

7 Install Fan Heat Sink

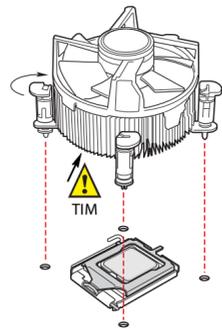
For the Intel® Server Chassis SC5250-E, an ACTIVE heat sink is required.

CAUTION: The heat sink has Thermal Interface Material (TIM) on the underside of it. Remove the protective cover from the TIM and use care not to damage the thermal material. Use gloves to avoid sharp edges.

Use the following procedure to install an active heat sink to your server board.

Prepare Fasteners for Installation

1. Make sure the screwdriver slot at the top of each fastener is rotated perpendicular to the blades of the heat sink as shown.



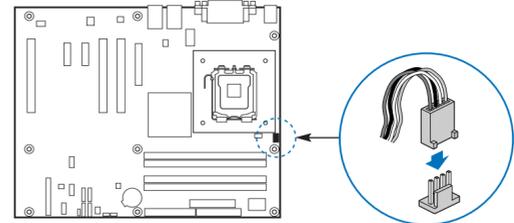
Attach Heat Sink Fasteners to Server Board

1. Align heat sink with holes in board and lower assembly to board. Snaps go through holes in server board.
2. Press downward on top of cap.
3. Fastener snaps into final position.

Repeat this procedure for each fastener.

Attach Heat Sink Fan Connector to Server Board

5. Connect the processor heat sink fan cable to the CPU fan header (J1F2).

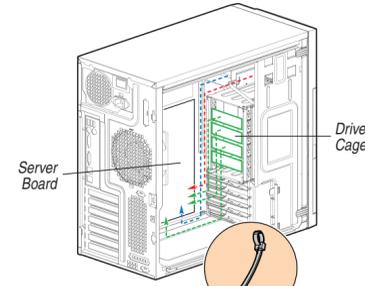


Note: The server board CPU fan header will accept either a 3-wire or a 4-wire fan cable connector. Align the matching tabs and connect as shown.

8 Routing CD-ROM/Floppy/ Front Panel Cables

Route cables as shown below according to the following legend:

- Front Panel Ribbon Cable
 - CD-ROM/Floppy Cables
 - SATA Hard Disk Drive Cables
- Use care to avoid blocking fans or add-in cards.



Use Cable-ties as necessary

Note: Your selected chassis and final configuration may have additional features or peripherals requiring connection to the server board. See the Reference section below for the location of all available server board connections. Go to the User Guide on the CD that accompanied your Intel® Entry Server Board SE7221BA1-E for detailed information on server board connectors and pinouts.

9 Making Connections to the Server Board ... Quick Reference

Required Connections

- B. +12V CPU Power Connector
- D. Main Power Connector**
- G. Chassis Intrusion Header
- K. Front Panel Connector

CPU/System Fan Connections

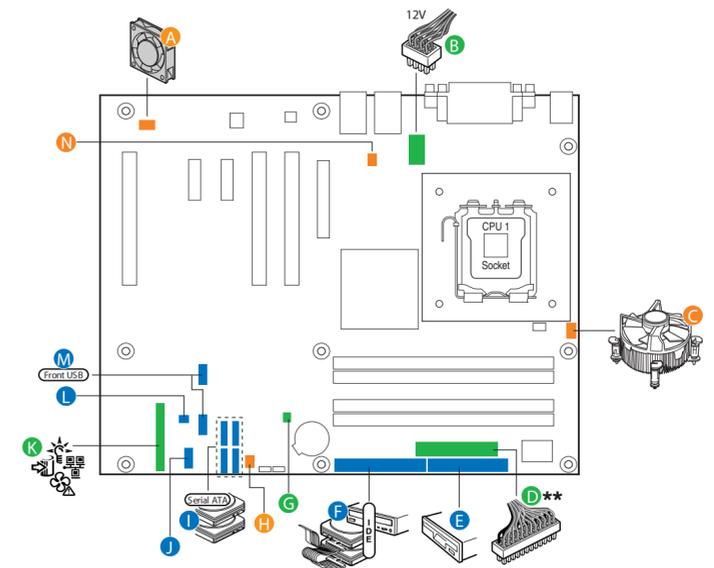
- C. CPU Fan Connector
- A. Rear Fan Connector
- H. Front Fan Connector
- N. VREG Fan Connector

Optional Connections

- E. Floppy Connector
- F. IDE Connector
- I. Serial ATA 0-3 Connectors
- J. Serial B Header
- L. SCSI LED Connector
- M. Front Panel USB 1 and 2

Note: All available server board connections are not shown. Your configuration may vary.

