Table of Contents

1.1 A Thank-you Note Before You Get Start

First of all, we would like to express our gratitude for purchasing AOpen products. Once again, this motherboard is designed uniquely to meet all your personal needs with our great industry-designing ability and our everlasting perseverance to the quality of all our products.

This manual will introduce you how this motherboard is installed. Please keep it well for your future reference. If you lost your printed manual, you may also go to our website at http://www.aopen.com to download the updated file.

Now, we would like to invite you to personally experience this user-friendly manual and all of the powerful functions this AOpen product offers.

1.2 Features of This Manual

To help you grab the useful information of this motherboard and aware of certain conditions that you might need to know, you will see the icons below frequently:

Note

This contains knowledge you should know in process of assembling, or some helpful tips.

Warning / Caution

Please be careful when you see this mark. It highlights mistakes that occur often during assembling, or something you need to pay attention to.

Tip

This tip tells you some useful information that will make your installation smoothly.

1.3 Safety Information

Please wear a wrist strap and attach it to a metal part of the system unit before handling a component. Alternatively, you can also touch an object that is of ground connection or with metal surface.

Always unplug the power before you make any jumper setting.

Before you install or remove any components on the motherboard, please make sure to disconnect the power first in case of damaging motherboard or other components.

Chapter 2 Introduction to This Motherboard

2.1 How does your motherboard look like?
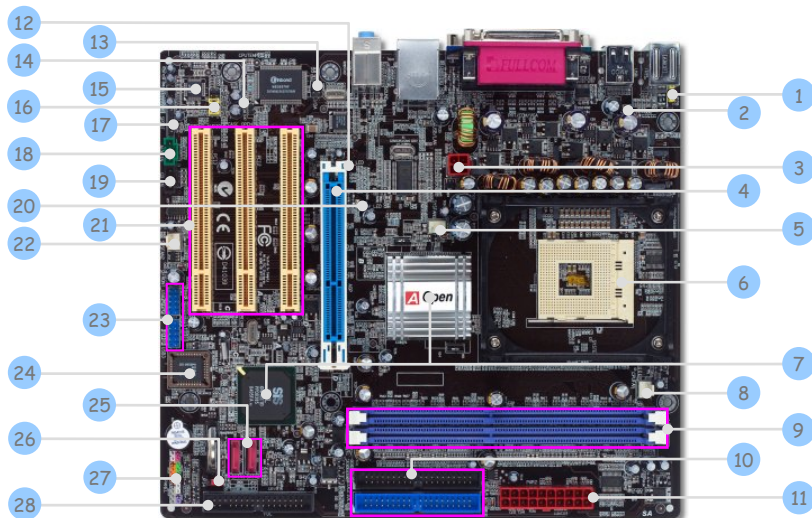
1. JP28 PS2 KB/Mouse Wakeup Jumper	15. Onboard AC'97 CODEC
2. Resetable Fuse	16. Front Audio Connector
3. 4-pin 12V ATX Power Connector	17. S/PDIF Connector
4. AGP 8X Expansion Slot	18. AUX_IN Connector
5. CPUFAN Connector	19. CD_IN Connector
6. 478-pin CPU socket supporting Intel P4 Northwood and Prescott CPU	20. AGP LED
7. SIS 661FX / 964 Chipsets (s661FXm-S) SIS 661FX / 964L Chipsets (s661FXm)	21. 32-bit PCI Expansion Slots X 3
8. SYSFAN Connector	22. SYSFAN2 Connector
9. 184-pin DIMMs x 2	23. USB 2.0 Connectors x 2
10. IDE Connectors x 2	24. DieHard BIOS Lite
11. ATX Power Connector	25. Serial ATA Ports X 2
12. STBY LED	26. JP14 CMOS Data Clear Jumper
13. IRDA Connector	27. Front Panel Connector
14. Case Open Connector	28. FDD Connector

2.2 Specification

Here is the main function of your motherboard.

Models	s661FXm-S	s661FXm
CPU	Intel Pentium 4 Northwood and Prescott CPU Socket 478 400/533/800MHz	Intel Pentium 4 CPU Northwood and Prescott CPU Socket 478 400/533/800MHz
Chipset	SIS 661FX / 964	SIS 661FX / 964L
Main Memory	DDR 266/333/400MHz DDR DIMM x 2 DIMM Type : 64/128/256/512MB & 1GB Max Memory : 2GB	Mode DDR 266/333/400MHz DDR DIMM x 2 DIMM Type : 64/128/256/512MB & 1GB Max Memory : 2GB
Graphics	Integrated VGA Engine in chipset 8X AGP slot	Integrated VGA Engine in chipset 8X AGP slot
IDE	Integrated ATA133 and Serial ATA Controller [support RAID0, 1] Max Disk: 144,000,000GB [by 48 bits LBA Spec.]	Integrated ATA133 Max Disk: 144,000,000GB [by 48 bits LBA Spec.]
LAN	SIS 10/100 Mbps LAN Controller RealTek PHY	SIS 10/100 Mbps LAN Controller RealTek PHY
Sound	Realtek AC'97 CODEC onboard, support 5.1 Channel	Realtek AC'97 CODEC onboard, support 5.1 Channel
USB	Integrated in chipset, USB 2.0 x 8	Integrated in chipset, USB 2.0 x 8
Slots	AGP x 1 PCI x 3	AGP x 1 PCI x 3
Back Panel I/O	PS/2 Keyboard x 1, PS/2 Mouse x 1 USB Port x 4, LAN Port x 1 VGA Port x 1, COM Port x 1 Printer Port x 1 Speaker_Out x 1, Line_In x 1 MIC_In x 1	PS/2 Keyboard x 1, PS/2 Mouse x 1 USB Port x 4, LAN Port x 1 VGA Port x 1, COM Port x 1 Printer Port x 1 Speaker_Out x 1, Line_In x 1 MIC_In x 1
On Board Connector	Front Panel x 1 Front Audio x 1 CPU FAN x 1,System FAN x 1,Chassis FAN x 1 Case Open Connector x 1 CD_IN x 1, AUX_IN x 1 IrDA x 1,S/PDIF x 1 USB Connector x 2	Front Panel x 1 Front Audio x 1 CPU FAN x 1,System FAN x 1,Chassis FAN x 1 Case Open Connector x 1 CD_IN x 1, AUX_IN x 1 IrDA x 1,S/PDIF x 1 USB Connector x 2
BIOS	Award PnP 4Mb Flash ROM BIOS	Award PnP 4Mb Flash ROM BIOS
Board Size	244 mm x 220 mm	244 mm x 220 mm

2.3 Block Diagram

Socket 478
Intel
Pentium 4
CPU

PCI Bus

32-bit PCI Slot
x3

for s661FXm-S
150MB/s

Serial ATA Ports
x2

ATA
66/100/133

IDE Drives x 4

400/533/800MHz
System Bus

VGA Onboard

SIS
661FX
chipset

RealTek
AC97
CODEC

AGP bus

AGP 8X

AGP 8X Slot

DIMM Sockets x2

DDR400/333/266
RAM Up to 2GB

964
(s661FXm-S)
964L
(s661FXm)

SIS
10/100
LAN
Controller

USB Ports x8

4Mbits Flash
EEPROM

LAN connect
Component

Floppy Disk
Drive

Parallel Port

Serial Ports x1

Chapter 3 Hardware Installation

3.1 Quick Installation Procedure

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

3.2 Installation You Have to Know
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.

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.

