



Mobile Broadband / GlobalAccess



**USB1000 Global Ready Modem**  
**Product User Guide**

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# Welcome

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Congratulations and thank you for purchasing the Verizon Wireless USB1000 Global Ready Modem for Mobile Broadband and Global**Access** service! You are now equipped with true global data mobility!

Before installing the USB1000 Global Ready Modem **VZ**Access Manager software and drivers, please review this manual which outlines the features of the USB1000 Global Ready Modem hardware.

**Important:** Do not plug the USB1000 Global Ready Modem into the Type A USB port until you have installed **VZ**Access Manager. (See the VZAccess Manager User Guide for detailed instructions on installation and software features, located on the Installation CD.)

The USB1000 Global Ready Modem is a global data device<sup>†</sup> that operates on the reliable Verizon Wireless Mobile Broadband and Global**Access** networks\* in America, Europe, or Asia. Now you can easily connect at high speeds to the Internet, your corporate Intranet, and your email while you're away from the office and out of the country.

<sup>†</sup> Technology Bands: CDMA 1X, EVDO Rev.A/0 800/1900 MHz; WCDMA, HSDPA, HSUPA 850/1900/2100 MHz; GSM, GPRS, EDGE 850/900/1800/1900

\*Service not available everywhere. Visit [www.verizonwireless.com/vzglobal](http://www.verizonwireless.com/vzglobal) for a complete list of available countries. Information subject to change.

# 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 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 USB1000 Global Ready Modem, or failure of the USB1000 Global Ready Modem to transmit or receive such data.

## Safety hazards

Do not operate the USB1000 Global Ready 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.

## USB1000 Global Ready Modem Hardware: Overview

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The USB1000 Global Ready Modem for worldwide mobile data access is designed for computers equipped with Type-A USB ports. This mobile data solution gives you the coverage and speed you need whether away from the office or out of the country. Some of the key features of the USB1000 Global Ready Modem are:

- **High Speed Wireless Data Across the Globe via Mobile Broadband and GlobalAccess\***  
*\*GlobalAccess requires SIM Card, sold separately*
- **USB (Universal Serial Bus)**  
The universal USB form factor makes wireless connectivity more convenient than ever since virtually all computing devices are equipped with a Type-A USB port such as notebooks, desktops and tablet PCs.
- **Intuitive VZAccess Manager Software**  
VZAccess Manager makes it easy to connect to the Internet or your corporate Intranet, and send email and text messages. Installation is simple and the application is easy to navigate.
- **Advanced Antenna System**  
The embedded antenna design supports five bands and is engineered with receiver equalization and diversity for improved performance in highly mobile environments and network fringe areas.
- **External Antenna Connector**  
An optional external antenna may be purchased to further improve data throughput and improve network connectivity in fringe areas. (See SAR and FCC requirements on page 13.)

### Additional features of the USB1000 Global Ready Modem include:

- VPN Capability
- Auto Connect at Startup
- 2-Way Text Messaging
- NDIS Support
- Based on the Qualcomm chipset MDM1000 (Gobi)
- SIM Card pre-installed\*  
*\*The Verizon Wireless USB1000 Modem comes with a SIM card pre-installed, which along with a Global Feature activated on your Verizon Wireless account, enables you access email in GSM Networks while traveling overseas. Please visit [www.verizonwireless.com/vzglobal](http://www.verizonwireless.com/vzglobal) for information on rates, coverage, and destinations.*

## Care of Your USB1000 Global Ready Modem

As with any electronic device, the USB1000 Global Ready Modem must be handled with care to ensure reliable operation. Verizon Wireless recommends the following handling guidelines:

- Do not apply adhesive labels to the USB1000 Global Ready 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 USB1000 Global Ready Modem from liquids, dust, and excessive heat.
- Store the USB1000 Global Ready Modem in a safe place, when not in use.

## Getting Started

**Important:** The USB1000 Global Ready 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.

**Important:** Prior to using the USB1000 Global Ready Modem:

- Install **VZ**Access Manager as provided with your **VZ**Access Manager Installation CD (refer to the comprehensive **VZ**Access Manager User Guide for instruction, located on the **VZ**Access Manager Installation CD).

