

7 Install Heatsink(s)

For an Intel® Server Chassis, choose the correct heatsink for your chassis:
 • Intel® Server Chassis SC5400: Passive heatsink
 • Intel® Entry Server Chassis SC5299-E: Active heatsink

For a non-Intel chassis, see the documentation accompanying your chassis.

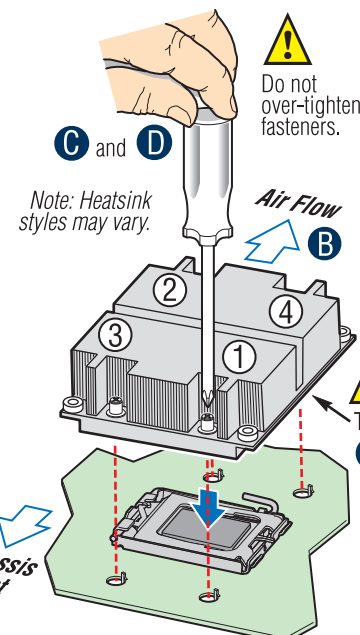
CAUTION: The heatsink has thermal interface material (TIM) on the underside of it. Use caution so that you do not damage the thermal interface material. Use gloves to avoid sharp edges.

- A If a protective film covers the thermal interface material (TIM) on the underside of the heatsink, remove the protective film.
- B Align heatsink fins to the front and back of the chassis for correct airflow. Airflow goes from front-to-back of chassis.

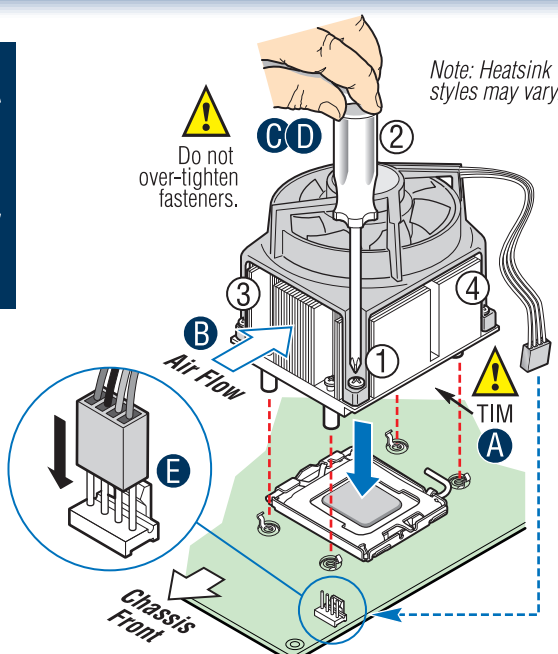
Each heatsink has four captive fasteners and should be tightened as follows:

- C Using a #2 Phillips® screwdriver, finger-tighten each fastener diagonally, according to the white-circled numbers shown in the figures at the right.
- D Securely re-tighten each fastener again in the same order as performed in Step C.
- E Attach fan power cable to server board as shown (active heatsink only).

