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Install Heatsink(s)

For an Intel® Server Chassis, choose the correct heatsink for your chassis:

- Intel® Server Chassis SC5400: 2U passive heatsink
- Intel® Entry Server Chassis SC5299-E: Active heatsink

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

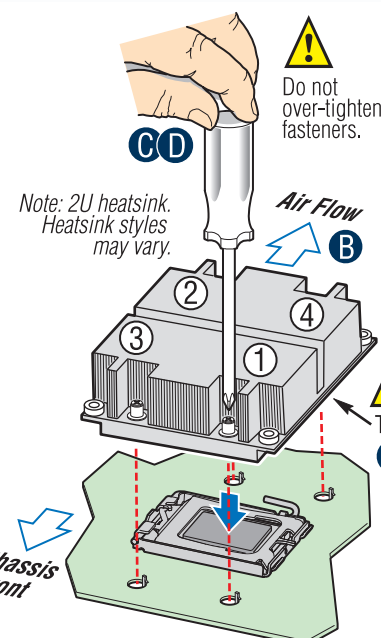
CAUTION: The heatsink has thermal interface material (TIM) on the underside of it. Use caution so that you do not damage the thermal interface material. Use gloves to avoid sharp edges.

- 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.

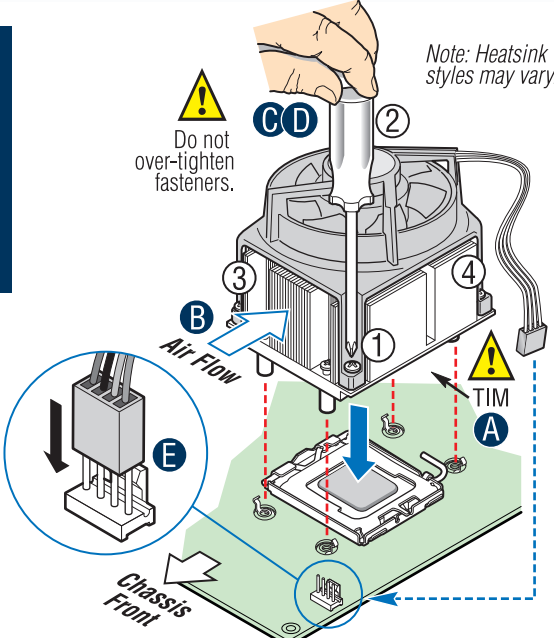
Each heatsink has four captive fasteners and should be tightened as follows:

- 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

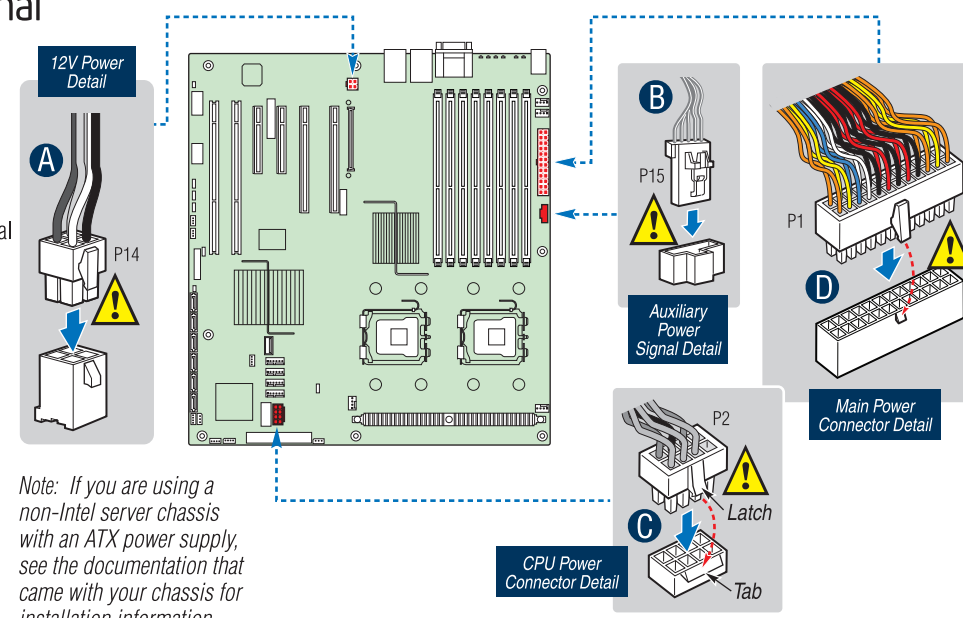


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Connect Internal Power Cables

- 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.

