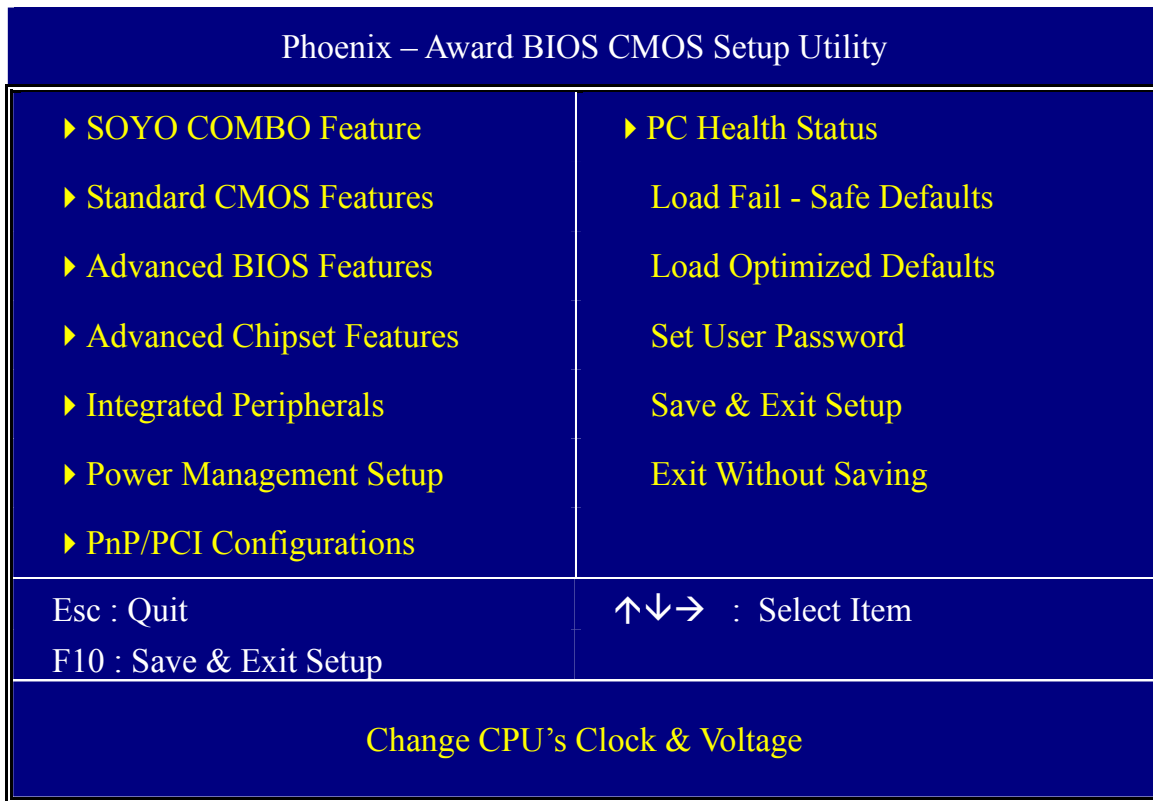
1. Turn the power on
2. To enter the BIOS Setup Utility, press the key while the system is performing the diagnostic checks,



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 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 **** 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*

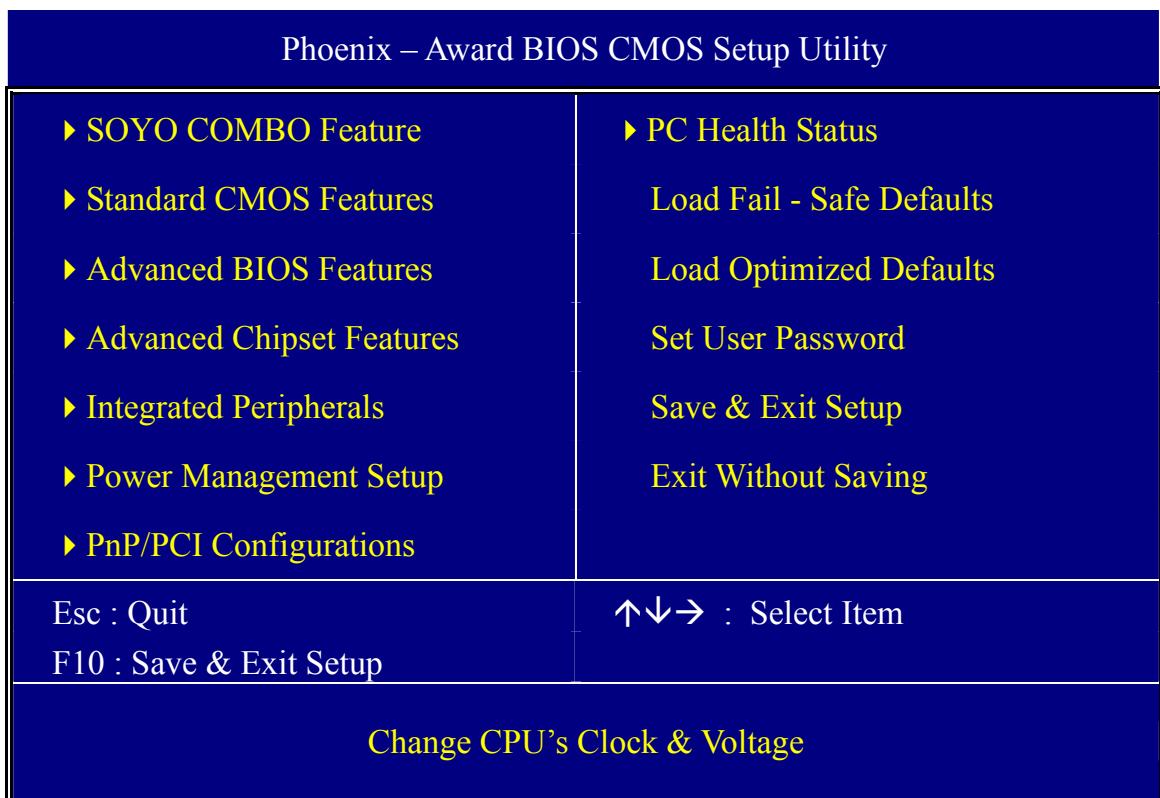
Chapter 3

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.

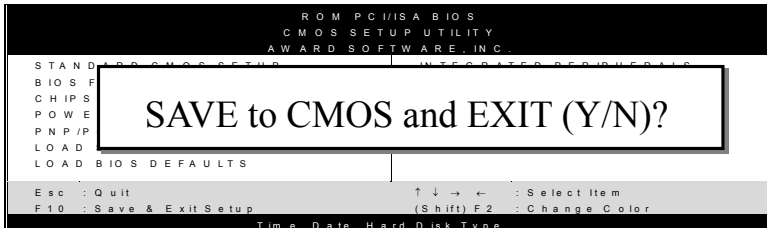


Hot Keys: Function keys give you access to a group of commands throughout the BIOS utility.

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

SAVE AND EXIT SETUP

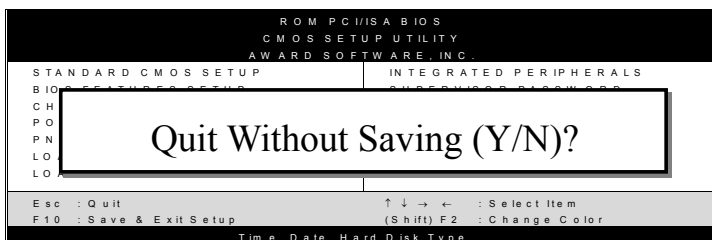
Select the [SAVE & EXIT SETUP] option from the Main Menu to save data to CMOS and exit the setup utility. This option saves all your changes and causes the system to reboot.



