Intel® Server Chassis SR1400
Intel® Server Chassis SR2400
Fixed Drive Kit

Installation Guide

Order Number: C83542-002

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Important Safety Instructions

Important Safety Instructions

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

Wichtige Sicherheitshinweise

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

重要安全指导

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

Consignes de sécurité

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

Instrucciones de seguridad importantes

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

Warnings and Cautions

These warnings and cautions apply whenever you remove the Access Cover to access components inside the server. Only a technically qualified person should integrate and configure the server.

⚠ WARNINGS

The power button on the front panel DOES NOT turn off the AC power. To remove power from server, you must unplug the AC power cord from the wall outlet or the chassis.

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

Hazardous voltage, current, and energy levels are present inside the power supply. There are no user-serviceable parts inside it; servicing should be done by technically qualified personnel.

⚠ CAUTIONS

ESD can damage disk drives, boards, and other parts. Perform all procedures in this document only at an ESD workstation. If one is not available, provide ESD protection by wearing an anti-static wrist strap attached to chassis ground—any unpainted metal surface—on your server when handling parts.

Always handle boards carefully. They can be extremely sensitive to ESD. Hold boards only by their edges. Do not touch the connector contacts. 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.

For proper cooling and airflow, always install the Access Cover before turning on the server. Operating it without the cover in place can damage system parts.

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About the Fixed Drive Kit

This fixed drive kit can be installed in the Intel® Server Chassis SR1400 or the Intel® Server Chassis SR2400. The kit provides you with the ability to install up to three fixed SATA drives into your Server Chassis SR1400 or SR2400. For easier SATA data and power cable routing in the Server Chassis SR2400, you should install the SATA drives into the lower bays.You cannot install hot-swap drives into either chassis when this kit is installed.

Before starting, remove the CD ROM tray and any installed drive carriers from the Server Chassis SR1400 or SR2400.

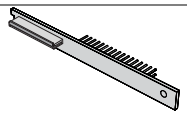
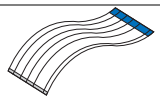
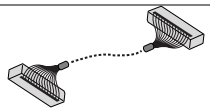
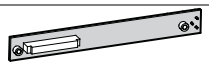
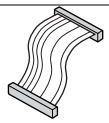
NOTE

The number of drives you can actually install depends on the server board capabilities, but the chassis limit is three drives with either the Server Chassis SR1400 or SR2400.

Kit Contents

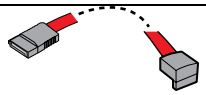
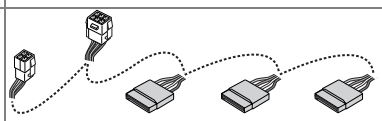
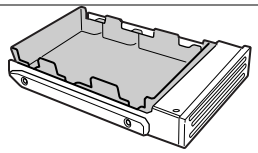
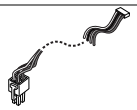
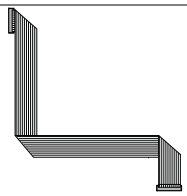
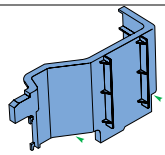
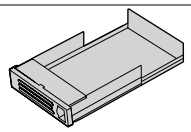
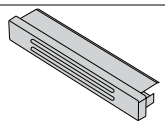
You should have received the following parts with your fixed drive kit, order number AFIXDRVKIT:

Fixed Drive Kit Parts List

Item	Picture (not to scale)	Quantity
Floppy drive interposer board with one screw		1
26-pin flat flex cable for floppy drive		1
34-pin floppy drive data cable		1
CD-ROM drive interposer board with two screws		1
40-pin CD-ROM drive data cable		1

continued

Fixed Drive Kit Parts List (continued)

SATA data cable		3
SATA power cable adapter		1
Fixed Hard Drive Carriers		3
CD-ROM drive or floppy drive power cable		1
Front panel cable (long)		1
Fixed drive power supply baffle (used with Server Chassis SR2400 only)		1
Drive bay blank (used with Server Chassis SR2400 only)		3
Sixth drive filler panel (used with Server Chassis SR2400 only)		1

Document Scope and Assumptions

This document provides instructions to guide you through installing the fixed drive kit into either the Intel® Server Chassis SR1400 or SR2400.

The instructions in this document are specific to the Intel® Server Boards SE7520JR2, SE7320VP2 and SE7221BK1-E. This kit may work with other Intel® Server Boards as well. For boards other than these server boards, refer to the documentation that came with your server board to determine compatibility and cable routing.

This document assumes you are installing the fixed drive kit during an initial integration process, before your server system is up and running. Because the Quick Start User's Guide used for the initial integration is used for several implementations, this instruction guide will ask you to uninstall selected components that you may have just installed. For the best results, read through both the Quick Start User's Guide and this installation guide before beginning your installation.

If you are installing the fixed drive kit into a fully integrated server system that is currently operational, you will need to uninstall several components. Refer to the appropriate Intel® Server Chassis User Guide for instructions on removing and reinstalling components. The User's Guides are available at

- Intel Server Chassis SR1400: http://support.intel.com/support/motherboards/server/chassis/SR1400/
- Intel Server Chassis SR2400: http://support.intel.com/support/motherboards/server/chassis/SR2400/

Tools and Supplies Needed

- Phillips* (cross head) screwdriver (#2 bit)
- Anti-static wrist strap (recommended)

Intel® Server Chassis SR2400 Fixed Drive Installation

NOTE

The SR2400 chassis is not compatible with Intel® Server Board SE7221BK1-E.

Follow Steps in Quick Start User's Guide

Follow the instructions in the Intel® Server Chassis SR2400 Quick Start User's Guide that came with your server chassis. The Quick Start User's Guide will direct you to this guide at the appropriate point during the integration process.

Install SATA Power Cable Adapter

1. Connect the SATA Power Cable Adapter to the 2x3 Power Supply Cable that extends from your power supply. See letters "A" and "B" in the figure below.

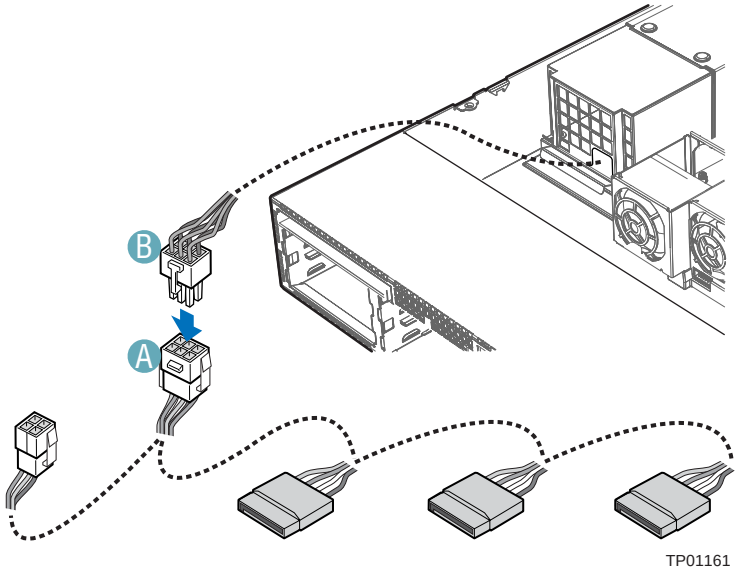


Figure 1. Installing SATA Power Cable Adapter

Install Slimline Floppy Drive (optional)

NOTE

The carrier for the slimline floppy drive was sent to you in the hardware kit that came with your Server Chassis SR2400.