CPU socket lever
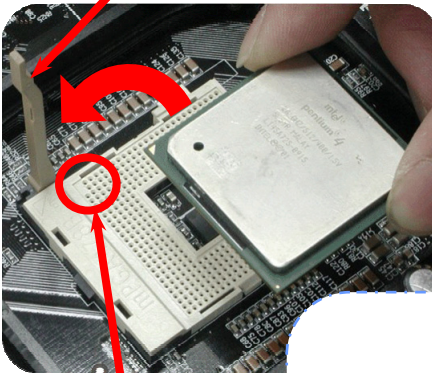
Socket Pin 1

Golden arrow
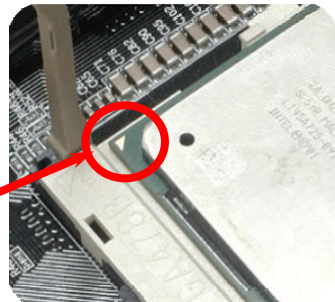
Installing CPU and System Fans

Plug 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
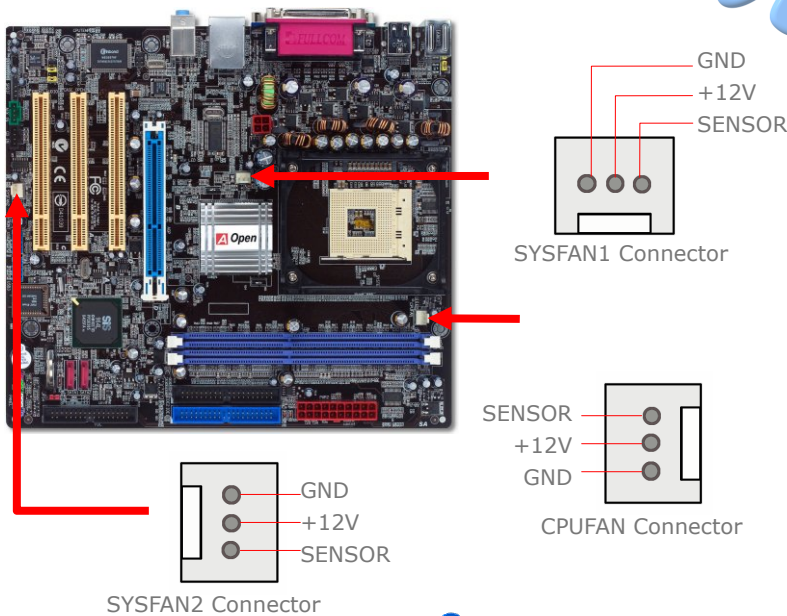
Note: Some CPU fans do not have sensor pin so that they cannot support fan monitoring.

Installing CPU Fan

1. Gently put down the CPU fan on the retention module with four clips aligning correctly to the four holes. **Make sure the two levers are in opposite direction.**

2. Press down the clips into the holes one by one. Make sure the clips are firmly fixed into the holes.

Clip

Hole
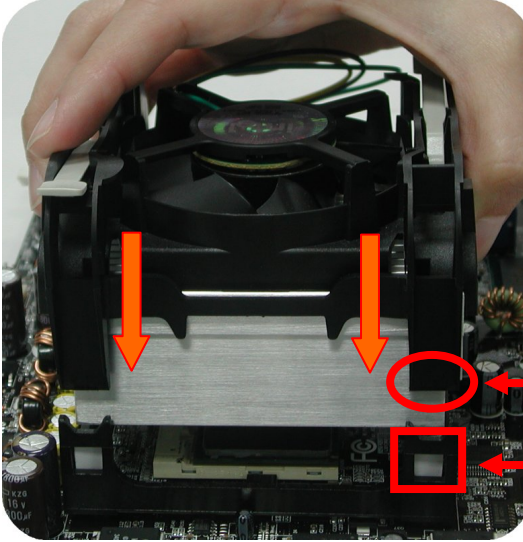
3. Pull two levers down toward the opposite direction to secure the cpu fan.
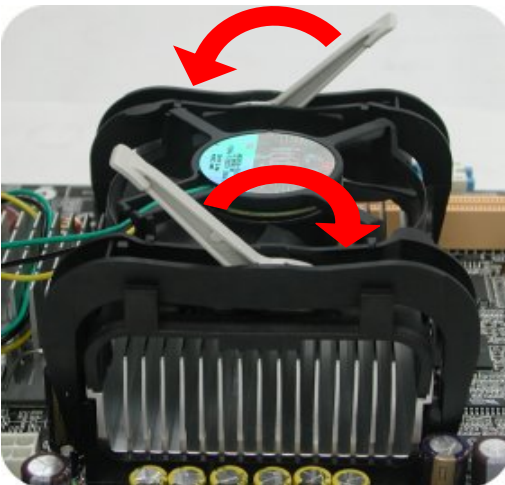
*📌 **Note:** The picture above may look different from the product you purchased.*

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 clip to hold the DIMM in place when the DIMM touches the slot's bottom.*
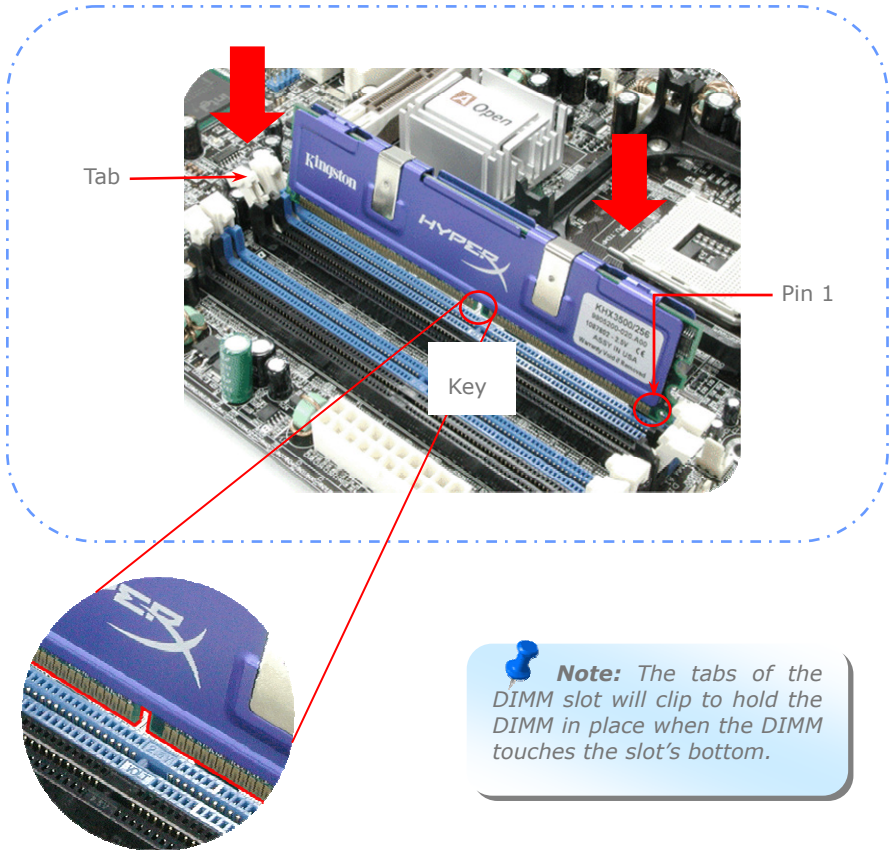
Connecting IDE and Floppy Cables

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

FDD Connector

Pin 1

Secondary Slave (4th)

Secondary Master (3rd)

Pin 1

Primary Slave (2nd)

Primary Master (1st)

