

# BROADBANDACCESS / NATIONALACCESS<sup>TM</sup>



# USB760 MODEM HARDWARE USER MANUAL

DRAFT ONLY\_Rev1B

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# Welcome

Congratulations on purchasing the Verizon Wireless USB760 Modem for BroadbandAccess and NationalAccess service!

Before installing the USB760 Modem VZAccess Manager software and drivers, review this manual which outlines the features of the USB760 Modem hardware.

This dual-band USB Modem operates over the high-speed Broadband**Access** and National**Access** networks in the 800/1900 bands enabling you to connect at high speeds to the Internet, your corporate Intranet, and your email while you're away from the office.

# **Wireless communications**

### **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 modem 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 USB760 Modem, or failure of the USB760 Modem to transmit or receive such data.

## Safety hazards

Do not operate the USB760 Modem 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 your modem 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 modem 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 modem 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 modem 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 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.

# Limitation of liability

The information contained in this document is subject to change without notice and should not be construed as a commitment by Verizon Wireless Inc.

# Copyright

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# **Patents and licenses**

Licensed by QUALCOMM Incorporated under one or more of the following Patents:

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.

# **USB760 Modem Hardware: Overview**

Thank you for choosing the advanced and compact USB760 Modem with microSD<sup>™</sup> by Novatel Wireless! This 2-in-1 mini device empowers you with high-speed data access on the Verizon Wireless Broadband**Access** wireless data network and it provides removable memory storage options all in one convenient and compact USB package. Along with the many advanced features of Broadband**Access**, such as data speeds up to 1.4Mbps, this device offers:

#### • High Speed Wireless Data (BroadbandAccess)

The USB760 Modem enables subscribers to access the latest in CDMA EV-DO technology, referred to as Rev A, resulting in higher data rates and higher system capacity that enable richer applications and services.

#### • Optional microSD<sup>™</sup> Memory Storage

Optional removable memory storage makes life on the go more convenient than ever. Save and transport important files such as documents, music, and pictures on microSD cards up to 16GB.

#### • Thumb-Size USB (Universal Serial Bus)

Only a couple of inches in size, the universal form factor makes wireless Broadband**Access** and file storage more convenient than ever since it works with virtually all computing devices equipped with a Type-A USB port such as notebooks, desktops, tablet PCs, and personal digital assistants.

#### • Exclusive NovaSpeed Technology

NovaSpeed, the latest software technology from Novatel Wireless, enhances Broadband**Access** speed up to 400%. Experience pure streaming video, online gaming, simultaneous uploads and downloads, and large file transfers with virtually no interruptions or buffering.

• Intuitive VZAccess Manager Software for automatic installation without a CD and easy navigation.

#### Compatibility with Different Operating Systems

Designed to operate on different computing platforms and operating systems including, Windows Vista, XP, 2000; Mac OS X 10.3.9 or higher; and Linux \*see System Requirements for a complete list of operating system support.

#### More features of this 2-in-1 device include

- Advanced embedded antenna design
- VPN capability
- Auto Connectivity options
- 2-Way Short Messaging Service (SMS)
- NDIS configuration
- External Antenna Connector

## Care of Your USB760 Modem

As with any electronic device, the USB760 Modem must be handled with care to ensure reliable operation. Verizon Wireless recommends the following handling guidelines:

- Do not apply adhesive labels to the USB760 Modem; they may cause the device to potentially overheat and they may alter the performance of the antenna
- 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 USB760 Modem from liquids, dust, and excessive heat.
- Store the USB760 Modem in a safe place, when not in use.

# **Getting Started**

**Important:** The USB760 Modem requires an activated account with Verizon Wireless in order to function. The modem can be activated three ways:

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

## **Customer Service**

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

## **USB760 Modem System Requirements**

To install and use the USB760 Modem, your host computer must meet these requirements:

Operating System	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 <u>www.vzam.net</u> . - OR - Mac® OS X 10.3.9 or higher Linux
Software	Internet browser software (i.e. Internet Explorer, Netscape, Safari, Firefox, AOL)
Modem Software	<b>VZ</b> Access Manager included on the device, no CD required.
CPU	166 MHz or higher
Interface	One Type-A USB port
Disk Drive	CD-ROM
Memory (RAM)	32 MB
Hard Disk Space	14 MB

# Your Verizon Wireless USB760

Your USB760 Modem has the following parts:

Note: VZAccess Manager software is required to be installed on each device to support the modem.

