s661FXm-S / s661FXm

PS/2 Mouse Connector

USB 2.0 Ports

SPP/EPP/ECP Parallel Port

RJ45 LAN Jack

Line-In

Speaker Out

MIC-In

PS/2 Keyboard

COM Port

VGA Port

USB 2.0 Ports

IrDA Connector

Case Open Connector

Onboard AC'97 CODEC

Front Audio Connector

S/PDIF Connector

AUX_IN Connector
STBY LED

CD_IN Connector

AGP Protection LED

32-bit PCI Expansion Slots x3

SYSFAN2 Connector

USB 2.0 Connectors x 2

DieHard BIOS Lite

Serial ATA Ports x2
Supports 150 MB/s Transfer Rate

JP14 CMOS Data Clear Jumper

Front Panel Connector

FDD Connector

JP28 PS2 KB/Mouse Wakeup Jumper

Resetable Fuse

4-pin 12V ATX Power Connector

Functional Polymer Capacitor

AGP 8X Expansion Slot that supports 8X AGP card(2.1GB/s)

CPUFAN Connector

478-pin CPU socket with Voltage and Frequency Auto-detection that supports Intel® Pentium® 4 Nothwood and Prescott CPU

SIS® 661FX/964 (s661FXm-S) / SIS® 661FX/964L (s661FXm) Chipsets that support 400/533/800 MHz FSB,

SYSFAN1 Connector

184-pin DIMMsx2 support DDR400/333/266 Max. To 2GB

IDE Connectors x 2 (ATA33/66/100/133 supported)

ATX Power Connector

AOpen reserves the right to revise all the specifications and information contained in this document, which are subject to change without notice.

Before You Start

Accessory Checklist

- *Easy Installation Guide x 1*
- *80-Wire IDE Cable x 1*
- *Floppy Drive Cable x 1*
- *Serial ATA Power Cable x 1 (for s661FXm-S)*
- *Serial ATA Cable x 1 (for s661FXm-S)*
- *Bonus Pack CD x 1*
- *I/O Shield x 1*

Installing By Yourself

1. Installing CPU

2. Installing CPU Fan & System Fan

3. Installing Memory Module

4. Installing HD, CD-ROM and SATA Disk, etc

5. Connecting Front Panel Cable

6. Connecting ATX Power Cable

7. Installing AGP & PCI Cards

8. Installing Other Devices (USB, Front Audio, etc)

9. Connecting Back Panel Ports (Keyboard, Mouse, etc)

10. Loading Default BIOS, Setting CPU Frequency

11. Installing Operating System (such as, Windows XP)

12. Installing Drivers & Utilities

FSB800

Hyper-Threading

RAID

DieHard BIOS Lite

Serial ATA

DDR400

ATA133

EzWin Flash

1. Installing CPU

This socket supports FC-PGA2 package CPU, which is the latest CPU package developed by Intel. Other forms of CPU package are impossible to be fitted in.

CPU socket lever

Socket Pin 1
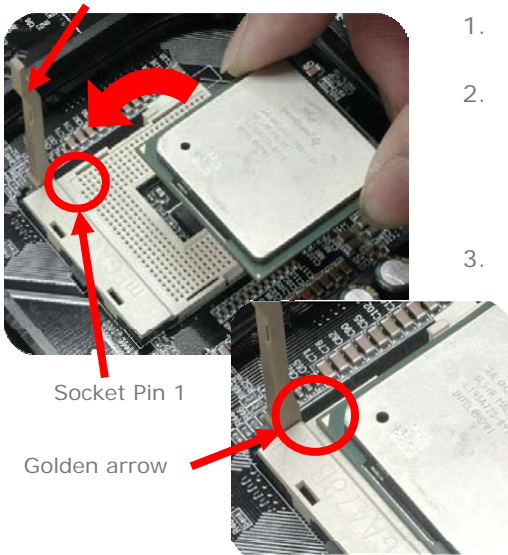
Golden arrow

1. Pull up the CPU socket lever and up to 90-degree angle.
2. Locate Pin 1 in the socket and look for a golden arrow on the CPU upper interface. Match Pin 1 and golden arrow. Then insert the CPU into the socket.
3. Press down the CPU socket lever to finish CPU installation.

Note: If you do not match the CPU socket Pin 1 and CPU golden arrow well, you may damage the CPU.
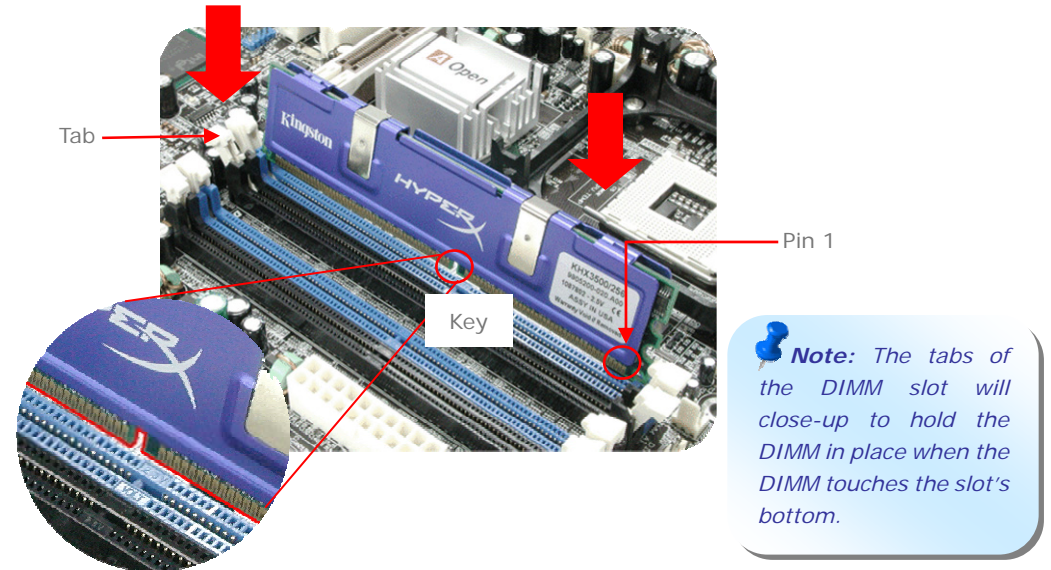
2. Installing CPU & System Fans

