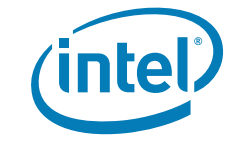


Intel® Desktop Board DX79SR Integration Guide



This guide contains basic instructions for installing the desktop board in a compatible chassis. For a complete description of the board and its features, refer to the Technical Product Specification at: <http://www.intel.com/products/motherboard>.



The layout of your board may differ slightly from that shown.

Before You Begin

- ⚠️ Follow these guidelines before you begin building your system:**
- Electrostatic discharge (ESD) can damage components. Perform the procedures described in this guide only at an ESD workstation using an antistatic wrist strap and a conductive foam pad. If such a station is not available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.
 - Always follow the steps in each procedure in the listed order.
 - Set up a log to record information about your computer such as serial numbers, installed options, and BIOS configuration.

Installation Precautions

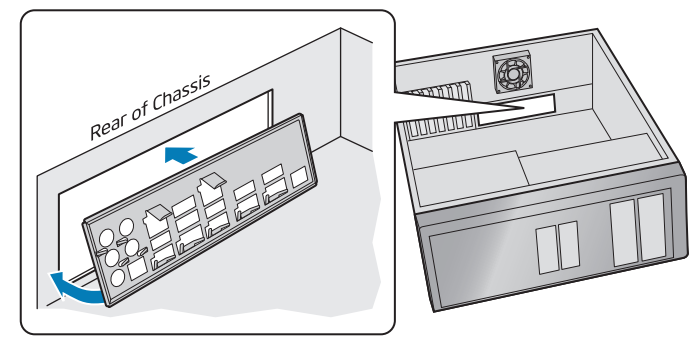
- When you install the desktop board, observe all warnings and cautions in this guide. To avoid injury, be careful of:
- Sharp pins on headers and connectors
 - Rough edges and sharp corners on the chassis
 - Damage to wires that could cause a short circuit

Observe Safety and Regulatory Requirements

Read and follow the instructions in this guide and the instructions supplied with the chassis and associated devices. If you do not follow these instructions and the instructions provided by the chassis and device suppliers, you increase your safety risk and possibility of noncompliance with regional laws and regulations.

1 Install the I/O Shield

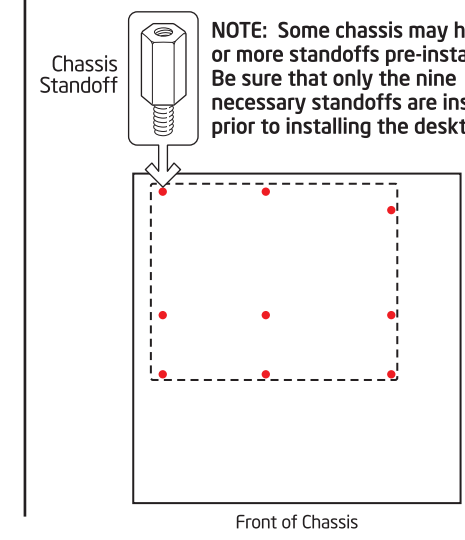
Place the I/O shield inside the chassis and press it into place so that it fits tightly and securely. Use caution so you do not deform the I/O shield.



2 Install the Desktop Board

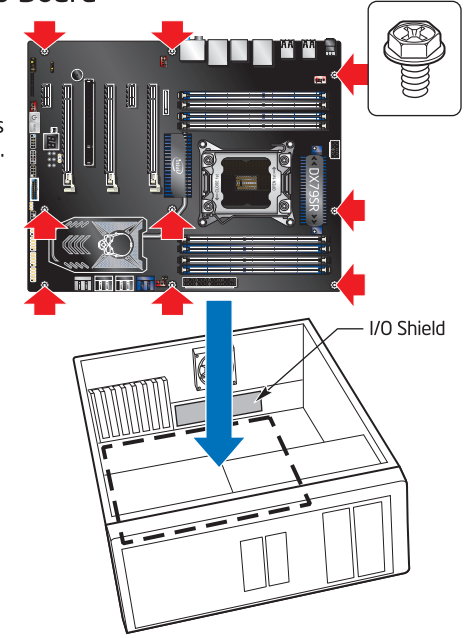
A. Install Standoffs

Nine standoffs should be installed into the chassis before installing the desktop board. Locate the threaded standoff holes that match the desktop board, and install a standoff at each location indicated by the RED circles.



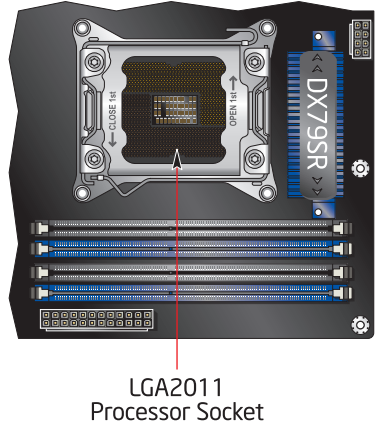
B. Install the Desktop Board

Install the desktop board by aligning the back panel with the I/O shield and securing the board to the standoffs using the screws provided with your chassis.



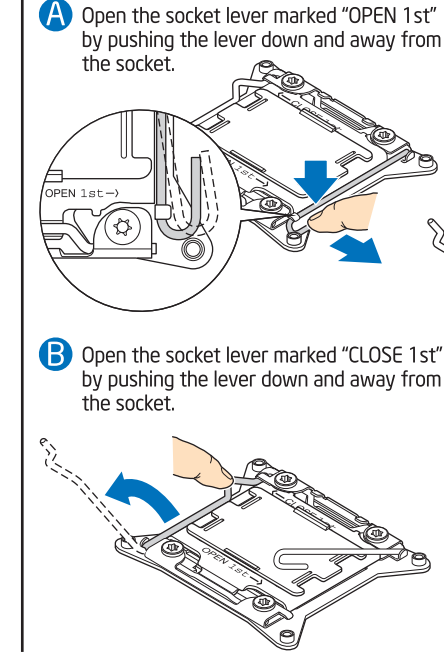
3 Install a Processor

For a list of processors this board supports, go to: <http://processormatch.intel.com>.

