Intel® Server Chassis SR2400/SR2400DC User Guide

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Intel server boards contain a number of high-density VLSI and power delivery components that need adequate airflow for cooling. Intel's own chassis are designed and tested to meet the intended thermal requirements of these components when the fully integrated system is used together. It is the responsibility of the system integrator that chooses not to use Intel developed server building blocks to consult vendor datasheets and operating parameters to determine the amount of airflow required for their specific application and environmental conditions. Intel Corporation can not be held responsible if components fail or the server board does not operate correctly when used outside any of their published operating or non-operating limits.

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Preface

About this Manual

Thank you for purchasing and using an Intel® Server Chassis SR2400/SR2400DC.

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 SR2400/SR2400DC. For the latest version of this manual, refer to
http://support.intel.com/support/motherboards/server/chassis/SR2400/manual.htm

✎ **NOTE**

> The Server Chassis SR2400/SR2400DC is used for multiple server boards.
> Before purchasing or attempting to install any component discussed in this
> manual, refer to the documentation provided with your server board to ensure
> the component is compatible with your server board.

Manual Organization

Chapter 1 provides a brief overview of the Server Chassis SR2400/SR2400DC. 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 front panel board, fans, power supply and other components.

At the back of this book, you will find some technical specifications[1], regulatory information, "getting help" information, and the warranty.

Product Accessories

The server chassis is compatible with the following Intel® Server Boards and Platforms:

- Intel® Server Board SE7520JR2
- Intel® Server Board SE7320VP2
- Intel® Server Platform SR2400SYS (integrated system)
- Intel® Server Platform SR2400SYSD2 (integrated system)

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[1] For complete technical specifications and additional technical information, see the *Intel® Server Chassis SR2400/SR2400DC Technical Product Specification*. See "Additional Information and Software" to find a Web link to this document.

Your Server Chassis SR2400/SR2400DC shipped with the following items [2]:

- A box of hardware components, referred to below as the "hardware box"
- One 700-W power supply (AC version) or one 600-W power supply (DC version), installed in the chassis
- Low-profile PCI-X riser, installed in the chassis
- CD-ROM / DVD drive tray, installed in the chassis
- Four system fans, installed in the chassis
- Chassis intrusion switch, installed in the chassis
- Air baffle, installed in the chassis
- Processor air duct, installed in the chassis
- CD-ROM filler panel, in the hardware box
- Floppy carrier assembly, in the hardware box
- Six 32- 8mm screws, in the hardware box
- Cables, in the hardware kit box
- Rack handles, in the hardware box
- *Quick Start User's Guide*, in the chassis box
- *Attention* document, in the chassis box

You must have one item from each of the following groups [3]:

- Riser option, choose one:
  — Full-height PCI-X riser
  — Full-height performance 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
  — Fixed SATA drive kit
- Control panel, choose one:
  — Standard control panel
  — Intel® Local Control Panel [4]

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[2] The contents list includes only items included with the Intel Server Chassis SR2400/SR2400DC. This list does not include items that are shipped and pre-installed in the Intel Server Platform SR2400JR2.

[3] Before purchasing any required options, refer to your server board documentation to determine which option(s) are supported on your server board.

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

You may also need or want to purchase one or more of the following items for your server: [5]

- Server rack cabinet and rails / brackets to mount the server into a rack
- Cable management arm
- 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
- Redundant fan kit (includes four fans)
- Redundant power supply
- Sixth drive SCSI or SATA kit
- Slimline CD-ROM drive or DVD-ROM drive
- Slimline floppy drive
- Kit to convert a hard drive bay to a floppy drive bay

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://www.support.intel.com/support/motherboards/server/chassis/SR2400/

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[5] 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/SR2400/

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, including BIOS settings and chipset information	Technical Product Specification
If you just received this product and need to install it	*Quick Start User's Guide* in the product box
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) and operating systems that have been tested with this product	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
DIMMs that have been tested with this product	See your server board documentation
To make sure your system falls within the allowed power budget	See your server board documentation
For software to manage your Intel® server	See your server board documentation
For drivers	See your server board documentation
For firmware and BIOS updates	See your server board documentation
For diagnostics test software	See your server board documentation

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 please 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.

Main DC Power Disconnect (Intel® Server Chassis SR2400DC)

You are responsible for installing a properly rated DC power disconnect for the system. The main disconnect must be readily accessible, and it must be labeled as controlling power to the system. The circuit breaker of a centralized DC power system may be used as a disconnect device when easily accessible and should be rated at no more than 10 amps.

Grounding the Server (Intel® Server Chassis SR2400DC only)

To avoid the potential for an electrical shock hazard, you must reliably connect an earth-grounding conductor to the server. The earth- grounding conductor must be a minimum 18AWG connected to the earth ground stud(s) on the rear of the chassis. The safety ground conductor should be connected to the chassis stud with a Listed closed two-hole crimp terminal with a maximum width of 0.25 inches. The nuts on the chassis earth-ground studs should be installed with a 10 in/lb torque. The safety ground conductor provides proper grounding only for the system. You must provide additional proper grounding for the rack and other devices installed in it.

⚠ Warnings

System power on/off: The power button DOES NOT turn off the system AC or DC power. To remove power from system, you must unplug the AC power cord from the wall outlet or remove the DC external source. Make sure the AC power cord is unplugged or DC external source removed 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.
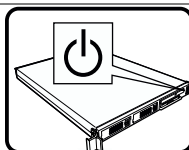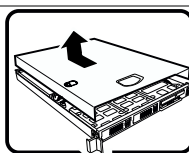
Safety Cautions

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* at http://support.intel.com/support/motherboards/server/sb/CS-010770.htm.
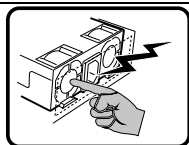
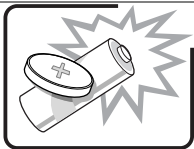|	
	The power supply in this product contains no user-serviceable parts. There may be more than one supply in this product. Refer servicing only to qualified personnel.
	Do not attempt to modify or use the supplied AC power cord if it is not the exact type required. A product with more than one power supply will have a separate AC power cord for each supply.
	The power button on the system does not turn off system AC power. To remove AC power from the system, you must unplug each AC power cord from the wall outlet or power supply.
	The power cord(s) is considered the disconnect device to the main (AC) power. The socket outlet that the system plugs into shall be installed near the equipment and shall be easily accessible.
	SAFETY STEPS: Whenever you remove the chassis covers to access the inside of the system, follow these steps:
	1. Turn off all peripheral devices connected to the system.
	2. Turn off the system by pressing the power button.
	3. Unplug all AC power cords from the system or from wall outlets.
	4. Label and disconnect all cables connected to I/O connectors or ports on the back of the system.
	5. Provide some electrostatic discharge (ESD) protection by wearing an antistatic wrist strap attached to chassis ground of the system—any unpainted metal surface—when handling components.
	6. Do not operate the system with the chassis covers removed.
	After you have completed the six SAFETY steps above, you can remove the system covers. To do this:
	1. Unlock and remove the padlock from the back of the system if a padlock has been installed.
	2. Remove and save all screws from the covers.
	3. Remove the covers.
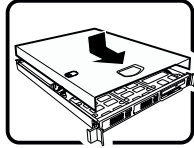
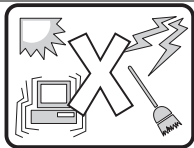|	
	For proper cooling and airflow, always reinstall the chassis covers before turning on the system. Operating the system without the covers in place can damage system parts. To install the covers: 1. Check first to make sure you have not left loose tools or parts inside the system. 2. Check that cables, add-in boards, and other components are properly installed. 3. Attach the covers to the chassis with the screws removed earlier, and tighten them firmly. 4. Insert and lock the padlock to the system to prevent unauthorized access inside the system. 5. Connect all external cables and the AC power cord(s) to the system.
	A microprocessor and heat sink may be hot if the system has been running. Also, there may be sharp pins and edges on some board and chassis parts. Contact should be made with care. Consider wearing protective gloves.
	Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Dispose of used batteries according to manufacturer's instructions.
	The system is designed to operate in a typical office environment. Choose a site that is: ▪ Clean and free of airborne particles (other than normal room dust). ▪ Well ventilated and away from sources of heat including direct sunlight. ▪ Away from sources of vibration or physical shock. ▪ Isolated from strong electromagnetic fields produced by electrical devices. ▪ In regions that are susceptible to electrical storms, we recommend you plug your system into a surge suppresser and disconnect telecommunication lines to your modem during an electrical storm. ▪ Provided with a properly grounded wall outlet. ▪ Provided with sufficient space to access the power supply cord(s), because they serve as the product's main power disconnect.
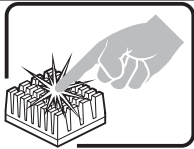
Wichtige Sicherheitshinweise

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.
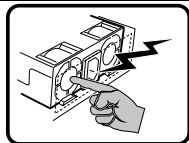
Benutzer können am Netzgerät dieses Produkts keine Reparaturen vornehmen. Das Produkt enthält möglicherweise mehrere Netzgeräte. Wartungsarbeiten müssen von qualifizierten Technikern ausgeführt werden.
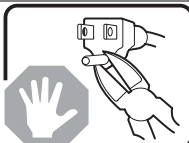
Versuchen Sie nicht, das mitgelieferte Netzkabel zu ändern oder zu verwenden, wenn es sich nicht genau um den erforderlichen Typ handelt. Ein Produkt mit mehreren Netzgeräten hat für jedes Netzgerät ein eigenes Netzkabel.
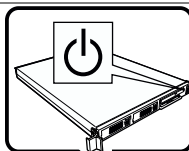
Der Wechselstrom des Systems wird durch den Ein-/Aus-Schalter für Gleichstrom nicht ausgeschaltet. Ziehen Sie jedes Wechselstrom-Netzkabel aus der Steckdose bzw. dem Netzgerät, um den Stromanschluß des Systems zu unterbrechen.
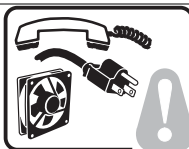
SICHERHEISMASSNAHMEN: Immer wenn Sie die Gehäuseabdeckung abnehmen um an das Systeminnere zu gelangen, sollten Sie folgende Schritte beachten:

1. Schalten Sie alle an Ihr System angeschlossenen Peripheriegeräte aus.
2. Schalten Sie das System mit dem Hauptschalter aus.
3. Ziehen Sie den Stromanschlußstecker Ihres Systems aus der Steckdose.
4. Auf der Rückseite des Systems beschriften und ziehen Sie alle Anschlußkabel von den I/O Anschlüssen oder Ports ab.
5. Tragen Sie ein geerdetes Antistatik Gelenkband, um elektrostatische Ladungen (ESD) über blanke Metallstellen bei der Handhabung der Komponenten zu vermeiden.
6. Schalten Sie das System niemals ohne ordnungsgemäß montiertes Gehäuse ein.
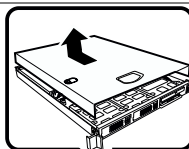
Nachdem Sie die oben erwähnten ersten sechs SICHERHEITSSCHRITTE durchgeführt haben, können Sie die Abdeckung abnehmen, indem Sie:

1. Öffnen und entfernen Sie die Verschlußeinrichtung (Padlock) auf der Rückseite des Systems, falls eine Verschlußeinrichtung installiert ist.
2. Entfernen Sie alle Schrauben der Gehäuseabdeckung.
3. Nehmen Sie die Abdeckung ab.
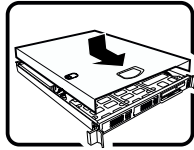
Zur ordnungsgemäßen Kühlung und Lüftung muß die Gehäuseabdeckung immer wieder vor dem Einschalten installiert werden. Ein Betrieb des Systems ohne angebrachte Abdeckung kann Ihrem System oder Teile darin beschädigen. Um die Abdeckung wieder anzubringen:

1. Vergewissern Sie sich, daß Sie keine Werkzeuge oder Teile im Innern des Systems zurückgelassen haben.
2. Überprüfen Sie alle Kabel, Zusatzkarten und andere Komponenten auf ordnungsgemäßen Sitz und Installation.
3. Bringen Sie die Abdeckungen wieder am Gehäuse an, indem Sie die zuvor gelösten Schrauben wieder anbringen. Ziehen Sie diese gut an.
4. Bringen Sie die Verschlußeinrichtung (Padlock) wieder an und schließen Sie diese, um ein unerlaubtes Öffnen des Systems zu verhindern.
5. Schließen Sie alle externen Kabel und den AC Stromanschlußstecker Ihres Systems wieder an.
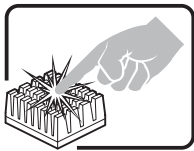
Der Mikroprozessor und der Kühler sind möglicherweise erhitzt, wenn das System in Betrieb ist. Außerdem können einige Platinen und Gehäuseteile scharfe Spitzen und Kanten aufweisen. Arbeiten an Platinen und Gehäuse sollten vorsichtig ausgeführt werden. Sie sollten Schutzhandschuhe tragen.
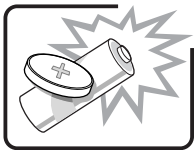
Bei falschem Einsetzen einer neuen Batterie besteht Explosionsgefahr. Die Batterie darf nur durch denselben oder einen entsprechenden, vom Hersteller empfohlenen Batterietyp ersetzt werden. Entsorgen Sie verbrauchte Batterien den Anweisungen des Herstellers entsprechend.
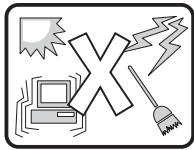
Das System wurde für den Betrieb in einer normalen Büroumgebung entwickelt. Der Standort sollte:

- sauber und staubfrei sein (Hausstaub ausgenommen);
- gut gelüftet und keinen Heizquellen ausgesetzt sein (einschließlich direkter Sonneneinstrahlung);
- keinen Erschütterungen ausgesetzt sein;
- keine starken, von elektrischen Geräten erzeugten elektromagnetischen Felder aufweisen;
- in Regionen, in denen elektrische Stürme auftreten, mit einem Überspannungsschutzgerät verbunden sein; während eines elektrischen Sturms sollte keine Verbindung der Telekommunikationsleitungen mit dem Modem bestehen;
- mit einer geerdeten Wechselstromsteckdose ausgerüstet sein;
- über ausreichend Platz verfügen, um Zugang zu den Netzkabeln zu gewährleisten, da der Stromanschluß des Produkts hauptsächlich über die Kabel unterbrochen wird.
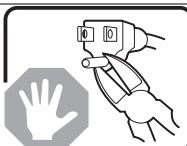
重要安全指导

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》）。
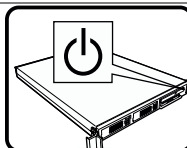
Consignes de sécurité

Lisez attention toutes les consignes de sécurité et les mises en garde indiquées dans ce document avant de suivre toute instruction. Consultez *Intel Server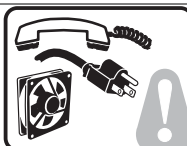 Boards and Server Chassis Safety Information* sur le site http://support.intel.com/support/motherboards/server/sb/CS-010770.htm.
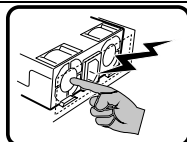
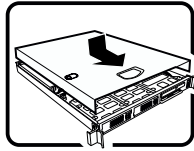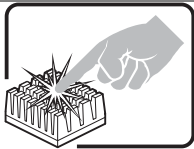|	
	Le bloc d'alimentation de ce produit ne contient aucune pièce pouvant être réparée par l'utilisateur. Ce produit peut contenir plus d'un bloc d'alimentation. Veuillez contacter un technicien qualifié en cas de problème.
	Ne pas essayer d'utiliser ni modifier le câble d'alimentation CA fourni, s'il ne correspond pas exactement au type requis. Le nombre de câbles d'alimentation CA fournis correspond au nombre de blocs d'alimentation du produit.
	Notez que le commutateur CC de mise sous tension /hors tension du panneau avant n'éteint pas l'alimentation CA du système. Pour mettre le système hors tension, vous devez débrancher chaque câble d'alimentation de sa prise.
	CONSIGNES DE SÉCURITÉ -Lorsque vous ouvrez le boîtier pour accéder à l'intérieur du système, suivez les consignes suivantes: 1. Mettez hors tension tous les périphériques connectés au système. 2. Mettez le système hors tension en mettant l'interrupteur général en position OFF (bouton-poussoir). 3. Débranchez tous les cordons d'alimentation c.a. du système et des prises murales. 4. Identifiez et débranchez tous les câbles reliés aux connecteurs d'E-S ou aux accès derrière le système. 5. Pour prévenir les décharges électrostatiques lorsque vous touchez aux composants, portez une bande antistatique pour poignet et reliez-la à la masse du système (toute surface métallique non peinte du boîtier). 6. Ne faites pas fonctionner le système tandis que le boîtier est ouvert.
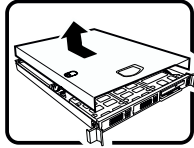
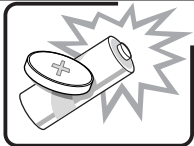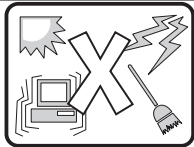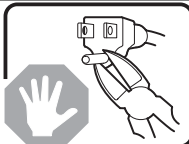|	
	Une fois TOUTES les étapes précédentes accomplies, vous pouvez retirer les panneaux du système. Procédez comme suit: 1. Si un cadenas a été installé sur à l'arrière du système, déverrouillez-le et retirez-le. 2. Retirez toutes les vis des panneaux et mettez-les dans un endroit sûr. 3. Retirez les panneaux.
	Afin de permettre le refroidissement et l'aération du système, réinstallez toujours les panneaux du boîtier avant de mettre le système sous tension. Le fonctionnement du système en l'absence des panneaux risque d'endommager ses pièces. Pour installer les panneaux, procédez comme suit: 1. Assurez-vous de ne pas avoir oublié d'outils ou de pièces démontées dans le système. 2. Assurez-vous que les câbles, les cartes d'extension et les autres composants sont bien installés. 3. Revissez solidement les panneaux du boîtier avec les vis retirées plus tôt. 4. Remettez le cadenas en place et verrouillez-le afin de prévenir tout accès non autorisé à l'intérieur du système. 5. Rebranchez tous les cordons d'alimentation c. a. et câbles externes au système.
	Le microprocesseur et le dissipateur de chaleur peuvent être chauds si le système a été sous tension. Faites également attention aux broches aiguës des cartes et aux bords tranchants du capot. Nous vous recommandons l'usage de gants de protection.
	Danger d'explosion si la batterie n'est pas remontée correctement. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le fabricant. Disposez des piles usées selon les instructions du fabricant.
	Le système a été conçu pour fonctionner dans un cadre de travail normal. L'emplacement choisi doit être: ▪ Propre et dépourvu de poussière en suspension (sauf la poussière normale). ▪ Bien aéré et loin des sources de chaleur, y compris du soleil direct. ▪ A l'abri des chocs et des sources de vibrations. ▪ Isolé de forts champs électromagnétiques géenérés par des appareils électriques. ▪ Dans les régions sujettes aux orages magnétiques il est recomandé de brancher votre système à un supresseur de surtension, et de débrancher toutes les lignes de télécommunications de votre modem durant un orage. ▪ Muni d'une prise murale correctement mise à la terre. ▪ Suffisamment spacieux pour vous permettre d'accéder aux câbles d'alimentation (ceux-ci étant le seul moyen de mettre le système hors tension).

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 en http://support.intel.com/support/motherboards/server/sb/CS-010770.htm.
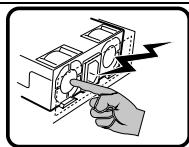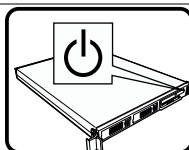
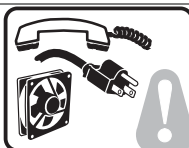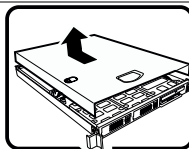|	
	El usuario debe abstenerse de manipular los componentes de la fuente de alimentación de este producto, cuya reparación debe dejarse exclusivamente en manos de personal técnico especializado. Puede que este producto disponga de más de una fuente de alimentación.
	No intente modificar ni usar el cable de alimentación de corriente alterna, si no corresponde exactamente con el tipo requerido. El número de cables suministrados se corresponden con el número de fuentes de alimentación de corriente alterna que tenga el producto.
	Nótese que el interruptor activado/desactivado en el panel frontal no desconecta la corriente alterna del sistema. Para desconectarla, deberá desenchufar todos los cables de corriente alterna de la pared o desconectar la fuente de alimentación.
	INSTRUCCIONES DE SEGURIDAD: Cuando extraiga la tapa del chasis para acceder al interior del sistema, siga las siguientes instrucciones: 1. Apague todos los dispositivos periféricos conectados al sistema. 2. Apague el sistema presionando el interruptor encendido/apagado. 3. Desconecte todos los cables de alimentación CA del sistema o de las tomas de corriente alterna. 4. Identifique y desconecte todos los cables enchufados a los conectores E/S o a los puertos situados en la parte posterior del sistema. 5. Cuando manipule los componentes, es importante protegerse contra la descarga electrostática (ESD). Puede hacerlo si utiliza una muñequera antiestática sujetada a la toma de tierra del chasis — o a cualquier tipo de superficie de metal sin pintar. 6. No ponga en marcha el sistema si se han extraído las tapas del chasis.
	Después de completar las seis instrucciones de SEGURIDAD mencionadas, ya puede extraer las tapas del sistema. Para ello: 1. Desbloquee y extraiga el bloqueo de seguridad de la parte posterior del sistema, si se ha instalado uno. 2. Extraiga y guarde todos los tornillos de las tapas. 3. Extraiga las tapas.
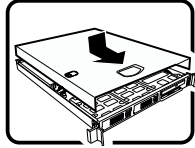
Para obtener un enfriamiento y un flujo de aire adecuados, reinstale siempre las tapas del chasis antes de poner en marcha el sistema. Si pone en funcionamiento el sistema sin las tapas bien colocadas puede dañar los componentes del sistema. Para instalar las tapas:

1. Asegúrese primero de no haber dejado herramientas o componentes sueltos dentro del sistema.
2. Compruebe que los cables, las placas adicionales y otros componentes se hayan instalado correctamente.
3. Incorpore las tapas al chasis mediante los tornillos extraídos anteriormente, tensándolos firmemente.
4. Inserte el bloqueo de seguridad en el sistema y bloquéelo para impedir que pueda accederse al mismo sin autorización.
5. Conecte todos los cables externos y los cables de alimentación CA al sistema.
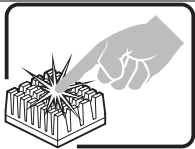
Si el sistema ha estado en funcionamiento, el microprocesador y el disipador de calor pueden estar aún calientes. También conviene tener en cuenta que en el chasis o en el tablero puede haber piezas cortantes o punzantes. Por ello, se recomienda precaución y el uso de guantes protectores.
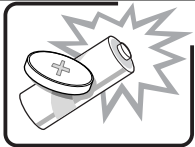
Existe peligro de explosión si la pila no se cambia de forma adecuada. Utilice solamente pilas iguales o del mismo tipo que las recomendadas por el fabricante del equipo. Para deshacerse de las pilas usadas, siga igualmente las instrucciones del fabricante.
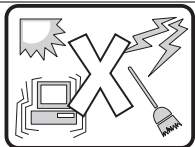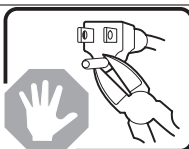
El sistema está diseñado para funcionar en un entorno de trabajo normal. Escoja un lugar:

- Limpio y libre de partículas en suspensión (salvo el polvo normal).
- Bien ventilado y alejado de fuentes de calor, incluida la luz solar directa.
- Alejado de fuentes de vibración.
- Aislado de campos electromagnéticos fuertes producidos por dispositivos eléctricos.
- En regiones con frecuentes tormentas eléctricas, se recomienda conectar su sistema a un eliminador de sobrevoltage y desconectar el módem de las líneas de telecomunicación durante las tormentas.
- Provisto de una toma de tierra correctamente instalada.
- Provisto de espacio suficiente como para acceder a los cables de alimentación, ya que éstos hacen de medio principal de desconexión del sistema.
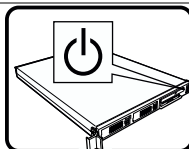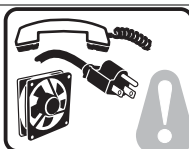
AVVERTENZA: Italiano
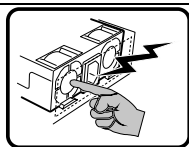
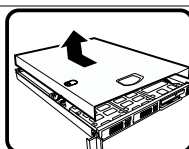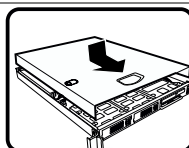|	
	Rivolgersi ad un tecnico specializzato per la riparazione dei componenti dell'alimentazione di questo prodotto. È possibile che il prodotto disponga di più fonti di alimentazione.
	Non modificare o utilizzare il cavo di alimentazione in c.a. fornito dal produttore, se non corrisponde esattamente al tipo richiesto. Ad ogni fonte di alimentazione corrisponde un cavo di alimentazione in c.a. separato.
	L'interruttore attivato/disattivato nel pannello anteriore non interrompe l'alimentazione in c.a. del sistema. Per interromperla, è necessario scollegare tutti i cavi di alimentazione in c.a. dalle prese a muro o dall'alimentazione di corrente.
	PASSI DI SICUREZZA: Qualora si rimuovano le coperture del telaio per accedere all'interno del sistema, seguire i seguenti passi: 1. Spegnere tutti i dispositivi periferici collegati al sistema. 2. Spegnere il sistema, usando il pulsante spento/acceso dell'interruttore del sistema. 3. Togliere tutte le spine dei cavi del sistema dalle prese elettriche. 4. Identificare e sconnettere tutti i cavi attaccati ai collegamenti I/O od alle prese installate sul retro del sistema. 5. Qualora si tocchino i componenti, proteggersi dallo scarico elettrostatico (SES), portando un cinghia anti-statica da polso che è attaccata alla presa a terra del telaio del sistema – qualsiasi superficie non dipinta – . 6. Non far operare il sistema quando il telaio è senza le coperture.
	Dopo aver seguito i sei passi di SICUREZZA sopracitati, togliere le coperture del telaio del sistema come seque: 1. Aprire e rimuovere il lucchetto dal retro del sistema qualora ve ne fosse uno installato. 2. Togliere e mettere in un posto sicuro tutte le viti delle coperture. 3. Togliere le coperture.
	Per il giusto flusso dell'aria e raffreddamento del sistema, rimettere sempre le coperture del telaio prima di riaccendere il sistema. Operare il sistema senza le coperture al loro proprio posto potrebbe danneggiare i componenti del sistema. Per rimettere le coperture del telaio: 1. Controllare prima che non si siano lasciati degli attrezzi o dei componenti dentro il sistema. 2. Controllare che i cavi, dei supporti aggiuntivi ed altri componenti siano stati installati appropriatamente. 3. Attaccare le coperture al telaio con le viti tolte in precedenza e avvitarle strettamente. 4. Inserire e chiudere a chiave il lucchetto sul retro del sistema per impedire l'accesso non autorizzato al sistema. 5. Ricollegare tutti i cavi esterni e le prolunghe AC del sistema.
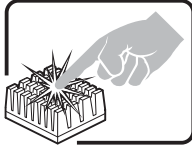
	Se il sistema è stato a lungo in funzione, il microprocessore e il dissipatore di calore potrebbero essere surriscaldati. Fare attenzione alla presenza di piedini appuntiti e parti taglienti sulle schede e sul telaio. È consigliabile l'uso di guanti di protezione.
	Esiste il pericolo di un esplosione se la pila non viene sostituita in modo corretto. Utilizzare solo pile uguali o di tipo equivalente a quelle consigliate dal produttore. Per disfarsi delle pile usate, seguire le istruzioni del produttore.
	Il sistema è progettato per funzionare in un ambiente di lavoro tipo. Scegliere una postazione che sia:
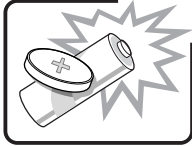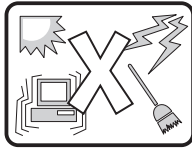
Il sistema è progettato per funzionare in un ambiente di lavoro tipo. Scegliere una postazione che sia:

- Pulita e libera da particelle in sospensione (a parte la normale polvere presente nell'ambiente).
- Ben ventilata e lontana da fonti di calore, compresa la luce solare diretta.
- Al riparo da urti e lontana da fonti di vibrazione.
- Isolata dai forti campi magnetici prodotti da dispositivi elettrici.
- In aree soggette a temporali, è consigliabile collegare il sistema ad un limitatore di corrente. In caso di temporali, scollegare le linee di comunicazione dal modem.
- Dotata di una presa a muro correttamente installata.
- Dotata di spazio sufficiente ad accedere ai cavi di alimentazione, i quali rappresentano il mezzo principale di scollegamento del sistema.