PASSIVE



ACTIVE

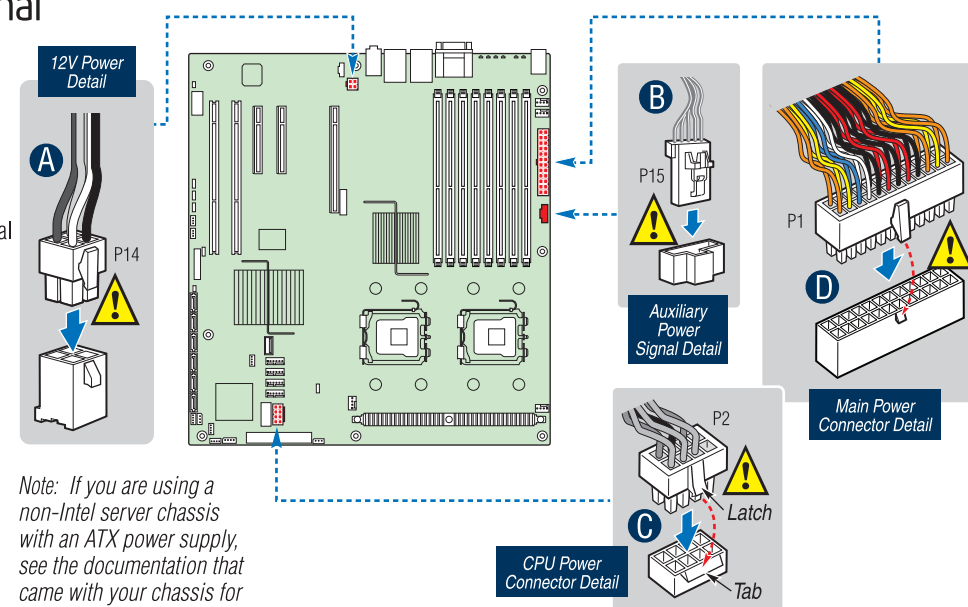


8 Connect Internal Power Cables

- A Attach the 12V power connector to the server board.
- B Attach the auxiliary power signal connector to the server board.
- C Attach the CPU power connector to the server board.
- D Attach the main power connector to the server board.

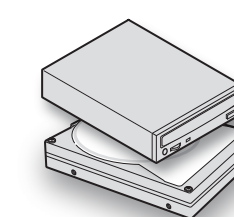
CAUTION: Note the location of the latch on each power cable connector and align it with the matching tab on each server board socket.

Note: If you are using a non-Intel server chassis with an ATX power supply, see the documentation that came with your chassis for installation information.

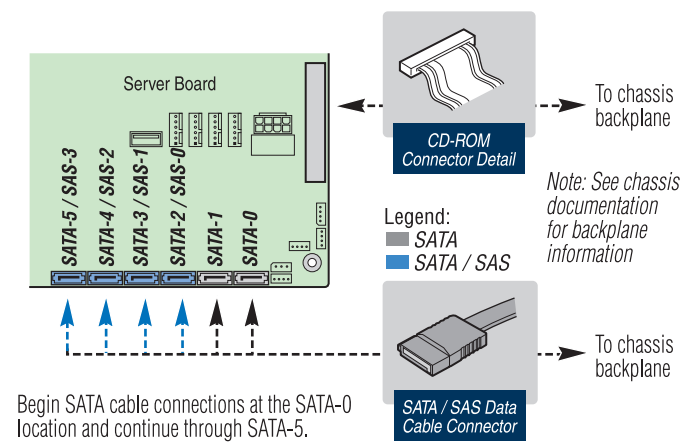


9 Install Optical Drive and Hard Drive(s)

See the documentation that came with your server chassis for drive installation instructions.



10 Connect Drive Data Cables

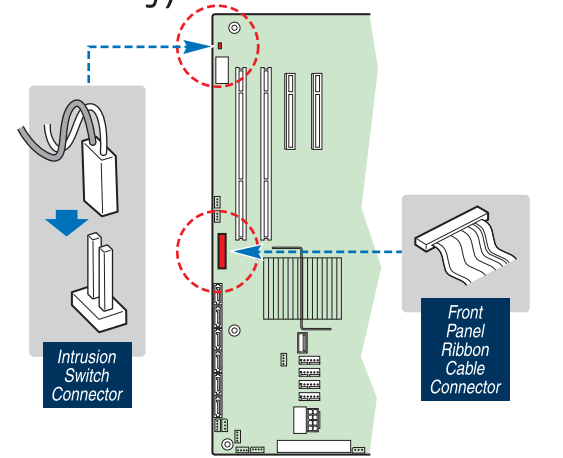


Begin SATA cable connections at the SATA-0 location and continue through SATA-5.

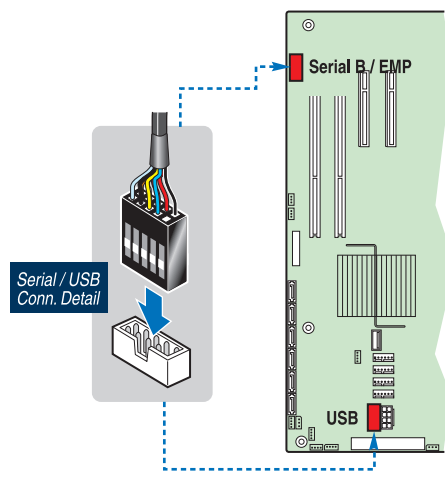
Begin SAS data cable connections at the SAS-0 location and continue through SAS-3.

Note: SAS functionality is available on SKU S5000XVNSAS. SAS is **not available** on SKU S5000XVNSATA.