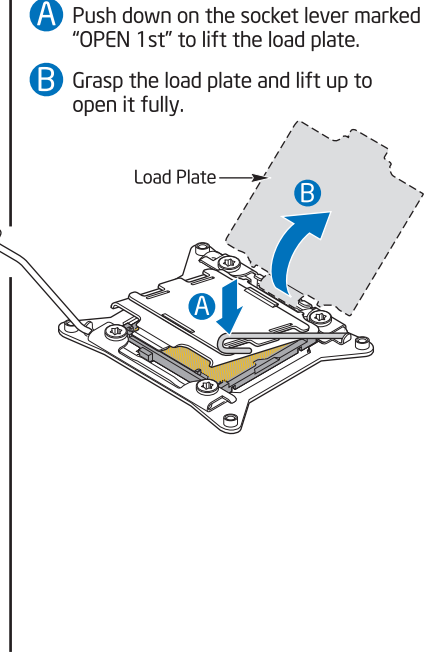


LGA2011 Processor Socket

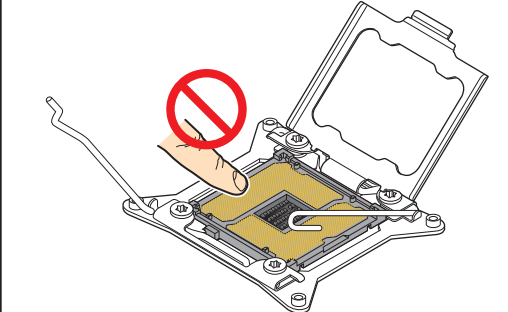
A. Unlatch the Socket Levers



B. Open the Load Plate



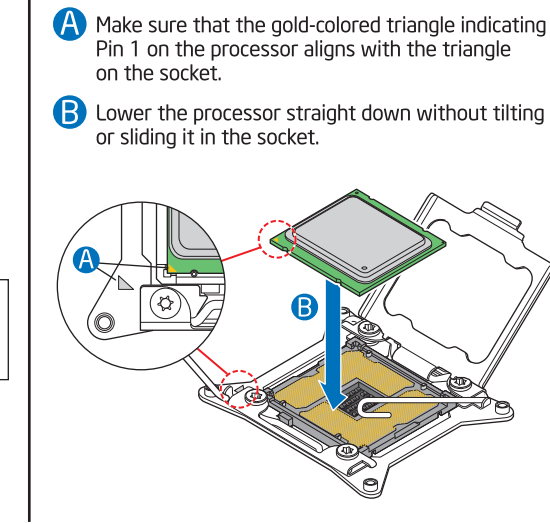
⚠️ When opening the socket, DO NOT TOUCH the gold socket contacts.



⚠️ When unpacking a processor, hold by the edges only to avoid touching the gold contacts.

C. Install the Processor

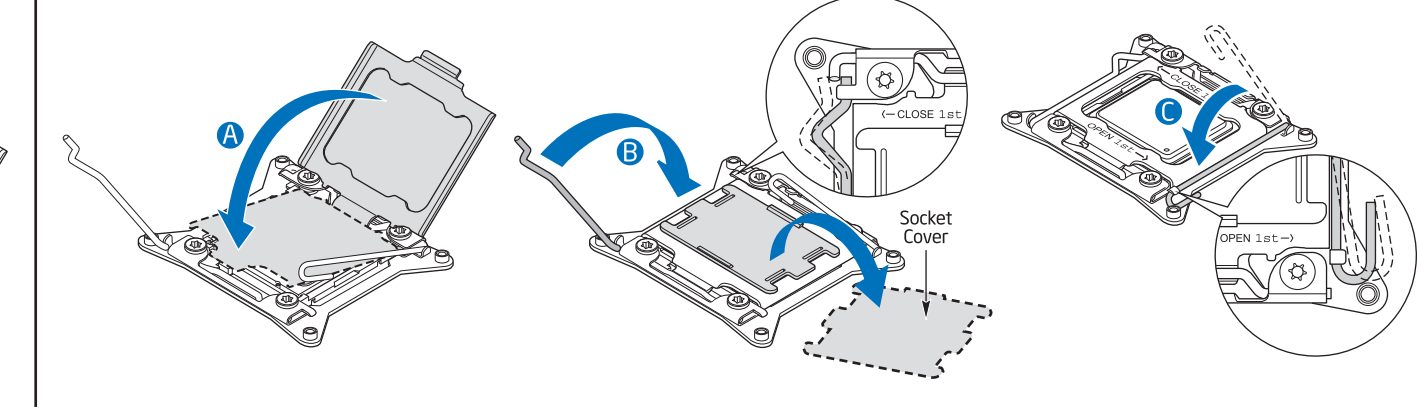
⚠️ The processor must align correctly with the socket before installation. DO NOT DROP the processor into the socket.



D. Close the Load Plate and Secure the Socket Lever

- A Close the load plate.
- B Engage the socket lever labeled "CLOSE 1st" under the latch. As the socket lever is latched, the socket cover will pop off.
- C Engage the socket lever labeled "OPEN 1st" under the latch.

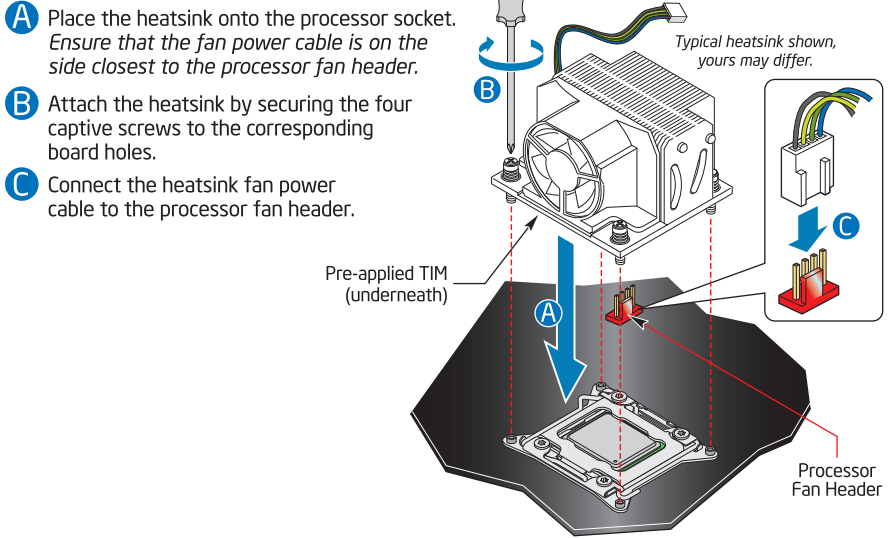
NOTE: Save the socket cover and replace it if the processor is removed.



4 Install a Heatsink

NOTE: Heatsinks that come with boxed Intel® processors use pre-applied thermal interface material (TIM) and do not need thermal grease. If you install a different heatsink, refer to the manufacturer's instructions.