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 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 Clock	200MHz	Item Help
Auto Detect PCI Clk	Disabled	
Spread Spectrum	Disabled	Menu Level ▶
▶ Advanced Tune-Up Settings		
CPU Vcore Select	Default	
AGP (1.5V) Voltage Select	Default	
DDR (2.5V) Voltage Select	Default	
HT (1.2V) Voltage Select	Default	
Onboard 1394	Enabled	
Onboard LAN	Enabled	
Onboard RAID	Enabled	
AC97 Audio	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS120	
RAID/ATA & SCSI Boot Order	RAID/ATA, SCSI	
↑↓→ 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
CPU Clock	200~511	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	
Auto Detect PCI Clk	Disabled	When enabled, this item will auto detect if the PCI socket have devices and will send clock signal to PCI devices. When disabled, it will send the clock signal to all PCI socket.	Default
	Enabled		
Spread Spectrum	Disabled	This item allows you to Disabled/Enabled the spread spectrum modulate.	Default
	Enabled		

Voltage Select

	Setting	Description	Note
CPU Vcore Select	Default 0.775~1.7V	This function allows you to adjust the CPU voltage.	Default
AGP Voltage Select	Default 1.6V 1.7V 1.8V	This function allows you to adjust the AGP voltage.	Default
DDR Voltage Select	Default 2.7V 2.8V 2.9V	This function allows you to adjust the DDR voltage.	Default
HT Voltage Select	Default 1.3V 1.4V 1.5V	This function allow you to adjust the Hyper Transport Voltage.	Default



Onboard Device

	Setting	Description	Note
Onboard 1394	Enabled	This setting allows you to enabled or disabled onboard IEEE1394.	Default
	Disabled		
Onboard LAN	Enabled	This setting allows you to enabled or disabled onboard LAN.	Default
	Disabled		
Onboard RAID	Enabled	This setting allows you to enabled or disabled onboard IDE RAID.	Default
	Disabled		
AC97 Audio	Enabled	This setting allows you to enabled or disabled on-chip Audio.	Default
	Disabled		

Quick Power On Self Test

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



System Boot Control Settings

	Setting	Description	Note
First /Second/Third Boot Device	Floppy	Select Your Boot Device Priority	
	LS120		
	HDD-0		
	SCSI		
	CDROM		
	HDD-1		
	HDD-2		
	HDD-3		
	ZIP100		
	USB-FDD		
	USB-ZIP		
	USB-CDROM		
	USB-HDD		
	LAN		
	Disabled		
RAID/ATA & SCSI Boot Order	RAID/ATA, SCSI	Select Your RAID/ATA & SCSI Boot Device Priority.	Default
	SCSI, RAID/ATA		

3-1.1 Advanced Tune-Up Settings



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

The [Advanced Tune-Up Settings] option changes the values of the chipset registers. These registers control the system options in the computer.

Phoenix – Award BIOS CMOS Setup Utility Advanced Tune-Up Settings		
DDR Timing Setting by	Auto	Item Help
x Max Memclock (Mhz)	200	Menu Level ▶
x CAS# latency	CL = 2.5	
x RAS# to CAS# delay (tRCD)	3 Bus Clocks	
x Min RAS# active time (tRAS)	6 Bus Clocks	
x Row precharge Time	3 Bus Clocks	
↑↓→:Move	Enter:Select	+/-/PU/PD:Value
F5:Previous Values	F6:Fail-Safe Defaults	F10:Save
		ESC:Exit
		F1:General Help
		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.



Advanced Tune-Up Settings

	Setting	Description	Note
DDR Timing Setting by	Auto	This item allows you to control the DRAM speed by SPD or Item.	Default
	Manual		
Max Memclock (Mhz)	100	This item allows you to control the DRAM speed.	
	133		
	166		
	200		Default
CAS Latency Time	1.5	This item allows you to control the DRAM CAS Latency time.	
	2		
	2.5		Default
	3		
RAS# to CAS# Delay (tRCD)	2 Bus Clocks	This item allows you to control DRAM RAS to CAS delay time.	
	3 Bus Clocks		Default
	4 Bus Clocks		
	5 Bus Clocks		
	6 Bus Clocks		
Min RAS# active Time (tRAS)	5 Bus Clocks	This item allow you to control DRAM RAS percharge time.	
	6 Bus Clocks		Default
	7 Bus Clocks		
	8 Bus Clocks		
	9 Bus Clocks		
	10 Bus Clocks		
	11 Bus Clocks		
	12 Bus Clocks		
	13 Bus Clocks		
	14 Bus Clocks		
Row precharge Time (tRP)	2	This item allow you to control DRAM Row precharge timing.	
	3		Default
	4		
	5		
	6		

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 Primary Master	None	Menu Level ▶ Change the day, month, year and century.
▶ IDE Primary Slave	None	
▶ IDE Secondary Master	None	
▶ IDE Secondary Slave	None	
Drive A Floppy 3 Mode Support	1.44M, 3.5 in. Disabled	
Video Halt On	EGA/VGA All Errors	
Base Memory	640K	
Extended Memory	326656K	
Total Memory	327680K	

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

This screen allows you to modify the basic CMOS settings.

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

Date & Time

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

Hard Disks Type & Mode

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

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



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

Floppy Drives

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

**Others Optional**

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

3-3 ADVANCED BIOS FEATURES

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

Phoenix – Award BIOS CMOS Setup Utility		
Advanced BIOS Features		
		Item Help
Virus Warning	Disabled	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.
CPU Internal Cache	Enabled	
External Cache	Enabled	
Boot Up Floppy Seek	Enabled	
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	
Report No FDD For WIN 95	No	
Video BIOS Shadow	Enabled	
Full Screen LOGO Show	Enabled	
EPA LOGO SELECT	LOGO-0	
Small Logo (EPA) Show	Enabled	

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

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



Virus Warning

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

Cache Memory Options

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

Boot Up Floppy Seek

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

Boot Up Num Lock Status

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

Gate A20 Options

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

Typematic Settings

	Setting	Description	Note
Typematic Rate Setting	Disabled	Keystrokes repeat at a rate determined by the keyboard.	Default
	Enabled	When enabled , the typematic rate and typematic delay can be selected.	
The following [Typematic Rate] and [Typematic Delay] fields are active only if [Typematic Rate Setting] is set to [Enabled]			
Typematic Rate	6 (Char/sec)	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)		
Typematic Delay	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
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.	Default
	Enabled		
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.	Default
	Disabled		
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



Other Control Options(Continue)

	Setting	Description	Note
Video BIOS Shadow	Enabled		Default
	Disabled	This BIOS is shadowed in a 16K segment if it is enabled and if it has BIOS present. These 16 segments can be shadowed from ROM to RAM. BIOS shadow copies BIOS code from slower ROM to faster RAM. BIOS can then execute from RAM.	

LOGO Show

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

3-4 ADVANCED CHIPSET FEATURES



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

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

Phoenix – Award BIOS CMOS Setup Utility																	
Advanced Chipset Features																	
▶ M1563 Configuration	Press Enter	Item Help															
▶ AGP Configuration	Press Enter	Menu Level ▶															
▶ HyperTransport Config	Press Enter																
System BIOS Cacheable	Disabled																
<table style="width: 100%; border: none;"> <tr> <td style="border: none;">↑↓→ Move</td> <td style="border: none;">Enter : Select</td> <td style="border: none;">+ / - / PU / PD : Value</td> <td style="border: none;">F10 : Save</td> <td style="border: none;">ESC : Exit</td> <td style="border: none;">F1 : General Help</td> </tr> <tr> <td style="border: none;">F5 : Previous Values</td> <td colspan="2" style="border: none;">F6 : Fail - Safe Defaults</td> <td colspan="3" style="border: none;">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														

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

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

CHIPSET FEATURES SETUP

	Setting	Description	Note
System BIOS Cacheable	Disabled		Default
	Enabled	The ROM area F0000H-FFFFFFH is cacheable.	

3-4.1 M1563 Configuration



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

The [M1563 Configuration] option changes the values of the chipset registers. These registers control the system options in the computer.

