



Your Reliable Partner

SU-2S

*Dual Opteron Server Board
Socket 940*

User's Manual

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Chapter 1. Introduction

1.1. Features & Specifications

CPU

- Supports Dual AMD Opteron 940-Pin Processor

Chipset

- ULi M1563 / AMD-8131
- Supports Advanced Configuration and Power Interface (ACPI)

Memory

- Eight 184-pin DIMM slots
- Supports 144-bit wide dual channel DDR 400/333 memory
- Up to 16GB, ECC registered memory capacity

VGA

- Onboard ATi Rage XL, Default 8MB Local memory (4MB Optional)

Serial ATA

- 8-channel Serial ATAII, with 3Gb/s data transfer rate (Marvell 88SX-6081)
- 4-channel Serial ATAII, with 3Gb/s data transfer rate (Marvell 88SX-6041)(optional)

System BIOS

- Supports Plug-and-Play (PNP)
- Supports Advanced Configuration Power Interface (ACPI)
- Write-Protect Anti-Virus function by AWARD BIOS
- 4MB Flash ROM

LAN

- 2x Broadcom 5704 Dual ports 64-bit Gigabit Ethernet Controllers

Expansion Slot

- 3x PCI-X 64bit/100MHz (3.3V)
- 2x PCI, 32bit/33MHz (5V)
- 1x SO-DIMM Connector (Optional)

Internal I/O Connectors

- 1x Floppy Port supports up to 2.88MB

- 2x 40-Pin IDE Ultra DMA 133/100/66/33 connector
- 1x COM port header (COM2)
- 8x Serial ATAPI Connectors
- 1x USB 2.0 header (Each header support two USB 2.0 devices)
- 1x SM Bus header (For SM Bus and I²C)
- 1x Printer Port Header

Back Panel I/O

- 1x PS/2 Keyboard and mouse Connector
- 1x COM port (COM1)
- 1x VGA port
- 1x Dual USB 2.0 Connector
- 2x Dual RJ-45 w/ Transformer LAN Connector

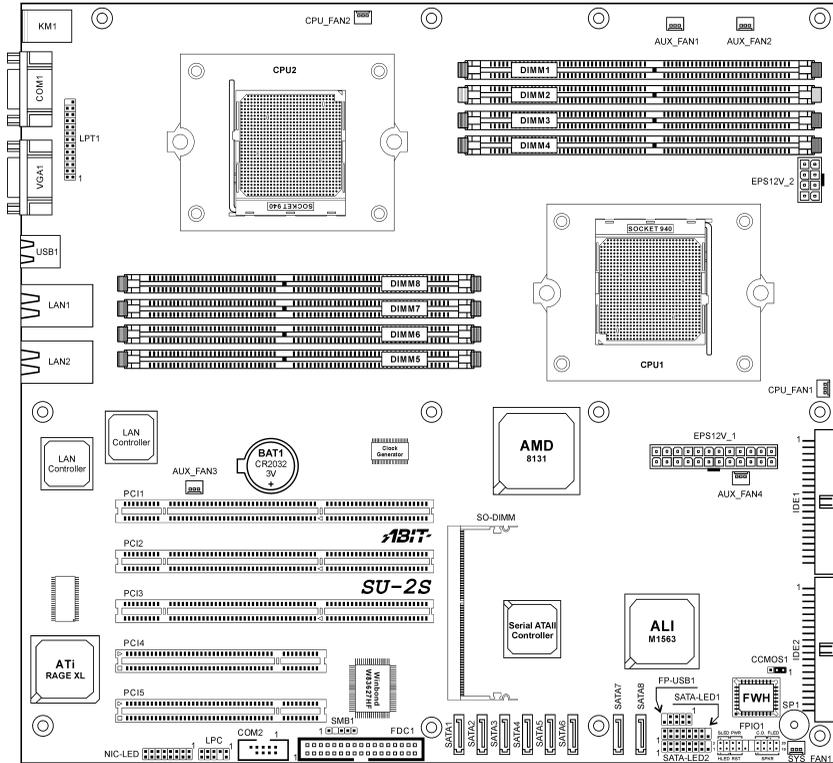
Miscellaneous

- EEB 3.0 form factor (12" x 13" – 305mm x 330mm)
- Hardware monitoring – Including Fan speeds, Voltages, System environment temperature
- Chassis intrusion detector
- 3.3V/5V 64-bit riser card supported (Optional)

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1.2. Layout Diagram



1.3. Jumpers & Connectors Description

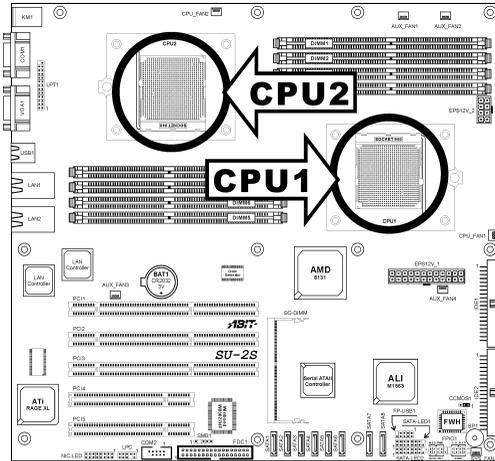
Jumpers	Description	Default Setting
CCMOS1	CMOS Memory Clearing Header	Pins 1-2 Closed (Normal)

Connectors	Description
AUX_FAN1~4	Auxiliary Fan Power Connectors
COM2	Connection Header for Additional COM Port
CPU_FAN1/CPU_FAN2	CPU Fan Power Connectors
DIMM1~DIMM4	DDR DIMM Slots (Controlled by CPU1)
DIMM5~DIMM8	DDR DIMM Slots (Controlled by CPU2)
EPS12V_1	24-Pin EPS12V Power Connector
EPS12V_2	8-Pin EPS12V Power Connector
FDC1	Floppy Disk Drive Connector
FPIO1	Front Panel Switch Connection Headers
FP-USB1	Additional USB Port Connection Header
IDE1/IDE2	Hard Disk Drive Connectors
LPC	Connection Header for Low Pin Count (Reserved for internal testing)
LPT1	Connection Header for Parallel Port
NIC-LED1	LED Connector for Network Interface
PCI1~PCI3	PCI-X 64bit/100MHz
PCI4~PCI5	PCI 32bit/33MHz
SATA1~SATA8	Serial ATAII connectors
SATA-LED1/ SATA-LED2	LED Connector for SATA Devices
SMB1	System Management Bus Header
SO-DIMM	SO-DIMM Connector
SYS_FAN1	System Fan Power Connector

Chapter 2. Hardware Setup

2.1. CPU Socket

This motherboard provides a ZIF (Zero Insertion Force) Socket 940 to install AMD Socket 940 CPU. The CPU you bought should contain with a kit of heatsink, cooling fan, retention frame and back plate. If that's not the case, buy one specially designed for Socket 940.

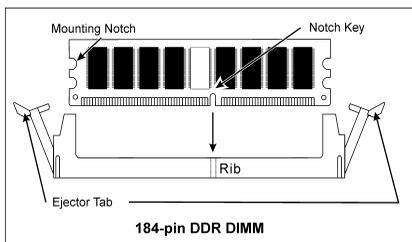


NOTE: This server board supports installing either one or two CPUs. To set up system with only one CPU, you MUST install it in Socket CPU1.

2.2.1. Installing and Removing Memory Modules

Power off the computer and unplug the AC power cord before installing or removing memory modules.

1. Locate the DIMM slot on the board.
2. Hold two edges of the DIMM module carefully, keep away of touching its connectors.
3. Align the two notch keys on the module with the two ribs on the slot.
4. Firmly press the module into the slots until the ejector tabs at both sides of the slot automatically snaps into the mounting notch. Do not force the DIMM module in with extra force as the DIMM module only fit in one orientation.
5. To remove the DIMM modules, push the two ejector tabs on the slot outward simultaneously, and then pull out the DIMM module.



ATTENTION: As the static electricity can damage the electronic components of the computer or optional modules, make sure you are discharged of static electricity by touching a grounded metal object briefly before starting these procedures.

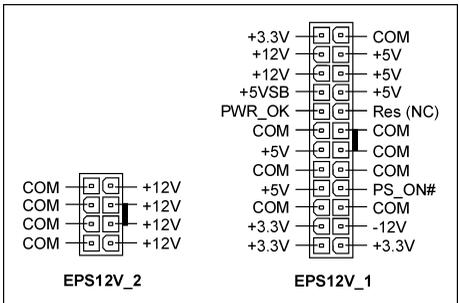
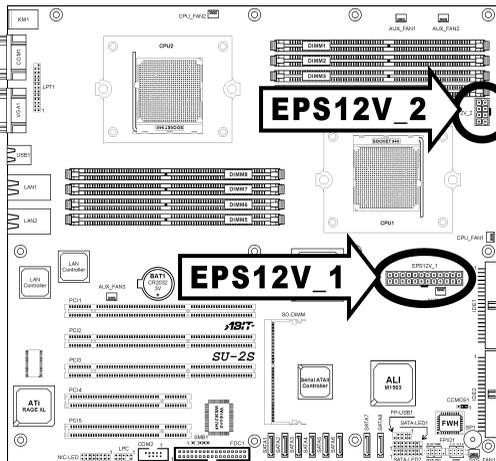
2.3. Connectors, Headers, and Switches

All the connectors, headers and switches mentioned here are depending on your system configuration. Some features you may (or may not) have to connect or to configure depending on the peripherals you have connected.

WARNING: Always power off the computer and unplug the AC power cord before adding or removing any peripheral or component. Failing to do so may cause severe damage to your system board and/or peripherals. Plug in the AC power cord only after you have carefully checked everything.

2.3.1. EPS Power Connectors (EPS12V_1, EPS12V_2)

These two provides the connection to EPS12V power supply.



