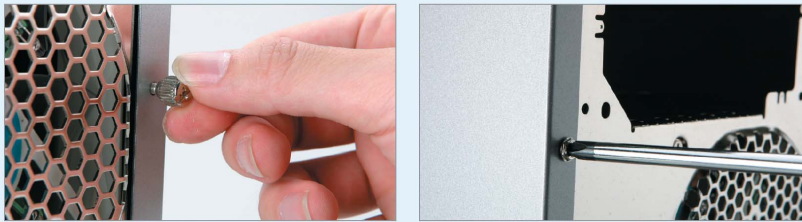


Chapter 3 Hands-on Installation

3.1 Installation of Power Supply and Chassis

Building a computer is like building a home; larger pieces of furniture are installed first, then smaller pieces and then all the rest. There are however many parts of a system that can be assembled in advance such as the processor and memory modules, but for this guide, let's start with the installation of the power supply first.

Step 1... Remove the Screws Securing the Side Panel



After taking the chassis out of the package box, remove the screws at the rear of the chassis that secure the two side access panels. Remove the screws securing the left access panel with your fingers and remove the screws securing the right access panel with a screwdriver.

Step 2... Open the Side Panel



This chassis from GIGABYTE has a protection design built in. As the arrow indicates, slightly push the latch on the left access panel and then pull outward to detach the panel. To detach the right panel, simply pull it outward. For most available chassis, you need to pull the access panels towards the rear side for removal.

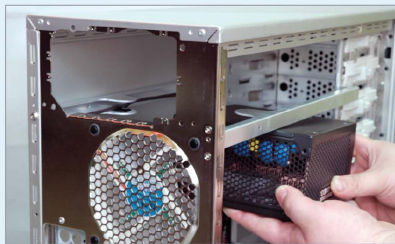
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Step 3... Identify the Position of the Power Supply



As the screws securing the power supply are not all located on the corners, make sure to match the positions of the screws with the screw holes on the rear side of the chassis before installation. Also make sure that the direction of the installation is correct, and pay special attention to check whether the power supply should be installed upright.

Step 4... Install the Power Supply



Place the power supply in an upright position and use your hands to hold its bottom and move it upwards. This makes it easier to move the power supply inside the chassis. Turn the power supply to the horizontal position near the top of the chassis, and then push it into place.

Step 5... Secure the Power Supply

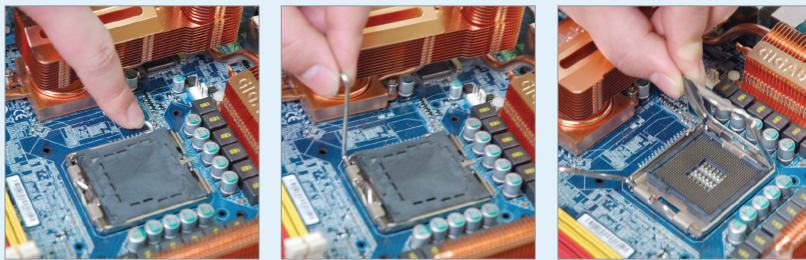


Hold the power supply with one hand, and then fasten the four screws at the rear of the chassis to secure the power supply. Make sure to use the proper screws.

3.2 Installation of the Components on the Motherboard

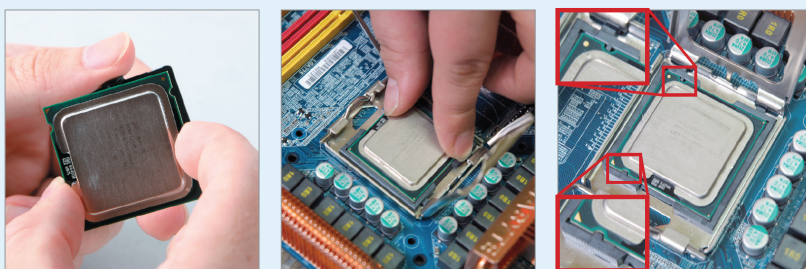
Some processor cooling fans require a unique base. The base needs to be secured from the rear of the chassis. Users need to first install some key components before installing the motherboard in the chassis to avoid the need for removing the motherboard again during installation.

