



Item Checklist

This item checklist is only available for retail market. Completely check your package, If you discover damaged or missing items, contact your retailer.

- ☒ P4I848P Pro series mainboard
- ☒ QDI Utility CD
- ☒ 1HD ribbon cable
- ☒ 1 FDD cable
- ☒ User's manual
- ☐ I/O shield(option)
- ☐ 1 10-pin ribbon cable with bracket for USB(option)
- ☐ Cable with bracket for 6CH_BRACKET(option)
- ☐ Signal cables for Serial ATA(option)
- ☐ Power cables for Serial ATA(option)



Notice

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If you need any further information, please visit our web-site: "www.qdigrp.com".

Certificate of Compliance



The following products have been tested by us with the listed standards and found in compliance with the council EMC directive 89/336/EEC. It is demonstrative for the compliance with this EMC Directive.

Submittor: QDI Technology Limited
23Floor, Lincoln House, Taikoo Place 979 King's
Road, Quarry Bay, HONG KONG

Product: MotherBoard

M/N: P4I848P Pro

- ☒ EN 55022/A1:2000 Limits and methods of measurements of radio disturbance characteristics of information technology equipment
- ☒ EN 61000-3-2/A14:2000 Electromagnetic compatibility(EMC)
Part 3: Limits
Section 2: Limits for harmonic current emissions (equipment input current \leq 16A per phase)
- ☒ EN 61000-3-3/A1:2001 Electromagnetic compatibility(EMC)
Part 3: Limits
Section 3: Limits of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current \leq 16A
- ☒ EN 55024/A1:2001 Information technology equipment-Immunity characteristics limits and methods of measurement

Signature : Wang Dayong

Date : 2004.02.01

Printed Name : Wang Dayong

Position: General Manager

The statement is based on a single evaluation of one sample of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab.logo.

Declaration of conformity



Trade Name:	QDI Computer (U . S . A .) Inc.
Model Name:	P4I848P Pro
Responsible Party:	QDI Computer (U . S . A .) Inc.
Address:	41456 Christy Street Fremont, CA 94538
Telephone:	(510)668-4933
Facsimile:	(510)668-4966
Equipment Classification:	FCC Class B Subassembly
Type of Product:	Mainboard
Manufacturer:	QDI TECHNOLOGY (HK) Inc.
Address:	23Floor, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, HONG KONG

Supplementary Information:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Tested to comply with FCC standards.

Signature : Wang Dayong

Date : 2004

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Layout



Be sure to unplug the AC power supply before adding or removing expansion cards, RAM or other system peripherals, otherwise your mainboard and RAM might be seriously damaged.



Be sure to add some Silicone Grease between the CPU and the heatsink to keep them fully contacted to meet the heat sink requirement.



Note:

This manual is suitable for P4I848P Pro series of mainboards. Each mainboard is carefully designed for the PC user who wants different features.

- 6A:** with 6 channel Audio
- L:** with onboard 10/100M LAN
- F:** with IEEE 1394
- K:** with onboard G-bit LAN

Chapter 1



Introduction

P4I848P Pro series of mainboards utilize Intel® 848P + ICH5 chipset, providing a fully compatible, high performance and cost-effective ATX platform. The new integrated technologies, together with AC'97 audio(2/6-channel), 8 USB, 2 SATA, and ATA100/66/33, give customers an advanced, multimedia solution at reasonable price. It provides 400/533/800MHz host bus speed to support Intel® Pentium 4 socket 478 processors and the DDR266/333/400 memory. It also provides advanced features such as ACPI and Keyboard Password Power-on functions(optional). Suspending to RAM, the optimal implementation of the Advanced Configuration and Power Interface (ACPI) specification, makes the PC's power consumption drop to the lowest possible level and enable quick wakeup.



Key Features

Form factor

- ATX form factor of 305mm x 210mm

Microprocessor

- Supports Intel® Pentium 4 (Hyper-Threading) socket 478 processors
- Supports Intel® Pentium 4 (Northwood) socket 478 processors at 2.4/2.6/2.8/3.0/3.2/3.4GHz with 800 MHz FSB
- Supports Intel® Pentium 4 (Northwood) socket 478 processors at 1.8/2.0/2.2/2.26/2.4/2.53/2.66/2.8/3.06GHz and above
- Supports Intel® Prescott socket 478 processors at 2.8GHz with 533 MHz FSB and at 2.8/3.0/3.2/3.4GHz with 800MHz FSB
- Supports Prescott Celeron CPU with 533 MHz FSB in the future
- Supports 400/533/800MHz host bus speed

System memory

- Provides two 184-pin DDR SDRAM interfaces
- Supports DDR266/333/400 SDRAM
- Supports 64/128/256/512Mb technology up to 2GB

Graphics Interface

- The AGP interface Supports 0.8V/1.5V signaling with 8X/4X data transfer and 8X/4X AGP Fast Writes

Onboard IDE

- Supports Independent timing of up to 4 drives
- Supports Ultra ATA 33/66/100, PIO mode
- Two fast IDE interfaces supporting four IDE devices including IDE hard disks and CD ROM drives

Onboard LAN(optional)

- 10/100(available on -L mainboard)/1000(available on -Kmainboard) Mbit/sec Ethernet support
- 10/100/1000M(available on -K mainboard) LAN interface built-in on board

Note: If the mainboard has onboard LAN, PCI1 slot only can connect to slave device.

USB 2.0

- USB 2.0 compliant, operates at 480Mbps, about 40X times faster than USB 1.1 which currently works at a snails pace of just 12Mbps
- Provides 8 USB 2.0 ports

Onboard I/O

- One floppy port supporting up to two 3.5" or 5.25" floppy drives with 360K/720K/1.2M/1.44M/2.88M format
- One high speed 16550 compatible COM with 16 byte send/receive FIFO
- One parallel port supports SPP/EPP/ECP mode
- Supports PS/2 mouse and PS/2 keyboard
- Provides one IrDA connector
- All I/O ports can be enabled/disabled in the BIOS setup



Onboard Audio

- AC'97 2.2 Specification Compliant
- Provides onboard Line-in Jack, Microphone-in Jack and Speaker-out Jack

6-channel Onboard Audio

- AC'97 2.2 Specification Compliant
- Provides Front left&right, Rear left&right/Line-in Jack and Center&Woofer/Microphone-in Jack, which can be specified by software

Advanced features

- PCI 2.2 Specification Compliant
- Provides Trend ChipAwayVirus On Guard
- Supports Windows 98/2000/ME/XP soft-off
- Supports Keyboard Password Power-on function(optional)
- Supports system monitoring(monitors CPU and system temperatures, system voltages, fan speed)
- Supports CPU triple overheat protection
 1. If the temperature of the CPU reaches the CPU Warning Temperature set in BIOS, the buzzer will warn.
 2. At the same time, the CPU THER-Throttling will be slowed down to the setpoint in BIOS.
 3. If the temperature of the CPU reach the CPU Shutdown Temperature, the system will be shutdown automatically under the ACPI OS and the data will be saved before.

Onboard SATA

- Two SATA devices including SATA HDD and CDROM/DVD ROM devices
- Supports 150Mbps transfer rate.

BIOS

- Licensed advanced AWARD(Phoenix) BIOS, supports flash ROM, plug and play ready
- Supports IDE CDROM/USB boot up.

