



Mobile Broadband / National **Access**



**MiFi™ 2200 – Intelligent Mobile Hotspot**  
**Product user guide**

## Welcome

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Congratulations on purchasing the Novatel Wireless MiFi 2200 Intelligent Mobile Hotspot for Mobile Broadband and Wi-Fi!

Before installing the MiFi 2200, **VZ**Access Manager software and drivers, review this manual, which outlines the features and functions of the MiFi 2200 hardware.

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

### ***The MiFi 2200 Package***

The Verizon Wireless MiFi 2200 package includes:

- Verizon Wireless MiFi 2200
- AC Wall Charger
- Lithium Ion Battery
- Storage Pouch
- microUSB Cable
- Quick Reference Guide

### ***Customer Service***

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

# Wireless communications

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## **IMPORTANT Notice**

Due to the transmission and reception properties of wireless communications, data can occasionally 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 MiFi 2200 may 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.

## ***Safety hazards***

Do not operate the MiFi 2200 device in an environment that may 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 modem from the USB port when instructed to do so, or when you suspect that it may cause interference or danger.

Where explosive atmospheres may be present

- Do not operate the MiFi 2200 in any area where a potentially explosive atmosphere may 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 MiFi 2200 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

- o Do not operate the MiFi 2200 in any area where medical equipment, life support equipment, or near any equipment that may be susceptible to any form of radio interference. In such areas, the host communications device must be turned off. The MiFi 2200 may transmit signals that could interfere with this equipment.

On an aircraft, either on the ground or airborne

- o 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 the MiFi 2200 is removed from the USB port prior to boarding aircraft in order to comply with these regulations. The MiFi 2200 can transmit signals that could interfere with various onboard systems and controls.

While operating a vehicle

- o 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.

**Limitation of liability**

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4,901,307	5,490,165	5,056,109	5,504,773	5,101,501
5,506,865	5,109,390	5,511,073	5,228,054	5,535,239
5,267,261	5,544,196	5,267,262	5,568,483	5,337,338
5,600,754	5,414,796	5,657,420	5,416,797	5,659,569
5,710,784	5,778,338			

## **Software Drivers License**

### Proprietary Rights Provisions:

The software drivers provided with this product are copyrighted by Verizon Wireless and/or Verizon Wireless' suppliers. And although copyrighted, the software drivers are unpublished and embody valuable trade secrets proprietary to Verizon Wireless and/or Verizon Wireless' suppliers. The disassembly, decompilation, and/or Reverse Engineering of the software drivers for any purpose is strictly prohibited by international law. The copying of the software drivers, except for a reasonable number of back-up copies is strictly prohibited by international law. It is forbidden by international law to provide access to the software drivers to any person for any purpose other than processing the internal data for the intended use of the software drivers.

### U.S. Government Restricted Rights Clause:

The software drivers are classified as "Commercial Computing device Software" and the U.S. Government is acquiring only "Restricted Rights" in the software drivers and their Documentation.

### U.S. Government Export Administration Act Compliance Clause:

It is forbidden by US law to export, license or otherwise transfer the software drivers or Derivative Works to any country where such transfer is prohibited by the United States Export Administration Act, or any successor legislation, or in violation of the laws of any other country.

## MiFi 2200 Intelligent Mobile Hotspot: Overview

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Thank you for choosing the Verizon Wireless MiFi 2200 Intelligent Mobile Hotspot by Novatel Wireless with Mobile Broadband and Wi-Fi!

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

With the MiFi 2200, you can:

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

- **Benefit from Wi-Fi Connectivity**

With the MiFi 2200 Intelligent Mobile Hotspot, connect via Wi-Fi and access Mobile Broadband/National Access to browse the Internet, access email, run businesses applications and more from a computer or most Wi-Fi compatible devices.

The MiFi 2200 enables multiple Wi-Fi enabled devices to connect at one time., such as notebooks, desktops, tablet computers, personal digital assistants, CE devices, and most Wi-Fi enabled consumer devices.

*Typical battery usage time is 4 hours active and 40 hours standby in Wi-Fi mode\* (\*for one Wi-Fi client)*

- **Experience NovaSpeed™ Technology**

NovaSpeed, the latest software technology from Novatel Wireless, enhances performance with streaming video, online gaming, simultaneous uploads and downloads, and large file transfers with minimal interruptions or buffering.

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

Includes VZAccess Manager software for automatic installation without a CD and easy navigation. The web-based MiFi Settings is for device status and activation via USB and Wi-Fi.

1. **VZAccess Manager:** A powerful application tool designed to make piloting your remote office a breeze. VZAccess Manager allows you to manage, monitor, and customize your wireless network activity through an easy-to-use interface.

**NOTE:** VZAccess Manager is required for activation and firmware/PRL updates.

2. **MiFi Settings:** Allows you to manage, monitor, and customize your Wi-Fi and Mobile Broadband connection through an easy-to-use interface when the device is in Wi-Fi mode (i.e. without the use of the USB cable).

- **Choose between Two Operating Modes:**

- **Mobile Broadband with USB Cable or Wi-Fi**

The MiFi 2200 package includes a battery for operation via Wi-Fi and a USB cable.

