

Comcast Connection Manager

Version 1.0

User Guide

<http://customer.comcast.com>



Take Fast With You

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Getting Started

System Requirements

The minimum system requirements to install and operate the Comcast Connection Manager are shown in the table below.

	Windows XP	Windows Vista
Processor	300 MHz	1 GHz (1.25 GHz recommended)
RAM	256 MB	1 GB (2 GB recommended)
Hard Drive Space	60 MB	75 MB
Internet Explorer	IE 5.5 (or higher)	IE 7 (or higher)
Windows Service Pack	Service Pack 2 (or higher)	-

Additional Requirements

- Compatible Comcast 3G or 4G Mobile Broadband Device for Mobile connections.
- Compatible Wi-Fi device for Wi-Fi connections

Installing the Comcast Connection Manager Software

Installing the Comcast Connection Manager is easy. Complete the following steps to install the Comcast Connection Manager software:

1. Insert the CD into your computer's CD ROM drive.
2. If your computer automatically starts the installation program from the CD, follow the on-screen instructions for installation and configuration.

If your computer does not automatically install the software from the CD:

- a. Open the *My Computer* folder (on Windows Vista, this folder is simply called *Computer*).
- b. Browse to the CD drive in My Computer (or Computer), and double-click on the CD drive icon.
- c. Double click on the Setup icon to begin installation.



- d. Follow the on screen instructions to install and configure the Comcast Connection Manager application.

Note: Once the Comcast Connection Manager software is installed, supported wireless devices will be detected automatically by the Comcast Connection Manager whenever you attach them. DO NOT plug the Comcast Mobile Broadband Device into your computer until you have completed the Comcast Connection Manager Installation. Inserting the device prior to installing the Comcast Connection Manager could result in the device drivers being configured incorrectly.

Launching the Comcast Connection Manager

Once your hardware is installed and ready to connect, you may go ahead and launch the Comcast Connection Manager by doing one of the following:

- Double-click the *Comcast Connection Manager* icon on your computer's desktop



Comcast
Connection
Manager

- In the Start menu, select *Programs* or *All Programs > Comcast > Comcast Connection Manager > Comcast Connection Manager*.

The Comcast Connection Manager Interface

Getting Connected

By default, the Comcast Connection Manager will automatically connect to an available network. It will seek to connect to Wi-Fi, 4G Mobile and 3G Mobile networks (in that order). You can also manually connect to a network, by first turning off the auto-connection feature. Wi-Fi connections may require additional configuration first, but the basics of establishing a connection are simple:

1. If you are already connected to a network whose connections are not managed by the Comcast Connection Manager, you must shut that connection down before establishing a connection with the Comcast Connection Manager (only one connection is allowed at a time).



Note: Manually disconnecting switches off the auto-connect feature until you restart the Comcast Connection Manager application.

2. Select the network to which you want to establish the connection by clicking one of the lines of the [Supported Networks List](#).

Note: If more than one available Wi-Fi network is detected, the Comcast Connection Manager will select one for you. To choose a different network, click [View All Wi-Fi](#), which displays the complete list of Wi-Fi networks detected (see page 24).

3. Click the [Connect](#) button to establish a connection to the currently-selected network.

Note: *Because only one connection is allowed at a time, any other connection will be shut down when you click [Connect](#).*

See Chapter 3, “Mobile Connections” for more information on establishing 3G mobile and 4G mobile connections. See Chapter 4, “Connecting to Wi-Fi Networks” for more information on establishing Wi-Fi connections.

Supported Networks List: In Detail

The main window of the Comcast Connection Manager interface features a list of the supported networks. The networks for which you have a supported device installed will be displayed in black. Those for which you do not have a supported device installed will be gray.

Network Name	Status	Network Type	Signal
Comcast Mobile 4G	jo Production (Device Cert)	Mobile	
Comcast Mobile 3G R What's 3G?		Mobile	
My Wi-Fi	Connected to My Wi-Fi	WiFi	

↑
Connection Indicators

The columns in this list include the following:

Connection Indicators

If you are currently connected to a particular network, the corresponding connection indicator will be lit (green). Other networks (to which you are not connected) remain gray.

Network Name

Networks supported by the Comcast Connection Manager are listed in this column. If the Mobile 3G network displayed is not Comcast's network, the **R** symbol will appear next to the network's name to indicate that this is a roaming network.

Status

A brief textual description of the connection status for the currently-selected network (for example, "Ready to Connect" or "Connected").

If the Comcast Mobile Broadband Device you are currently using is a 4G only device, this column will contain a "What's 3G?" link. Click this link to view information on upgrading to 3G/4G dual mode service.

Network Type

This column indicates whether each supported network is Mobile (3G or 4G) or Wi-Fi.

An icon will appear in this column if the network to which you are currently connected has been secured using encryption technologies.

Signal Strength

Indicates the current strength of signals being received from this network. Stronger signals tend to produce more reliable connections.

Menus in the Main Window

The File Menu

Click *File* in the menu bar of the Comcast Connection Manager's main window to produce a menu with the following options:

Enable/Disable Wi-Fi

Select this option to enable and disable Wi-Fi. Use the disable option when you want to prevent your Wi-Fi adapter from establishing connections or consuming your laptop's power.

Enable/Disable Comcast Mobile 3G

Select this option to enable and disable your Comcast 3G Mobile Broadband Device. Use the disable option when you want to prevent your Comcast 3G Mobile Broadband Device from establishing connections or consuming your laptop's power.

Enable/Disable Comcast Mobile 4G

Select this option to enable and disable your Comcast 4G Mobile Broadband Device. Use the disable option when you want to prevent your Comcast 4G Mobile Broadband Device from establishing connections or consuming your laptop's power.

Exit

Exit the Comcast Connection Manager application and close any wireless connections.

The Tools Menu

Click **Tools** in the menu bar of the Comcast Connection Manager's main window to produce a menu with the following options:

Profiles

Select this option to display the Network Profiles window (see page 30). This window is used to create, edit and prioritize network profiles.

Diagnostics > Wi-Fi Info

Select this item to open the Wi-Fi Info window. This window displays technical information about the Wi-Fi network to which you are currently connected (if any) and the associated Wi-Fi device.

Diagnostics > Comcast Mobile 3G Info

Select this item to open the Mobile Info window. This window displays technical information about the 3G Mobile network to which you are currently connected (if any) and your Comcast 3G Mobile Broadband Device.

Diagnostics > Comcast Mobile 4G Info

Select this item to open the Comcast Mobile 4G Info window. This window displays technical information about the 4G Mobile network to which you are currently connected (if any) and your Comcast 4G Mobile Broadband Device.

Diagnostics > Event History

Select this item to display a list of the most recent Comcast Connection Manager events (network connections, network disconnection, errors, etc.).

Diagnostics > Generate Diagnostics

Select this item to generate a file containing diagnostic information. Comcast technical support may ask you to generate and email the file to aid in diagnosing connection problems.

Check for Updates

Select this item to check for updates to the Comcast Connection Manager software and its databases.

Settings

Select this item to open the Settings window, which allows you to configure a number of features to your personal preference.

The Help Menu

Click [Help](#) in the menu bar of the Comcast Connection Manager's main window to produce a menu with the following options:

Help

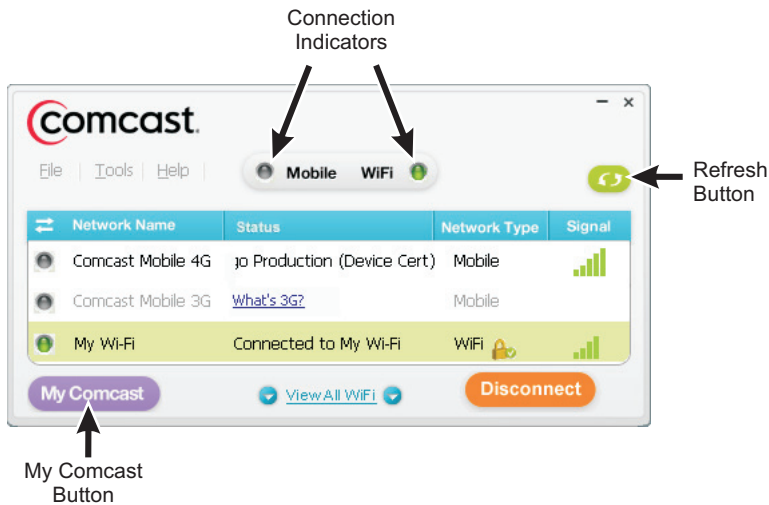
Select this item to open the Comcast Connection Manager's help system.

About the Comcast Connection Manager

Select this item to display version information for the Comcast Connection Manager software.

Other Items in the Main Window

The following other items appear in the main window:



Connection Indicators

These indicators are similar to the connection indicators on the leftmost column of the Supported Networks List. However, the *Mobile* indicator indicates a connection to *either* a 3G mobile network or a 4G mobile network.

Refresh Button

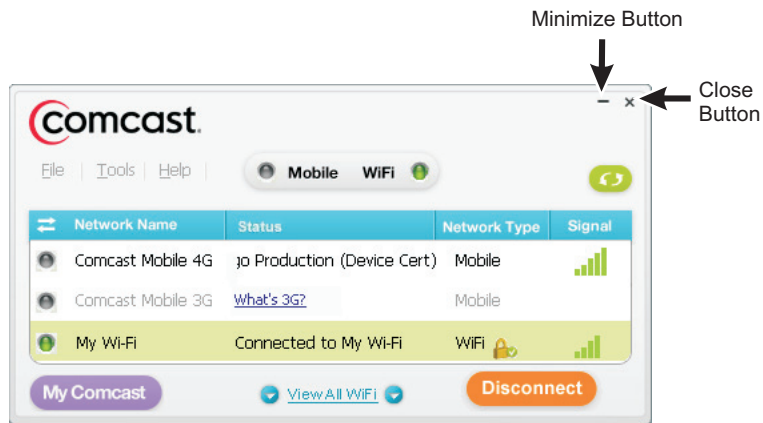
Click this button to refresh the information in the window.

My Comcast Button

When connected to one of the networks listed above, clicking this button opens your browser to the Comcast home page.

Minimizing the Main Window

The buttons in the upper-right corner of the main window control the appearance and location of the window.



Minimize Button

Similar to the minimize button in most Windows applications, this reduces the Comcast Connection Manager to a panel on the task bar.



Click this panel to return the Comcast Connection Manager to full size.

Close Button

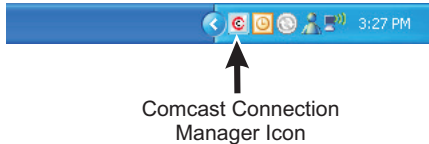
Click this button to close the main window but leave the Comcast Connection Manager running in the background. The smaller version of the main window (shown below) appears in the corner of your screen.



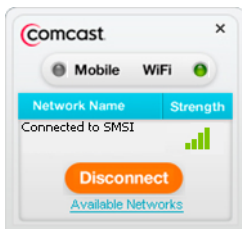
After a few seconds, this window closes automatically and only the system tray icon remains on the screen (see page 17).

Using the System Tray Icon

Whenever the Comcast Connection Manager software is running, the icon shown below appears in the system tray (the row of icons next to the clock on the taskbar).



The icon remains in the system tray as long as the Comcast Connection Manager is running, even if the main window has been closed. Click once on this icon to open a small window with the ability to connect and disconnect. Note that this smaller version of the main window only remains on screen for a few seconds (just long enough to establish a new connection).



Double-click on the system tray icon to open the main window (if it is closed) and to move it in front of other open applications.

The Right-Click Menu

Right-click on the system tray icon to produce a menu with two options:

- Select [Settings](#) to open the Settings window (see Chapter 7, “Comcast Connection Manager Settings”).
- Select [Exit](#) to close the Comcast Connection Manager application.