Phoenix – Award BIOS CMOS Setup Utility M1563 Configuration		
M1563 Gated Clock	Disabled	Item Help
EHCI PHY Power Saving	Enabled	Menu Level ▶
EHCI Read Pre-Fetch	Enabled	
IDE Read Pre-Fetch	Enabled	
OHCI Read Pre-Fetch	Enabled	
AC97 Read Pre-Fetch	Enabled	
PCI Slots Read Pre-Fetch	Enabled	
PCI/14M/USB CLK PowerDown	Disabled	
↑↓→:Move	Enter:Select	+/-/PU/PD:Value
F5:Previous Values	F6:Fail-Safe Defaults	F7: Optimized Defaults
F10:Save	ESC:Exit	F1:General Help

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

M1563 Configuration

	Setting	Description	Note
M1563 Gated Clock	Disabled	When this option is enabled the internal chipset logic circuitry will reduce it's power consumption.	Default
	Enabled		
EHCI Read Pre-Fetch	Disabled	This option prefetches reads from the EHCI (USB 2.0) controller into cache to speed up accesses to it if enabled. Prefetching means that if the data is not available in cache, it will read the data and all surrounding data in one burst read into the cache.	Default
	Enabled		
IDE Read Pre-Fetch	Disabled	Enabling this option allows reads from the IDE controller to be prefetched to cache to speed up accesses to it.	Default
	Enabled		
OHCI Read Pre-Fetch	Disabled	Enabling this option allows reads from the OHCI (USB 1.1) controller to be prefetched to cache to speed up accesses to it.	Default
	Enabled		
AC97 Read Pre-Fetch	Disabled	Enabling this option allows reads from the AC97 (Onboard audio) controller to be prefetched to cache to speed up accesses to it.	Default
	Enabled		
PCI Slots Read Pre-Fetch	Disabled	Enabling this option allows reads from the PCI slots to be prefetched to cache to speed up accesses to them.	Default
	Enabled		
PCI/14M/USB CLK PowerDown	Disabled	If this option is enabled, the system will remove the clock signal from the PCI, the 14 MHz Clock and the USB controller	Default
	Enabled		

3-4.2 AGP Configuration



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

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

Phoenix – Award BIOS CMOS Setup Utility					
AGP Configuration					
Data Transfer Mode	1x/2x/4x/8x	Item Help			
Fast Write	Enabled	Menu Level ▶			
AGP Aperture Size (MB)	64				
↑↓→: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.

AGP Configuration

	Setting	Description	Note
Data Transfer Mode	1x/2x/4x	The speed at which your AGP bus is running.	Default
	1x/2x/4x/8x		
Fast Write	Enabled	Enabled/Disabled AGP fast write capability.	Default
	Disabled		
AGP Aperture Size (MB)	256M	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.	
	128M		
	64M		Default
	32M		

3-4.3 HyperTransport Config



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

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

Phoenix – Award BIOS CMOS Setup Utility HyperTransport Config		
Hammer to M1687 Freq.	800 Mhz	Item Help
Hammer to M1687 Width	16 bits	Menu Level ▶
M1687 to M1563 HTT Freq.	400MHz – 400MHz	
M1687 to M1563 HTT Width	8 Bits	
M1687 / M1563 HTT TriState	Enabled	
↑↓→:Move	Enter:Select	+/-/PU/PD:Value
F5:Previous Values	F6:Fail-Safe Defaults	F10:Save
		ESC:Exit
		F1:General Help
		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.



HyperTransport Config

	Setting	Description	Note
Hammer to M1687 Freq.	800 MHz	This option allows you to select at what speed the bus between the K8 CPU and the M1687 North Bridge is running.	Default
	600 MHz		
	400 MHz		
	200 MHz		
Hammer to M1687 Width	8bits	This option allows you to select the bus width (how many bits at a time) of the bus between the K8 CPU and the M1687 North Bridge. Note that the 16bits/8bits means a 16 bit bus from the M1687 North Bridge to the K8 CPU and an 8 bit bus from the K8 CPU to the M1687 North Bridge.	
	16bits		Default
	16bits/8bits		
M1687 to M1563 HTT Freq.	200MHz~200MHz	This option allows you to select at what speed the bus (Hyper Transport Technology) between the M1687 North Bridge and the M1563 South Bridge is running.	
	400MHz~400MHz		Default
M1687 to M1563 HTT Width	8bits	This option allows you to select the bus width (how many bits at a time) of the bus between the M1687 North Bridge and the M1563 South bridge.	Default
	4bits		
	2bits		
M1687 / M1563 HTT TriState	Disabled	If this option is enabled, the bus between the M1687 and the M1563 is tristated when not in use. Otherwise it will continuously be driven.	
	Enabled		Default

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		
On-Chip Primary IDE	Enabled	Item Help
Master PIO	Auto	
Slave PIO	Auto	Menu Level ▶
Master Ultra DMA	Auto	
Slave Ultra DMA	Auto	
On-Chip Secondary IDE	Enabled	
Master PIO	Auto	
Slave PIO	Auto	
Master Ultra DMA	Auto	
Slave Ultra DMA	Auto	
On-Chip USB1.1 Controller	Enabled	
USB Keyboard Support	Disabled	
USB Mouse Support	Disabled	
On-Chip USB2.0 Controller	Enabled	
Init Display First	AGP	
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

IDE Controls	Setting	Description	Note
On-Chip 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 enable Ultra DMA Mode support.	Default



Keyboard Controls

Keyboard Controls	Setting	Description	Note
On-Chip USB1.1 Controller	Disabled		
	Enabled	Select <i>Enabled</i> if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.	Default
USB Keyboard Support	Disabled	Turn off the on-board IDE.	Default
	Enabled	Use a USB keyboard.	
USB Mouse Support	Disabled	Turn off the on-board IDE.	Default
	Enabled	Use a USB Mouse.	
On-Chip USB2.0 Controller	Disabled		
	Enabled	Select <i>Enabled</i> if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.	Default
Init Display First	PCI Slot	Choose which card – AGP	
	AGP	Display card or PCI VGA card – to initialize first.	Default



IDE HDD Block Mode

	Setting	Description	Note
IDE HDD Block Mode	Disabled		
	Enabled	Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.	Default

FDC Controls

FDC Controls	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

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 address except for Disabled or Auto.	Default (port 2)
	3E8/IRQ4		
	2E8/IRQ3		
	Auto		
UART Mode Select	Normal	The second serial port offers these InfraRed interface modes.	Default
	IrDA		
	ASKIR		
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

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
Game Port Address	Disabled	Set the I/O address for the onboard 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 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
Thermal Trip	Enabled		
PM Control by APM	No		
MODEM Use IRQ	3		
Video Off In Suspend	Yes		
Video Off Method	DPMS		
PM Timers			
HDD Power Down	Disabled		
Suspend Mode	Disabled		
** PowerOn \ WakeUP Function **			
Soft-Off by PWR-BTTN	Instant-Off		
WakeUP\PowerON by PCI Card	Disabled		
WakeUP \ PowerOn by Ring	Disabled		
Resume by Alarm	Disabled		
x Date (of Month) Alarm	0	Menu Level ▶	
x Time (hh:mm:ss) Alarm	0 : 0 : 0		



** Suspend Break Events **	
IRQ [1] (Keyboard)	Enabled
IRQ [3]	Disabled
IRQ [4]	Disabled
IRQ [5]	Disabled
IRQ [6] (Floppy Disk)	Enabled
IRQ [7]	Disabled
IRQ [8] (RTC)	Disabled
IRQ [9]	Disabled
IRQ [10]	Disabled
IRQ [11]	Disabled
IRQ [12] (PS2 Mouse)	Enabled
IRQ [14] (Primary IDE)	Enabled
IRQ [15] (Secondary IDE)	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				
Thermal Trip	Disabled	If this option is enabled and CPU temperature over 120°C, then system will into soft off.	Default		
	Enabled				
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
MODEM Use IRQ	3	Selects which IRQ the modem uses to wake up from.	Default		
	3-11, NA				
Video Off In Suspend	Yes	If the CPU goes into suspend mode, should the monitor also be turned off.	Default		
	No				
Video Off Method	V/H	Selects the method by which the monitor is blanked.			
	Sync+Blank				
	Blank screen				
	DPMS		Default		



	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.
Suspend Mode	Disabled		Default
	1Min-1Hour	When the set time has elapsed, BIOS sends a command to the system to enter suspend Mode.	

PowerON\WakeUp Function

	Setting	Description	Note
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.	
WakeUp\ Power On by PCI card	Disabled	If enabled any PCI card using the PINE signal will wake the system up.	Default
	Enabled		
WakeUp\ Power On by Ring	Disabled		Default
	Enabled	The system will self-power on when the modem is ringing.	
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.	

IRQs Activity Monitoring

	Setting	Description
IRQs Activity Monitoring (Press Enter)	Enabled	IRQ[1](Keyboard), IRQ[6](Floppy Disk), IRQ[12](PS2 Mouse), IRQ[14](Primary IDE)
	Disabled	IRQ[3], IRQ[4], IRQ[5], IRQ[7], IRQ[8](RTC), IRQ[9], IRQ[10], IRQ[11], IRQ[15](Secondary IDE)

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



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

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



PNP/PCI Configuration Controls

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

PNP/PCI Configuration Setup (Continue)

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

MULTI I/O ADDRESSES

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

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



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



3-8 PC HEALTH STATUS

This option shows the Motherboard's PC Health Status.

