XOHM™ Connection Manager User Guide

7/21/08

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1 Welcome to XOHM

XOHM is next generation mobile broadband that's designed to work as fast around town as it does at home. With XOHM, you'll connect to the Internet without long-term contracts or complications. Then you can take the Internet, and everything you do with it, along with you anywhere XOHM has coverage.

Getting started with XOHM is simple: no wires means no service calls. Just install the XOHM Connection Manager software, connect your XOHM Card to your computer, activate your XOHM service, and you have broadband on the go.

XOHM Connection Manager

XOHM Connection Manager manages XOHM WiMAX connections, Wi-Fi connections, and Ethernet (tethered LAN) connections.* This document outlines the main windows of the XOHM Connection Manager and describes how to perform specific key tasks. It includes information on:

There is also an addendum to the XOHM Connection Manager User Guide addressing specific firewall configurations to ensure successful activation and provisioning. This information can be found beginning on page 49.

Note	*Visit* www.xohm.com *for the most up-to-date version of the XOHM Connection Manager User Guide.*
	Need help? Visit www.xohm.com *or call* XOHM Care *at* 1-877-333-XOHM.

* *XOHM Connection Manager does not manage connections for any other wireless connection cards including those designed to operate on the major cellular networks. To connect using another type of connection card, exit XOHM Connection Manager from the system tray and then launch that card's connection manager program. To return to XOHM WiMAX service, turn off the other connection manager program and then launch XOHM Connection Manager.*

2 Installing XOHM Connection Manager

Installing XOHM Connection Manager software and connecting your XOHM Card requires just a few simple steps: prepare your computer, install XOHM Connection Manager, insert your XOHM Card, and activate your XOHM account.

2.1 System Requirements

The system requirements provided here reflect only the standards required to install and run XOHM Connection Manager. Please see your XOHM Card's support documentation for additional specifications.

- ***Operating System:*** Windows XP (service pack 2 or 3) or Windows Vista
- ***Ports:*** One available USB port or one available ExpressCard 34mm or 54 mm slot or standard PCMCIA slot with optional adapter (depending on type of XOHM Card)
- ***Optical Drive:*** CD-ROM drive (or better)
- ***System Configuration:***
  - ***Processor:*** 466 MHz or higher (1 GHz or higher recommended)
  - ***Hard Disk:*** 100 MB available disk space required
  - ***RAM:*** 256 MB minimum (512 MB or higher recommended)
  - ***Storage:*** 100 MB available disk drive space (300 MB or more recommended)
- ***Web Browser:*** XOHM Connection Manager is compatible with Internet Explorer 6 and higher, Firefox 1.5 and higher, and Safari 3.0 and higher. It may also function with other browsers.

2.2 About XOHM Connection Manager

XOHM Connection Manager manages XOHM WiMAX connections, Wi-Fi connections, and Ethernet (tethered LAN) connections.* Once you install XOHM Connection Manager, it becomes the default program for managing your computer's Internet connections.

* *XOHM Connection Manager does not manage connections for any other wireless connection cards including those designed to operate on the major cellular networks. To connect using another type of connection card, exit XOHM Connection Manager from the system tray and then launch that card's connection manager program. To return to XOHM WiMAX service, turn off the other connection manager program and then launch XOHM Connection Manager.*

30 Day Activation Period

When you install XOHM Connection Manager, you may use it to manage your Wi-Fi and Ethernet Web connections for up to 30 days without registering your XOHM service. After 30 days, XOHM Connection Manager will cease to function for Wi-Fi and Ethernet connections (you will only be able to make XOHM WiMAX connections). To avoid disruptions in service, we recommend that you activate your XOHM Card on the XOHM WiMAX network as soon as possible. Visit ***www.xohm.com*** for more information.

2.3 Before You Install XOHM Connection Manager

2.3.1 Write Down Your Wi-Fi Settings

XOHM Connection Manager manages new and existing Wi-Fi connections once they're added to the network list. To add new networks, you have to know certain information about them. (See Section 5 Configuring Wi-Fi Networks on page 24 for details.)

Before you begin installation, write down any applicable Wi-Fi configuration settings before installing XOHM Connection Manager. Necessary information may include ***SSID*** (network name; usually filled in automatically), ***Security Type*** (such as WPA, WPA2, WEP), ***Encryption Type*** (AES or TKIP), ***Authentication*** (usually Pre-Shared Key, though PEAP and EAP-TLS may be used), ***Key/Passphrase*** (the password that confirms your network permission), and ***WEP Key Index*** (only used for WEP security type). Not all fields will be required for all networks.

Tip	*If your computer is running Windows Vista or Windows XP SP3, XOHM Connection Manager may be able to import your current Wi-Fi configuration settings to make connecting to your Wi-Fi network easier. This only applies if you are using Windows Connection Manager or another connection manager that uses Windows profiles.*

2.3.2 Configure Your Firewall

Activation and provisioning requires open two-way communication between XOHM Connection Manager and the XOHM WiMAX network. Depending on your computer's firewall and security settings, you may need to adjust your firewall settings to allow the required communication; otherwise, activation and provisioning may fail.

- During the activation process, your firewall application may ask for your permission to allow communication involving ***XOHM Configuration Manager*** and ***Connection Manager***. To ensure successful activation and subsequent provisioning, it is strongly recommended that you always allow connectivity from and to ***XOHM Configuration Manager*** and ***Connection Manager*** (see "2.5.1 Activate Over-the-Air (OTA) in a XOHM Network Coverage Area" on page 7 for more details). Consult your firewall documentation or "Addendum – Working With Firewalls" on page 49.

Note	*XOHM Configuration Manager transmits your WiMAX MAC ID, device manufacturer, and model name to facilitate initial activation and subsequent provisioning activities.* **It DOES NOT send any personally identifiable information.**

- If the firewall settings are left unchanged, some firewall programs may automatically deny access without notification. XOHM Connection Manager will not be able to complete activation.

For more information on how to manually change firewall settings to ensure successful activation and provisioning, please see "Addendum – Working With Firewalls" on page 49.

2.4 Install XOHM Connection Manager

Important	DO NOT insert the XOHM Card into your computer's USB port or ExpressCard or PCMCIA slot until instructed to do so by the installation software.

1. Insert the XOHM Connection Manager Installation CD into your computer's CD drive.

   - The installation screen (see below) should appear automatically. If your computer does not display the installation screen, click ***Start > My Computer*** and double-click on the ***CD Drive***. From the CD drive file list, click ***XOHM.hta*** to display the installation screen. (Click ***Run*** if an "Unknown Publisher" prompt appears.)