Plug in the CPU fan cable to the 3-pin CPUFAN connector. If you have chassis fan, you can also plug it in SYSFAN1 or SYSFAN2 connector.

GND
+12V
SENSOR

SYSFAN1 Connector

SENSOR
+12V
GND

CPUFAN Connector

GND
+12V
SENSOR

SYSFAN2 Connector
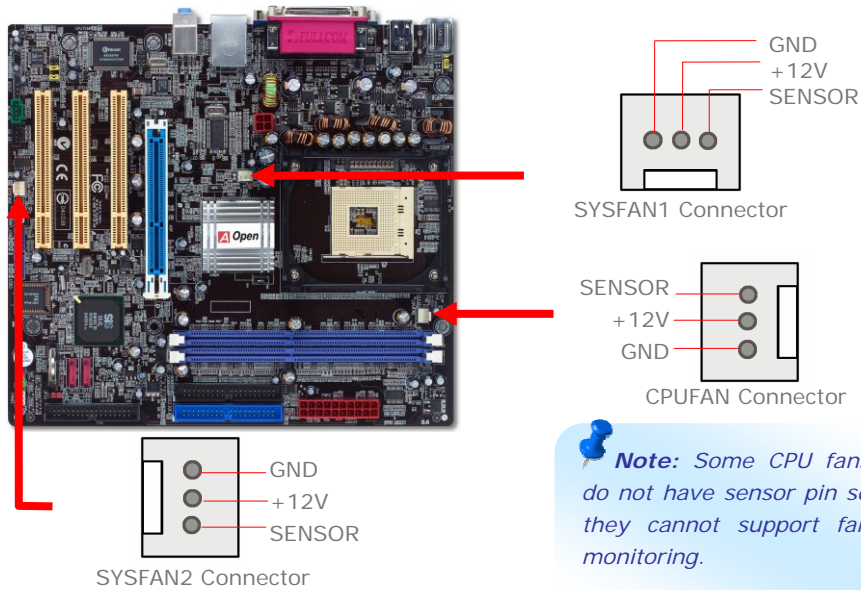
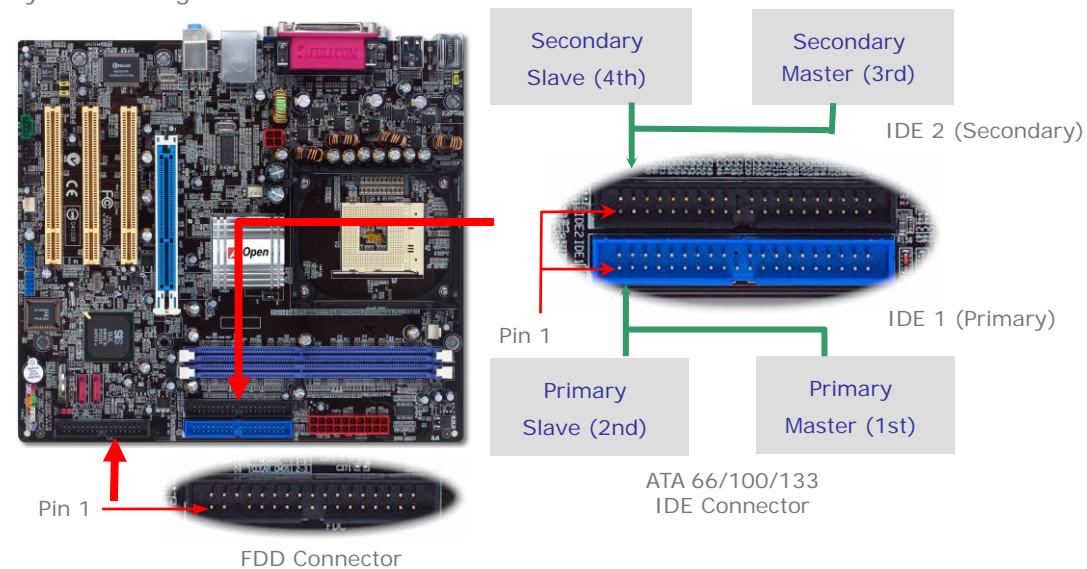*Note: Some CPU fans do not have sensor pin so they cannot support fan monitoring.*

3. Installing Memory Modules

DIMM slots are designed in Electronic Blue which are very easy to recognize. Insert the module straight down to the DIMM slot with both hands and press down firmly until the DIMM module is securely in place.

Tab

Pin 1

Key

Note: The tabs of the DIMM slot will close-up to hold the DIMM in place when the DIMM touches the slot's bottom.