Phoenix – Award BIOS CMOS Setup Utility														
PC Health Status														
ABR (Anti Burn Regulator)	Default (85°C)	Item Help Menu Level ▶												
CPU fan in suspend mode	Turn-off													
CPU Vcore	1.40V													
+ 3.3V	3.25V													
+ 5V	5.05V													
+ 12V	12.00V													
DDR Voltage	2.60 V													
AGP Voltage	1.50 V													
CPU Temp. External	37°C / 98°F													
CHA Temperature	38°C / 100°F													
CPU Temp. On Die	63°C / 147°F													
CHAFAN1 Speed	0 RPM													
CPUFAN1 Speed	4687 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 colspan="2">F5:Previous Values</td> <td colspan="2">F6:Fail-Safe Defaults</td> <td colspan="2">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										

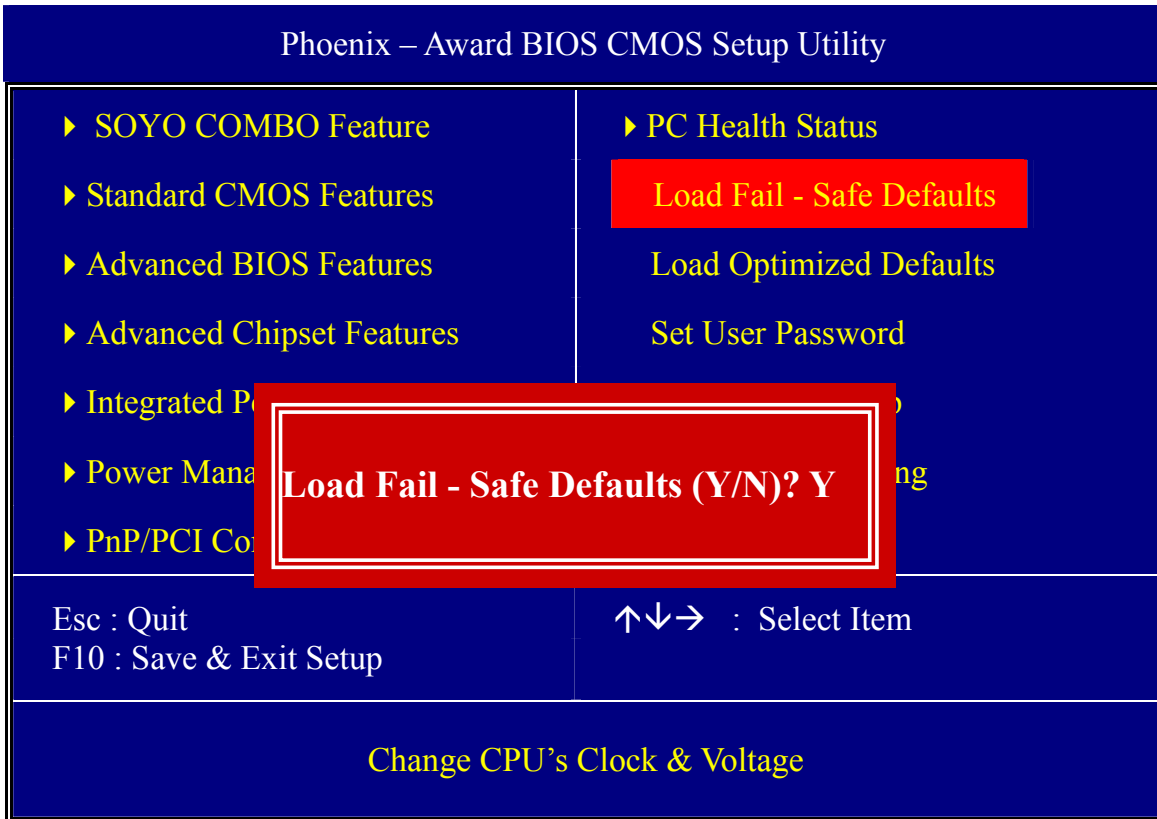


CPU Device Monitoring

	Setting	Description	Note
ABR (Anti Burn Regulator)	120°C/248°F	Set the CPU temperature for the system to shutdown.	
	115°C/239°F		
	110°C/230°F		
	105°C/221°F		
	100°C/212°F		
	95°C/203°F		
	90°C/194°F		
	85°C/185°F		
	80°C/176°F		
	75°C/167°F		
	70°C/158°F		
	65°C/149°F		
	60°C/140°F		
	55°C/131°F		
	50°C/122°F		
	Default (85°C)		
Disabled			
CPU fan is suspend mode	Turn-off	This item allow you to control CPU fan in suspend mode. If you select Turn-off option, then when system into suspend mode, the CPU fan will be turn-off.	Default
	Stay-on		
Vcore, 3.3V, +5V, +12V, DDR Voltage, AGP Voltage	V	Show the current voltage status.	
CPU Temp. External	°C/°F	Show the current status of CPU temperature.	
CHA Temperature	°C/°F	Show the current status of the System temperature.	
CPU Temp. On Die	°C/°F	Show the current status of CPU Die temperature.	
Current CPUFAN1/ CHAFAN1 Speed	RPM	Show the current status of CPU/CHA Fan.	

3-9 LOAD FAIL-SAFE DEFAULTS

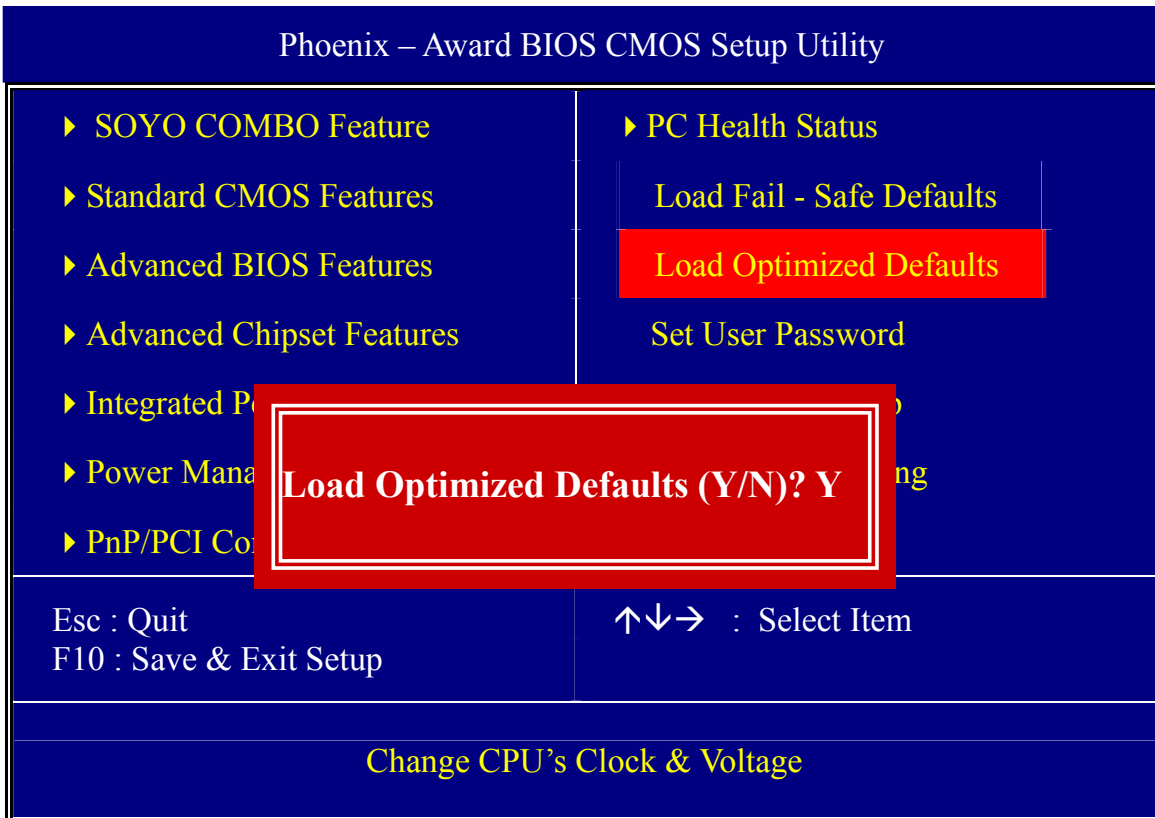
Select the [Load Fail-Safe Defaults] option from the Main Menu to load a pre-defined safe bios settings. This option is recommended if you have instability issues.



