verizonwireless

Mobile Broadband **/** National**Access**

MiFi™ 2200 – Intelligent Mobile Hotspot
Product user guide

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Getting Started

Overview

Congratulations on your purchase of the Novatel Wireless MiFi 2200 Intelligent Mobile Hotspot for Mobile Broadband and WiFi!

This device operates over high-speed Mobile Broadband and National**Access** networks in the 800/1900 bands and WiFi, enabling you to connect at high speeds to the Internet, your corporate Intranet, WiFi enabled devices, and access your email virtually anywhere!

MiFi 2200 is an Intelligent Mobile Hotspot, empowering you with high-speed data access on the Verizon Wireless Mobile Broadband wireless data network as well as WiFi connectivity.

Features

- **Connect to High-Speed Wireless Data (Mobile Broadband and NationalAccess)**

- **Benefit from WiFi Connectivity**

- **Choose between Two Operating Modes: Mobile Broadband with USB Cable or WiFi**

   NOTE See "System Requirements" on page 7 for a complete list of supported operating systems.

- **Manage Wireless Network Activity – VZAccess Manager® Software and MiFi Settings**

   - **VZAccess Manager** allows you to manage, monitor, and customize your wireless network activity through an easy-to-use interface.

   NOTE **VZ**Access Manager is required for activation and firmware/PRL updates.

   - **MiFi Settings** is an easy-to-use web-based interface that allows you to manage, monitor, and customize your WiFi and Mobile Broadband connection when the device is in WiFi mode (e.g., when not connected with a USB cable).

- **Advanced embedded antenna design**

- **VPN capability**

- **Auto connectivity options**

- **2-Way Short Messaging Service (SMS) (Mobile Broadband only)**

- **NDIS configuration**

Package Contents

The Verizon Wireless MiFi 2200 package includes:

- Verizon Wireless MiFi 2200

- AC wall charger

- Lithium-ion battery

- Storage pouch

- microUSB cable

- Quick reference guide

- Software included on the device (no CD required)

System Requirements

To install the software and use MiFi 2200 in USB Cable mode, your computer must meet the following requirements.

- Supported operating systems (USB Cable mode only)

    - Windows® 2000, XP (SP2 or higher), Vista, 7

    NOTE   Windows 2000 SP3 and SP4, Windows XP SP1 require specific OS patches.
    For details go to www.vzam.net.

    - Mac OS® X v10.4 or higher

- Internet browser software. For example: Microsoft Internet Explorer 6.0 or higher, Firefox, Safari, Opera, Chrome

- **VZ**Access Manager included on the device (no CD required)

- USB port: Type A, v1.1 supported; v2.0 high speed recommended

- WiFi (802.11b or higher)

- Hard drive: 100 MB free hard disk space

- Memory (RAM): 128 MB

If your device is already activated and you want to use WiFi mode only, your computer needs WiFi, Internet browser software only.

Your device must have Verizon Wireless data service to function properly. [See Activate Your Device (page 24).]

Software

When you connect MiFi 2200 to your computer for the first time, the software automatically installs itself on your computer. The software is included on the device (no CD required).

The device has two modes: Mobile Broadband (USB Cable) mode, and WiFi mode.

- **Mobile Broadband (USB Cable) mode**: Change the device settings with the **VZ**Access Manager software on your computer.

- **WiFi mode**: Change the device settings with the web-based MiFi Settings.

Components

❶ **Power Button/Power Button LED**: Powers on and off the device. The LED indicates power, battery status, and roaming activity. [See LED States (page 10).]

❷ **microUSB Connector:** The AC charger and USB cable connect here.

❸ **Service Status LED**: Shows your mobile broadband connection status. [See LED States (page 10).]

❹ **Network Name and Password Label**: The preconfigured name of your network (SSID) and your network password (also called a network key) are printed on the back of your device.

❺ **Master Reset Button**: Returns the device to factory settings. [See How do I reset MiFi back to factory settings? (page 63).]

❻ **Battery Compartment**: The battery is placed inside here.

LED States

Service Status LED

LED Color		Status	Description
No light		Off, and the Power Button LED is also off	The device is powered off or otherwise is not getting power.
No light		Off; the Power Button LED is pulsing GREEN	The device is in low-power Standby mode. [See Power Management (page 59).] This means the device is charging while connected to a computer, but the device is not connected to the network.
GREEN		Solid	The device is powered on but is not transmitting or receiving data.
		Slow blinking	The device is on and searching for a network, and does not have service.
		Intermittent blinking	The device is transmitting or receiving data. The blink rate is proportional to the data speed.

Power Button LED

LED Color		Status	Description
No Light		Off	The device is powered off or otherwise is not getting power.
BLUE		Solid	The device is powered on and roaming.
GREEN		Solid	The device is powered on and fully charged.
		Pulsing	The device is in low-power Standby mode. [See Power Management (page 59).]
Red		Blinking	The battery is critically low.
Amber		Solid	The battery is charging.
		Pulsing	The device has an error. [See Troubleshooting (page 60).]

Power Management

Your device will work from its battery or when plugged into a power source.

- **Battery** — The battery lasts for up to four hours. Charge the battery by plugging in the AC adapter. While the battery is charging the Power Button LED is solid amber. When the battery is fully charged, the LED is solid green.

- **Wall power** — You can use the device when it is plugged into a wall socket. The MiFi battery charges while it is plugged in.

- **USB power from a computer** — You can use the device as a USB modem while plugged into the USB port of a computer, using the supplied microUSB cable. The battery charges while it is plugged in. Charging the battery through the USB port is slower than charging it with wall power.

> **NOTE** You cannot use MiFi in WiFi mode while it is plugged into a USB port.

Before using MiFi 2200, read the battery safety information in the "Safety Hazards" section of this guide. [See Proper Battery Use and Disposal (page 72).]

Battery Tips

WARNING!   Use only batteries and chargers with your device that have been approved by your service provider or by Novatel Wireless. Always use Novatel Wireless original batteries and chargers. The warranty does not cover damage caused by non-Novatel Wireless batteries and/or chargers.

- It normally takes at least four hours to fully charge the battery.

- Do not use sharp objects to access the battery well, this may damage the device and the battery.

- Do not use excessive force to remove the battery or to access the battery well.

- If your MiFi device is connected to a computer using a USB cable, the battery charges.

- When one device is accessing mobile data while your MiFi device is using battery power, the device lasts up to four hours.

- The battery discharges more rapidly as additional devices access your MiFi device.

- Battery life depends on the network, signal strength, temperature, features, and accessories you use.

- Your device also works with an approved car charger.

- New batteries or batteries stored for a long time may take more time to charge.

- When charging your battery, keep it near room temperature.

- When storing your battery, keep it uncharged in a cool, dark, dry place.

- Never expose batteries to temperatures below -10°C (14°F) or above 45°C (113°F).

- Never leave the device in an unattended vehicle due to uncontrollable temperatures that may be outside the desired temperature for this device.

- Some batteries perform best after several full charge/discharge cycles.

- It is normal for batteries to gradually wear down and require longer charging times. If you notice a change in your battery life, it is probably time to purchase a new battery.

IMPORTANT   Whenever you remove or insert either the battery or the SIM card, ensure your MiFi device is not connected to any device or power source. Never use tools, knives, keys, pens or any type of object to force the door open or to remove the battery. Using any of these types of objects could result in puncturing the MiFi battery.

WARNING!   The failure to use approved batteries and chargers may increase the risk that your device will overheat, catch fire, or explode, resulting in serious bodily injury, death, or property damage. To avoid risk of explosion, never dispose of batteries in a fire.

Caring for Your Device

Like any electronic device, the device must be handled with care to ensure reliable operation. Verizon Wireless recommends the following guidelines:

- Protect the device from liquids, dust, and excessive temperatures.

- Do not apply adhesive labels to the device; they might cause the device to potentially overheat and they might alter the performance of the antenna.

- The USB connector should plug easily into your computer's standard Type A USB port. Do not force the device into a port, as doing so might damage the connector.

- Remove the device from your computer before transporting it.

- Store the device in a safe place when not in use.

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Using MiFi 2200

Accessing the Network
Using the Device for the First Time
Configuring WiFi Mode
Using the Device After Setup is Complete
Accessing the User Guides

Accessing the Network

The Verizon Wireless MiFi 2200 supports Verizon Wireless **Mobile Broadband** and National**Access** service for a superior wireless data connection.

Mobile Broadband/National**Access**

Now you can get the broadband-like speed you require to work efficiently outside the home or office. You can connect to the Internet, corporate intranet, check your email and download attachments with average download speeds of 600 kbps–1.4 Mbps. Mobile Broadband gives you the freedom to stay productive and connected whether you're on the road or in a meeting across town. You also receive National**Access** service when outside the Mobile Broadband Rate and Coverage Area. National**Access** is available in thousands of cities and towns and allows download speeds of 60-80 kbps and burst up to 144 kbps.

Mobile Broadband with EVDO Rev. A
- Download: typical download speeds of 600 kbps–1.4 Mbps.

- Upload: typical upload speeds of 500-800 kbps.

Mobile Broadband with EVDO Rev. 0
- Download: typical download speeds of 400-700 kbps.

- Upload: typical upload speeds of 60-80 kbps.

Subject to Customer Agreement, Calling Plan, credit approval & other service terms.

Mobile Broadband Rev.A speed claim based on our network tests with 5 MB FTP data files without compression. Verizon Wireless is rapidly adding Rev. A capability to your Mobile Broadband service area. Your Mobile Broadband Rev. A-enabled device will indicate coverage when you are in a Mobile Broadband Rev. A service area. When outside the Rev. A service area, your wireless device will revert to Mobile Broadband Rev. 0 (typical download speeds will be 400–700 Kbps and upload speeds will be 60–80 Kbps) or National**Access** coverage areas, where available. Actual throughput speed and coverage may vary. Speed claims not applicable when roaming.
National**Access** Rev.0 speed claim based on our network test with 101 KB FTP data files, without compression. Actual throughout speed and coverage may vary. Speed claim not applicable when roaming.

WiFi 802.11b and 802.11g
- 802.11b uses the 2.4 GHz frequency with a bandwidth of 11 Mbps.

- 802.11g uses the 2.4 GHz frequency with a bandwidth of 54 Mbps.

Using the Device for the First Time

IMPORTANT   Do not connect MiFi 2200 to a USB hub, as it might not provide sufficient power.

To get started, follow these steps.

❶   Confirm your computer meets the minimum system requirements. [See System Requirements (page 7).]

❷   Insert and charge the battery. [See Insert and Charge the Battery (page 17).]

❸   Connect the device to your computer with the USB cable. [See Connect the Device to the Computer with the USB Cable (page 18).]

❹   Install the **VZ**Access Manager software. [See Install and Set Up the Software (page 14).]

❺   Activate MiFi 2200. [See Activate Your Device (page 24).]

IMPORTANT   MiFi 2200 requires an activated account with Verizon Wireless to function.

Activation must be performed within a Mobile Broadband and/or National**Access** coverage area while connected to a computer using the USB cable. **VZ**Access Manager must be installed prior to activation.

MiFi 2200 includes software and drivers in its flash memory, so no installation CD is needed. The device automatically installs the software the first time it is inserted into the computer's USB port.

Insert and Charge the Battery

IMPORTANT   Before you use your device, be sure to charge the battery for at least 2.5 hours to ensure a full initial charge.

MiFi 2200 requires an activated account with a network operator.

To insert and charge the battery

❶   Open the battery compartment, located on the bottom of the device.

❷   Insert the battery by lining up the gold-colored contact points on the battery with the gold-colored contact points in the battery compartment.

❸   Once the battery is secure, place the battery cover back on the device until it locks into place.

❹   Connect the microUSB end of the AC wall charger to the microUSB port of the device as shown.

❺ Plug the other end of the AC wall charger into the appropriate electrical outlet. Charge for at least two and a half hours.

CAUTION!   Use only batteries and chargers with your device that have been approved by Verizon Wireless or Novatel Wireless. The failure to use approved batteries and chargers may increase the risk that your device will overheat, catch fire, or explode, resulting in serious bodily injury, death, or property damage.

