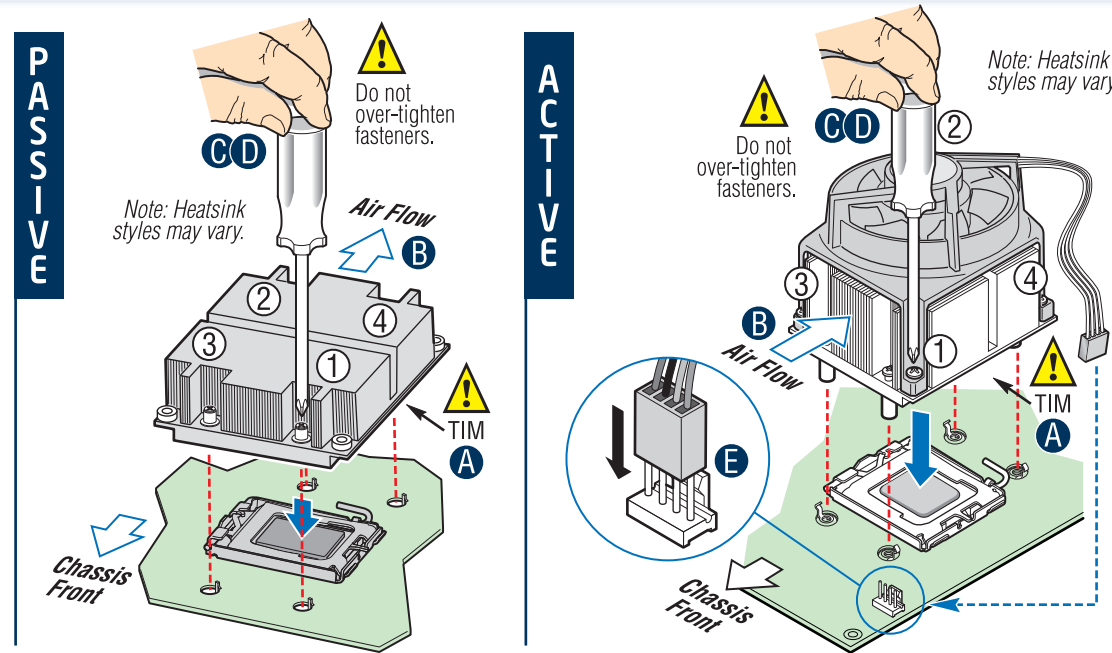


7 Install Heatsink(s)

Note: This procedure is specific to the following Intel® Server Chassis:
 • Intel® Server Chassis SC5400: Passive heatsink
 • Intel® Entry Server Chassis SC5299-E BP and BRP: 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.

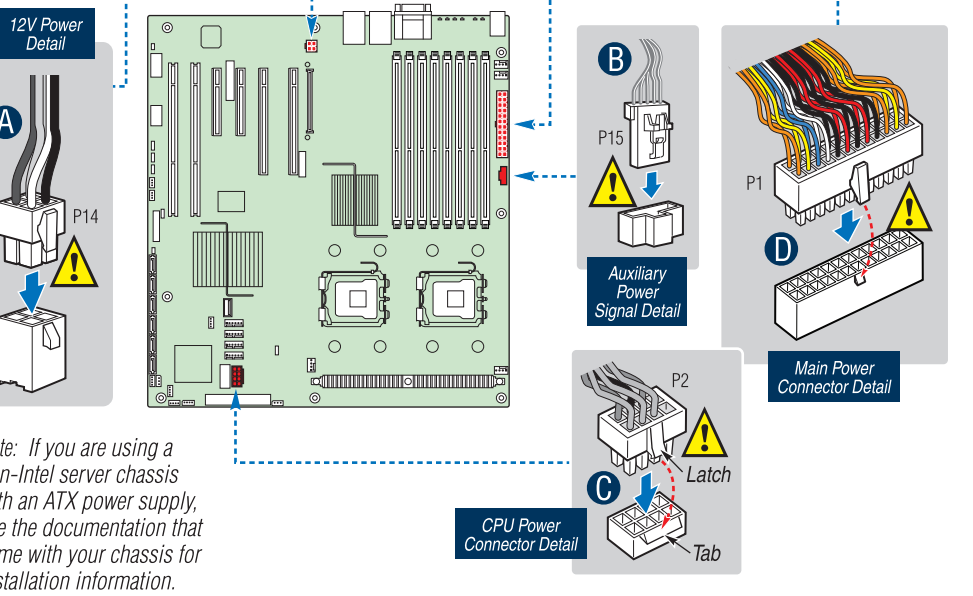
- If a protective film covers the thermal interface material (TIM) on the underside of the heatsink, remove the protective film.
 - Align heatsink fins to the front and back of the chassis for correct airflow. Airflow goes from front-to-back of chassis.
- Each heatsink has four captive fasteners and should be tightened as follows:
- Using a #2 Phillips® screwdriver, finger-tighten each fastener diagonally, according to the white-circled numbers shown in the figures at the right.
 - Securely re-tighten each fastener again in the same order as performed in Step C.
 - Attach fan power cable to server board as shown (active heatsink only).