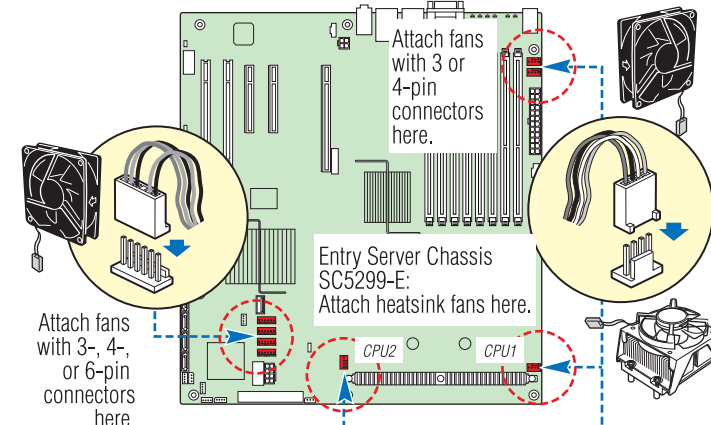
11 Connect Intrusion Switch Cable (non-Intel chassis only) and Front Panel



12 Connect Serial B / EMP and USB Cables (optional)



13 Connect Fan Cables



For a non-Intel server chassis, see the "Making Connections ... Quick Reference" section below, and the documentation accompanying your chassis for specific chassis fan connection requirements.

14 Install RAID Adapter Card (optional)

If you are installing a RAID adapter, see the documentation that came with your RAID adapter for installation instructions.

For Intel RAID solutions, follow the installation instructions in the Hardware Guide that came with your RAID adapter to install the hardware. See the Software Guide for configuration instructions after installing the hardware.

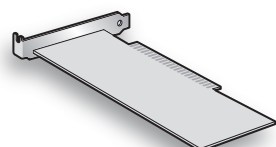
See also the Intel® Workstation Board S5000XVN User Guide on the Intel® Server Deployment Toolkit 2.0 CD. This document provides information about Intel® Embedded Server RAID Technology II and the BIOS settings that need to be configured for RAID 0, 10, and 10 for SATA and SAS.

15 Install Video Add-in Card

See the documentation that came with your server chassis for add-in card installation instructions.

16 Install Other Add-in Card(s) (optional)

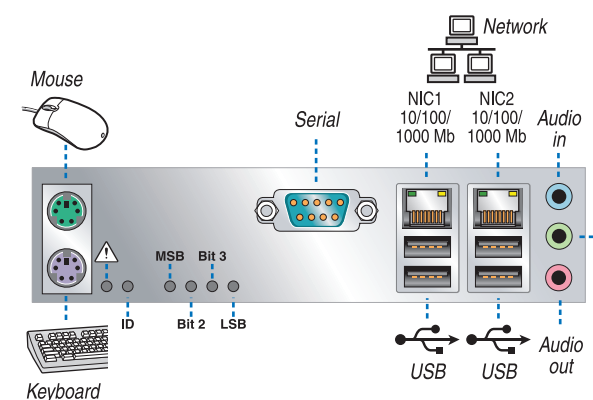
See the documentation that came with your server chassis for add-in card installation instructions.



17 Finish Up the Hardware

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

CAUTION: See your chassis documentation for AC power and grounding requirements.



18 Install Firmware and Software BIOS, Drivers, and Operating System Installation

- A. **Confirm BIOS Version:** Look on the Server/System Management screen in the BIOS Setup Utility to determine the installed BIOS version. Compare this to the versions at: <http://support.intel.com/support/motherboards/server/S5000XVN>. 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. **Update FRUSDR:** You must update the FRU/SDR information on your workstation. Download the latest version from: <http://support.intel.com/support/motherboards/server/S5000XVN>. Follow the instructions in the readme file with the software for installation instructions.
- C. **Configure your RAID Controller (optional):** 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 2.0 CD. If using a Microsoft® operating system, the Express Installer will autorun and allow you to select the appropriate drivers to install. On other operating systems, browse the CD folders to locate and install the driver files.
- F. **Install Intel® SMaRT Tool (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

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/S5000XVN/>

- The system does not boot or show video at power-on.
- Check that both the P12V4 and the +12V CPU power connectors are plugged in.
- Beep code 4-3-2-1 in a system using a Dual Core Intel® Xeon® Processor 5000 sequence means you have unrecognized or bad memory.
- Remove and rotate DIMMs into socket DIMM_A1 to isolate which one is causing problems.
- Remember, all DIMMs must be:
 - FBDIMM 533/667-MHz compliant 240-pin DIMMs
 - The same speed.
 - From the same manufacturer.
 - Installed beginning with DIMM A1.
- Your power supply must provide a minimum of 550W with 3A 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 550W power supply.