You are now ready to install the drivers and **VZ**Access Manager software. The first time you use the device, you must connect MiFi 2200 to your computer with the microUSB cable (included).

Connect the Device to the Computer with the USB Cable

To connect the device to the computer

❶ Grip MiFi 2200 by its sides and gently connect the small end of the microUSB cable to the microUSB port on the device.

The cable should fit easily into the device. Do not force the cable into the device as this might damage both the cable and the device.

❷ Connect the large end of the microUSB cable to your computer's USB port.

The cable should fit easily into the port. Do not force the cable into the port as this might damage both the cable and the port.

NOTE   If you have difficulty inserting the cable into your computer's USB port, verify that you are inserting the cable in the correct orientation and that you are using a Type A USB port.

The following occurs:

❶ The status icon appears in the system tray / notification area (Windows) or in the menu bar (Mac).

❷ MiFi 2200 is powered on automatically and begins charging.

IMPORTANT The recommended minimum distance between you and the device is 8 inches. Extend the microUSB cable so MiFi is at least 8 inches from your body.

Power MiFi 2200 On and Off

Power On

➤ Press the Power Button until the Power Button LED is solid green.

Power Off

❶ If the device is plugged into your computer with the USB Cable, unplug the USB cable from the device first.

❷ Press and hold the Power Button until the Power Button LED shuts off.

Install the Software

IMPORTANT Installation must be performed within a Mobile Broadband and/or National**Access** coverage area.

Before installing your new software, delete or uninstall any previously installed modem or dialer software from your computer. [See How do I uninstall the previously installed software? (page 63).]

Install the software (Windows)

❶ Turn on your computer and close all programs.

❷ Connect the device to your computer's USB port with the included microUSB cable. [See Connect the Device to the Computer with the USB Cable (page 18).]

A window opens.

❸ The installer launches automatically.

❹ Follow the on-screen instructions.

> **Tip!** The **VZ**Access Manager installer has a pre-selected option to install a Desktop shortcut. This a convenient way to open the software.

❺ Set up the software. [See Set up the software (Windows) (page 21).]

Install the software (Mac OS X)

❶ Turn on your computer and close all applications.

❷ Connect the device to your computer's USB port with the included microUSB cable. [See Connect the Device to the Computer with the USB Cable (page 18).]

A **VZ**Access Manager icon appears in the left column of a Finder window, or as a disk image on the Desktop.

❸ Double-click the **VZAccess Manager** package icon to begin the installation process. The **VZ**Access Manager installation program opens.

❹ Follow the on-screen instructions.

❺ Set up the software. [See Set up the software (Mac OS X) (page 22).]

> **Tip!** The **VZ**Access Manager Dock icon is a convenient way to open the software. If the installation program gives you the option to install an icon in the Dock, click **Yes**.

Set Up the Software

Set up the software (Windows)

❶ Turn on MiFi 2200. [See <u>Power MiFi 2200 On and Off</u> (page 19).] Be sure both LEDs are green.

IMPORTANT Both LEDs **must** be green for the software to detect the device correctly.

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❷ Launch **VZ**Access℠ Manager.

The **VZ**Access℠ Manager window opens.

Tip! If the device is not fully turned on (both LEDs green) when you launch the software, a "A wireless device was not detected!" message opens. Turn the device on, then click **OK**, ensure the device type is set to Auto Detect, and then click **Start** to detect the device.

❸ Click **Connect WWAN**.
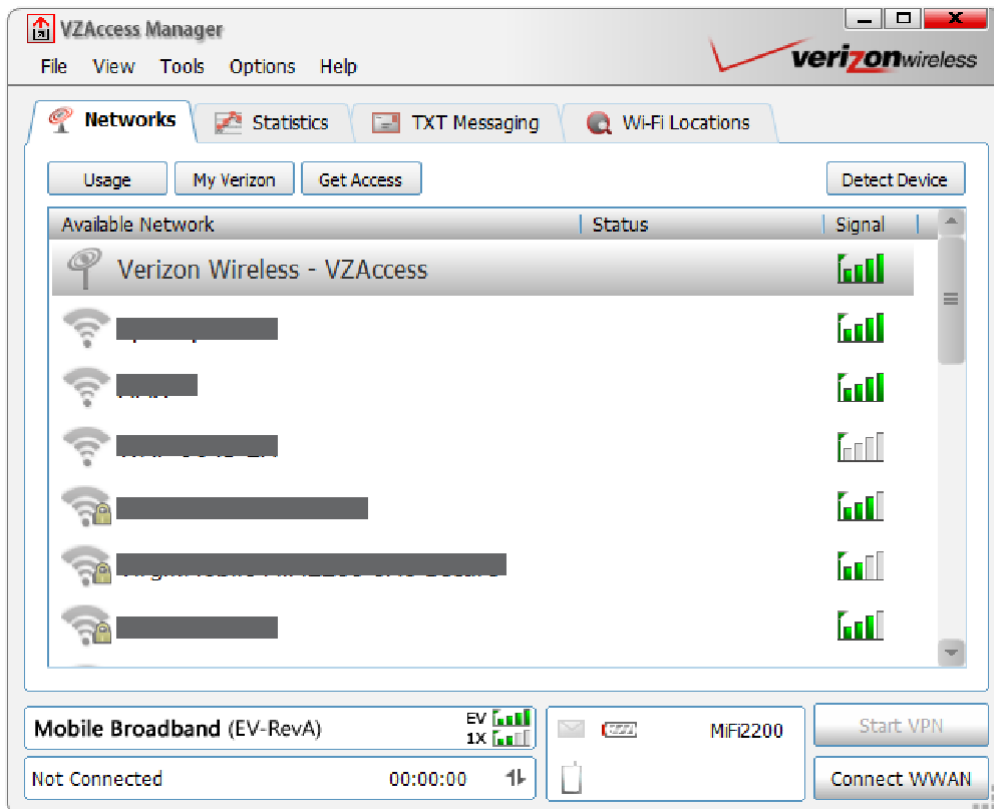
If your device was already activated prior to installing **VZ**AccessSM Manager and you are in a broadband coverage area, the software connects to the Verizon Wireless network.

OR

If your device was not already activated prior to installing **VZ**Access℠ Manager, the software connects to the Verizon Wireless activation website.

Follow the on-screen instructions to complete the activation.
[See Activate Your Device (page 24).]

> **NOTE**   See the **VZ**Access Manager User Guide for more detailed instructions.

Set up the software (Mac OS X)

❶   Turn on MiFi 2200. [See Power MiFi 2200 On and Off (page 19).] Be sure both LEDs are green.

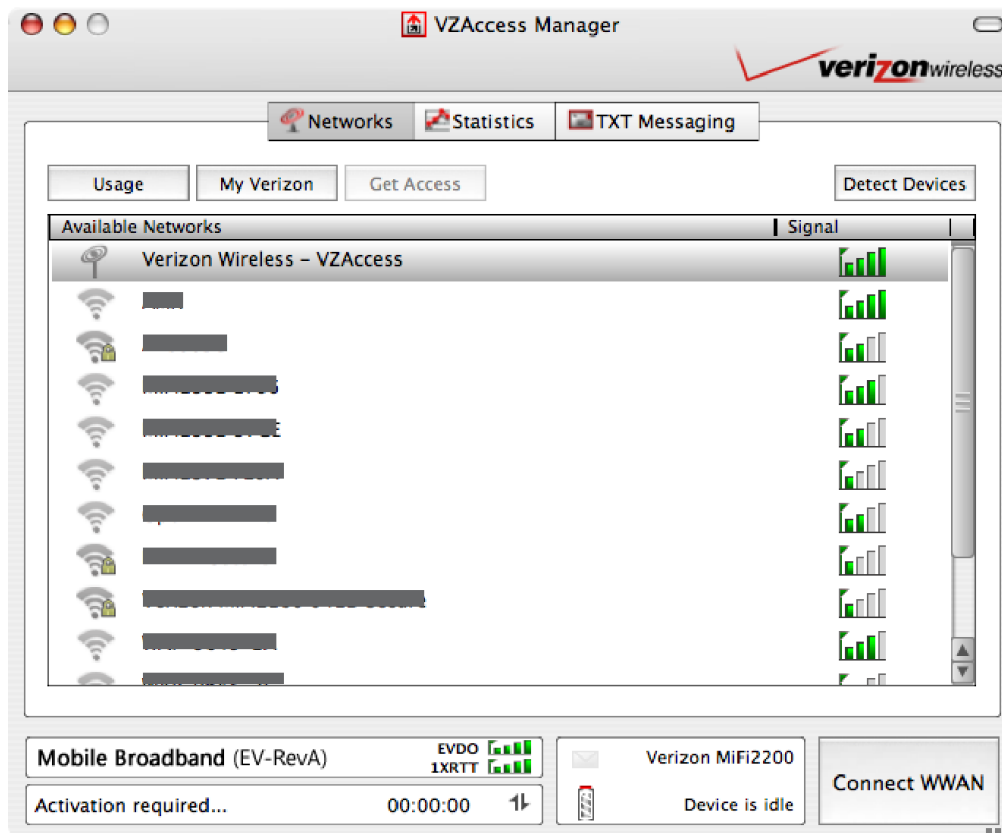**IMPORTANT**   Both LEDs **must** be green for the software to detect the device correctly.

---

❷   Launch **VZ**AccessSM Manager.

The **VZ**Access℠ Manager window opens.

❸   Click **Connect WWAN**.

If your device was already activated prior to installation of **VZ**Access Manager and you are in a broadband coverage area, the software connects to the Verizon Wireless network.

OR

If your device was not already activated prior to installation of **VZ**Access Manager, the software connects to the Verizon Wireless activation website.

Follow the on-screen instructions to complete the activation. [See Activate Your Device (page 24).]

NOTE   See the **VZ**Access Manager User Guide for more detailed instructions.

Activate Your Device

**IMPORTANT**   MiFi 2200 requires an activated account with Verizon Wireless to function.

Activation must be performed within a Mobile Broadband and/or National**Access** coverage area while connected to a computer using the USB cable. **VZ**Access Manager must be installed prior to activation.

The device can be activated three ways:

- in a Verizon Wireless store

- by contacting Verizon Wireless Telesales

- self-activation through the Verizon Wireless activation website (as part of setting up the software; a message appears the first time you activate your device).

To self-activate your device

➤   Select an option and then click **Continue**. Follow the onscreen instructions.
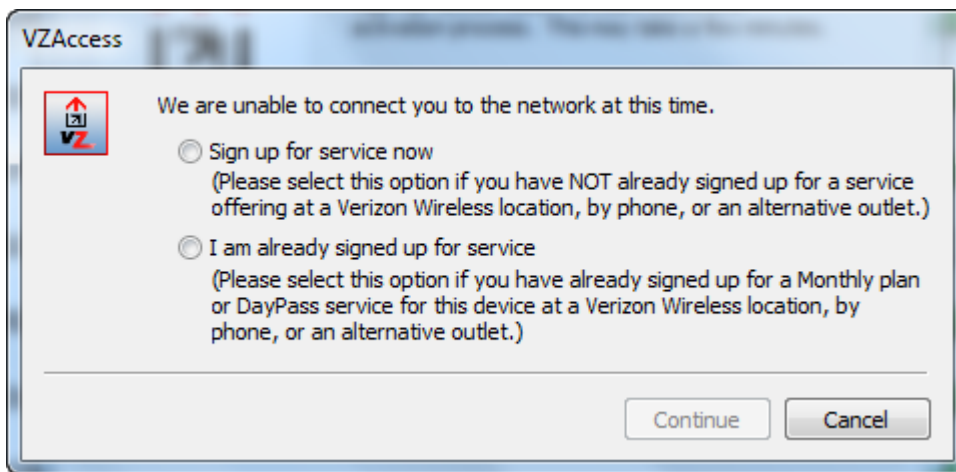
Properly Remove the Device from Your Computer

> **IMPORTANT**   Be sure to disconnect from the network and quit **VZ**Access Manager
> before you remove the device from your computer. Disconnecting and quitting the
> software avoids potential problems such as automatic shutdown or screen freezing.

MiFi 2200's USB technology allows you to safely remove the device from your computer at any time when you are not connected to the network.

