9 Install Heat Sink(s)

ACTIVE

Active processor heat sink(s) is required in the Intel® Workstation System SC5650SCWS.

⚠ **CAUTION:** The heat sink 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 second heat sink is required for a second processor.

Note: Heatsink styles may vary

⚠ **CAUTION:** Do not over-tighten fasteners.

A. If a protective film covers the thermal interface material (TIM) on the underside of the heatsink, remove the protective film.

B. Align active heat sinks to let air flow go through to the center of the board.

C. Using a #2 Phillips* screwdriver, finger-tighten each fastener diagonally, according to the white-circled numbers.

D. Securely re-tighten each fastener again in the same order as performed in Step C.

E. Attach active heatsink fan power cable to workstation board as shown.

10 Install (Optional) RAID 5 Activation Key/Connect (Optional) SGPIO Cable/ Connect Hard Drives/Optical Drive to Workstation Board

A. (Optional) Install optional RAID 5 Activation Key (AXXRAKSW5) on on-board RAID 5 Key connector as shown.
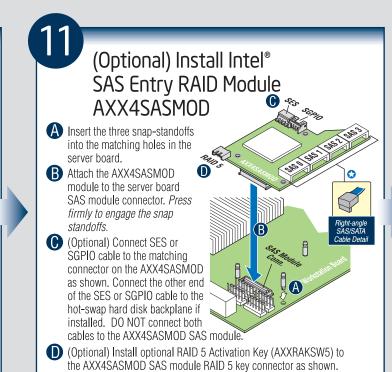
B. (Optional) Connect the SGPIO cable to the server board SGPIO Connector as shown. Connect the other end of the SGPIO cable to the hot-swap hard disk backplane if installed.
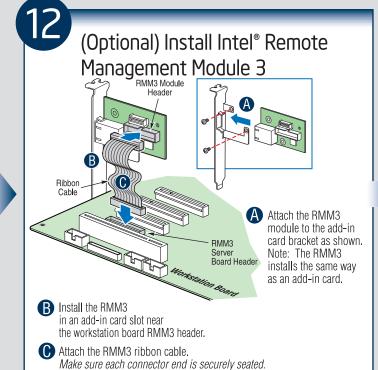
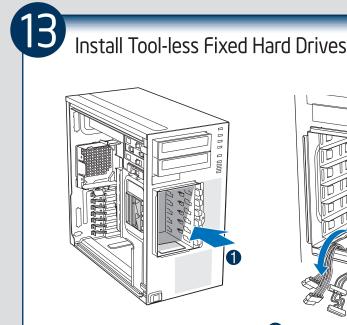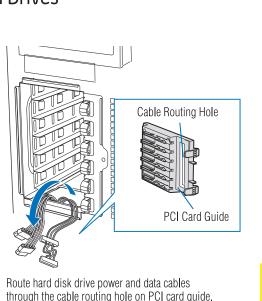C. Connect SATA Data Cables to the server board as shown.

✿ Begin cable connections at the SATA 0 location.

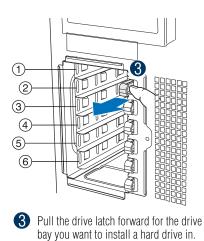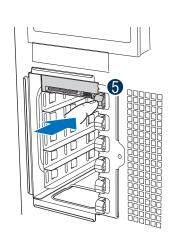## 11 (Optional) Install Intel® SAS Entry RAID Module AXX4SASMOD

A. Insert the three snap-standoffs into the matching holes in the server board.

B. Attach the AXX4SASMOD module to the server board SAS module connector. *Press firmly to engage the snap standoffs.*

C. (Optional) Connect SES or SGPIO cable to the matching connector on the AXX4SASMOD as shown. Connect the other end of the SES or SGPIO cable to the hot-swap hard disk backplane if installed. DO NOT connect both cables to the AXX4SASMOD SAS module.

D. (Optional) Install optional RAID 5 Activation Key (AXXRAKSW5) to the AXX4SASMOD SAS module RAID 5 key connector as shown.

✿ NOTE: Use right-angle SAS/SATA cables only

Right-angle SAS/SATA Cable Detail

12 (Optional) Install Intel® Remote Management Module 3

A. Attach the RMM3 module to the add-in card bracket as shown. Note: The RMM3 installs the same way as an add-in card.

B. Install the RMM3 in an add-in card slot near the workstation board RMM3 header.

C. Attach the RMM3 ribbon cable. Make sure each connector end is securely seated.

13 Install Tool-less Fixed Hard Drives

1. Insert fixed drive cage into chassis.

2. Route hard disk drive power and data cables through the cable routing hole on PCI card guide.

Cable Routing Hole
PCI Card Guide

3. Pull the drive latch forward for the drive bay you want to install a hard drive in.

⚠ Drive slots 1, 3, and 5 MUST be populated first. Failure to do so could result in thermal issues within chassis.

4. Insert fixed hard drive into drive bay until it stops. Ensure that the power and data connector end of the hard drive is facing forward.

5. Push drive latch in to lock hard drive into drive bay.

6. Install additional drives as necessary.

7. Install power and data cables to each of the installed drives. The cables route through the oval opening at the bottom of the drive cage.