- **USB** Connector
- e microSD Slot
- **B** Protective Cap (not shown)
- 4 Lanyard hook (on bottom of device)
- **5** LED Indicator
- **6** External Antenna Connector

Bottom view, USB connector end





- 1. **USB Connector**: Connects to your computing device via the Type A USB port
- 2. microSD Memory Card Slot: Accommodates optional microSD memory cards up to 4GB (*microSD* cards sold separately)
- 3. **Protective Cap:** Protects USB Connector from debris/damage when not in use.
- 4. Lanyard hook: Permits use of lanyard accessory for wearable portability of the USB760.
- 5. **External Antenna Connector**: Connect an optional external antenna to the USB760 Modem for improved performance in fringe areas
- 6. **Service Status Indicator (LED)**: Visual simple service status LED indicator that shows you service and data modes. Please see the following page for an explanation of the LED states.

## Service Status Indicator (LED)

The USB760 Modem is designed with a status light that simply indicates whether or not the device is powered on and what the connection status is.

LED not lit	No Power to Modem
LED GREEN - Solid	Modem is powered but not transmitting or receiving
LED GREEN – slow blinking	Modem searching for a CDMA network
LED GREEN – intermittent blinking	Modem transmitting/receiving data; blinking rate proportional to data speed
LED RED	No Service
LED AMBER	Error, reset modem

# The USB760 Modem Package

The Verizon Wireless USB760 Modem package includes:

- Verizon Wireless USB760 Modem
- VZAccess Manager CD ROM (includes detailed user guides)
- Quick Reference Guide
- Lanyard
- Keychain

# Ways to Access

The Verizon Wireless USB760 Modem supports Verizon Wireless **BroadbandAccess** and **NationalAccess** service for a superior wireless data connection.

## BroadbandAccess/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. Broadband**Access** 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 Broadband**Access** 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.

BroadbandAccess 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 Broadband**Access** service area. Your Broadband**Access** Rev. A-enabled device will indicate coverage when you are in a Broadband**Access** Rev. A service area. When outside the Rev. A service area, your wireless device will revert to Broadband**Access** 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.

# How to Use Your USB760 Modem

# **Basics**

The comprehensive 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 your USB760 Modem with the **VZ**Access Software.

## Using the Device for the First Time

Follow these steps to begin using your USB760 Modem:

#### Windows

- 1. Turn on your computing device and close all applications.
- 2. Insert the USB760 Modem into your computer's USB port.
- VZAccess Manager and the USB760 Modem drivers automatically install (this may take a few moments). If VZAccess Manager does not automatically install, go to Start>My Computer and click to open the CD-ROM drive. Select setup.exe and wait a few moments for the software and drivers to automatically install.
- 4. Launch **VZ**Access Manager. The first time you launch VZAccess Manager the VZAccess Manager Setup Wizard appears. Following the on-screen instructions to configure the device\*.
- 5. If your device was activated prior to installation of VZAccess Manager and you are in a broadband coverage area, you will be connected to the Verizon Wireless network. If your device was not activated prior to installation of VZAccess Manager, the software will connect to the Verizon Wireless activation website. Follow the on-screen instructions to complete the activation.

\*Refer to the VZAccess Manager User Guide, located on the Installation CD for more detailed instructions.

#### Mac

- 1. Turn on your computing device and close all applications.
- 2. Insert the USB760 Modem into your computer's USB port.
- 3. 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.
- 4. 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\*.
- 5. If your device was activated prior to installation of VZAccess Manager and you are in a broadband coverage area, you will be connected to the Verizon Wireless network. If your device was not activated prior to installation of VZAccess Manager, the software will connect to the Verizon Wireless activation website. Follow the on-screen instructions to complete the activation.

\*Refer to the VZAccess Manager User Guide, located on the Installation CD for more detailed instructions.

**Important:** Installation must be performed within a Broadband**Access** and/or National**Access** coverage area. **Important:** Before installing your new software, delete or uninstall any previously existing modem or dialer software from your computing system.