*USB Cable mode supports Windows Vista, XP, 2000; Mac OS X 10.4 or higher.*

*\*See System Requirements for a complete list of operating system support.*

**Additional features include**

- Advanced embedded antenna design for Mobile Broadband and Wi-Fi
- VPN capability
- Auto installation and connectivity options
- 2-Way Short Messaging Service (SMS) (Mobile Broadband only)
- NDIS configuration

## ***About Your MiFi 2200 Intelligent Mobile Hotspot***

Your MiFi 2200 has the following parts:



1. **Power Button:** Indicates power, battery, and roaming activity. Please see the following page for an explanation of the Power button LED states. (See also page 9 for Power Button LED description)
2. **microUSB Connector:** Connects to computing devices equipped with a Type A USB port.
3. **Service Status Indicator (LED):** Visual service status LED indicator that shows you service and data modes. Please see the following page for an explanation of these Service Status LED states. (See also page 9 for Service Status Indicator LED description)

## ***Care of Your MiFi 2200 Wireless Intelligent Mobile Hotspot***

As with any electronic device, the MiFi 2200 must be handled with care to ensure reliable operation. Verizon Wireless recommends the following handling guidelines:

- Do not apply adhesive labels to the MiFi 2200; they may cause the device to potentially overheat and they may alter the performance of the antenna system.
- The USB connector should plug easily into your computer's Type A USB port. Forcing the device into a port may damage the connector.
- Protect the MiFi 2200 from liquids, dust, and excessive heat.
- Store the MiFi 2200 in a safe place, when not in use.



## LED States



### Service Status Indicator (LED)

The MiFi 2200 is designed with a status light that simply indicates what the connection status is.

LED Color	Meaning
LED not lit	No Power to MiFi
LED GREEN - Solid	MiFi is powered but not transmitting or receiving
LED GREEN – slow blinking	MiFi is powered on but there is no service
LED GREEN – intermittent blinking	MiFi transmitting/receiving data; blinking rate proportional to data speed



### Power Button (LED)

The MiFi 2200 is designed with a power button that lights up to indicate whether or not the device is powered on and what the charging status is.

LED Color	Meaning
LED not lit	No Power to MiFi
LED BLUE – Solid	MiFi is Powered on and Roaming
LED GREEN - Solid	MiFi is powered on and fully charged
LED GREEN – glowing	MiFi is in hibernate
LED RED - blinking	MiFi Battery is Critically Low.
LED AMBER - solid	MiFi Battery is Charging
LED AMBER - blinking	MiFi Error, see Troubleshooting

## ***About the VZAccess Manager Software and the MiFi Settings***

### ***Ways to Access***

The MiFi 2200 supports **Mobile Broadband** and **Wi-Fi** service for a superior wireless data connection.

#### **Mobile Broadband/NationalAccess**

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 400 - 700 Kbps. 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.

##### **Rev. A capable data devices**

- Download: typical download speeds of 600 kbps - 1.4 Mbps.
- Upload: typical upload speeds of 500-800 kbps.

##### **Rev. 0 capable data devices**

- Download: typical download speeds of 400-700 kbps with a maximum download speeds burst to 2Mbps.
- Upload: typical upload speeds of 60-80 kbps with peak speeds burst to 144 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.*

*NationalAccess 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.*

#### **Wi-Fi 802.11b/g**

802.11 b uses the 2.4GHz frequency spectrum with a bandwidth of 11 Mbps.

802.11 g (2.4Ghz, 54Mbps).

## Getting Started

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In order to get started with your new device, you will need to follow a few simple steps:

1. Review and confirm that your computer meets the minimum system requirements
2. Insert and charge the battery
3. Plug into USB and activate the MiFi 2200

### ***The MiFi 2200 System Requirements***

To install and use the MiFi 2200, your host computer must meet these requirements:

Operating System * IN USB CABLE MODE with USB Cable ONLY	Windows® Vista, XP (SP2 or higher), 2000 <b>NOTE:</b> Windows XP SP1, Windows 2000 SP3 and SP4 require specific OS patches. For details please go to <a href="http://www.vzam.net">www.vzam.net</a> . - OR - Mac® OSX 10.4 or higher
Software	Internet browser software (i.e. Internet Explorer, Netscape, Safari, Firefox, AOL)
MiFi Software	Mobile Broadband/USB Cable Mode: <b>VZ</b> Access Manager included on the device, no CD required. Wi-Fi Mode: MiFi Settings
CPU	166 MHz or higher
Interface	One Type-A USB port and/or 802.11 b/g
Memory (RAM)	128 MB
Hard Disk Space	100 MB

## How to Use Your MiFi 2200

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This chapter provides information and instructions for setting up the MiFi 2200 for the first time. There are two power modes of use with the MiFi 2200, Mobile Broadband and Wi-Fi, which are detailed in this section.

The Quick Reference Guide that was included in the box when you purchased your product and the **VZ**Access Manager Software User Guide details the installation and configuration of the MiFi 2200 with the **VZ**Access Software.

Follow these steps to begin using the MiFi 2200:

**IMPORTANT:** Before using the MiFi 2200 for the first time, please insert the battery and charge fully.

### ***Power Management***

**There are three power modes in which the MiFi 2200 may be used:**

- Battery
- AC Wall Charger
- microUSB Cable

**Battery:** In this mode, the MiFi 2200 is powered by the rechargeable battery.

**AC Wall Charger:** In this mode, the MiFi 2200 is powered by the AC Wall Charger.

**microUSB Cable:** In this mode, the MiFi 2200 is powered directly by your computer via the microUSB cable.

**WARNING:** Mac Users: Plugging MiFi 2200 into a USB port for charging while MacBook® is in standby may frequently wake up the computer.