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:

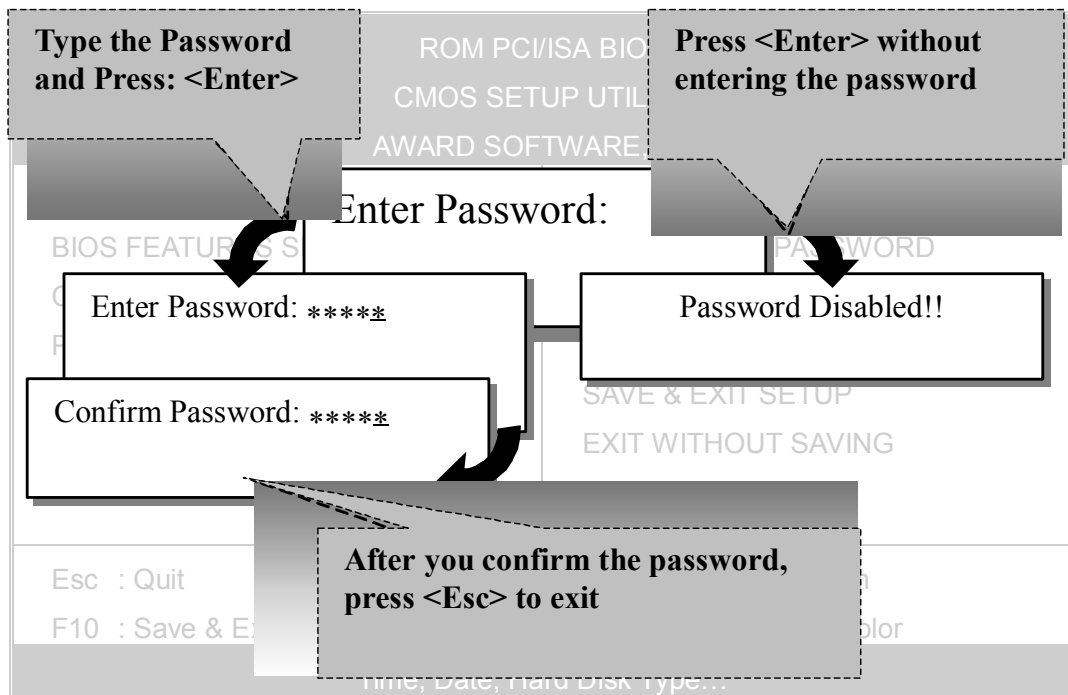
Password Disabled!!

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



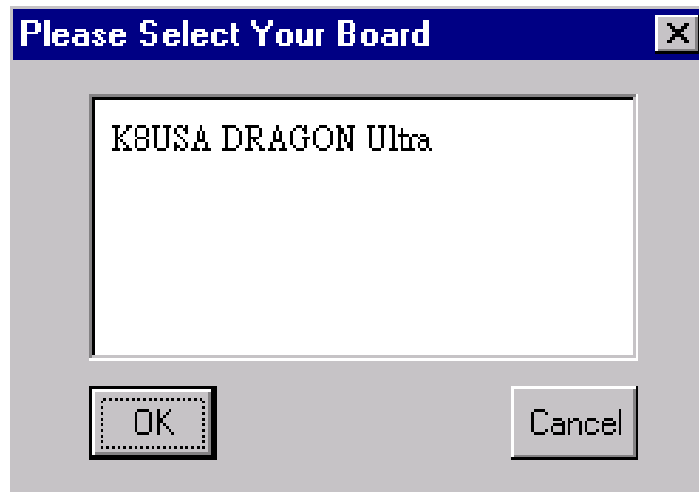
The SOYO-CD will Auto Run only in Windows Based Operating Systems.

Your SY-K8USA DRAGON ULTRA Motherboard comes with a CD-ROM labeled “SOYO CD”. The SOYO CD contains

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

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

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



(SOYO CD Start Up Program Menu)

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

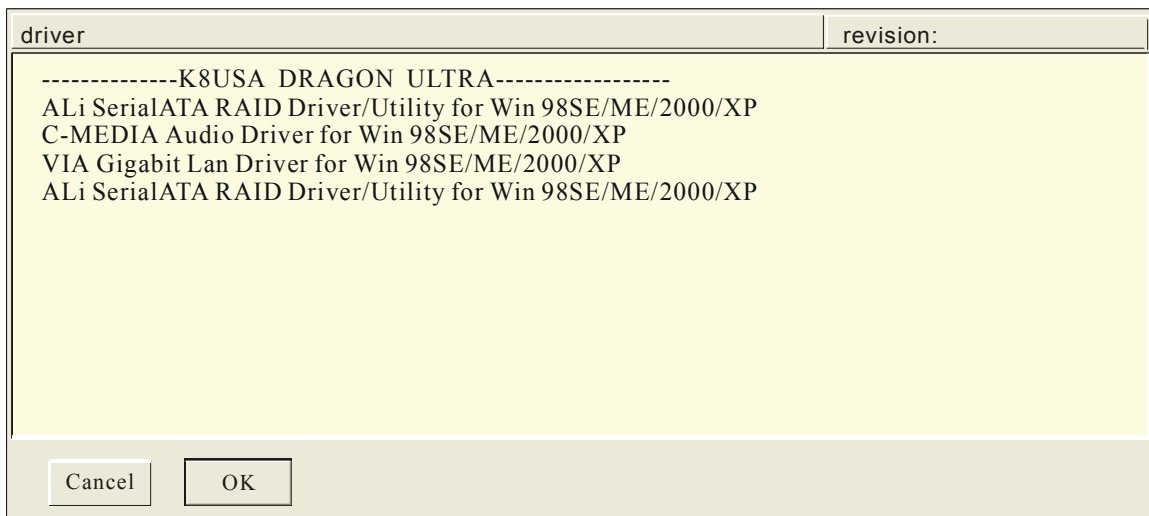


The user's manual files included on the SOYO CD are in PDF (Postscript Document Format). In order to read a PDF file, the appropriate Acrobat Reader software must be installed on your system.

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

Step 2. Install Drivers and Utilities

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



(Driver Installation Menu)

A short description of all available drivers follows:

➤ **ALi Integrated Driver for Win 98SE/ME/2000/XP**

This program will install ALi Integrated Driver on your computer.

➤ **C-MEDIA Audio Driver for Win 98SE/ME/2000/XP**

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

➤ **VIA Gigabit Lan Driver for Win 98SE/ME/2000/XP**

This program will install VIA Gigabit Lan Driver on your computer.

➤ **ALi SerialATA RAID Driver/Utility for Win 98SE/ME/2000/XP**

This program will install ALi Serial ATA driver on your computer.



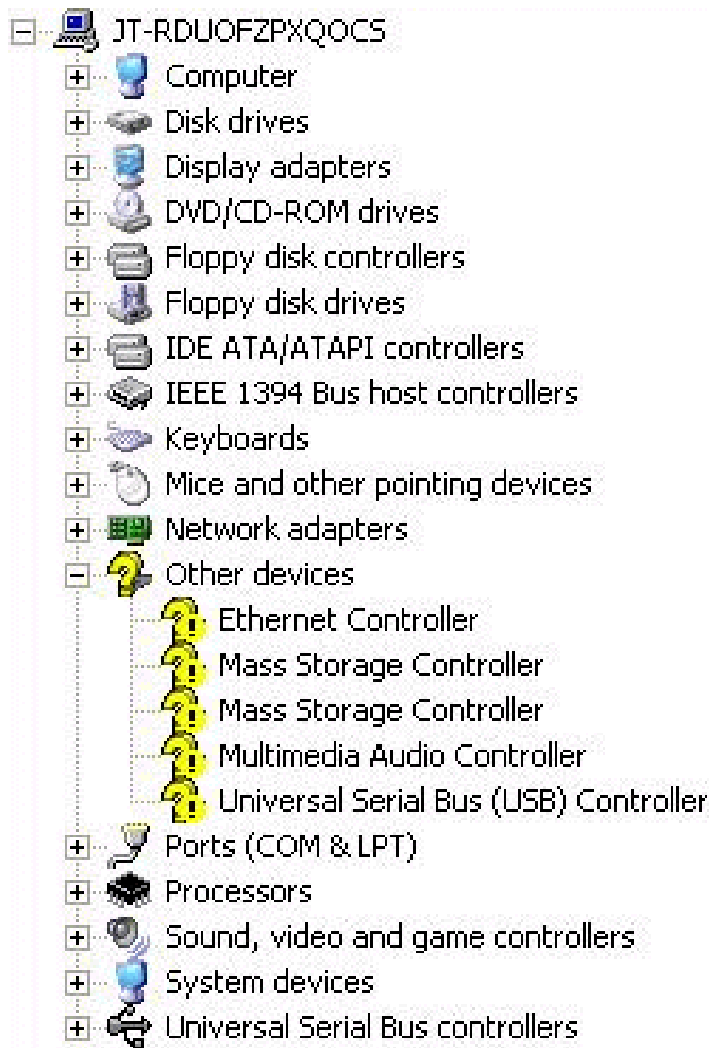
Select which driver you want to install and click **OK**, or click **Cancel** to abort the driver installation and return to the main menu.