Green function

- Supports ACPI (Advanced Configuration and Power Interface) and ODPM (OS Directed Power Management)
- Supports ACPI power status: S0 (full-on), S1 (power on suspend), S3 (suspend to RAM), S4(suspend to Disk, depends on OS) and S5 (soft-off)

Main Expansion Slots and Connectors

Slot/Port (Quantity)	Description
PCI(5)	PCI slots
IDE(2)	IDE ports
FLOPPY(1)	Floppy Drive port
DDR(2)	DIMM socket
USB(8)	USB connectors
AGP(1)	AGP slot
LAN(1) (optional)	LAN connector
COM(1)	COM connector
PARALLEL(1)	Parallel connector
IrDA(1)	IrDA connector



Chapter 2



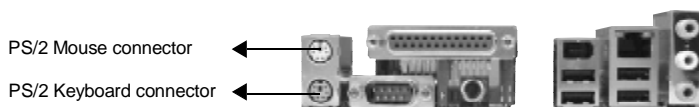
Installation Instructions

This section covers External Connectors and Jumper Settings. Refer to the mainboard layout chart for locations of all jumpers, external connectors, slots and I/O ports. Furthermore, this section lists all necessary connector pin assignments for your reference. The particular state of the jumpers, connectors and ports are illustrated in the following figures. Before setting the jumpers or inserting these connectors, please pay attention to the direction.

External Connectors

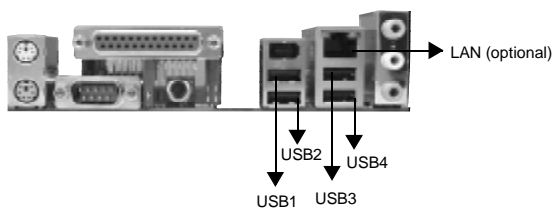
PS/2 Keyboard/Mouse Connector

PS/2 keyboard connector is for the usage of PS/2 keyboard. If using a standard AT size keyboard, an adapter should be used to fit this connector. PS/2 mouse connector is for the usage of PS/2 mouse.



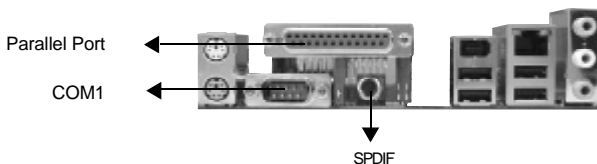
USB1, USB2, USB3, USB4 and LAN Connectors (optional)

Four USB ports are for connecting USB devices. The RJ-45 connector is for onboard LAN.



Parallel Port, Serial Port Connectors (COM1) and SPDIF OUT Connector

The parallel port connector can be connected to a parallel device such as a printer. The serial port COM1 connector can be connected to a serial port device such as a serial port mouse. You can enable/disable them and choose the IRQ or I/O address in "Integrated Peripherals" from AWARD BIOS SETUP. The S/PDIF (Sony / Philips Digital Interface) input allow your digital audio input from digital audio devices (optional). The S/PDIF output is capable of providing digital audio data or compressed AC3 data to an external Dolby digital decoder.



Warning:

Be sure to unplug the AC power supply before adding or removing expansion cards or other system peripherals, otherwise your mainboard and expansion cards might be seriously damaged.



IEEE 1394 port(optional)

IEEE 1394 port is for connecting IEEE 1394 devices.



IEEE 1394 Port(optional)

Line-in jack, Microphone-in jack and Speaker-out jack

The Line-in jack can be connected to devices such as a cassette or minidisc player to playback or record.

The Microphone-in jack can be connected to a microphone for voice input.

The Speaker-out jack allows you to connect speakers or headphones for audio output from the internal amplifier.

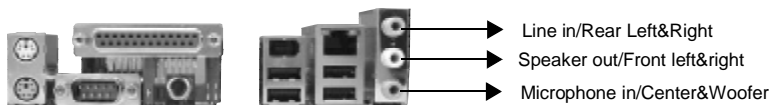


6-Channel Audio

This mainboard utilizes ALC655 chip providing 6-channel Audio, which consists of Front Left, Front Right, Rear Left, Rear Right, Center and Woofer for a complete surround sound effect. When 6-Channel audio is available, the front Left&Right jack can be connected to the Front speakers, the Back Left&Right jack can be connected to the rear speakers and the Center&Woofer jack can be connected to the center speaker and woofer.

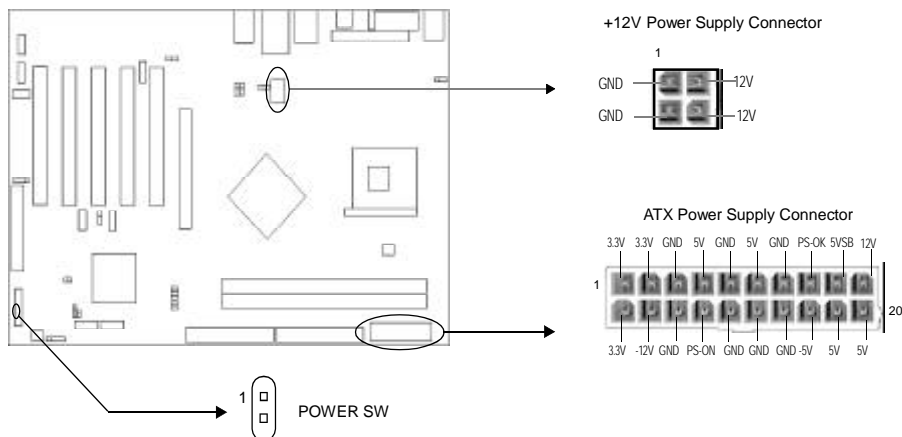
Microphone function is offered by F_AUDIO Connector on the mainboard now.

If set 2-Channel Audio mode on -6A mainboard, you can connect two speakers to the Front Left&Right jack, at the same time use the Rear Left&Right jack as Line in jack, and use the Center&Woofer jack as Microphone in jack.



ATX 12V Power Supply Connector & Power Switch (POWER SW)

The power switch (POWER SW) should be connected to a momentary switch. When powering up your system, first turn on the mechanical switch of the power supply (if one is provided), then push once the power switch. When powering off the system, you needn't turn off the mechanical switch, just push once the power switch.



Note: If you change "Soft-off by PWR-BTTN" from default "Instant-off" to "Delay 4 Sec" in the "POWER MANAGEMENT SETUP" section of the BIOS, the power switch should be pressed for more than 4 seconds before the system powers down.

Hard Disk LED Connector (HD_LED)

The connector connects to the case's IDE indicator LED indicating the activity status of IDE hard disk. The connector has an orientation. If one way doesn't work, try the other way.

Reset Switch (RESET)

The connector connects to the case's reset switch. Press the switch once, the system resets.



Speaker Connector (SPEAKER)

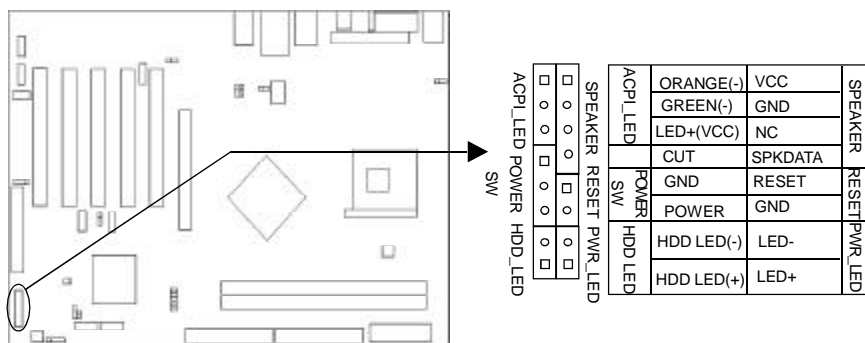
The connector can be connected to the speaker on the case.