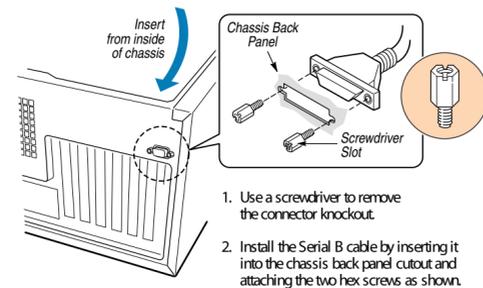
** Depending on your power supply, the main power connector could have a 2x10 or 2x12 pin connection. Either connector will work, but Pin 1 on the server board power connector must match up with Pin 1 on the power supply connector.



Note: Not all optional connections are shown in this diagram. Refer to the Reference section of this Quick Start User's Guide, your Intel® Entry Server Board SE7221BA1-E User Guide, and your server chassis documentation for additional connection information.

10 Install the Serial B Cable (optional)

(Note: If your selected chassis has a front panel Serial B connector, route your optional Serial B cable as shown in Step 8 above. A typical back panel installation is shown below.)



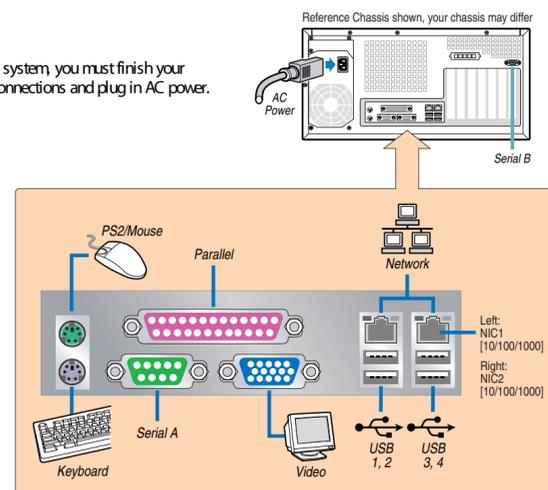
Serial B Back Panel Location

1. Use a screwdriver to remove the connector knockout.
2. Install the Serial B cable by inserting it into the chassis back panel cutout and attaching the two hex screws as shown.
3. Attach the other end to the Serial B connector on the server board. See Reference section below for the Serial B connector location.

11 Finishing Up

Before installing your operating system, you must finish your chassis installation, make I/O connections and plug in AC power.

1. Replace the chassis cover.
2. See your chassis documentation to complete pedestal installation.
3. Connect your keyboard, mouse, video, and other I/O cables as shown.
4. Connect the AC power cable last.



12 Software • Drivers, Firmware, and Operating System Installation

A. Confirm BIOS

Look on the Server/System Management screen in the BIOS Setup Utility to determine the installed BIOS. Compare these to the versions at <http://support.intel.com/support/motherboards/server/SE7221BA1-E/>. If new versions are available, update the BIOS on your server. See the User Guide on the Intel® Server Deployment Toolkit CD for update instructions.

B. Configure your Server with the Server Configuration Wizard

Boot to the Server Board SE7221BA1-E Intel® Server Deployment Toolkit CD. Select the Server Configuration Wizard to configure your server for remote server management.

C. Configure your RAID Controller

Use the instructions provided with the RAID controller.

D. Install your Operating System

Use the instructions provided with the RAID controller and with the operating system.

E. Install Operating System Drivers

With the operating system running, insert the Intel® Server Deployment Toolkit CD. If using a Microsoft® Windows® operating system, the Express Installer will autorun and allow you to select most drivers to install. On other operating systems, browse the CD folders to locate and install the driver files.

F. Install Intel® Server Management 8 (optional)

With the operating system running, insert the Intel® Server Management 8 CD that came with your server board. On a Windows® operating system, the Setup program will auto-run. Follow the on-screen instructions. For installation details, see Getting Started with Intel® Server Manager 8, located on the ISM CD.