The carrier for the slimline DVD-ROM drive / CD-ROM drive was pre-installed in the slimline drive bay of your Server Chassis SR2400. It will need to be removed from the chassis before beginning.

1. 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.
2. Lower the right side of the floppy drive into the carrier until it clicks into place. See letter “B” in the figure.

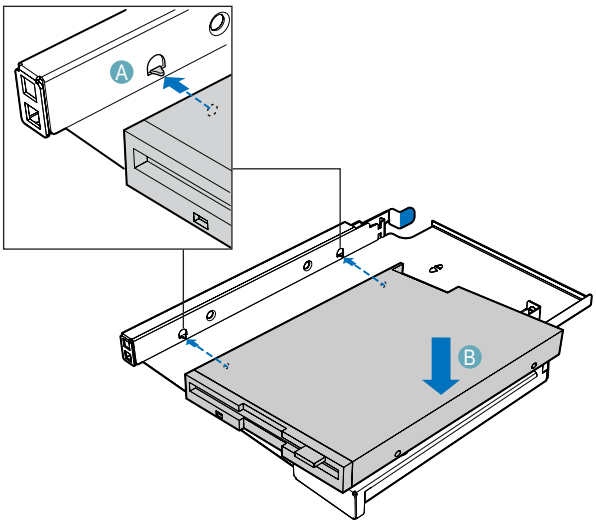


Figure 2. Installing Slimline Floppy Drive into Carrier

3. Open the connector on the rear of the floppy drive by pulling up on the connector cover. See letter “A” in the figure below.
4. Insert one end of the 26-pin flat flex cable into the connector.
5. Push down on the connector cover to lock the cable into place.
6. Open the connector on the interposer board by pulling out on the connector cover. See letter “D” in the figure below.
7. Insert the loose end of the floppy cable into the interpose board connector. See letter “E” in the figure.
8. Push in on the connector cover to lock the cable into place. See letter “F” in the figure.

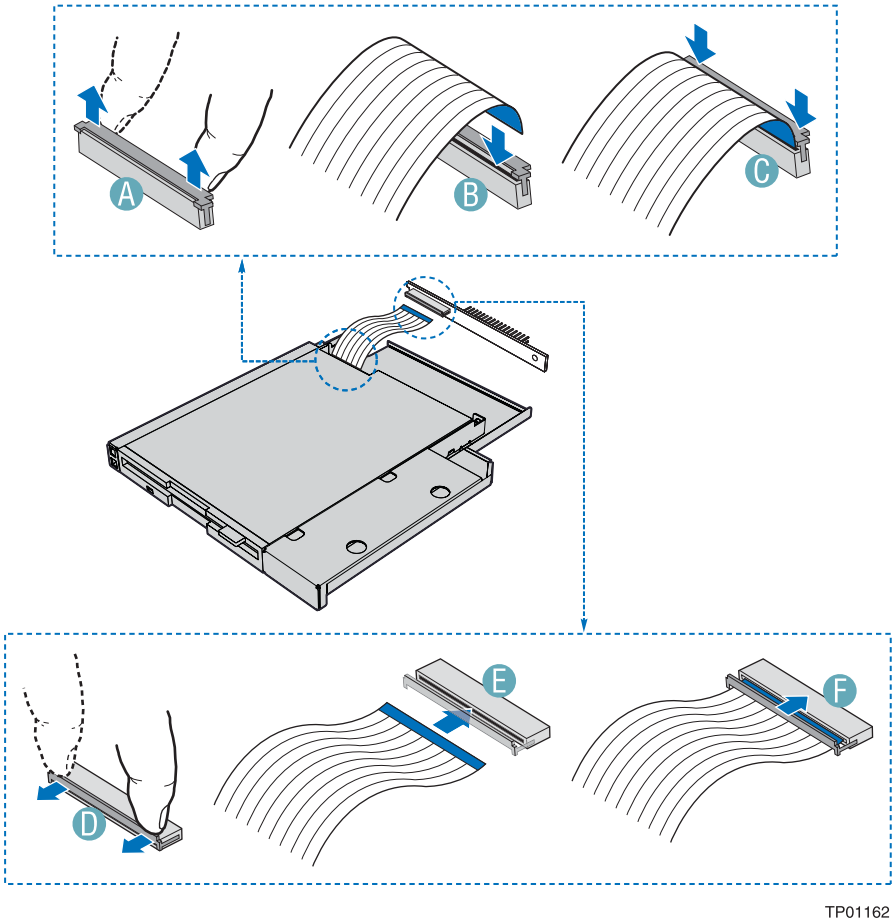


Figure 3. Installing 26-pin Flat Flex Data Cable

9. Lower the interposer board into the floppy drive tray and engage the notch. See Letter “A” in the figure below.
10. Attach the interposer board to floppy drive with the screw that was included with the interpose board. See letter “B” in the figure. In the diagram, the flat flex cable been removed for clarity.

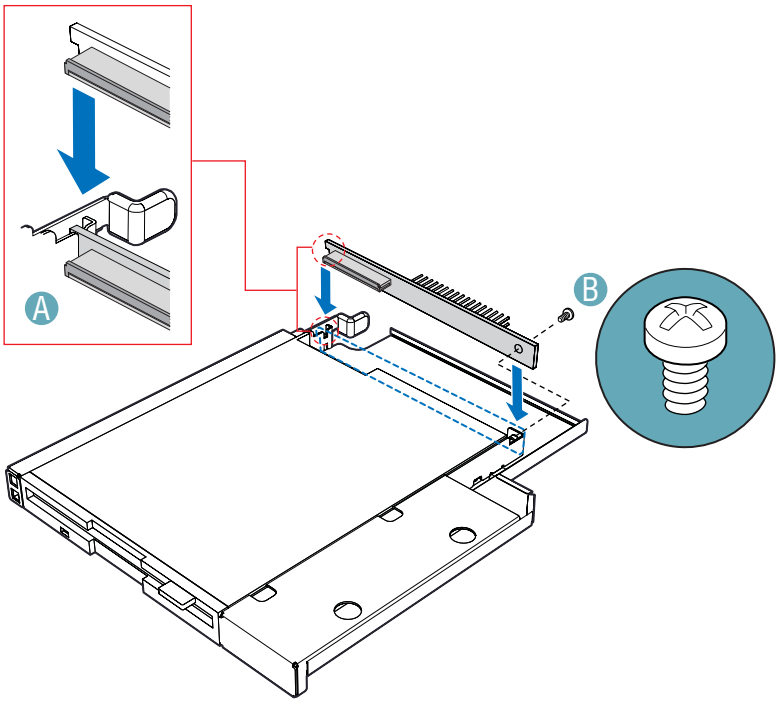


Figure 4. Installing Floppy Drive Interposer Board

11. Slide the floppy drive assembly into the chassis until it clicks into place. See letter “A” in the figure below.
12. Connect the 2x2 end of the floppy drive power cable that was included with your kit to the 2x2 power connector on SATA power adapter cable. See letters “B” and “C” in the figure below.
13. 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.
14. 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.
15. Step 12 of your Intel Server Chassis SR2400 Quick Start User’s Guide will direct you to install the air baffle. The floppy drive data cable must route beneath this air baffle, as shown in the diagram below.