Quick removal

❶   End your Mobile Broadband session by selecting **Disconnect** from **VZ**Access℠ Manager.

❷   Exit **VZ**Access℠ Manager and ensure the device is powered off.

❸   Gently grip the USB cable on both sides and pull straight out to avoid damaging the USB connectors.

Standard unplug/eject hardware removal (Windows and Mac OS X)

❶   End your Mobile Broadband session by selecting **Disconnect** from **VZ**Access℠ Manager.

❷   Exit **VZ**Access℠ Manager and ensure the device is powered off.

❸   **Windows only**: Right-click the **Safely Remove Hardware** icon in the Windows notification area, click **Safely Remove Hardware**, click the device, and then click **Stop** (Windows 2000, XP, Vista) or **Eject** (Windows 7).

❹   Gently grip the USB cable on both sides and pull straight out to avoid damaging the USB connectors.

Configuring WiFi Mode

The MiFi Settings Web-based User Interface (MiFi Settings) is used to configure MiFi 2200 for WiFi mode. In WiFi mode, there is no USB connection from your computer to MiFi 2200; the connection to MiFi 2200 is wireless using WiFi.

> **IMPORTANT**   The device must be activated before you configure WiFi mode. [See Activate Your Device (page 24).]
>
> The battery must be fully charged before you configure WiFi mode. [See Insert and Charge the Battery (page 17).]

Configure Security for MiFi 2200

MiFi 2200 comes from the factory with security enabled. A sticker on the back panel includes the name of the wireless network (SSID) and the network password. You can change the security settings with the MiFi Settings WiFi screen. [See WiFi (page 38).]

Connect to MiFi Settings

❶ Turn on your computer and turn on MiFi 2200, and be sure both LEDs are green and lit.

MiFi 2200's Power Button LED should be solid green, indicating the device is in service and ready to connect. MiFi 2200 broadcasts its own wireless network.

❷ On your computer, use the WiFi manager (Windows) or the Airport menu bar icon (Mac OS X) to connect wirelessly to the MiFi 2200 wireless network.

> **Tip!**   The steps to connect to a WiFi network vary depending on your operating system and whether you use the native application or third-party software.
> Generally you click an icon in the Windows notification area where you can select **View Available Wireless Networks,** or click the Airport icon in the menu bar on a Mac. If you are unfamiliar with wireless networking on your computer, consult the computer help system.

❸ Connect to the network name found on the sticker on the device. The name includes **Verizon MiFi2200**.

❹ Open your browser and type **http://192.168.1.1** into the address bar. Then press the **Enter** or **Return** key.

The Welcome screen opens. [See Welcome (page 33).]

❺ Type the password **admin** in the Login field in the upper right corner of the window.

The Welcome screen changes to the Home screen. [See Home (page 36).]

For more information about MiFi Settings, see "Configuring MiFi Settings" on page 32.

Using the Device After Setup is Complete

MiFi 2200 has two modes: Mobile Broadband with USB Cable mode or WiFi mode.

Mobile Broadband with USB Cable Mode

You can use MiFi 2200 as a USB modem to connect your computer to the mobile broadband network.

Connect the device to a computer

➊ Connect the device to your computer's USB port with the included microUSB cable. [See Connect the Device to the Computer with the USB Cable (page 18).]

➋ Turn on the device so both LEDs are lit and green. Although the device is powered on, it does not automatically connect to the Internet.

➌ If sound effects are enabled, the computer might beep.

Open the software (Windows)

➊ Open the **VZ**Access Manager software. If the auto-launch feature is enabled it starts automatically.

➋ An icon appears in the Windows notification area.

Open the software (Mac OS X)

➊ Double-click the **VZ**Access Manager icon in the **Applications** > **VZAccess** folder (unless Open at Login is enabled).

➋ An icon appears in the menu bar.

Connect To and Disconnect From the Network

➊ Open the **VZ**Access Manager software. The main window opens.

➋ To connect to the network, click **Connect WWAN**.

➌ To disconnect from the network, click **Disconnect**.

WiFi Mode

You can use MiFi 2200 as a wireless hotspot to connect your computer and/or (up to a total of five) other WiFi enabled devices to the mobile broadband network.

You can customize MiFi 2200's settings using MiFi Settings. [See Configuring MiFi Settings (page 32).]

Normal Use

- MiFi 2200 is not connected to a computer.

- MiFi 2200 is powered on as soon as you press the power button and the Power Button LED becomes green.

- Once MiFi 2200 is powered on (and has been activated during initial setup), it automatically connects to the Internet. This requires that Mobile Broadband / National**Access** service is available, and one or more WiFi devices are connected to MiFi 2200's wireless network.

- The Service Status LED on the device becomes green and blinks according the connection speed.

Setting Up a Temporary Hotspot

You can use the device to set up a temporary hotspot to allow a maximum of five connections to your MiFi 2200 at one time.

The Temporary Hotspot profile is pre-set on your device. It generates a temporary network name (SSID) and network key so you can allow others to connect to your device without having to change your secure profile's security settings.
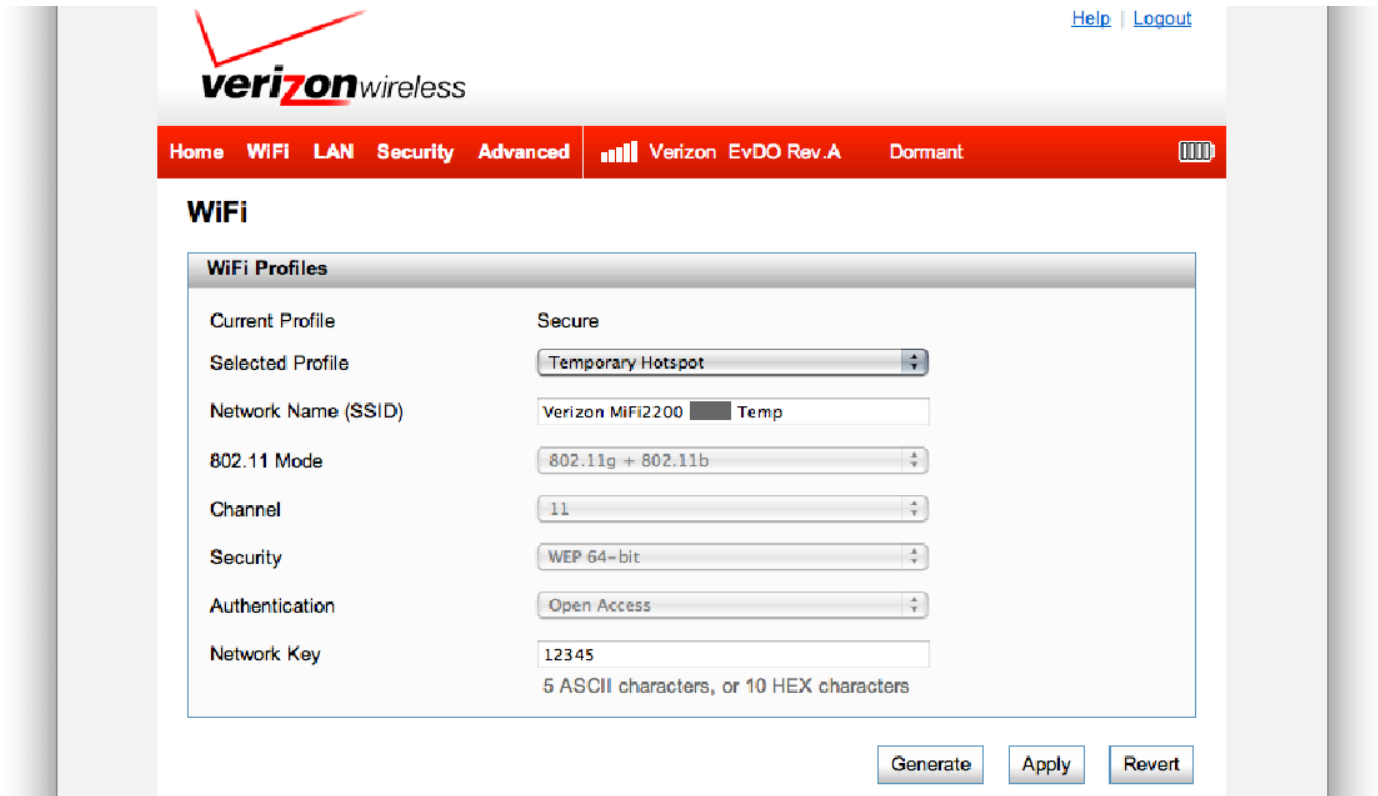
Set up a Temporary Hotspot
To set up a Temporary Hotspot, follow these steps.

❶ Connect to MiFi Settings and log in. [See Configuring MiFi Settings (page 32).]

❷ Go to the WiFi screen. [See WiFi (page 38).]

❸ On the WiFi screen, select Temporary Hotspot as the selected profile.

A new (temporary) network name (SSID) and network key (WiFi passkey) appears. Typically the temporary network name is the secure profile name with "Temp" added, and the temporary network key is "12345."

Tip! Click **Generate** to create a new network name and network key.

❹ Click **Apply**. Others can now use the temporary network name (SSID) and network key to connect to your device.

For more information about changing profiles, see "WiFi" on page 38.

Accessing the User Guides

The User Guides can be easily accessed after **VZ**Access Manager is installed. Your device includes the following User Guides:

- **VZ**Access Manager Software User Guide – Explains the **VZ**Access Manager features

- MiFi 2200 Product User Guide – Explains MiFi 2200's hardware features and WiFi configuration

The guides are located in the **VZ**Access folder.

To access the User Guides (Windows)

❶ Connect the device to your computer's USB port with the included microUSB cable. [See <u>Connect the Device to the Computer with the USB Cable</u> (page 18).]

❷ Go to **My Computer** > **Devices with Removable Storage**.

❸ Right-click the **VZ**Access Manager icon in the Devices with Removable Storage list. A menu opens.

❹ Select **Install or run program from your media**. A window opens.

If the User Account Control window opens, click **Yes**.

❺ In the Verizon dialog, click **View Documentation**. A window opens.

❻ Click the file name to open the user guide you would like to read.

To access the User Guides (Mac OS X)

❶ Connect the device to your computer's USB port with the included microUSB cable. [See <u>Connect the Device to the Computer with the USB Cable</u> (page 18).]

❷ Open a Finder window.

The **VZA**ccess Manager Finder window might open by itself.

❸ In the left column of the Finder window, select **VZ**Access Manager.

❹ In the Finder window, click the file name to open the user guide you would like to read.

3

MiFi Settings

Configuring MiFi Settings

You can configure the WiFi settings on your device using the easy-to-use MiFi Settings Web-based User Interface (MiFi Settings). It allows you to manage, monitor, and customize your WiFi and Mobile Broadband connection when the device is in WiFi mode.

The following sections describe how to connect to MiFi Settings, as well as each screen and the corresponding functionality.

Connect to MiFi Settings

❶ Turn on your computer and turn on MiFi 2200, and be sure both LEDs are green and lit.

MiFi 2200's Power Button LED should be solid green, indicating the device is in service and ready to connect. MiFi 2200 broadcasts its own wireless network.

❷ On your computer, use the WiFi manager (Windows) or the AirPort menu bar icon (Mac OS X) to connect wirelessly to the MiFi 2200 wireless network.

> **Tip!** The steps to connect to a WiFi network vary depending on your operating system and whether you use the native application or third-party software.
> Generally you click an icon in the Windows notification area where you can select **View Available Wireless Networks,** or click the Airport icon in the menu bar on a Mac. If you are unfamiliar with wireless networking on your computer, consult the computer help system.

❸ Connect to the network name found on the sticker on the device. The name includes **MiFi2200**.

❹ Open your browser and type **http://192.168.1.1** into the address bar. Then press the **Enter** or **Return** key.

The Welcome screen opens. [See Welcome (page 33).]

❺ Type the password **admin** in the Login field in the upper right corner of the window.

The Welcome screen changes to the Home screen. [See Home (page 36).]

Welcome

The Welcome screen is the first screen you see after connecting and prior to logging in. It contains status information about MiFi 2200 but does not allow changes until after you log in.

Login

Type the password (the default password is **admin**) in the Login field at the top right corner of the window.

