



Installation Guide

HP Broadband Wireless Module

Document Part Number: [416484-002](#)

August 2007

© Copyright 2007 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Installation Guide
HP Broadband Wireless Module

Second Edition: August 2007

First Edition: ??????

Document Part Number: 416484-002

Contents

1 Getting started

Using HP Broadband Wireless	1-1
Identifying the required hardware	1-2
Preparing the computer	1-4

2 Installing the HP Broadband Wireless Module

Installing the wireless module in model nc6400 and model 6910p	2-1
Removing the keyboard	2-2
Installing the wireless module	2-5
Replacing the keyboard	2-9
Installing the wireless module in model 2510p	2-10
Installing the wireless module in model 2710p	2-15

3 Completing the installation

4 Removing an HP Broadband Wireless Module

Removing a wireless module from model nc6400 and model 6910p	4-1
Removing a wireless module from model 2510p	4-4
Removing a wireless module from model 2710p	4-6

5 Installing the HP Broadband Wireless

Module software

6 Downloading updates

A Regulatory notices

Federal Communications Commission notice	A-1
Modifications	A-2
Cables	A-2
Declaration of Conformity for products marked with the FCC logo (United States only)	A-2
Products with wireless devices	A-4
.	A-4
.	A-4

Index

1

Getting started

When used with mobile network operator service, your HP Broadband Wireless computer gives you the freedom to stay connected to the Internet, send e-mail, or connect to your corporate network when you are on the road and outside the range of Wi-Fi hotspots.

Using HP Broadband Wireless

To use the mobile broadband capability of your HP Broadband Wireless computer, you must do the following:

1. Purchase mobile network operator service [from a CMDA provider](#) for your HP Broadband Wireless computer.

The coverage area of each mobile network operator is different. For information on coverage and how to establish service, see the HP Web site:

<http://www.hp.com/broadbandwireless>

2. Locate the slot for the HP Broadband Wireless Module. Refer to the following table to determine the locations for your computer.

Computer model	Wireless module slot
nc6400	Under the keyboard
6910p	Under the keyboard
2510p	WWAN* module compartment
2710p	Hard drive bay

*wireless wide area network (WWAN)

3. Install the HP Broadband Wireless Module in your HP Broadband Wireless computer.

Instructions for installing the HP Broadband Wireless Module are provided in Chapter 2, “Installing the HP Broadband Wireless Module.”

4. Install the HP Broadband Wireless Module software on your computer.

The software is included on the *HP Broadband Wireless Software* disc in the HP Broadband Wireless Module kit. Instructions are provided in “Chapter 5, “Installing the HP Broadband Wireless Module software.”

Identifying the required hardware



CAUTION: To prevent an unresponsive system, install only an HP Broadband Wireless Module authorized for use in your computer by the governmental agency that regulates wireless devices in your country or region. If you install a wireless module and then receive a warning message, remove the module to restore computer functionality. Then contact technical support. For information about contacting technical support, refer to the printed *Getting Started* guide included with your computer.

To install the HP Broadband Wireless Module, you need the items shown in the following illustration and described in the following table.



Item	Component
①	HP Broadband Wireless Module
②	Two screws
③	Phillips screwdriver
④	Serial number and regulatory label
Not illustrated	<i>HP Broadband Wireless Module Software disc</i>
Not included	Flat-bladed or T8 Torx screwdriver (if keyboard removal is required)

Preparing the computer

Before you begin any installation or removal procedures:

1. Save your work, exit all programs, and shut down the computer.



If you are not sure whether the computer is off or in hibernation, turn the computer on, and then shut it down through the operating system.

2. Disconnect all external devices connected to the computer.
3. Disconnect the power cord.
4. Remove the battery.

2

Installing the HP Broadband Wireless Module

Installing the wireless module in model nc6400 and model 6910p

In the following computer models, the slot for the wireless module is located under the keyboard:

- HP Compaq nc6400 Notebook PC
- HP Compaq 6910p Notebook PC

Follow the procedure below to install the HP Broadband Wireless Module under the keyboard:

Removing the keyboard



CAUTION: To reduce the risk of damage to electronic components, discharge yourself of static electricity by touching a grounded metal object before you begin the following procedure.

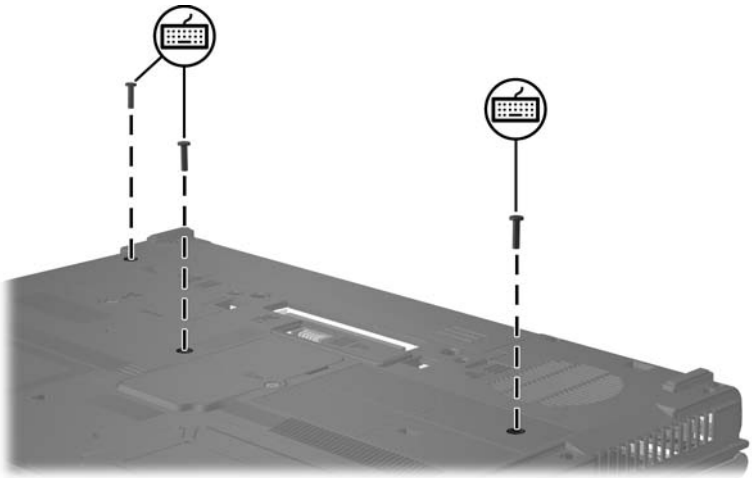
To remove the keyboard:

1. Follow the procedures in “Preparing the computer,” in Chapter 1, “Getting started.”
 2. Turn the computer upside down.
-



If your computer has a wireless module currently installed, you must remove it before installing the new module. Refer to Chapter 4, “Removing an HP Broadband Wireless Module.” After you remove the existing module, begin the following procedure at step 3 to install the new module.