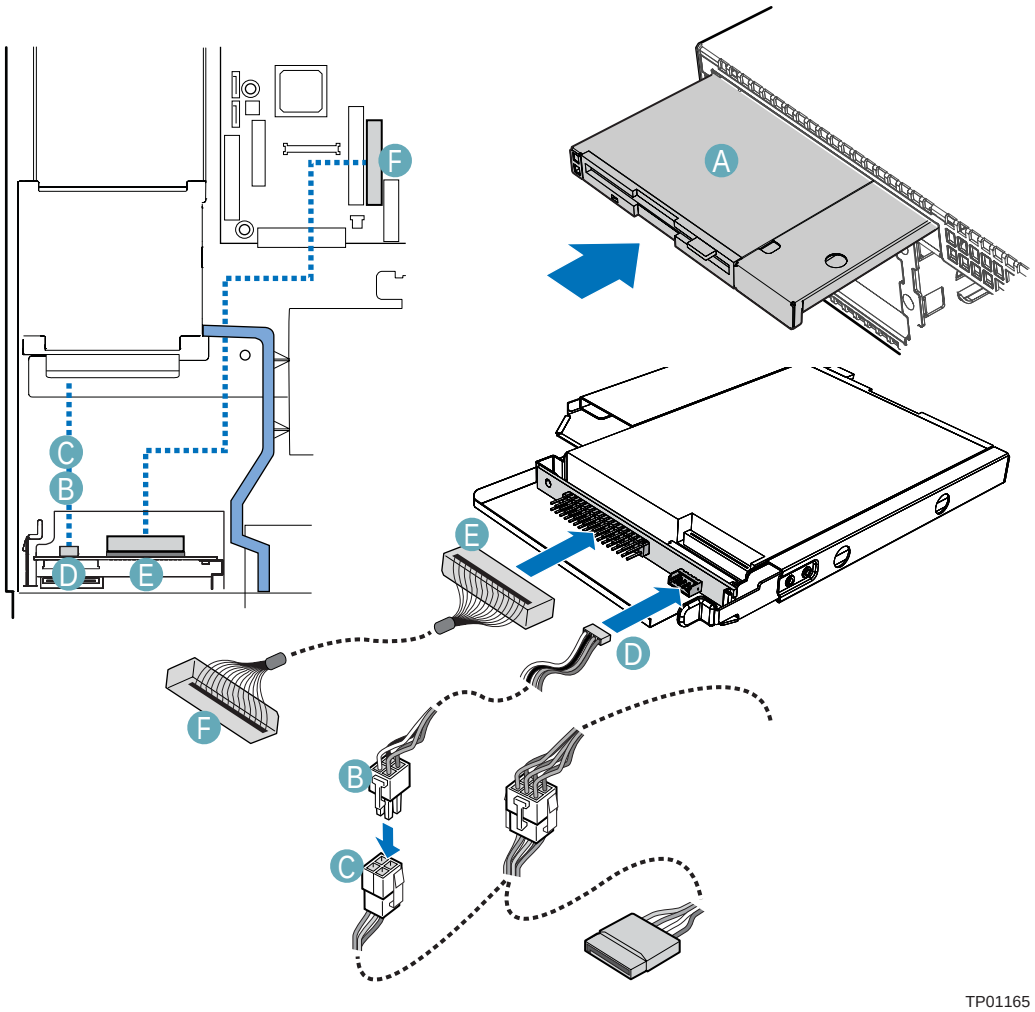


Figure 5. Installing Slimline Floppy Drive into Chassis

Install Slimline DVD-ROM or CD-ROM Drive (optional)

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. It will need to be removed from the chassis before beginning.

1. 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.
2. 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.
3. Use the two screws indicated in the figure to attach the interpose board to the DVD-ROM / CD-ROM drive. See letters “C” and “D” in the figure.

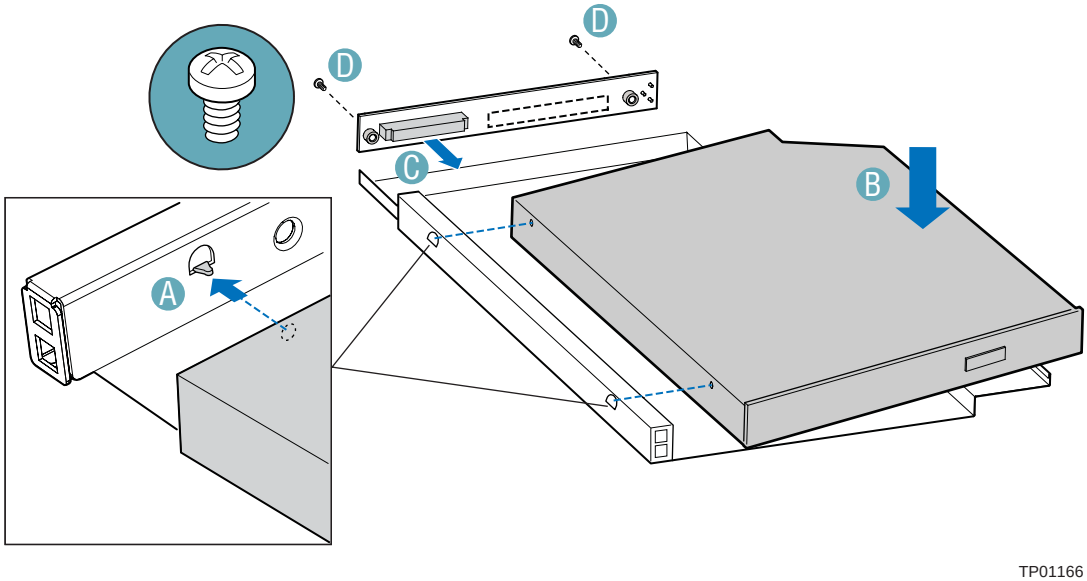


Figure 6. Installing DVD-ROM or CD-ROM Drive into Carrier

4. Insert the DVD-ROM / CD-ROM drive into the chassis. See letter “A” in the figure below.
5. Connect the 2x2 end of the DVD-ROM/CD-ROM drive power cable that was included with your kit to the 2x2 power connector on SATA power adapter cable. See letters “B” and “C” in the figure below.
6. Connect the remaining end of 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.
7. 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.
8. Step 12 of your Intel Server Chassis SR2400 Quick Start User’s Guide will direct you to install the air baffle. The DVD-ROM / CD-ROM drive data cable must route beneath this air baffle, as shown in the diagram below.