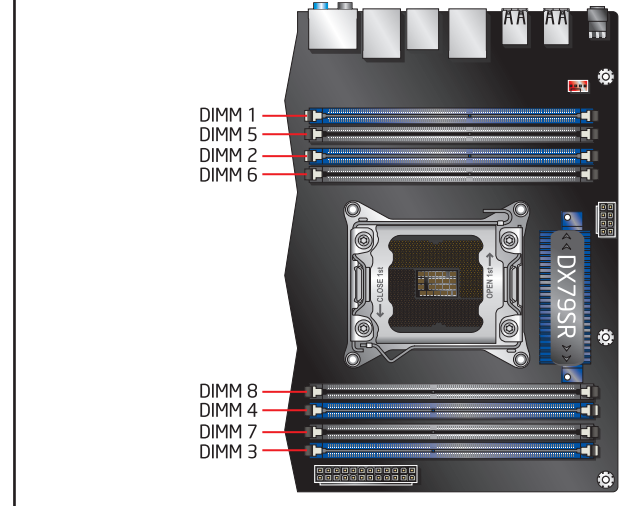
⚠️ Do not touch or disturb the TIM on the heatsink during installation.



5 Install System Memory

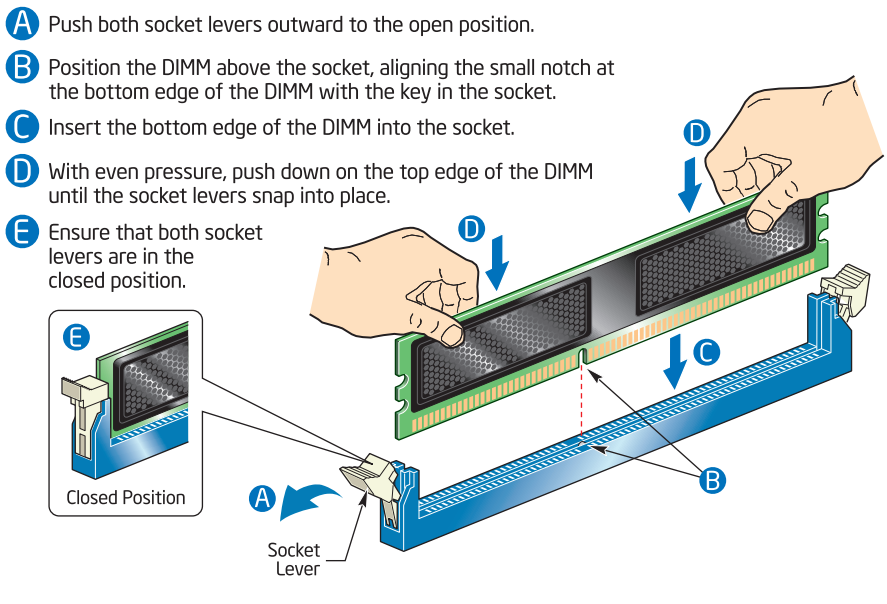
Suggested Memory Configurations and Population Order

NOTE: This desktop board supports 240-pin DDR3 DIMMs only. For a list of tested memory go to: <http://www.intel.com/support/go/buildit>.



- Minimum memory: 1 GB 1066 MHz DDR3 DIMM.
 - Memory should be installed in DIMM number order.
 - For best performance, DIMMs should be identical in size, speed, and organization.
- For more information on memory configurations, refer to: <http://www.intel.com/support/motherboards/desktop/sb/cs-011965.htm>.

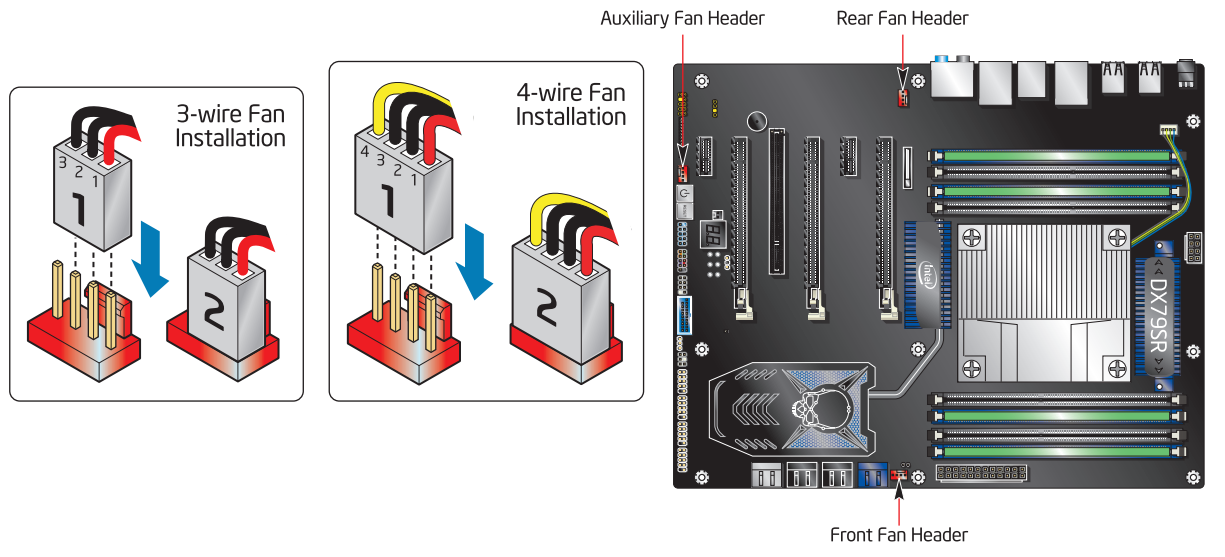
⚠️ Do not touch the gold contacts when handling or installing DIMMs.



6 Connect Chassis Fans

This desktop board has three fan headers for connecting chassis fans. See the details below for connecting either a 3-wire or a 4-wire fan to the desktop board fan headers.