3. Use a small, flat-bladed or T8 Torx screwdriver to remove the 3 keyboard screws from the bottom of the computer.

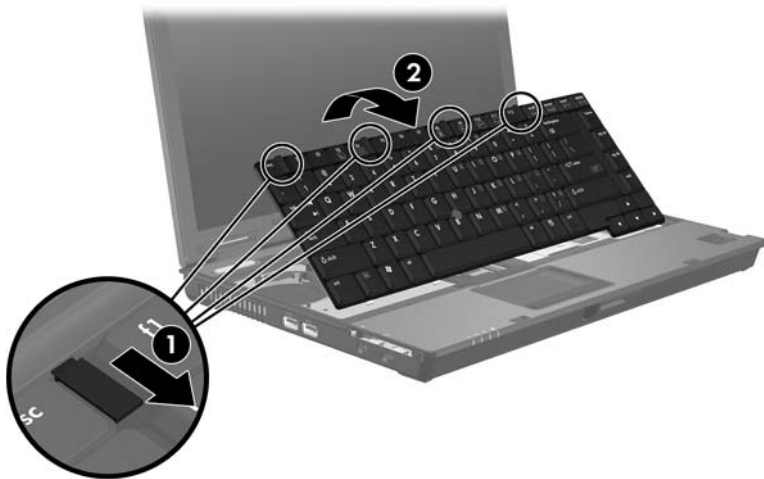


4. Turn the computer right-side up and open it.

Installing the HP Broadband Wireless Module

CAUTION: The keyboard is attached to the computer with a cable. You may leave the cable connected while you install the wireless module. Be careful that you do not damage the cable or connectors when you remove and replace the keyboard.

5. Unlock the keyboard ❶ by sliding the 4 keyboard latches ❷ in the direction shown. Then lift the rear edge of the keyboard and gently swing it forward until the keyboard rests upside down on the palm rest.

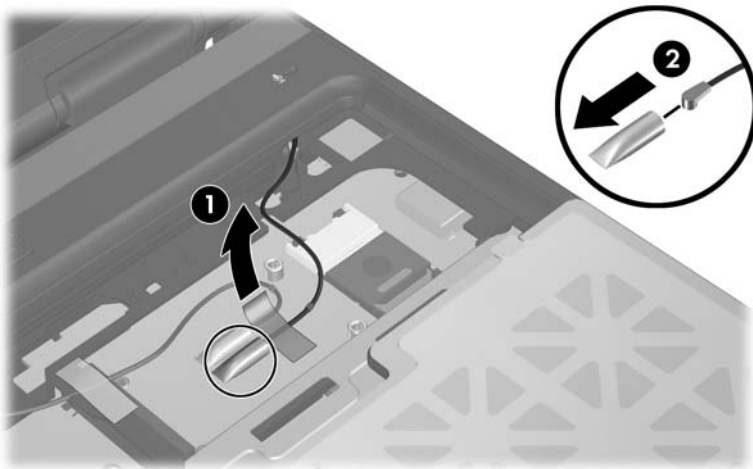


Installing the wireless module



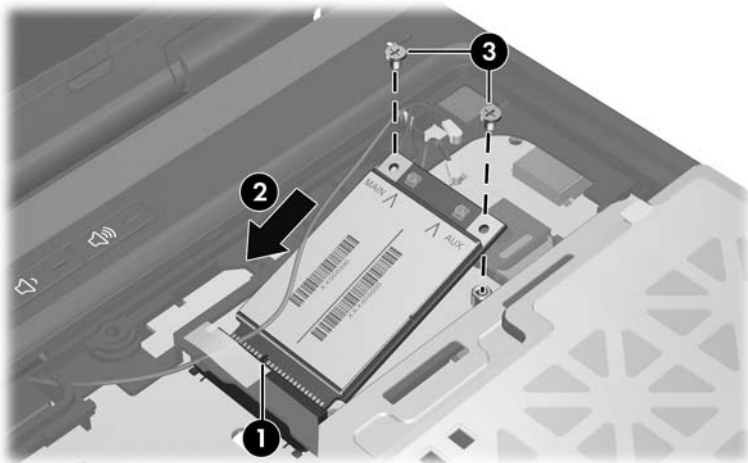
If your computer has a wireless module currently installed, you must remove it before installing the new module. Refer to Chapter 4, “Removing an HP Broadband Wireless Module.” After you remove the existing module, begin the following procedure at step 3 to install the new module.

1. Remove the tape **1** securing the antenna cables.
2. Gently remove the plastic cover **2** from the MAIN antenna cable (labeled with the number 5 or with a red band) and from the AUX antenna cable (labeled with the number 6 or with a blue band).



Installing the HP Broadband Wireless Module


3. Insert the notched edge of the wireless module at an angle into the WWAN module slot **1**, and then press the module **2** down until it is seated.
4. Use the Phillips screwdriver and the 2 screws **3** provided in this kit to secure the module in place.

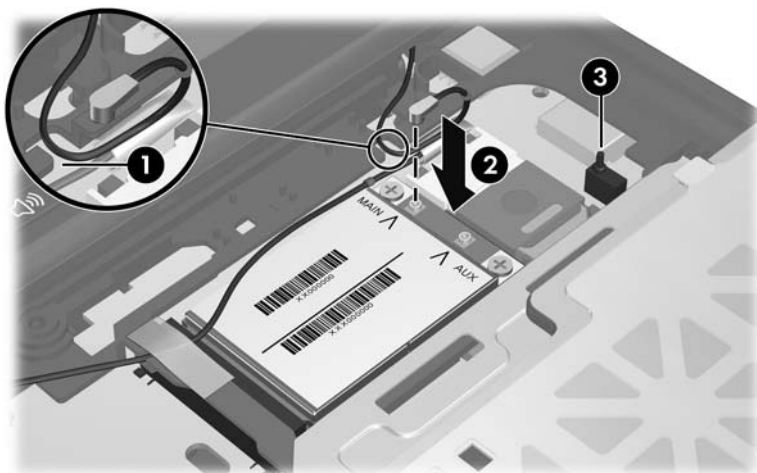


CAUTION: Be careful not to pinch the cables or damage the connectors. Doing so could reduce wireless performance or cause the wireless module to function improperly.