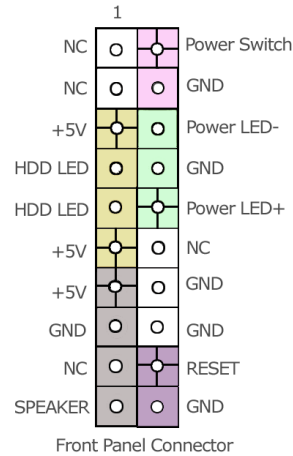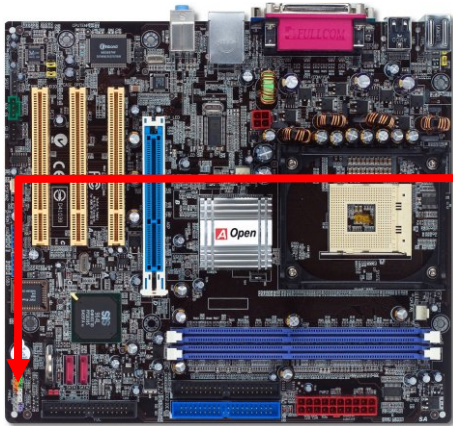# 4. Connecting IDE and Floppy Cables

Connect 34-pin floppy cable and 40-pin, 80-wire IDE cable to floppy connector FDD and IDE connector. Be careful of the pin1 orientation. Wrong orientation may cause system damage.

Secondary Slave (4th)

Secondary Master (3rd)

IDE 2 (Secondary)

Pin 1

IDE 1 (Primary)

Primary Slave (2nd)

Primary Master (1st)

ATA 66/100/133 IDE Connector

Pin 1

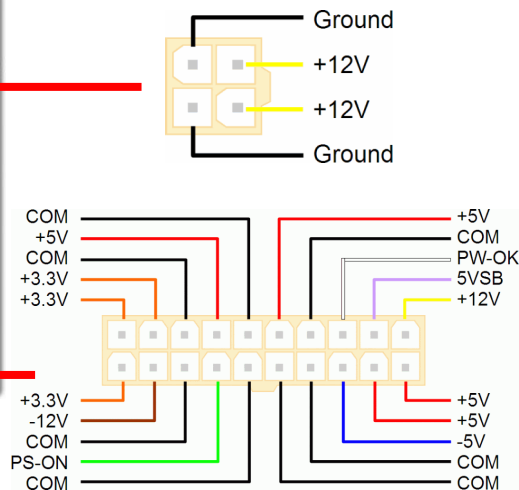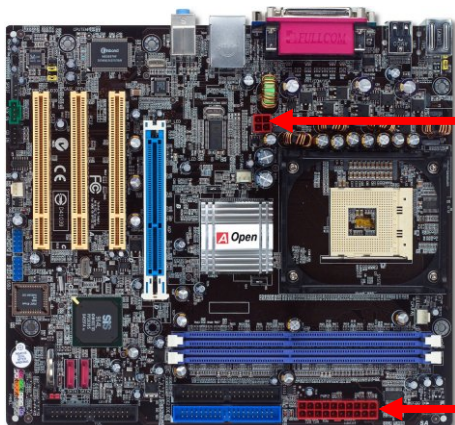FDD Connector

5. Connecting Front Panel cable

Attach the power LED, speaker, and reset switch connectors to the corresponding pins. If you enable "Suspend Mode" item in BIOS Setup, the ACPI & Power LED will keep flashing while the system is in suspend mode.

Locate the power switch cable from your ATX housing. It is 2-pin female connector from the housing front panel. Plug this connector to the soft-power switch connector marked *SPWR*.

NC	O	O	Power Switch
NC	O	O	GND
+5V	O	O	Power LED-
HDD LED	O	O	GND
HDD LED	O	O	Power LED+
+5V	O	O	NC
+5V	O	O	GND
GND	O	O	GND
NC	O	O	RESET
SPEAKER	O	O	GND

Front Panel Connector

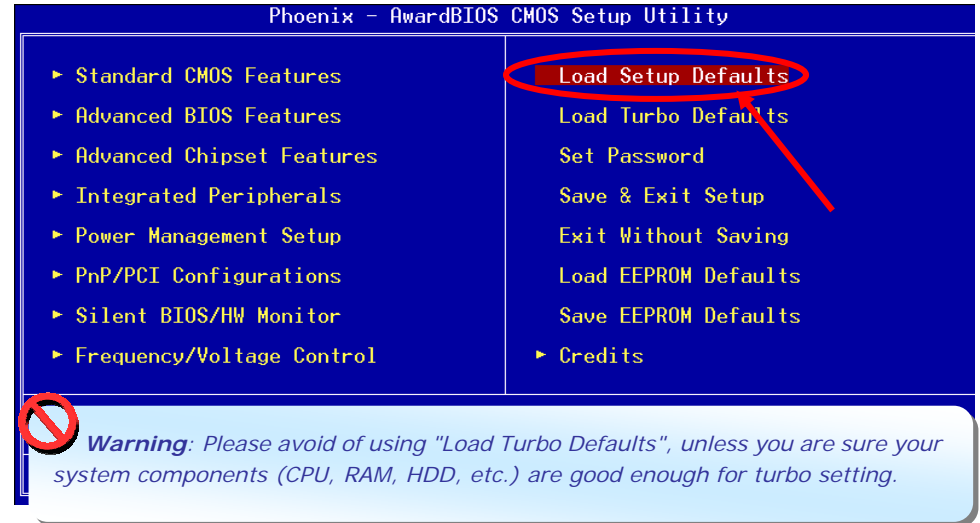## 6. Connecting ATX Power Cables

This motherboard comes with a 20-pin and 4-pin ATX power connector as shown below. Make sure you plug in the right direction. We strongly recommend you to insert the 4-pin connector before connecting the 20-pin connector.