ATA 66/100/133 IDE
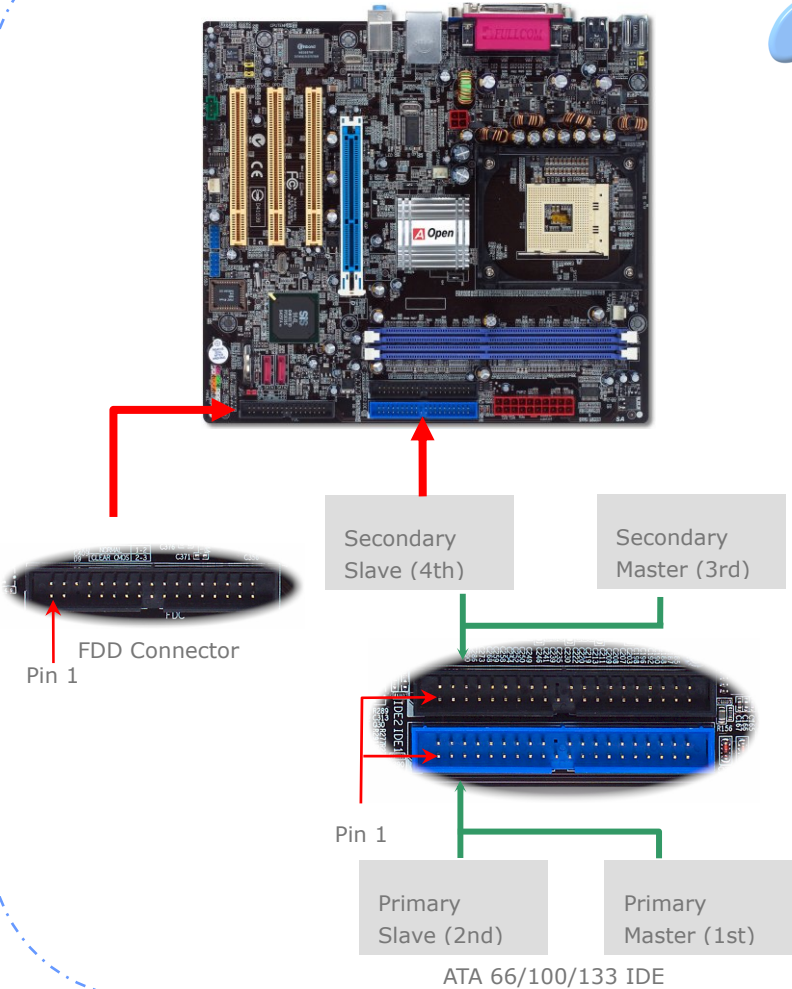
Connecting Front Panel Cable

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, which is a 2-pin female connector from the housing front panel. Plug this connector to the soft-power switch connector marked SPWR.
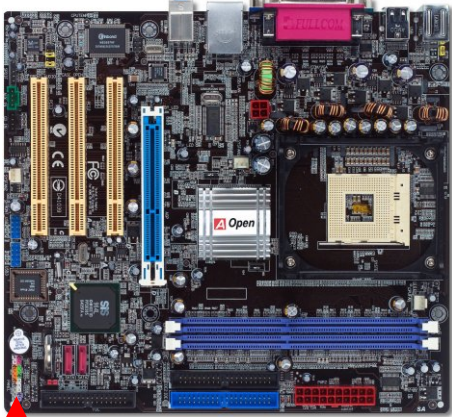
	1	
NC	○ ○	Power Switch
NC	○ ○	GND
+5V	○ ○	Power LED-
HDD LED	○ ○	GND
HDD LED	○ ○	Power LED+
+5V	○ ○	NC
+5V	○ ○	GND
GND	○ ○	GND
NC	○ ○	RESET
SPEAKER	○ ○	GND

Front Panel Connector

Connecting ATX Power Cables

This motherboard comes with a 20-pin and 4-pin ATX power connector as shown below. Make sure you plug them 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
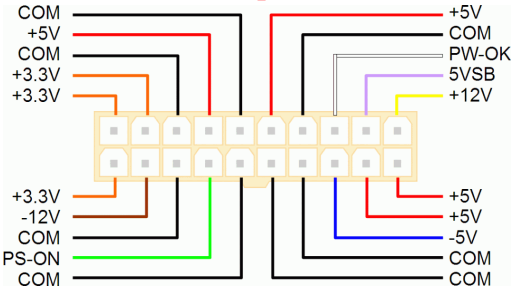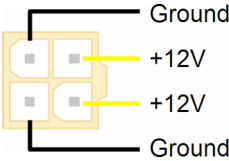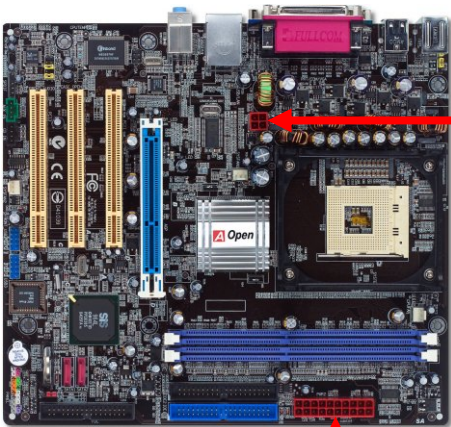
3.3 Other Installation for Your Reference
Setting CPU Voltage and Frequency

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

BIOS Setup > Frequency / Voltage Control > CPU Speed Setup
(Users will do the overclocking at their own risks!!)

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.

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

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 661FX chipset support maximum 800MHz (200MHz*4) system bus and 66MHz AGP clock; higher clock setting may cause serious system damage.

Connecting Serial ATA

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 Port0 (SATA1) will be set as the first boot device automatically. ***Please note that it doesn't support Hot-Plug in function.***

SATA1   SATA2
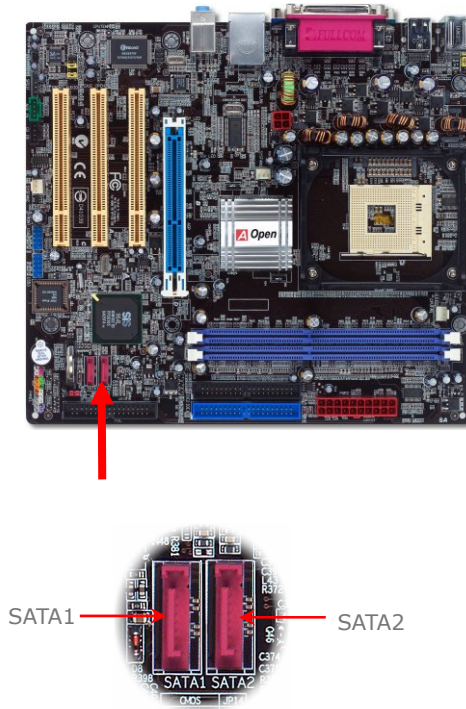
Adjusting your Hard Disk Setting

Except its original 2 sets of parallel IDE, this motherboard supports the latest serial ATA hard disk. If you are unable to find your newly installed serial ATA hard disks on your operating system after having them installed, the problem may lie in the BIOS setting. You can simply adjust BIOS settings to have them work properly.