Mobile Connections

Manually Connecting to a Mobile Network

By default, the Comcast Connection Manager will automatically select an available wireless network and establish a connection. But, you can choose a different network if you like. To manually connect to a mobile network, follow these steps:

1. Connect your Comcast Mobile Broadband Device.
2. Select either *Comcast Mobile 3G* or *Comcast Mobile 4G* in the main window.
3. Click the *Connect* button to connect.

Note: *Manually choosing a network to connect to stops the Comcast Connection Manager from automatically connecting to networks for the duration of the session. If you want to return to automatic connection mode, you must restart the Comcast Connection Manager.*

Connecting to Wi-Fi Networks

Manually Connecting to a Wi-Fi Network

If you have a Wi-Fi-enabled laptop, or a computer with an external Wi-Fi device attached, the Comcast Connection Manager will enable you to connect to nearby Wi-Fi networks. When there are nearby Wi-Fi networks available, the Comcast Connection Manager will select a network to connect to and display its name.

By default, the Comcast Connection Manager will automatically establish a connection to an available wireless network. But, you can choose a different network if you like. Follow these steps to connect:

1. Select [Wi-Fi](#) in the Comcast Connection Manager's main window.
2. To connect to the network whose name is displayed, click [Connect](#).

To connect to a different network, click the [View All Wi-Fi](#) link. The drop down menu that appears lists all available networks (see page 24). Select the network you want to connect to and then click the [Connect](#) button.

Note: A **closed** item under Network Name indicates the presence of one or more closed networks. See "Accessing a Closed Network" on page 25 for more information.

Note: Manually choosing a network to connect to stops the Comcast Connection Manager from automatically connecting to networks for the duration of the session. If you want to return to automatic connection mode, you must restart the Comcast Connection Manager.

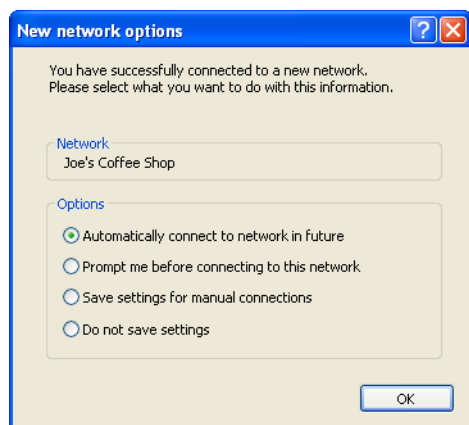
Prompts

Once the Comcast Connection Manager has connected to the selected network, you may see the following prompts:

- If the network is encrypted, you will be prompted to enter an encryption key. Enter it and click [OK](#) or click [Cancel](#) and select a different network. See "Introduction to Wi-Fi Encryption" on page 26 for more information on connecting to encrypted networks.
- When connecting to a Wi-Fi network for the first time, the Comcast Connection Manager may display the [New Network Options](#) prompt (see page 22). You can use this dialog box to configure the Comcast Connection Manager to automatically connect to the network in the future or to prompt you when that network is available.

Options for Connecting to a New Network

If *Prompt me before saving network settings* is selected in the *Automatic Profile Creation Settings* Window (see “Automatic Profile Creation Settings” on page 35), you will see the dialog pictured below when you connect to a new Wi-Fi Network for the first time. The option selected specifies the type of profile that the Comcast Connection Manager will create for this network. By creating a profile automatically, the Comcast Connection Manager makes it easier for you to connect to the same network in the future.



You must choose one the following options:

Automatically connect to network in future

If this option is selected, the Comcast Connection Manager will automatically connect to this network whenever it is detected.

Note: When multiple networks that have been configured for auto-connection are detected, the Comcast Connection Manager will connect to the network whose profile is ranked highest in the *Network Profiles* window. See “Network Profile Priority” on page 31 for more information on profile rank and how to change it.

Prompt me before connecting to this network

If this option is selected, the Comcast Connection Manager will notify you when this network is detected and offer to establish a connection to it. However, it won't actually establish the connection unless you give your “OK.”

Save settings for manual connections

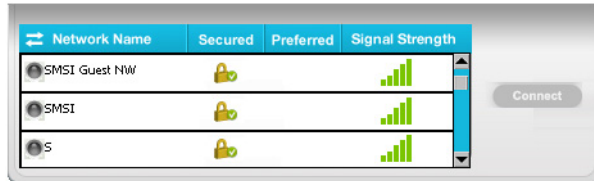
If this option is selected, the Comcast Connection Manager will save the connection settings you used to connect to this network so that you don't have to enter them again, but it won't connect to this network automatically. To manually connect to this network, select it in the Wi-Fi Networks List and then click the *Connect* button.

Do not save settings

Choosing this option will allow you to connect to the network this time, but will not save parameters for future connections (no profile will be created).

The List of Wi-Fi Networks

Clicking [View All Wi-Fi](#) link in the Comcast Connection Manager's main window produces a list of all available networks.



Select a network and click the [Connect](#) button to connect.


The information displayed for each network includes the items listed below.

Network Name


The Signal Set IDentifier (SSID) is the name that is broadcast by a Wi-Fi Access Point to identify the network.

A *closed* item in this column indicates the presence of one or more closed networks. Connecting to such a network requires the creation of a profile for that network. See “Accessing a Closed Network” on page 25 for more information.

Secured

Encrypted networks display the  icon in this column. See “Introduction to Wi-Fi Encryption” on page 26 for instructions on connecting to encrypted networks.

Preferred

A check () is displayed for any Wi-Fi network that is listed in the Network Profiles window. This includes Wi-Fi networks for which you have created profiles and Wi-Fi networks for which a profile has been created automatically (see “Options for Connecting to a New Network” on page 22 for more about automatic profile creation).

Signal Strength

A gauge showing the strength of the signal detected from each network. Stronger signals tend to produce more reliable connections.

Accessing a Closed Network

To access a closed network with the Comcast Connection Manager, you must set up a network profile for that network. Follow these steps:

1. Select *Profiles* from the Tools menu to display the *Network Profiles* window.
2. Select *Add New Profile* from the *Settings* menu. A list of network profile types now appears.
3. Select *Wi-Fi*.
4. Click *Add*. The first page of properties for the new profile appears.
5. Enter the name of the network you want to add in the *SSID* field exactly as provided by the network administrator.
6. Check *This is a non-broadcasted network (Closed)* to identify this as a closed network.
7. Fill out the remaining fields on this page as instructed by the network administrator.
8. Click *Next* to continue to the *General* page.
9. Configure the fields on the *General* page as desired.
10. Click *Finish* to exit.

Introduction to Wi-Fi Encryption

Comcast Mobile 4G Networks and Comcast Mobile 3G Networks are encrypted and connection to them secured using special software in your Comcast Mobile Broadband Devices. Similarly, Wi-Fi networks often use encryption technologies to protect data travelling over the network. Unlike Comcast Mobile 4G Networks and Comcast Mobile 3G Networks, however, connecting to an encrypted Wi-Fi network requires that you enter an encryption key.

Encryption Keys

An encryption key is a code used to encrypt data exchanged between an encrypted network and the Comcast Connection Manager. You must obtain the appropriate encryption key from the administrator of an encrypted network in order to connect to that network.

What Does “PSK” Stand For?

PSK stands for “Pre-Shared Key,” which means that your encryption key has to be entered manually rather than using a protocol like 802.1x to obtain it from the network as part of the connection process. Because of its simplicity, PSK is the typical choice for home and small office environments. All Wi-Fi connections supported by the Comcast Connection Manager use the PSK method.

Wired Equivalent Privacy (WEP)

WEP is a standard encryption technology that has been used since the early days of Wi-Fi networks. Although even more secure methods such as WPA have since emerged, WEP remains an extremely popular choice for encrypted networks. There are two variants of WEP:

- **WEP Open:** This is by far the most commonly-used version of WEP. Networks that use WEP Open don't verify that you have the correct encryption key before allowing you to connect. However, if you don't have the connect encryption key, you won't be able to communicate with the network.
- **WEP Shared:** The network sends out sample text for the Comcast Connection Manager to encrypt. If the result that the network gets back is what it expected, it allows the connection. Ironically, this is somewhat less secure than WEP Open because the verification process gives potential intruders a large hint about the contents of the encryption key.

Wi-Fi Protected Access (WPA and WPA2)

Developed by an industry trade group known as the Wi-Fi Alliance, WPA is an interim standard meant to address the shortcomings of WEP. WPA2 is a newer standard that succeeded WPA, but both versions remain in common use.

To use WPA, you need a WPA-compliant Wi-Fi device.

What are TKIP and AES?

Temporal Key Integrity Protocol (TKIP) and Advanced Encryption Standard (AES) are different encryption protocols that can be used with WPA. TKIP is the method that was called for in the original WPA Specification. AES, which is even more secure, was added as an alternate method to later versions of the specification. If network uses WPA, but doesn't specify which one, TKIP is the most likely to be supported by the network.

Connecting to an Encrypted Network

When you choose to [Connect](#) to an encrypted network, the software will prompt you to enter a network encryption key. To proceed, enter a network encryption key obtained from the network administrator and then click the [Connect](#) button on the prompt dialog.

Tip: You can create a profile containing the appropriate encryption information to avoid having to manually enter an encryption key each time you connect. See “Creating a Profile for a Wi-Fi Network” on page 32 for more information.

Network Profiles

What is a Network Profile?

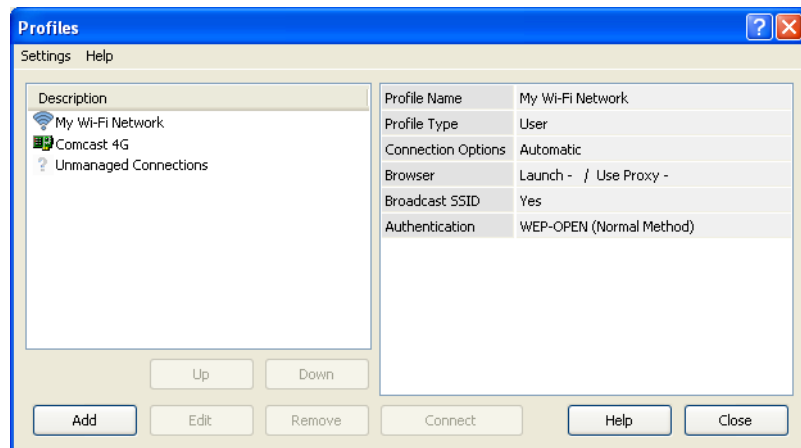
A network profile contains the configuration information needed to connect to a particular network. Mobile Broadband profiles are predefined by Comcast (though some configuration options are available). Wi-Fi profiles can be created in the Network Profiles window or created automatically when you connect to a new Wi-Fi network.

Among other things, network profiles allow you to:

- Configure the Comcast Connection Manager to automatically connect using the profile's settings whenever the associated network is available.
- Prioritize networks to help the Comcast Connection Manager choose which network to connect to.
- Save settings, such as encryption keys for Wi-Fi security or VPN configuration, to enable one-click connection.

The Network Profiles Window

Network profiles can be added and configured in the Network Profiles window. To access the Network Profiles window, click the *Profiles* button in the main window.



The left pane of this window lists of all the Network Profiles you have defined so far. Also listed are any Network Profiles that have been pre-configured by Comcast and any profiles automatically added when you first connected to a new network.

A profile's position in the list indicates its priority. See “Network Profile Priority” on page 31 for more information.

Profile Icons

Each profile listed in the Network Profiles window has an icon next to the name. This icon indicates the technology that this profile uses to establish connections.



Comcast 3G Mobile



Comcast 4G Mobile



Wi-Fi



Unmanaged Connections - this is a placeholder for types of networks not managed by the Comcast Connection Manager. See “Network Profile Priority” on page 31 for more information

Network Profile Priority

In the Network Profiles window, profiles are listed in order of priority. When selecting a network to connect to, the Comcast Connection Manager will choose the topmost profile for which all of the following are true:

- The network described by the profile is available
- You have a device capable of connecting to the network connected to your computer
- The *Connection Options* field on the *General* tab in the profile's configuration is set to either "Automatic" or "Prompt"
- The profile is not "Unmanaged Connections" (see below)

Profile priority also determines when the Comcast Connection Manager will automatically switch from one network to another. If you are connected to one network and a higher priority network becomes available, the Comcast Connection Manager will switch to the higher priority network.