Step 1... Remove the Protection Cover of the Processor



At first, gently press the securing lever beside the LGA775 socket, and then pull the lever outward to detach it from the baffle. The other side of the securing cover will be raised automatically while the protruding part is depressed. Then hold both sides of the covering in a vertical position with your forefinger and middle finger. You can remove the plastic protection cover of the processor at this point.

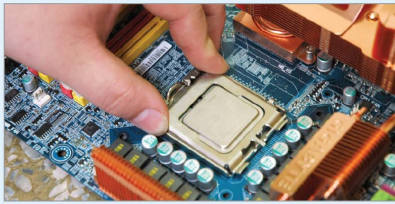
Step 2... Install the Processor



Remove the plastic protection cover of the LGA775 processor. Avoid touching the contact on the rear of the processor. Likewise, grasp the edge of the processor firmly with your forefinger and middle finger. With the indented corner of the processor aligned with the triangle on the processor socket, carefully insert the processor into the socket in a straight and downward direction. Be sure to match the processor to the latch of the socket.

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Step 3... Clasp the Processor Securing Cover



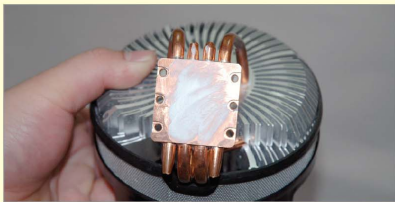
If the processor does not match the latch of the socket, the metal lever cannot be clasped properly. Do not use force during installation to prevent damage to the processor or socket.

Step 4... Apply Thermal Paste on the Processor



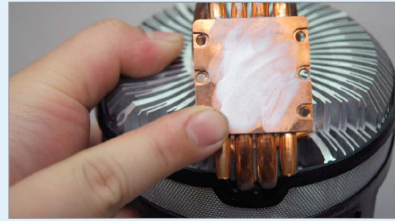
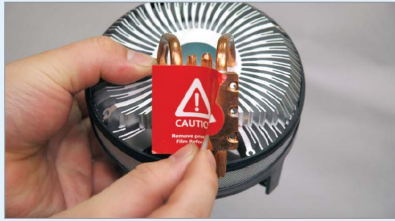
In order to achieve better performance, thermal paste is not applied to the bottom of the cooler in advance for some commercially available fans in the market or GIGABYTE Volar cooler. Before starting to use the product, apply the supplied thermal paste to the surface of the processor or the bottom of the cooler. Use only the required amount of thermal paste on the processor or cooler. Too much or too little can cause damage.

Notes



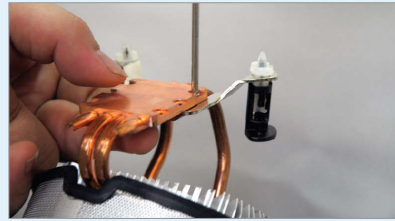
The function of thermal paste is to fill in the small clearance between the processor and cooler. Use your finger to spread the required amount of thermal paste evenly on the processor. The excessive amount of thermal paste will be pressed outside the surface after the cooler is installed.

Step 5... Apply Thermal Paste on the Cooler



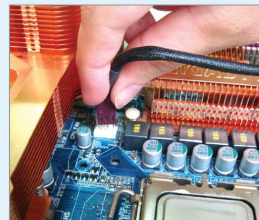
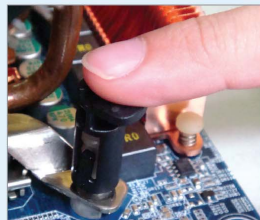
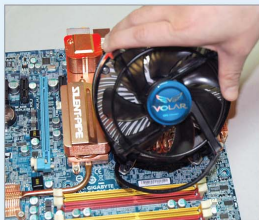
Remove the protection label from the bottom of Volar, and then use your finger to apply thermal paste on the bottom.

Step 6... Install the Cooler



Secure the LGA 775 clips on both sides of Volar. Place Volar above the processor with its four securing plugs aligned with the cooler installation holes on the motherboard.