Ground
+12V
+12V
Ground

COM   +5V
+5V   COM
COM   PW-OK
+3.3V   5VSB
+3.3V   +12V

+3.3V   +5V
-12V   +5V
COM   -5V
PS-ON   COM
COM   COM

7. Power-on and Loading BIOS Setup

Del

After you finish the setting of jumpers and connect correct cables. Power on and enter the BIOS Setup, press <Del> during POST (Power On Self Test). Choose "Load Setup Defaults" for recommended optimal performance.

```
Phoenix - AwardBIOS CMOS Setup Utility
```
► Standard CMOS Features	Load Setup Defaults
► Advanced BIOS Features	Load Turbo Defaults
► Advanced Chipset Features	Set Password
► Integrated Peripherals	Save & Exit Setup
► Power Management Setup	Exit Without Saving
► PnP/PCI Configurations	Load EEPROM Defaults
► Silent BIOS/HW Monitor	Save EEPROM Defaults
► Frequency/Voltage Control	► Credits

🚫 ***Warning****: Please avoid of using "Load Turbo Defaults", unless you are sure your system components (CPU, RAM, HDD, etc.) are good enough for turbo setting.*

8. AOpen Bonus Pack CD and EzInstall

You can use the autorun menu of Bonus CD disc. Choose the utility and driver from the icons at left side, and then click on the "**GO**" button to complete installation automatically.

Install driver

Install utility

Browse

Read me

Exit CD

Click to install online manual

AOpen

Welcome
AOpen s661FXm-S

AOpen

Install Driver

☑ SiS VGA Utilities
☑ Realtek Avance AC97 Audio Driver
☑ Realtek RTL8110 Gigabit Ethernet NIC Driver
☑ SiS IDE Driver
☑ SiS SATA RAID Driver

Back

GO

EzInstall

Setting CPU Voltage & Frequency

Setting CPU Core Voltage
This motherboard supports Voltage ID (VID) function to detect CPU voltage automatically during power-on.

Setting CPU Frequency
This motherboard is CPU jumper-less design, you can set CPU frequency through 1MHz stepping CPU Overclocking in the BIOS. CPU Core Frequency = CPU FSB clock x CPU Ratio. However, all CPU now selling in the market belong to "Fixed Multiplier". That means users can not adjust the CPU Ratio but only change CPU FSB clock to achieve overclocking.

(Users do the overclocking at their own risk!!)

BIOS Setup > Frequency / Voltage Control > CPU Speed Setup

CPU Ratio	8x, 10x... 24x, 25x, 26x, 27x, 28x
CPU FSB (Adjustment manually)	FSB = 100MHz-248MHz by 1MHz Stepping CPU Overclocking

CPU Model Name	CPU Core Freq.	System Bus	L2 Cache	Ratio
Pentium 4 2.4AG	2400MHz	533MHz	1MB	18x
Pentium 4 2.8AG	2800MHz	533MHz	1MB	21x
Pentium 4 2.8BG	2800MHz	533MHz	512KB	21x
Pentium 4 2.8CG	2800MHz	800MHz	512KB	14x
Pentium 4 2.8EG	2800MHz	800MHz	1MB	14x
Pentium 4 3.0CG	3000MHz	800MHz	512KB	15x
Pentium 4 3.0EG	3000MHz	800MHz	1MB	15x
Pentium 4 3.06BG	3066MHz	533MHz	512KB	23x
Pentium 4 3.2CG	3200MHz	800MHz	512KB	16x
Pentium 4 3.2EG	3200MHz	800MHz	1MB	16x
Pentium 4 3.4CG	3400MHz	800MHz	512KB	17x
Pentium 4 3.4EG	3400MHz	800MHz	1MB	17x
Celeron 325	2533MHz	533MHz	256KB	19x
Celeron 330	2666MHz	533MHz	256KB	20x
Celeron 335	2800MHz	533MHz	256KB	21x
Celeron 340	2933MHz	533MHz	256KB	22x
Celeron 345	3066MHz	533MHz	256KB	23x

Note: With CPU speed changing rapidly, there might be faster CPU on the market by the time you received this installation guide. This table is kindly for your references only.

Note: SIS 661FX chipset support Intel P4 Northwood and Prescott CPU. Northwood and Prescott CPU could detect the clock ratio automatically; you may not be able to adjust the clock ratio in BIOS manual.

*Warning: SIS 6661FX chipset support maximum 800MHz (200MHz*4) system bus and 66MHz AGP clock; higher clock setting may cause serious system damage.*

JP14 Clear CMOS

You can clear CMOS to restore system default setting. To clear the CMOS, follow the procedure below.
1. Turn off the system and unplug the AC power.
2. Remove ATX power cable from connector PWR2.
3. Locate JP14 and short pins 2-3 for a few seconds.
4. Return JP14 to its normal setting by shorting pin 1 & pin 2.
5. Connect ATX power cable back to connector PWR2.

