

Intel® Storage System SSR316MJ2 Backplane Board (FMJBACKPLANE2)

Installation Guide

Order Number: D27076-001



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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

Storage system power on/off: The push-button on/off power switch on the front panel of the storage system does not turn off the AC power. To remove AC power from the storage system, you must unplug the AC power cord from either the power supply or wall outlet.

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

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

Avoid injury: Lifting the storage system chassis and attaching it to the rack is a two-person job. If needed, use an appropriate lifting device. A fully loaded Intel® Storage System SSR316MJ2 weighs approximately 31.8 kg (70 lbs.).

CAUTIONS

Temperature: The operating temperature of the storage system, when installed in an equipment rack, must not go below 5° C (41° F) or rise above 35° C (95° F). Extreme fluctuations in temperature can cause a variety of problems in the storage system.

Ventilation: The equipment rack must provide sufficient airflow to the front of the storage system to maintain proper cooling. It must also include ventilation sufficient to exhaust a maximum of 1900 BTUs per hour for a fully loaded Intel® Storage System SSR316MJ2.

Contents

About the Backplane Board Assembly	7
Contents.....	7
Backplane Board Installation Procedures	8
Required Tools.....	8
Power Down System and Remove Chassis Cover	8
Unseat Hard Disk Drive Carriers.....	9
Disconnect Front Panel Cables.....	10
Remove Fan Assembly Screws	11
Disconnect Fan Cables.....	12
Remove Fan Assembly and Disconnect SATA Cables.....	13
Cut SATA Cable Ties.....	14
Disconnect I ² C Cables.....	15
Disconnect Power Distribution Module Cables	16
Remove Backplane Board	17
Install New Backplane Board	18
Connect Power Distribution Module Cables.....	19
Connect SATA Cables	20
Connect I ² C Cables.....	21
Install Fan Assembly.....	22
Attach Fan Assembly	23
Connect System Fan Cables	24
Connect Front Panel Board Cables	25
Seat Hard Disk Drive Carriers.....	26
Finishing Up	27

Figures

Figure 1. Removing Chassis Cover	8
Figure 2. Unseating Hard Disk Carriers	9
Figure 3. Disconnecting Front Panel Cables.....	10
Figure 4. Removing System Fan Assembly Screws	11
Figure 5. Disconnecting System Fan Cables	12
Figure 6. Removing System Fan Assembly and Disconnecting SATA Cables.....	13
Figure 7. Cutting SATA Cable Ties	14
Figure 8. Disconnecting I ² C Cables.....	15
Figure 9. Disconnecting Power Distribution Module Cables	16
Figure 10. Removing Backplane Board	17
Figure 11. Installing New Backplane Board	18
Figure 12. Connecting Power Distribution Module Cables.....	19
Figure 13. Connecting SATA Cables	20
Figure 14. Connecting I ² C Cables	21
Figure 15. Installing System Fan Assembly	22
Figure 16. Attaching System Fan Assembly	23
Figure 17. Connecting System Fan Cables	24
Figure 18. Connecting Front Panel Board Cables	25
Figure 19. Seating Hard Disk Drives.....	26
Figure 20. Installing the Chassis Cover	27

About the Backplane Board Assembly

Enclosed is your new Intel® FMJBACKPLANE2 Backplane Board. The Intel® FMJBACKPLANE2 Backplane Board comes equipped with sixteen connected SATA cables.

This document describes how to install the FMJBACKPLANE2 Backplane Board into the Intel® Storage System SSR316MJ2. The FMJBACKPLANE2 Backplane Board is installed into the storage system just behind the hard disk drives, near the front of your storage system.

Contents

The FMJBACKPLANE2 Backplane Board assembly consists of the following:

- One FMJBACKPLANE2 Backplane Board, mounted within metal housing
- Sixteen SATA cables, shipped connected to the backplane board



NOTE

The backplane board was shipped to you mounted in metal housing. Do not remove the metal housing. In these instructions, references to the backplane board include the metal housing.

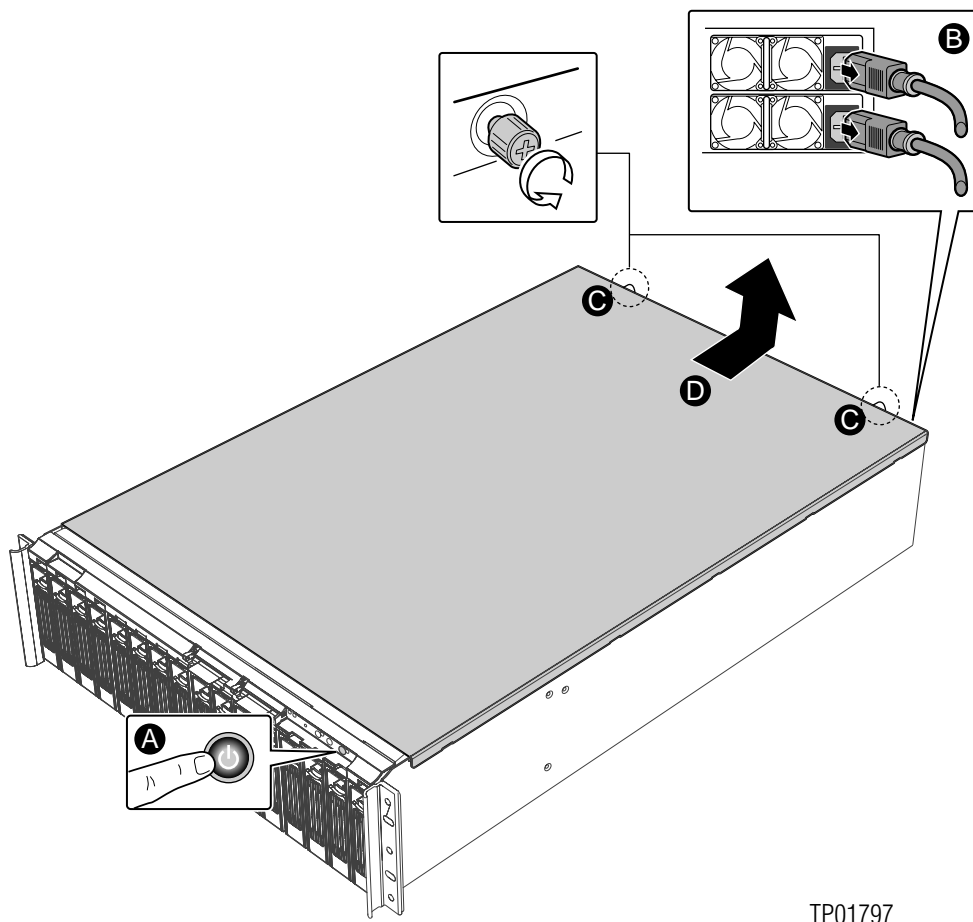
Backplane Board Installation Procedures

Required Tools

- Cross-head (Number 1 size Phillips*) screwdriver, with a maximum length of 4 inches
- Wire-cutter

Power Down System and Remove Chassis Cover

1. Review the safety information and warnings at the beginning of this guide.
2. Power down your Intel® Storage System Console. See letter “A” in Figure 1.
3. Remove both AC power cords from the AC power inputs at the rear of your storage system. See letter “B” in Figure 1.
4. Loosen the two thumb screws at the rear of the chassis cover. See letter “C” in Figure 1.
5. Facing the front of the chassis, push the top cover rearward, and then lift it up to remove it. See letter “D” in Figure 1.