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# Inserting and Removing the USB760 Modem

## Inserting and Connecting the USB760 Modem

When you connect the USB760 Modem, the following should occur once VZAccess Manager has been installed:

- Under ideal conditions, the label of the USB760 Modem should be facing up.
- The USB760 Modem is powered as soon as you connect it to the Type A USB port of your computing device. Although the modem is powered, it does not automatically connect to the Internet.
- The LED indicator on the device lights up.
- If sound effects are enabled, the computing device may beep.
- The VZAccess Manager Software starts (unless the auto-launch feature has been disabled).

#### To properly insert the USB760 Modem:

- 1. Remove the protective cap from the device.
- Grip the USB760 by its sides and gently insert the device into the Type A USB port. The USB760 should fit easily into the USB port (see also USB Extension Cable on page XX). Do not force the USB760 into the USB port as this may damage both the device and the USB port.
- 3. The Hardware Icon appears in the system tray (Windows) or on the Desktop (Mac).

NOTE: If you are experiencing trouble inserting the device into you computer's USB port:

- 1. Verify that you are inserting the device the proper way.
- 2. Verify that you are using a Type-A USB port.

## **Removing the USB760 Modem**

To remove the USB760 Modem, first terminate your Internet connection session and exit **VZ**Access Manager. Alternatively the USB760 Modem may be removed after the computing device is shutdown or turned off.

**Important:** Verify that all file transfers to the microSD card are complete before removing the device, otherwise you are at risk of losing data.

#### WINDOWS

The USB760 Modem's USB technology allows you to safely remove the USB760 Modem at any time when you are not connected to the network. Below are hardware removal options.

Quick Removal

- 1. End your BroadbandAccess session by selecting Disconnect from VZAccess Manager.
- 2. Exit **VZ**Access Manager.

3, Simply grip the USB760 Modem on both sides and pull straight out to avoid damaging the USB connectors.

Standard Unplug/Eject Hardware Removal

- 1. End your BroadbandAccess session by selecting Disconnect from VZAccess Manager.
- 2. Exit **VZ**Access Manager to ensure that the USB760 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 grip the USB760 Modem on both sides and pull straight out to avoid damaging the USB connectors.

#### MACINTOSH

- 1. End your BroadbandAccess session by selecting Disconnect from VZAccess Manager.
- 2. Exit VZAccess Manager to ensure that the USB760 is powered off.
- 3. Right-Click (Option-Right Click) the VZAccess Manager desktop icon and select Eject.

4, Simply grip the USB760 Modem on both sides and pull straight out to avoid damaging the USB connectors.

**NOTE:** Once you have connected the USB760 Modem, avoid removing it before your Internet connection is terminated, as some operating systems may be unable to respond to the sudden change in operation, causing automatic shutdowns or screen freeze issues.

# **USB760** Accessories

There are a variety of optional accessories available for your device that are sold separately through Verizon Wireless and there are three easy ways to purchase them:

- Shop online anytime at <u>www.verizonwireless.com</u>
- Call us at 1866 VZ GOT IT (894 6848)
- Visit one of the Verizon Wireless Communication Stores

## Accessories

- microSD<sup>™</sup> Memory Card up to 16 GB
- Lanyard (included with your purchase)
- Flexible USB Extension Cable

# How to Insert and Use the microSD Memory Card

The USB760 is equipped with removable, hot-swappable, memory storage. The convenience of this feature enables you to connect to high-speed Broadband**Access** for Internet and VPN accessibility on the fly and store precious data simultaneously to an external drive without the need of another flash drive.

A microSD card (sold separately) is required to take advantage of the memory storage feature.

#### To Insert a microSD Card

- 1. Locate the microSD port as depicted in the figure to the right.
- 2. Remove microSD card blank following the Eject instructions.
- 3. Line up the microSD card with the port as shown here.
- 4. Gently push in the microSD card one time until it clicks into place.



#### To Eject a microSD Card

The USB760 removable memory storage feature is hot-swappable, meaning the microSD card may be removed at any time, whether the USB760 is inserted in the computing device or not.

- 1. Gently push in the microSD card and it will pop out half way of the slot.
- 2. Once partially visible, you may pull the microSD card out of the slot and store in dry, safe place.

#### To Save Information on the microSD Card

Saving files to the microSD Memory Card on the USB760 follow the same principles as saving files to any external flash drive per your specific operating system.