CAUTION: To avoid damaging the antenna connector, do not insert the connector at an angle. Instead, firmly press it straight down until it snaps into place.


5. Route the MAIN antenna cable ❶ (labeled with the number 5 or with a red band) as shown in the illustration, and then connect it to the MAIN terminal ❷ on the wireless module.

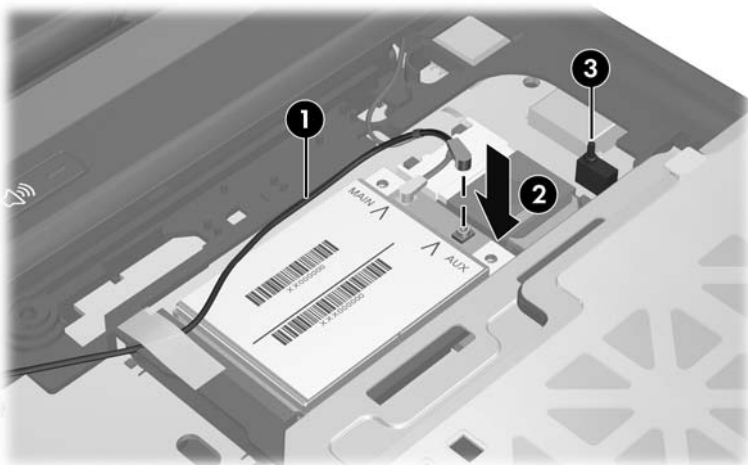
 Be sure that the antenna cable is routed through the channel in the frame of the computer so that it does not obstruct the SIM detect switch ❸ or lie across the raised edge of the frame.



Installing the HP Broadband Wireless Module

6. Route the AUX antenna cable ❶ (labeled with the number 6 or with a blue band) as shown in the illustration, and then connect it to the AUX terminal ❷ on the wireless module.

 Be sure that the antenna cable is routed through the channel in the frame of the computer and so that it does not obstruct the SIM detect switch ❸ or lie across the raised edge of the frame.

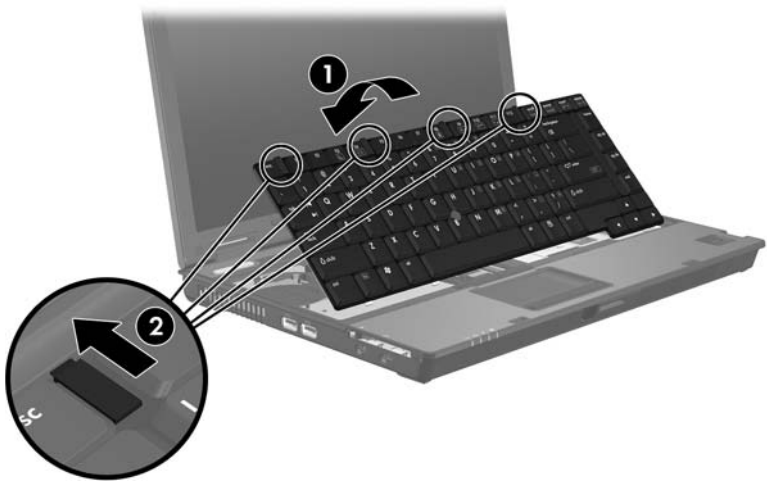


Replacing the keyboard

CAUTION: Be sure that the WWAN antenna cables are carefully positioned and that neither cable is obstructing the SIM detect switch or lying across the raised edge of the frame of the computer. See steps 5 and 6 on pages 2-7 and 2-8 for details.

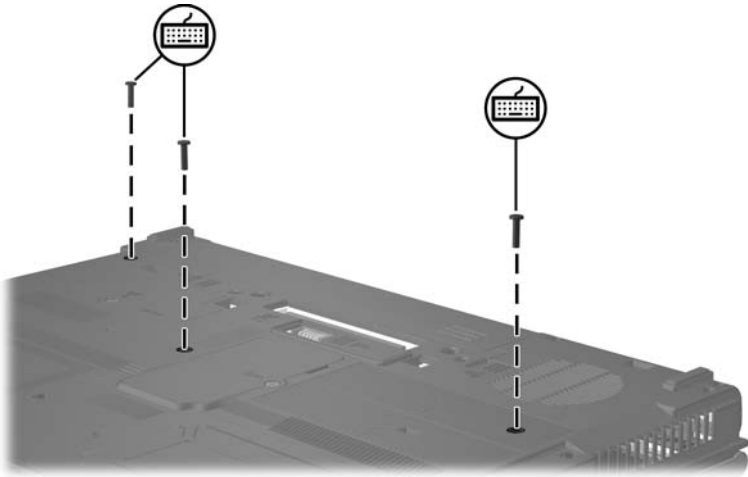
Be careful not to pinch the cables or damage the connectors. Doing so could reduce wireless performance or cause the wireless module to function improperly.

1. Rotate the keyboard back to its original location ❶ and lock it into place by sliding the 4 keyboard latches in the direction shown ❷.



Installing the HP Broadband Wireless Module

2. Close the computer and turn it upside down. Use a small, flat-bladed or T8 Torx screwdriver to replace the 3 keyboard screws on the bottom of the computer.