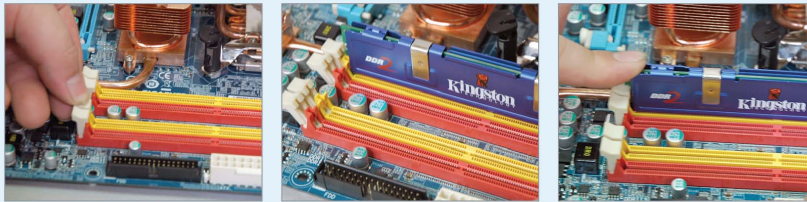
Step 7... Secure the Cooler



Press the four securing plugs downwards. When the securing plugs are installed correctly, shake the cooler lightly to see if it is secured properly. Then connect power to the cooler. If you use the original Intel cooler, the installation procedure is basically the same. You can also refer to the documentation included with the fan for installation instructions.

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Step 8... Open the Memory Latch



Press both memory module slot latches outward to release the module with your thumbs. Match the protection notch of the memory module with the projected part of the memory slot, and then insert the memory module into the slot vertically. Place both thumbs on both ends of the memory module and press down vertically. When the module is seated in the slot, the latches on both ends will clip automatically. You can also press to secure the module.

Step 9... Install the Memory Module



Be sure to install memory modules in the slots of the same color to ensure dual-channel functionality. To remove the memory module, use both thumbs to press both memory module slot latches outward to release the module.

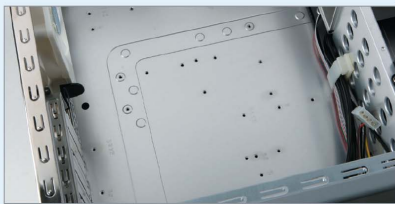
Note



Be sure to install memory modules in the slots of the same color to ensure dual-channel functionality. To remove the memory module, use both thumbs to press both memory module slot latches outward to release the module.

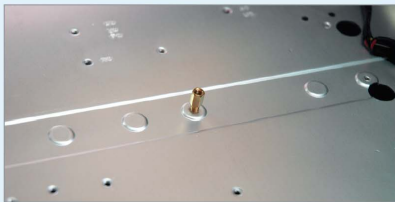
3.3 Installation of Motherboard

Step 1... Install Copper Pillars



Lay the chassis on the side access panel. Slightly fasten the supplied copper pillars to the chassis. The demonstrated GIGABYTE GA-G1975X motherboard uses the ATX specification, and the locations on the motherboard for the copper pillars are A1-A9 according to the label on the bottom of the motherboard. If no indication of the locations for the copper pillars can be found, simply place the motherboard inside the chassis to find out the proper positions for the copper pillars.

Step 2... Secure Copper Pillars



Properly secure the 9 copper pillars required by the ATX motherboard. (The quantity of copper pillars to be secured depends on the size of the motherboard purchased.) To firmly fasten the copper pillars, use sharp-nose pliers.

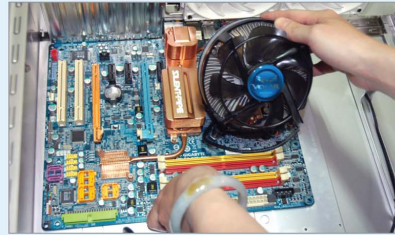
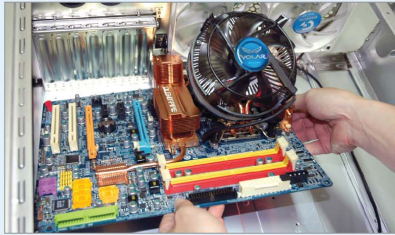
Step 3... Install I/O plate



Remove the plate from the rear of the chassis and install the ATX plate supplied with the motherboard. Press the sides of the plate slightly for seamless contact.

