Front fan and fan holder installation

Introduction

This document describes how to install a front fan and fan holder/card guide in an HP computer.

Kit contents

- Fan
- Combination card guide/fan holder for the HP Z200, Z210, or Z400 computer
- Warranty information

Your responsibilities

You are responsible for determining whether the product is appropriate for your use and will interface with other equipment without malfunction or damage. You are also responsible for backing up data before installing any product and for regularly backing up data after installing the product. HP is not liable for any damage to equipment or data loss resulting from the use of any product. To determine the compatibility of this product with your computer or workstation, view *QuickSpecs* at http://www.hp.com/go/productbulletin.

Before you begin

> **NOTE:** Only computers having non-factory-integrated, high-power PCI cards require the additional cooling provided by the optional front chassis fan included in this kit. This front fan is not recommended for use on computers that have hard drives mounted in the optical bays if your environmental temperature exceeds 27°C (80°F). This might reduce long-term reliability of these hard drives.

617600-B22

Warnings and cautions

WARNING! ⚠ Any surface or area of the equipment marked with this symbol indicates the presence of a hot surface or hot component. If this surface is contacted, the potential for injury exists. To reduce the risk of injury from a hot component, enable the surface to cool before touching.

WARNING! ⚠ Any surface or area of the equipment marked with this symbol indicates the presence of an electrical shock hazard. To reduce the risk of injury from electrical shock, do not open any enclosed area marked with this symbol.

WARNING! To reduce the risk of electric shock or damage to your equipment:

— Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

— Plug the power cord in a grounded (earthed) outlet that is easily accessible at all times.

— Disconnect power from the equipment by unplugging the power cord from the electrical outlet.

WARNING! To reduce the risk of serious injury, read the *Safety & Comfort Guide*. It describes proper computer setup, posture, health, and work habits for computer users, and provides important electrical and mechanical safety information. This guide is located at http://www.hp.com/ergo and on the documentation CD (if one is included with the product).

WARNING! If a product is shipped in packaging marked with this symbol, 👥, the product must always be lifted by two persons to avoid personal injury due to product weight.

CAUTION: Static electricity can damage the electronic components of the computer. Before beginning these procedures, be sure you discharge static electricity by briefly touching a grounded metal object.

CAUTION: To prevent damage to the computer, observe the following Electrostatic Discharge (ESD) precautions while performing the system parts removal and replacement procedures:

— Work on a static-free mat.

— Wear a static strap to ensure that any accumulated electrostatic charge is discharged from your body to the ground.

— Create a common ground for the equipment you are working on by connecting the static-free mat, static strap, and peripheral units to that piece of equipment.

NOTE: HP accessories are for use in HP computer products. They have been extensively tested for reliability and are manufactured to high quality standards.

Step 1—Preparing for component installation

NOTE: Computer models vary. All illustrations are examples only.

Accessing the internal components of the computer

1. If you need help preparing the computer for this installation, consult the removal and replacement procedures in the service guide for your computer at http://www.hp.com/support/manuals.

2. Power down the computer, and then disconnect the power cord.

3. Power down all external devices, and then disconnect them from the computer.

4. Remove the side access panel.

Step 2—Installing the front fan and fan holder

1. To have adequate clearance for installing the fan, remove any full-length expansion cards:

   a. (Z400 only) If installed, remove the expansion card support by removing the two connecting screws (1) and lifting up on the support (2).