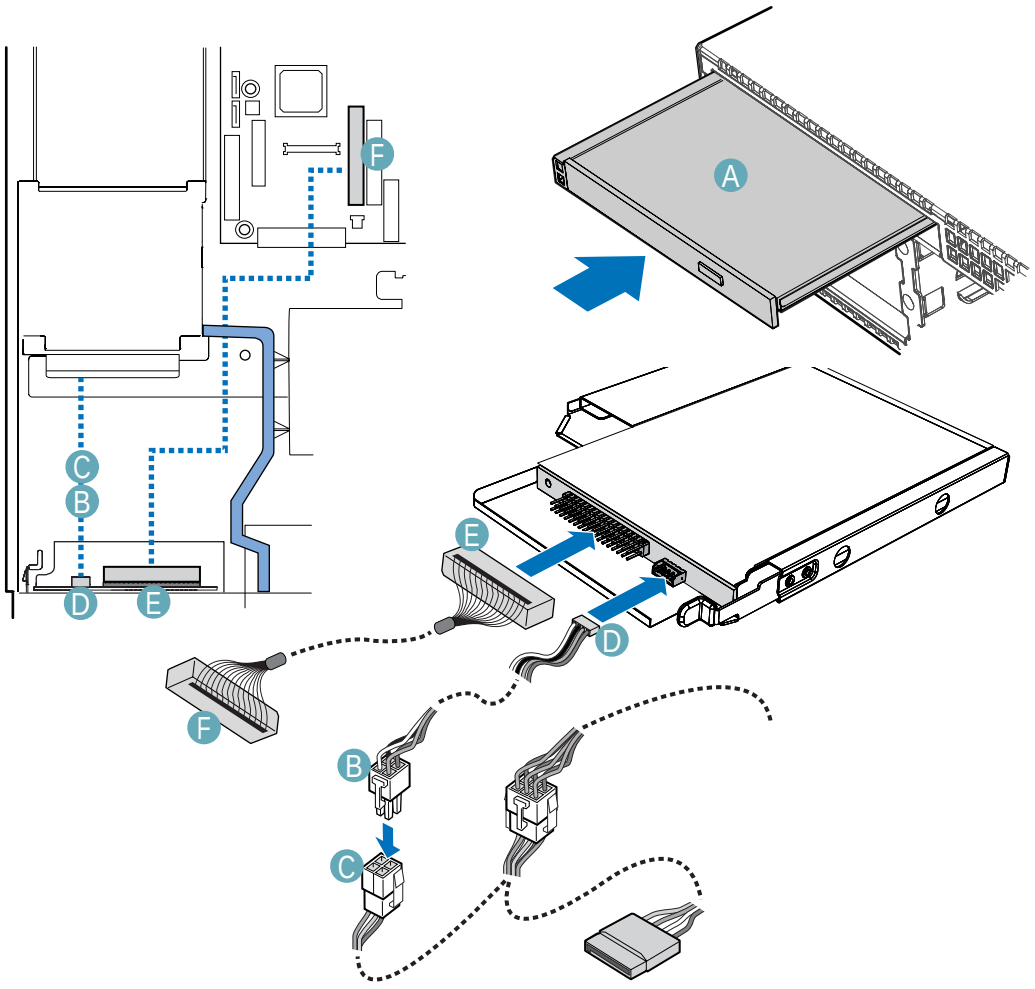


Figure 7. Installing DVD-ROM or CD-ROM Drive into Chassis

Install SATA Data Cable(s)

1. For each drive you will be installing, route one SATA data cable from the server board to a hard drive bay, with the right-angle end of the SATA data connector going to the server board.
2. Connect the right-angle SATA data connector to the corresponding location on the server board. See letter “B” in the figure below. See your server board documentation for assistance in locating the SATA connector location(s) on the server board.
3. Lay the remaining end of the SATA data connector(s) in the drive bay(s). Plan to install SATA hard drives first into the lower three bays to ease power cable routing. You will connect the SATA data and power cables when you install the hard drive(s). See letters “A” and “C” to see how the SATA data and power cables will connect.
4. Step 12 of your Intel Server Chassis SR2400 Quick Start User’s Guide will direct you to install the air baffle. The SATA drive data and power cable(s) must route beneath this air baffle, as shown by letters “D” and “E” in the diagram below.

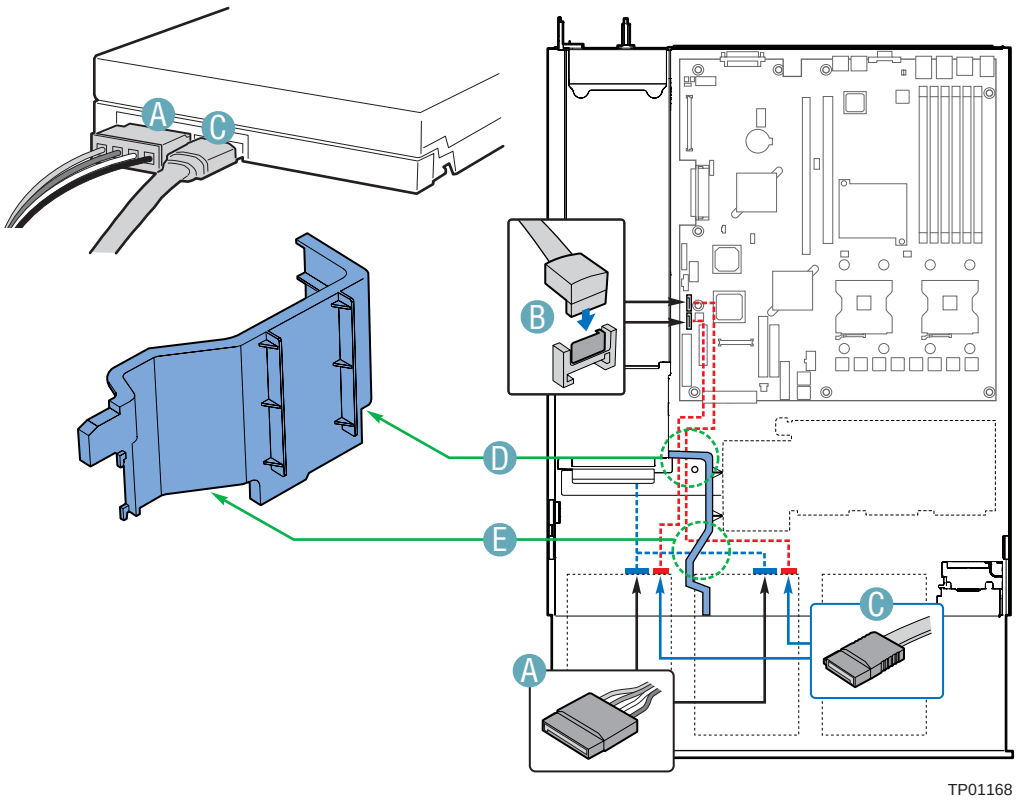


Figure 8. Installing SATA Data Cables

Install Filler Panels

1. Install the slimline filler panel if you did not install a CD-ROM drive, DVD-ROM drive, or floppy drive. See letter “A” in the figure below.
2. Install a filler panel into the empty slot above the sixth drive bay, unless you are installing the tape drive kit as part of your integration process. See letter “B” in the figure below.
3. Install the drive bay blank into the the sixth drive bay if no drive is installed in this bay. See letter “C” in the figure.
4. Install empty hard drive carriers into remaining upper drive bays.
5. Install drive blanks into any lower bays that will not have a hard drive installed.