## ***How to use the Battery***

### **Battery tips**

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

- Always use Novatel Wireless Original batteries and chargers. The warranty does not cover damage caused by non-Novatel Wireless batteries and/or chargers.
- 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.
- 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.



**Contact your local recycling center for proper battery disposal. See page 46 for details on proper disposal of the battery.**

**WARNING:** Never dispose of batteries in a fire because they may explode.

Before using the MiFi 2200, read the battery safety information in the “Safety and General Information” section at the back of this guide. You will need to install and charge the battery as described below. Some batteries perform best after several full charge/discharge cycles.

## How to insert and charge the battery

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



2. Insert the battery by lining up the gold contact points on the battery with the gold contact points in the battery compartment.



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



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



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

**IMPORTANT:** Please use only an approved charging accessory to charge your device. Improper handling of the charging part, as well as the use of an incompatible charger, may cause damage to your device and void the Warranty.

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

## ***Powering the MiFi 2200 On and Off***

To power the device on:

1. Press the Power LED button until the Power LED lights up solid green.

To power the device off:

1. If the device is plugged into your computing device with the USB Cable, disconnect/unplug the USB cable from the device first.
2. Press the Power LED button until the Power LED shuts off.

## ***How to use the microUSB Cable***

**To properly connect the MiFi 2200 with the microUSB Cable:**

Grip the MiFi 2200 by its sides and gently insert the USB Cable into the microUSB port. Next, insert the other end of the cable in a Type A USB port. The cable should fit easily into the USB port. The following occurs:



1. The Hardware Icon appears in the taskbar (Windows) or on the Desktop (Mac).
2. MiFi 2200 begins charging and is powered on automatically.

**IMPORTANT:** When using the device with the microUSB Cable, fully extend the cable so that the device remains at an appropriate distance. The recommended minimum distance between you and the device is 8 inches.

## **Unplugging the MiFi 2200 when Connected with the microUSB Cable**

To unplug the MiFi 2200, first terminate your Internet connection session and exit **VZAccess Manager**.



## Windows

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

### To safely eject hardware:

Standard Unplug/Eject Hardware Removal

1. End your session by selecting **Disconnect** from **VZAccess Manager**.
2. Exit **VZAccess Manager** to ensure that the MiFi 2200 is powered off.
3. Right-click the **Safely Remove Hardware** icon in the notification area, click **Safely Remove Hardware**, click the device, and then click **Stop**.
4. Simply pull the cable straight out from both the MiFi 2200 and the computer.
5. The device remains powered on until you press and hold the power button to turn it off.

## Mac OS X

1. End your session by selecting **Disconnect** from **VZAccess Manager**.
2. Exit **VZAccess Manager** to ensure that the MiFi 2200 is powered off.
3. Right-Click (Option-Right Click) the **VZAccess Manager** desktop icon and select **Eject**.
4. Simply pull the cable straight out from both the MiFi 2200 and the computer.
5. The device remains powered on until you press and hold the power button to turn it off.

## Setting up the MiFi 2200 for the First Time

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**VZ**Access Manager must be installed prior to activation of your device. The first time you use the device, **VZ**Access Manager must be installed. Refer to the Quick Reference Guide that came with your device for details.

**IMPORTANT:** The MiFi 2200 requires an activated account with Verizon Wireless in order to function.

The MiFi 2200 can be activated three ways:

- in a Verizon Wireless store
- by contacting Verizon Wireless Telesales
- self-activated through the Verizon Wireless activation website.

**IMPORTANT:** Installation must be performed within a Mobile Broadband and/or National**Access** coverage area in tethered mode via the USB Cable. **VZ**Access Manager must be installed prior to activation.

**IMPORTANT:** Before installing your new software, delete or uninstall any previously existing modem or dialer software from your computing system using your operating system's Add/Remove Programs process.

## ***Installation: Windows and Mac***

1. Turn on your computing device and close all applications.
2. Connect the MiFi 2200 to your computer using the included USB Cable.
  - a) Insert the USB cable into the microUSB port on the USB on the MiFi 2200 and the other end into the USB port of your computer.
  - b) MiFi 2200 will power on automatically.

**NOTE:** If you are experiencing trouble easily connecting the USB cable into your computer's USB port and into the device:

Verify that you are inserting the USB cable in the proper orientation.

Verify that you are using a Type-A USB port on your computer.

Verify that you are connecting the microUSB connector end of the cable into the microSD port on the device.



3. **WINDOWS:** VZAccess Manager Installer automatically launches and the MiFi 2200 drivers automatically install once installation is complete (this may take few moments).

If VZAccess Manager does not automatically install, go to **Start>My Computer** and click to open the CD-ROM drive icon. Select **setup.exe** and wait a few moments for the software and drivers to automatically install.

**MAC:** The VZAccess Manager CD icon appears. Click to open and select VZAccess Manager to launch the installer. Follow the onscreen instructions to install the software and drivers.

Launch VZAccess Manager. The first time you launch VZAccess Manager the VZAccess Manager Setup Wizard appears. Following the on-screen instructions to configure the

device. When prompted, select "PC Card or USB Modem" as device type. Do not select "Tethered device".

4. If your device was not activated prior to installation of **VZ**Access Manager, the software will connect to the Verizon Wireless activation website. Follow the on-screen instructions to complete the activation.
5. Set up is complete.