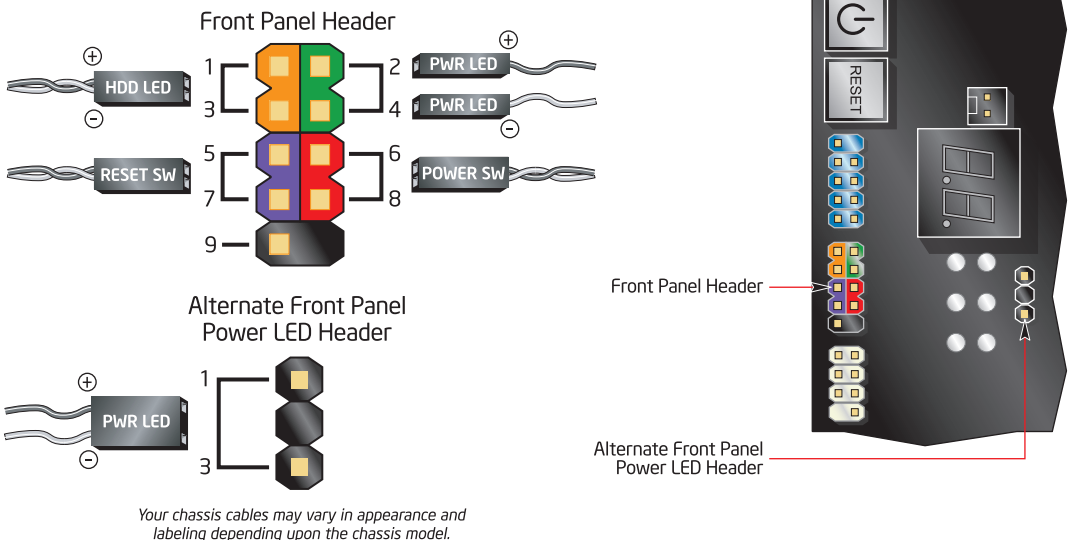
NOTE: The pin numbering for the fan connectors is shown for ease of installation.



7 Connect Chassis Front Panel Cables

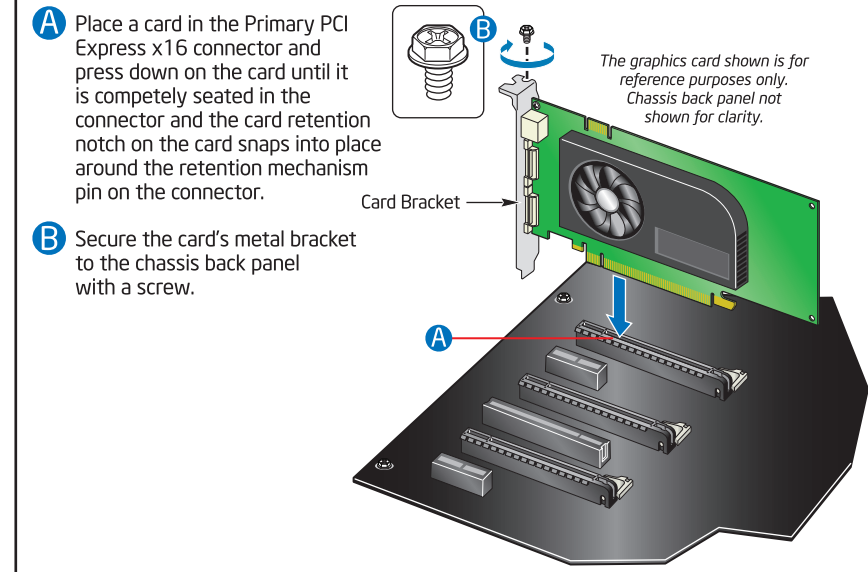
Make the front panel connections as shown in the diagram below.

NOTE: This desktop board provides two options for connecting the front panel power LED; only make one connection.

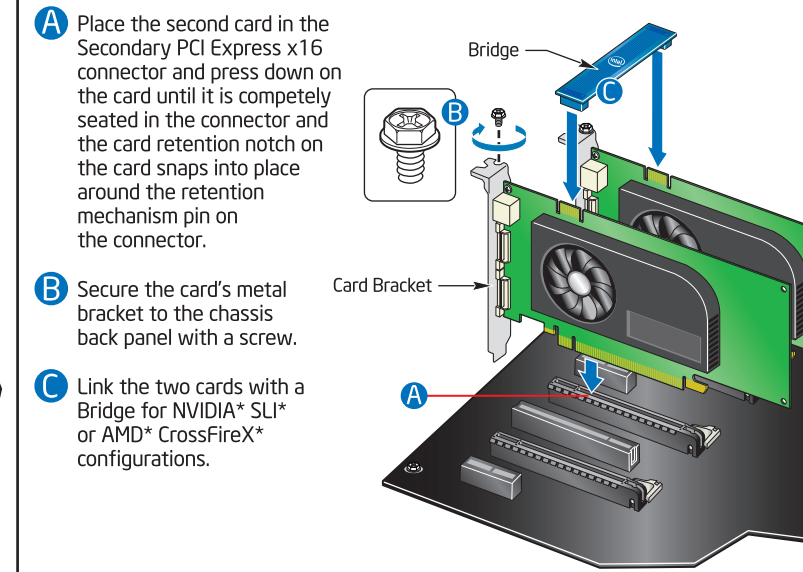


8 Install a PCI Express* x16 Graphics Card

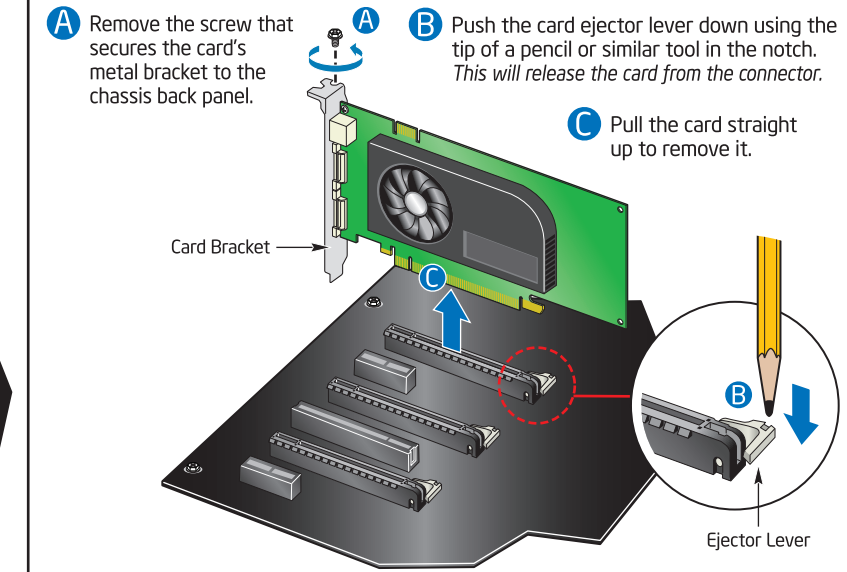
A. Install a PCI Express x16 Graphics Card