Power LED Connector (PWR_LED)

When the system is in S0 status, the LED is on. When the system is in S1 status, the LED is blink; When the system is in S3, S4, S5 status, the LED is off. The connector has an orientation.

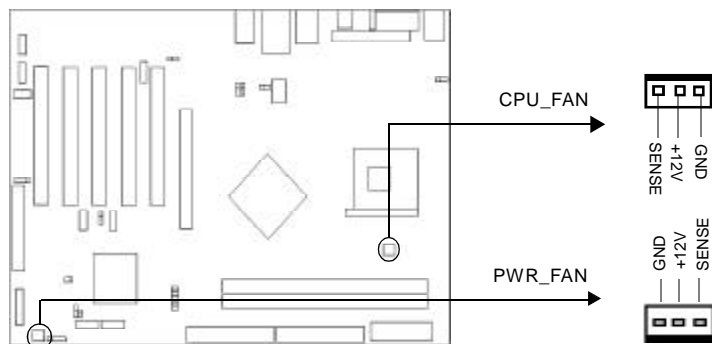
ACPI LED Connector (ACPI_LED)

The ACPI LED is a dual-color light with three pins. Pin1 and Pin2 drive different color lights. If Pin1 drives the orange light, then, Pin2 drives the green light, the following status will come out. When the system is in S0 status, the LED is green on. When the system is in S1 status, the LED is green blink. When the system is in S3 status, the LED is orange on. When the system is in S4, S5 status, the LED is off.



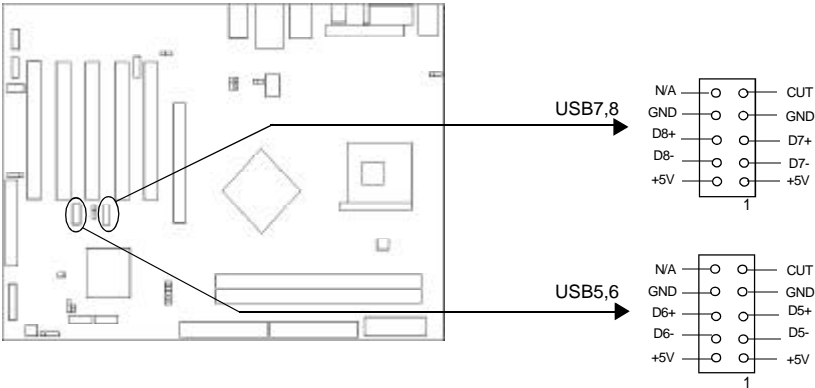
Fan Connectors (PWR_FAN, CPU_FAN)

The fan speed of these three fans can be detected and viewed in "PC Health" section of the CMOS SETUP.



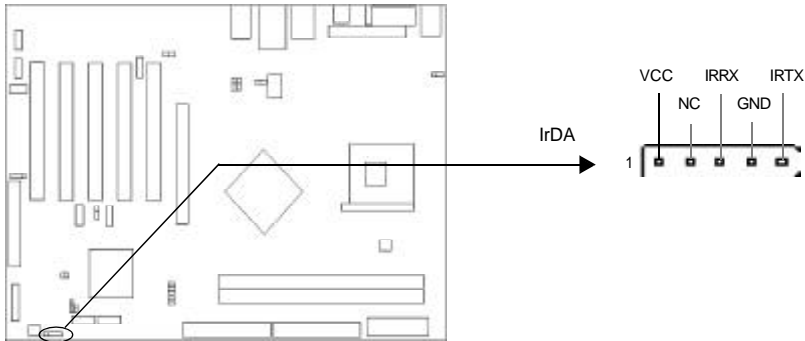
USB5,6; USB7,8

Besides USB1,2,3,4 on the back panel, P4I848P Pro series of mainboards also have two 8-pin headers on board which may connect to front panel USB cable(optional) to provide additional four USB ports.



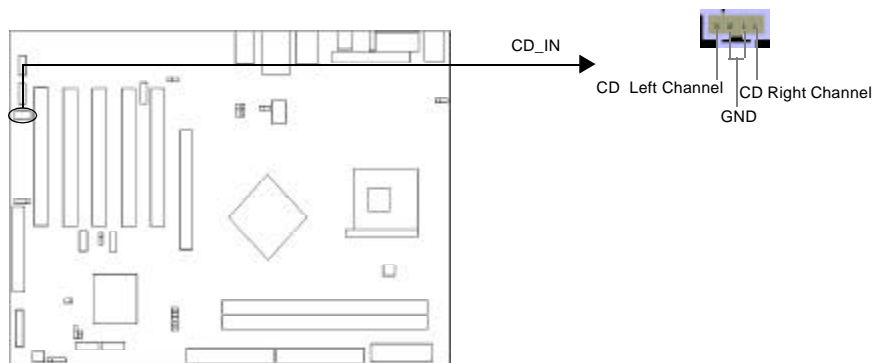
Infrared Header (IrDA)

This connector supports wireless transmitting and receiving device. Before using this function, configure the settings for IR Address, IR Mode and IR IRQ from the “INTEGRATED PERIPHERALS” section of the CMOS SETUP.



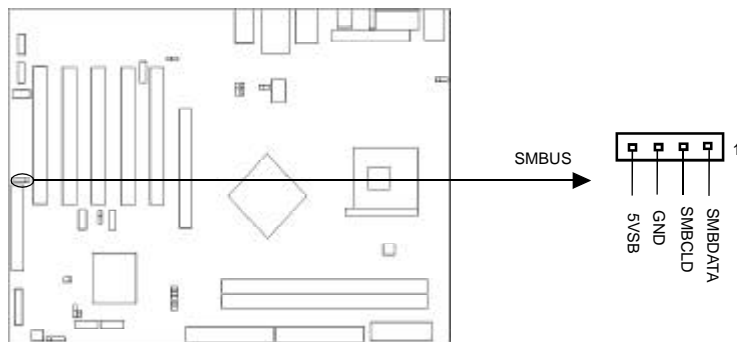
Audio Connectors (CD_IN)

CD_IN is Sony standard CD audio connector, it can be connected to a CD-ROM drive through a CD audio cable.



4-pin SMBus Connector(SMBUS)

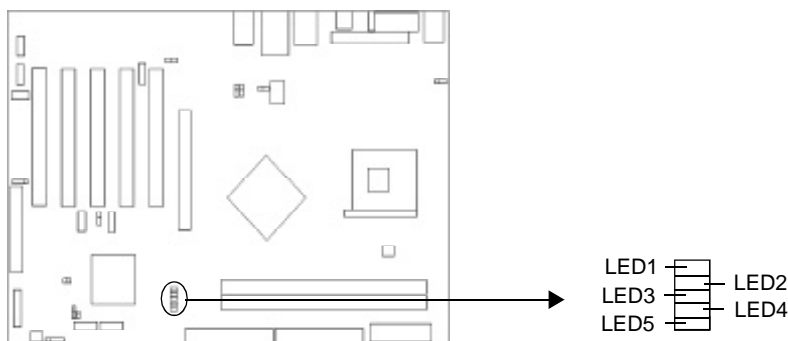
This connector allows you to connect SMBus devices. SMBus devices communicate through the SMBus with a SMBus host and/or other SMBus devices. The SMBus or System Management Bus is a specific implementation of I^2C bus, which is a multi-master bus, that is, multiple devices can be connected to the same bus and each one can act as a master by initiating data transfer.