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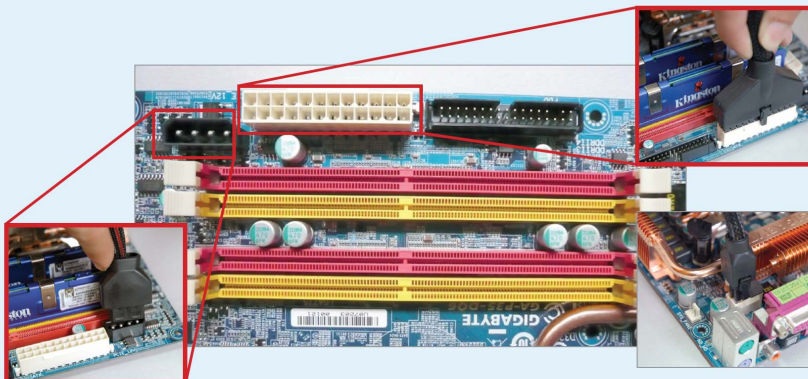
Step 4... Install and Fasten the Motherboard



Line up the connection port (IO port) with the chassis back panel ATX plate, tilt the motherboard and place it inside the chassis. Adjust the motherboard to align the screw holes with the copper pillars. Then use the supplied screws to fasten the motherboard. (Washers are advised for better insulation). Check again to see if any pillar was missed for fastening.

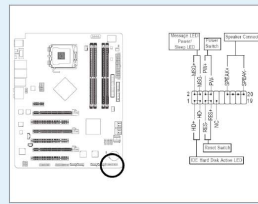
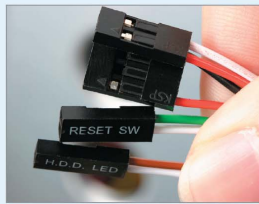
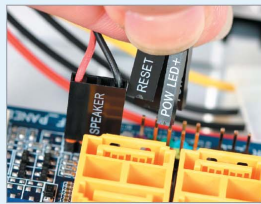


Step 5... Connect Power to the Motherboard



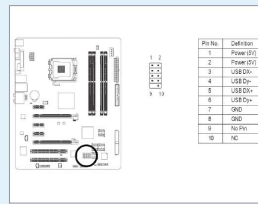
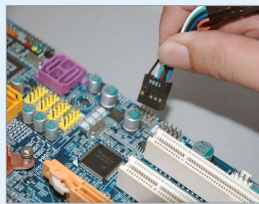
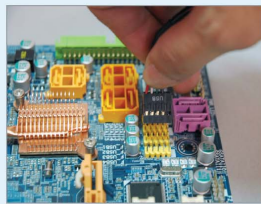
Connect the ATX 24-pin power cable of the power supply and the 4-pin (or 8-pin) 12 V power cable (a separate 12V power cable is optional for some motherboards) to the motherboard. Both connectors support a fool-proof design, so you do not need to worry about inadequate connections. If the connection does not work properly, change the direction and try again.

Step 6... Connect Signal Cables to the Front Panel



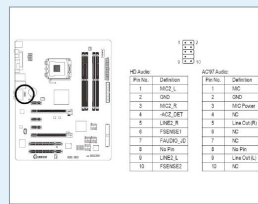
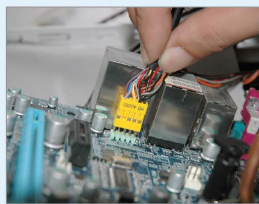
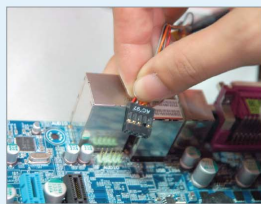
Follow the pin and color indications to connect the power and reset signal cables to the front panel of the chassis. Also observe the polarity of connectors; the connector with an arrow symbol indicates positive. Refer to the documentation supplied with the motherboard for connection position and corresponding pins.

Step 7... Connect the USB



In the same manner, connect the USB, 1394 and audio signal cables (the pin features a fool-proof design to avoid improper connection) to the front panel of the chassis. GIGABYTE motherboards use combined USB connectors. However, most commercially available motherboards have USB connectors supporting separate pins. Follow the instructions in the documentation supplied with the motherboard for pin positions when connecting USB signal cables.