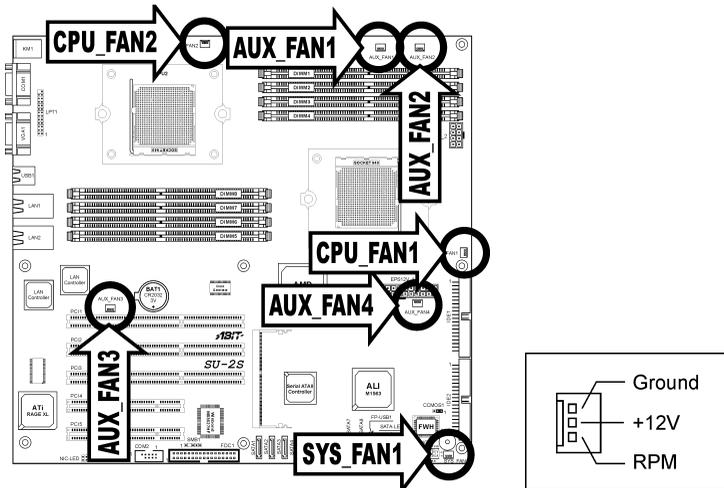
2.3.2. FAN Connectors (CPUFAN1~2, SYSFAN1, AUXFAN1~4)

These connectors each provide power to the cooling fans installed in your system.

The CPU must be kept cool by using a powerful fan with heatsink. The system is capable of monitoring the speed of the CPU fan.

- **CPUFAN1:** Power connector for CPU1 cooling fan
- **CPUFAN2:** Power connector for CPU2 cooling fan
- **SYSFAN1:** System Fan Power Connector
- **AUXFAN1~AUXFAN4:** Auxiliary Fan Power Connectors

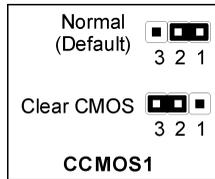
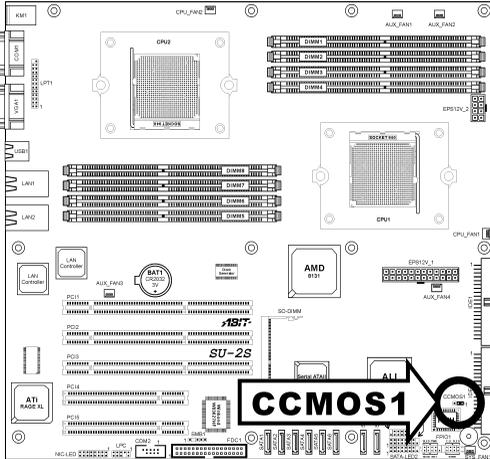
WARNING: These fan connectors are not jumpers. DO NOT place jumper caps on these connectors.



2.3.3. CMOS Memory Clearing Header (CCMOS1)

This header uses a jumper cap to clear the CMOS memory.

- **Pin 1-2 shorted (default):** Normal operation.
- **Pin 2-3 shorted:** Clear CMOS memory.

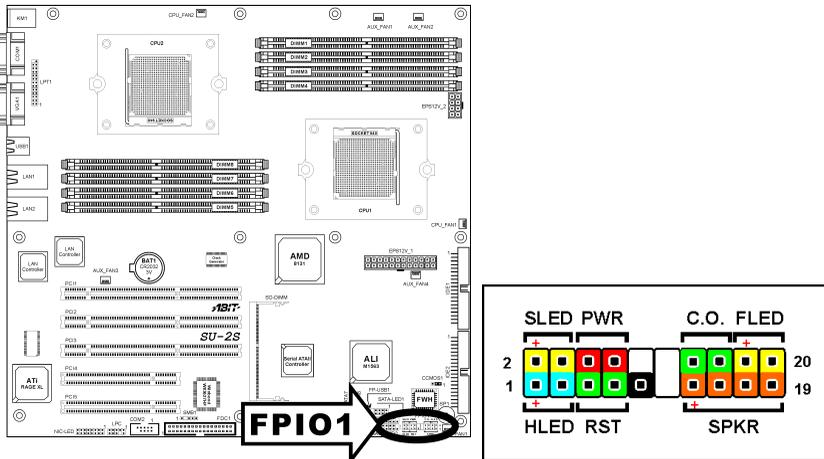


ATTENTION: Turn the system power off first (including the +5V standby power) before clearing the CMOS memory. Failing to do so may cause your system to work abnormally or malfunction.

2.3.4. Front Panel Switches & Indicators Connection Headers (FPIO1)

This header is used for connecting switches and LED indicators on the chassis front panel.

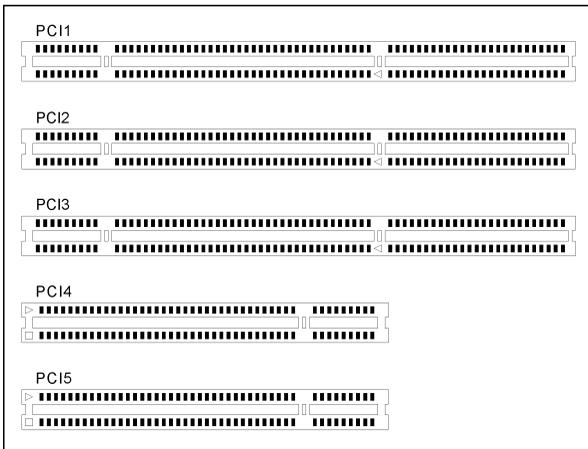
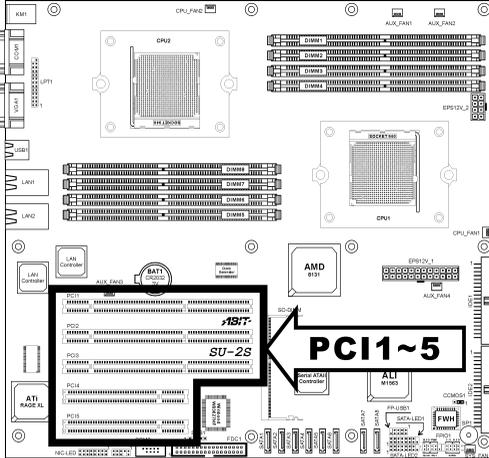
Watch the power LED pin position and orientation. The mark “+” align to the pin in the figure below stands for positive polarity for the LED connection. Please pay attention to connect these headers. A wrong orientation will only cause the LED not lighting, but a wrong connection of the switches could cause system malfunction.



- **HLED (Pin 1, 3):** Connects to the HDD LED cable.
- **RST (Pin 5, 7):** Connects to the Reset Switch cable.
- **SPKR (Pin 13, 15, 17, 19):** Connects to the System Speaker cable.
- **SLED (Pin 2, 4):** Connects to the Suspend LED cable.
- **PWR (Pin 6, 8):** Connects to the Power Switch cable.
- **C.O. (Pin 14, 16):** Connects to Case Open (Intrusion) device.
- **FLED (Pin 18, 20):** Connects to the Fault LED cable.

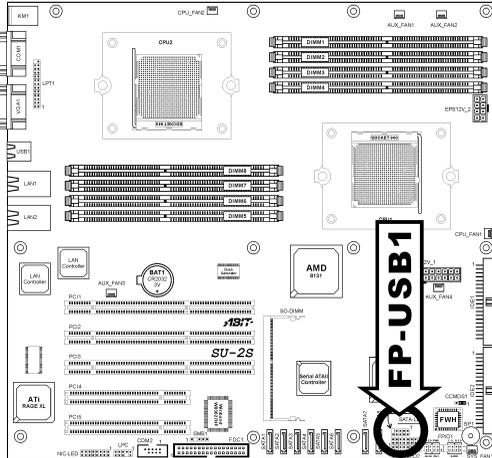
2.3.5. PCI Slots (PCI1~PCI5)

- **PCI1~PCI3:** PCI-X 64bit/100MHz
- **PCI4~PCI5:** PCI 32bit/33MHz



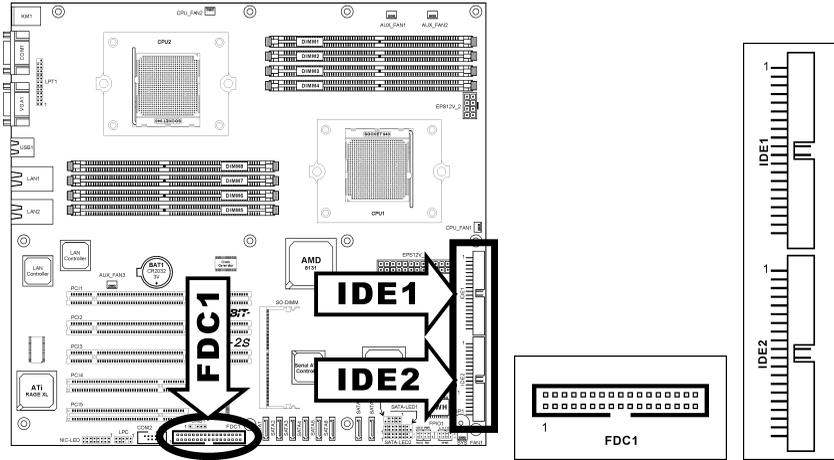
2.3.6. Additional USB Port Connection Header (FP-USB1)

This header provides two additional USB port connections.



	Pin	Signal	Pin	Signal
	1	VCC	2	VCC
	3	- Data 0	4	- Data 1
	5	+ Data 0	6	+ Data 1
	7	GND	8	GND
			10	NC

2.3.7. Floppy and IDE Disk Drive Connectors (FDC1, IDE1/IDE2)

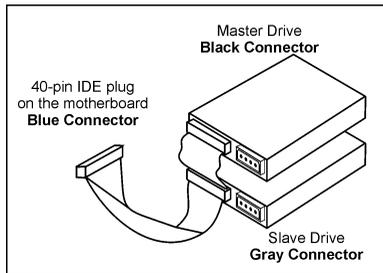


The FDC1 connector connects up to two floppy drives with a 34-wire, 2-connector floppy cable. Connect the single end at the longer length of ribbon cable to the FDC1 on the board, the two connectors on the other end to the floppy disk drives connector. Generally you need only one floppy disk drive in your system.

NOTE: The red line on the ribbon cable must be aligned with pin-1 on both the FDC1 port and the floppy connector.

Each of the IDE port connects up to two IDE drives at Ultra ATA/100 mode by one 40-pin, 80-conductor, and 3-connector Ultra ATA/66 ribbon cables.