Contents

Figures

Tables

1 Server Chassis Features

This chapter briefly describes the main features of Intel® Server Chassis SR2400/SR2400DC. This chapter provides pictures 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 SR2400/SR2400DC is shown in the following picture.
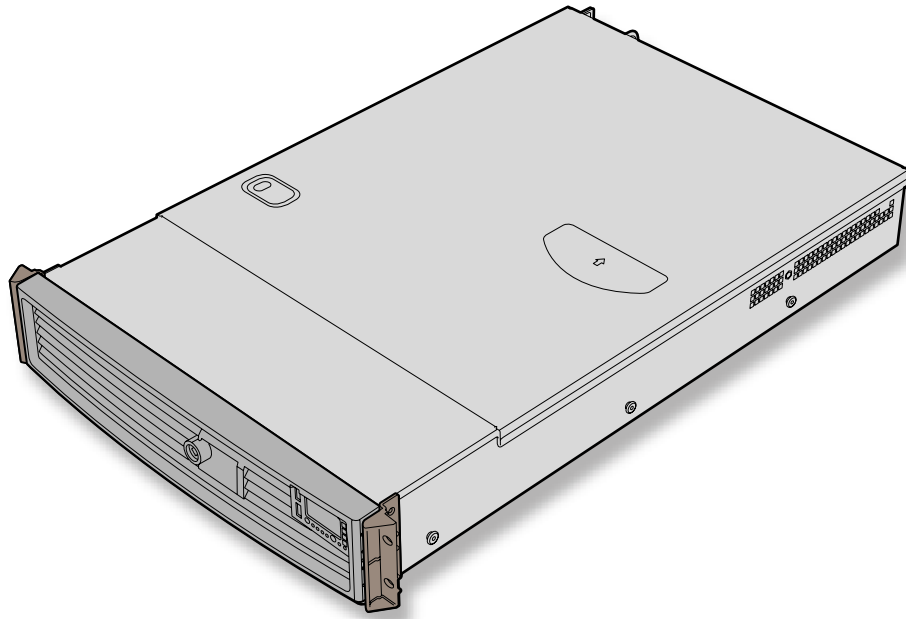
Figure 1. Intel® Server Chassis SR2400/SR2400DC

Table 1 summarizes the major features of the server chassis.[6]

Table 1.   Server Chassis Features

Feature	Description
Dimensions	▪ 3.445 inches high ▪ 16.930 inches wide ▪ 26.457 inches deep ▪ 60 pounds (Base chassis weight)
Hard Drives (dependent on option selected)	▪ Up to five fixed or hot-swap SATA or SCSI drives ▪ Drive bay for sixth SATA or SCSI hot-swap hard drive or a 3.5 inch tape drive
Peripherals (dependent on option selected)	▪ Slimline bay for CD-ROM drive, DVD-ROM drive, or floppy drive ▪ Kit to convert one hard drive bay into a floppy drive bay (optional accessory) ▪ PCI riser card bracket
Fans (dependent on option selected)	▪ Support for up to eight system fans (four standard, four as optional accessory) ▪ Two non-redundant fans in power supply
Control Panel (dependent on option selected)	▪ Standard Control Panel ▪ Intel® Local Control Panel (requires installation of the optional Intel® Management Module – Advanced or Intel® Management Module – Professional)
LEDs and displays (dependent on option selected)	With Standard Control Panel: ▪ NIC1 Activity ▪ NIC2 Activity ▪ Power / Sleep ▪ System Status ▪ System Identification ▪ Hard Drive Activity With Intel® Local Control Panel: ▪ NIC1 Activity ▪ NIC2 Activity ▪ Power / Sleep ▪ System Status ▪ System Identification ▪ Hard Drive Activity ▪ LCD Display Screen

Continued

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[6] 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.

Table 1.   Server Chassis Features (continued)

Power Supply (AC)	▪ One hot-swap 700-W power supply module ▪ 1+1 hot-swap redundant 700-W power supply (optional accessory)
Power Supply (DC)	▪ One hot-swap 600-W power supply module ▪ 1+1 hot-swap redundant 600-W power supply (optional accessory)
System Security	▪ Lockable front bezel (optional accessory) ▪ Chassis intrusion switch ▪ Lock attach point for chassis cover
USB	▪ One front panel USB port with Standard Control Panel ▪ Two front panel USB ports with Intel® Local Control Panel ▪ Two back panel USB ports
Video	▪ One front panel video port (available only with the Standard Control Panel)[7] ▪ One rear panel video port

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[7] Video connections must be used separately. The server board and chassis do not support synchronous use of video out of the front and back of the chassis.

Component Identification

Internal Components
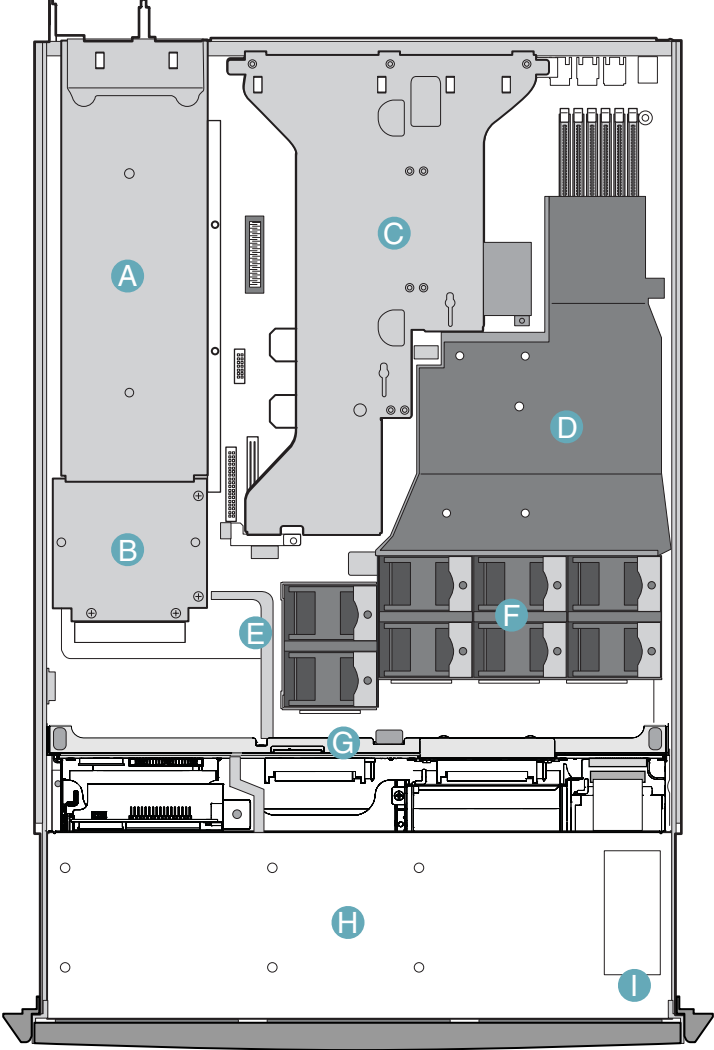
TP01087

A. Power supply module housing

B. Power distribution module

C. PCI Riser assembly

D. Processor air duct. (Memory DIMMs and processor(s) underneath)

E. Air baffle (AC model; air baffle for DC model differs)

F. Fan module (shown with optional redundant fans)

G. SATA or SCSI backplane (optional component)

H. Drive bay area (drives not included)

I. Control panel board

Figure 2. Internal Component Locations

Hot-Swap SATA Backplane Connections

The diagram below shows the connection points on the rear of the SATA backplane. The power supply, server board and a SATA RAID card can be connected to the locations below.

TP01363

A. OPT connector

B. Location for sixth drive board (accessory)

C. Fan distribution cable connector

D. Flex cable connector
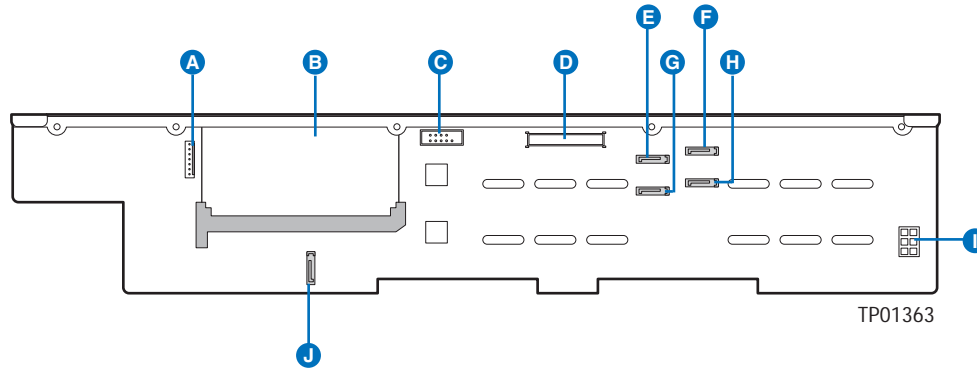
E. SATA channel D connector

F. SATA channel B connector

G. SATA channel C connector

H. SATA channel A connector

I. Backplane power connector

J. SATA channel E connector

Figure 3. Rear of SATA Backplane

Hot-Swap SCSI Backplane Connections

The diagram below shows the connection points on the rear of the SCSI backplane. The power supply, server board and a SCSI RAID card can be connected to the locations below.

TP01364

A. SCSI connector

B. OPT connector

C. Location for sixth drive board (accessory)
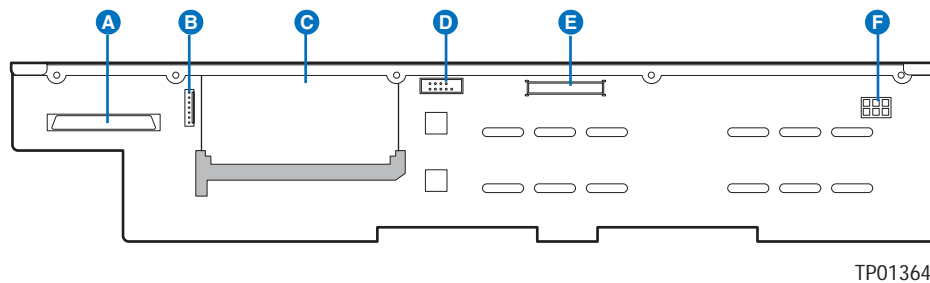
D. Fan distribution cable connector

E. Flex cable connector

F. Backplane power connector

Figure 4. Rear of SCSI Backplane

Standard Control Panel

The diagram below shows the features available on the Standard Control Panel. The Standard Control Panel is one of two required control 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 Control Panel."
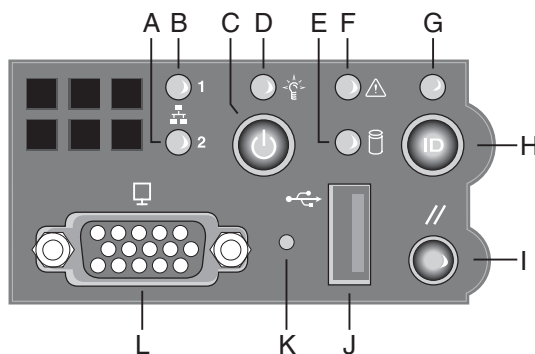
TP00779

Callout	Feature	Function
A	NIC 2 activity LED	Blinking green light indicates network activity.
B	NIC 1 activity LED	Continuous green light indicates a link between the system and the network to which it is connected.
C	Power/Sleep button	Toggles the system power on/off. Sleep button for ACPI-compatible operating systems.
D	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.
E	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.
F	System Fault 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.
G	System Identification LED	Solid blue indicates system identification is active. No light indicates system identification is not activated.
H	System identification button	Toggles the front panel ID LED and the baseboard ID LED on and off. The baseboard LED is visible from the rear of the chassis and allows you to locate the server from the rear of a rack of systems.
I	Reset button	Reboots and initializes the system.
J	USB 2.0 port	Allows you to attach a USB component to the front of the chassis.
K	NMI button	Puts the server in a halt-state for diagnostic purposes.
L	Video port	Allows you to attach a video monitor to the front of the chassis. The front and rear video ports cannot be used at the same time.

Figure 5. Standard Control Panel

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 control options that can be selected. The other option is the Standard Control Panel. For instructions on installing the Standard Control Panel, see "Replacing the Control Panel".

✏️ **NOTE**

> This control panel requires the installation of the Intel® Management Module, Professional Edition or Advance Edition. Some server boards do not support this control panel. See your server board documentation to determine if this control panel is compatible with your server board.
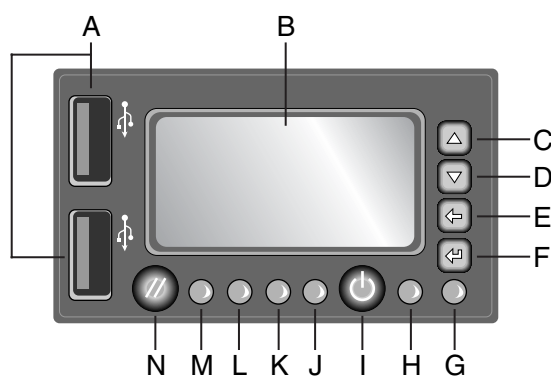
TP00780

Callout	Feature	Function
A	USB 2.0 ports	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, scroll right	Move to the previous page.
G	System Identification LED	Solid 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

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.
L	NIC 1 activity LED	Continuous green light indicates a link between the system and the network to which it is connected.
K	NIC 2 activity LED	
		Blinking green light indicates network activity.
M	Hard disk drive status LED	Random blinking green light indicates hard disk drive activity (SCSI or SATA).
		No light indicates no hard disk drive activity.
N	Reset button	Reboots and initializes the system.

Figure 6. Intel® Local Control Panel

Back Panel Features
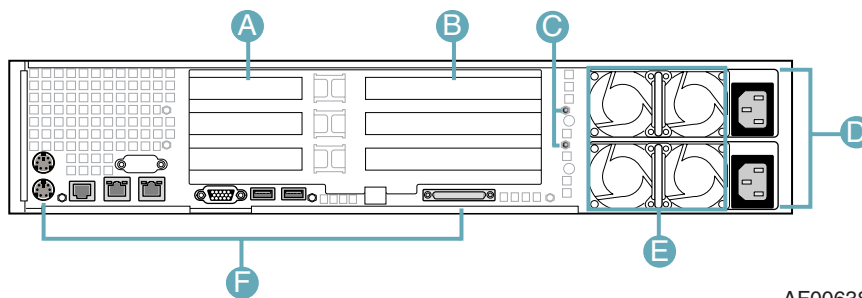
AF00638

A. Low-profile add-in card bracket   D. AC power receptacles (top receptacle for optional redundant power supply)

B. Full-height add-in card bracket   E. Power supply fans (shown with optional power module installed)

C. Grounding studs   F. I/O ports (see note)

Notes:
1. I/O connectors vary, depending on the server board installed. See your server board documentation for port identification.
2. AC back panel shown; DC back panel differs.

Figure 7. Chassis Back

Peripheral Devices

The chassis provide locations and hardware for installing hard drives, a floppy drive, CD-ROM drive, or DVD-ROM drive, and a bay for installing a tape drive. The drives must be purchased separately. The following figure shows the available options.
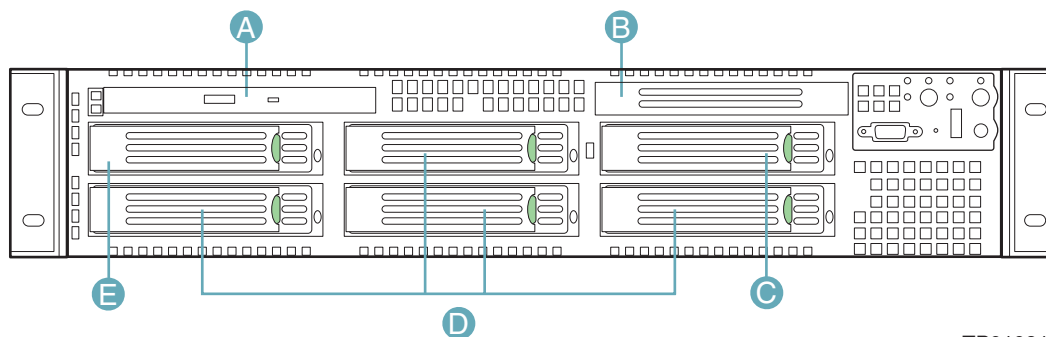
TP01091

A. Slimline floppy drive / DVD / CD-ROM drive bay
B. Tape drive bay (optional kit required). See note below.
C. Sixth drive bay (optional kit required) or merged with tape drive bay (see note below)
D. Hard drive bays (four of five, see letter "E" for the fifth drive bay)
E. Fifth hard drive bay or bay for installing floppy drive conversion kit (optional kit required)

Note: When a tape drive is installed, it encompasses both the tape drive bay and the sixth drive bay. You cannot install both a tape drive and a sixth drive.

Figure 8. Optional Peripherals

Hard Disk Drives

The Intel® Server Chassis SR2400/SR2400DC supports both a hot-swap (SCSI and SATA) and a non-hot-swap (SATA only) configuration. If the non-hot-swap configuration is used, before replacing a hard 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 or DC external source from the system or wall outlet.

The left top drive bay (directly under the slimline bay) can be converted to be used for a floppy drive. To use the bay for a floppy drive, the AXXFLOPHDDTRAY accessory kit must be used.

For information on how to install a 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 SR2400/SR2400DC 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 Drives

The slimline drive carriers included with your server chassis can be used with one slimline floppy, CD-ROM or DVD-ROM drives. There are two carriers that ship with the chassis. One carrier is for a CD-ROM or DVD ROM; the other is for a slimline floppy.

The floppy drive / CD-ROM / DVD-ROM cage can be inserted or removed only when system power is turned off. Drives in the slimline cage are NOT hot swappable. For installation instructions for a floppy drive, see "Installing or Removing a Floppy Drive." For installation instructions for a CD-ROM or DVD-ROM drive, see "Installing or Removing a CD-ROM or DVD-ROM Drive."

✏ **NOTES**

> The optional kit to convert a hard drive bay to a floppy drive bay must be used if both a CD-ROM / DVD-ROM drive and a floppy drive are needed.

> The Intel Server Chassis SR2400 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. To use one of the drives provided by Intel, use the following order codes:
> - Slimline CD-ROM Drive: AXXSCD
> - Slimline DVD/CDR Drive: AXXDVDCDR
> - Slimline Floppy Drive: AXXSFLOPPY

Tape Drive

A SCSI tape drive can be installed into the combined tape drive bay and the sixth drive bay at the upper right side of the chassis. If a tape drive is installed, the sixth drive kit cannot be installed; the tape drive installation merges the two bays into one to accommodate the height of a tape drive.

The carrier to install a tape drive is an optional accessory kit that must be purchased separately. The order number is ADRTAPEKIT. A tape drive is not included with the accessory kit. For instructions on installing a tape drive, see "Installing a Tape Drive."

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, 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.

✎ **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 Server Chassis SR2400 is designed to be mounted into a rack. The Intel SR2400 server chassis can be mounted using one of two accessories; the first is a tool-less rail kit and the second is a fixed rail kit. When installing the chassis into a rack, 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.

The order numbers are as follows:

- Tool-less Rail Kit: AXXHERAIL
- Fixed Rail Kit: AXXBRACKETS
- Cable Management Arm: AXXRACKCARM (requires the tool-less 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 other 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:

- Black bezel for use with the Standard Control Panel: ADRBEZBLACK
- Black bezel for use with the Intel® Local Control Panel: ADRLCDBEZEL

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 and are based on the reader 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 Intel® Server Chassis SR2400/SR2400DC 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 chassis. Before removing the top cover, power down the server and unplug all peripheral devices and the AC power cable or DC external source. Except for the redundant power supply, none of the components inside the chassis 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 or DC external source.
4. Remove the shipping screw (if installed). See letter "A" in the figure below.
5. While holding in the blue button at the top of the chassis in (see letter "B"), slide the top cover back until it stops (see letter "C").
6. Lift the cover upward and remove it. A notch in the cover is provided to help lift it upward to remove it (see letter "D").
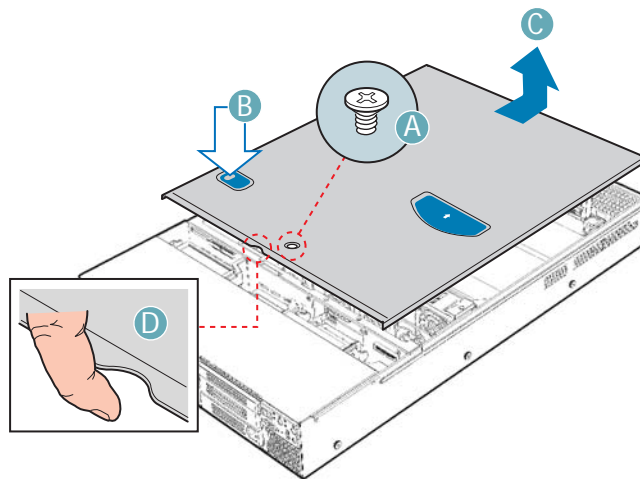
TP01092

Figure 9. 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. See letter "B" in the figure.
4. Reconnect all peripheral devices and the AC power cord or DC external source.
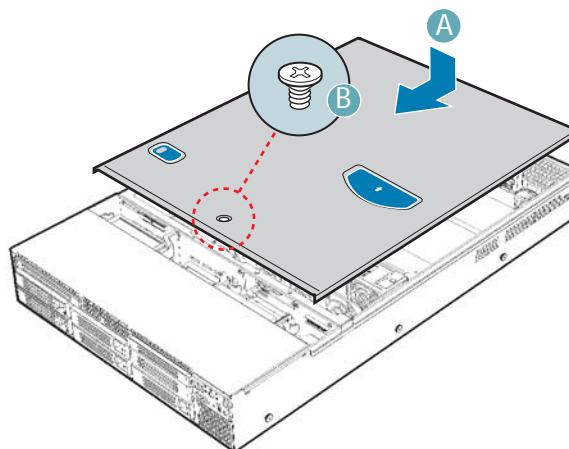
TP01093

Figure 10. Installing the Chassis Cover

Removing and Installing the Front Bezel

The front bezels are available as optional accessories for the Server Chassis SR2400. 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. The installation steps are the same for both bezels. If you are installing a bezel on your chassis, make sure you position it with the control panel area at the top right.