   Figure 1 Removing expansion card support (Z400)
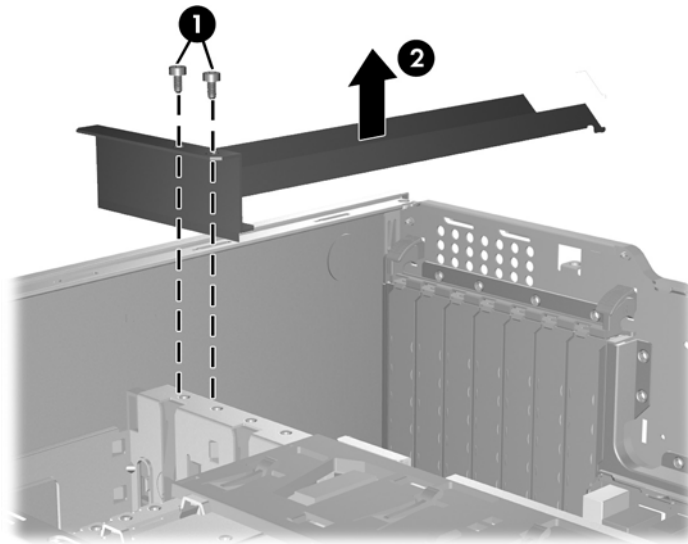
b. If installed, remove the card hold-down clamp: grasp the top of the clamp (1), squeeze the release handles until the bottom of the clamp releases from the clamp rail (2) (it should click when it releases), and swing the clamp out from the back panel (3).
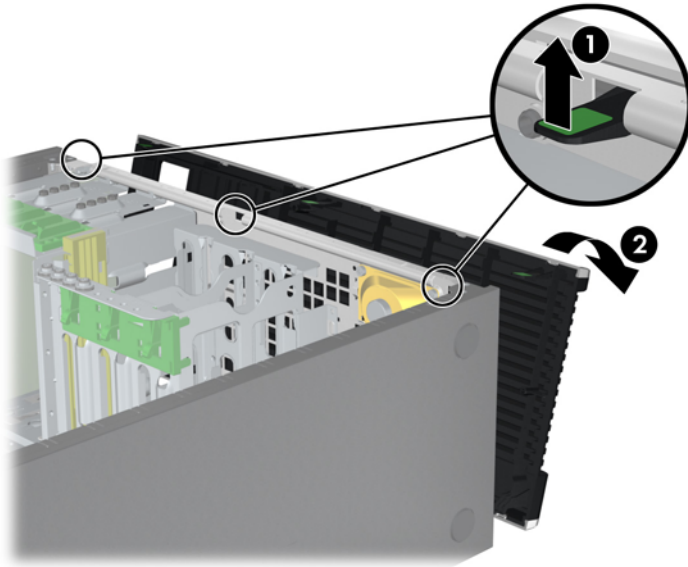
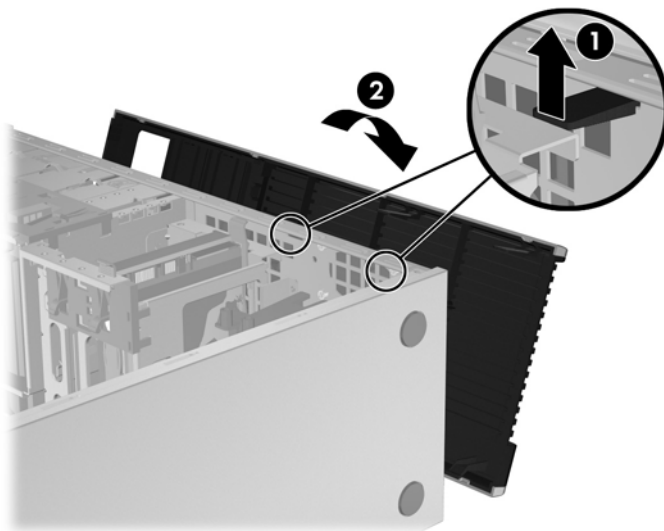**Figure 2** Removing expansion card hold-down clamp (Z200 and Z210)
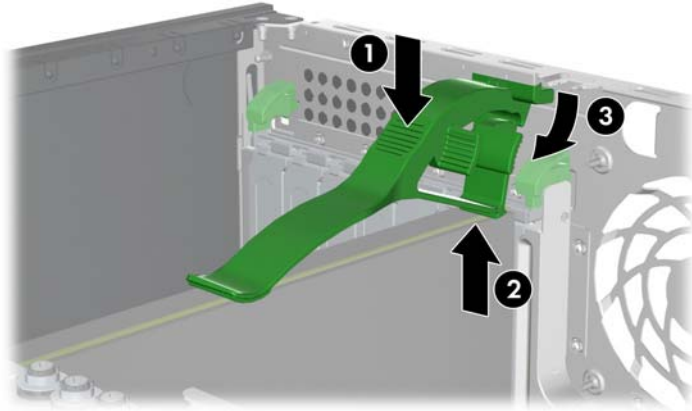
c. Disconnect the 1394 power cable if it is used by any of the full-length expansion cards.

2. Remove the front bezel by lifting the release tabs (1), and then rotating the front bezel off the chassis (2).

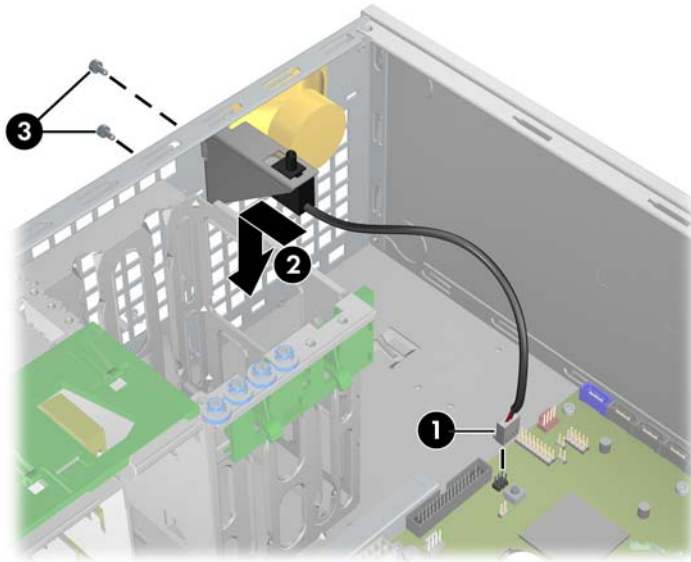**Figure 3** Removing the front bezel (Z200 and Z210)

