

---

# NVIDIA Tesla Compute Processor card installation

## Document Information

- Part Number: 577807-002
- Second edition
- © 2009–2010 Hewlett-Packard Development Company, L.P.

## Introduction

This document describes how to install an NVIDIA Tesla Compute Processor card with an auxiliary power adapter cable in an HP Z800 or Z400 Workstation.

## Kit contents

- NVIDIA Tesla Compute Processor card
- 6-to-8 pin auxiliary power adapter cable
- Installation instructions (this document)
- Warranty information


## Before you begin

To determine the compatibility of this product with your HP workstation, see *QuickSpecs* online at <http://www.hp.com/go/productbulletin>.


Before installing an NVIDIA Tesla compute processor card, ensure the following criteria are met:

- HP Z400 Workstations must contain a 600 Watt power supply.
- HP Z800 Workstations must contain an 1110 Watt power supply.
- The NVIDIA Tesla C2050 Compute Processor card may be used alone, or with another C2050, or with a compatible graphics card. If used with a compatible graphics card, use of the C2050 DVI output is not supported
- The NVIDIA Tesla C1060 Compute Processor card is a dedicated computational unit, and must be used in conjunction with a compatible graphics card.

# Warnings and cautions

- 
- ⚠ **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!** ⚠ 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!** 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.
- 
- ⚠ **WARNING!** To reduce the risk of serious injury, read the *Safety & Comfort Guide*. It describes proper workstation 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).
- 
- ⚠ **CAUTION:** Static electricity can damage the electronic components of the workstation. Before beginning these procedures, be sure you discharge static electricity by briefly touching a grounded metal object.
- 
- ⚠ **CAUTION:** To prevent damage to the workstation, 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 Workstation 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.

## Removing components

1. Remove the expansion card support to enable access to the expansion slots and system board connectors.
2. Select a PCI Express (PCIe)2-x16 expansion slot.

 **NOTE:** To identify a PCIe2-x16 expansion slot, see the service label on the workstation side access panel.

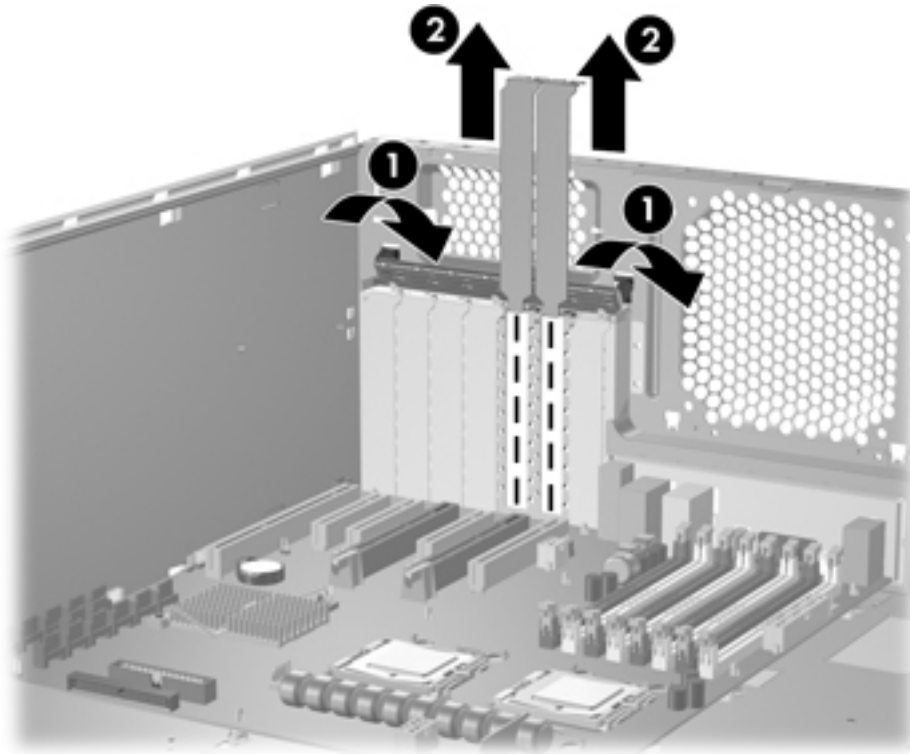
---

 **NOTE:** For optimal cooling, keep the expansion slot adjacent to the fan free or filled with an expansion card that does not obstruct the fan inlet of the Tesla card.

---

- a. Open the expansion slot retention clamp (1).
- b. Remove the applicable expansion slot covers (2).