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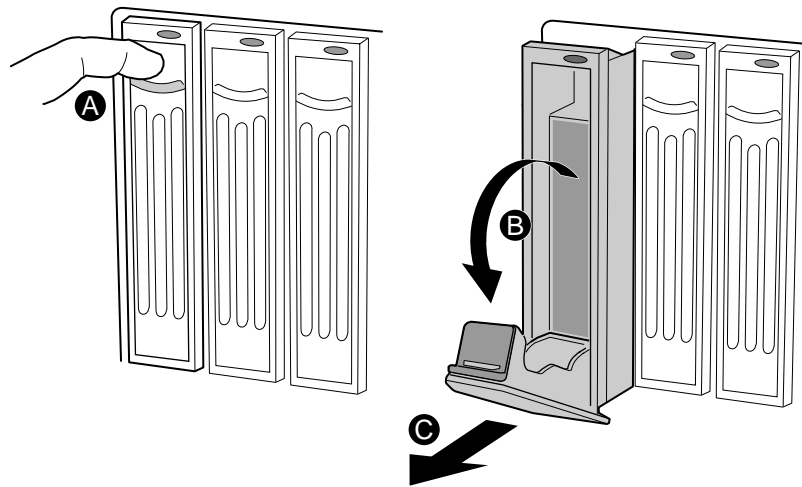
Figure 1. Removing Chassis Cover

Unseat Hard Disk Drive Carriers

CAUTION

The steps below do not require removing hard disk drive carriers from the storage system. You need only disengage the carriers. If you choose to remove the drive carriers from the storage system, first note the location of each drive carrier. You must later reinstall each drive carrier into the same location from which it was removed. See the *Intel® Storage System SSR316MJ2 Quick Start User's Guide* for details.

1. Press down on the hard disk drive handle release mechanisms to unlatch the handle on the hard disk drive carriers. See letter "A" in Figure 2.
2. Rotate the hard disk drive and hard disk drive carrier handles downward. See letter "B" in Figure 2.
3. Slide the hard disk drives and hard disk drive carriers at least halfway out of the hard disk drive bays. See letter "C" in Figure 2. It is not necessary to completely remove the hard disk drives from the bays. See the caution message above.

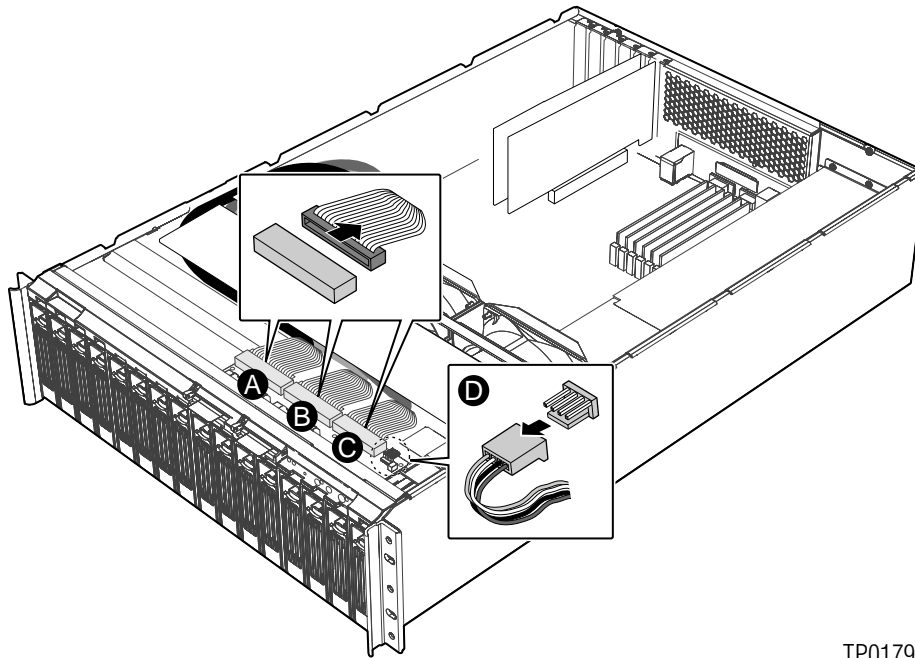


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Figure 2. Unseating Hard Disk Carriers

Disconnect Front Panel Cables

1. Disconnect the front panel cable, labeled J1, from the front panel board. See letter “A” in Figure 3.
2. Disconnect the secondary IDE cable, labeled J3, from the front panel board. See letter “B” in Figure 3.
3. Disconnect the primary IDE cable, labeled J5, from the front panel board. See letter “C” in Figure 3.
4. Disconnect the front panel power connector from the front panel board. See letter “D” in Figure 3.

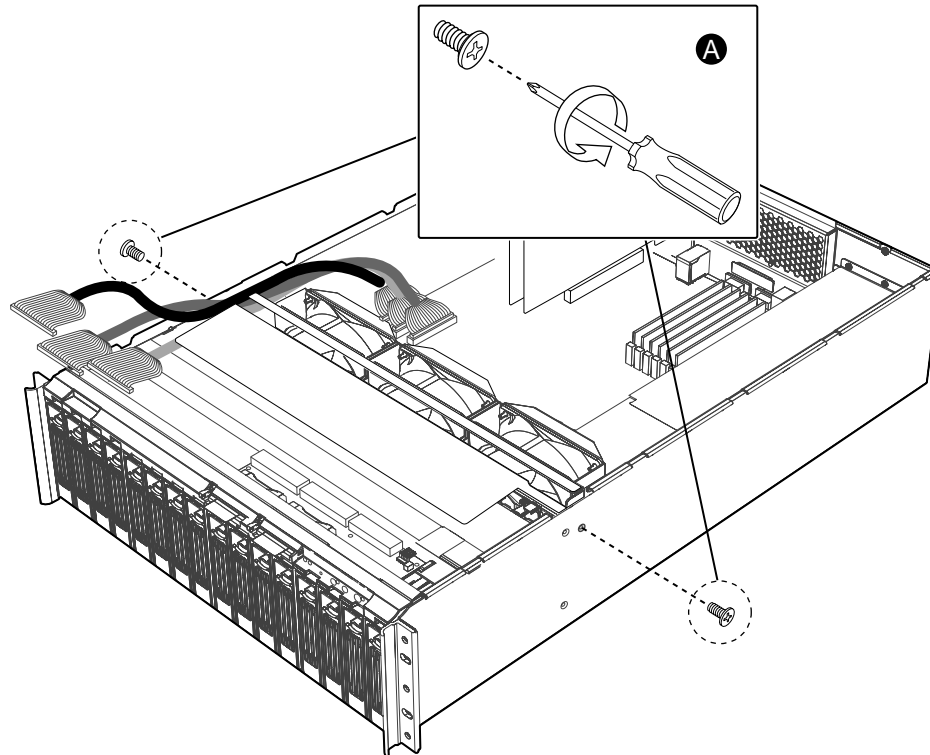


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Figure 3. Disconnecting Front Panel Cables

Remove Fan Assembly Screws

Use a Number 1 size Phillips* screwdriver to remove the screw on each side of the system. See letter “A” in Figure 4. These screws hold the system fan assembly in place. See Figure 4. These screws will be re-installed later.