## Customer Service

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

## USB1000 Global Ready Modem System Requirements

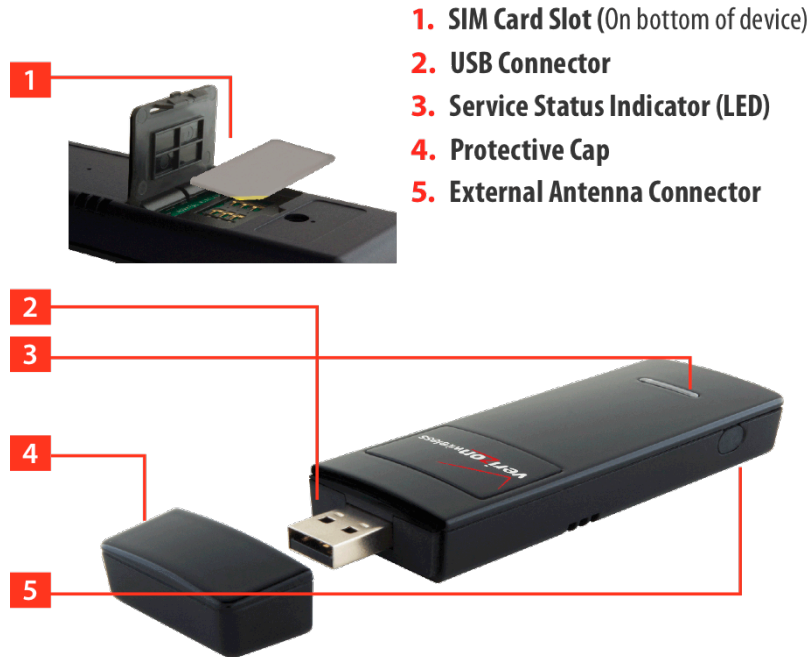
To install and use the USB1000 Global Ready Modem, your host computer must meet these minimum requirements:

Operating System	Windows® Vista or XP (SP2 or higher)
Software	Internet browser software (i.e. Internet Explorer, Netscape, Safari, Firefox, AOL)
Modem Software	<b>VZ</b> Access Manager <i>Included on the VZAccess Manager Installation CD</i>
CPU	166 MHz or higher
Interface	One Type-A USB port
Disk Drive	CD-ROM
Memory (RAM)	256 MB
Hard Disk Space	100 MB

## Your Verizon Wireless USB1000 Global Ready Modem

Your USB1000 Global Ready Modem has the following parts:

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




1. **SIM Card Slot:** This slot, located on the bottom of the device holds the SIM Card. (Please refer to page 11, Preparing the USB1000 for GlobalAccess with the SIM Card.)
2. **USB Connector:** USB form factor plugs into any compatible device with a Type A USB port. (Please refer to page 5, System Requirements).
3. **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.
4. **Protective Cap:** Protects USB Connector from debris/damage when not in use.
5. **External Antenna Connector:** Connect an optional external antenna to the USB1000 Global Ready Modem for improved performance in fringe areas. (See SAR and FCC requirements on page 13.)



## Service Status Indicator (LED)

The USB1000 Global Ready 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	There is no power to the device; it is not ready for use.
 LED GREEN - Solid	Your device is powered on, but is not yet connected to the Internet.
LED GREEN – slow blinking	Your device is powered on and is searching for the network.
LED GREEN – intermittent blinking	Your device is now connected to the Internet and it is active. You are using the connection.

## The USB1000 Global Ready Modem Package

The Verizon Wireless USB1000 Global Ready Modem package includes:

- Verizon Wireless USB1000 Global Ready Modem
- **VZ**Access Manager CD ROM (includes detailed user guides)
- Quick Reference Guide
- USB Extension Cable and Cradle
- SIM Card pre-installed
- Global Support Kit

## Ways to Access

The Verizon Wireless USB1000 Global Ready Modem supports Verizon Wireless Mobile Broadband and Global**Access** service for a superior wireless data connection in at home and abroad.