Diagnosis LED(Optional)

During the POST , the LED1~LED5 representing POST steps will light up in turn. During the POST,If use the CPU of Hyper-Threading and Hyper-Threading is enable in the BIOS,the LEDs will light up in turn, then blink together. please refer to the following table to learn the POST status:

LED1	LED2	LED3	LED4	LED5	status
blink	off	off	off	off	CPU damaged , BIOS chip absent or damaged
on	off	off	off	off	system detect CPU and initialize chipset
off	on	off	off	off	system detect memory
off	off	on	off	off	system initialize PCI
off	off	off	on	off	system initialize clockgen
off	off	off	off	on	system detect Video and invoke Video BIOS
on	on	on	on	on	Hyper-Threading OK



Front Audio Interface(F_AUDIO)

The audio interface provides two kinds of audio output choices: the FrontAudio, the RearAudio. Their priority level is as sequence. When the FrontAudio is available, the RearAudio will be cut off. An onboard amplifier is provided for the earphone. When the FrontAudio is absent, Pin9 and Pin10, Pin5 and Pin6 must be short connected.

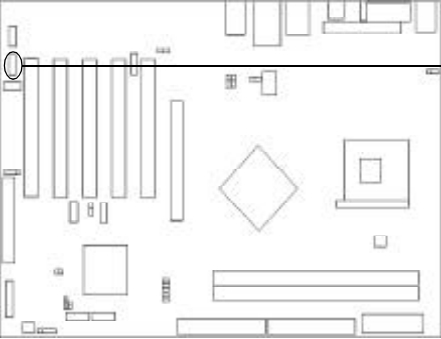


Diagram of the mainboard showing the F_AUDIO header location. An arrow points from the header to the pin configuration table.

F_AUDIO

1	2
3	4
5	6
7	8
9	10

Pin No.	Symbol	Pin No.	Symbol
1	AUD_MIC	2	AUD_GND
3	AUD_MIC_BIAS	4	ADU_VCC
5	AUD_FPOUT_R	6	AUD_RET_R
7	NC	8	(Cut away)
9	AUD_FPOUT_L	10	AUD_RET_L

Onboard SATA

The mainboard provides two Serial ATA connectors, SATA is a storage interface that is compliant with SATA 1.0 Specification. With speed of up to 150Mbps. you can connect Serial ATA cable to Serial ATA hard disk.

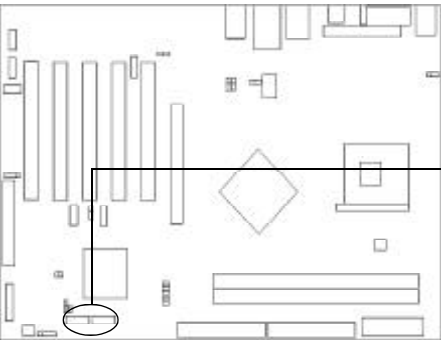


Diagram of the mainboard showing the SATA1/SATA2 header location. An arrow points from the header to the pin configuration diagram.

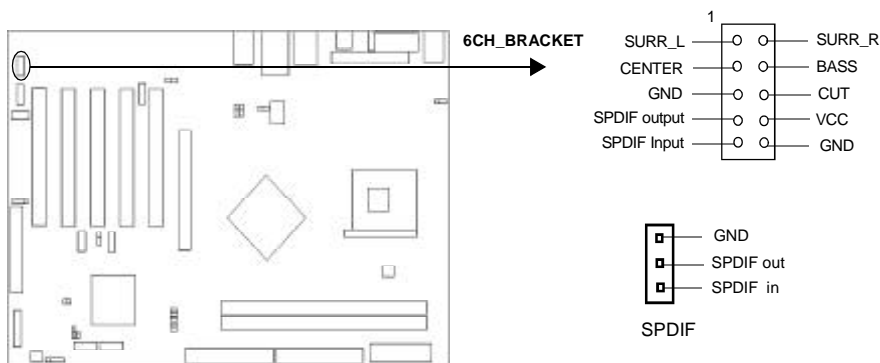
SATA1/SATA2

GND	RX+	RX-	RX-	TX+	TX+	GND
-----	-----	-----	-----	-----	-----	-----



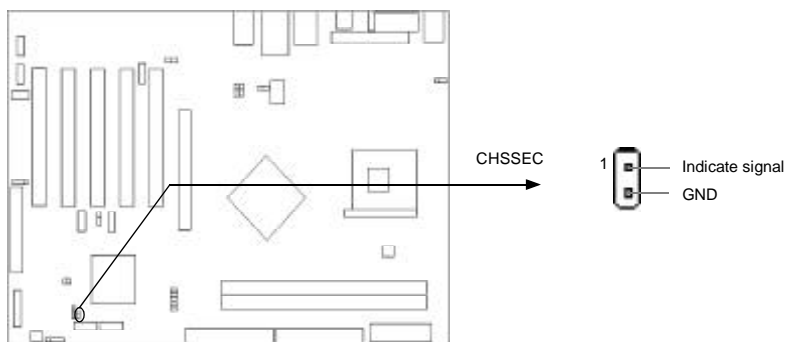
6CH-BRACKET Connector(optional)

The SPDIF input allow your digital audio input from digital audio devices.(optional) The 6CH_BRACKET output is capable of providing digital audio data or compressed AC3 data to an external Dolby digital decoder.



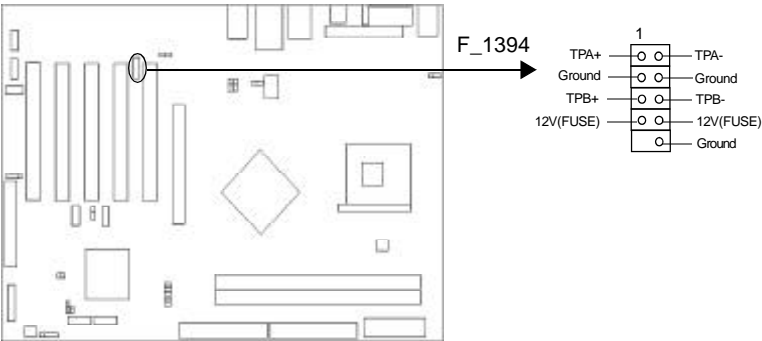
Chassis Security Switch (CHSSEC)

The connector connects to the chassis security switch on the case. The system can detect the chassis intrusion through the status of this connector. If the connector has been closed once, the system will record the status and indicate the chassis has been opened. You can monitor or check this information from some software.












Front IEEE 1394 port(F_1394)(optional)

Besides one 1394 port on the back panel, the mainboard also have one 10-pin headers on board to provide additional IEEE 1394 port.



Jumper Settings

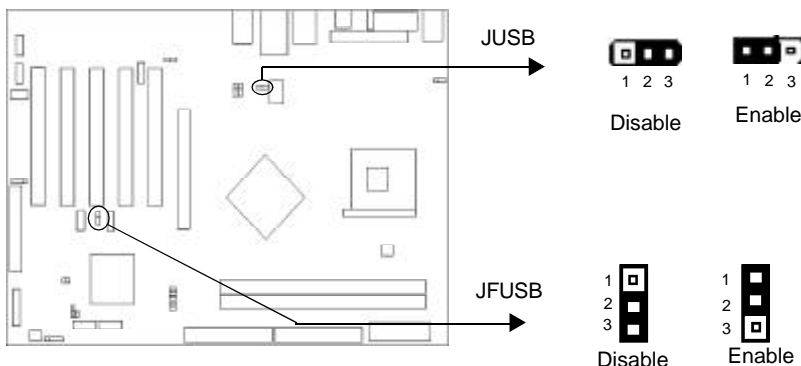
Jumpers are located on the mainboard, the clear CMOS jumper CLR_CMOS, enable keyboard password power-on function jumper JKB etc. Pin 1 for all jumpers are located on the side with a thick white line (Pin1→ ), referring to the mainboard's silkscreen. Jumpers with three pins will be shown as  to represent pin1 & pin2 ("1-2") closed and  to represent pin2 & pin3 ("2-3") closed.