After installing your hard disks properly, you can directly go to BIOS setting screen for adjustment. Simply pressing *"Integrated Peripherals* → *SIS OnChip PCI Device* → *SIS Serial ATA Controller"* to either enable or disable SATA interface.

```
                    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              Phoenix - AwardBIOS CMOS Setup Utility
                              Integrated Peripherals
  ▶ PnP/PC
              ▶ SIS OnChip IDE Device    Press Enter          Item Help
  ▶ Silen    ▶ SIS OnChip PCI Device    Press Enter
             ▶ Onboard SuperIO Device   Press Enter    Menu Level   ▶
  ▶ Freque     USB Controller           Enabled
               USB Ports Number         6 Ports
               USB 2.0 Supports         Enabled
 Esc : Qu      USB Keyboard Support     Auto
 F10 : Sa      IDE HDD Block Mode       Enabled
               Init Display First       AGP

                        Phoenix - AwardBIOS CMOS Setup Utility
                               SIS OnChip PCI Device

                AC97 Audio              Enabled          Item Help
                Onboard LAN             Enabled
                SiS Serial ATA Controller  Enabled    Menu Level   ▶▶

             ↑↓→←:Move
                 F2:I

                 ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
                      F2:Item Help F5:Previous Values F6:Setup Defaults F7:Turbo Defaults
```

Connecting AGP 8X Expansion Slot

This motherboard provides an AGP 8X slot. The AGP 8X is a bus interface targeted for high-performance 3D graphic. Traditionally AGP used both rising and falling edge of the 66MHz clock for 4X AGP, and the data transfer rate could achieve 66MHz x 4bytes x 4 = 1056MB/s. Now AGP is moving to AGP 8X mode, which is upgraded to 66MHz x 4bytes x 8 =2.1GB/s.
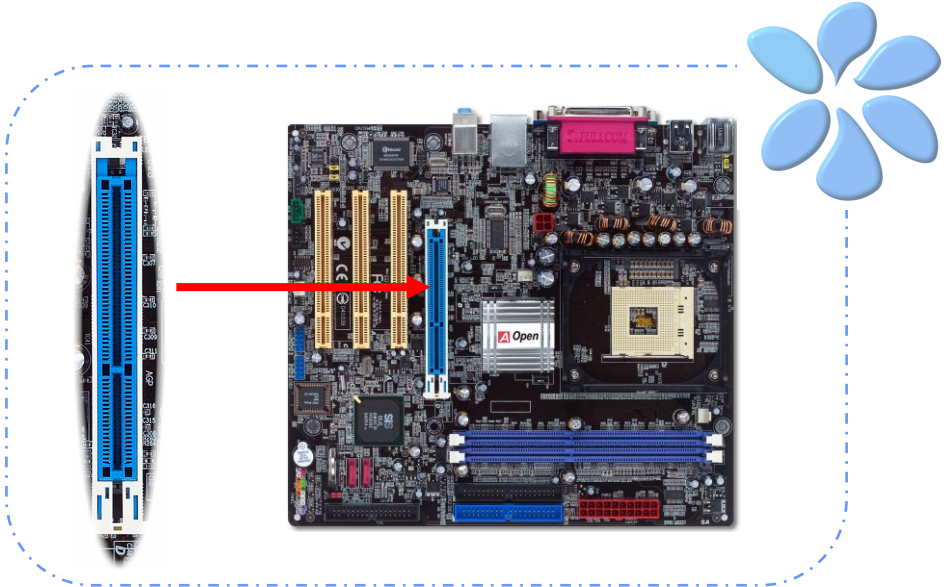

Warning: *It is strongly recommended not adjust AGP/PCI voltage/clock when you connect SATA device. It is because when the voltage/clock for AGP/PCI is adjusted, the SATA clock cannot remain at 100MHz, and the system will therefore be unstable.*

Warning: It is strongly recommended not install a 3.3V AGP card, which is not supported by SIS 661FX chipsets on this motherboard.

Connecting IrDA

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
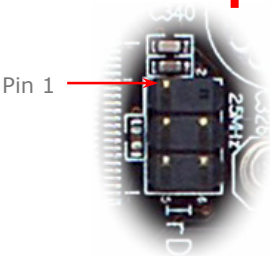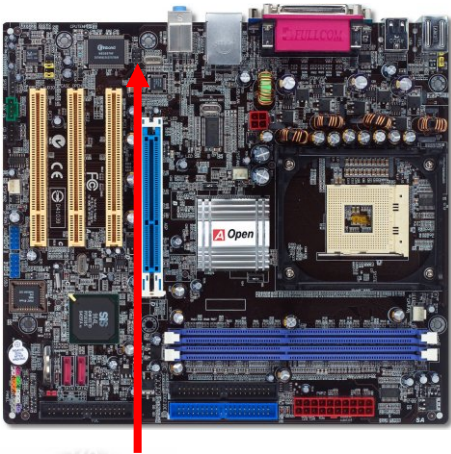
	1	
NC	●	○ KEY
+5V	●	● GND
IR_TX	●	● IR_RX

IrDA Connector

10/100 LAN Supported

On the strength of SIS 10/100 LAN controller on board, this motherboard provides 10/100Mbps Ethernet for office and home use. The Ethernet RJ45 connector is located on the top of USB connectors. The right hand side LED indicates link mode; it lights in yellow when linking to network. The left hand side LED indicates the transfer mode and will light in green when data is transferring at 100Mbps (never lights while at 10Mbps). To enable or disable this function, you may simply adjust it through BIOS. To enable LAN wakeup function, you have to set the "Wake on PCI Card" enable in the BIOS "Power Management Setup" section.

Speed LED (Left)
Green 100Mbps

ACT LED (Right)
Yellow
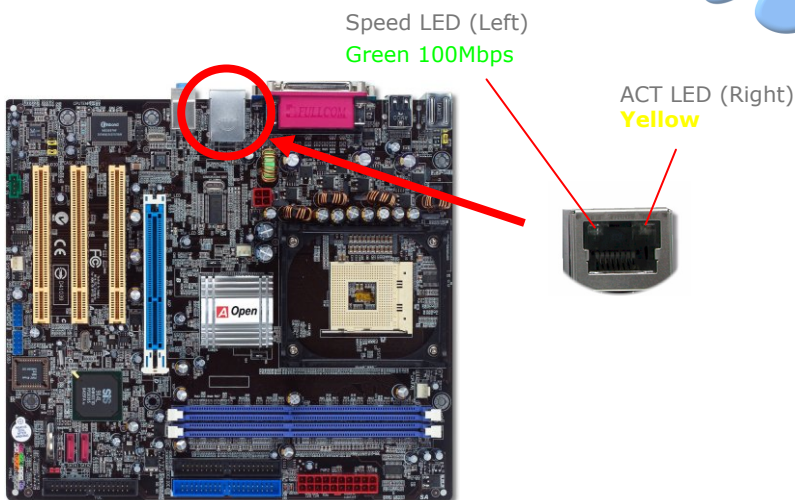
Connecting USB2.0

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 Front USB connector to USB modules or chassis front panel.
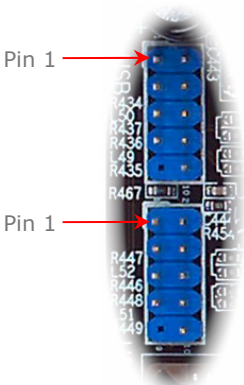
Pin 1

Pin 1

1

+5V	+5V
SBD6-	SBD7-
SBD6+	SBD7+
GND	GND
KEY	NC

USB 2.0 Connector
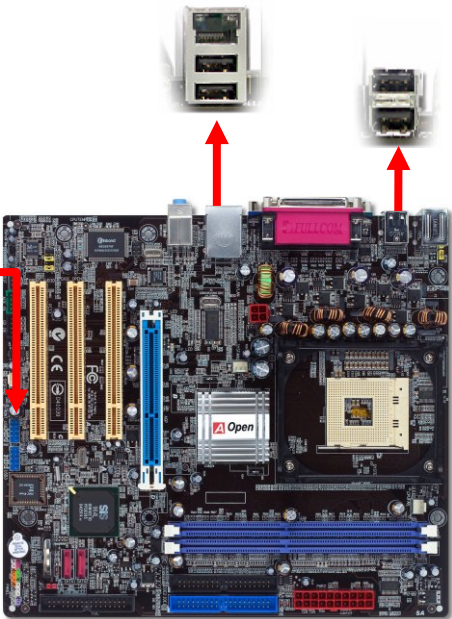
Super 5.1 Channel Audio Effect

This motherboard comes with a Realtek AC'97 CODEC (ALC655), which supports high quality of 5.1 Channel audio effects, bringing you a brand new audio experience. On the strength of the innovative design of ALC655, you're able to use standard line-jacks for surround audio output without connecting any external module. To apply this function, you have to install the audio driver in the Bonus Pack CD as well as an audio application supporting 5.1 Channel. Picture below represents the standard location of all speakers in 5.1 Channel sound tracks. Please connect the plug of your front speakers to the green "Speaker out" port, rear speakers' plug to the blue "Line in" port and both of the center and subwoofer speakers to the red "MIC in" port.