Note: Automatic connection switching only occurs when in automatic connection mode. The Comcast Connection Manager starts out in this mode each time it is launched, but switches to manual mode if you manually choose a network and click *Connect*. To return to automatic mode, restart the Comcast Connection Manager application.

Changing Profile Priority

To change the priority of a specific profile, select the profile whose priority you would like to change. Then, click the *Up* button or the *Down* button to move the profile up or down the list.

Unmanaged Connections

"Unmanaged Connections" is not a network profile. It is a placeholder for all network connections that are not managed by the Comcast Connection Manager software. The placement of this item in the list determines how high priority these unmanaged connections should be considered.

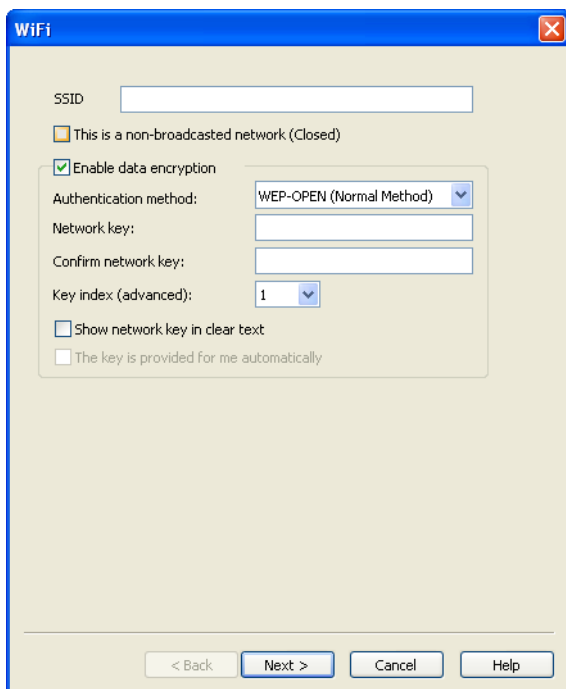
Ethernet LAN connections are an example of connections not managed by the Comcast Connection Manager. If "Unmanaged Connections" is at the top of the list, Ethernet LAN connections would take precedence over the wireless connections managed by the Comcast Connection Manager and your managed wireless connection would be shut down when you connect to your LAN. If, on the other hand, "Unmanaged Connections" is at the bottom of the list, the managed connection would not be shut down.

Note: You can specify which devices are included in the "Unmanaged Connections" group in the *Hardware* tab of the *Settings* window.

Creating a Profile for a Wi-Fi Network

Perform these steps to create a Wi-Fi network profile.

1. Click the *Profiles* button in the main window. The Network Profiles Window will now be displayed.
2. Select *Add New Profile* from the *Settings* menu. A list of network profile types now appears.
3. Select *Wi-Fi*.
4. Click the *Add* button to bring up the first page of the wizard used to create Wi-Fi network profiles.



The screenshot shows a window titled "WiFi" with a close button in the top right corner. The window contains the following fields and options:

- SSID: A text input field.
- This is a non-broadcasted network (Closed)
- Enable data encryption
- Authentication method: A dropdown menu showing "WEP-OPEN (Normal Method)".
- Network key: A text input field.
- Confirm network key: A text input field.
- Key index (advanced): A dropdown menu showing "1".
- Show network key in clear text
- The key is provided for me automatically

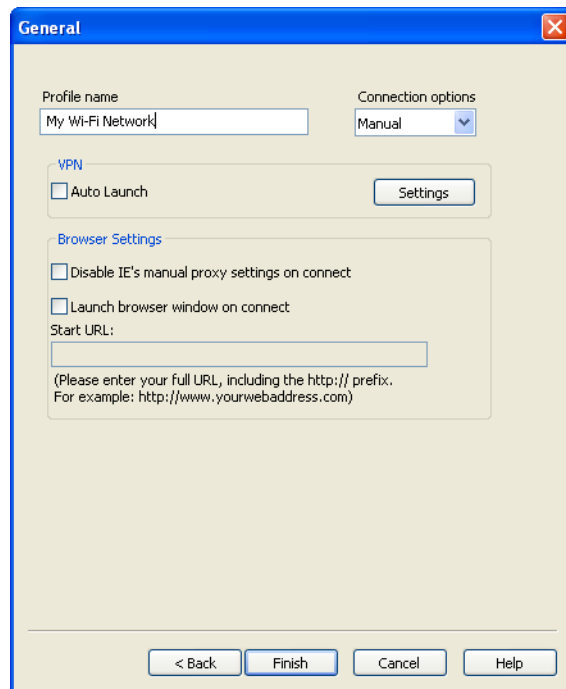
At the bottom of the window, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

5. In the *SSID* Field, enter the broadcast name of the network to which you will be connecting. Note that the name entered here must match the SSID (Service Set Identifier) used by the network exactly.
6. If the network is a *Closed* network, check the *This is a non-broadcast network* box.
7. If the network whose profile you are configuring does not use WEP or WPA encryption, leave the *Enable data encryption* box unchecked.

—or—

If the network uses WEP or WPA encryption, check the *Enable data encryption* box and configure the Wi-Fi Data Encryption Settings as explained in "Configuring Wi-Fi Data Encryption" on page 34.

8. Click the *Next Button*. The *General* page appears (see page 38).



The screenshot shows a window titled "General" with a close button in the top right corner. The window contains the following elements:

- Profile name:** A text box containing "My Wi-Fi Network".
- Connection options:** A dropdown menu currently set to "Manual".
- VPN section:** A checkbox for "Auto Launch" which is unchecked, and a "Settings" button to its right.
- Browser Settings section:** Two checkboxes: "Disable IE's manual proxy settings on connect" (unchecked) and "Launch browser window on connect" (unchecked).
- Start URL:** A text box with the label "Start URL:" above it. Below the box is the instruction: "(Please enter your full URL, including the http:// prefix. For example: http://www.yourwebaddress.com)".
- Navigation buttons:** At the bottom of the window are four buttons: "< Back", "Finish", "Cancel", and "Help".

9. Configure the settings in the *General* page as desired and then click *Finish*.

Configuring Wi-Fi Data Encryption

1. Contact the administrator of the network to obtain information needed for access, such as the security method used, encryption keys required, etc.
2. Check the *Enable data encryption* box.
3. Select the appropriate *Authentication method* for this network. Supported authentication methods include the following:
 - *None*: For an unencrypted network.
 - *WEP-Open (Normal Method)*: This is the standard WEP encryption method.
 - *WEP-Shared*: Similar to WEP-Open, but the base station asks the client to prove that it has the right key before the connection is established.
 - *WPA-PSK (TKIP or AES)*: This is the pre-shared key version of the WPA protocol.
 - *WPA2-PSK (TKIP or AES)*: This is the pre-shared key version of the WPA2 protocol.

Note: *The WPA methods listed above will only be displayed if your Wi-Fi adapter supports WPA security.*

4. Enter the encryption key for this network in *Network Key* and *Confirm Network Key* fields.

Note: *Normally, the display of the encryption key will be obscured for privacy reasons. If you prefer to actually see the key's text, check the *Show network key in clear text* box.*

Automatic Profile Creation Settings

The Comcast Connection Manager can automatically create network profiles for each new Wi-Fi network you successfully connect to. The setting that controls this can be found by selecting [Automatic Profile Creation](#) from the [Settings](#) menu in the Network Profiles window. Choose from the following options:

- [Automatically save all networks that I connect to](#) — The Comcast Connection Manager will create a new profile for every new Wi-Fi Network you successfully connect to.
- [Prompt me before saving network settings](#) — The Comcast Connection Manager will ask you if you want to create a new profile each time you successfully connect to a new network.
- [Allow manual input of network settings only](#) — The Comcast Connection Manager will not automatically create network profiles.

Editing a Network Profile

You can edit all of the settings contained in Wi-Fi network profiles. A reduced set of parameters will be available for modification in profiles that were created for you by Comcast.

1. Click the *Profiles* button in the main window. The Network Profiles window appears.
2. Select the profile you wish to edit in the left pane of the window.
3. Click the *Edit* button. A tabbed interface showing all the user-editable settings of the selected profile appears. Depending on the type of profile you are editing, the following tabs may be displayed:
 - Wi-Fi (see page 37)
 - General (see page 38)
4. Make the desired changes.
5. Click the *OK* button when you are finished.

Deleting a Network Profile

Follow these steps to delete a profile from the Network Profiles window:

1. Click the *Profiles* button in the main window. The Network Profiles window will now be displayed.
2. Select the profile that you want to delete from the list in the left pane of the window.
3. Click *Remove*. A prompt that asks if you are sure you want to delete this profile appears.
4. Click *Yes* to confirm that you want to delete the profile.

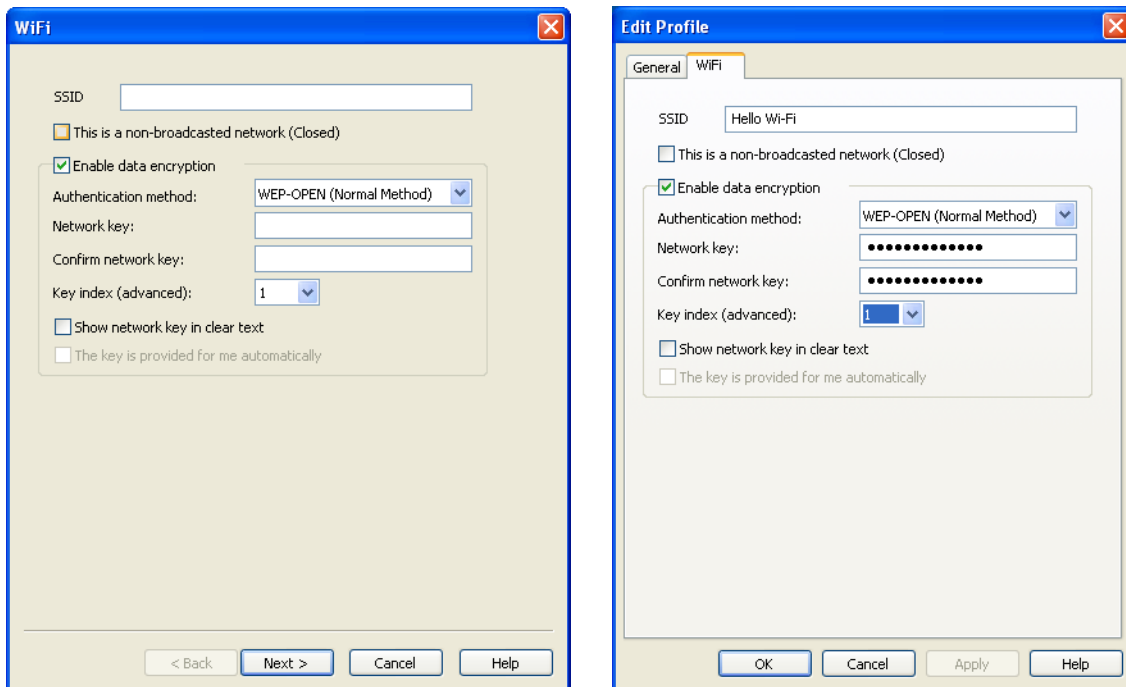
Note: You cannot delete network profiles that were created for you by Comcast.

Profile Properties: Wi-Fi

The *Wi-Fi* page contains the security settings for Wi-Fi network profiles.

- The version of this window pictured on the left below appears when creating a new profile.
- The tabbed version on the right appears when editing an existing profile.

Although the window controls vary, the actual parameters included are identical for both versions.



