

Intel® Server Chassis SR1450 User Guide

Order Number: C95452-002

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Preface

About this Manual

Thank you for purchasing and using the Intel® Server Chassis SR1450.

This manual is written for system technicians who are responsible for troubleshooting, upgrading, and repairing this server chassis. This document provides a brief overview of the features of the board/chassis, a list of accessories or other components you may need, troubleshooting information, and instructions on how to add and replace components on the Intel Server Chassis SR1450. For the latest version of this manual, see

<http://support.intel.com/support/motherboards/server/chassis/SR1450/manual.htm>.

Manual Organization

Chapter 1 provides a brief overview of the Intel Server Chassis SR1450. In this chapter, you will find a list of the server chassis features, pictures of the product, and product diagrams to help you identify components and their locations.

Chapter 2 provides instructions on adding and replacing components. Use this chapter for step-by-step instructions and diagrams for installing or replacing components such as the fans, power supply, drives, and other components.

At the back of this book, you will find some technical specifications¹, regulatory information, “getting help” information, and the warranty.

¹ For complete technical specifications and additional technical information, see the *Intel® Server Chassis SR1450 Technical Product Specification*. See “[Additional Information and Software](#)” to find a Web link to this document.

Product Contents, Order Options, and Accessories

The server chassis SR1450 is compatible with the Intel® Server Board SE7520JR2.

Your Server Chassis SR1450 ships with the following items:

- A box of hardware components, referred to below as the “hardware box”
- One 520W power supply module, installed in the chassis
- Power distribution board, installed in the chassis
- Low-profile PCI-X riser, installed in the chassis
- CD-ROM / DVD drive tray, installed in the chassis
- System fan module, installed in the chassis
- Single system fan, installed in the chassis
- Two power supply fan modules, installed in the chassis
- Chassis intrusion switch, installed in the chassis
- Power supply air duct, installed in the chassis
- Processor air duct, installed in the chassis
- CD-ROM filler panel, installed in the chassis
- Floppy carrier assembly, in the hardware box
- Cables, in the hardware box
- Six 32-6mm flat screws for installing drive component, in the hardware box
- Seven screws for mounting the server board into the chassis, in the hardware box
- *Intel® Server Chassis SR1450 Quick Start User's Guide*, in the chassis box
- *Attention* document, in the chassis box

You must choose from several required options when purchasing this chassis:

- Riser option, choose one:
 - Full-height PCI-X riser
 - Full-height PCI-Express* riser
- Hard drive installation option kit, choose one:
 - SCSI hot-swap backplane kit
 - SATA hot-swap backplane kit
- Control panel, choose one:
 - Standard control panel
 - Intel® Local Control Panel ²
- Rack option, choose one:
 - Tool-less rail kit (Optional Cable Management Arm (CMA) Accessory also available)
 - Rack brackets

You may need or want to purchase one or more of the following items for your server: ³

- Front bezel for the selected control panel option
- Processor(s) and heat sink(s)
- Memory DIMMs
- Intel® Management Module (Advanced or Professional)
- Tape drive kit
- Second 520W power supply module for redundancy
- Slimline CD-ROM drive or DVD/CDR drive
- Slimline floppy drive
- Kit to convert a hard drive bay to a slimline floppy drive bay
- ATA flash drive power cable

For information about which of these items have been tested and can be used with your chassis, and for ordering information for Intel products, see

<http://support.intel.com/support/motherboards/server/chassis/SR1450/>

² The Intel® Local Control Panel requires the installation of the optional Intel® Management Module – Professional or Intel® Management Module – Advanced

³ Before purchasing any optional items, refer to your server board documentation to determine which items are supported on your server board.

Additional Information and Software

If you need more information about this product or information about the accessories that can be used with this server board, use the following resources.

These sources are available at

<http://support.intel.com/support/motherboards/server/chassis/SR1450/>

Unless otherwise indicated in the table below, once on this Web page, type the document or software name in the search field at the **left** side of the screen and select the option to search “This Product.”

For this information or software	Use this Document or Software
For in-depth technical information about this product	Technical Product Specification
If you just received this product and need to install it	<i>Intel® Server Chassis SR1450 Quick Start User's Guide</i> in the product box or search for “Documentation”
For virtual system tours and interactive repair information	A link to the SMaRT Tool is available under “Other Resources” at the right side of the screen
Accessories or other Intel® server products	Search for “Spares and Configuration Guide”
Hardware (peripheral boards, adapter cards)	Search for “Tested Hardware and Operating System List”
Server boards that have been tested with this product	Search for “Compatible Server Board”
Processors that have been tested with this product	See your server board documentation online at http://support.intel.com
DIMMs that have been tested with this product	See your server board documentation online at http://support.intel.com
To make sure your system falls within the allowed power budget	Search for “Installation and Use” for Power Budget Analysis Tool
For software to manage your Intel® server	See your server board documentation online at http://support.intel.com
For drivers	See your server board documentation online at http://support.intel.com
For firmware and BIOS updates	See your server board documentation online at http://support.intel.com
For diagnostics test software	See your server board documentation online at http://support.intel.com

Safety Information



WARNING

Before working with your server product, whether you are using this guide or any other resource as a reference, pay close attention to the safety instructions. You must adhere to the assembly instructions in this guide to ensure and maintain compliance with existing product certifications and approvals. Use only the described, regulated components specified in this guide. Use of other products / components will void the UL listing and other regulatory approvals of the product and will most likely result in noncompliance with product regulations in the region(s) in which the product is sold.

Emissions Disclaimer

To ensure EMC compliance with your local regional rules and regulations, the final configuration of your end system product may require additional EMC compliance testing. For more information contact your local Intel Representative.

See “[Regulatory and Integration Information](#)” for product Safety and EMC regulatory compliance information. This is an FCC Class A device. Integration of it into a Class B chassis does not result in a Class B device.

Intended Uses

This product was evaluated as Information Technology Equipment (ITE), which may be installed in offices, schools, computer rooms, and similar commercial type locations. The suitability of this product for other product categories and environments (such as: medical, industrial, telecommunications, NEBS, residential, alarm systems, test equipment, etc.), other than an ITE application, may require further evaluation.

EMC Testing

Before computer integration, make sure that the chassis, power supply, and other modules have passed EMC testing using a server board with a microprocessor from the same family (or higher) and operating at the same (or higher) speed as the microprocessor used on this server board.



Warnings

System power on/off: The power button DOES NOT turn off the system AC power. To remove power from system, you must unplug the AC power cord from the wall outlet. Make sure the AC power cord is unplugged before you open the chassis, add, or remove any components.

Hazardous conditions, devices and cables: Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the server and disconnect the power cord, telecommunications systems, networks, and modems attached to the server before opening it. Otherwise, personal injury or equipment damage can result.

Electrostatic discharge (ESD) and ESD protection: ESD can damage disk drives, boards, and other parts. We recommend that you perform all procedures in this chapter only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to chassis ground—any unpainted metal surface—on your server when handling parts.

ESD and handling boards: Always handle boards carefully. They can be extremely sensitive to ESD. Hold boards only by their edges. After removing a board from its protective wrapper or from the server, place the board component side up on a grounded, static free surface. Use a conductive foam pad if available but not the board wrapper. Do not slide board over any surface.

Installing or removing jumpers: A jumper is a small plastic encased conductor that slips over two jumper pins. Some jumpers have a small tab on top that you can grip with your fingertips or with a pair of fine needle nosed pliers. If your jumpers do not have such a tab, take care when using needle nosed pliers to remove or install a jumper; grip the narrow sides of the jumper with the pliers, never the wide sides. Gripping the wide sides can damage the contacts inside the jumper, causing intermittent problems with the function controlled by that jumper. Take care to grip with, but not squeeze, the pliers or other tool you use to remove a jumper, or you may bend or break the stake pins on the board.

Safety Cautions

Read all caution and safety statements in this document before performing any of the instructions. See also *Intel Server Boards and Server Chassis Safety Information* or at <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm>

Wichtige Sicherheitshinweise

Lesen Sie zunächst sämtliche Warn- und Sicherheitshinweise in diesem Dokument, bevor Sie eine der Anweisungen ausführen. Beachten Sie hierzu auch die Sicherheitshinweise zu Intel-Serverplatinen und Servergehäusen unter <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm>

重要安全指导

在执行任何指令之前，请阅读本文档中的所有注意事项及安全声明。和/或 <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm> 上的 *Intel Server Boards and Server Chassis Safety Information*（《Intel 服务器主板与服务器机箱安全信息》）。

Consignes de sécurité

Lisez attention toutes les consignes de sécurité et les mises en garde indiquées dans ce document avant de suivre toute instruction. Consultez *Intel Server Boards and Server Chassis Safety Information* sur le site <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm>

Instrucciones de seguridad importantes

Lea todas las declaraciones de seguridad y precaución de este documento antes de realizar cualquiera de las instrucciones. Vea *Intel Server Boards and Server Chassis Safety Information* en <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm>

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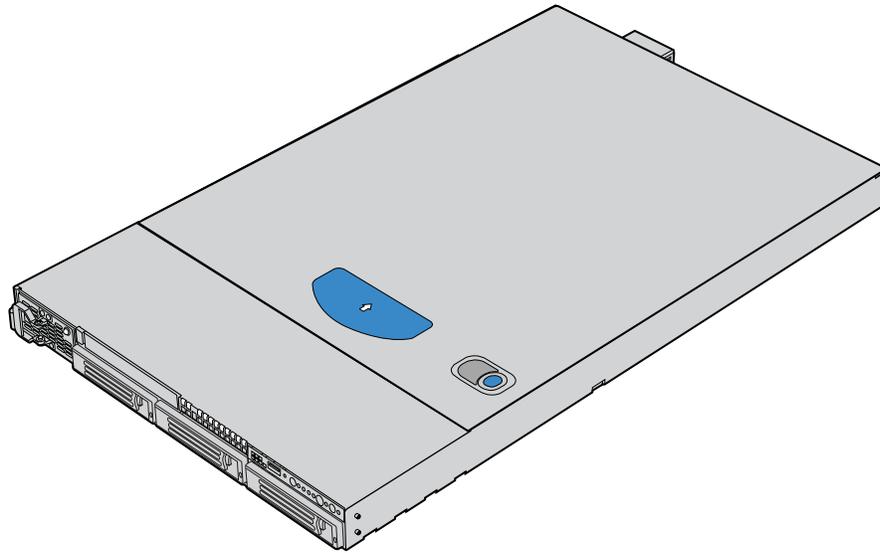
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1 Server Chassis Features

This chapter briefly describes the main features of Intel® Server Chassis SR1450. This chapter provides drawings of the product, a list of the server features, and diagrams showing the location of important components and connections on the server chassis.

The Intel Server Chassis SR1450 is shown in the following drawing.



TP01584

Figure 1. Intel® Server Chassis SR1450

Table 1 summarizes the major features of the server chassis. ⁴

Table 1. Server Chassis Features

Feature	Description
Dimensions	<ul style="list-style-type: none"> ▪ 1.703 inches high ▪ 16.930 inches wide ▪ 27.480 inches deep (including power receptacles) ▪ 35 pounds (max chassis weight)
Hard Drives (dependent on option selected)	<ul style="list-style-type: none"> ▪ Up to three hot-swap SATA or hot-swap SCSI drives
Peripherals (dependent on option selected)	<ul style="list-style-type: none"> ▪ Slimline bay for CD-ROM, DVD-ROM drive, or slimline floppy drive ▪ Kit to convert one hard drive bay into a floppy drive bay (optional accessory) ▪ PCI riser card (configurations depend on accessories used)
Control Panel (dependent on option selected)	<p>Standard Control Panel: Intel® Local Control Panel (requires installation of the optional Intel® Management Module – Advanced or Intel® Management Module – Professional)⁵</p>
LEDs and displays (dependent on option selected)	<p>With Standard Control Panel:</p> <ul style="list-style-type: none"> ▪ NIC1 Activity ▪ NIC2 Activity ▪ Power / Sleep ▪ System Status ▪ System Identification ▪ Hard Drive Activity <p>With Intel® Local Control Panel:</p> <ul style="list-style-type: none"> ▪ NIC1 Activity ▪ NIC2 Activity ▪ Power / Sleep ▪ System Status ▪ System Identification ▪ Hard Drive Activity ▪ LCD Display
USB (dependent on option selected)	<ul style="list-style-type: none"> ▪ One front panel USB port with Standard Control Panel ▪ Two front panel USB ports with Intel® Local Control Panel ▪ Two back panel USB ports

Continued

⁴ Before purchasing any component noted as either “optional,” or “dependent on option selected,” refer to your server board documentation to determine which option(s) are supported with your server board.

⁵ Use of the Local Control Panel requires conversion of one hard drive bay.

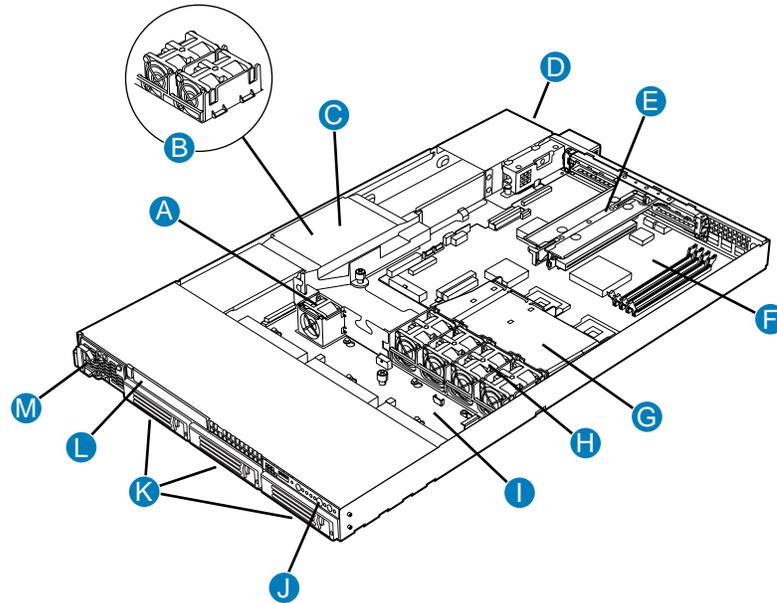
Table 1. Server Chassis Features (continued)

Power Supply	<ul style="list-style-type: none">▪ One hot-swap 520W power supply module▪ One plus one hot-swap redundant 520W power supply (optional accessory)
System Security	<ul style="list-style-type: none">▪ Lockable front bezel (optional accessory)▪ Chassis intrusion switch▪ Lock attach point for Kensington* style lock
Fans	<ul style="list-style-type: none">• Four 40x40x56mm dual-rotor system fans• One 40x40x28mm single rotor system fan• Two 40x40x56mm dual-rotor power supply fans (dedicated to power supply cooling)
Video	<ul style="list-style-type: none">▪ One rear panel video port

Component Identification

Internal Components

The diagram below shows the server chassis with a server board installed into it.