8 Connect Internal Power Cables

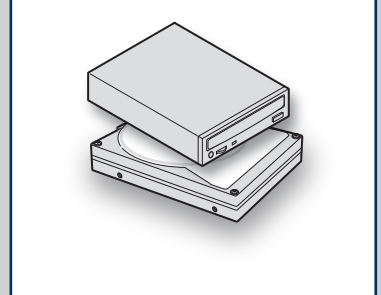
- Attach the 12V power connector to the server board.
- Attach the auxiliary power signal connector to the server board.
- Attach the CPU power connector to the server board.
- Attach the main power connector to the server board.

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

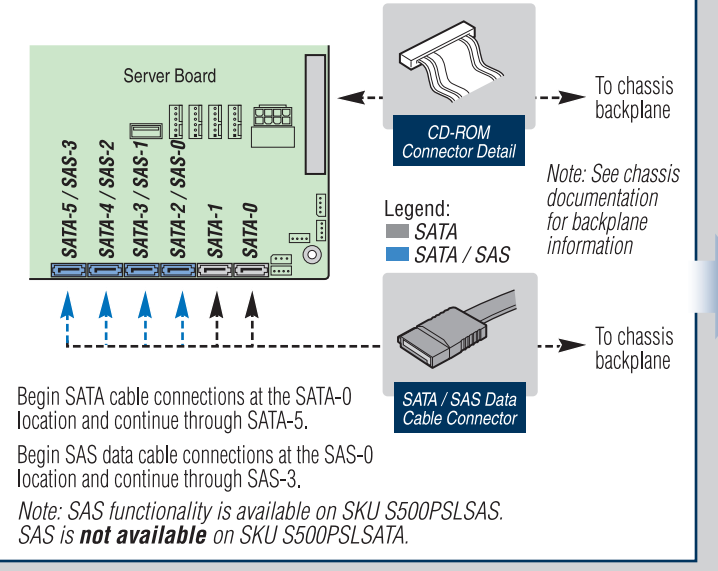


9 Install Optical Drive and Hard Drive(s)

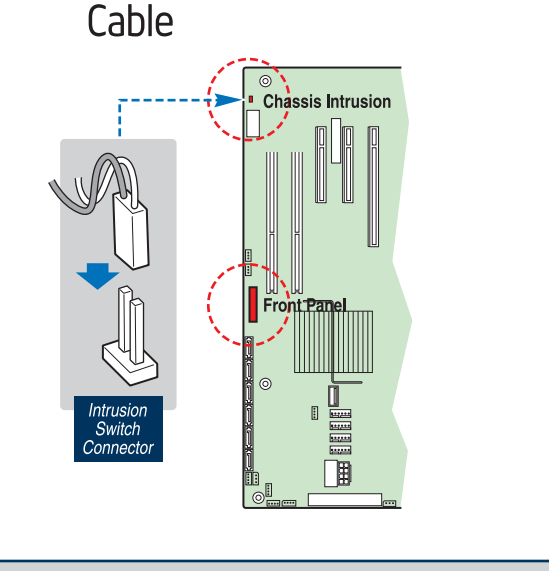
See the documentation that came with your server chassis for drive installation instructions.