Follow these steps to configure Wi-Fi network security:

1. In the *SSID* field, enter the name broadcast by the network for which you are creating a profile. The name entered here must match the SSID (Service Set Identifier) used by the network exactly.
2. If this is a closed network, check *This is a non-broadcast network (closed)*.
3. If the network does not use WEP or WPA encryption, leave *Enable data encryption* unchecked and no further configuration is necessary on this page.

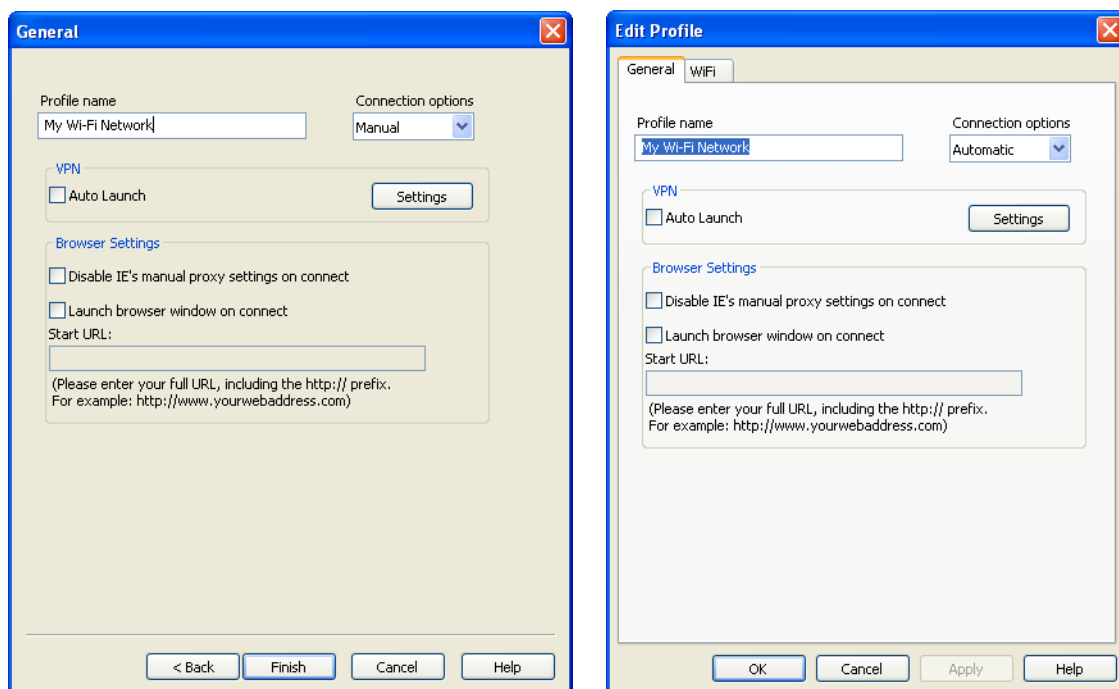
If the network does use WEP or WPA encryption, check *Enable data encryption* and configure the Wi-Fi data encryption settings. (See “Configuring Wi-Fi Data Encryption” on page 34).

Profile Properties: General

The *General* page contains settings that apply to all types of network profiles.

- The version of this window pictured on the left below appears when creating a new profile.
- The tab version on the right appears when editing an existing profile.

Although the window controls vary, the actual parameters included are identical for both versions.



Note: Some of the options pictured on this page may not be available if you are editing a profile created for you by Comcast.

Profile Name

The name entered here will be displayed in the Network Profiles window and the Comcast Connection Manager's main window.

Connection Options

This setting controls what the Comcast Connection Manager will do when it detects the network to which this profile applies. Select one of the following options:

- *Automatic* — The Comcast Connection Manager will automatically connect to this network whenever it is detected.
- *Prompt me* — The Comcast Connection Manager will ask you whether to connect to this network each time the network is detected.
- *Manual* — Connections to this network may be established using the controls in the main window or by selecting it in the Network Profiles window and then clicking *Connect*, but the Comcast Connection Manager will not connect to this network automatically.

VPN Auto Launch

Check this box if you would like to automatically launch your VPN client software when you establish a connection to this network. Click the accompanying *Settings* button to open the VPN tab of the Settings window.

Disable IE's manual proxy settings on connect

If you normally connect to the Internet through a proxy server (common on corporate LANs), you may experience difficulty connecting to the Internet with Internet Explorer when you are traveling. This is because Internet Explorer is trying to connect through a proxy server that is on your home network rather than on the network to which you are connected.

If this is the case, you can check this box to disable proxy server settings while you are connected using this profile.

Launch browser window on connect

Check this box to automatically launch your browser each time you connect to this network. If you want the browser to start at a particular Web page each time you connect to this network, enter its web address in the *Start URL* box.

Virtual Private Networks (VPNs)

What is a Virtual Private Network?

A Virtual Private Network (VPN) is a private network that can be accessed over a public backbone network (like the Internet) without compromising the privacy of the VPN. Typically, VPNs maintain their privacy by forming secure (encrypted) “tunnels” directly to users who access them. For example, a company might set up a VPN for its employees to access their corporate network securely when they are away from the office.

The software responsible for forming the tunnel with the private network is called a VPN Client. Because the VPN Client and the private network exchange data in an encrypted format, no one on the public network over which this information passes can access it.

Supported Clients

Although the Comcast Connection Manager is not a VPN Client itself, it can automate the launching of your VPN Client software when needed. The Comcast Connection Manager has been tested with the following VPN Clients and even automates certain tasks for these clients:

- Microsoft
- Cisco
- Nortel
- Checkpoint (please see “Using the Checkpoint VPN Client” on page 44 for important caveats)
- NetMotion (please see “Using the NetMotion VPN Client” on page 44 for important caveats)

The Comcast Connection Manager can also launch other VPN Clients, but may require more manual configuration to do so.

Configuring a VPN Connection

As with any other secure network, accessing a VPN requires some security-related configuration. Perform these steps:

1. Consult the administrator of the VPN you wish to access. The administrator will provide you with VPN Client software and instructions for establishing VPN connections.
2. If the VPN Client software is not already installed on your system, install it now. (Microsoft's VPN Client is pre-installed on most versions of Windows).
3. Follow your administrator's instructions for setting up a VPN Login Profile.
4. Access the [VPN](#) tab by selecting the [Settings](#) option in the [Tools](#) menu and then clicking the [VPN](#) tab.
5. If the VPN client software you are using is supported by the Comcast Connection Manager, select [Use existing VPN profile](#). Then, specify the client software and the login profile that you want to use.

If the VPN Client software you are using is NOT supported by the Comcast Connection Manager, select [Use Third Party VPN Client](#). Then, click the [Browse](#) button to specify the location of the client software that you are using.

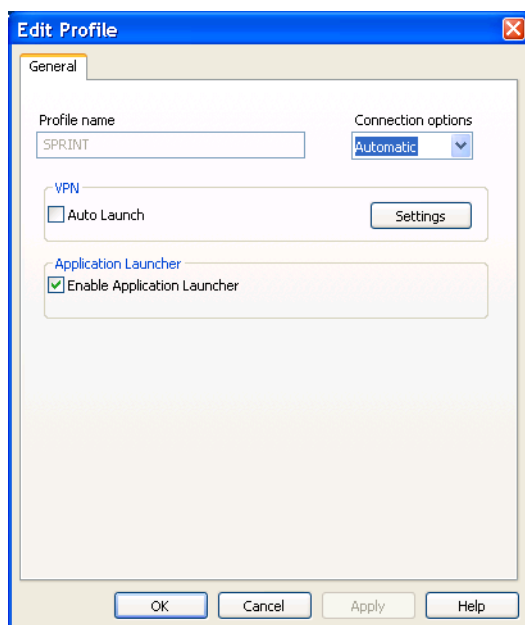
6. Click the [OK](#) button to exit the [Settings](#) window.

Once your VPN Settings have been configured, you can configure network profiles to automatically start your VPN Session upon connection. See "Automatically Launching a VPN Connection" on page 43.

Automatically Launching a VPN Connection

You can configure a network profile to automatically launch your VPN Client and log into a VPN once the connection to a wireless network has been established. Follow these steps:

1. If you have not already done so, configure the connection settings for the VPN you wish to connect to. (See “Configuring a VPN Connection” on page 42).
2. Open the Network Profiles window by clicking the *Profiles* button in the main window.
3. In the left pane, select the profile for which you want to automate VPN connections.
4. Click the *Edit* button. The *Edit Profile* window for the selected profile appears.



5. If the *General* tab is not already selected, select it now.
6. Check the *Auto Launch* box.
7. Click *OK* to exit.

Tip: If you want your VPN Client to be launched automatically with all (or most) of the new profiles you create, consider checking the *Set VPN autolaunch for newly created connection profiles* box on the *VPN* tab of the *Settings* window. This configures the default behavior of all newly created profiles.

Using the Checkpoint VPN Client

Although CheckPoint's VPN client provides a command line interface that applications such as the Comcast Connection Manager can use to establish connections, the user cannot access other modes of the CheckPoint VPN client while the client is in command line mode.

What does this mean for CheckPoint VPN users? Essentially, you should keep the Comcast Connection Manager open only when you have an active connection managed by the Comcast Connection Manager open. If you want to establish another type of connection with the CheckPoint VPN client, you **MUST** shut down the Comcast Connection Manager first. When the Comcast Connection Manager shuts down, it will put the VPN client back into a mode that users can access.

Using the NetMotion VPN Client

NetMotion's VPN client takes complete control of all data communication to and from your computer. This forces all data communication applications to go through the "tunnel" it creates. However, the Comcast Connection Manager needs to bypass this tunnel in order to establish connections. The Comcast Connection Manager will accomplish this in one of the following ways:

- The NetMotion VPN client maintains a list of applications that are allowed to bypass its VPN tunnel. If your VPN administrator has added the Comcast Connection Manager to this list, the Comcast Connection Manager can establish connections without interrupting the operation of the NetMotion client.
- If the Comcast Connection Manager has not been added to NetMotion's bypass list, the Comcast Connection Manager will detect that the NetMotion client is interfering with its operations when it attempts to establish a connection. When this happens, it will instruct the NetMotion client to enter bypass mode (which allows all applications to bypass its tunnel) while the connection is being established. Once the connection has been successfully established, the Comcast Connection Manager will return the NetMotion client to its normal operating mode.

Comcast Connection Manager Settings

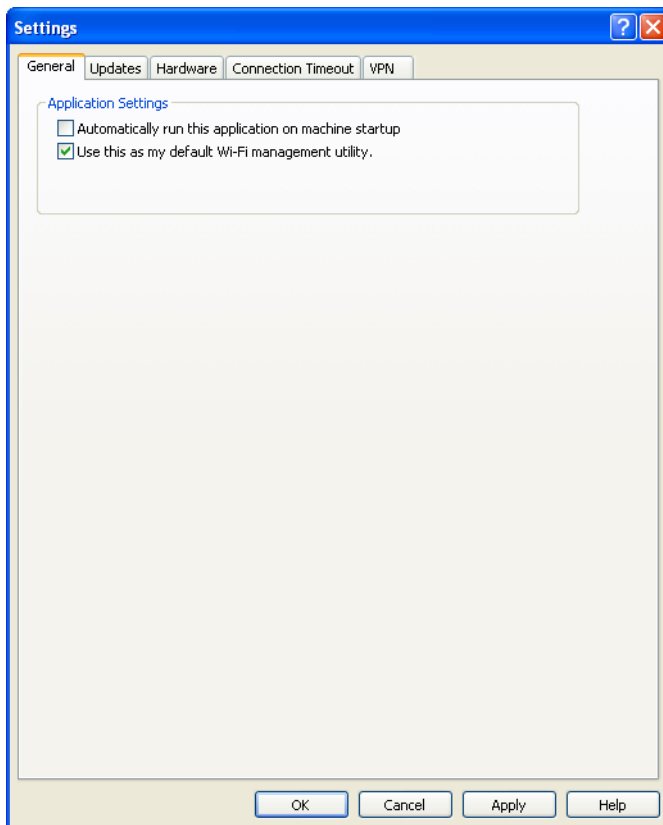
Introduction

The Settings window allows you to configure the behavior of the Comcast Connection Manager software. Among other things, these settings control how the client connects to networks, when it retrieves updates and if its connections should time out.