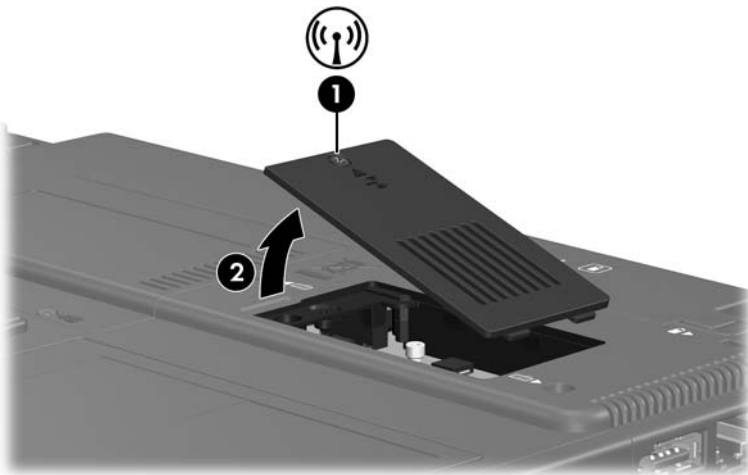
Installing the wireless module in model 2510p

In the HP Compaq 2510p Notebook PC, the slot for the wireless module is located in the WWAN module compartment on the bottom of the computer.

Follow the procedure below to install an HP Broadband Wireless Module in the WWAN module compartment:

1. Follow the procedures in “Preparing the computer,” in Chapter 1, “Getting started.”
2. Turn the computer upside down on a flat surface, with the front toward you.

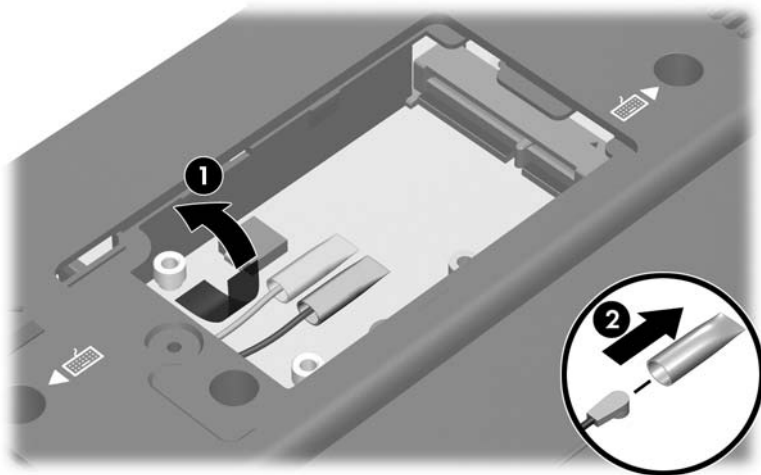
3. Use the Phillips screwdriver provided in this kit to loosen the WWAN module compartment cover screw **1**.
4. Lift the WWAN module compartment cover away from the computer **2**.



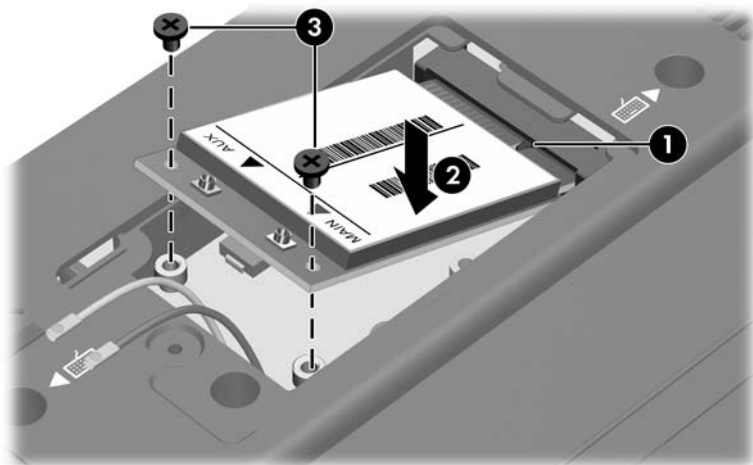
If your computer has a wireless module currently installed, you must remove it before installing the new module. Refer to Chapter 4, “Removing an HP Broadband Wireless Module.” After you remove the existing module, resume this procedure at step 7 to install the new module.

Installing the HP Broadband Wireless Module

5. Remove the tape **1** securing the antenna cables.
6. Gently remove the plastic cover **2** from the MAIN antenna cable (labeled with the number 5 or with a red band) and from the AUX antenna cable (labeled with the number 6 or with a blue band).

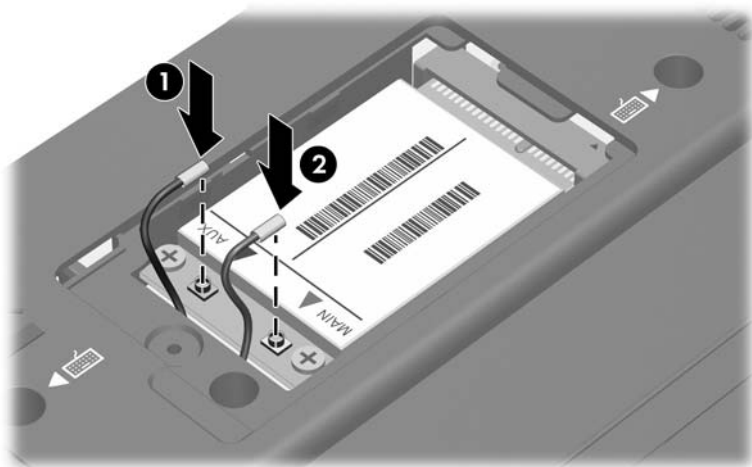


7. Insert the notched edge of the wireless module at an angle into the WWAN module slot **1**, and then press the module **2** down until it is seated.
8. Use the Phillips screwdriver and the 2 screws **3** provided in this kit to secure the module in place.



Installing the HP Broadband Wireless Module

9. Connect the AUX antenna cable ❶ (labeled with the number 6) to the AUX terminal on the wireless module and connect the MAIN antenna cable ❷ (labeled with the number 5) to the MAIN terminal.