Making Connections to the Server Board

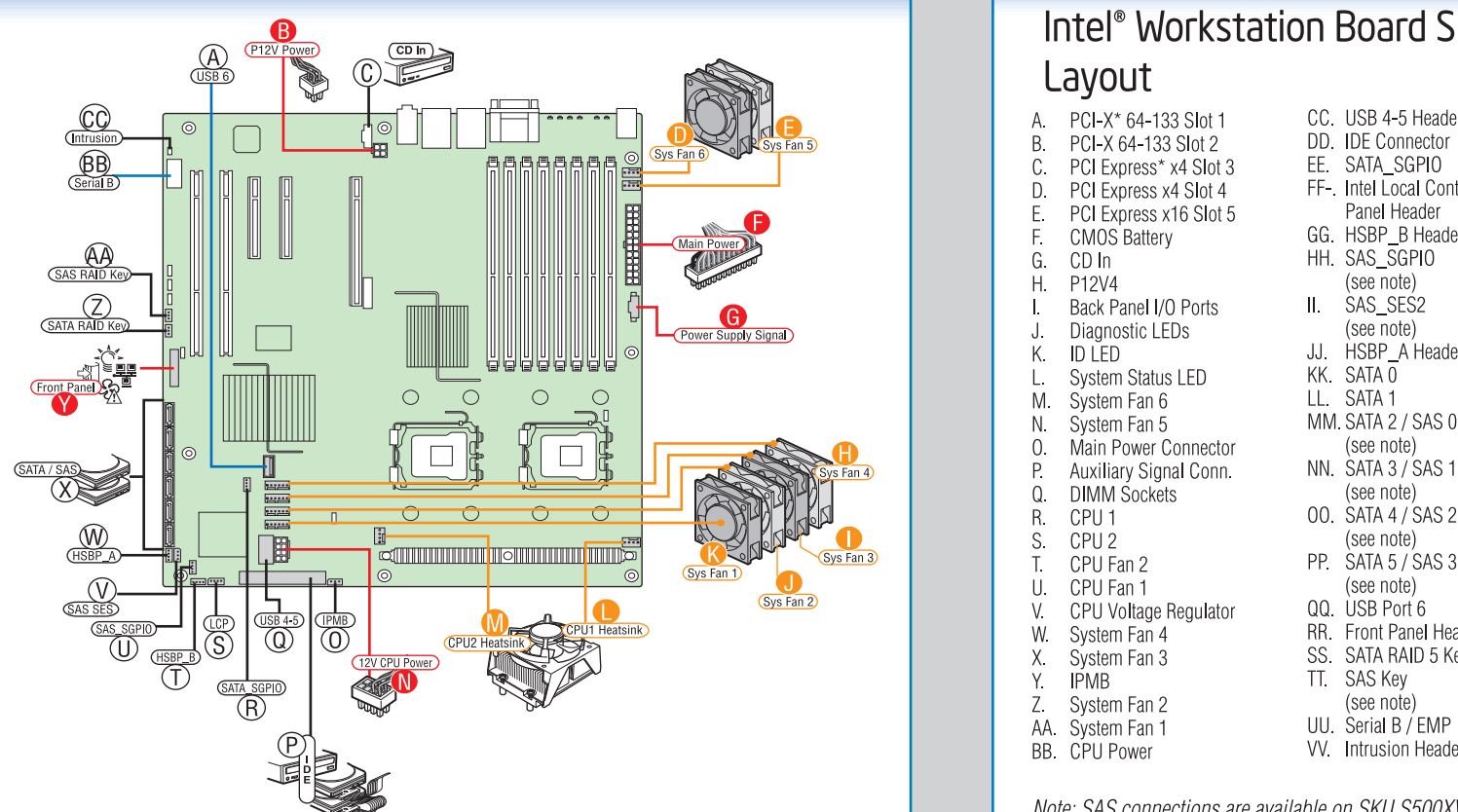
Required Connections for Selected Chassis	SC5400	SC5299-E
B. P12V4 Power Connector	■	■
F. Main Power Connector	■	■
G. Power Supply Signal Connector	■	■
N. +12V CPU Power Connector	■	■
Y. Front Panel Connector	■	■

CPU/System Fan Connections for Selected Chassis	SC5400	SC5299-E
D. System Fan 6	No connection	120 mm fan
E. System Fan 5	No connection	No connection
H. System Fan 4	No connection	No connection
L. System Fan 3	120 mm fan	No connection
J. System Fan 2	No connection	No connection
K. System Fan 1	92 mm fan	92 mm fan only if hot-swap bay is installed
L. CPU 1 Heatsink Fan	No connection	CPU1 fan
M. CPU 2 Heatsink Fan	No connection	CPU2 fan only if CPU2 is installed

Connectors in the diagram that are shown with white-circled callout letters are optional.