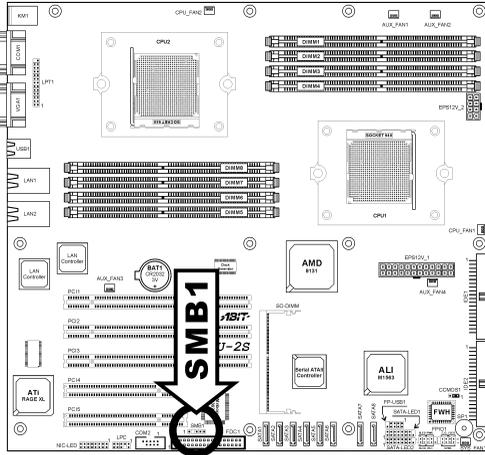
Connect the single end (blue connector) at the longer length of ribbon cable to the IDE port of this board, the other two ends (gray and black connector) at the shorter length of the ribbon cable to the connectors of your hard drives.



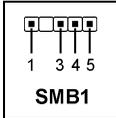
NOTE: Make sure to configure the “Master” and “Slave” relation before connecting two drives by one single ribbon cable. The red line on the ribbon cable must be aligned with pin-1 on both the IDE port and the hard-drive connector.

2.3.8. System Management Bus Connection Header (SMB1)

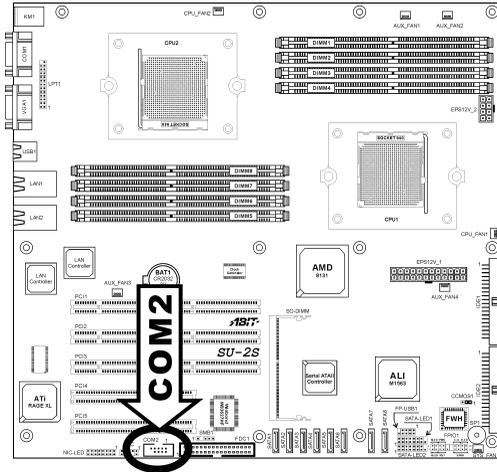
This header provides the connection to system management bus (SMBus).



Pin	Signal	Pin	Signal
1	SMBCLK	2	NC
3	Ground	4	SMBDATA
5	VCC		



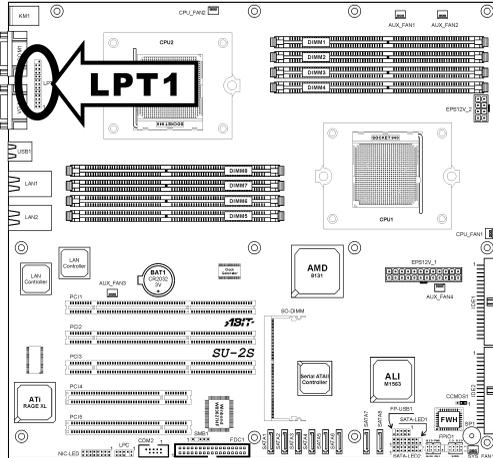
2.3.9. Additional COM Port Connection Header (COM2)



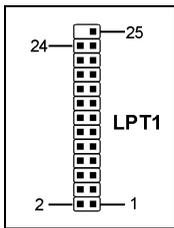
	Pin	Signal	Pin	Signal
	1	DCD (Data Carrier Detect)	2	RXD (Receive-Data)
	3	TXD (Transfer-Data)	4	DTR (Data-Terminal-Ready)
	5	GND	6	DSR (Data-Set-Ready)
	7	RTS (Request-to-Send)	8	CTS (Clear-to-Send)
	9	RI (Ring-Indicator)	10	NC (No Connected)

2.3.10. Connection Header for Parallel Port (LPT1)

This header provides one external LPT1 port connection.

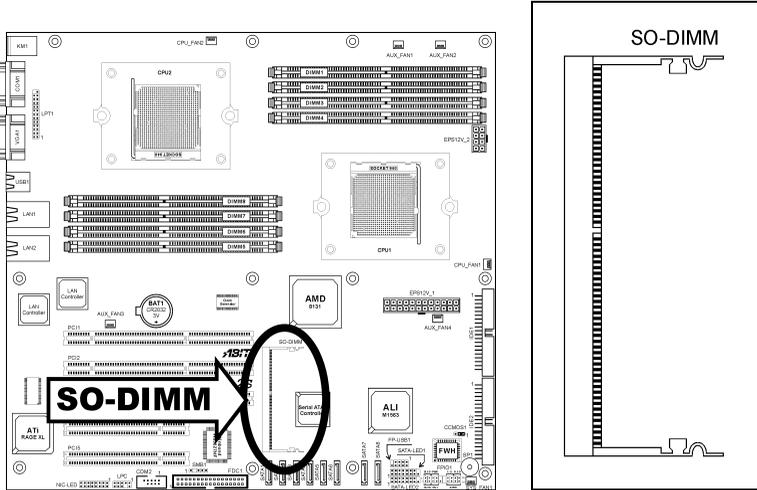


Pin	Signal	Pin	Signal
1	STB#	2	AFD#
3	PD0	4	ERR#
5	PD1	6	INIT#
7	PD2	8	SLIN#
9	PD3	10	GND
11	PD4	12	GND
13	PD5	14	GND
15	PD6	16	GND
17	PD7	18	GND
19	ACK#	20	GND
21	BUSY	22	GND
23	PE	24	GND
25	SLCT		



2.3.11. SO-DIMM Connector (SO-DIMM)

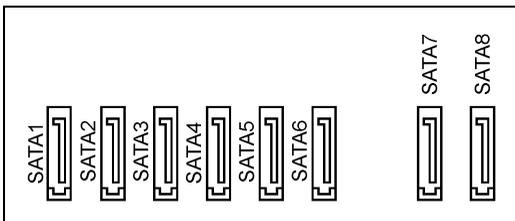
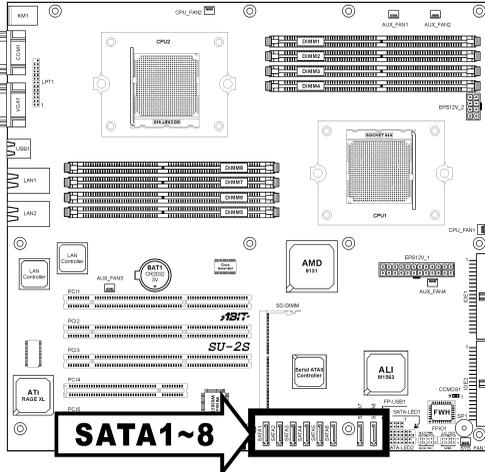
This connector provides connection for SO-DIMM Interface PCIX card.



Please check [ABIT Website](#) for available cards.

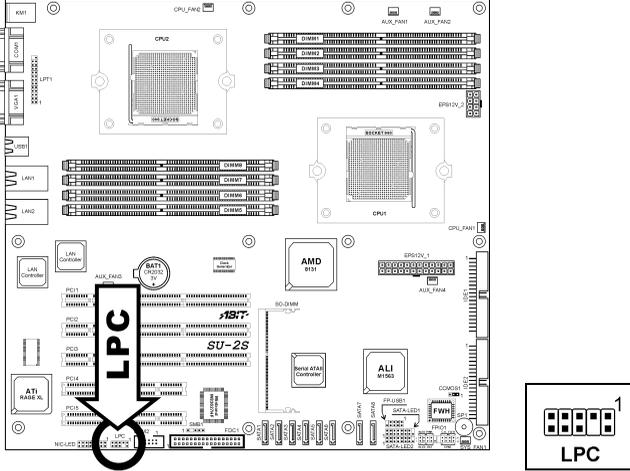
2.3.12. Serial ATA connectors (SATA1~SATA8)

These connectors each provide one Serial ATAII channel connection.



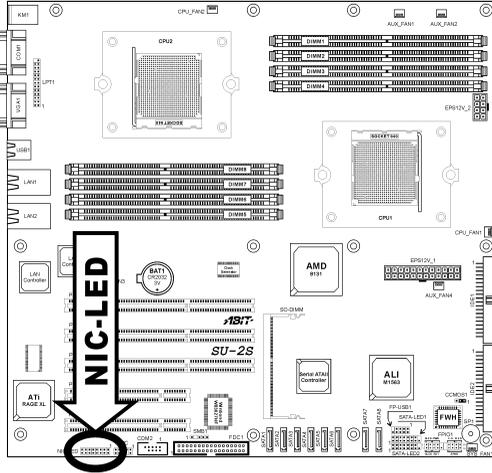
2.3.13. Low Pin Count Connection Header (LPC)

(Reserved for internal testing)



2.3.14. LED Connector for Network Interface (NIC-LED1)

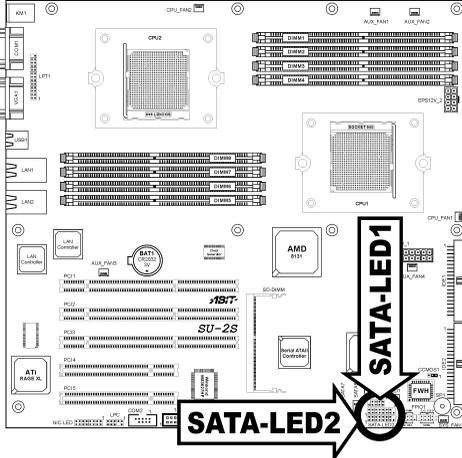
These headers are reserved for connecting LED indicators of Network Interface



	Pin	Signal	Pin	Signal
	1	Active_LED1	2	Link_LED1
	3	Speed_100_LED1	4	Speed_1000_LED1
	5	Active_LED2	6	Link_LED2
	7	Speed_100_LED2	8	Speed_1000_LED2
	9	Active_LED3	10	Link_LED3
	11	Speed_100_LED3	12	Speed_1000_LED3
	13	Active_LED4	14	Link_LED4
	15	Speed_100_LED4	16	Speed_1000_LED4