8. Re-attach drive cage EMI shield to chassis.

9. Tighten thumb screw.

14 Install Fan Duct / System Fan Assembly

⚠ Warning! Remove the inlet filler board for dual processor configuration

Inlet Filler Board Removal Detail

1. Align the chassis and air duct alignment rails as shown at right.

2. Install the air duct, making sure the latch engages.

Air Duct Alignment Rails
Chassis Rear Fan Bracket
Chassis Alignment Rails

15 Install PCI Add-in Boards

1. From inside of chassis, press open the back panel PCI add-in board retention device.

2. Remove the PCI slot shield by pressing the shield out from the inside of the chassis.

3. While holding the PCI add-in board by its top edge or upper corners, firmly press the add-in board into the expansion slot.

4. Close the back panel PCI add-in board retention device.

16 Remove Filler Panels

Remove the bezel filler panels for each drive you have installed. Release plastic tabs located at back side of bezel and pull out filler panels from front.

17 Install Feet (Pedestal Configuration Only)

Note: This step applies to the pedestal version only. If you plan to configure your chassis as a rack mount system, refer to your system service guide.

1. Insert rubber foot into chassis hole.

2. Secure foot by inserting pin through the rubber foot.
Note: Repeat above steps until all four feet are installed.

Chassis Fan Connection

✓ = System Fan header used		Notes:
System Fan 1	✓	PCI Zone Chassis Fan
System Fan 3	✓	HDD Cage Fan
System Fan 5	✓	Rear Chassis Fan

Accessories and Order Codes

Hot Swap Conversion Kit for AXX6DRV3GR	APPTHSDBKIT
Hot Swap Conversion Kit for AXX6DRV3GEXP	APP3HSDBKIT
6-Drive SAS/SATA Hot Swap Cage without expander	AXX6DRV3GR[1]
6-Drive SAS/SATA Hot Swap Cage with expander	AXX6DRV3GEXP[1]
Intel® Server Chassis Rack Mount Kit	APP3RACKIT
Intel® Server Chassis SC5650 Product Maintenance Kit	APPTPMKIT
Intel® Remote Management Module 3	AXXRMM3
Intel® SAS Entry RAID Module	AXX4SASMOD
Intel® RAID Activation Key (SATA/SAS Software RAID 5)	AXXRAKSW5
Video Cable Kit for Intel® Workstation on-board Video	FXXSCVDCBL

[1] Requires a Hot Swap Conversion Kit
A complete list of accessories and spares can be found at: http://support.intel.com

Front Panel Controls and Indicators

A. Power/Sleep LED
B. Power/Sleep Button
C. NMI Button
D. Reset Button
E. NIC 1 Activity LED
F. NIC 2 Activity LED
G. Hard Drive Activity LED
H. Status LED

Reference

Chassis Features and Components

A. Front Panel
B. 5.25-inch Device Drive Bays (2)
C. Hard Drive Cage Access Door
D. Door Lock
E. USB Ports (2)
F. Fan Duct and System Fan (DP/WS/BRP configuration shown)
G. Hard Drive Cage Retention Mechanism

H. Alternate external SCSI Knockout
I. Fixed Hard Drive Fan
J. Padlock Loop
K. PCI Card Guide
L. External SCSI Knockout
M. Serial B port Knockout
N. Power Supply (fixed illustrated)
O. A/C Power In
P. I/O Shield
Q. PCI Add-in Board Slots

Intel® Workstation Board S5520SC Component Layout

Note: Refer to the Technical Product Specification for Diagnostic LED decoder list.

See your Intel® Workstation Board S5520SC Service Guide for expanded component and connection information.

18 Install Front Bezel Assembly

1. Engage three clips at right edge of chassis.
2. Rotate left side of bezel assembly toward chassis.
3. Snap two bezel tabs into corresponding recesses at left edge of chassis front panel.

19 Close System

1. Slide the side cover on chassis and latch securely.
2. Replace screws.

⚠ **CAUTION:** This chassis must be operated with the SIDE COVER installed to ensure proper cooling.

20 Finishing Up

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

Network
NIC1 10/100/1000 Mb
NIC2 10/100/1000 Mb
1394
Serial A
Audio
USB
USB

⚠ **CAUTION:** Power supply requires a 16-guage power cord

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/s5520SC/

The system does not boot or show video at power-on:
- Check that all processor power connectors are plugged-in. Without these connections, the server cannot boot.
- Beep code 3 means you have bad memory; replace the faulty DDR3 DIMM(s).
- Remember, all DIMMs must be:
  - DDR3 800/1066/1333-compliant, 240-pin DIMMs.
  - No mixing of DDR3 RDIMMs and UDIMMs.
  - Installed from first slot of each channel.
  - Install Quad-Rank DIMM from first slot of each channel.

Available Documents

Document Type	Content
Technical Product Specification	In-depth technical information
Spares and Configuration Guide	Supported accessories and spares list
Software and Drivers	Tested peripherals and operating system lists Tested memory list Supported processors list
Software and Drivers	Up-to-date firmware, driver and utility information

Additional Reference Documents available at:
http://support.intel.com/support/motherboards/server/S5520SC/