Status Bar

The Status Bar at the top of the screen contains information about the mobile (3G) network connection, plus the battery status. The following information is available:

- **Signal Strength Image** – The current signal strength for the mobile network.

- **Network Name** – The name of the mobile network.

- **Network Technology** – The type of connection (for example: EVDO Rev A).

- **Roaming Indicator** – A triangular image is displayed while roaming (not shown).

- **Connection Status** – The current connection status (Connected, Connecting, Disconnected, Disconnecting, Dormant, Not Activated).

- **Battery Status** – The current charge level of the battery.

Internet Connection

This section provides more information about MiFi 2200's Internet connection (3G connection). If no Internet connection currently exists, most of the fields are empty or zero.

- **Received** — The amount of data received during the current Internet connection.

- **Transmitted** — The amount of data sent during the current Internet connection.

- **Connected Time** — The period of time elapsed since the current Internet connection was established.

- **IP Address** — The Internet IP address assigned to this device.

- **Mask** — The network mask for the IP address assigned to this device.

- **Gateway** — The gateway IP address for the IP address assigned to this device.

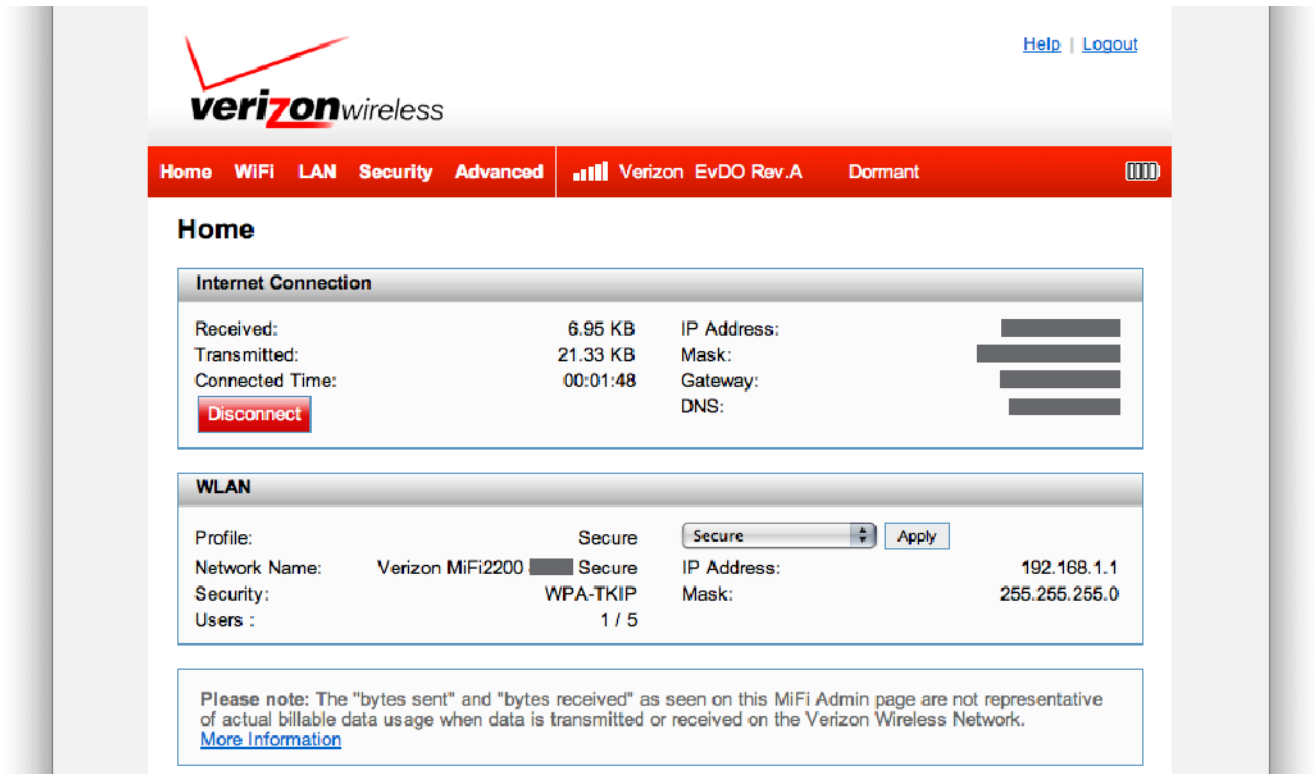- **DNS** — The Domain Name Server currently used by this device.

WLAN

The WLAN section provides more information about the wireless network (also called WiFi LAN or an 802.11 network). The following information is available.

- **Profile** — The wireless (802.11) profile currently in use. There are three possible profiles, and each has its own settings. When you log in you can change the profile.

- **Network Name** — The network name (SSID) used by the current WiFi profile.

- **Security** — The security method used by the current WiFi profile.

- **Users** — The number of users (wireless devices) connected to this MiFi 2200, and the number of wireless devices allowed. This appears as "number connected / number allowed".

- **IP Address** — The IP address of this MiFi, as seen by devices on the wireless network.

- **Mask** — The network mask associated with the IP address.

Home

The Home screen is the first screen you see after logging in to MiFi Settings. It is similar to the Welcome Screen, but adds configuration options. It is the main point of entry for everything you do in the browser interface.

Status and Menu Bar

After you log in to MiFi Settings, the status bar on the Welcome screen changes to include the navigation menu. This helps you navigate to the configuration pages.

Internet Connection

The Internet Connection section remains the same as on the Welcome screen, but gains a **Connect/Disconnect** button to connect or disconnect from the Internet. [See Internet Connection (page 34).]

WLAN Profile

Most of the WLAN settings remain the same as on the Welcome screen. [See <u>WLAN</u> (page 35).] The profile in use can now be changed. Select the profile from the pop-up menu and then click **Apply**.

In the profile menu you can choose from **Secure** (recommended), **Temporary Hotspot**, and **Open**.

IMPORTANT   Changing the profile ends all WiFi connections to MiFi 2200, including the current connection to MiFi Settings. You **must** re-connect your computer to MiFi 2200 using the new profile's WiFi settings.

Be sure to write down the new network key (WiFi passkey) before you finish changing the profile.

WiFi

The WiFi screen is the screen you use to customize the WiFi profiles.
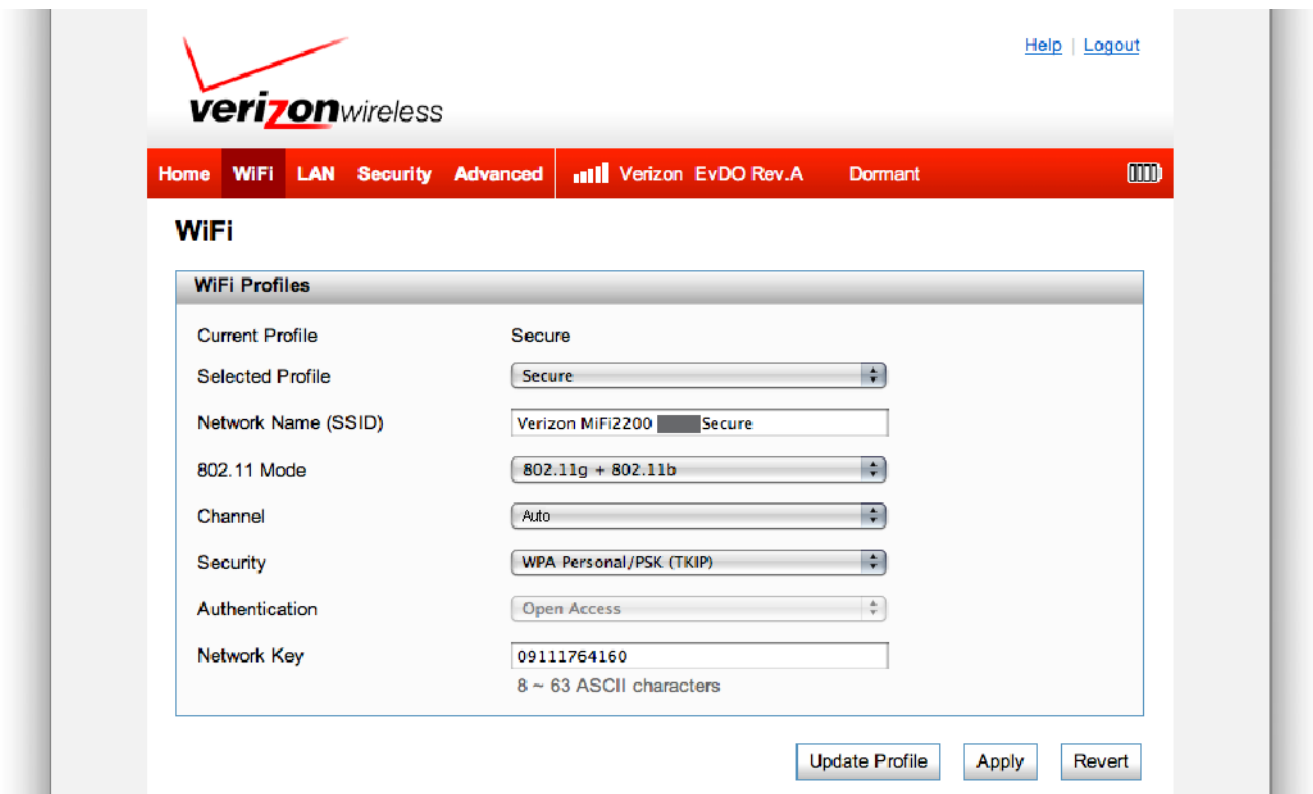
The WiFi screen has the following options.

- **Current Profile** — The wireless (802.11) profile currently in use.

- **Selected Profile** — The profile settings shown on the page. [See Changing to a Different Profile (page 39).]

- **Network Name (SSID)** — The name of MiFi 2200's wireless network.

- **802.11 Mode** — The wireless network technology used. **802.11g + 802.11b** is most compatible, allowing both 802.11b devices and 802.11g devices to connect to the wireless network.

- **Channel** — If available, select **Auto**. With this setting, MiFi 2200 selects the best available channel. If the **Auto** setting is not available, you can experiment to see which channel provides the best results, or use the default setting.

- **Security** — The security type used to encrypt the wireless network.

  - WEP 64-bit (least secure, more compatible with older devices)

  - WEP 128-bit

  - WPA Personal/PSK (TKIP)

  - WPA2 Personal/PSK (AES) (most secure, less compatible with older devices)

- **Authentication** — This is locked to Open Access for all profiles.

- **Network Key** — The passkey for the wireless network. The default passkey is printed on a sticker on the device. The following security types support the corresponding passkey lengths.

  - WEP 64-bit – 5 ASCII characters or 10 HEX characters.

  - WEP 128-bit – 13 ASCII characters or 26 HEX characters.

  - WPA Personal/PSK (TKIP) – ASCII string, 8 to 63 characters in length.

  - WPA2 Personal/PSK (AES) – ASCII string, 8 to 63 characters in length

Choosing a Profile

Your device comes with the Secure profile already set. The following profiles come with your device.

- **Secure** — This is the profile you should use most of the time. You can set up this profile with the security measures you need to use your device safely.

- **Temporary Hotspot** — This profile allows you set up a temporary hotspot to allow others nearby (maximum of five) to go online at the same time.

- **Open** — This profile is not secure and should be avoided.

Setting up a Temporary Hotspot

For more information about setting up a temporary hotspot, see "Setting Up a Temporary Hotspot" on page 29.

Changing to a Different Profile

To use a different profile, follow these steps.

❶ Click the Selected Profile pop-up menu and choose a different profile.

❷ Wait a moment for the web page to update with the WiFi settings for the selected profile.

❸ Click **Apply** to change to the new profile settings.

IMPORTANT Changing the profile ends all WiFi connections to MiFi 2200, including the current connection to MiFi Settings. You **must** re-connect your computer to MiFi 2200 using the new profile's WiFi settings.

Be sure to write down the new network key (WiFi passkey) before you finish changing the profile.

Updating the Current Profile

To update the current profile, follow these steps.

❶ Keep the same profile in the Selected Profile pop-up menu.

❷ Make changes to the profile settings.

❸ Click **Apply**.