Step 8... Attach Audio Connection on the Front Panel



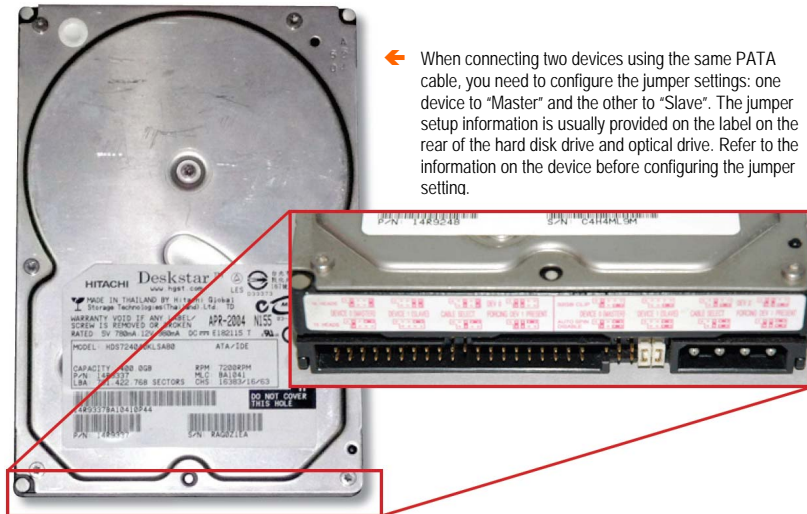
Many chassis now support audio and microphone connections on the front panel. Follow the instructions in the documentation of the motherboard to correctly install the related signal cables. Once finished, you will be able to use audio functionality (either AC 97 or HD Audio) on the front panel.

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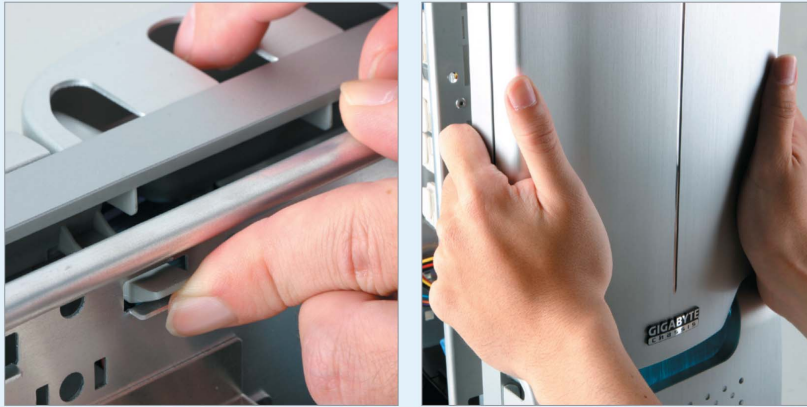
3.4 Securing Storage Devices

The installation procedures and connection cables are similar for a hard disk drive, optical drive, burner or floppy disk drive. The connection usually requires a signal cable and a power cable. Note that an additional audio signal cable is required for an optical drive. Minor differences still exist for different chassis. For the demonstrated GIGABYTE chassis, no screws are required to secure the hard disk drive, optical drive or floppy disk drive; rails and latches are used instead for easy installation.

Screws are often supplied with chassis, but sometimes they may differ from those supplied with the hard disk drive or optical drive. You are recommended to use the original screws to fasten the drives. Note that since the Intel 915 chipset, the South Bridge chip supports only one IDE connector (except for motherboards that use ATA chips). As a result, use the IDE connector to connect the optical drive. Avoid connecting the optical drive and hard disk drive using the same ATA cable; otherwise, the performance of the hard disk drive may be affected. Although Serial ATA hard drives are popular now, you can still install an IDE hard disk drive. This also applies to Serial ATA optical drives.