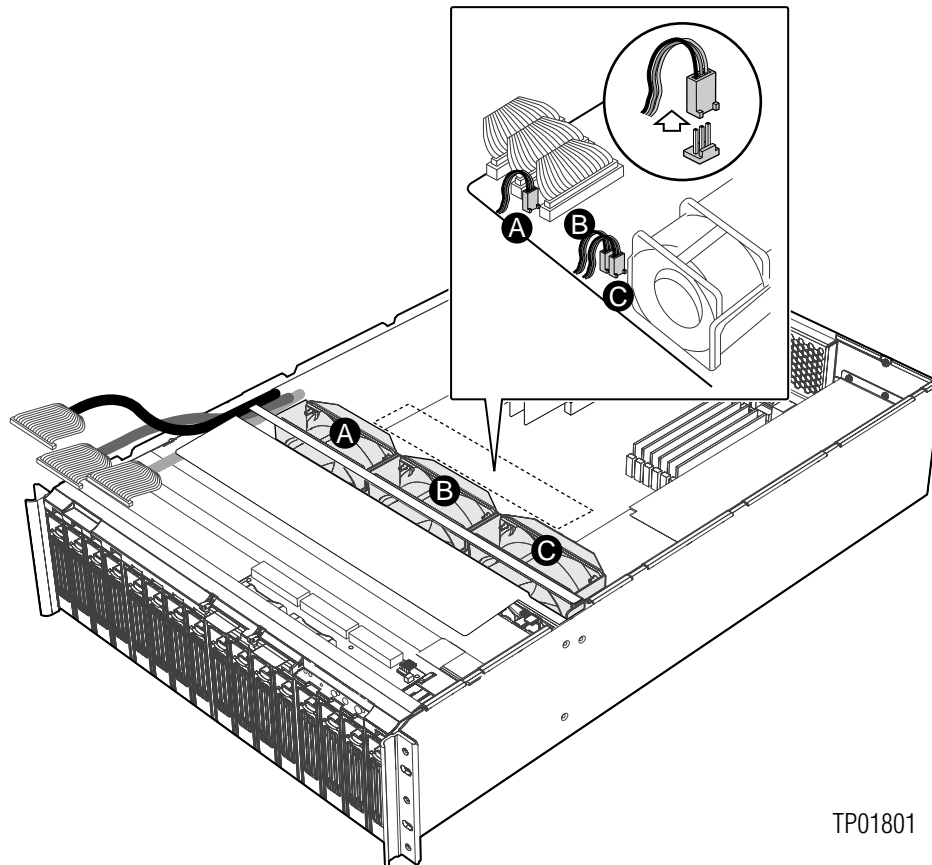


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Figure 4. Removing System Fan Assembly Screws

Disconnect Fan Cables

1. Disconnect the Fan 3 cable from the server board. See letter “A” in Figure 5.
2. Disconnect the Fan 4 cable from the server board. See letter “B” in Figure 5.
3. Disconnect the Fan 5 cable from the server board. See letter “C” in Figure 5.

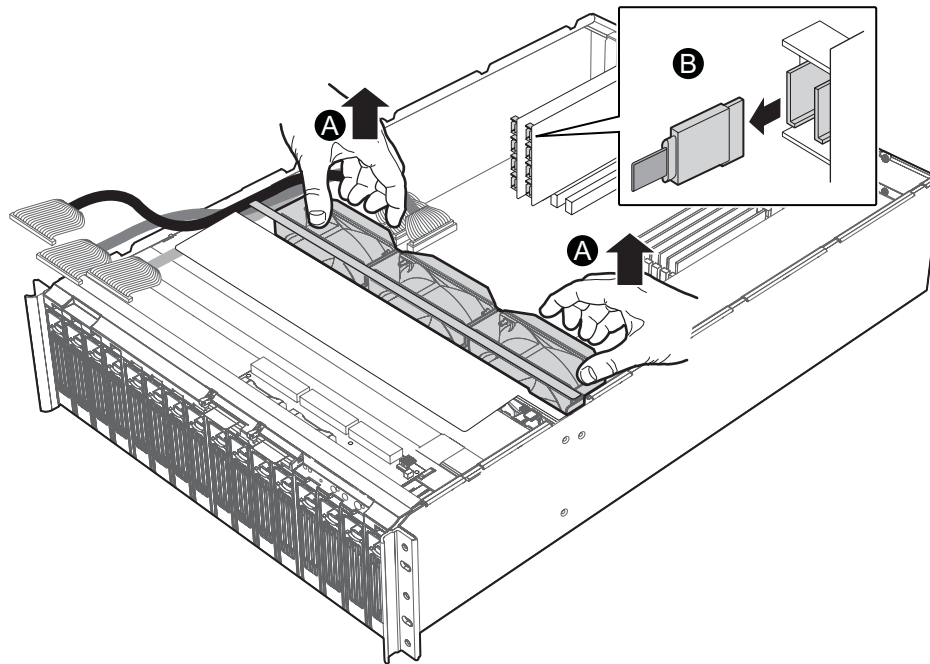


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Figure 5. Disconnecting System Fan Cables

Remove Fan Assembly and Disconnect SATA Cables

1. Simultaneously pull up on both sides of the system fan assembly to remove the fan assembly from the storage system. See letter “A” in Figure 6. Set the system fan assembly on a static-free surface.
2. Remove the 16 SATA cable connectors from the two SATA Host Bus Adapter cards located inside the chassis at the rear of the system. See letter “B” in Figure 6.