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.

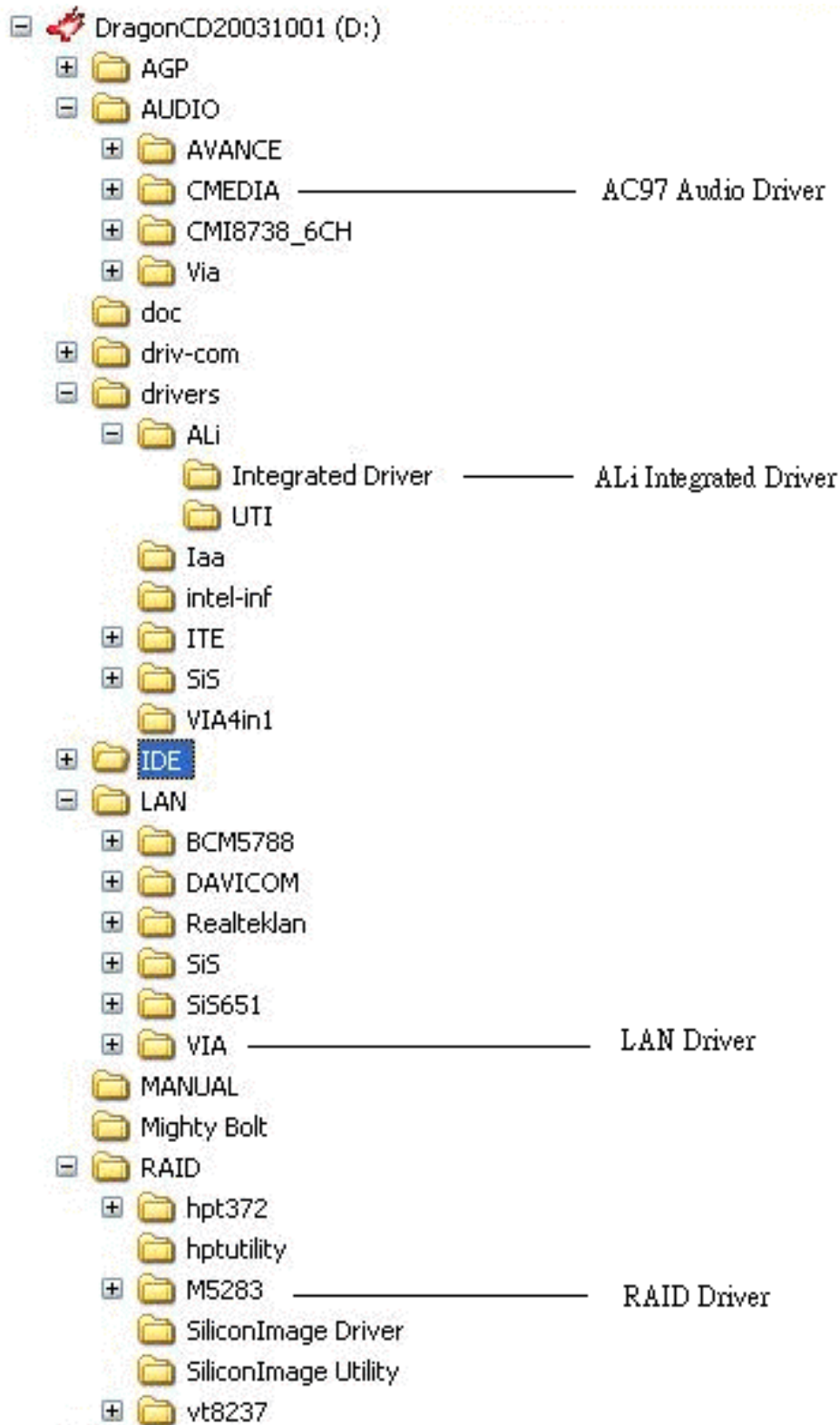
After Windows XP installation, your device manager should look like this:



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



Drivers directory list in the CD driver



Chapter 5

IDE 3 DRIVER INSTALLATION

You can use your IDE3 as

1. Normal IDE function.
2. RAID function. (RAID0, 1)

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

1. Go to the CMOS setup → SOYO COMBO Feature → and set the “Onboard RAID” to “Enable”.
2. Install the ALi M5283 driver. See driver installation instruction below.

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

1. Connect 2 hard disk on IDE3.
2. Go to the CMOS setup → SOYO COMBO Feature → and set the “Onboard RAID” to “Enable”.
3. Go to the CMOS setup → SOYO COMBO Feature → and set the “First Boot Device” to “SCSI”.
4. Set the “RAID/ATA,SCSI Boot Order” to “RAID/ATA, SCSI”.
5. Press “Ctrl+A” when the Ali M5283 BIOS summary screen appears.
6. Create a disk array, check appendix A for create instructions.
7. Install the ALi M5283 driver. See driver installation instruction below.

To boot from the IDE 3

1. Go to the CMOS setup → SOYO COMBO Feature → and set the First Boot Device to “SCSI”.
2. Set the “RAID/ATA,SCSI Boot Order” to “RAID/ATA, SCSI”.



For more information on the ALi M5283 Utility Software, please check the ALi M5283 manual located in “d:\manual\m5283_raid.pdf” in the Soyo driver CD.

Installing ALi M5283 during OS Installation

Install driver during Windows XP installation

1. **Go to “d:\raid\m5283\floppy” directory, (assuming that your CD-ROM is drive d:) copy all the files and directory to a floppy disk.**
2. Start installing Windows XP.
3. Windows XP will start to inspect your hardware configuration
4. Press “F6” when the message “Press F6 if you need to install a third party SCSI or RAID driver...” Appear. Below the screen
5. Press **S** key to specify additional devices when the **Windows XP Setup** window appears.
6. Insert the floppy disk of driver, then press **Enter** to continue
7. In the follow-on window of device type, please select “**M5283 SATA RAID controller (Windows XP)**” to continue
8. Win XP will prompt you that a message that the driver is newer than the default driver, press **S** (use the driver on floppy) to continue
9. The follow-on interface will list the devices to be installed, in which “**M5283 SATA RAID controller (Windows XP)**” item should be included. (If users want to install other devices, press “S” at this time.) Press **ENTER** to continue Windows XP setup.

Install driver during Windows 2000 installation

1. **Go to “d:\raid\m5283\floppy” directory, (assuming that your**



CD-ROM is drive d) copy all the files and directory to a floppy disk.

2. Windows 2000 will start to inspect your hardware configuration
3. Press “F6” when the message “Press F6 if you need to install a third party SCSI or RAID driver....” Appear.
4. Press **S** key to specify additional devices when the **Windows 2000 Setup** window appears.
5. Insert the floppy disk of driver, then press **Enter** to continue
6. In the follow-on window of device type, please select “**which “M5283 SATA RAID controller (Windows 2000)”** to continue
7. Win 2000 will prompt you that a message that the driver is newer than the default driver, press **S** (use the driver on floppy) to continue
8. The follow-on interface will list the devices to be installed, in which “**M5283 SATA RAID controller (Windows 2000)”** item should be included. (If users want to install other devices, press “**S**” at this time.) Press **ENTER** to continue Windows 2000 setup

Chapter 6

SATA1/SATA2 DRIVER INSTALLATION

You can use your SATA1/SATA2 as

1. Normal IDE function.
2. RAID function. (RAID0, 1)

To use SATA1/SATA2 as normal IDE, please do the following steps

1. Go to the CMOS setup → SOYO COMBO Feature → and set the “Onboard RAID” to “Enable”.
2. Install the ALi 5283 driver. See driver installation instruction below.

To use SATA1/SATA2 as RAID controller, please do the following steps

1. Connect 2 SATA hard disk on SATA1/SATA2.
2. Go to the CMOS setup → SOYO COMBO Feature → and set the “Onboard RAID” to “Enable”.
3. Go to the CMOS setup → SOYO COMBO Feature → and set the “First Boot Device” to “SCSI”.
4. Set the “RAID/ATA,SCSI Boot Order” to “RAID/ATA, SCSI”.
5. Press “Ctrl+A” when the Ali M5283 BIOS summary screen appears.
6. Create a disk array, check appendix A for create instructions.
7. Install the ALi M5283 driver. See driver installation instruction below.

To boot from the SATA1/SATA2

1. Go to the CMOS setup → SOYO COMBO Feature → and set the First Boot Device to “SCSI”.
2. Set the “RAID/ATA,SCSI Boot Order” to “RAID/ATA, SCSI”.

For more information on the ALi M5283 Utility Software, please check the ALi M5283 manual located in “d:\manual\m5283_raid.pdf” in the Soyo driver CD.

Installing ALi M5283 during OS Installation

Install driver during Windows XP installation

1. **Go to “d:\raid\m5283\floppy” directory, (assuming that your CD-ROM is drive d:) copy all the files and directory to a floppy disk.**
2. Start installing Windows XP.
3. Windows XP will start to inspect your hardware configuration
4. Press “F6” when the message “Press F6 if you need to install a third party SCSI or RAID driver...” Appear. Below the screen
5. Press **S** key to specify additional devices when the **Windows XP Setup** window appears.
6. Insert the floppy disk of driver, then press **Enter** to continue
7. In the follow-on window of device type, please select “**M5283 SATA RAID controller (Windows XP)**” to continue
8. Win XP will prompt you that a message that the driver is newer than the default driver, press **S** (use the driver on floppy) to continue
9. The follow-on interface will list the devices to be installed, in which “**M5283 SATA RAID controller (Windows XP)**” item should be included. (If users want to install other devices, press “S” at this time.) Press **ENTER** to continue Windows XP setup.

Install driver during Windows 2000 installation

1. **Go to “d:\raid\m5283\floppy” directory, (assuming that your**



CD-ROM is drive d) copy all the files and directory to a floppy disk.

2. Windows 2000 will start to inspect your hardware configuration
3. Press “F6” when the message “Press F6 if you need to install a third party SCSI or RAID driver...” Appear.
4. Press **S** key to specify additional devices when the **Windows 2000 Setup** window appears.
5. Insert the floppy disk of driver, then press **Enter** to continue
6. In the follow-on window of device type, please select “which **“M5283 SATA RAID controller (Windows 2000)”** to continue
7. Win 2000 will prompt you that a message that the driver is newer than the default driver, press **S** (use the driver on floppy) to continue
8. The follow-on interface will list the devices to be installed, in which “**M5283 SATA RAID controller (Windows 2000)**” item should be included. (If users want to install other devices, press “**S**” at this time.) Press **ENTER** to continue Windows 2000 setup

APPENDIX A

ALi M5283

Introduction

1.1 What is ALi M5283 controller

ALi M5283 is a high integration IDE controller that supports both Parallel-ATA and Serial-ATA interfaces. It supports PATA UDMA mode transfer up to mode 6 and SATA 1.0 drives.

M5283 also provides a cost-effective solution of RAID functions for the performance and reliability.

Main Features & Benefits

- Support RAID 0, 1, & JBOD
- Allowed maximum 2 disks connection to every controller (Does not support ATAPI devices)
- Support independent use of hard disk
- Support Operating Systems: Windows 98/Me, Windows 2000, Windows XP.
- Windows-based software for RAID management(compatible with BIOS)

2. ALi RAID BIOS

After the system BIOS detects ALi RAID BIOS, the RAID BIOS version and drive information shows up on the screen.

The following is an example of BIOS version and drives information when using M5281:

ALi RAID BIOS V1.00

(c) ALi Corporation 2003, All Rights Reserved.

Identifying IDE driver .o.o.x.x.o.o

Channel 1 Master: Maxtor 4A160J0

Channel 1 Slave : Maxtor 6L040J2

Channel 2 Master: WDC WD360GD-00F

Channel 3 Master: Maxtor 6Y200M0

Press Ctrl-A to enter ALi RAID BIOS setup utility

When RAID BIOS is waiting after identifying drives, press 'Ctrl' and 'A' simultaneously to enter the setup menu:

2.1 RAID BIOS Setup Menu

```
RAID BIOS Setup Utility (c) 2003 ALi Corporation    www.ali.com.tw

Create RAID 0 Striping for Performance
Create RAID 1 Mirroring for Reliability Select
Create JBOD for integrated Capacity
Stripe Size
Delete RAID Setting & Partition      64K
Delete All RAID Setting & Partition
Rebuild RAID Array
Select Boot Drive

SPACE : Select
↑↓    : Moving Cursor
ENTER : Select & Finish
ESC   : Exit

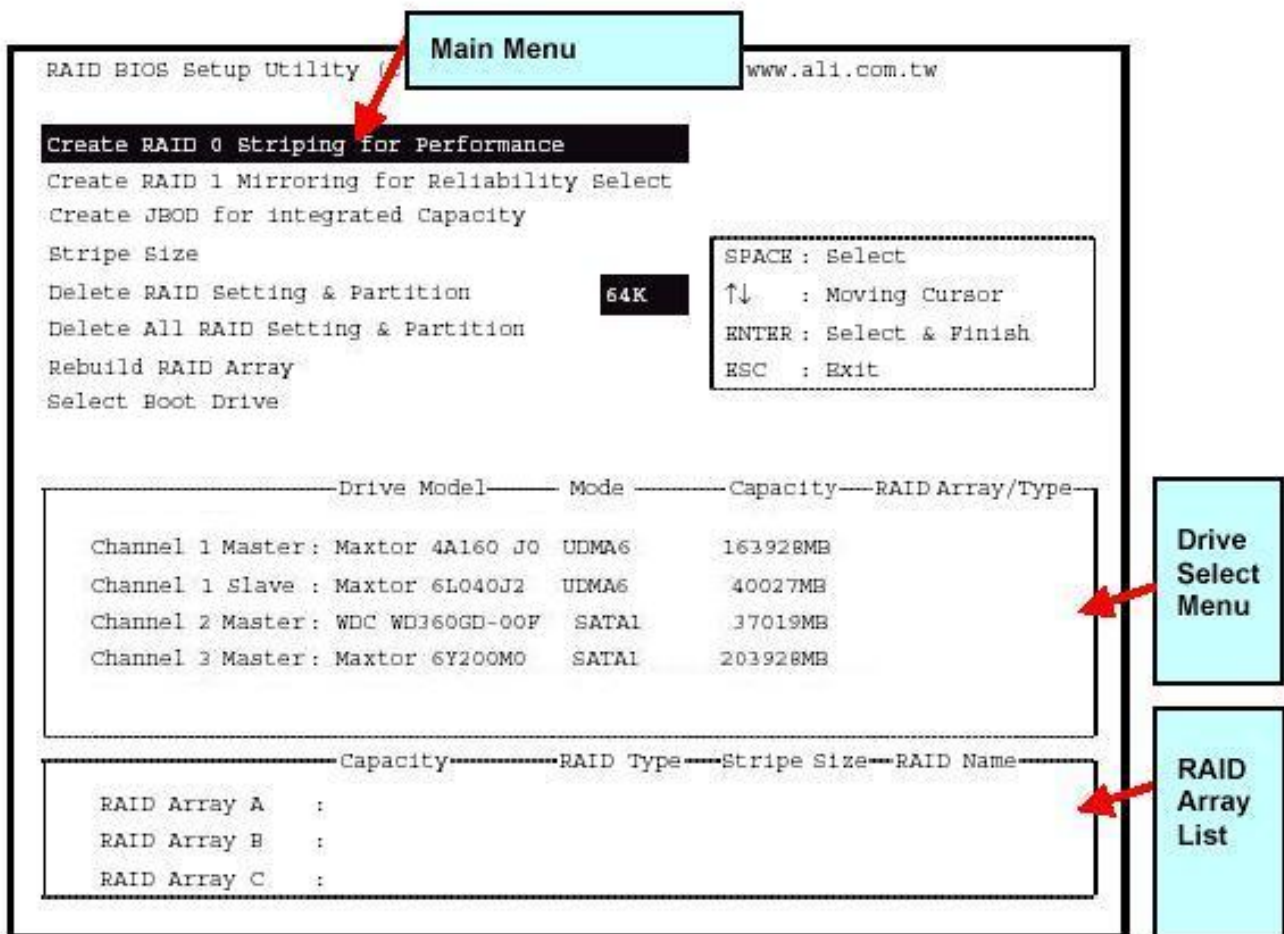
-----Drive Model----- Mode -----Capacity-----RAID Array/Type-----
Channel 1 Master: Maxtor 4A160 J0  UDMA6      163928MB
Channel 1 Slave  : Maxtor 6L040J2  UDMA6      40027MB
Channel 2 Master: WDC WD360GD-00F  SATA1      37019MB
Channel 3 Master: Maxtor 6Y200M0   SATA1      203928MB

-----Capacity-----RAID Type-----Stripe Size-----RAID Name-----
RAID Array A   :
RAID Array B   :
RAID Array C   :
```

There are three major areas in the RAID BIOS setup screen: Main Menu, Drive Select Menu and RAID Array List:

2.2 Main Menu

In **Main Menu**, the user has several options to operate RAID:



2.2.1 Create RAID 0 Striping for Performance

1. Press 'Enter' key to activate this item. An 'S' flash cursor appears at the **Drive Select Menu** for the user to choose the first drive for RAID 0.
2. Use 'Space' key to choose the desired drive for RAID 0. Then the flash cursor changes to an 's' flash cursor for the user to choose the second drive for RAID 0.
3. The prompt 'Create RAID 0(Y/N)' appears after two drives are properly assigned.
4. Press 'Y', and then some necessary information will be written to the

drives, which may destroy the original data in the drives.

Warning: *Make sure the data in drives is no longer in use before creating RAID Array.*

5. Next, the Array Name input line appears for the user to key in a name for the newly created array. The effective characters for an array name is '0'-'9', 'A'-'Z', 'a'-'z', space and underscore.
6. After the RAID array has been created successfully, its information shows up at **RAID Array List**.

Note: RAID 0 cannot be used for parallel ATA drives connected at the same channel. RAID 0 cannot be used for mixed parallel and serial ATA drives.

2.2.2 Create RAID 1 Mirroring for Reliability

1. Press 'Enter' key to activate this item. An 'M' flash cursor appears at the 'Drive Select Menu' for the user to choose the first drive for RAID 1.
2. Use 'Space' key to choose the desired drive for RAID 1. Then flash cursor changes to an 'm' flash cursor for the user to choose the second drive for RAID 1.
3. The prompt 'Create RAID 1(Y/N)' appears after two drives are properly assigned.
4. Press 'Y', and then some necessary information will be written to drives, which maybe destroy the original data in the drives.

Warning: *Make sure the data in drives is no longer in use before creating RAID Array.*

5. Next, the Array Name input line appears for the user to key in a name for the newly created array. The effective characters for an array name is '0'-'9', 'A'-'Z', 'a'-'z', space and underscore.

6. After the RAID array has been created successfully, its information shows up at RAID Array List.
7. Lastly a prompt message asks whether to do drive copy. The source and destination drives are the ones indicated as 'M' and 'm' in 'Drive Select Menu' respectively.

***Note:** RAID 1 cannot be used for parallel ATA drives connected at the same channel. RAID 1 cannot be used for mixed parallel and serial ATA drives.*

2.2.3 Create JBOD for integrated Capacity

1. Press 'Enter' key to activate this item. A 'J' flash cursor appears at the 'Drive Select Menu' for the user to choose the first drive for JBOD.
2. Use 'Space' key to choose the desired drive for JBOD array. Use 'Enter' key to finish JBOD drive selection. The maximum number of drives for JBOD array is four and the minimum is two.
3. The prompt 'Create JBOD (Y/N)' appears.
4. Press 'Y' key and then some necessary information will be written to drives, which maybe destroy the original data in the drives

***Warning:** Make sure the data in drives is no longer in use before creating RAID Array.*

5. Next the Array Name input line appears for the user to key in a name for the newly created array. The effective characters for an array name is '0'-'9', 'A'-'Z', 'a'-'z', space and underscore.

2.2.4 Stripe Size

This item is effective for RAID 0. The user can choose a stripe size from 64K (default), 32K, 16K, 8K and 4K. If the user uses RAID 0 for most A/V editing application or files, 64K is recommended.

1. Press 'Enter' key to activate this item. Then 64K, 32K, 16K, 8K, 4K items appears at bottom of Main Menu.
2. Use '↑' '↓' to choose the stripe size.

2.2.5 Delete RAID Setting & Partition

1. Press 'Enter' key to activate this item. An 'E' flash cursor appears at the 'Drive Select Menu' for the user to choose defined array drive to be deleted.
2. 'Data on RAID drives will be erased (Y/N)?' prompt message shows up to confirm the user's selection.
3. Press 'Y' key, and then the data in drivers is destroyed.

***Warning:** Make sure the data in drives is no longer in use before deleting RAID Array.*

4. 'RAID array List' automatically updates itself.

2.2.6 Delete All RAID Setting & Partition

1. Press 'Enter' key to activate this item.
2. 'Data on RAID drives will be erased (Y/N)?' prompt message shows up to confirm the user's selection.
3. Press 'Y' key, and then the data in drivers is destroyed.

***Warning:** Make sure the data in drives is no longer in use before deleting RAID Array.*

4. 'RAID array List' automatically updates itself.

2.2.7 Rebuild RAID Array

When a drive is replaced or BIOS detects a bad drive, use **Rebuild RAID Array** to keep data coherency for RAID 1 and 0+1.

1. Press 'Enter' key to activate this item. An 'R' flash cursor appears at the 'Drive Select Menu' for the user to choose the array to rebuild.
2. BIOS shows the source and destination drives and waits for confirmation to rebuild. Press 'Y' to start rebuild process.
3. Process status bar shows up during the rebuild process.

2.2.8 Select Boot Drive

1. Press 'Enter' key to activate this item. A 'B' flash cursor appears at the 'Drive Select Menu' for the user to choose the boot drive.
2. Press 'Enter' or 'Space' Key to finish selection.

Note: The boot drive affects how the operation system treats the order of other drives. Take the above BIOS screen as an example, if Channel 3 is the boot drive, the operation system will use the order of Channel 3 Master, Channel 1 Master, Channel 1 Slave, Channel 4 Master consecutively.

2.3 Drive Select Menu

There are three bars in this menu: two RAID Drive Selection Bar and one Boot Drive Selection Bar.

RAID BIOS Setup Utility (c) 2003 ALi Corporation www.ali.com.tw

Create RAID 0 Striping for Performance Select Boot Drive

Ability Select

RAID Drive Selection Bar

Striping

Create JBOD for integrated capacity

Stripe Size: **64K**

RAID Drive Selection Bar

Delete

Delete All RAID Setting & Partition

Rebuild

Boot Drive Selection Bar

SPACE : Select
 ↑↓ : Moving Cursor
 ENTER : Select & Finish
 ESC : Exit

	Drive Model	Mode	Capacity	RAID Array/Type
S	Channel 1 Master: Maxtor 4A160 J0	UDMA6	163928MB	
M	Channel 1 Slave : Maxtor 6L040J2	UDMA6	40027MB	
s	Channel 2 Master: WDC WD360GD-00F	SATA1	37019MB	
H	Channel 3 Master: Maxtor 6Y200MO	SATA1	203928MB	

Capacity	RAID Type	Stripe Size	RAID Name
RAID Array A	:		
RAID Array B	:		
RAID Array C	:		

APPENDIX B

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, US: www.soyousa.com, Germany: 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 awdfash utility to the diskette.
4. On the CMOS setup and disable CIH 4-way protection.
5. Type "awdfash 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 than 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 than 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 C

Contact Information

How to contact us:

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

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

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