4x3.5" Hot-Swap Drive Cage Kit Installation Guide for Intel® Server Chassis/System

Order Number: G23758-002

G23758-002

This document provides instructions for installing the following accessory kit:

FUP4X35HSDK

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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://www.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://www.intel.com/support/motherboards/server/sb/cs-010770.htm.

重要安全指导

在执行任何指令之前，请阅读本文件中的所有注意事项及安全声明。并参阅 http://www.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://www.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://www.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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Before You Begin

Before removing the access cover for any reason, you must observe the following safety guidelines:

1. Turn off any peripheral devices connected to the server.
2. Turn off the server by pressing the power button on the front of the chassis.
3. Unplug the AC power cord from the chassis or wall outlet.
4. Label and disconnect all peripheral cables connected to I/O connectors or ports on the back of the chassis.
5. Label and disconnect all telecommunication lines connected to I/O connectors or ports on the back of the chassis.
6. Provide electrostatic discharge (ESD) protection by wearing an anti-static wrist strap attached to a chassis ground—any unpainted metal surface—when handling components.

About the Drive Cage Kits

4x3.5" hot-swap driver cage kits allow you to install up to 4 hot-swap hard drive solutions for the following Intel® Server Chassis:

- Intel® Server Chassis P4304XXSFCN
- Intel® Server Chassis P4304XXSHCN

NOTE

Refer to your server board documentation to determine the SAS/SATA support provided for your server system.

If you want to use your SAS/SATA drives for a RAID configuration, you may need to install a SAS/SATA RAID add-in card. Refer to your server board documentation and/or your SAS/SATA RAID card documentation for additional installation instructions and requirements.

Kit Contents lists

The following tables provide a list of contents for 4x3.5" hot-swap drives cage kit.

4x3.5 hot-swap drive cage kit (FUP4X35HSDK)

Item	Quantity
Drive cage assembly	1
SATA hot-swap Drive carriers	4
SAS/SATA cable assembly with ID label	4
I2C cable	1
SGPIO cable	1
EMI HDD Cover	1
This manual	1

Tools and Supplies Needed

- Phillips* (cross head) screwdriver (#2 bit)
- Anti-static wrist strap (recommended)
- Serial ATA (SATA) RAID card (dependent on installation)
- SAS RAID card (dependent on installation)

Intel® Server Chassis P4000S family Installation

NOTE

This section applies only to the drive cage kit installations into:

- Intel® Server Chassis P4304XXSFCN
- Intel® Server Chassis P4304XXSHCN

Remove the Chassis Cover

When your chassis is upright (in a tower/pedestal position) and you are facing the rear of it, the access cover is on the right side.

If your chassis is in a rack-mount configuration, the right side is already on the top.

To remove the Chassis cover:

1. Observe the safety and ESD precautions at the beginning of this manual.
2. Turn off all peripheral devices connected to the server. Turn off the server.
3. Disconnect the AC power cord.
4. Remove the screws (see letter "A").
5. Slide the top cover back (see letter "B") and lift the cover outward to remove it.

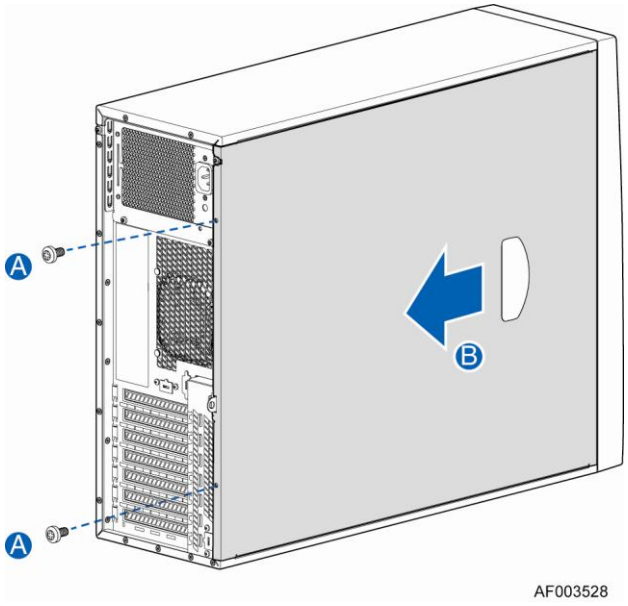

Figure 1. Removing the Chassis Cover

Remove the Front Bezel Assembly

NOTE

For a rack configuration or chassis on its side, position the chassis hanging over the edge of a table or workbench before removing the bezel.