To access the Settings window, Select *Settings* in the Tools menu.

Settings: General

The *General* Tab contains general settings for the Comcast Connection Manager software.



Automatically run this application on machine startup

When this box is checked, the Comcast Connection Manager will be launched automatically each time you start your computer.

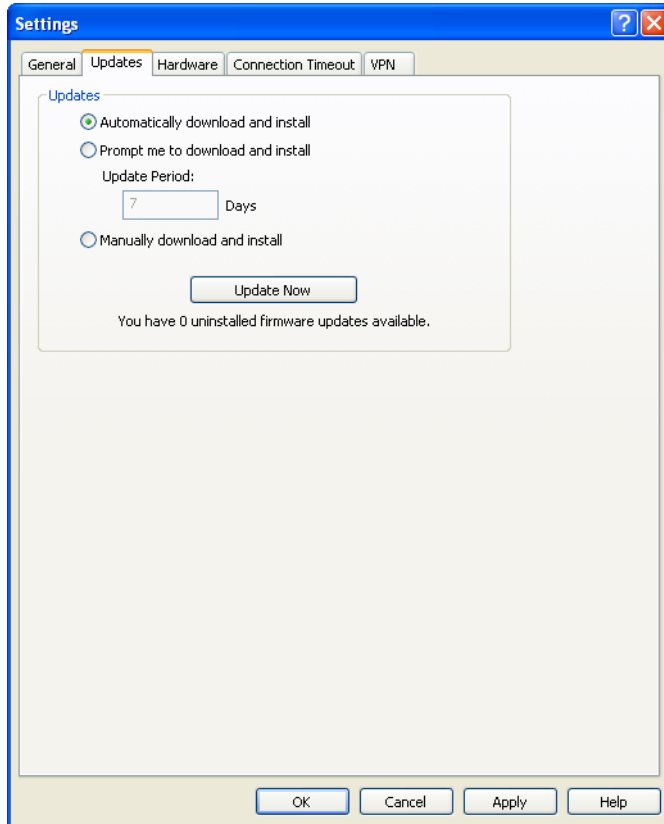
Use this as my default Wi-Fi management utility

If this box is checked, the Comcast Connection Manager will manage all Wi-Fi connections on your computer when it is running. If you wish to return control of Wi-Fi connections to the operating system (or to another application), you must exit the Comcast Connection Manager software.

When this box is NOT checked, the Comcast Connection Manager's Wi-Fi functionality is disabled.

Settings: Updates

The [Updates](#) tab allows you to specify when updates to the Comcast Connection Manager software and device firmware are made.



Automatically download and install

Select this option to have the Comcast Connection Manager automatically download and install product updates at regular intervals (once a week).

Note: *These updates are silent (occur in the background). You will not see the update wizard when updates are downloaded silently.*

Prompt me to download and install

Select this option to have the Comcast Connection Manager periodically prompt you to download and install product updates.

Manually download and install

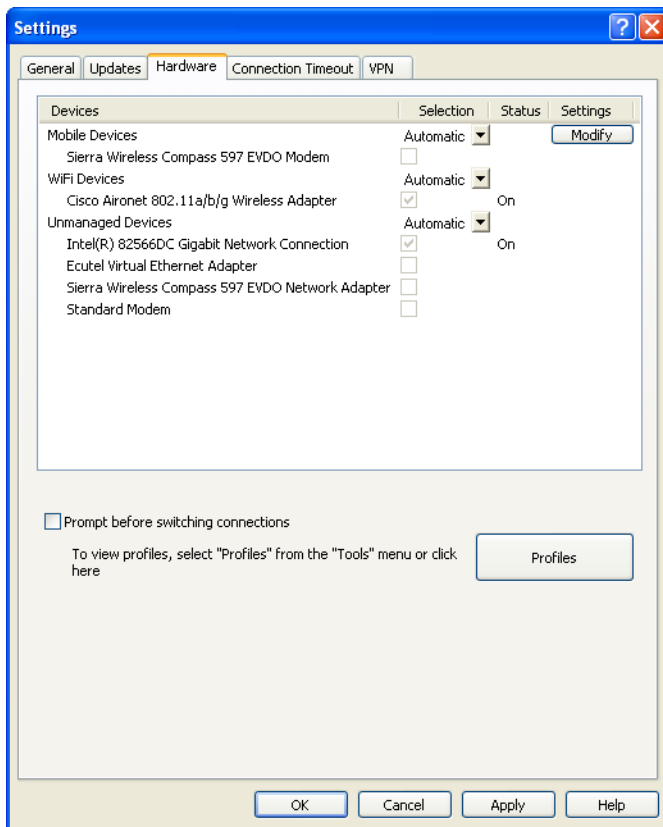
Select this option if you want product updates to be downloaded only when you click the [Update Now](#) button below.

Update Now

Click [Update Now](#) to have the Comcast Connection Manager immediately check for and download available updates.

Settings: Hardware

The *Hardware* tab is used to configure hardware-related settings for connection establishment.



The following items can be found on this tab:

The Device List

This table lists all the devices connected to your computer that may be used to establish network connections. Among other things, this table allows you to:

- Enable and disable individual devices.
- Choose between multiple device of the same type.
- Configure additional properties for Comcast 3G Mobile Broadband Devices.

For more information, see "The Device List" on page 51.

Prompt before switching connections

When in automatic connection mode, the Comcast Connection Manager software automatically switches to a higher priority network if one becomes available. This has the potential to disrupt any activity that was relying on the original connection.

Checking this box will cause the Comcast Connection Manager to prompt you for permission before establishing the connection to the new network.

The Profiles Button

Click this button to open the Network Profiles window.

The Device List

The device list is a table that appears on the Hardware tab of the Settings window. It is primarily used to select and configure connected devices.

Devices Column

This column lists all of the network access devices installed on your computer, grouped by the connection technologies they use. Each technology type heading is followed by the device names of the specific devices of that type that are installed on your computer. The technology types are:

- Wi-Fi Devices
- 3G Mobile Devices
- 4G Mobile Devices
- Unmanaged Devices

Note: The network devices listed under *Unmanaged Devices* are not managed by the Comcast Connection Manager application. So, the configuration in this window works a bit differently for them. See “Unmanaged Devices” on page 52 for more information.

Selection Column

This column allows you to specify which devices should be used to connect. The choices for this column are:

- *Automatic:* The Comcast Connection Manager will automatically choose the best device for this technology type.
- *Manual:* Allows you to manually select the device to be used. After selecting this option, check the box next to the device you wish to use.
- *Disabled:* This option is useful when you are using a multi-function wireless device that can only use one wireless mode at a time. For example, you may have a Wi-Fi/Mobile Broadband Device that can't access both types of network at the same time. When using such devices, you may have to temporarily shut down the Comcast Connection Manager's use of one of these functions when you want to use the other technology.

Status Column

This column identifies the operational status of the device. It indicates whether the device is *On* or *Off*.

Property Column

Additional properties (such as roaming) may be configured for devices if a [Modify](#) button is displayed in this column. Click [Modify](#) to open a pop-up window that provides additional configuration options for the device. Currently, only 3G Mobile Broadband Devices have such a window. (see “Device Properties” on page 53)

Unmanaged Devices

Unlike other categories in the device list, “Unmanaged Devices” are NOT supported by the Comcast Connection Manager. Although the Comcast Connection Manager cannot use these devices to establish connections, it can detect when a device in this category has established a connection and (if you desire) shut down its own connections when this occurs.

To monitor the connection status of a device in this group, check the box in the [Selected](#) column. Connections for all checked devices will be included in the [Unmanaged Connections](#) group in the Network Profiles window. See “Network Profile Priority” on page 71 for more information on the [Unmanaged Connections](#) group.

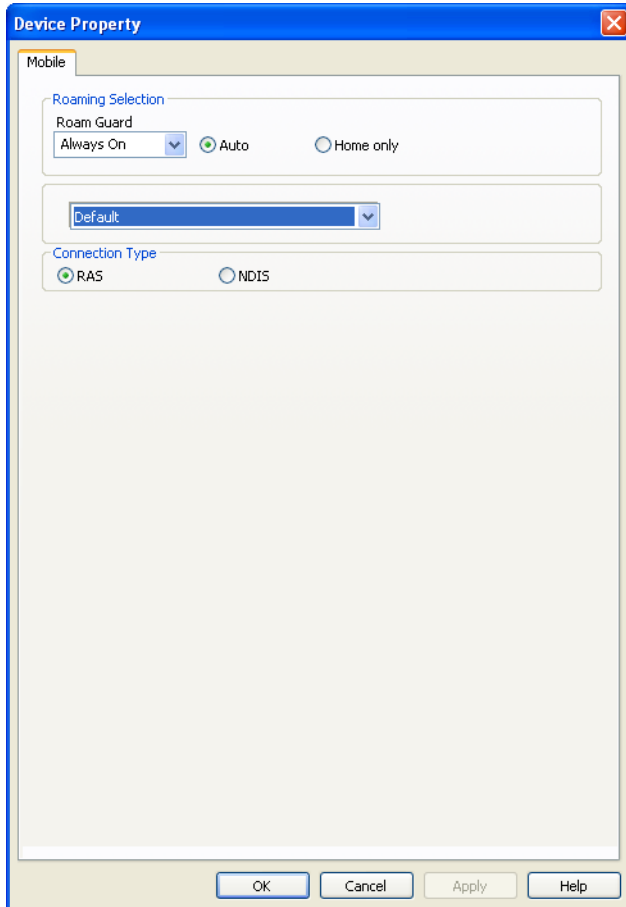
Note: *the Automatic/Manual Disabled dropdown menu at the top of the [Unmanaged Devices](#) group must be set to Manual to change which devices are checked.*

The Automatic/Manual/Disabled dropdown menu at the top of the [Unmanaged Devices](#) group determines the default state of the checkbox for newly-detected device.

- If the dropdown is set to [Automatic](#), new devices added to the other group will be checked by default.
- If the dropdown is set to [Manual](#), you can manually configure which devices are checked and which are not checked. Additionally, new devices will be unchecked by default.

Device Properties

The *Device Property* window contains three sections used to configure the behavior of 3G mobile devices connected to your computer.



Roaming Selection

Configure permission for the Comcast Connection Manager to connect to roaming networks. Consult your service agreement for more information about roaming service and any charges that such service might incur. You can choose one of these options:

- *Auto* — connects to Comcast's network when available, using roaming networks only when a connection to Comcast's network is not available.
- *Home Only* — connects only to Comcast's network. Never connects to other networks.

Use the *Roam Guard* pull-down menu to specify whether you would like the Comcast Connection Manager to display a warning message when you are about to connect to a roaming network for which there may be additional roaming charges.

- *Always Ask*: always prompt you before connecting to a roaming network.
- *Never Ask*: never ask before connecting to a roaming network.
- *Default*: display the prompt when the Extended Roaming Indicators (ERI) file on your mobile device says it is necessary to do so.

Mode

This menu allows you to specify which network technology is used to establish 3G Mobile Broadband data connections.

- *Automatic*: The Comcast Connection Manager will automatically select the best fit for your Comcast 3G Mobile Broadband Device.
- *CDMA 1xRTT*: Code Division Multiple Access utilizing the older 1 times Radio Transmission Technology.
- *CDMA EVDO*: Code Division Multiple Access utilizing the faster Evolution-Data Optimized (EVDO) Technology.