Pin 1

1   1

Clear CMOS   Normal (default)
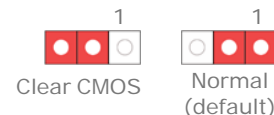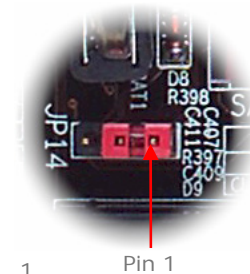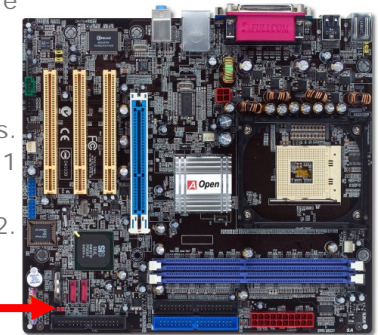
Tip: When should I Clear CMOS?
1. *Boot fails because of overclocking...*
2. *Forget password...*
3. *Troubleshooting...*

JP28 Keyboard/Mouse Wakeup Jumper

This motherboard provides keyboard / mouse wake-up function. You can use JP28 to enable or disable this function, which could resume your system from suspend mode with keyboard or mouse. The factory default setting is "Disable" (1-2), and you may enable this function by setting the jumper to 2-3.

Pin 1

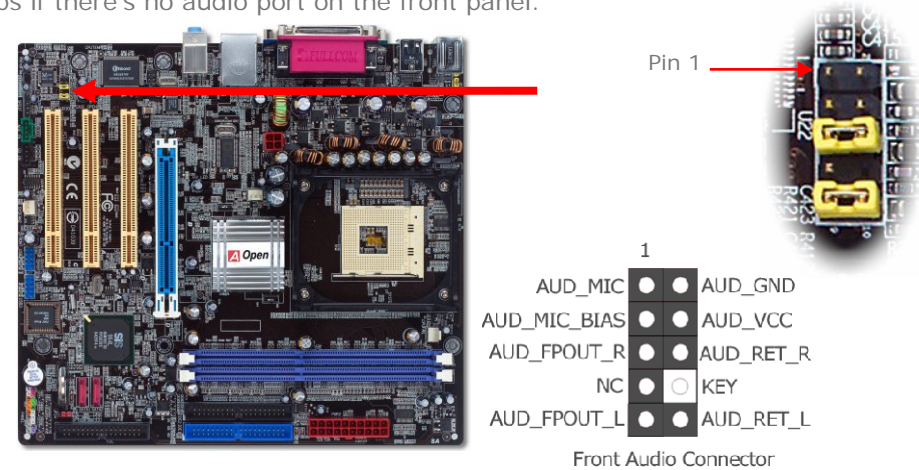1   1

Disable (Default)   Enable
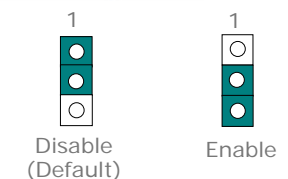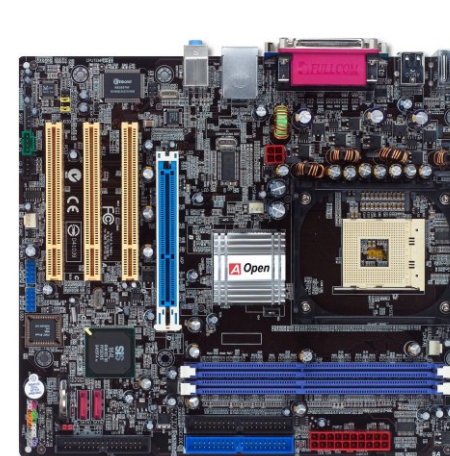
USB 2.0 Connectors

This motherboard provides eight USB 2.0 ports to connect USB devices, such as mouse, keyboard, modem, printer, etc. There are four ports on the back panel. You can use proper cables to connect the Front USB connector to USB modules or front panel of chassis.

Pin 1

Pin 1

	1	
+5V	● ●	+5V
SBD6-	● ●	SBD7-
SBD6+	● ●	SBD7+
GND	● ●	GND
KEY	○ ●	NC

USB 2.0 Connector
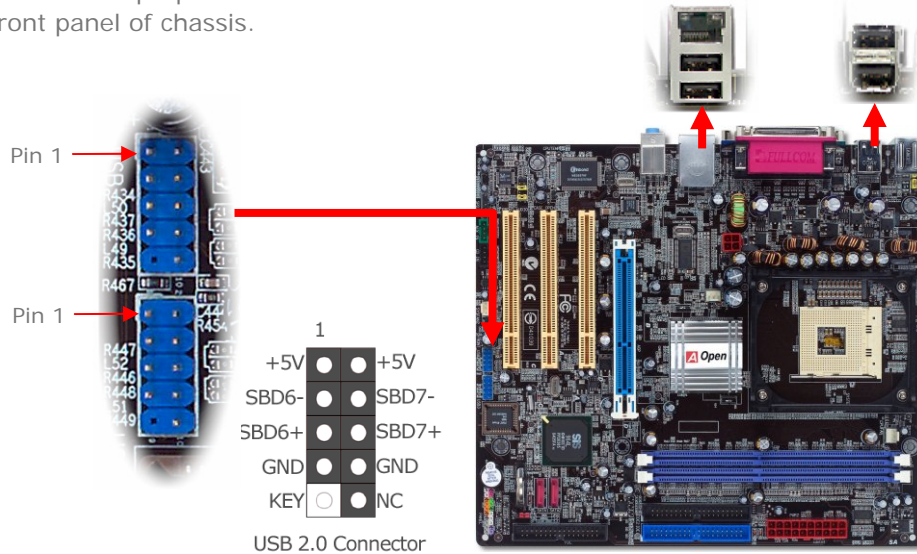
Front Audio Connectors

If the housing has been designed with an audio port on the front panel, you'll be able to connect onboard audio to front panel through this connector. By the way, please remove 5-6 and 9-10 jumper caps from the Front Audio Connector before connecting the cable. Please do not remove these 5-6 and 9-10 yellow jumper caps if there's no audio port on the front panel.