**Figure 4** Removing the front bezel (Z400)

3. (Z400 with hood sensor only) Remove the hood sensor and mounting bracket:

   a. Disconnect the sensor power cable from the system board (1).

     Figure 5 Removing the hood sensor and mounting bracket (Z400)

   b. Slide the hood sensor out of its mounting bracket (2).

   c. Remove the hood sensor mounting bracket by using a Torx screwdriver to remove the two screws that hold the hood sensor bracket to the chassis (3).

4. Insert the fan unit into the fan holder/card guide. Align the fan with the label facing inward. If an airflow indicator is present on the fan, make sure it points toward the holder and the rear of the chassis. Position the power cable so that it has the maximum length to reach the system board.

    Figure 6 Inserting the fan into the fan holder/card guide
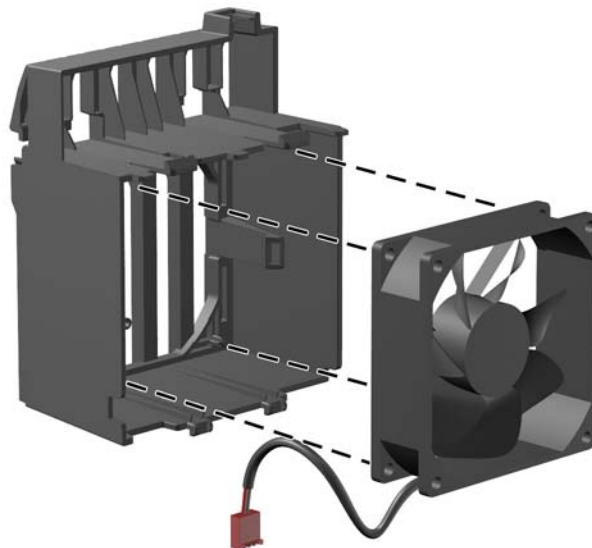
5. (Z400 with hood sensor only) Insert the hood sensor into the slot provided on the fan holder/card guide.

Figure 7 Inserting the hood sensor into the fan holder/card guide
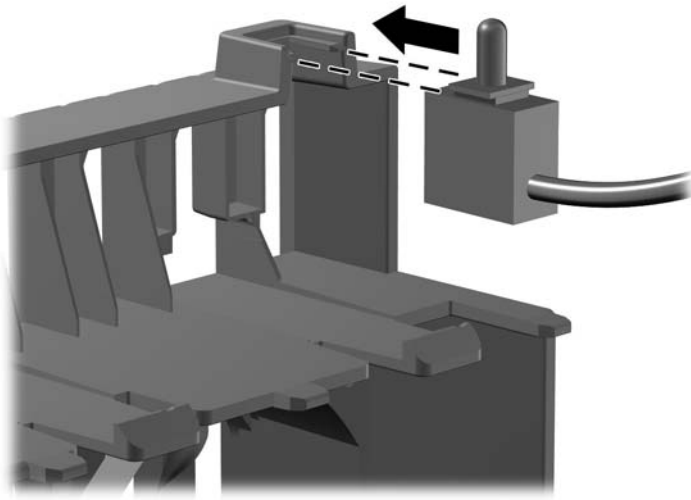
6. Route the front chassis cables so that they will clear the fan holder/card guide:

- Route the front USB and power switch cables along the bottom of the drive bay (1).
- Route the speaker cable along the side wall of the chassis (2).