### Mobile Broadband

**Mobile Broadband** — Take broadband with you while you're on the go! With Verizon Wireless Mobile Broadband you can stay connected at broadband speeds wherever you are. With access to America's most reliable broadband network, you can download large files and view email attachments at typical speeds of 600 to 1400 Kbps (download) and 500 to 800 Kbps (upload).\*

*\*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.*

### Global**Access**

**Global**Access**** — Global**Access** supports tri-band HSDPA/HSUPA/UMTS (850/1900/2100MHz) and quad band EDGE/GPRS (850/900/1800/1900MHz). The USB1000 Global Ready Modem supports high-speed Global**Access** in over fifty countries across the globe\*.

*\*Service not available everywhere. Visit [www.verizonwireless.com/vzglobal](http://www.verizonwireless.com/vzglobal) for a complete list of available countries. Information subject to change.*

# How to Use Your USB1000 Global Ready Modem

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## Basics

Before you begin using your USB1000 Global Ready Modem, you must first install **VZAccess Manager**. The comprehensive Quick Reference Guide that was included in the box when you purchased your product and the **VZAccess Manager Software User Guide** details the installation and configuration of your USB1000 Global Ready Modem.

## Using the Device for the First Time

1. Turn on your computing device and close all applications.
2. Insert the **VZAccess Manager** CD-ROM into your computer's CD drive.
3. If the **VZAccess Manager** CD does not automatically launch, manually launch the **VZAccess Manager** CD following the guidelines outlined for manual CD launch per the operating system of your computing device. (Instructions for manual CD launch may be found in the User Guide or Help features of your computing device.)
4. Follow the onscreen instructions for installing **VZAccess Manager**.
5. When prompted by **VZAccess Manager**, insert the USB1000 Global Ready Modem to install the necessary drivers.
6. Launch **VZAccess Manager**, and click on the **Connect** button. Follow the on-screen instructions to complete activation. Refer to the **VZAccess Manager User Guide**, located on the Installation CD for more detailed instructions on connecting to Mobile Broadband and using **GlobalAccess** while abroad.

**Important:** Before installing your new software, delete or uninstall any previously existing modem or dialer software from your computing system.

**VZAccess Manager** must be installed before you plug the USB1000 Global Ready Modem into the computing device for the first time. Only after the software has been installed can the operating system successfully install and configure the USB1000 Global Ready Modem.

## Inserting and Removing the USB1000 Global Ready Modem

### Inserting and Connecting the USB1000 Global Ready Modem to your Computer

Before you connect the USB1000 Global Ready Modem to your computer the first time, you must first install **VZAccess Manager** (see the **VZAccess Manager User Guide** located on the Installation CD).

#### **When you connect the USB1000 Global Ready Modem, the following should occur once VZAccess Manager has been installed:**

- The USB1000 Global Ready 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, notifying you that new hardware has been detected.
- The **VZAccess Manager** Software starts (unless the auto-launch feature has been disabled).

#### **To properly insert the USB1000 Global Ready Modem:**

1. Remove the protective cap from the device.
2. Hold the device along the side edges and gently insert the device into your computer's Type A USB port. The USB1000 should fit easily into the USB port. Do not force the USB1000 into the USB port as this may damage both the device and the USB port.
3. The Hardware Icon appears in the system tray.

**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 USB1000 Global Ready Modem

The USB1000 Global Ready Modem's USB technology allows you to safely remove the USB1000 Global Ready Modem from a Windows computer at any time when you are not connected to the network.

1. End your session by selecting **Disconnect** from **VZAccess Manager**.
2. Exit **VZAccess Manager**.
3. Simply grip the USB1000 Global Ready Modem on both sides and pull straight out to avoid damaging the USB connectors.