To remove the front bezel assembly:

1. Observe the safety and ESD precautions at the beginning of this manual.
2. Power down the server and unplug all peripheral devices and the AC power cable.
3. Remove the chassis cover. For instructions, see “Remove the Chassis Cover”.
4. Release the two plastic tabs on the left side of the bezel assembly to disengage the tabs, and rotate the bezel assembly (see letter “A”) no more than 40 degrees outward.
5. At a 40-degree angle, push the bezel assembly away from the chassis (see letter “B”).
6. If the bezel assembly does not immediately disconnect from the chassis, tap the left-hand side of the bezel assembly to disengage the bezel hooks on the right-hand side of the chassis.

⚠ CAUTION

Do not rotate the bezel assembly more than 40 degrees or you will damage the bezel hooks on the right-hand side of the bezel assembly.

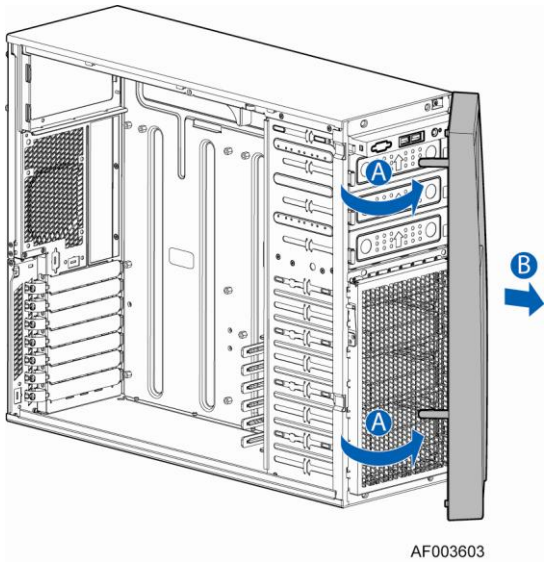

Figure 2. Removing the Front Bezel Assembly

4x3.5" Hot-Swap Drive Cage Installation

This section reviews the steps required to install the following upgrades:

- 4x3.5 Hot-Swap Drive Cage Kit (FUP4X35HSDK)

NOTE

If hard drives are installed in the existing fixed drive tray, disconnect the power and data cables to each drive.

1. Lift the EMI shield (see letter “A”) and move EMI shield outward from the chassis (see letter “B”).

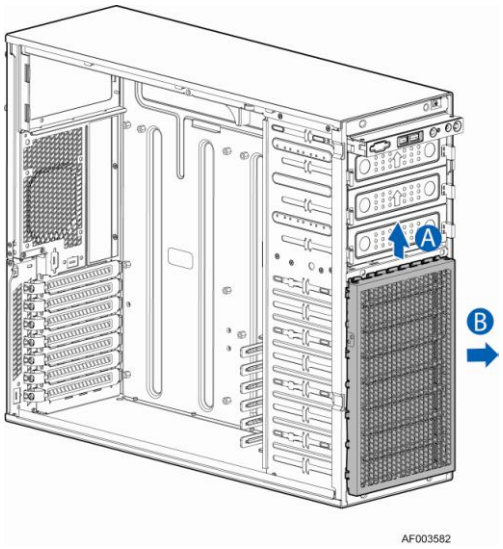

Figure 3. Removing the EMI Shield

2. Pull out all the fixed HDD carrier trays.

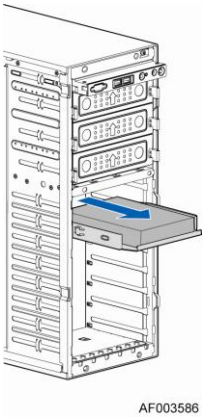

Figure 4. Removing fixed HDD carrier tray

3. Install the hot-swap EMI HDD shield under the hot-swap cage.

a) Fit the edges of the EMI Shield against the sides of the chassis (see letter “A”).

b) While pressing the EMI Shield, slide the EMI Shield downwards until the latches on the EMI Shield are engaged with the chassis (see letter “B”).