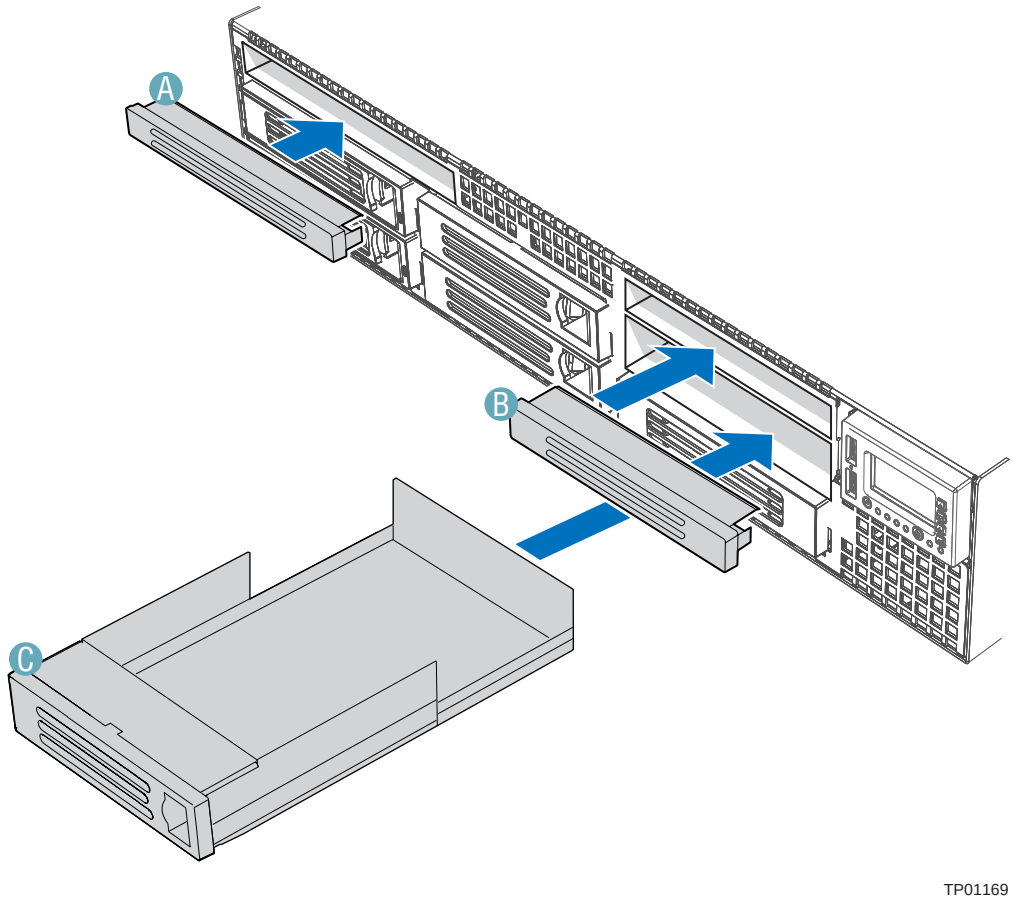


Figure 9. Installing Filler Panels

Complete Server System Integration

Return to the Intel® Server Chassis SR2400 Quick Start User's Guide, continuing with Step 12 and making the following changes to the Cable Routing Legend shown in Step 12:

Cable routing through both notches:

- Add SATA data cable(s)
- Front panel cable

Cable routing through rear notch:

- Add floppy data cable (if floppy drive is installed)
- Add DVD-ROM or CD-ROM data cable (if DVD-ROM or DVD-ROM drive is installed)

Cable routing through front notch (not currently included in Step 12):

- Add SATA power cable

After completing Step 21 in the Quick Start User's Guide, connect the data and power cable(s) to your SATA drives, as shown by letters "A" and "C" in Figure 8.

Intel® Server Chassis SR1400 Fixed Drive Installation

Follow Steps in Quick Start User's Guide

Follow the instructions in the Intel® Server Chassis SR1400 Quick Start User's Guide that came with your server chassis. The Quick Start User's Guide will direct you to this guide at the appropriate point during the integration process.

Install SATA Power Cable Adapter

1. Connect the SATA power cable adapter to the 2x3 Power Supply Cable that extends from your power supply. See letters "A" and "B" in the figure below.

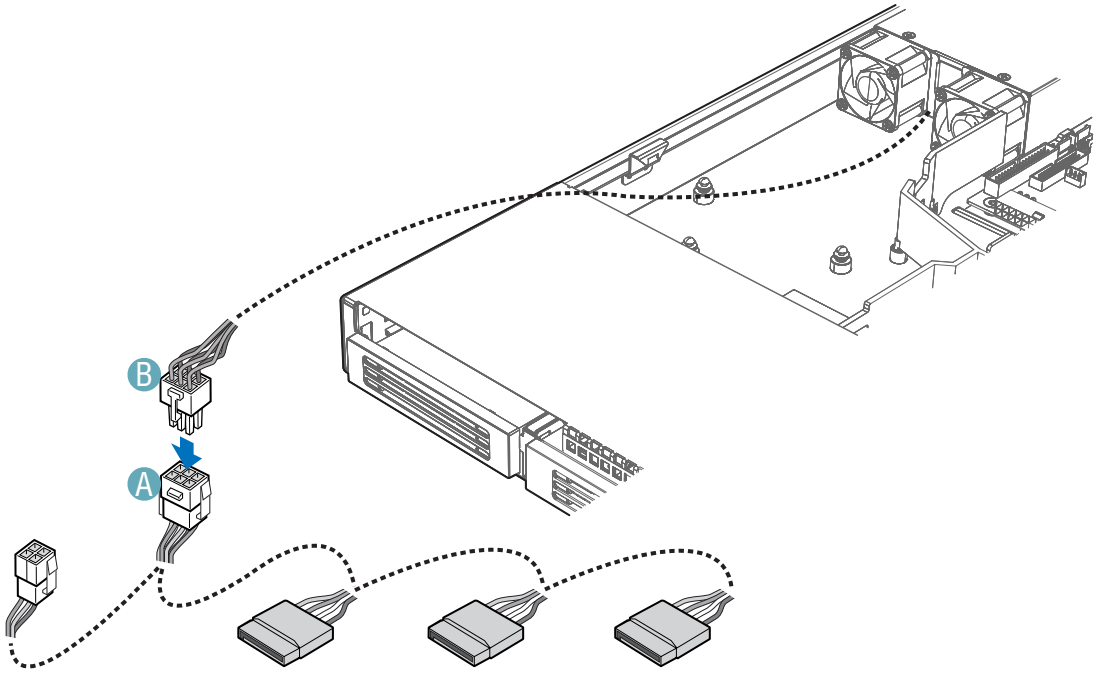


Figure 10. Installing SATA Power Cable Adapter

Install Slimline Floppy Drive (optional)

NOTE

The carrier for the slimline floppy drive was sent to you in the hardware kit that came with your Server Chassis SR1400.

1. 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.
2. Lower the right side of the floppy drive into the carrier until it clicks into place.

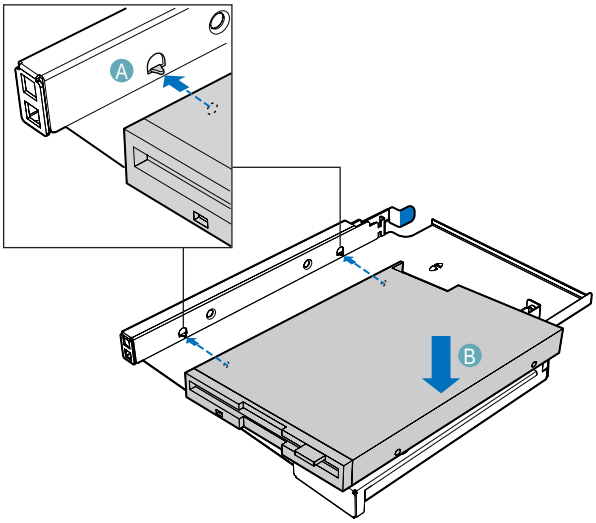


Figure 11. Installing Slimline Floppy Drive into Carrier

3. Open the connector on the rear of the floppy drive by pulling up on the connector cover. See letter “A” in the figure below.
4. Insert one end of the 26-pin flat flex cable end into the connector.
5. Push down on the connector cover to lock the cable into place.
6. Open the connector on the interposer board by pulling out on the connector cover. See letter “D” in the figure below.
7. Insert the loose end of the floppy cable into the interpose board connector. See letter “E” in the figure.
8. Push in on the connector cover to lock the cable into place. See letter “F” in the figure.