Front Left (Green)   Center (Red)   Front Right (Green)

Subwoofer (Red)

Rear Lert (Blue)   Rear Right (Blue)
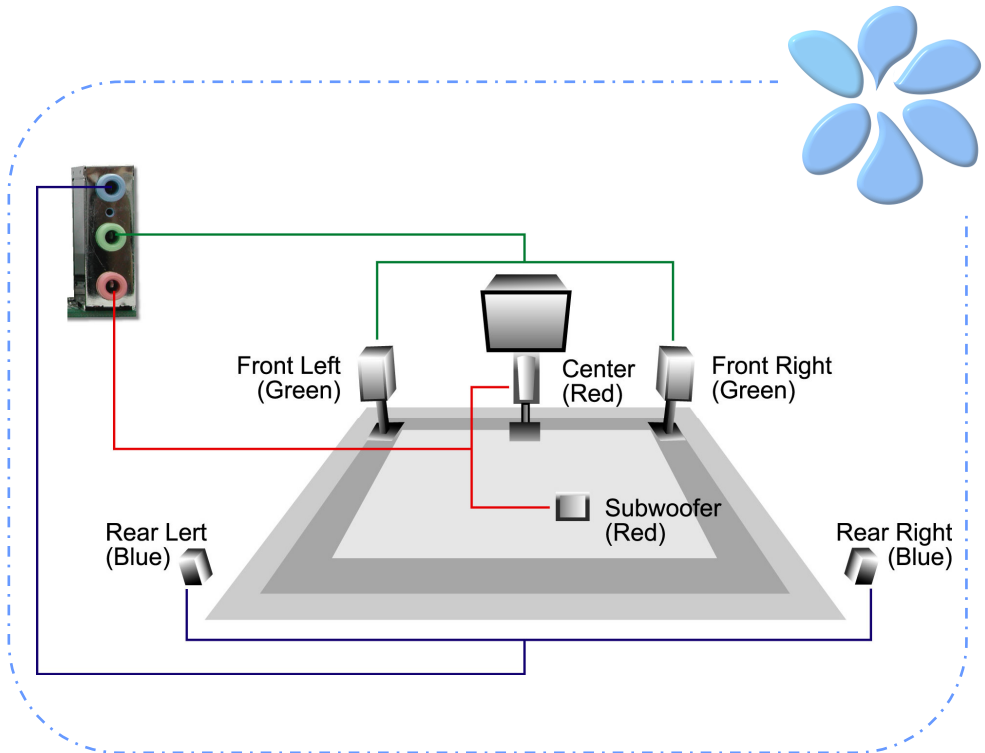
Connecting Front Audio

If the housing is 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 the jumper cap from the Front Audio Connector before you connect the cable. Do not remove this yellow jumper cap if your housing doesn't have an audio port on the front panel.

Pin1
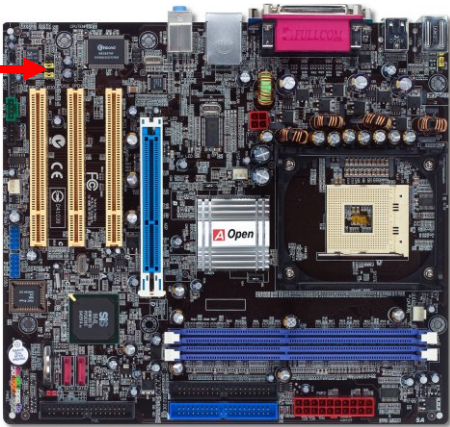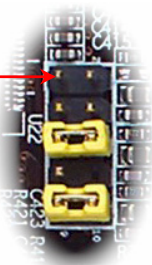
```
                    1
     AUD_MIC  ● ●  AUD_GND
AUD_MIC_BIAS  ● ●  AUD_VCC
 AUD_FPOUT_R  ● ●  AUD_RET_R
          NC  ● ○  KEY
 AUD_FPOUT_L  ● ●  AUD_RET_L
```

Front Audio Connector

Connecting CD_IN

This connector is designed to connect CD Audio cable from CDROM or DVD drive to onboard sound.

R — ▪
GND — ▪
GND — ▪
L — ▪
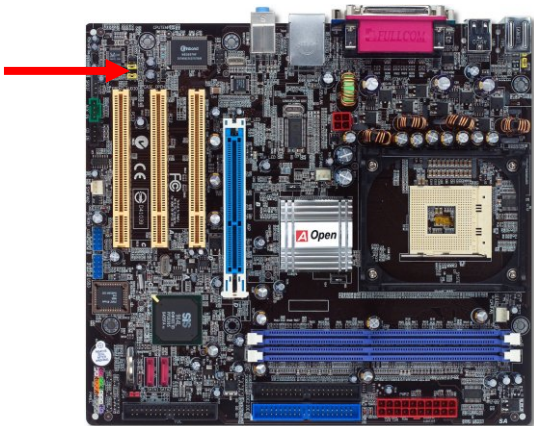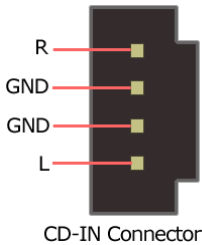
CD-IN Connector

Connecting AUX_IN

This connector is used to connect MPEG Audio cable from MPEG card to onboard sound.

R
GND
GND
L

AUX-IN Connector
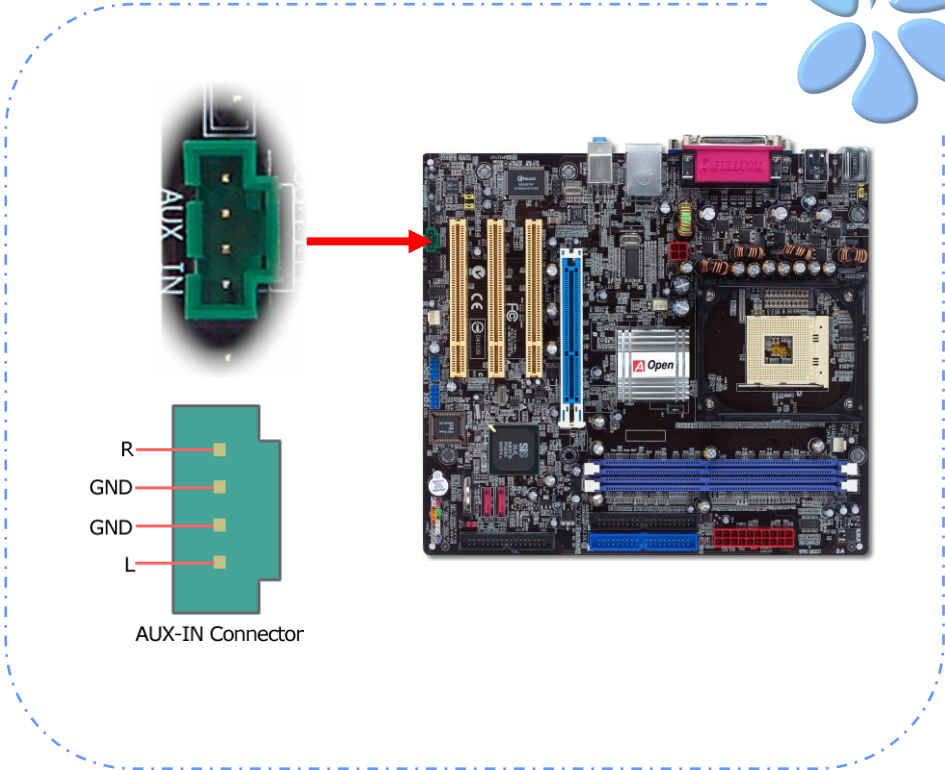
Connecting Case Open

The "CASE OPEN" header provides chassis intrusion-monitoring function. To make this function work, you have to enable it in the system BIOS, connect this header to a sensor somewhere on the chassis. So, whenever the sensor is triggered by lights or by the opening of the chassis, the system will beep to inform you. Please be informed that this useful function only applies to advanced chassis; you may purchase an extra sensor, attach it on your chassis and make a good use of this function.