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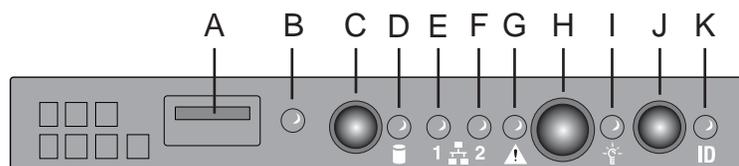
- A. Single system PCI fan
- B. Power supply fan modules
- C. Power supply air duct
- D. Rear power supply module
- E. PCI Riser assembly
- F. Server board
- G. Processor air duct.
- H. System fan module
- I. SATA or SCSI backplane
- J. Control panel (Standard Control Panel shown)
- K. Drive bay area (drives not included)
- L. CD/DVD – ROM/Floppy drive bay
- M. Front power supply module

Not shown: rack handles, optional front bezel, chassis cover

Figure 2. Internal Component Locations

Standard Control Panel

The diagram below shows the features available on the Standard Control Panel. The Standard Control Panel is one of two required front panel options that can be selected. The other option is the Intel® Local Control Panel. For instructions on installing the Standard Control Panel, see [“Replacing the Standard Control Panel.”](#)



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Callout	Feature	Function
A	USB 2.0 port	Allows you to attach a USB component to the front of the chassis.
B	NMI button	Puts the server in a halt-state for diagnostic purposes.
C	Reset button	Reboots and initializes the system.
D	Hard disk drive activity LED	Random blinking green light indicates hard disk drive activity (SCSI or SATA). No light indicates no hard disk drive activity.
E	NIC 1 activity LED	Blinking green light indicates network activity.
F	NIC 2 activity LED	Continuous green light indicates a link between the system and the network to which it is connected.
G	System Status LED	Solid green indicates normal operation Blinking green indicates degraded performance Solid amber indicates a critical or non-recoverable condition Blinking amber indicates a non-critical condition No light indicates POST is running or the system is off
H	Power/Sleep button	Toggles the system power on/off. Sleep button for ACPI-compatible operating systems.
I	Power/Sleep LED	Continuous green light indicates the system has power applied to it. Blinking green indicates the system is in S1 sleep state No light indicates the power is off / is in ACPI S4 or S5 state.
J	System identification button	Toggles the front panel ID LED and the server board ID LED on and off. The server board LED is visible from the rear of the chassis and allows you to locate the server from the rear of a rack of systems.
K	System Identification LED	Solid or blinking blue indicates system identification is active No light indicates system identification is not activated

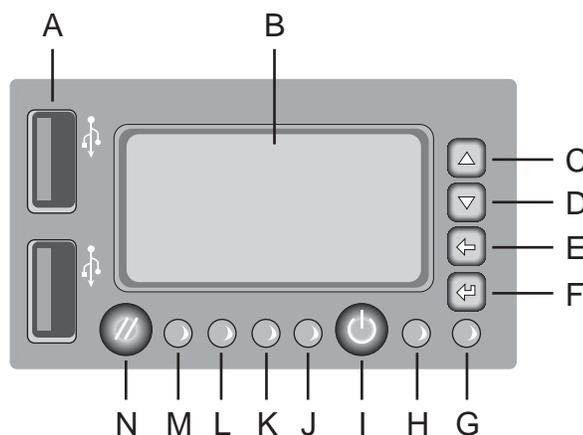
Figure 3. Standard Control Panel Features

Intel® Local Control Panel

The diagram below shows the features available on the Intel® Local Control Panel. The Intel Local Control Panel is one of two required front panel options that can be selected. The other option is the Standard Control Panel. For instructions on installing the Standard Control Panel, see [“Replacing the Intel® Local Control Panel”](#).

⇒ **NOTE**

This control panel requires the installation of the Intel® Management Module, Professional or Advance Edition.



TP01587

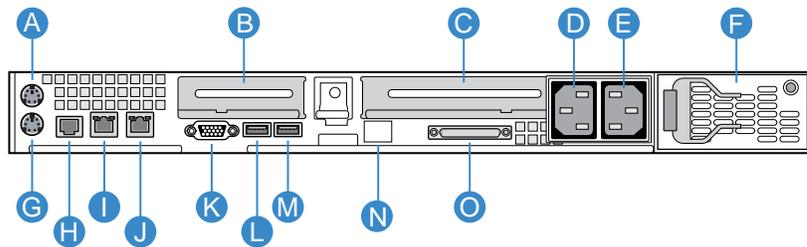
Callout	Feature	Function
A	USB 2.0 port	Allows you to attach a USB component to the front of the chassis.
B	LCD display	Screen on which system information is displayed.
C	Menu control button, scroll up	Scroll up one option at a time.
D	Menu control button, scroll down	Scroll down one option at a time.
E	Menu control button, scroll left	Move to the previous option.
F	Menu control button, enter	Enter/select the option.
G	System Identification LED	Solid or blinking blue indicates system identification is active. No light indicates system identification is not activated.
H	Power/Sleep LED	Continuous green light indicates the system has power applied to it. Blinking green indicates the system is in S1 sleep state. No light indicates the power is off / is in ACPI S4 or S5 state.
I	Power/Sleep button	Toggles the system power on/off. Sleep button for ACPI-compatible operating systems.

Continued

Callout	Feature	Function
J	System Status LED	Solid green indicates normal operation. Blinking green indicates degraded performance. Solid amber indicates a critical or non-recoverable condition. Blinking amber indicates a non-critical condition. No light indicates POST is running or the system is off.
K	NIC 2 activity LED	Continuous green light indicates a link between the system and the network to which it is connected. Blinking green light indicates network activity.
L	NIC 1 activity LED	
M	Hard disk drive activity LED	Random blinking green light indicates hard disk drive activity (SCSI or SATA). No light indicates no hard disk drive activity is taking place.
N	Reset button	Reboots and initializes the system.

Figure 4. Intel® Local Control Panel Features

Back Panel Features



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- A. Mouse port
- B. Low-profile add-in card bracket
- C. Full-height add-in card bracket
- D. AC power receptacle (front power supply)
- E. AC power receptacle (rear power supply)
- F. Rear power supply module
- G. Keyboard port
- H. Serial Port B
- I. NIC1
- J. NIC2
- K. Video
- L. USB1
- M. USB0
- N. IMM Advanced Dedicated NIC Knock Out
- O. SCSI Channel B

Figure 5. Chassis Back

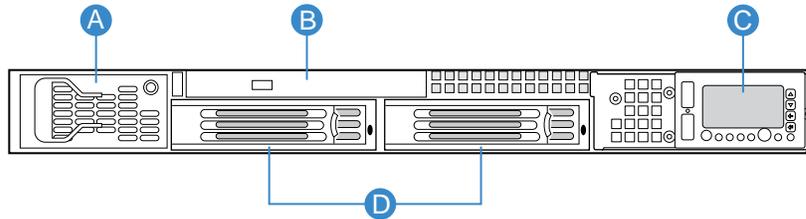


NOTE

The AC power supply receptacles are linked to separate power supply modules.

Peripheral Devices (Front Features)

The chassis provides locations and hardware for installing hard drives, a floppy drive, CD-ROM drive, or DVD-ROM drive. The drives must be purchased separately. The following figure shows the available options.



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- A. Front power supply module
- B. Slimline floppy drive or DVD-ROM drive or CD-ROM drive
- C. Control panel (Local Control Panel shown)
- D. Hard drive bays (3)

Figure 6. Optional Peripherals

Hard Disk Drives

There are two options for hard drive support: SCSI hot-swap or SATA hot-swap.

The middle drive bay can be converted to be used as a floppy bay. To use the bay for a floppy drive, the AXXFLOPHDDTRAY accessory kit must be used.

For instructions on installing hard drives, see [“Installing and Removing a Hard Disk Drive”](#).

➡ NOTES

Drives can consume up to 17 watts of power each. Drives must be specified to run at a maximum ambient temperature of 45 °C.

The Intel Server Chassis SR1450 does not support all SCSI or Serial ATA hard drives. See [“Additional Information and Software”](#) for an Internet link to a list of supported hardware.

Floppy / CD-ROM / DVD-ROM Slimline Carriers

The slimline drive carriers can be used with one slimline floppy, CD-ROM or DVD-ROM drive. There are two carriers that ship with the chassis; one carrier is for a CD-ROM or DVD-ROM, and the other is for a slimline floppy. Unless the optional kit to convert a hard drive bay to a floppy drive bay is used, you cannot install both a CD-ROM / DVD-ROM drive and a floppy drive.

The floppy drive / CD-ROM / DVD-ROM carriers can be inserted or removed only when system power is turned off; drives in the slimline carriers are NOT hot swappable. For installation instructions on installing a floppy drive see “[Installing or Removing a Floppy Drive](#)”. For installation instructions on installing a CD-ROM drive or DVD-ROM drive, see “[Installing or Removing a CD-ROM or DVD-ROM Drive](#)”.

⇒ NOTE

The Intel Server Chassis SR1450 does not support all slimline floppy, CD-ROM or DVD-ROM hard drives. See “[Additional Information and Software](#)” for an Internet link to a list of supported hardware. Intel provides accessory kits for these drives.

Advanced Management Options

Intel® Management Module

Two versions of the Intel® Management Module are available to provide additional server management features.

- The Intel Management Module - Professional Edition contains a hardware mezzanine card that plugs into the server board.
- The Intel Management Module - Advanced Edition includes a hardware mezzanine card, a 10/100 Mb NIC mezzanine card, and cables.

For installation instructions on installing either Intel Management Module, see the instructions provided with the management module and the SE7520JR2 Quick Start User’s Guide.

⇒ NOTE

Some server boards may not support the Intel® Management Module. See your server board documentation to determine if this feature is compatible with your server board.

Rack-Mounted Systems

Your Intel® Server Chassis SR1450 is designed to be mounted into a rack. You must choose from one of two accessories.

The Intel Server Chassis SR1450 comes ready for mounting using the Tool-less Rail Kit (AXXHERAIL). This option can also support a Cable Management Arm (APLCARM).

The second option is a fixed rail kit (AXXBRACKETS). This option requires some integration to the chassis. It does not support a Cable Management Arm.

Intel recommends you install systems from the bottom of the rack to the top. In other words, install the first system in the rack into the bottom position of the rack, the second system in the second position from the bottom, and so on. Instructions for installing your chassis into a rack are included in the rail kit.

Front Bezels

The optional front bezels provide a snap-on design that allows for maximum airflow through the server chassis. Two bezels are available. One fits a system that has the Standard Control Panel installed. The other is used for a chassis with the Intel Local Control Panel. Each bezel provides a lock to secure the hard drive and floppy drive / CD-ROM / DVD-ROM drive area. For instructions on installing either of the front bezels, see [“Removing and Installing the Front Bezel”](#).

The order numbers for the bezels are:

APLBEZBLACK: Black bezel for use with the Standard Control Panel.

APLLCDBEZEL: Black bezel for use with the Intel® Local Control Panel.

2 Hardware Installations and Upgrades

Before You Begin

Before working with your server product, pay close attention to the safety instructions at the beginning of this manual. See “[Safety Information](#).”

This document provides instructions for adding and replacing chassis components. For instructions on replacing components on the server board, such as the processor and memory DIMMs, see the instructions provided with the server board.

Tools and Supplies Needed

- Phillips* (cross head) screwdriver (#1 bit and #2 bit)
- Antistatic wrist strap and conductive foam pad (recommended)

System References

All references to left, right, front, top, and bottom assume the reader is facing the front of the chassis as it would be positioned for normal operation.

Removing and Installing the Chassis Cover

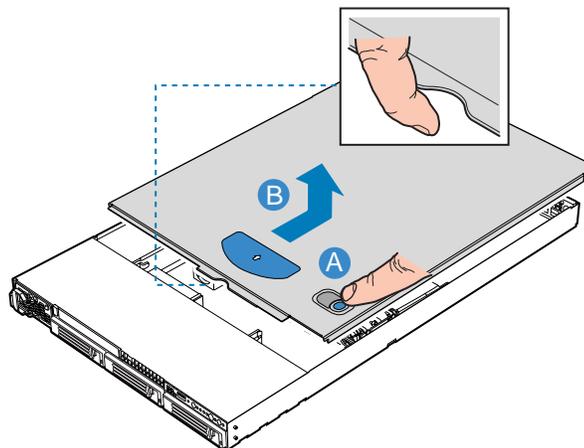
Removing the Chassis Cover

The Server Chassis SR1450 must be operated with the top cover in place to ensure proper cooling. You will need to remove the top cover to add or replace components inside of the platform. Before removing the top cover, power down the server and unplug all peripheral devices and the AC power cable(s). None of the components accessible through the top cover are hot-swappable.

⇒ NOTE

A nonskid surface or a stop behind the chassis may be needed to prevent the chassis from sliding on your work surface.

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Turn off all peripheral devices connected to the server. Turn off the server.
3. Disconnect the AC power cord.
4. Remove the shipping screw (if installed).
5. While holding in the blue button at the top of the chassis in (see letter “A”), slide the top cover back until it stops (See letter “B”).
6. Lift the cover upward to remove it.

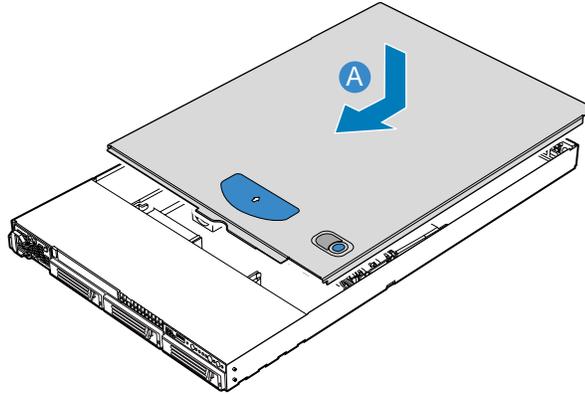


TP01590

Figure 7. Removing the Chassis Cover

Installing the Chassis Cover

1. Place the cover over the chassis so that the side edges of the cover sit just inside the chassis sidewalls.
2. Slide the cover forward until it clicks into place. See letter “A” in the figure below.
3. (Optional) Insert the shipping screw at the center of the top cover.
4. Reconnect all peripheral devices and the AC power cord.



TP01591

Figure 8. Installing the Chassis Cover

Removing and Installing the Front Bezel

The front bezels are available as optional accessories for the Server Chassis SR1450. Two front bezel options are available. One is used for the Standard Control Panel and the other is used with the Intel® Local Control Panel. See the diagrams below to identify your front bezel. Note the orientation in the figures below – the control panel is at the right. If you are installing a bezel on your chassis, make sure you position it as shown.



TP01592

Figure 9. Standard Front Bezel



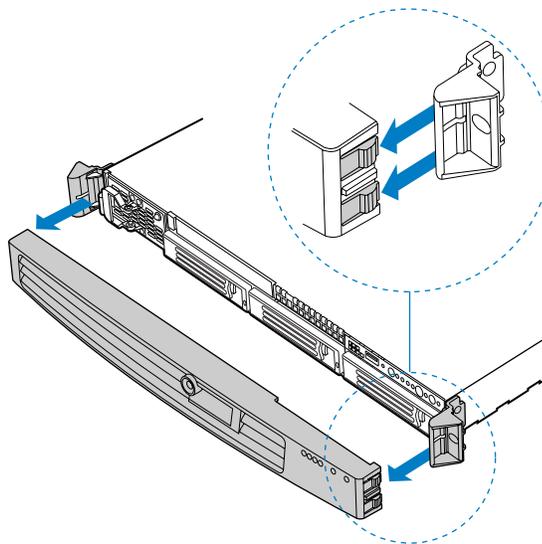
TP01593

Figure 10. Intel® Local Control Panel Front Bezel

Removing the Front Bezel

Use the steps below if your system includes either the standard front bezel or the front bezel for the Intel Local Control Panel.

1. Unlock the bezel.
2. Disconnect any cables attached to the front of the control panel.
3. Pull the bezel out from the chassis.



TP01594

Figure 11. Removing the Front Bezel

Installing the Front Bezel

Use the steps below if your system includes either the standard front bezel or the front bezel for the Intel Local Control Panel. The front bezel is optional.

1. At each end of the bezel, line up the center notch on the bezel with the center guide on the rack handles.
2. Push the bezel onto the front of the chassis until it clicks into place.
3. Lock the bezel.
4. Connect any necessary cables to the front control panel area at the right side of the chassis.