2.3.15. LED Connector for SATA Devices (SATA-LED1/SATA-LED2)

These headers are reserved for connecting LED indicators of SATA devices

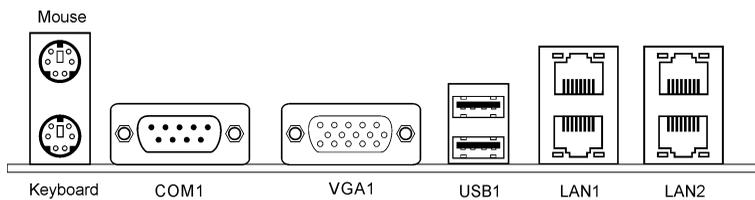


Pin	Signal	Pin	Signal
1	Active_LED1 (SATA_GPIO8)	2	Link_LED1 (SATA_GPIO0)
3	Active_LED2 (SATA_GPIO9)	4	Link_LED2 (SATA_GPIO1)
5	Active_LED3 (SATA_GPIO10)	6	Link_LED3 (SATA_GPIO2)
7	Active_LED4 (SATA_GPIO11)	8	Link_LED4 (SATA_GPIO3)
9	GND	10	RESET
11	SATA_GPIO18	12	SATA_GPIO19
13	SATA_GPIO20	14	SATA_GPIO21
15	VCC		

Pin	Signal	Pin	Signal
1	Active_LED5 (SATA_GPIO12)	2	Link_LED5 (SATA_GPIO4)
3	Active_LED6 (SATA_GPIO13)	4	Link_LED6 (SATA_GPIO5)
5	Active_LED7 (SATA_GPIO14)	6	Link_LED7 (SATA_GPIO6)
7	Active_LED8 (SATA_GPIO15)	8	Link_LED8 (SATA_GPIO7)
9	GND	10	RESET
11	SATA_GPIO22	12	SATA_GPIO23
13	SATA_GPIO24	14	SATA_GPIO25
15	VCC		

NOTE: Pin 1~8 and pin 11~14 are GPIO pin headers; you may need software efforts to implement these suggested features.

2.3.16. External I/O Panel



- **Mouse:** PS/2 mouse connector.
- **Keyboard:** PS/2 keyboard connector.
- **COM1:** Serial port connector.
- **VGA1:** Monitor signal connector.
- **USB1:** USB 2.0 connectors.
- **LAN1/LAN2:** Gigabit LAN connectors.



Chapter 3. BIOS Setup

This motherboard provides a programmable EEPROM that you can update the BIOS utility. The BIOS (Basic Input/Output System) is a program that deals with the basic level of communication between processor and peripherals. Use the BIOS Setup program only when installing motherboard, reconfiguring system, or prompted to “Run Setup”. This chapter explains the Setup Utility of BIOS utility.

After powering up the system, the BIOS message appears on the screen, the memory count begins, and then the following message appears on the screen:

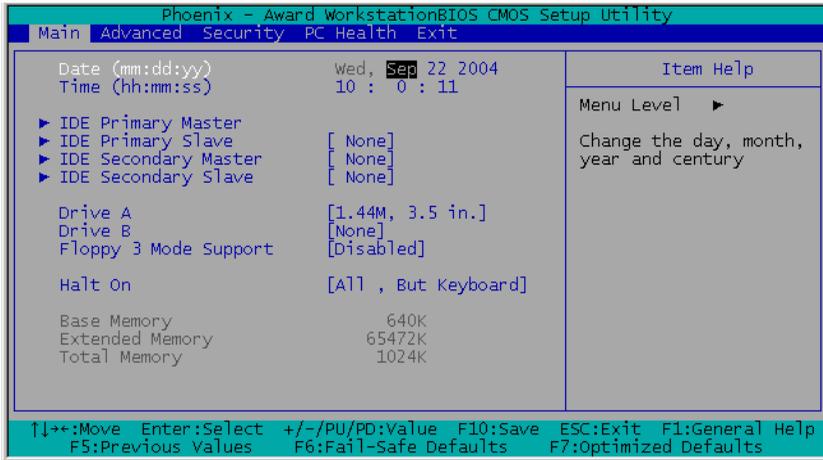
Press DEL to run setup

If this message disappears before you respond, restart the system by pressing <Ctrl> + <Alt> + keys, or by pressing the Reset button on computer chassis. Only when it failed by these two methods can you restart the system by powering it off and then back on.

NOTE: In order to increase system stability and performance, our engineering staffs are constantly improving the BIOS menu. The BIOS setup screens and descriptions illustrated in this manual are for your reference only, may not completely match what you see on your screen.

After pressing key, the main menu screen appears.

3.1. Main Menu



Date (mm:dd:yy)

This item sets the date you specify (usually the current date) in the format of [Month], [Date], and [Year].

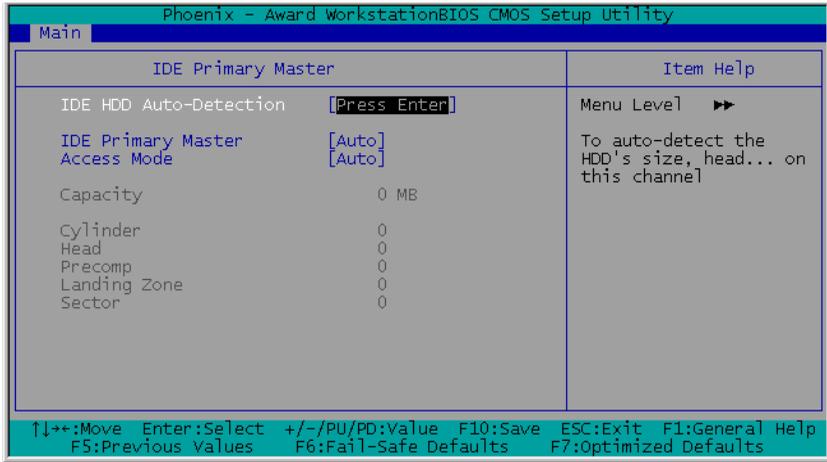
Time (hh:mm:ss)

This item sets the time you specify (usually the current time) in the format of [Hour], [Minute], and [Second].

IDE Primary Master/Slave, IDE Secondary Master/Slave

Move cursor to item “IDE Primary Master”, “IDE Primary Slave”, “IDE Secondary Master” or “IDE Secondary Slave”, and then press <Enter> key to enter its sub-menu.

IDE Primary/Secondary Master/Slave



IDE HDD Auto-Detection

This item allows you to detect the parameters of IDE drives by pressing the <Enter> key. The parameters will automatically be shown on the screen.

IDE Primary Master

When set to [Auto], the BIOS will automatically check what kind of IDE drive you are using. If you want to define your own drive by yourself, set it to [Manual] and make sure you fully understand the meaning of the parameters. Refer to the manual provided by the device manufacturer to get the settings right.

Access Mode

This item selects the mode to access your IDE devices. Leave this item to its default [Auto] settings to let BIOS detects the access mode of your HDD and makes decision automatically.

Capacity

This item automatically displays your HDD size. Note that this size is usually slightly greater than the size given by a disk-checking program of a formatted disk.

Cylinder

This item configures the numbers of cylinders.

Head

This item configures the numbers of read/write heads.

Precomp

This item displays the number of cylinders at which to change the write timing.

Landing Zone

This item displays the number of cylinders specified as the landing zone for the read/write heads.

Sector

This item configures the numbers of sectors per track.

↩ **Back to Main Menu:**

Drive A & Drive B:

This item sets the type of floppy drives (usually only Drive A) installed.

Floppy 3 Mode Support:

This item allows you to use “3 Mode Floppy Drive” in Japanese computer system by selecting drive A, B, or both. Leave this item to its default [Disabled] setting if you are not using this Japanese standard floppy drive.

Halt On

This item determines whether the system stops if an error is detected during system boot-up.

[All Errors]: The system-boot will stop whenever the BIOS detect a non-fatal error.

[No Errors]: The system-boot will not stop for any error detected.

[All, But Keyboard]: The system-boot will stop for all errors but keyboard error.

Base Memory

This item displays the amount of base memory installed in the system. The value of the base memory is typically 640K for system with 640K or more memory size installed on the motherboard.

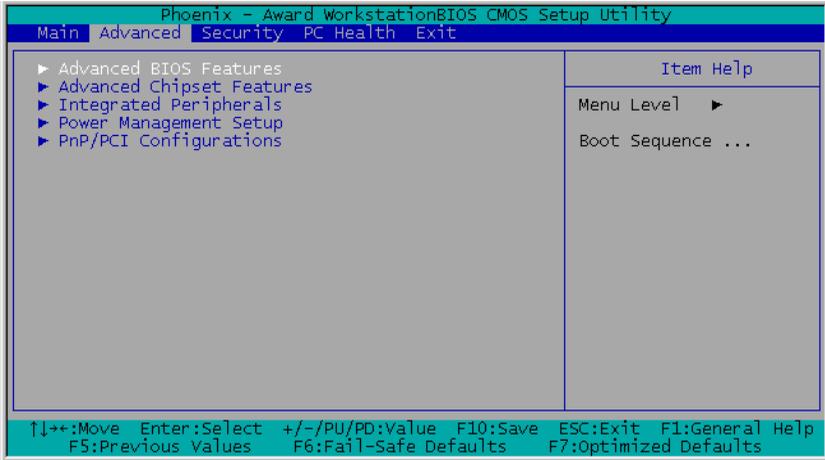
Extended Memory

This item displays the amount of extended memory detected during system boot-up.

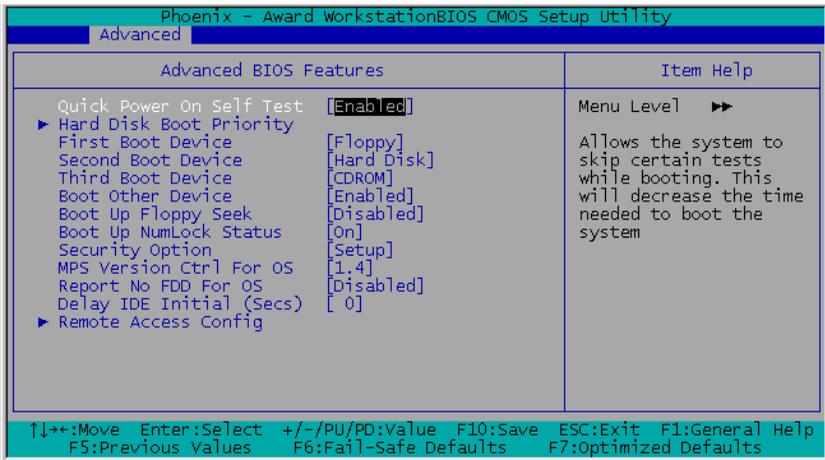
Total Memory

This item displays the total memory available in the system.