#### WINDOWS

# INSERT THE USB760 INTO YOUR COMPUTER'S USB PORT (SEE PAGE XX: INSERTING AND REMOVING THE USB760).

- The computer detects new hardware and the Unplug/Eject icon appears in the taskbar.
- You may save files to the USB760 two ways:

#### Save download files directly to the USB760

- 1. In the **Save to**: box, click the down arrow to view the contents of the pull down menu.
- 2. Select the USB760 which appears as a drive letter (i.e. E:, F:, G:, etc) Mass Storage or Removable Storage.
- 3. Type a name for the file you are saving to the USB760 and click **Save**.

#### Save files from an Application

- 1. When saving files directly from an application to the USB760, go to File > Save As.
- 2. In the Save in: box, click the down arrow to view the contents of the pull down menu.
- 3. Select the USB760 which appears as a drive letter (i.e. E:, F:, G:, etc) Mass Storage or Removable Storage.
- 4. Type a name for the file you are saving to the USB760 and click **Save**.

#### Drag/Drop – Copy/Paste

- 1. Go to **My Computer** and locate the USB760 as **Mass Storage** or **Removable Storage** with a letter assigned to it (i.e. **E:**, **F:**, **G:**, etc). Double-click to open the window and view the contents.
- 2. You may drag or copy/paste files into the Mass Storage or Removable Storage folder.

#### MACINTOSH

#### Save download files directly to the USB760

- 1. In the **Save to**: box, click the down arrow to view the contents of the pull down menu.
- 2. Select the USB760 which may appear as **No Name** in the Finder sidebar.
- 3. Type a name for the file you are saving to the USB760 and click **Save**.

#### Save files from an Application

- 1. When saving files directly from an application to the USB760, go to File > Save (or Save As...).
- 2. In the **Save in**: box, click the down arrow to view the contents of the pull down menu.
- 3. Select the USB760 which typically appears as **No Name** In the Finder sidebar.
- 4. Type a name for the file you are saving to the USB760 in the **Save As** and click **Save**.

#### Drag/Drop - Copy/Paste

- 1. Go to **Finder** and locate the USB760 as **No Name**. Double-click to open the window and view the contents.
- 2. You may drag or copy/paste files into the **No Name** folder.

#### To Open Files from the microSD Card

#### WINDOWS

- 1. Ensure the USB760 Modem is properly inserted in the computing device (see page 9, Inserting and Removing the USB760 Modem).
- 2. Go to **My Computer** and locate the USB760 Modem as **Mass Storage** or **Removable Storage** with a letter assigned to it (i.e. **E:**, **F:**, **G:**, etc). Double-click to open the window and view the contents.

#### MAC

- 1. Ensure the USB760 Modem is properly inserted in the computing device (see page 9, Inserting and Removing the USB760 Modem).
- 2. Go to **Finder** and locate the USB760 Modem drive (may appear as **No Name**). Double-click to open the window and view the contents.

## How to Use the Lanyard Accessory

A lanyard is included in the USB760 package. The lanyard is a convenient accessory that enables you to wear the USB760 around your neck while on the go.

**Important:** Do not wear the lanyard and the USB760 around rotating or machinery or during sleep. An emergency release clip is constructed in the design, however you may also cut through the material.

#### To affix the lanyard to the USB760

- 1. Locate the Lanyard Hook on the device.
- 2. Pinch the looped thread on the lanyard and feed through the Lanyard hole in the protective cap.
- 3. Pinch the looped thread on the lanyard and insert into the Lanyard Hook hole until it exits through the other side.
- 4. Insert the end of the Lanyard (and protective cap, if applicable) through the loop and pull to tighten.

NOTE: Do not pull the lanyard string too tight; otherwise, you will be unable to easily remove the protective cap.



# How to Use the Flexible USB Cable

The Flexible USB Cable Extension accessory (sold separately) is a safe and convenient method of using the USB760 when solving clearance issues due to overcrowding in the USB port area of your computer (a common occurrence with notebooks).

- 1. Plug one end of the USB Cable into the Type A USB port on your computer.
- 2. Insert the USB760 into the other end of the USB Cable.
- 3. Launch **VZ**Access Manager and click **Connect**.