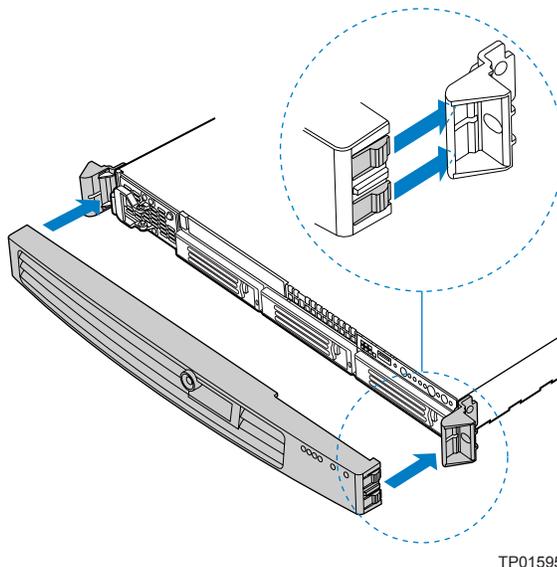


Figure 12. Installing the Front Bezel

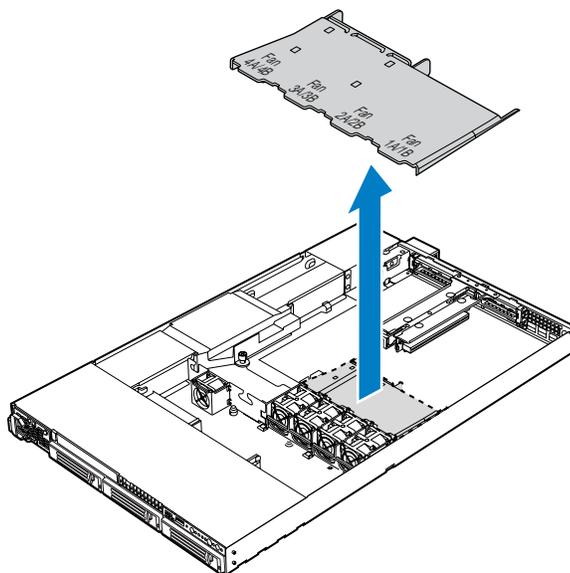
Removing and Installing the Processor Air Duct

Always operate your server chassis with the processor air duct in place. The air duct is required for proper airflow to maintain proper cooling of the processors.

For instructions on adding or replacing a processor, first remove the processor air duct, and then see your server board user guide for instructions on processor installations and removals. Return to these instructions to reinstall the processor air duct after installing your processor and heat sink.

Removing the Processor Air Duct

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Lift the processor air duct from its location over the two processor sockets.

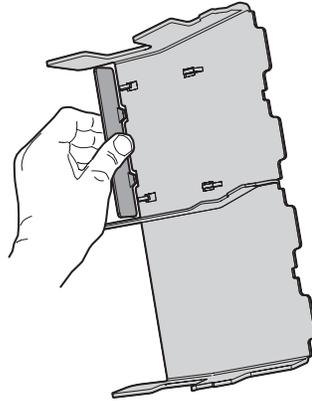


TP01596

Figure 13. Removing the Processor Air Duct

Installing the Processor Air Duct

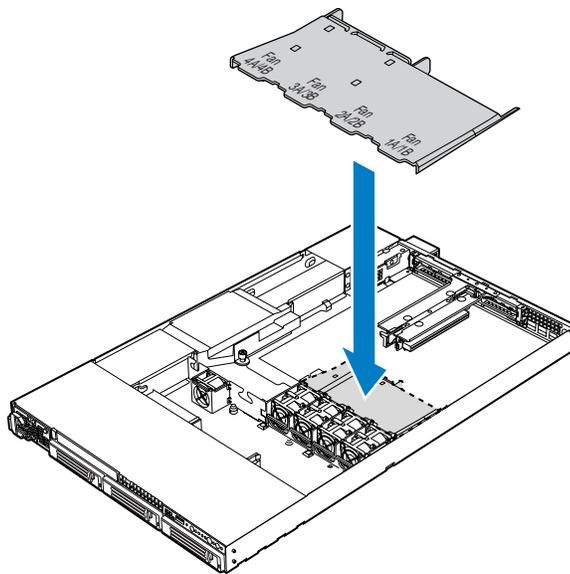
1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. If you are installing the processor air duct for the first time after installing a second processor, remove the tab on the back side of the processor air duct. See [Figure 14.](#)



TP01597

Figure 14. Preparing the Processor Air Duct

5. Place the processor air duct over the processor socket(s). See the figure below. The front edge of the air duct should contact the fan module and the top of the installed air duct should be flush with the top surface of the fan module. Use caution not to pinch or disengage cables that may be near or under the air duct.



TP01598

Figure 15. Installing the Processor Air Duct

6. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
7. Plug all peripheral devices and the AC power cable(s) back into the server.

Installing and Removing a Hard Disk Drive

Up to three hard drives of one of the following types can be installed, depending on the hard drive installation option used in your server chassis and the drives supported by your server board.

- Three hot-swap SCSI drives if the SCSI backplane is installed.
- Three hot-swap SATA drives if the SATA backplane is installed.

⇒ NOTE

The Intel Server Chassis SR1450 does not support all hard drives. See [“Additional Information and Software”](#) for an Internet link to a list of supported hardware.



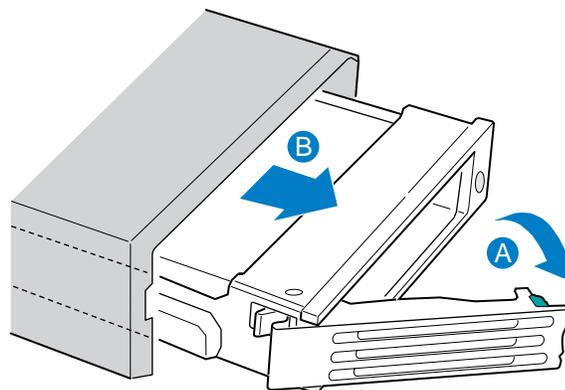
CAUTION

If you install less than three drives or devices, empty drive bays must be occupied by carriers with baffles to maintain proper system cooling.

To avoid possible damage to your chassis, DO NOT USE older style drive carriers received with other Intel server chassis.

Removing a SATA or SCSI Hot-swap Hard Disk Drive

1. Remove the front bezel if it is installed. For instructions, see [“Removing and Installing the Front Bezel.”](#)
2. Press in on the green latch at the front of the hard drive carrier. See letter “A” in the figure below.
3. Pull out on the black lever and slide the carrier from the chassis. See letter “B” in the figure below.



TP01599

Figure 16. Removing a Hot-swap Hard Drive Carrier from Chassis

4. Remove the four screws that attach the plastic baffle or the previously installed hard drive to the drive carrier. Two screws are at each side of the baffle or the hard drive. If required, store the plastic baffle for future use.

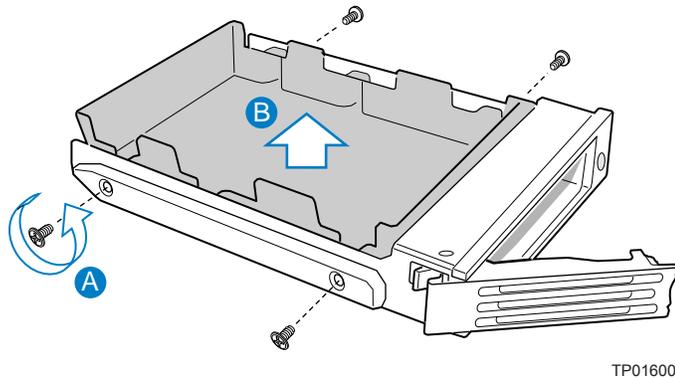


Figure 17. Removing the Baffle from a Hot-swap Drive Carrier

Installing a SATA or SCSI Hot-swap Hard Disk Drive

1. Remove the hard drive from its wrapper and place it on an antistatic surface.
2. Set any jumpers and/or switches on the drive according to the drive manufacturer's instructions.
3. With the drive circuit-side down, position the connector end of the drive so that it is facing the rear of the drive carrier. See [Figure 18](#).
4. Align the holes in the drive to the holes in the drive carrier and attach it to the carrier with the screws that were attached to the plastic retention device.

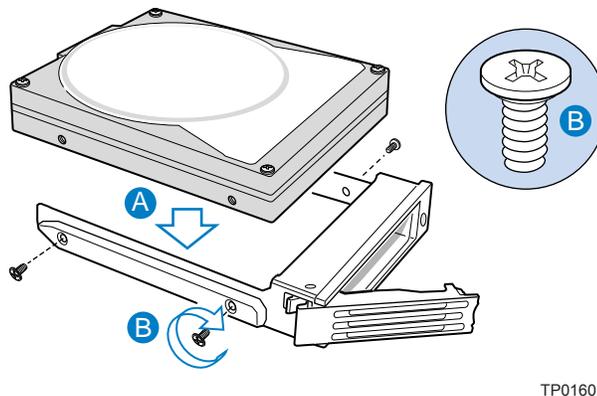
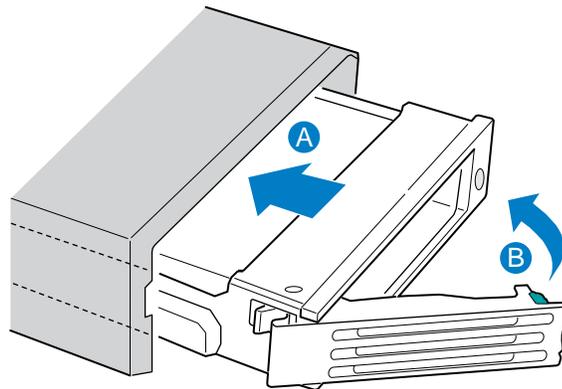


Figure 18. Attaching a Hot-swap Hard Disk Drive to a Carrier

5. With the black lever in the fully open position, slide the drive assembly into the chassis. The green latch at the front of the drive carrier must be to the right. Do not push on the black drive carrier lever until the lever begins to close by itself.

6. When the black drive carrier lever begins to close by itself, push on it to lock the drive assembly into place.



TP01602

Figure 19. Inserting a Hot-swap Hard Disk Drive Assembly into the Chassis

7. (Optional) Install the front bezel. For instructions, see [“Removing and Installing the Front Bezel.”](#)

Installing or Removing a Floppy Drive (Slimline or Standard)

Floppy drives are installed in different ways, depending on the following items:

- You want to install the floppy drive into the slimline drive bay.
- You have installed a CD-ROM or DVD-ROM drive into the slimline drive bay. You want to install the floppy drive into a bay that was intended for a hard drive (optional conversion kit is required).

Look carefully at the heading titles below before beginning your installation to be sure you are following the correct instructions for your system.



CAUTION

Floppy drives are NOT hot swappable. Before removing or replacing the drive, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord from the system or wall outlet.

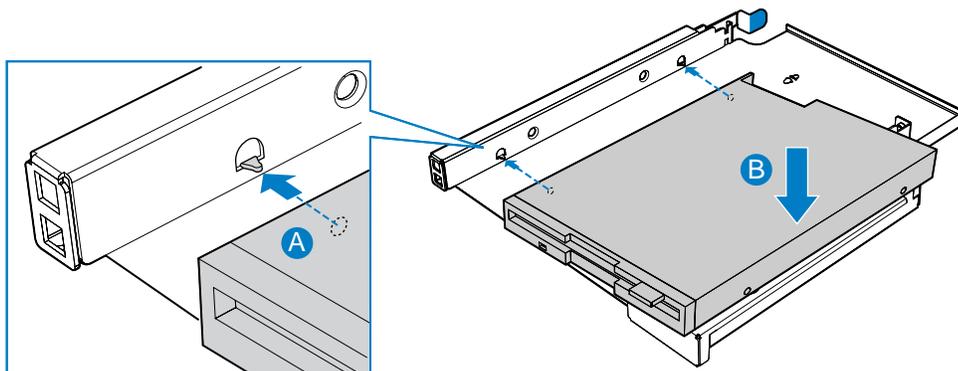
Installing a Floppy Drive into Slimline Bay

Use these instructions if you are installing a floppy drive into the slimline drive bay at the upper left side of your chassis.

⇒ **NOTE**

The carrier for the slimline floppy drive that is used in these instructions was sent to you in the hardware kit that came with your Server Chassis SR1450.

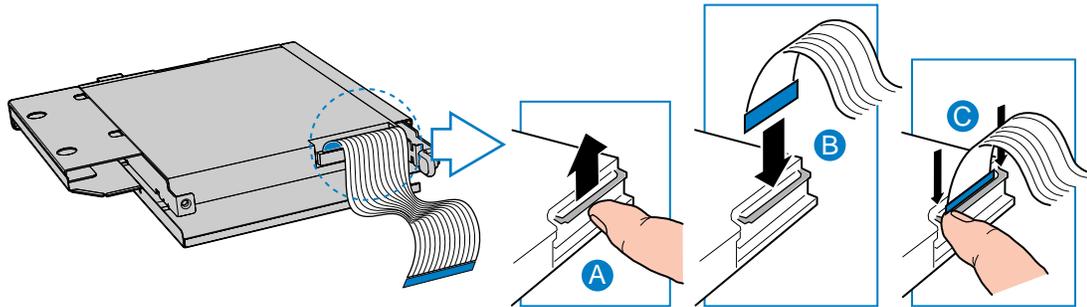
1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove the front bezel if it is installed. For instructions, see [“Removing and Installing the Front Bezel.”](#)
5. Align the two holes at the left side of the floppy drive with the two cutouts in the floppy drive carrier. See letter “A” in the figure below.
6. Lower the right side of the floppy drive into the carrier until it is flush and in place. See letter “B” in the figure below.



TP01603

Figure 20. Installing a Floppy Drive into the Slimline Carrier

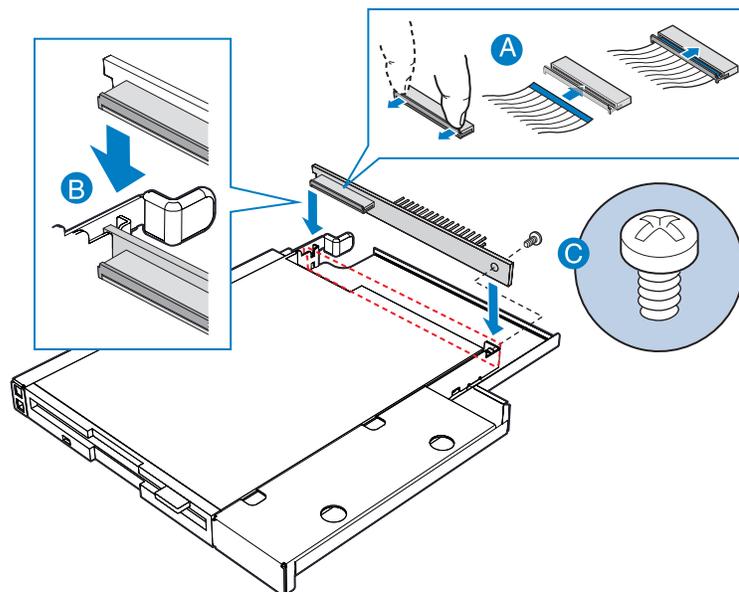
7. Open the connector on the rear of the floppy drive by pulling up on the connector cover. See letter “A” in the figure below.
8. Insert one end of the 26-pin floppy drive flat flex cable end into the connector. See letter “B” in the figure below.
9. Push down on the connector cover to lock the cable into place. See letter “C” in the figure below.