3.2. Advanced Menu



3.2.1. Advanced BIOS Features



Quick Power On Self Test

When set to [Enabled], this item speeds up the Power On Self Test (POST) after powering on the system. The BIOS shorten or skip some check during the POST.

Hard Disk Boot Priority:

This item selects the hard disks booting priority. By pressing <Enter> key, you can enter its submenu where the hard disks detected can be selected for the booting sequence to boot up system.

This item functions only when there is the option of [Hard Disk] in any one of the First/Second/Third Boot Device items.

First Boot Device / Second Boot Device / Third Boot Device / Boot Other Device

Select the drive to boot first, second and third in the [First Boot Device], [Second Boot Device], and [Third Boot Device] fields respectively. The BIOS will boot the operating system according to the sequence of the drive selected. Set [Boot Other Device] to [Enabled] if you wish to boot from another device other than these three items.

Boot Up Floppy Seek:

When set to [Enabled], the BIOS will check whether the floppy disk drive is installed or not.

Boot Up NumLock Status:

This item determines the default state of the numeric keypad at system booting up.

[On]: The numeric keypad functions as number keys.

[Off]: The numeric keypad functions as arrow keys.

Security Option

This item determines when the system will prompt for password - every time the system boots or only when enters the BIOS setup.

[Setup]: The password is required only when accessing the BIOS Setup.

[System]: The password is required each time the computer boots up.

NOTE: Don't forget your password. If you forget the password, you will have to open the computer case and clear all information in the CMOS before you can start up the system. But by doing this, you will have to reset all previously set options.

MPS Version Control For OS

This item specifies which version of MPS (Multi-Processor Specification) this motherboard will use. Leave this item to its default setting.

Report No FDD For OS:

When set to [Yes], this item allows you to run some older operating system without floppy disk drive. Leave this item to its default setting.

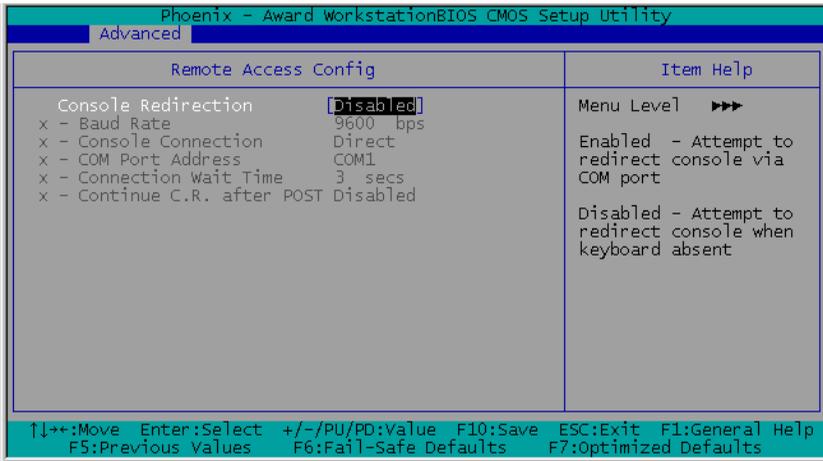
Delay IDE Initial (Secs):

This item allows the BIOS to support some old or special IDE devices by prolonging this delay time. A larger value will give more delay time to the device for which to initialize and to prepare for activation.

↩ **Remote Access Config:**

This item enables remote access to system through serial port.

Click <Enter> key to enter its submenu:

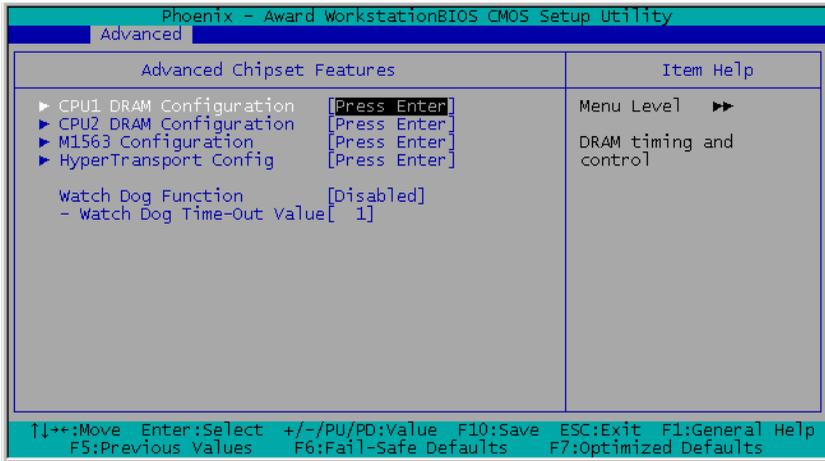


Console Redirection

[Enabled]: Attempt to redirect console via COM port.

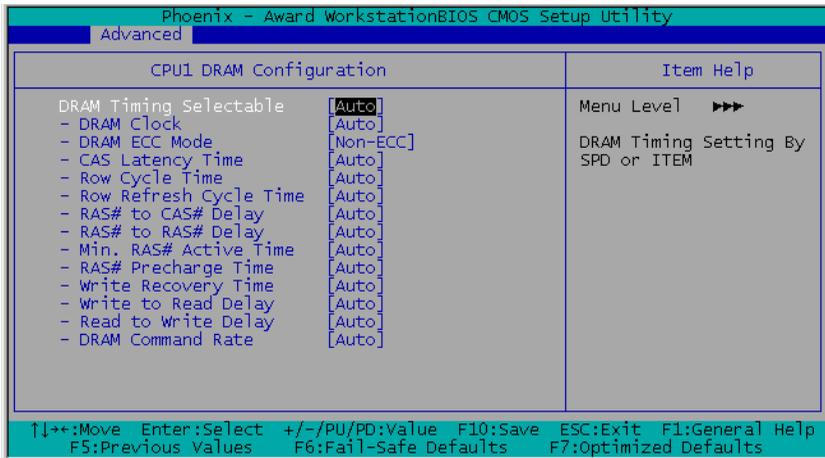
[Disabled]: Attempt to redirect console when keyboard absent.

3.2.2. Advanced Chipset Features



☞ CPU1/CPU2 DRAM Configuration

This item configures the DRAM timing and control. Click <Enter> key to enter its submenu:



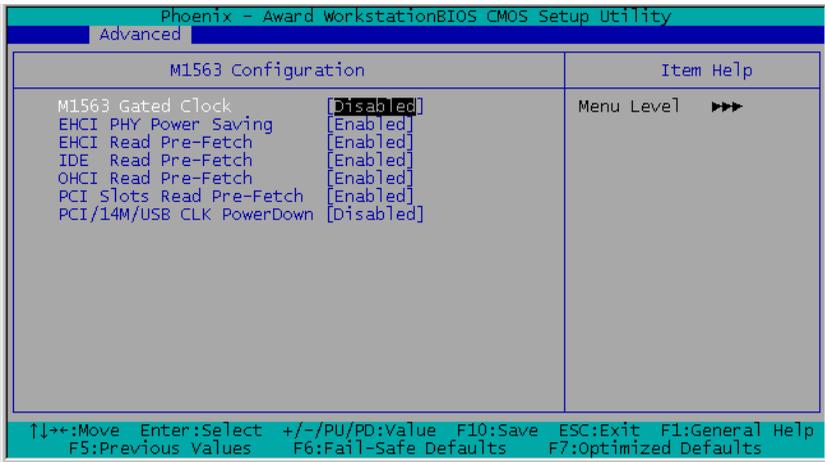
DRAM Timing Selectable

This item sets the optimal timings for the following four items, depending on the memory module you are using.

Leave this item to its default [Auto] setting, or if you want to configure its following options manually by selecting [Manual] setting.

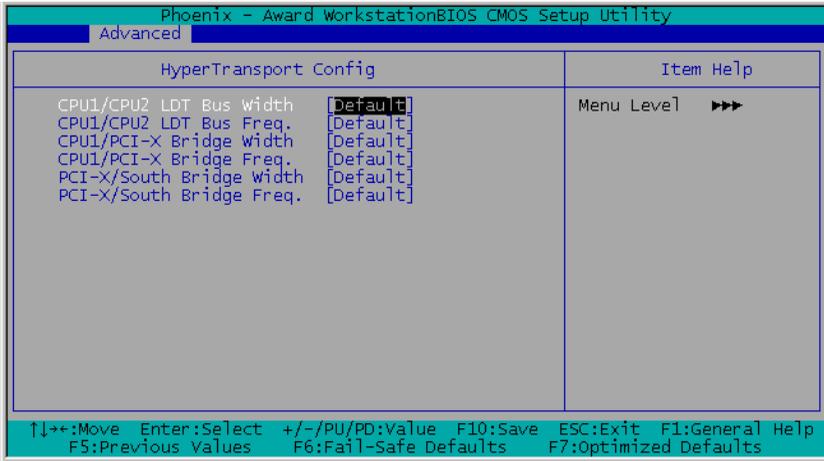
↪ **M1563 Configuration**

This item configures the power saving, clock gated and prefetch for M1563 south-bridge chipset. Click <Enter> key to enter its submenu:



↶ HyperTransport Config

This item configures width and frequency for HyperTransport. Click <Enter> key to enter its submenu:



CPU1/CPU2 LDT Bus Width

This item specifies CPU1 to CPU2 Hyper Transport Link Data width.

CPU1/CPU2 LDT Bus Freq.

This item specifies CPU1 to CPU2 Hyper Transport Link Clock frequency.

CPU1/PCI-X Bridge Width

This item specifies CPU1 to PCI-X Hyper Transport Link Data width.

CPU1/PCI-X Bridge Freq.

This item specifies CPU1 to PCI-X Hyper Transport Link Clock frequency.

PCI-X/South Bridge Width

This item specifies PCI-X to South Bridge Hyper Transport Link Data width.