- If you change the Network Name (SSID), security method, or network key you will need to re-connect with the WiFi manager on your computer.

- If you change other settings, your computer will re-connect automatically after MiFi 2200 restarts.

Tip! Some WiFi clients become confused if the security is changed and the network name is not. If you change security settings and do not get asked for the new network key when you try to reconnect, delete the existing old network name from your Preferred Networks list on your wireless device. Then you can reconnect.

IMPORTANT Changing the Network Name (SSID), security method, or network key (WiFi passkey) ends all WiFi connections to MiFi 2200, including the current connection to MiFi Settings. You **must** re-connect your computer to MiFi 2200 using the new profile's WiFi settings.

Be sure to write down the new network key (WiFi passkey) before you finish changing the profile.

Updating a Profile Not Currently in Use

To update a profile not currently in use, follow these steps.

❶ Change the Selected Profile pop-up menu to a different profile.

❷ Wait a moment for the web page to update with the WiFi settings for the selected profile.

❸ Change the settings.

NOTE The Temporary Hotspot profile cannot be changed directly. You must click **Generate** to generate a new network name (SSID) and network key.

❹ Click **Update Profile** to save the changes.

OR

Click **Apply** to update the profile and also make it the current profile.

Buttons

The **Update Profile** button adds changes to a profile not currently in use. This does not affect the existing WiFi connection between your computer and the device.

The **Apply** button applies changes to the current profile.

The **Revert** button returns changed profile settings to the previous settings.

The **Generate** button (available for the Temporary Hotspot profile only) generates a network name (SSID) and network key for the **Temporary Hotspot** profile. The remaining Temporary Hotspot settings are copied from the **Secure** profile.

LAN

The LAN screen gives you information about MiFi 2200's network. The screen has two sections, TCP/IP and Connected Devices.

The TCP/IP section shows the following information.

- **IP Address** — The IP address for MiFi 2200.

- **Subnet Mask** — The subnet mask network setting for MiFi 2200. The default value 255.255.255.0 is standard for small (class "C") networks. If you change the LAN IP Address, ensure you use the correct Subnet Mask for the IP address range containing the LAN IP address.

- **MAC Address** — The Media Access Controller (MAC) or physical address for MiFi 2200.

- **DHCP Address Range** — The range of IP addresses reserved for use by MiFi 2200's DHCP server table. If a device with a static IP address wants to connect to MiFi 2200's network, the static IP should be outside of the DHCP address range. Most devices do not have a static IP.

The Connected Devices section shows the following information for each device connected to the network.

- **IP Address** — The IP address for the connected device.

- **IP Type** — This can be **DHCP** if the IP address came from MiFi 2200, or **ARP** if the ARP protocol was used.

- **Hostname** — The network name for the connected device (if available).

- **MAC Address** — The MAC address for the connected device.

> **NOTE** The MAC address on the Windows operating system is called the **Physical Address**.

Date/Time — The date/time the device was detected by the network.

Buttons

The **Refresh** button re-loads the LAN screen to show changes to the list of connected devices, such as a device that recently joined or left the network.

The **Apply** button applies any changes you made to MiFi 2200's IP address or subnet mask.
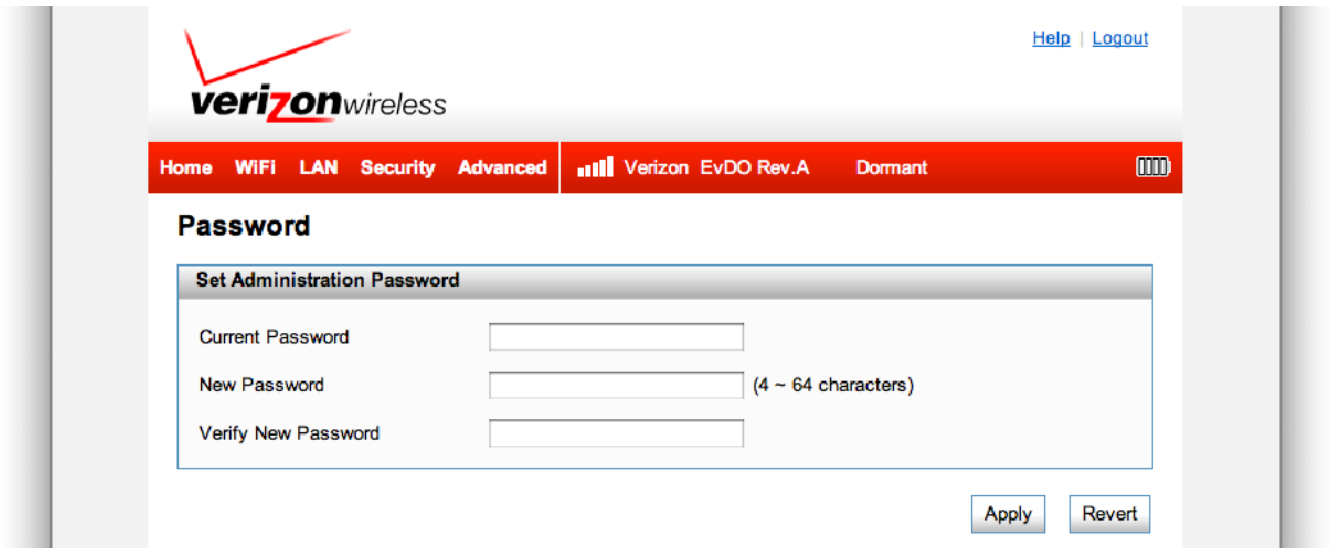

IMPORTANT   Changing MiFi 2200's IP address ends all WiFi connections to MiFi 2200, including the current connection to MiFi Settings. You **must** re-connect your computer to MiFi 2200 using the new IP address.

Be sure to write down the new IP address before you finish changing the profile.

Password

The Security Menu includes the Password screen.

The Password screen enables you to set the administration password. This password is the password you use to log in to MiFi Settings. It is set to **admin** by default.

Change the Administration Password

The default password is **admin**. To change the administration password, follow these steps.

❶ Type your current password in the **Current Password** box.

❷ Type the new password (it must have between 4 and 64 characters) in the **New Password** box.

❸ Type it again in the **Verify New Password** box.

❹ Click **Apply**.

Next time you log in to MiFi Settings, you need to use the new password.

IMPORTANT Record your administration password. If you forget it, you have to reset the device before you can use MiFi Settings. [See How do I reset MiFi back to factory settings? (page 63).]

MAC Filter

The Security Menu includes the MAC Filter screen.

> **IMPORTANT**   Do not enable MAC filtering unless you have added your own computer's MAC address to the trusted client list. Otherwise you will be unable to access the device.

The MAC Filter screen enables you to allow specific devices to connect to MiFi 2200's wireless network. For example, if you put the MAC address for your WiFi-enabled mobile phone and the MAC addess for your computer in the MAC Filter Trusted Client List, then only those devices can connect to MiFi 2200.

Trusted devices still need the correct network name (SSID) and network key (WiFi passkey).

> **NOTE**   The MAC address on the Windows operating system is called the **Physical Address**.

Enable MAC Filter

This checkbox enables or disables the MAC Filter feature.

When the feature is **enabled** (checked), you must add the MAC address for the device to the Trusted Client List. If a device not in the list tries to connect to the MiFi 2200 wireless network, the connection is blocked even if the device has the correct network name (SSID) and network key (WiFi passkey).

When the feature is **disabled** (un-checked), any device with the correct network name (SSID) and network key (WiFi passkey) can connect to the MiFi 2200 wireless network.

Find the MAC Address on a Computer

The Media Access Controller (MAC) Address is also known as a hardware or physical address for a device (usually a network adapter). It consists of six pairs of numbers and letters (for example, 00-21-9B-1C-64-34).

You can view the MAC address for any device connected to the MiFi wireless network from the WiFi screen. [See WiFi (page 38).]

Tip!   You can cut and paste your computer's MAC address from the WiFi Clients section of the WiFi screen.

If the computer is not connected to the MiFi wireless network, you can find the MAC address directly.

- On a Windows PC, the MAC address is the Physical Address. You can find the Physical Address by running **ipconfig /all** from the cmd window.

  » To run **ipconfig/all**, select **Start** > **All Programs** (or **Programs**) > **Accessories** > **Command Prompt** to open the Command Prompt window. Then type **ipconfig/all** and press the **Return** or **Enter** key.

- On a Mac, the MAC address is the AirPort ID.

  » To find the AirPort ID, open the **Apple** () **Menu** > **System Preferences** > **Network**. In the list, click **AirPort**. Click **Advanced**. A sheet opens. Click the **AirPort** tab. The AirPort ID is at the bottom of the sheet.

IMPORTANT   Windows only: Make sure you get the MAC address for the wireless network adapter and not the Ethernet controller (NIC), if the computer has both.

Add a Device to the Trusted Client List

To add a device to the Trusted Client List, follow these steps.

❶ Type the WiFi-enabled device's MAC address in the **Add Trusted Client MAC Address** field. You can use either ":" or "-" as the separator (for example, 00:21:9B:1C:64:34 or 00-21-9B-1C-64-34).

Tip!   You can cut and paste your computer's MAC address from the WiFi Clients section of the WiFi screen.

❷ Click **Add Client**.

❸ Repeat steps 1 and 2 as needed.

❹ When the list is complete, click **Apply**.

Remove a Device from the Trusted Client List

To remove a device from the Trusted Client List, follow these steps.

❶ Click on the device in the Trusted Client List to select it.

❷ Click **Delete**.

Buttons

Delete Client removes a device from the Trusted Client List.

Add Client adds the MAC address typed in the Add Trusted Client MAC Address field to the Trusted Client List.

Apply saves changes made to the list.

Revert discards changes made to the list.

Port Filtering

The Security Menu includes the Port Filtering screen.

Port filtering blocks outgoing Internet connections. You can set a list of Allowed Applications to only allow certain programs to connect to the Internet.

Enable Port Filtering

This checkbox enables or disables the Port Filtering feature.

When the feature is **enabled** (checked), you must select a port filtering application in the Allowed Applications list to allow that application to connect to the Internet. For example, if you select VPN in the Allowed Applications list but do not select HTTP, you can connect to a VPN server but you cannot connect to a web page using your Internet browser.

When the feature is **disabled** (un-checked), any application can connect to the Internet.

Allowed Applications

Enable each port filtering application that needs to be able to access the Internet. When port filtering is enabled, all other applications are blocked.

Custom Applications

This page has no effect unless the Port Filtering feature is enabled.

Click **Custom Applications** to open the Custom Applications screen. You can define and enable custom Port Filtering applications. You need to know details of the traffic used and generated by the applications you wish to define.

The Custom Applications screen uses checkboxes to enable port filtering for custom applications. Similar to the Allowed Applications list, you must enable custom applications so they can connect to the Internet.

- **Application Name** — Type a name for the application.

- **Ports** — Click the Ports link to show the Port Definition Panel. Click **Hide** when you finish defining the current application. Click **Apply** when you finish defining all applications.

- **Port Definition Panel** — This allows you to define the ports used by this application. The background shading and dialog title indicates the current application.

Port Ranges

You can define up to five port ranges for each application. Each port range has the following attributes.

- **Start Port** — Type the beginning of the range of port numbers used by outgoing traffic for this application. Use as many rows as necessary to define the required number of port ranges. Unused rows can be left blank.

- **End Port** — Type the end of the range of port numbers. If the port is a single port instead of a range, type the same value for both the Start Port and the End Port.

- **Protocol** — For each port range (each row), select the protocol (TCP, UDP, or both) used by that port range.

You can define all of your applications before you click **Apply** to save your changes.

Use the **Ports** and **Hide** links as necessary to open and close the Port Definition Panel so you can define the ports for each application as needed

Advanced Settings

The Advanced Menu includes the Advanced Settings screen.

The Advanced Settings screen is divided into four sections: Access Point, 3G Modem, Router, and System.

Access Point

The **SSID broadcast enable** checkbox enables or disables the SSID broadcast feature.

If this is enabled, MiFi 2200's wireless network appears in the **Available Wireless Networks** list on your computer or portable device. If this is disabled, MiFi 2200 is not listed and its network name (SSID) must be typed manually to connect a device.