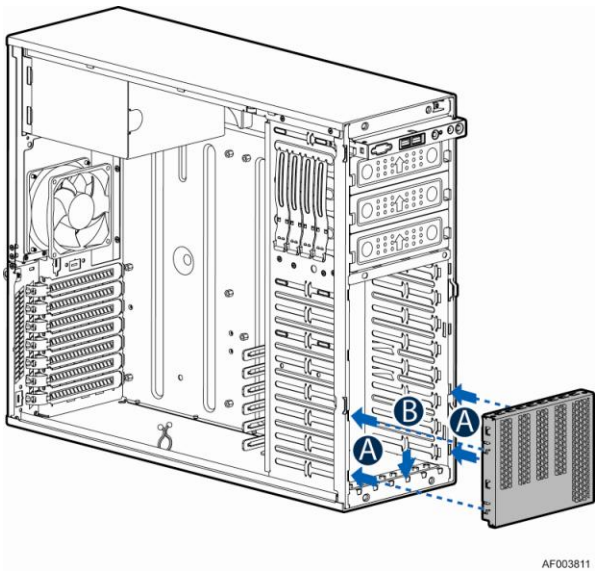

Figure 5. Installing the EMI HDD shield under the hot-swap cage

4. Install the 4x3.5" Hot-Swap Hard Drive Cage.

a) Slide the 4x3.5" Hot-Swap Drive Cage into the slot (see letter “A”).

b) Secure the Hard Drive Cage with the Screw (see letter “B”).

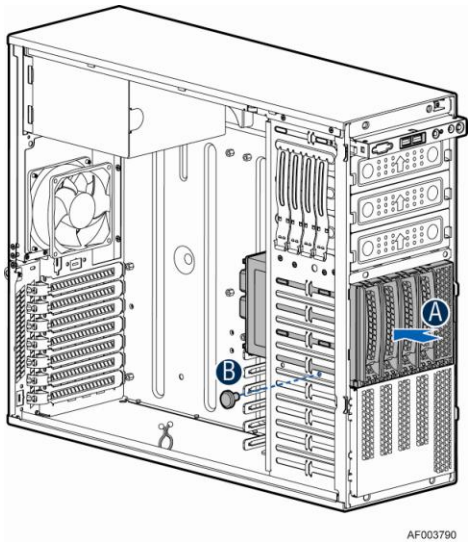

Figure 6.Installing the 4x3.5" Hot-Swap Hard Drive Cage

4x3.5" Hot Swap Backplane Cable Connections

Connect the following cables when installing a four-drive backplane (FUP4X35HSBP):

1. Connect data cables (letter “A”).
2. Connect an I2C_IN cable (letter “B`”).
3. Connect an SGPIO cable (letter “C”)
4. Connect power cable (letter “D”)