Pin 1

|	1	
AUD_MIC	● ●	AUD_GND
AUD_MIC_BIAS	● ●	AUD_VCC
AUD_FPOUT_R	● ●	AUD_RET_R
NC	● ○	KEY
AUD_FPOUT_L	● ●	AUD_RET_L

Front Audio Connector

IRDA Connector

The IrDA connector can be configured to support wireless infrared module, with this module and application software such as Laplink or Windows Direct Cable Connection, user can transfer files to or from laptops, notebooks, PDA devices and printers. This connector supports both HPSIR (115.2Kbps, 2 meters) and ASK-IR (56Kbps).
Install an infrared module onto the IrDA connector and enable the infrared function from BIOS Setup, UART Mode, you can use this function. Please make sure you connect correct orientation when plugging IrDA module.

Pin 1

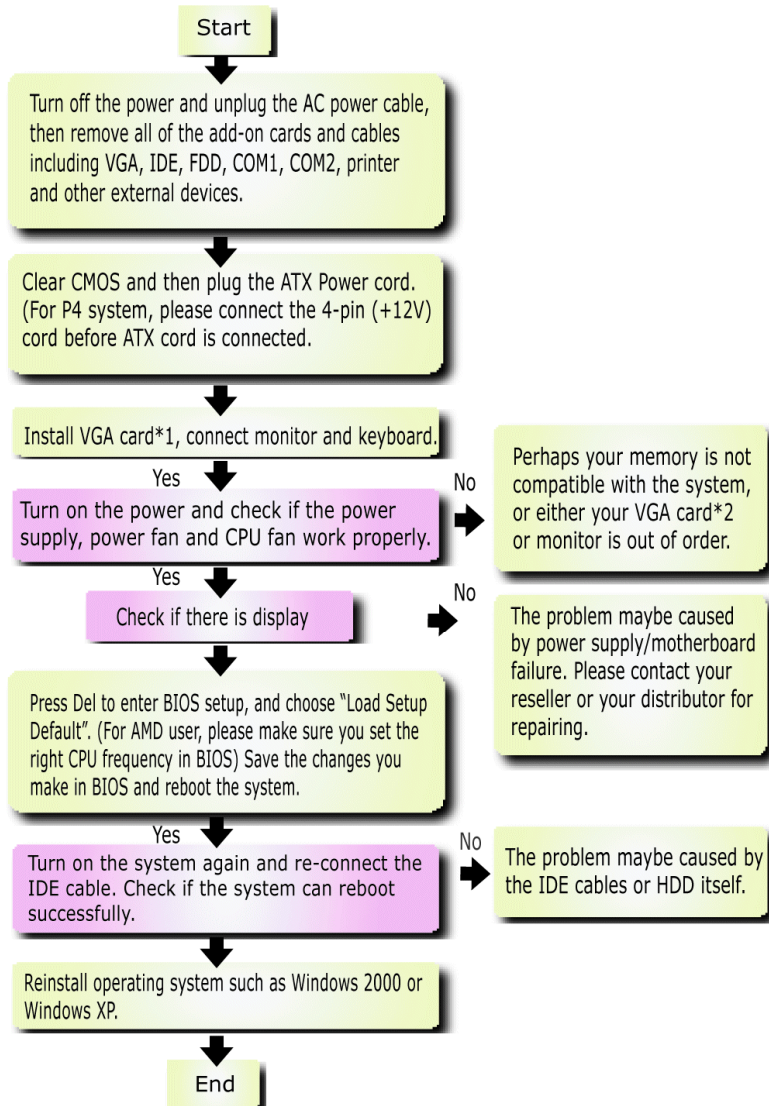|	1	
NC	● ○	KEY
+5V	● ●	GND
IR_TX	● ●	IR_RX
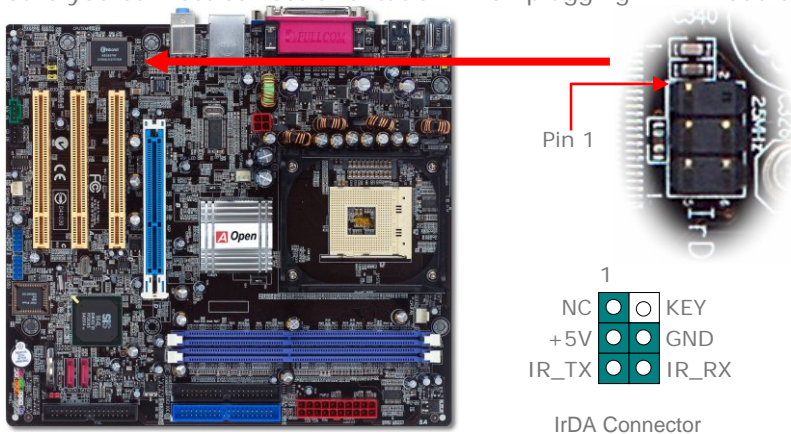
IrDA Connector