B. Install and Link a Second PCI Express x16 Graphics Card

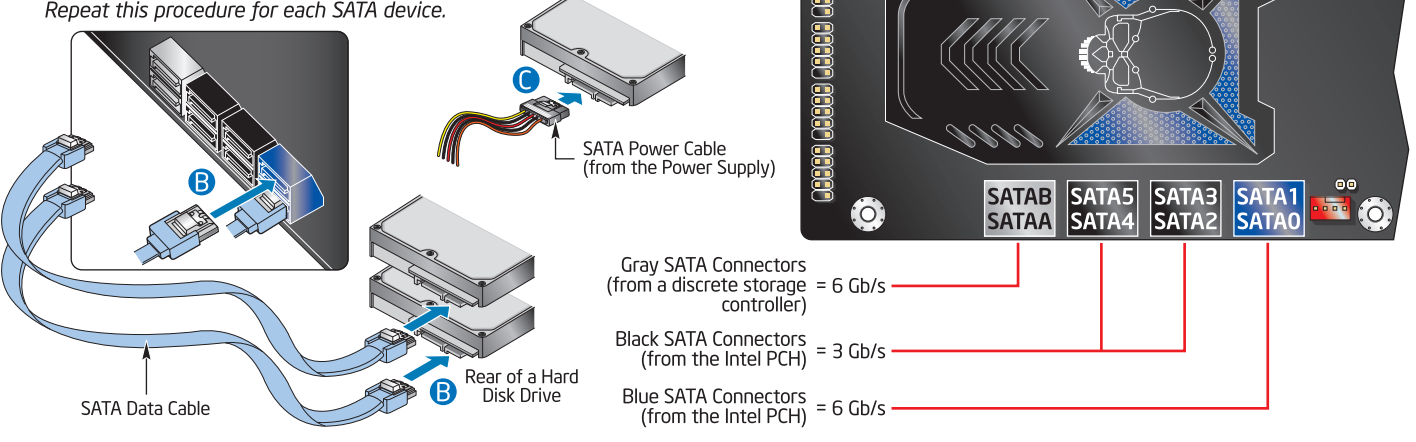


C. Remove a PCI Express x16 Graphics Card



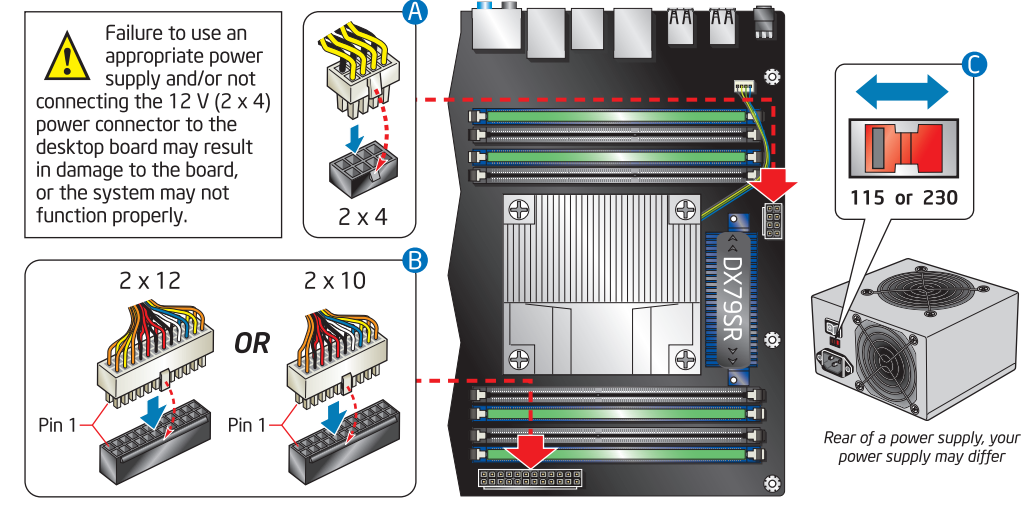
9 Install and Connect SATA Devices

- A** Install your SATA devices (Hard Disk Drive, Optical Drive, etc.). See the documentation that came with your chassis or SATA device for device installation.
- B** Connect both ends of the SATA data cable, one end to an available SATA port on the desktop board and the other to the connector at the rear of the SATA device.
- C** Connect the SATA power cable from the power supply to the power connector at the rear of the SATA device.



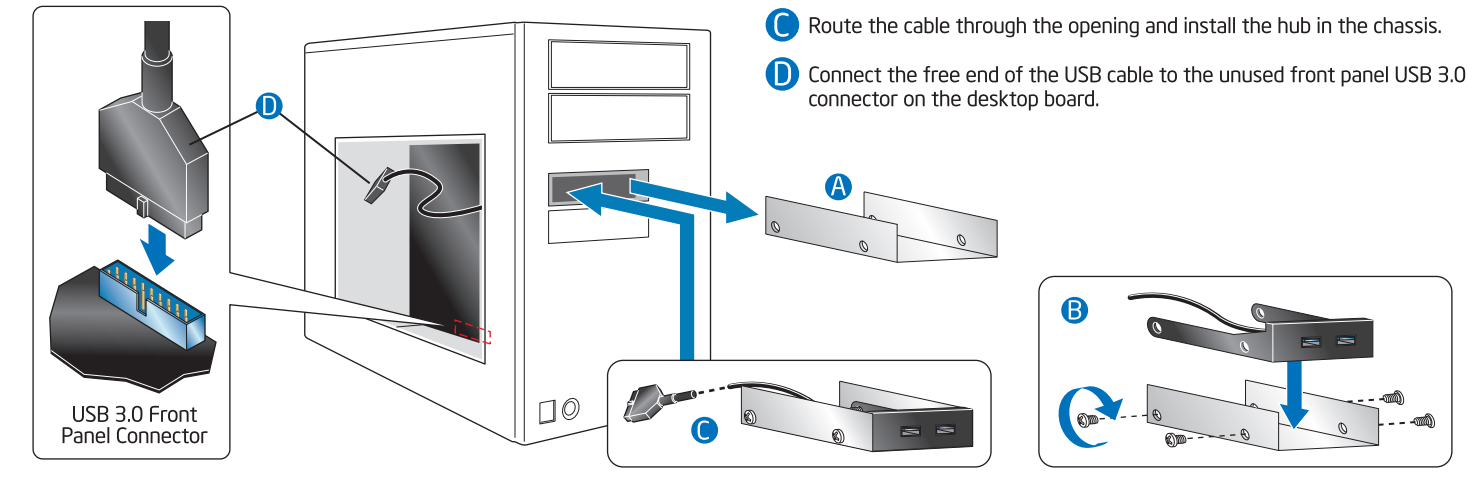
10 Make Power Connections

- A** Connect the 2 x 4 power supply cable to the matching 2 x 4 power connector on the board.
- B** Connect the 2 x 12 power supply cable to the matching 2 x 12 power connector on the board. Your power supply may have a 2 x 10 power cable, if so, connect as shown.
- C** Ensure that the voltage setting on the rear of the power supply is set correctly.



