HP Support Center

HP Notebook PCs - Fixing Problems When Connecting to a 3G or Cellular WWAN Network

This document pertains to HP Notebook PCs with Windows Vista

A Wireless Wide Area Network or WWAN is the wireless connectivity to the internet that is achieved with the use of cellular tower technology. Cellular services such as AT&T, Verizon, and Sprint offer WWAN service for a monthly fee. WWAN connectivity allows anyone with a notebook computer and a WWAN card to browse the internet, check their e-mail, or connect to a Virtual Private Network (VPN) from anywhere within the regional boundaries of your carrier's service.

As people become more dependent on online technology to conduct business and keep information flowing, wireless connectivity has become a virtual necessity. This document assists with understanding WWAN activation, troubleshooting your hardware, locating WWAN in your Device Manager, identifying and understanding the WWAN signal in Connection Manager, connecting the WWAN using HP Wireless Assistant, and answering several frequently asked questions concerning WWAN devices.

WWAN Activation

To activate your WWAN, the following criteria apply.

- To activate using AT&T, you must be connected to the internet. Visit the www.att.com web site for installation information, like AT&T 3G MicroCell - Frequently Asked Questions .
- To activate with Verizon and Sprint, you use the WWAN module to connect directly to the provider wirelessly. Activating Verizon and Sprint does not require an internet connection. Visit the www.verizonwireless.com web site for wireless installation support information, like Mobile Broadband Built-in for Hewlett Packard Laptops .

Basic Troubleshooting

You must activate your service prior to beginning to troubleshoot any hardware issues.

NOTE: Just because the unit has a SIM card inserted does **NOT** ensure that an account has been activated.
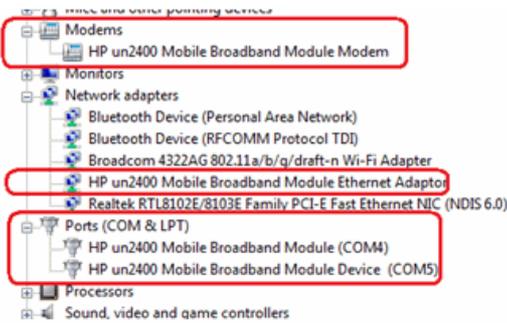
Figure 1: SIM Slot with Cover Installed

Figure 2: SIM Slot with Cover Removed

Is the WWAN listed in Device Manager?
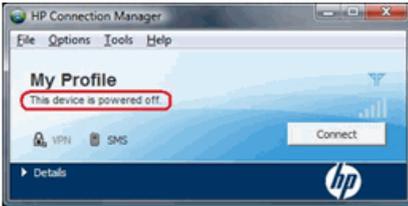
Open **Device Manager** and locate the WWAN card listed as the **HP un2400 Mobile Broadband Module** . It is listed in the **Modems, Network Adapters** , and **Port** categories. If there is a yellow bang 🔔 showing beside the listing, you should install the latest drivers available by going to www.hp.com , **Support and Drivers** to located the applicable driver.

If not in Device Manager, check the **Wireless**

button. If the buttons LED is not lit blue, press the **Wireless** button or check **HP Wireless Assistant** for status.

NOTE: The WWAN device must have a battery installed to work. The WWAN module disappears from **Device Manager** when the battery is removed.

Is there a WWAN signal available?

Signal strength may be low indoors, and especially in interior rooms without windows. Ensure the indicator is showing good signal strength. It is recommended to have at least two-three bars for testing.
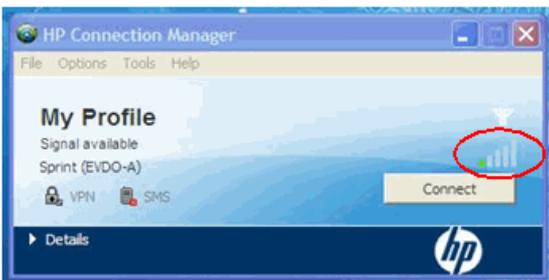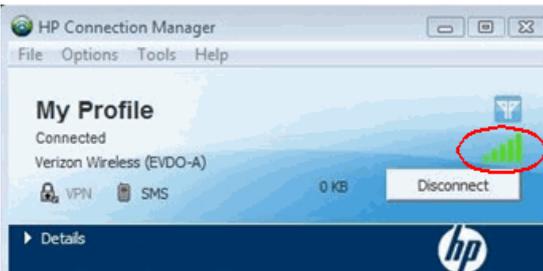
Figure 3: Wireless Indicator Showing One Bar