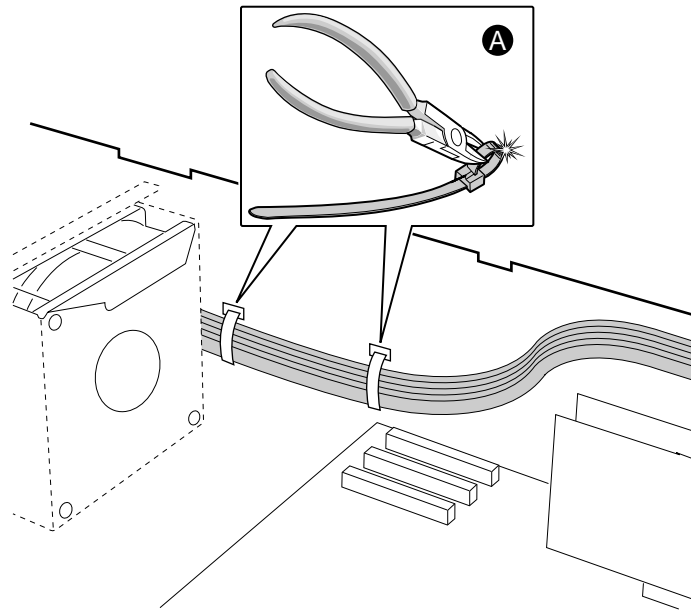


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Figure 6. Removing System Fan Assembly and Disconnecting SATA Cables

Cut SATA Cable Ties

1. Note the routing for the SATA cables and the locations of the SATA cable ties. You will need to install new cable ties in these locations later.
2. Cut the plastic cable ties that bundle the SATA cables. See letter “A” in Figure 7. Use caution so you do not cut the SATA cables.



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Figure 7. Cutting SATA Cable Ties

Disconnect I²C Cables

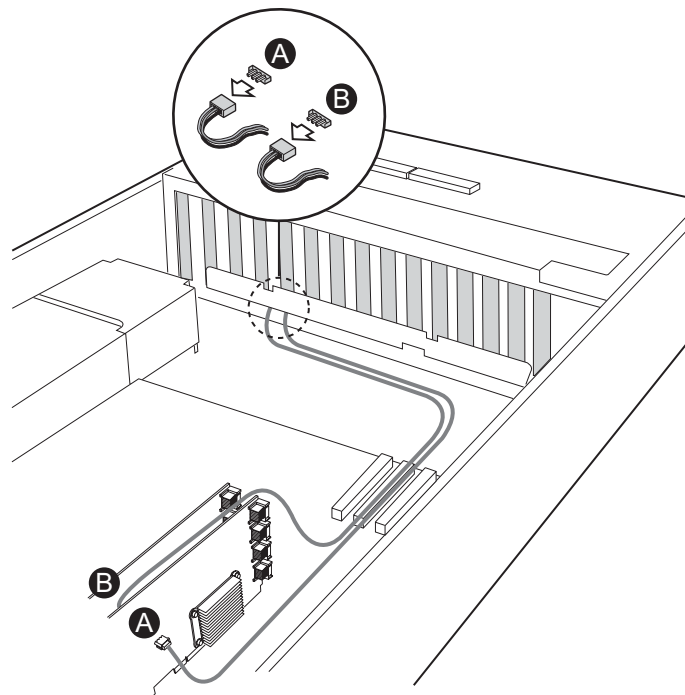


NOTE

The I²C cables are labeled at each end, on the cable connector. In the instructions and the figure below, it is assumed that letter “A” corresponds to your cable labeled JP4 and SL3_J13. Your connections may be different. It is important that you write down the connections as they exist in your chassis, so you may later correctly reconnect them.

In these steps, you do not need to disconnect the I²C cables from the Host Bus Adapter cards. If you choose to disconnect the cables from the cards, make sure you also write down these cable connections.

1. Write down the I²C cable connector positions on the backplane board. You will later need to reconnect these cables to the same headers.
2. Disconnect the I²C cable that is labeled JP4 from the backplane board at the front of the chassis. See letter “A” in the circled area of Figure 8.
3. Disconnect the I²C cable that is labeled JP6 from the backplane board. See letter “B” in the circled area of Figure 8.

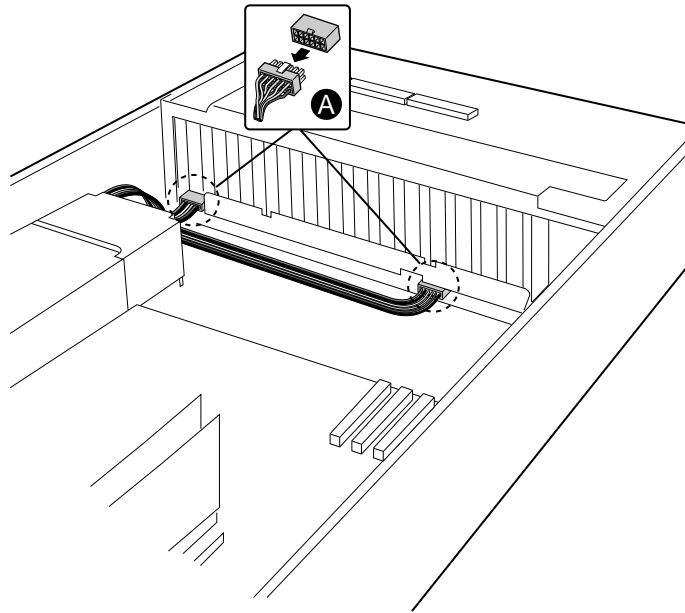


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Figure 8. Disconnecting I²C Cables

Disconnect Power Distribution Module Cables

Disconnect the two 12-pin power distribution module connectors from the backplane board. See letter “A” in Figure 9.



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Figure 9. Disconnecting Power Distribution Module Cables