Pin 1

1

Sensor

GND

Chassis Intrusion Connector
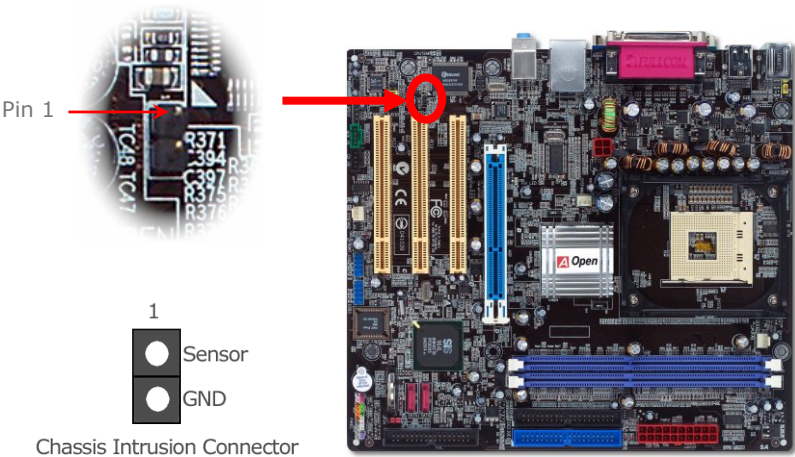
Connecting S/PDIF (Sony/Philips Digital Interface)

S/PDIF (Sony/Philips Digital Interface) is a newest audio transfer file format, which provides impressive audio quality through optical fiber and allows you to enjoy digital audio instead of analog audio. Through a specific audio cable, you can connect the S/PDIF connector to other end of the S/PDIF audio module, which bears S/PDIF digital output. Normally there are two S/PDIF outputs as shown, one for RCA connector, the most common one used for consumer audio products, and the other for optical connector with better audio quality. Same as outputs, you can also connect RCA or optical audio products to input connectors on the module and have the voice or music come out from your computer. However, you must have a S/PDIF supported speaker/amplifier/decoder with S/PDIF digital input/output to connect to the S/PDIF digital input/output to make the most out of this function.

Pin 1

1
+5V
NC
SPDIFOUT
GND
SPDIFIN

(RCA)
S/PDIF OUT
S/PDIF IN

S/PDIF OUT
S/PDIF IN
(Optical)

S/PDIF Cable

S/PDIF Module
(User Upgrade Optional)
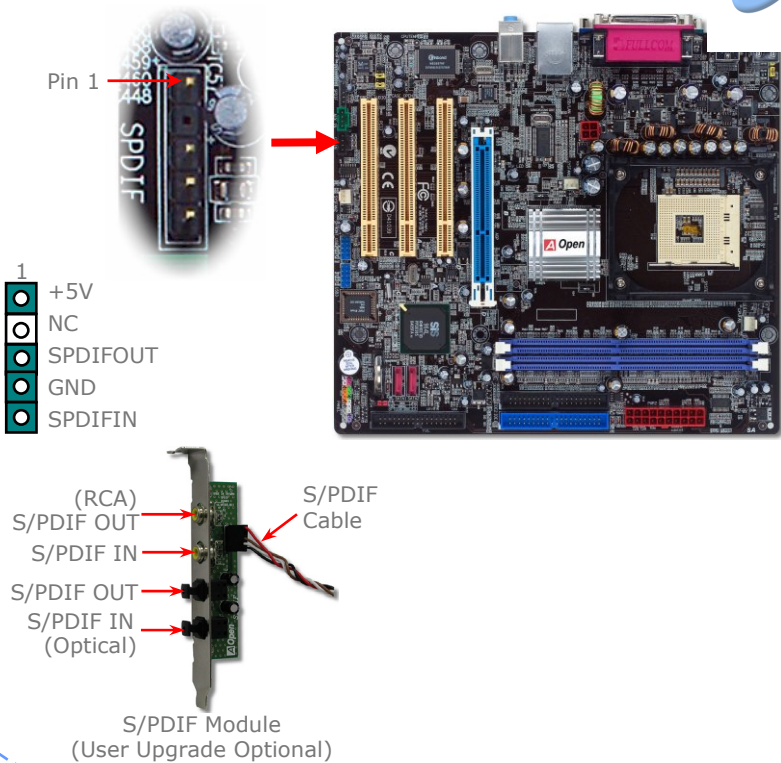
Colored Coded Back Panel

The onboard I/O devices have PS/2 Keyboard, PS/2 Mouse, RJ-45 LAN Connector, COM1, VGA port, Printer, USB, AC'97 sound and game ports. The view angle of drawing shown here is from the back panel of the housing.
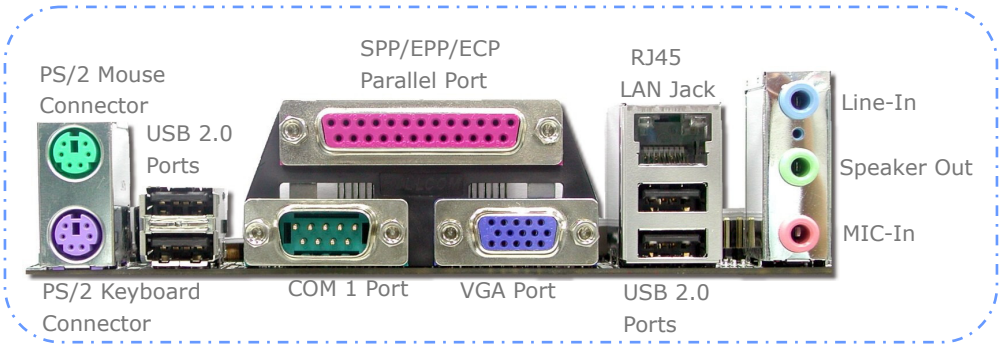
PS/2 Keyboard:	For standard keyboard, which use a PS/2 plug.
PS/2 Mouse:	For PC-Mouse, which use a PS/2 plug.
USB Port:	Available for connecting USB devices.
Parallel Port:	To connect with SPP/ECP/EPP printer.
COM1 Port:	To connect with pointing devices, modem or others serial devices.
RJ-45 LAN Port:	To connect Ethernet for home or office use.
VGA Connector:	To connect with PC monitor.
Speaker Out:	To External Speaker, Earphone or Amplifier.
Line-In:	Comes from the signal sources, such as CD/Tape player.
MIC-In:	For Microphone

LED Indication

LED indication including Standby LED and AGP LED are AOpen's considerate designs that aim at providing you friendly system information.