TP01604

Figure 21. Installing Floppy Flat Flex Cable to a Floppy Drive

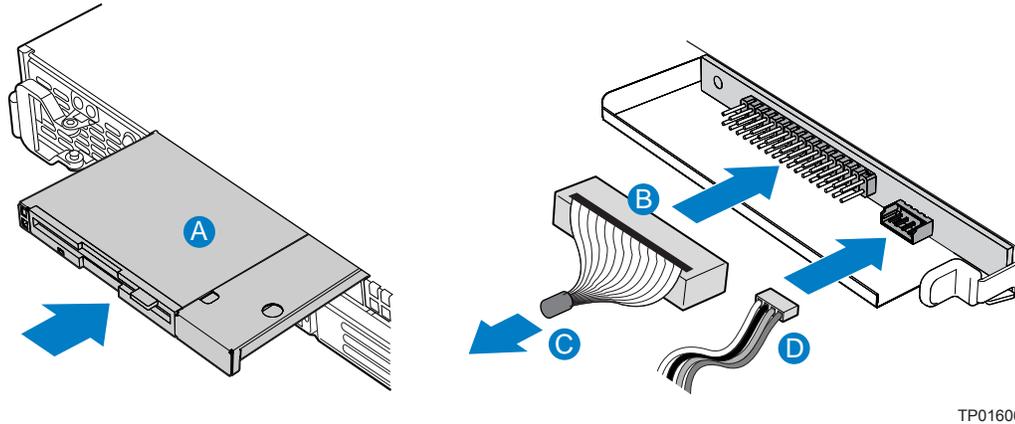
10. Connect the opposite end of the floppy flex cable to the matching connector on the interposer board. See letter “A” in the figure below.
11. Install floppy interposer board to floppy tray by inserting the left side into the tray slot (See Letter “B” in the figure below) and securing the other side with a screw (See letter “C” in the figure below).
12. Install floppy drive into slimline drive bay until it clicks into place.



TP01605

Figure 22. Installing the Floppy Drive Interposer Board

13. Connect the floppy drive data cable that was included with your kit between the interposer board and the server board. See letters “B” and “C” in the figure. See your server board documentation for assistance in locating the connector location on the server board.
14. Connect the longest of the two device power cables coming from the backplane power connector. See letter “D” in the figure.



TP01606

Figure 23. Installing the Slimline Floppy Drive into the Chassis

15. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
16. (Optional) Install the front bezel. For instructions, see [“Removing and Installing the Front Bezel.”](#)
17. Plug all peripheral devices and the AC power cable(s) back into the server.

Removing a Floppy Drive from the Slimline Bay

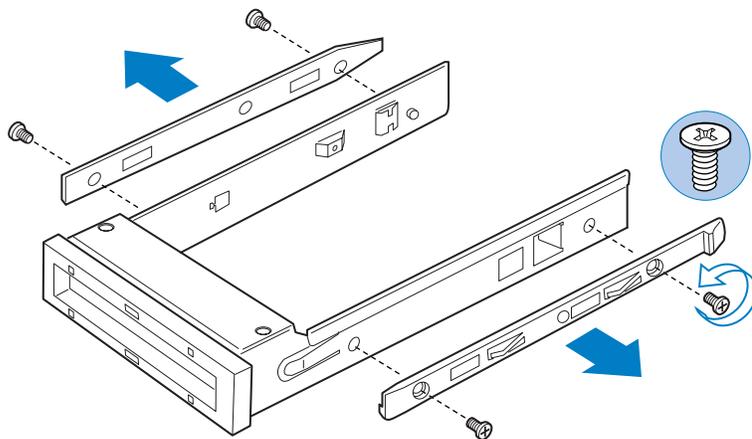
1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove the front bezel if it is installed. For instructions, see [“Removing and Installing the Front Bezel.”](#)
5. Detach the power and data cables from the rear of the floppy drive.
6. Detach the data cable from the server board and remove the cable from the chassis.
7. Push in on the blue lever at the rear of the drive carrier.
8. Slide the floppy drive carrier out through the front of the chassis.
9. Remove the screw that attaches the interposer board to the drive. Lift the interposer board from the drive.
10. Remove the flat flex cable from the floppy drive and from the interposer board.
11. Press downward on the right side of the carrier to release the drive from the drive carrier.
12. Store the floppy drive carrier, the interposer board, the flat flex cable, and the floppy drive data cable for future use.
13. Install the slimline filler panel into slimline bay if no drive is to be installed into the bay.

14. Install the chassis cover. For instructions, see “[Installing the Chassis Cover.](#)”
15. (Optional) Install the front bezel. For instructions, see “[Removing and Installing the Front Bezel.](#)”
16. Plug all peripheral devices and the AC power cable(s) back into the server.

Installing a Floppy Drive into the Converted Hard Drive Bay

The slimline floppy drive conversion kit must be installed in the center hard drive bay.

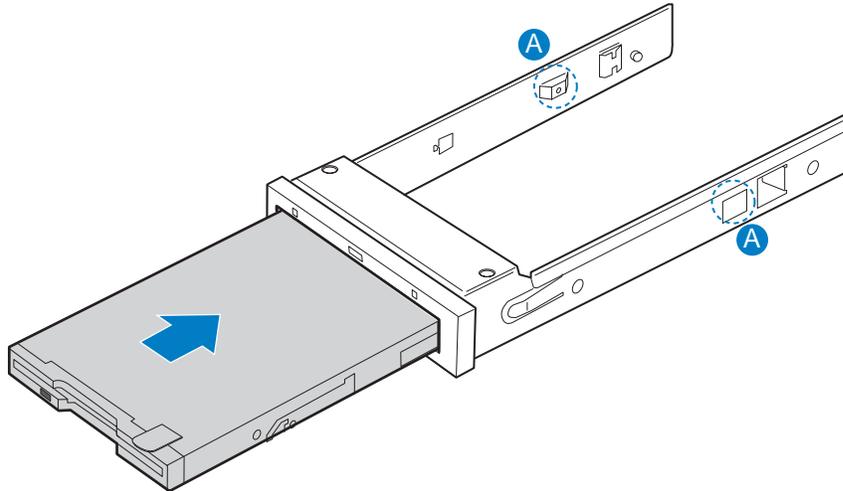
1. Observe the safety and ESD precautions at the beginning of this book. See “[Safety Information.](#)”
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see “[Removing the Chassis Cover.](#)”
4. Remove the front bezel if it is installed. For instructions, see “[Removing and Installing the Front Bezel.](#)”
5. Remove the center hot-swap hard drive carrier from the chassis.
6. Remove the screws that attach the slide rails to the floppy drive conversion kit carrier.



TP01609

Figure 24. Removing the Rails from the Floppy Drive Conversion Kit Carrier

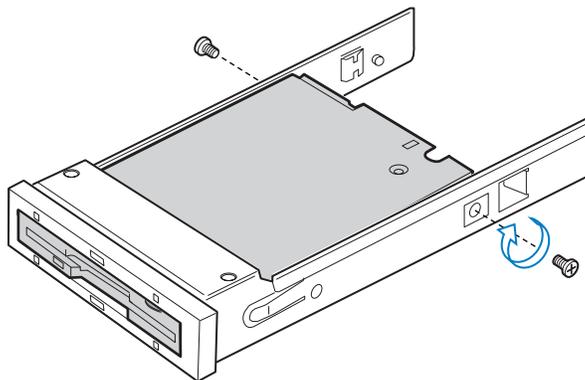
7. Slide the floppy drive into the drive carrier, rear of the drive first, with the underside of the drive facing down.
8. Line up the holes in the side of the drive with the holes in the carrier. See letter “A” in the figure below.



TP01610

Figure 25. Inserting a Drive into the Floppy Conversion Kit Carrier

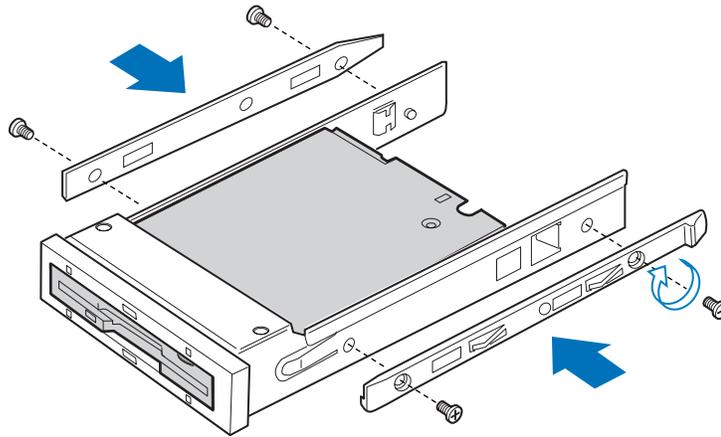
9. Attach the floppy drive to the carrier with the screws that came with your floppy drive conversion kit. One screw attaches at each side. See the figure below.



TP01323

Figure 26. Attaching a Drive to Floppy Drive Conversion Kit Carrier

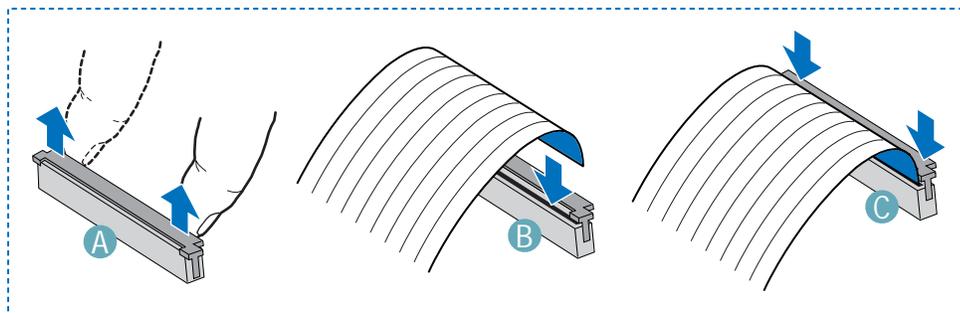
10. Reattach the slide rails onto floppy drive conversion kit carrier. See the figure below.



TP01309

Figure 27. Install the Rails onto the Floppy Drive Conversion Kit Carrier

11. Open the connector on the rear of the floppy drive by pulling up on the connector cover. See letter “A” in the figure below.
12. Insert one end of the flat flex cable end into the floppy drive connector. See letter “B” in the figure.
13. Push down on the connector cover to lock the cable into place. See letter “C” in the figure.



TP01311

Figure 28. Installing the Flat Flex Cable to the Floppy Drive

14. Attach the other end of the flat flex cable to the interposer board.
15. Install the interposer board into the floppy drive conversion kit carrier. One screw attaches on the right side.
16. Slide the carrier assembly into center hard drive bay until it clicks into place.
17. Attach the power and data cables to the interposer board.
18. Attach the other end of the power and data cables to the server board.
19. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
20. (Optional) Install the front bezel. For instructions, see [“Removing and Installing the Front Bezel.”](#)
21. Plug all peripheral devices and the AC power cable(s) back into the server.

Removing a Floppy Drive from the Converted Hard Drive Bay

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove the front bezel if it is installed. For instructions, see [“Removing and Installing the Front Bezel.”](#)
5. Remove cables from the interposer board.
6. Push in on the lever at the rear of the floppy carrier and slide the drive from the front of the chassis.
7. Remove the interposer board.
8. Remove the flat flex cable from the interposer board.
9. Open the connector cover on the rear of the floppy drive by pulling up on it. Release the flat flex cable from the drive.
10. Remove the two screws at each side that hold the drive rails to the drive carrier. Lift the two rails from the carrier.
11. Remove the two screws attaching the drive to the converted hard drive bay carrier.
12. Install an empty hot-swap hard drive carrier into chassis drive bay if no floppy or hard drive is to be installed into the bay.
13. Store the screws, the converted drive bay carrier, the side rails, interposer board, floppy cable and the flat flex cable for future use.
14. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
15. (Optional) Install the front bezel. For instructions, see [“Removing and Installing the Front Bezel.”](#)
16. Plug all peripheral devices and the AC power cable(s) back into the server.

Installing or Removing a CD-ROM or DVD-ROM Drive



CAUTION

CD-ROM and DVD-ROM drives are NOT hot swappable. Before removing or replacing the drive, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord from the system or wall outlet.

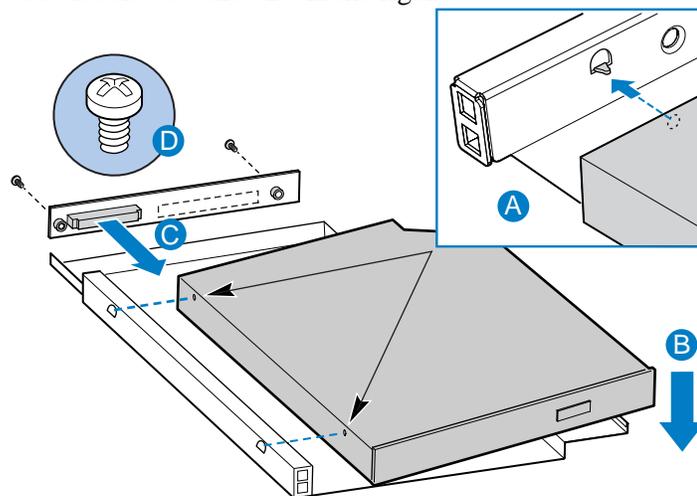
Installing a DVD-ROM or CD-ROM Drive into Slimline Bay



NOTE

The carrier for the slimline DVD-ROM drive / CD-ROM drive was pre-installed in the slimline drive bay of your Server Chassis SR1450.

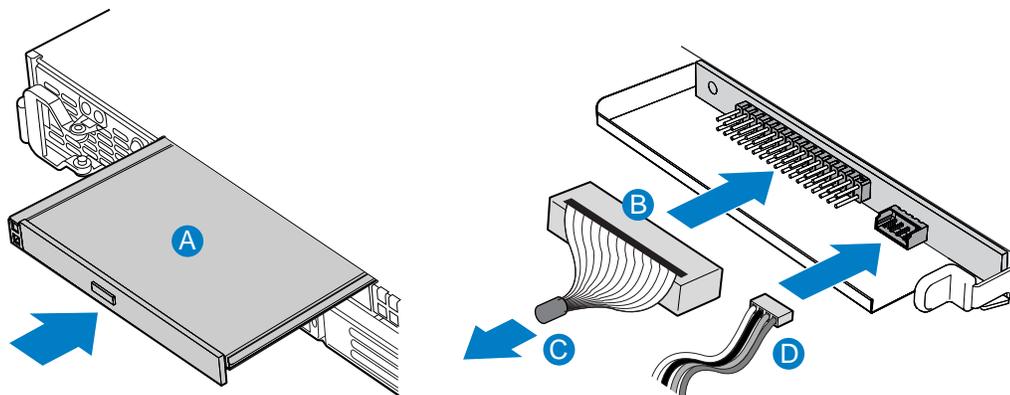
1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove the front bezel if it is installed. For instructions, see [“Removing and Installing the Front Bezel.”](#)
5. Push in on the blue lever at the rear of the CD-ROM / DVD-ROM drive carrier and push the carrier out through the front of the chassis.
6. Align the two holes at left edge of DVD-ROM / CD-ROM drive with the cutouts in drive carrier. See letter “A” in the figure below.
7. Lower the right side of the DVD-ROM / CD-ROM drive into the carrier until it is flush and in place. See letter “B” in the figure below.
8. Use the two screws indicated in the figure to attach the interposer board to the DVD-ROM / CD-ROM drive. See letters “C” and “D” in the figure.



TP01613

Figure 29. Installing a DVD-ROM / CD-ROM Drive into the Carrier

9. Slide the DVD-ROM / CD-ROM drive carrier into the chassis. See letter “A” in the figure below.
10. Attach the 44-pin CD-ROM drive cable to the exposed side / back of the interposer board. See letter “B” in the figure below.
11. Connect the loose end of the CD-ROM drive cable to the server board IDE connector. See letter “C” in the figure below.
12. Connect the longest of the two device power cables coming from the backplane power connector. See letter “D” in the figure below.



TP01614

Figure 30. Installing a DVD/CDROM Drive into the Chassis

13. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
14. (Optional) Install the front bezel. For instructions, see [“Removing and Installing the Front Bezel.”](#)
15. Plug all peripheral devices and the AC power cable(s) back into the server.