# **Technical Support**

# **Data Technical Support**

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

# Troubleshooting

# USB760 Modem

The following tips will help solve many common problems encountered while using the USB760 Modem:

- Make sure you are using the USB760 in the correct geographic region: a BroadbandAccess and NationalAccess USB760 in the US.
- Ensure that the wireless network's coverage extends to your current location.

When properly installed, the USB760 Modem 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 USB760 Modem are being used by other devices.
- Network coverage is not available (either because you are outside the Broadband**Access** and National**Access** coverage area or because of an account or network problem).

For issues related to the VZAccess Manager consult the VZAccess Manager User Guide, located on the Installation CD.

# **Product Specification**

# **Technical Specifications**

Name:	Verizon Wireless USB760 Modem
Model:	USB760 Modem
Approvals:	FCC (North America);CDG,
Weight	19 g / 0.67 oz
Dimensions:	57 mm x 25 mm x 12 mm
	2.24 in x 0.98 in x 0.47 in
Wireless Network – Dual Mode:	CDMA 1X/EV-DO
Chip Set	QUALCOMM™ QSC6085
Interface Type:	Type A USB Port

### TABLE 1

TABLE 2

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 Temperature	0° C to +45° C (32°F to 131° F)
Storage Temperature	-20° C to +65° C (-4° F to 149° F)
Relative Humidity	5% to 90% over operating temperature
Drop	1 meter drop, no damage – fully operational
Vibration Stability	5 Hz to 500 Hz, 0.1 octave/second

# **Regulatory Notices**

# Federal Communications Commission Notice (FCC -- United States)



Electronic devices, including computers and wireless modems, generate RF energy incidental to their intended function and are therefore subject to FCC rules and regulations.

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. 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:

- 1. This device may not cause harmful interference.
- 2. 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 USB760 MODEM IS FACTORY TUNED. NO CUSTOMER CALIBRATION OR TUNING IS REQUIRED. CONTACT VERIZON WIRELESS TECHNICAL SUPPORT FOR INFORMATION ABOUT SERVICING YOUR WIRELESS COMMUNICATION DEVICE.

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

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

This USB modem is approved for use in normal size notebook computers only (typically with 12" or larger display screens). To comply with FCC RF exposure requirements, this modem should not be used in configurations that cannot maintain at least 11 mm (approximately 0.43" or 7/16") from users and bystanders; for example, in certain notebook and tablet computers and configurations where the USB connectors are unable to provide or ensure the necessary separation is available between the modem and its users to satisfy compliance.

# **RF Exposure/Specific Absorption Rate (SAR) Information**

This product has been evaluated for SAR and meets the FCC Guidelines for exposure to radio waves.

FCC Equipment Authorization ID: PKRNVWMC760

Your wireless modem is a radio transmitter and receiver. It is designed and manufactured not to exceed the exposure limits for radio frequency (RF) energy set by the Federal Communications Commission (FCC) of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless devices including mobile USB Modems and wireless modems uses a unit of measurement known as the Specific Absorption Rate, or SAR. Tests for SAR are conducted using standard operating positions reviewed by the FCC with the device under test transmitting at its highest certified power level in all frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the USB Modem or modem while operating can be well below the maximum value. This is because the USB Modem is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

Before this device is made available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations (for example, at the ear or worn on the body) as required by the FCC for each model.

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. THE HIGHEST SAR VALUE FOR THIS MODEM WHEN TESTED FOR COMPLIANCE AGAINST FCC STANDARDS WAS 1.53 W/KG USER-LAP POSITION. 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

## 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 PC, PDA, etc).

### **Hot-Swappable**

The ability to remove and replace the microSD Card from the USB760 while it is still connected to the computer and online without damaging the device.

### 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.

### Mbps

Megabits per second

### MicroSD

Additional external memory for your device.

### MicroSD Card

A small, removable flash memory card available in various storage sizes up to 16GB. This accessory is sold separetely.

## **MicroSD Slot**

A built-in slot on your device that is designed specifically for a microSD Card.

## PDA

Personal Digital Assistant. A handheld device used for organization, notes, address books, etc.

## 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 <u>www.cdg.org</u>.

## SMS

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

## 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, mobile USB760 Modem, etc.

### VPN

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

### WAN / WWAN

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.

### 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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