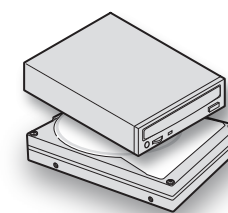
CAUTION: Note the location of the latch on each power cable connector and align it with the matching tab on each server board socket.



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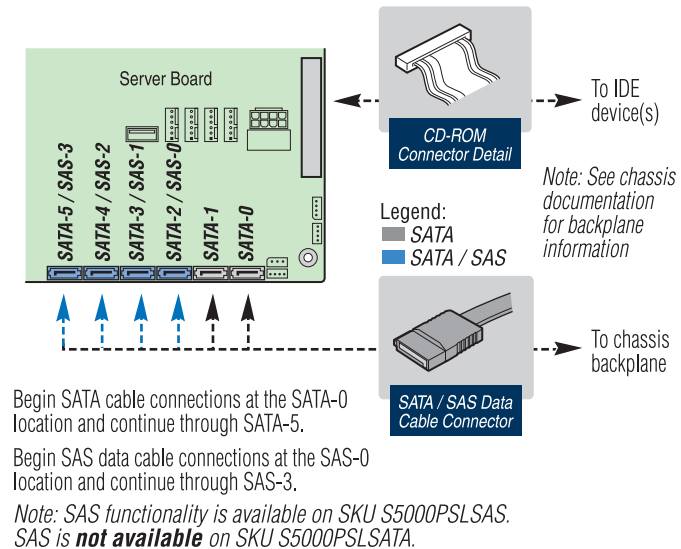
Install Optical Drive and Hard Drive(s)

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



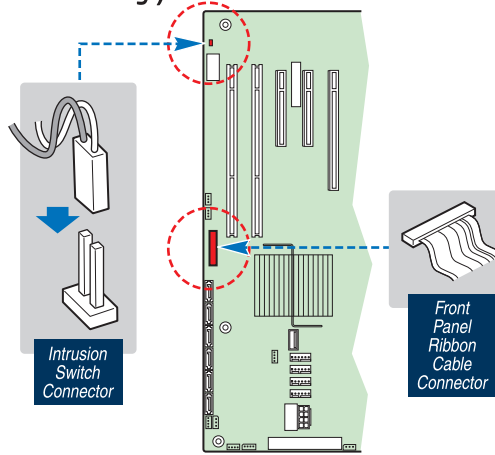
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Connect Drive Data Cables



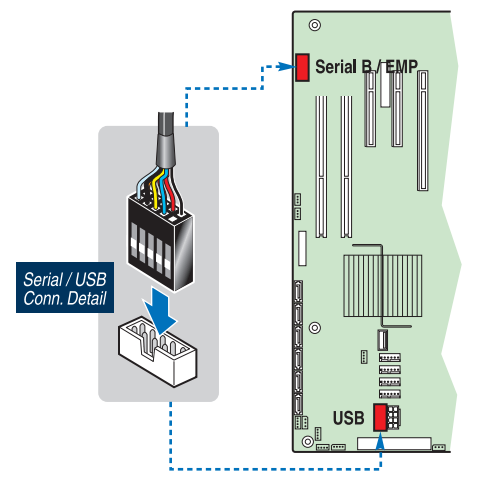
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Connect Intrusion Switch Cable (non-Intel chassis only) and Front Panel



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Connect Serial B / EMP and USB Cables (optional)

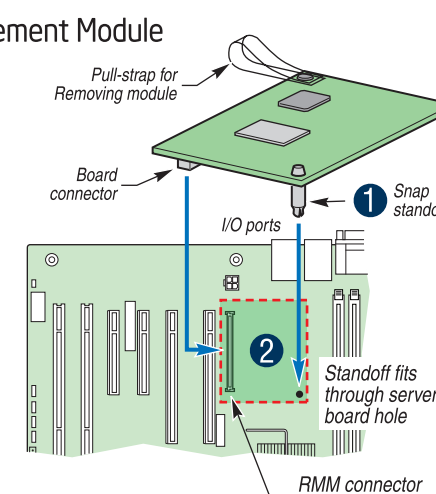


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Install Intel® Remote Management Module and RMM NIC (optional)

