

VERIZON WIRELESS
BROADBANDACCESS/NATIONALACCESS
V640 EXPRESSCARD USER MANUAL



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Welcome

Congratulations on purchasing the Verizon Wireless BroadbandAccess/NationalAccess V640 ExpressCard with VZAccess Manager. This dual-band card operates over the CDMA EV-DO networks in the 800/1900 bands. This wireless ExpressCard will enable you to connect at high speed to the Internet, your corporate Intranet, and your email while you're away from the office. This manual will provide information needed to get started and use your new V640 ExpressCard and VZAccess Manager.

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 V640 ExpressCard, or failure of the V640 ExpressCard to transmit or receive such data.

Safety hazards

Do not operate the V640 ExpressCard 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 card 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 card 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.

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 Computer 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.

Getting started

This section will walk you through how to get started using your V640 ExpressCard. This includes software and driver installation, inserting the card so Microsoft Windows is able to detect and install the drivers for your V640 ExpressCard and setting up a data session to connect to the Internet.



Important: Prior to using **BroadbandAccess/NationalAccess** service you must:

1. Install VZAccess Manager version as provided with your installation CD
2. Activate service using **BroadbandAccess/NationalAccess** V640 ExpressCard

Customer Service

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

V640 ExpressCard System Requirements

Operating System: Windows 2000, XP

Card Slot: ExpressCard34/54/Card Bay*

Pentium processor: 166 MHz

Disk Drive: CD ROM

Memory: 32MB

Disk Space: 14 MB

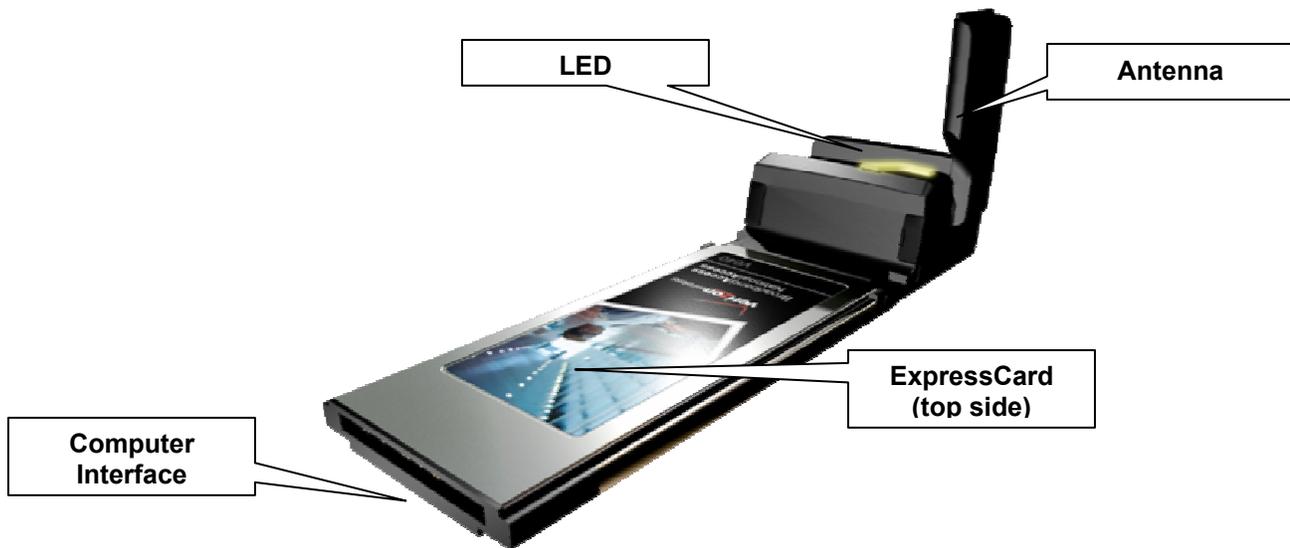
Internet Browser

* *Card Bay requires card caddy accessory*

Your V640 ExpressCard

Your V640 ExpressCard fits into the ExpressCard slot (54 or 34 slot) of most Windows based laptop computers. The V640 ExpressCard utilizes Verizon Wireless's network to connect to the Internet and is capable of transferring data at speeds up to 2.0Mbps*. The Verizon V640 ExpressCard runs on Microsoft 2000 and XP. VZAccess Manager allows you to control and monitor your connection. It will also allow you to send and receive SMS (Short Messaging Service), get online help and has an address book.

**Speeds average 400-700 kbps with bursts capable of 2Mbps based on our network tests with 5MB FTP data files, without compression. Typical upload speeds of 60-80 kbps. Actual speeds and coverage may vary.*



ExpressCard: this is the device that when plugged into a Personal Computer provides wireless data solutions

Computer Interface Connector: connects to your Personal Computer via the computer ExpressCard slot

Service/Data LED: visual indicator that shows you service and data modes

LED Color, Flashing Pattern	Meaning
OFF	Radio is off and the card is in the Slotted state.
Red LED – Steadily blinking	The radio is not attached to the network or is in the disabled mode.
Red LED – Slowly blinking	The radio is off and the card is in the Slotted state or the radio is in USB Selective Suspend.
Green LED – Steadily blinking	The radio is on and the card is in the Active state with an active data connection.
Green LED – Slowly blinking	The radio is in USB Selective Suspend and the card is in the Active state with an active data connection.

Care of Your V640 ExpressCard

Verizon Wireless recommends the following handling guidelines:

Handle with care

Avoid storing your V640 ExpressCard in extreme temperatures

Store the card in a dry and clean environment

Avoid spilling any liquid or immersing the card in water

Do not place any labels on the Antenna as this may alter the sensitivity of the antenna

Do not place any labels on the card as this may interfere with the ExpressCard slot when inserting

Do not force the V640 ExpressCard into the ExpressCard slot

Do not apply force on the top or bottom of the V640 ExpressCard

When transporting your laptop, remove the V640 ExpressCard from the ExpressCard slot

The V640 ExpressCard Package

The Verizon Wireless V640 ExpressCard Package includes:

- V640 ExpressCard
- VZAccess Manager CD ROM
- Quick Reference Guide



IMPORTANT: Do not insert the V640 ExpressCard into the ExpressCard slot until you have installed VZAccess Manager and have activated a **BroadbandAccess/NationalAccess** service for your V640 ExpressCard.

Introduction

VZAccess™ Manager from Verizon Wireless:

Welcome to the Verizon Wireless VZAccess Manager. VZAccess Manager provides easy access to the wireless Internet. It has built-in support for both WWAN and Wi-Fi devices, giving you the flexibility to connect your notebook to the Internet wirelessly anytime, anywhere.

Supported Services

VZAccess Manager supports the Verizon Wireless **BroadbandAccess/NationalAccess** service. This service requires a dual-band CDMA 1xRTT and an EV-DO capable ExpressCard (such as the V640 ExpressCard). The Verizon Wireless **BroadbandAccess/NationalAccess** service provides a superior wireless data connection, supporting rates up to 2.0Mbps*.

**Speeds average 400-700 kbps with bursts capable of 2Mbps based on our network tests with 5MB FTP data files, without compression. Typical upload speeds of 60-80 kbps. Actual speeds and coverage may vary.*

VZAccess Manager System Requirements

In order to set up VZAccess Manager, you will need the following minimum system requirements:

- Microsoft Windows: Windows 2000 Professional, or Windows XP (Home, Professional, Media Center or Tablet PC Editions)
- Pentium 166 MHz or higher
- Verizon Wireless V640 ExpressCard
- Optional Wi-Fi adapter for Wi-Fi access
- Internet browser software for Internet access or the software used by your company for network access
- Verizon Wireless data service

Installation and Configuration

This section will guide you through the installation and setup process for the VZAccess Manager. Before getting started, you should become familiar with the documentation that came with your ExpressCard.

Getting Started

Follow these steps to install VZAccess Manager:

1. Turn on your computer and close all applications.
2. Insert the CD-ROM into your CD drive.
3. If set up does not automatically start, click the Start button on the taskbar and choose Run. Type D:\Start (where D is the letter of your CD-ROM drive) and click OK.
4. Follow the steps in the next section...



Important: The following installation must be performed within a **BroadbandAccess/NationalAccess** coverage.

Important: Your new **BroadbandAccess/NationalAccess** version of VZAccess Manager must be installed even if you already have a previous version loaded.

Important: VZAccess Manager must be installed before you insert the V640 ExpressCard into the computer for the first time. Only after the software has been installed can the operating system successfully install and configure the V640 ExpressCard.

VZAccess Manager Setup Program

Step 1

Double-click VZAccess Manager setup program. You will be presented with a "Welcome" screen. Click the **Next** button to continue with the installation process.



Step 2

After the Welcome screen you will see VZAccess Manager License Agreement. In order to install and use this product you must agree with the terms of this agreement. Select "I agree with this software license agreement," then click the **Next** button to continue. If you do not agree with this agreement, click the **Cancel** button to exit.



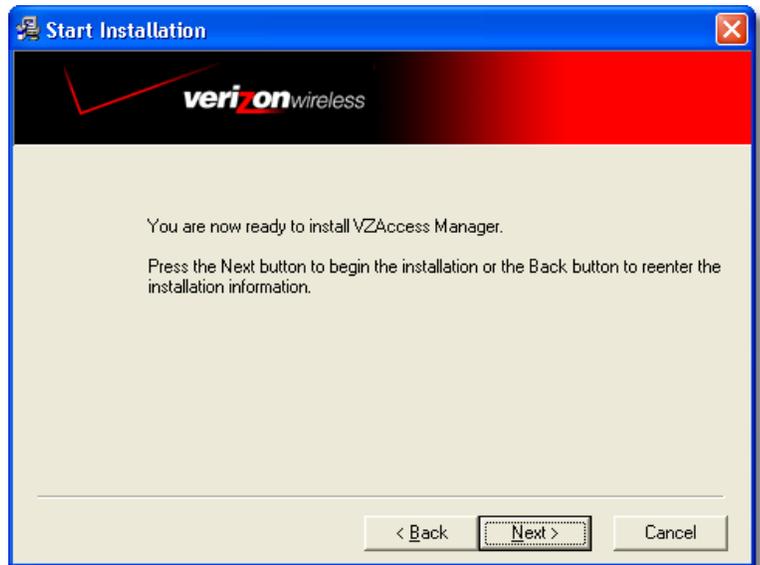
Step 3

You are now ready to select the location on your computer where VZAccess Manager should be installed. It is recommended that you do not modify the default destination folder. Click the **Next** button to continue.



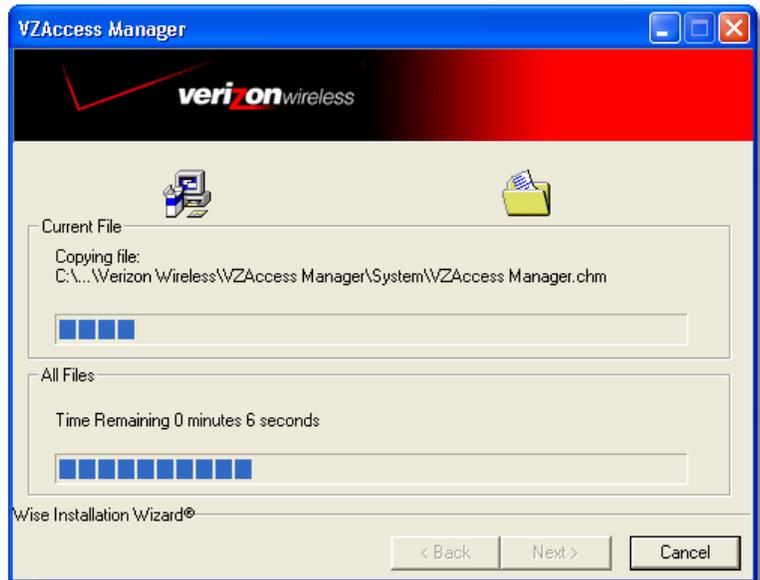
Step 4

You are now ready to begin installing VZAccess Manager components onto your computer. Click **Next** to continue.



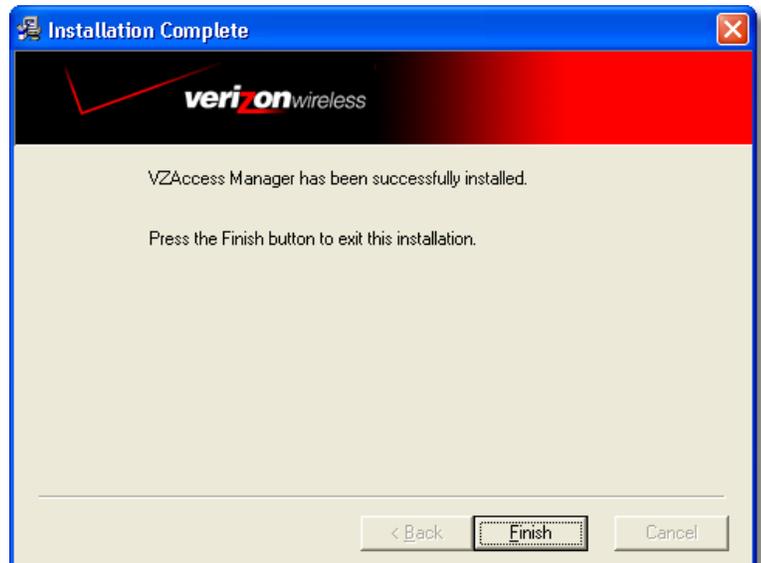
Step 5

During this step the components of VZAccess Manager product are being installed onto your computer. Installation will occur to the destination folder specified in Step 3 above.



Step 6

Installation is now complete. Click the **Finish** button to leave VZAccess Manager setup program and begin using your new software.



The setup program will automatically create a **VZAccess Manager** shortcut on your desktop.

VZAccess Manager Setup Wizard

After you have successfully completed the installation process of VZAccess Manager, you are ready to start VZAccess Manager and begin your initial setup. The steps in the Setup Wizard are critical to the proper operation of VZAccess Manager when using your WWAN or Wi-Fi device to connect to the Internet wirelessly. Do not insert your V640 ExpressCard until instructed to do so.

Step 1

Click the **Start** button, select the Programs menu and choose VZAccess Manager menu item to start VZAccess Manager program.

Step 2

On first-run of VZAccess Manager the Setup Wizard will automatically run. You will be presented with a Welcome screen.

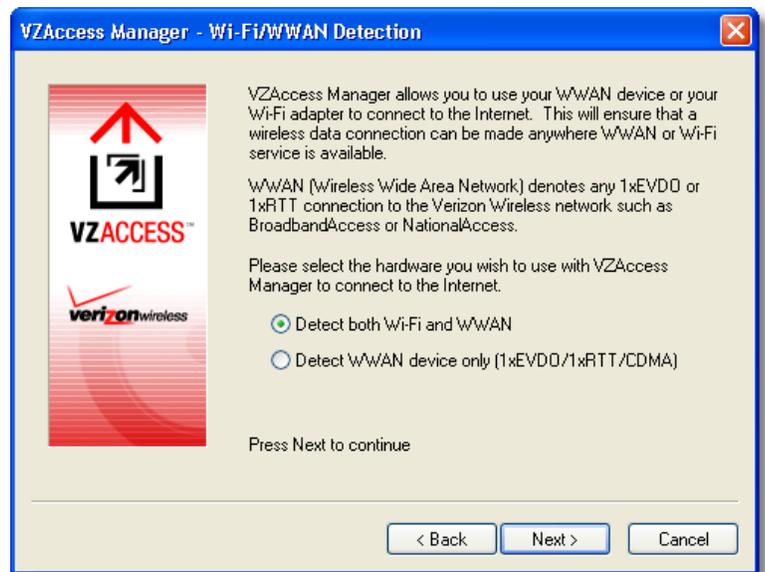
If you have an Internet connection, it is recommended that you check to see if you are running the latest version of VZAccess Manager. Click the **Check for Updates** button to perform this check.

Click **Next** to continue.



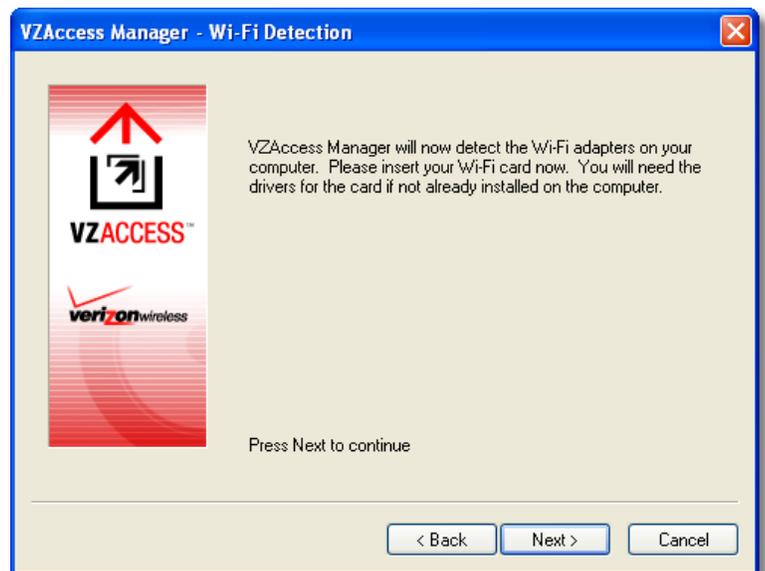
Step 3

In this step of the Setup Wizard you must specify the type of wireless device that you intend to use with VZAccess Manager. Select either "**Detect both Wi-Fi and WWAN**" or "**Detect WWAN device only**." For the purposes of this guide, "Detect both Wi-Fi and WWAN" will be used. Please note that your experience in Step 4 may be different if you use a different selection. After making the appropriate selection, click **Next** to continue.



Step 4

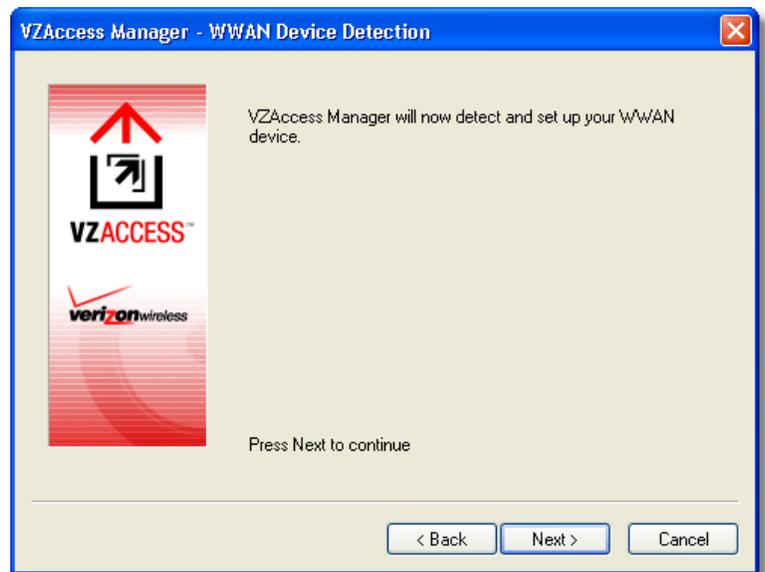
In this step VZAccess Manager will detect the Wi-Fi adapters on your computer. If your computer has a built-in Wi-Fi adapter, you do not need to do anything and can proceed to the next step. Otherwise, please insert your Wi-Fi ExpressCard now. You will need the drivers for the card if not already installed on the computer. Once complete, click **Next** to continue.