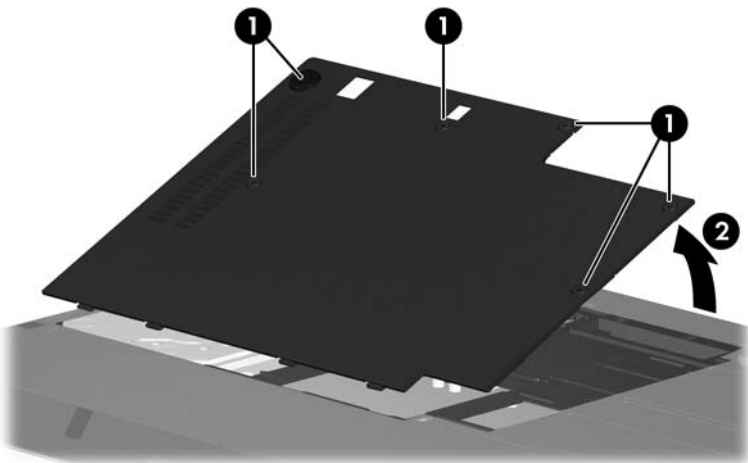


Installing the wireless module in model 2710p

In the HP Compaq 2710p Notebook PC, the slot for the wireless module is located in the hard drive bay on the bottom of the computer.

Follow the procedure below to install an HP Broadband Wireless Module in the hard drive bay:

1. Follow the procedures in “Preparing the computer,” in Chapter 1, “Getting started.”
2. Turn the computer upside down on a flat surface, with the back toward you.
3. Use the Phillips screwdriver provided in this kit to loosen the 6 hard drive cover screws ❶.
4. Lift the hard drive bay cover ❷ away from the computer.

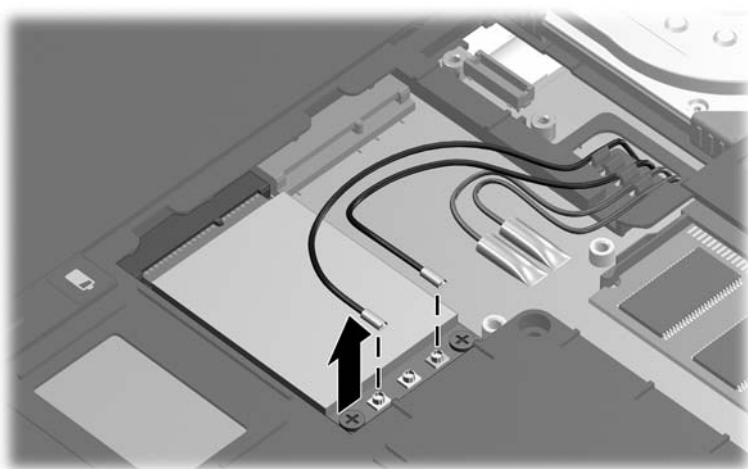


Installing the HP Broadband Wireless Module



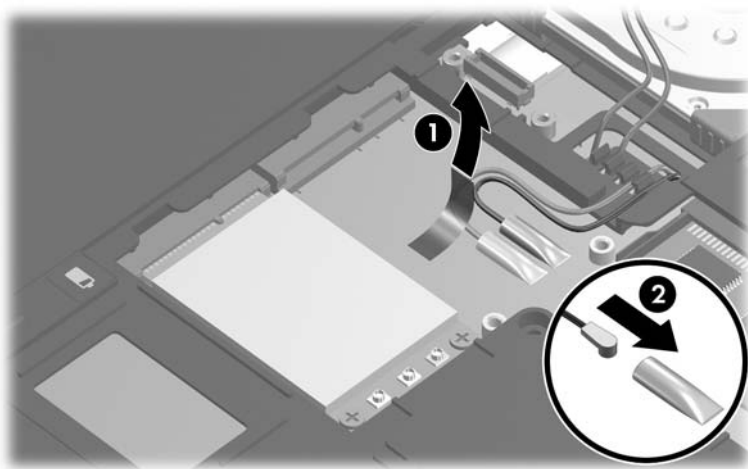
CAUTION: Do not pull on an antenna cable to remove it. Gently grip and pull only on the connector itself. Pulling on the cable can damage the connector or break it off the cable.

5. Carefully disconnect the 2 wireless local area network (WLAN) module antenna cables (labeled with the numbers 1 and 2) by lifting the cable connector(s) with your fingernails or a small screwdriver.



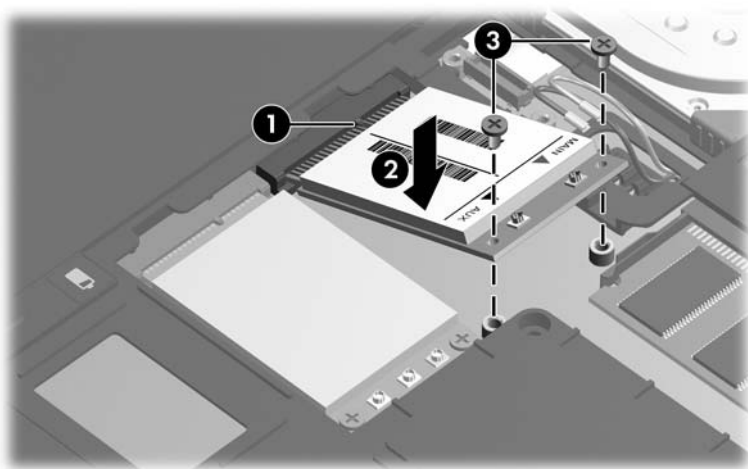
If your computer has a wireless module currently installed, you must remove it before installing the new module. Refer to Chapter 4, “Removing an HP Broadband Wireless Module.” After you remove the existing module, resume this procedure at step 8 to install the new module.