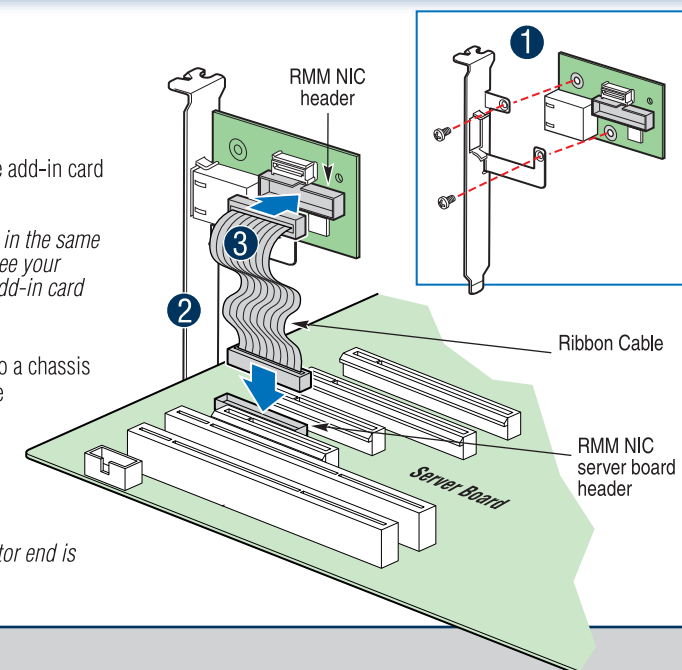
A. Install Intel® Remote Management Module

- 1 Insert the standoff into the hole labeled TH4 on the underside of the Intel® Remote Management Module.
- 2 Attach the Intel® Remote Management Module to the server board RMM connector and press the standoff into the matching hole in the server board.



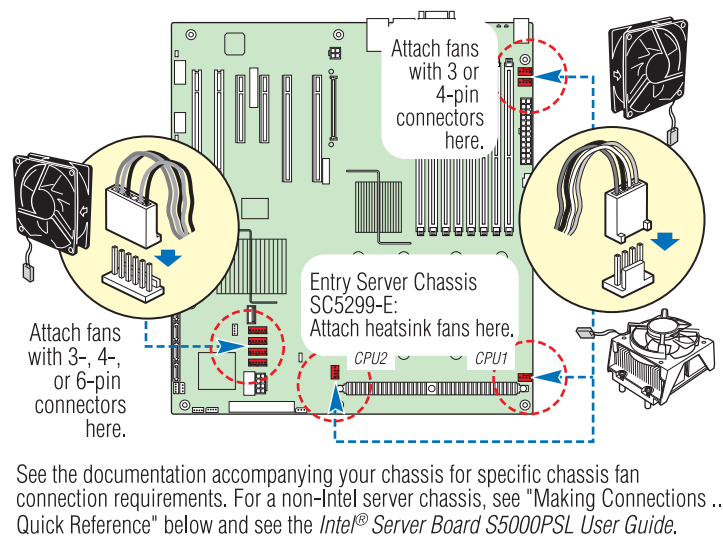
B. Install RMM NIC

- 1 Attach the module to the add-in card bracket as shown.
- Note: The RMM NIC installs in the same manner as an add-in card. See your chassis documentation for add-in card installation procedures.
- 2 Install the RMM NIC into a chassis add-in card slot near the server board RMM NIC header.
- 3 Attach the RMM NIC ribbon cable as shown. Make sure each connector end is securely seated.



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Connect Fan Cables



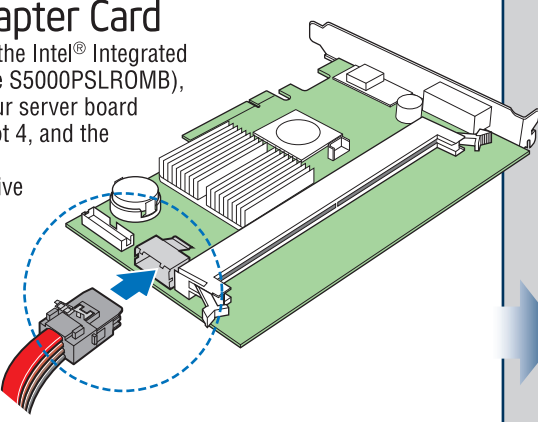
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Install RAID Adapter Card

If your server board SKU includes the Intel® Integrated Server RAID module (product code S5000PSLRMB), the RAID adapter included with your server board must be installed in add-in card slot 4, and the internal SATA/SAS header on the card must be cabled to the hard drive or to the server board backplane. See the hardware and software guides on the Intel® Server Deployment Toolkit 2.0 CD that came with your server board for installation and configuration instructions.