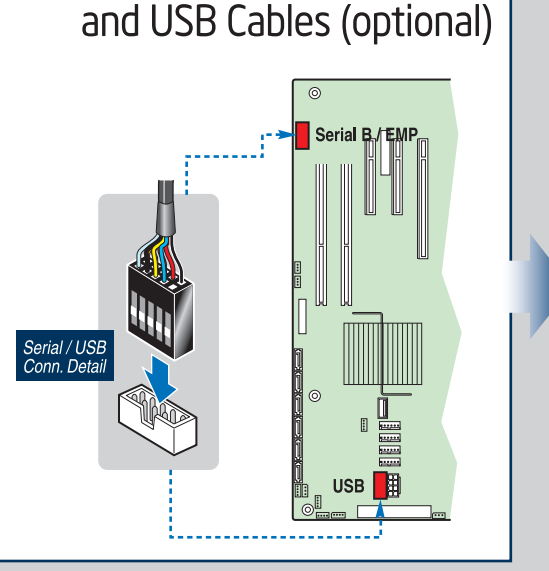
10 Connect Drive Data Cables



11 Connect Intrusion Switch Cable



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



13 Install Intel® Remote Management Module and ASMI NIC (optional)

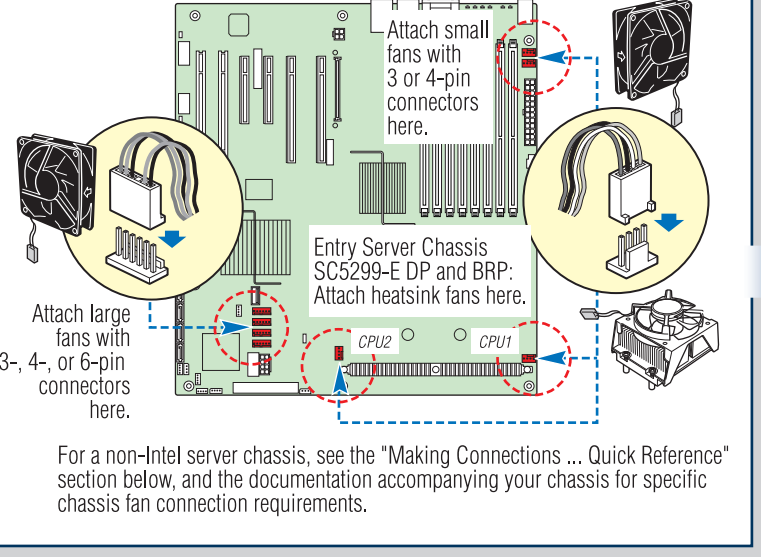
A. Install Intel® Remote Management Module

- Insert the standoff into the hole labeled TH4 on the underside of the Intel® Remote Management Module.
- Attach the Intel® Remote Management Module to the server board Advanced Server Management Interface (ASMI) connector and press the standoff into the matching hole in the server board.

B. Install ASMI NIC

- Attach the module to the add-in card bracket as shown.
- Install the ASMI NIC into a chassis add-in card slot convenient to the server board ASMI NIC header.
- Attach the ASMI NIC ribbon cable as shown. Make sure each connector end is securely seated.

14 Connect Fan Cables



15 Install RAID Adapter Card (optional)

If your server board SKU includes Intel® Integrated Server RAID Technology II, see the hardware and software guides on the CD that came with your server board.

If you are installing a non Intel 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.

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

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

17 Finish Up

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.

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/S5000PSL/>

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 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 620W 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 620W power supply.

18 Software

- BIOS, Drivers, and Operating System Installation
- 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/S5000PSL>. 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.
 - Configure your RAID Controller:** Use the instructions provided with the RAID controller.
 - Install your Operating System:** Use the instructions provided with the RAID controller and with the operating system.
 - 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 the appropriate drivers to install. On other operating systems, browse the CD folders to locate and install the driver files.
 - Install Intel® Remote Management Software:** If you installed the Intel Remote Management Module and the ASMI NIC, download and install the Intel Remote Management Software from <http://support.intel.com/support/motherboards/server/S5000PSL>.
 - 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>.