Figure 4: Wireless Indicator Showing All Bars

If there is no WWAN signal and you are not in an interior room. you should do the following:

1. Make sure HP Connection Manager's network selection has the correct network selected. This information is displayed in HP Connection manager.
2. For global networks such as AT&T, make sure an "active" SIM card is inserted in unit. You can look in HP Connection Manager's diagnostics for "IMSI" parameter; this is a unique number of every SIM card. A valid IMSI entry proves that the SIM card is present.

   NOTE: A non-active SIM will not show any network signal strength status either.
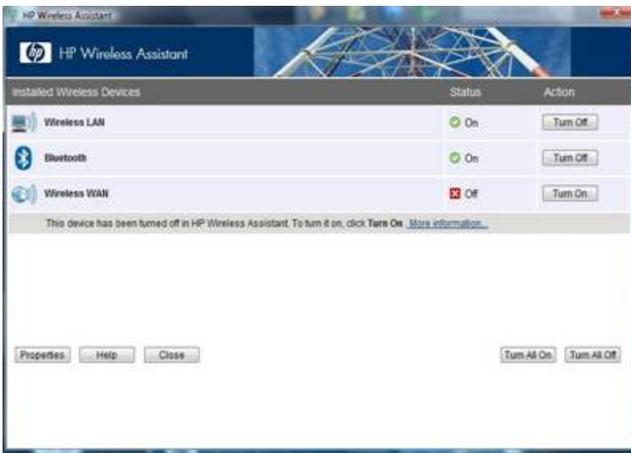
3. To further test the module, modify the operator selection to Verizon Wireless North America, and then wait for the device to re-load new CDMA firmware. You can manually change the operator selection by editing the profile. Click on **Tools, Profile Manager** , select **My Profile** , and then **Edit** , then select **Wireless WAN** and **Edit** . Then pull down **Profile Selection** to select from list, and then pull down **Provider** to select **Verizon Wireless (North America)** .

Check the signal strength associated with Verizon network. This will provide high level of confidence that there are no HW/Antenna related issues with module. After confirming, reset carrier selection back to the original.

Connecting the WWAN using the HP Wireless Assistant

When you reach the desktop, the HP Wireless Assistant by default shows that the WWAN is **Off** . Using the **Turn On** button provided will activate the device. However, HP recommends that you use **Connection Manager** and **not** use HP Wireless Assistant to activate the WWAN.

Figure 5: Wireless Assistant Showing WWAN Available

Connecting the WWAN using the Connection Manager

Yes, by performing the following steps:

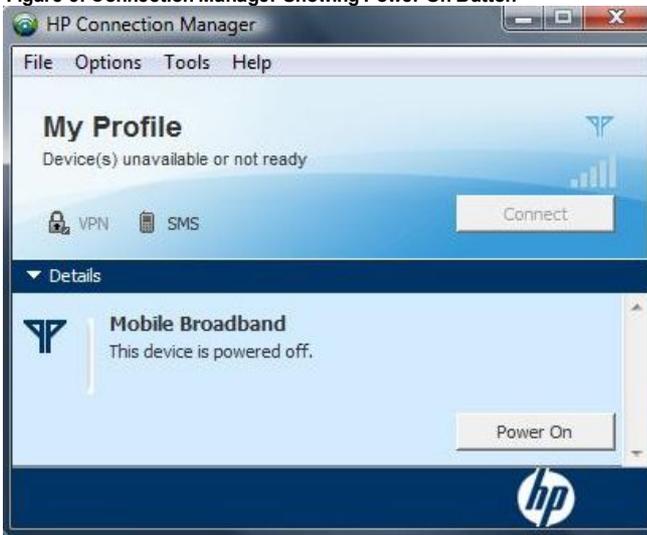1. Launch Connection Manager and click the **Connect** button.