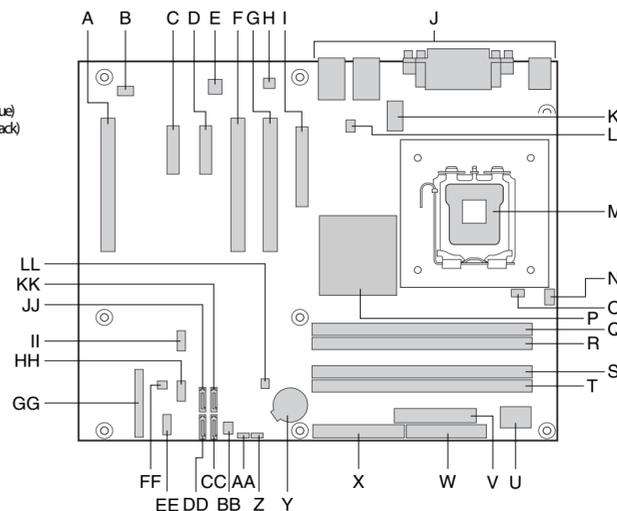
G. Install Intel® SMarT Tool 5 (optional)

With the operating system running, insert the Intel® Server Deployment Toolkit CD. The Express Installer will autorun. Click Intel® SMarT Tool at the left side of the screen. Follow the on-screen instructions. For information about Intel® SMarT Tool, see <http://developer.intel.com/design/servers/smartool/index.htm>.

Reference

Server Board Component Layout

- A: Conventional PCI Slot 3
- B: Rear Fan Connector
- C: PCIe Slot 2 (x4 Connector)
- D: PCIe Slot 1 (x4 Connector)
- E: Intel® 82551QM LAN Controller
- F: Conventional PCI Slot 2
- G: Conventional PCI Slot 1
- H: Marvell® Yukon® 88E8050 PCI Express® Gigabit Ethernet Controller
- I: PCI Express® 1 x8 Slot
- J: Back Panel I/O
- K: 2x4 Power Connector
- L: Vreg Fan Connector
- M: LGA775 Processor Socket
- N: CPU Fan Connector
- O: Hardware Management Controller
- P: Intel® E7221MC MCH with integrated video
- Q: Channel A DIMM 0 Socket (blue)
- R: Channel A DIMM 1 Socket (black)
- S: Channel B DIMM 0 Socket (blue)
- T: Channel B DIMM 1 Socket (black)
- U: I/O Controller
- V: 2x12 Power Connector
- W: Diskette Drive Connector
- X: Parallel ATA IDE Connector
- Y: Battery
- Z: BIOS Configuration Jumper
- AA: Clear CMOS Jumper
- BB: Front Fan Connector
- CC: SATA 3 Connector
- DD: SATA 2 Connector
- EE: Serial B Connector
- FF: SCSI LED Connector
- GG: Front Panel Connector
- HH: Front Panel USB 2
- II: Front Panel USB 1
- JJ: SATA 0 Connector
- KK: SATA 1 Connector
- LL: Chassis Intrusion Connector



Common Problems and Solutions

For a list of hardware components that have been tested with this system, see: <http://support.intel.com/support/motherboards/server/SE7221BA1-E/>

- The system does not boot or show video at power-on.
- Check that +12V CPU power connector is plugged in. Without this cable the processor will not have any power.
 - Beep code 3 in a system using an Intel® Pentium® 4 (minimum 520 with HT Technology in the LGA775 package) processor means you have unrecognized or bad memory.
 - Remove and replace DIMMs one bank at a time to isolate which one is causing problems.
 - Remember, all DIMMs must be:
 - DDR2 400/533 compliant 240-pin SDRAM gold DIMMs.
 - The same speed.
 - From the same manufacturer.
 - Installed beginning with Channel A DIMM 0.
 - Your power supply must provide a minimum of 350W with 1.2A standby current, which complies with the SSI EPS 12V specification.

The system sometimes works, but is exhibiting erratic behavior.

- This is typically the result of using an under-rated power supply. Make sure you are using at least a 350W power supply.

Accessories and Order Codes

Intel® Server Board SE7221BA1-E	SE7221BA1-E
Intel® Server Chassis SC5250 (Beige)	KPTBASE450
Intel® Server Chassis SC5250 (Black)	KPTBASE450BLK

A complete list of accessories and spares can be found at: www.intel.com/go/serverbuilder