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

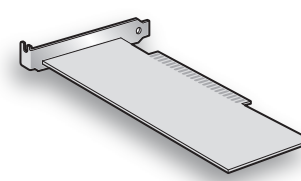
For other Intel RAID solutions, follow the installation instructions in the Hardware Guide that came with your RAID adapter to install the hardware. See the RAID controller software guide for configuration instructions after installing the hardware.



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Install Add-in Card(s) (optional)

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

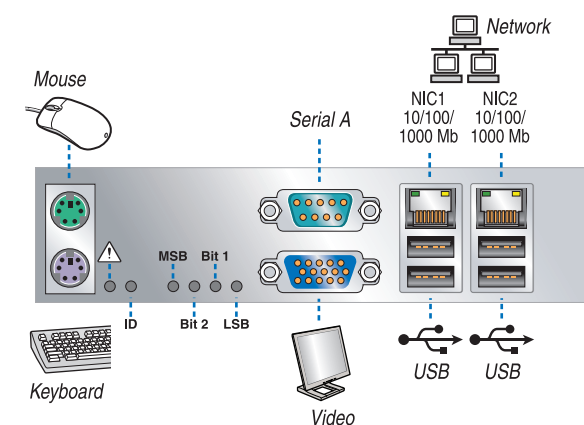


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Finish Up

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 both the P12V4 and the +12V CPU power connectors are plugged in. Without these connections, the server cannot boot.
- Beep code 4-3-2-1 means you have unrecognized or bad memory. Replace the faulty FB DIMM(s).
- Remember, all DIMMs must be:
 - FB DIMM 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 550 Watts with 3 Amps 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 550 Watt power supply.

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Install Software

- BIOS, Drivers, and Operating System Installation

A. Confirm BIOS, BMC, and FRUSDR Versions: Look on the Server/System Management screen in the BIOS Setup Utility to determine the installed BIOS, BMC firmware, and FRUSDR versions. Compare these to the versions at: <http://support.intel.com/support/motherboards/server/S5000PSL>. If new versions are available, update the BIOS, BMC firmware, and FRUSDR on your server. See the User Guide on the Intel® Server Deployment Toolkit 2.0 CD for update instructions.

B. Configure your RAID Controller: Use the instructions provided with the RAID controller.

C. Install your Operating System: Use the instructions provided with the RAID controller and with the operating system.

D. Install Operating System Drivers: With the operating system running, insert the Intel® Server Deployment Toolkit 2.0 CD. If using a Microsoft® Windows® operating system, the installer will autoun 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.

E. Install Intel® Remote Management Software: If you installed the Intel® Remote Management Module and the RMM NIC, download and install the Intel Remote Management Software from <http://support.intel.com/support/motherboards/server/S5000PSL>.

F. Install Intel® SmaRT Tool (optional): With the operating system running, insert the Intel® Server Deployment Toolkit 2.0 CD. The Express Installer will autoun. 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/smarttool/index.htm>.

Making Connections to the Server Board ... Quick Reference

Required Connections

| for Selected Chassis | SC5400 | SC5299-E |
|----------------------------------|--------|----------|
| B. P12V4 Power Connector | | |
| E. Main Power Connector | | |
| F. Power Supply Signal Connector | | |
| M. +12V CPU Power Connector | | |
| W. Front Panel Connector | | |