## Accessing the User Guides

The User Guides may be easily accessed after **VZAccess Manager** has been installed. Your device includes two User Guides:

- **VZAccess Manager Software User Guide** – Details the functions of **VZAccess Manager**
- **The MiFi 2200 Product User Guide** – Details the MiFi 2200's hardware features and Wi-Fi configuration.

The guides will appear on your desktop during installation. If you are unable to locate the guides on your desktop, you may easily locate them in the **VZAccess** folder.

### To access the User Guides:

#### Windows

1. Connect the MiFi 2200 to your computer.
2. Go to **My Computer > Devices with Removable Storage**.
3. Right-click the **VZAccess Manager** icon in the Devices with Removable Storage list. A menu appears.
4. Select **Explore** and a window pops up. Click to open the **Docs** folder and the User Guides are visible.

#### Mac OS X

1. Connect the MiFi 2200 to your computer.
2. Go to Finder and click to open the **VZAccess Manager CD** icon.
3. The **VZAccess Manager** folder includes the User Guides.

## Connecting in Wi-Fi Mode the first time: Access MiFi Settings

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### **Overview**

After **VZ**Access Manager and the device drivers have been installed on your computer, you may elect to use the MiFi 2200 in WiFi mode.

The Web-based User Interface (shortened to Web UI in most of this document) is used to configure the MiFi 2200 while it is in “Wi-Fi” mode. In this mode, there is no USB connection from your host computer to the MiFi 2200, and the connection to the MiFi 2200 must be made via Wi-Fi.

### **How to Connect the MiFi 2200 in Wi-Fi Mode (No USB cable)**

**Note:** The battery must be fully charged in order to use the MiFi 2200 in Wi-Fi mode for the first time. (See Page 13 Setup: Wi-Fi Modem: Battery Use).

**When you connect the MiFi 2200 in Wi-Fi mode, the following should occur once you press the power button:**

- The MiFi 2200 is powered as soon as you press the power button and the Power LED lights up.
- Once the MiFi 2200 is powered and has been activated, it automatically connects to the Internet provided that Mobile Broadband / National**Access** service is available and one or more Wi-Fi devices are connected with MiFi.
- The 3G Status LED indicator on the device lights up and blinks according the connection speed.

## ***Connecting to the MiFi 2200's MiFi Settings***

To connect to the MiFi Settings in the MiFi 2200, follow this procedure:

1. Establish a Wi-Fi connection to the MiFi 2200.
  - Use your normal Wi-Fi manager on your computer to establish a Wi-Fi connection from your computer to the MiFi 2200.
  - The Wi-Fi settings must match those in use on the MiFi 2200. If using the default settings, refer to the Quick Start Guide for the default values. If you have previously changed the default profile on the MiFi 2200, or are using a different profile, use the values previously set on the MiFi 2200.
2. Open your Web Browser
3. In the "Address" or "Location" bar, enter the address of the MiFi 2200:
  - http://192.168.1.1
4. The Welcome Page appears.

## ***Welcome Page***

The Welcome page is displayed when your first connect to the MiFi Settings in the MiFi 2200, prior to login. This page provides some status information, but no configuration changes can be made until you login.

## **Login**

The "**Login**" field is on the top right of the screen. Login requires only a password – there is no login name.

Use the case-sensitive default password: "admin".

## **Status Information**

The Welcome page contains status information about the MiFi 2200. The status information is contained in three sections:

*Status Bar*

*Internet*

*WLAN*

### **1. Status Bar**

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

- **Signal Strength Image** – Indicates the current signal strength for the mobile network.
- **Network Name** – The name of the mobile network.
- **Network Technology** – The type of connection (e.g. EVDO, EVDO Rev A)

- **Roaming Indicator** – A triangular image is displayed while roaming.
- **Connection Status** – The current connection status states (Connected, Connecting, Disconnected, Disconnecting, Dormant, Not Activated).

## 2. Internet Status

This section provides details of the Internet connection (3G connection) provided by the MiFi 2200. If no Internet connection currently exists, most of the fields will be empty or zero.

- **Received** - For the current Internet connection, the amount of data received.
- **Transmitted** - For the current Internet connection, the amount of data transmitted.
- **Connection Time** - For the current Internet connection, the period of time which has elapsed since the connection was established.
- **IP Address** - The Internet IP address assigned to this MiFi 2200.
- **Mask** - The network mask associated with the IP address above.
- **Gateway** - The gateway IP address associated with the IP address above.
- **DNS** - The Domain Name Server currently used by this MiFi 2200.

## 3. WLAN

The WLAN section contains details of the Wireless LAN, also called **Wi-Fi network** or an **802.11 network**.

The following data is presented.

- **Profile** - The Wireless (802.11) profile currently in use. There are 3 possible profiles; each has its own settings. Once you login, you can change the profile in use.
- **Network Name** - The network name (SSID) used by the current Wi-Fi profile.
- **Security** - The security method used by the current Wi-Fi profile.
- **Users** - The number of users (wireless clients) connected to this MiFi 2200, and the number of wireless clients allowed. This is presented in the form "number connected / number allowed".
- **IP address** - The IP address of this MiFi 2200, as seen by devices on the WLAN (802.11 wireless network).
- **Mask** - The network mask associated with the IP address above.



## **Home Page**

Once you login, the **Welcome** page changes to the **Home** page.

This is almost identical to the Welcome page, but now some configuration options are available.