Figure 8 Routing the cables (Z400 shown)
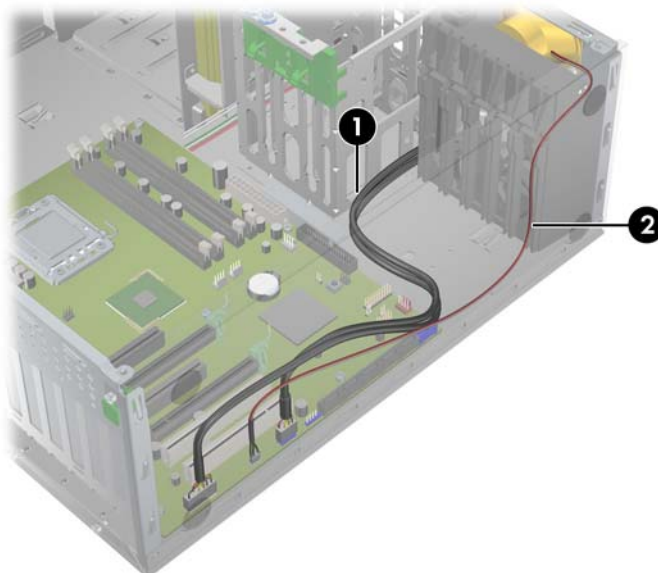
7. Angle the fan holder/card guide assembly to one side to insert it into the chassis (1), and then rotate the assembly so that it is parallel to the front of the chassis (2). Make sure that the fan cable can reach the power receptacle on the system board.
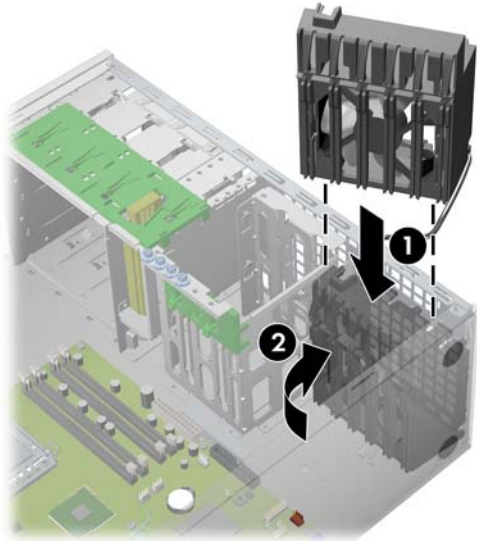
⚠ **CAUTION:** Clamping a cable between the card guide and the chassis might damage the cable.

Figure 9 Inserting the fan holder/card guide assembly

8. Finish installing the fan holder/card guide assembly, as shown in the following illustration:

   a. Slide the fan holder/card guide toward the front of the chassis (1).

   b. Rotate the fan holder/card guide so that the bottom tabs snap into the grid on the chassis first, followed by the top tabs (2).

   c. Plug the front fan connector into the front chassis fan header on the system board (3).

   📝 **NOTE:** To locate system board components, see the service label on the side access panel.

d. (Z400 with hood sensor only) Carefully route the hood sensor cable along the drive bay and plug it into the HSENSE connector on the system board (4).

Figure 10 Installing the fan holder/card guide assembly
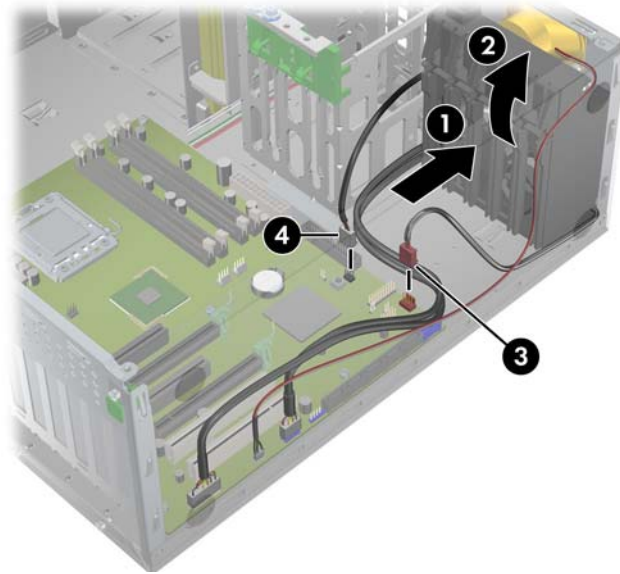
9. Make sure that none of the cables are pinched and that all cables are positioned so that they will not interfere with the expansion cards.

Step 3—Reassembling the computer

1. Reinstall any expansion cards that you removed. Full-length cards will now fit into the slots on the front fan holder/card guide.

2. (Z400 with expansion card support only) Replace the expansion card support by repositioning it over the expansion cards, locking it into the back end of the chassis, and replacing the two mounting screws.

3. Replace any hold-down clamps that were previously installed by inserting each clamp into the chassis opening aligned with the expansion card and then rotating the clamp down onto the card until it snaps into place. If the clamp does not close, ensure that the card is properly seated, and then try again.

4. Reconnect the 1394 power cable if it is used by any of the expansion cards you removed.

5. Reinstall the side access panel.

6. Reconnect external devices and power cord.

7. Restore power to the computer and all external devices.

Japanese 日本語

This document is available in Japanese. See http://www.hp.com/support/manuals, then select your product and select **Japanese** from the drop down **Manual Language** menu.

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