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# Internal USB port kit installation

## Introduction

The internal USB port kit provides a Type A female USB port compatible with Type A USB devices internal to the computer chassis. This document describes how to install the internal USB port kit on HP Z and xw series Workstations.

## Kit contents

- Internal USB port kit
- Adjustable cable strap
- Warranty information
- Internal USB port kit installation instructions (this document)

## Before you begin

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



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## Warnings and cautions

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

- ▲ If present, remove the card support to enable access to the expansion slots and system board connectors.

# Step 2—Identifying the internal USB connector

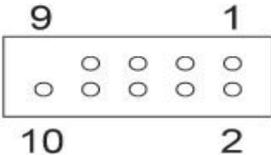
The Internal USB Cable can be installed in most HP Z and xw series Workstations. The cable attaches to the internal USB header connector located on the computer system board. Installation of the kit is slightly different for each computer model within the series due to system board design differences.

Identify the internal USB header connector on the computer system board as follows:

1. Using the computer service label diagram (affixed to the inside of the side access panel, removed previously), identify the internal USB header connector location on the system board.

 **NOTE:** Some workstations have a second Internal USB connector (shown on the service label diagram). The second Internal USB connector may have a Type A USB receptacle permanently affixed to the header. This is an additional USB connector, located directly on the system board, and is not used with this option kit.

2. Locate the internal USB header connector on the computer system board. This header has either a 1x5- or 2x5-pin layout with exposed pins, depending on computer model.

Internal USB 1x5-pin header	Internal USB 2x5-pin header
Blank key position (pin 5)	Blank key position (pin 9)
	

## Step 3—Installing the internal USB cable

Complete the following steps to install the internal USB cable, shown in the following figure.

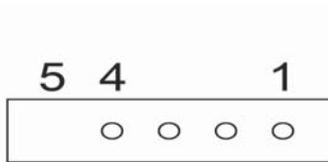
**Figure 1** Internal USB cable



1. Attach the internal USB cable 1x5-pin receptacle (A in the preceding figure) to the mating exposed pins of the available 1x5- or 2x5-pin header connector (which ever is available) on the system board:

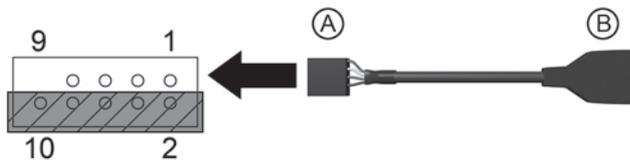
**1x5-pin header.** When connecting the cable to a 1x5-pin header, carefully match the blank pin position on the header to the blank pin position on the cable receptacle. The following figure shows the pin blank pin position (pin 5) on the 1x5-pin header connector.

**Figure 2** 1x5-pin header showing the blank pin 5 key position



**2x5-pin header.** When connecting the internal USB cable to a 2x5-pin header connector on the system board, carefully match the blank pin position on the header to the blank pin position on the cable receptacle, and **connect the cable receptacle to the keyed side only of the header (containing pin positions 1, 3, 5, 7, and blank pin 9)**, as shown in the following figure.

**Figure 3** 2x5-pin header showing the correct alignment and blank pin 9 key position



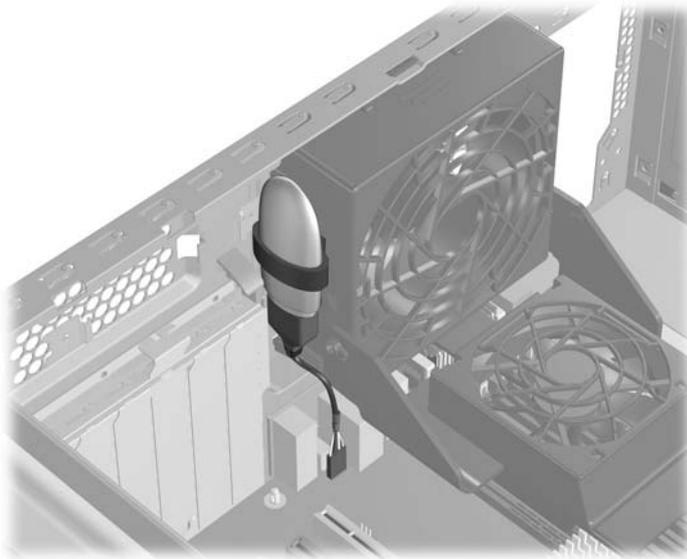
- △ **CAUTION:** Do not attempt to connect the internal USB cable receptacle to system board header pins 2, 4, 6, 8, and 10. Damage might result to the header connector and cable receptacle.

2. Attach a USB key or other USB device to the Type A receptacle on the other end of the internal USB cable.

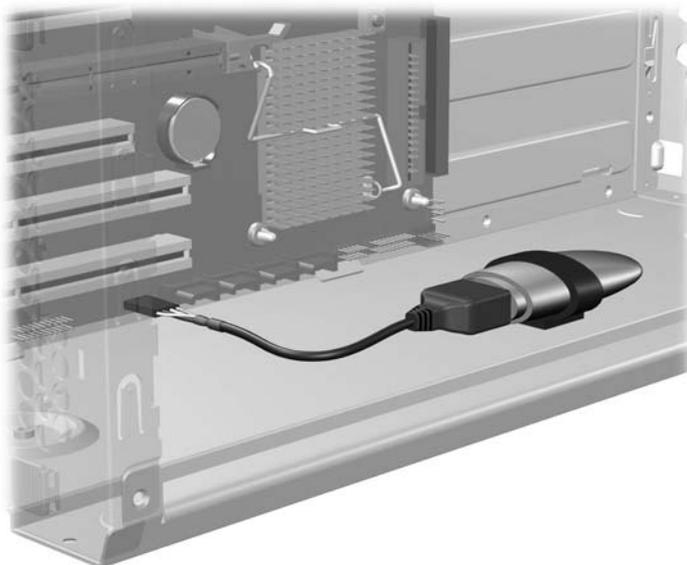
 **NOTE:** Although the internal USB cable is intended for use with a USB Key, it can be used with any USB device that has a compatible USB Type A male connector.

3. Using the adjustable strap with adhesive pad provided in the installation kit, affix the connected USB key or device to the computer chassis, as desired. The following two figures show example mounting options for a USB cable and device within the computer chassis.

**Figure 4** Example 1 of attaching the internal USB cable



**Figure 5** Example 2 of attaching the internal USB cable



 **CAUTION:** Ensure that the USB device is not mounted in a location that might obstruct the flow of cooling air within the chassis plenum.

## Step 4—Reassembling the computer

1. Reinstall the card support, if applicable.
2. Reinstall the side access panel.
3. Reconnect external devices and power cord.
4. 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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