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.
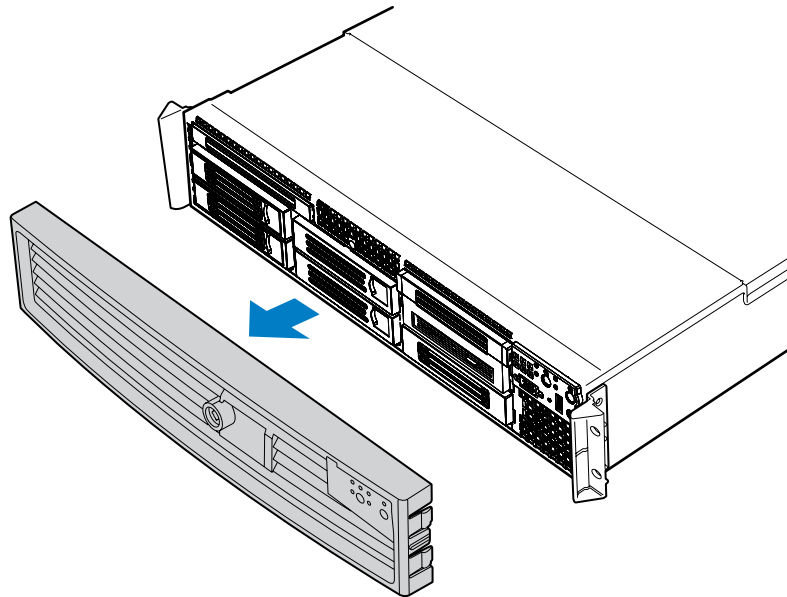
TP01344

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. Connect any necessary cables to the control panel area at the right side of the chassis.
4. (Optional): Lock the bezel.
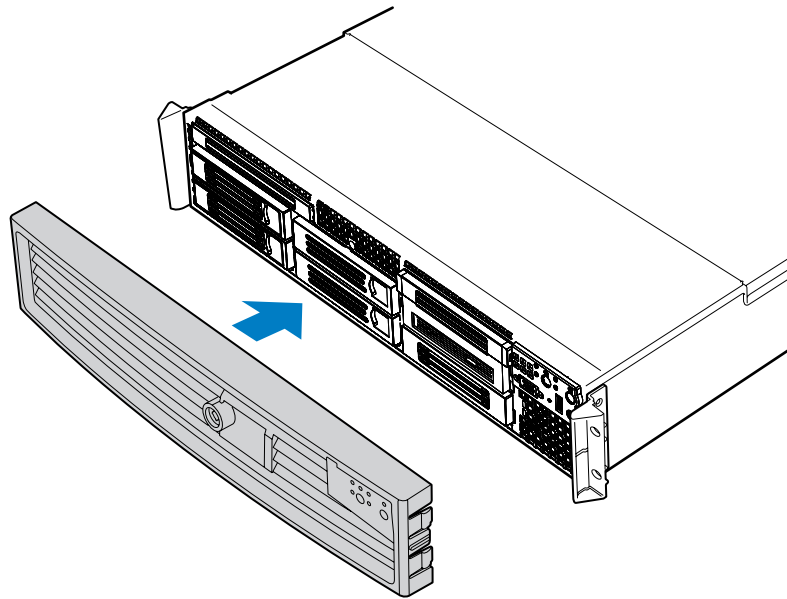
TP01342

Figure 12. Installing the Front Bezel

Removing and Installing the Processor Air Duct and Processor Air Dam

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

For instructions on adding or replacing a processor, first remove the processor air duct and the processor air dam, and then see your server board user guide for instructions on processor installations and removals. Return to these instructions to reinstall the processor air dam and 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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Lift the processor air duct from its location over the processor socket(s). See the figure below.
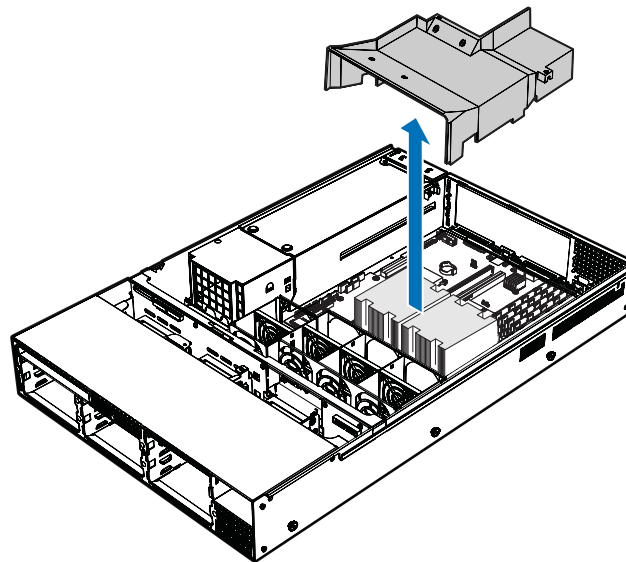
TP01343

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 or DC external power.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. If you are installing a second processor, remove the air dam on the underside of the processor air duct. For instructions, see "Removing the Processor Air Dam".
5. If you are removing a second processor, install the air dam on the underside of the air duct. For instructions, see "Installing the Processor Air Dam."
6. 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 power supply. Use caution not to pinch or disengage cables that may be near or under the air duct.
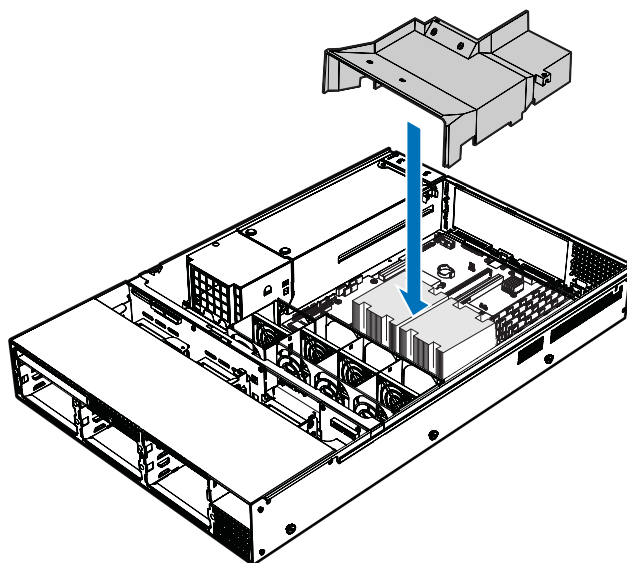
TP01116

Figure 14. Installing the Processor Air Duct

7. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
8. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Removing the Processor Air Dam

If you install only a single processor, the processor air dam must be installed on the underside of the processor air duct. If you install two processors, the air dam must be removed from the air duct.

For instructions on adding or replacing a processor, first remove the processor air duct and the processor air dam, and then see your server board user guide for instructions on processor installations and removals. Return to these instructions to reinstall the processor air dam and 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 or DC external source.
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. Turn the processor air duct over to reveal the underside of it.
6. Remove the air dam by sliding the slotted holes from the duct pins. See the figure below. Save the air dam for future use.
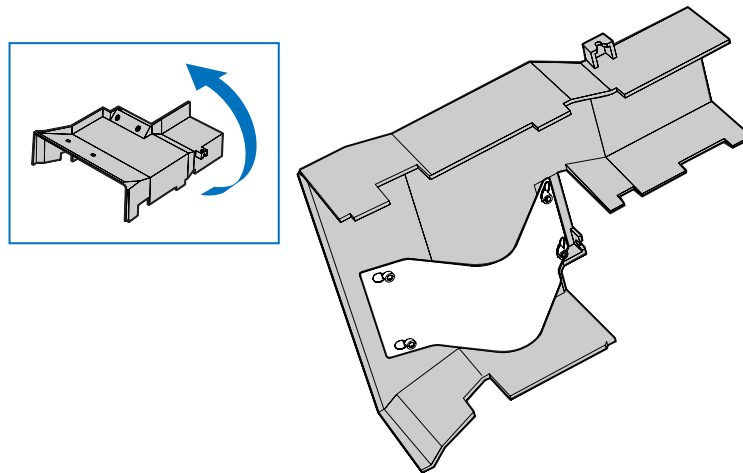
TP01117

Figure 15. Installing the Processor Air Dam

7. Install the processor air duct. For instructions, see "Installing the Processor Air Duct."
8. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
9. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Installing the Processor Air Dam

The air dam is installed on a server board that supports two processors but only one processor is to be installed. Remove the air dam only if you will be installing a second processor. If you have removed the second processor from the server, install the processor air dam as follows:

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 or DC external source.
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. Turn the processor air duct over to reveal the underside of it.
6. Install one end of the air dam by sliding the slotted holes onto the matching pins in the air duct.
7. Install the opposite end of the air dam, while holding the center of the air dam out, so it pushes away from the air duct.
8. Install the processor air duct. For instructions, see "Installing the Processor Air Duct."
9. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
10. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Removing and Installing the Air Baffles

Some installation processes will require that you remove the air baffle(s). Depending on your server configuration, you will have either one or two air baffles. If your system uses a hot-swap backplane, you have two air baffles:

- A small air baffle is attached to the drive cage area, in front of the backplane.
- A large air baffle is installed between the power supply and the back of the backplane. The large air baffle differs, depending upon whether you have an AC or a DC model of the server chassis.

If your system uses fixed drives, you have one air baffle that is attached between the power supply and the drive cage area.

The steps below describe how to remove and then install the air baffle(s). Use these steps only when it is indicated as necessary for a component installation process. Always operate your server chassis with the air baffle(s) in place. Air baffles are required for proper airflow within the chassis.

Removing the Large Hot-swap Air Baffle (Backplane Installed)

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. **Important:** Note how the cables are routed around and under the air baffle. You will need to re-route these cables when you re-install the baffle.
5. Pull up on the air baffle to remove it. See the figure below. You may need to remove or hold cables out of the way.
6. Return to the procedure that directed you to remove the large air baffle.

TP01347
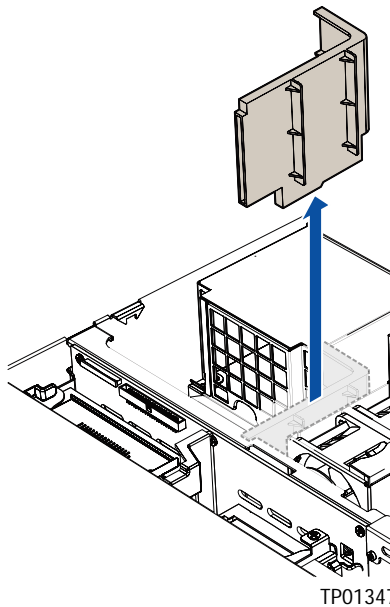
* Air baffle for AC model shown; air baffle for DC model differs.

Figure 16. Removing the Large Hot-swap Air Baffle

Installing the Large Hot-swap Air Baffle (Backplane Installed)

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Lower the baffle into the chassis between the power supply and the back of the backplane, using your notes from the air baffle removal steps to re-route the cables.
5. Line up the guide pin on the chassis floor with the matching hole in the baffle. See letter "A" in the figure below.
6. Push down on the baffle to secure it to the chassis. Use caution so you do not pinch any cables under the baffle.
7. Return to the procedure that directed you to install the large air baffle.
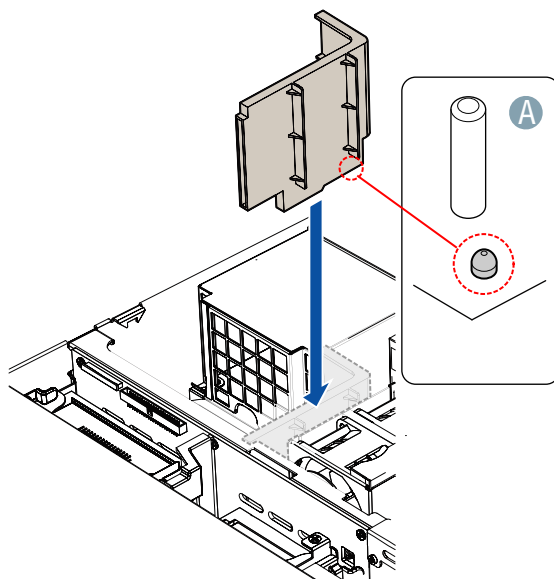
TP01185

* Air baffle for AC model shown; air baffle for DC model differs.

Figure 17. Installing the Large Hot-swap Air Baffle

Removing the Small Hot-swap Air Baffle (Backplane Installed)

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Remove the large air baffle. For instructions, see "Removing the Large Hot-swap Air Baffle (Backplane Installed)."
5. Remove the fan module. For instructions, see "Removing the Fan Module."
6. Remove the SATA or SCSI backplane. For instructions, see "Removing a SATA or SCSI Backplane."
7. **Important:** Note how cables are routed around and under the air baffle. You will need to re-route these cables when you reinstall the air baffle.
8. Pull up on the air baffle to remove it, disengaging the hooks that attach the baffle at the rear of the drive bay area. See letter "A" in the figure below. You may need to remove or hold cables out of the way.
9. Return to the procedure that directed you to remove the small air baffle.
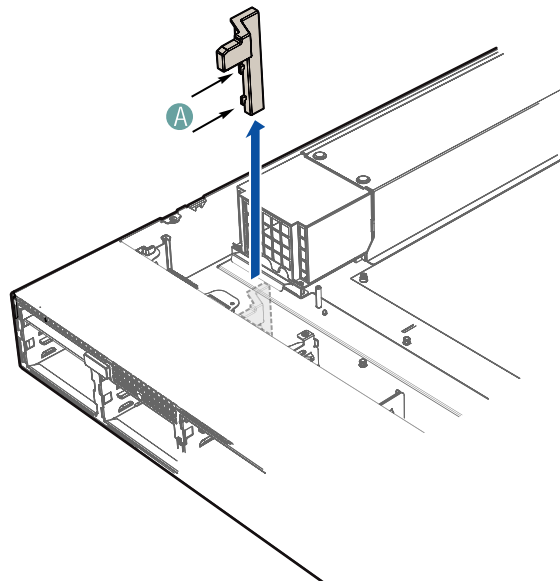
TP01348

Figure 18. Removing the Small Hot-swap Air Baffle

Installing the Small Hot-swap Air Baffle (Backplane Installed)

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Remove the fan module. For instructions, see "Removing the Fan Module."
5. Remove the backplane. For instructions, see "Removing a SATA or SCSI Backplane."
6. Lower the small baffle into the chassis behind the drive bay area, using your notes from the air baffle removal steps to re-route any cables.
7. Insert the two hooks on the baffle into the matching slots at the rear of the drive area. See letter "A" in the figure below.
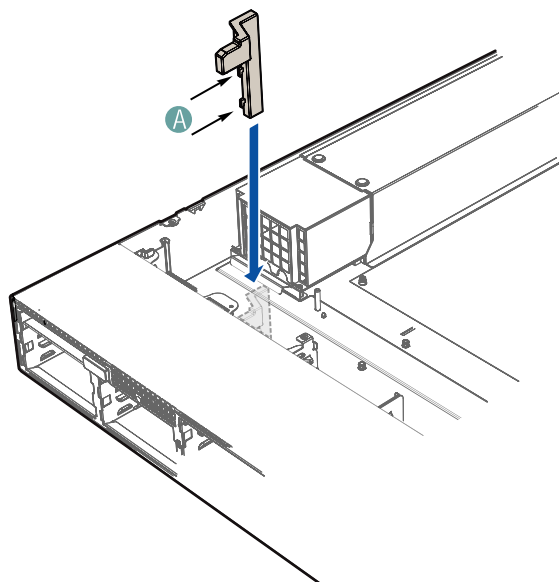
TP01182

Figure 19. Installing the Small Hot-swap Air Baffle

8. Install the backplane. For instructions, see "Installing a Replacement SATA or SCSI Backplane."
9. Install the fan module. For instructions, see "Installing the Fan Module."
10. Return to the procedure that directed you to install the small air baffle.

Removing the Fixed Drive Air Baffle (No Backplane Installed)

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. **Important:** Note how the cables are routed over and under the air baffle. You will need to re-route these cables when you re-install the air baffle.
5. Pull up on the rear of the air baffle and slide the front of the baffle from beneath the drive cage area to remove it. See the figure below. You may need to remove or hold cables out of the way.
6. Return to the procedure that directed you to remove the fixed drive air baffle.
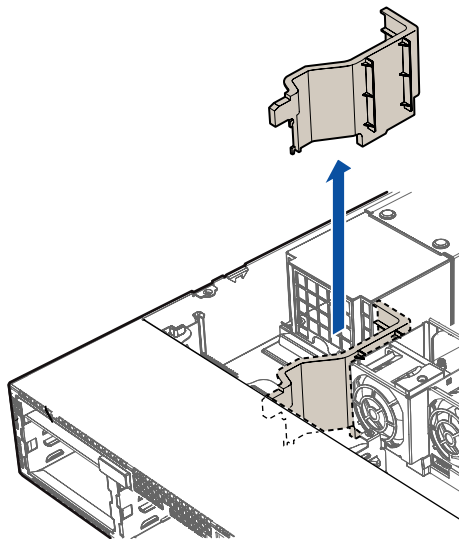
TP01367

* Air baffle for AC model shown; air baffle for DC model differs.

Figure 20. Removing the Fixed Drive Air Baffle

Installing the Fixed Drive Air Baffle (No Backplane Installed)

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Hook the front of the air baffle under the drive bay area at the left of the fan module, engaging the two small hooks at the front of the air baffle. See letter "A" in the figure below.
5. Lower the baffle into the chassis behind the drive bay area, using your notes from the air baffle removal steps to re-route any cables. See letter "B" in the figure below.
6. Line up the guide pin on the chassis floor with the matching hole in the baffle. See letter "C" in the figure.
7. Push down on the baffle to secure it to the chassis. Use caution so you do not pinch any cables under the baffle.
8. Return to the procedure that directed you to install the fixed drive air baffle.
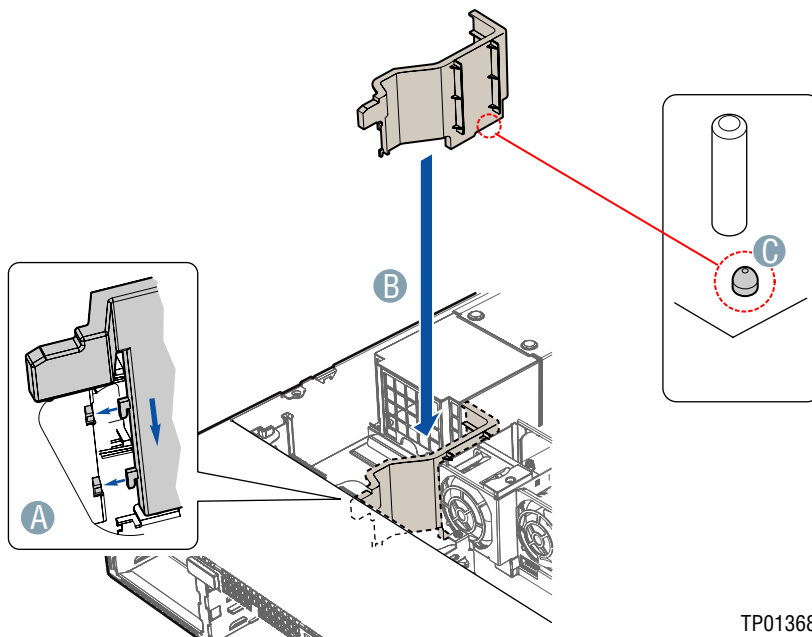
TP01368

* Air baffle for AC model shown; air baffle for DC model differs.

Figure 21. Installing the Fixed Drive Air Baffle

Removing and Installing the Fan Module

Some installation processes will require that you remove and later re-install the fan module. The steps below describe how to remove and then install this component. Use these steps only when it is indicated as necessary for a component installation process.

Removing the Fan Module

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Disconnect the fan module cable from the fan module.
5. Pull up on the release tab at the left side of the fan module to release it from the chassis. See letter "A" in the figure below.
6. Slide the fan module to the left until it stops.
7. Lift the module from the chassis floor. See letter "B" in the figure.
8. (Hot-swap systems only): Disconnect the fan distribution cable from the backplane.
9. Remove the fan module from the chassis.
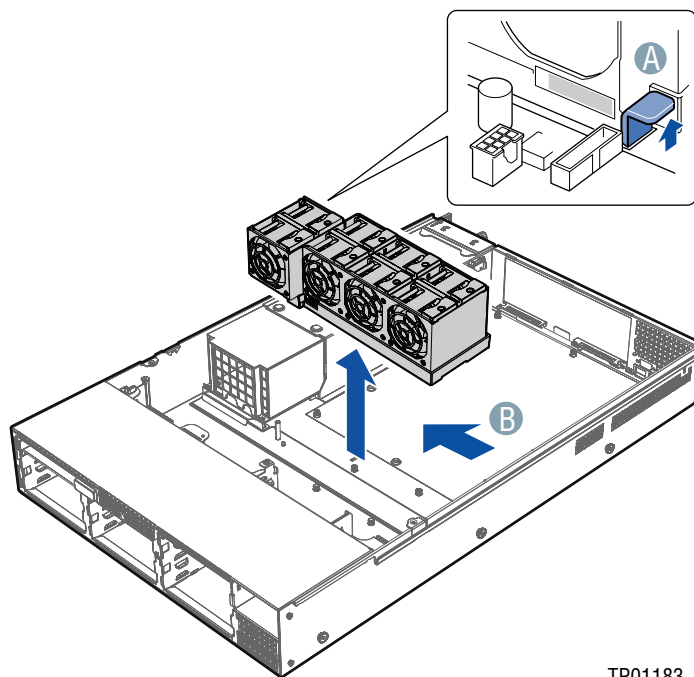
Figure 22. Removing the Fan Module

Installing the Fan Module

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. (For hot-swap system only): Attach the fan distribution cable between the backplane and the fan module. See letters "A" and "B" in the figure below.
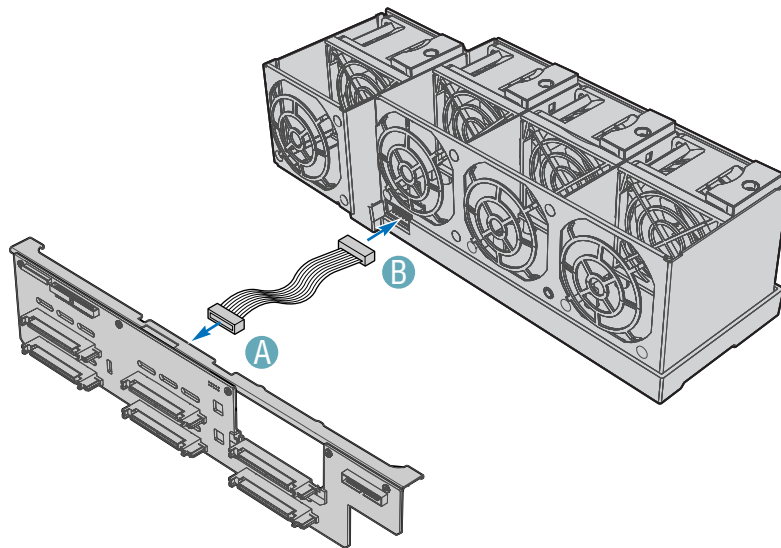
TP01080

Figure 23. Connecting the Fan Distribution Cable

5. Place the fan module over the chassis standoffs and slide the module to the right until the blue tab clicks into place. See letter "A" in the figure below.
6. Connect the folded fan module ribbon cable to the fan module. See letter "B" in the figure.
7. If it is not already connected, connect the other end of the ribbon cable to the server board. See letter "C" in the figure.
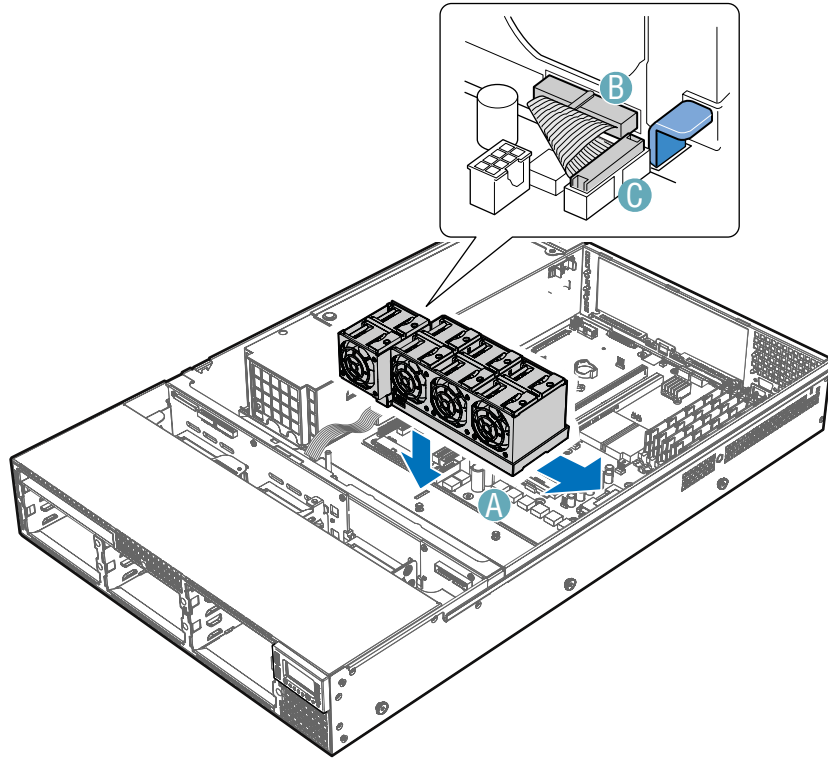
TP01081

Figure 24. Installing the Fan Module

Installing and Removing a Hard Disk Drive

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

- Five hot-swap SATA drives if the SATA backplane is installed.
- Five hot-swap SCSI drives if the SCSI backplane is installed.
- Three fixed SATA drives if the fixed drive kit is installed.
- Six hot-swap SATA drives if both the SATA backplane and the sixth drive kit are installed.
- Six hot-swap SCSI drives if both the SCSI backplane and the sixth drive kit are installed.

NOTE

The Intel Server Chassis SR2400 does not support all hard drives. See "Additional Information and Software" for an Internet link to a list of supported hardware.

Removing a SATA or SCSI Hot-swap Hard Disk Drive

Use these instructions only if you have installed the SATA or SCSI backplane kit.

1. Remove the front bezel if it is installed. For instructions, see "Removing 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.
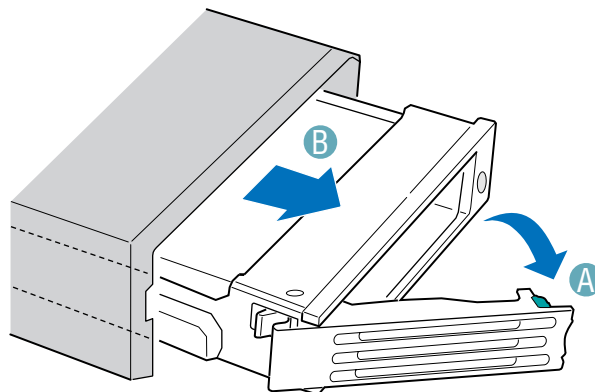
TP00786

Figure 25. Removing the Hot-swap Hard Drive Carrier from the Chassis

4. Remove the four screws that attach the plastic retention device or the previously installed hard drive to the drive carrier. Two screws are at each side of the retention device or the hard drive. If required, store the plastic retention device for future use.
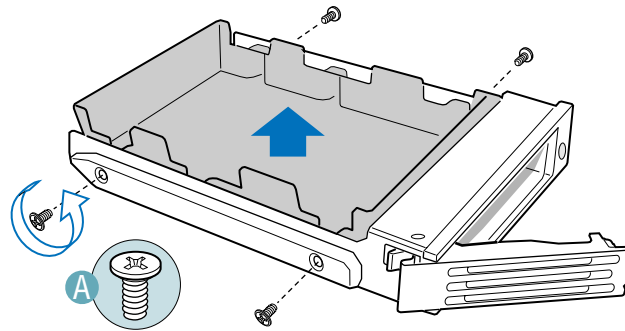
TP00787

Figure 26. Removing the Retention Device from the 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.
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.
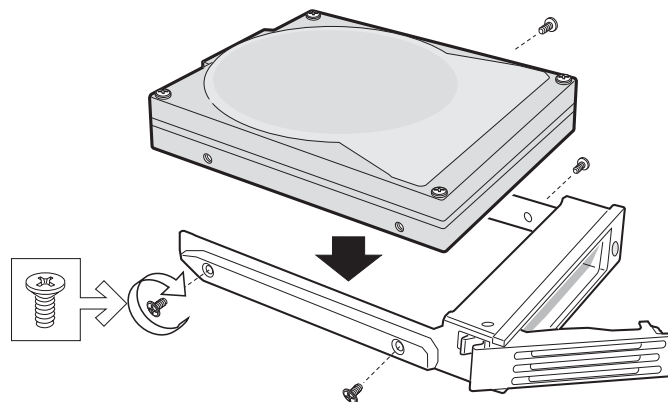
TP00736

Figure 27. Attaching a Hot-swap Hard Disk Drive to a Drive 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. See letter "A" in the figure below. 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. See letter "B" in the figure.
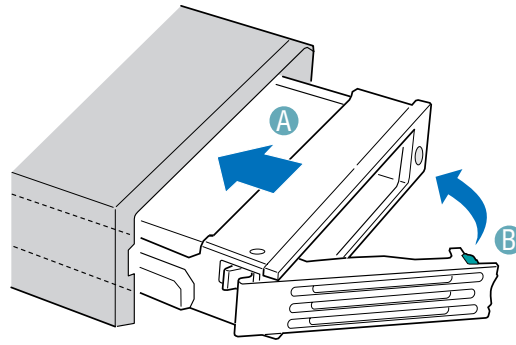
TP00789

Figure 28. Inserting a Hot-swap Hard Disk Drive Assembly into the Chassis

7. (SATA installation only): Connect the SATA cable(s) labeled SATA CH A and SATA CH B to the backplane. See letter "A" in the figure below to locate the backplane. See letter "B" in the figure to identify the end of the SATA cable that is attached to the backplane. In the figure below, the SATA board showing the SATA cable connections is shown as if you were looking at the chassis from the rear.