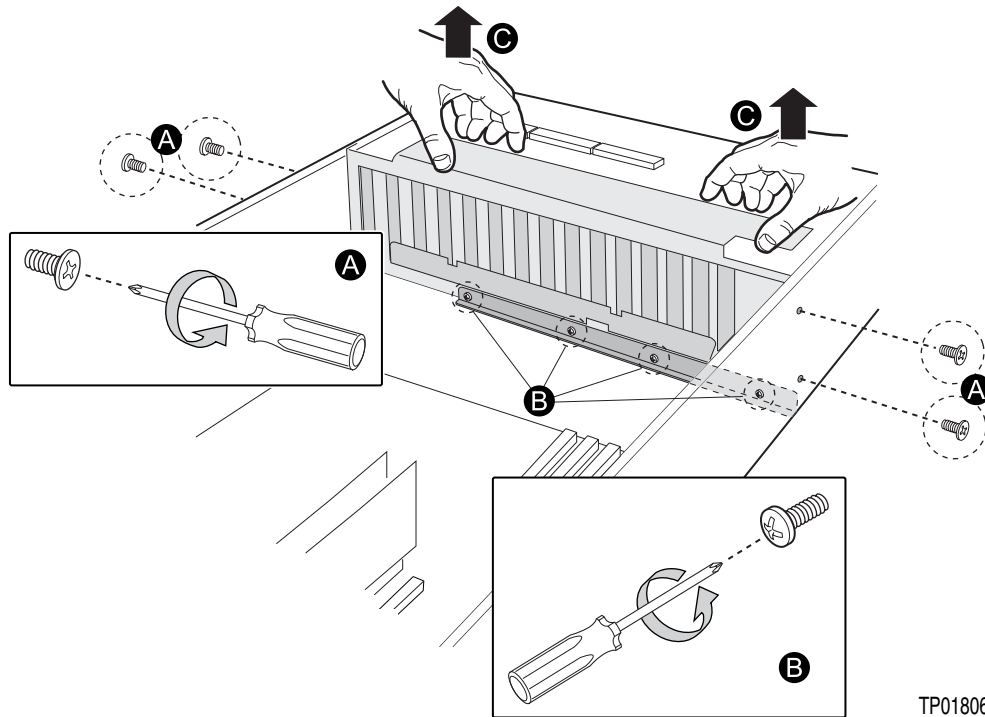
Remove Backplane Board

1. Use a Number 1 size Phillips screwdriver to remove the screws that hold the backplane board to each side of the system. Two screws are at each side of the system. See letter “A” in Figure 10. Set these screws aside. They will be re-installed later.
2. Use a Number 1 size Phillips screwdriver to remove the four screws from the steel lip at the bottom of the backplane board. See letter “B” in Figure 10. Set these screws aside. They will be re-installed later.
3. Lift the backplane board from the storage system. See letter “C” in Figure 10.



CAUTION

Use caution while lifting the backplane board so you do not cut yourself on sharp edges.



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Figure 10. Removing Backplane Board

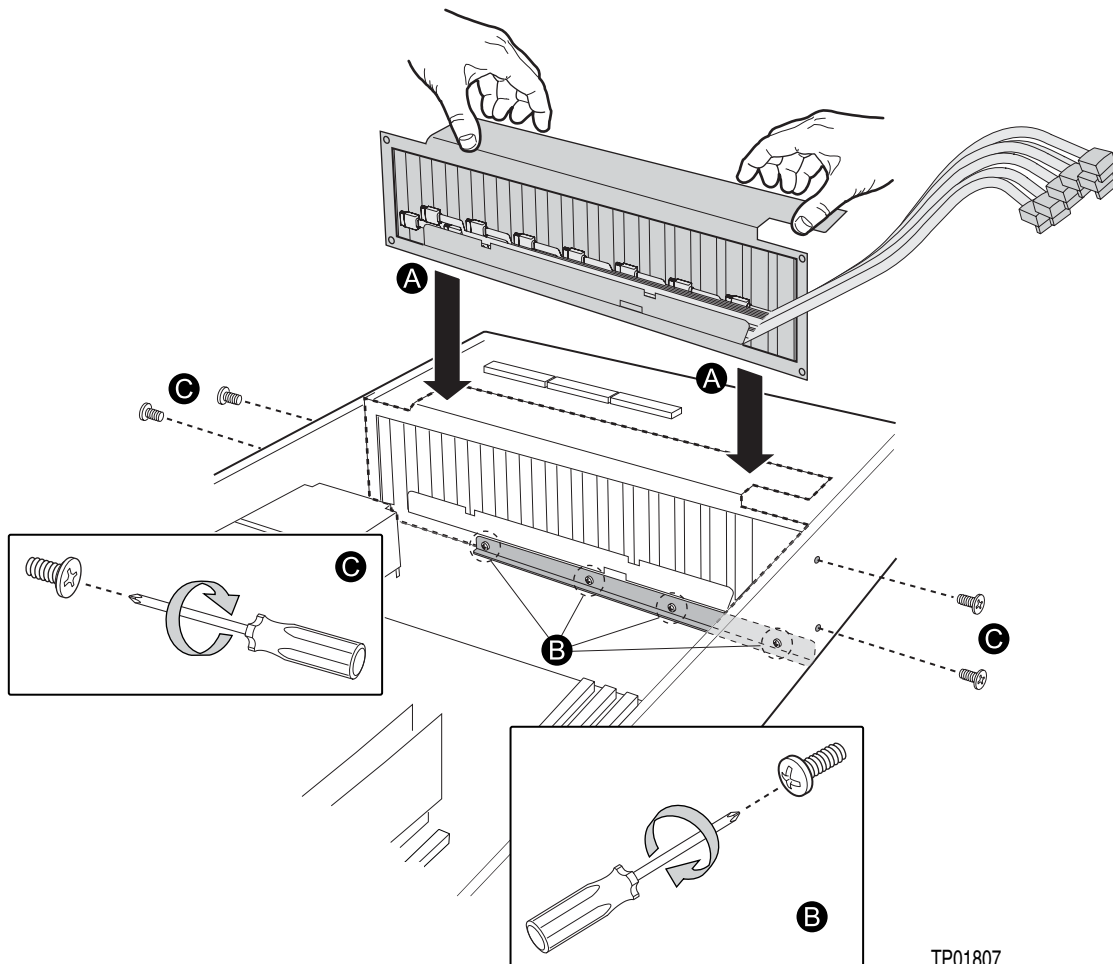
Install New Backplane Board



NOTE

The backplane board was shipped to you mounted in metal housing. Do not remove the metal housing. In these instructions, references to the backplane board include the metal housing.

1. Align the holes on the bottom of the new Intel® FMJBACKPLANE2 Backplane Board with the protruding blue pegs on the floor of the chassis.
2. Push down to snap the backplane board into place. See letter “A” in Figure 11.
3. Use a Number 1 size Phillips screwdriver to install the four screws into the steel lip and the backplane board. See letter “B” in Figure 11.
4. Use a Number 1 size Phillips screwdriver to install two screws into each side of the system and the backplane board. See letter “C” in Figure 11.

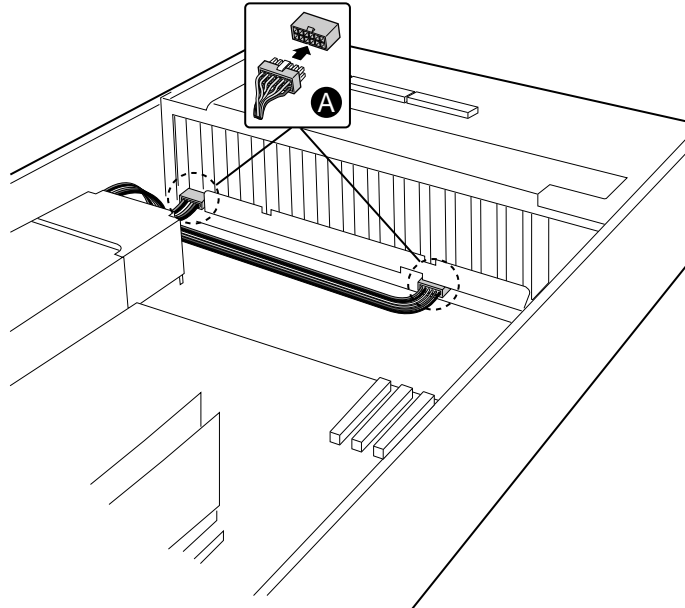


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Figure 11. Installing New Backplane Board

Connect Power Distribution Module Cables

Connect the two 12-pin Power Distribution Module cables to the backplane board. See letter “A” in Figure 12.