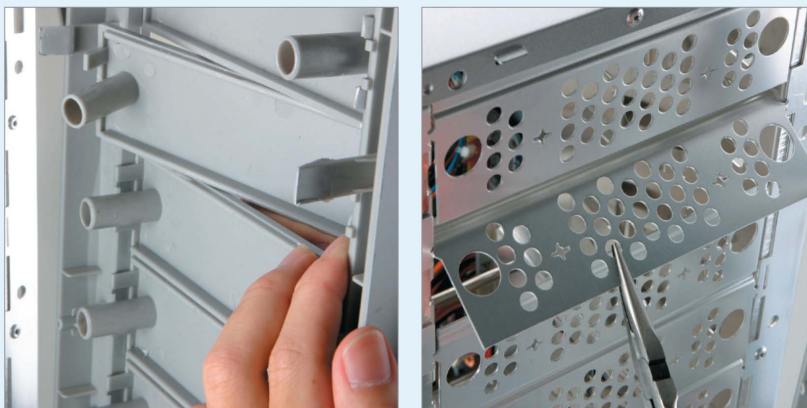


Step 1... Remove the Panel



The front panel of the GIGABYTE chassis is secured by three latches on both sides respectively. Press the latches outward to release and remove the front panel. The procedure is easy; however, do not use excessive force otherwise the latches can be damaged.

Step 2... Remove the Iron Plate



Then use a sharp-nose pliers to remove the iron plate located at the 5.25-inch position of the chassis. Use the handle of a screwdriver to gently knock and remove the plastic protection cover of the front panel from inside the chassis.

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Step 3... Install the Optical Drive and Floppy Disk Drive



Insert the optical drive and floppy disk drive into the 5.25" and 3.5" drive bays respectively through the front of the chassis. Depending on the chassis model, there may be no limit on how far back into the chassis the device can be inserted; therefore, you need to measure in advance the lengths of the drives that will appear outside the chassis. Otherwise, the front sides of the drives may not be level with the chassis panel after the panel is closed. You can also close the panel first before installing the optical drive and floppy disk drive.

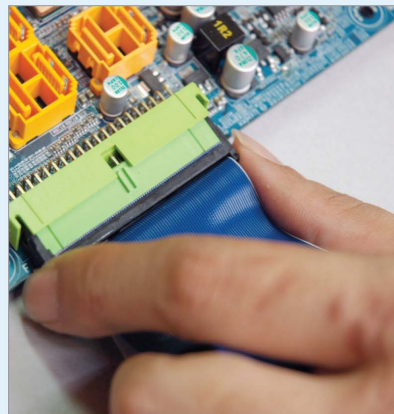
Step 4... Secure the Optical Drive



Slide the rails on the sides of the drive forward. When you hear a clicking sound, the drive is properly secured. Slightly move the drive and make sure that the drive does not shake. If a chassis requires screws instead of rails to secure the drive, fasten two screws to each side of the drive for equal fixation.

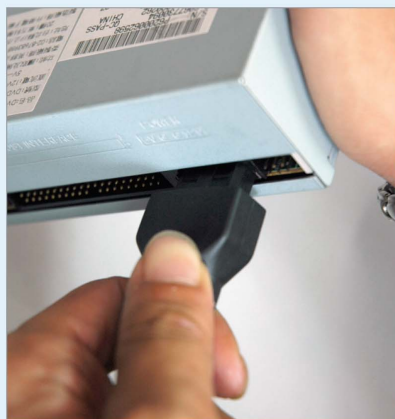


Step 5... Connect the Flat Cable

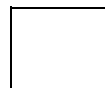


There are usually three connectors on a PATA cable. Two of them are located closely and are used to connect devices; the one located farther is used to connect to the motherboard. These connectors use a fool-proof design to avoid improper connection.

Step 6... Connect the Power to the Optical Drive and Floppy Disk Drive



The power connectors for the optical drive and floppy disk drive are different in size. Thanks to a fool-proof design and different appearance, they are easy to distinguish. Do not use extreme force during the connection to avoid damage.



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Step 7... Install the Rails of the Hard Disk Drive



Take the hard disk drive rails out of the accessory box supplied with the system case. Install and secure the rails to the sides of the hard disk drive. Make sure that the handles of the rails face the power supply of the hard disk drive and the data transmission cable.

