

Dell™ Systems

# **1 x 2 BACKPLANE KIT INSTALLATION GUIDE**

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# Notes, Notices, Cautions, and Warnings



**NOTE:** A NOTE indicates important information that helps you make better use of your computer.



**NOTICE:** A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



**CAUTION:** A CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



**WARNING:** A WARNING indicates a potentially hazardous situation which, if not avoided, may result in severe injury.

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# 1 x 2 Backplane Installation


This document provides instructions for installing a 1 x 2 backplane kit to add provisions for up to two additional 1-inch small computer system interface (SCSI) hard-disk drives in a Dell™ system's peripheral bay.


## 1 x 2 Backplane Kit Contents

The 1 x 2 backplane kit includes the following items:

- A 1 x 2 backplane attached to an assembled drive cage
- Four 6-32 x 0.25-inch hex-head Phillips screws
- Inter-integrated circuit (I<sup>2</sup>C) extension cable
- Nonterminated SCSI cable that links the 1 x 2 backplane to the system board

## Before You Begin


 **WARNING:** Before you perform this procedure, you must turn off the system and disconnect it from its power source. For more information, read the safety precautions in your *System Information* document.

 **WARNING:** Your system may have more than one power supply cable. To reduce the risk of electrical shock, you must disconnect all power supply cables before servicing the system. For more information, see “Safety First—For You and Your Computer” in your *Installation and Troubleshooting Guide*.

- 1 Turn off the system, including any attached peripherals, and disconnect the system from the electrical outlet.

 **CAUTION:** See “Protecting Against Electrostatic Discharge” in the safety instructions in your *System Information* document.

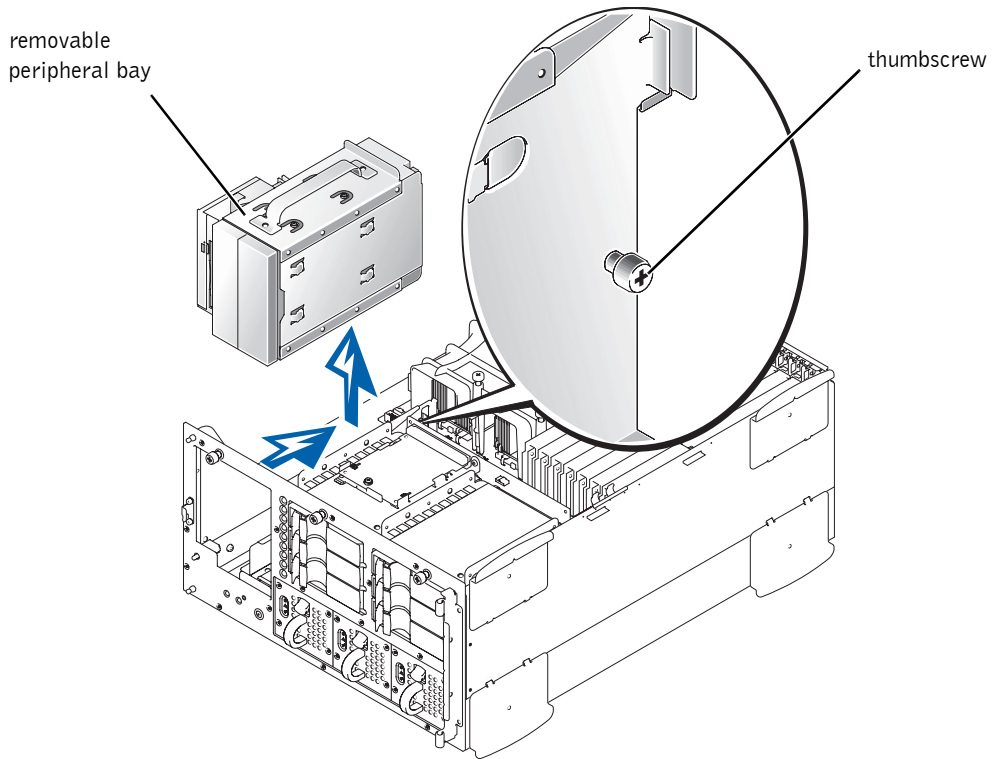
- 2 Unpack the 1 x 2 backplane kit.
- 3 Remove the front bezel (see “Removing the Front Bezel” in your *Installation and Troubleshooting Guide*).
- 4 Remove the system cover (see “Removing the System Cover” in your *Installation and Troubleshooting Guide*).

 **NOTE:** Verify that your system has the latest basic input/output system (BIOS) revision and firmware. Download the latest revision from the Dell support site at <http://support.dell.com>.

## Removing the Peripheral Bay

- 1 Remove the front fan assembly (see “Removing the Front Fan Assembly” in your *Installation and Troubleshooting Guide*).
- 2 Disconnect the interface cable from the interposer board attached to the back of the CD-ROM/diskette drive.
- 3 Loosen the thumbscrew securing the peripheral bay to the chassis (see Figure 1-1).

**Figure 1-1. Removing the Peripheral Bay**



- 4 While grasping the peripheral bay handle, slide the peripheral bay backward and lift the bay straight up to clear the chassis. Set the peripheral bay on a smooth work surface.
- 5 Facing the rear of the peripheral bay, reach inside the bay and press against the center of the blank slot insert to release the insert. Remove both inserts.

## Installing the Drive Cage

- 1 Ensure that the 1 x 2 backplane is secured to the back of the drive cage with four screws.
- 2 Insert the drive cage into the peripheral drive bay until two of the holes on the top and two holes on the bottom of the drive cage align with holes in the peripheral bay. See Figure 1-2 for the orientation on a tower system.

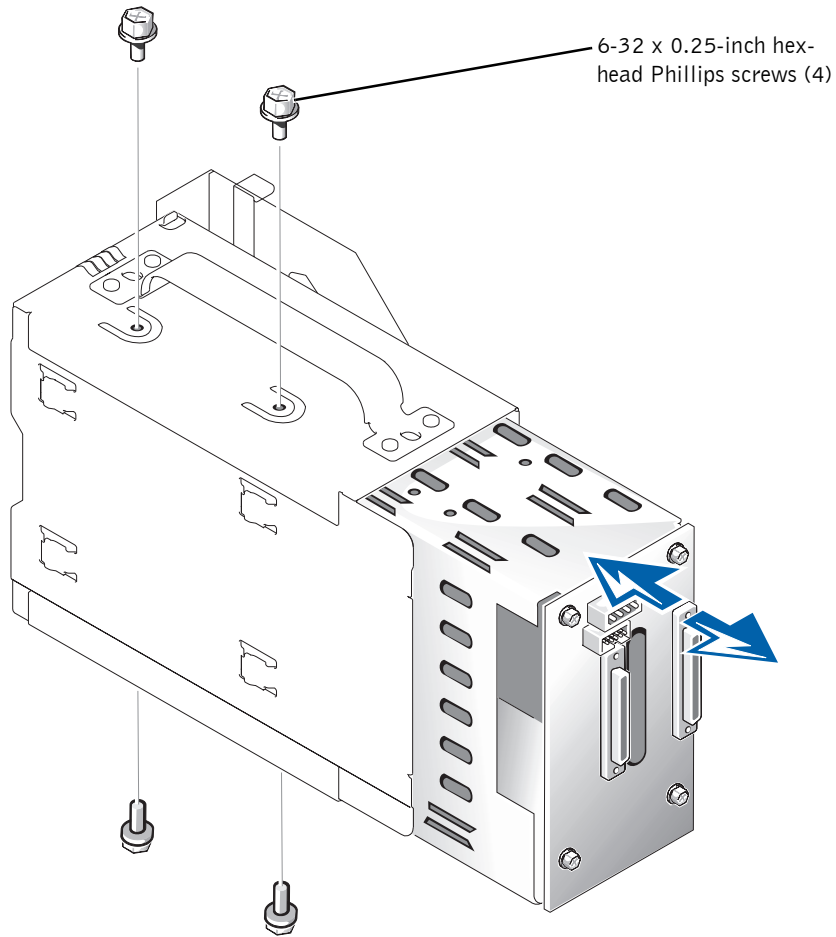


**NOTE:** To install the drive cage into the peripheral bay of a *rack system*, turn the cage 180° so that the 1 x 2 backplane power connector is near the bottom of the peripheral bay.



**NOTE:** The drive cage can be inserted into the peripheral bay from the front or the back.

**Figure 1-2. Installing the Drive Cage (Tower System)**



- 3 Secure the drive cage to the peripheral bay with four screws (two on the top and two on the bottom).

Figure 1-2 shows the proper location for these screws.

### **Installing the Peripheral Bay**

- 1 Reconnect the interface cable to the CD-ROM/diskette drive interposer board.
- 2 While grasping the peripheral bay handle, lower the peripheral bay into the chassis.


- 3 Align the tabs on side of the peripheral bay with the locking slots in the chassis and slide the peripheral bay forward.
- 4 Tighten the thumbscrew securing the peripheral bay to the chassis (see Figure 1-1).

### Installing the I<sup>2</sup>C Extension Cable

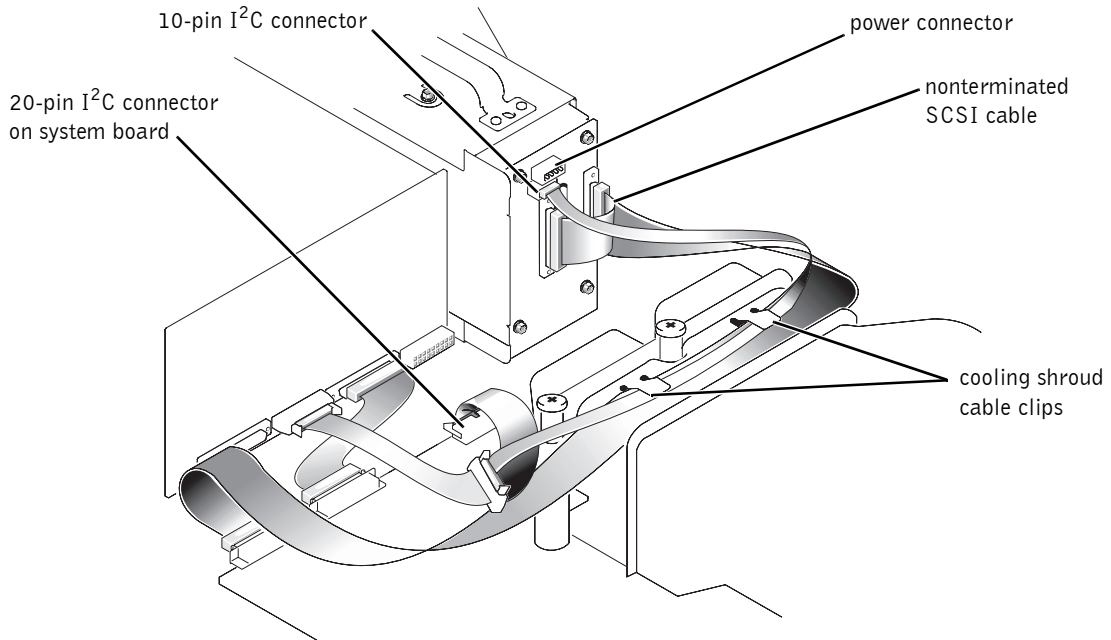
- 1 Disconnect the I<sup>2</sup>C cable connector at the 20-pin PLANAR connector on the system board.


*Do not* disconnect the end that is connected to the SCSI backplane.

- 2 In the customer kit, locate the I<sup>2</sup>C extension cable. This cable has three connectors: a 20-pin connector on one end, a 10-pin connector on the other end, and a 20-pin cable connector in the middle (see Figure 1-3).


 **NOTE:** Figure 1-3 shows the 1 x 2 backplane and its drive cage oriented for a tower system. For rack systems, you must install the 1 x 2 backplane and its drive cage oriented 180° from the position shown in Figure 1-3.

**Figure 1-3. Installing the I<sup>2</sup>C Extension Cable**




 **NOTICE:** The I<sup>2</sup>C cable must be routed over the top of the cooling shroud.

- 3 Route the I<sup>2</sup>C extension cable through the clips on the top of the cooling shroud (see Figure 1-3).
- 4 Attach the 10-pin connector on the I<sup>2</sup>C extension cable to the 10-pin connector (PLANAR\_1X2) on the 1 x 2 backplane.
- 5 Attach the 20-pin connector on the end of the I<sup>2</sup>C extension cable to the 20-pin connector on the system board (PLANAR).
- 6 Attach the free end of the I<sup>2</sup>C cable, which was disconnected from the system board in step 1, to the middle connector on the new I<sup>2</sup>C extension cable that you installed in steps 3 and 4.
- 7 Attach a four-wire power cable to the power connector (J1) on the 1 x 2 backplane (see Figure 1-3).

 **NOTE:** The four-wire power cable is the standard cable found on all systems and provides power to peripherals, such as a tape drive.

### Installing the SCSI Cable

 **NOTE:** The SCSI cable installation described in this document is a typical installation of the SCSI cable used with the 1 x 2 backplane. You can install the SCSI cable differently, depending on redundant array of independent disks (RAID) configurations and the existence of SCSI peripheral cards. Refer to your operating system documentation for information on how to set up your SCSI devices.

To connect the SCSI cable to the 1 x 2 backplane, perform the following steps:

- 1 In the customer kit, locate the nonterminated 68-pin SCSI cable. This cable has one connector on one end and two connectors on the other end (see Figure 1-3).
- 2 Route the SCSI cable through the clips on top of the cooling shroud (see Figure 1-3).
- 3 On the end with two connectors:
  - a Attach the connector on the end of the cable to the vertical connector that is closest to the 10-pin I<sup>2</sup>C connector on the 1 x 2 backplane (see Figure 1-3).
  - b Attach the next-to last connector on the cable to the remaining vertical connector on the 1 x 2 backplane (see Figure 1-3).
- 4 Attach the end with one connector to the SCSIB connector on the system board.

You can also connect this end of the cable to a Peripheral Component Interconnect (PCI) SCSI or PCI RAID controller card.

## Completing the Installation

- 1 Replace the front fan assembly (see “Replacing the Front Fan Assembly” in your *Installation and Troubleshooting Guide*).
- 2 Replace the system cover (see “Replacing the System Cover” in your *Installation and Troubleshooting Guide*).
- 3 Replace the front bezel (see “Replacing the Front Bezel” in your *Installation and Troubleshooting Guide*).
- 4 Reconnect the system and peripherals to their power sources and turn on power.