8. (SATA installation only): If you will be using the SATA connections on the server board, connect the 90-degree end of the SATA cable(s) to the corresponding server board connection(s). The cable connected to SATA CH A should be connected to SATA 0. The cable connected to SATA CH B should be connected to SATA 1. See letter "C" in the figure below to identify the end of the SATA cable that is attached to the server board. See your server board documentation to locate the SATA connection points on the server board.

If you will be using an add-in SATA RAID controller, connect SATA CH A through SATA CH E to the appropriate connectors on the add-in card. See your add-in card documentation for the appropriate SATA connections.
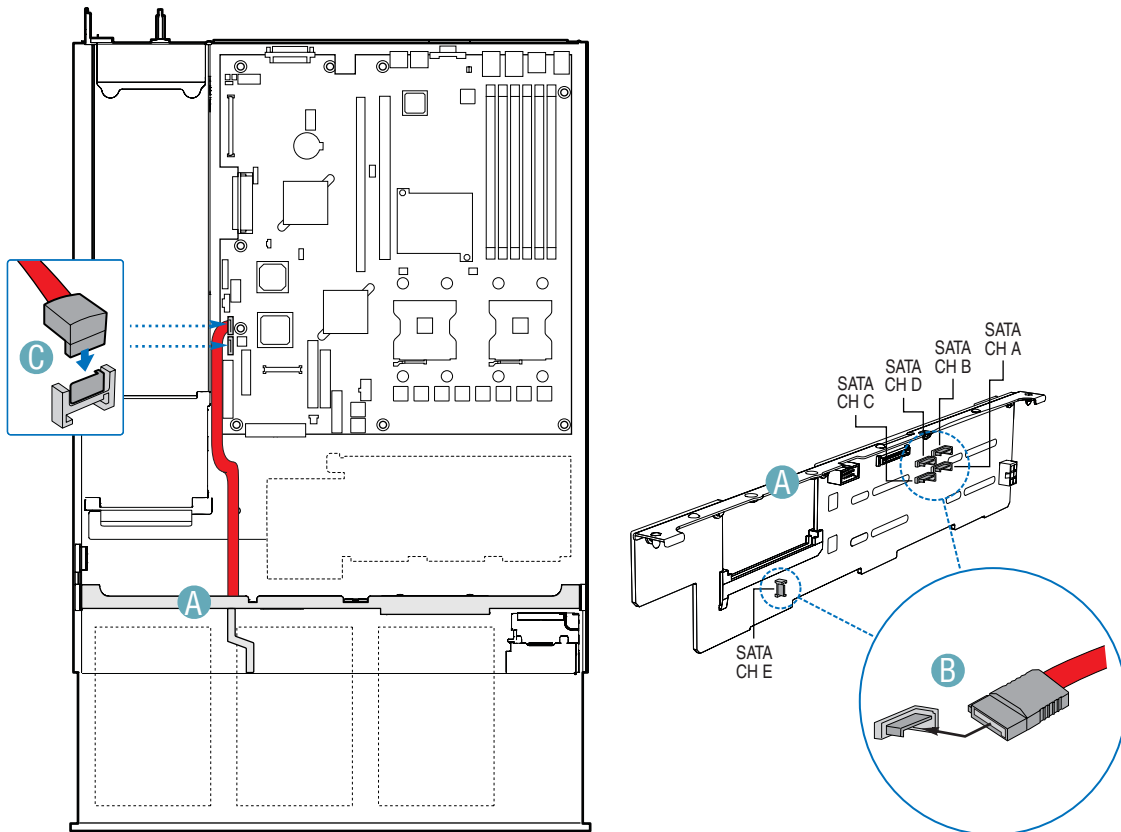
TP01365

Figure 29. Connecting the Hot-swap SATA Data Cables

9. (SCSI installation only): Connect the end of the SCSI cable that is labeled "Backplane" to the backplane SCSI Connector. See letter "A" in the figure below.

10. (SCSI installation only): Connect the end of the SCSI cable that is labeled "Server Board" to the SCSI connection on the server board if not already connected. See letter "B" in the figure below. See your server board documentation to locate the SCSI connection point on the server board.

TP01075
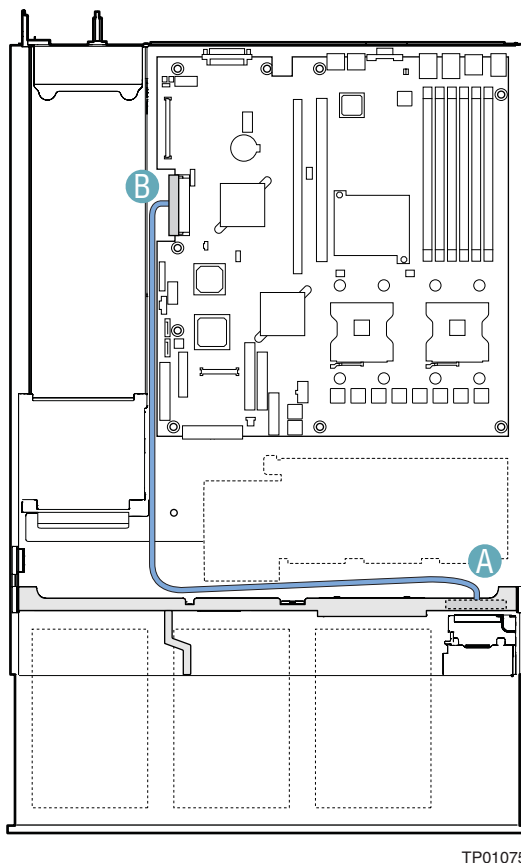
Figure 30. Connecting the SCSI Data Cable

11. (Optional) Install the front bezel. For instructions, see "Installing the Front Bezel."

Installing a Fixed SATA Hard Disk Drive

Use these instructions only if you have installed the fixed drive kit.

⚠ CAUTION

Fixed 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 removing the AC power cord or DC external source 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 or DC external source.
3. Remove the front bezel if it is installed. For instructions, see "Removing and Installing the Front Bezel."
4. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
5. Press the latch on the back of the fixed drive carrier and slide the carrier from the bay. See letter "A" in the figure below to identify the latch at the rear of the carrier.
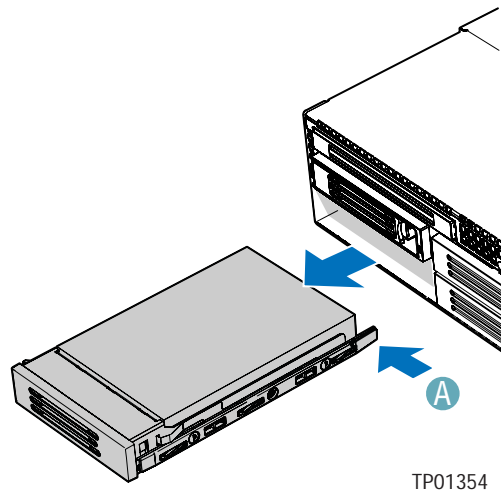
TP01354

Figure 31. Removing a Fixed Hard Drive Carrier from the Chassis

6. Remove the four screws that attach the plastic retention device or the previously installed hard drive to the drive carrier. Two screws are at each side of the retention device or the hard drive. If required, store the plastic retention device for future use.
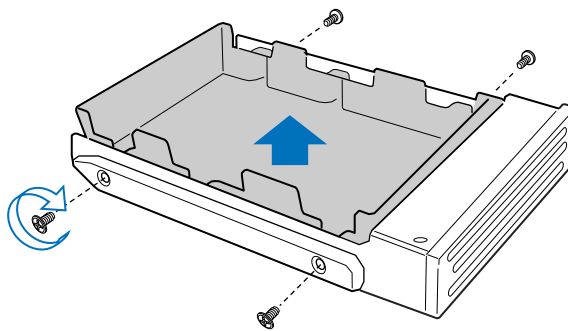
TP01304

Figure 32. Removing the Retention Device from the Fixed Drive Carrier

7. With the drive circuit-side down, position the connector end of the drive so that it is facing the back of the carrier.
8. Attach the hard drive to the carrier using the four screws removed from the carrier.
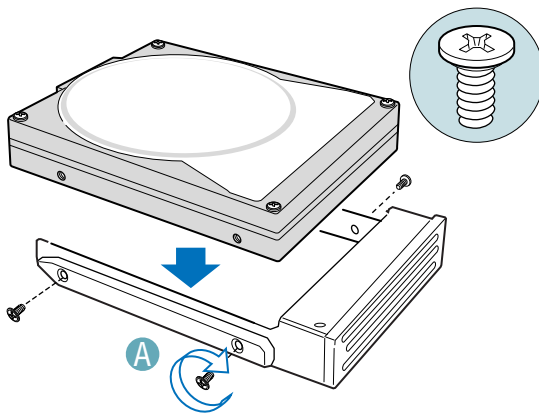
TP00788

Figure 33. Attaching a Hard Drive to the Fixed Drive Carrier

9. Insert the drive into the bay until it clicks into place. Install drives first into the lower three drive bays for the easiest cable routing.

10. If it is not already installed, connect the SATA power cable adapter to the 3x2 power supply cable that extends from your power supply. See letters "A" and "B" in the figure below. The power cable adapter was provided to you with the fixed drive kit.

TP01161
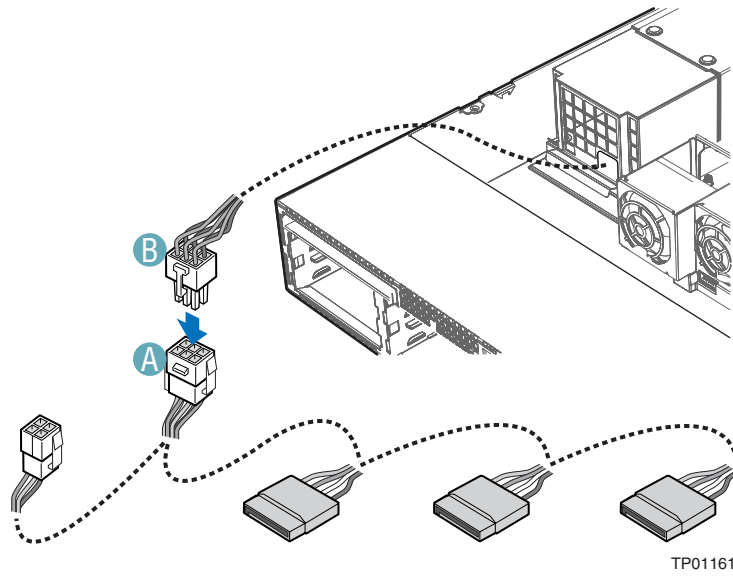
Figure 34. Installing the Fixed SATA Drive Power Cables

11. For each drive you install, route one SATA data cable from the server board or add-in card to the hard drive, with the right-angle end of the SATA data cable connected to the server board or add-in card SATA connector. See letter "B" in the figure below and see your server board documentation or add-in card documentation for assistance in locating the SATA connectors on the board or add-in card.

12. See letters "C" and "D" in the following figure and the arrow that leads from these letters to the component in the chassis. This component is the air baffle that is referred to in the following steps. The letters "C" and "D" point to the cutouts that are referred to in the step below.

13. Data cables for drives installed to the right of the air baffle must be routed through the two cutouts at the bottom of the air baffle (letters "C" and "D" in the figure). The data cable for drives installed to the left of the air baffle must be routed through the rear cutout of the air baffle (letter "D"). You may need to remove the air baffle to route the cables underneath it. To see how to remove and then install the air baffle, see "Removing the Fixed Drive Air Baffle (No Backplane Installed)" and "Installing the Fixed Drive Air Baffle (No Backplane Installed)."

14. Connect the remaining end of the SATA data cable to the back of the SATA drive. See letter "A" in the figure below.
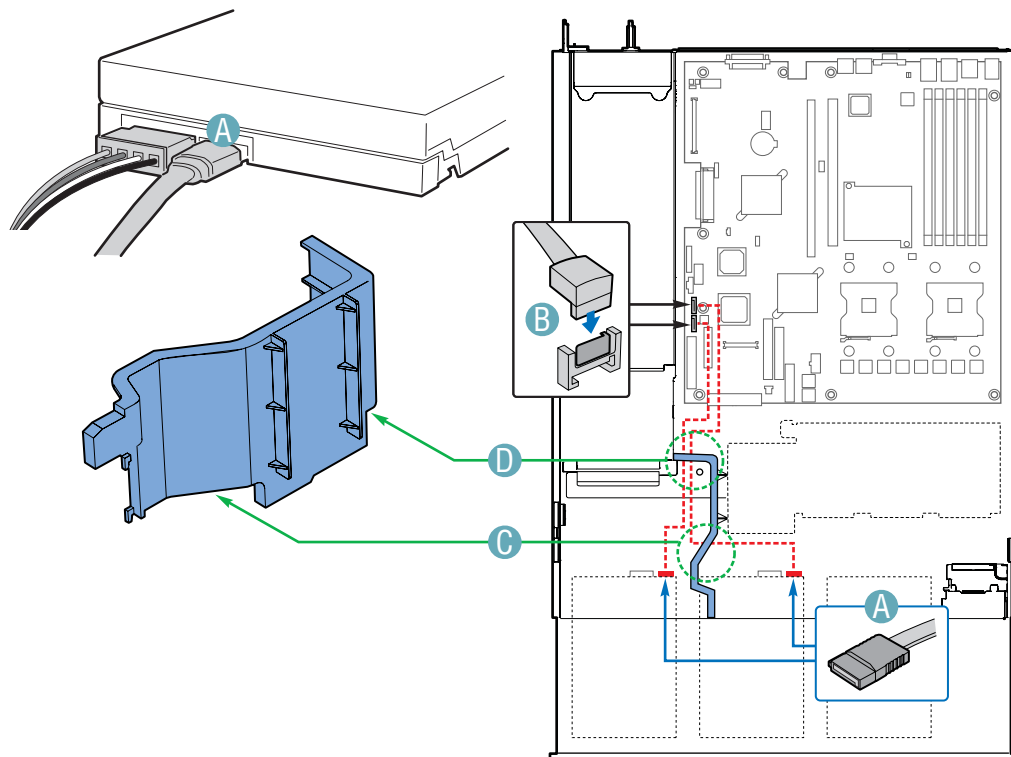
TP01324

* Air baffle for AC model shown; air baffle for DC model differs.

Figure 35. Installing the Fixed SATA Drive Data Cables

15. Power cables for drives installed to the right side of the air baffle must be routed beneath the front cutout in the underside of the air baffle. See letter "B" in the figure below. The power cables for drives installed to the left of the air baffle do not need to be routed under the air baffle. You may need to remove the air baffle to route cables underneath it. To see how to remove and then install the air baffle, see "Removing the Fixed Drive Air Baffle (No Backplane Installed)" and "Installing the Fixed Drive Air Baffle (No Backplane Installed)."

16. Connect the SATA power cable adapter end(s) to the rear of the SATA drive. See letter "A" in the figure below to locate the connector on the SATA drive.

17. Install the chassis cover. For instructions, see "Removing the Chassis Cover."

18. Install the front bezel. For instructions, see "Removing and Installing the Front Bezel."
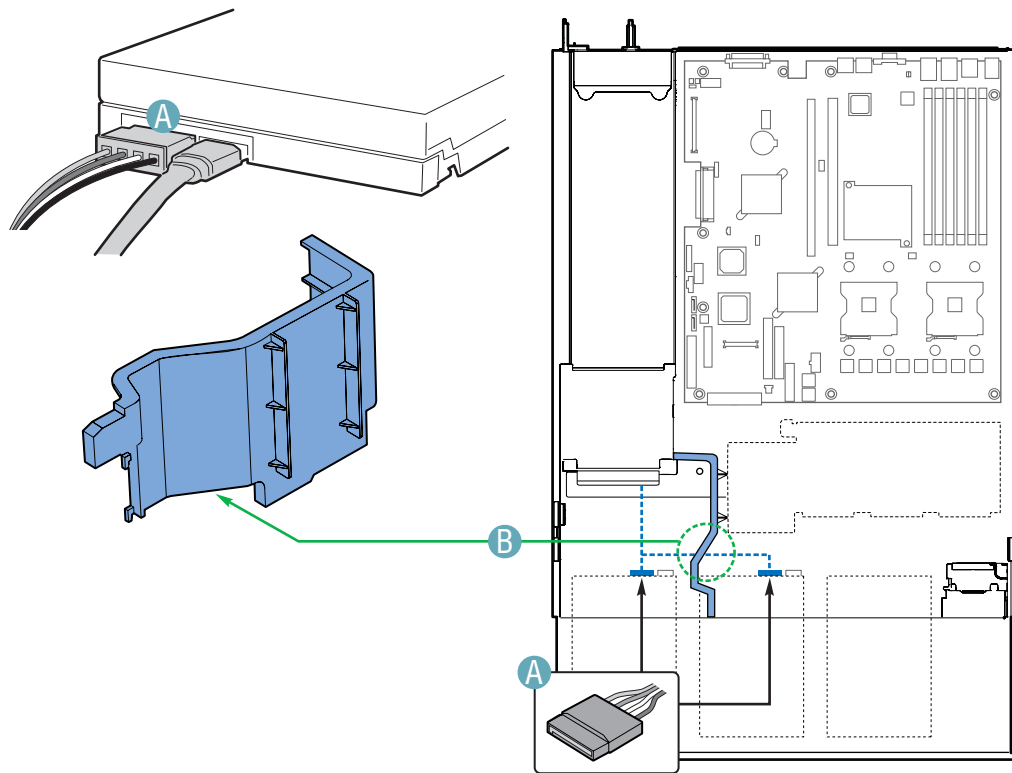
TP01325

* Air baffle for AC model shown; air baffle for DC model differs.

Figure 36. Installing the Fixed SATA Drive Power Cables

Removing a Fixed SATA Hard Disk Drive

⚠ **CAUTION**

> Fixed 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 remove the AC power cord or DC external source 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 or DC external source.
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 SATA data connector and power cables from the rear of the SATA drive and remove the SATA data cables. You may need to remove and then reinstall the air baffle to remove the SATA cables from the chassis. For instructions, see "Removing the Fixed Drive Air Baffle (No Backplane Installed)" and "Installing the Fixed Drive Air Baffle (No Backplane Installed)."
6. Press the latch on the back of the fixed drive carrier and slide it from the bay.
7. Remove the four screws that attach the hard drive to the drive carrier. Lift the drive from the carrier. Store the drive in an anti-static bag.
8. If you are not installing a new drive, place the plastic retention device into the drive carrier, using the four screws you removed from the hard drive.
9. Insert the screws that held the drive in the carrier into the screw locations on the carrier for future use.
10. Slide the drive carrier into the chassis until it clicks into place.

✎ **NOTE**

> For proper airflow, the hard drive carrier must be replaced in the chassis,
> even if no hard drive is installed in it.

11. (Optional) Install the front bezel. For instructions, see "Removing and Installing the Front Bezel."
12. Install the chassis cover. For instructions, see "Removing the Chassis Cover."
13. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Installing the SATA or SCSI Sixth Drive Accessory

The SATA and SCSI sixth drive accessories is used when a sixth SATA hot-swap drive or a sixth SCSI hot-swap drive is needed. The SATA or SCSI backplane accessory kit is required to install this accessory. After installing the sixth drive accessory kit, see "Removing a SATA or SCSI Hot-swap Hard Disk Drive" for instructions on installing a hot-swap disk drive.

✏ **NOTE**

> You cannot use the sixth drive accessory kit to mix installations of SATA and SCSI drives. In other words, if you have five SCSI drives installed, you cannot use the sixth drive accessory as a way to install a SATA drive. Your drive types must match the type of backplane that you have installed.

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 or DC external source.
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 the Front Bezel."
5. Remove the drive blank from the sixth drive bay by using a long screwdriver to push it out through the front of the chassis.
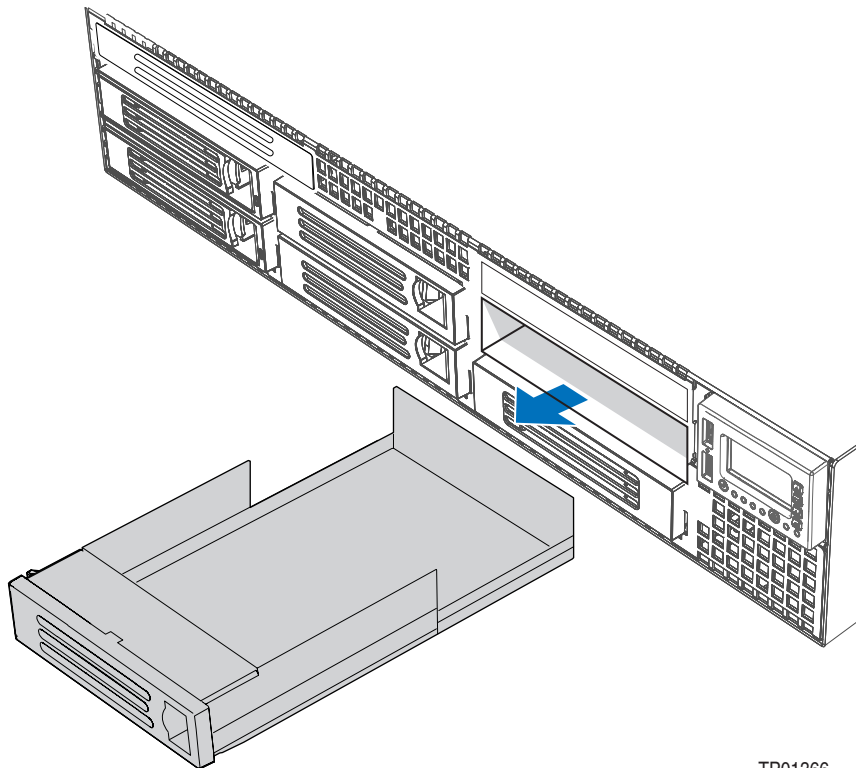
TP01366

Figure 37. Remove the Drive Blank from the Chassis

6. Remove the fan module. For instructions, see "Removing the Fan Module."
7. Hold the SATA or SCSI sixth drive accessory board about ¼-inch above the opening in the backplane to allow alignment notches to clear the top of the backplane bracket. Move the board forward into the opening and set it into place while lining up the two tabs on the sixth drive kit board with the matching holes on backplane. Be sure the board seats into the plastic retainer at the bottom of the backplane opening.
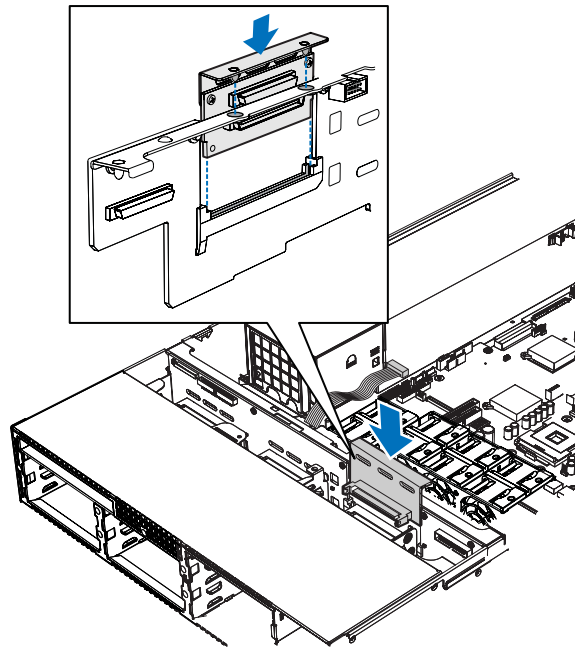
TP01084

Figure 38. Installing the Sixth Drive Board

8. (SATA sixth drive accessory only): Connect the end of the long SATA data cable that has the right-angle connector to the server board or to the add-in card. See your server board or add in card documentation for the connection point on the server board or add-in card. Connect the remaining end of the cable to the connector on the sixth drive board.
9. (SCSI sixth drive accessory only): Connect the end of the long SCSI cable that is labeled "Backplane" to the connector on the sixth drive board that is labeled "M/B." Connect the remaining end of the SCSI connector to the server board or add in card. See server board or add in card documentation for the connection location. For assistance in locating connectors on the backplane, see "Hot-Swap SATA Backplane Connections."
10. (SCSI sixth drive accessory only): Connect the end of short SCSI cable that is labeled "Backplane" to the backplane connector labeled "SCSI CH A." Connect the other end to the sixth drive board connector. For assistance in locating connectors on the backplane, see "Hot-Swap SCSI Backplane Connections."

11. Included with your sixth drive kit is a power cable connector labeled "Drive 5 Pwr." Connect one end of this cable into the connector labeled "OPT" on sixth drive board. Connect the remaining end of the Drive 5 power cable to the connector on the backplane that is labeled "OPT CONN."
12. Install the fan module. For instructions, see "Installing the Fan Module."
13. Install the chassis cover. For instructions, see "Removing the Chassis Cover."
14. Install the SATA or SCSI hard disk drive into the sixth drive position. For instructions, see "Removing a SATA or SCSI Hot-swap Hard Disk Drive."
15. (Optional): Install the front bezel. For instructions, see "Installing the Front Bezel."

Installing or Removing a Floppy Drive (Slimline or Standard)

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

- The SATA or SCSI backplane is installed and you want to install the floppy drive into the slimline drive bay.
- No backplane is installed and you want to install the floppy drive into the slimline drive bay.
- The SATA or SCSI backplane is installed and 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 server.