**Figure 1** Opening the retainer and removing the slot covers

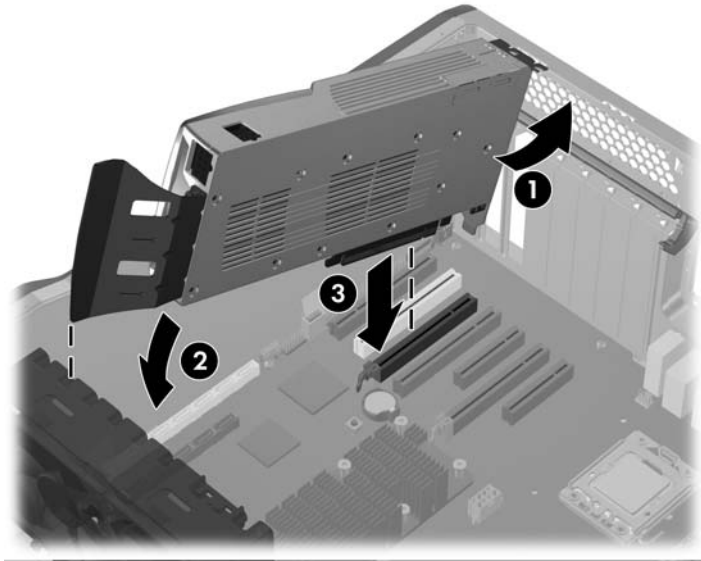


## Step 2—Installing the card

1. While lowering the card into the chassis, rotate the graphics card bulkhead under the rear chassis lip (1).
2. Align the card in a groove of the card guide (2) and pivot the card until level.


3. Press securely into the PCIe expansion slot (3).

**Figure 2** Installing the card





## Step 3—Connecting the power

1. Close the expansion card retention clamp by rotating it downward (1). The retention clamp is secured by the expansion card support.

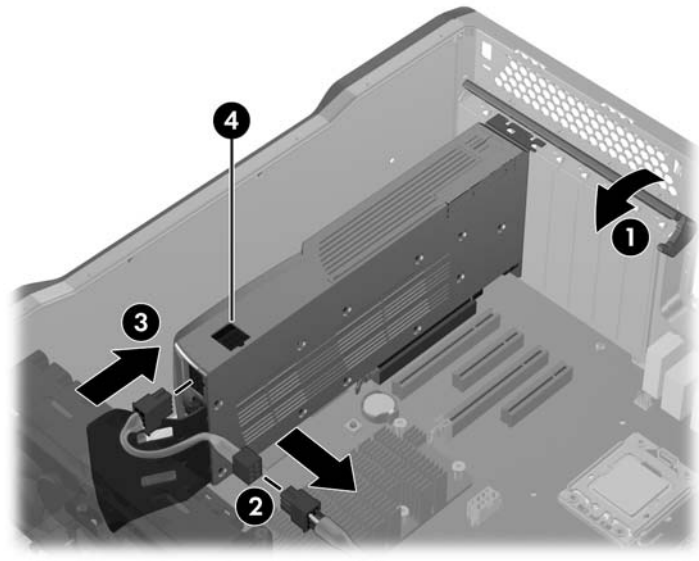
 **NOTE:** It is normal for the expansion card retention clamp to have a slight (5-10 degree) angle when closed. If the angle is greater than this, open the clamp and ensure that all cards are properly seated and all the brackets are mated to the chassis, then re-close the clamp.

2. Connect the 6-to-8 pin auxiliary power adapter cable, supplied with this kit, to one of the auxiliary power cables (2), and then to the Tesla card (3).

 **NOTE:** No connection is made at point (4). If a label covers the outlet at (4), do not remove it.

 **TIP:** The auxiliary power cable connectors are typically stored (attached) to the front expansion card guide.

**Figure 3** Installing the 6-to-8 pin auxiliary power adapter cable



## Step 4—Reassembling the workstation

1. Reinstall the expansion card support.
2. Reinstall the side access panel.
3. Reconnect power to the workstation and all external devices.
4. Restore power to the workstation and all external devices.

## Step 7—Configuring the software

For instructions on loading and setting up the graphics drivers, see the manufacturer's documentation shipped with the NVIDIA Tesla graphics card.

At the time of component installation, look for device firmware and driver updates, designated for your workstation model and operating system from <http://www.hp.com/go/workstationsupport>.

## Japanese 日本語

This document is available in Japanese. See [http://www.hp.com/support/workstation\\_manuals](http://www.hp.com/support/workstation_manuals), then select your workstation product and select **Japanese** from the drop down **Manual Language** menu.

このドキュメントは日本語版が用意されています。[http://www.hp.com/support/workstation\\_manuals](http://www.hp.com/support/workstation_manuals) にアクセスし、ご使用のワークステーション製品を選択し、**Manual Language** ドロップダウンメニューから **Japanese** を選択してください。