Connection Type

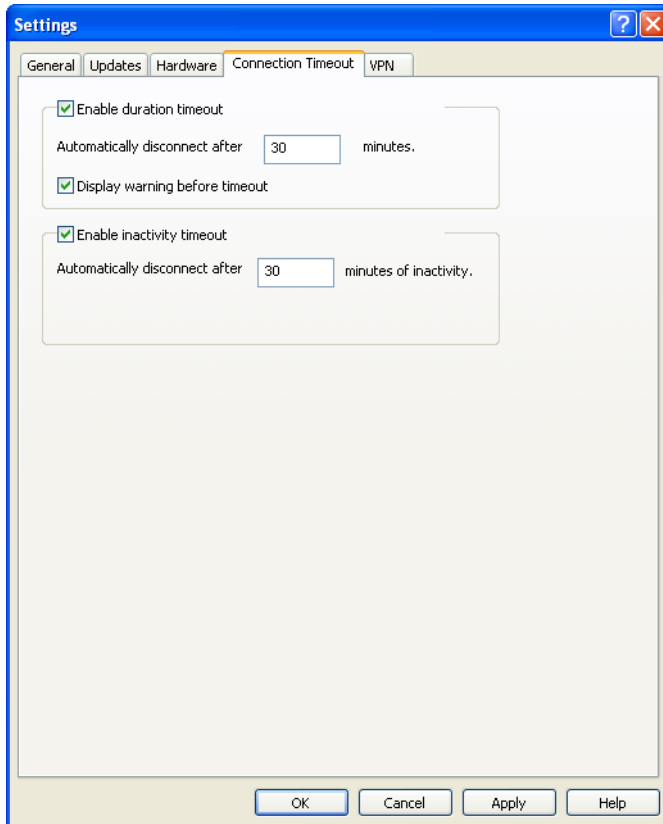
This setting determines which software interface the Comcast Connection Manager should use to communicate with your Comcast 3G Mobile Broadband Device.

- *NDIS* allows more efficient communication with devices that support it.
- *RAS* is supported by more devices.

Note: *Many 3G Mobile Broadband Devices support only one of these interfaces. If this is the case with your device, the interface that your device supports will be selected by default and you will not be able to change the selection.*

Settings: Connection Timeout

The Connection Timeout tab allows you to specify if and when the Comcast Connection Manager will automatically shut down a connection.



Configuring Duration Timeouts

A duration timeout is a maximum time allowed for any connection. So, a duration timeout of 30 minutes will shut down any connection that lasts longer than 30 minutes.

To configure a duration timeout, check the *Enable Duration Timeout* box. Then, specify the number of minutes after which the timeout should occur.

If you want the Comcast Connection Manager to warn you before it disconnects for a duration timeout, check the *Display warning before timeout* box.

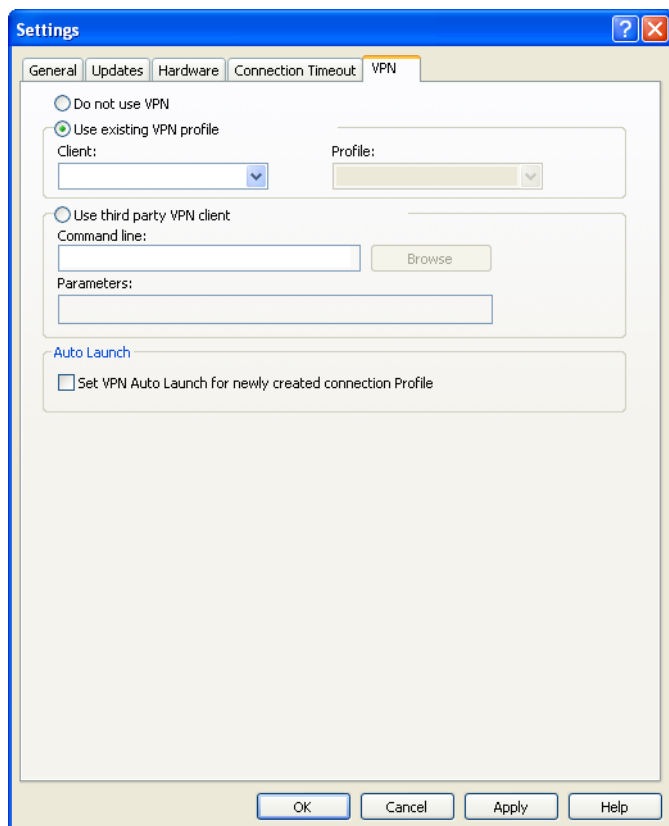
Configuring Inactivity Timeouts

Configuring an inactivity timeout instructs the Comcast Connection Manager to disconnect if there has been little or no data exchanged on a connection for a specified number of minutes.

To configure an inactivity timeout, check the *Enable Inactivity Timeout* box. Then, specify the number of minutes of inactivity that will trigger the timeout.

Settings: VPN

The *VPN* tab specifies how the Comcast Connection Manager accesses Virtual Private Networks.



The top item, *Do Not Use VPN*, disables the Comcast Connection Manager's capacity to log into VPNs. Select this option if you do not wish to establish connections to Virtual Private Networks.

You must choose one of the other two options and fill in the corresponding fields if you wish to automatically log into a VPN when you connect to a specific network (see “Automatically Launching a VPN Connection” on page 43).

Use existing VPN profile

Select this item if the VPN client software you will be using is supported by the Comcast Connection Manager. Then, specify the supported client software and the login profile that you want to use. See “Supported Clients” on page 41 for more information on supported VPN client software.

Use third party VPN client

Select this item if the VPN client software you will be using is NOT supported by the Comcast Connection Manager. Follow these steps to configure the Comcast Connection Manager to launch the unsupported software:

1. Click the [Browse](#) button.
2. Select the program file to be launched.
3. Click [Open](#). The path of the selected file should now appear in the [Command Line](#) box.
4. If your VPN client software requires that additional parameters be included after the program filename on the command line, these may be entered in the [Parameters](#) box. Consult the documentation for your VPN client to determine if such parameters are needed.

See “Supported Clients” on page 41 for more information on which VPN client software is supported.

Set VPN autolaunch for newly created connection profiles

If this box is checked, all new network profiles created will be configured to automatically launch your VPN upon successful connection. If this box not checked, new profiles will not connect to your VPN until you follow the instructions in Automatically Launching a VPN.

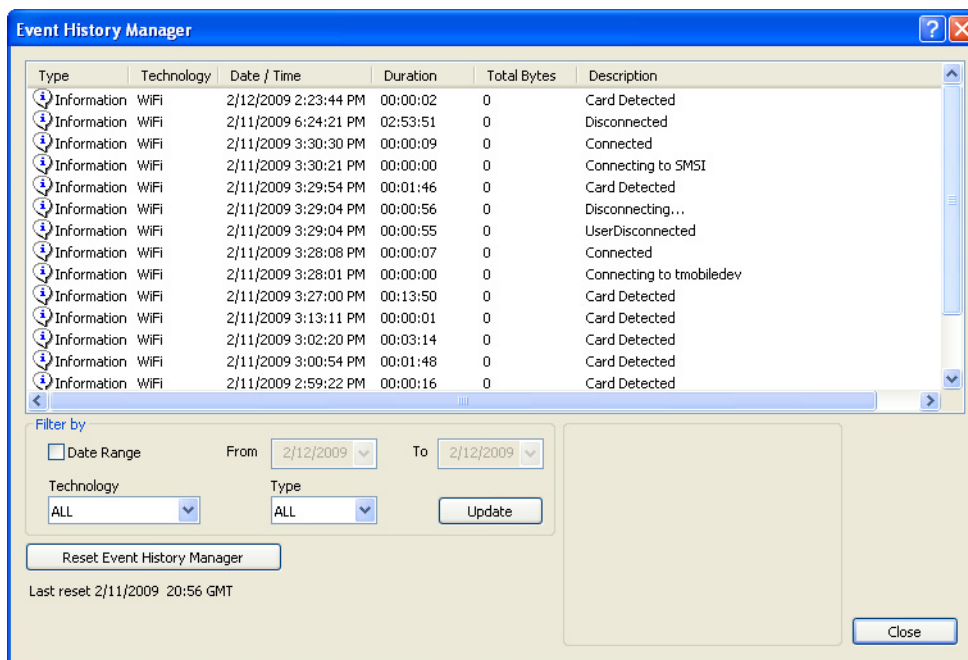
Note: *This setting specifies the initial state of the [VPN Autolaunch](#) box on the General page of settings for each new profile (see page 39). You can easily change this setting for an individual profile after the profile is created.*

Troubleshooting Tools

8

Event History Manager

Select *Diagnostics > Event History* from the Tools menu to see a log of events (for example, connections, disconnections, errors). The window shown below will appear.



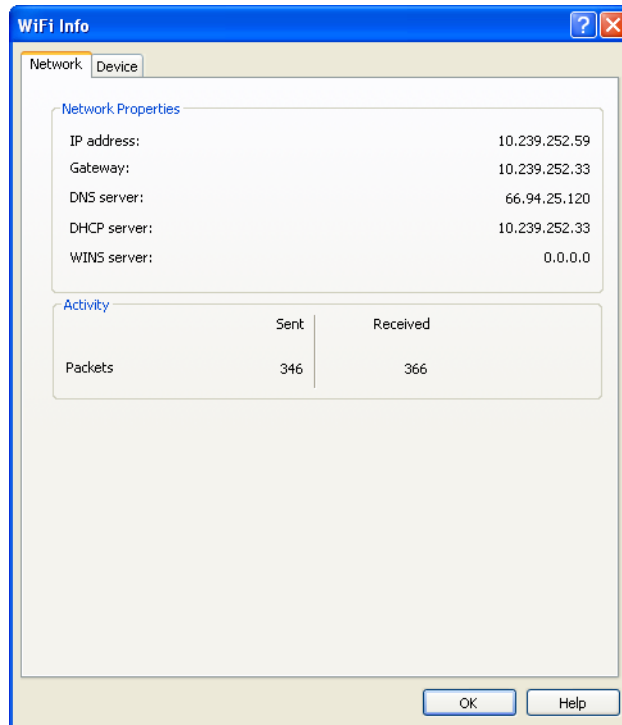
You can do the following in this window:

- Double-click on any item in the list to see more information about that event
- Use the options in the *Filter by* section to limit the events displayed to a particular date range, connection technology or event type.
- Click on the *Reset Event History Manager* button to delete all the currently-logged events.

Wi-Fi Network Information

To view information about a Wi-Fi network you are currently connected to or about your current Wi-Fi device, select *Diagnostics > Wi-Fi Info* from the *Tools* menu. This produces the window shown below.

Network Tab



IP Address

The Internet address your computer is using for the current Wi-Fi network connection. Ordinarily, the address displayed here is assigned only for the duration of the current connection. It is most likely NOT permanently assigned to your computer.

Gateway

The address of the device that is responsible for routing all of the network traffic you send over the Wi-Fi connection.

DNS Server

The address of the server your computer is using to translate textual Internet addresses (like Comcast.com) into the numerical addresses used natively by the Internet Protocol.

DHCP Server

The address of the server that assigned your computer's network configuration for the current wireless connection.

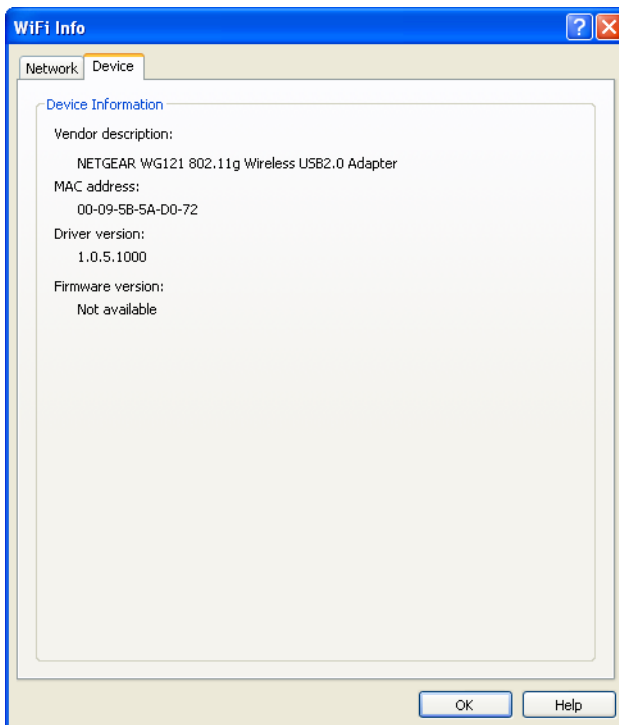
WINS Server

The address of the server (if any) that your computer is using to find the names of computers on a Windows network.

Activity

The number of packets of data that your computer has sent and received over the Wi-Fi connection since it was established.

Device Tab



Vendor Description

The name of your Wi-Fi device, as reported by its on-board operating software.

MAC Address

The Hardware Address of the device. MAC (Media Access Control) addresses are pre-configured by the device's manufacturer and usually cannot be altered. These addresses are used for transferring data by hardware-level protocols such as Ethernet and 802.11 (Wi-Fi). Higher level protocols such as the TCP/IP Protocol Suite used by the Internet have their own addressing schemes, but still rely on the hardware-level protocol for the transfer of data between individual nodes on a network.

Driver Version

The version of the driver for this device that is currently installed on your computer.

Firmware Version

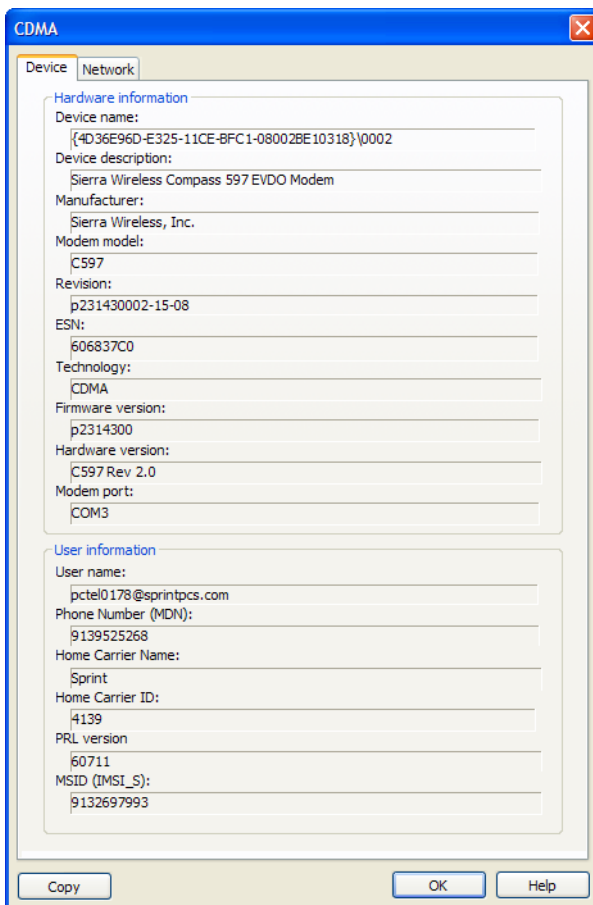
The version of the device's on-board operating software.

Comcast Mobile 3G Info Window

To view information about your Comcast 3G Mobile Broadband Device and/or your Comcast Mobile 3G connection (if any), select [Diagnostics > Comcast Mobile 3G Info](#) from the [Tools](#) menu. The window shown below will appear.

Note: *The information displayed in this window is provided by your Comcast 3G Mobile Broadband Device and its drivers. If the device does not provide this information or the information provided is incorrect, this will be reflected in the displayed data.*

Device Tab



The screenshot shows a window titled "CDMA" with two tabs: "Device" and "Network". The "Device" tab is active and displays the following information:

Hardware information	
Device name:	{4D36E96D-E325-11CE-BFC1-08002BE10318}\0002
Device description:	Sierra Wireless Compass 597 EVDO Modem
Manufacturer:	Sierra Wireless, Inc.
Modem model:	C597
Revision:	p231430002-15-08
ESN:	606837C0
Technology:	CDMA
Firmware version:	p2314300
Hardware version:	C597 Rev 2.0
Modem port:	COM3

User information	
User name:	pctel0178@sprintpcs.com
Phone Number (MDN):	9139525268
Home Carrier Name:	Sprint
Home Carrier ID:	4139
PRL version:	60711
MSID (IMSI_S):	9132697993

At the bottom of the window are three buttons: "Copy", "OK", and "Help".

Device Name

The name used internally by software applications to uniquely identify your Comcast 3G Mobile Broadband Device.

Device Description

The commercial name of your Comcast 3G Mobile Broadband Device.

Manufacturer

The name of the manufacturer of your Comcast 3G Mobile Broadband Device.

Modem Model

The model name of your Comcast 3G Mobile Broadband Device.

Revision

The revision field contains manufacturer-specific information about the version of your device. It may, for example, contain additional information about your device's model number or its firmware version.

ESN

Your Comcast 3G Mobile Broadband Device's Electronic Serial Number.

Technology

The type of Comcast 3G Mobile Broadband Device you are using (CDMA or GSM).

Firmware Version

The version of your Comcast 3G Mobile Broadband Device's on-board operating software.

Hardware Version

The version of your device's hardware.

Modem Port

The communications (COM) port that your Comcast 3G Mobile Broadband Device is currently attached to.

User Name

Your Network Access Identity (NAI), usually in the form of username@companyabc.com.

Phone Number (MDN)

The telephone number of your Comcast 3G Mobile Broadband Device.

Home Carrier Name

The name of the wireless service provider that your Comcast 3G Mobile Broadband Device considers to be its “home” network.

Home Carrier ID

The ID of the wireless service provider that your device considers to be its “home” network.

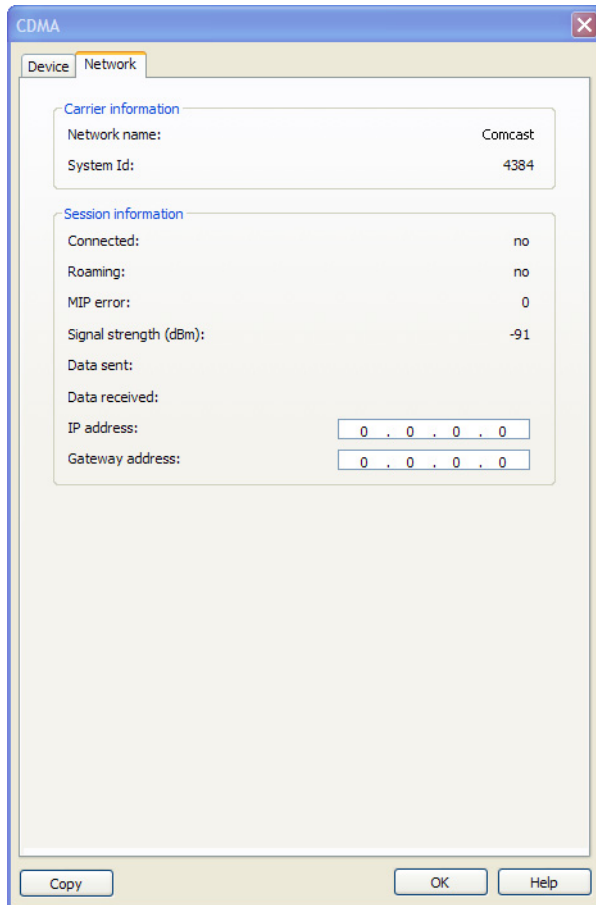
PRL Version

The version of the file on your device that contains the Preferred Roaming List.

MSID (IMSI_S)

Your Comcast 3G Mobile Broadband Device's IMSI (International Mobile Subscriber Identity) code. The IMSI allows any mobile network to know the home country and network of the subscriber.

Network Tab



Network Name

The name of the 3G mobile carrier to which you are currently connected.

System ID

The ID of the network to which your Comcast 3G Mobile Broadband Device is currently connected.

Connected

Indicates whether you are currently connected to a 3G Mobile Broadband network.

Roaming

Indicates whether you are currently connected to a 3G Mobile Broadband network other than Comcast's network.

MIP Error

The last Mobile IP Error Code reported by your Comcast 3G Mobile Broadband Device.

Signal Strength (dBm)

The strength of the signal being received from this network, expressed in dBm.

Data Sent

The amount of data sent over this connection since it was established (in bytes).

Data Received

The amount of data received over this connection since it was established (in bytes).

IP Address

The IP Address you are using for the current 3G Mobile Broadband connection. Ordinarily, the address displayed here is assigned only for the duration of the current connection. It is most likely NOT permanently assigned to your computer.

Gateway Address

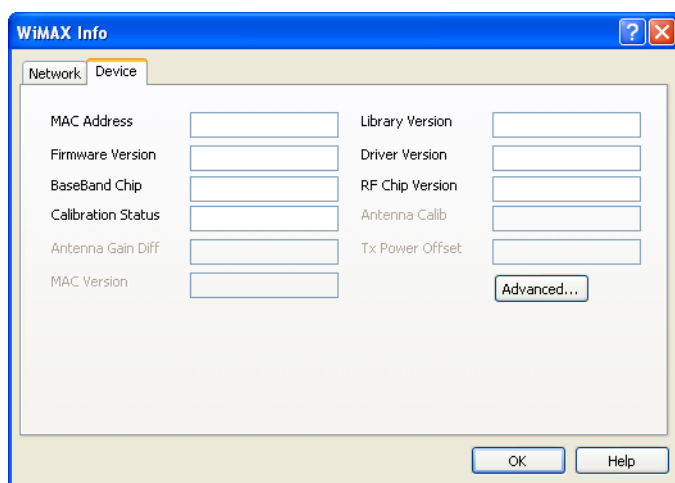
The address of the default gateway that has been assigned to your device.

Comcast Mobile 4G Info Window

To view information about your Comcast 4G Mobile Broadband Device and/or your Comcast Mobile 4G connection (if any), select [Diagnostics > Comcast Mobile 4G Info](#) from the [Tools](#) menu. The window shown below will appear.

Note: The information displayed in this window is provided by your Comcast 4G Mobile Broadband Device and its drivers. If the device does not provide this information or the information provided is incorrect, this will be reflected in the displayed data.

Device Tab



This page displays various information about the Comcast 4G Mobile Broadband Device currently attached to your computer.

MAC Address

The Hardware Address of the device. MAC (Media Access Control) addresses are pre-configured by the device's manufacturer and usually cannot be altered. These addresses are used for transferring data by hardware-level protocols such as Ethernet or WiMAX. Higher level protocols such as the TCP/IP Protocol Suite used by the Internet have their own addressing schemes, but still rely on the hardware-level protocol for the transfer of data between individual nodes on a network.

Library Version

The version of the software interface of the device's 4G Mobile chipset.

Firmware Version

The version of your Comcast 4G Mobile Broadband Device's onboard operating software.

Driver Version

The version of the driver for this device that is currently installed on your computer.

BaseBand Chip

The version of the chip in your Comcast 4G Mobile Broadband Device that formulates the baseband 4G mobile signal.

RF Chip Version

The version of the chip in your Comcast 4G Mobile Broadband Device that modulates and multiplexes the baseband 4G mobile signal for RF transmission.

Calibration Status

This indicates whether your Comcast 4G Mobile Broadband Device has been calibrated.

Antenna Calib

This item is not currently reported by the Comcast Connection Manager software.

Antenna Gain Diff

This item is not currently reported by the Comcast Connection Manager software.

Tx Power Offset

This item is not currently reported by the Comcast Connection Manager software.