⚠ **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 remove the AC power cord or DC external source from the system or wall outlet.

Installing a Floppy Drive into Slimline Bay (Backplane Installed)

Use these instructions if you are installing a floppy drive into the slimline drive bay at the upper left side of your chassis and your system includes either the SATA or SCSI backplane. You will know if you have one of these backplanes installed if you can install either hot-swap SATA or hot-swap SCSI drives.

✏ **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 SR2400/SR2400DC.

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 or DC external source.
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 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 clicks into place. See letter "B" in the figure below.

TP01082

Figure 39. 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.
9. Push down on the connector cover to lock the cable into place. See letter "C" in the figure.
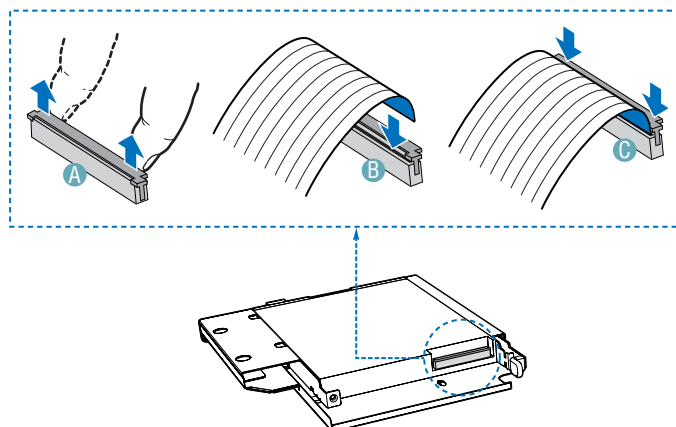
TP01144

Figure 40. Connecting the Flat Flex Cable to a Floppy Drive

10. Slide the floppy drive assembly into the slimline bay of the chassis until it clicks into place. See letter "A" in the figure below.

11. Open the connector labeled "Floppy Con" on the backplane by pulling up on the connector cover. See letter "B" in the figure below. For assistance in locating connectors on the SATA backplane, see "Hot-Swap SATA Backplane Connections." For assistance in locating connectors on the SCSI backplane, see "Hot-Swap SCSI Backplane Connections."

12. Insert the loose end of the floppy cable into the backplane connector. See letter "C" in the figure.

13. Push in on the connector cover to lock the cable into place. See letter "D" in the figure.
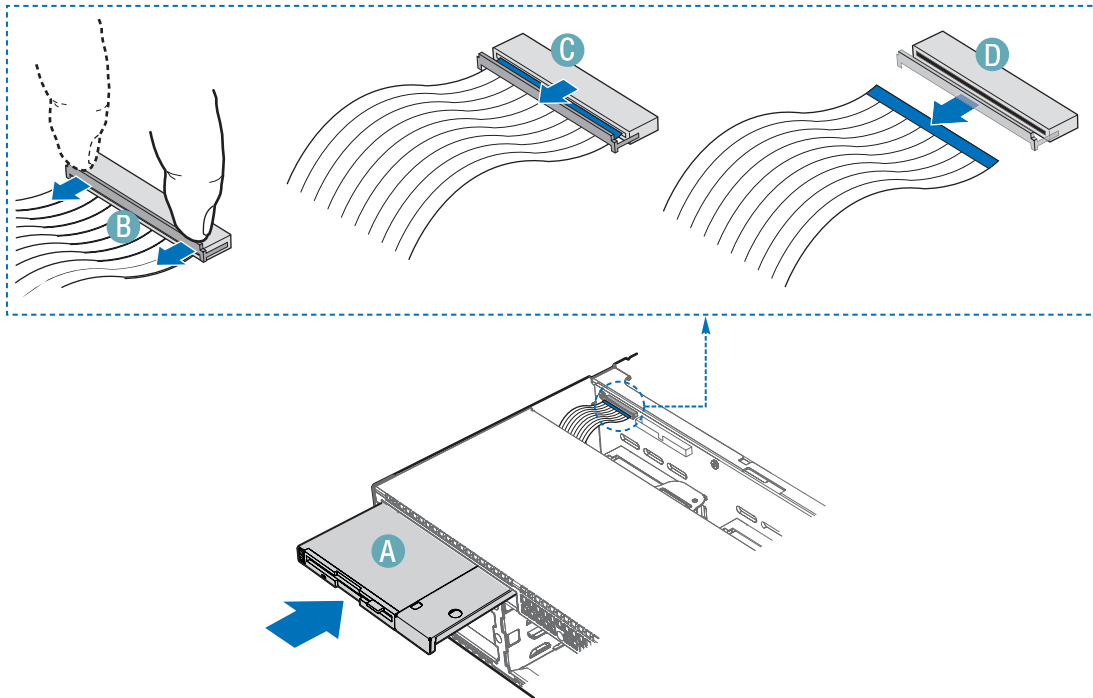
TP01105

Figure 41. Installing the Slimline Floppy Drive into the Chassis

14. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
15. (Optional): Install the front bezel. For instructions, see "Installing the Front Bezel."
16. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Removing a Floppy Drive from the Slimline Bay (Backplane Installed)

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 or DC external source.
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 the Front Bezel."
5. Pull up at the top of the connector on the backplane labeled "Floppy Con" to release the cable from it. For assistance in locating connectors on the SATA backplane, see "Hot-Swap SATA Backplane Connections." For assistance in locating connectors on the SCSI backplane, see "Hot-Swap SCSI Backplane Connections."
6. Push in on the blue lever at the rear of the drive carrier.
7. Slide the floppy drive carrier out through the front of the chassis.
8. Remove the data cable from the rear of the floppy.
9. Press downward on the side of the carrier to release the drive from the drive carrier.
10. Store the floppy drive carrier and the floppy drive data cable for future use.
11. Install the slimline filler panel into the chassis opening.
12. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
13. (Optional): Install the front bezel. For instructions, see "Installing the Front Bezel."
14. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Installing Floppy Drive into Slimline Bay (No Backplane Installed)

✏ **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 SR2400/2400DC. The interposer board and floppy drive power adapter cable used in these instructions was sent to you with your fixed drive kit.

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 or DC external source.
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 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 clicks into place. See letter "B" in the figure below.

TP01082

Figure 42. Installing a Slimline Floppy Drive into the 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 flat flex cable end into the connector. See letter "B" in the figure.

9. Push down on the connector cover to lock the cable into place. See letter "C" in the figure.

10. Open the connector on the interposer board by pulling out on the connector cover. See letter "D" in the figure below.

11. Insert the loose end of the floppy cable into the interposer board connector. See letter "E" in the figure.

12. Push in on the connector cover to lock the cable into place. See letter "F" in the figure.
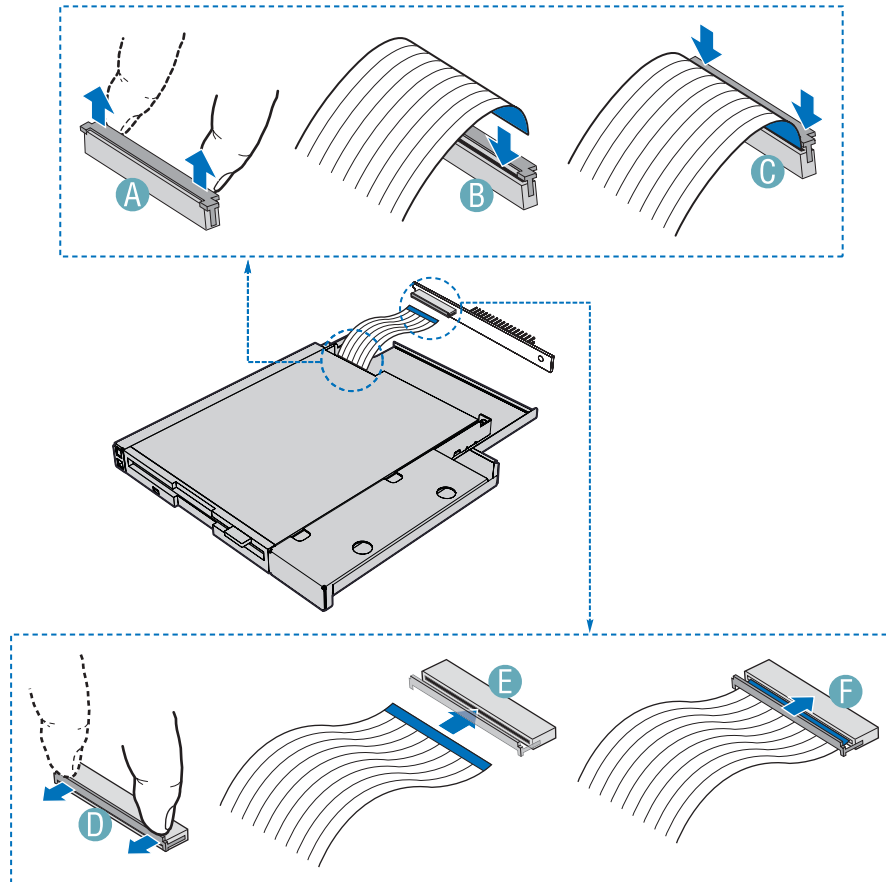
TP01162

Figure 43. Connecting the Flat Flex Cable to a Floppy Drive

13. Lower the interposer board into the floppy drive tray at the rear of the floppy drive and engage the notch on the board. See letter "A" in the figure below.

14. Attach the interposer board to floppy drive with the screw that was included with the interposer board. See letter "B" in the figure. In the diagram, the flat flex cable been removed for clarity.
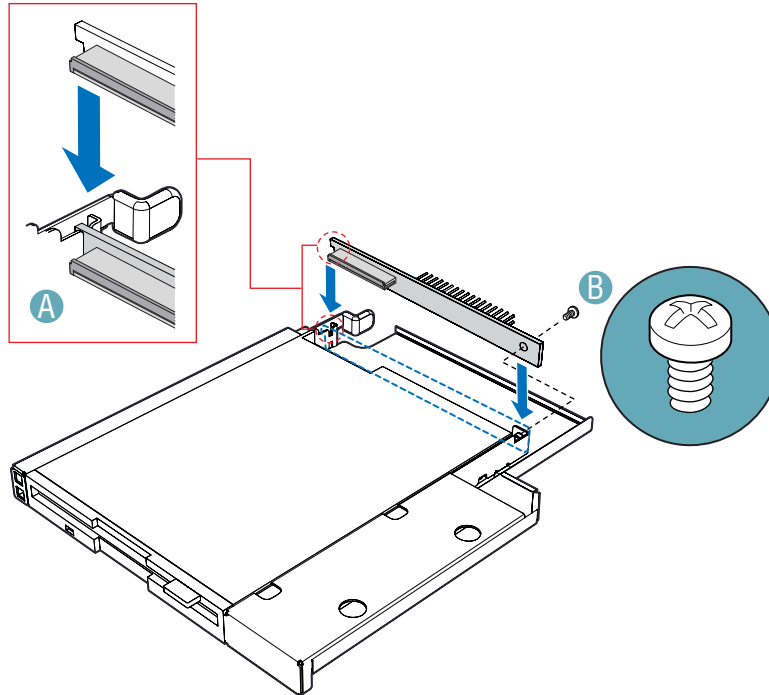
TP01164

Figure 44. Installing the Floppy Drive Interposer Board

15. Slide the floppy drive assembly into the chassis until it clicks into place. See letter "A" in the figure below.

16. Connect the 2x2 end of the floppy drive power cable that was included with your kit to the 2x2 power connector on the SATA power adapter cable. See letters "B" and "C" in the figure below.

17. Connect the remaining end of the floppy drive power cable to the power connector on the rear of the floppy drive. See letter "D" in the figure.

18. Connect the floppy drive data cable that was included with your kit between the floppy drive data connector and the server board. See letters "E" and "F" in the figure. See your server board documentation for assistance in locating the connector location on the server board.

19. Route the floppy drive data cable underneath the air baffle, as shown in the diagram below. You may need to remove the air baffle to route the data cable. For instructions on removing and installing the air baffle, see "Removing the Fixed Drive Air Baffle (No Backplane Installed)" and "Installing the Fixed Drive Air Baffle (No Backplane Installed)."
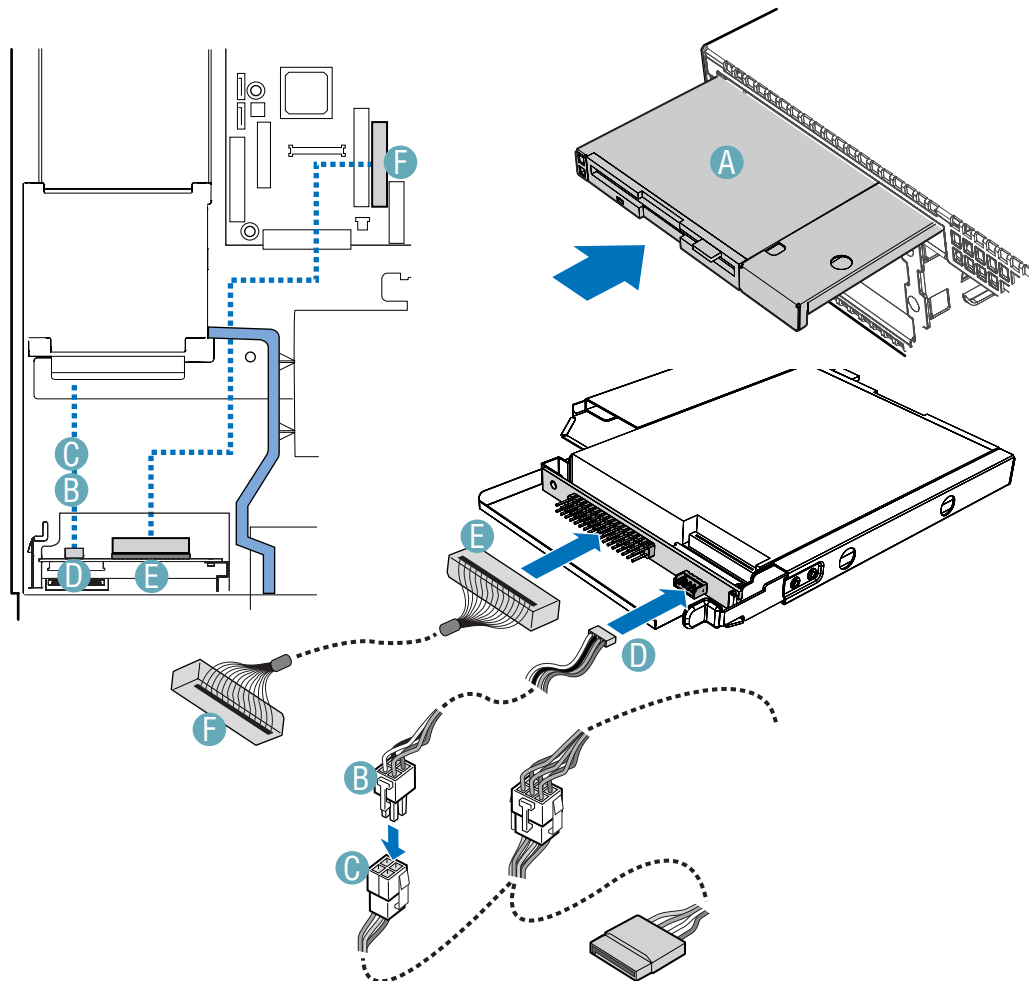
TP01165

Figure 45. Connecting the Floppy Drive Cables

17. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
18. Remove the front bezel. For instructions, see "Installing the Front Bezel."
19. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

## Removing a Floppy Drive from the Slimline Bay (No Backplane Installed)

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 or DC external source.
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 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. Remove the data cable from the chassis. You may need to remove the air baffle to remove the data cable. For instructions on removing and installing the air baffle, see "Removing the Fixed Drive Air Baffle (No Backplane Installed)" and "Installing the Fixed Drive Air Baffle (No Backplane Installed)."
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. Press downward on the side of the carrier to release the drive from the drive carrier.
11. Store the floppy drive carrier, the interposer board, and the floppy drive data cable for future use.
12. Install the slimline filler panel into the chassis opening.
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 in all peripheral devices and connect the AC power cable or DC external source to the server.

Installing a Floppy Drive into the Converted Hard Drive Bay (Backplane Installed)

The floppy drive conversion kit can only be installed into a system that is using either the SATA or the SCSI backplane. The floppy drive conversion kit must be installed in the left, top hard drive bay, directly under the slimline 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 or DC external source.
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 the Front Bezel."
5. Remove the upper left hot-swap hard drive carrier from the chassis.
6. Remove the screws that attach the slide rails to the floppy drive conversion kit carrier.
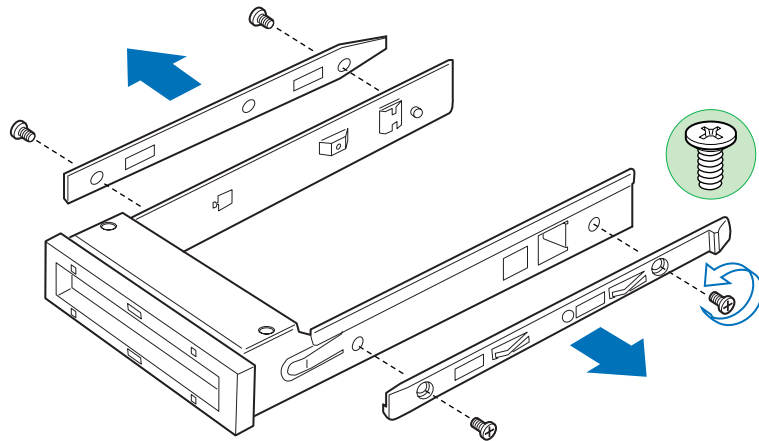
TP01307

Figure 46. 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.
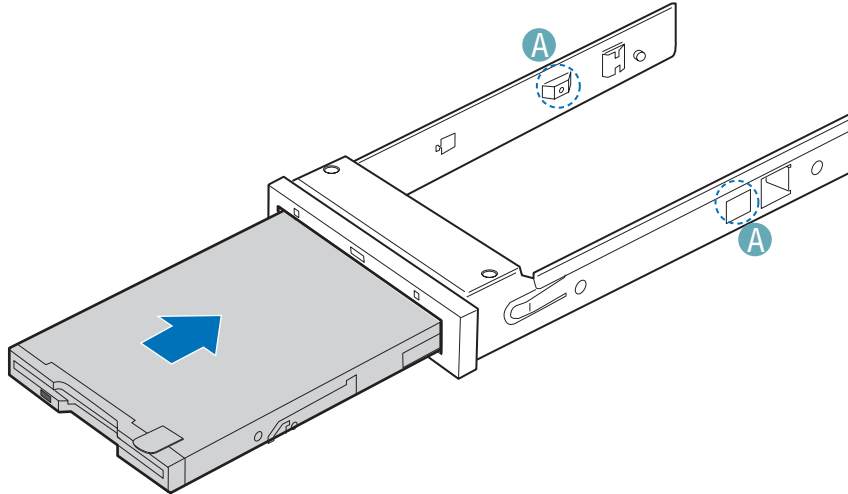
TP01308

Figure 47. Inserting a Floppy Drive into the Floppy Drive 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.
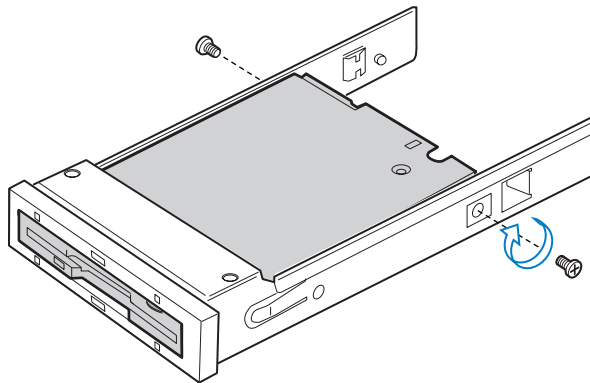
TP01323

Figure 48. Attaching a Floppy Drive to the Floppy Drive Conversion Kit Carrier

10. Reattach the slide rails onto floppy drive conversion kit carrier. See the figure below.
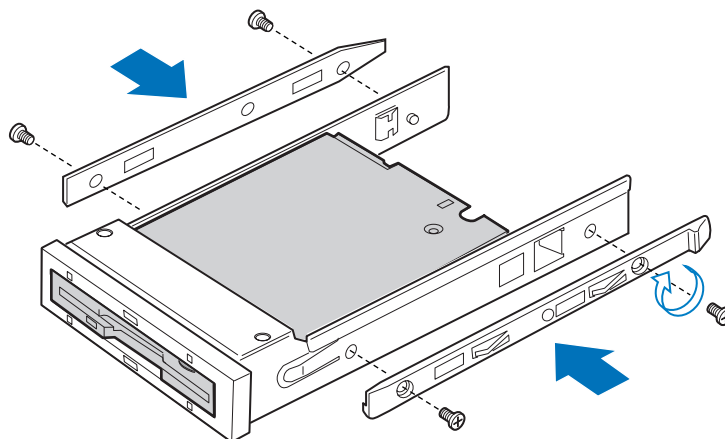
TP01309

Figure 49. Installing 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.
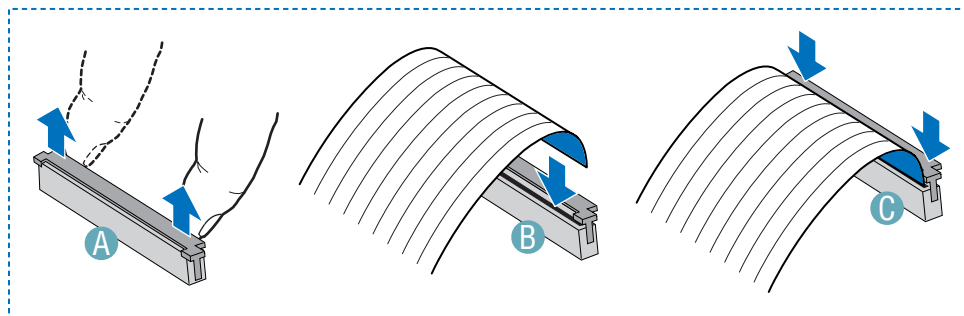
TP01311

Figure 50. Connecting the Flat Flex Cable to a Floppy Drive

14. Slide the carrier assembly into the upper left hard drive bay until it clicks into place. See letter "A" in the figure below.
15. Open the connector labeled "Floppy Con" on the backplane by pulling up on the connector cover. See letter "B" in the figure below. For assistance in locating connectors on the SATA backplane, see "Hot-Swap SATA Backplane Connections." For assistance in locating connectors on the SCSI backplane, see "Hot-Swap SCSI Backplane Connections."
16. Insert the loose end of the flat flex cable into the backplane connector. See letter "C" in the figure.
17. Push in on the connector cover to lock the cable into place. See letter "D" in the figure.
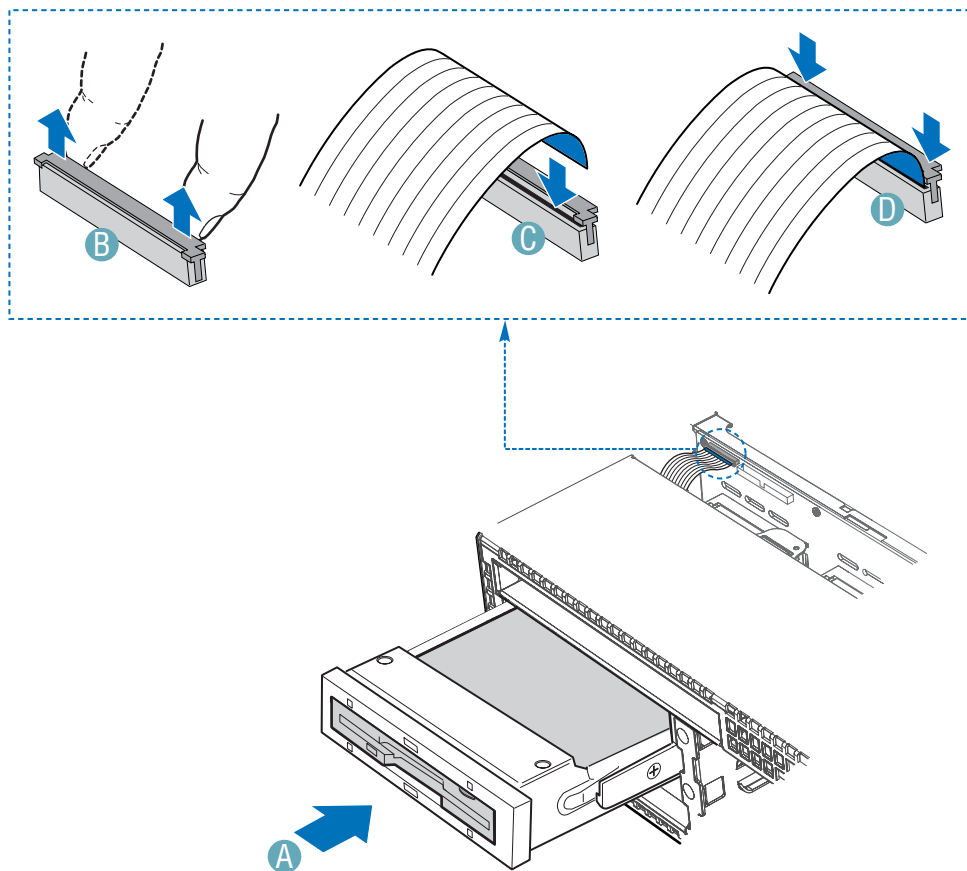
TP01310

Figure 51. Installing the Floppy Drive into the Chassis

18. Install the chassis cover. For instructions, see "Installing the Chassis Cover"
19. (Optional) Install the front bezel. For instructions, see "Installing the Front Bezel."
20. Plug in all peripheral devices and connect the AC power cable or DC external source to 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 or DC external source.
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 the Front Bezel."
5. Open the connector labeled "Floppy Con" on the backplane by pulling up on the connector cover. Remove the flat flex cable from the backplane. For assistance in locating connectors on the SATA backplane, see "Hot-Swap SATA Backplane Connections." For assistance in locating connectors on the SCSI backplane, see "Hot-Swap SCSI Backplane Connections."
6. Push in on the lever at the rear of the floppy carrier and slide the drive from the front of the chassis.
7. Open the connector cover on the rear of the floppy drive by pulling up on it. Release the flat flex cable from the drive.
8. Remove the two screws at each side that hold the drive rails to the drive carrier. Lift the two rails from the carrier.
9. Disconnect the two screws attaching the drive to the converted hard drive bay carrier.
10. 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.
11. Store the screws, the converted drive bay carrier, the side rails, and the flat flex cable for future use.
12. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
13. (Optional) Install the front bezel. For instructions, see "Installing the Front Bezel."
14. Plug in all peripheral devices and connect the AC power cable or DC external source to 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 remove the AC power cord or DC external source from the system or wall outlet.