Step 8... Install the Hard Disk Drive in the Chassis



Insert the hard disk drive into the drive bay and make sure that the rails on both sides click into place. Particularly, as the hard disk drive is placed horizontally (different from CD ROM and Floppy Disk Drive) on this computer case, it features convenient installation and optimal efficiency of heat dissipation by working with the front fan. If the hard disk drive is fixed by screws on the computer case, remember to fasten two screws on both sides of the drive to balance the fixed strength.

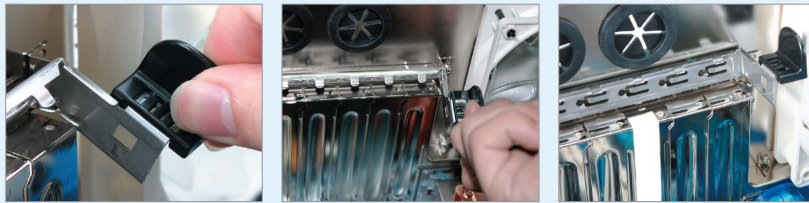
Step 9... Connect the Flat Cable and Power Cable



Connect the flat cable and power cable to the hard disk drive. If the power supply does not support the Serial ATA connector, you can use an adapter cable (an adapter cable is supplied with the chassis). For an IDE hard disk drive, make sure to use the ATA/100 high-density signal cable for the optimal performance. The Serial ATA signal cable has a fool-proof design to prevent improper connection; using excessive force may lead to damage.

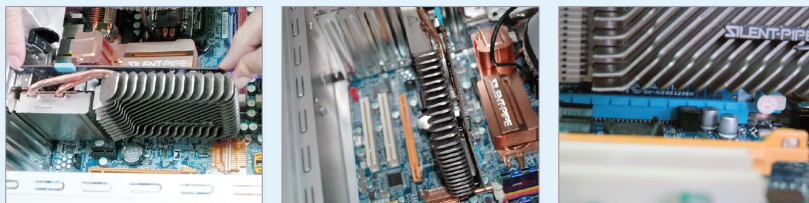
3.5 Installation of Graphics Accelerator and Interface Card

Step 1... Remove the Latch and Plate



With the chassis laid flat, pull the black lever beside the interface card outwards, lift up the cross rod, and then remove the plate.

Step 2... Install the Graphics Accelerator



Next, align the graphics accelerator with the card slot (PCI Express® x16) and then vertically press down the leads into the slot with both hands. After the graphics accelerator is blocked by the dovetail at the end of slot, press back and secure the bar. Please note that most computer chassis still use screws to secure the interface card; make sure to fasten the screws if necessary. Be sure to connect the power cable if the graphics accelerator supports an external power connector.

Step 3... Install Other Interface Cards

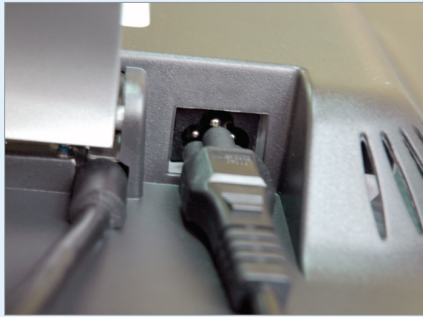


The installation procedures for graphics accelerators and interface cards are of the same type. Pay attention to the pitch between interface cards for better cooling. At last, assemble the computer chassis by refitting the side panel and securing the screws to finish the hardware installation procedures.

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3.6 Connecting Peripherals

Step 1... Connect the Power Cable for the Display

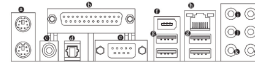


Connect the power cable to the power connector on the rear of the LCD monitor. (some LCDs do not include any built-in power adapter. In this case, users should connect the power cable to the supplied power adapter and then to the LCD.)