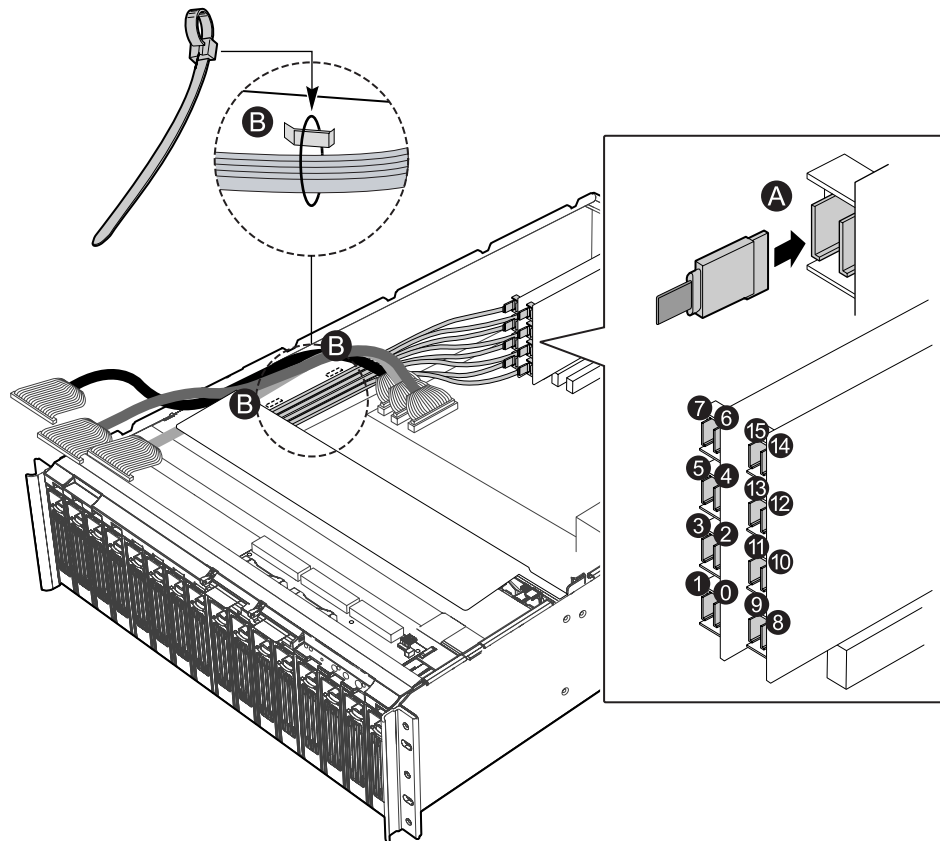


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Figure 12. Connecting Power Distribution Module Cables

Connect SATA Cables

1. Connect the 16 SATA cables to the two SATA Host Bus Adapter cards located inside the chassis at the rear of the system. See letter “A” in Figure 13.
2. Route the SATA cables along the side of the chassis in the same way that the original SATA cables were routed.
3. Insert new plastic cable ties through the steel links on the side of the chassis. Bundle the SATA cables into the cable ties and close the ties tightly around the cables. See letter “B” in Figure 13.
4. Bundle the SATA cables in other locations as necessary.



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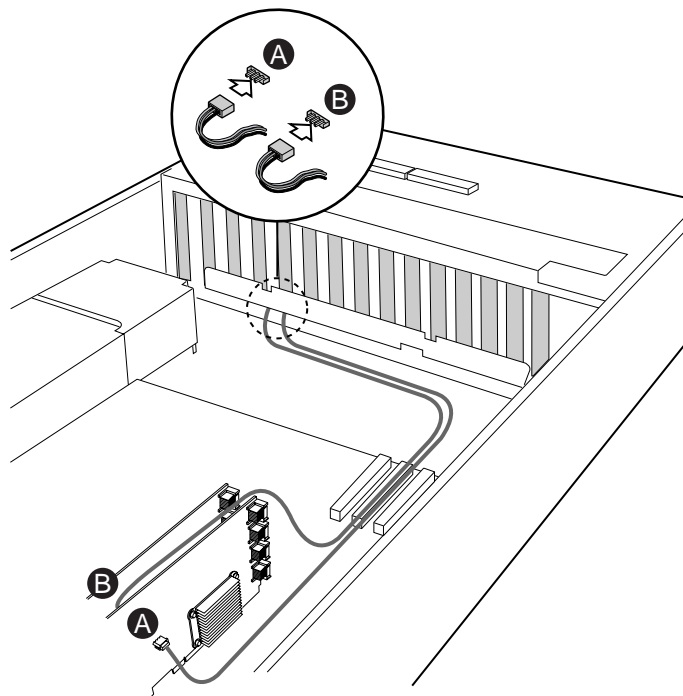
Figure 13. Connecting SATA Cables

Connect I²C Cables

NOTE

The I²C cables are labeled at each end, on the cable connector. In the instructions and the figure below, it is assumed that letter “A” corresponds to your cable labeled JP4 and SL2_J13. Your connections may be different. Refer to the notes you made when you disconnected the cables to ensure you are reconnecting them in the correct places.

1. Connect the I²C cable that is labeled JP4 to the backplane board. See letter “A” in the circled area of Figure 14.
2. Connect the I²C cable that is labeled JP6 to the backplane board. See letter “B” in the circled area of Figure 14.

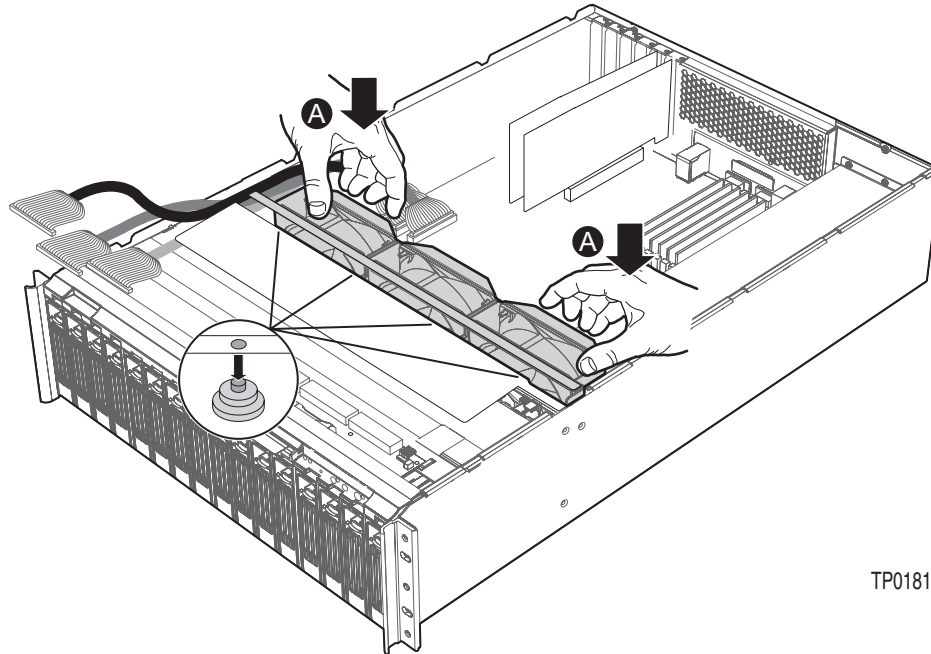


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Figure 14. Connecting I²C Cables