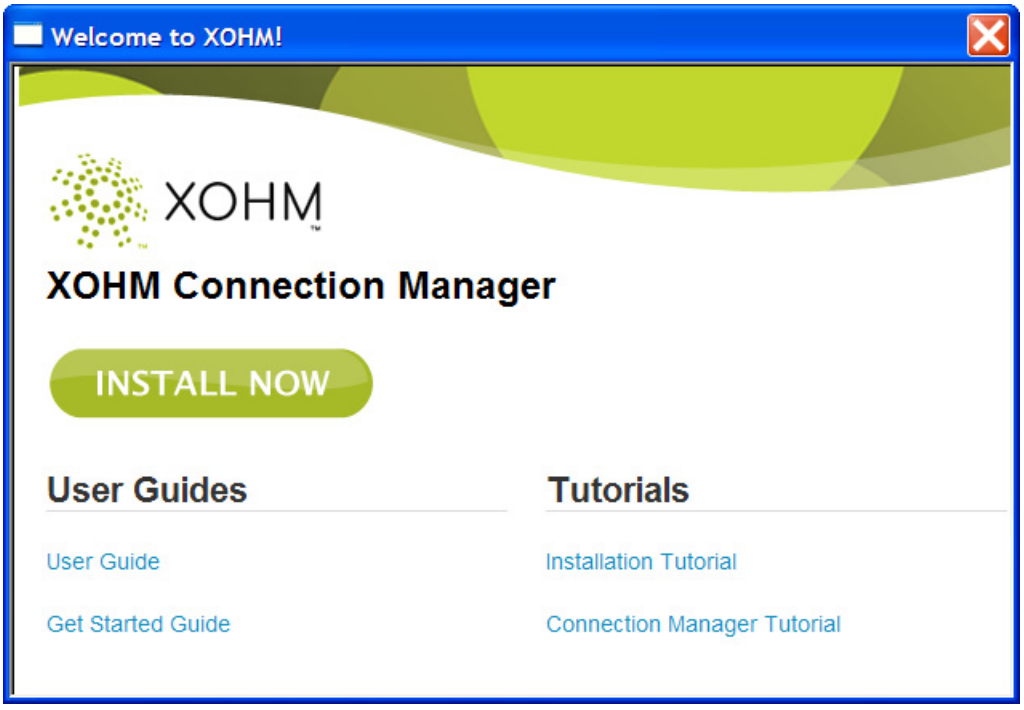

Figure 2.1: XOHM Connection Manager Installation Screen

2. Click ***INSTALL NOW*** to begin the installation.

Note	*Software installation requires administrative permission on your computer. If you do not have administrator access, contact your system administrator to install the software.*

Tip	*From the installation screen, you can click links to display the user guide or get started guide, or click a link under "Tutorials" to view a video demonstration.*

3. The Connection Manager Installation Wizard "Welcome" screen appears. Click ***Next***.

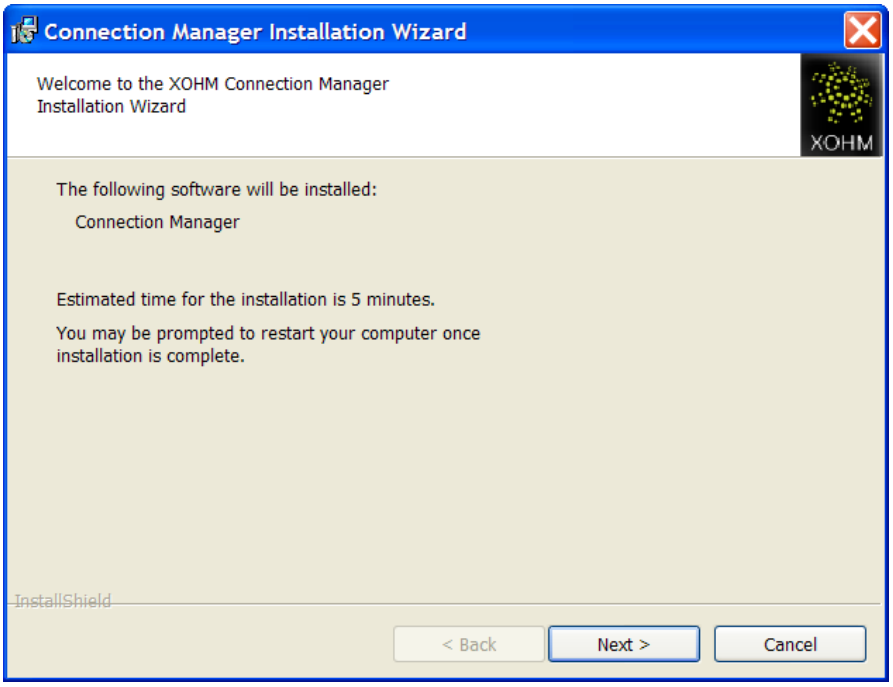

Figure 2.2: Connection Manager Installation Wizard

4. Follow the onscreen instructions to complete the installation wizard.
   - When prompted, insert the XOHM ExpressCard or USB into your computer and click ***OK***. (See your XOHM Card's ***Get Started*** guide for details.)