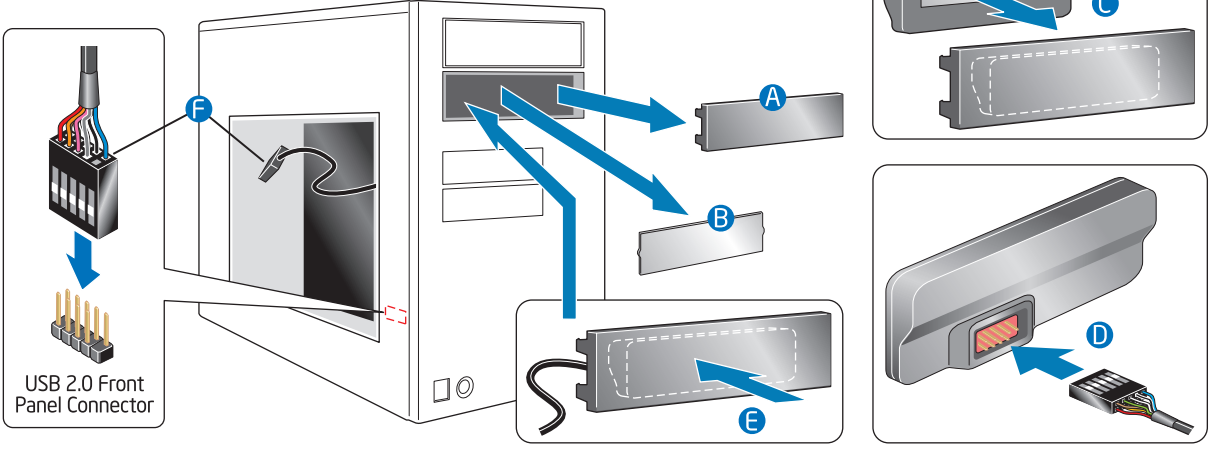
11 Install the USB 3.0 Front Panel Hub (Optional)

- A** Remove the filler panel tray from an empty 3-1/2" drive bay in the chassis bezel. If the tray has a bezel, remove it prior to installing the USB 3.0 Front Panel Hub.
- B** Attach the USB 3.0 Front Panel Hub to the tray using four screws.
- C** Route the cable through the opening and install the hub in the chassis.
- D** Connect the free end of the USB cable to the unused front panel USB 3.0 connector on the desktop board.



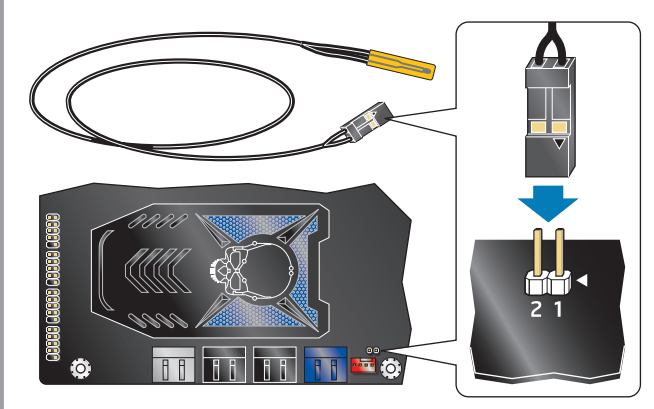
12 Install the WiFi/Bluetooth* Module (Optional)

- A** Remove the plastic cover from an empty 5-1/4" drive bay in the chassis bezel.
- B** Remove the metal filler plate from the internal drive bay.
- C** Remove the paper backing covering the adhesive on the back of the WiFi/Bluetooth Module and attach the module to the back side of the plastic drive bay cover.
- D** Connect one end of the USB cable to the connector on the front of the module.
- E** Reinstall the plastic drive bay cover in the chassis bezel while routing the USB cable into the chassis through the empty drive bay.
- F** Connect the free end of the USB cable to an unused front panel USB 2.0 connector on the desktop board.



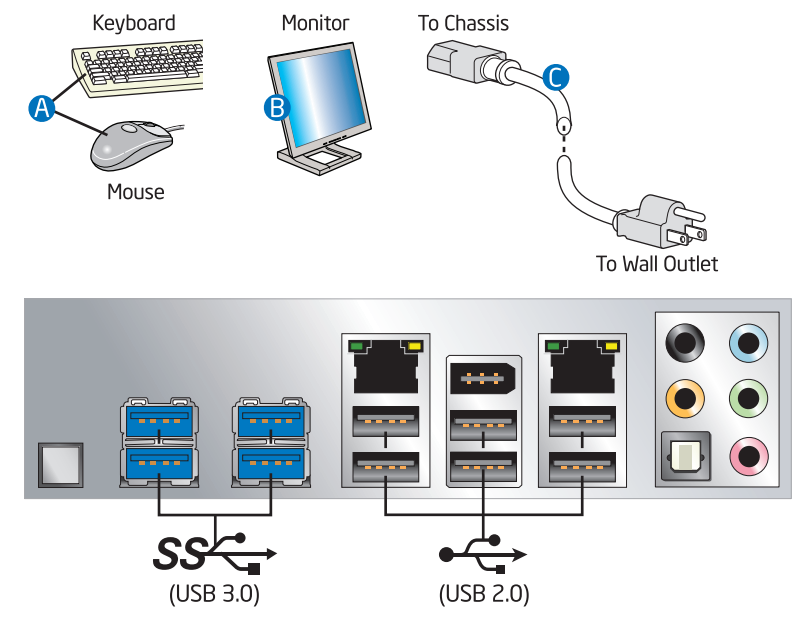
13 Connect the Remote Thermal Probe (Optional)

Connect the Remote Thermal Probe to the Remote Thermal Probe header.



14 Finishing up

- A** Connect a mouse and keyboard using any combination of the available USB ports.
- B** Connect one or two monitors to your external graphics card connectors.
- C** Connect the AC power cord to the back of the chassis and to a wall outlet.