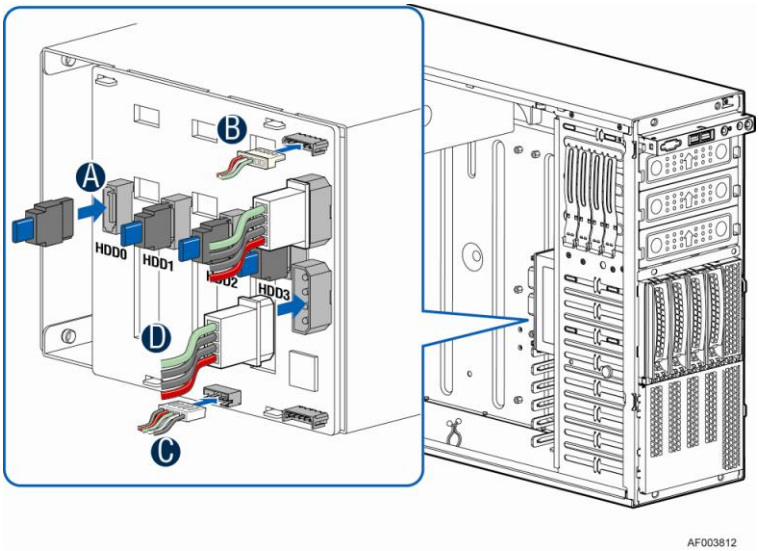

Figure 7. 4x3.5" Hot Swap Backplane (FUP4X35HSBP) Cable Connections

Server Board/RAID Controller Connections

Refer to the documentation that came with your server board and/or RAID controller for instructions on connecting backplane cables to the server board or controller.

WARNING

It is critical that you connect the SAS/SATA data cables correctly from the SAS/SATA backplane to your server board or RAID controller. Failure to do so may result in data loss.

Install Hot-Swap Hard Drives

NOTE

The 3.5" hard disk drive can be a SSD or SAS and SATA. Refer to your server board or system documentation to determine SSD/SAS/SATA support for your server system.

1. Remove the four screws securing the 2.5" HDD interface bracket and remove the 2.5" HDD interface bracket.

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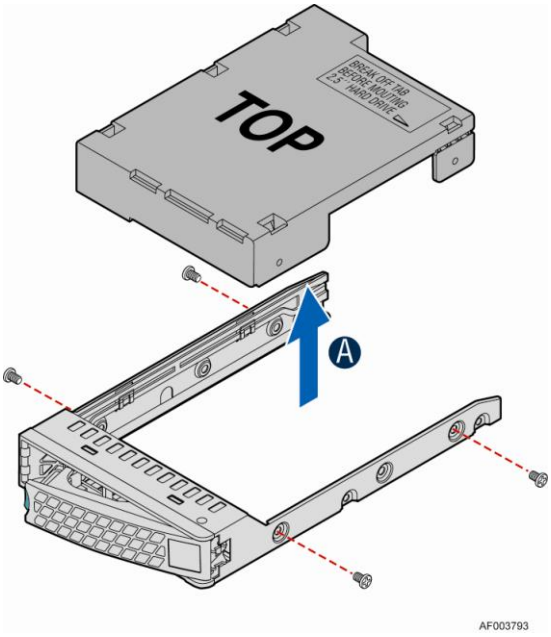

Figure 8. Removing the 2.5" HDD interface bracket from Carrier

2. Install the 3.5" hard disk drive using the same four screws as shown. Make sure the connector end of the drive matches the backplane connector.

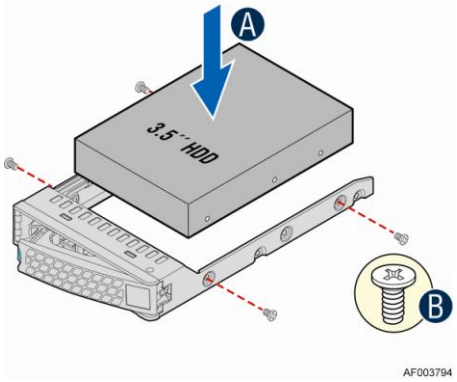

Figure 9. Installing the 3.5" HDD into the Carrier

Replace Front Bezel Assembly for Hot-Swap Hard Drive

1. Fit the right edge of the bezel assembly against the right side of the chassis.
2. Engage the plastic bezel hooks (see letter “A”) into the raised metal slots at the chassis edge.
3. Rotate the bezel assembly toward the chassis.
4. Latch the two plastic tabs (see letter “B”) on the left side of the bezel assembly to the chassis.

CAUTION

Do not attach the bezel assembly to the chassis at more than a 40-degree angle or you will damage the bezel hooks on the right side of the bezel assembly.