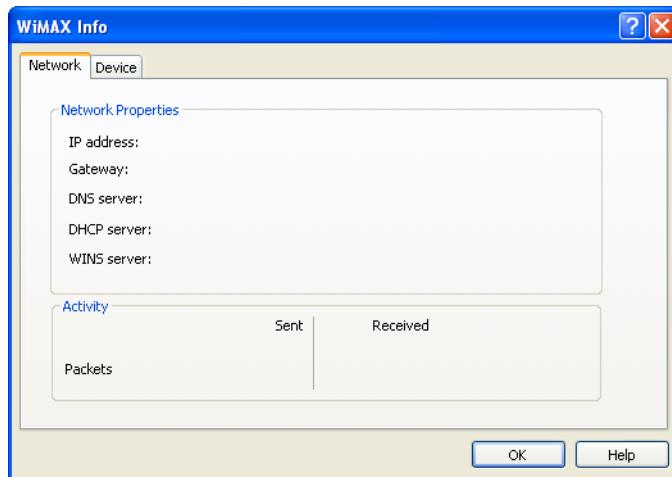
MAC Version

This item is not currently reported by the Comcast Connection Manager software.

The Advanced Button

Click this button to open the Advanced Mobile 4G Info window.

Network Tab



This page displays various information about the 4G mobile network you are currently connected to (if any).

IP Address

The Internet address your computer is using for the current 4G mobile network connection. Ordinarily, the address displayed here is assigned only for the duration of the current connection. It is most likely NOT permanently assigned to your computer.

Gateway

The address of the device that is responsible for routing all of the network traffic you send via 4G mobile.

DNS Server

The address of the server your computer is using to translate textual Internet addresses (like Comcast.com) into numerical addresses used natively by the Internet Protocol.

DHCP Server

The address of the server that assigned your computer's network configuration for the current 4G mobile connection.

WINS Server

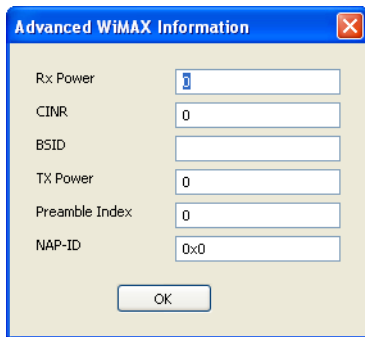
The address of the server (if any) that your computer is using to find the names used by computers in a Windows workgroup.

Activity

The number of packets of data that your computer has sent and received over the WiMAX connection since it was established.

Advanced Mobile 4G Information

Clicking the *Advanced* button on the Device page of the Mobile 4G Info window produces the Advanced Mobile 4G Info window (shown below). This window provides advanced information for troubleshooting a 4G mobile connection.



The screenshot shows a dialog box titled "Advanced WiMAX Information" with a close button in the top right corner. The dialog contains six input fields, each with a label to its left and a value in the field:

Label	Value
Rx Power	0
CINR	0
BSID	
TX Power	0
Preamble Index	0
NAP-ID	0x0

At the bottom center of the dialog is an "OK" button.

Rx Power

The strength of the signal received.

CINR

Carrier to Interference + Noise Ratio. This is an indication of how strong the desired signal is compared to any interfering signals and noise. This gives a slightly more accurate indication of the overall quality of the signal received than just the signal strength by itself.

BSID

Base Station ID. The ID of the base station you are currently connected to.

TX Power

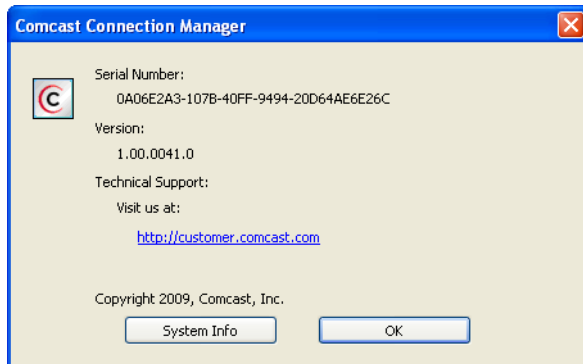
The level of power your Comcast 4G Mobile Broadband Device is using to transmit.

Preamble Index

The Preamble Index of the 4G mobile base station sector you are currently connected to.

About Comcast Connection Manager

Select *About Comcast Connection Manager* from the Help menu to see the version number of the Comcast Connection Manager software as well as the website for Comcast customer service.



Click the *System Info* button to see information about your computer's current configuration, which may be useful to a customer service representative in resolving a problems.

Troubleshooting Procedures

General Questions

How do I stop the Comcast Connection Manager from launching every time I restart my computer?

Follow these steps:

1. Select *Settings* from the *Tools* menu.
2. Select the *General* tab.
3. Remove the check from the *Automatically run this application on machine startup* box.
4. Click the *OK* button.

Who can I contact if I need assistance with the Comcast Connection Manager?

Support for the Comcast Connection Manager can be obtained through Comcast's webbiest, <http://customer.comcast.com> or by phone at 1-866-206-2182. When contacting Comcast support, be sure to include the version of Windows and the type of wireless device you are using as well a description of the problem you are experiencing.

Wi-Fi Questions

Why Does the Comcast Connection Manager Keep Scanning for Wi-Fi Networks?

The Comcast Connection Manager will continue to scan until it finds one or more available networks or hot spots. If it keeps scanning, there are most likely no Wi-Fi networks or hot spots in the area.

“Closed” networks are a special case. Although the Comcast Connection Manager can detect whether closed networks are in the area, it can’t actually identify (or connect to) individual closed networks without probing for these networks using their exact names. To enable this, you have to create a profile for the network you wish to connect to. See “Accessing a Closed Network” on page 25 for more information.

Why do I keep losing my connection?

This may be due to interference caused by other devices like cordless phones, microwave ovens, and other 2.4GHz band devices. Move a few feet away from such devices.

Why am I unable to connect to a network that I can see in the Comcast Connection Manager?

Signal strength from the wireless Access Point may not be strong enough to allow reliable connections. It may not be a publicly available Access Point. Many companies or campuses will use wireless networking within their buildings, but will not grant public access.

Device Issues

In some circumstances, the Comcast Connection Manager will not be able to use your Wi-Fi, Comcast 3G Mobile Broadband Device or Comcast 4G Mobile Broadband Device.

A network name displayed in the main window will turn gray when the corresponding device has been disabled or if the device's presence is not currently detected by the Comcast Connection Manager.

Device Disabled

All of the devices used by the Comcast Connection Manager can be disabled by Microsoft Windows. If this is the case, you can re-enable the device.

Resolution

You can enable an attached wireless device by selecting [Enable Comcast Mobile 3G](#), [Enable Comcast Mobile 4G](#) or [Enable Wi-Fi](#) from the [File](#) menu.

Note: *On Windows Vista systems, these options may be unavailable (grayed out) at all times. This may be because of security restrictions in your Microsoft Vista security configuration. Running the application as an administrator may allow access to these options. Follow these steps:*

1. Close the Comcast Connection Manager.
2. Right click on the Comcast Connection Manager icon on your computer's desktop. A short menu appears.
3. Select "Run As Administrator" from this menu.

No Wireless Device Detected

Failure to detect the device may result from any of the following causes:

- Devices that must be tethered to your computer with a data cable (such as USB), but are not currently properly connected. Make sure the cables for devices that require them are properly attached to both your computer and the device.
- External devices that are not currently powered on. Make sure external devices are switched on. Make sure the batteries of battery-powered devices are charged. Make sure devices that must be plugged into an electrical outlet are plugged in.
- PC Card, USB, or Express Card devices that are not properly inserted. Make sure such devices are firmly seated in the appropriate slots.

- The wrong device is selected in the *Hardware* Tab of the *Settings* Window. Ordinarily, automatic selection should be specified in the “Selected” column. If *Manual* selection is specified, verify that the selected device is the device you are trying to use. See “Settings: Hardware” on page 49 for more information.
- No driver or incorrect driver installed. Ensure that the latest drivers for the device are correctly installed according to the instructions of the device’s manufacturer.

Numbered Errors

The most commonly-reported connection errors are listed below, along with some advice on their resolution.

Error 67

Possible causes for this error include the following:

- Mobile Broadband Device account credentials have changed.
- Mobile Broadband Device is no longer provisioned for service.

Resolution

Contact Comcast Customer Service to ensure that your device is properly provisioned and that there are no problems with the account.

Error 131

Your Mobile Broadband Device account credentials may have changed.

Resolution

Contact Comcast Customer Service to ensure that your device is properly provisioned and that there are no problems with the account.

Error 619

A connection to the remote computer could not be established, so the port used for this connection was closed. Possible causes for this error include the following:

- Network resources are unavailable.
- Attempting to reconnect before your Mobile Broadband Device has finished disconnecting from a previous call.
- Your Mobile Broadband Device may be malfunctioning.

Resolution

- Wait 30 seconds, and then try to connect again.
- Remove the Mobile Broadband Device and re-attach it to the computer.
- Reboot the computer.

Error 628

The connection was terminated by the remote computer before it could be completed. Possible causes for this error include the following:

- Call was dropped due to poor signal.
- Call was dropped due to network congestion.

Resolution

- If indoors, move closer to a window, exterior wall or move to a higher level. Re-orienting the computer/wireless device may help as well.
- Wait 30 seconds, and then try to connect again.

Error 633

The device is already in use or is not configured properly. Possible causes for this error include:

- There is a problem with the drivers installed for the wireless device.
- Another application such as a fax program or PDA device software is attempting to use the port.

Resolution

- Shut down all FAX and PDA software and launch the Comcast Connection Manager again. Examples of common applications that can cause this type of problem include: PalmSource Hotsync, Microsoft ActiveSync, and Blackberry Desktop Manager.
- Uninstall any other wireless device connection management software installed on the computer.
- Re-install the Comcast Connection Manager.

Error 668

The connection was dropped. Possible causes for this error include:

- Poor signal.
- Network congestion.

Resolution

- If indoors, move closer to a window, exterior wall, or a higher level. Reorienting the computer or wireless device may help as well.
- Reboot the computer.
- Contact Comcast Customer Service to ensure that your device is properly provisioned.

Error 678

The remote computer is not responding. Possible causes for this error include:

- Poor signal.
- Network resources are unavailable.

Resolution

- If indoors, move closer to a window or exterior wall or move to a higher level. Reorienting the computer or wireless device may help as well.
- Wait 30 seconds, and then try to connect again.

Error 691

Access was denied because user name and/or password supplied is invalid on the domain. Possible causes for this error include:

- Poor signal.
- Mobile Broadband Device account credentials have changed.

Resolution

- If indoors, move closer to a window or exterior wall or move to a higher level. Reorienting the computer/wireless device may help as well.
- Reboot the computer.

- Contact Comcast Customer Service to ensure that your device is properly provisioned.

Error 692

There was a hardware failure in the device. Possible causes of this error include:

- Wireless device is defective or broken.
- Problem with PC Card Slot, ExpressCard slot, or USB port.

Resolution

- Close the Comcast Connection Manager, reinsert the device, and launch the Comcast Connection Manager again.
- Reboot the computer.
- Try connecting the device to another slot (or port).

Error 718

PPP/Network Timeout. Possible causes for this error include:

- Poor signal.
- Network resources are unavailable.

Resolution

- If indoors, move closer to a window or exterior wall or move to a higher level. Reorienting the computer or wireless device may help as well.
- Wait 30 seconds, and then try to connect again.
- Reboot the computer.

Error 719

PPP termination by remote machine. Possible causes for this error include the following:

- Poor signal.
- Network resources are unavailable.

Resolution

- If indoors, move closer to a window or exterior wall, or move to a higher level. Reorienting the computer or wireless device may help as well.
- Wait 30 seconds, and then try to connect again.
- Reboot the computer.

Error 777

The connection attempt failed because the connecting device on the remote computer is out of order. Possible causes for this error include:

- Poor signal.
- Network resources are unavailable.
- There is a problem with one of the wireless device drivers.

Resolution

- If indoors, move closer to a window or exterior wall, or move to a higher level. Reorienting the computer or wireless device may help as well.
- Wait 30 seconds, then try to connect again.
- Close the Comcast Connection Manager, reinsert the wireless device and launch the Comcast Connection Manager again.
- Reboot the computer.
- Uninstall any other software that manages wireless connections (if any are present on the computer).
- Reinstall the Comcast Connection Manager.