3G Modem

The **Auto-connect enable** checkbox enables or disables the Auto-connect feature.

If this is enabled, MiFi 2200 automatically connects to Mobile Broadband/National**Access**. If this is disabled, MiFi 2200 connects to Mobile Broadband/National**Access** only after you click **Connect** on the home screen.

Router

The **DHCP Server enable** checkbox enables or disables the DHCP server feature.

If this is enabled, the DHCP Server automatically allocates an IP address to each of your wireless clients. Normally, this should be enabled. If this is disabled, each Wireless client should have a fixed IP address, set on the client.

The **VPN Pass-through enable** checkbox enables or disables the VPN Passthrough feature.

If this is enabled, this feature allows VPN clients to connect through MiFi 2200 to remote VPN Servers. Normally, this option should be enabled. If this is disabled, VPN clients are not allowed to connect.

System

The **System log enable** checkbox enables or disables the System log feature.

If this is enabled, you can view the system log on the Diagnostics screen. [See Diagnostics (page 54).]

The **Language** menu changes the MiFi Settings Web UI language.

Date/Time Format menu changes the format of the date to reflect that used in the US or Europe. It changes the format of the time to a 12- or 24-hour clock.

Buttons

Click **Apply** to save changes.

Click **Revert** to return to previous settings.

Config File

The Advanced Menu includes the Config File screen.

The Config File screen provides the ability to download (back up) a copy of the configuration settings from MiFi 2200 to a file on your computer, or restore (upload) a previously-saved configuration file from your computer to MiFi 2200.

This configuration file contains all settings for the Access Point and Router functions of MiFi 2200. It does not contain any data for the 3G module.

The Config File screen is divided into two sections: Config File Download and Config File Upload.
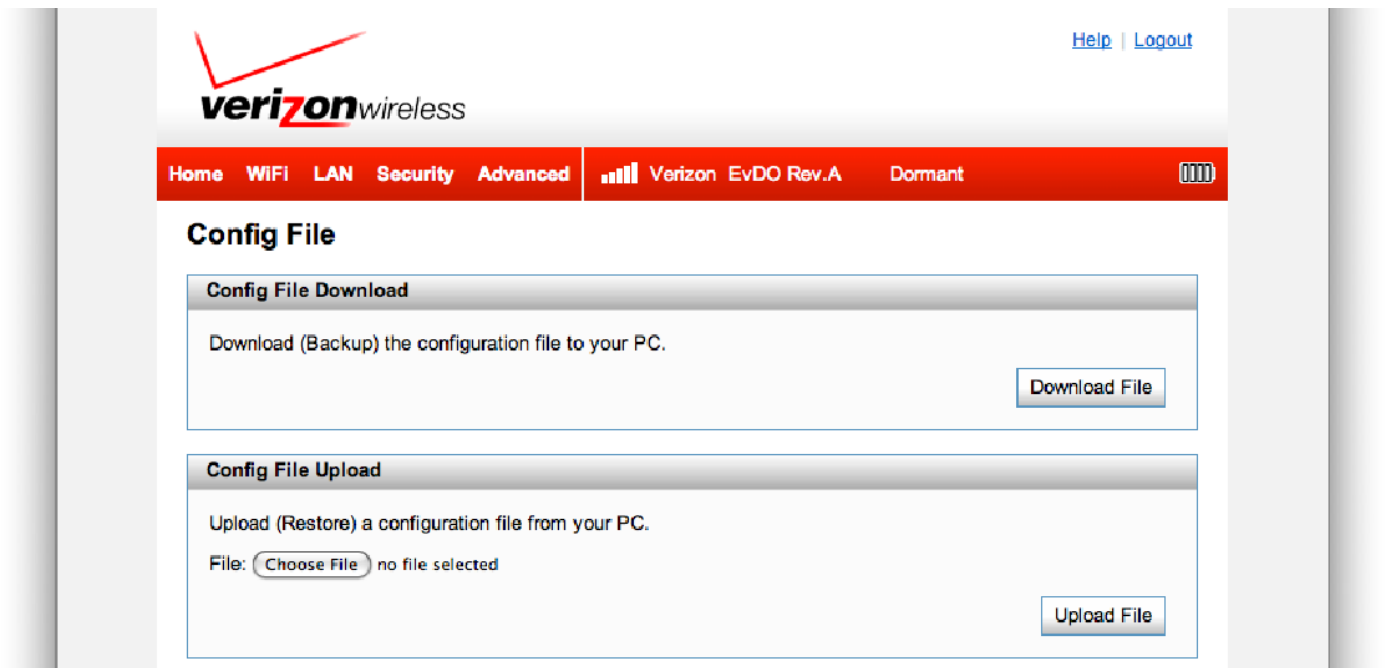
Config File Download

Click **Download File** to download a copy of the current configuration, and store the file on your computer. You are prompted to save the file; you can choose to rename it.

Config File Upload

Use this feature to restore a previously-saved configuration file to MiFi 2200. This overwrites all existing settings with the information stored in the config file.

Click **Choose File** to browse to the config file you previously downloaded to your computer.

Click **Upload File** to begin uploading the chosen file. After upload finishes, the config file is immediately applied, and MiFi 2200 restarts.

> **WARNING!** Uploading a configuration file changes ALL of the existing settings to match the configuration file. If the WiFi settings change, you will lose this connection, and will need to reconnect using the new settings.

Diagnostics

The Advanced Menu includes the Diagnostics screen.

The Diagnostics screen shows information about the MiFi 2200 firmware and other system-level information. You can also view the system log. This screen is used mostly for troubleshooting and is not required for normal operation.

System Information

This section contains detailed information about MiFi 2200.

AP/Router

- **Manufacturer** — The manufacturer of MiFi 2200.

- **Model** — The model number or name of MiFi 2200.

- **Serial Number** — Each MiFi 2200 has a unique serial number.

3G Modem

- **ESN** — The Electronic Serial Number (ESN) is used by the mobile data network to identify this particular modem.

- **MDN** — The Mobile Directory Number (MDN) is used by the mobile data network to identify this particular data service.

Version

- **AP** — For the Access Point component, the version of the firmware currently installed.

- **Router** — For the Router component, the version of the firmware currently installed.

- **Modem** — For the Modem component, the version of the firmware currently installed.

System Status

- **Modem Status** — Click the button to view more information about the Modem status. This information is mostly used for troubleshooting.

- **System Log** — Click the button to view the System Log. The System Log records various operations, and is mostly used for troubleshooting.

Global Traffic Counters

These counters record incoming and outgoing Internet traffic. They continue incrementing until you click **Restart Counters**.

- **Start Date** — The date on which these Global Traffic Counters started, usually the date of the first connection. If the counters have been restarted, this is the date of the last restart.

- **Total connection time** — This records the total time period during which a data connection to the Internet has been available.

- **Data Received** — The total amount of data received.

- **Data Transmitted** — The total amount of data transmitted.

- **Restart Counters** — Click the button to set the counters above to zero.

- **Connection Log** — Click the button to view the Internet Connection Log.

  NOTE The Internet Connection Log shows only the most recent connections rather than all of the connections, which contribute to the Traffic Counters.

IMPORTANT   Please note: "Data Received" and "Data Transmitted" as seen on this Diagnostics page are not representative of actual billable data usage when data is transmitted or received on the Verizon Wireless Network. Due to different network protocol overheads and protocol conversions, the data transmitted on the Verizon Wireless Network differs from what is observed on the device. Please see the **Usage** tab in **VZ**Access Manager during USB mode to view the estimated data usage for your current billing cycle.

Additionally, when using MiFi in WiFi mode, you do not get usage alerts when connecting or be able to track your usage with the **Usage** button in **VZ**Access Manager. Please periodically connect in USB mode using **VZ**Access Manager to track your unbilled usage for the current billing cycle.

Buttons

- **Modem Status** — [See System Status (page 55).]

- **System Log** — [See System Status (page 55).]

- **Restart Counters** — [See Global Traffic Counters (page 55).]

- **Connection Log** — [See Global Traffic Counters (page 55).]

- **Restart** — Restart MiFi 2200. All Internet connections, and all WiFi connections, are lost during the restart.

- **Reset to Factory Defaults** — This button resets all Access Point and Router settings to their factory default values. All existing settings are lost.

WARNING!   The "Reset to Factory Defaults" operation overwrites ALL existing settings. If the WiFi settings change, you will lose this connection, and need to reconnect using the new settings. [See How do I reset the Access Point and Router settings back to factory settings? (page 63).]
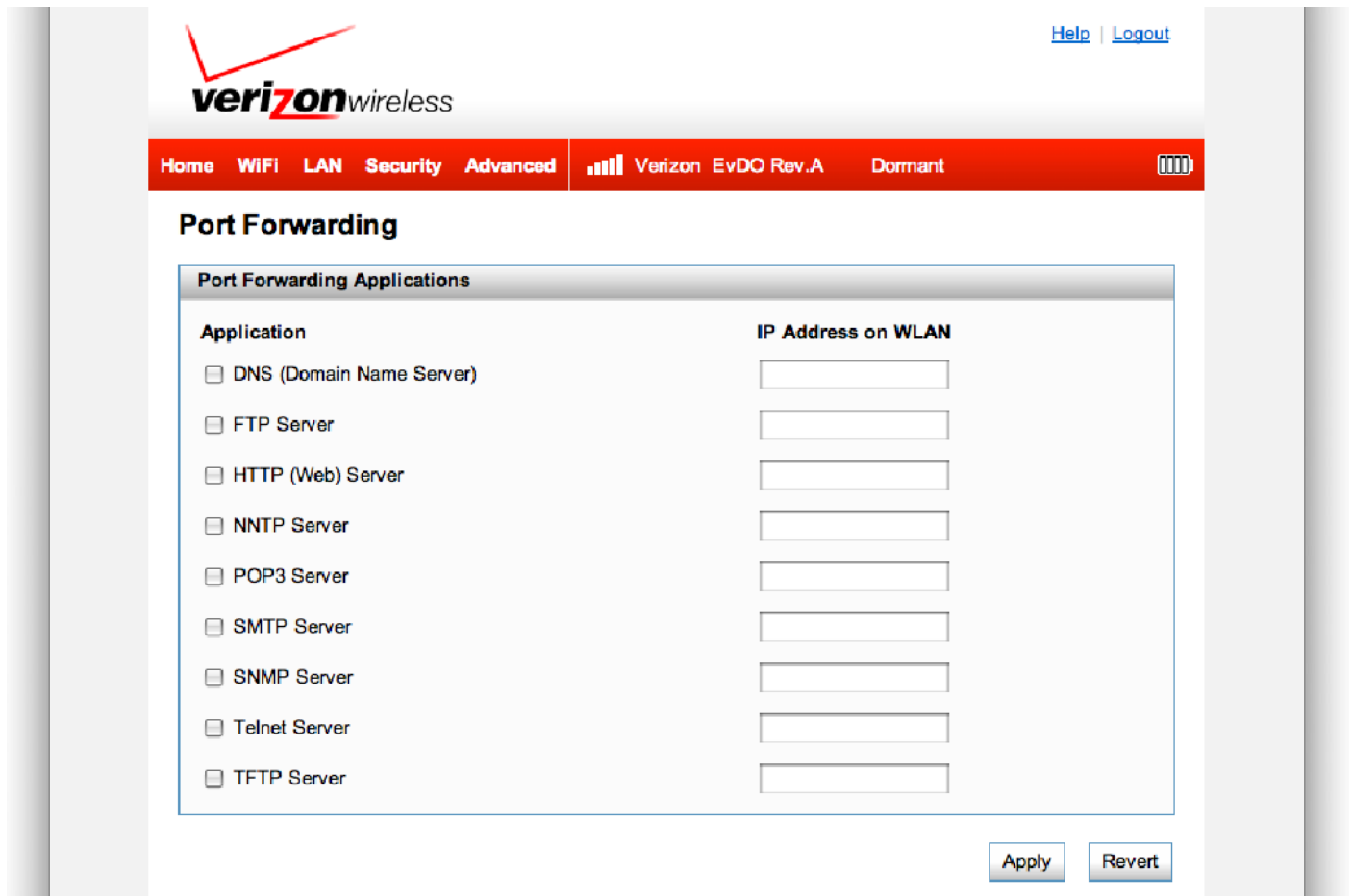
Port Forwarding

The Advanced Menu includes the Port Forwarding screen.