   NOTE: Some telephone company specific models will have customized connection utilities.

2. If connection manager is not present, you can download this from www.hp.com .

3. Open **Connection Manager** , click **Power On** to turn on the module.

   Figure 6: Connection Manager Showing Power On Button

4. To turn off the WWAN device, click **File** and click **Exit Connection Manager** .

Figure 7: Connection Manager Showing Exit

NOTE: Do not use the red **X** to close out the program as this only minimizes it.

What if it WWAN does not connect to internet?

If the PC connects successfully to the WWAN but there are still problems accessing the internet, check if PC can connect using a LAN connection. To check the connection, disconnect WWAN, plug the PC into a local Ethernet connection (LAN), and validate that there is no issue. Look for common issues such as firewall setting, malware, proxy, or other settings that could prevent internet access.

Connecting to the Verizon mobile broadband network

The notebook cannot automatically connect to the Verizon mobile broadband network when connecting initially in a 3G-only coverage area. The Verizon VZAccess Manager does not automatically create a mobile broadband profile. To resolve this issue, either manually create a mobile broadband profile or update the Verizon VZAccess Manager software as described below.

To manually create a mobile broadband profile:

1. Click the **View Available Networks** icon in the system tray.

2. Click the name of the appropriate 3G or 4G mobile broadband connection on the list, then click **Connect** .
3. When prompted, enter vzinternet for the APN, select **Never connect automatically** , and then leave both the **Username** and **Password** fields blank.
4. Save the settings. The notebook should now be connected to the mobile broadband network.

To update the Verizon VZAccess Manager software:

1. Connect to a network that has Internet access.
2. Open the **VZAccess Manager** program (provided by Verizon).
3. Open the **Help** menu, then click **Check for Updates** and follow the on-screen instructions to update the program to the latest version.

WWAN Frequently Asked Questions

The following provides responses to several of the frequently asked questions concerning the WWAN service.

Is there more than one WWAN module that will work?

Only the Qualcomm Gobi WWAN hardware module works across all platforms.

What US carriers are supported?

The WWAN module supports the AT&T, Sprint, and Verizon US carriers.

Can I replace my WWAN module?

The WWAN module is not customer replaceable on all units. Refer to your parts ordering system to determine your replacement/repair options.

How do I find my hardware listed in Device Manager?

The hardware is listed in Device Manager as the HP Un2400 and can be found under the Modems, Network Adapters, and Ports (Com and LTP).

Are SIM cards required?

Sim cards are required for AT&T and for Verizon Global Plans. The SIM card is inserted under the battery. SIM cards are installed at the factory for mainstream platforms. Models sold exclusively from telephone company vendors may not have SIM cards if they are not required.

How do I know what hardware is available?

Some units may have SIM card slots, but no WWAN module. Therefore, it is important to verify computer specifications before assuming there is an issue with WWAN.

Can I upgrade any computer to support WWAN?

Not all units of every model are ungradable to support WWAN. For example a newer unit of a specific model may support WWAN, but an earlier unit of the same model may not have WWAN module slot, WWAN antenna, or SIM slot installed in the unit.

What software do I use to setup my WWAN?

HP Connection Manager is the primary software used to setup, connect, and provide status on your WWAN connection. Certain telephone company specific models may be restricted to using only their specific software.

How do I find the status of my WWAN module?

HP Wireless Assistant provides the status of WLAN, Bluetooth, and WWAN modules. You can use HP Wireless Assistant to turn these on or off individually, however, HP recommends that you use HP Connection Manager for turning the WWAN module on or off.