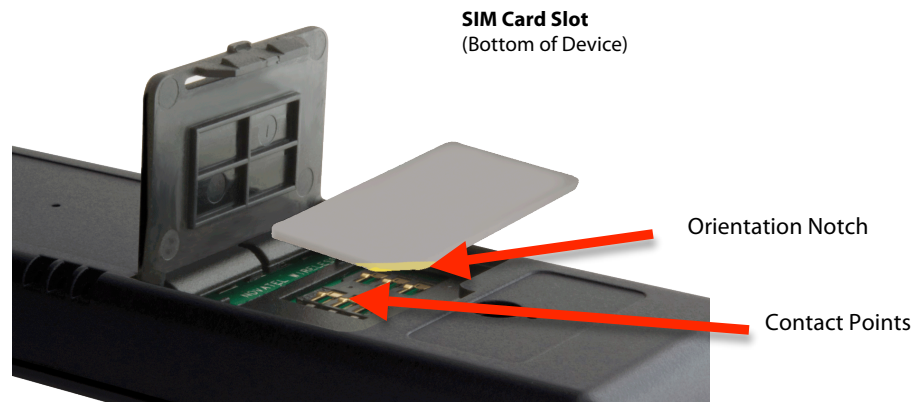
## Preparing the USB1000 Global Ready Modem for GlobalAccess

### Using the SIM Card

A SIM Card is required In order to use the USB1000 Global Ready Modem with Global**Access**. It is installed on USB1000 and along with a Global feature on your account, enables you to access data while outside the U.S. Should your SIM Card be lost or damaged, please follow these instructions for the installation of your new SIM:

#### To insert the SIM Card:

1. Ensure that the contact points (typically gold) on the SIM Card are facing upward.
2. Align the orientation notch on the SIM Card with the orientation notch on the tray.



#### Important steps to take to properly care for the SIM card:

- Keep the SIM card clean and dry at all times
- Do not bend, tear or scratch the SIM card
- Don't expose the SIM card inside the phone under extreme temperature (-25C to +75C)
- Don't place the SIM card near magnetic fields

## USB1000 Accessories

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There are a couple of accessories available for your device: the USB Modem Extension Cable and Cradle (included) and an External Antenna Option (sold separately through Verizon Wireless).

### USB Modem Extension Cable and Cradle Accessory

The USB1000 Global Ready Modem package includes a USB Extension Cable and Cradle Accessory. Although this accessory is not required for use with your USB1000 Global Ready Modem, it offers increased performance of your USB1000 Global Ready Modem under certain operating conditions. Simply insert the USB connector into the USB port of your computing device to deliver increased RF performance and to solve clearance issues.

#### Using the USB Extension Cable and Cradle Accessory

Depending on the condition you are trying to solve (increased performance or clearance issues), plug either one of both of the two connected ends of the USB Modem Extension Cable and Cradle into the Type A USB port(s) on your computer. Please choose from one of the following scenarios:

**If you are experiencing limited space around the USB ports of your computer:**

1. Plug either one of the two connectors of the Y-cable into one USB port on your computer. This will free up space around the USB ports of your computer.
2. Plug the USB1000 Global Ready Modem into the USB port of the cradle.
3. The device is connected to and powered by the computer as soon as the USB cable is plugged properly into a USB port.
4. Launch **VZAccess Manager** and click **Connect**.

**If you are in a network fringe area and need to increase RF performance, use both connectors on the Y-Cable to provide the modem with more power for use in weaker signal areas:**

1. Plug both USB connectors of the Y-cable into two USB ports on your computer.
2. Plug the USB1000 Global Ready Modem into the USB port of the cradle.
3. The device is connected to and powered by the computer as soon as the USB cable is plugged properly into the USB ports.
4. Launch **VZAccess Manager** and click **Connect**.



## External Antenna Connector

This device is equipped with an external antenna connector.

To access the External Antenna Connector:

1. Locate the External Antenna Connector on the side of the device.
2. Remove the rubber protector to expose the External Antenna Connector. (Keep the rubber protector in a safe place for future use in order to protect the External Antenna Connector from debris when not in use).

**Important:** This device when used in a mobile configuration with an external antenna option is only authorized for use in laptop computers that are identical or substantially similar to those in its grant application. A minimum of 20cm (8 inches) of separation between the external antenna and the users body must be maintained at all times and this device must not be co-located or operate in conjunction with any other antenna or transmitter except for those described in this filing. In order to comply with FCC/IC regulations limiting both maximum RF output power, and human exposure to RF radiation, the maximum external antenna gain must not exceed 3dBi in the Cellular or PCS bands of operation. This device is classified as a mobile device with respect to RF exposure compliance when the external antenna is used.