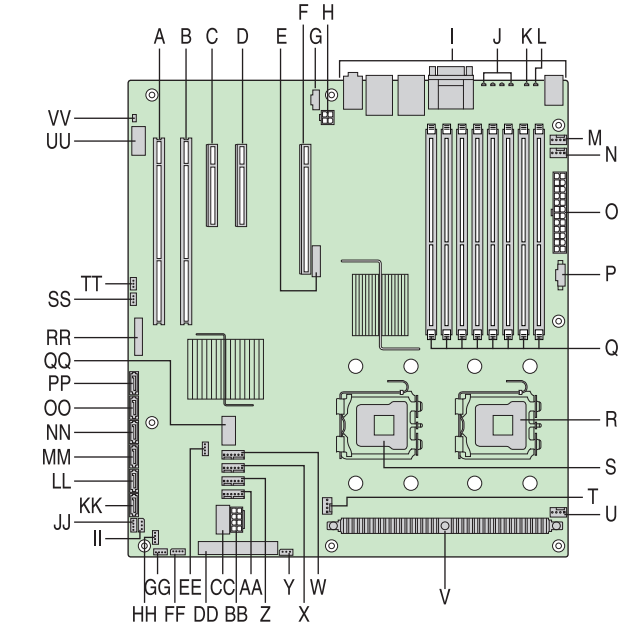
Note: Not all optional or available connections are shown in this diagram. Refer to the Reference section of this Quick Start User's Guide, your Intel® Workstation Board S5000XVN User Guide, and your server chassis documentation for additional connection information.

Note: SAS connections are available on SKU S5000XVNSAS. SAS connections are **not available** on SKU S5000XVNSATA.



Intel® Workstation Board S5000XVN Component Layout

- A. PCI-X® 64-133 Slot 1
- B. PCI-X 64-133 Slot 2
- C. PCI Express® x4 Slot 3
- D. PCI Express x4 Slot 4
- E. PCI Express x16 Slot 5
- F. CMOS Battery (see note)
- G. CD In (see note)
- H. P12V4 (see note)
- I. Back Panel I/O Ports
- J. Diagnostic LEDs
- K. ID LED
- L. System Status LED
- M. System Fan 6
- N. System Fan 5
- O. Main Power Connector
- P. Auxiliary Signal Conn.
- Q. DIMM Sockets
- R. CPU 1
- S. CPU 2
- T. CPU Fan 2
- U. CPU Fan 1
- V. CPU Voltage Regulator
- W. System Fan 4
- X. System Fan 3
- Y. IPMB
- Z. System Fan 2
- AA. System Fan 1
- BB. CPU Power
- CC. USB 4-5 Header
- DD. IDE Connector
- EE. SATA_SGPI0
- FF. Intel Local Control Panel Header
- GG. HSBP_A Header
- HH. SAS_SGPI0
- II. SAS_SES2 (see note)
- JJ. HSBP_B Header
- KK. SATA 0
- LL. SATA 1
- MM. SATA 2 / SAS 0 (see note)
- NN. SATA 3 / SAS 1 (see note)
- OO. SATA 4 / SAS 2 (see note)
- PP. SATA 5 / SAS 3 (see note)
- QQ. USB Port 6
- RR. Front Panel Header
- SS. SATA RAID 5 Key
- TT. SAS Key (see note)
- UU. Serial B / EMP
- VV. Intrusion Header



Note: SAS connections are available on SKU S5000XVNSAS. SAS connections are **not available** on SKU S5000XVNSATA.

Accessories and Order Codes

Hard Drive Power Connector Converter Cable	ASLPRWCABLE
Intel® RAID Activation Key (SATA / SAS RAID 5)	AXXRAKSW5
Intel® Server Chassis SC5400 Base	SC5400BASE
Intel® Entry Server Chassis SC5299-E WS	SC5299WS

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