## **Menu**

The menu is now displayed, allowing you to navigate to any of the configuration pages. The available pages are described in the following sections of this chapter.

### **WLAN Profile**

The Wi-Fi Profile in use can now be changed. Just select the desired profile, and click the **“Apply”** button.

Changing the WIFI profile will terminate all Wi-Fi connections to the MiFi 2200, including the connection to the Web-based UI.

You must re-connect to the MiFi 2200 using the Wi-Fi settings of the new profile. Ensure you know what these settings are – check the Wi-Fi screen if uncertain.

## Wi-Fi Screen

This page is accessed via the menu, and contains all settings related to the WLAN, also called Wi-Fi network or 802.11 network.

### Wi-Fi Profiles

Wireless settings are contained in "Profiles". Three (3) profiles are available:

- **Secure** - Wireless security must be enabled.
- **Open** - No Wireless security is possible.
- **Temporary Hot Spot** - Security is enabled, and the network name (SSID) and security key are auto-generated. The other Wi-Fi settings are copied from the "Secure" profile.

This screen contains 2 Profile fields:

1. **Current Profile** – this is the Wi-Fi profile in use.
2. **Selected Profile** – the screen displays the Wi-Fi settings for this screen.

When the screen first loads, the Current and Selected profiles will be the same.

### Changing to a Different Profile

To use a different profile:

1. Select the desired profile in the "Selected Profile" list.
2. Wait for the screen to update with the Wi-Fi settings for the selected profile.
3. Click the "**Apply**" button to cause the MiFi 2200 to use the selected profile.

Changing the WiFi profile will terminate all Wi-Fi connections to the MiFi 2200, including the connection to the Web-based UI.

You must re-connect to the MiFi 2200 using the Wi-Fi settings of the new profile. Ensure you know what these settings are. This is the Wi-Fi screen.

### Updating the Current Profile

- Modify the displayed Wi-Fi settings
- Click the "**Apply**" button.

If you update the Current Profile, the existing connection will be lost. The effect will depend on which Wi-Fi settings you have changed:

1. If the network name (SSID) is changed, you will need to use the Wi-Fi manager on your computer to reconnect.
2. If the security method or network key is changed, you will need to use the Wi-Fi manager on your computer to reconnect.
3. For other changes, your computer should reconnect automatically after a short interval after the AP (Access Point) in the MiFi 2200 restarts.

## Updating other Profiles

You can also update a profile which is not in use. This will have no effect on the existing Wi-Fi connection from your computer to the MiFi 2200.

- Change the **Selected Profile** to the Profile you wish to change.
- Wait for the screen to update with the Wi-Fi settings for the selected profile.
- Change the settings as desired. Note that for the "Temporary Hotspot" profile, these settings cannot be changed directly. For this Profile, you can only click "**Generate**" to generate new values for the network name (SSID) and security key.
- Click the "**Update**" button to save your changes. Alternatively, click the "**Apply**" button to both update this profile and start using it (make it the current profile).

## Wi-Fi Settings

Each Wi-Fi Profile contains the following settings. For the "Temporary Hotspot" profile, these settings cannot be changed directly.

- **Network Name (SSID)** - The Network Name (also called SSID) of the Selected Profile. Note that each profile must have a different network name to avoid confusing wireless clients.
- **802.11 Mode** - Select the desired mode.
- **Channel** - Select the desired channel. If available, the "Auto" setting is recommended. With this setting, the best available channel will be automatically selected. If the "Auto" setting is not available, you can experiment to see which channel provides the best results, but normally the default value will be fine.
- **Security** - For the "Secure" profile, select the desired security method. Use the most secure method supported by your wireless clients. The options are listed in order, from least secure to most secure.
  - WEP 64-bit
  - WEP 128-bit
  - WPA Personal/PSK (TKIP)
  - WPA2 Personal/PSK (AES)
- **Network Key** - Enter the network key. The requirements for the network key depend upon the Security option chosen.
  - 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.

## Buttons

- **Update Profile** - Use this to update the settings for the selected profile, without using it. This button is only available if the "Selected Profile" is different to the "Current Profile".
- **Apply** - Update the "Selected Profile" with the settings shown on screen, and start using it. The Selected Profile will become the Current Profile, if it is not the Current Profile already.
- **Generate** – Only available for the "Temporary Hotspot" Profile, this button will re-generate the network name (SSID) and network key for this Profile. The other settings for this Profile are copied from the "Secure" Profile.
- **Revert** - Discard any changes made since the last "Update" or "Apply" operation. You can also discard changes by selecting a different profile in the "Selected Profile" list.

## **LAN Screen**

This screen contains information and settings related to the local LAN. Note that for the MiFi 2200, the local LAN is the same as the WLAN (Wi-Fi network), because there are no wired clients.

The following fields are available.

- **LAN IP Address** - The IP address for this client, as seen from the local network. Normally, you can use the default value.
- **Subnet Mask** - 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 MAC Address is a low-level network identifier. Every network interface must have a MAC address. This read-only field displays the MAC Address for the WLAN interface. Unlike the IP address, the MAC Address does not change when you connect to a different network.
- **DHCP Address Range** – The DHCP Server allocates IP addresses to clients. This field indicates the ranges of IP addresses which are reserved for use by the DHCP Server. If you have any clients which use a fixed IP address, that fixed IP address should be outside the DHCP Address Range.
- **LAN Devices** - This table lists all known clients on the local LAN. For each client, the following data is provided.
  - **IP Address** - The IP address of the client.
  - **IP Type** – This indicates "DHCP" if the IP address was allocated by the DHCP Server in this MiFi 2200. If "ARP" is displayed, then the client was discovered using the ARP protocol.
  - **Hostname** - If known, the name of the LAN client. This information is not always available.
  - **MAC Address** - The MAC Address is a low-level network identifier. This field displays the MAC Address of the client
  - **Date/Time** - The Date/Time when the client was detected.