PCI-X/South Bridge Freq.

This item specifies PCI-X to South Bridge Hyper Transport Link Clock frequency.

⏪ **Back to Advanced Chipset Features Menu:**

Watch Dog Function

This option controls the function for Watch Dog.

[Disabled]: Disable the Watch Dog function.

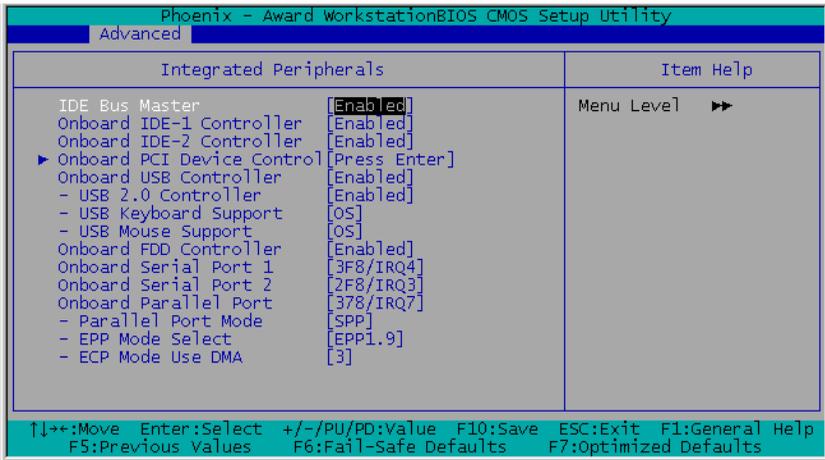
[Enabled/Sec.]: Enable the Watch Dog function by the timer based on seconds.

[Enabled/Min.]: Enable the Watch Dog function by the timer based on minutes.

✳ **Watch Dog Time-Out Value**

Type in the Time-Out value for your Watch Dog function.

3.2.3. Integrated Peripherals



IDE Bus Master:

This option enables or disables the IDE bus mastering capability under the DOS environment.

Onboard IDE-1 Controller

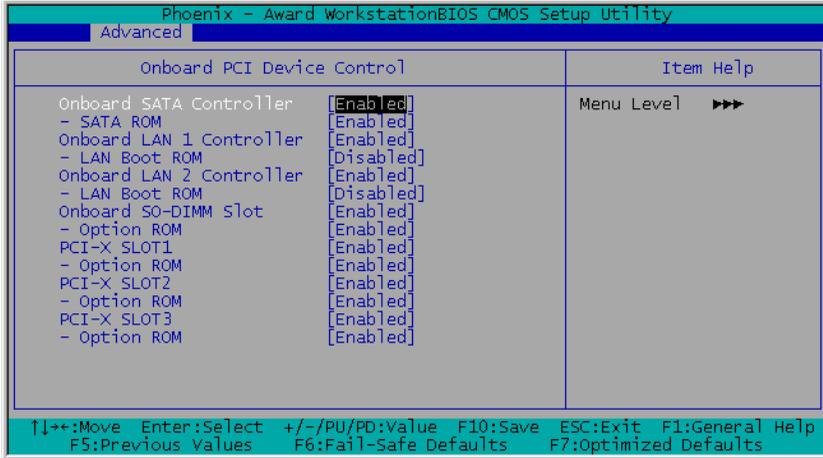
This item enables or disables the onboard IDE-1 controller.

Onboard IDE-2 Controller

This item enables or disables the onboard IDE-2 controller.

☞ Onboard PCI Device:

Click <Enter> key to enter its submenu:



Onboard SATA Controller:

This option enables or disables the onboard SATA controller.

* SATA ROM

This item allows you to use the SATA ROM device.

Onboard LAN1 Controller:

This option enables or disables the LAN1 controller.

* LAN Boot ROM

This item allows you to use the boot ROM (instead of a disk drive) to boot-up the system and access the local area network directly.

Onboard LAN2 Controller:

This option enables or disables the LAN2 controller.

* LAN Boot ROM

This item allows you to use the boot ROM (instead of a disk drive) to boot-up the system and access the local area network directly.

Onboard SO-DIMM slot

This option enables or disables the onboard SO-DIMM slot controller.

✧ **Option ROM**

This item allows you to use the ROM device.

PCI-X SLOT1

This option enables or disables the PCI-X slot1 controller.

✧ **Option ROM**

This item allows you to use the ROM device.

PCI-X SLOT2

This option enables or disables the PCI-X slot2 controller.

✧ **Option ROM**

This item allows you to use the ROM device.

PCI-X SLOT3

This option enables or disables the PCI-X slot3 controller.

✧ **Option ROM**

This item allows you to use the ROM device.

↶ **Back to Integrated Peripherals Menu:**

Onboard USB Controller:

This item enables the USB controller at all USB ports or specific port(s).

✧ **USB 2.0 Controller:**

This item enables the USB 2.0 controller.

✧ **USB Keyboard Support:**

This item allows you to select [**BIOS**] for using USB keyboard in DOS environment, or [**OS**] in OS environment.

✧ **USB Mouse Support:**

This item allows you to select [**BIOS**] for using USB mouse in DOS environment, or [**OS**] in OS environment.

Onboard FDD Controller:

This option enables or disables the onboard FDC controller.

Onboard Serial Port 1 / Onboard Serial Port 2:

This item determines which I/O addresses the onboard Serial Port controller will access.

[Auto]: The system automatically select an I/O address for the onboard Serial Port.

[3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3]: Allows you to manually select an I/O address for the onboard Serial Port.

[Disabled]: Disables the onboard Serial Port.

Onboard Parallel Port:

This item specifies the I/O address used by the parallel port.

[Disabled]: This option prevents the parallel port from accessing any system resources. When the value of this option is set to [Disabled], the printer port becomes unavailable.

[378/IRQ7]: This option allows the parallel port to use [378/IRQ7] as its I/O port address. The majority of parallel ports on computer systems use IRQ7 and I/O Port 378H as the standard setting.

[278/IRQ5]: This option allows the parallel port to use [278/IRQ5] as its I/O port address.

[3BC/IRQ7]: This option allows the parallel port to use [3BC/IRQ7] as its I/O port address.

✧ **Parallel Port Mode:**

This item specifies the parallel port mode.

[SPP]: (Standard Parallel Port) Allows bi-directional parallel port operation at normal speed.

[EPP]: (Enhanced Parallel Port) Allows bi-directional parallel port operation at maximum speed.

[ECP]: (Extended Capabilities Port) Allows bi-directional parallel port operation at a speed faster than the normal mode's data transfer rate.

[ECP+EPP]: Allows parallel port operation at ECP and EPP mode.

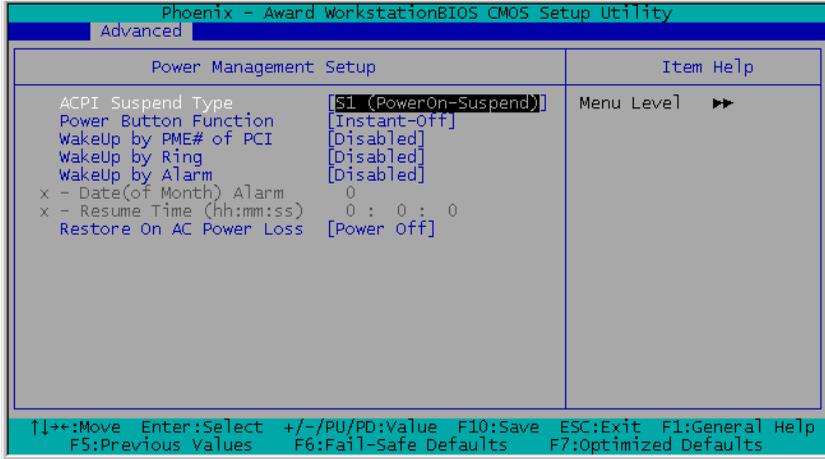
✧ **EPP Mode Select:**

This item selects the EPP mode.

✧ **ECP Mode Use DMA:**

This item selects the DMA channel of the parallel port.

3.2.4. Power Management Setup



ACPI Suspend Type:

This item selects the type of Suspend mode.

[S1 (PowerOn-Suspend)]: Enables the Power On Suspend function.

[S3 (Suspend-To-RAM)]: Enables the Suspend to RAM function.

Power Button Function

This item selects the method of powering off your system:

[Delay 4 Sec.]: Pushing the power button for more than 4 seconds will power off the system. This will prevent the system from powering off in case you accidentally hit or pushed the power button.

[Instant-Off]: Pressing and then releasing the power button at once will immediately power off the system.

Wake-Up by PME# of PCI

When set to [Enabled], access to the onboard LAN or a PCI card such as a modem or LAN card will cause the system to wake up. The PCI card must support the wake up function.

Wake-Up by Ring

When set to [Enabled], telephone calls coming through an external or internal modem will power-on your system.

WakeUp by Alarm

When set to [Enabled], you can set the date and time you would like the Soft-Off PC to power-on in the “**Date (of Month) Alarm**” and “**Time (hh:mm:ss) Alarm**” items. However, if the system is being accessed by incoming calls or the network (Resume On Ring/LAN) prior to the date and time set in these items, the system will give priority to the incoming calls or network instead.

*** Date (of Month) Alarm**

[0]: This option power-on the system everyday according to the time set in the “Time (hh:mm:ss) Alarm” item.

[1-31]: This option selects a date you would like the system to power-on. The system will power-on on the date set, and the time set in the “Time (hh:mm:ss) Alarm” item.

*** Resume Time (hh:mm:ss)**

This item sets the time you would like the system to power-on.