Serial ATA Connectors

To connect a serial ATA disk, you have to have a 7-pin serial ATA cable. Connect two ends of the serial ATA cable to the serial ATA header on the motherboard and the disk. Like every other traditional disk, you also have to connect a power cable. Please be noted that it is a jumper free implement; you don't need to set jumpers to define a master or slave disk. When serial ATA hard disks are installed on serial ATA ports, the one connected on SATA1 will be set as the first boot device automatically. *Please note that it doesn't support Hot-Plug in function.*
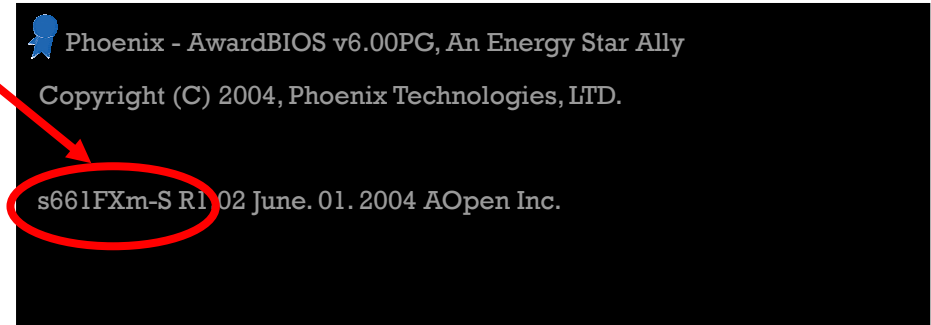
SATA1   SATA2
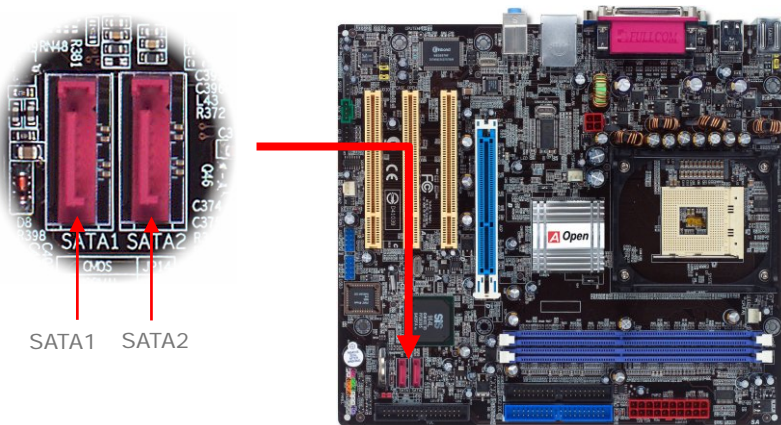
Troubleshooting

If you encounter any trouble to boot you system, follow the procedures accordingly to resolve the problem.

Start

Turn off the power and unplug the AC power cable, then remove all of the add-on cards and cables including VGA, IDE, FDD, COM1, COM2, printer and other external devices.

↓

Clear CMOS and then plug the ATX Power cord. (For P4 system, please connect the 4-pin (+12V) cord before ATX cord is connected.)

↓

Install VGA card*1, connect monitor and keyboard.

Yes ↓

Turn on the power and check if the power supply, power fan and CPU fan work properly. — **No** → Perhaps your memory is not compatible with the system, or either your VGA card*2 or monitor is out of order.

Yes ↓

Check if there is display — **No** → The problem maybe caused by power supply/motherboard failure. Please contact your reseller or your distributor for repairing.

↓

Press Del to enter BIOS setup, and choose "Load Setup Default". (For AMD user, please make sure you set the right CPU frequency in BIOS) Save the changes you make in BIOS and reboot the system.

Yes ↓

Turn on the system again and re-connect the IDE cable. Check if the system can reboot successfully. — **No** → The problem maybe caused by the IDE cables or HDD itself.

↓

Reinstall operating system such as Windows 2000 or Windows XP.

↓

End

*1 The VGA card is not necessary to be installed if your monitor is connected to the onboard VGA port.
*2 If you connect to the onboard VGA port and no screen displays, then your onboard VGA device might have problem.

Model name and BIOS version

Model name and BIOS version can be found on upper left corner of first boot screen (POST screen). For example:

> Phoenix - AwardBIOS v6.00PG, An Energy Star Ally
>
> Copyright (C) 2004, Phoenix Technologies, LTD.
>
> s661FXm-S R1.02 June. 01. 2004 AOpen Inc.

s661FXm-S is model name of motherboard; **R1.02** is BIOS version

Register Your Motherboard

Thanks for choosing AOpen product, please register this motherboard at http://club.aopen.com.tw/productreg/ to become a Gold member of Club AOpen, and to ensure high service quality and priority from AOpen. You will also have a chance to play slot machine game to win prize from AOpen. Please prepare the following information before you start: **Model Name, Part Number (P/N), Serial Number (S/N) and Purchase Date**. The Part Number and Serial number are printed on bar code label. You can find this bar code label on the outside packing or on component side of PCB. For example:

9188110201 91949378KN73

Part No.   Serial No.

P/N: 91.88110.201 is part number, **S/N: 91949378KN73** is serial number.