## ***Password Screen***

Available on the **Security** sub-menu, the Password screen allows you to change the password which you used to login to this Web-based interface.

To change the login password:

- Enter the current password into the "Current Password" field.
- Enter the new password into the "New Password" field, using only letters, numbers, and standard punctuation symbols. The password must be at least 4 characters long.
- Verify the new password by re-entering it in the "Verify New Password" field.
- Click "**Apply**" to save your changes.

## MAC Filter Screen

Available on the **Security** sub-menu, the MAC Filter screen allows you to control which Wi-Fi clients can use the MiFi 2200 to connect to the Internet. Access is allowed only for known and trusted wireless clients. The trusted clients are identified by their MAC address, which is a unique low-level network ID.

**Note:** On Windows computers, the "MAC address" is called the "Physical Address". You can check the properties or status of the wireless interface on your computer to find the MAC address of your computer.

The MAC Filter screen contains the following settings.

- **Enable MAC Filter** - Use this checkbox to enable or disable this feature as required.
  - **Enabled:** The MAC address of each wireless client is checked. If the MAC address is in the "Trusted Client MAC Address List", access is allowed. Otherwise, access is blocked. Note that allowed clients must still have the correct Wireless Security settings.
  - **Disabled:-** This feature is disabled, and the MAC address of each Wireless client is not checked. All clients will be allowed. However, clients must still have the correct Wireless Security settings.
  
- **Trusted Client MAC Address List** - This lists the MAC addresses of Wireless clients for which you have allowed access.

If you have not entered any MAC addresses, this list will be empty.

If the list is not empty, you can remove a client from the list by selecting it and clicking the "**Delete**" button.
  
- **Add Trusted Client MAC Address** - Use this to add a wireless client to the "Trusted Client MAC Address List".
  - Enter the MAC address of the wireless client,
  - Click the "**Add Client**" button.
  - When finished updating the Trusted Client list, click the "**Apply**" button to save the updated list.
  - Alternatively, clicking the "**Revert**" button will discard any changes made since the last "**Apply**" operation.

## Port Filtering Screen

Available on the **Security** sub-menu, this screen allows you to configure the Port Filtering feature. This feature can block outgoing Internet traffic. If enabled, only known applications, identified by port number, can connect to the Internet.

This screen contains the following settings

- **Enable Port Filter** - Use this checkbox to enable or disable the Port Filtering feature as desired.
  - **Enabled:** Only traffic from the specified "Allowed Applications" is allowed. Other outgoing (Internet) traffic is blocked.
  - **Disabled:** This feature is disabled, and outgoing traffic is not checked.
- **Allowed Applications** - Enable each application which you wish to be able to access the Internet while the Port Filter feature is enabled. All other applications will be blocked.
- **Custom Applications** - Use this button if you wish to define your own applications. A sub-window will open and provide the opportunity to define additional applications. This screen is described in the following section.

## Custom Applications Screen

This screen is reached by the "Custom Applications" button on the **Port Filter** screen. It allows you to 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.

This screen contains the following settings:

- **Checkbox** - Use this to enable an application after you have defined it. If enabled, then traffic from this application is allowed to access the Internet. If not checked, traffic for this application is blocked.

**NOTE:** These checkboxes have no effect unless the Port Filter is enabled on the **Port Filter** screen.

- **Application Name** - Enter a suitable name for the application.
- **Ports** - Click this link to display the Port Definition panel, allowing you to define the ports used by this application. Click "**Hide**" when finished defining the current application; click "**Apply**" when finished defining all applications.
- **Port Definition Panel** - This panel is displayed when the "Ports" link is clicked, and allows you to define the ports used by the current application. The current application is indicated by background shading and panel heading. You can define up to 5 port ranges for each application, as follows:



- **Start Port** - Enter 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** - Enter the end of the range of port numbers. For a single port (rather than a range), enter the same value for both the Start Port and End Port.
- **Protocol** - For each port range (each row), select the protocol (TCP, UDP, or both) used by that port range.

### **Saving your Changes**

You can define all required applications before clicking the **“Apply”** button.

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***

Available on the **Advanced** menu, this screen contains a number of rarely-used settings intended for use in special circumstances.

The settings on this screen are organized into 3 categories

*Access Point*

*3G Modem*

*Router*

*System*

### **Access Point Settings**

- **SSID broadcast enable** - Normally, this should be left enabled so that MiFi 2200 will appear in the list of "Available Wireless Networks" on your computer or portable device. If disabled, MiFi 2200 will not be listed, and its details must be entered manually.

### **3G Modem**

- **Auto-connect enable** – Normally, this should be left enabled so that MiFi 2200 automatically connects to Mobile Broadband/NationalAccess. If disabled, MiFi 2200 will connect to Mobile Broadband/NationalAccess only after user clicks **Connect** button on home screen.