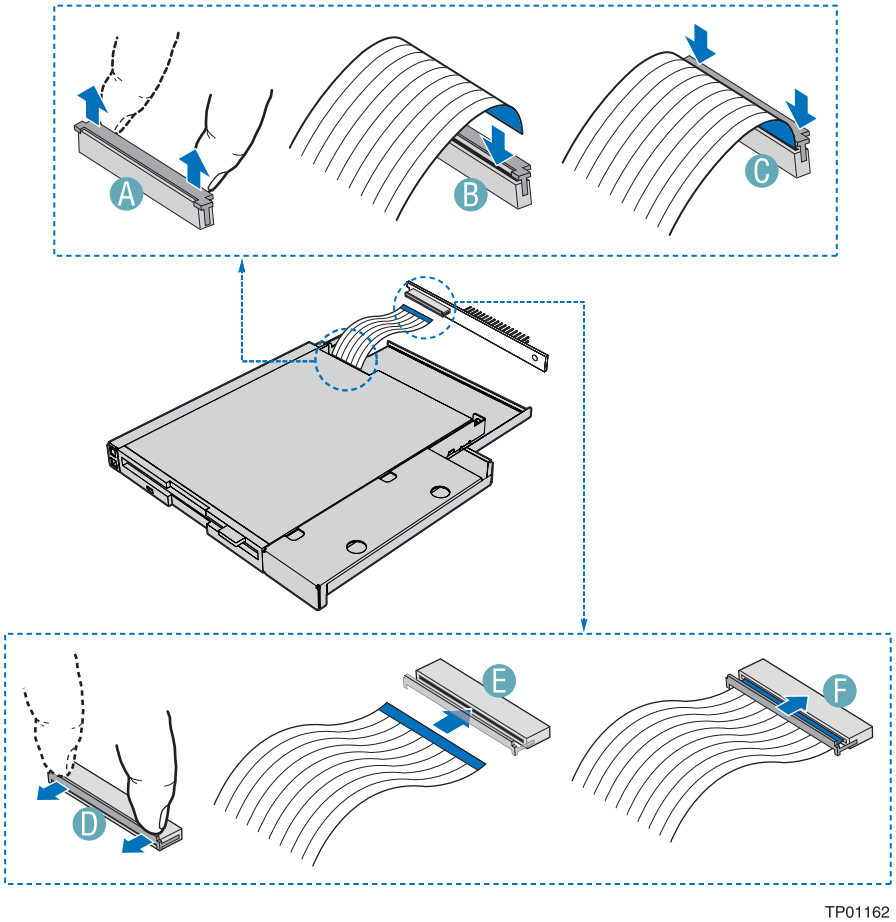


Figure 12. Installing 26-pin Flat Flex Data Cable

9. Lower the interposer board into the floppy drive tray and engage the notch. See Letter “A” in the figure below.
10. Attach the interposer board to floppy drive with the screw that was included with the interpose board. See letter “B” in the figure. In the diagram, the flat flex cable been removed for clarity.

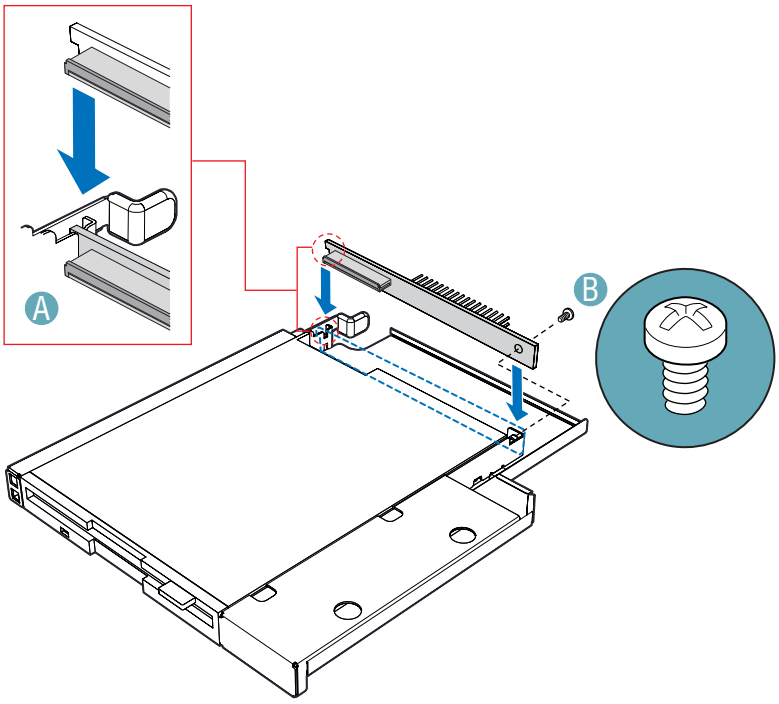


Figure 13. Installing Floppy Drive Interposer Board

11. Slide the floppy drive assembly into the chassis until it clicks into place. See letter “A” in the figure below.
12. Connect the 2x2 end of the floppy drive power cable that was included with your kit to the 2x2 power connector on SATA power adapter cable. See letters “B” and “C” in the figure below.
13. 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.
14. 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.
15. Step 11 of your Intel Server Chassis SR1400 Quick Start User’s Guide will direct you to install the air baffle. The floppy drive data cable must route over this air baffle, as shown in the diagram below.