Jumper	Symbol	Description	Represent
		1-2	set pin1 and pin2 closed
		2-3	set pin2 and pin3 closed
		close	set the pins closed
		open	set the pins opened



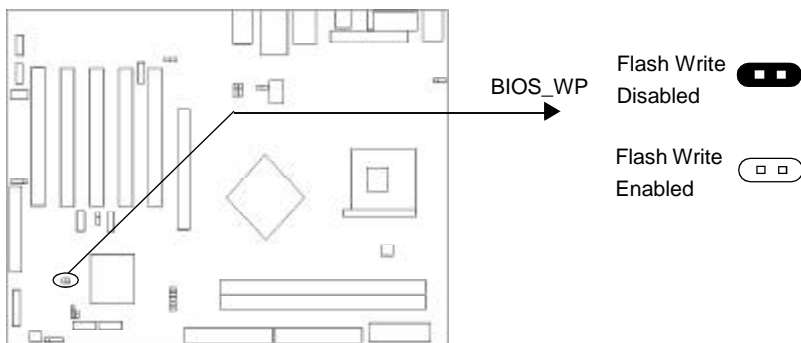
Enable Front/Back Panel USB Device Wake-up Function (JFUSB/JUSB) (optional)

The mainboard provides the advanced USB device wake-up function. The system can be waked up from its power saving status including ACPI S3 by activating USB device. Before using this function, set JFUSB/JUSB with pin1 & pin2 closed. Otherwise, set JFUSB/JUSB with pin2 & pin3 closed for disabling. Furthermore, the item "Wake-Up From S3 by USB" in Power Management Setup should also be set correspondingly to enable or disable this function.



BIOS-Protection Jumper (BIOS_WP)

The BIOS of the mainboard is inside the FWH. If the jumper BIOS_WP is set as closed, the system BIOS is protected from being attacked by serious virus such as CIH virus, you will be unable to flash the BIOS to the mainboard in this status.

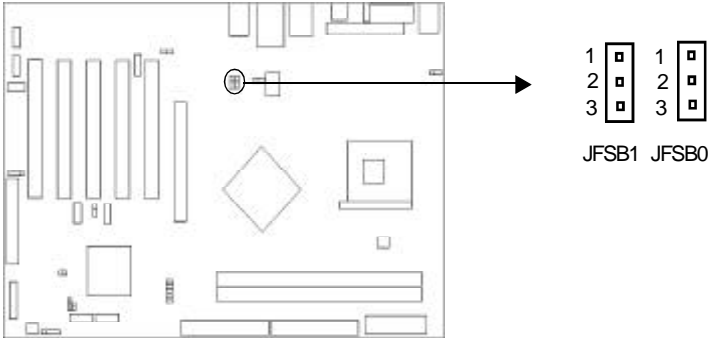


The DMI (Desktop Management Interface) system information such as the CPU type/speed, memory size, and expansion cards will be detected by the onboard BIOS and stored in the flash ROM. Whenever the system hardware configuration is changed, DMI information will be updated automatically. However, setting jumper BIOS_WP as closed makes flashing BIOS and updating DMI information impossible. Therefore, set BIOS_WP as open when changing the system hardware configuration, or the error message "Unknown Flash Type" will be displayed on the screen, and DMI information may not be updated.



Overclocking Jumper Setting (JFSB0,JFSB1)(optional)

Jumpers JFSB0 and JFSB1 provides users with CPU overclocking feature. The host bus speed can be set as 100x4/133x4/166x4/200x4MHz or AUTO. If CPU FSB(front side bus) is set as auto, the system detects the CPU FSB automatically. The table below is for your reference.



FSB	AUTO	100MHz	133 MHz	166 MHz	200 MHz
JFSB0	1-2	2-3	OPEN	OPEN	2-3
JFSB1	1-2	2-3	2-3	OPEN	OPEN

“1-2”: pin1 & pin2 closed “2-3”: pin2 & pin3 closed OPEN: all pins opened

Whether or not your system can be overclocked depends on the capability of your processor and memory. Whether the processor is bus ratio locked or unlocked should also be taken into account. For bus ratio unlocked processor, this overclocking feature can be implemented by setting FSB as 100x4/133x4/166x4/200x4MHz, meanwhile adjusting the bus ratio (multiplier) in “QDI Innovation features” in AWARD BIOS CMOS Setup and memory.



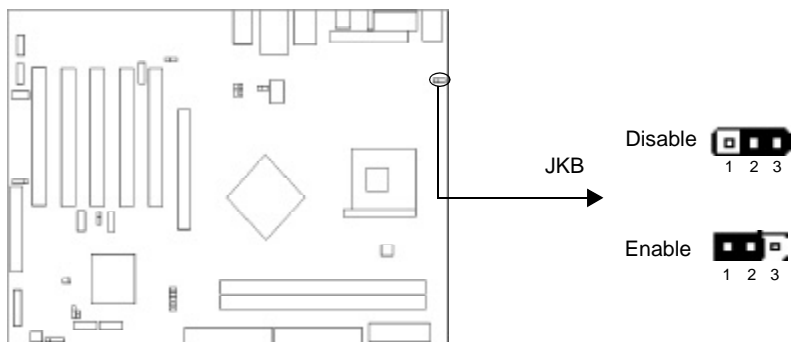
Warning:

Be sure your selection is right. CPU over speeding is dangerous! We will not be responsible for any damages caused.



Enable keyboard password power-on function (JKB)(optional)

The mainboard provides the advanced keyboard password power-on function. Before using this function, set JKB with pin1 & pin2 closed. Otherwise, set JKB with pin2 & pin3 closed for disabling.



Furthermore in order to implement this function, set "POWER ON Function" to "Password" and enter the keyboard power-on password in the "INTEGRATED PERIPHERALS" section of the CMOS SETUP. Save and exit, then power off your system. In this case, the power button's power-on function is disabled.

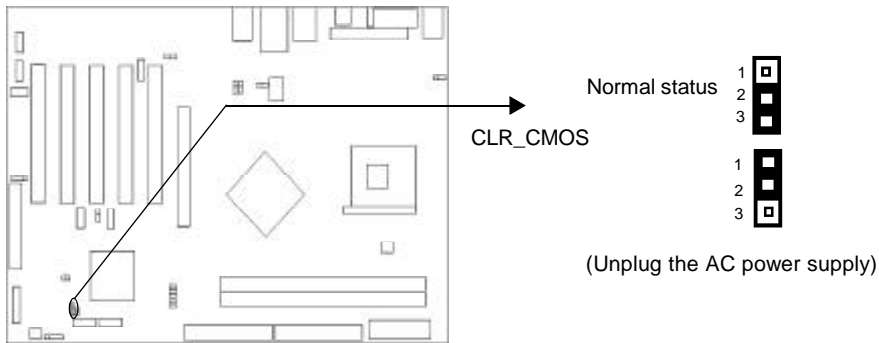


- Note:**
1. If using this function, 5VSB line of the power supply should be capable of delivering enough current for all the devices connected to the keyboard port, if not, you will be unable to power up the system using the keyboard.
 2. If you set JKB with pin2 & pin3 closed, set "POWER ON Function" to BUTTON ONLY, don't set it to Password, or you'll be unable to power up your system by the keyboard or the power button.
 3. If you encounter the above problems, clear CMOS and set the jumper pin2 and pin3 closed to disable the function, then power on the system by pushing the power button, and set "power on Function" back to "Button Only".