The Port Forwarding feature allows incoming traffic (from the Internet) to be forwarded to a particular computer or device on MiFi 2200's wireless network. Normally, incoming traffic from the Internet is blocked.

You need to use Port Forwarding to allow Internet users to access any server you are running on your computer, such as a Web server, FTP server, or E-mail server. Also, for some online games, Port Forwarding must be used for the game to function correctly.

IMPORTANT   Port forwarding creates a security risk. This feature should be disabled when it is not required.

Using Port Forwarding

A number of common server applications are listed. To use any of these applications, follow this procedure:

❶ Install the application on a computer that is connected to MiFi 2200's wireless network (WLAN).

❷ Ensure the computer is connected to MiFi 2200, and record the computer's IP address for the MiFi Settings Web UI.

❸ On the Port Forwarding screen, type the computer's IP Address in the **IP Address on WLAN** field beside the application name.

❹ Enable the corresponding application on this screen by selecting its checkbox.

❺ Save your changes by clicking **Apply**.

❻ Click **Home** to go to the Home screen, and make a note of MiFi 2200's IP address.

❼ Tell the person or company that needs port forwarding to connect to MiFi 2200's IP address of MiFi 2200 (by default, this is **http://192.168.1.1**). Connection requests are forwarded to the IP address specified in step 3.

When no longer needed, the application should be disabled on this screen by de-selecting its checkbox, and saving this change by clicking **Apply**. Leaving applications enabled unnecessarily creates a security risk.

Power Management

The Advanced Menu includes the Power Management screen.

MiFi 2200 can switch to a low-power Standby mode. When using battery power, switching to Standby mode greatly extends the battery life.

To exit Standby mode, press the power button.
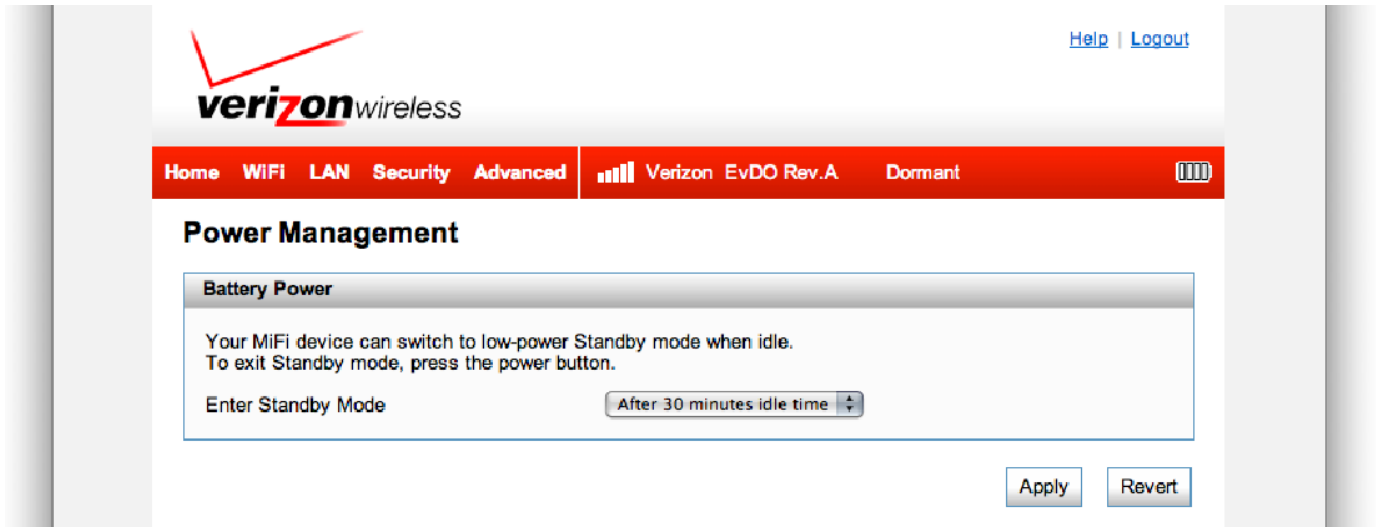
Battery Power

Select the desired Standby timer.

When powered by the battery, MiFi 2200 switches to Standby mode after being idle for the selected time period, provided that no WiFi devices are connected to MiFi.

To prevent switching to Standby mode, select **Never**.

> **NOTE** Standby timer settings have no effect when MiFi 2200 is connected to a computer with a USB cable.

The timer options are from 2-60 minutes idle time, or never.

Buttons

Click **Apply** to save changes.

Click **Revert** to return to previous settings.

Troubleshooting

Overview

When properly installed, MiFi 2200 is a highly reliable product. Most problems are caused by one of these issues:

- System resources required by the device are being used by other devices.

- Network coverage is unavailable due to coverage area, an account problem, or a network problem.

The following tips can help solve many common problems encountered while using the device.

First Steps

- Make sure you are using the device in the correct geographic region.

- Ensure that your wireless coverage extends to your current location.

- Ensure you have an active subscription plan.

- Restarting your computer and your modem can resolve many issues.

IMPORTANT   Before contacting support, be sure to restart both your computer and your device.

Common Problems and Solutions

The following are some common problems and solutions.

Windows only: What if my software didn't install automatically?

➤ Your computer's USB port might not work properly. You can try a different USB port or install the software manually.

  1. Connect the device to your computer.
  2. Click **My Computer** or **Computer**.
     A Windows Explorer window opens.
  3. Select the **CD Drive VZAccess Manager** icon.
  4. Double-click **setup.exe**.

My computer does not start when the device is inserted. I experience an error or a blank screen.

➤ When this happens, remove the device and restart the computer.
  The device contains internal memory which behaves like a CD-ROM. Some computers, depending on the system BIOS settings, might try to start from the device's internal memory instead of the Hard Drive. The computer might show a black screen with a cursor or an error message about a non-bootable disk. This behavior is similar to using any non-bootable CD in your CD-ROM drive.

I cannot install the software.

➤ You might not have administrator privileges.

  1. Contact your system administrator (if applicable).
  2. Log on to your computer as an administrator, or create a user account with administrator privileges.

Windows only: An AutoPlay window keeps opening. How can I stop it from occurring?

  1. Be sure the device is attached to your computer with a microUSB cable.
  2. Open the **VZ**Access Manager window.
  3. In the window, click **Options** > **Preferences** in the menu bar.
  4. Click WWAN Device.
  5. Deselect the checkbox **Enable "VZAccess Manager" CD-ROM Disk**.
  6. Click **OK**.

I still cannot connect to the network after trying First Steps [See]

➤ The software might be incorrectly installed. Uninstall the software and then install it again.

How do I uninstall the previously installed software?

To uninstall the previously-installed software, see the following instructions.

➤ **Windows**: Uninstall the software using the Control Panel feature in Windows. See Windows Help for more information.

> **NOTE** For best results, uninstall **VZ**Access Manager first, then uninstall Zain MiFi Broadband Generic Drivers, and then uninstall Verizon Wireless Firmware Updates (if present).

➤ **Mac OS X**: When the **VZ**Access Manager software is running, select the **VZ**Access Manager menu. Then click **Uninstall VZAccess Manager**. Follow the onscreen instructions. Restart the computer to finish removing the files.

My MiFi powered off when I plugged it in to the wall charger. Why?

This occurs if any power settings are activated once the device is plugged into the wall charger.

➤ Manually press the power button to turn it back on.

My MiFi just powered off without my pressing the power button. Why?

This may occur under any of the following circumstances.

» Pressing the Master Reset button.
» Restarting the device.
» Switching profiles.
» Restoring the configuration settings.
» Battery depleted.

➤ Manually press the power button to turn it back on.

➤ If battery is depleted, charge the device with the wall charger or USB cable.

How do I reset MiFi back to factory settings?

The master reset button is in a small hole located on the bottom of the device. This button returns the device to factory settings, including re-setting the network name (SSID) and network key (WiFi passkey) to those printed on the sticker affixed to the back of the device.

1. Place one end of an unfolded paper clip in the master reset button hole.
2. Press the paper clip on the button until the Service Status LED blinks green one full blink and then a very brief blink (about five seconds).

How do I reset the Access Point and Router settings back to factory settings?

When MiFi is in WiFi mode, you can connect to MiFi Settings by connecting your computer to the MiFi wireless network and going to **http://192.168.1.1** in your browser.

Connect to the Diagnostics screen. [See Diagnostics (page 54).] The Diagnostics screen has a **Reset to Factory Defaults** button. This button resets all Access Point and Router settings to their factory default values. All existing settings are lost.

Technical Support

Customer Service

For Customer Service while in the U.S. or Canada, dial 1-800-922-0204.

Data Technical Support

For additional information and technical support for **VZ**Access Manager and Verizon wireless devices, you can visit the Verizon Wireless Data Technical Support page at: http://www.verizonwireless.com/b2c/support/data.jsp.

5

Product Specifications and Regulatory Information

Product Specifications

General

Name:	Verizon Wireless MiFi 2200
Model:	MiFi2200 VZW
Approvals:	FCC (North America); CDG
Weight:	58 g / 2.05 oz
Dimensions (with USB folded out):	90 mm x 60 mm x 8.8 mm, 3.54 in x 2.36 in x 0.35 in
Wireless Network – Dual Mode:	CDMA 1X/EV-DO
Wireless Network – WiFi Mode	802.11 b/g
Default SSID	Verizon MiFi2200 (see sticker on device for the identifier specific to your device)
Battery	
Size	1150 mAh
Time required for full charge when charging from the AC Charger	2.5 hours (when not in use)
Time required for full charge when charging from the computer microUSB cable	7-8 hours (when not in use)
Chip Set:	QUALCOMM® QSC6085
Interface Type:	Type A USB Port for microUSB cable (included)

Technology/Bands

Technology:	CDMA Rev A, Rev 0, 1XRTT
Band Designation:	800/1900 MHz
Transmit Band:	824.7-848.31MHz/1851.25-1908.75MHz
Receive Band:	869.7-893.31MHz/1931.25-1988.75MHz

Environmental

Operating Temperature:	-10 ° C to +45° C (14°F to 113° F)
Storage Temperature:	-20° C to 25° C (-4° F to 77° F)
Drop:	1 meter (3.28 feet) drop, no damage – fully operational
Vibration Stability:	5 Hz to 500 Hz, 0.1 octave/second

Regulatory Statements

CE Marking

This device has been tested to and conforms to the essential regulatory requirements of the European Union R&TTE directive 1999/5/EC and has attained CE Marking.

$$\text{CE } 0682$$

Federal Communications Commission Notice (FCC – United States)

This equipment has been tested to, and found to be within the acceptable limits for a Class B digital device, pursuant to part 15 of the FCC Rules and Industry Canada ICES-003. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates radio frequency energy and is designed for use in accordance with the manufacturer's user manual. However, there is no guarantee that interference will not occur in any particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are 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 the receiver

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/television technician for help

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.

- This device must accept any interference received, including interference that may cause undesired operation.

WARNING: DO NOT ATTEMPT TO SERVICE THE WIRELESS COMMUNICATION DEVICE YOURSELF. SUCH ACTION MAY VOID THE WARRANTY. THE MiFi 2200 DEVICE IS FACTORY TUNED. NO CUSTOMER CALIBRATION OR TUNING IS REQUIRED. CONTACT YOUR SERVICE PROVIDER FOR INFORMATION ABOUT SERVICING YOUR WIRELESS COMMUNICATION DEVICE.

Notice to Consumers: Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

NOTE: The Radio Frequency (RF) emitter installed in your modem must not be located or operated in conjunction with any other antenna or transmitter, unless specifically authorized by Novatel Wireless Technologies.

MODIFICATIONS: The FCC requires that you be notified that any changes or modifications made to this device that are not expressly approved by Novatel Wireless, Inc. may void your authority to operate the equipment.

RF Exposure Content

FCC Equipment Authorization ID: PKRNVWMiFi2200

This device is only authorized for use in Mobile applications. At least 20cm (8 inches) of separation between the antenna and the users body must be maintained at all times.