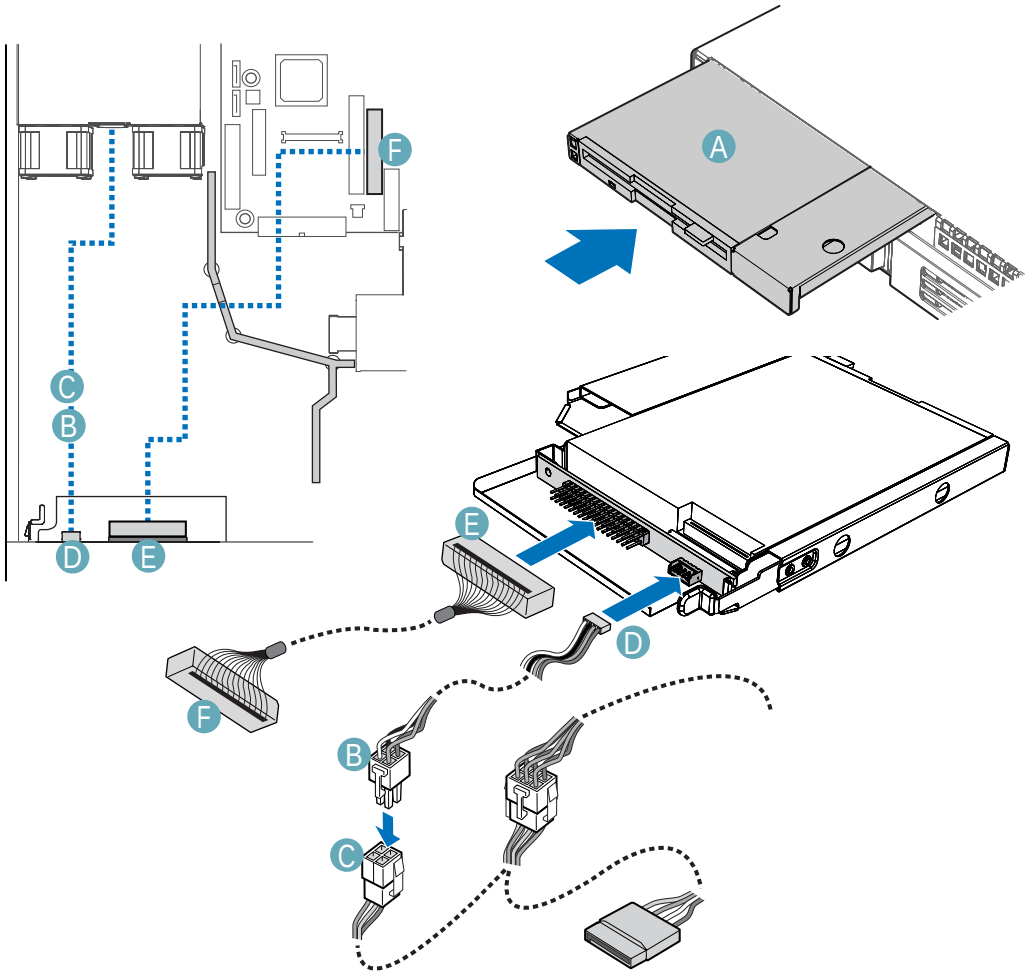


Figure 14. Installing Slimline Floppy Drive into Chassis

Install Slimline DVD-ROM or CD-ROM Drive (optional)

NOTE

The carrier for the slimline DVD-ROM drive / CD-ROM drive was pre-installed in the slimline drive bay of your Server Chassis SR1400. It will need to be removed from the chassis before beginning.

1. 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.
2. 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.
3. Use the two screws indicated in the figure to attach the interpose board to the DVD-ROM / CD-ROM drive. See letters “C” and “D” in the figure.

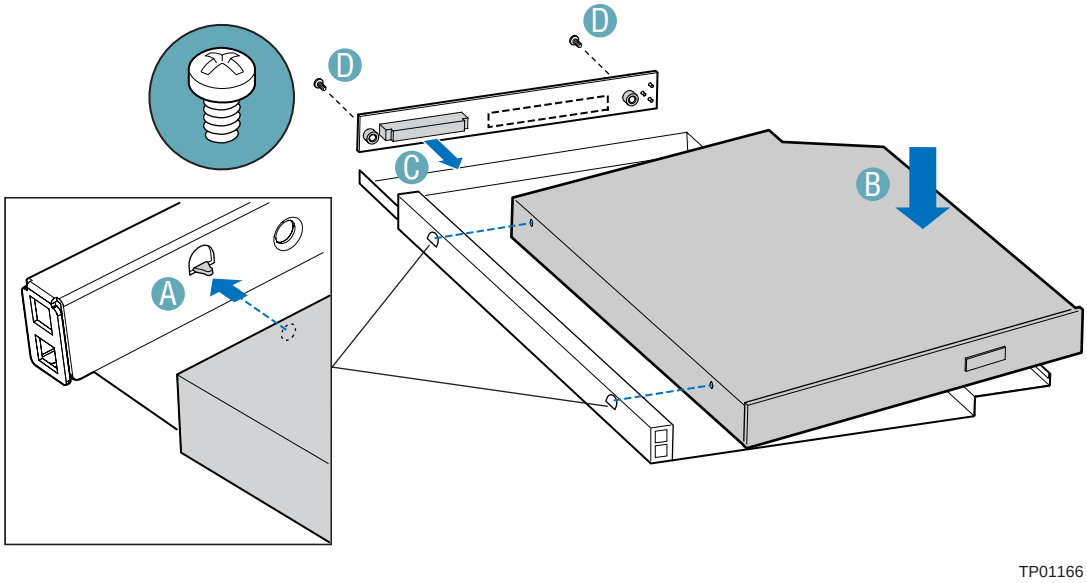


Figure 15. Installing DVD-ROM or CD-ROM Drive into Carrier

4. Insert the DVD-ROM / CD-ROM drive into the chassis. See letter “A” in the figure below.
5. Connect the 2x2 end of the DVD-ROM/CD-ROM drive power cable that was included with your kit to the 2x2 power connector on SATA power adapter cable. See letters “B” and “C” in the figure below.
6. Connect the remaining end of 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.
7. 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.
8. Step 11 of your Intel Server Chassis SR1400 Quick Start User’s Guide will direct you to install the air baffle. The DVD-ROM / CD-ROM drive data cable must route over this air baffle, as shown in the diagram below.

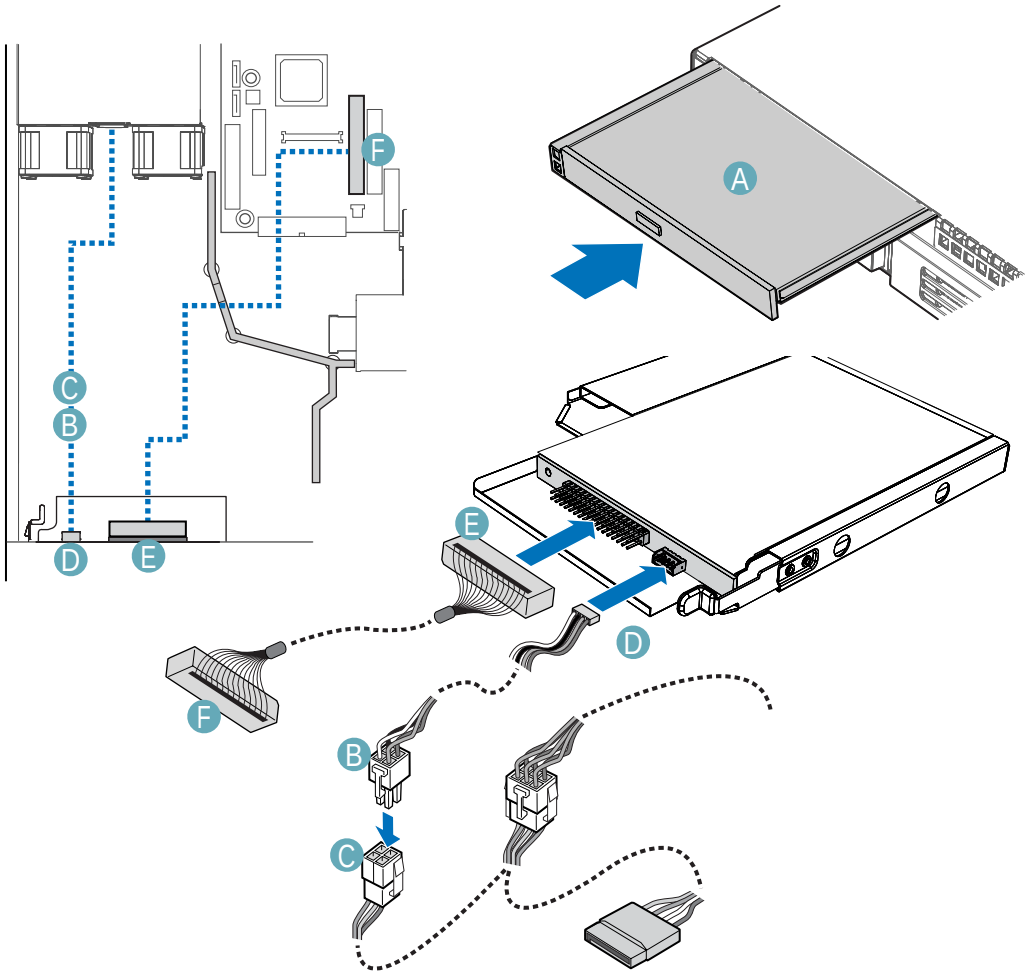


Figure 16. Installing DVD-ROM or CD-ROM Drive into Chassis

Install SATA Data Cable(s)