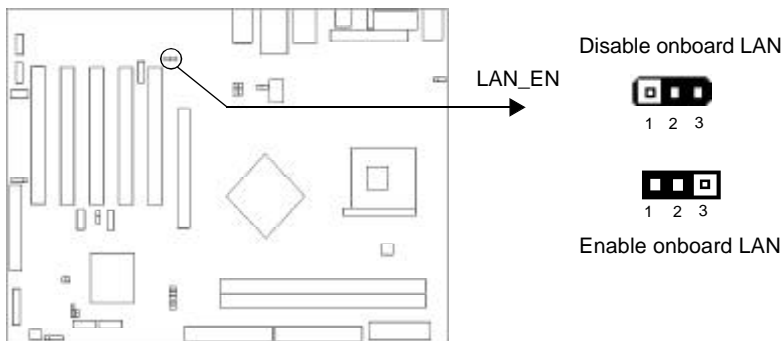
Clear CMOS (CLR_CMOS)

If you want to clear CMOS, unplug the AC power supply first, close CLR_CMOS (pin1 & pin2) once, set CLR_CMOS back to the normal status with pin2 & pin3 connected, then power on the system.



Onboard LAN (LAN_EN)

If you want to use the onboard LAN, set LAN_EN with pin1&pin2 closed, Otherwise, set LAN_EN with pin2&pin3 closed for disable this fuction.



Chapter 3



BIOS Description

The mainboard uses AWARD BIOS Setup program that provides a Setup utility for users to modify the basic system configuration. The information is stored in CMOS RAM so it retains the Setup information even if the power is turned off. This chapter provides you with the overview of the BIOS Setup.

AWDFLASH.EXE

This is a flash memory write/read utility used for the purpose of upgrading your BIOS when necessary. Before doing so, please note:

- **We strongly recommend you only upgrade BIOS when encounter problems.**
- **Before upgrading your BIOS, review the description below to avoid making mistakes, destroying the BIOS and resulting in a non-working system.**

When you encounter problems, for example, you find your system does not support the latest CPU released after our current mainboard, you may therefore upgrade the BIOS, please don't forget to set BIOS_WP as open and disable the "Flash Write Protect" item in AWARD BIOS CMOS Setup first .

Follow the steps exactly for a successful upgrade.

1. Create a bootable system floppy diskette by typing Format A:/s from the DOS prompt under DOS6.xx or Windows 9x environment.
2. Copy AWDFLASH.EXE(version>=8.24q) from the directory \Utility located on QDI Driver CD to your new bootable diskette.
3. Download the updated BIOS file from the Website (<http://www.qdigrp.com>). Please be sure to download the suitable BIOS file for your motherboard.
4. Decompress the file download, copy the BIOS file (xx.bin) to the bootable diskette, and note the checksum of this BIOS which is located in readme file.
5. Reboot the system from the bootable diskette created.
6. Then run the AWDFLASH utility at the A:\ prompt as shown below:

```
A:\AWDFLASH xxxx.bin
```

Follow the instruction through the process. Don't turn off power or reset the system until the BIOS upgrade has been completed.

If you require more detailed information concerning AWDFLASH Utility, for example, the different usage of parameters, please type A:\>AWDFLASH /?



Note:

Because the BIOS Software will be updated constantly, the following BIOS screens and descriptions are for reference purposes only and may not reflect your BIOS screens exactly.



AWARD BIOS Description Entering Setup

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press key to enter the AWARD BIOS CMOS Setup Utility.

Press to enter SETUP

When you have entered, the Main Menu appears on the screen. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.



Main Menu

Standard CMOS Features Setup

The basic CMOS settings included in “Standard CMOS Features” are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value desired in each item.

QDI Innovation Features

This section describes QDI innovation EASY technology.

Advanced BIOS Features

This section allows you to configure your system for basic operation. You have the opportunity to select the system’s default speed, boot-up sequence, keyboard operation, shadowing and security.

Advanced Chipset Features

The chipset features setup is used to change the values of the chipset registers. The registers control most of the system options in the computer.

Power Management Setup

The power management setup menu allows you to configure system to most save energy while operating in a manner consistent with your own style of computer use.

PnP/PCI Configurations

This section describes how to configure the PCI bus system. This section covers some very technical items and it is recommended that only experienced users should make any changes to the default setting.



Integrated Peripherals

The integrated peripherals setup allows user to configure the onboard IDE controller, floppy disk controller, the printer port and the serial ports etc..

PC Health Status

The PC health status display CPU and case fan speed.

Set Supervisor/User Password

Changes, sets, or disables password. It allows you to limit access to the system and the setup program. When this function is selected, the following message appears at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled. Once the password is disabled, the system will boot and you can enter BIOS Setup freely.

PASSWORD DISABLED

If you have selected "**System**" in "Security Option" of "BIOS Features Setup" menu, you will be prompted for the password every time the system reboots or any time you try to enter BIOS Setup.

If you have selected "**Setup**" at "Security Option" from "BIOS Features Setup" menu, you will be prompted for the password only when you enter BIOS Setup.

Supervisor Password has higher priority than User Password. You can use Supervisor Password when booting the system or entering BIOS Setup to modify all settings. Also you can use User Password when booting the system or entering BIOS Setup but can not modify any setting if Supervisor Password is enabled.

Load Optimized Defaults

The Optimized Defaults are common and efficient. It is recommended users load the optimized defaults first, then modify the needed configuration settings.

Save & Exit Setup

Saves value changes to CMOS and exits setup.

Exit Without Saving

Abandons all CMOS value changes and exits setup.

Note: if you need detailed information about BIOS, please view them in the CD.



Appendix

QDI Utility CD

A QDI Utility CD is supplied with this mainboard, the contents contained in it are showed as below:

1. Driver Install

Using this choice, you can install all the drivers for your mainboard . You should install the drivers in order, and you need to restart your computer until all the drivers are installed.

- | | |
|-----------------------------|------------------|
| A. Chipset software | B. USB2.0 Driver |
| C. Network Driver(optional) | D. Audio Driver |
| E. DirectX | |

2. Accessory

- A. QFlashV1.0

3. Browse CD

You could read all the contents contained in this CD, including Utility and Documents.

The files included in Utility are:

- | | |
|-----------------|---------------|
| A. Awdflash.exe | B. Cblogo.exe |
| C. Lf.exe | |

The files included in Documents are:

- A. Adobe Acrobat Reader V5.0



LogoEasyII



LOGOEASY II supports the high-resolution 640x480 or 800x600 image display and full-screen, top right corner or bottom right corner display. It also supports simultaneous display of logo and sign-on message of the BIOS testing system. LOGOEASY II is a tool that can be operated in multi-platforms to refresh and change LOGO graphics including DOS, WINDOWS 9X, WINDOWS NT, WINDOWS ME and WINDOWS XP.