Install Fan Assembly

1. Move loose wires away from the space where the system fan assembly will be installed.
2. Align the holes on the bottom edge of the system fan assembly with the blue plastic shock brackets on the bottom of the chassis.
3. Set the system fan assembly into place. See letter “A” in Figure 15.

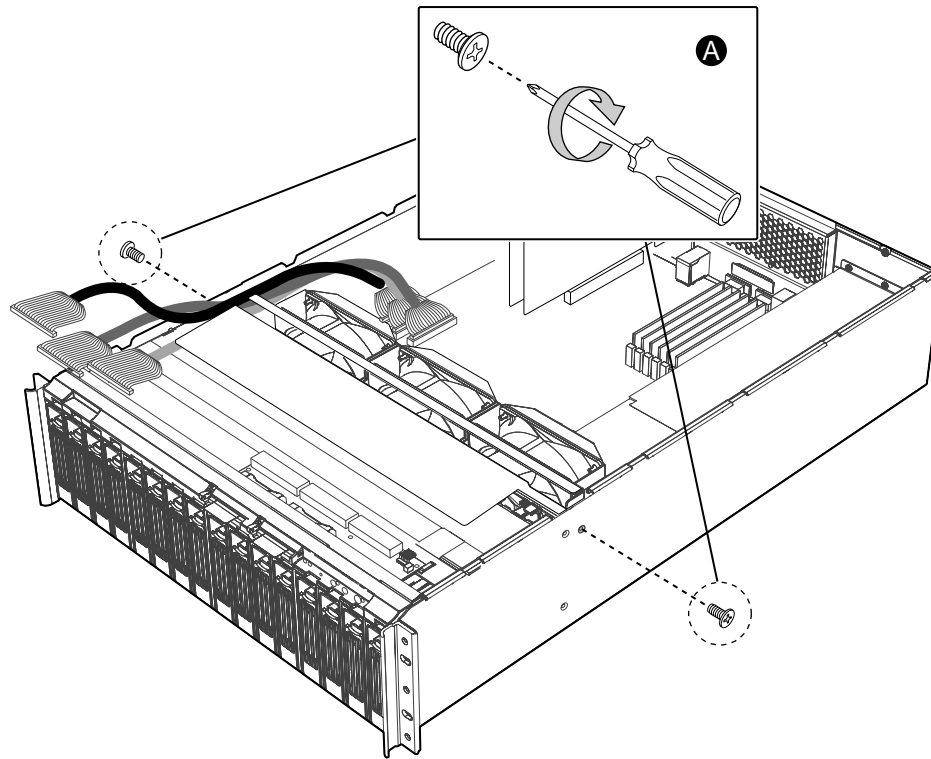


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Figure 15. Installing System Fan Assembly

Attach Fan Assembly

Use a Number 1 size Phillips screwdriver to attach the fan assembly to the chassis, using one screw at each side of the system. See letter “A” in Figure 16.

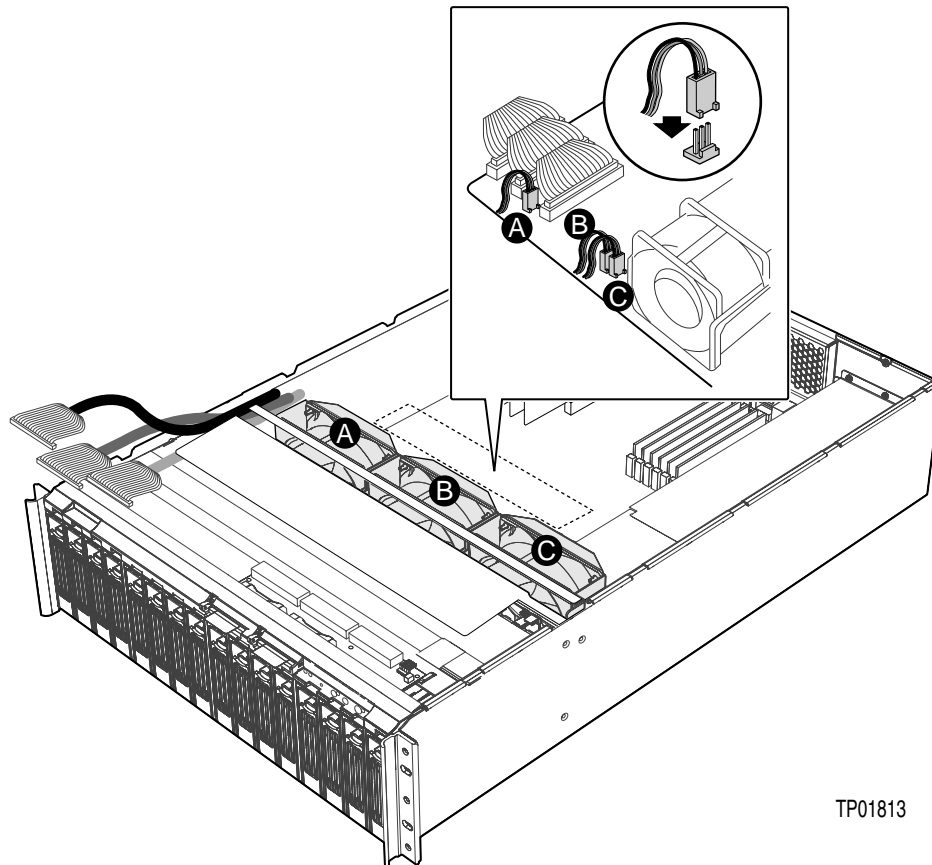


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Figure 16. Attaching System Fan Assembly

Connect System Fan Cables

1. Connect the Fan 3 cable to the server board. See letter “A” in Figure 17.
2. Connect the Fan 4 cable to the server board. See letter “B” in Figure 17.
3. Connect the Fan 5 cable to the server board. See letter “C” in Figure 17.