Note: WWAN (Wireless Wide Area Network) denotes any 1xEVDO, 1xRTT or CDMA connection to the Verizon Wireless network such as **BroadbandAccess** or **NationalAccess**.

Step 5

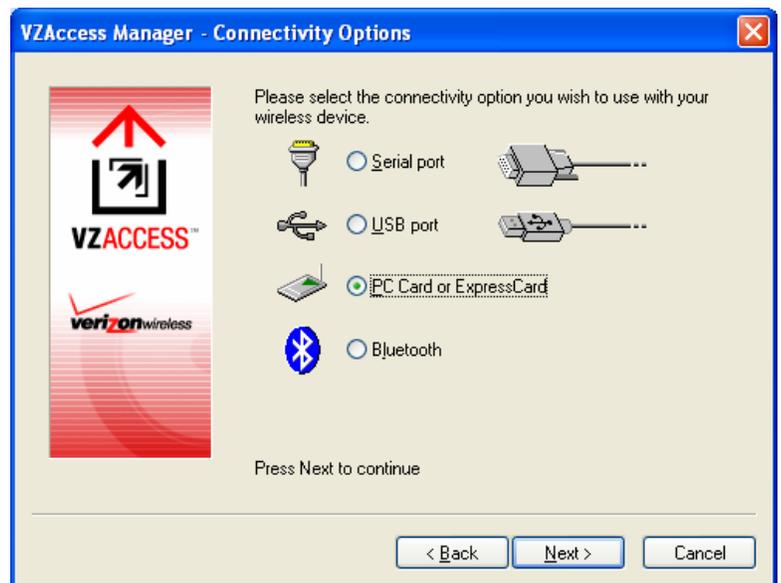
VZAccess Manager will now detect and setup your WWAN device.



Step 6

In this step you need to select the type of connectivity you wish to use with your wireless device. For the purposes of this guide, we will select the radio button associated with "PC Card or ExpressCard." Once you have selected your connectivity option, click **Next** to continue.

Please note that Bluetooth only applies to handsets that support Bluetooth.



Step 7

Insert your V640 ExpressCard now, and wait for Windows to detect and install drivers for the device.

IMPORTANT: When inserting or removing the V640 ExpressCard, grip both sides, do not handle the V640 ExpressCard by pulling on the antenna

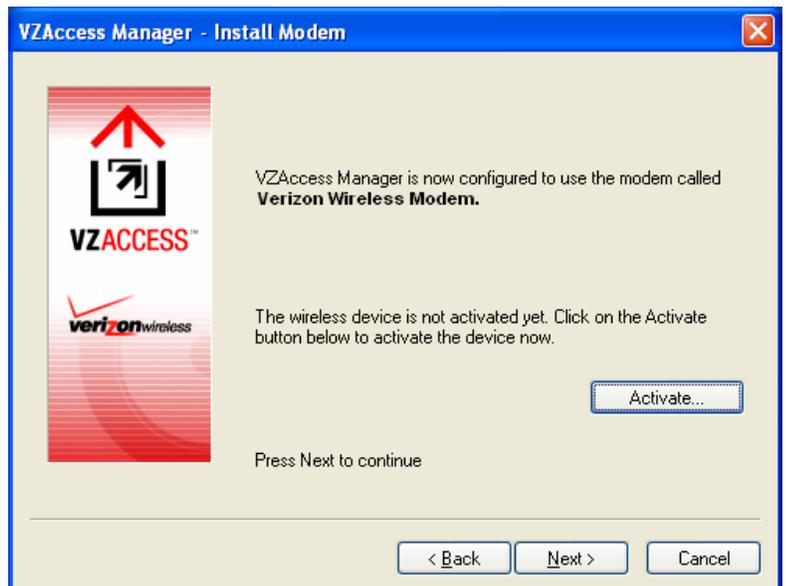


If the card is detected, you will see the following screen.

If your device is not activated, you will need to click "Activate" for the Over-The-Air (OTA) activation process to take place. You will see a dialog displaying the status of the OTA activation process.

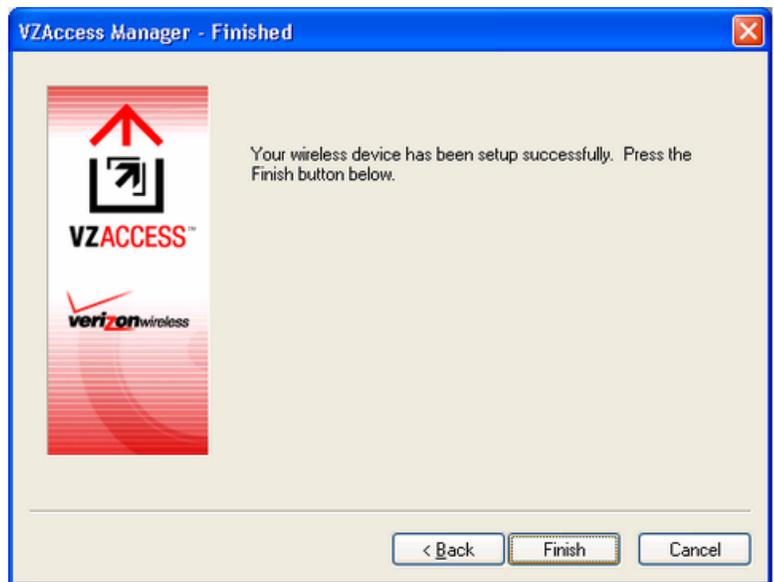


Note: If your device is already activated, you will not see the "Activate" button on this screen.



Step 8

The detection and configuration process for your ExpressCard is now complete. In this step you can elect to run VZAccess Manager automatically every time you start up your computer. To do so, check the "Run VZAccess Manager at Startup" checkbox. Click **Finish** when complete.



Please familiarize yourself with the information in the "Using VZAccess Manager" and "Connecting to the Internet" sections of this guide.

Using VZAccess Manager

Today's online world offers more services everyday and Verizon Wireless gives you the tools you need to take advantage of the best in connectivity solutions. With VZAccess Manager, enjoy the freedom and convenience of wireless Internet connectivity from your notebook computer!

Features

WWAN (Wireless Wide Area Network, CDMA 1xEV-DO and 1xRTT) Specific Features

- Configures your PC to use your wireless device as a modem.
- Creates BroadbandAccess connection if using a BroadbandAccess-capable device. This connection will automatically fall back to NationalAccess if BroadbandAccess is unavailable.
- Copy utility to create wireless copies of your dial-up connections.
- Signal strength and battery level display.
- Features a test function for your WWAN device.

Wi-Fi Features

- Configures Wi-Fi Adapter to work with VZAccess Manager.
- Displays Wi-Fi connections and signal strength when in a Wi-Fi coverage area. Supports connecting to Wi-Fi networks such as ones used at home or work.
- Supports built-in Wi-Fi adapters or ExpressCards.



A WWAN-capable ExpressCard is required to use the WWAN features. Individual WWAN features are also device-dependent as described in the WWAN section above.

Other Features

- Can launch your browser, e-mail client, VPN or a program of your choice upon connection.
- Logs connections used, duration and bytes sent and received.
- Supports TXT messaging.

Getting Started



VZAccess
Manager

Double click on VZAccess Manager icon on your desktop or click on the Windows **Start** menu and select **Programs > VZAccess Manager** from the list of programs.

VZAccess Manager Setup Wizard

The first time you launch VZAccess Manager, you will see VZAccess Manager Setup Wizard:



Stepping through this wizard is critical to properly setting up your WWAN or Wi-Fi device. Please follow the on-screen instructions.

About the Networks View

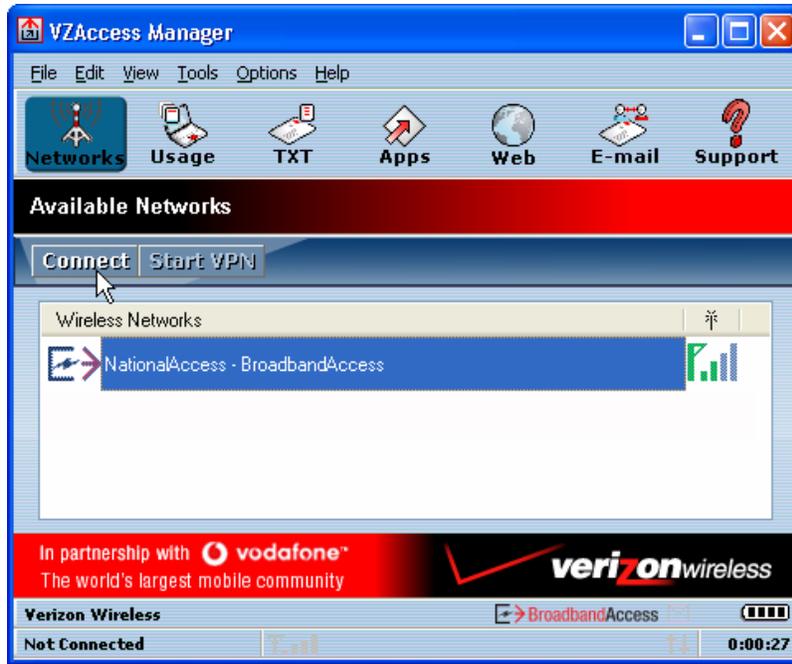
When the Setup Wizard is complete, VZAccess Manager displays the "Networks" view. This view lists all currently available network connections and indicates their respective signal strengths:

At a glance you can see the signal strength and battery level (if applicable) of your WWAN or Wi-Fi network. Select "Refresh Networks" or "Refresh Signal Levels" from the "Options" menu to update the information in this panel. Your current connection state and the elapsed time of the connection are displayed along the bottom of the status bar.

The status bar along the bottom of the window displays your current connection state and the elapsed time of any connection. Additional information is available in "The Status Bar" topic.

Connecting for the First Time

Once your Wi-Fi or WWAN device is properly configured, connecting to the Internet is as simple as selecting the network connection type shown in the list and clicking the Networks button. Note that the Networks button immediately above the list will change to "Connect" or "Connect Wi-Fi" as appropriate based on the current selection in the networks list.



1. To connect to Verizon Wireless for the first time:

- Select "National Access–BroadbandAccess."
- Click the **Connect** button or simply double-click the network name.
- If your device has not yet been activated, you will be directed to a Verizon Wireless website to set up an account.

Disconnecting

Once connected, the **Connect** button will change to **Disconnect**. Simply click **Disconnect** to end your current connection or double-click the network name again.

Other Notes



If your expected connection does not appear: Select "Refresh Networks" from the "Options" menu. This will cause VZAccess Manager to look for your wireless device(s) and verify network availability.



Changing Wireless Devices: If you change wireless devices, you will need to run the Setup Wizard again. To do this make sure that your phone and cable are connected, then select "Run Wizard" from the "Options" menu.



Wi-Fi networks:

- If you have any Wi-Fi networks you manually added because they do not broadcast their SSID, they will always be displayed, and you will have to refer to the signal strength displayed to know when you are in range. See the section "Wi-Fi Specific Settings" for additional details.
- Note that with certain Wi-Fi adapters the signal strength for Wi-Fi networks is not accurate until you connect to the network.



NationalAccess and BroadbandAccess Connections:

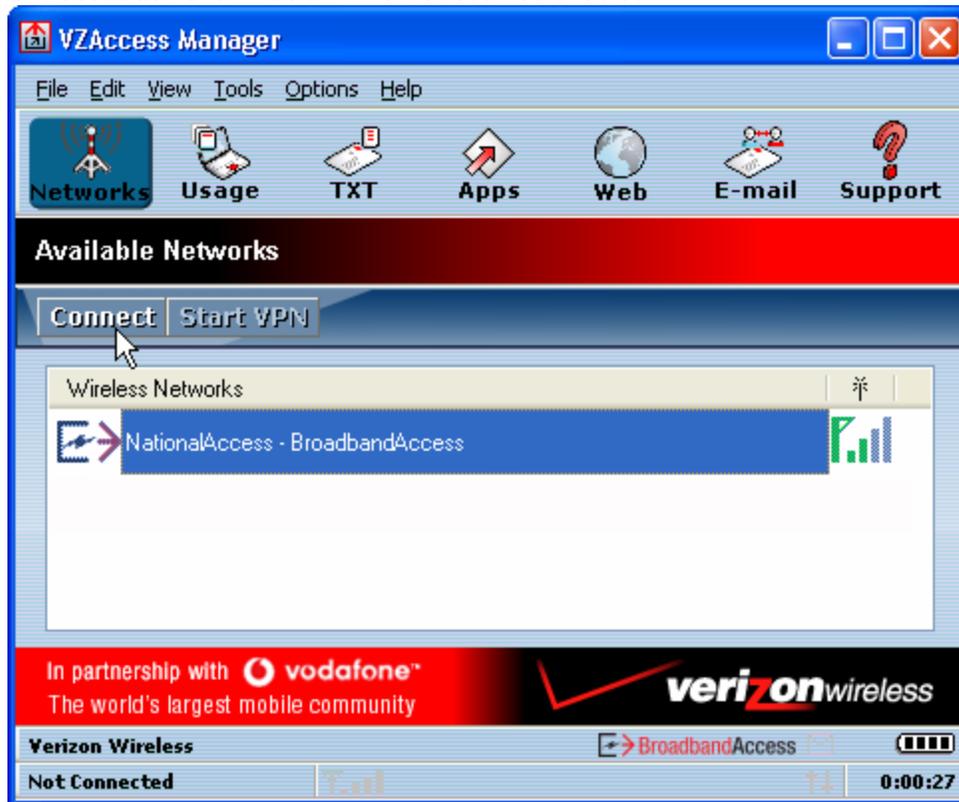
- The NationalAccess connection is only created when the WWAN option is selected during setup and if you are using a NationalAccess capable device that does not support the Verizon Wireless BroadbandAccess service.
- If you are using a BroadbandAccess capable device, a BroadbandAccess connection will be created.
- This connection will use BroadbandAccess if available and will automatically attempt a NationalAccess connection when BroadbandAccess is not available.

For further troubleshooting tips, please refer to Troubleshooting.

Connecting

Once your Wi-Fi or WWAN device is properly configured, connecting to the Internet is as simple as selecting the network connection type shown in the list and clicking the **Connect** button. Note that the Networks button immediately above the list will change to **Connect** or **Connect Wi-Fi** based on the current selection in the networks list.

1. Select one of the following connections: "NationalAccess - BroadbandAccess" or "NationalAccess."
2. Click the **Connect** button shown below when it becomes enabled.



Once connected, the **Connect** button will change to **Disconnect**. Simply click this to end your current connection. To connect to any other network shown, select it, and then select **Connect**.

The Status Bar

Information regarding your current network connection can be seen in the status bar along the bottom of the VZAccess Manager interface. For more information on this status bar, see the section "*The Status Bar*" in the "*Additional Features*" section.

Note: If you are using a WWAN device that supports the Verizon Wireless dial-up data service and you made wireless copies of your dial-up accounts, they will also appear. See the section "*Creating Wireless Copies of your Dial-Up Connections.*" Optionally you can have all dial-up connections appear in VZAccess Manager and use it to launch any dial-up networking connection. See the section "*Setting Your Preferences.*" If you are in the presence of a private Wi-Fi network (such as one at work or at home) it will also appear if you selected the Wi-Fi option during setup. If the number of connections exceeds what can be displayed, a vertical scroll bar will appear to the right of the connections. Scroll down to see them all.



The first time you connect with **BroadbandAccess/NationalAccess, BroadbandAccess, NationalAccess,** or a private Wi-Fi connection, a connectivity warning message will appear. You have the option to suppress these warning messages when they are displayed.

VZAccess Manager will display status information at the bottom during the connection process as well as while connected. When not connected, the status text in the lower left corner will display "Not connected" for the currently selected network. The timer will display "00:00:00." Once connected, the status text will display "Connected" and the elapsed timer will begin to run. When a connection is active, its name will appear as bold text.

The status is also reflected in the Task Tray icon.



Connected



Idle - Not Connected



Connecting



Disconnecting



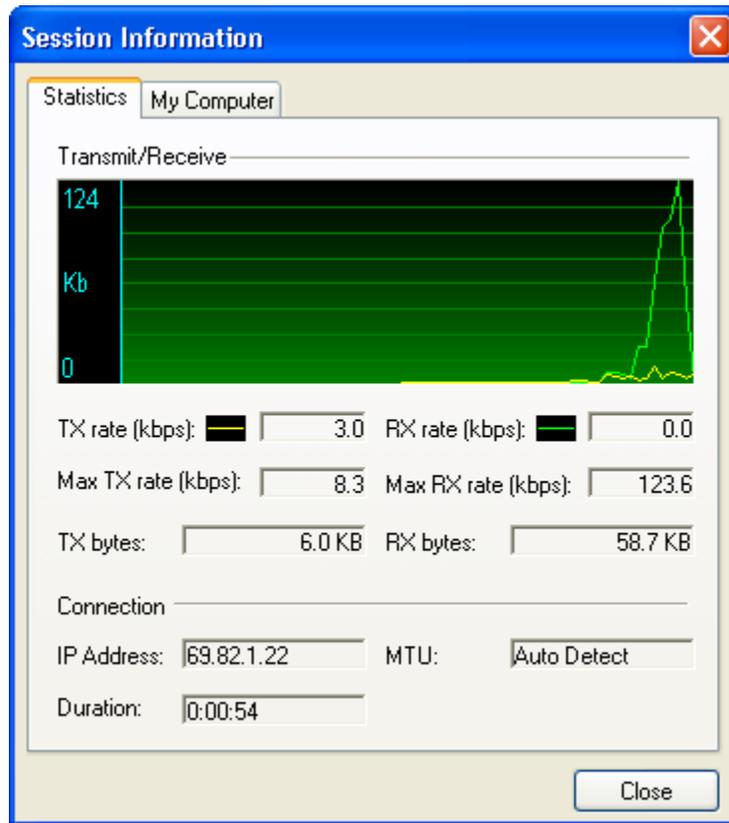
A window will also slide out of the tray showing when you connect and disconnect from networks.

The pop up status can be turned off, if desired, by selecting "Options," "Preferences," "Options" tab, un-checking "Show pop-up status windows by tray." Right clicking on the tray icon provides various options and double clicking on it will always show the application. Placing your cursor on it will display the current connection status.

Based on your preferences, your browser or e-mail or VPN program can be launched automatically, or you can launch whatever software you want to use. You can also determine if all connections show in the drop down list or only your wireless ones, see Setting Your Preferences.

Note: Always use VZAccess Manager when connecting via BroadbandAccess or NationalAccess. This will ensure the wireless device is configured properly before connecting.

At any time during your connection you can check your current connection speed and throughput stats in the Statistics tab of the Session Information window. To see this window, select "Statistics" from the "Options" menu.



The Session Information window will also contain a My Computer tab and a Wi-Fi tab if applicable. The My Computer tab contains detailed information about your computer. This information is helpful when troubleshooting a problem.

Additional information when using the NationalAccess connection:

If you are using the **BroadbandAccess/NationalAccess** or **NationalAccess** connection and the call fails when you try to connect, with VZAccess Manager returning to its idle state, you should try to connect again. If you feel you may have incorrectly entered your wireless account number during initial setup, select "Options," "Run Wizard."

Dormancy:

NationalAccess and **BroadbandAccess** data sessions become dormant if you are not sending or receiving any data. As soon as you resume sending or receiving data, the data session will return to an active state.

Depending on your device and your **NationalAccess** or **BroadbandAccess** plan, your data session may disconnect during a dormant state. See your Verizon Calling Plan brochure for details or visit www.verizonwireless.com If this happens, select disconnect, and then connect again.

Warning Messages

NationalAccess

The first time you connect via the NationalAccess connection, the following warning message will be displayed:

ATTENTION

You are about to establish a NationalAccess (1xRTT) data connection. Charges apply in accordance with your subscription to your Verizon Wireless NationalAccess.

To see our current pricing for NationalAccess, please visit <http://www.verizonwireless.com/b2c/mobileoptions>

This message will display each time you go to connect via the NationalAccess connection until you select "Do not show this warning again."

BroadbandAccess

The first time you connect via BroadbandAccess, the following warning message will be displayed:

ATTENTION

You are about to establish a BroadbandAccess or NationalAccess data connection. Charges apply in accordance with your subscription to your Verizon Wireless NationalAccess/BroadbandAccess.

To see our current pricing for BroadbandAccess, please visit <http://www.verizonwireless.com/b2c/mobileoptions>

This message will display each time you go to connect via BroadbandAccess, until you select "Do not show this warning again."

Wi-Fi

The first time you connect to a Wi-Fi network, you will see the following warning:

ATTENTION

You are about to establish a connection to a Wi-Fi network. Verizon Wireless does not support problems associated with Wi-Fi networks.

Verizon Wireless Customer Care will not be able to assist you. Please see the Help file for details.

In most cases connecting to a private Wi-Fi network is a simple process and you can use VZAccess Manager instead of the Wi-Fi client you would normally use. If you have any problems doing this try the recommendations in the section on Wi-Fi Troubleshooting.

Using Dial Up Connections

This section is only applicable if you are using a **WWAN Device** that supports dial-up connections.

You can make wireless copies of existing dial-up accounts on your system. This will wirelessly enable them and allow you to connect to them wirelessly.

To launch the copy utility, select "Tools," "Dial-up Accounts" then "Copy."

Click on the connection or connections you want to copy and click on the "OK" button.



The new connection will have a suffix of "(Wireless)" and will be set to use your wireless device as the modem. If the utility is unable to automatically recognize your existing area code and number, the existing number will be displayed, and you will be prompted to enter the area code and number. The utility configures the new wireless connections to always dial 11 digits, so that they will work locally and also in other digital data coverage areas.

If it is determined that the connection might benefit by further optimization, an additional connection with a "(Wireless Optimized)" suffix, will also be created. This connection may connect faster. If you have trouble with the "(Wireless Optimized)" connection, you can delete it from your dial-up networking folder and use the "(Wireless)" connection.

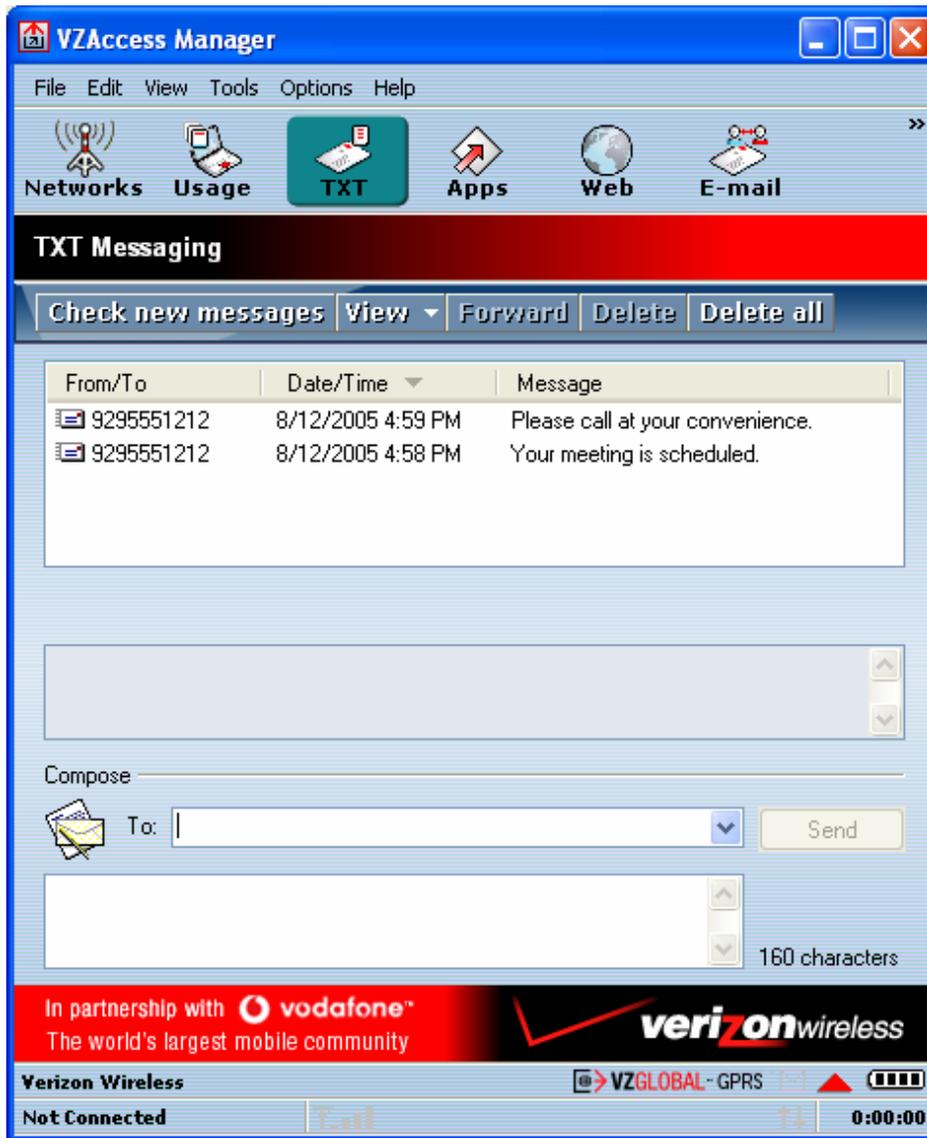
Note: Some applications, such as AOL and JUNO, have dial-up networking connections that can't be used directly from VZAccess Manager or Dial-Up Networking. Copies of these connections will not work with your wireless device, since the original connections do not work by themselves. In most cases the original connections or the software can be configured to use your wireless device as a modem. For the easiest way to configure AOL to work with your wireless device, see the section on [Configuring AOL](#).

To delete connections:

Windows 2000 and XP users can access Dial-Up Networking from VZAccess Manager by selecting "Tools," "Control Panels," "Network and Dial-up Connections," right click on the desired connection and select "Delete."

TXT Messaging

VZAccess Manager supports TXT Messaging for ExpressCards.



Receiving TXT Messages

- All of your TXT messages will appear at the list box at the top of the TXT messaging view. By default, all sent and received messages will appear.
- To view only certain messages, click on the 'View' toolbar button and select 'Received Messages', 'Sent Messages' or 'All Messages'.
- If you are in the TXT Messaging view and a new message arrives, the message will automatically appear in the list and be displayed in bold.
- To view a long TXT message, select the message in the list view. The details of the message will appear below the list.
- If you are not in the TXT Messaging view and a new message arrives, a TXT icon will appear in the status bar showing that new messages are available. There is also a TXT preference option that can automatically switch VZAccess to the TXT view when new messages arrive. By default, this feature is turned off.

- To reply to an inbound message, select the message and press the 'Reply' toolbar button. The ExpressCard number of the sender will be populated in the send area below. Enter your new message and press the 'Send' button to send the message.
- To forward an inbound message, select the message and press 'Forward' toolbar button. The message will be populated in the send area below prefixed with a "FW:." Press the 'Send' button to send the message.
- To resend a sent message, select the message and press the 'Resend' toolbar button. The ExpressCard number and message will be populated in the send area below. Press the 'Send' button to send the message again.

Sending TXT Messages

- While using the V640 ExpressCard, to send a text message to:
 - a US-based wireless number, enter: +, 1, then the wireless number.
 - a wireless number outside the US, enter: +, 011, the country code, then the wireless number.
- To send a TXT message to one or more Verizon Wireless subscribers, enter their 10-digit mobile numbers separated by semi-colons in the "To..." field. (Ex: 2125551234; 2125554567). If you use commas, the application will automatically replace them with semi-colons.
- With some devices that support TXT messaging contact lists, you may be able to click on the **To...** button to open your contact list.
- To Send a TXT to one of the entries in your Contact List, click the **To...** button to open the Contacts window. Simply double click on the name of the user and that individual will automatically be added to the 'Send To' field. Holding down the 'Ctrl' key while you click names from the lists will allow you to select multiple names at once.
- The phone number and the message field are required.
- The Character counter counts up from 0 to 160 and counts all of the characters typed in the message field.
- Click the **Send** button.

TXT Contacts

The Address Book allows you to store the names and mobile numbers of your personal contacts.

To create a personal contact:

- From the Contact List dialog, press the **Add** button.
- Enter the full name of the contact into name into the 'Name' field.
- Enter either the 10-digit mobile number into the 'Mobile 1' field.
- The 'Mobile 2' field can be used to enter a second mobile phone number. This is used if the individual sends you a message from this number. You will see the user's name next to the inbound message instead of the phone number.
- Click the **OK** button. The contact name will now display in the list.

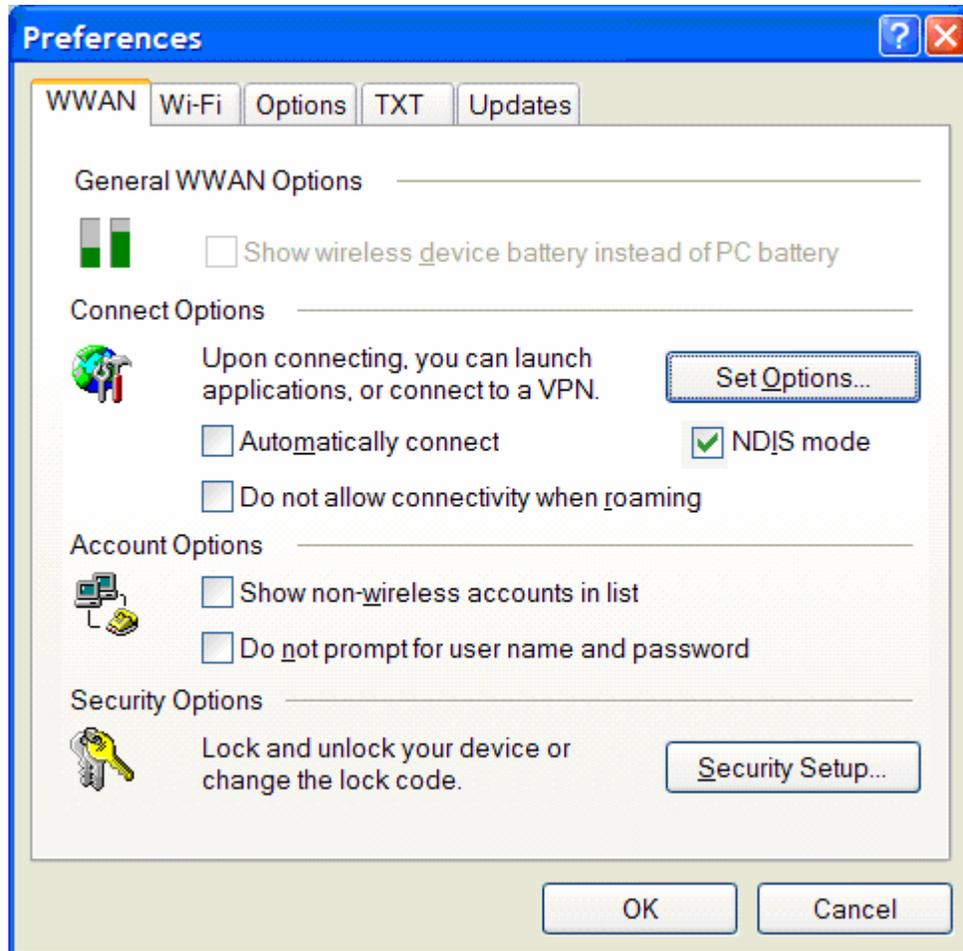
To edit a personal contact:

- Click a name from the list and press the **Edit** button.
- Make the necessary changes and click the **OK** button.
- Clicking the **Cancel** button will not save any changes you have made.
- Clicking the **Delete** button will remove that name from your list.

VZAccess Manager Preferences

WWAN Settings

To access the WWAN preferences, click on the "Tools" menu, then "Preferences...."



Connect Options

The "Set Options..." Button: This is used to set various connect options. See below.

Automatically Connect: If desired, you can select to have VZAccess Manager automatically connect at application startup.

"Do not allow connectivity when roaming:" Enabling this option will prevent you from connecting when roaming. This option is disabled if using NDIS mode. VZAccess Manager only supports this feature with certain devices; if not supported, the option will not appear.

NDIS Mode: Enables/disables the NDIS feature. Please note that NDIS is only supported by some ExpressCards. It also requires either Verizon Wireless BroadbandAccess or NationalAccess coverage, and either Windows 2000 or XP. When enabled, NDIS provides an "always on" Internet connection similar to a standard Network Interface Card (NIC). Please note that an NDIS broadband connection will remain active even if you exit VZAccess Manager.

Account Options

Show non-wireless accounts in list: If you select this option, all of your dial-up accounts will show up in VZAccess Manager's list of accounts, allowing you to use VZAccess Manager to launch them instead of Dial-Up Networking. With this option unchecked, the only connections that are displayed in VZAccess Manager's list of accounts are Verizon Wireless connections and any other connections you have created. If VZAccess Manager is also configured for Wi-Fi, these connections will also be displayed when in coverage of the hot spot.

Do not prompt for user name and password: If you are only using BroadbandAccess or NationalAccess, this setting has no effect. If you created Wireless connections to dial into other networks or have existing connections you are going to launch using VZAccess Manager, checking this option will skip the screen that normally asks for your user name and password. For this to work you will have had to connect previously, successfully saving your user name and password.

Security Options

The "Security Setup..." Button: This is used to lock/unlock the V640 ExpressCard as well as change the lock code on the V640 ExpressCard.

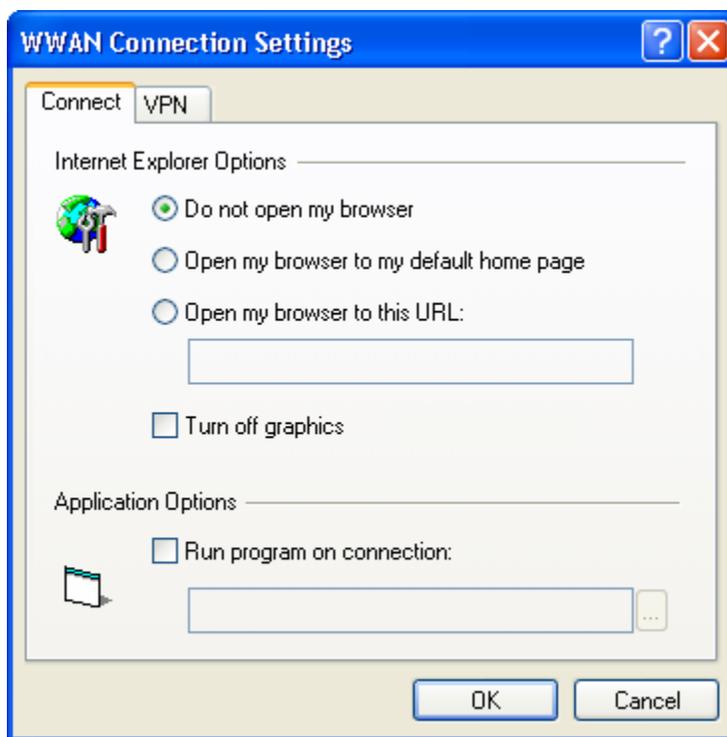
Device Options

Show wireless device battery instead of PC battery: (This option will only appear if you are using VZAccess Manager with a handset.) If you are using a WWAN device and this option is selected, the battery level of your WWAN device will be displayed when your device is connected and detected by VZAccess Manager, as well as when you connect and disconnect using your WWAN device. Battery Status cannot be updated while you are connected to a Wireless Wide Area Network (WWAN). You can refresh the status when you are not connected, by selecting "Tools," "Refresh Signal Levels" from VZAccess Manager's main window. *ExpressCards do not use batteries, so you can use this option to display the PC/notebook's battery instead.*

The "Set Options" Button & Its Dialog

The Connect Tab

When you select the "Set Options" button from the screen above, the following options appear: ("Tools," "Preferences," "WWAN tab," "Set Options. . . "):



Do not open my browser: With this option selected, when you connect to a WWAN network, VZAccess Manager will not automatically launch your default web browser.

Open my browser to my default home page: With this option selected, when you connect to a WWAN network (BroadbandAccess or NationalAccess), VZAccess Manager will automatically launch your default web browser and your home page will load.

Open my browser to this URL: With this option selected, when you connect to a WWAN network (BroadbandAccess or NationalAccess), VZAccess Manager will automatically launch your default web browser but do it in such a way that the URL you specify will load instead of your home page.

Turn off graphics: If you select this it will turn off graphics in Internet Explorer.

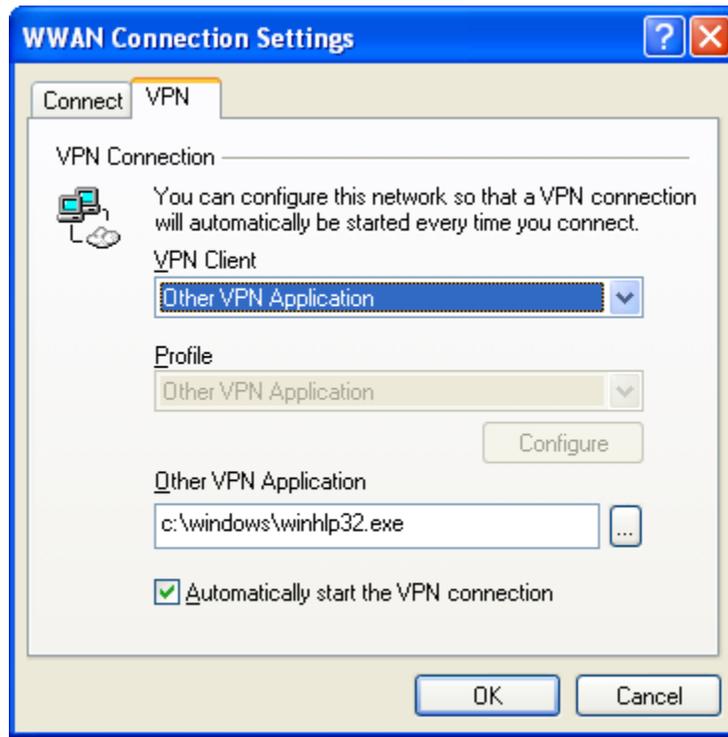


Note: With these options off, web pages will load faster but you will have to right click and select "show picture" for any pictures you want to see.

Run program on connection: This allows automatically running a program when you use VZAccess Manager to connect to a WWAN network. Select the browse button, , to browse to the desired application you want to run when you connect to a WWAN network using VZAccess Manager. The application will run for all WWAN connections made from VZAccess Manager.

The VPN Tab

The following options exist on the VPN tab ("Tools," "Preferences," "WWAN" tab, "Set Options. . . ," "VPN" tab):



VPN Client: VZAccess Manager automatically detects if certain VPN clients like Microsoft, Cisco, CheckPoint, etc are installed on the computer and allows you to select the one you wish to use. Check with your network administrator to setup your VPN connection.

If the VPN client you wish to use does not appear in the list, you can select **Other VPN Application**.

Other VPN Application: This allows running a VPN program when VZAccess Manager connects to a network.

Enter the full path to an executable, or select the browse button, , to find the path to the desired application.

Security Setup

When you select the "Security Setup" button from the screen above, the following options will appear ("Tools," "Preferences," "WWAN tab," "Security Setup. . ."):



Lock code: Enter your 4 digit lock code (The default lock is the last four digits of your device's phone number) and select OK to lock or unlock the wireless device. **Warning:** *If you plan to use this device feature, we recommend you change your lock code to a new number.*

Change Lock Code: This is used to change the 4 digit lock code on the V640 ExpressCard



Current lock code: Enter your current 4 digit lock code.

New lock code: Enter your new 4 digit lock code.

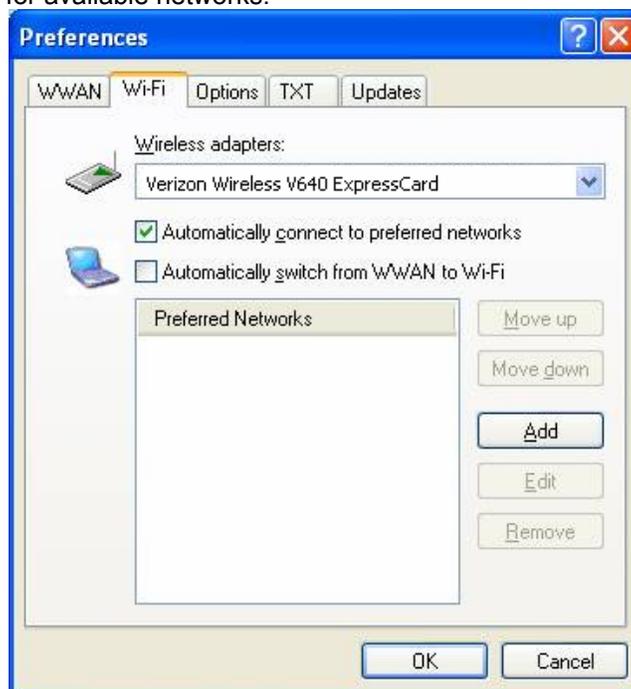
Confirm new lock code: Re-type the new 4 digit lock code.

Wi-Fi Settings

To access the Wi-Fi preferences, click on the "Tools" menu, then "Preferences..." and select the "Wi-Fi" tab.

The following options are available if you selected "detect Wi-Fi" device during setup. If you have added a Wi-Fi device after having installed VZAccess Manager, you can select "Options," "Run Wizard" to run the setup wizard again.

If you connect your Wi-Fi device after VZAccess Manager has been started and you are in coverage of a Wi-Fi network, selecting "**Options**," "**Refresh Networks**" will allow VZAccess Manager to recognize your Wi-Fi device (and WWAN if connected) and scan for available networks.



Wireless adapters: In the rare case you have more than one Wi-Fi adapter, you can select the Wi-Fi adapter you are using. If your adapter does not appear, try upgrading to the latest available drivers from the Wi-Fi device manufacturer.

Automatically connect to preferred networks: If desired, you can select to have VZAccess Manager automatically connect to your preferred Wi-Fi networks when they are detected.

Automatically switch from WWAN to Wi-Fi: Requires that "Automatically connect to preferred networks" is selected. When you select this option to automatically switch from WWAN to Wi-Fi, VZAccess Manager will disconnect your WWAN connection (BroadbandAccess or NationalAccess) and automatically connect via Wi-Fi when a preferred Wi-Fi network is detected.

Preferred Networks: When you connect to or add Wi-Fi networks they will appear in this list. If using the "Automatically connect" feature VZAccess Manager will try to connect to the networks in the order they appear in this list.

Move Up: Changes the priority of the Wi-Fi networks you have added or connected to in the past. This option is only available when you have two or more Wi-Fi networks in the "Preferred" list.

Move Down: Changes the priority of non Verizon Wireless Wi-Fi networks you have added or connected to in the past. This option is only available when you have two or more Wi-Fi networks in the "Preferred" list.

Add: Used to manually add Wi-Fi network. If you select "Add" you will have to enter the network's name and indicate if it is password protected. The only time you would need to use the "Add" feature would be if the Access Point providing the Wi-Fi coverage does not broadcast its network name (SSID). The easiest way to add a network that broadcasts its network name is to select the Wi-Fi network connection when it appears, and then select "Connect." If it is password protected you will be prompted to enter your WEP (Wired Equivalent Privacy) key.



Note: If you manually add a Wi-Fi network, when VZAccess Manager finds it, its signal strength will be displayed to the right of the network name when you are within coverage of that network. If you incorrectly entered the name, the signal strength will never indicate any signal.



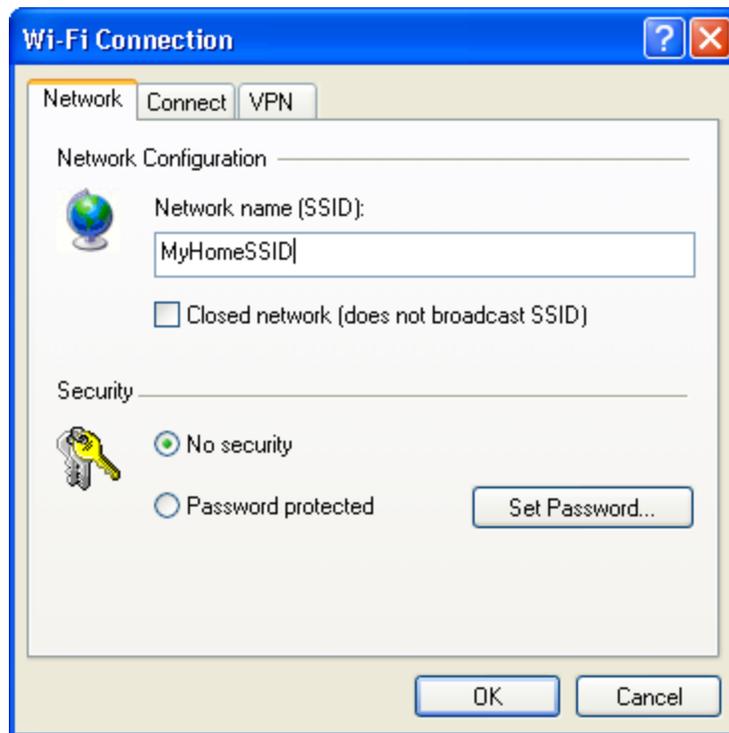
Note: that with certain Wi-Fi adapters the signal strength for Wi-Fi networks is not accurate until you connect to the network.

Edit: If you select a connection in the Preferred Network list, the Edit button will become active. Pressing it will provide you with three additional tabs that will be discussed below.

Remove: This will remove any other Wi-Fi networks you have added or connected to in the past. Just select the network, then select "Remove."

Network Tab

From the Wi-Fi tab (above, "Tools," "Preferences," "Wi-Fi" tab) if you select a network listed under "Preferred Networks" then select the "Edit" button or if you select the "Add" button, one of the following options will be displayed:



The following options exist on the Network tab:

Network Name: On the Network tab, for private networks you can edit or enter the Network name and specify if it is a closed network. Note: The name has to match the network to work. If the network broadcasts its SSID, instead of manually adding it, select the Wi-Fi network connection when it appears, and then select "Connect." If it is password protected you will be prompted to enter your WEP (Wired Equivalent Privacy) key.

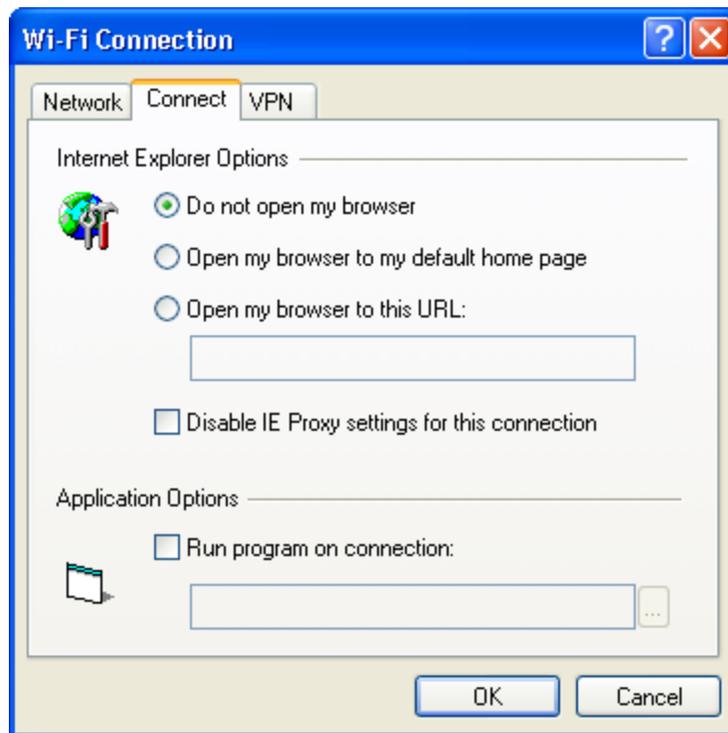


Note: The name has to match the network to work. Note that this name is case sensitive when entering it.

Set Password: This option allows you to modify, delete or enter your Wi-Fi WEP keys for a private Wi-Fi network.

Connect Tab

The following options exist on the **Connect** tab ("Tools," "Preferences," "Wi-Fi" tab, select "Add" or a network in the "Preferred Network" list and "Edit," then "Connect"):



Do not open my browser: With this option selected, when you connect to a Wi-Fi network, VZAccess Manager will not automatically launch your web browser.

Open my browser to my default home page: With this option selected, when you connect to a Wi-Fi network VZAccess Manager will automatically launch your web browser and your default home page will load.

Open my browser to this URL: With this option selected, when you connect to a Wi-Fi network, VZAccess Manager will automatically launch your web browser but do it in such a way that the URL you specify will load instead of your home page.

Disable IE Proxy settings for this connection: This option provides an automatic method to turn off proxy settings when connecting to a Wi-Fi network. This would typically be used if you normally use proxy settings at work to access the Internet and you wanted to access the Internet directly via Wi-Fi without using VPN (Virtual Private Networking) software.

Run program on connection: This allows automatically running a program when you use VZAccess Manager to connect to a Wi-Fi network. Select the browse button to browse to the desired application you want to run when you connect to a Wi-Fi network using VZAccess Manager. The application will run for all Wi-Fi connections made from VZAccess Manager.

VPN Tab

The following options exist on the **VPN** tab ("Tools," "Preferences," "Wi-Fi" tab, select "Add" or a network in the "Preferred Network" list and "Edit," then "VPN"):



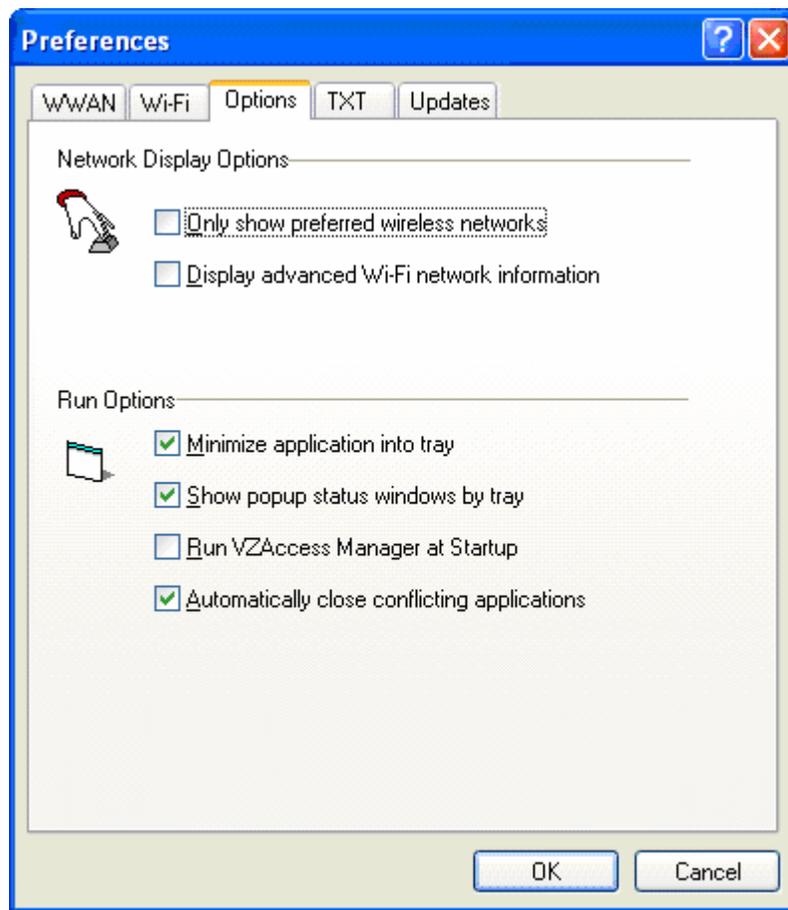
VPN Client: VZAccess Manager automatically detects if certain VPN clients like Microsoft, Cisco, CheckPoint, etc are installed on the computer and allows you to select the one you wish to use. Check with your network administrator to setup your VPN connection.

If the VPN client you wish to use does not appear in the list, you can select **Other VPN Application**

Other VPN Application: This allows automatically running any VPN program when you use VZAccess Manager to connect to the Wi-Fi network you added or edited. Select the browse button to browse to the desired VPN application you want to run when you connect to the Wi-Fi network you added or edited, using VZAccess Manager. If you have a shortcut you normally use to launch your VPN application you may want to right click on it and select properties to see where the program is located and how it's named.

Options

To access the Options tab, click on the "Tools" menu, then "Preferences...." and select the "Options" tab.



Network Display Options

Only show preferred wireless networks at start up: This only applies to Wi-Fi networks. If checked, at startup, only networks in your Preferred list on the Wi-Fi tab are displayed (networks you have connected to in the past) otherwise, all detected networks are displayed.

Display advanced Wi-Fi network information: This only applies to Wi-Fi networks. If checked, additional information will be displayed for Wi-Fi networks such as the channel, MAC address (also referred to as Physical Address) and type of security.

Run Options

Minimize Application into tray: With this option selected, when you minimize VZAccess Manager, instead of taking up space in your taskbar, it will just disappear. You can get it back by double clicking on the tray icon, , alternatively you can right click in the icon and select "Show Application."

You can minimize the main window of VZAccess Manager by selecting the minimize icon () in the upper right corner of the main window.

Show pop-up status windows by tray: Enables status notification in a pop up window above the task bar that displays for a few seconds whenever connection status changes.

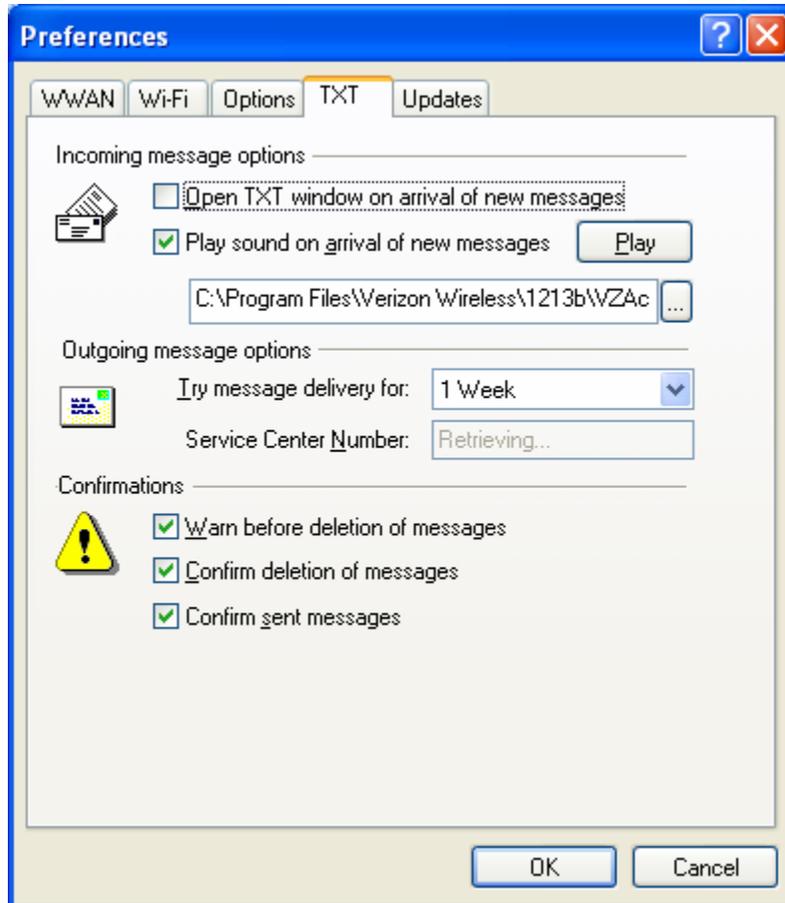
Run VZAccess Manager at Startup: Selecting this option adds VZAccess Manager to the Windows Startup group, unchecking it removes VZAccess Manager from the startup group.

Automatically close conflicting applications: With this option selected, VZAccess Manager will automatically close any application it recognizes that is known to prevent it from working correctly. For example, it may close the client software that was supplied with your Wi-Fi card, if it's known to conflict with VZAccess Manager controlling your Wi-Fi card.

TXT Messaging Settings

To access the TXT preferences, click on the "Tools" menu, then "Preferences...." and select the "TXT" tab.

The following options are available for ExpressCards only that support TXT Messaging.



Incoming message options

Open TXT window on arrival of new message:

VZAccess Manager will automatically switch to the TXT view when a new message arrives.

Play sound on arrival of new messages:

A sound file (.WAV) can be selected to play when new messages arrive.

Outgoing message options

Message delivery duration:

The duration of time that the Verizon Wireless network will attempt to deliver the message. The default is a duration of 1 week.

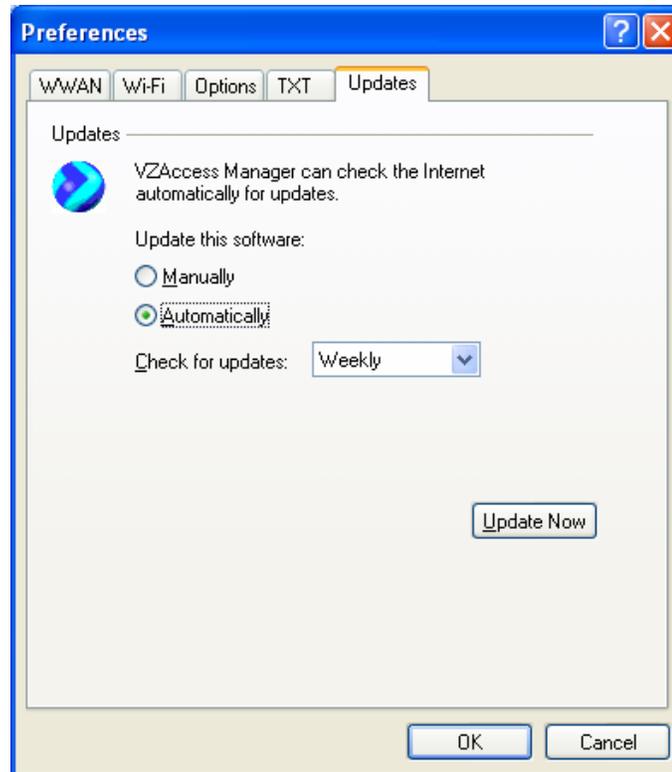
Confirmations

The following confirmation dialogs can be turned on or off:

- Warn before deletion of messages
- Confirm deletion of messages
- Confirm sent messages

Updates Settings

To access the Updates preferences, click on the "Tools" menu, then "Preferences..." and select the "Updates" tab.



This feature allows VZAccess Manager to automatically check for software updates. If an update is available, you will be notified of its size and approximate download times.

You will be given the choice to download or cancel. If you select download, you will be presented with a display that shows the progress as the update is downloading with the option to cancel if desired. You do not need to download the updates wirelessly; you can use any connection to the Internet.



Note: If you download the updates wirelessly, normal usage charges apply.

You can allow the software to check automatically for updates, daily, weekly (default), or monthly. It only checks when the application is running and when it detects that you are connected and able to access to the Internet. If desired, you can select "Manually" and the software will only check for updates when you select "Update Now" (pictured above), or when you select, from VZAccess Manager's main screen, "Help," "Check for Updates."

Additional Features

In addition to the basic features mentioned in previous sections, VZAccess Manager has the additional features listed below.

The Status Bar

The details of your current connection can be seen in the status bar at the bottom of VZAccess Manager. This status bar is always visible when the interface is fully expanded. For information on minimizing the VZAccess Manager interface, see the section "*Minimizing the Interface.*"

Most users will see the following "NationalAccess - BroadbandAccess" version of the status bar:



Connection Status

The text on the bottom left portion of the status bar below the "Verizon Wireless" text reflects your current state. During an active connection, this text will change to "Connected." If you are not connected, it will display "Not Connected."

WWAN Device Status Area

The text that reads "Verizon Wireless" can change to the following:

- **Device not inserted** - Your WWAN V640 ExpressCard is removed from the notebook.
- **Device not activated** - Your V640 ExpressCard needs to be activated. Select Activate from the Options menu.

Coverage

For ExpressCards, an icon will be displayed if you are in NationalAccess or BroadbandAccess coverage. Move the mouse pointer over these icons to see the tool tip showing the name of the current service.

NDIS

The following icons also appear on the status bar to indicate your device's NDIS status:

	NDIS is enabled and connected
	NDIS is enabled but disconnected
(No NDIS image)	NDIS is disabled.

New TXT

If your device supports TXT messaging, an icon appears on the status bar to show that you have a new TXT message waiting. Double click on the icon to jump to the TXT view to see the message.

Throughput

The amount of data that you have sent and received since the current network connection was initiated can be seen by holding the mouse over the green up and down arrows on the right side of the status bar.

Battery Level

The current battery level of your laptop can be seen on the right side of the status bar.

Elapsed Time

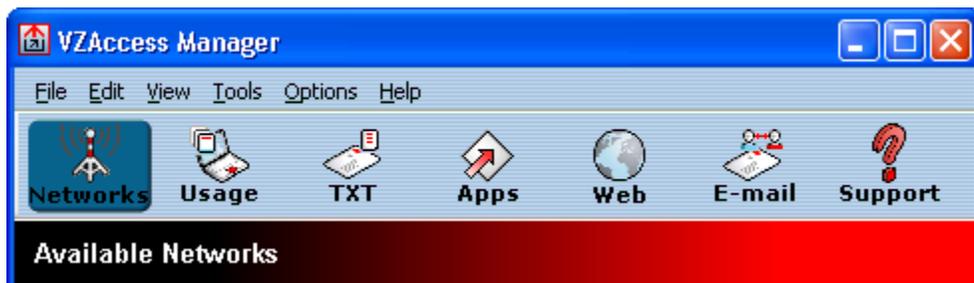
The amount of time that has elapsed since the current network connection was initiated is tracked on the lower right side of the status bar.

Roaming Status

VZAccess Manager displays Roaming status for the V640 ExpressCard. These icons will show on the status bar in these scenarios:

Icon	Status
	Roaming
	Extended Network
No icon displayed	Home Network

The Toolbar Buttons



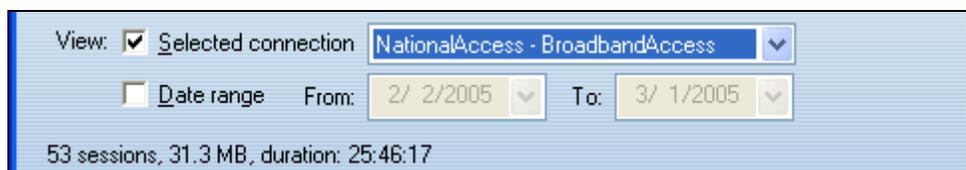
The "Networks" button

Displays all of your available wireless connections and networks. Please refer to the Connecting section earlier.

The "Usage" button

Provides a concise session log of your network activity. Click on a column heading to sort the log. This window also displays the total number of sessions as well as the total time connected.

The information displayed in the Usage log can be customized using the controls that appear just below the list.



To view only the connection history of a specific network type, check the "Selected connection" checkbox and select the desired type from the drop-down list. To view only the connections made during a specific interval, check the "Date range" checkbox and specify the date in the "From:" and "To:" fields.

To export this log as a CSV file, click the Export button that is immediately above the log. To clear the log, press the Clear button. Note that clearing the log cannot be undone.

The "Apps" button

Add applications here that you want easy access to while connected to the wireless Internet. VZAccess Manager will pre-load into this view links to Verizon Wireless web sites, and any Microsoft Office applications you have loaded on your computer.

The "TXT" button

The TXT button allows you to send short text messages to any other wireless device that supports SMS. Note that this button is only available when using a wireless device that supports TXT Messaging.

The "Web" button

Launches the default web browser on your computer.

The "Email" button

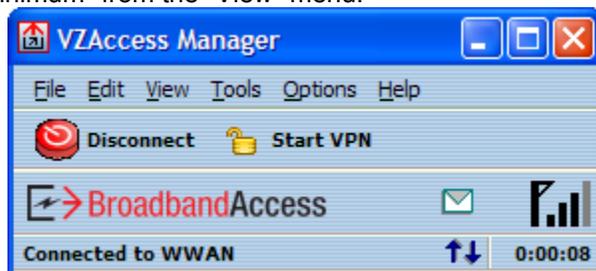
Launches the default email application on your computer.

The "Support" button

Displays a variety of help options available to you. Click this button to find assistance with a problem, to explore the full range of VZW products and services, or to contact Verizon Wireless.

Minimizing the Interface

The interface for VZAccess Manager can be minimized to take up as little screen real estate as possible. To minimize the interface, select "Minimum" from the "View" menu.



To exit the Minimum view, you have the following options:

- In the top, right-hand corner, click the "Maximize" button (to the left of the Exit button)
- In the View menu, de-select "Minimum"
- Select any other option on the View menu.

The Tools Menu

Preferences...:

Provides access to the Preferences dialog box. For details, please refer to VZAccess Manager Preferences section.

Control Panels

From this menu you have access to your system's "Modem," "Network and Dial-Up Connections," and "Internet" control panels. You can also see all control panels by selecting "All."

Dial-Up Accounts: Add, edit, or copy wireless dial-up accounts.

- Add Wireless: This is used to create a wireless dial-up connection from scratch.
- Add Other: This is used to create a regular dial-up connection from scratch.
- Edit: This is used to edit properties of any dial-up connection.
- Copy: See section on "Using Dial-Up Connections."



Dial-up account options are only applicable if using a WWAN device that supports dial-up accounts.

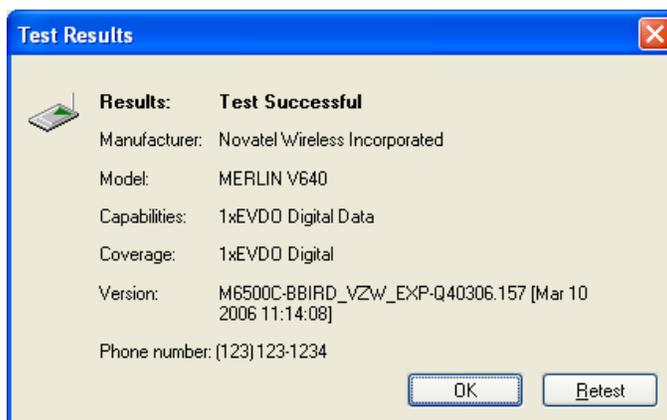
The Options Menu

Refresh Networks: This causes VZAccess Manager to verify devices connected and to scan for available Networks. Use this feature if you connected your equipment after launching VZAccess Manager. Pressing the F6 function key can also access this option.

Refresh Signal Levels: This causes VZAccess Manager to query signal levels and update its display. This will also update the battery display for your WWAN device if it is not in an active data session. Signal levels are automatically refreshed when you launch VZAccess Manager, connect or disconnect. Pressing the F5 function key can also access this option.

Statistics: If you selected to detect and install Wi-Fi during installation, there will be a Wi-Fi statistics tab with additional information and tools that are helpful in the event any troubleshooting of the connection is required. You can view key statistics including bandwidth and your IP address information, release your IP address, renew your IP address. If you selected to detect and install a WWAN device during installation, there will be a Statistics tab that will show data speeds during a session when using the WWAN device. NationalAccess delivers typical speeds of 60 to 80 kbps, bursting up to 144 kbps. BroadbandAccess provides broadband-like speeds (up to 2.0 Mbps). There is also a "My Computer" tab; this tab has key information about your computer that may be helpful in troubleshooting any problems that may occur. It also has the option of being e-mailed to Verizon Wireless Technical Support.

Test WWAN Device: Retrieve and display detailed information about your WWAN device such as manufacturer, model, version, etc. Also, see the current battery (not with ExpressCards) and signal strengths. This information can be valuable when troubleshooting a problem.



The Help Menu

Contents: Launches this help file. You can also access this help file from your installation CD.

Check for Updates: Can be used with any connection to the Internet to check for software updates for VZAccess Manager.



Note: If downloading an update wirelessly, normal usage charges apply - see Update Options in Setting Your Preferences.

Device Support Page: Takes you to the Verizon Wireless device support page that contains information about wireless devices, useful tips and hardware manuals.

E-mail Verizon Wireless Support: This option will attempt to launch your mail client with the default address to e-mail Verizon Wireless Support.

About VZAccess Manager: Displays the software version.

Settings in other Applications

This section describes special settings that might be required to use them over the Verizon Wireless network.

Sync Applications

Palm Incorporated's HotSync® and Microsoft Corporation's ActiveSync® are used for Personal Digital Assistants (PDAs). These programs are used to synchronize files between a notebook or desktop PC and PDA. These programs may conflict with your WWAN device. If you have any problems using your WWAN device, try turning these programs off as explained below.

To turn HotSync On & Off

Right click on the HotSync® icon in your task tray and the menu below will appear. Click on "Local Serial" and "Local USB" to remove the check marks. This effectively disables HotSync® and if it is causing a conflict this will allow your WWAN device to work. You can repeat this process to put the check marks back to re-enable HotSync®. If you are using an early version of HotSync®, you may not be able to uncheck the "Local" options without first checking "Modem" or "Network." If this is the case, you can always select "Exit" to close HotSync® and launch it from the **Start** Menu the next time you need it.

To turn Microsoft ActiveSync® On & Off

Right click on the ActiveSync® icon in your task tray and select "Connection Settings."

Select/deselect "Allow serial cable or infrared connection to this COM port:" and "Allow USB connection with this desktop computer." Make sure they are **unchecked** if you are having trouble connecting with your WWAN device and restore them to their original settings when syncing your PDA. Click "OK" when finished.

Proxy Settings

Proxy settings affect the way your computer and browser connect to other computers on the internet and local networks. It is highly recommended that you consult your network support staff before changing these settings described here.

Most corporations go through a proxy server to access the Internet via the corporate network. If you wish to access the internet directly through BroadbandAccess or NationalAccess, proxy settings must be turned off. If you are connecting to your corporation's network using VPN (Virtual Private Networking) and your corporation uses proxies, then you would need the correct proxy settings to be able to access the Internet. For exact details on the proxy settings needed when accessing your corporate network, contact your corporate network technical support department if you need additional assistance.

Performance, when accessing the Internet directly, is improved because you eliminate any overhead of the VPN client.

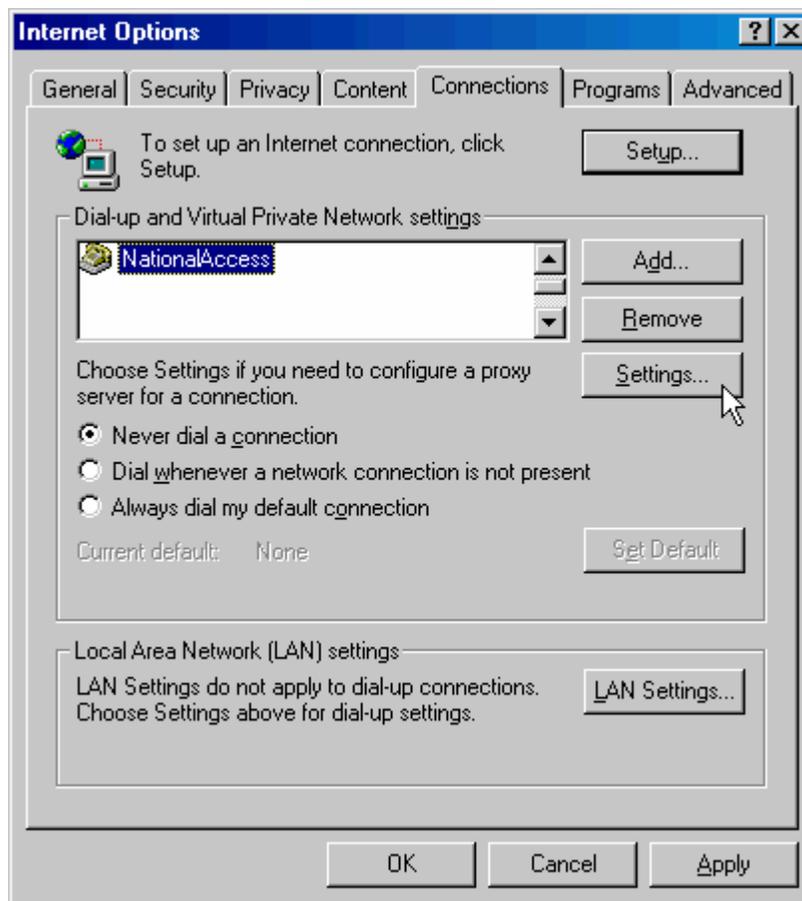
Proxy settings if using Internet Explorer (version 5 and newer)

If you are using proxy settings, when connected to a corporate network via your Network adapter, they will be entered under LAN settings. These settings apply to devices that appear to Windows as Network adapters - this includes Wi-Fi adapters as well as your Network adapter. You can access the LAN Settings by doing the following:

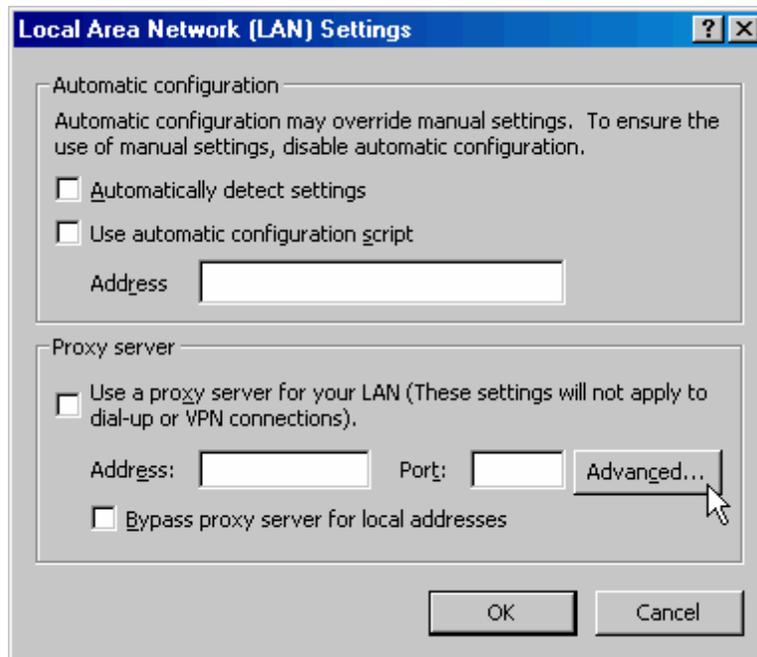
Step 1: In Internet Explorer, select "Tools," "Internet Options."



Step 2: Then select the "Connections Tab" and "LAN Settings."



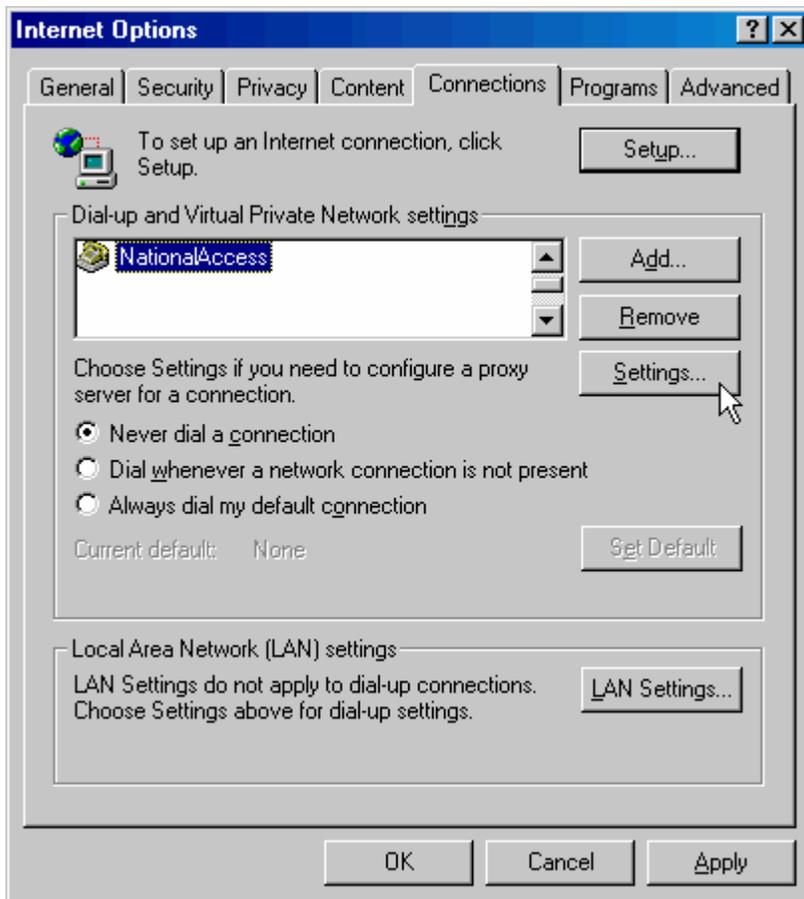
If your company uses proxy settings they will appear here.



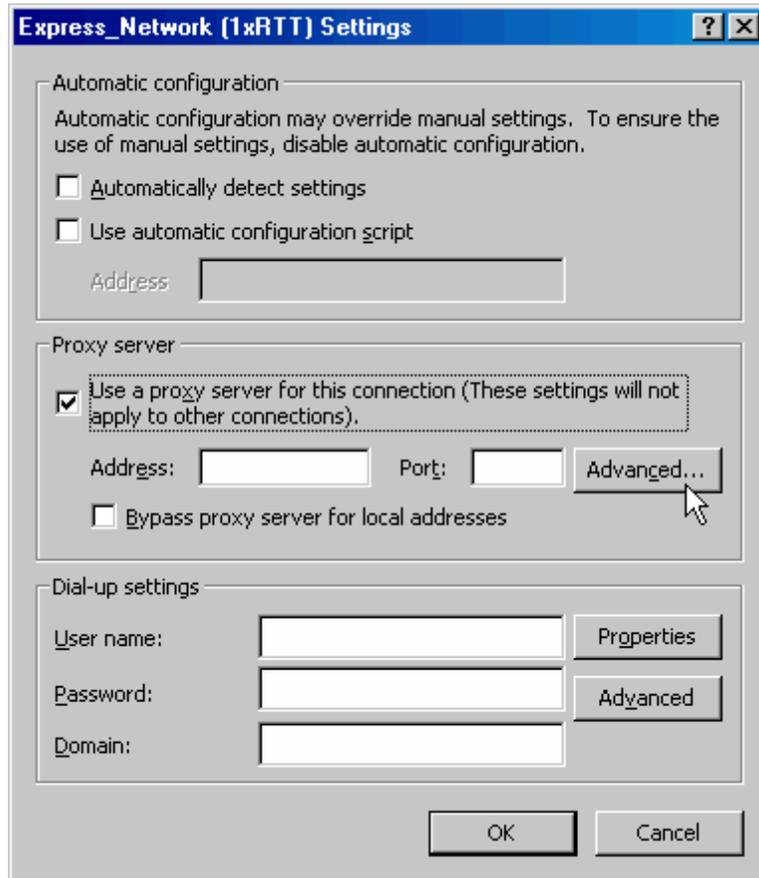
Step 3: If you are only using Wi-Fi connections without VPN and you want to access the Internet directly, you would uncheck the first three options to turn proxy settings off. If using VPN and if the settings are present you would leave them. To restore the settings you would navigate back to this screen and recheck any boxes you had unchecked. If using a WWAN device, BroadbandAccess and NationalAccess have no proxy settings associated with them from within VZAccess Manager by default. This means you can access the Internet directly using these connections but if you connect via VPN and your company requires proxy settings, you will not be able to access the Internet when connected via VPN. Performance is better if you drop your VPN connection when you want to access the Internet directly, but, if desired, you can record all the settings on the "Local Area network (LAN) Settings" screen and on the screen that appears when you select the "Advanced" button (Step 5), enter these settings in the properties for your WWAN connections (BroadbandAccess, NationalAccess).

Note: If desired, you can have proxy settings automatically turned off when you connect using Wi-Fi connections - See Wi-Fi Specific Settings.

Step 4: If you need to enter proxy settings connections used by VZAccess Manager, you would use the "Connections" tab in the previous step, highlight the connection -- ex. **BroadbandAccess** -- and then select "Settings." (If you need to navigate to this tab, from Internet Explorer's main screen, select "Tools," "Options" as shown in Step 1 and then the "Connections" tab.)



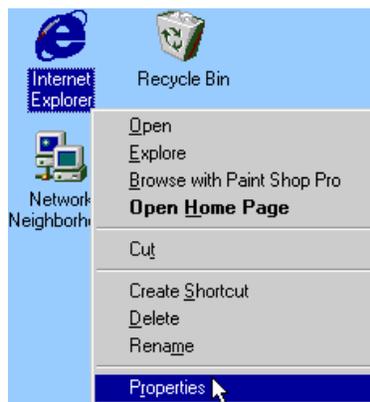
Step 5: The settings will be displayed. You can now enter the same proxy settings you recorded in Step 3, if you desire to use VPN and your proxy settings with these connections. If necessary also enter the information recorded from the screen that appears after selecting the "Advanced" button. To disable proxy settings for these connections you would have to uncheck the "Use proxy server . . ." box. Proxy settings must be disabled to access the Internet directly when using these connections without VPN.



Proxy Settings if using Internet Explorer 4.x:

In Internet Explorer 4.x, proxy settings are global and have to be turned off when accessing the Internet directly through BroadbandAccess or NationalAccess and back on if required by your company when using their network to access the Internet or when using VPN.

Step 1: Right-click on the Internet Explorer icon and go to Properties (or if Internet Explorer is already open go to View then Internet Options...).



Step 2: Click on the "Connection" tab. Uncheck the box labeled "Access the Internet using a proxy server" then click "OK" or "Apply." You may now access the Internet through BroadbandAccess or NationalAccess.

When you wish to access the Internet through your corporate network proxy server, you must repeat these steps, checking the box labeled "Access the Internet using a proxy server." **If your proxy setting is incorrect for the connection you are using, you will get an error whenever you try to go to any site.**

Proxy Settings if using Netscape Navigator 4.0 and higher:

In Netscape Navigator 4.0 and higher, proxy settings are global and have to be turned off when accessing the Internet directly through BroadbandAccess or NationalAccess and back on if required by your company when using their network to access the Internet or when using VPN.

Step 1: From within your browser, go to "Edit" then "Preferences."

Step 2: Click on the "+" beside "Advanced" then "Proxies." Next select "Direct connection to the Internet" and click "OK." You may now access the Internet through BroadbandAccess or NationalAccess.

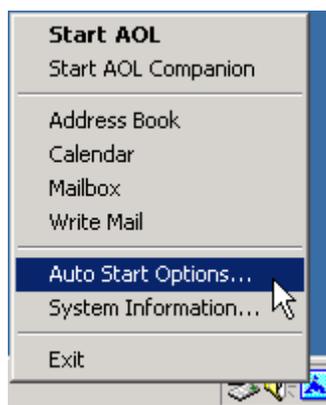
Reminder: When you wish to access the Internet through your corporate network proxy server, you must repeat these steps, selecting "Manual proxy configuration" then clicking "OK." **If your proxy setting is incorrect for the connection you are using, you will get an error whenever you try to go to any site.**

Instructions for AOL Users

AOL supports using other connections to the Internet, so it can be used with the Verizon Wireless BroadbandAccess or NationalAccess connections.

Configuring AOL Version 9

Step 1: Right click on the AOL icon in your task tray, and then click on "Auto Start Options..."



Step 2: Select "Don't use any Auto Start options," and then click the "OK" button. (We have found it to be more reliable to manually launch AOL, rather than to use the Auto Start options.)



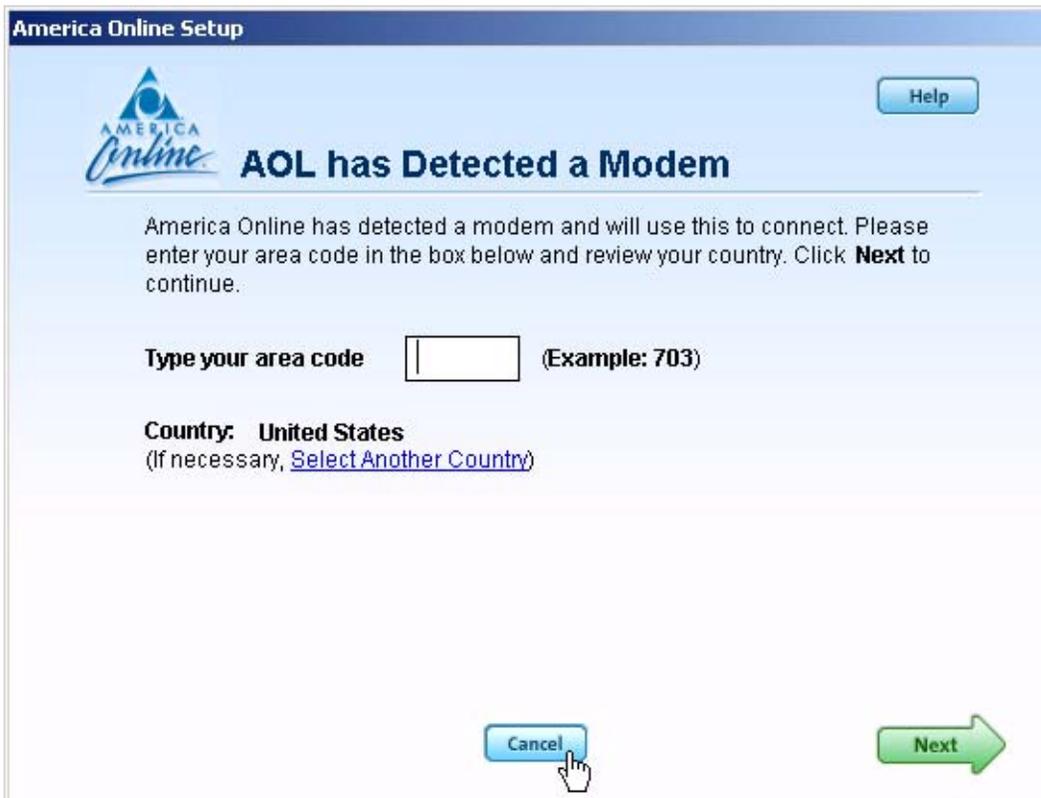
Step 3: The first time you run AOL (version 9), after setting your V640 ExpressCard up as a modem, you may get the following screen; select **OK** to proceed.



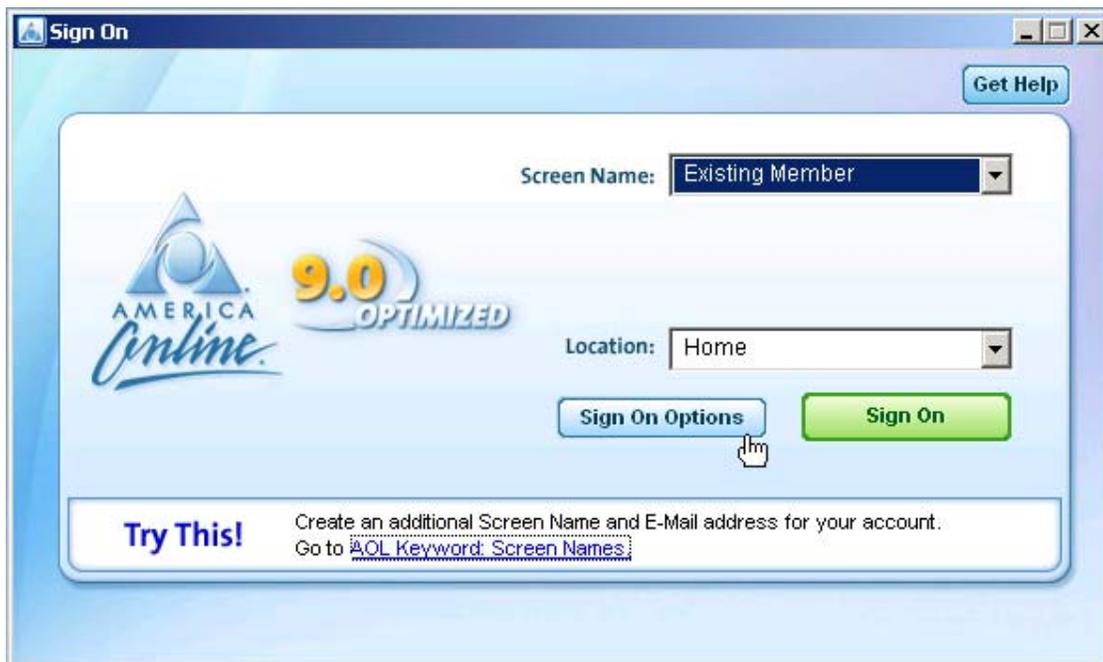
Step 4: AOL will attempt to detect how it might be able to connect.



Step 5: Once AOL detects a way to connect, select **Cancel**



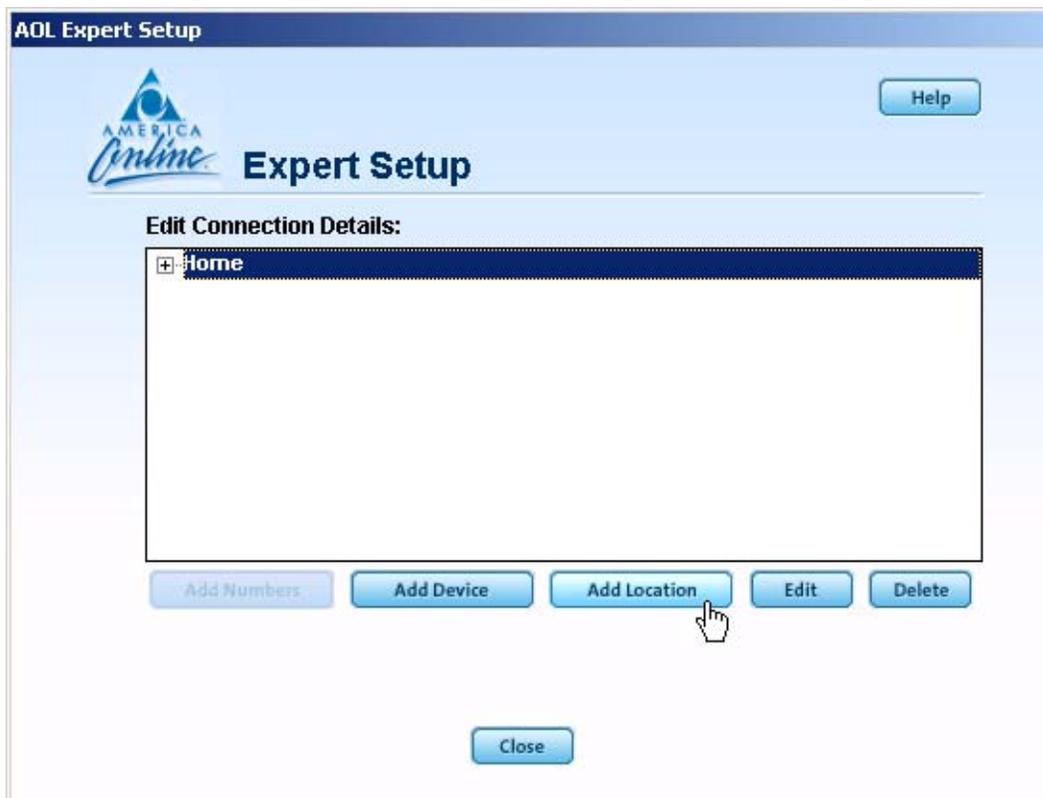
Step 6: From the sign on screen select **Sign On Options**



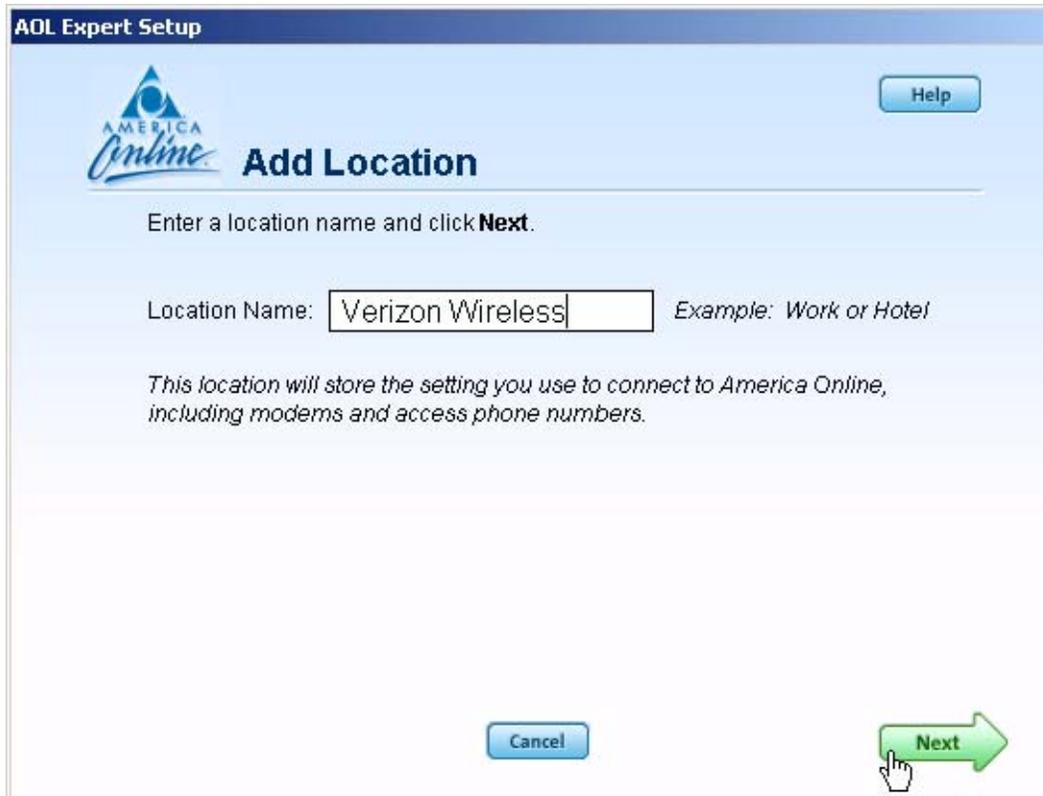
Step 6: Select Expert Setup



Step 7: Select Add Location



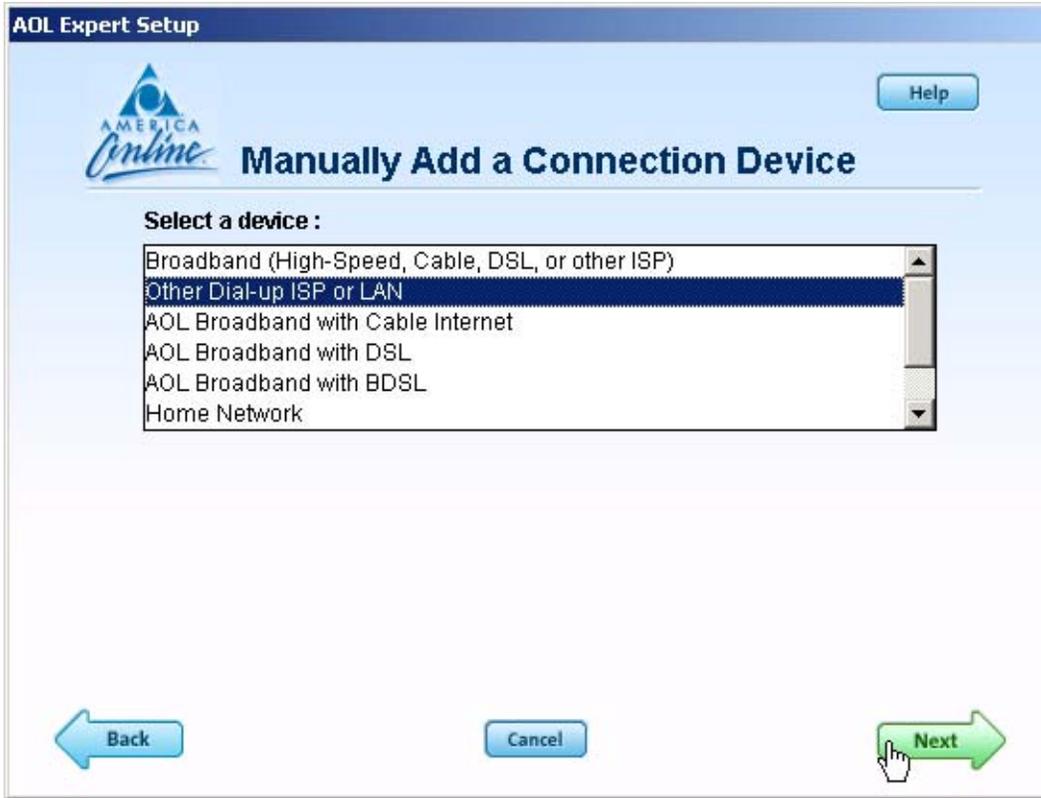
Step 7: For the location name enter **Verizon Wireless** and then select **Next**.



Step 8: If "Other Dial-up ISP or LAN" is available select it then select **Next** and go to Step 10. If this option is not available, select "(Manually add a connection device)" and then select **Next**.



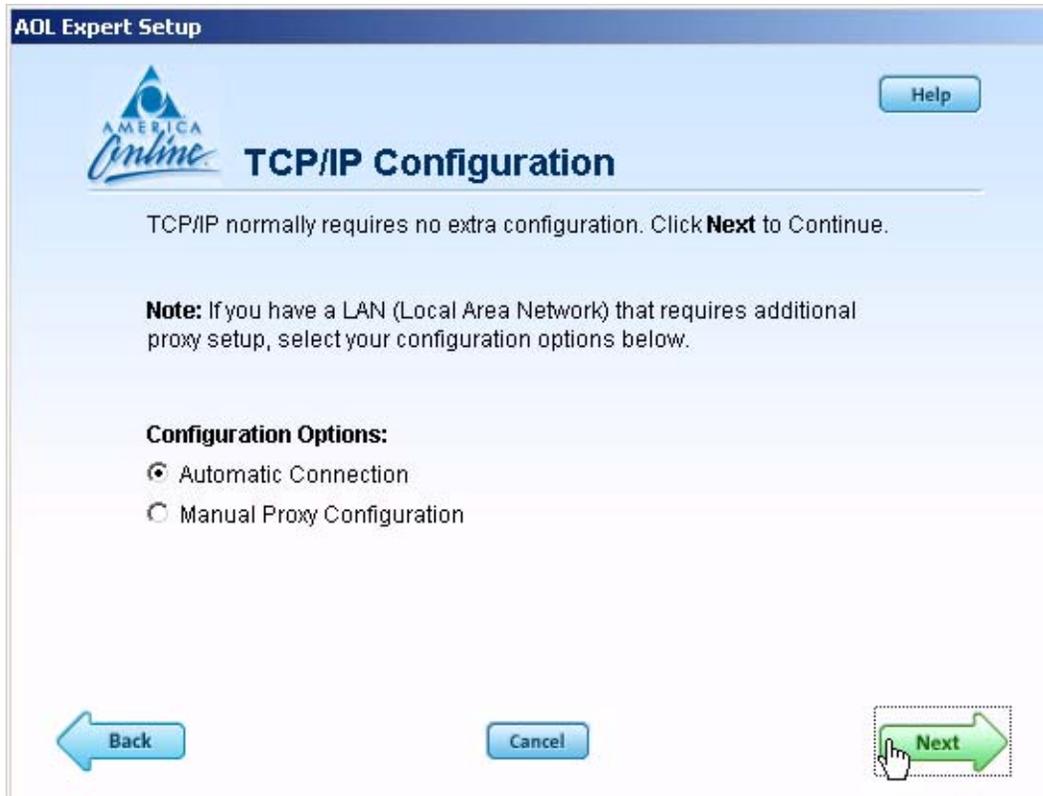
Step 9: Select "Other Dial-up ISP or LAN" then select **Next**.



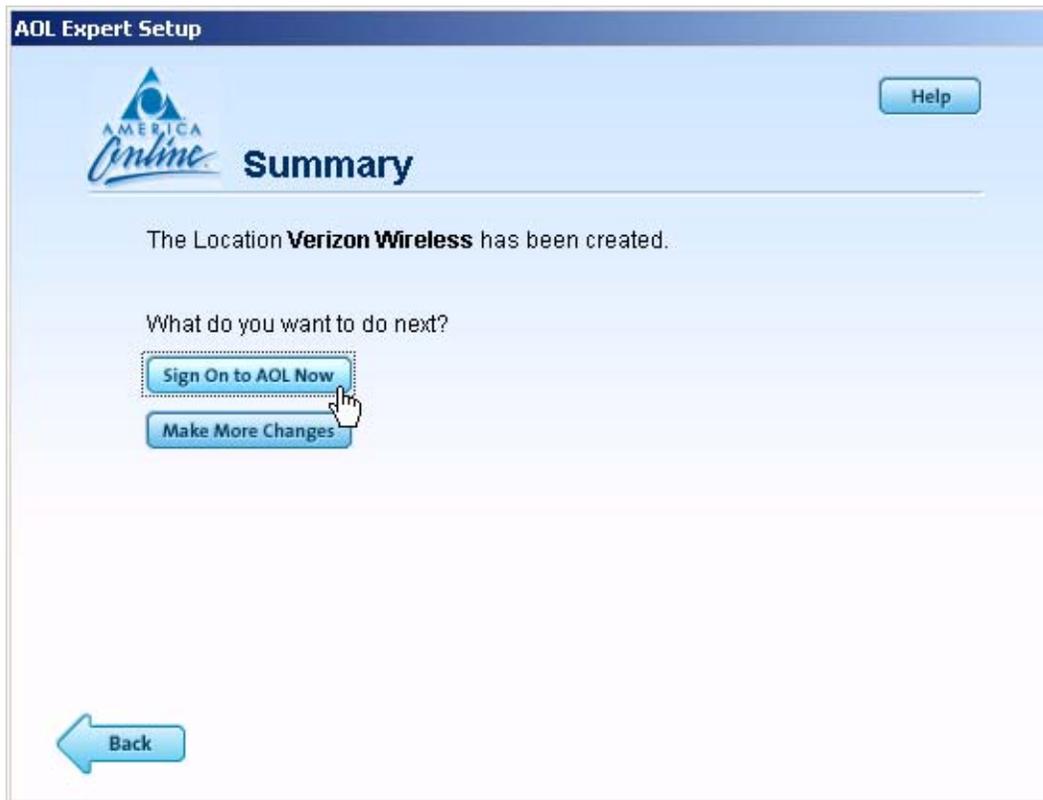
Step 10: Select **Next**.



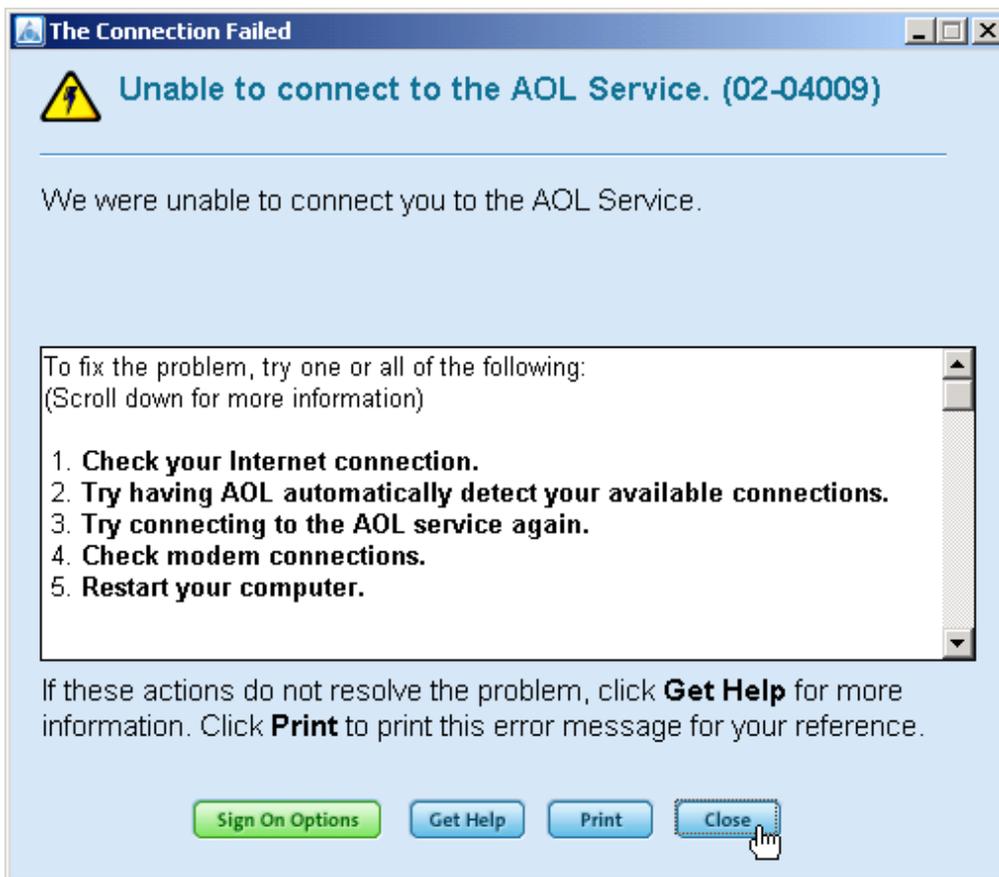
Step 11: Select Next.



Step 12: Even though AOL reports the location has been created, you must click on "Sign On to AOL Now" to save the changes. Since you are not actually connected to the Internet, AOL will not actually be able to sign on, but it will save your changes.



Step 13: Select **Close** when you get the following error message. This completes configuring AOL to work with any connection to the Internet, including BroadbandAccess and NationalAccess.



Using AOL Version 9 with your Mobile Office Connections

To use AOL with the Verizon Wireless BroadbandAccess or NationalAccess, select the desired connection from VZAccess Manager's main window and select "Connect."

Once connected, launch AOL. From your sign on screen, select "Verizon Wireless" for the location and sign on.

Note: You can set VZAccess Manager to automatically launch AOL when you get connected. For further help details, see the "Run program on connection" section on the Wi-Fi Specific Settings page and the WWAN Specific Settings page. Check the box to "Run program on connection:," then click the  button to browse and select aol.exe, it should be located in your "C" drive in an America On Line folder, under the "Program Files" folder.

Note: If you normally use a landline modem rather than connecting wirelessly, just remember to change the location back to the one you normally use. Then change it back to "Verizon Wireless" when you use BroadbandAccess or NationalAccess.

Reminder: To disconnect from BroadbandAccess or NationalAccess, click on the "Disconnect" button in VZAccess Manager. (Signing off AOL will not end the call.)

Using E-mail with VZAccess

POP3 E-mail

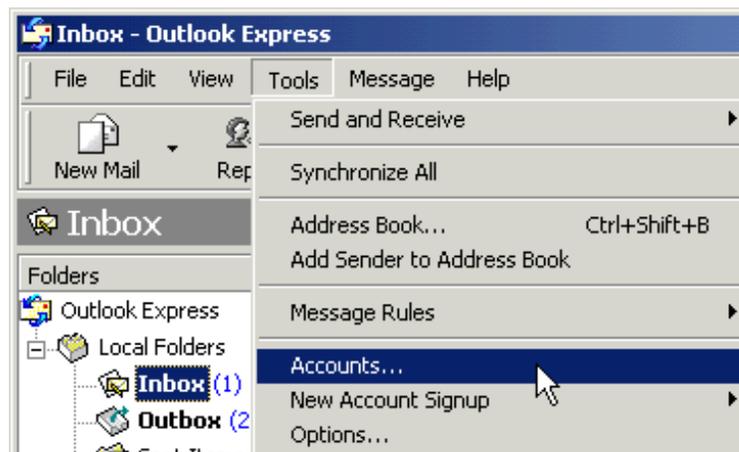
You can use BroadbandAccess or NationalAccess to access your POP3 e-mail account if your e-mail provider allows access through other providers (many do). If your provider restricts access to their outgoing mail server you will get an error message similar to the one below if you are attempting to send mail.

Most send mail servers are not accessible from various connections to the Internet. You usually have to be connected to the e-mail provider's network to access their mail server and most e-mail providers require authentication (a user name and password). The reason everyone has had to resort to this is that without these measures, anyone can use a send mail server to send massive amounts of unwanted junk e-mail. If you are having trouble sending e-mail - this also includes replying and forwarding, and you are getting an error message similar to that shown above, then your send mail server can not be accessed from the Verizon Wireless network.

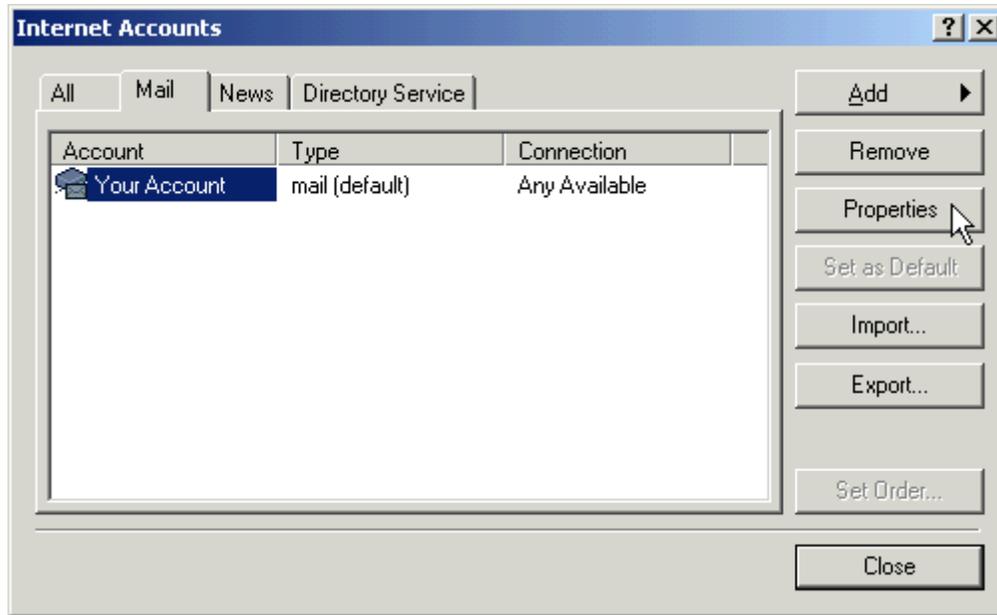
For customers in this situation, Verizon Wireless has made available a send mail server that you can use in place of the one you normally use. All that is required is that you have a TXT messaging capable Verizon Wireless device and TXT messaging service, visit www.vtext.com and establish a profile there by selecting "Join Up" and completing the form. You will be asked to enter your 10 digit mobile number. A TXT message will be sent to your device and will be used to establish your password. Most Verizon Wireless ExpressCards can receive TXT messages. If you have a ExpressCard that is not capable of receiving TXT messages and you have a Verizon Wireless phone that is, you can use it to establish a profile on www.vtext.com as described above.

To use the Verizon Wireless Send Mail Server, you will edit your existing Mail account settings and change the outgoing mail server you are currently using. In place of your existing Send Mail Server, enter smtp.vzwmail.net, select "My server requires authentication" and using the 10 digit mobile number you used to establish your profile on www.vtext.com, enter the 10 digit mobile number@vzwmail.net (i.e. 6145551212@vzwmail.net) for the Send Mail Server user name. For the password, use the password you established for www.vtext.com. You will also be able to use this server when connected to the Internet from various providers eliminating the need to change this setting when you switch from being connected to the Internet through Verizon Wireless and by various other means. If you need to know where these settings normally are in your e-mail client, check with your e-mail provider. For your convenience the settings for Outlook Express® are as follows:

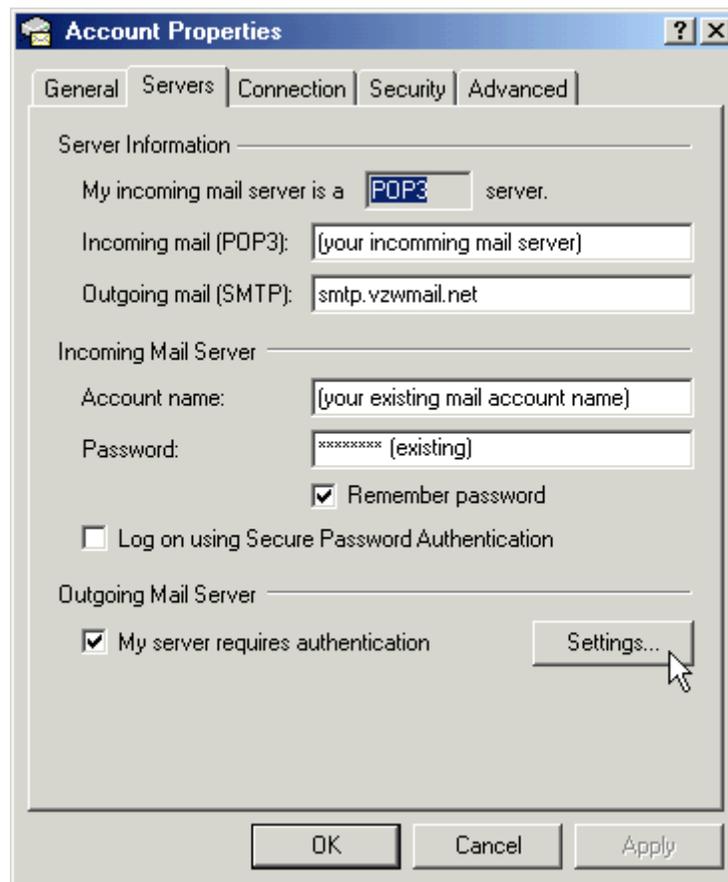
Step 1: Select "Tools," "Accounts."



Step 2: Select your default account, then "Properties."



Step 3: Select the "Servers" tab. In the "Outgoing mail (SMTP):" field enter "smtp.vzwmail.net" without quotes. In the "Outgoing Mail Server" section at the bottom, select "My server requires authentication," then select "Settings."



Step 4: Select "Log on using," then using the 10-digit mobile number you used to establish your profile at www.vtext.com, enter the 10-digit mobile number@vzwmail.net for the account name (i.e. 6145551212@vzwmail.net). For the password, enter the password you established on www.vtext.com. Select "Remember password." Select "OK," "Apply," "OK," "Close" to get back to the Outlook Express® main screen. It may take up to two hours for your www.vtext.com credentials to be valid on the smtp.vzwmail.net server. Once they are valid, you should be able to send mail using the Verizon Wireless Send Mail Server (also referred to as a SMTP - Simple Mail Transport Protocol Server), when you are connected to the Internet, wirelessly or via other means.



Additional important notes about the Verizon Wireless Send Mail Server:

- There is no monthly charge for this service.
- Message Limits are as follows: 2MB Message Size, 100 Recipients per message.
- Customers that are identified as using this server to generate SPAM messages (what most would consider unsolicited junk e-mail) will be denied access to this server (e-mail messages will not be sent).
- If you are using an e-mail client other than Outlook® or Outlook Express® and it fails to work with the Verizon Wireless Send Mail server, it may not support authentication correctly. Try using Outlook Express® if you have any problems. If it works and your e-mail client does not, check to see if any updates are available for your e-mail client.

NOTE: Credentials established on www.vtext.com may take up two hours before they will work on the smtp.vzwmail.net server. If your credentials work on www.vtext.com but not on the smtp.vzwmail.net server, try again after two hours.

Web Based E-mail

If you currently do not have e-mail software, or if you do not have a text messaging capable Verizon Wireless device or ExpressCard, you can sign up for web based e-mail at any of the popular portal sites, such as <http://www.yahoo.com>, or <http://www.msn.com>. You may also search for other e-mail providers from any of these pages.

Technical Support

Data Technical Support

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

Troubleshooting

V640 ExpressCard

The following tips will help solve many common problems encountered while using the V640 ExpressCard:

- Make sure you are using the appropriate card in the correct geographic region: a BroadbandAccess/NationalAccess card in the US.
- Ensure that the wireless network's coverage extends to your current location.
- Confirm that you have an up-to-date version of VZAccess Manager.

WWAN

When installing VZAccess Manager, it was not able to find the WWAN device (For a 1xEV-DO/1XRTT/CDMA ExpressCard).

- If using a WWAN (1xEV-DO/1XRTT/CDMA) ExpressCard, try removing it and reinserting it by following the proper insert and eject hardware guidelines for your operating system.
- Identify any software that uses the serial port on your computer or other USB devices (such as Microsoft ActiveSync and Palm HotSync) and exit all of these programs. See Turning Sync Applications On and Off.
- Make sure that the auto-answer feature of any fax software you are using is disabled.
- Check with your computer manufacturer to verify your serial port or USB port is enabled and properly configured.

I get connected, but I can't get to any web sites.

- If you are using VPN (Virtual Private Networking) you may require proxy settings on BroadbandAccess and NationalAccess if you wish to access the Internet when connected to a corporate network through VPN. To see if this is the case disconnect from your VPN and see if you can access the Internet directly. For additional information see Turning Proxy Settings On and Off.
- If you are using a PC provided by your employer it's possible they might be using Microsoft's Winsock Proxy or a similar program that enforces Proxy settings without having to enter any proxy settings in your web browser. If this is the case, you will only be able to access the Internet when using VPN. To access the Internet directly you will have to disable the Winsock Proxy. Usually these applications have an icon in Control Panel that allows turning them on and off. Check with your Network Administrator if you think this might be the case.

I can receive e-mail but cannot send e-mail using my e-mail program.

Some Internet Service Providers require that you be connected through them to access their mail server to send e-mail. See section on E-mail Options.

My computer locks up or crashes when attempting to connect:

- Refer to your computer manual for help in managing your serial COM ports and USB ports, to resolve potential resource conflicts.
- Exit any applications that may use serial ports or USB ports, that might be causing a conflict and try again.
- While trying to use your WWAN ExpressCard, remove any unrelated ExpressCard (PCMCIA) modems from your computer.

My connection fails immediately, or I get a "Call Failed" message

- Remove and reinsert the V640 ExpressCard from the ExpressCard slot. Then try to establish your session again.

My communication software shows that I am connected, but my wireless phone does not.

- Depending on your device and your NationalAccess or BroadbandAccess plan, your data session may disconnect during a dormant state. See your Calling Plan brochure for details. Select disconnect, then connect again
- Your call may have been disconnected due to a network anomaly. Disconnect and try to establish your session again.

I get "There is no dial tone" while trying to connect, using my V640 ExpressCard or it seems as if the V640 ExpressCard is not being recognized at all.

- Remove and reinsert the V640 ExpressCard from the ExpressCard slot. Then try to establish your session again.
- Raise the antenna on your V640 ExpressCard. If you are not within the digital coverage area, wait until you are back in the Verizon Wireless digital coverage area to place your call.

Every time I try to establish a BroadbandAccess or NationalAccess connection, it fails.

- If you feel you may have incorrectly entered your wireless telephone number during initial setup, from the menu bar select "Options" and then "Run Wizard." After the wizard finishes, try connecting again.

Wi-Fi

When installing VZAccess Manager, it was not able to find the Wi-Fi device.

- Verify that the client that came with the Wi-Fi device can talk to it. If it can't, contact the Wi-Fi device manufacturer for assistance getting it to work with the client it comes with. Then try VZAccess Manager again.
- Check with the Wi-Fi device manufacturer to see if newer drivers are available. If they are, download and install them.
- If using a Wi-Fi ExpressCard, try removing it and reinserting it.
- On Windows 2000 and XP, this can happen if you do not have administrative rights. Check with your IT department, if you have one, to see if they limited your user rights. If they have, you will need their assistance to run the setup wizard with administrative rights. You can access the setup wizard from VZAccess Manager's main screen by selecting "Tools," "Run Wizard."

When installing VZAccess Manager, a dialog appeared stating that a feature in the Cisco® Aironet® Client needed to be enabled.

- A simple configuration change is required to the Cisco® Aironet® Client to allow VZAccess Manager to work properly. Select, "Start," "Programs," "Cisco Systems," "Aironet Client Utility (ACU)," "Select Profile," then select "Use Another Application to Configure My Wireless Settings," and "Apply."

When installing VZAccess Manager, a dialog appeared stating "You will need to upgrade your Wi-Fi card drivers before running this program. . ."

Check with the Wi-Fi device manufacturer to see if newer drivers are available. If they are download and install them.

I get connected, but I can't get to any web sites.

- If you are using VPN (Virtual Private Networking) you may require proxy settings to access the Internet when Wi-Fi connections. To see if this is the case disconnect from your VPN and see if you can access the Internet directly. Also if you are not using VPN and you have proxy settings set, they will prevent you from accessing web pages. For additional information see Turning Proxy Settings On and Off.
- If you are using a notebook provided by your employer, it's possible they might be using Microsoft's Winsock Proxy or a similar program that enforces Proxy settings without having to enter any proxy settings in your web browser. If this is the case you would only be able to access the Internet when using VPN. To access the internet directly you would have to disable the Winsock Proxy. Usually these applications have an icon in Control Panel that allows turning them on and off. Check with your Network Administrator if you think this might be the case.

I'm unable to connect using Wi-Fi.

- A low signal can cause this. Try moving within the Wi-Fi hot spot to improve your signal and try connecting again.
- This can happen when your computer fails to successfully obtain an IP address. Try performing a release and renew by selecting the following from VZAccess Manager's main screen: "Session," "Statistics," "Wi-Fi" tab. The "Address type" should show "Assigned by DHCP." If it shows "Automatic Private Address" you have not been assigned an IP address from the Wi-Fi network. Select "Release," then "Renew."

Try selecting "Disconnect" and then connect again.

I can receive e-mail but cannot send e-mail using my e-mail program.

Some Internet Service Providers require that you be connected through them to access their mail server to send e-mail. See section on E-mail Options.

I connected OK, everything was working, then everything stopped working.

- A low signal can cause this. Try moving within the Wi-Fi hot spot to improve your signal and try connecting again.

If necessary, try disconnecting and reconnecting.

My connection was lost.

A low signal can cause this. Try moving within the Wi-Fi hot spot to improve your signal and try connecting again.

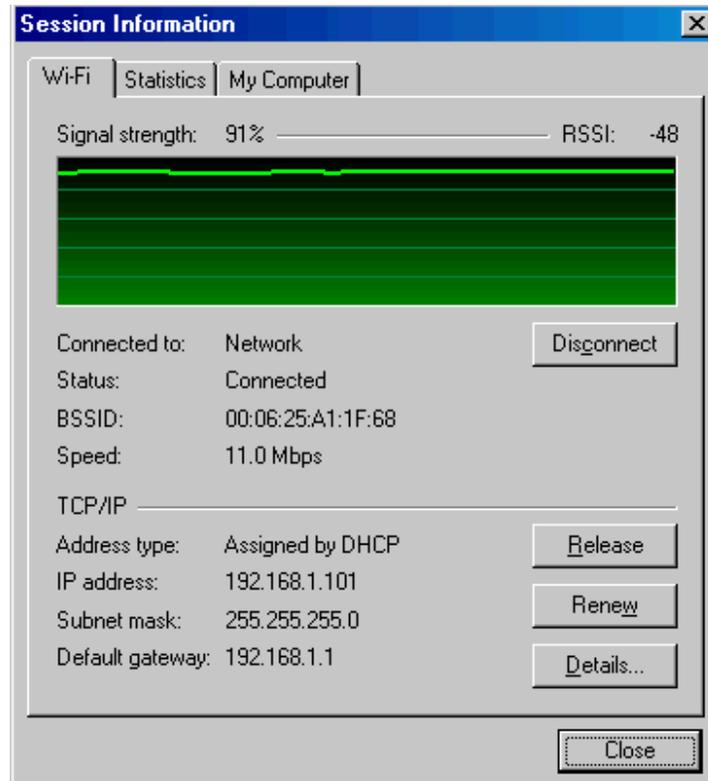
I can't get VZAccess Manager to work with my private Wi-Fi Network.

- First verify that the client that came with the Wi-Fi device works with your private network. If it doesn't, contact your Wi-Fi device provider and or the device provider of your network equipment.
- In the section on Wi-Fi specific settings there are options to manually add a Wi-Fi network if it does not broadcast its Network ID (SSID) which would prevent it from appearing in VZAccess Manager. There is also an option to enter / edit your WEP (Wireless Equivalent Privacy) password if your network requires one. If it was incorrectly entered, it could prevent you from connecting.

- The issue may be related to using WEP security and your specific Wi-Fi adapter. You may want to temporarily test your network without WEP to determine if this is the case. If it works without WEP and fails using WEP, please e-mail Verizon Wireless Tech support with your computer and Wi-Fi device info by doing the following: From VZAccess Manager's main screen select "Session," "Statistics," "My Computer" then "E-mail Technical Support." Please also include in the body of the e-mail your computer brand, model and any Wi-Fi device information you have - built in device or ExpressCard, brand and model. We will pass this information on to Smith Micro for consideration in a future version. **Use the client that came with your device if you have this issue. Also please be aware that Verizon Wireless does not support problems associated with Wi-Fi networks. Customer Care will not be able to assist you.**

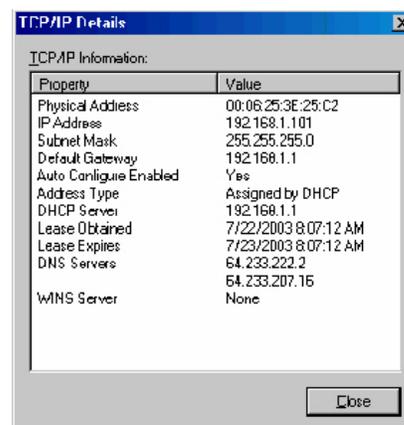
Wi-Fi Statistics Support Tool

From VZAccess Manager's main screen select "Session," "Statistics," then the Wi-Fi tab.



This tool displays signal strength, all relevant IP address information with additional details by selecting "Details." It also provides the ability to release your existing IP address and request a new one by selecting "Release," then "Renew." This procedure is a common troubleshooting step as explained in some of the symptoms and solutions listed above.

The "Details. . ." option will display the following information:



Product Specification

Technical specification

This section outlines the technical and environmental specifications of your V640 ExpressCard

TABLE 1

Name:	Verizon Wireless V640 ExpressCard
Model:	V640 ExpressCard
Approvals:	 FCC (North America);
Dimensions:	Length: 112mm, Width: 34mm, Depth: 5mm
Wireless Network – Dual Mode:	CDMA 1X/EV-DO
ExpressCard Standard:	ExpressCard 34

TABLE 2

Technology:	CDMA
Band Designation:	1X/EV-DO: 800/1900 MHz
Transmit Band:	824.7-848.31MHz/1851.25-1908.75MHz
Receive Band:	869.7-893.31MHz/1931.25-1988.75MHz
Power Output – Transmit Power:	23.8dBm nominal Output Power

TABLE 3

Operating Temperature	0° Celsius to +55° Celsius
Storage Temperature	-20° Celsius to +65° Celsius
Relative Humidity	95% maximum – Non Condensing
Vibration	147 m/s ² (15Gpeak) 10hz-2000hz

Safety and regulations

This section will inform you of the important safety measures you should be aware of, including the standards that the modem complies to.

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.

Novatel 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 Verizon Wireless V640 ExpressCard, or failure of the Verizon Wireless V640 ExpressCard to transmit or receive such data

Safety Hazards

Do not operate the Verizon Wireless V640 ExpressCard 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 card 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 refuelling 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 card 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.

Electrostatic Discharge (ESD)

- Electrical and electronic devices are sensitive to electrostatic discharge (ESD). The VZAccess Manager software will attempt to re-initialize the device should a substantial electrostatic discharge reset the device. If the software is not operational after an ESD occurrence, then restart VZAccess Manager. See section 2.1.4.

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 V640 EXPRESSCARD MODEM OEM 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.

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: PKRNVWXV620

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 ExpressCards 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 ExpressCard or modem while operating can be well below the maximum value. This is because the ExpressCard or 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 1.14W/KG USER-LAP POSITION AND 0.163W/KG BYSTANDER POSITION.

THIS DEVICE WAS TESTED FOR SAR COMPLIANCE IN THE BYSTANDER CONFIGURATION WITH A 2.5CM SPACING. IN ORDER TO COMPLY WITH FCC RF EXPOSURE REQUIREMENTS, BYSTANDERS SHOULD MAINTAIN A 2.5CM DISTANCE FROM THE ANTENNA OF THIS DEVICE.

THIS DEVICE IS INTENDED TO BE USED IN NOTEBOOK COMPUTERS. USE IN OTHER TYPES OF HOST UNITS SUCH AS PDA'S, ETC, ARE PROHIBITED AND MAY NOT COMPLY WITH FCC RF EXPOSURE GUIDELINES/REQUIREMENTS.

Limited Warranty and Liability

Warranty Period: Products & Accessories - 90 days (in each case from the date of invoice).

Novatel Wireless warrants that during the Warranty Period 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.

NOVATEL WIRELESS' LIABILITY HERE UNDER IS EXPRESSLY LIMITED TO REFUND OF ALL AMOUNTS PAID TO NOVATEL WIRELESS FOR ANY DEFECTIVE UNITS OF PRODUCT, WHETHER NOVATEL WIRELESS' LIABILITY ARISES FROM ANY BREACH OF EXPRESS WARRANTY, BREACH OF ANY OBLIGATION ARISING FROM BREACH OF WARRANTY, OR OTHERWISE WITH RESPECT TO THE MANUFACTURE AND SALE OF ANY UNITS OF THE PRODUCT, WHETHER LIABILITY IS ASSERTED IN CONTRACT OR TORT, INCLUDING NEGLIGENCE AND STRICT PRODUCT LIABILITY. NOVATEL WIRELESS SHALL IN NO EVENT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE DUE TO ANY CAUSE.

Purchaser's exclusive remedy for a claim under this warranty shall be limited to the repair or replacement, at Novatel Wireless' option, of defective or nonconforming 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, or failure to follow prescribed installation, operating and maintenance procedures,
- (II) defects, errors or nonconformities 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.

Access Point

An interface between a Wi-Fi network and a wired network.

bps

Bits per second – rate of data flow.

Broadband

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

COM Port

Defines a serial/RS-232 port within the Windows environment. May be physical or virtual.

Dial-Up Connection

A switched network connection established by a computer using an analog data modem over ordinary copper telephone lines.

Dormancy

A network state that occurs when no data has been transmitted or received after a given amount of time. A network connection may disconnect during a dormant state.

ExpressCard

A new standard introduced by PCMCIA that delivers thinner, faster, lighter devices to desktop and notebook computers. All ExpressCard slots accommodate devices that support USB 2.0 or PCI Express Standards.

Firewall

A hardware or software boundary that protects a network or single PC from unwanted outside traffic.

HTTP

Hypertext Transfer Protocol

ISP

Internet Service Provider

IP

Internet Protocol. The mechanism by which packets are routed between computers on a network.

Kilobyte

1024 bytes

Kbps

Kilobits per second – rate of data flow

LSP

Layered Service Provider – a Microsoft feature

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

PC

Personal Computer

PCMCIA

Personal Computer Memory Card International Association. Defines specifications used for ExpressCards.

www.pcmcia.org

PDA

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

POP3

Post Office Protocol v3. A standard transport protocol used send and receive email.

Proxy

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

Serial Connection

A network connection established by a serial device such as a modem. Serial communication between your PC and modem or other serial devices adhere to the RS-232 standard.

SMS

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

SSID

Service Set Identifier. An SSID is also referred to as a Network Name because it is a name that identifies a Wi-Fi network. Most access points broadcast their SSID.

Sync

To compare and synchronize two or more sources of data.

TCP/IP

Transmission Control Protocol / Internet Protocol

URL

Uniform Resource Locator

USB

Universal Serial Bus. A connection type for computer peripherals such as a printer, mobile ExpressCard, 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. A network which uses common carrier-provided lines. Contrasts with LAN.

WCDMA

Wideband Code Division Multiple Access. Wideband CDMA is a third-generation (3G) wireless standard which utilizes one 5 MHz channel for both voice and data, initially offering data speeds up to 384 Kbps. WCDMA is also referred to as UMTS - the two terms have become interchangeable. WCDMA is the 3G standard that most GSM carriers are moving to. Parts of the WCDMA standard are based on GSM technology. WCDMA networks are designed to integrate with GSM networks at certain levels. Most WCDMA ExpressCards include GSM as well, for backward compatibility. WCDMA borrows certain technology ideas from CDMA, as the name implies, but is in fact very different and incompatible with ExpressCards and networks using "CDMA" technology. In Europe and Asia, WCDMA is being deployed in the all-new 2100 MHz frequency band. In North America, WCDMA is being deployed in the existing 1900 MHz (PCS) and 850 MHz (cellular) bands.

WEP

Wired Equivalent Privacy. A security protocol for wireless local area networks (WLANs) defined in the 802.11b standard. WEP is designed to provide the same level of security as that of a wired LAN.

Wi-Fi

Wireless Fidelity. A generic term used to describe any type of 802.11 (a, b, g) network.

WWAN

Wireless Wide Area Network

WWAN Device

Wireless ExpressCard and cable or 1xEVDO/1xRTT/CDMA ExpressCard.

WWW

World Wide Web

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