6. Remove the tape **1** securing the broadband wireless module antenna cables.
7. Gently remove the plastic cover **2** from the MAIN antenna cable (labeled with the number 5 or with a red band) and from the AUX antenna cable (labeled with the number 6 or with a blue band).

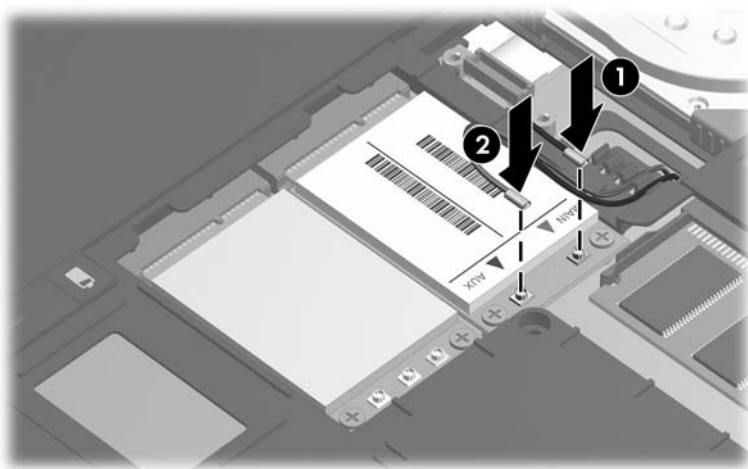


Installing the HP Broadband Wireless Module

8. Insert the notched edge of the wireless module at an angle into the WWAN module slot **1**, and then press the module **2** down until it is seated.
9. Use the Phillips screwdriver and the 2 screws **3** provided in this kit to secure the module in place.

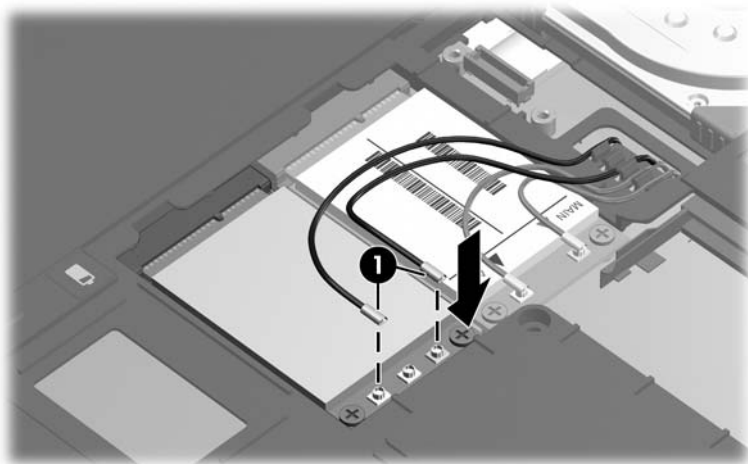


10. Connect the MAIN antenna cable ❶ (labeled with the number 5) to the MAIN terminal on the wireless module and connect the AUX antenna cable ❷ (labeled with the number 6) to the AUX terminal on the wireless module.



Installing the HP Broadband Wireless Module

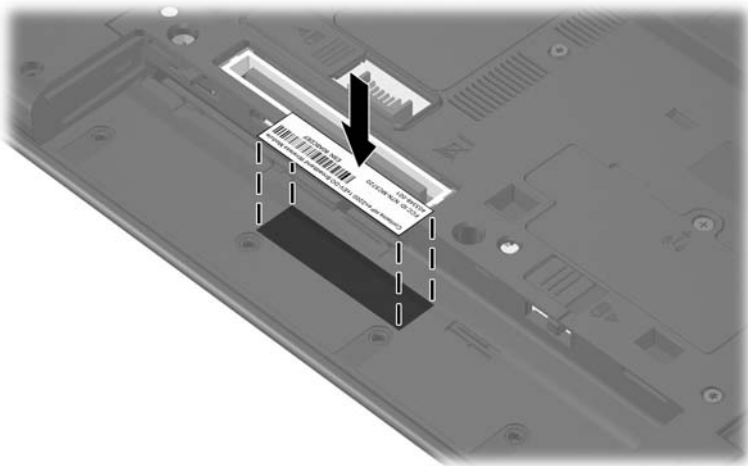
11. Reconnect the 2 WLAN module antenna cables ❶ (labeled with the numbers 1 and 2).



3


Completing the installation

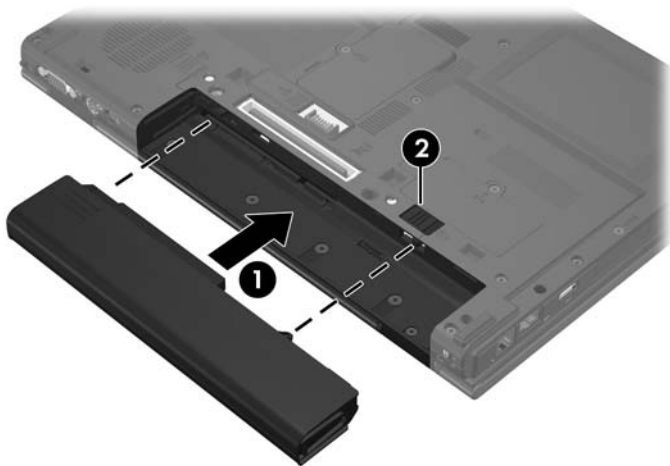
1. Remove the paper covering the adhesive on the back of the serial number and regulatory label and affix the label inside the battery compartment. Be sure that the label adheres securely.



Completing the installation

2. Replace the battery **1**, secure the battery lock **2**, and turn the computer right-side up.

 Your computer may look slightly different from the illustration in this section. For more detailed information about replacing the battery, refer to the user guides on your computer. To access the guides in Help and Support, select **Start > Help and Support > User Guides**.