BIOS_ProtectEasy



The BIOS of the mainboard is contained inside the Flash ROM. Severe viruses such as CIH virus are so dangerous that it may overwrite the BIOS of the mainboard. If the BIOS has been damaged, the system will be unable to boot. We provide the following solution which protects the system BIOS from being attacked by such viruses.

RecoveryEasyII



RecoveryEasy II — the latest edition of RecoveryEasy, providing a more easy-to-operate and more secure and reliable tool for backing up and recovering the hard disk data. It will make your data on the hard disk more secure, and make your computer more reliable. RecoveryEasy II will bring you invaluable experiences. It allows you to experience unprecedented security and reliability with its one-hotkey backup, one-hotkey recovery and powerful virus-free functions.

SpeedEasy



BIOS provides you with a set of basic values for your processor selection instead of the jumper settings. The processor speed can be manually selected on the "QDI Innovation features" menu screen.

BootEasy



BootEasy technology enormously improves the long BOOT process time of computers. Reducing the wait time every user has to suffer when starting their computer. BIOS without BootEasy has to perform many routines every time when the system starts, such as checking system core of the computer and initializing system peripherals. Now with the BootEasy, BIOS will not run these repetitive Processes any longer, PC can boot-up without any redundant waiting for the displaying of starting OS. BootEasy save all the information when PC first normally boot-up, and it restores all the parameters for the system and thus let the PC boot freely and rapidly.

Note: if you need detailed information about Easy technology, please view them in the CD or visit our web-site: www.qdigrp.com.



Using 4-/6-Channel Audio(4-/6- Channel Audio Interface)

The motherboard is equipped with Realtek ALC655 chip, which provides support for 6-channel audio output, including 2 Front, 2 Rear, 1 Center and 1 Subwoofer channel. ALC655allows the board to attach 4 or 6 speakers for better surround sound effect. The section will tell you how to install and use 4/6-channel audio function on the board.

Installing the Audio Driver

The Realtek ALC655 chipset driver has to be installed before the 4-/6-Channel audio function can be used.

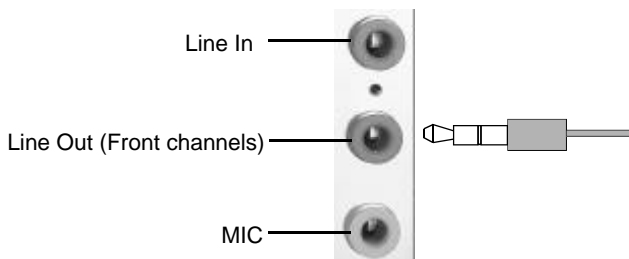
Using 4-/6-channel Audio Function

You can start to use the 4-/6-channel audio function After the driver is installed completely. The first, you can connect 4 or 6 speakers to the audio output connector. Then open utility to set the work parameter.

Attaching speakers

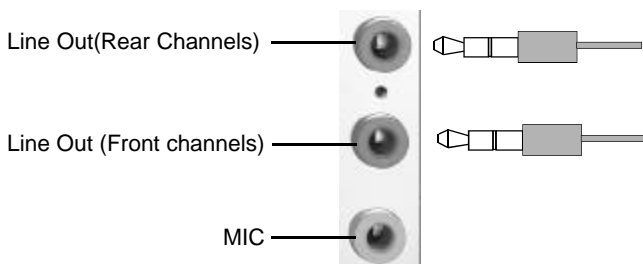
To perform multichannel audio operation, connect multiple speakers to the system. You should connect the same number of speakers as the audio channels you will select in the software utility.

2-Channel Analog Audio Output



Description: Line Out, Line In and MIC functions all exist under 2-channel configuration.

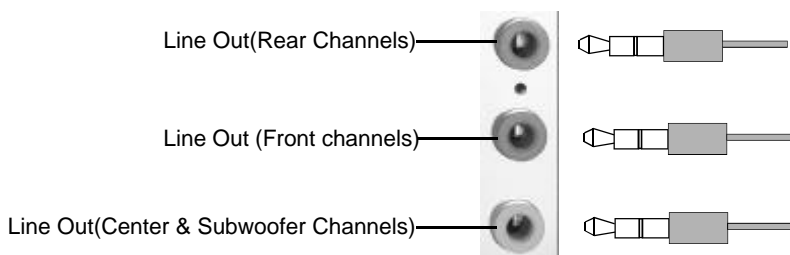
4-Channel Analog Audio Output



Description: Line In is converted to Line Out function under 4-channel configuration.

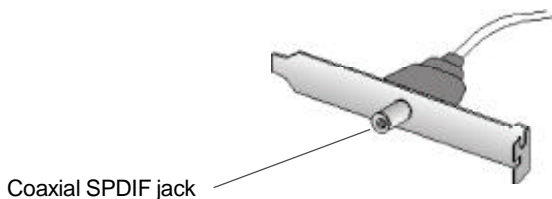


6-Channel Analog Audio Output



Description: Both Line In and MIC are converted to Line Out function under 6-channel configuration.


Digital Audio Output

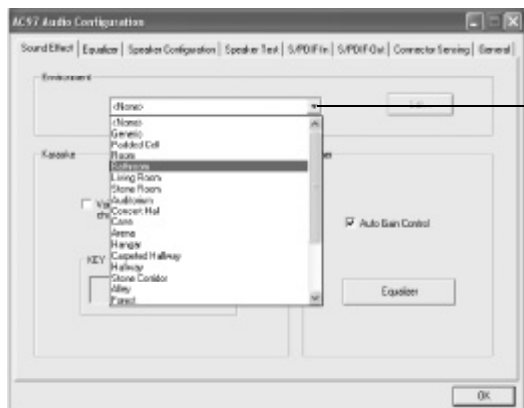


Description:

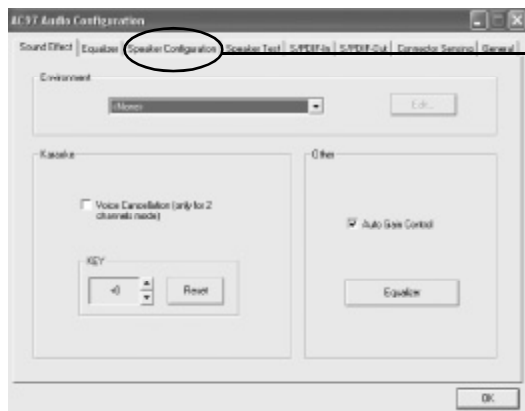
Connnet the SPDIF speakers to the Coaxial SPDIF jack.

Selecting 4- or 6-Channel Setting

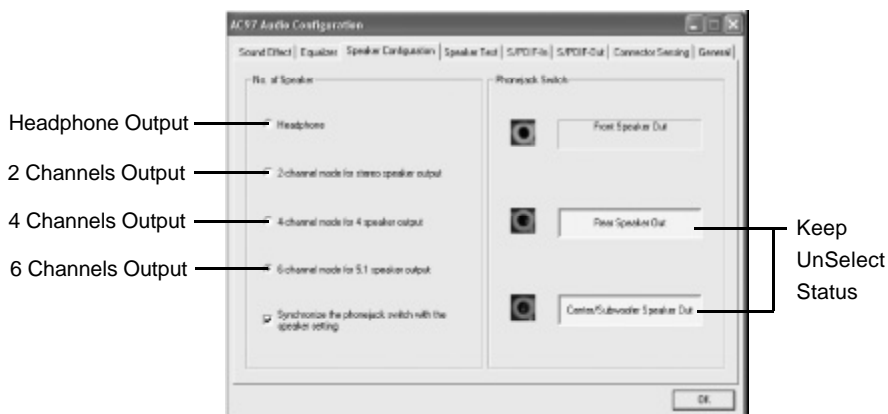
1. Click the audio icon  from the window tray at the bottom of the screen.
2. Select any surround sound effect you prefer from the “Environment” pull-down menu under the **Sound Effect** tab.