Phoenix-Award BIOS ERROR Message

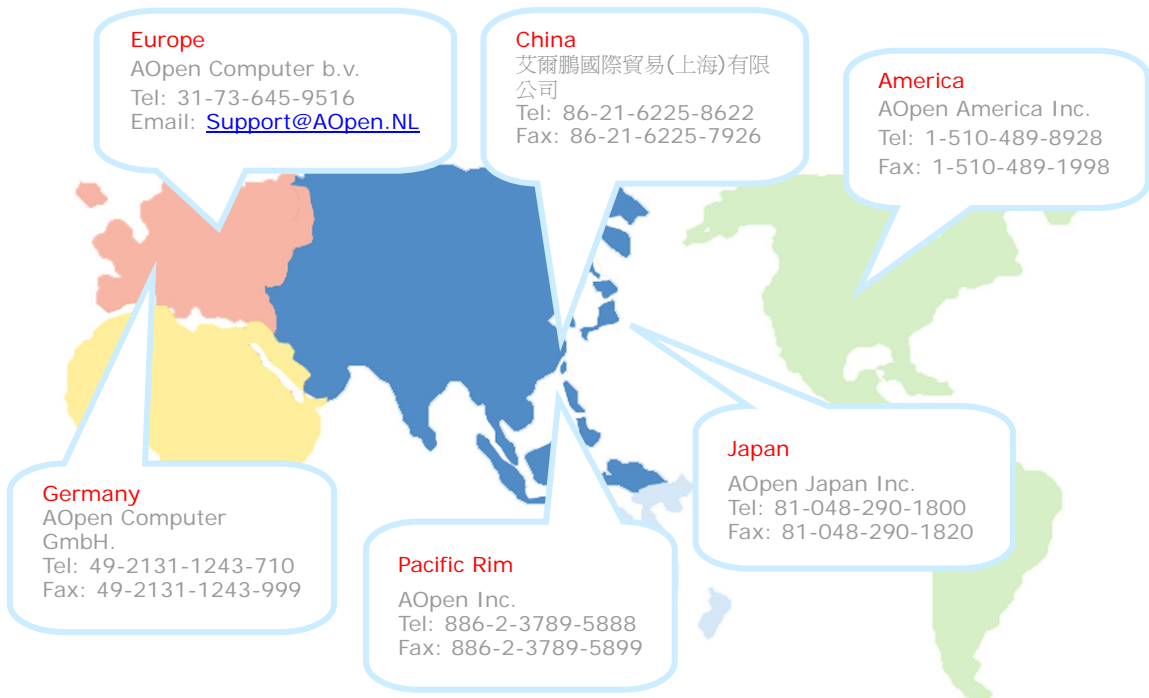| Beep Sound	Message
1 short(Beep)	System booting is normally.
1 long - 1 short(Beep)	DRAM ERROR
1 long - 2 short(Beep)	Display card or monitor connected error
1 long - 3 short(Beep)	Keyboard Error
Long(Beep) continuous	DRAM hasn't inset correctly.

Technical Support

Dear Customer,

Thanks for choosing AOpen products. We invite you to register at http://www.aopen.com to become a Gold Member of Club AOpen so as to ensure quality service in the future. In order to maintain the best service to every customer of us, we recommend you to follow the procedures below and seek help from our branches according to the region you buy the product. With your help, we can then continue to provide efficient and the best quality service to every customer.

Thanks very much for your understanding!

Europe
AOpen Computer b.v.
Tel: 31-73-645-9516
Email: Support@AOpen.NL

China
艾爾鵬國際貿易(上海)有限公司
Tel: 86-21-6225-8622
Fax: 86-21-6225-7926

America
AOpen America Inc.
Tel: 1-510-489-8928
Fax: 1-510-489-1998

Germany
AOpen Computer GmbH.
Tel: 49-2131-1243-710
Fax: 49-2131-1243-999

Pacific Rim
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Fax: 81-048-290-1820

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Germany	http://www.aopencom.de/tech/default.htm
America	http://usa.aopen.com/tech/default.htm
Japan	http://www.aopen.co.jp/tech/default.htm

Online Manual: To download manual, please log on and then select your preferred language. Under "Type" directory, choose "Manuals" to go to our manual database. You can also find the manual and EIG in AOpen Bonus Pack.
http://download.aopen.com.tw/downloads

Test Report: We recommend you to choose board/card/device from the compatibility test reports for assembling your PC. It may prevent incompatibility problems.
http://english.aopen.com.tw/tech/report/default.htm

FAQ: Here we list problems that users often encounter and FAQ (Frequently Asked Questions). You may select your preferred language after log on, and may be able to find a solution to your problem.
http://club.aopen.com.tw/faq/

Download Software: After log on and having language selected, you may get the latest updated BIOS/utility and drivers you need under "Type" directory. In most case, newer versions of drivers and BIOS have solved earlier bugs or compatibility problems.
http://download.aopen.com.tw/downloads

eForum: AOpen eForum is provided to discuss our products with other users, in which your problem probably had been discussed before or will be answered. After log on, you may select your preferred language under "Multi-language".
http://club.aopen.com.tw/forum

Contact Us: Please prepare detail system configuration and error symptom before contacting us. The part number, serial number and BIOS version are also very helpful.

Contact Distributors/Resellers: We sell our products through resellers and integrators. They should know your system configuration very well and should be able to solve your problem efficiently and provide important reference for you.