Making Connections to the Server Board ... Quick Reference

Required Connections for Selected Chassis	SC5400	SC5299-E DP and BRP
B. P12V4 Power Connector	■	■
E. Main Power Connector	■	■
F. Power Supply Signal Connector	■	■
M. +12V CPU Power Connector	■	■
X. Front Panel Connector	■	■

CPU/System Fan Connections for Selected Chassis	SC5400	SC5299-E DP and BRP
C. D. System Fan 5-6 Headers	Rear fan - optional 90 mm fan	Rear fan - optional 90 mm fan
G. System Fan 4	No connection	120 mm fan
H. System Fan 3	No connection	90 mm fan
I. System Fan 2	No connection	120 mm fan
J. System Fan 1	No connection	HDD cage fan
K. CPU 1 Heatsink Fan	N/A	CPU1 fan
L. CPU 2 Heatsink Fan	N/A	CPU2 fan

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® Server Board S5000PSL User Guide, and your server chassis documentation for additional connection information.

Note: SAS connections are available on SKU S500PSLSAS. SAS connections are not available on SKU S500PSLSATA.

Intel® Server Board S5000PSL Component Layout

A. PCI-X* 64-100 Slot 1	DD. CPU Power
B. PCI-X 64-100/133 Slot 2	EE. USB 4-5
C. PCI Express* x4 Slot 3	FF. IDE Connector
D. ASMI_NIC	GG. SATA_SGPI0
E. PCI Express x4 Slot 4 (ROMB)	HH. Intel Local Control Panel Header
F. PCI Express x8 Slot 5	II. HSBP_B Header
G. PCI Express x8 Slot 6	JJ. SAS_SGPI0 (see note)
H. CMOS Battery	KK. SAS_SES2 (see note)
I. P12V4	LL. HSBP_A Header
J. ASMI Connector	MM. SATA D
K. Back Panel I/O Ports	NN. SATA 1
L. Diagnostic LEDs	OO. SATA 2 / SAS 0 (see note)
M. ID LED	PP. SATA 3 / SAS 1 (see note)
N. System Status LED	QQ. SATA 4 / SAS 2 (see note)
O. System Fan 6	RR. SATA 5 / SAS 3 (see note)
P. System Fan 5	SS. USB Port 6
Q. Main Power Connector	TT. Front Panel Header
R. Auxiliary Signal Conn. DIMM Sockets	UU. SATA RAID 5 Key
T. CPU 1	VV. SAS Key (see note)
U. CPU 2	WW. Serial B / EMP (see note)
V. CPU Fan 1	XX. Intrusion Header
W. CPU Fan 2	
X. CPU Voltage Regulator	
Y. System Fan 4	
Z. System Fan 3	
AA. I/FMB	
BB. System Fan 2	
CC. System Fan 1	

Note: SAS connections are available on SKU S500PSLSAS. SAS connections are not available on SKU S500PSLSATA.

Accessories and Order Codes	
Intel® Remote Management Module	AXXRMM
Hard Drive Power Connector Converter Cable	ASLPWRCABLE
Intel® RAID Adapter SROMB18E	FXXSROMBSAS18E
Intel® RAID Activation Key (Hardware RAID 0, 1, 5, 10, 50)	AXXRAK18E
Intel® RAID Activation Key (SATA / SAS Software RAID 5)	AXXRKWS5
SAS Cable for SAS ROMB Card	FXXLPSASCLB
Intel® RAID Smart Battery	AXXRSBBU3
Intel® Server Chassis SC5400 Base	SC5400BASE
Intel® Server Chassis SC5400 BRP	SC5400BRP
Intel® Server Chassis SC5400 LX	SC5400LX
Intel® Entry Server Chassis SC5299-E DP	SC5299DP
Intel® Entry Server Chassis SC5299-E BRP	SC5200BRP

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