3. Click the **Speaker Configuration** tab.



- The following window appears.




- Select the multi-channel operation you prefer from **No. of Speakers**.
- Click **OK**

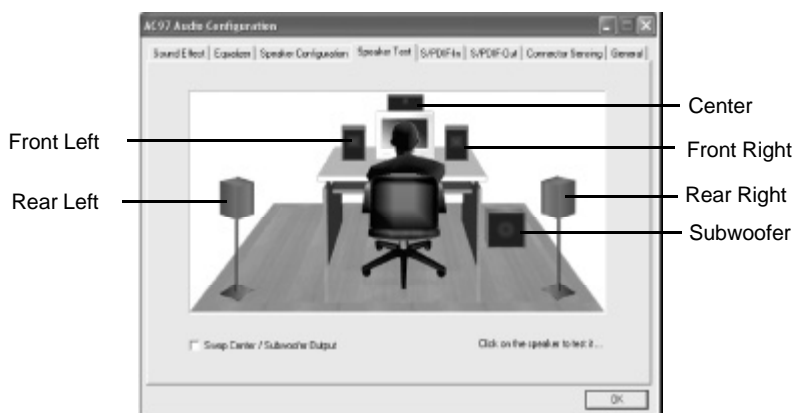
Testing the Connected Speakers

To ensure 4- or 6-channel audio operation works properly, you may need to test each connected speaker to make sure every speaker work properly. If any speaker fails to sound, then check whether the cable is inserted firmly to the connector or replace the bad speakers with good ones.

Testing Each Speaker

- Click the audio icon  from the window tray at the bottom of the screen.
- Click the **Speaker Test** tab.

- The following window appears.




- Select the speaker which you want to test by clicking on it.

Playing KaraOK

The KaraOK function will automatically remove human voice (lyrics) and leave melody for you to sing the song. **The function is applied only for 2-channel audio operation**, so make sure "2 channels mode" is selected in the "No. of Speakers" column before playing KaraOK.

Playing KaraOK

- Click the audio icon  from the window tray at the bottom of the screen.
- Make sure the **Sound Effect** tab is selected.
- Select **Voice Cancellation** in the "Karaoke" column.



- Click **OK**.

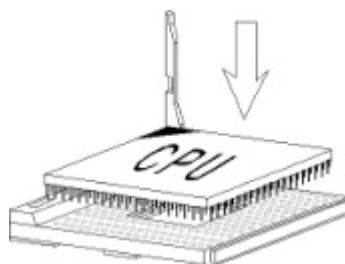


CPU Installation Procedures

1. Pull the lever sideways away from the socket. Then, raise the lever up to a 90-degree angle.



2. Look for the cut edge. The cut edge should point towards the lever pivot. The CPU will only fit in the correct orientation. If the CPU is correctly installed, the pins should be completely embedded into the socket and can not be seen.



3. Hold the CPU down firmly, and then close the lever to complete installation.



Warning: *Overheating will seriously damage the CPU and system, always make sure the cooling fan can work properly to protect the CPU from overheating.*

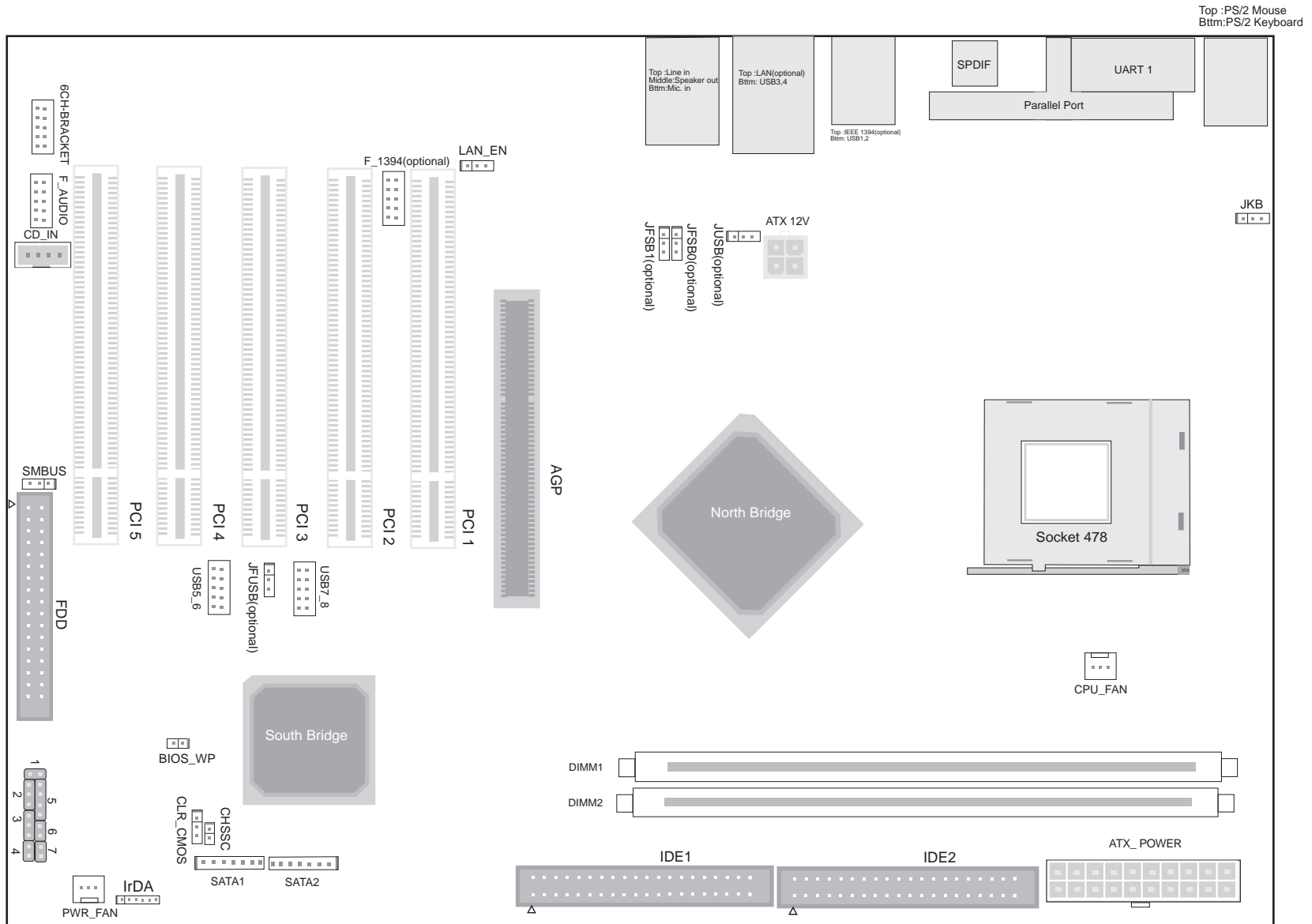
Mainboard Layout

P4I848P Pro

Note:

The layout includes all options.

It is for your reference only.



Note: Pin1 for all jumpers are located on the side with black line.
 1. HDD_LED 2. ACPI_LED 3. POWER SW 4. HDD-LED 5. SPEAKER 6. RESET 7. POWER LED