Removing a CD-ROM or DVD-ROM Drive from the Slimline Bay

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove the front bezel if it is installed. For instructions, see [“Removing and Installing the Front Bezel.”](#)
5. Disconnect the CD-ROM data cable from the server board and interposer board.
6. Disconnect the power cable from the interposer board.
7. Push in on the blue lever at the rear of the drive carrier. Slide the drive carrier out through the front of the chassis.
8. Press downward on the right side of the carrier release the drive from the drive carrier.
9. Remove the two screws at the rear of the CD-ROM or DVD-ROM drive to disconnect the interposer board.
10. Store the screw, CD-ROM data cables and interposer board for future use. Suggestion: tape the screw to the drive carrier.
11. Slide the empty drive carrier into the chassis until it clicks into place, or install the slimline filler panel.
12. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
13. (Optional) Install the front bezel. For instructions, see [“Removing and Installing the Front Bezel.”](#)
14. Plug all peripheral devices and the AC power cable(s) back into the server.

Installing and Removing a PCI Riser Card

You can order your choice of one of two PCI riser solutions.



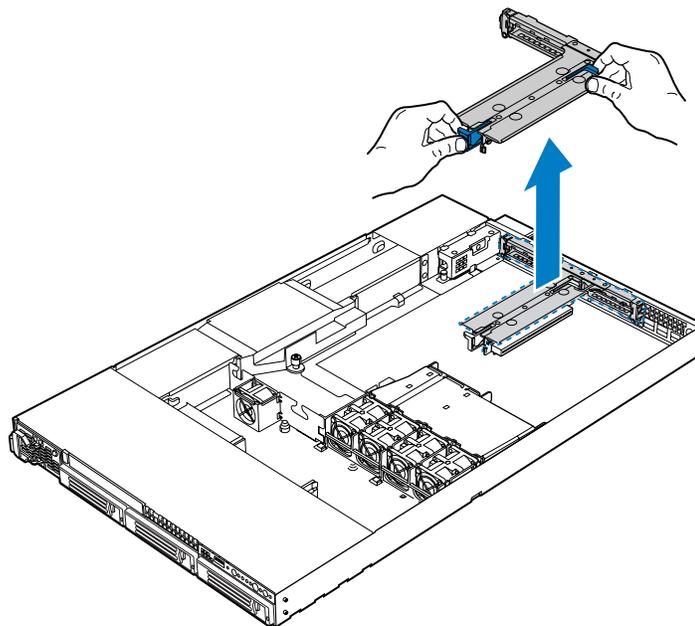
CAUTION

PCI riser connectors are NOT hot swappable. Before removing or replacing the riser connector, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord from the system or wall outlet.

Installing a PCI Riser Card

To install the PCI riser card, use the following instructions.

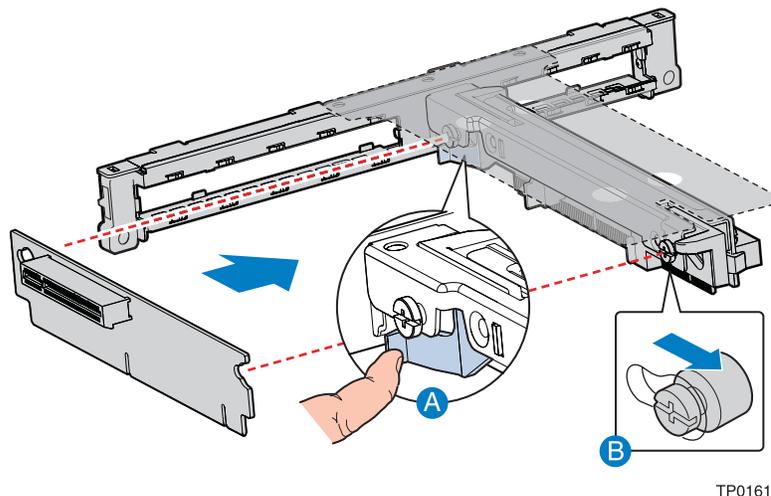
1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Pull up on the two latches on the assembly.
5. Lift the PCI riser assembly from the chassis.



TP01615

Figure 31. Removing the PCI Riser Assembly from the Chassis

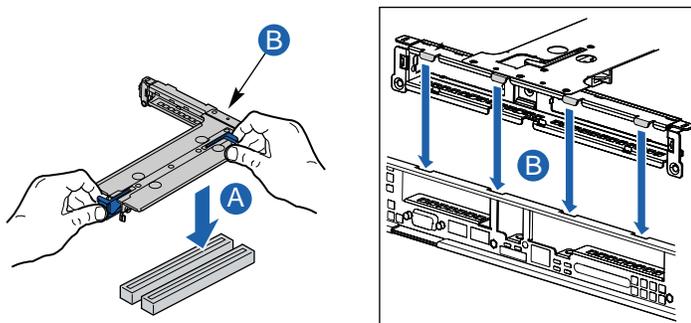
6. Line up the stand-offs on the riser assembly with the slot and the large hole on the riser card.
7. Press and hold the blue riser locking lever. See letter “A” in the figure below.
8. Place riser card onto the stand-offs. See letter “B” in the figure below.
9. Slide the riser card to the right to lock it into place.
10. Release the blue locking lever.



TP01616

Figure 32. Installing an Add-in Card into the PCI Riser Assembly

11. Install a PCI add-in card, if desired. For instructions, see [“Installing a PCI Add-in Card.”](#)
12. Position the riser assembly over the PCI sockets on the server board (see letter “A” in the figure below), lining up the four hooks at the rear of the riser assembly with the four slots in the rear of the chassis (see letter “B”).
13. Push the riser assembly down until the assembly is securely seated.



TP01618

Figure 33. Installing the PCI Riser Assembly into the Chassis

14. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
15. Plug all peripheral devices and the AC power cable(s) back into the server.

Removing a PCI Riser Card

The PCI riser card can be replaced if it fails or if a different option is required. To replace the PCI riser card, use the following instructions to remove it, and then follow the instructions under [“Installing a PCI Riser Card”](#) to install a new riser card.

⇒ NOTE

To eliminate the possibility of installing the replacement card on the wrong side of the PCI riser assembly, replace one card at a time.

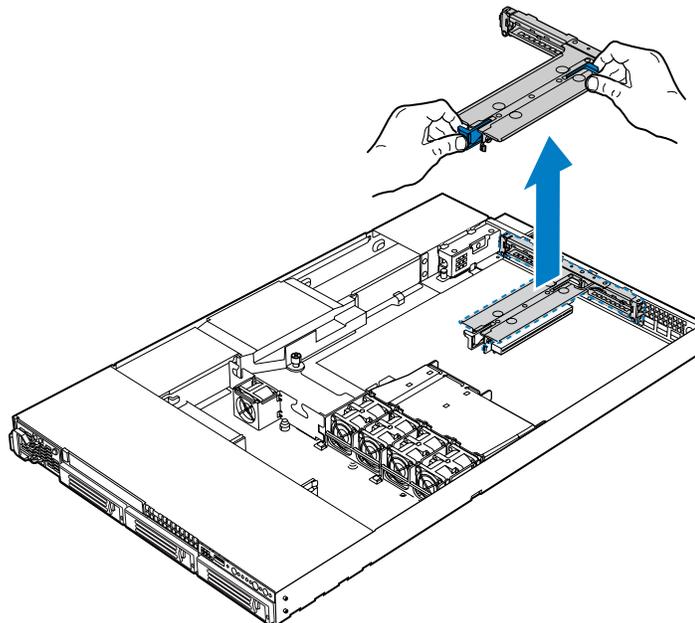
1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Lift up on the two blue levers to lift the PCI riser assembly from the chassis.
5. Remove any PCI add-in cards that are installed in the connector. For instructions, see [“Removing a PCI Add-in Card.”](#)
6. Push back on the blue release lever at the end of the riser card. While holding the lever back, push firmly on the other edge of the board to disengage the riser card from the assembly.
7. Follow the steps under [“Installing a PCI Riser Card”](#) to install a replacement riser card.
8. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)

Installing and Removing a PCI Add-in Card

Installing a PCI Add-in Card

In the slot provided by the PCI riser card, you can install one add-in card. Use the following instructions to install an add-in card.

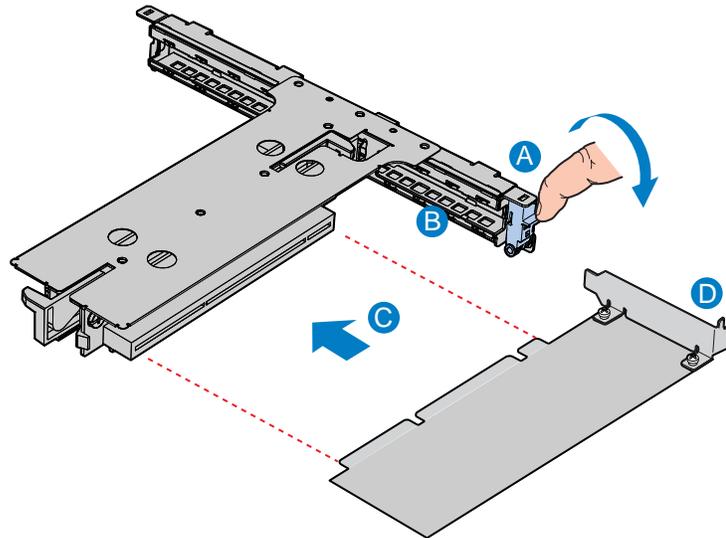
1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Pull up on the two latches on the assembly.
5. Lift the PCI riser assembly from the chassis.



TP01615

Figure 34. Removing the PCI Riser Assembly from the Chassis

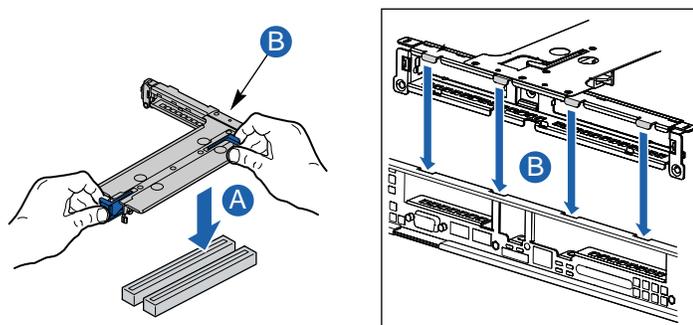
6. Open the PCI retention clip on the PCI riser card assembly. See letter “A” in the figure below.
7. Remove the filler panel at the back of the riser assembly. See letter “B” in the figure below.
8. Insert the add-in card until it seats in riser card connector. See letter “C”.
9. Make sure the add-in card bracket inserts into slot. See letter “D”.
10. Close the retention clip. See letter “A” in the figure.



TP01617

Figure 35. Installing an Add-in Card to the PCI Riser Assembly

11. Position the riser assembly over the PCI sockets on the server board (see letter “A” in the figure below), lining up the four hooks at the rear of the riser assembly with the four slots in the rear of the chassis (see letter “B”).
12. Push the riser assembly down until the assembly is securely seated.



TP01618

Figure 36. Installing the PCI Riser Assembly into the Chassis

13. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
14. Plug all peripheral devices and the AC power cable(s) back into the server.

Removing a PCI Add-in Card

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Pull up on the two latches on the riser assembly.
5. Lift the PCI riser assembly from the chassis.
6. Open the PCI retention clip on the PCI riser card assembly.
7. Remove the add-in card.
8. Replace the filler panel at the back of the riser assembly.
9. Close the retention clip.
10. Position the riser assembly over the PCI sockets on the server board.
11. Push the riser assembly down until the assembly is securely seated.
12. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
13. Plug all peripheral devices and the AC power cable(s) back into the server.

Replacing the Standard Control Panel

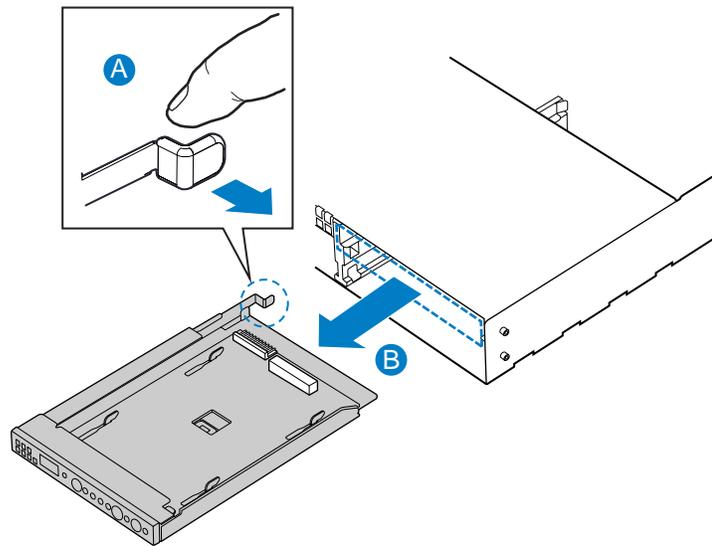
Your server must be operated with a control panel installed. The steps for replacing the Standard Control Panel are listed below.



CAUTION

The control panel is NOT hot swappable. Before removing or replacing the control panel, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord(s) from the system or wall outlet.

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Disconnect the front panel cable and the USB cable from the front panel control board at the rear of the control panel.
5. Press the latch at the back of the control panel. See letter “A” in the figure below.
6. Slide the control panel out through the front of the chassis. See letter “B” in the figure.



TP01619

Figure 37. Removing the Standard Control Panel from the Chassis

7. Slide the replacement control panel into the chassis until it clicks into place.
8. Connect the front panel cable and the USB cable to the replacement control panel.
9. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
10. Plug all peripheral devices and the AC power cable(s) back into the server.

Replacing the Intel® Local Control Panel

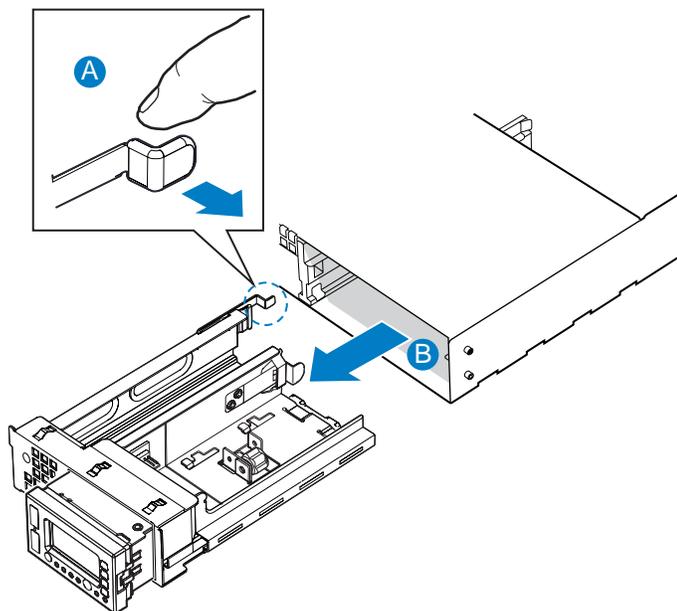
Your server must be operated with a control panel installed. The steps for replacing the Intel Local Control Panel are listed below.



CAUTION

The control panel is NOT hot swappable. Before removing or replacing the control panel, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord(s) from the system or wall outlet.

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove the USB cable from the routing channel.
5. Press the latch at the back of the control panel (See letter “A” in the figure below) and pull the control panel out several inches.
6. Disconnect the front panel cable and the USB cable from the front panel control board at the rear of the control panel.
7. Slide the control panel out through the front of the chassis. See letter “B” in the figure.



TP01620

Figure 38. Removing the Intel® Local Control Panel from the Chassis

Hardware Installations and Upgrades

8. If using a bezel with the Local Control Panel, change out the LCP plastic front panel on the replacement control panel. If you are not using the optional bezel, make sure the back half of the tray is secured in the “shortened” position.
9. Connect the front panel cable and the USB cable to the replacement control panel.
10. Slide the replacement LCP/tray assembly into the chassis until the release lever clicks into place.
11. Install the chassis cover. For instructions, see [“Installing the Chassis Cover”](#)
12. Plug all peripheral devices and the AC power cable(s) back into the server.

Replacing System Fan(s)

The system fans at the front of the Server Chassis SR1450 can be individually replaced if one of them fails. Use the steps below to replace a dual rotor fan.