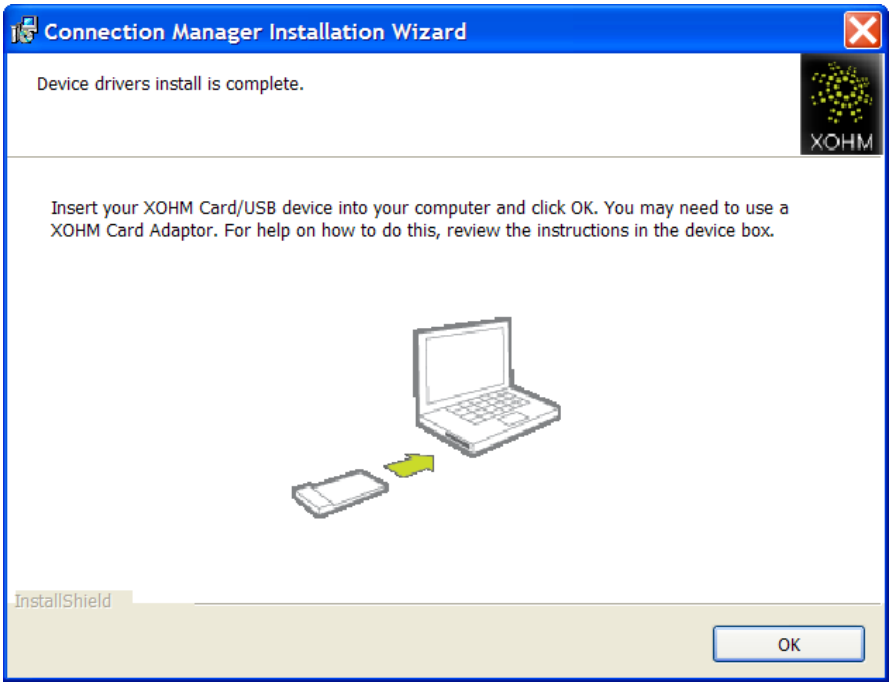

Figure 2.3: Insert ExpressCard or USB

5. When installation is complete, click ***Restart Now*** to restart your computer.

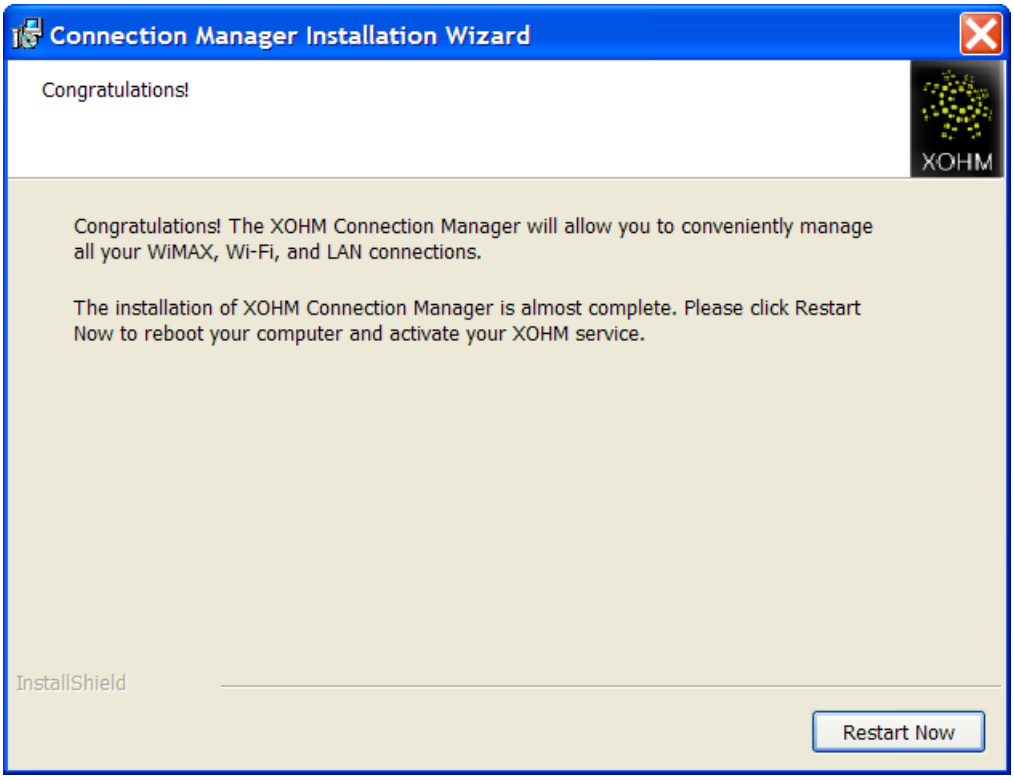

Figure 2.4: Connection Manager Installation – Complete

Understanding the Status Light

Your XOHM Card gives you at-a-glance status information via its LED status indicator. Here's a list of indicators and meanings:

- ***Green status light – Solid Green*** indicates the card is powered and service is available. ***Flashing Green*** indicates data activity (send/receive, alerts, diagnostics).
- ***Amber status light – Flashing Amber*** indicates a transitional state (initialization, firmware updates, acquiring network). ***Solid Amber*** (XOHM ExpressCard Only) indicates a standby state.
- ***Red status light*** indicates a problem state (no network service available, other errors).

Tip	*Flip open the XOHM Card antenna to improve WiMAX signal reception. See your XOHM Card's* **Get Started** *guide for more information.*

2.5 Activate Your XOHM Account

There are two options available for activating your XOHM account: over-the-air (OTA) using your XOHM connection, and off-network using an existing Internet connection.

Tip	*Make sure you have a credit card available to set up your XOHM service and complete activation.*

2.5.1 Activate Over-the-Air (OTA) in a XOHM Network Coverage Area

The OTA activation process automatically launches once you have installed the XOHM Connection Manager software and inserted your XOHM Card.

1. When your computer restarts after installing XOHM Connection Manager, the program is designed to launch automatically and search for the XOHM network.
   - If it is not already attached, insert your XOHM Card into your computer. The computer should automatically detect and recognize the new hardware and display an icon in the system tray.

Note	**Windows Vista Users** – *Before proceeding with activation, it may be necessary to remove and reinsert your XOHM Card after installing XOHM Connection Manager.*

   - If your computer does not automatically launch XOHM Connection Manager, click ***Start > (All) Programs > XOHM > XOHM Connection Manager*** or double-click the XOHM Connection Manager icon () on the desktop.

Note	*During the activation process, your firewall application may ask for your permission to allow communication involving* **XOHM Configuration Manager** *and* **Connection Manager**. *To ensure successful activation and subsequent provisioning, it is strongly recommended that you always allow connectivity from and to* **XOHM Configuration Manager** *and* **Connection Manager**. *Consult your firewall documentation or see "Addendum – Working With Firewalls" on page 49.* *XOHM Configuration Manager transmits your WiMAX MAC ID, device manufacturer, and model name to facilitate initial activation and subsequent provisioning activities.* **It DOES NOT send any personally identifiable information.**

2. The first time XOHM Connection Manager launches and detects the XOHM WiMAX network, click ***Activate XOHM*** to launch the XOHM website to begin activating and provisioning your XOHM Card. (If the XOHM network is not available, go to step 2 under "2.5.2 Activate Outside of a XOHM Network Coverage Area" on page 9.)

3. When the XOHM website opens, follow the instructions to explore the XOHM service options, select the option that's right for you, and activate your XOHM Card on the XOHM WiMAX network. When you have made your selections, submit your order.
   - XOHM Connection Manager will remain open in the background. Please leave it open during this process.

4. When activation is complete, your XOHM Card and XOHM service are ready to use. (Activation by XOHM is typically fast but may take several minutes.)
   - Upon successful activation, the main XOHM Connection Manager screen appears. To confirm activation, use your Web browser to navigate to another website.
   - If you are able to successfully display another website, then your XOHM Card and service are activated. If you were brought back to the xohm.com activation page, then your service is not yet activated.
   - If activation is unsuccessful, refer to the ***Troubleshooting*** information in your XOHM Card documentation for possible solutions. If none of those addresses the problem, call ***XOHM Care*** at ***877-333-XOHM*** (877-333-9646) for assistance.
5. Proceed to Section 3 "XOHM Connection Manager Interface" on page 13.

Figure 2.5: Activation Complete – Connected to XOHM WiMAX

2.5.2 Activate Outside of a XOHM Network Coverage Area

If you are outside of an immediate XOHM WiMAX network coverage area and you have an alternate (Ethernet or Wi-Fi) Internet connection available, you can activate XOHM service once you have installed XOHM Connection Manager and inserted your XOHM Card. This lets you quickly connect to the XOHM WiMAX network once you're in a XOHM network coverage area.

1. When your computer restarts after installing XOHM Connection Manager, the program is designed to launch automatically and search for the XOHM network.
   - If it is not already attached, insert your XOHM Card into your computer. The computer should automatically detect and recognize the new hardware and display an icon in the system tray.
   - If your computer does not automatically launch XOHM Connection Manager, click ***Start > (All) Programs > XOHM > XOHM Connection Manager*** or double-click the XOHM Connection Manager icon ( ) on the desktop.
2. When XOHM Connection Manager notifies you that the XOHM network is not available (see Figure 2.6-A), check ***Connect to a LAN*** or ***Connect to Wi-Fi***, and then click ***Next***. (If you select ***Connect to Wi-Fi***, you will be prompted to set up a Wi-Fi connection). Make sure the selected Internet connection (Wi-Fi or Ethernet [LAN]) is active, and then click the onscreen ***Complete Registration*** link (see Figure 2.6-B) to go to the XOHM activation page.

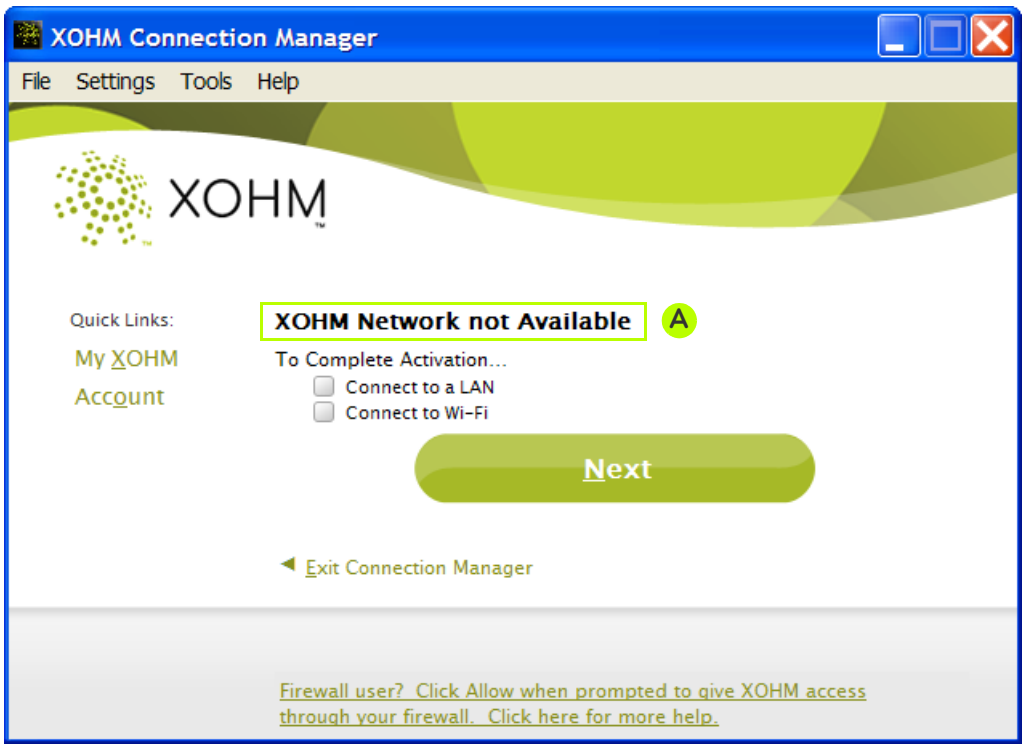

Figure 2.6-A: XOHM Network Not Available

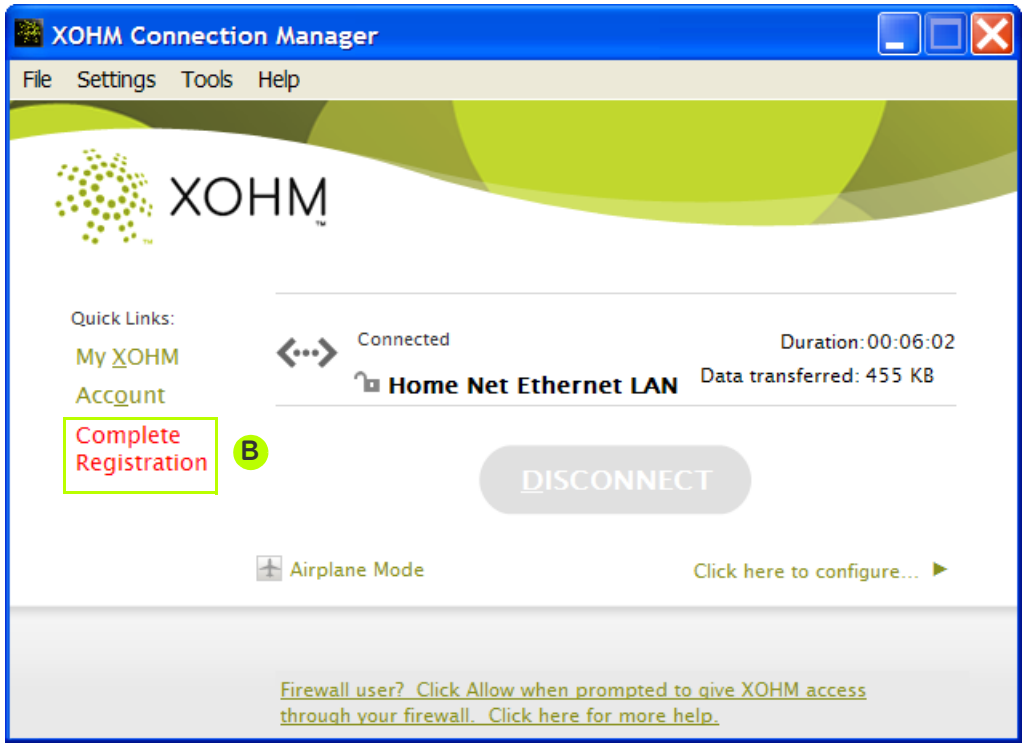

Figure 2.6-B: Complete Registration link

- If no link appears, launch your computer's Web browser (such as Internet Explorer) and go to ***www.xohm.com/activation***.
- If you're using a Wi-Fi connection and you are running Windows XP service pack 2 without the wireless LAN API (see "2.3.1 Write Down Your Wi-Fi Settings" on page 3), you may need to use the XOHM Connection Manager ***Network Configuration*** tool to configure your connection. See "5.2 Configuring Wi-Fi Networks From the Network Configuration Panel" on page 27 for details.

3. Follow the instructions to explore the XOHM service options, select the option that's right for you, and submit your order.
   - During off-network registration you will be asked to enter your XOHM Card's MAC (media access control) ID (for example, 01-23-45-67-89-ab). The MAC ID (also known as MAC address) can be found on the label attached to your XOHM Card or on the box for your XOHM Card; you can also click ***Help > About Connection Manager*** to display the MAC address (will only appear if your XOHM Card is inserted).

4. When activation is complete, your XOHM Card will be ready to use once you are in a XOHM network coverage area.
   - Once you are in a XOHM network coverage area, insert your XOHM Card and launch XOHM Connection Manager. The XOHM WiMAX network will detect and identify your card and complete your registration automatically.
5. Proceed to Section 3: "XOHM Connection Manager Interface" on page 13.

Note	*You can use XOHM Connection Manager to manage your non-XOHM (Ethernet or Wi-Fi) connections for up to 30 days without registering on the XOHM WiMAX network. After 30 days, XOHM Connection Manager will allow connections only to the XOHM WiMAX network, until you have registered. Alternatively, you can exit XOHM Connection Manager to connect using Ethernet or Wi-Fi.*

2.6 Uninstalling XOHM Connection Manager

1. Make sure XOHM Connection Manager is not running.
   - Right-click on the XOHM Connection Manager icon ( ) in the system tray and click ***Exit***.
   - Click ***Yes*** to confirm that you want to exit Connection Manager.

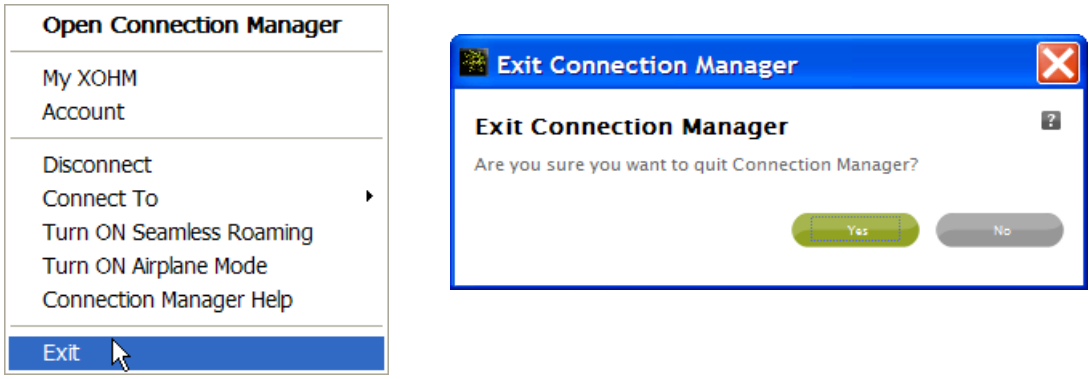

Figure 2.7: Exit Connection Manager

2. Click ***Start > (All) Programs > XOHM > XOHM Connection Manager Tools > Uninstall XOHM Connection Manager***.

   – or –

   Click ***Start > Control Panel > Add or Remove Programs***, highlight ***XOHM Connection Manager***, and click ***Remove***.

3. Click ***Yes*** to confirm that you want to uninstall XOHM Connection Manager.
4. When the uninstall has completed, follow the prompts to restart your computer.
5. To reestablish connectivity using your previous network configurations, launch the connection manager program that had been in use before installing XOHM Connection Manager. Consult your program's documentation for further information.

Note	*In some instances, the XOHM Connection Manager folder (c:\Program Files\XOHM\XOHM Connection Manager) may not be completely removed after the program has been uninstalled. You may delete the folder manually if this is the case.*

3 XOHM Connection Manager Interface

The XOHM Connection Manager main display offers two primary views:

- ***Connection Status***
- ***All Available Networks***

This section outlines the basic features and options available under each view. It also provides details on the options available via the menu bar.

3.1 Connection Status

Click ***Connection Status*** to display an easy-to-understand snapshot of your current XOHM networking status. This view also offers one-click links to the ***My XOHM*** homepage and the ***Account*** management site.

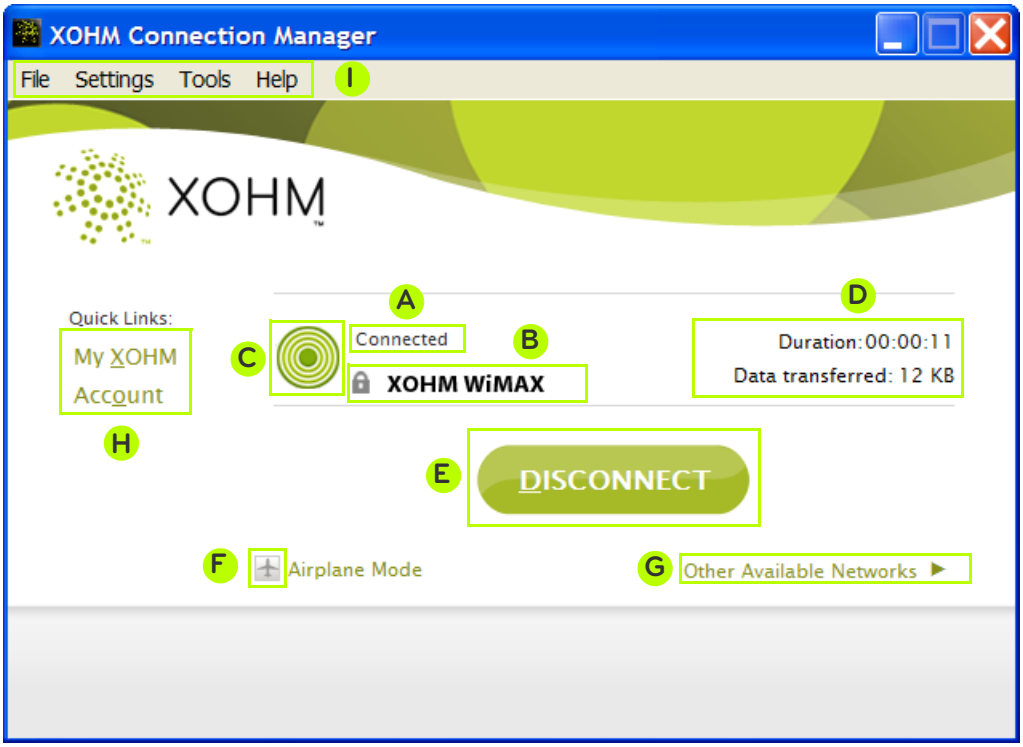

Figure 3.1: Connection Manager – Connection Status

Your ***Connection Status*** view gives you the following information at a glance (see Figure 3.1):

A. ***Connection Status*** will display one of the following:

- ***Connected*** – Currently connected using the displayed network.
- ***Ready*** – Networks are available but not currently connected. Click ***Connect*** (E) to initiate a connection to the displayed network. (When connected, button reads ***Disconnect*** as in Figure 3.1 above.)

- ***Searching*** – Connection Manager is searching for an available network. No networks are currently detected.
- ***Connecting*** – Connection Manager is establishing a new connection with the displayed network.
- ***Airplane Mode*** – When active, all radio (over-the-air) connections are disabled.

Note	*If you are* **Roaming**, *it will be displayed directly beneath the* **Connection Status** *(A) message.*

B. ***Network Information*** displays the current network name, network type, and security status.

C. ***Signal Strength*** displays the relative signal strength of the current WiMAX or Wi-Fi network connection. Signal strength is not an indicator of network speed. For information about the various icons, see "4.2 WiMAX Signal Strength" on page 23 and "5.3 Wi-Fi Signal Strength" on page 32.

D. ***Connection Statistics*** lets you know how long the connection has been running and how much data has been transferred during the connection (activity).

E. ***Connect/Disconnect*** button toggles between the following options:

- ***Connect*** – Click ***Connect*** to connect to the displayed network when connection status ***Ready*** is displayed.
- ***Disconnect*** – Click ***Disconnect*** to end a current connection or to cancel a connection that is being established.

F. ***Airplane Mode*** lets you disable all radio (over-the-air) connections.

G. ***Other Available Networks*** – Click to switch to the ***All Available Networks*** view to see and configure available networks. (Prior to activating XOHM service, this link appears as ***Click here to configure***.)

H. ***My XOHM*** and ***Account*** – Click to link to your XOHM homepage (***My XOHM***) or to your account management page (***Account***).

I. ***Menu Bar*** – Click to display available options.

- ***File*** lets you ***Connect/Disconnect***, ***Close***, or ***Exit***.
- ***Settings*** options include ***Turn Off/On Seamless***, ***Turn On/Off Airplane Mode***, ***General***, ***Network Configuration***, ***Software Updates***, and ***Notifications***. (See "3.4 Menu Bar – Settings Menu" on page 16 and "XOHM Connection Manager Settings" on page 33 for details.)
- ***Tools*** provides access to ***Connection Details***, ***Connection History***, ***Troubleshooting***, ***Speed Test***, and ***Coverage Map***. (See "Tools" on page 41 for details.)
- ***Help*** lets you access ***Connection Manager Help***, ***XOHM Support***, ***About Connection Manager***, and ***Tutorials***.

3.2 All Available Networks

Click ***Other Available Networks*** to display a list of all networks currently detected by XOHM Connection Manager. As with the Connection Status window, this view also offers one-click links to the ***My XOHM*** homepage and the ***My Account*** management site.

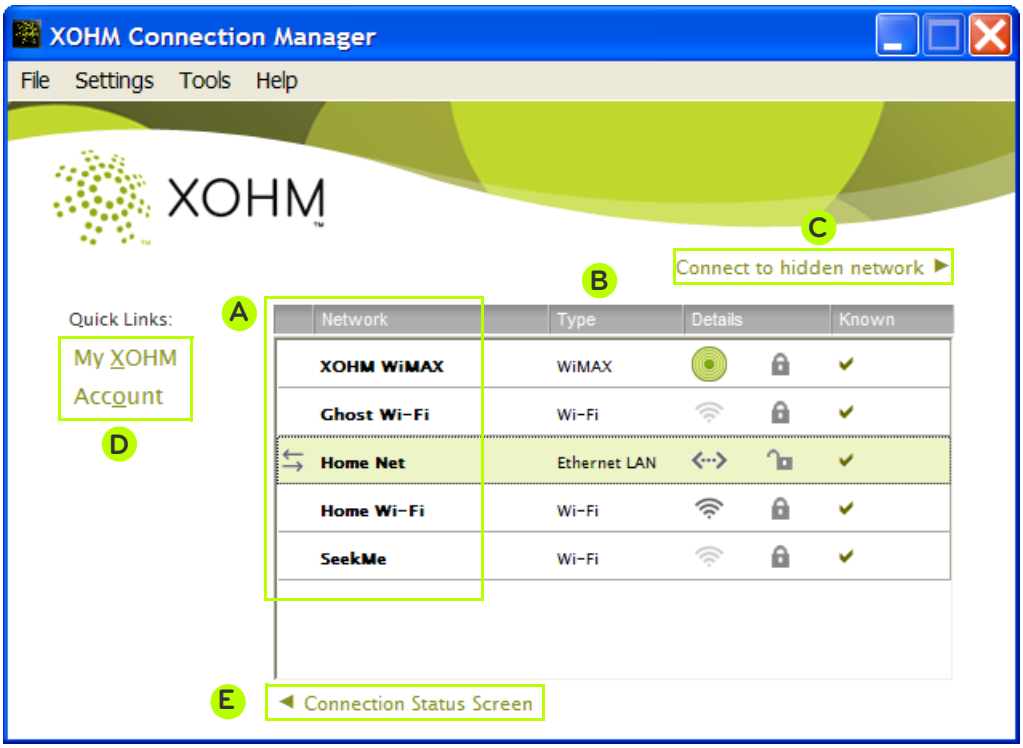

Figure 3.2: Connection Manager – All Available Networks

The ***All Available Networks*** screen gives you the following information and options (see Figure 3.2):

A. ***Network*** lists all the currently detected networks.

B. ***Sort By*** – Click a header to sort the network list by the selected category. Click twice to reverse the sort.

- ***Network*** – Sorts alphabetically by network name.
- ***Type*** – Sorts alphabetically by network type.
- ***Details*** – Sorts by signal strength.
- ***Known*** – Sorts by Known networks (networks that have already been configured in XOHM Connection Manager).

C. ***Connect to hidden network*** launches a dialog box allowing you to configure a hidden Wi-Fi network (a network that does not broadcast its SSID [network name]).

D. ***My XOHM*** and ***Account*** – Click to link to the XOHM homepage (***My XOHM***) or to your account management page (***Account***).

E. ***Connection Status Screen*** – click to switch to the ***Connection Status*** view.

3.3 Menu Bar – File Menu

The ***File*** menu provides the following options:

- ***Connect/Disconnect*** – Lets you connect or disconnect a network, when applicable.
- ***Close*** – Closes XOHM Connection Manager to the system tray. The application will continue running in the background and will be available through the system tray.
- ***Exit*** – Shuts down XOHM Connection Manager completely. Click ***Yes*** when prompted to confirm the exit. (Click ***No*** to cancel and return to XOHM Connection Manager.)

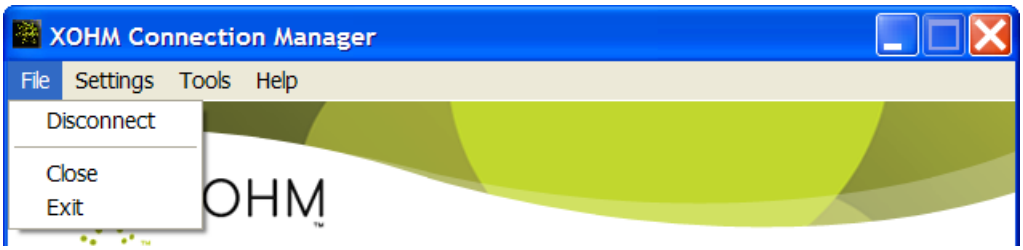

Figure 3.3: File Menu

3.4 Menu Bar – Settings Menu

The ***Settings*** menu provides the following options:

- ***Turn Off/On Seamless*** toggles the seamless roaming mode between Seamless Roaming ON and Seamless Roaming OFF modes. (See "3.4.1 Seamless Roaming" on page 17 for details.)
- ***Turn On/Off Airplane Mode*** activates or deactivates Airplane Mode.
- ***General***, ***Network Configuration***, ***Software Updates***, and ***Notifications*** each launch the ***Connection Manager Settings*** popup window to the corresponding menu. (See "XOHM Connection Manager Settings" on page 33 for details.)

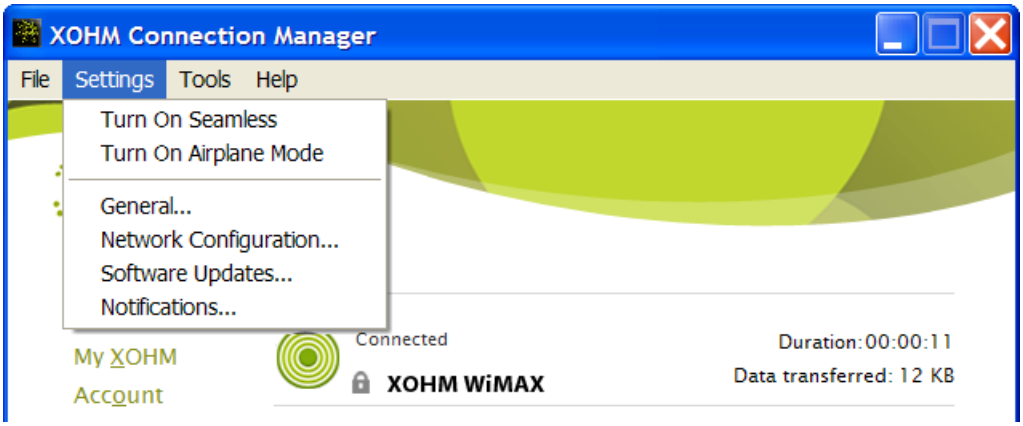

Figure 3.4: Settings Menu

3.4.1 Seamless Roaming

Seamless roaming helps you stay connected as you move between configured networks, such as the XOHM WiMAX network, configured Wi-Fi networks, and any Ethernet (LAN) networks. With seamless roaming on, XOHM Connection Manager automatically switches from a network that is losing strength to another ***known network*** you have configured, based on the Prioritization Rules in the ***General*** settings window. (See "6.1.1 Prioritization Rules" on page 35 for details.) You will most often want to turn seamless roaming on and leave it on whenever using XOHM Connection Manager. When seamless roaming is on, it replaces all Windows or other existing network selection functionality. ***Seamless roaming is turned on by default.***

An example of Seamless Roaming:

- You are at home connected to an Ethernet (LAN) network. You also have a Wi-Fi network set up in your home that has been configured in XOHM Connection Manager. (See "Configuring Wi-Fi Networks" on page 24.)
- You unplug the Ethernet cable; you are automatically switched to your Wi-Fi network. Any active uploads, downloads, or VPN connections may be interrupted and will need to be reinitiated. Otherwise, your data connection is maintained.
- Still connected to the Wi-Fi network, you leave your house and the XOHM WiMAX network is available; once the Wi-Fi signal becomes too weak to maintain, XOHM Connection Manager automatically switches to the XOHM network. Any active uploads, downloads, or VPN connections may be interrupted and will need to be reinitiated. Otherwise, your data connection is maintained.

Here are some basic behaviors associated with seamless roaming:

Seamless Roaming ON:

- If you are connected to the XOHM WiMAX network and then go out of range, your connection will drop and XOHM Connection Manager will automatically connect to the next available network based on your priority settings. Any data transfer taking place when the connection was lost (downloading or uploading data, streaming media, VPN, VoIP) will be interrupted. You will need to reinitiate any interrupted sessions once the new connection is established.
- If you are connected to a Wi-Fi network and you enter an area where the signal is losing strength and another network is available, XOHM Connection Manager will automatically connect to the highest-ranked available network. Certain data protocols, such as VPN, will be interrupted when the connection switches.

Seamless Roaming OFF:

- If you are connected to any network and enter an area where there is no longer a viable signal, your connection will drop and data transfer will stop. XOHM Connection Manager will search for another available network and you will be prompted to select a new network and launch a new connection manually. With seamless roaming off, XOHM Connection Manager will not launch any connection automatically.
- There may be situations where you may wish to turn seamless roaming off. For example, if you are in an area that receives multiple signals and you require a single persistent signal (such as when downloading or uploading data, streaming media, or using VPN or VoIP service), turning seamless roaming off will ensure that XOHM Connection Manager will not inadvertently interrupt your connection to switch to another network.

To turn seamless roaming on or off:

- Click ***Settings > Turn On Seamless*** or ***Turn Off Seamless***.

Note	*If a connection attempt fails when seamless roaming is turned off, XOHM Connection Manager automatically reverts to using Prioritization Rules for new connections.*

Whenever you select a network manually, seamless roaming automatically turns off.

3.4.2 Airplane Mode

Enabling ***Airplane Mode*** shuts down the radio for WiMAX and Wi-Fi devices. This allows you to conserve power and work offline and in areas where wireless communication is prohibited.

To turn on Airplane Mode:

1. Click ***Settings > Turn On Airplane Mode***.

   – or –

   Click the ***Airplane Mode*** button in the Connection Status view of the main window.

2. Click ***Yes*** when the confirmation screen appears.

To turn off Airplane Mode and allow the radio to connect to wireless networks:

- Click ***Settings > Turn Off Airplane Mode***.

– or –

- Click the ***Airplane Mode*** button in the Connection Status view of the main window.

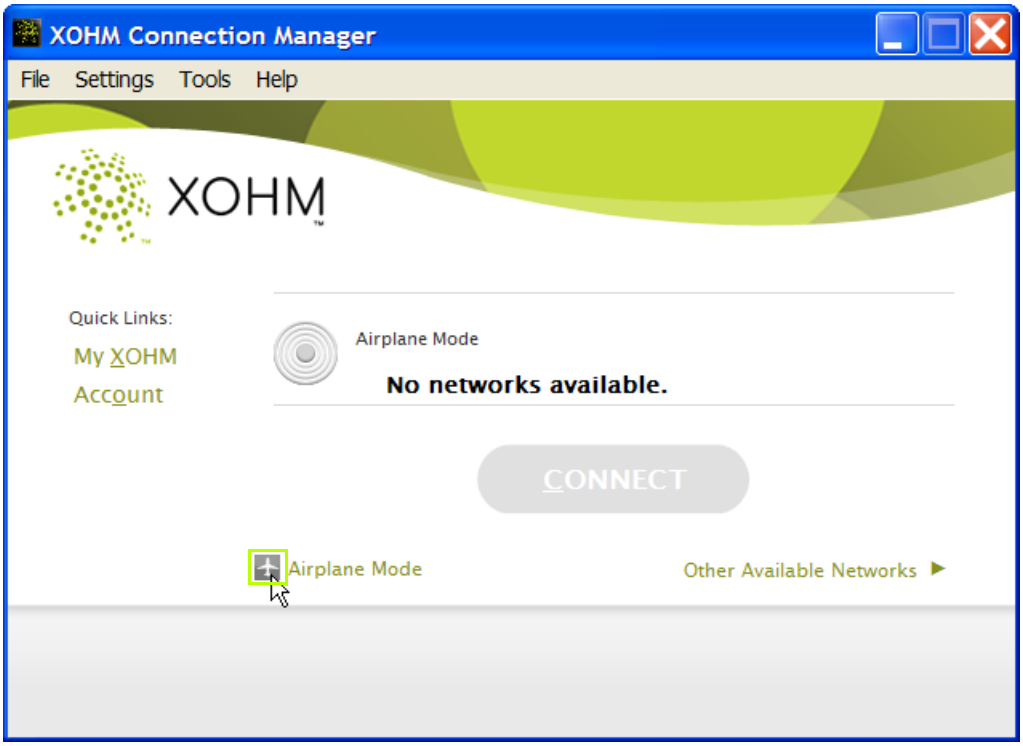

Figure 3.5: Turning Off Airplane Mode

Note	*You can also set Airplane Mode to be on at startup through the* **General** *menu in the* **Connection Manager Settings** *popup window. This may be useful if you are going to be boarding an airplane and want to use your laptop during the flight.*

3.5 Menu Bar – Tools Menu

The ***Tools*** menu provides the following options. For details on Tools menu options, see the corresponding section in "Tools" beginning on page 41.

- ***Connection Details*** (page 41)
- ***Connection History*** (page 42)
- ***Troubleshooting*** (page 44)
- ***Speed Test*** (page 45)
- ***Coverage Map*** (page 45)

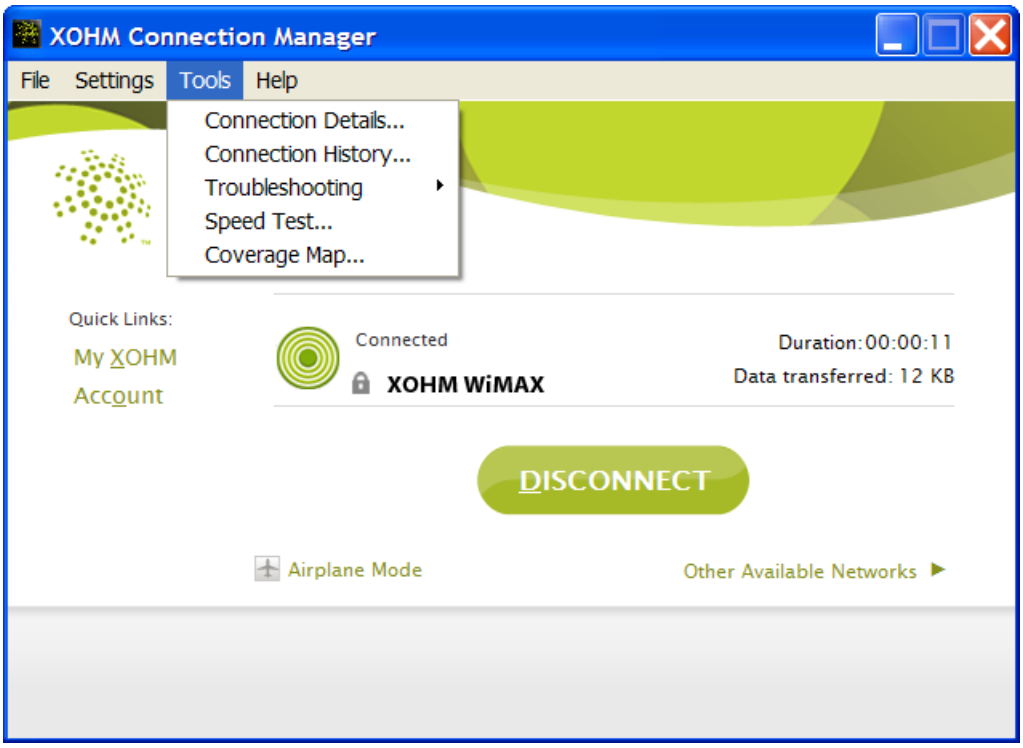

Figure 3.6: Tools Menu

3.6 Menu Bar – Help Menu

The ***Help*** menu provides access to the following options:

- ***Connection Manager Help*** launches the XOHM Connection Manager's local help file.
- ***XOHM Support*** launches a Web browser to access the online XOHM support site.
- ***About Connection Manager*** launches a dialogue box summarizing the software version number and your XOHM Card's MAC address.
- ***Tutorials*** launches a menu of onscreen tutorials to help introduce you to XOHM Connection Manager features and guide you through specific tasks.
  - ***Overview Demos*** include introductory tutorials on ***Connection Manager***, ***System Tray Options***, and ***Diagnostic Tools***.
  - ***How To Demos*** include ***Using Seamless Roaming***, ***Setting Priorities***, ***Add & Connect a New Wi-Fi***, and ***Troubleshooting Tools***.