3. Reconnect all external devices.
4. Connect the computer to external AC power:
 - a. Plug the AC adapter into the computer.
 - b. Plug one end of the power cord into the AC adapter and the other end of the power cord into an AC outlet.
5. Turn on the computer.

4

Removing an HP Broadband Wireless Module



If you have a problem removing the module, contact your network administrator or an authorized service provider for assistance.

Removing a wireless module from model nc6400 and model 6910p

In models nc6400 and 6910p, the slot for the wireless module is located under the keyboard.

Follow the procedure below to remove an HP Broadband wireless module from under the keyboard:



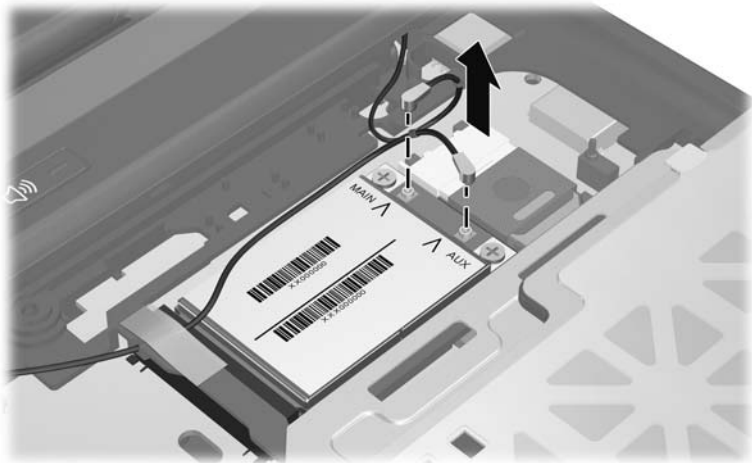
CAUTION: To reduce the risk of damage to electronic components, discharge yourself of static electricity by touching a grounded metal object before you begin the following procedure.

Removing an HP Broadband Wireless Module

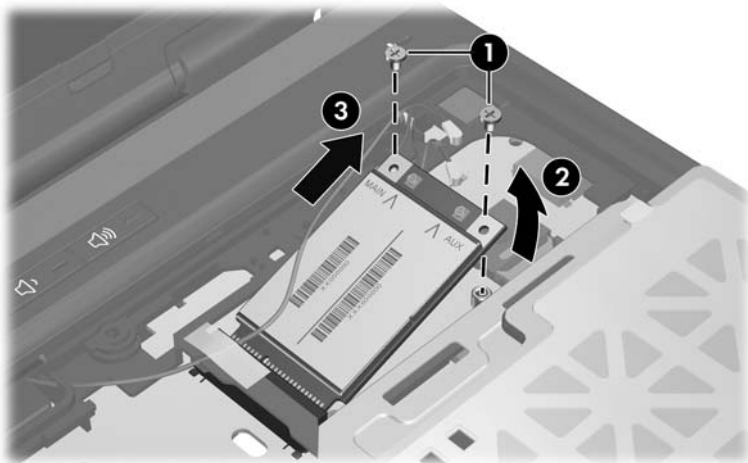


CAUTION: Do not pull on an antenna cable to remove it. Gently grip and pull only on the connector itself. Pulling on the cable can damage the connector or break it off the cable.

1. Carefully disconnect the wireless module antenna cables from the wireless module by lifting the cable connectors with your fingernails or a small screwdriver.



2. Use the Phillips screwdriver to remove the 2 screws ❶.
3. Lift up the wireless module ❷, and slide it out of the slot ❸ at an angle.



Removing a wireless module from model 2510p

In model 2510p, the slot for the wireless module is located in the WWAN module compartment on the bottom of the computer.

Follow the procedure below to remove an HP Broadband Wireless Module from the WWAN module compartment:

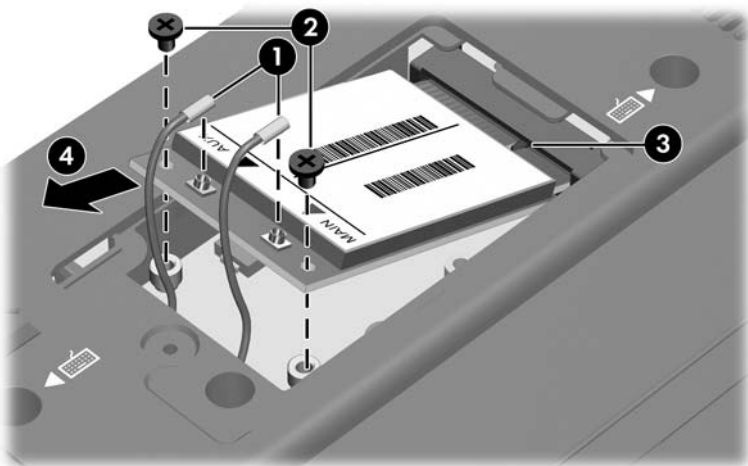


CAUTION: To reduce the risk of damage to electronic components, discharge yourself of static electricity by touching a grounded metal object before you begin the following procedure.



CAUTION: Do not pull on an antenna cable to remove it. Gently grip and pull only on the connector itself. Pulling on the cable can damage the connector or break it off the cable.

1. Carefully disconnect the wireless module antenna cables ❶ from the wireless module by lifting the cable connectors with your fingernails or a small screwdriver.
2. Remove the 2 Phillips screws ❷ that secure the wireless module to the computer. (The edge of the module opposite the slot rises away from the computer.)
3. Slide the wireless module away from the slot ❸ at an angle ❹.



Removing a wireless module from model 2710p

In model 2710p, the slot for the wireless module is located in the hard drive bay on the bottom of the computer.