CAUTION

The system fans are NOT hot swappable. Before removing or replacing the system fans, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord(s) from the system or wall outlet.

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove the processor air duct. For instructions, see [“Removing the Processor Air Duct.”](#)
5. Follow the cable from the failed fan to the connector on the fan distribution board.
6. Disconnect the cable from the fan distribution board. See letter “A” in the figure below.
7. There are no screws or connections to loosen. Lift the failed fan from the fan module assembly. See letter “B” in the figure below.

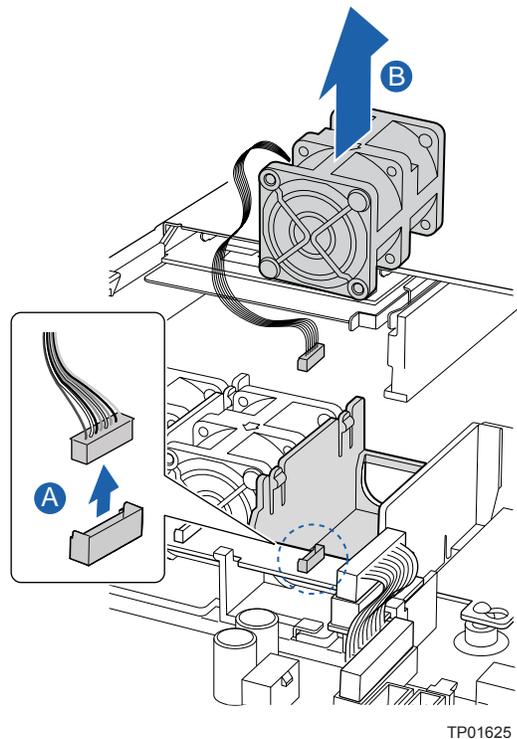


Figure 39. Removing a System Fan Module

8. Note the position of the raised arrows in the top of the replacement fan. Position the fan so one arrow points to the left, and the other arrow points to the rear of the chassis. The fan cable should be pointing to the rear of the chassis.
9. With the fan arrows oriented correctly, insert the replacement fan into the fan module.
10. Connect the power cable for the fan into the fan distribution board.
11. Install the processor air duct. For instructions, see [“Installing the Processor Air Duct.”](#)
12. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
13. Plug all peripheral devices and the AC power cable(s) back into the server.

Replacing the Single System PCI Fan

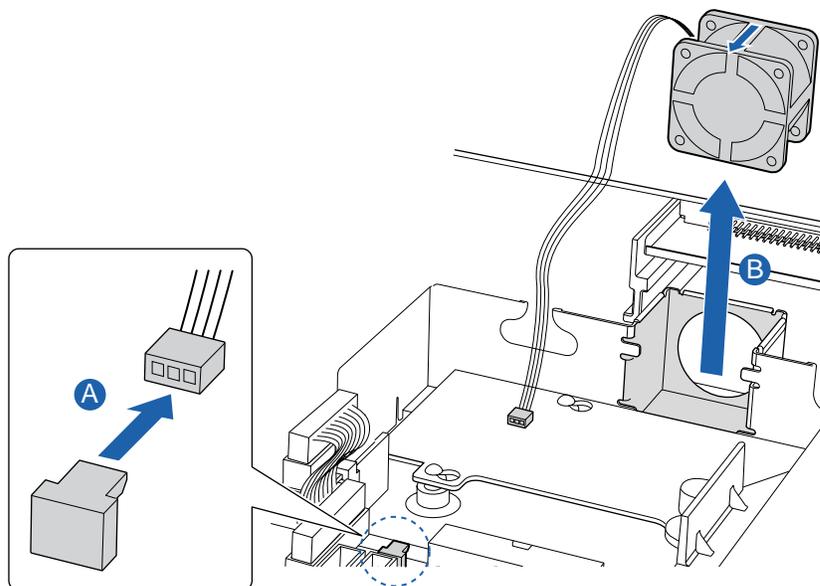
The single system fan in the Server Chassis SR1450 can be replaced if it fails. Use the steps below to replace the single rotor fan.



CAUTION

The single system PCI fan is NOT hot swappable. Before removing or replacing the system PCI fan, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord(s) from the system or wall outlet.

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Disconnect the cable from the fan connector. See letter “A” in [“Figure 40. Removing the Single System PCI Fan.”](#)
5. There are no screws or connections to loosen. Lift the failed fan from the fan module assembly. See letter “B” in [“Figure 40. Removing the Single System PCI Fan.”](#)



TP01626

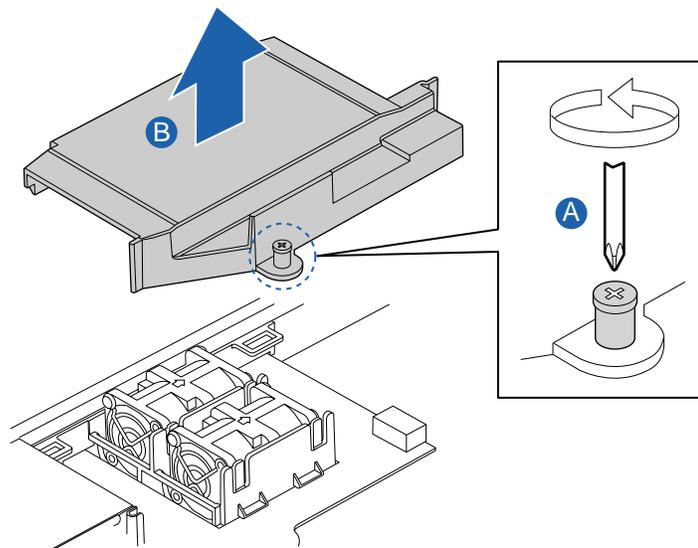
Figure 40. Removing the Single System PCI Fan

6. Note the position of the raised arrows in the top of the replacement fan. Position the fan so one arrow points to the left, and the other arrow points to the rear of the chassis. The fan cable should be pointing to the rear of the chassis.
7. With the fan arrows oriented correctly, insert the replacement fan into the fan housing.
8. Connect the fan into the fan connector.
9. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
10. Plug all peripheral devices and the AC power cable(s) back into the server.

Removing the Power Supply Air Duct

Use the steps below to remove the power supply air duct.

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove cables from the air duct channel.
5. Remove the screw from the power supply air duct. See letter “A” in the figure below.
6. Lift the power supply air duct from its location over the two power supply fan modules. See letter “B” in the figure below.



TP01623

Figure 41. Removing the Power Supply Air Duct

Installing the Power Supply Air Duct

Use the steps below to install the power supply air duct.

1. Place the power supply air duct over the power supply fan modules.
2. Line up the hole in the power supply air duct with the stand-off below the power distribution board. Make sure that the air duct edges fit down into the grooves next to the power supply module. Screw down the power supply air duct.
3. Route cables through the air duct channel.
4. Install the chassis cover. For instructions, see [“Installing the Chassis Cover”](#).
5. Plug all peripheral devices and the AC power cable(s) back into the server.

Replacing a Power Supply Fan Module

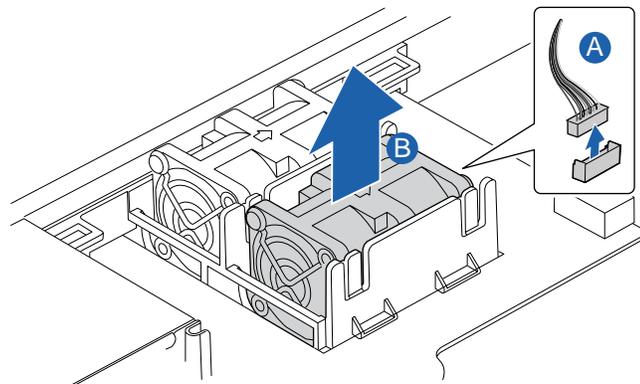
The power supply fan modules in the Server Chassis SR1450 can be individually replaced if one of them fails. Use the steps below to replace a dual rotor fan.



CAUTION

The power supply fan module is NOT hot swappable. Before removing or replacing the power supply fan module, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord(s) from the system or wall outlet.

1. Verify a power supply fan module failure by checking the status LED. An amber or amber blinking LED indicates an actual or impending fan failure.
2. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
3. Power down the server and unplug all peripheral devices and the AC power cable(s).
4. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
5. Remove the power supply air duct. For instructions, see [“Removing the Power Supply Air Duct”](#).
6. Disconnect the fan cable from the power distribution board. See letter “A” in the figure below.
7. Lift the failed fan from the fan module assembly. See letter “B” in the figure below.



TP01624

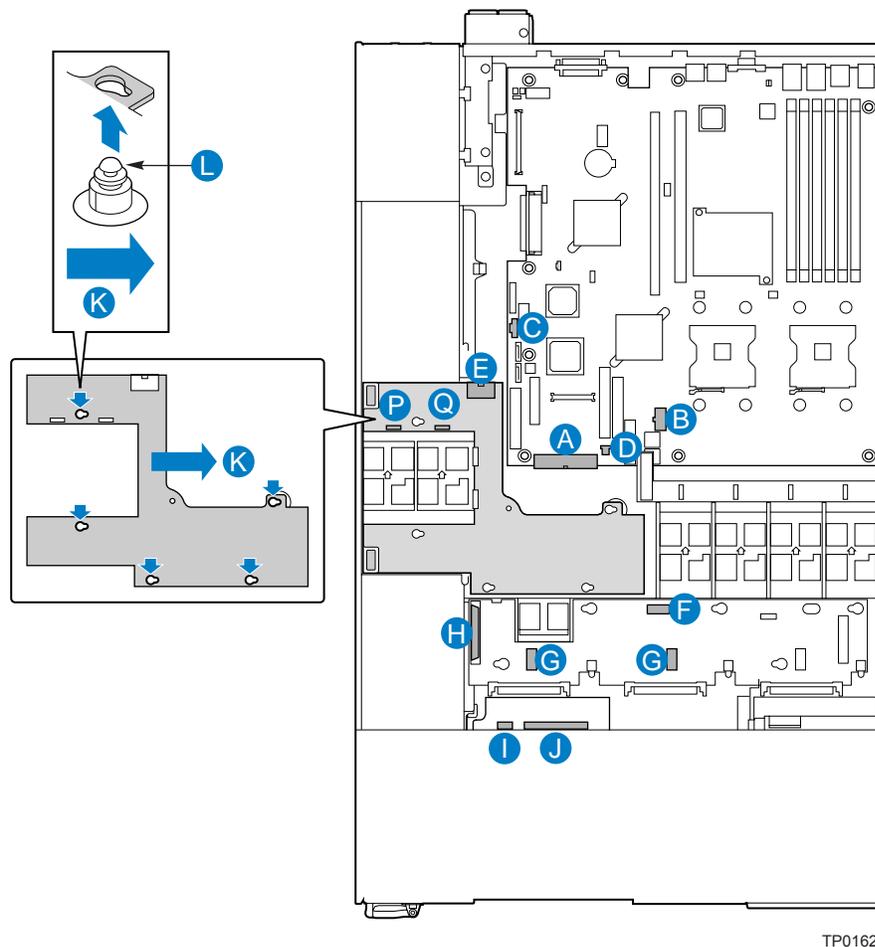
Figure 42. Removing a Power Supply Fan Module

8. Note the position of the raised arrows in the top of the replacement fan. Position the fan so one arrow points to the left, and the other arrow points to the rear of the chassis.
9. With the fan arrows oriented correctly, insert the replacement fan into the fan module.
10. Connect the power cable for the fan into the power distribution board.
11. Install the power supply air duct. For instructions, see [“Installing the Power Supply Air Duct.”](#)
12. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
13. Plug all peripheral devices and the AC power cable(s) back into the server.

Replacing the Power Distribution Board

The power distribution board is located between the two power supplies. This board can be replaced if it fails. To replace the power distribution board, use the following instructions.

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove the power supply air duct. For instructions see [“Removing the Power Supply Air Duct”](#).
5. Remove the power supply modules. For instructions see [“Removing a Hot-Swap Power Supply”](#).
6. Disconnect the main power, CPU power and power signal cables from the server board. In [“Figure 43. Removing the Power Distribution Board”](#), letter “A” shows the main power cable, letter “B” shows the CPU power cable, and letter “C” shows the power signal cable.
7. Disconnect the PCI fan. See letter “D” in [“Figure 43”](#).
8. Disconnect the power from the power distribution board (see letter “E” in [“Figure 43”](#)) and the backplane (see letter “F” in [“Figure 43”](#)).
9. If a SATA backplane is installed, disconnect the SATA cables from the backplane. See letter “G” in [“Figure 43”](#)).
10. If a SCSI backplane is installed, disconnect the SCSI cables from the backplane. See letter “H” in [“Figure 43”](#)).
11. Disconnect the power supply fans (see letters “P” and “Q” in [“Figure 43”](#)).
12. If a slimline DVD/CD-ROM or floppy is installed, disconnect the power (see letter “I” in [“Figure 43”](#)) and data cable (see letter “J” in [“Figure 43”](#)).
13. Slide the power distribution board to the right to release the board. See letter “K” in [“Figure 43”](#).
14. Lift the power distribution board from the chassis. See letter “L” in [“Figure 43”](#).

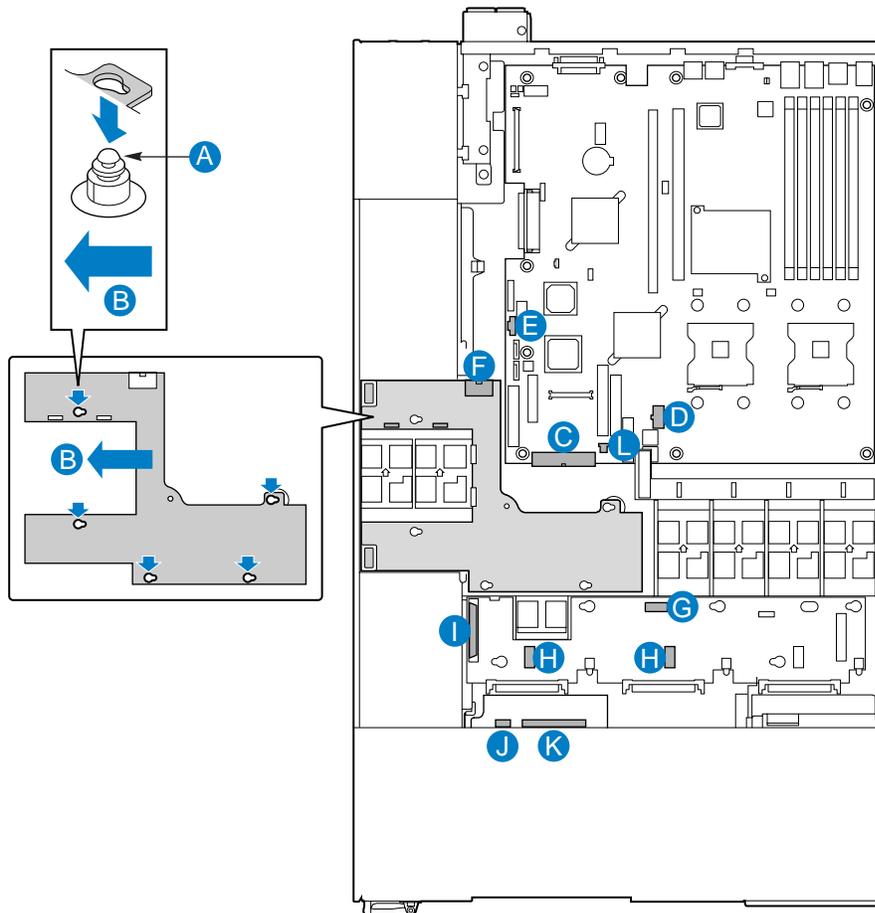


TP01629

Figure 43. Removing the Power Distribution Board

15. Line up the holes on the replacement power distribution board with the power supply stand-offs on chassis. See letter “A” in [“Figure 44. Installing the Power Distribution Board”](#). Press down and slide the power distribution board to the left until it sits firmly in place. See letter “B” in [“Figure 44”](#).
16. Connect the main power, CPU power, and power signal from the power supply to the server board. In [“Figure 44”](#), letter “C” shows the main power cable, letter “D” shows the CPU power cable, and letter “E” shows the power signal cable.
17. Connect the power cable to the power distribution board (see letter “F” in [“Figure 44”](#)) and connect the power cable to the backplane (see letter “G” in [“Figure 44”](#)).
18. If a SATA backplane is installed, connect the SATA cables. See letter “H” in [“Figure 44”](#).
19. Reconnect the power supply fans.
20. If a SCSI backplane is installed, connect the SCSI cables. See letter “I” in [“Figure 44”](#).
21. Install the power supply modules. For instructions see [“Installing a Hot-Swap Power Supply”](#).
22. Install the power supply air duct. For instructions see [“Installing the Power Supply Air Duct”](#).