The FCC has granted an Equipment Authorization for this wireless modem with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines.

Wireless Communications

IMPORTANT   Due to the transmission and reception properties of wireless communications, data occasionally can be lost or delayed.

This can be due to the variation in radio signal strength that results from changes in the characteristics of the radio transmission path. Although data loss is rare, the environment where you operate the modem might adversely affect communications.

Variations in radio signal strength are referred to as fading. Fading is caused by several different factors including signal reflection, the ionosphere, and interference from other radio channels.

Verizon Wireless or its partners will not be held responsible for damages of any kind resulting from the delays or errors in data transmitted or received with the MiFi 2200 device, or failure of the MiFi 2200 device to transmit or receive such data.

Limited Warranty and Liability

Novatel Wireless, Inc. warrants for the 12-month period immediately following receipt of the Product by Purchaser that the Product will be free from defects in material and workmanship under normal use. THESE WARRANTIES ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The exclusive remedy for a claim under this warranty shall be limited to the repair or replacement, at Novatel Wireless' option, of defective or non-conforming materials, parts or components. The foregoing warranties do not extend to (I) non conformities, defects or errors in the Products due to accident, abuse, misuse or negligent use of the Products or use in other than a normal and customary manner, environmental conditions not conforming to Novatel Wireless' specification, of failure to follow prescribed installation, operating and maintenance procedures, (II) defects, errors or nonconformity's in the Product due to modifications, alterations, additions or changes not made in accordance with Novatel Wireless' specifications or authorized by Novatel Wireless, (III) normal wear and tear, (IV) damage caused by force of nature or act of any third person, (V) shipping damage, (VI) service or repair of Product by the purchaser without prior written consent from Novatel Wireless, (VII) products designated by Novatel Wireless as beta site test samples, experimental, developmental, reproduction, sample, incomplete or out of specification Products, or (VIII) returned products if the original identification marks have been removed or altered.

Safety Hazards

Do not operate MiFi 2200 in an environment that might be susceptible to radio interference resulting in danger, specifically:

Areas where prohibited by the law

Follow any special rules and regulations and obey all signs and notices. Always turn off the host device and remove the device from the USB port when instructed to do so, or when you suspect that it might cause interference or danger.

Where explosive atmospheres might be present

Do not operate your device in any area where a potentially explosive atmosphere might exist. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Be aware and comply with all signs and instructions.

Users are advised not to operate the device while at a refueling point or service station. Users are reminded to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.

Areas with a potentially explosive atmosphere are often but not always clearly marked. Potential locations can include gas stations, below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Near medical and life support equipment

Do not operate your device in any area where medical equipment, life support equipment, or near any equipment that might be susceptible to any form of radio interference. In such areas, the host communications device must be turned off. The device can transmit signals that could interfere with this equipment.

On an aircraft, either on the ground or airborne

In addition to FAA requirements, many airline regulations state that you must suspend wireless operations before boarding an airplane. Please ensure that the host device is turned off and your modem is removed from the USB port prior to boarding aircraft in order to comply with these regulations. The modem can transmit signals that could interfere with various onboard systems and controls.

While operating a vehicle

The driver or operator of any vehicle should not operate a wireless data device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some countries, operating such communications devices while in control of a vehicle is an offense.

Electrostatic discharge (ESD)

Electrical and electronic devices are sensitive to electrostatic discharge (ESD). Macintosh native connection software might attempt to reinitialize the device should a substantial electrostatic discharge reset the device. If the software is not operational after an ESD occurrence, then restart your computer.

Proper Battery Use and Disposal

IMPORTANT In event of a battery leak:

- Do not allow the liquid to come in contact with the skin or the eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice

- Seek medical advice immediately if a battery has been swallowed

- Communicate the appropriate steps to be taken if a hazard occurs. Due to the transmission and reception properties of wireless communications, data occasionally can be lost or delayed.

Please review the following guidelines for safe and responsible battery use.

- Do not disassemble or open, crush, bend or deform, puncture, or shred.

- Do not modify or remanufacture, attempt to insert a foreign object into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.

- Only use the battery for the system for which it was specified.

- Only use the battery with a charging system that has been qualified with the system per this standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.

- Do not short circuit a battery or allow a metallic or conductive object to contact the battery terminals.

- Replace the battery only with another battery that has been qualified with the system per this standard. Use of an unqualified battery may present a risk of fire, explosion, leakage, or other hazard.

- Promptly dispose of used batteries in accordance with local regulations.

- Battery usage by children should be supervised.

- Avoid dropping the device or battery. If the device or the battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.

- Improper battery use may result in a fire, explosion, or other hazard.

6

Glossary

Glossary

- **3G** — Third Generation. 3G refers to the third generation of mobile telephony technology. The evolution of 3G technology is as follows:

  CDMA technologies
  - » 1xRTT offered speeds up to 144 Kbps (2002).

  - » EV-DO increased downlink speeds up to 2.4 Mbps (2004).

  - » EV-DO Rev A boosted downlink speeds to 3.1 Mbps (2006).

  - » EV-DO Rev B can use 2 to 15 channels with each downlink peaking at 4.9 Mbps.

  - » Ultra Mobile Broadband was slated to reach 288 Mbps but operators might switch to LTE instead.

- **802.11 (b, g, n)** — A set of WLAN communication standards in the 2.4, 3.6 and 5 GHz frequency bands.

- **bps** — bits per second. The rate of data flow.

- **Broadband** — High-capacity high-speed, transmission channel with a wider bandwidth than conventional modem lines. Broadband channels can carry video, voice, and data simultaneously.

- **CDMA** — Code Division Multiple Access. It is the underlying channel access method used by some mobile phone standards.

- **DHCP** — Dynamic Host Configuration Protocol. Software found in servers and routers that automatically assigns temporary IP addresses to clients logging into an IP network.

- **DHCP Server** — A server or service with a server that assigns IP addresses.

- **DNS** — Domain Name System. A system for converting host names and domain names into IP addresses on the Internet or on local networks that use the TCP/IP protocol.

- **ESN** — Electronic Serial Number. A unique 32-bit number embedded in a wireless device that identifies the device.

- **Firewall** — A hardware or software boundary that protects a network or single computer from unwanted outside traffic.

- **Firmware** — A computer program embedded in an electronic device. Firmware usually contains operating code for the device.

- **GPS** — Global Positioning System. A radio-based navigation system that allows users to determine their location. The device uses satellite data to calculate its position. Commonly used in mapping and navigation systems.

- **Host Name** — The unique name by which a network-attached device is known on a network.

- **Hotspot** — A WiFi (802.11) access point or the area covered by an access point. Used for connecting to the Internet.

- **Hot-Swappable** — The ability to safely remove and replace a component (for example, a memory card or USB device) from a device or computer while it is powered on.

- **HTTP** — Hypertext Transfer Protocol. An application-level protocol for accessing the World Wide Web over the Internet.

- **ICCID** — Integrated Circuit Card IDentification. A serial number stored in and engraved or printed on a SIM card that internationally identifies the card.

- **IEEE —** Institute of Electrical and Electronics Engineers. An international technical/professional society that promotes standardization in technical disciplines.

- **IP** — Internet Protocol. The mechanism by which packets are routed between computers on a network.

- **IP Type** — The type of service provided over a network.

- **IP address** — Internet Protocol address. The address of a device attached to an IP network (TCP/IP network).

- **ISP** — Internet Service Provider. Also referred to as the service carrier, an ISP provides Internet connection service. (See Network Operator)

- **Kbps** — Kilobits per second. The rate of data flow.

- **LAN** — Local Area Network. A type of network that lets a group of computers, all in close proximity (such as inside an office building), communicate with one another. It does not use common carrier circuits though it can have gateways or bridges to other public or private networks.

- **MAC Address** — Media Access Control. A number that uniquely identifies each network hardware device. MAC addresses are 12-digit hexadecimal numbers.

- **MEID** — Mobile Equipment IDentifier. A globally unique number for a physical piece of mobile station equipment.

- **Mbps** — Megabits per second.

- **microSD / microSDHC** — A small, removable flash memory card available in various storage sizes. Some products have a slot that allows them to utilize this external memory.

- **MSID** — Mobile Station IDentifier. A number for a mobile phone that identifies that phone to the network. These numbers are carrier specific.

- **NDIS** — Network Driver Interface Specification. NDIS is a Windows specification for how communication protocol programs (such as TCP/IP) and network device drivers should communicate with each other.

- **Network Mask** — A number that allows IP networks to be subdivided for security and performance.

- **Network Operator** — The vendor who provides your wireless access. Known by different names in different regions, some examples are: wireless provider, network provider, and service provider.

- **Network Technology** — The technology on which a particular network provider's system is built; such as CDMA and EVDO.

- **Port** — A virtual data connection used by programs to exchange data. It is the endpoint in a logical connection. The port is specified by the port number.

- **Port Forwarding** — A process that allows remote devices to connect to a specific computer within a private LAN.

- **Port Number** — A 16-bit number used by the TCP and UDP protocols to direct traffic on a TCP/IP host. Certain port numbers are standard for common applications.

- **Protocol** — A standard that enables connection, communication, and data transfer between computing endpoints.

- **PRL** — Preferred Roaming List. A list that your wireless phone or device uses to determine which networks to connect with when you are roaming. (Network operator specific)

- **Protocol** — A standard that enables connection, communication, and data transfer between computing endpoints.

- **Proxy** — A firewall mechanism that replaces the IP address of a host on the internal (protected) network with its own IP address for all traffic passing through it.

- **PUK code** (Pin Unlock Key) — A PUK is required when you enter an incorrect PIN 3 times. After entering the wrong PIN 3 times, the SIM card is disabled.

- **RAS** — Remote Access Service. A Windows NT/2000 Server feature that allows remote users access to the network from their Windows laptops or desktops via modem.

- **Rev A** — CDMA EV-DO Rev. A is a leading-edge wireless technology with higher data rates and higher system capacity. It is a fully backward compatible standard and remains interoperable with deployed EV-DO networks and devices around the world. The increased data rates on Rev. A's physical layer enable richer applications and services. For more information, visit www.cdg.org.

- **Router** — A device that directs traffic from one network to another.

- **SIM** — Subscriber Identification Module. Found in GSM network technology, the SIM is a card containing identification information for the subscriber and their account. The SIM card can be moved to different devices.

- **SMS** — Short Message Service. A service for sending short messages of up to 160 (224 in 5-bit mode) characters to mobile devices. SMS is also known as text messaging.

- **SSID** — Service Set IDentifier. The name assigned to a WiFi network.

- **TCP/IP** — Transmission Control Protocol/Internet Protocol. The set of communications protocols used for the Internet and other similar networks.

- **UI** — User Interface. The part of a software application or hardware device that a user sees and interacts with.

- **USB** — Universal Serial Bus. A connection type for computing device peripherals such as a printer, mobile modem, etc. USB connectors may be used for data transfer or charging.

- **USB Port Types** — The USB ports on computers and hubs have a rectangular Type A socket, and peripheral devices have a cable with a Type A plug. Peripherals that do not have an attached cable have a square Type B socket on the device and a separate cable with a Type A and Type B plug. Ports and connectors are available in different sizes (for example, standard, mini, and micro).

- **VPN** — Virtual Private Network. A secure private network that runs over the public Internet. Commonly used to connect to an office network from elsewhere.

- **WAN** — Wide Area Network. A public network that extends beyond architectural, geographical, or political boundaries (unlike a LAN, which is usually a private network located within a room, building, or other limited area).

● **WCDMA** — Wideband Code-Division Multiple Access. A 3G mobile wireless technology that promises much higher data speeds to mobile and portable wireless devices. Another name for UMTS.

● **WEP** — Wired Equivalent Privacy. An IEEE standard security protocol for 802.11 networks. Superseded by WPA and WPA2.

● **WiFi** — Wireless Fidelity. Any system that uses the 802.11 standard developed and released in 1997 by the IEEE.

● **WiFi Client** — A wireless device that connects to the Internet via WiFi.

● **WPA/WPA2** — WiFi Protected Access. A security protocol for wireless 802.11 networks from the WiFi Alliance.