### **Router Settings**

- **DHCP Server enable** - The DHCP Server automatically allocates an IP address to each of your wireless clients. Normally, this should be enabled. If disabled, each Wireless client should have a fixed IP address, set on the client.
- **VPN Pass-through enable** - This feature allows VPN clients to connect through MiFi 2200 to remote VPN Servers. Normally, this option should be left enabled.

### **System Settings**

- **System log enable** - Enable or disable the system log as desired. The system log can be viewed on the "Diagnostics" screen.
- **Language** - This option sets the language used in this interface. Select the desired option.
- **Date/Time** – You can use either American or European format. Select the desired option.

## Config File

Available on the **Advanced** menu, this screen provides the ability to download (backup) a copy of the configuration settings from the MiFi 2200 to a file on your computer, or restore (upload) a previously-saved configuration file from your computer to the MiFi 2200.

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

### Config File Download

Click the "**Download File**" button to download a copy of the current configuration, and store the file on your computer. You will be prompted to save the file; you can rename it if desired.

### Config File Upload

Use this to restore a previously-saved configuration file to the MiFi 2200. This action will overwrite all existing settings with the values stored in the config file.

- **File** - Enter the path and filename for the config file you previously downloaded to your computer, or click the "**Browse**" button to use the normal "Open File" dialog to select the config file on your computer.
- **Upload File** - After selecting a config file on your computer, click "**Upload File**" button to begin the upload. After uploading, the config file is immediately applied, and MiFi 2200 will restart.

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

## ***Diagnostics***

Available on the **Advanced** menu, this screen displays details of the firmware (software) and other system-level information. You can also view the system log and perform various operations. 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 ESN is used by the mobile data network to identify this particular modem.

MDN - The 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 (software) currently installed.
- **Router** - For the Router component, the version of the firmware (software) currently installed.
- **Modem** - For the Modem component, the version of the firmware (software) currently installed.

### **System Status**

- **Modem Status** - Click this to view details of the Modem status in the panel beside this button. This information is mostly useful for troubleshooting.
- **System Log** - Click this to view the System Log in the panel beside this button. The System Log records various operations, and is mostly useful for troubleshooting.

### **Traffic Counters**

These counters record incoming and outgoing Internet traffic. They continue incrementing until restarted. The following data and operations are supported.

1. **Start Date** - The date on which these Traffic Counters started. If the counters have been restarted, this will be the date of the last restart. Otherwise, this will be the date of the first connection.
2. **Total connection time** - This records the total time period during which a data connection to the Internet is available.
3. **Data Received** - The total amount of data received.
4. **Data Transmitted** - The total amount of data transmitted.

5. **Restart Counters** - Click to button to set the counters above to zero.
6. **Connection Log** - Click this to view the Internet Connection Log.

**Note:** That the Internet Connection Log shows only the most recent connections rather than all of the connections, which contribute to the Traffic Counters.

### **Operations**

The following system-level operations are supported.

- **Restart** - Restart MiFi 2200. All Internet connections, and all Wi-Fi connections, will be lost during the restart.
- **Reset to Factory Defaults** - Use this to reset all AP and Router settings to their factory default values. All existing settings will be lost.

**WARNING!** The "Reset to Factory Defaults" operation will overwrite ALL existing settings. If the Wi-Fi settings change, you will lose this connection, and will need to reconnect using the new settings.

## **Port Forwarding**

Available on the **Advanced** menu, this feature allows incoming traffic (from the Internet) to be forwarded to a particular computer or device on your local WLAN. Normally, incoming traffic from the Internet is blocked by the Firewall.

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 on-line games, Port Forwarding must be used in order for the game to function correctly. Note that Port Forwarding creates a security risk and should be disabled when not required.

## **Using Port Forwarding**

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

1. Install the application on a computer on your local WLAN.
2. Ensure the computer is connected to MiFi 2200, and record the computer's IP address for the Wi-Fi interface.
3. On this screen, enter the computer's IP Address in the "IP Address on WLAN" field beside the application name.
4. Enable this application on this screen by checking its checkbox.
5. Save your changes with the "Apply" button.
6. On the "Home" screen, make a note of the Internet IP address of MiFi 2200.
7. Ask users on the Internet to connect to the Internet IP address of MiFi 2200. These connection requests will be forwarded to the IP address specified in step 3.

When no longer needed, the application should be disabled on this screen by unchecking its checkbox, and saving this change with the "Apply" button. Leaving applications enabled unnecessarily creates a security risk.

## ***Power Management***

Available on the **Advanced** menu, this screen controls the Power Management features of the MiFi 2200. The MiFi 2200 can switch to a low-power Standby mode. When using battery power, switching to Standby mode will greatly extend the battery life. While in Standby mode, the LED will blink slowly, fading in and out. To exit Standby mode, press the power button.

### **Battery Power**

- Select the desired Standby option.
- When powered by the battery, the MiFi 2200 will switch to Standby mode after being idle for the selected time period, provided that no Wi-Fi devices are connected to MiFi. To prevent switching to Standby mode, select "Never".
- Select the desired Standby option.
- When powered by the battery, the MiFi 2200 will shut down after being idle for the selected time period, provided that no Wi-Fi devices are connected to MiFi. To prevent MiFi from shutting down, select "Never".

**NOTE:** These settings have no effect when using the USB connection.

## ***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>.



## Troubleshooting

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The following tips will help solve many common problems encountered while using the MiFi 2200:

- Make sure you are using the MiFi 2200 in the correct geographic region: a Mobile Broadband and National **Access** the MiFi 2200 in the US.
- Ensure that the wireless network's coverage extends to your current location.