Restore On AC Power Loss

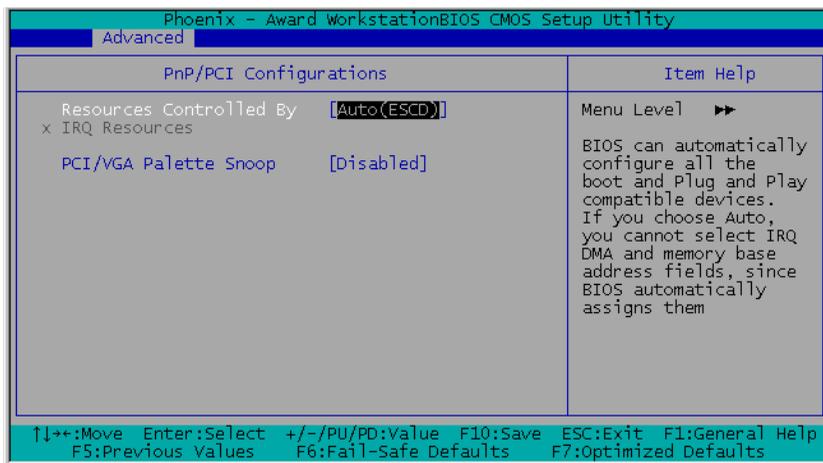
This item selects the system action after an AC power failure.

[Power Off]: When power returns after an AC power failure, the system’s power remains off. You must press the Power button to power-on the system.

[Power On]: When power returns after an AC power failure, the system’s power will be powered on automatically.

[Last State]: When power returns after an AC power failure, the system will return to the state where you left off before power failure occurs. If the system’s power is off when AC power failure occurs, it will remain off when power returns. If the system’s power is on when AC power failure occurs, the system will power-on when power returns.

3.2.5. PnP/PCI Configurations



Resources Controlled By

This item configures all of the boot and Plug-and-Play compatible devices.

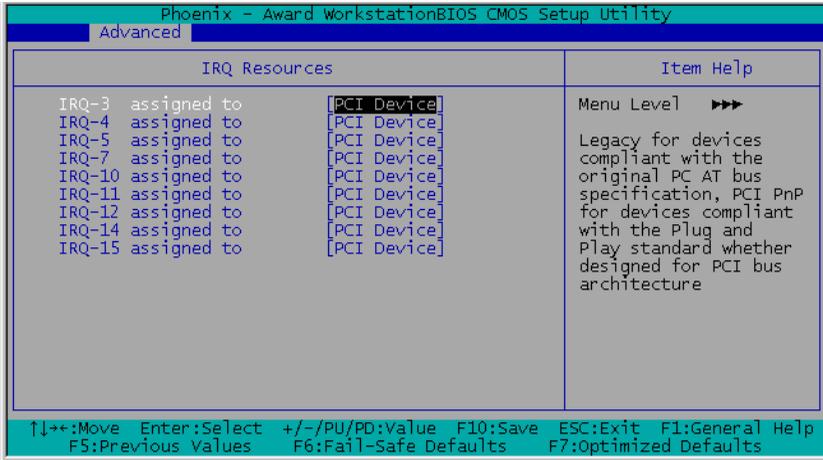
[Auto(ESCD)]: The system will automatically detect the settings.

[Manual]: Choose the specific IRQ resources in the “IRQ Resources” menu.

IRQ Resources

Click <Enter> key to enter its submenu:

This item sets each system interrupt to either [PCI Device] or [Reserved].



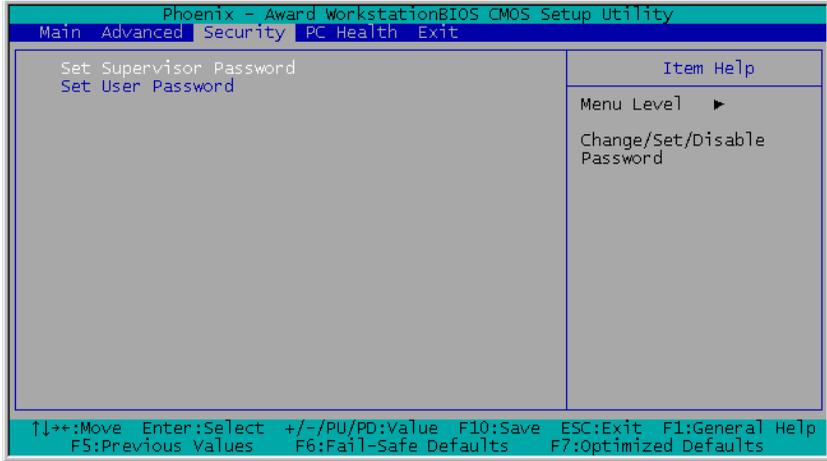
PCI/VGA Palette Snoop:

This item determines whether the MPEG ISA/VESA VGA cards can work with PCI/VGA or not.

[Enabled]: MPEG ISA/VESA VGA cards work with PCI/VGA.

[Disabled]: MPEG ISA/VESA VGA cards do not work with PCI/VGA.

3.3. Security Menu



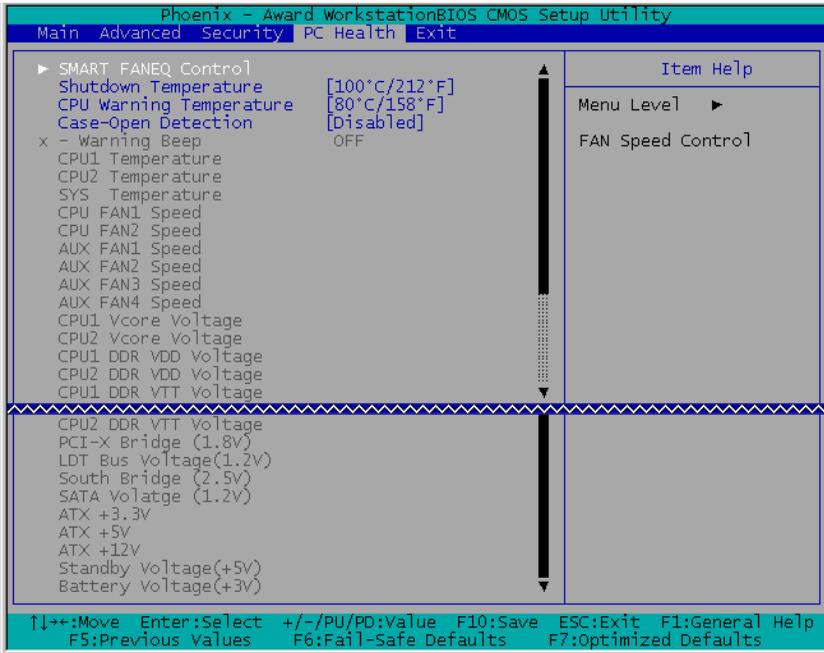
Set Supervisor Password

This option protects the BIOS configuration or restricts access to the computer itself. The Supervisor Password is used to protect the stored CMOS options from being changed by unauthorized users.

Set User Password

This option protects the BIOS configuration or restricts access to the computer itself. The User Password requires all users to enter a password in order to use the system, and/or enter the BIOS setup (but can't change its contents).

3.4. PC Health Menu



SMART FANEQ Control

This item allows you to control the CPU fan speed down to a specific percentage.

When set to a specific percentage, the CPU fan speed will run at the percentage you set in this item if the temperature limit set in the item “Active Temperature” is not exceeded.

The CPU fan speed will run at 100% regardless of what the percentage you set in this item if the temperature limit set in the item “Active Temperature” is exceeded.

Shutdown Temperature

This item sets the temperature that would shutdown the system automatically in order to prevent system overheats.

CPU Warning Temperature

This item selects the CPU's warning temperature limit. Once the system has detected that the CPU's temperature exceeded the limit, warning beeps will sound.

NOTE: The onboard hardware monitor function is capable of detecting these system health conditions. If you want a warning message to pop-up or a warning alarm to sound when an abnormal condition occurs, you must install the "Hardware Doctor" utility. This utility is included in the "Driver & Utility CD" that came packed with this motherboard.

Case-Open Detection

This option controls the function for case-opening detection device connected at pin-7 and pin-8 at FPIO1 header.

[Disabled]: Disable the Case-Open Detection.

[Enabled]: Enable the Case-Open Detection.

[Cleared]: Clear the warning message when the case-opening situation is detected.

※ **Warning Beep**

This option controls the onboard buzzer to beep when the case-opening situation is detected.

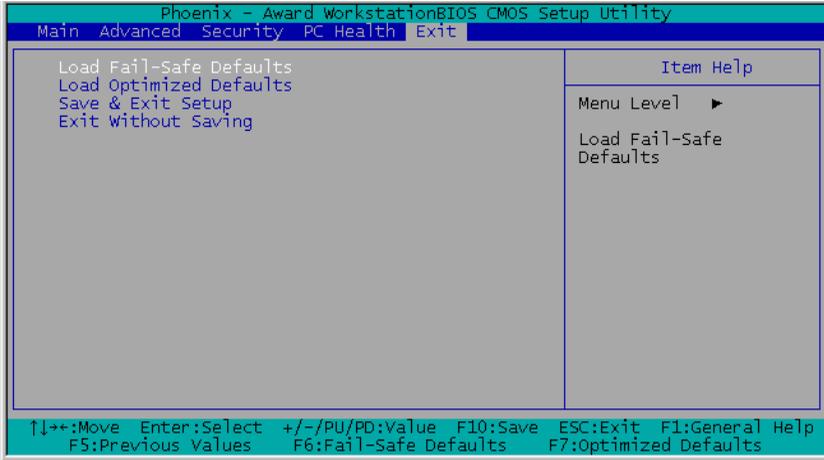
All Voltages, Fans Speed and Thermal Monitoring

These unchangeable items list the current status of the CPU and environment temperatures, fan speeds, and system power voltage.

NOTE: The hardware monitoring features for temperatures, fans and voltages will occupy the I/O address from 294H to 297H. If you have a network adapter, sound card or other add-on cards that might use those I/O addresses, please adjust your add-on card I/O address to avoid using these addresses.

3.5. Exit Menu

Once you have made all your selections in the previous BIOS setup menu, you have to save the settings and exit the setup menu. Select the Exit Menu in the menu bar to show the following menu:



NOTE: Pressing <ESC> does not exit this menu. You have to select one of the options in this menu, such as “Exit Without Saving” to exit the menu without saving your previous settings.

Load Fail-Safe Defaults

This option loads the BIOS default values for the most stable, minimal-performance system operations.

Load Optimized Defaults

This option loads the BIOS default values that are factory settings for optimal-performance system operations.

Save & Exit Setup

This option saves your selections and exits the setup menu.