23. If a slimline DVD/CD-ROM or floppy drive is installed, connect power (see letter “J” in “Figure 44”) and data cable (see letter “K” in “Figure 44”).
24. Connect the PCI fan. See letter “L” in “Figure 44”.
25. Install the chassis cover. For instructions, see “Installing the Chassis Cover.”
26. Plug all peripheral devices and the AC power cable(s) back into the server.



TP01628

Figure 44. Installing the Power Distribution Board

Replacing the Hot-Swap Power Supply

The power supply can be replaced if it fails. If your server uses a redundant power supply, you do not need to power down your server to replace the failed power supply, as long as the remaining power supply is plugged into an AC power source and is functioning. If you do not have a redundant power supply installed, you must power down your server system before replacing the power supply.

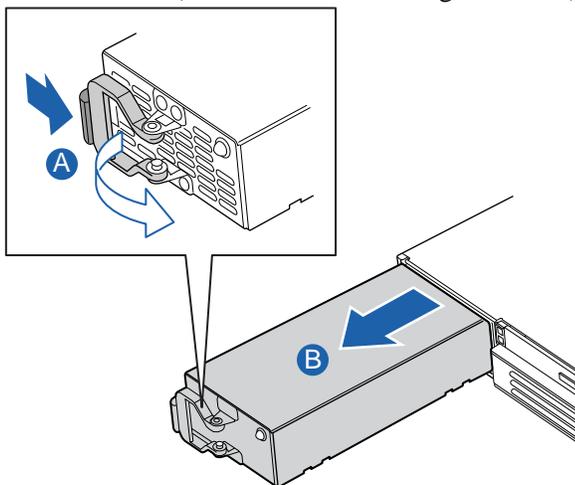
⇒ NOTE

Power supply receptacles are dedicated to the front and back power supplies. Make sure AC power is plugged in correctly to ensure the power supply functions.

Removing a Hot-Swap Power Supply

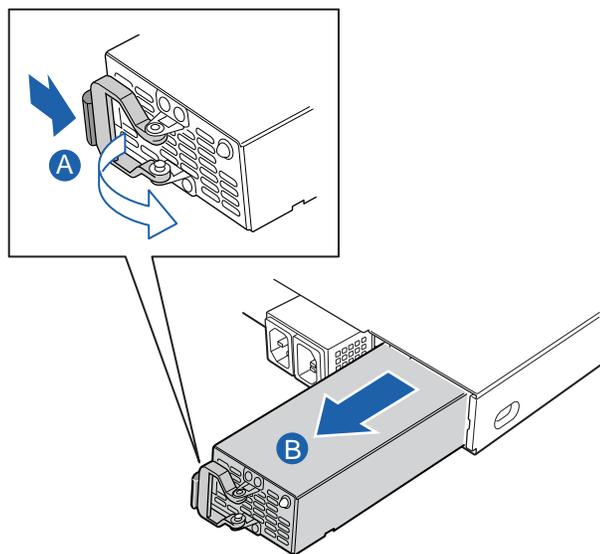
To replace the power supply, use the following instructions.

1. (Non-redundant power supply only) Power down the server.
2. Remove the AC power cable from the inlet connector on the failed power supply.
3. Open handle, push the green latch toward the right (see letter “A” in the figure below), and pull the power supply out of the chassis (see letter “B” in the figure below).



TP01622

Figure 45. Removing the Front Hot-Swap Power Supply from the Chassis



TP01630

Figure 46. Removing the Rear Hot-Swap Power Supply from the Chassis

Installing a Hot-Swap Power Supply

To install a replacement power supply or to add a redundant power supply, use the following instructions.

1. (Replacing power supply only) Remove the failed power supply. For instructions see [“Removing a Hot-Swap Power Supply”](#).
2. (Installing redundant power supply only): Remove the filler panel from the rear power supply bay by pulling it out.
3. Slide the new power supply into the opening until it clicks into place. The latch on the rear of the power supply must be at the right.
4. Make sure the front power supply is flush with the chassis edge, and the rear power supply is slightly recessed from the edge of the lid.
5. Move the latch to the left to lock it in place.
6. Plug in the AC power cable into the inlet connector on the new power supply.

Removing and Installing the SATA or SCSI Backplane

Your server chassis must be configured with one of the following drive installation options:

- A hot-swap SCSI option that came with a SCSI backplane board.
- A hot-swap SATA option that came with a SATA backplane board.



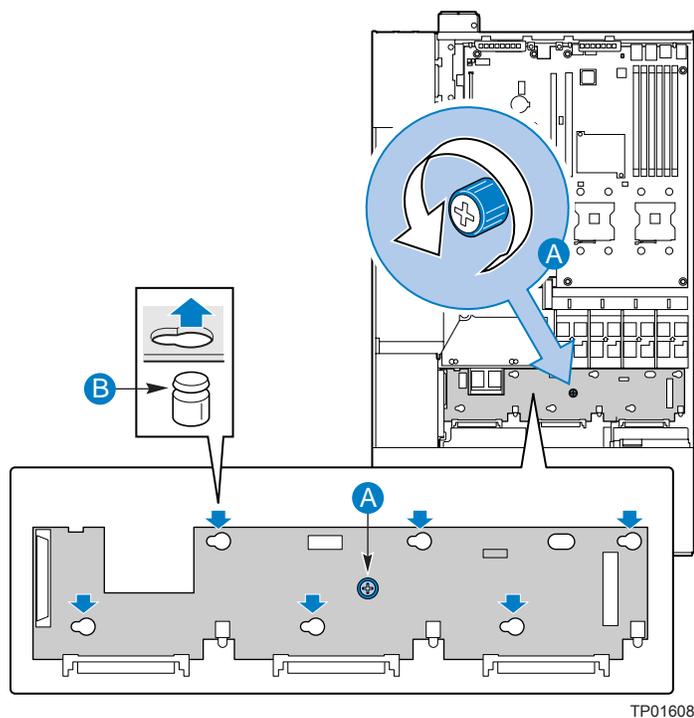
CAUTION

The backplane is tool-less, but NOT hot swappable. Before removing or replacing the backplane, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord from the system or wall outlet.

The backplane board and the hardware that came with the backplane can be replaced if your backplane fails or if a different option is required. To replace the backplane, use the following instructions to remove and then to install a backplane.

Removing the SATA or SCSI Backplane

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove all hot-swap drive carriers. For instructions, see [“Removing a SATA or SCSI Hot-swap Hard Disk Drive.”](#)
5. Disconnect all cables from the backplane:
6. Loosen the blue captive screw at the center of the backplane. See letter “A” in the figure below
7. Slide the board to the left until it stops. Do not pull on any components on the board – grasp only on the edges of the board.
8. Lift the backplane from the chassis. The holes in the backplane will slide from the matching pins in the chassis. If any of the pins catches on the holes, it means you have not slid the board fully to the right. See letter “B” in the figure.

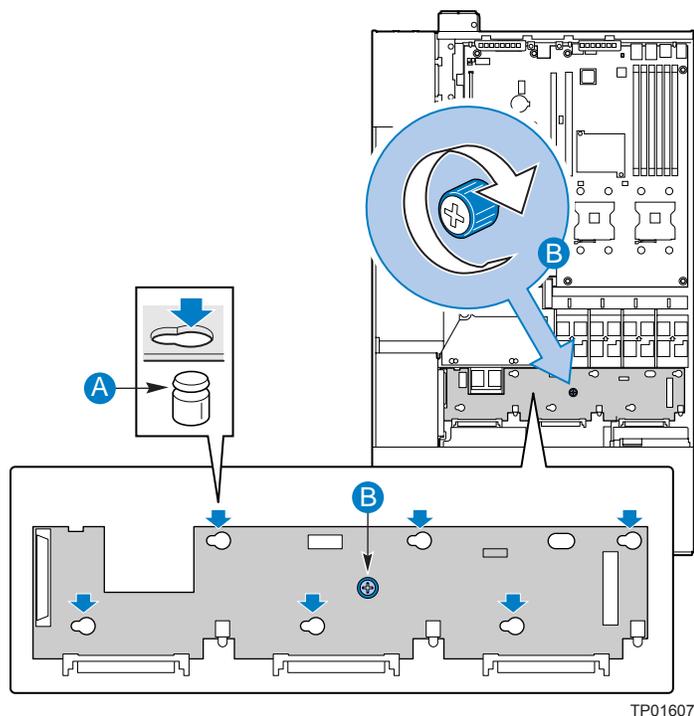


TP01608

Figure 47. Removing the SATA or SCSI Backplane from the Chassis

Installing the SATA or SCSI Backplane

1. Observe the safety and ESD precautions at the beginning of this book. See [“Safety Information.”](#)
2. Power down the server and unplug all peripheral devices and the AC power cable(s).
3. Remove the chassis cover. For instructions, see [“Removing the Chassis Cover.”](#)
4. Remove all hot-swap drive carriers. For instructions, see [“Removing a SATA or SCSI Hot-swap Hard Disk Drive.”](#)
5. Set the backplane board in place so that the holes in the board fit through the pegs in the bottom of the server chassis. See letter “A” in the figure below.
6. Slide the board to the right until it stops. Do not pull on any components on the board – grasp only on the edges of the board.
7. Tighten the blue captive screw at the center of the backplane board. See letter “B” in the figure.



TP01607

Figure 48. Installing a SATA or SCSI Backplane into the Chassis

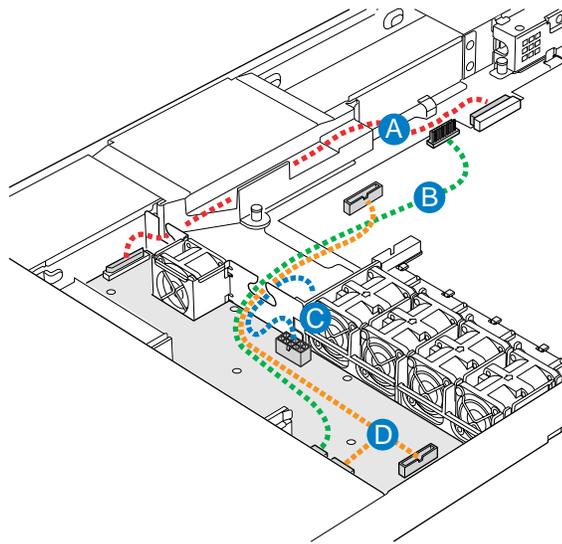
Hardware Installations and Upgrades

8. Connect the following cables to the backplane:
 - Front panel cable
 - Power cable
 - (SCSI backplane only): SCSI Channel A cable. The cable indicates the end that is to be connected to the backplane.
 - (SATA backplane only): SATA cable(s).
9. Install the chassis cover. For instructions, see [“Installing the Chassis Cover.”](#)
10. Install the hot-swap hard drive(s), if applicable. For instructions, see [“Installing a SATA or SCSI Hot-swap Hard Disk Drive”](#).
11. (Optional) Install the front bezel. For instructions, see [“Installing the Front Bezel.”](#)

Technical Reference

Cable Routing

When you add or remove components from your server chassis, make sure your cables are routed correctly before reinstalling the chassis cover. Use caution to make sure no cables or wires are pinched and that the airflow from the fans is not blocked. Use the tables and figure below to determine the correct cable routing.

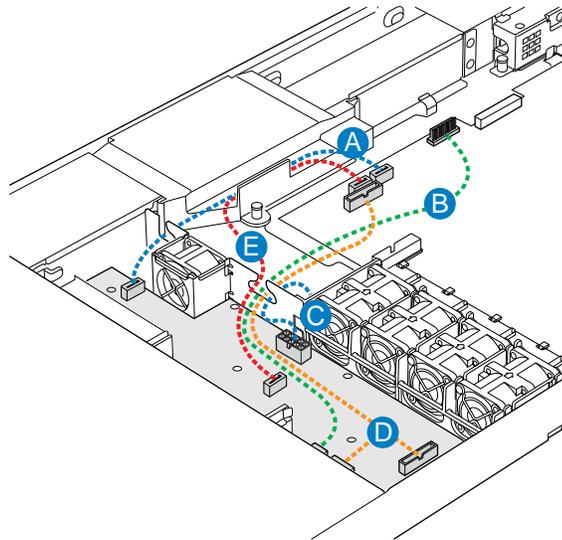


TP01611

Figure 49. SCSI Cable Routing Through Notches in Metal Air Baffle

Table 2. SCSI Cable Routing Reference

A	SCSI cable (SCSI backplane to server board)
B	USB cable (front panel to server board)
C	Power cable (SCSI backplane)
D	Front panel cable



TP01612

Figure 50. SATA Cable Routing Through Notches in Metal Air Baffle

Table 3. SATA Cable Routing Reference

A	SATA0 cable
B	USB cable (front panel to server board)
C	Power cable (SATA backplane)
D	Front panel cable
E	SATA1 cable

Power Supply Specifications

520-W Single Power Supply Input Voltages

- 100-127 V~ at 50/60 Hz; 6.7 A max.
- 200-240 V~ at 50/60 Hz; 3.4 A max.

520-W Single Power Supply Output Voltages

The table below lists the total wattage available from the power subsystem for each voltage. Ensure that your loads do not exceed the combined total wattage of 520 Watts. For information about calculating the power usage for your configuration, see [“Calculating Power Usage.”](#)

Table 4. 520-W Power Supply System Output Capability

Voltage	Maximum Current
+3.3 V	16 A
+5.0 V	16 A
+5 V Standby	2 A
+12.0 V	58 A
-12.0 V	0.5 A

1. Maximum continuous total DC output power should not exceed 520W. 520W includes the two fans powered from the power distribution board.
2. 3.3V and 5V power is converted from 12V on the power distribution board.



CAUTION

Do not exceed a combined power output of 100 Watts for the +5 V and +3.3 V outputs. Exceeding a combined 100 Watts will overload the power subsystem and may cause the power supplies to overheat and malfunction.

System Environmental Specifications

Table 5. Environmental Specifications

Temperature Non-operating Operating	-40 ° to 70 °C. +10°C to +35°C with the maximum rate of change not to exceed 10°C per hour
Humidity Non-operating	90% relative humidity (non-condensing) at 35 °C.
Shock Operating Packaged	2.0 g, 11 msec, 1/2 sine Non-palletized free fall in height 24 inches.
Acoustic noise	Sound Pressure: 55 dBA (Rackmount) in an idle state at typical office ambient temperature. (23 +/- degrees C) Sound Power: 7.0 BA in an idle state at typical office ambient temperature. (23 +/- 2 degrees C)
Electrostatic discharge (ESD)	+/-15kV except I/O port +/-8KV per Intel Environmental test specification; no component damage.

Equipment Log and Worksheets

Equipment Log

Use this equipment log to record information about your server.

Item	Manufacturer Name and Model Number	Serial Number	Date Installed
Chassis			
Server Board			
Processor Speed and Cache			
Memory			
Video Display			
Keyboard			
Mouse			
Diskette Drive A			
CD-ROM Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Intel® Management Module			
Intel® Local Control Panel			

Current Usage

Calculating Power Usage

The total combined wattage for your configuration **must be less than the wattage rating for your power supply**. Use the worksheets in this section to calculate the total used by your configuration. See the documentation that came with your add-in boards for their current and voltage information.

