Dell™ PowerEdge™ 6300 and 4300 Systems 1 x 2 Backplane Installation Information

This document provides installation instructions for the optional 1 x 2 small computer system interface (SCSI) backplane for the Dell PowerEdge 6300 and 4300 systems. The 1 x 2 SCSI backplane provides hot-pluggable Ultra2/low voltage differential (LVD) SCSI connections for two 1-inch hard-disk drives in the system's peripheral drive bay.

For a description of the SCSI backplane's functionality, see your system's *User's Guide* and *Installation and Troubleshooting Guide*.

Installing the 1 x 2 Backplane

WARNING: The power supplies in this computer system produce high voltages and energy hazards, which can cause bodily harm. Only trained service technicians are authorized to remove the computer cover and access any of the components inside the computer.

Your 1 x 2 backplane customer kit contains the following items:

- Assembled drive cage
- I^{2}C extension cable
- Nonterminated SCSI cable

Before You Begin

WARNING: Your system may have more than one power supply cable. To reduce the risk of electrical shock, a trained service technician must disconnect all power supply cables before servicing the system. For more information, see "Safety First—For You and Your Computer" in Chapter 7 of the *Installation and Troubleshooting Guide*.

NOTES: Verify that your system has the latest basic input/output system (BIOS) revision and firmware. Download the latest revision from the Support section of the Dell Web site at **http://www.dell.com**.

For proper use of the 1 x 2 backplane, the minimum BIOS revision level for the 6300 system is A06, and the minimum BIOS revision level for the 4300 system is A05. To ensure that you have the minimum firmware for the 1 x 2 backplane for both systems, run the SMFLASH utility A33 on your system.

Before you install the 1 x 2 backplane, prepare the peripheral drive bay for installation. To remove or install drives in the peripheral drive bay, you must remove the computer cover and front bezel according to the instructions in "Removing and Replacing the Computer Cover" in Chapter 7 of the *Installation and Troubleshooting Guide*.

Removing and Replacing Front-Panel Inserts

To protect the inside of the computer from foreign particles, a plastic front-panel insert covers each empty peripheral drive bay. Before you install a drive in an empty peripheral drive bay, you must first remove the front-panel insert.

Whenever you remove a drive, be sure to replace the front-panel insert over the empty peripheral drive bay.

To remove the front-panel insert for a peripheral drive bay that you intend to use, first remove the front bezel. Then, facing the inside of the front bezel, press against the center of the insert with your thumbs until the insert bows sufficiently to loosen the tabs on the sides of the insert. Pull the insert out of the bezel.

To replace a front-panel insert, position the insert over the peripheral drive bay opening from the inside of the front bezel and carefully press the insert into place. A tab on each side of the insert snaps into a corresponding latch on the inside of the front bezel.

If you have any peripheral devices in the bottom two slots of the peripheral drive bay, remove them before installing the 1 x 2 backplane. To remove an existing peripheral device (such as a CD-ROM drive or a tape drive) from the peripheral drive bay, perform the following steps:

1. Remove the system cover and the front bezel.

2. Locate the plastic clips attached to the drive rails that are on each side of the peripheral device that you want to remove.

3. Squeeze the clips inward toward the device until the clips disengage from the sides of the peripheral bay.

4. Pull the peripheral device outward until the device clears the peripheral bay.

5. Unplug the data cable and power cord from the back of the peripheral device. Do not pull hard on the peripheral device when removing it from the system because the cord and cable connections in the system may become loose or damaged.

    NOTE: If a cord or cable prevents the removal of a peripheral device from the system, unplug the cord or cable from the back of the peripheral device while it is still in the peripheral bay.

Installing the Drive Cage

To install the drive cage, perform the following steps:

1. Ensure that the drive cage is correctly assembled:

    a. Verify that the 1 x 2 backplane is connected to the edge of the auxiliary SCSI backplane via a 100-pin connector.

    b. Verify that the auxiliary SCSI backplane is inserted into the enclosure on the side of the cage and secured with one screw.

    c. Verify that the 1 x 2 backplane is secured to the back of the cage with four screws.

    d. Verify that a drive rail is attached to each side of the drive cage.

2. Insert the drive cage into the empty peripheral drive bay until the clips on the drive rails snap into the sides of the peripheral drive bay (see Figure 1).
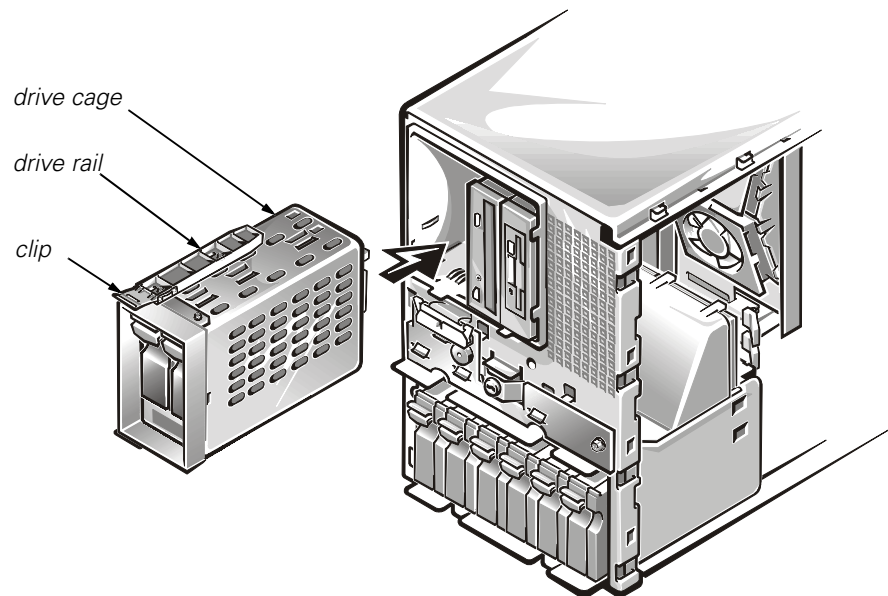

drive cage

drive rail

clip

Figure 1. Installing the Drive Cage

Installing the I^{2}C Extension Cable

To install the I^{2}C extension cable, perform the following steps:

1. Disconnect the I^{2}C cable from the 20-pin connector on the system board and set it to one side (see Figure 2).

2. In the customer kit, locate the I^{2}C extension cable. (This cable has three connectors: a 20-pin connector on one end and in the middle and a 10-pin connector on the other end.)

3. Attach the 10-pin connector on the I^{2}C extension cable to the 10-pin connector on the 1 x 2 backplane.

4. Attach the 20-pin connector on the I^{2}C extension cable to the 20-pin connector on the system board.

5. Attach the loose end of the I^{2}C cable, which was set aside, to the middle connector of the I^{2}C extension cable.

6. Attach a four-wire power cable to the power connector on the 1 x 2 backplane.

NOTE: The four-wire power cable is the standard cable found on all systems and provides power to peripherals; for example, for a CD-ROM drive or tape drive.
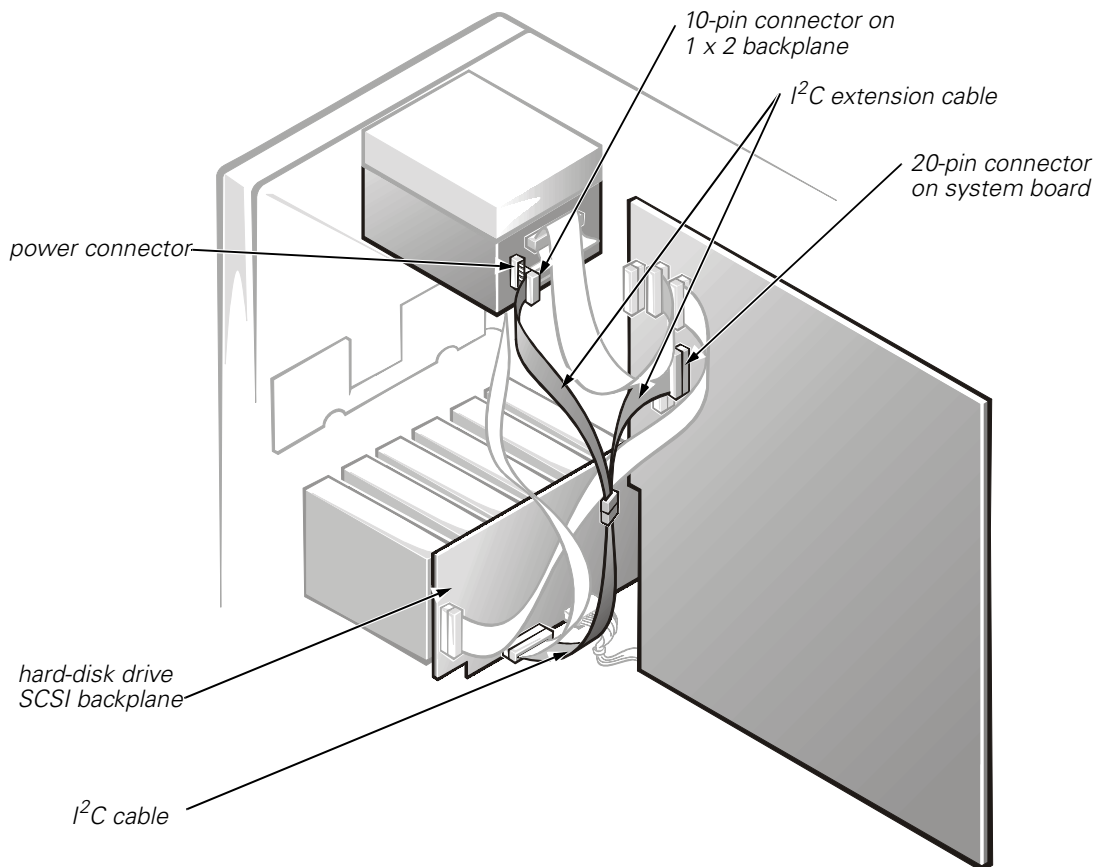

Figure 2. Installing the I^{2}C Extension Cable

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 arrays 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 install 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 two connectors at one end and one connector on the other end. See Figure 3.)
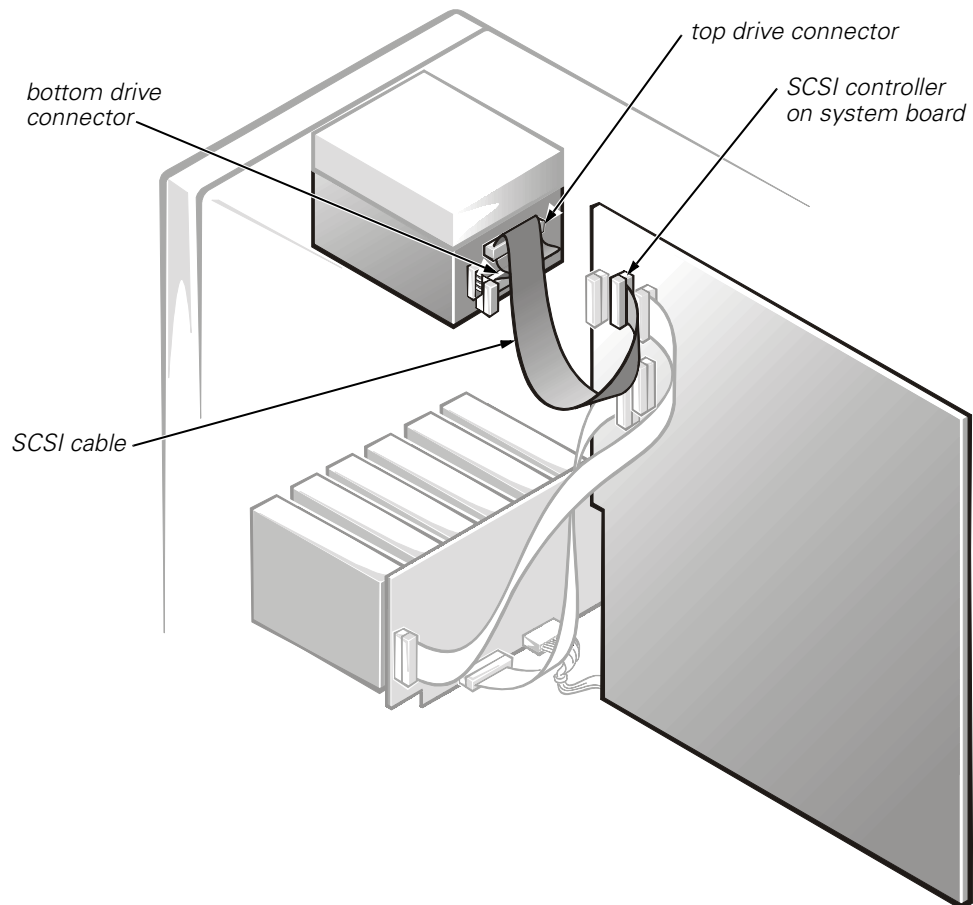

Figure 3. Installing the SCSI Cable to 1 x 2 Backplane

2. On the end with two connectors:

   a. Attach the connector at the end of the cable to the bottom drive connector on the 1 x 2 backplane.

   b. Attach the second connector to the top drive connector on the 1 x 2 backplane.

3. Attach the end with one connector to a SCSI controller on the system board.

Converting the Drive Carriers

You can use only 1-inch hard-disk drives with the 1 x 2 backplane. If you have 1.6-inch hard-disk drive carriers that you want to use with your 1 x 2 backplane, you need to place 1-inch hard-disk drives in the carrier and modify the 1.6-inch carriers to be 1 inch in width. To modify the 1.6-inch carriers to 1-inch width, remove the spacer insert.

NOTE: To remove the spacer insert, use a screwdriver to pry open the clips on the inside of the carrier release handle, and pull the spacer insert away from the carrier.

After you have installed your 1 x 2 backplane, see "Installing and Removing SCSI Hard-Disk Drives" in Chapter 10 of the *Installation and Troubleshooting Guide* for information on how to install your hard-disk drives.

NOTE: The 1 x 2 backplane sets the top drive to SCSI ID0 and the bottom drive to SCSI ID1.