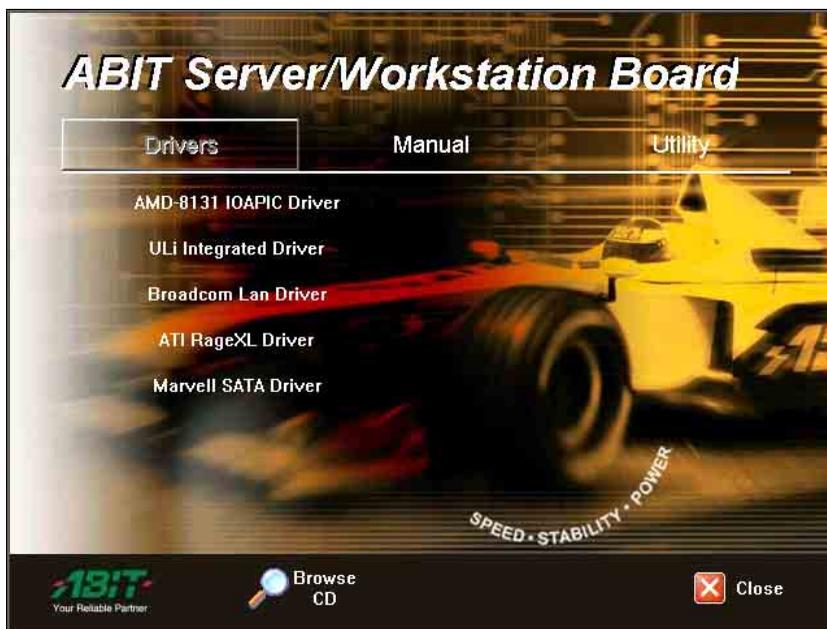
Exit Without Saving

This option exits the setup menu without saving any change.

Chapter 4. Driver Installation

After all the hardware has been installed, you must first install the operating system and then the software drivers. The necessary drivers are all included within the Drivers & Utilities CD that came packaged with your workstation board.

The display shown in the following figure should appear after inserting this CD into your CD-ROM drive, if not, enter → [My Computer] → CD-ROM drive → double click [Launch].



Setup Items

- **Drivers**
Install the drivers for Windows Operating System.
- **Manual**
View the user's manual in PDF file.
- **Utility**
Click to enter the sub-screen for installing software like Acrobat Reader, Award Flash, DirectX, and LoFormat utility.
- **Browse CD**
Browse the contents of this CD-ROM.
- **Close**
Exit the CD setup Items Menu.

Appendix A. How to Get Technical Support

(From our website) <http://www.abit.com.tw>

(In North America) <http://www.abit-usa.com>

(In Europe) <http://www.abit.nl>

Thank you for choosing ABIT products. ABIT sells all our products through distributors, resellers and system integrators; we have no direct sales to end-users. Before sending email for tech support please check with your resellers or integrators if you need any services, they are the ones who sold you your system and they should know best as to what can be done, how they serve you is a good reference for future purchases.

We appreciate every customer and would like to provide the best service to you. Providing fast service to our customers is our top priority. However we receive many phone calls and a huge amount of email from all over the world. At the present time it is impossible for us to respond to every single inquiry. Therefore it is quite possible that if you send an email to us that you may not receive a response.

We have done many compatibility tests and reliability tests to make sure our products have the best quality and compatibility. In case you need service or technical support, please understand the constraint we have and **always check with the reseller who sold the product to you first.**

To expedite service, we recommend that you follow the procedures outlined below before contacting us. With your help, we can meet our commitment to provide the best service to the **greatest number of ABIT customers:**

- 1. Check the Manual.** It sounds simple but we have taken a lot of care in making a well-written and thorough manual. It is full of information that doesn't only pertain to motherboards. The CD-ROM included with your board will have the manual as well as drivers. If you don't have either one, go to our Program Download Area of the Website or FTP server.
- 2. Download latest BIOS, software or drivers.** Please go to our Program Download area on our Website to check to see if you have the latest BIOS. They are developed over periods of time to fix bugs or incompatibilities. **Also please make sure you have the latest drivers from your peripheral cards makers!**
- 3. Check the ABIT Technical Terms Guide and FAQ on our Website.** We are trying to expand and make the FAQs more helpful and information rich. Let us know if you have any suggestions. For hot topics check out our HOT FAQ!
- 4. Internet Newsgroups.** They are a great source of information and many people there can offer help. ABIT's Internet News group, alt.comp.periphs.mainboard.abit, is an ideal forum for the public to exchange information and discuss experiences they have had with ABIT products. Many times you will see that your question has already been asked before. This is a public Internet news group and it is reserved for free discussions. Here is a list of some of the more popular ones:

[alt.comp.periphs.mainboard.abit](#)
[comp.svs.ibm.pc.hardware.chips](#)
[alt.comp.hardware.overclocking](#)
[alt.comp.hardware.homebuilt](#)
[alt.comp.hardware.pc-homebuilt](#)

5. **Ask your reseller.** Your ABIT authorized distributor should be able to provide the fastest solution to your technical problem. We sell our products through distributors who sell to resellers and stores. Your reseller should be very familiar with your system configuration and should be able to solve your problem much more efficiently than we could. After all, your reseller regards you as an important customer who may purchase more products and who can urge your friends to buy from him or her as well. They integrated and sold the system to you. They should know best what your system configuration is and your problem. They should have reasonable return or refund policies. How they serve you is also a good reference for your next purchase.
6. **Contacting ABIT.** If you feel that you need to contact ABIT directly you can send email to the ABIT technical support department. First, please contact the support team for the branch office closest to you. They will be more familiar with local conditions and problems and will have better insight as to which resellers offer what products and services. Due to the huge number of emails coming in every day and other reasons, such as the time required for problem reproduction, we will not be able to reply to every email. Please understand that we are selling through distribution channels and don't have the resources to serve every end-user. However, we will try to do our best to help every customer. Please also remember that for many of our technical support team English is a second language, you will have a better chance of getting a helpful answer if your question can be understood in the first place. Be sure to use very, simple, concise language that clearly states the problem, avoid rambling or flowery language and always list your system components. Here is the contact information for our branch offices:
7. **RMA Service.** If your system has been working but it just stopped, but you have not installed any new software or hardware recently, it is likely that you have a defective component. Please contact the reseller from whom you bought the product. You should be able to get RMA service there.
8. **Reporting Compatibility Problems to ABIT.** Because of tremendous number of email messages we receive every day, we are forced to give greater weight to certain types of messages than to others. For this reason, any compatibility problem that is reported to us, giving detailed system configuration information and error symptoms will receive the highest priority. For the other questions, we regret that we may not be able to reply directly. But your questions may be posted to the Internet news group in order that a larger number of users can have the benefit of the information. Please check the news group from time to time.

<p>North America and South America</p>	<p>ABIT Computer (U.S.A.) Corporation 45531 Northport Loop West, Fremont CA, 94538, U.S.A. Tel: 1-510-623-0500 Fax: 1-510-623-1092 Sales: sales@abit-usa.com Latin America Sales: ventas@abit-usa.com Marketing: marketing@abit-usa.com Web Site: http://www.abit-usa.com</p>
<p>RMA Center</p>	<p>46808 Lakeview Blvd. Fremont, CA 94538, U.S.A.</p>
<p>UK and Ireland</p>	<p>ABIT Computer (U.K.) Corporation Ltd. Unit 3, 24-26 Boulton Road, Stevenage, Herts SG1 4QX, UK Tel: 44-1438-228888 Fax: 44-1438-226333 E-mail: sales@abitcomputer.co.uk</p>
<p>Germany and Benelux (Belgium, Netherlands, Luxembourg), France, Italy, Spain, Portugal, Greece, Denmark, Norway, Sweden, Finland, and Switzerland</p>	<p>AMOR Computer B.V. (ABIT's European Office) Jan van Riebeeckweg 15, 5928LG, Venlo, The Netherlands Tel: 31-77-3204428 Fax: 31-77-3204420 Sales: sales@abit.nl Web Site: http://www.abit.nl</p>
<p>Austria, Czech, Romania, Bulgaria, Slovakia, Croatia, Bosnia, Serbia, and Macedonia</p>	<p>Asguard Computer Ges.m.b.H Schmalbachstrasse 5, A-2201 Gerasdorf / Wien, Austria Tel: 43-1-7346709 Fax: 43-1-7346713 E-mail: asguard@asguard.at</p>
<p>Shanghai</p>	<p>ABIT Computer (Shanghai) Co. Ltd. Tel: 86-21-6235-1829 Fax: 86-21-6235-1832 Web Site: http://www.abit.com.cn</p>
<p>Russia and CIS</p>	<p>ABIT Computer (Russia) Co. Ltd. Sales: sales@abit.ru Info: info@abit.ru Web Site: http://www.abit.ru</p>
<p>Poland</p>	<p>ABIT Computer (Poland) Co. Ltd. Przedstawicielstwo w Polsce ul. Wita Stwosza 28, 50-149 Wroclaw Tel: 48 71 780 78 65 / 66 Fax: 48 71 372 30 87</p>
<p>Japan</p>	<p>Web Site: http://www.abit4u.jp</p>
<p>Taiwan Head Office <i>(Serving all other territories not listed above. Taiwan is 8+ GMT time, and may have different holiday calendar from yours.)</i></p>	<p>ABIT Computer Corporation No. 323, Yang Guang St., Neihu, Taipei, 114, Taiwan Tel: 886-2-8751-8888 Fax: 886-2-8751-3382 Sales: sales@abit.com.tw Marketing: market@abit.com.tw Web Site: http://www.abit.com.tw</p>



Technical Support Form

Company Name:

Phone Number:

Contact Person:

Fax Number:

E-mail Address:

Model	*	BIOS ID #	*
Motherboard Model No.		DRIVER REV	
OS/Application	*		
Hardware Name	Brand	Specifications	
CPU	*		
HDD	<input type="checkbox"/> IDE1 <input type="checkbox"/> IDE2		
CD-ROM-Drive	<input type="checkbox"/> IDE1 <input type="checkbox"/> IDE2		
System Memory			
ADD-ON CARD			

Problem Description:

