

**VERIZON WIRELESS**  
**AIRCARD<sup>®</sup> 595U USB MODEM**  
**USER MANUAL**



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# Welcome

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Congratulations on purchasing the Verizon Wireless Broadband**Access**/National**Access** AirCard<sup>®</sup> 595U USB modem with **VZAccess**<sup>SM</sup> Manager. This dual-band modem operates over the CDMA EV-DO networks in the 800/1900 bands. This wireless USB modem enables you to connect at high speed to the Internet, your corporate Intranet, and your email while you're away from the office.

This document provides hardware-related information about your AirCard 595U USB modem.

For information on installing the AirCard 595U USB modem and using the **VZAccess** Manager software, please see the Quick Reference Guide or the **VZAccess** User Manual (available as a PDF file on the installation CD).

## 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 AirCard 595U USB modem, or failure of the AirCard 595U USB modem to transmit or receive such data.

## Safety hazards

Do not operate the AirCard 595U USB 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 slot 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 slot 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 offence.

## 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.

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 6,199,168 6,339,405 6,359,591 6,400,336 6,516,204 6,561,851 6,643,501 6,653,979 6,697,030  
 6,785,830 6,845,249 6,847,830 6,876,697 6,879,585 6,886,049 6,968,171 6,985,757 7,023,878  
 7,053,843 7,106,569 7,145,267 7,200,512 D442,170 D459,303

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This product includes  
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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

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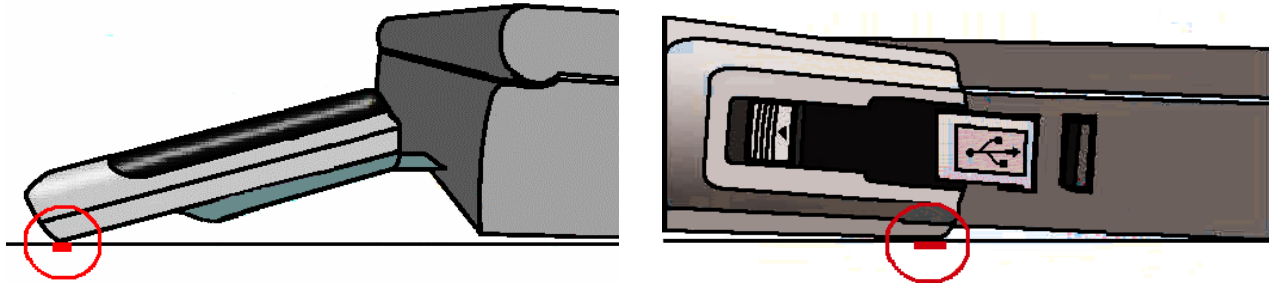
## AirCard 595U USB Modem System Requirements

Operating system: Microsoft® Windows® Vista (32-bit or 64-bit), Windows XP, or Windows 2000

Disk drive: CD ROM

Slot: One USB slot.

**Warning:** Do not insert the modem into a USB hub or a USB slot on a keyboard. If the orientation of your computer's USB slot or the thickness of your computer is such that pressure is applied to the modem's end or side (as shown by the red circles in the drawings below), you may damage the modem or your computer. In such cases, do not insert the modem directly into your computer's USB slot; use the docking station instead.



For the system requirements to run the **VZAccess Manager** software, please see the **VZAccess User Manual**.

## Your AirCard 595U USB modem

Your AirCard 595U USB modem fits into the USB slot of Windows-based notebook computers. The AirCard 595U USB modem uses the **VZAccess Manager** software and the enhanced EV-DO Rev. A technology capable of operating in Verizon Wireless Broadband **Access** coverage areas at average download speeds of 600 to 1400 kbps and download speeds of 500 to 800 kbps\*.

\* *Speeds based on our network tests with 5MB FTP data files, without compression. Actual speeds and coverage may vary.*



- **USB modem:** this is the device that, when plugged into a Personal Computer or notebook, provides wireless data solutions
- **Computer interface connector:** connects to your Personal Computer or notebook via the computer's USB slot

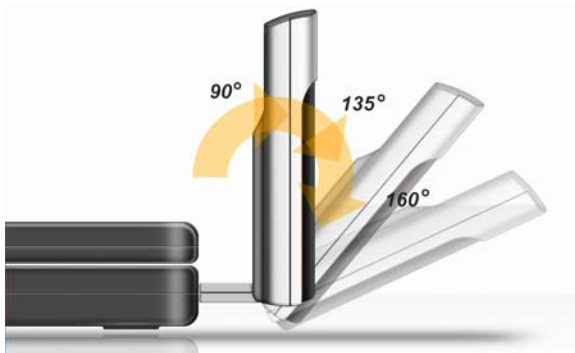
- **Service LEDs:** visual indicators that show you service and data modes. The USB modem has two LED light bars. The LED light bars operate as described in the following table.
- **External antenna jack:** allows you to connect an optional external antenna to your USB modem for improved performance (sold separately).