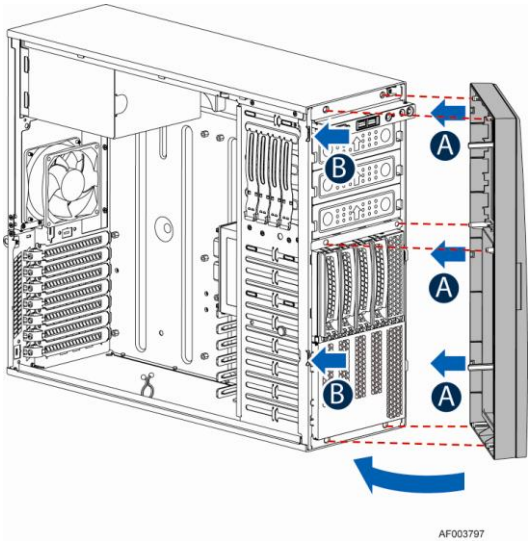

Figure 10. Reinstalling the Front Bezel Assembly for Hot-Swap

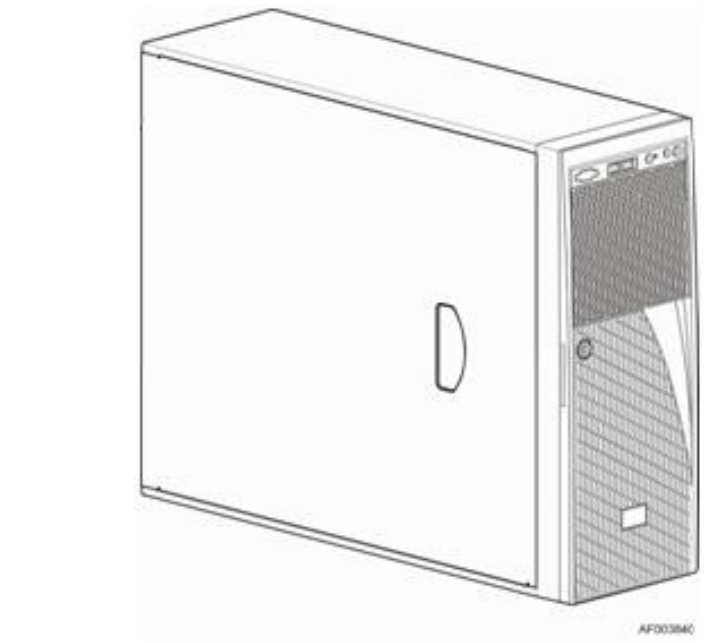

Figure 11. Front View of the Front Bezel for Hot-Swap hard drive

Install the Chassis Cover

1. Slide the chassis cover on the chassis (see letter “A”).
2. Latch the cover securely to the chassis.
3. Secure the chassis cover with the screws (see letter “B”).

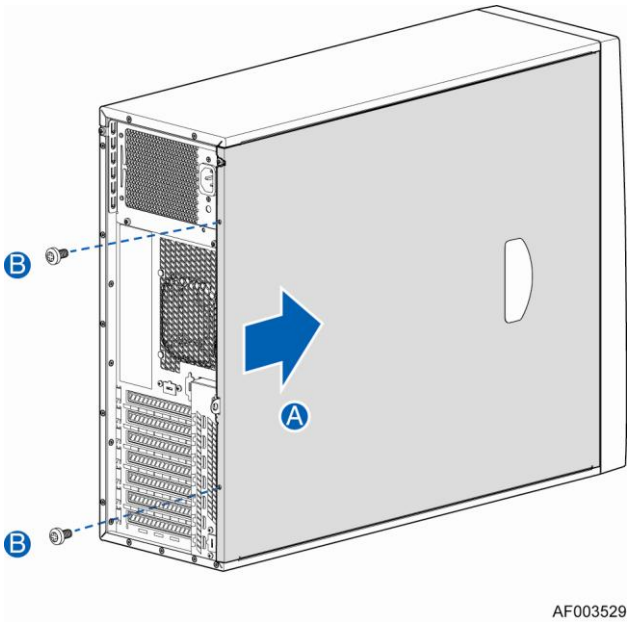

Figure 12. Installing the Chassis Cover

CAUTION

This chassis must be operated with the access cover installed to ensure proper cooling.

Complete Setup

1. Reconnect all peripheral devices and the AC power
2. Power up the server