15 Software

- A** Turn on your computer and install an operating system.
- B** Insert the Intel® Express Installer DVD to install the necessary software to complete your desktop board integration. Go to: <http://downloadcenter.intel.com> to download the latest drivers.
- C** (Optional) For information on configuring your system for RAID, refer to the Intel® Rapid Storage Technology User Guide at: http://www.intel.com/p/en_US/support/highlights/chpsts/irms.

Troubleshooting

If your system fails to boot:

- Ensure that the 2 x 4 power supply cable is plugged into the 12 V (2 x 4) processor core voltage connector on the desktop board.
- Disconnect all power and remove and re-insert the processor, memory, and any add-in cards to make sure they are fully seated. Restart the system.
- Remove any non-essential hardware components, reconnect the power, and restart the system.

If your system still does not boot, go to: http://www.intel.com/p/en_US/support/, select product support for Intel® Desktop Board DX79SR, and then select "Troubleshooting system 'no boot' issues". This web site contains extensive information to help you solve non-boot problems including a **No Boot Wizard**.

Beep Codes

When a repeating beep code is heard and your system does not boot or display video, the beeps indicate the following:

Beep Pattern	Problem
Two beeps (beep, beep [pause], beep, beep)	No video detected
Three beeps (beep, beep, beep [pause]) This beep pattern repeats until the system is powered off.	Memory error
High/Low beeps (high, low, high, low, high, low)	CPU thermal trip

For more information, go to: <http://www.intel.com/support/motherboards/desktop/sb/cs-010249.htm>.

Safety and Regulatory Information

Battery Warning

Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible. Disposal of used batteries must be in accordance with local environmental regulations.

FCC Declaration of Conformity

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

For questions related to the EMC performance of this product, contact Intel Corporation, 5200 N.E. Elam Young Parkway, Hillsboro, OR 97124 1-800-628-8686.

Canadian Department of Communications Compliance Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Japan VCCI Statement

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づいてクラスB 情報技術装置として設計されています。この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

Korea Class B Statement

이 기기는 가정용(B급) 전자파적합기기로서 주 로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

Korea Certification mark. Includes an adjacent KCC (Korean Communications Commission) certification number: KCC-REM-CPU-DX79SR.

Date of manufacture: May 2012
Country of Origin: China

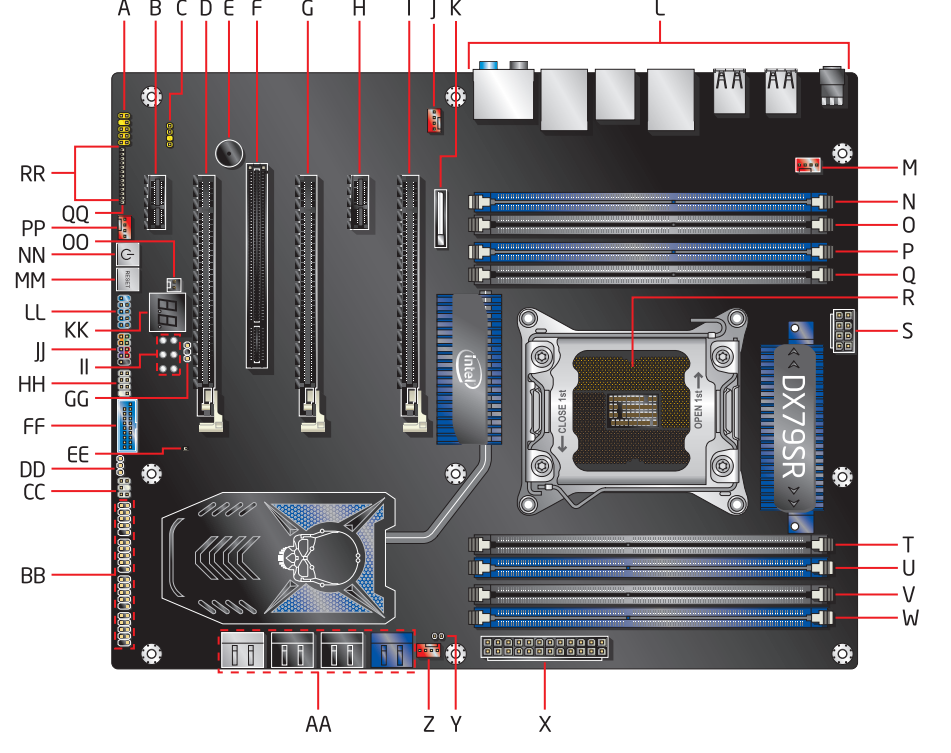
China RoHS Environmentally Friendly Use Period

The Environmentally Friendly Use Period (EFUP) for Intel Desktop Boards has been determined to be 10 years.

For detailed information about the desktop board's regulatory compliance, refer to the Technical Product Specification at: <http://www.intel.com/products/motherboard>.