Worksheet, Calculating DC Power Usage

Table 6. Power Usage Worksheet 1

Device	Current (maximum) at voltage level:					
	+3.3 V	+5 V	-5 V	+12 V	-12 V	5 V Standby
Baseboard, Front Panel Board and Fans						
Processor(s)						
Memory						
3.5-inch Diskette Drive						
CD-ROM Drive						
1st Hard Drive						
2nd Hard Drive						
3rd Hard Drive						
Expansion Board 1						
Expansion Board 2						
Intel® Management Module						
Local Control Panel						
Total Current						



NOTE

An online power budget analysis tool is available at <http://support.intel.com> (search for “Installation and Use”) to make sure your system falls within the allowed power budget.

Worksheet, Total Combined Power Used by the Server

1. From the previous worksheet, enter the total current for each column.
2. Multiply the voltage by the total current to get the total wattage for each voltage level.
3. Add the total wattage for each voltage level to arrive at the total combined power usage for the power subsystem.

Table 7. Power Usage Worksheet 2

Voltage level and total current (V X A = W)	Total Watts for each voltage level
(+3.3 V) X (_____ A)	_____ W
(+5 V) X (_____ A)	_____ W
(+12 V) X (_____ A)	_____ W
(-12 V) X (_____ A)	_____ W
(5 V standby) X (_____ A)	_____ W
Total Combined Wattage	_____ W



CAUTION

Do not exceed a combined power output of 100 Watts for the +5 V and +3.3 V outputs. Exceeding a combined 100 Watts will overload the power subsystem and may cause the power supplies to overheat and malfunction.

Regulatory and Compliance Information

Product Regulatory Compliance

Product Safety Compliance

The Server Chassis SR1450 complies with the following safety requirements:

- UL60950 – CSA 60950(USA / Canada)
- EN60950 (Europe)
- IEC60950 (International)
- CB Certificate & Report, IEC60950 (report to include all country national deviations)
- GS License (Germany)
- GOST R 50377-92 - License (Russia)
- Belarus License (Belarus)
- Ukraine License (Ukraine)
- CE - Low Voltage Directive 73/23/EEE (Europe)
- IRAM Certification (Argentina)
- GB4943- CNCA Certification (China)

Product EMC Compliance – Class A Compliance

The Server Chassis SR1450 has been tested and verified to comply with the following electromagnetic compatibility (EMC) regulations when installed a compatible Intel® host system. For information on compatible host system(s) refer to Intel's Server Builder Web site or contact your local Intel representative.

- FCC /ICES-003 - Emissions (USA/Canada) Verification
- CISPR 22 – Emissions (International)
- EN55022 - Emissions (Europe)
- EN55024 - Immunity (Europe)
- EN61000-3-2 - Harmonics (Europe)
- EN61000-3-3 - Voltage Flicker (Europe)
- CE – EMC Directive 89/336/EEC (Europe)
- VCCI Emissions (Japan)
- AS/NZS 3548 Emissions (Australia / New Zealand)
- BSMI CNS13438 Emissions (Taiwan)
- GOST R 29216-91 Emissions (Russia)
- GOST R 50628-95 Immunity (Russia)
- Belarus License (Belarus)
- Ukraine License (Ukraine)
- RRL MIC Notice No. 1997-41 (EMC) & 1997-42 (EMI) (Korea)
- GB 9254 - CNCA Certification (China)
- GB 17625 - (Harmonics) CNCA Certification (China)

Certifications / Registrations / Declarations

- UL Certification (US/Canada)
- CE Declaration of Conformity (CENELEC Europe)
- FCC/ICES-003 Class A Attestation (USA/Canada)
- VCCI Certification (Japan)
- C-Tick Declaration of Conformity (Australia)
- MED Declaration of Conformity (New Zealand)
- BSMI Certification (Taiwan)
- GOST R Certification / License (Russia)
- Belarus Certification / License (Belarus)
- RRL Certification (Korea)
- IRAM Certification (Argentina)
- CNCA Certification (China)
- Ecology Declaration (International)

Product Regulatory Compliance Markings

This product is marked with the following Product Certification Markings:

Table 8. Product Certification Markings

Regulatory Compliance	Country	Marking
cULus Listing Marks	USA/Canada	
GS Mark	Germany	 
CE Mark	Europe	
FCC Marking (Class A)	USA	This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Manufactured by Intel Corporation
EMC Marking (Class A)	Canada	CANADA ICES-003 CLASS A CANADA NMB-003 CLASSE A
VCCI Marking (Class A)	Japan	この装置は、クラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。VCCI-A

continued

Table 8. Product Certification Markings (continued)

Regulatory Compliance	Country	Marking
BSMI Certification Number & Class A Warning	Taiwan	
		警告使用者： 這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策
GOST R Marking	Russia	
RRL MIC Mark	Korea	
China Compulsory Certification Mark	China	

Electromagnetic Compatibility Notices

FCC (USA)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions related to the EMC performance of this product, contact:

Intel Corporation
 5200 N.E. Elam Young Parkway
 Hillsboro, OR 97124
 1-800-628-8686

Regulatory and Compliance Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit other than the one to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment. The customer is responsible for ensuring compliance of the modified product.

Only peripherals (computer input/output devices, terminals, printers, etc.) that comply with FCC Class A or B limits may be attached to this computer product. Operation with noncompliant peripherals is likely to result in interference to radio and TV reception.

All cables used to connect to peripherals must be shielded and grounded. Operation with cables, connected to peripherals, that are not shielded and grounded may result in interference to radio and TV reception.

Industry Canada (ICES-003)

Cet appareil numérique respecte les limites bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le Ministre Canadian des Communications.

English translation of the notice above:

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Canadian Department of Communications.

Europe (CE Declaration of Conformity)

This product has been tested in accordance too, and complies with the Low Voltage Directive (73/23/EEC) and EMC Directive (89/336/EEC). The product has been marked with the CE Mark to illustrate its compliance.

VCCI (Japan)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

English translation of the notice above:

This is a Class A product based on the standard of the Voluntary Control Council for Interference (VCCI) from Information Technology Equipment. If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

BSMI (Taiwan)

警告使用者：
這是甲類的資訊產品，在居住的環境中使用時，
可能會造成射頻干擾，在這種情況下，使用者會
被要求採取某些適當的對策

The BSMI Certification Marking and EMC warning is located on the outside rear area of the product.

Korean RRL Compliance



1. 기기의 명칭(모델명) :
2. 인증번호 :
3. 인증받은 자의 상호 :
4. 제조년월일 :
5. 제조자/제조국가 :

English translation of the notice above:

1. Type of Equipment (Model Name): On License and Product
2. Certification No.: On RRL certificate. Obtain certificate from local Intel representative
3. Name of Certification Recipient: Intel Corporation
4. Date of Manufacturer: Refer to date code on product
5. Manufacturer/Nation: Intel Corporation/Refer to country of origin marked on product

Regulated Specified Components

To maintain the UL listing and compliance to other regulatory certifications and/or declarations, the following regulated components must be used and conditions adhered to. Interchanging or use of other component will void the UL listing and other product certifications and approvals.

Updated product information for configurations can be found on the Intel Server Builder Web site at the following URL:

<http://channel.intel.com/go/serverbuilder>

If you do not have access to Intel's Web address, please contact your local Intel representative.

- **Server Chassis** (base chassis is provided with power supply and fans)—UL listed.
- **Server board**—you must use an Intel server board—UL recognized.
- **Add-in boards**—must have a printed wiring board flammability rating of minimum UL94V-1. Add-in boards containing external power connectors and/or lithium batteries must be UL recognized or UL listed. Any add-in board containing modem telecommunication circuitry must be UL listed. In addition, the modem must have the appropriate telecommunications, safety, and EMC approvals for the region in which it is sold.
- **Peripheral Storage Devices**—must be UL recognized or UL listed accessory and TUV or VDE licensed. Maximum power rating of any one device is 19 watts. Total server configuration is not to exceed the maximum loading conditions of the power supply.

Getting Help

World Wide Web

<http://support.intel.com/support/motherboards/server/SR1450>

Telephone

All calls are billed US \$25.00 per incident, levied in local currency at the applicable credit card exchange rate plus applicable taxes. (Intel reserves the right to change the pricing for telephone support at any time without notice).

Before calling, fill out the "Issue Report Form" on the following pages.

In U.S. and Canada		1-800-404-2284	
In Europe			
UK	0870 6072439	Finland	9 693 79297
France	01 41 918529	Denmark	38 487077
Germany	069 9509 6099	Norway	23 1620 50
Italy	02 696 33276	Sweden	08 445 1251
Spain	91 377 8166	Holland	020 487 4562
In Asia-Pacific region			
Australia	1800 649931	Indonesian	001-803 65 7249
Hong Kong	852 2 844 4456	Malaysia	1-800 80 1390
Korea	822 767 2595	New Zealand	0800 444 365
PRC	800 820 1100	Pakistan	632 6368415 (IDD via Philippines)
Singapore	65 213-1311	Philippines	1-800 1 651 0117
Taiwan	2 2545-1640	Thailand	1-800 6310003
India	0006517-830 3634	Vietnam	632 6368416 (IDD via Philippines)
In Japan			
0120-868686 (Domestic)		81-298-47-0800 (outside country)	
In Latin America			
Brazil	0021-0811-408-5540	Ecuador	999-119, 800-628-8686 (via AT&T)
Mexico	001-800-628-8686	Guatemala	99-99-190, 800-628-8686 (via AT&T)
Colombia	980-9-122-118	Venezuela	800-11-120, 800-628-8686 (via AT&T)
Costa Rica	0-800-011-0395	Argentina	001-800-222-1001, 800-628-8686 (via AT&T)
Panama	001-800-628-8686	Paraguay	008-11, 800-628-8686 (via AT&T)
Chile	800-532-992	Peru	0-800-50000, 800-628-8686 (via AT&T)
Miami	1-800-621-8423	Uruguay	000-410, 800-628-8686 (via AT&T)

For an updated support contact list, see <http://www.intel.com/support/9089.htm/>

Intel® Server Issue Report Form

Date Submitted: _____

Company Name: _____

Contact Name: _____

Email Address: _____

Intel Server Product: _____

Priority (Critical, Hot, High, Low): _____

Brief Problem Description. Provide a brief description below. See the last page for space to include a detailed problem description.

Board / Chassis Information

Server Board	DIMM Configuration
<input type="checkbox"/> Intel Server Board SE7520JR2	DIMM1A MB:
<input type="checkbox"/> Other (list):	DIMM1A Vendor/part number:
Baseboard Revision – PBA#:	DIMM1B MB:
Baseboard Serial Number:	DIMM1B Vendor/part number:
CPU1 Speed/Stepping/Spec:	DIMM2A MB:
CPU2 Speed/Stepping/Spec:	DIMM2A Vendor/part number:
System BIOS Version:	DIMM2B MB:
HSC Firmware Version:	DIMM2B Vendor/part number:
	DIMM3A MB:
	DIMM3A Vendor/part number:
	DIMM3B MB:
	DIMM3B Vendor/part number:

Operating System Information

Operating System _____

Version _____

Service Pack # _____

Peripheral Information

Check each box below that is used, and provide the requested information

Peripheral	Card Or Peripheral Description	Driver Revision	IRQ #	I/O Base Address	FW Rev#
Add-in Cards					
<input type="checkbox"/>	Add-in Card				
<input type="checkbox"/>	Add-in Card				
<input type="checkbox"/>	Add-in Card				

Video

On-Board Video

Add-in Video

NIC

On-Board NIC1

On-Board NIC2

Hard Drive Information:

IDE # of drives installed: _____
Make/Model/Firmware Revision _____

SCSI # of drives installed: _____
Make/Model/Firmware Revision _____

SATAI # of drives installed: _____
Make/Model/Firmware Revision _____

Warranty

Limited Warranty for Intel® Chassis Subassembly Products

Intel warrants that the Products (defined herein as the Intel® chassis subassembly and all of its various components and software delivered with or as part of the Products) to be delivered hereunder, if properly used and installed, will be free from defects in material and workmanship and will substantially conform to Intel's publicly available specifications for a period of three (3) years after the date the Product was purchased from an Intel authorized distributor. Software of any kind delivered with or as part of products is expressly provided "as is" unless specifically provided for otherwise in any software license accompanying the software.

If any Product furnished by Intel which is the subject of this Limited Warranty fails during the warranty period for reasons covered by this Limited Warranty, Intel, at its option, will:

- **REPAIR** the Product by means of hardware and/or software; OR
- **REPLACE** the Product with another Product; OR
- **REFUND** the then-current value of the Product if Intel is unable to repair or replace the Product.

If such Product is defective, transportation charges for the return of Product to buyer within the USA will be paid by Intel. For all other locations, the warranty excludes all costs of shipping, customs clearance, and other related charges. Intel will have a reasonable time to make repairs or to replace Product or to refund the then-current value of the Product.

In no event will Intel be liable for any other costs associated with the replacement or repair of Product, including labor, installation or other costs incurred by buyer and in particular, any costs relating to the removal or replacement of any product soldered or otherwise permanently affixed to any printed circuit board.

This Limited Warranty, and any implied warranties that may exist under state law, apply only to the original purchaser of the Product.

Extent of Limited Warranty

Intel does not warrant that Products to be delivered hereunder, whether delivered stand-alone or integrated with other Products, including without limitation semiconductor components, will be free from design defects or errors known as "errata." Current characterized errata are available upon request.

This Limited Warranty does not cover damages due to external causes, including accident, problems with electrical power, usage not in accordance with product instructions, misuse, neglect, alteration, repair, improper installation, or improper testing.

Warranty Limitations and Exclusions

These warranties replace all other warranties, expressed or implied including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Intel makes no expressed warranties beyond those stated here. Intel disclaims all other warranties, expressed or implied including, without limitation, implied warranties of merchantability and fitness for a particular purpose. Some jurisdictions do not allow the exclusion of implied warranties, so this limitation may not apply.

All expressed and implied warranties are limited in duration to the limited warranty period. No warranties apply after that period. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you.

Limitations of Liability

Intel's responsibility under this, or any other warranty, implied or expressed, is limited to repair, replacement, or refund, as set forth above. These remedies are the sole and exclusive remedies for any breach of warranty. Intel is not responsible for direct, special, incidental, or consequential damages resulting from any breach of warranty under another legal theory including, but not limited to, lost profits, downtime, goodwill, damage to or replacement of equipment and property, and any costs of recovering, reprogramming, or reproducing any program or data stored in or used with a system containing this product. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights that vary from jurisdiction to jurisdiction.

Any and all disputes arising under or related to this Limited Warranty shall be adjudicated in the following forums and governed by the following laws: for the United States of America, Canada, North America, and South America, the forum shall be Santa Clara, California, USA, and the applicable law shall be that of the State of California, USA; for the Asia Pacific region, the forum shall be Singapore and the applicable law shall be that of Singapore; for Europe and the rest of the world, the forum shall be London and the applicable law shall be that of the United Kingdom.

In the event of any conflict between the English language version and any other translated version(s) of this Limited Warranty, the English language version shall control.

How to Obtain Warranty Service

To obtain warranty service for this Product, you may contact Intel or your authorized distributor.

North America and Latin America—To obtain warranty repair for the product, please go to the following Web site to obtain instructions:

<http://support.intel.com/support/motherboards/draform.htm>

In Europe and in Asia—Contact your original authorized distributor for warranty service.

Any replacement Product is warranted under this written warranty and is subject to the same limitations and exclusions for the remainder of the original warranty period.

Telephone Support

If you cannot find the information you need on Intel's World Wide Web site (<http://www.intel.com/>), call your local distributor or an Intel Customer Support representative. See "Getting Help" for telephone numbers.

Returning a Defective Product

Before returning any product, call your authorized dealer/distribution authority.