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

- The wrong driver has been installed.
- System resources required by the MiFi 2200 are being used by other devices.
- Network coverage is not available (either because you are outside the Mobile Broadband and National **Access** coverage area or because of an account or network problem).

### ***Master Reset***

There is Master Reset button on the bottom of the device. The Master Reset button restores the device Wi-Fi settings only back the factory default settings.

To use the Master Reset button:

1. Locate the button on the bottom of the device.
2. Depress for five (5) seconds.

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
My MiFi powered off once I plugged it into the wall charger	This occurs if any power settings are activated once the device is plugged into the wall charger (i.e. pressing the Master Reset button).	Manually press the power button to turn it back on.
My MiFi just powered off without my pressing the power button	This may occur under any of the following circumstances <ul style="list-style-type: none"><li>• Pressing the Master Reset button</li><li>• Restarting the device</li><li>• Switching Profiles</li><li>• Restoring the Configuration Settings</li><li>• Battery depleted</li></ul>	Manually press the power button to turn it back on. If battery is depleted, charge the device with the wall charger or USB cable.

For issues related to **VZAccess Manager** consult the [VZAccess Manager Software User Guide](#).

# Product Specification

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## Technical Specifications

**TABLE 1: GENERAL SPECIFICATIONS**

Name:	Verizon Wireless MiFi 2200
Model:	MiFi2200 VZW
Weight	58 g / 2.05 oz
Dimensions:	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 – Wi-Fi Mode	802.11 b/g
Default SSID	Verizon MiFi2200
Battery Size Duration for full charge: AC Charger Duration for full charge: computer USB Cable	1150 mAh 2.5 Hours (when not in use) 7-8 Hours computer USB Cable (when not in use)
Chip Set	QUALCOMM™ QSC6085
Interface Type:	Type A USB Port for computer USB Cable microUSB (included)

**TABLE 2: CDMA TECHNOLOGY**

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

**TABLE 3: OPERATING SPECIFICATIONS**

Operating Temperature	14°F to 113°F
Storage Temperature	-4°F to 77°F
Drop	3.28 feet drop, no damage – fully operational
Vibration Stability	5 Hz to 500 Hz, 0.1 octave/second

## Regulatory Notices

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### *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.

# 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.

## ***Safety Content***

### **Safety Notices**

Do not operate your MiFi 2200 in any area where medical equipment, life support equipment, or near any equipment that may be susceptible to any form of radio interference. In such areas, the host communications device must be turned off. The MiFi 2200 may 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 MiFi 2200 is removed from the card slot prior to boarding aircraft in order to comply with these regulations. MiFi 2200 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.

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.

## ***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.

### **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 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 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 batter 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.

## Limited Warranty and Liability

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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.

# Glossary

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## **1xRTT**

Short for single carrier (1x) Radio Transmission Technology. A high speed wireless technology based on the CDMA platform. 1xRTT has the capability of providing broadband-like speeds of up to 144 Kbps. 1xRTT is also referred to as CDMA2000.

## **1xEVDO**

Part of a family of CDMA2000 1x digital wireless standards. 1xEVDO is a "3G" standard. EVDO stands for "EVolution, Data-Optimized." 1xEVDO is based on a technology initially known as "HDR" (High Data Rate) or "HRPD" (High Rate Packet Data), developed by Qualcomm. The international standard is known as IS-856. 1xEVDO has the capability of providing broadband-like speeds of average speeds of 400-700 kbps.

## **bps**

Bits per second – 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.

## **Computing Device**

Personal Computing device (notebook, desktop computer, tablet computer, PDA, etc).

## **Kbps**

Kilobits per second – rate of data flow

## **LAN**

Local Area Network. A data network confined to limited area with moderate to high data rates. Does not use common carrier circuits, although may have gateways or bridges to other public or private networks.

**MicroUSB**

MicroUSB is not to be confused with miniUSB. The micro USB technology features a small and durable form factor for frequent use. MicroUSB was developed by the USB Implementers Forum, Inc. (USB-IF), an independent non-profit group that works to advance USB technology.

**Mbps**

Megabits per second

**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](http://www.cdg.org).

**SMS**

Short Messaging Service. Short text messages of generally no more than 140-160 characters sent and received by wireless devices.

**Tethered Modem**

Refers to using MiFi 220 with your notebook connected with a USB cable instead of wirelessly.

**Type A USB**

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.

**USB**

Universal Serial Bus. A connection type for computing device peripherals such as a printer, mouse, keyboard, etc.

**VPN**

Virtual Private Network. A way to communicate through a dedicated server securely to a corporate network over the Internet.



## **WAN**

Wide Area Network (WAN). A computer network covering a broad geographical area. WANs are used to connect local area networks (LANs) together, so that users and computers in one location can communicate with users and computers in other locations.

## **Wi-Fi**

Wi-Fi (Wireless Fidelity) refers to any system that uses the 802.11 standard, which was developed by the Institute of Electrical and Electronics Engineers (IEEE) and released in 1997.

## **WWAN**

Wireless Wide Area Network (WWAN). Also called "wireless broadband" or "broadband wireless," wireless WANs (WWANs) use cellular towers to transmit a wireless signal over a range of several miles to a mobile device compared to wireless Wi-Fi LANs (WLANs), which span only a few hundred feet and generally to only stationary devices.

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