Installing a DVD-ROM or CD-ROM Drive into Slimline Bay (Backplane Installed)

✏️ **NOTE**

> The carrier for the slimline DVD-ROM drive / CD-ROM drive was pre-installed in the slimline drive bay of your Server Chassis SR2400/SR2400DC.

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 or DC external source.
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 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 clicks into 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.
9. Attach the 44-pin CD-ROM drive cable to the exposed side / back of the interposer board. See letter "E" in the figure.
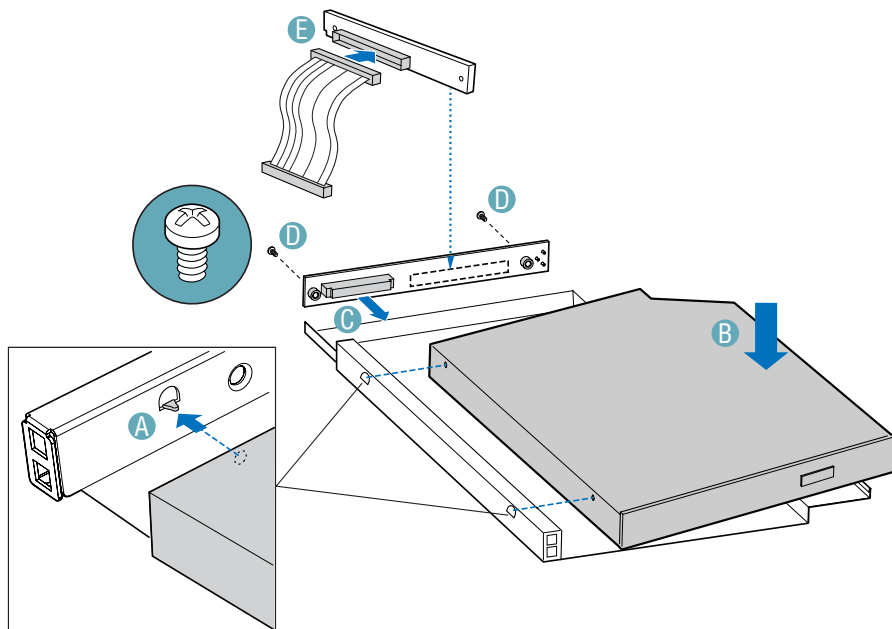
TP01085

Figure 52. Installing a DVD-ROM / CD-ROM Drive into the Slimline Carrier

10. Slide the DVD-ROM / CD-ROM drive carrier into the chassis. See letter "A" in the figure below.
11. Connect the loose end of the CD-ROM drive cable to the backplane connector. See letter "B" in the figure. For assistance in locating connectors on the SATA backplane, see "Hot-Swap SATA Backplane Connections." For assistance in locating connectors on the SCSI backplane, see "Hot-Swap SCSI Backplane Connections."

TP01086
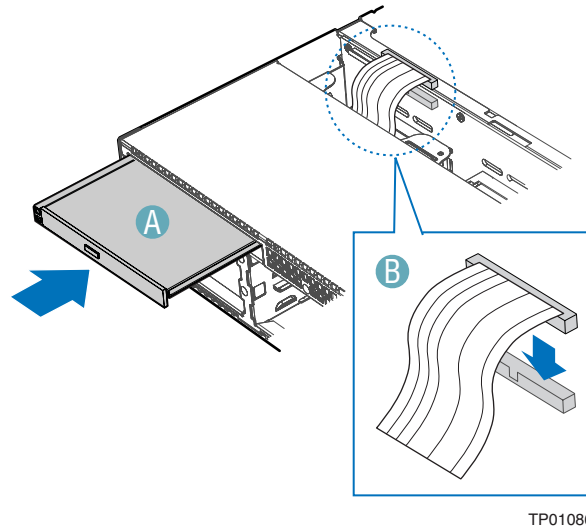
Figure 53. Installing a DVD/CDROM Drive into the Chassis

12. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
13. (Optional) Install the front bezel. For instructions, see "Installing the Front Bezel."
14. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

# Removing a CD-ROM or DVD-ROM Drive from the Slimline Bay (Backplane Installed)

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 or DC external source.
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 the Front Bezel."
5. Disconnect the CD-ROM data cable from the backplane. For assistance in locating connectors on the SATA backplane, see "Hot-Swap SATA Backplane Connections." For assistance in locating connectors on the SCSI backplane, see "Hot-Swap SCSI Backplane Connections."
6. Push in on the blue lever at the rear of the drive carrier. Slide the drive carrier out through the front of the chassis.
7. Press downward on the side of the carrier release the drive from the drive carrier.

8. Disconnect the data cable from the rear of the CD-ROM or DVD-ROM drive.
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 and interposer board for future use. Suggestion: tape the screw to the drive carrier.
11. Install the slimline filler panel in the chassis opening.
12. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
13. (Optional) Install the front bezel. For instructions, see "Installing the Front Bezel."
14. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Installing a DVD-ROM or CD-ROM Drive into Slimline Bay (No Backplane Installed)

✏ **NOTE**

> The carrier for the slimline DVD-ROM drive / CD-ROM drive was pre-installed in the slimline drive bay of your Server Chassis SR2400/SR2400DC. The interposer board and floppy drive power adapter cable used in these instructions was sent to you with your fixed drive kit.

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 or DC external source.
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 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 clicks into 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.

TP01166

Figure 54. Installing a DVD-ROM or CD-ROM Drive into the Slimline Carrier

9. Insert the DVD-ROM / CD-ROM drive carrier into the chassis. See letter "A" in the figure below.
10. If it is not already connected, connect the 2x3 end of the DVD-ROM/CD-ROM drive power cable that was included with your fixed drive kit to the 2x3 power connector on the SATA power adapter cable. See letters "B" and "C" in the figure below.
11. Connect the drive power cable to the power connector on the rear of the DVD-ROM or CD-ROM drive. See letter "D" in the figure.
12. Connect the DVD-ROM / CD-ROM drive data cable that was included with your kit between the interposer board and the IDE connector on the server board. See letters "E" and "F" in the figure. See your server board documentation for assistance in locating the connector location on the server board.
13. Route the DVD-ROM / CD-ROM drive data cable under the top of air baffle, as shown in the diagram below. You may need to remove and then reinstall the air baffle to route the cable. For instructions on removing and installing the air baffle, see "Removing the Fixed Drive Air Baffle (No Backplane Installed)" and "Installing the Fixed Drive Air Baffle (No Backplane Installed)."
14. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
15. (Optional) Install the front bezel. For instructions, see "Installing the Front Bezel."
16. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.
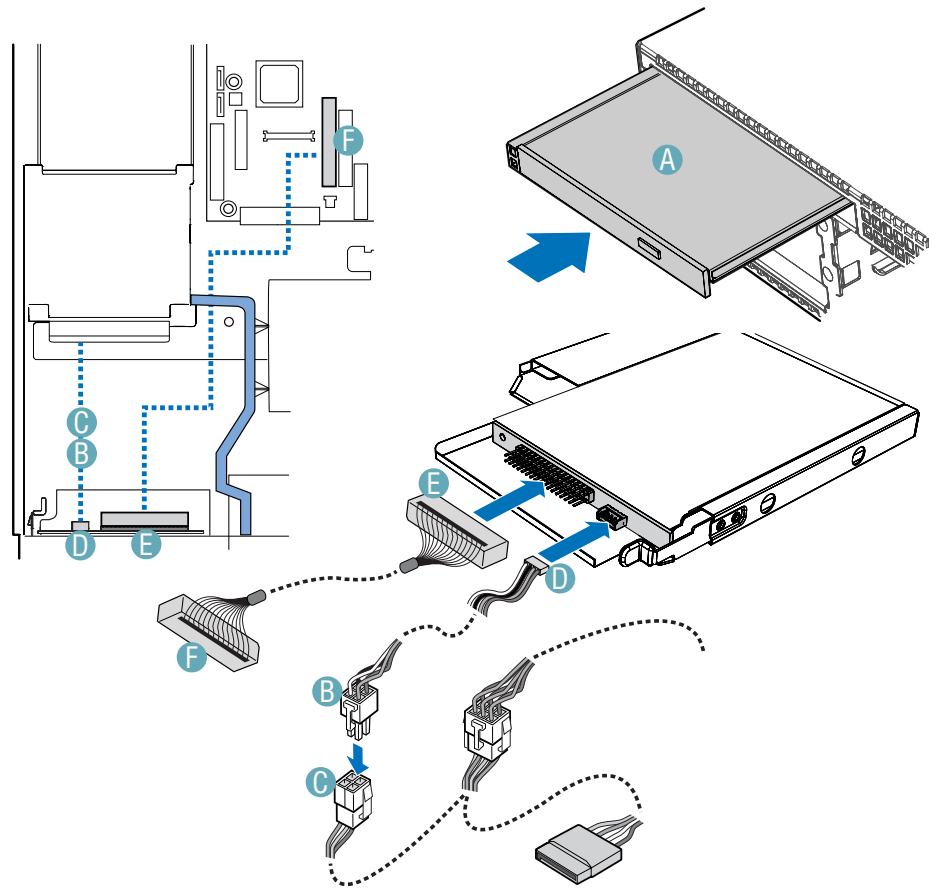
Figure 55. Installing a DVD-ROM or CD-ROM Drive into the Chassis

Removing a DVD-ROM or CD-ROM Drive from Slimline Bay (No Backplane Installed)

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 or DC external source.
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 the Front Bezel."
5. Detach the data cable from the server board. See your server board documentation for assistance in locating the connector on the server board.
6. Detach the data cable from the CD-ROM or DVD-ROM drive. Remove the data cable from the chassis.
7. Detach the power cable from the CD-ROM or DVD-ROM drive.
8. Push in on the blue lever at the rear of the CD-ROM / DVD-ROM drive carrier and push the drive carrier out through the front of the chassis.
9. Remove the two screws that attach the interposer board to the CD-ROM or DVD-ROM drive. Remove the interposer board from the drive.

10. Push down at the side of the carrier and lift the drive from the carrier.
11. If a replacement drive will not be installed in the carrier, store the data cable, the interposer board, and the screws for future use.
12. Install the slimline filler panel in the chassis opening.
13. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
14. (Optional) Install the front bezel. For instructions, see "Installing the Front Bezel."
15. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Removing and Installing the PCI Riser Assembly

Always operate your server chassis with the PCI riser assembly in place. The riser assembly is required for proper airflow within the chassis. You will need to remove the PCI riser assembly from the chassis to replace the PCI riser connectors, or to add or remove a PCI add-in card.

Removing the PCI Riser Assembly

Use the following instructions to remove the PCI riser assembly from the chassis.

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 or DC external source.
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. Disconnect any cables attached to any installed add-in cards.

6. Lift up on the two levers on the PCI riser assembly to lift the riser assembly from the chassis. See the figure below.
7. If you need to add or replace a PCI riser connector, see "Installing and Removing a PCI Riser Connector."
8. If you need to add or replace a PCI add-in card, see "Installing and Removing a PCI Add-in Card."
9. If you removed the PCI riser assembly as a step for another procedure, continue with that procedure.
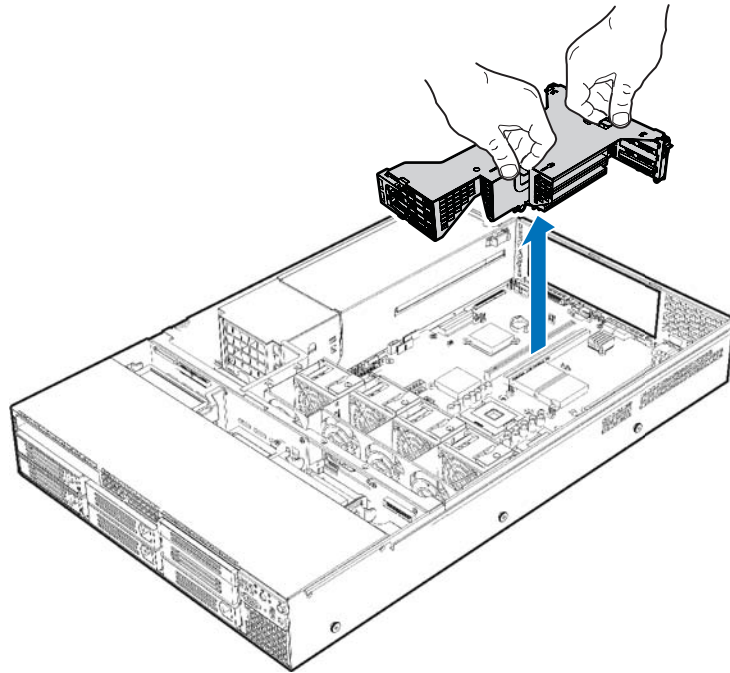
TP01111

Figure 56. Removing the PCI Riser Assembly from the Chassis

Installing the PCI Riser Assembly

Use the following instructions to install the PCI riser assembly into the chassis.

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 or DC external source.
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. Install any necessary add-in cards into the PCI riser assembly.
6. Install any cables onto add in cards that require them. See your add-in card documentation for information and add-in card requirements.

7. Set the riser assembly straight down, matching the hooks in the back of the riser assembly to the notches in the rear of the chassis. See the figure below.
8. Press firmly to push the riser into the slots on the server board.
9. Install the processor air duct. For instructions, see "Installing the Processor Air Duct"
10. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
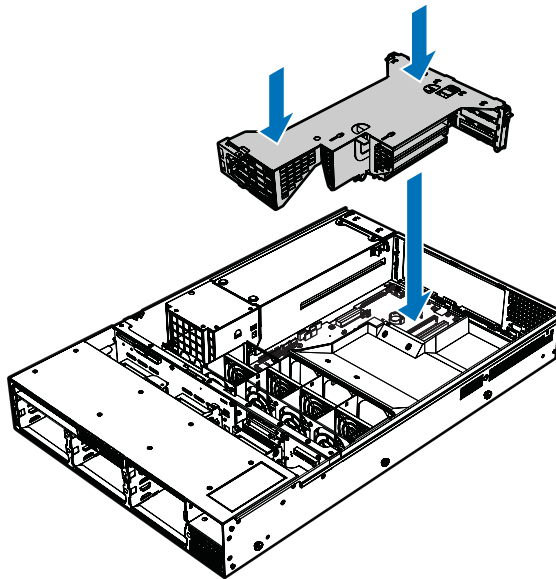
TP01112

Figure 57. Installing the PCI Riser Assembly into the Chassis

Installing and Removing a PCI Riser Connector

The PCI riser connectors can be replaced if one fails or if a different option is required. To replace a PCI riser connector, use the instructions under "Removing a PCI Riser Connector" to remove a connector, and then follow the instructions under "Installing the PCI Riser Assembly" to install a new riser connector.

NOTE

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

Removing a PCI Riser Connector

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Remove processor air duct. For instructions, see "Removing the Processor Air Duct."
5. Remove the PCI riser assembly. For instructions, see "Removing the PCI Riser Assembly."
6. Remove any installed PCI add-in cards. For instructions, see "Removing a PCI Add-in Card."
7. Push back on the blue release lever at the end of one of the riser connectors. See letter "A" in the figure below.
8. While holding the lever back, push firmly on the edge of the board, sliding it toward the rear of the riser module, to disengage the connector from the riser pin. See letter "B" in the figure.
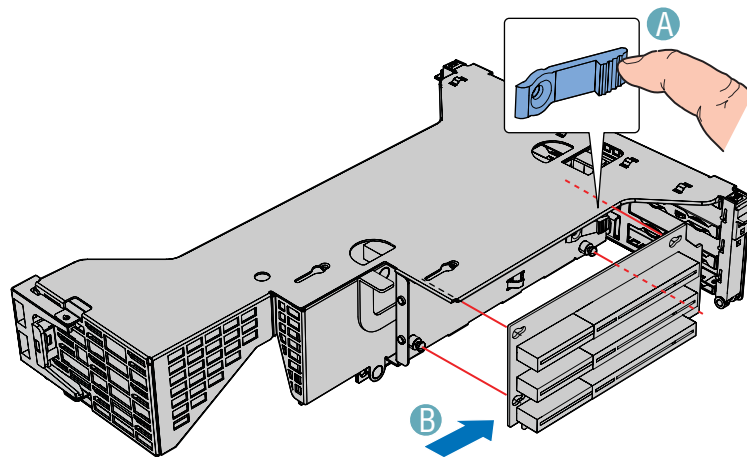
TP01113

Figure 58. Removing a PCI Riser Connector from the PCI Riser Assembly

9. Install the replacement riser connector, if desired. For instructions, see "Installing a PCI Riser Connector."
10. Install the riser assembly into the chassis. For instructions, see "Installing the PCI Riser Assembly."
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."

Installing a PCI Riser Connector

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Remove processor air duct. For instructions, see "Removing the Processor Air Duct."
5. Remove the PCI riser assembly. For instructions, see "Removing the PCI Riser Assembly."
6. Line up the screws on the riser assembly with the slot and the large hole on the riser connector.
7. Press and hold the blue riser locking lever. See letter "A" in the figure below.
8. Place riser connector onto the retention pins.
9. Slide the riser connector toward the front of the riser module to lock it into place. See letter "B" in the figure.
10. Release the blue locking lever.
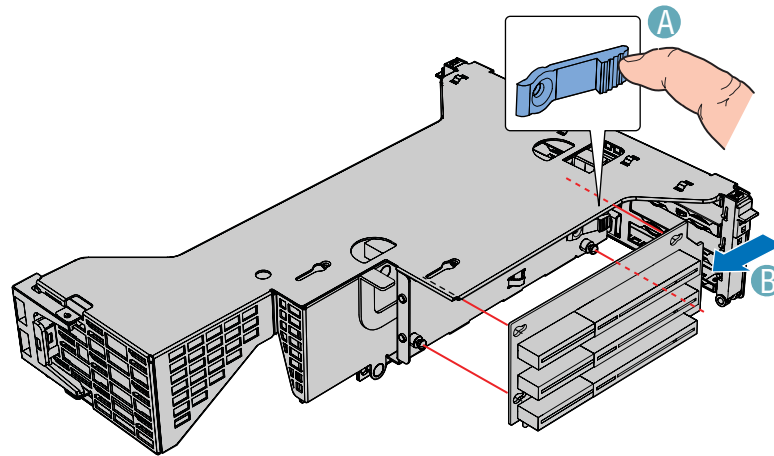
TP01313

Figure 59. Installing a PCI Riser Connector

11. Install the PCI add-in card(s), if desired. For instructions, see "Installing a PCI Add-in Card."
12. Install the PCI riser assembly into the chassis. For instructions, see "Installing the PCI Riser Assembly."
13. Install the processor air duct. For instructions, see "Installing the Processor Air Duct."
14. Install the chassis cover. For instructions, see "Installing the Chassis Cover."

Installing and Removing a PCI Add-in Card

In the slots provided by the PCI riser card, you can install either one or two PCI add-in cards.

Peripherals and add-in cards are not included in your system and must be purchased separately. The riser connector at the center of the chassis supports a single full-height add-in card or a single low profile PCI add-in card. A low-profile add-in card that is to be installed in the full-height riser connector must be equipped with a standard full-height PCI mounting bracket.

Installing 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 or DC external source.
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. Remove the PCI riser assembly. For instructions, see "Removing the PCI Riser Assembly."
6. Open the PCI retention clip(s) on the PCI riser card assembly. If you are installing a full-length PCI card, you will need to open clips at both the front and rear of the riser assembly. See the two letter "A's" 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, pressing in on it until it seats in the riser card connector. Make sure the bracket inserts into the matching slot. See letter "C".
9. Close the PCI retention clip(s).

TP01114
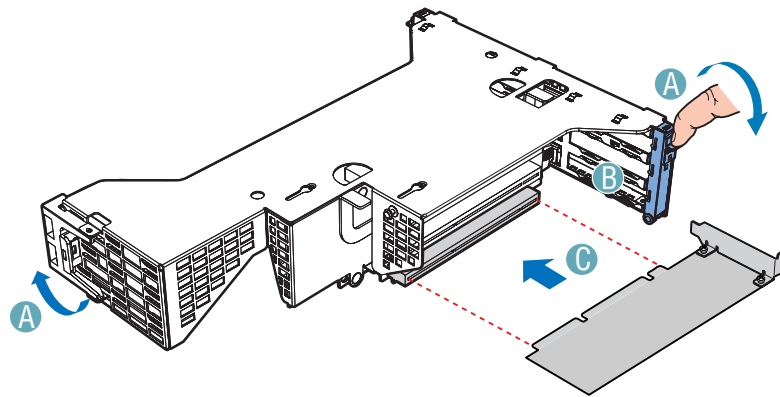
Figure 60. Installing a PCI Add-in Card

10. Install the riser assembly into the chassis. For instructions, see "Installing the PCI Riser Assembly."
11. Install the chassis cover. For instructions, see "Installing the Chassis Cover."

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 or DC external source.
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. Remove the PCI riser assembly. For instructions, see "Removing the PCI Riser Assembly."
6. Open the PCI retention clip on the PCI riser card assembly.
7. Remove the add-in card.
8. Close the retention clip.
9. Install the riser assembly. For instructions, see "Installing the PCI Riser Assembly."
10. Install the chassis cover. For instructions, see "Installing the Chassis Cover."

Replacing the Control Panel

The steps for replacing the Standard Control Panel and the Intel® Local Control Panel are nearly identical. Use the steps below for both varieties of the control panel. Where necessary, differences between the two control panels are noted.

Your server must be operated with a control panel installed.

⚠ **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 remove the AC power cord or DC external source 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 system and unplug all peripheral devices and the AC power cable or DC external source.
3. Remove the front bezel if it is installed. For instructions, see "Removing and Installing the Front Bezel."
4. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
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 far enough so that you can reach the front panel and USB cable connectors at the rear of the control panel. See letter "B" in the figure. You may need to disconnect the ends of the front panel and USB cables that are attached to the server board or to a backplane to create sufficient slack to slide the control panel module from the chassis.

7. Disconnect the front panel cable and the USB cable from the front panel control board at the rear of the control panel. See letters "C" and "D" in the figure.

✐ **NOTE**

The cables at the rear of the control panel are positioned differently for the Intel® Local Control Panel and the Standard Control Panel. In the Local Control Panel, the USB cable (letter "D" in the figure below) is perpendicular to the front panel cable (letter "C" in the figure below), instead of parallel to it. Note the positions as you remove the cables from the control panel.
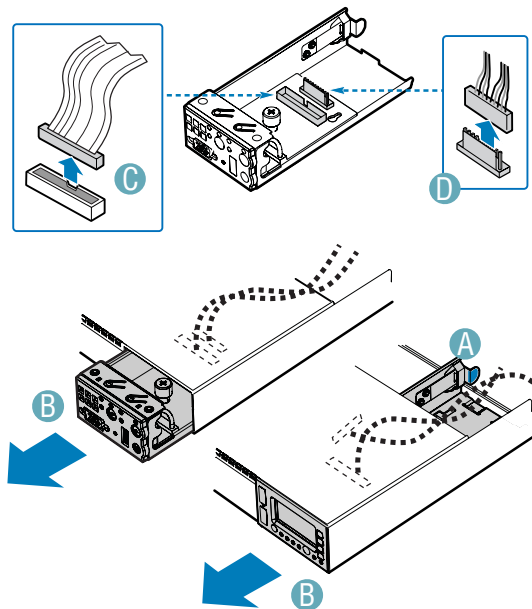
TP01297

Figure 61. Removing the Control Panel from the Chassis

8. Connect the front panel cable and the USB cable to the replacement control panel.
9. Slide the replacement control panel into the chassis until it clicks into place.
10. If you needed to disconnect the front panel or USB cable from the server board or from a backplane board, reconnect the cable(s).
11. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
12. (Optional) Install the front bezel. For instructions, see "Installing the Front Bezel."
13. Plug in all peripheral devices and connect the AC power cable or DC external source to the server.

Replacing a System Fan

The system fans at the front of the Server Chassis SR2400/SR2400DC can be individually replaced if one of them fails. You must have four fans installed in the back four positions of the fan module.

The Server Chassis also allows you to install four redundant fans. The redundant fans must be installed as a set of four and are installed in the four front fan sockets of the fan module. The instructions for installing a redundant fan are the same as the instructions for installing a replacement fan, except that when you are first installing the redundant set of fans, you do not need to remove any fans.

The fans that are integrated into the power supply cannot be replaced separately. If one of these fans fails, the power supply module must be replaced.

To replace a system fan, use the following instructions. To install the redundant fans, use the following instructions, but disregard step 4.

⚠ **CAUTION**

> Fans are NOT hot swappable. Before removing or replacing a 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 remove the AC power cord or DC external source 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 system and unplug all peripheral devices and the AC power cable or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. There are no screws to loosen. Lift the failed fan from the module.
5. Position the fan so the connector on the fan is at the right and pointing down.
6. With the fan oriented correctly, insert the fan into the fan module, engaging the connector on the fan into the matching connector on the fan module.
7. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
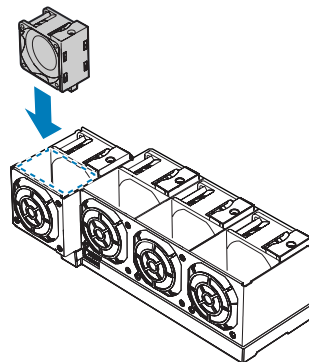
TP01118

Figure 62. Installing a System Fan

Replacing the Power Supply Distribution Module (AC Version)

✐   **NOTE**

This procedure only applies to the AC version of the Intel® Server Chassis SR2400. If you are replacing a power distribution module for the Intel® Server Chassis SR2400DC, see "Replacing the Power Supply Distribution Module (DC Version)" for instructions.

The power supply distribution module is at the front of the power supply. This module can be replaced if it fails. To replace the power supply distribution module, 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.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Remove the air baffle. If you are using fixed drives, see "Removing the Fixed Drive Air Baffle (No Backplane Installed)" for instructions. If you are using hot-swap drives, see "Removing the Large Hot-swap Air Baffle (Backplane Installed)" for instructions.
5. Remove the hot swap power supply/supplies. For instructions, see "Removing a Hot-swap Power Supply."
6. Remove the PCI riser assembly. For instructions, see "Removing the PCI Riser Assembly."

7. (Hot-swap system only) Disconnect the backplane flat flex cable from the server board. See letter "A" in the figure below. The position of your cable may be different. See your server board documentation for the specific connection point.

TP01348

Figure 63. Disconnecting the Flex Cable from the Server Board

8. Unplug the main power, power signal and CPU power cables from the server board. The position of your cables may be different. See your server board documentation to locate the connection points. In the diagram below, letter "A" shows the main power cable, letter "B" shows the power signal cable, and letter "C" shows the CPU power cable.