STBY LED will light up when power is provided to the motherboard, giving you a convenient indication check the system power status in circumstances such as power on/off, stand-by mode and RAM power status during Suspend to RAM mode.

AGP LED aims to protect your motherboard from being damaged by over voltage of AGP card. When AGP Protection Technology is implemented, this motherboard will automatically detect the voltage of AGP card and prevent your chipsets from being burnt out. Please note that if you install an AGP card with 3.3V, which is not supported by SIS 661FX chipset, the AGP LED on the motherboard will light up to warn you the possible damage of the exceeding voltage.
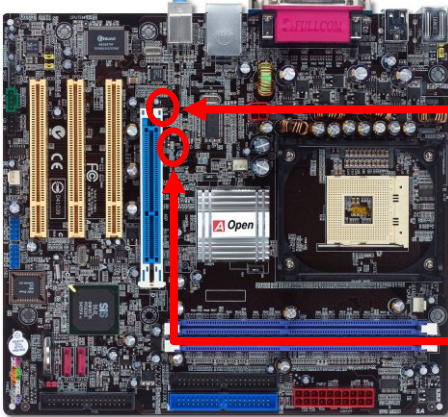
STBY LED

AGP LED

3.4 Jumper Settings

JP28 Keyboard / Mouse Wakeup Jumper

This motherboard provides PS2 keyboard / mouse wake-up function.

1	⬤
	⬤
	○

Disable (Default)

1	○
	⬤
	⬤

Enable
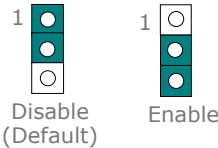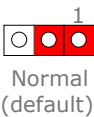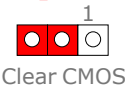
JP28 PS2 KB/Mouse Wakeup Jumper

JP14 Clear CMOS Jumper

1
⬤ ⬤ ○

Clear CMOS

1
○ ⬤ ⬤

Normal (default)

JP14 Clear CMOS Data

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.

Chapter 4 Special Features and Utilities

RAID (for s661FXm-S only)
(Redundant Array of Independent Disks)

With the latest chipsets implemented, SIS 964 provides RAID 0 and RAID 1 function for the Serial ATA hard disks. You may use RAID BIOS Setting Utility provided by SIS to setup your disk array. For more RAID introduction, please visit our website: ***http://english.aopen.com.tw/tech/techinside/RAID.htm***

RAID BIOS Setting Utility

In order to make sure your system can recognize and operate Serial ATA RAID device smoothly, we have to enter RAID BIOS Setting Utility to do some configuration. After finishing the BIOS setup and reboot, you will see [Press <CRTL><S> to run BIOS Setting Utility] about half way through the boot up. When you enter you will be presented with a screen as shown below. You can use this utility to create or delete your disk arrays.

```
Silicon Integrated Systems Corp. RAID BIOS Setting Utility v1.xx
(c) 2003-2005 Silicon Integrated Systems Corp.All Right Reserved.

Press <CTRL><S> to run BIOS Setting Utility
Scan Device. Please Wait………….

        Primary Master     :  xxxxxxxx     xxxxxxMB    UDMA 5
        Primary Slave      :  <Deice Not Found>
        Secondary Master   :  <SATA Device Not Found>
        Secondary Slave    :  xxxxxxxx     xxxxxMB    UDMA 5

   [ RAID Information ]
```

```
═══════════════════════  Disk Status  ═══════════════
*Current Created Raid*


[R] : Enter Raid setup utility

 [Q] : Exit current menu

Location        Model          Capacity     Mode      RAID Type

DISK 1        ST380023AS       78080MB      UDMA5     Single
DISK 2        ST380023AS       78080MB      UDMA5     Single
```

Other Useful Features

With excellent design ability of R&D team, AOpen boasts for its various powerful and handy features that come with our product like follows. You are welcomed to visit our technical website to learn more about those features. *http://english.aopen.com.tw/tech/techinside*
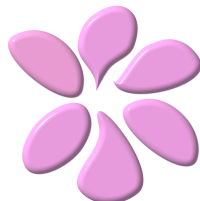
Chapter 5 Setting BIOS

Introduction

System parameters can be modified by going into BIOS Setup menu; this menu allows you to configure the system parameters and save the configuration into the 128 bytes CMOS area (normally in the RTC chip or in the main chipset).

The Phoenix-Award BIOS™ that installed in the Flash ROM of the motherboard is a custom version of an industry standard BIOS. The BIOS provides critical low-level support for standard devices such as hard disk drives, serial and parallel ports.

AOpen's R&D engineering team had optimized most BIOS settings of this motherboard. However, some default settings of BIOS cannot fine-tune those sections that controlled by chipset. Therefore, this chapter is intended to guide you and help you to configure some other settings.

To enter BIOS setup menu, press <Del> when POST (Power-On Self Test) screen is shown on your monitor.

> *Note:* Because BIOS code is the most often changed part on motherboard, the BIOS information contained in this manual may be different from the BIOS version that comes with your motherboard.

# How To Use Phoenix-Award™ BIOS Setup Program

Generally, you can use arrow keys to highlight items that you want to choose, press <Enter> key to select, and use <Page Up> and <Page Down> keys to change setting values. You can press <Esc> key to quit Phoenix-Award™ BIOS setup program. The following table provides details about how to use keyboard in the Phoenix-Award ™ BIOS setup program. Alternatively, it's strongly recommended to install AOpen's newest WinBIOS Utility to get more detailed description, further powerful functions and advanced setting of BIOS.

Key	Description
Page Up or +	Change setting to next value or increase the value.
Page Down or -	Change setting to previous value or decrease value.
Enter	Select the item.
Esc	In main menu: Quit without saving any changes. In sub menu: Exit current menu to main menu.
Up Arrow	Highlight previous item.
Down Arrow	Highlight next item.
Left Arrow	Move the light bar to left side of menu.
Right Arrow	Move the light bar to right side of menu.
F6	Load Setup Default setting value from CMOS.
F7	Load turbo setting value from CMOS.
F10	Save changed settings and exit setup program.

How To Enter BIOS Setup

After finishing the jumper settings and connecting cables, you can power on and enter the BIOS Setup. Press <Del> during POST (Power-On Self Test) and choose "Load Setup Defaults" for recommended optimal performance.

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

BIOS Upgrade under Windows environment

With outstanding R&D ability of AOpen, we now bring you a whole new BIOS Flash wizard ---- EzWinFlash. With an eye to convenience for users, EzWinFlash combines the BIOS binary code and flash module together, so the only thing you have to do is just clicking on the utility you downloaded from web and let it help you complete the flash process automatically. EzWinFlash detects your motherboard and checks the BIOS version cleverly to prevent your system from any possible failure. Moreover, EzWinFlash has been taken into consideration to go with any windows platform you might be using, no matter if you're using Windows 95/98, 98SE/ME, NT4.0/2000, or Windows XP.

In the meanwhile, in order to provide a much more user-friendly operating environment, AOpen EzWinFlash is natively designed to have multi-language function to provide easier way for user in changing BIOS setting.
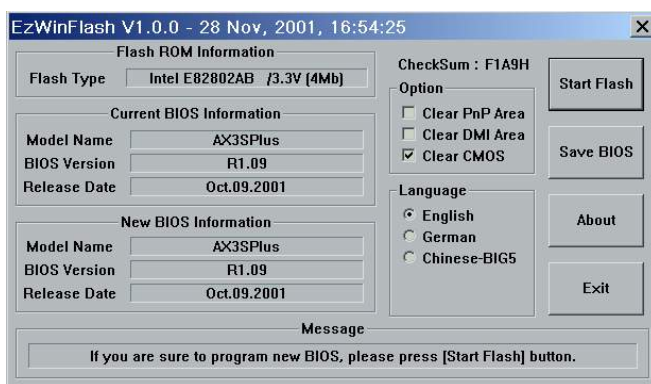
Caution: You are taking a risk of BIOS flash failure when you update your system. If your motherboard is working stable, and there are no major bugs to be fixed by a latter BIOS revision, we recommend that you DO NOT upgrade your BIOS. If you intent on upgrade PLEASE MAKE SURE you get the right BIOS revision for your motherboard model so as to avoid any possible failure.