1. For each drive you will be installing, route one SATA data cable from the server board to a hard drive bay, with the right-angle end of the SATA data connector going to the server board.
2. Connect the right-angle SATA data connector to the corresponding location on the server board. See letter “B” in the figure below. See your server board documentation for assistance in locating the SATA connector location(s) on the server board.
3. Lay the remaining end of the SATA data connector(s) in the drive bay(s). You will connect the SATA data and power cables when you install the hard drive(s). See letters “A” and “C” to see how the SATA data and power cables will connect.
4. Step 11 of your Intel Server Chassis SR1400 Quick Start User’s Guide will direct you to install the air baffle. The SATA drive data cable(s) must route beneath this air baffle, as shown by letters “D” and “E” in the diagram below.

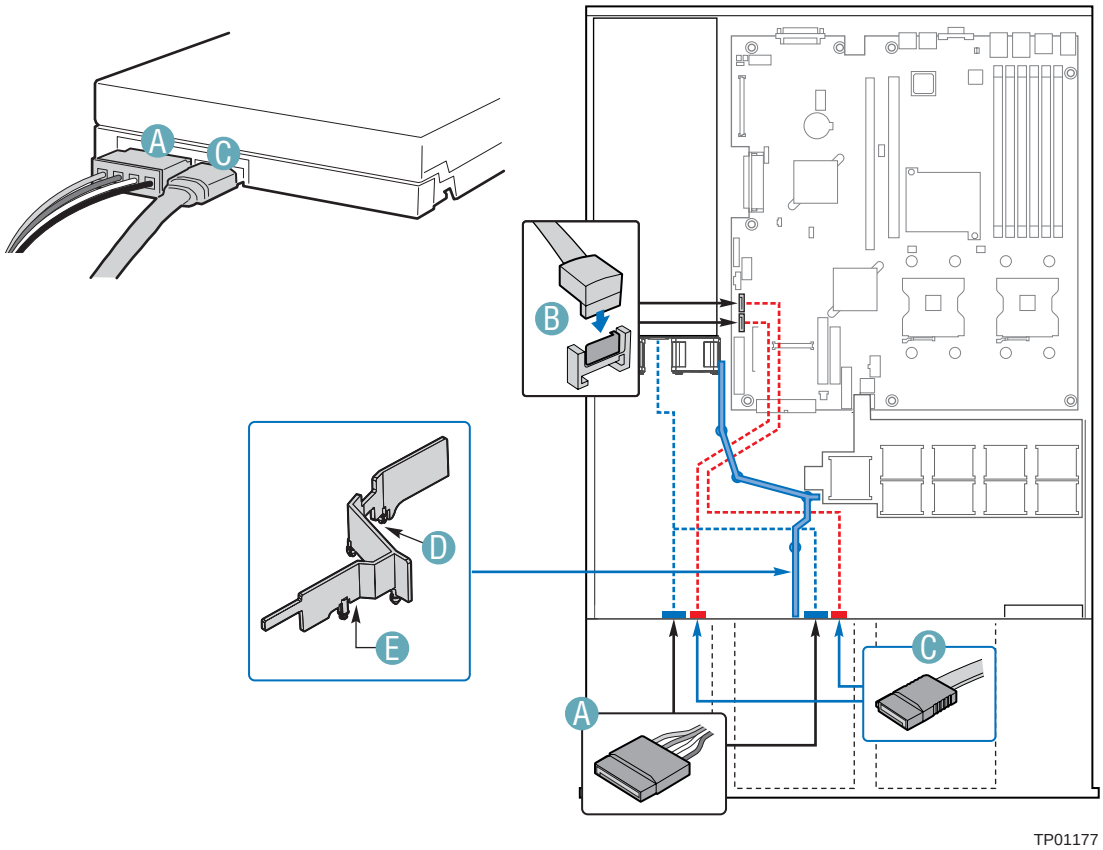


Figure 17. Installing SATA Data Cables

Install Filler Panels

1. Install the slimline filler panel if you did not install a CD-ROM drive, DVD-ROM drive, or floppy drive. See letter “A” in the figure below.
2. Install empty hard drive carriers into any drive bays that will not have a hard drive installed.

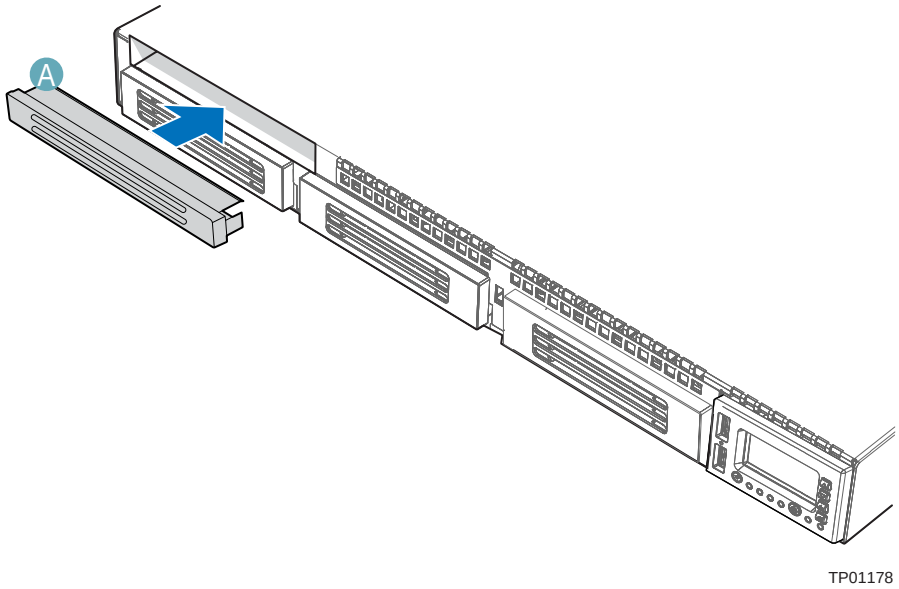


Figure 18. Installing Slimline Filler Panel

Complete Server System Integration

Return to the Intel® Server Chassis SR1400 Quick Start User’s Guide, continuing with Step 11 and making the following changes to the Cable Routing Legend shown in Step 11:

Cable routing through rear notch:

- Add SATA data cable(s). Refer to Figure 17 in this document for assistance.
- Add floppy data cable (if floppy drive is installed)
- Add DVD-ROM or CD-ROM data cable (if DVD-ROM or DVD-ROM drive is installed)

Cable routing through bottom notch:

- Add front panel cable
- Add SATA data cable(s). Refer to Figure 17 in this document for assistance.
- Add SATA power adapter cable. Refer to Figure 17 in this document for assistance.

Following Step 19 in the Quick Start User’s Guide, connect the data and power cable(s) to your SATA drives, as shown by letters “A” and “C” in Figure 17.