Step 2... Connect the Audio Signal Cable



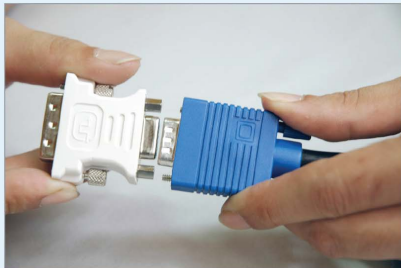
Back Panel Connectors



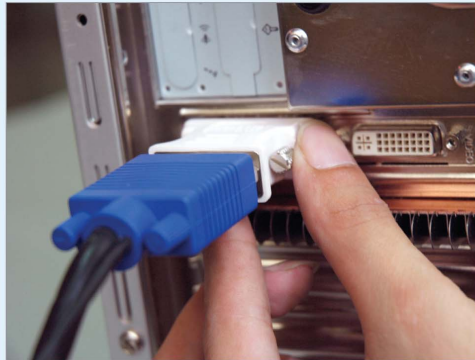
- **Center/Subwoofer Speaker Out Jack (Orange)**
Use this audio jack to connect center/subwoofer speakers in a 5.1/7.1-channel audio configuration.
- **Rear Speaker Out Jack (Black)**
Use this audio jack to connect rear speakers in a 4.5/5.1/7.1-channel audio configuration.
- **Side Speaker Out Jack (Grey)**
Use this audio jack to connect side speakers in a 7.1-channel audio configuration.
- **Line In Jack (Blue)**
The default line-in jack. Use this audio jack for line-in devices such as an optical drive, walkman, etc.
- **Line Out Jack (Green)**
The default line out jack. Use this audio jack for a headphone or 2-channel speaker. This jack can be used to connect front speakers in a 4.5/5.1/7.1-channel audio configuration.
- **Mic In Jack (Pink)**
The default Mic in jack. Microphones must be connected to this jack.

To use the built-in speakers of the LCD monitor, connect one end of the audio signal cable to the audio input connector of the LCD monitor, and the other end to the audio output connector (green) on the computer. The demonstrated motherboard supports 7.1-channel speaker system and if the computer is equipped with a speaker in the same rank, you should refer to motherboard manual to find the channel location of every audio output port before proceeding with the connection.

Step 3... Install the DVI Cable



Connect the DVI cable to the display and display card. If you use the D-Sub interface, the connection method will be the same. Both cables have a fool-proof design to prevent wrong connections. Be sure to secure the connector firmly after the connection. If you use an LCD monitor with the D-Sub interface but your graphics accelerator does not support the D-Sub interface, you can use a DVI-to-D-Sub adapter for conversion.



Step 4... Adjust the Screen Display



Ensure that the Windows® operating system and graphics driver are installed. Set the display resolution to the same setting as the actual resolution of the LCD monitor. Then press the "Auto" button of the LCD monitor to optimize the screen display. If you find the default settings not applicable, press the "Menu" button to open the OSD menus and adjust the settings of the OSD items, such as color temperature, contrast and brightness.

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Step 5... Confirm the Keyboard and Mouse Interface



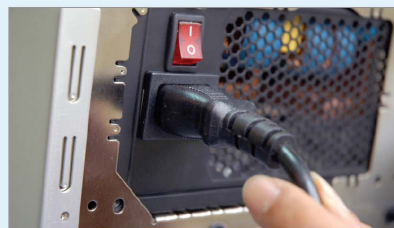
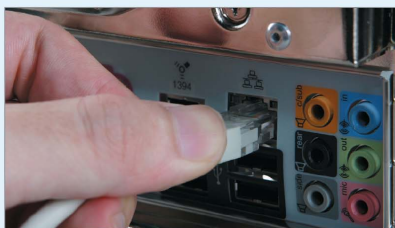
If you use a USB mouse or keyboard, but want to leave the USB port unoccupied, you can use a USB-to-PS2 converter supplied with the product. (If no converter is supplied with the product, please check whether conversion to PS2 is available for the product.)

Step 6... Connect the Keyboard and Mouse



The PS2 mouse and keyboard connectors on the motherboard are distinguished by color: green indicates the mouse and purple denotes the keyboard. The connectors feature a built-in protective design, allowing easy identification. If the connection is not available, please change the direction and try again. Do not use excessive force, otherwise the connector could become damaged.

Step 7... Connect the Network Cable and Power Cable



Connect the broadband network cable to the RJ-45 port on the rear of the computer. And then insert main power to the power supply (all with fool-proof design) to finish the installation.