Figure 64. Disconnecting the Power Cables from the Server Board

9. (Hot-swap system only): Disconnect the 2x3 power cable from the backplane. See the figure below. For assistance in locating connectors on the SATA or SCSI backplane, see "Hot-Swap SATA Backplane Connections" or "Hot-Swap SCSI Backplane Connections."

TP01350
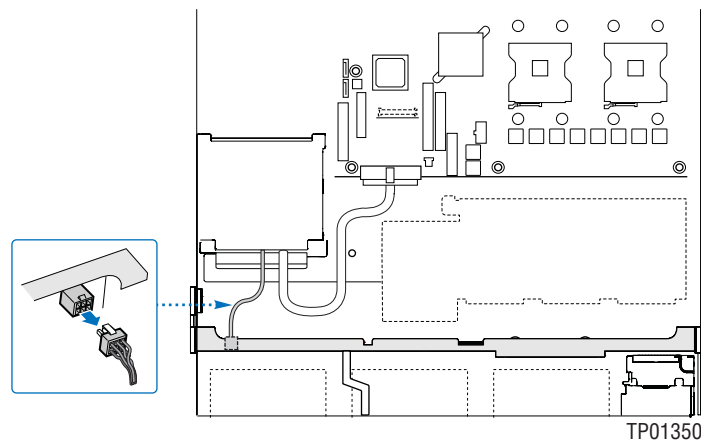
Figure 65. Disconnecting the Power Cable from the Backplane

10. (Fixed SATA system only): Disconnect the SATA power adapter cable from the power supply. In the figure below, letter "B" is the connector from the power supply. Letter "A" is the connector from the SATA power adapter cable.

TP01351
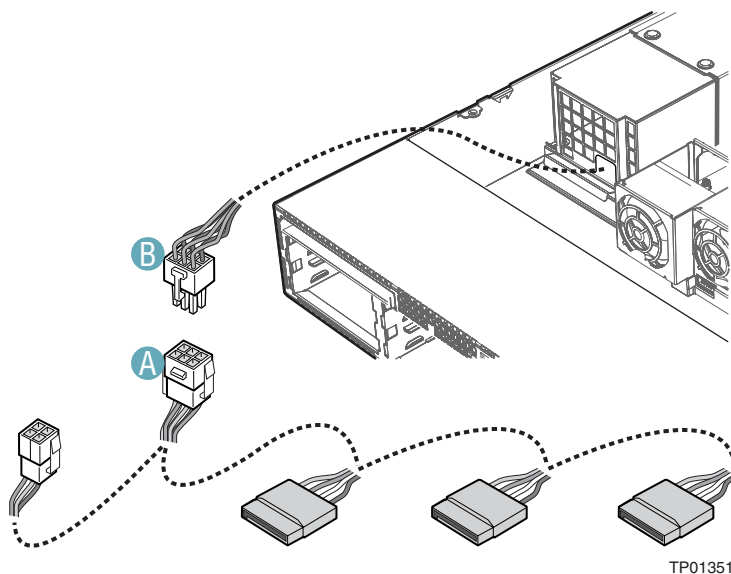
Figure 66. Disconnecting the Flex and Power Cables

11. Press the bar at the front of power distribution module to release the module (see "A" in the following figure). Slide the module forward slightly and lift it from the chassis (see "B" and "C").

TP01352
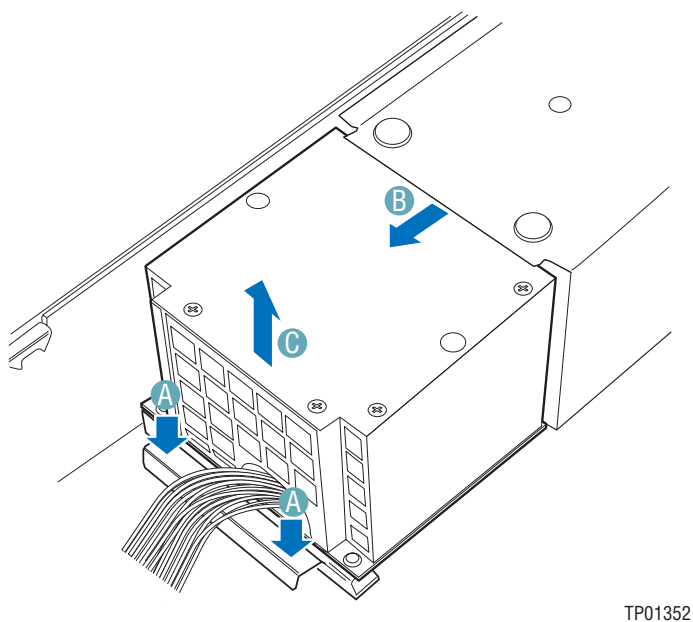
* Air baffle not shown for illustrative purposes.

Figure 67. Removing the Power Distribution Module

12. Set the replacement power supply distribution module into the chassis and slide it backward against the power supply. See letters "A" and "B" in the figure below.
13. Push down on the lever at the front of the power distribution the power supply distribution module while lining up the holes on power supply stands on chassis. See letter "C" Press down until power supply sits firmly in place.
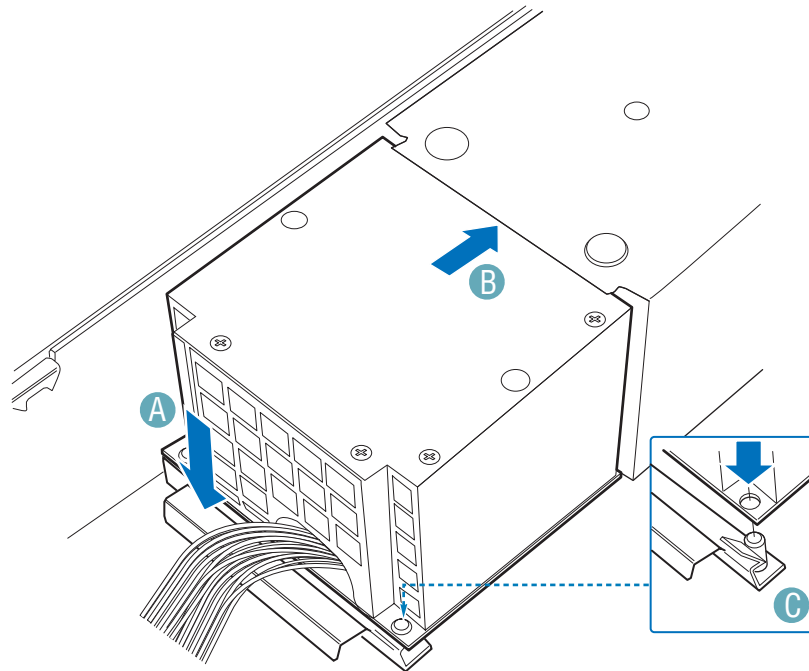
TP01353

* Air baffle not shown for illustrative purposes.

Figure 68. Installing the Power Distribution Module

14. Connect the main power, CPU power, and power signal from the power supply to the server board. Refer back to Figure 64 and see your server board documentation to locate the connection points for these cables.
15. Install the air baffle. For instructions on installing the baffle and you have hot-swap drives installed, see "Installing the Large Hot-swap Air Baffle (Backplane Installed)." For instructions on installing the baffle if you are using fixed drives, see "Installing the Fixed Drive Air Baffle (No Backplane Installed)."
16. (Hot-swap system only): Connect the 2x3 power cable to the backplane. Refer back to Figure 65 for a diagram of this connection point.
17. (Fixed drive system only): Connect the 2x3 power cable to the SATA power adapter cable Refer back to Figure 66 to see how these cables connect.
18. (Hot-swap system only): Connect the flex cable to the server. Refer back to Figure 63 and see your server board documentation to locate the connection points for this cable.
19. Install the hot-swap power supply/supplies. For instructions, see "Installing a Hot-swap Power Supply."
20. Install the PCI riser assembly. For instructions, see "Installing the PCI Riser Assembly."

21. Install the processor air duct. For instructions, see "Installing the Processor Air Duct."
22. Install the chassis cover. For instructions, see "Installing the Chassis Cover."

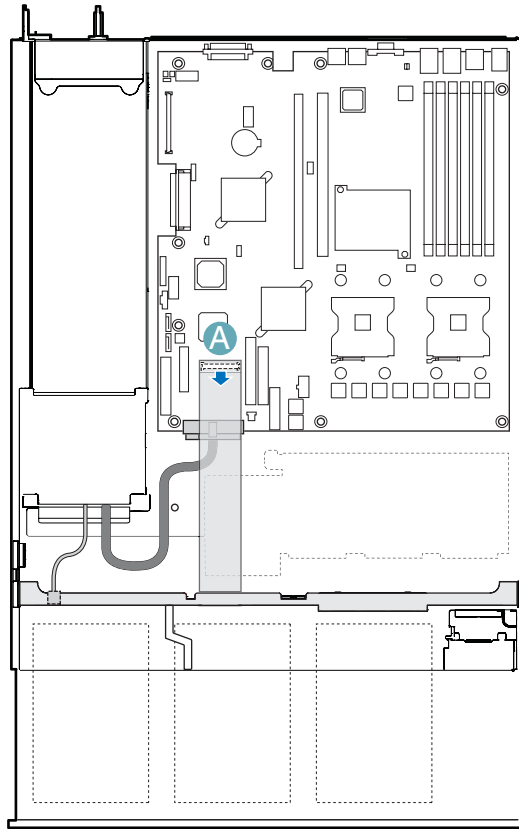# Replacing the Power Supply Distribution Module (DC Version)

✏ **NOTE**

This procedure only applies to the DC version of the Intel® Server Chassis SR2400. If you are replacing a power distribution module for the AC version of the Intel® Server Chassis SR2400, see "Replacing the Power Supply Distribution Module (AC Version)" for instructions.

The power supply distribution module is at the front of the power supply. This module can be replaced if it fails. To replace the power supply distribution module, 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 DC power source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Remove the air baffle. If you are using fixed drives, see "Removing the Fixed Drive Air Baffle (No Backplane Installed)" for instructions. If you are using hot-swap drives, see "Removing the Large Hot-swap Air Baffle (Backplane Installed)" for instructions.
5. Remove the hot swap power supply/supplies. For instructions, see "Removing a Hot-swap Power Supply."
6. Remove the PCI riser assembly. For instructions, see "Removing the PCI Riser Assembly."

7. (Hot-swap system only) Disconnect the backplane flat flex cable from the server board. See letter "A" in the figure below. The position of your cable may be different. See your server board documentation for the specific connection point.

TP01348

Figure 69. Disconnecting the Flex Cable from the Server Board

8. Unplug the main power, power signal and CPU power cables from the server board. The position of your cables may be different. See your server board documentation to locate the connection points. In the diagram below, letter "A" shows the main power cable, letter "B" shows the power signal cable, and letter "C" shows the CPU power cable.

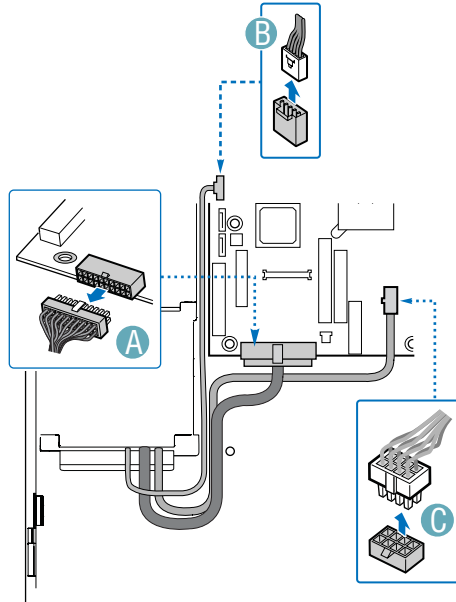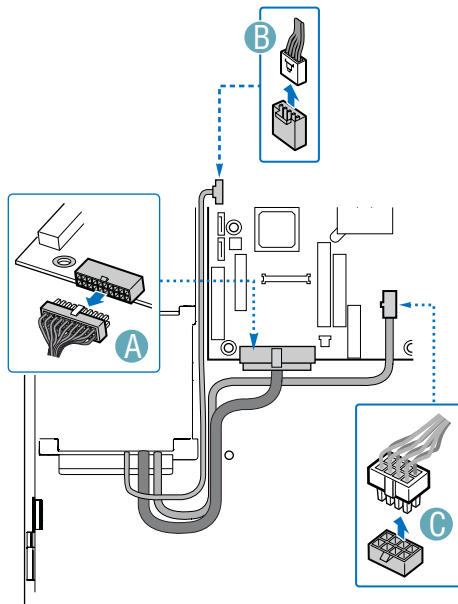**Figure 70. Disconnecting the Power Cables from the Server Board**

9. (Hot-swap system only): Disconnect the 2x3 power cable from the backplane. See the figure below. For assistance in locating connectors on the SATA or SCSI backplane, see "Hot-Swap SATA Backplane Connections" or "Hot-Swap SCSI Backplane Connections."

TP01350
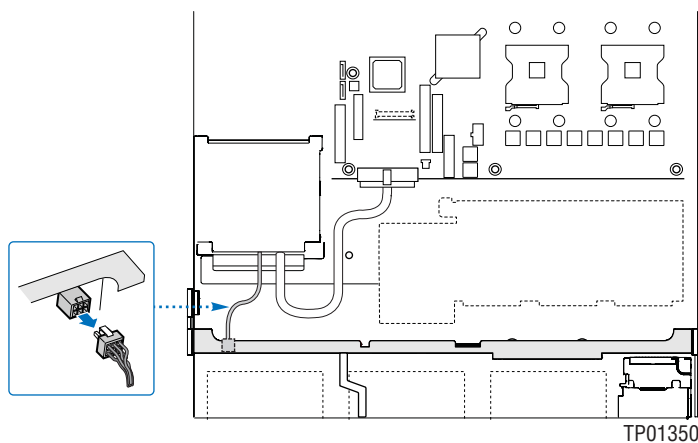
Figure 71. Disconnecting the Power Cable from the Backplane

10. (Fixed SATA system only): Disconnect the SATA power adapter cable from the power supply. In the figure below, letter "B" is the connector from the power supply. Letter "A" is the connector from the SATA power adapter cable.
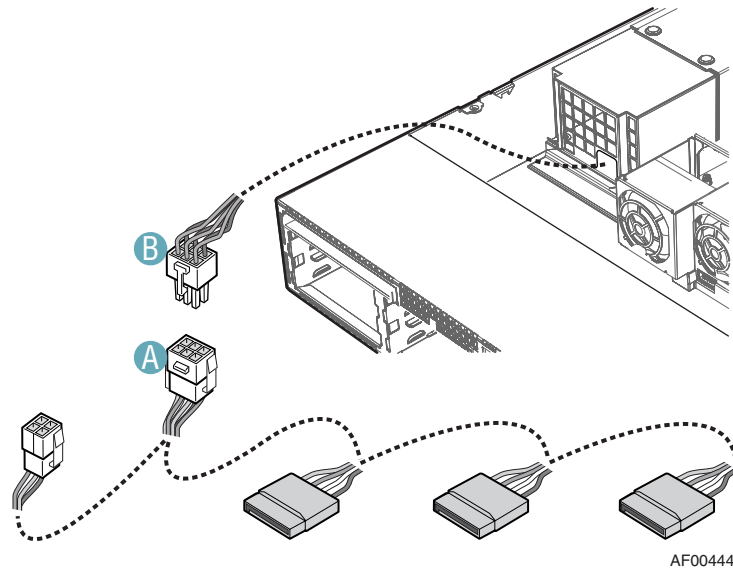
Figure 72. Disconnecting the Flex and Power Cables

11. Remove the two screws that attach the power distribution module to the chassis. See letter "A" in the figure below for screw locations.

12. Slide the module forward slightly and lift it from the chassis. See letters "B" and "C" in the figure.
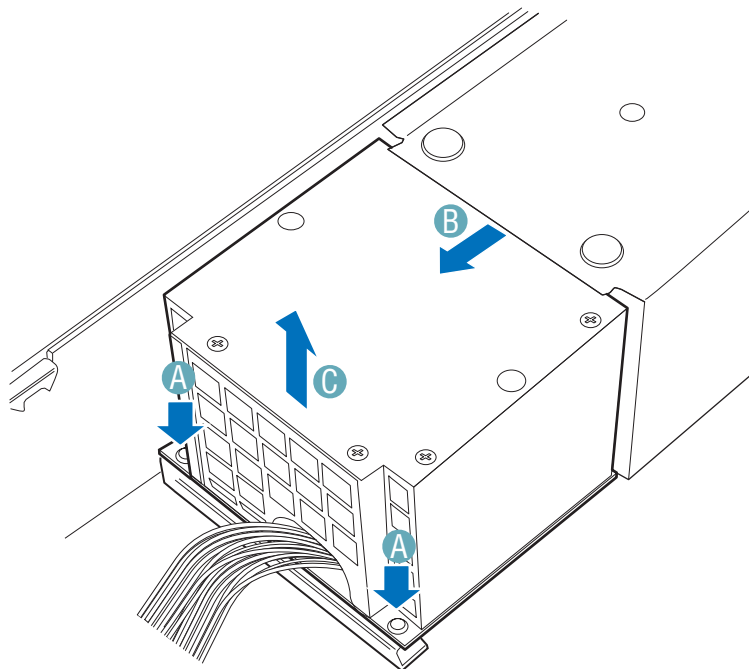
AF00442

Figure 73. Removing the Power Distribution Module

13. Set the replacement power supply distribution module into the chassis and slide it backward against the power supply. See letter "A" in the figure below.

14. Secure the power distribution module to the chassis with two screws. See letter "B" in the figure below for screw locations.

AF00443
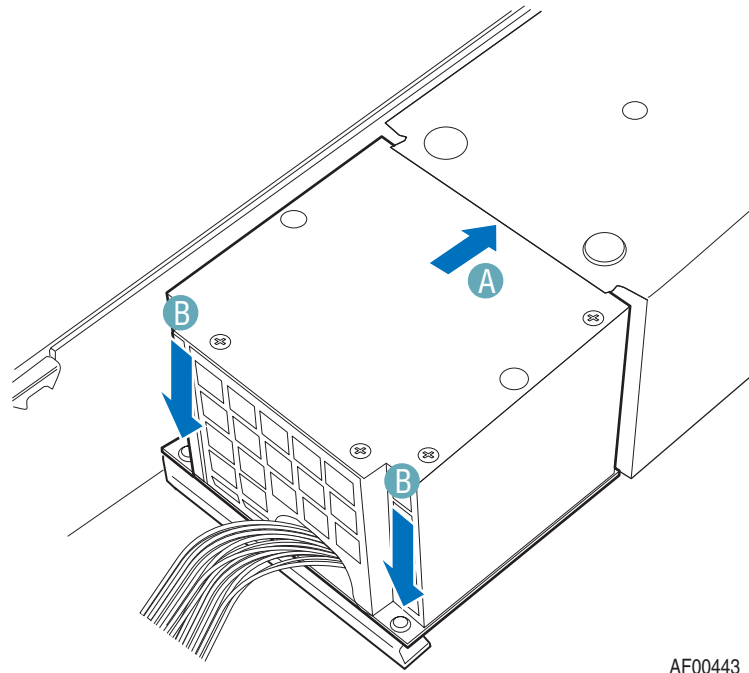
Figure 74. Installing the Power Distribution Module

15. Connect the main power, CPU power, and power signal from the power supply to the server board. Refer back to Figure 64 and see your server board documentation to locate the connection points for these cables.
16. Install the air baffle. For instructions on installing the baffle and you have hot-swap drives installed, see "Installing the Large Hot-swap Air Baffle (Backplane Installed)." For instructions on installing the baffle if you are using fixed drives, see "Installing the Fixed Drive Air Baffle (No Backplane Installed)."
17. (Hot-swap system only): Connect the 2x3 power cable to the backplane. Refer back to Figure 65 for a diagram of this connection point.
18. (Fixed drive system only): Connect the 2x3 power cable to the SATA power adapter cable Refer back to Figure 66 to see how these cables connect.
19. (Hot-swap system only): Connect the flex cable to the server. Refer back to Figure 63 and see your server board documentation to locate the connection points for this cable.
20. Install the hot-swap power supply/supplies. For instructions, see "Installing a Hot-swap Power Supply."
21. Install the PCI riser assembly. For instructions, see "Installing the PCI Riser Assembly."
22. Install the processor air duct. For instructions, see "Installing the Processor Air Duct."
23. Install the chassis cover. For instructions, see "Installing the Chassis Cover."

Installing or Replacing a Hot-swap Power Supply (AC Version)

The power supply can be replaced if it, or one of the fans integrated into 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**

This procedure only applies to the AC version of the Intel® Server Chassis SR2400. If you are installing or replacing a hot swap power supply for the Intel® Server Chassis SR2400DC, see "Installing or Replacing a Hot-swap Power Supply (DC Version)" for instructions.

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 failed power supply.
3. Press the green latch at the rear of power supply and pull the power supply from the chassis.
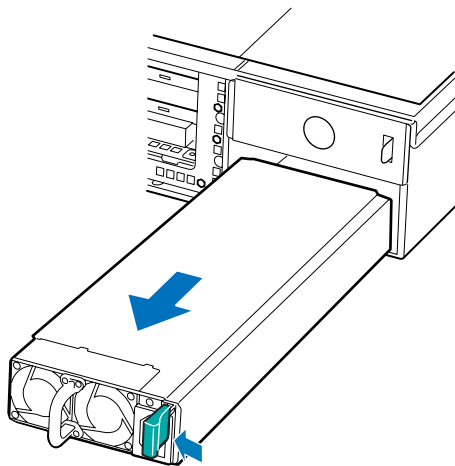
TP01119

Figure 75. Removing a Hot-swap Power Supply

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 upper 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. Plug in the AC power cable for the new power supply.

Installing or Replacing a Hot-swap Power Supply (DC Version)

The power supply can be replaced if it, or one of the fans integrated into 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 a DC 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**

This procedure only applies to the DC version of the Intel® Server Chassis SR2400. If you are installing or replacing a hot swap power supply for the AC version of the Intel® Server Chassis SR2400, see "Installing or Replacing a Hot-swap Power Supply (AC Version)" for instructions.

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 DC power source from the failed power supply.

3. Press the green latch at the rear of power supply (see letter "A" in the following figure) and pull the power supply from the chassis (see letter "B").
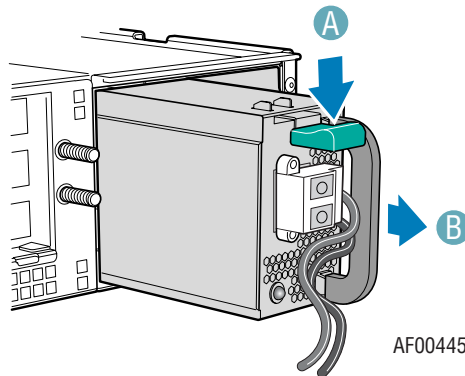
Figure 76. Removing a Hot-swap Power Supply

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 upper 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. Plug in the DC power source for the new power supply.

Installing or Removing the SATA or SCSI Backplane

You received your server chassis with your choice of one of three backplane options:

- A hot-swap SCSI option that came with a SCSI backplane that came with a flex cable, a SCSI cable, and drive carriers
- A hot-swap SATA option that came with a SATA backplane that came with a flex cable, SATA cable, and drive carriers
- A fixed SATA drive option that came with power cables, slimline drive cables, front panel cables, and drive trays

The backplane board and equipment that came with it can be replaced if your backplane board fails or if a different option is required. To replace the backplane board, use the following instructions. In the steps below, for assistance in locating connection points on the SATA backplane, see "Hot-Swap SATA Backplane Connections." For assistance in locating connection points on the SCSI backplane, see "Hot-Swap SCSI Backplane Connections."

Removing a 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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Remove the large air baffle. For instructions, see "Removing the Large Hot-swap Air Baffle (Backplane Installed)."
5. Remove the PCI riser assembly. For instructions, see "Removing the PCI Riser Assembly."
6. Remove the fan module. For instructions, see "Removing the Fan Module."
7. Remove all hot-swap drive carriers. If the drives will be reinstalled, it is not necessary to remove the hard drives from the carriers.
8. (If converting from a hot-swap drive system to a fixed drive system only): Remove any installed floppy and CD-ROM or DVD-ROM drive carriers from the chassis. For instructions to remove a floppy drive, see "Removing a Floppy Drive from the Slimline Bay (Backplane Installed)." For instructions to remove a CD-ROM or DVD-ROM drive, see "Removing a CD-ROM or DVD-ROM Drive from the Slimline Bay (Backplane Installed)." If the drive will be reinstalled, it is not necessary to remove the drive from the carrier. However, you must remove the interposer board and the flat flex cable from the rear of the drive.
9. Remove the air baffle(s). Use the following conditions to determine which baffle(s) you need to remove:
   — If you are replacing your backplane with a backplane of the same or a different type, you will need to remove one air baffle. For instructions, see "Removing the Large Hot-swap Air Baffle (Backplane Installed).
   — If you are converting from a hot-swap system to a fixed drive system, you will need to remove two air baffles. For instructions, see "Removing the Large Hot-swap Air Baffle (Backplane Installed)" and "Removing the Small Hot-swap Air Baffle (Backplane Installed)." After removing the backplane, see the instructions that came with your fixed drive kit to install the fixed drive components.
10. Disconnect all cables from the backplane.
11. (If converting from a hot-swap drive system to a fixed drive system only): Remove the control panel and disconnect the front panel cable from the control panel. For instructions on removing the control panel, see "Replacing the Control Panel," following steps 1-7. It is not necessary to remove the USB cable from the control panel.
12. (If converting from a hot-swap drive system to a fixed drive system only): Remove the flex cable from the server board. See your server board documentation to locate the connection point on the server board.
13. (If converting from a hot-swap drive system to a fixed drive system only): Remove the fan distribution cable from the fan module.

14. Holding the backplane only by the edges, lift it from the chassis. Use caution so you do not press on any components on the backplane.
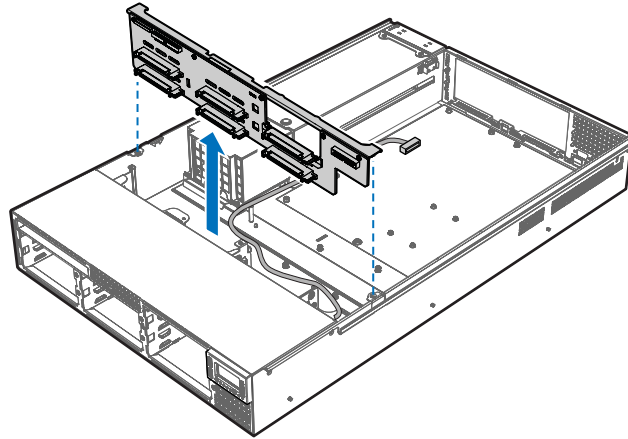
TP01120

Figure 77. Removing a SATA or SCSI Backplane

15. (If converting from a fixed drive system to hot-swap drive system only): Store the air baffles, any cables you removed, and any removed CD-ROM / DVD-ROM or floppy drive components.
16. Store the backplane for future use.
17. (If converting from a hot-swap drive system to a fixed drive system only): Use the instructions that came with your fixed drive kit to install the fixed drive components.
18. (If installing a new SATA or SCSI backplane only): Follow the instructions below to replace your backplane.