## Technical Support

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### Data Technical Support

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



## Troubleshooting

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### USB1000 Global Ready Modem

The following tips will help solve many common problems encountered while using the USB1000 Global Ready Modem:

- Make sure you are using the USB1000 in the correct geographic region: Mobile Broadband and National**Access** USB1000 in the US and in the countries which support Global**Access**. Please visit [www.verizonwireless.com/vzglobal](http://www.verizonwireless.com/vzglobal) for the most up-to-date coverage maps.
- Ensure that the wireless network's coverage extends to your current location.

When properly installed, the USB1000 Global Ready 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 USB1000 Global Ready Modem are being used by other devices.
- Network coverage is not available (either because you are outside the a 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

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Name:	Verizon Wireless USB1000 Global Ready Modem
Model:	USB1000 Global Ready Modem
Approvals:	R&TTE directive 1999 / 5 /EC (health, safety, EMC, spectrum) FCC Type Acceptance CE Industry Canada (IC) GCF PTCRB CTIA TRP/TIS CDMA Developers Group (stages 1,2,3) Microsoft WHQL RoHS Directive 2002/95/EC Compliant WEEE Directive 2008/96/EC Compliant
Weight	45 g / 1.59 oz
Dimensions:	87 mm x 37 mm x 12 mm 3.43 in x 1.46 in x 0.47 in
Chipset:	QUALCOMM™ MDM1000 (Gobi)
Interface Type:	Type A USB Port
Power Consumption	Voltage 5V Transmit: max800mA (3 watts) - USB Y-cable included for increased transmit power when in cell edge Idle: max 115mA

## Regulatory Notices

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### CE Marking

**CE 0682** 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.

### 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.

In order to comply with FCC RF Exposure requirements, this device must be installed so that a minimum separation distance of 1.5cm (0.60") is maintained between the antenna and all persons during ordinary operating conditions contingent upon the following:

1. The laptop or PC is placed on a desktop, table or flat surface
2. The device is placed on a flat surface

**WARNING: DO NOT ATTEMPT TO SERVICE THE WIRELESS COMMUNICATION DEVICE YOURSELF. SUCH ACTION MAY VOID THE WARRANTY. THE USB1000 GLOBAL READY 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.

## 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.

This USB modem is approved for use in normal size laptop 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 laptop and tablet computers and configurations where the USB connectors on the host computer are unable to provide or ensure the necessary separation between the modem and its users or bystanders to satisfy RF exposure compliance requirements. The users should be advised to see details in the instruction manual.

## **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: PKRNVWMC1000

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 0.775 W/KG USER-LAP POSITION.

## 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.

### 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).

### EDGE

Enhanced Data GSM Environment OR Enhanced Data for Global Evolution. EDGE is an enhanced version of GPRS that enables the delivery of multimedia and other broadband applications to mobile devices. It is designed to deliver data downloads at rates up to 237 kbps and is considered an evolutionary step to 3G/UMTS.

### GPRS

General Packet Radio Service. GPRS is a packet based broadband service with download speeds up to 86 kbps. GPRS is considered an evolutionary step to more advanced technologies such as EDGE and WCDMA.

### HSDPA

High Speed Downlink Packet **Access**. HSDPA is an enhanced version of WCDMA that supports broadband connections. This enhanced 3G technology enables the download of high-bandwidth multimedia files, high resolution graphics, and other complex files, and viewing e-mail attachments at broadband-like speeds.

### 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

## **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).

## **SIM/USIM**

A (Universal) Subscriber Identity Module (USIM/SIM) is part of a removable smart card ICC (Integrated Circuit Card), also known as SIM Cards, for mobile data devices and mobile phones. SIM cards securely store the service-subscriber key (IMSI) used to identify a subscriber. The SIM card allows users to change mobile devices by simply removing the SIM card from one mobile device and inserting it into another mobile device.

## **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.

## **UMTS**

Universal Mobile Telecommunications System. 3G system standardized by ETSI under 3GPP along with other regional standards organizations.

## **USB**

Universal Serial Bus. A connection type for computing device peripherals such as a printer, mobile USB1000 Global Ready Modem, 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.

## **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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