Follow the procedure below to remove an HP Broadband Wireless Module from the hard drive bay:

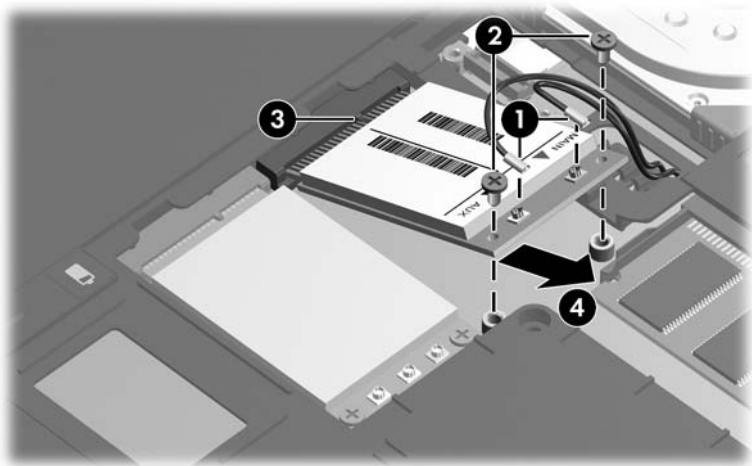


CAUTION: To reduce the risk of damage to electronic components, discharge yourself of static electricity by touching a grounded metal object before you begin the following procedure.

CAUTION: Do not pull on an antenna cable to remove it. Gently grip and pull only on the connector itself. Pulling on the cable can damage the connector or break it off the cable.

Removing an HP Broadband Wireless Module

1. Carefully disconnect the wireless module antenna cables **1** from the wireless module by lifting the cable connectors with your fingernails or a small screwdriver.
2. Remove the 2 Phillips screws **2** that secure the wireless module to the computer. (The edge of the module opposite the slot rises away from the computer.)
3. Gently pull the wireless module away from the slot **3** at an angle **4**.



Removing an HP Broadband Wireless Module

5

Installing the HP Broadband Wireless Module software

The installation disc included in this accessory kit contains the necessary software and drivers for the wireless module.

To install the software and drivers:

- » Insert the *HP Broadband Wireless Module Software* disc into the optical drive of the computer and follow the on-screen instructions.



Updates to the software and drivers contained on the disc may be available. For instructions on downloading and installing the updated software and drivers, refer to Chapter 6, “Downloading updates.”

Installing the HP Broadband Wireless Module software

6

Downloading updates

HP periodically updates the software and drivers for the wireless module. You can download and install software and driver updates from the HP Web site to your hard drive. The updates are packaged in compressed files called *SoftPaqs*.

To obtain software updates:

1. See the HP Web site at <http://www.hp.com/support>. Follow the on-screen instructions to select your country or region.
2. Click **Download drivers and software (and firmware)**, and then enter the product name for your computer.
3. Select your operating system.
4. Select **Driver - Network**, and then select the upgrade, if available, for the HP Broadband Wireless Module software and drivers. Follow the on-screen instructions to download the software and drivers to your hard drive.

Downloading updates

A

Regulatory notices

This section provides compliance information and country-specific wireless regulatory notices for the computer product. Some notices may not apply to your product.

In some environments, the use of wireless devices may be restricted. Such restrictions may apply onboard airplanes, in hospitals, near explosives, in hazardous locations, and so on. If you are uncertain of the policy that applies to the use of this product, ask for authorization to use it before you turn it on.

Federal Communications Commission notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by HP may void the user's authority to operate the equipment.

Cables

To maintain compliance with FCC Rules and Regulations, connections to this device must be made with shielded cables having metallic RFI/EMI connector hoods.

Declaration of Conformity for products marked with the FCC logo (United States only)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following 2 conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

If you have questions about the product that are *not* related to this declaration, write to

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 530113
Houston, TX 77269-2000

For questions regarding this FCC declaration, write to

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 510101
Houston, TX 77269-2000

or call HP at 281-514-3333

To identify your product, refer to the part, series, or model number located on the product.

Products with wireless devices

This device must not be co-located or operating in conjunction with any other antenna or transmitter.



WARNING: Exposure to Radio Frequency Radiation

The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation of tablet PCs and notebooks.

During normal operation of tablet PCs: To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennae should not be less than 2.5 cm (1 inch). To identify the location of the wireless antennae, refer to the *Tablet PC Tour* guide included with the computer.

During normal operation of notebooks: To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennae should not be less than 20 cm (8 inches), including when the computer display is closed. To identify the location of the wireless antennae, refer to the *Notebook Tour* guide included with the computer.

Index

B

- broadband wireless
 - coverage area 1-1
 - regulatory notices A-1

D

- Declaration of Conformity
 - A-2
- downloading software updates
 - from HP 6-1
- drivers
 - downloading 6-1
 - updating 6-1

E

- equipment usage regulatory notices A-1
- establishing service 1-1

F

- Federal Communications Commission (FCC)
 - cable notice A-2
 - device modifications notice A-2
 - equipment usage notice A-1
- firmware
 - downloading 6-1

- updating 6-1

I

- installing
 - driver updates 6-1
 - wireless module software 5-1
- installing an HP Broadband Wireless Module
 - model 2510p 2-10
 - model 2710p 2-15
 - model 6910p 2-1
 - model nc6400 2-1

K

- keyboard
 - removing 2-2
 - replacing 2-9

M

- mobile network operators 1-1

P

- preparing the computer 1-4

R

- regulatory label 3-1
- removing an HP Broadband Wireless Module
 - model 2510p 4-4

- model 2710p 4-6
- model 6410p 4-1
- model nc6400 4-1
- removing the keyboard 2-2
- replacing the keyboard 2-9
- required hardware 1-3

S

- Specific Absorption Rate
(SAR) information A-4

U

- updating drivers 6-1
- updating firmware 6-1

W

- wireless
 - coverage area 1-1
 - regulatory notices A-1
- wireless module antenna cable
 - disconnecting 4-2, 4-5,
4-7
- wireless module software
 - installation 5-1
- WLAN antenna cable
 - disconnecting 2-16