Installing a Replacement SATA or SCSI Backplane

If you are installing a SATA or SCSI backplane for the first time (not installing a replacement backplane), see the installation instructions that came with your backplane. The instructions below assume some of the cables are already installed.

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 or DC external source.
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 the Front Bezel."
5. Remove the processor air duct. For instructions, see "Removing the Processor Air Duct."
6. Remove the PCI riser assembly. For instructions, see "Removing the PCI Riser Assembly"
7. Remove all hot-swap drive carriers, regardless of whether a drive is installed in the carrier. If the drives will be reinstalled, it is not necessary to remove the hard drives from the carriers.
8. Remove the fan module. For instructions, see "Removing the Fan Module."

9. Hold the backplane only by the edges. Do not push or pull on any components on the backplane. Set the backplane in place at the front of the chassis, with the sides of the board resting in the guides at the left and right sides of the chassis.
10. Ensure the USB cable is positioned inside of the cutout at the back of the control panel. See letter "A" in the figure below.
11. Push the USB cable toward the chassis floor, so that when the backplane is installed the USB cable will route beneath the metal at the edge of the backplane. Refer again to letter "A" in the figure.
12. Use care to avoid pinching any cables. Slide the backplane into the chassis guides at the left and right sides of the chassis until the pins at the left and right sides of the backplane bracket are fully inserted into the matching holes in the chassis. See letter "B" in the figure below.
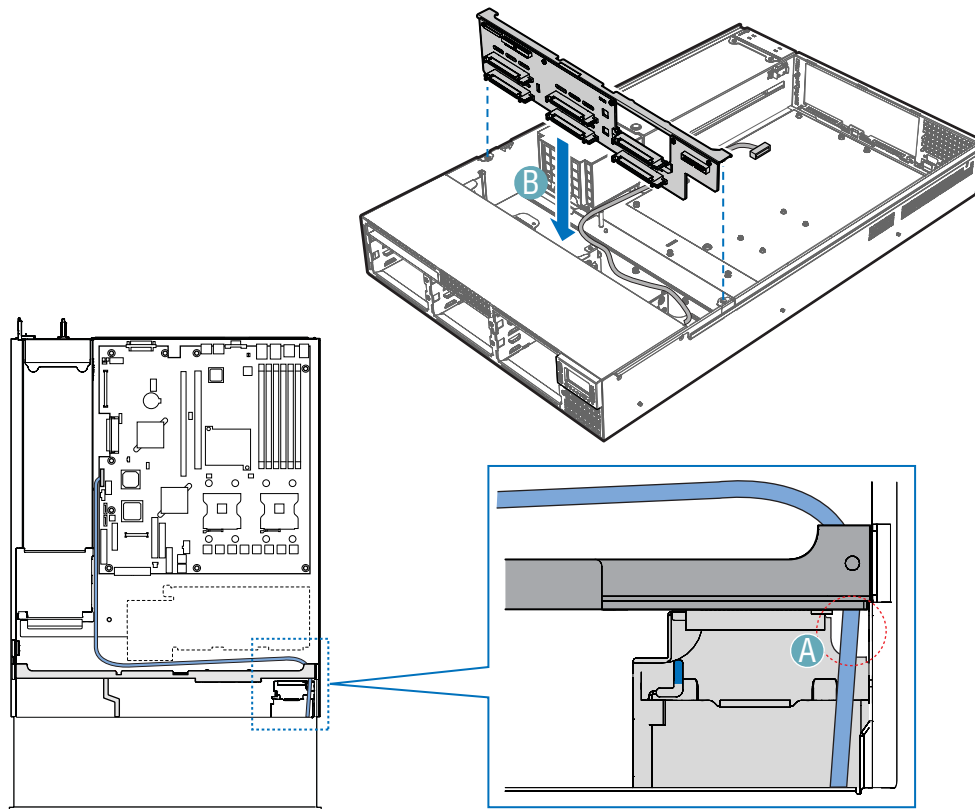
TP01074

Figure 78. Installing a SATA or SCSI Backplane

13. Connect the flex cable between the server board and the backplane. See letter "A" in the figure below. See your server board documentation to locate the connection point on the server board.
14. Connect the 2x3 power cable to the backplane. See letter "B" in the figure.

15. Connect the front panel cable between the control panel and the backplane. See letter "C" in the figure.

TP01076
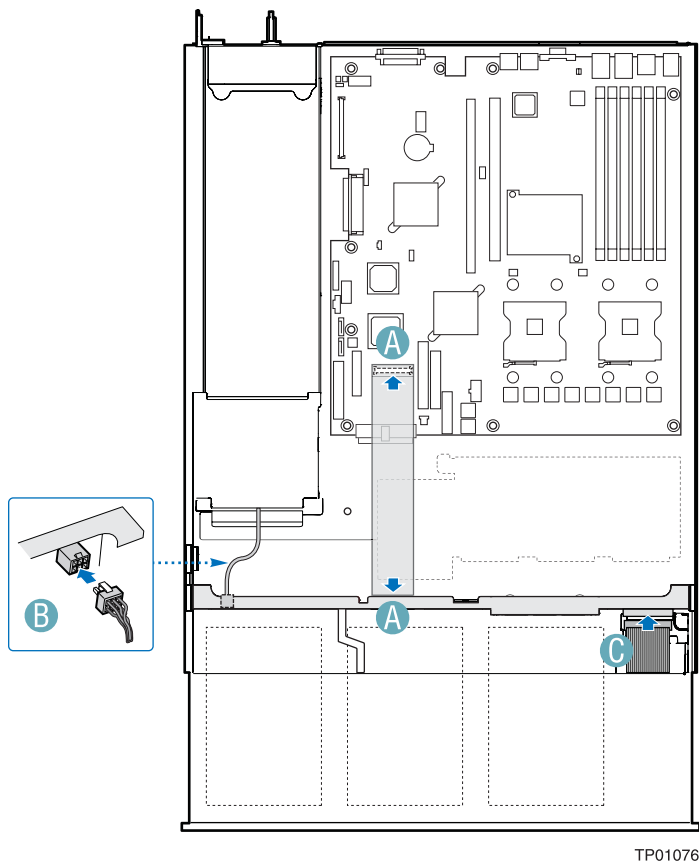
Figure 79. Installing a SATA or SCSI Backplane

16. Install the fan module. For instructions, see "Installing the Fan Module."
17. Install the air baffle. For instructions, see "Installing the Large Hot-swap Air Baffle (Backplane Installed)."
18. Install the processor air duct. For instructions, see "Installing the Processor Air Duct."
19. Install the PCI riser assembly. For instructions, see "Installing the PCI Riser Assembly."
20. Install the hot-swap hard drive(s). For instructions, see "Removing a SATA or SCSI Hot-swap Hard Disk Drive."
21. Install the floppy drive or CD-ROM / DVD-ROM drive. For instructions, see "Installing or Removing a Floppy Drive" and "Installing or Removing a CD-ROM or DVD-ROM Drive."
22. Install the chassis cover. For instructions, see "Installing the Chassis Cover."
23. (Optional): Install the front bezel. For instructions, see "Installing the Front Bezel."

Installing a Tape Drive

To install a tape drive into your Server Chassis SR2400/SR2400DC, your system must meet the following requirements:

— You must purchase the tape drive kit, order number ADRTAPEKIT.
— You must purchase a 3.5-inch SCSI tape drive.
— You must have either the SATA or SCSI backplane installed.

After purchasing the tape drive kit and the tape drive, use the instructions below to install them. In addition to these instructions, refer to the instructions that came with your tape drive for additional requirements.

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 or DC external source.
3. Remove the chassis cover. For instructions, see "Removing the Chassis Cover."
4. Remove the front bezel. For instructions, see "Removing the Front Bezel."
5. Push the tape drive filler panel from the chassis by using a long screwdriver to push it out from the inside of the chassis. See the figure below to locate the tape drive filler panel.
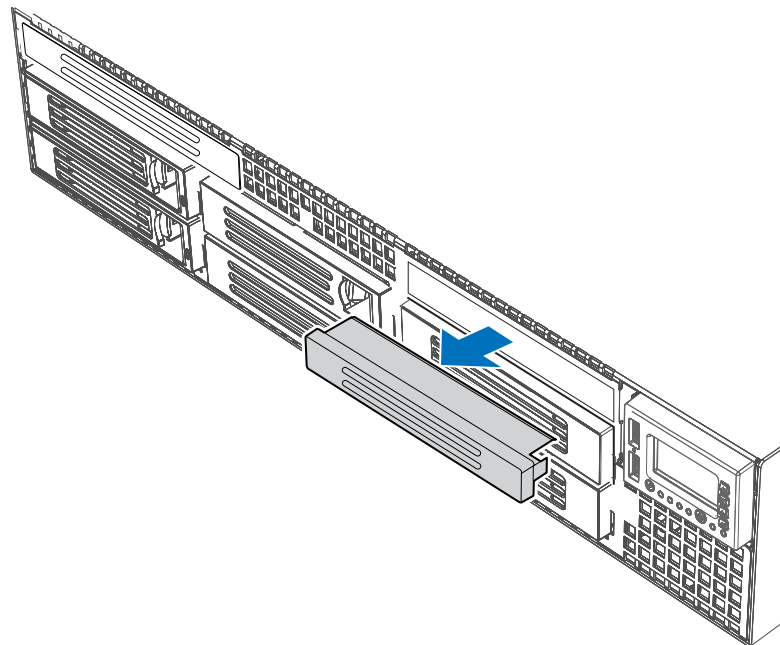
TP01355

Figure 80. Removing the Tape Drive Bay Filler Panel

6. The sixth drive bay is directly below the tape drive bay in the chassis. Lift the lever at the rear of the hard drive blank that is installed in the sixth drive bay to remove the blank from the chassis.

7. Attach the tape drive to the tape drive carrier kit using the four screws that were included with the tape drive kit. See the figure below.
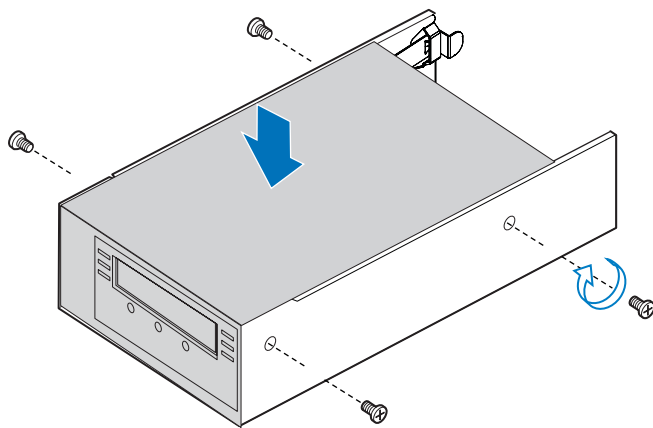
TP01356

Figure 81. Inserting a Tape Drive into the Carrier

8. Slide the tape drive carrier with the installed tape drive into the combined tape drive bay / sixth drive bay until the carrier clicks into place.
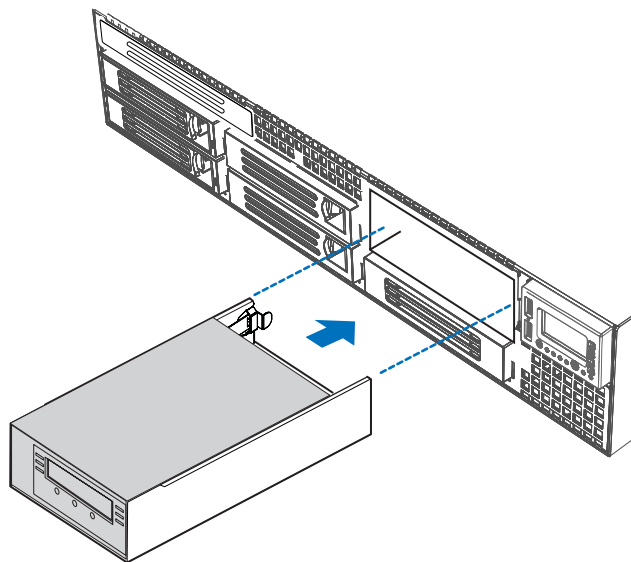
TP01357

Figure 82. Inserting the Tape Drive Carrier into the Chassis

9. Attach the end of the SCSI cable that is labeled "Tape Drive" to the SCSI connection on the tape drive.

10. Route the SCSI cable along the front of the fan module and then through the front and rear openings on the underside of the air baffle. You may need to remove the air baffle to route the cable. For instructions on removing and installing the air baffle, see "Removing the Large Hot-swap Air Baffle (Backplane Installed) and "Installing the Large Hot-swap Air Baffle (Backplane Installed)."

11. Route the end of the SCSI cable that is labeled "Server Board" to the server board or add-in card connector. Push the cable through the opening in the backplane, as shown in the figure below. See your server board or add-in card documentation to locate the connection point on the server board or add-in card.

12. Connect the 7-pin tape drive power cable to the backplane connector that is labeled "OPT CONN".

13. Connect the 4-pin tape power cable to the tape drive.

14. Install the chassis cover. For instructions, see "Installing the Chassis Cover."

15. (Optional): Install the front bezel. For instructions, see "Installing the Front Bezel."
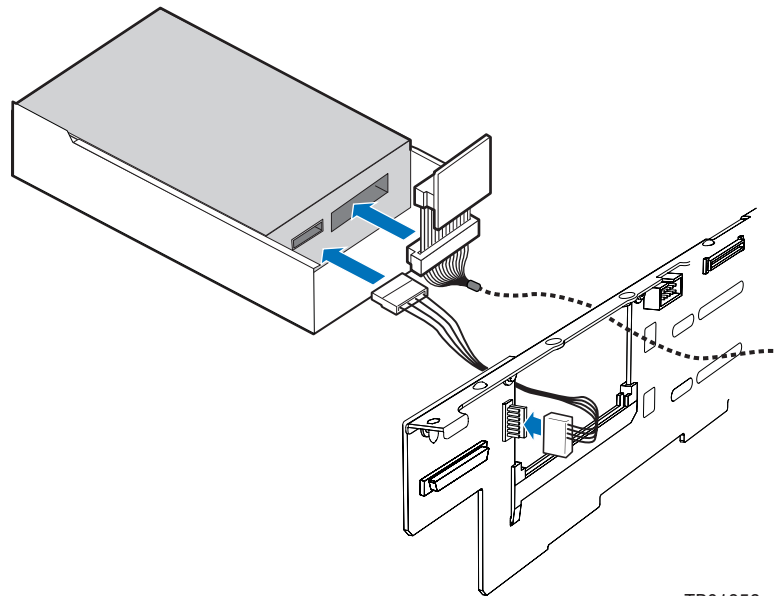
TP01358

Figure 83. Connecting the Tape Drive Cables

Filling Empty Chassis Bays

A filler panel, drive blank, or empty drive carrier must be installed into any empty drive bay. To access the drive bays, install the front bezel if it is installed. For instructions, see "Removing the Front Bezel." With the bezel removed, install the appropriate panel(s), blank, or empty hard drive bay(s) as described below.

- If you do not have a CD-ROM, DVD-ROM, or floppy drive installed in the slimline bay, install the slimline filler panel. See letter "A" in the figure below.
- If you do not have a tape drive installed, install a filler panel into the empty slot above the sixth drive bay. See letter "B" in the figure below.
- If you do not have a sixth drive or a tape drive installed, install the drive bay blank into the sixth drive bay. See letter "C" in the figure.
- Install empty hard drive carriers into any remaining empty hard drive bays.
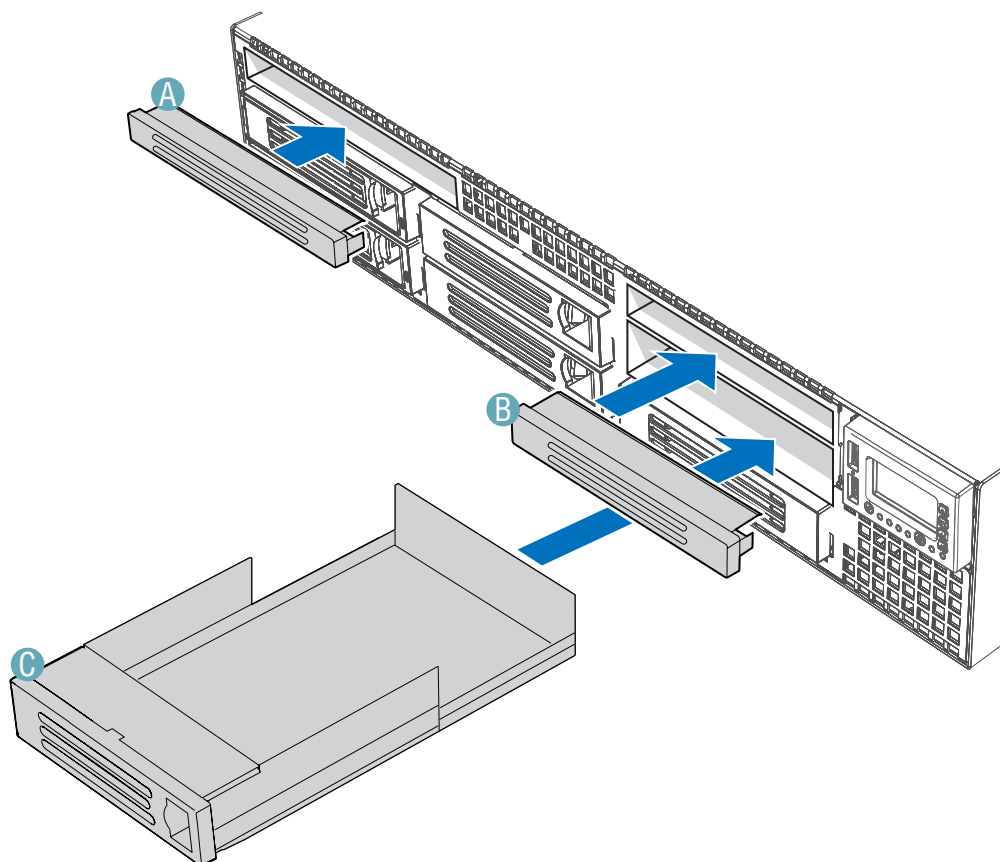
TP01169

Figure 84. Installing the Filler Panels

Technical Reference

Power Supply Specifications

700-W Redundant Power Supply Input Voltages (AC Version only)

700-W Power Supply
- 100-127 V~ at 50/60 Hz; 8.9 A max.
- 200-240 V~ at 50/60 Hz; 4.5 A max.

700-W Single Power Supply Output Voltages

700-W Power Supply

The table below lists the total wattage available from the power subsystem for each voltage. If you configure your system heavily, ensure that your loads do not exceed the combined total wattage of 700 Watts. For information about calculating the power usage for your configuration, see "Calculating Power Usage."

Table 1. 700-W Power Supply System Output Capability

Voltage	Maximum Current
+3.3 V	24 A
+5.0 V	24 A
+5 V Standby	2 A
+12.0 V	58 A
−12.0 V	0.5 A

⚠ **CAUTION**

Do not exceed a combined power output of 140 Watts for the +5 V and +3.3 V outputs. Exceeding a combined 140 Watts will overload the power subsystem and may cause the power supplies to overheat and malfunction.

The expansion slots on the server board are rated for no more than 25 Watts for any one slot. The average current usage per slot should not exceed 13 Watts.

600-W Redundant Power Supply Input Voltage (DC Version only)

600-W Power Supply
- -48VDC/-60VDC; 20.5 ADC maximum input current.

600-W Single Power Supply Output Voltages

600-W Power Supply

The table below lists the total wattage available from the power subsystem for each voltage. If you configure your system heavily, ensure that your loads do not exceed the combined total wattage of 600 Watts. For information about calculating the power usage for your configuration, see "Calculating Power Usage."

Table 2. 600-W Power Supply System Output Capability

Voltage	Maximum Current
+3.3 V	20 A
+5.0 V	26 A
+5 V Standby	2.5A
+12.0 V	49 A
−12.0 V	0.5 A

⚠ **CAUTION**

Do not exceed a combined power output of 150 Watts for the +5 V and +3.3 V outputs. Exceeding a combined 150 Watts will overload the power subsystem and may cause the power supplies to overheat and malfunction.

The expansion slots on the server board are rated for no more than 25 Watts for any one slot. The average current usage per slot should not exceed 13 Watts.

System Environmental Specifications

Table 3. Environmental Specifications

Temperature	
Non-operating	−40 ° to 70 °C.
Operating	5 ° to 35 °C; derated 0.5 °C for every 1000 ft (305 m) to a maximum of 10,000 ft.
Humidity	
Non-operating	90% relative humidity (non-condensing) at 30 °C.
Shock	
Operating	2.0 g, 11 msec, 1/2 sine
Packaged	Operational after an 18" free fall.
Acoustic noise	7 Bels in sound power for a typical office ambient temperature (65-75 °F). **Your selection of peripherals may change the noise level.**
Electrostatic discharge (ESD)	Tested to 15 kilovolts (kV); no component damage.

Equipment Log and Worksheets

Equipment Log

Use the blank equipment log provided here to record information about your server. You will need some of this information when you run the SSU.

Item	Manufacturer Name and Model Number	Serial Number	Date Installed
Chassis			
Server Board			
Processor Speed and Cache			
Memory			
Video Display			
Keyboard			
Mouse			
Floppy Drive			
CD-ROM Drive			
Tape Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			

continued

Equipment Log (continued)

Item	Manufacturer Name and Model Number	Serial Number	Date Installed
Intel® Management Module			
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 two worksheets in this section to calculate the total used by your configuration. For current and voltage requirements of add-in boards and peripherals, see your vendor documents.

Worksheet, Calculating DC Power Usage

Table 4. 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						
DVD Rom Drive						
1st Hard Drive						
2nd Hard Drive						
3rd Hard Drive						
4th Hard Drive						
5th Hard Drive						
6th Hard Drive						
Tape Drive						
Expansion Board 1						
Expansion Board 2						
Expansion Board 3						
Expansion Board 4						
Expansion Board 5						
Intel® Management Module						
Standard or Local Control Panel						
Total Current						

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 5. 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 150 Watts for the +5 V and +3.3 V outputs. Exceeding a combined 150 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 Intel® Server Chassis SR2400/SR2400DC 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 SR2400/SR2400DC has been 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 2.   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

Table 3.   Product Certification Markings

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

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白主規制協議会（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/chassis/SR2400

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
Belgium	02 714 3182		
In Asia-Pacific region			
Australia	1800 649931	Indonesia	803 65 7249
Hong Kong	852 2 844 4456	Malaysia	1 800 80 1390
Korea	822 767 2595	New Zealand	0800 444 365
China	800 820 1100 (toll-free)	Pakistan	632 63684 15 (IDD via Philippines)
	8 621 33104691 (not toll-free)	Philippines	1 800 1 651 0117
Singapore	65 6213-1311	Thailand	1 800 631 0003
India	0006517 2 68303634 (manual	Vietnam	632 6368416 (IDD via Philippines)
	toll-free. From India, you need an	Myanmar	63 2 636 9796 (via Philippines)
	IDD-equipped telephone)	Cambodia	63 2 636 9797 (via Philippines)
Taiwan	2 2545-1640		
In Japan			
0120 868686 (Domestic)		81 298 47 0800 (outside country)	

In Latin America

Brazil	001-916 377 0180	Ecuador (Andimate)	Contact AT&T USA at 1 999 119. Once connected, dial 800 843 4481
Mexico	Contact AT&T USA at 001 800 462 628 4240. Once connected, dial 800 843 4481	Ecuador (Pacifictel)	Contact AT&T USA at 1 800 225 528. Once connected, dial 800 843 4481
Colombia	Contact AT&T USA at 01 800 911 0010. Once connected, dial 800 843 4481	Guatemala	Contact AT&T USA at 99 99 190. Once connected, dial 800 843 4481
Costa Rica	Contact AT&T USA at 0 800 0 114 114. Once connected, dial 800 843 4481	Venezuela	Contact AT&T USA at 0 800 2255 288. Once connected, dial 800 843 4481
Panama	Contact AT&T USA at 00 800 001 0109. Once connected, dial 800 843 4481	Argentina	Contact AT&T USA at 0-800 222 1288. Once connected, dial 800 843 4481
Chile (Easter Island)	Contact AT&T USA at 800 800 311. Once connected, dial 800 843 4481	Paraguay	001 916 377 0114
		Peru	001 916 377 0114
Chile (Mainland and Juan)	Contact AT&T USA at 800 225 288. Once connected, dial 800 843 4481	Uruguay	001 916 377 0114
Miami	1 800 621 8423		

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.

_____

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Board / Chassis Information

Baseboard Revision – PBA#:	DIMM Configuration
Baseboard Serial Number:	DIMM1A MB:
CPU1 Speed/Stepping/Spec:	DIMM1A Vendor/part number:
CPU2 Speed/Stepping/Spec:	DIMM1B MB:
System BIOS Version:	DIMM1B Vendor/part number:
HSC Firmware Version:	DIMM2A MB:
Chassis Model Serial Number:	DIMM2A Vendor/part number:
❒ Intel Server Chassis SR2400 ❒ Intel Server Chassis SR2400DC	DIMM2B MB:
	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#
PCI-X 66/100MHz Riser Slot					
☐ PCI Slot 1					
PCI "Super Slot" PCI-X 133/266 or PCI-Express					
☐ PCI Slot 2					
Video					
☐ On-Board Video					
☐ Add-in Video					
NIC					
☐ On-Board NIC1 (1.0 Gb)					
☐ On-Board NIC2 (1.0 Gb)					

Hard Drive Information:

☐ ATA   # of drives installed: _____
Make/Model/Firmware Revision _____

☐ SCSI   # of drives installed: _____
Hot-swap: ____   Fixed: ____
Make/Model/Firmware Revision _____

☐ SATA # of drives installed: _____
Make/Model/Firmware Revision _____
Hot-swap: ____   Fixed: ____

Complete Problem Description

In the space below, provide a **complete** description of the steps used to reproduce the problem or a complete description of where the problem can be found. Please also include any details on troubleshooting already done.

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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.