Note: The model name on this BIOS picture is for reference only. It may not be the same model with your motherboard.

You may accomplish BIOS upgrade procedure with EzWinFlash according to following steps, and it's STRONGLY RECOMMENDED to close all applications before you start the upgrades.

Download the latest version of BIOS package zip file from AOpen official web site. (Ex: http://english.aopen.com.tw/)

Unzip the downloaded BIOS package (ex: WSGMAXII102.ZIP) with WinZip (http://www.winzip.com) in Windows environment.

Save the unzipped files into a folder, for example, WSGMAXII102.EXE & WSGMAXII102.BIN.

Double click WSGMAXII102.EXE; EzWinFlash will detect the model name and BIOS version of your motherboard. If you collect wrong BIOS, you will not be allowed to proceed with the flash steps.

You may select a preferred language in main menu, then click [Start Flash] to begin the BIOS upgrade procedure.

EzWinFlash will complete all the process automatically, and a dialogue box will pop up to ask you to restart Windows. Click [YES] to reboot Windows.

Press <Del> at POST to enter BIOS setup screen; choose "Load Setup Defaults", then "Save & Exit Setup". Done!

It is strongly recommended NOT to turn off the power or run any applications during FLASH PROCESS.

> **Warning:** *The new BIOS upgrade will permanently replace your original BIOS setting when flashing. You may need to reconfigure the BIOS setting before your system goes back to work as normal.*

Vivid BIOS technology

Have you been fed up with the conservative and immutable POST screen? Let's rule out the tradition idea that POST screen are stiff and frigid, and let AOpen show you the newly developed VividBIOS to experience the lively vivid colorful POST screen!

Unlike earlier graphic POST screen which could occupy the whole screen and mask text information during POST, AOpen VividBIOS deals with graphics and texts separately, and makes them running simultaneously during POST. With this innovative design, VividBIOS now brings you a beautiful and sleek 256 colors screen without missing any important information shown on POST screen.

In addition, the limited space of BIOS ROM is another big issue. When all of the traditional BIOS can only show space-consuming and uncompressed Bitmap, AOpen has considerately tuned the BIOS to next generation, to recognize the smaller-sized GIF format and even dynamic-showing GIF animation.

Vivid BIOS shares the same fundamental technology with Open JukeBox CD Player, you may use the same EzSkin utility to change your VividBIOS screen or to download your favorite Open JukeBox skin. If you see this little logo shown beside your model name on the motherboard download page, *http://english.aopen.com.tw/tech/ezskin/vivid.htm*, it is assured that your motherboard supports this innovative feature!

Chapter 6 Installing Drivers

EzInstall

You may think that installing drivers and utilities would be a repeated task of going through those installation wizards and steps-by-steps. Now, you will be surprised with how "Ez" EzInstall could do. Without wizards or steps, all you have to do is to do one click and then it's done. Click and done. Yes. EzInstall makes installation easy and even foolproof!

After putting in the CD, you will be prompted with AOpen welcome page and our branches information.

First, click on the install driver ICON at left side for necessary drivers.

Second, click on the install utility ICON at left side for preferred utilities.

Practically, it's done. But you may also browse CD contents, Readme to get more information or just exit the CD installation.

Click to install online manual

Install driver

Install utility

Browse CD Contents

Readme

Exit CD

AOpen

Welcome

AOpen s661FXm-S

Contact us

Install User manual

AOpen Inc.
http://www.aopen.com.tw
TEL: +886-2-3789-5888
FAX: +886-2-3789-5899

AOpen America Inc.
http://english.aopen.com.tw
TEL: +1-408-232-1200
FAX: +1-408-232-1280

AOpen Computer B.V.
http://www.aopen.nl
TEL: +31-73-645-9516
FAX: +31-73-645-9604

AOpen Computer GmbH.
http://www.aopencom.de
TEL: +49-2131-1243-710
FAX: +49-2131-1243-999

AOpen Japan Inc.
http://www.aopen.co.jp
TEL: +81-048-290-1800
FAX: +81-048-290-1820

AOpen International Co., Ltd.
http://www.aopen.com.cn
TEL: +86-21-6225-8622
FAX: +86-21-6225-7926

AOpen branches information

Ez Install

6.1 Installing Drivers

As you may see from the Installing driver page, EzInstall had picked up necessary for your motherboard. All you have to do is just click on the "**GO**", and no more steps afterward, of all listed drivers, grey checks indicate necessary drivers; you cannot click them off. Red checks can be disabled if you don't want to install them now.

Press the icon will prompt the "**Install Driver**" page. You may also press "**Back**" to return to the Main page.
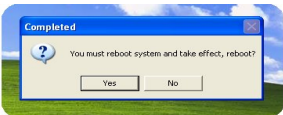
Once clicking "GO", EzInstall will run the installing procedure automatically, and prompt a reboot dialog (Some drivers or utilities may skip the reboot part).

6.2 Installing Utilities

Installing Utilities is virtually the same as installing drivers. AOpen provides you many friendly and powerful utilities to manage your system. You may find lots of fabulous utilities listed there, and all you have to do is to click on the "**GO**", then it will install the utilities to your system right away without complicated steps.

Press the icon will prompt the **"Install Utilities"** page for your selection. You may also press **"Back"** to get back to the Main page.

TroubleShooting

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 / No

Turn on the power and check if the power supply, power fan and CPU fan work properly.

Perhaps your memory is not compatible with the system, or either your VGA card*2 or monitor is out of order.

Yes / No

Check if there is display

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 / No

Turn on the system again and re-connect the IDE cable. Check if the system can reboot successfully.

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.

Chapter 8 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!

AOpen Technical Supporting Team

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

Japan
AOpen Japan Inc.
Tel: 81-048-290-1800
Fax: 81-048-290-1820

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

Pacific Rim
AOpen Inc.
Tel: 886-2-3789-5888
Fax: 886-2-3789-5899

Europe Email:	*Support@AOpen.NL*
Pacific Rim:	*http://www.aopen.com.tw/tech/default.htm*
China:	*http://www.aopen.com.cn/tech/default.htm*
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*

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) 2003, Phoenix Technologies, LTD.

i865GVm-I   R1.02 June. 01. 2003 AOpen Inc.
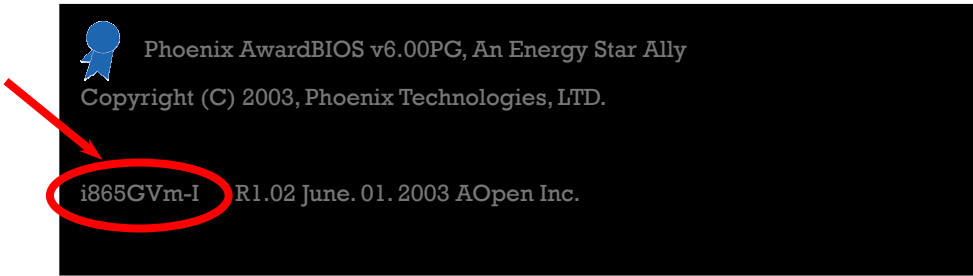
i865GVm-I is model name of motherboard; R1.02 is BIOS version

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:

918811020191949378KN73

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

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.