LED	LED behavior	Indicates
Data	Off	The modem has no power. The modem is not completely inserted into the computer, or the computer is in suspend mode (which powers down the modem), or you have powered off the modem.
	Green, blinking slowly	The modem is powering up, or no service is available.
	Green, not blinking	The modem has power, has found a signal, and is ready to connect.
	Green, blinking rapidly	The modem is sending or receiving data—a data session is in progress.
PWR	Off	The modem has no power. The modem is not completely inserted into the computer, or the computer is in suspend mode (which powers down the modem), or you have powered off the modem.
	Red	The modem has power; the battery is low. Charge the battery by inserting the modem into the USB slot of your computer. Alternatively, insert the modem into the docking station, and attach the docking station to your computer.
	Green	The modem has power; the battery is charged.

## Care of your AirCard 595U USB modem

Verizon Wireless recommends the following guidelines in handling your modem:

- Do not apply adhesive labels to the modem.
- To avoid the risk of explosion, use the same battery model when replacing the battery. Properly dispose of the used battery.
- The modem should fit easily into your USB slot. Forcing the modem into a slot may damage connector pins.
- The modem’s USB connector is adjustable to three positions (as shown in the picture below). Do not force the hinge past the last position—this may break the connector.



- When removing your modem, always grip it by the sides of the modem rather than the end. Never insert or remove the modem while holding the antenna, as this action may damage the modem.
- Protect the modem from liquids, dust, and excessive heat.

- When storing or transporting your computer, remove the modem.
- When not installed in your computer, store the modem in a safe place.
- Do not use the modem with a handheld computer; it is designed only for notebook computers running Windows Vista, Windows XP, or Windows 2000.

## Package contents

The Verizon Wireless AirCard 595U USB modem package includes:

- AirCard 595U USB modem
- Rechargeable modem battery
- Docking station with attached cable
- **VZAccess Manager CD** (includes the **VZAccess Manager** software, **VZAccess User Manual**, and AirCard 595U USB Modem User Manual [this document] with warranty information)
- Quick Reference Guide



**IMPORTANT:** Do not insert the AirCard 595U USB modem into the USB slot until you have installed **VZAccess Manager** and have activated a **BroadbandAccess/NationalAccess** service for your AirCard 595U USB modem. For instructions on installing the software, see the **VZAccess User Manual**.

## Technical Support

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For additional information and technical support, visit Verizon's Data Technical Support page at: [www.verizonwireless.com/b2c/support/data.jsp](http://www.verizonwireless.com/b2c/support/data.jsp).

## Troubleshooting

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### AirCard 595U USB modem


The following tips may help solve problems encountered while using the AirCard 595U USB modem and the **VZAccess Manager** software:

- Make sure you are using the appropriate modem in the correct geographic region: a **BroadbandAccess/NationalAccess** modem in the US.
- Ensure that the wireless network's coverage extends to your current location.
- Ensure that the PWR LED is green.
- Confirm that you have an up-to-date version of **VZAccess Manager**. To download the latest version of **VZAccess Manager**, visit [www.vzam.net](http://www.vzam.net).

For more troubleshooting information, see the **VZAccess User Manual** and online Help.

# Product Specification

**Table 1 General specifications**

Name	Verizon Wireless AirCard 595U USB modem	
Model	AirCard 595U USB modem	
Approvals	FCC, IC (North America)	
Dimensions	Length: 93mm Width: 39mm Height 20mm	
Wireless network – dual mode	CDMA 1X/EV-DO	
USB standard	USB 1.0 and 2.0	

**Table 2 Radio frequency and electrical specifications**

Technology	CDMA
Band designation	1X/EV-DO: 800/1900 MHz
Current	Maximum: 500 mA (from USB port).  Typical data call current (talk mode), at 3.3 V: <ul style="list-style-type: none"> <li>• 285 mA (1X)</li> <li>• 295 mA (1xEV-DO)</li> </ul> Standby: 2.75 mA (1X/1xEV-DO hybrid mode)
Transmitter power	200 mW (+23 dBm)
Transmit band	PCS: 1805 to 1870 MHz Cellular: 824 to 849 MHz
Receive band	PCS: 1715 to 1780 MHz Cellular: 868 to 894 MHz GPS: 1575.42 MHz
Channel spacing	1.25 MHz
Frequency stability	±150 Hz



**Table 3 Environmental specifications**

Operating temperature	-10 to +60°C
Storage temperature	-20 to +85°C
Humidity	85%, non-condensing
Vibration	Random vibration, 10 to 1000 Hz, nominal 6G RMS in each of 3 mutually perpendicular axes.  Test duration of 60 minutes for each axis, for a total test time of 3 hours (non-operating).
Drop	Drop 1 m on concrete on each of 6 faces, 2 times

## Regulatory Notices

The design of the AirCard 595U USB modem complies with U.S. Federal Communications Commission (FCC) guidelines respecting safety levels of radio frequency (RF) exposure for portable devices, which in turn are consistent with the following safety standards previously set by U.S. and international standards bodies:

- ANSI / IEEE C95.1-1999, *IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz*
- National Council on Radiation Protection and Measurements (NCRP) Report 86, 1986, *Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields*
- Health Canada, Safety Code 6, 1999, *Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz*
- International Commission on Non-Ionising Radiation Protection (ICNIRP) 1998, *Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)*

**FCC ID:** N7N-MC5725U

**CAUTION:** The AirCard 595U USB modem has been tested for compliance with FCC / IC RF exposure limits in the notebook computer(s) configurations with a horizontal USB slot and can be used in notebook computers with substantially similar physical dimensions, construction, and electrical and RF characteristics. This USB modem must not be co-located or operated in conjunction with any other antenna or transmitter. Use of this device in any other configuration may exceed the FCC RF Exposure compliance limit. **Note:** If this USB modem is intended for use in any other portable device, you are responsible for separate approval to satisfy the SAR requirements of Part 2.1093 of FCC rules.

## 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 and found to comply with the limits for a Class B computing device peripheral, pursuant to Part 15, 22, and 24 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is 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 FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

**CAUTION:** Any changes or modifications not expressly approved by Sierra Wireless could void the user's authority to operate the equipment.

**WARNING (EMI) - Canada:** This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference causing equipment standard entitled "Digital Apparatus," ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par le ministre des Communications.

If you have purchased this product under a United States Government contract, it shall be subject to restrictions as set forth in subparagraph (c)(1)(ii) of Defense Federal Acquisitions Regulations (DFARs) Section 252.227-7013 for Department of Defense contracts, and as set forth in Federal Acquisitions Regulations (FARs) Section 52.227-19 for civilian agency contracts or any successor regulations. If further government regulations apply, it is your responsibility to ensure compliance with such regulations.

**WARNING: DO NOT ATTEMPT TO SERVICE THE WIRELESS COMMUNICATION DEVICE YOURSELF. SUCH ACTION MAY VOID THE WARRANTY. THE AIRCARD 595U USB MODEM IS FACTORY TUNED. NO CUSTOMER CALIBRATION OR TUNING IS REQUIRED. CONTACT VERIZON WIRELESS TECHNICAL SUPPORT FOR INFORMATION ABOUT SERVICING YOUR WIRELESS COMMUNICATION DEVICE.**

## Limited Warranty and Liability

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**THIS PRODUCT IS PROVIDED TO YOU UNDER THE FOLLOWING TERMS AND CONDITIONS THAT CONTAIN LIMITATIONS ON WARRANTIES AND LIABILITIES AND YOUR REMEDIES. BY USING THIS PRODUCT YOU AGREE TO THE TERMS AND CONDITIONS BELOW.**

The original end-user purchaser of the enclosed wireless personal computer modem card (the "**Product**") from Sierra Wireless (the "**Vendor**") or one of its authorized suppliers, is offered a personal, non-transferable, limited warranty that: (a) the Product will be of good quality and free from defects in design, materials, workmanship, and manufacture under normal use and service; (b) all materials, parts, components, and other items incorporated in the Product will be new; and (c) the Product will be compliant with, and perform in accordance with, its specifications, for a period that expires one year from the original purchase date of the Product (the "**Warranty Period**").

During the Warranty Period, if Vendor determines that a Product is defective under a proper warranty claim, then Vendor will, at its sole discretion, either (a) pay parts and labor charges for the repair of the Product, or (b) replace the Product with a new or rebuilt unit (which unit may use refurbished parts of similar quality and functionality), provided that the defective Product is returned to a Vendor-authorized service center for the Product, transportation charges prepaid, and is accompanied by written proof of purchase in the form of a bill of sale or receipted invoice indicating that the Product was purchased by you and is within the Warranty Period. After the Warranty Period, you are responsible for paying all parts, labor, and shipping charges.

The warranty described above shall apply to all repaired or replaced Product for a period of 90 days from the date of return to you, or the balance of the Warranty Period, whichever is greater.

This limited warranty does not cover and is void with respect to: (a) Products which have been improperly installed, repaired, maintained, or modified; (b) Products which have been subjected to misuse (including using the Products with hardware which is electrically or mechanically incompatible with the Products), abuse, accident, physical damage, abnormal operation, improper handling or storage, neglect, exposure to fire, water, or excessive moisture or dampness, or extreme changes in climate or temperature; (c) Products which have been opened, repaired, modified, or altered by anyone other than Vendor or a Vendor-authorized service center; (d) Products which have been damaged due to fire, flood, acts of God, or other acts which are not Vendor's fault and which the Product is not specified to tolerate; (e) cosmetic damage; (f) Products which have been operated outside of published maximum ratings; (g) cost of installation, removal, or reinstallation of the Product; (h) signal reception problems (unless caused by a defect in material(s) or workmanship); or (i) Products on which warranty stickers or serial numbers have been removed, altered, or rendered illegible.

This limited warranty is not transferable to any third party including, but not limited to, any subsequent purchaser or owner of the Products. Any transfer or resale of any of the Products will automatically terminate Vendor's warranty coverage of such Products.

This limited warranty is only valid in the United States of America, and does not cover customer education, instruction, installation, setup adjustments, or signal reception problems.

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PN 2130830 Version 1.0 May2007