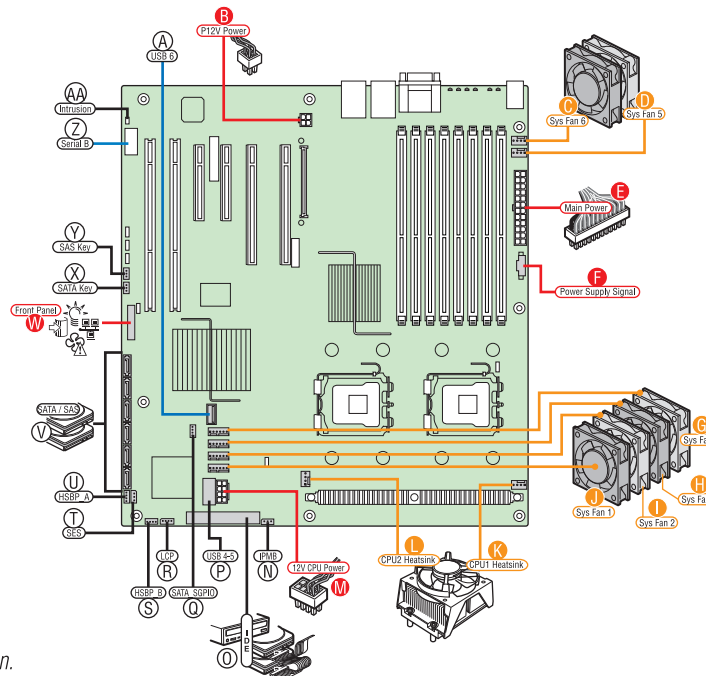
CPU/System Fan Connections

| for Selected Chassis | SC5400 LX | BRP, Base | SC5299-E |
|---|---------------|---------------|---|
| C. System Fan 6 | No connection | No connection | 120 mm fan |
| D. System Fan 5 | No connection | No connection | No connection |
| G. System Fan 4 | 120 mm fan | No connection | No connection |
| H. System Fan 3 | 120 mm fan | 120 mm fan | No connection |
| I. System Fan 2 | 92 mm fan | No connection | No connection |
| J. System Fan 1 | 92 mm fan | 92 mm fan | 92 mm fan only if hot-swap bay is installed |
| K. CPU 1 Heatsink Fan | No connection | No connection | CPU1 fan |
| L. CPU 2 Heatsink Fan only if CPU2 is installed | No connection | No connection | CPU2 fan |

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

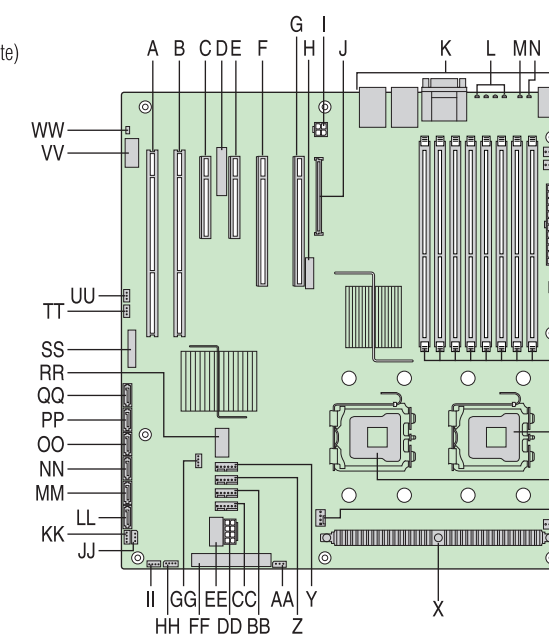
Note: Not all optional or available connections are shown in this diagram. Refer to the Reference section of this Quick Start User's Guide, your Intel® Server Board S5000PSL User Guide, and your server chassis documentation for additional connection information.

Note: SAS connections are available on only on SKU S5000PSLSAS. SAS connections are not available on SKU S5000PSLSATA.



Intel® Server Board S5000PSL Component Layout

- A. PCI-X® 64-100 Slot 1
B. PCI-X 64-100/133 Slot 2
C. PCI Express® x4 Slot 3
D. RMM_NIC header
E. PCI Express x4 Slot 4 (ROMB)
F. PCI Express x8 Slot 5
G. PCI Express x8 Slot 6
H. CMOS Battery
I. P12V4
J. RMM Connector
K. Back Panel I/O Ports
L. Diagnostic LEDs
M. ID LED
N. System Status LED
O. System Fan 6
P. System Fan 5
Q. Main Power Connector
R. Auxiliary Signal Conn.
S. DIMM Sockets
T. CPU 1
U. CPU 2
V. CPU Fan 2
W. CPU Fan 1
X. CPU Voltage Regulator
Y. System Fan 4
Z. System Fan 3
AA. IPMB
BB. System Fan 2



Notes: SAS connections are available on SKU S5000PSLSAS. SAS connections are not available on SKU S5000PSLSATA. SATA_SPGIO (GG) is available on SATA and ROMB SKUs only.

Accessories and Order Codes

| | |
|--|-------------|
| Intel® Remote Management Module | AXXRMM |
| Hard Drive Power Connector Converter Cable | ASLPWRCABLE |
| Intel® RAID Activation Key (Hardware RAID 0, 1, 5, 10, 50) | AXXRK18E |
| Intel® RAID Activation Key (SATA / SAS Software RAID 5) | AXXRKSW5 |
| SAS Cable for SAS ROMB Card | FXLPSASCBLL |
| Intel® RAID Smart Battery | AXXRBBU3 |
| 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 | SC5299BRP |
| Intel® Entry Server Chassis SC5299-E Base | SC5299BASE |

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