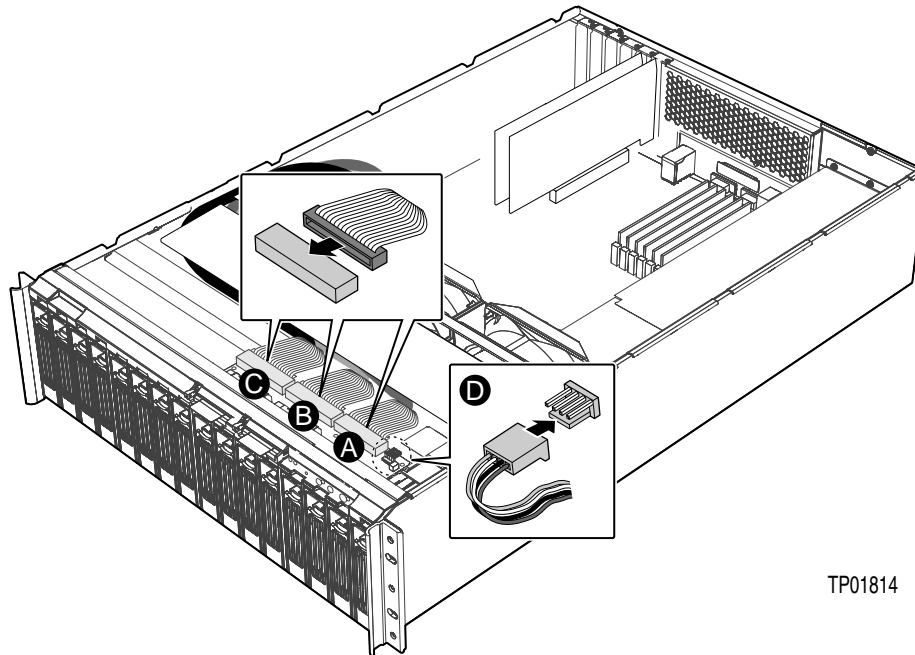


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Figure 17. Connecting System Fan Cables

Connect Front Panel Board Cables

1. Connect the front panel cable, labeled J1, to the front panel board. See letter “A” in Figure 18.
2. Connect the secondary IDE cable, labeled J3, to the front panel board. See letter “B” in Figure 18. The secondary IDE cable has a white metal sheath and the connector on the front panel is also white.
3. Connect the primary IDE cable, labeled J5, to the front panel board. The primary IDE cable has a blue metal sheath and the connector on the front panel is also blue. See letter “C” in Figure 18.
4. Connect the front panel power connector to the front panel board. See letter “D” in Figure 18.



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Figure 18. Connecting Front Panel Board Cables

Seat Hard Disk Drive Carriers

1. Slide all sixteen hard disk drive carriers into the bays until they stop. See letter “A” in Figure 19.
2. Push the handles up until they latch into place. See letter “B” in Figure 19.

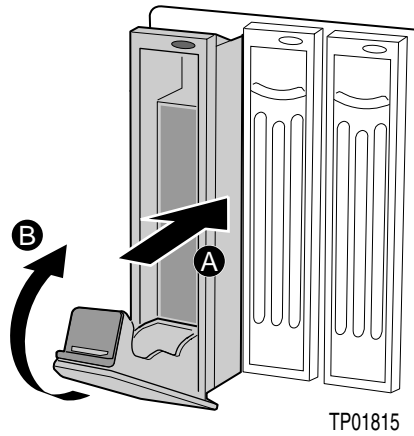


Figure 19. Seating Hard Disk Drives

Finishing Up

1. Facing the front of the system, set the chassis cover into the corresponding slot in the chassis.
2. Pull the top cover forward. See letter “A” in Figure 20.
3. Tighten the two thumb screws at the rear of the chassis. See letter “B” in Figure 20.
4. Connect the AC power cables. See letter “C” in Figure 20.
5. Power on your Intel® Storage System Console. See letter “D” in Figure 20.

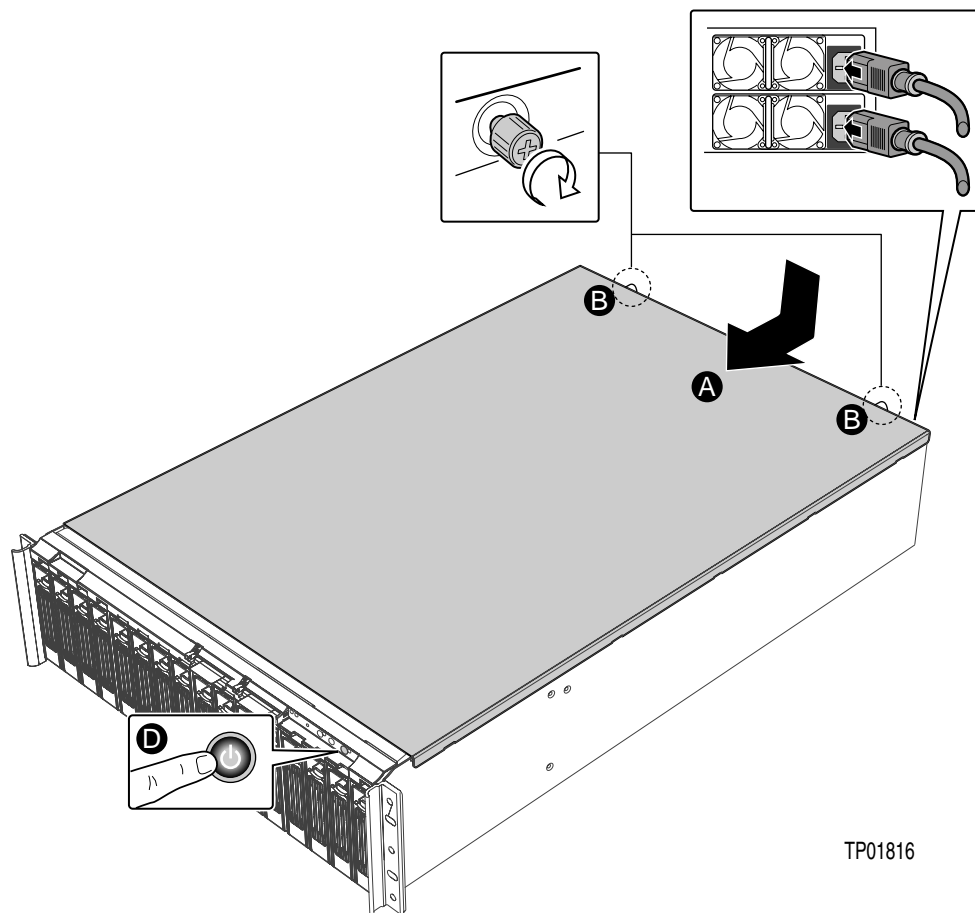


Figure 20. Installing the Chassis Cover