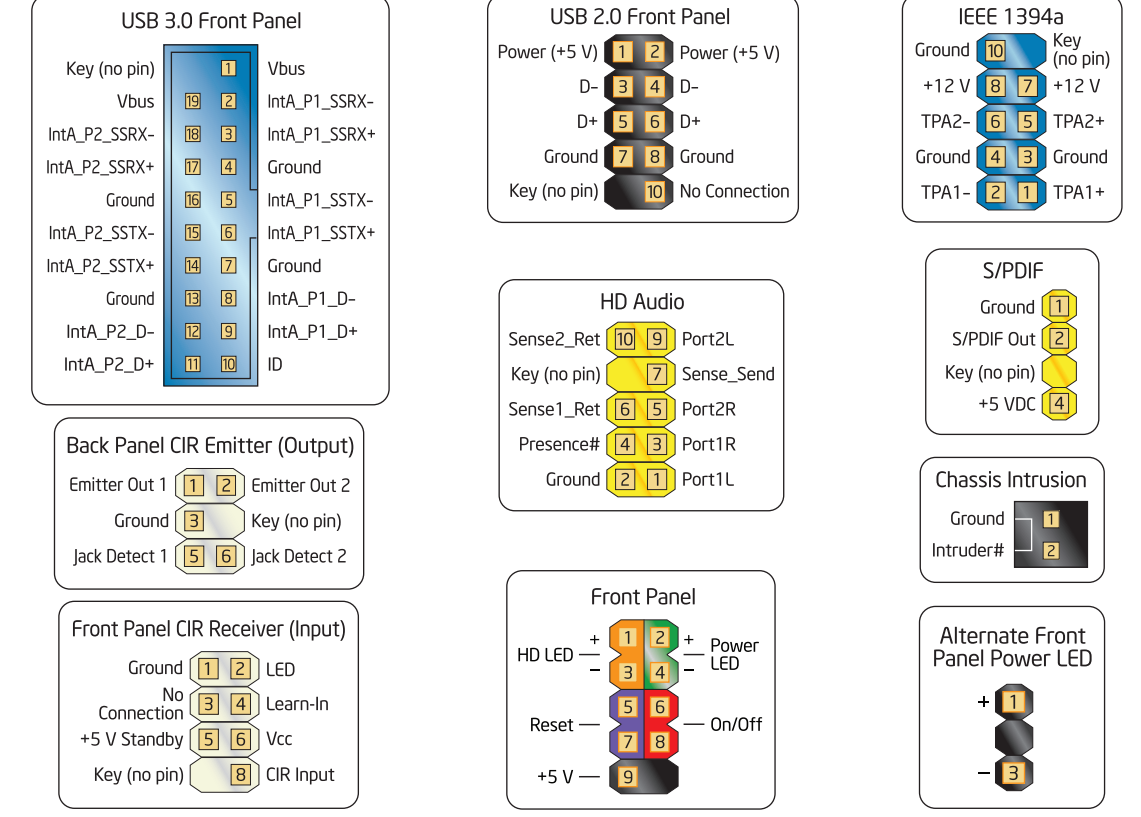
Reference

Desktop Board Components

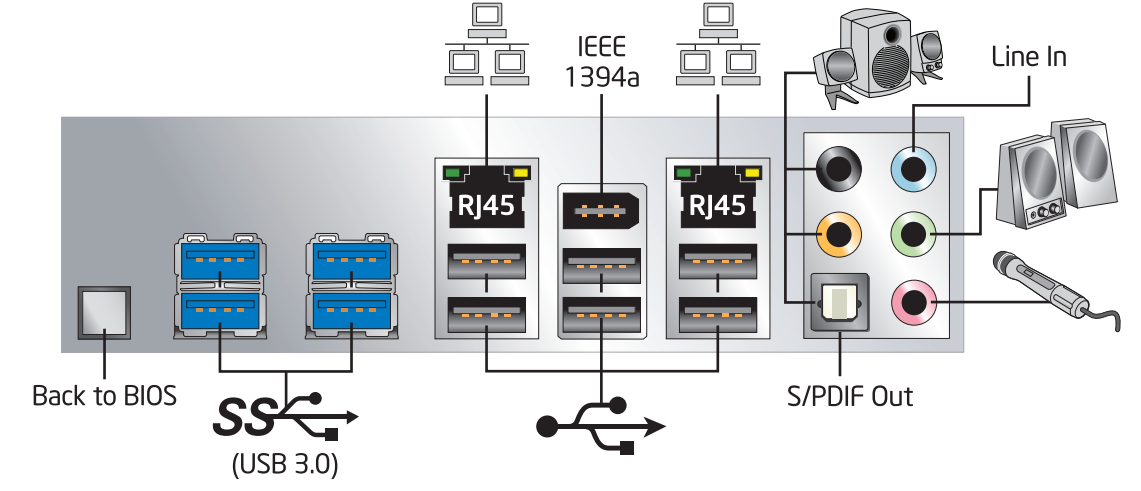


- A. Front Panel HD Audio Header
- B. PCI Express 2.0 x1 Connector
- C. S/PDIF Header
- D. PCI Express x16 Connector (x8 Electrically)
- E. Speaker
- F. PCI Connector
- G. Secondary PCI Express x16 Connector
- H. PCI Express 2.0 x1 Connector
- I. Primary PCI Express x16 Connector
- J. Rear Fan Header
- K. Battery
- L. Back Panel Connectors
- M. Processor Fan Header
- N. DIMM 1
- O. DIMM 5
- P. DIMM 2
- Q. DIMM 6
- R. DIMM 3
- S. Front Panel Connectors
- T. Remote Thermal Probe Header
- U. Front Fan Header
- V. SATA Connectors
- W. USB 2.0 Front Panel Headers
- X. Back Panel CIR Emitter (Output) Header
- Y. BIOS Configuration Jumper
- Z. Power Fault LED
- AA. USB 3.0 Front Panel Connector
- AB. Alternate Front Panel Power LED Header
- AC. USB 2.0 Front Panel Connector
- AD. Voltage Measurement Test Points
- AE. Front Panel Header
- AF. POST Code Display LED
- AG. IEEE 1394a Header
- AH. Reset Button
- AI. Power Button
- AJ. Processor Socket
- AK. Auxiliary Fan Header
- AL. Standby Power LED
- AM. Diagnostic LEDs

Header and Connector Pinouts



Back Panel Connectors



BIOS Reference

The BIOS (Basic Input/Output System) controls the computer's boot process. The purpose of the BIOS is to identify and initialize processor, memory, hard drives, optical drives, and other hardware.

BIOS Settings

For a list of BIOS settings along with their purpose and options, refer to the BIOS Glossary at: <http://www.intel.com/support/motherboards/desktop/sb/cs-020304.htm>.

Updating the BIOS

You should update the BIOS on your board only if the newer BIOS version solves a specific problem you have. BIOS updates are available in Intel's Download Center at: <http://downloadcenter.intel.com/>. There are various methods of updating an Intel® Desktop Board BIOS to the latest version. The number of methods available for any particular board model varies, depending on drive support and BIOS update file size. For update instructions, go to: <http://www.intel.com/support/motherboards/desktop/sb/cs-022312.htm>.

Troubleshooting the BIOS

For tips on troubleshooting BIOS issues on Intel® Desktop Boards, refer to: <http://www.intel.com/support/motherboards/desktop/sb/cs-028780.htm>.

BIOS Configuration Jumper Settings:

1-2	Normal
2-3	Configuration
No jumper	Recovery

Online Support

For more information on Intel Desktop Board DX79SR, consult the following online resources:

- General board information: <http://www.intel.com/products/motherboard/index.htm>
- Available board configurations: <http://ark.intel.com>
- Supported processors: <http://processormatch.intel.com>
- Chipset information: <http://www.intel.com/products/desktop/chipsets/index.htm>
- BIOS and driver updates: <http://downloadcenter.intel.com/>
- More integration information: <http://www.intel.com/support/go/buildit>
- Customer support: http://www.intel.com/p/en_US/support?id=hdr+support
- Intel® Rapid Storage Technology: http://www.intel.com/p/en_US/support/highlights/chpsts/irms
- Tested memory: <http://www.intel.com/support/motherboards/desktop/sb/cs-025414.htm>

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