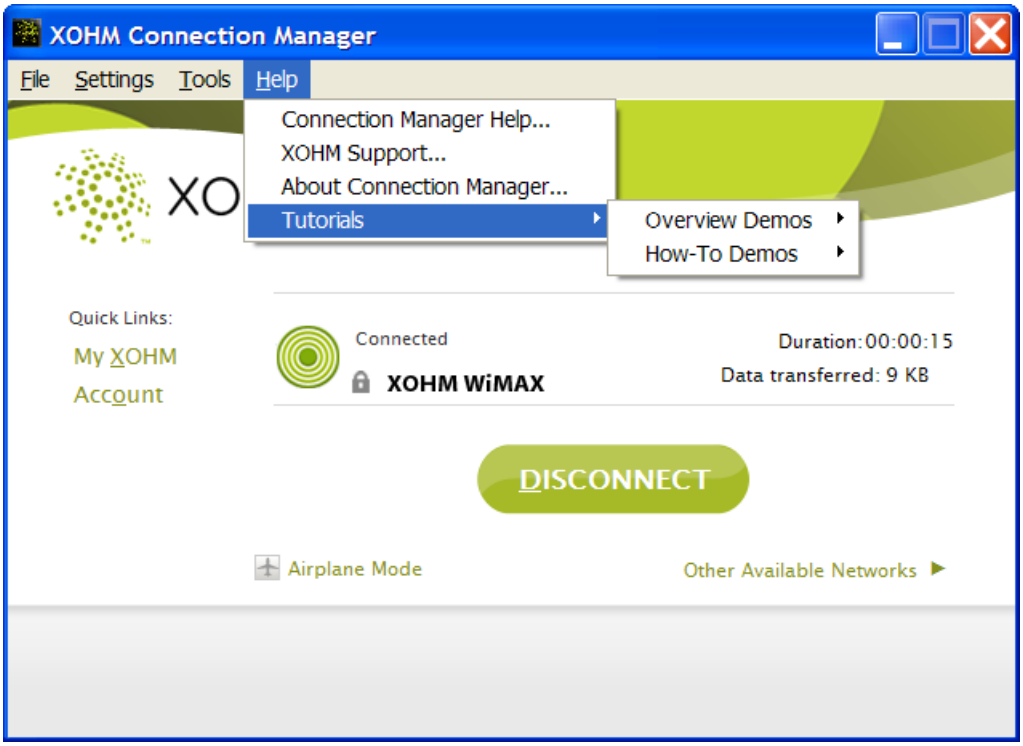

Figure 3.7: Help Menu

4 WiMAX Network

4.1 WiMAX in the Connection Status View

XOHM Connection Manager automatically detects present XOHM Cards. When seamless roaming is on, XOHM Connection Manager automatically attempts to connect to the WiMAX network. If successful, the ***Connected*** status will be reflected as shown below.

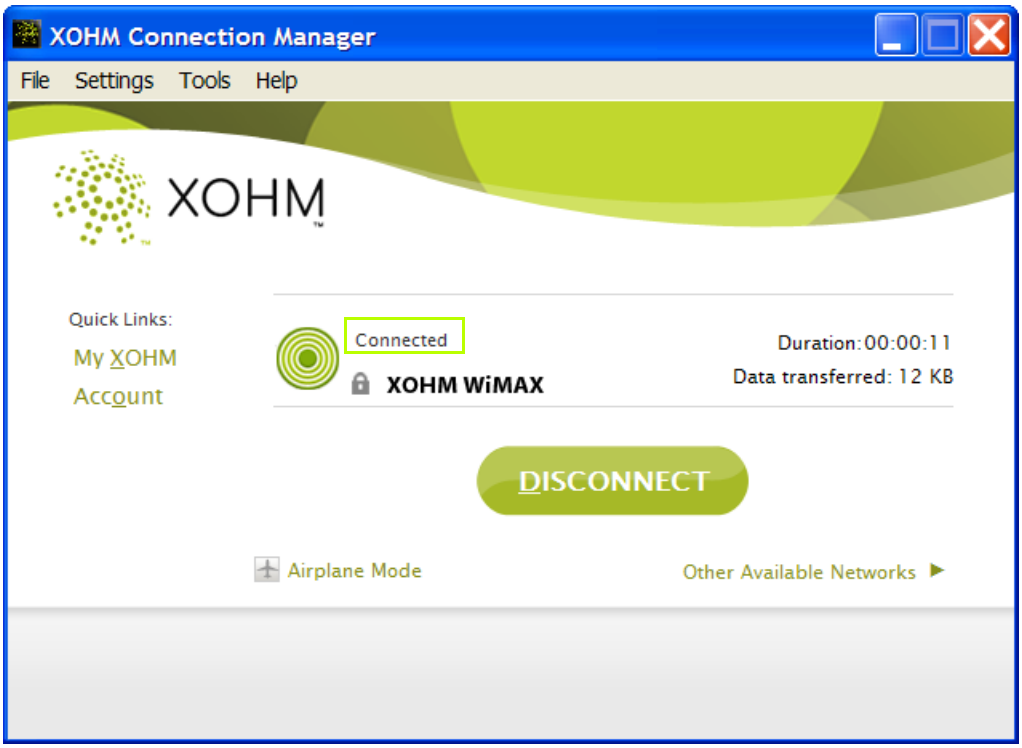

Figure 4.1: WiMAX Connected Status

Two additional connection states may appear in the Connection Status view:

- ***Ready*** – This is displayed if one of the following situations occurs:
  a. Seamless roaming is OFF and a connection has not yet been attempted (such as at system startup).
  b. Seamless roaming is OFF and the ***Disconnect*** button has been clicked.
  c. Seamless roaming is ON and a previous connection attempt had been cancelled.
- ***Connecting*** – This is displayed when one of the following conditions occurs:
  a. The ***Connect*** button has been clicked and the connection has not yet been completed.
  b. Seamless roaming is ON and there has been a loss of connectivity.

4.2 WiMAX Signal Strength

When connected to the XOHM WiMAX network or when viewing available networks in the Available Networks screen, the green "bullseye" icon indicates the relative strength of your WiMAX signal. Signal strength is not an indicator of network speed.

Icon	*Signal Strength*
	***WiMAX ready***
	***Excellent***
	***Good***
	***Average***
	***Weak***
	***Very Weak***
	***No WiMAX signal***

Figure 4.2: WiMAX Signal Strength

5 Configuring Wi-Fi Networks

5.1 Configuring Wi-Fi Networks From the All Available Networks View

To configure Wi-Fi networks from the All Available Networks view:

1. Select an available Wi-Fi network and click ***Connect***. (The Connect to Network dialog box appears, allowing you to configure the Wi-Fi network.)

Figure 5.1: Select a Wi-Fi Network

2. Enter your Wi-Fi network configuration settings.

Note	*With Windows Vista or Windows XP SP3 many of the Wi-Fi configuration settings outlined below may already be populated when you add a new Wi-Fi network, depending on the previous connection manager you were using.* *If you are running Windows XP SP2 and have several Wi-Fi networks to add, a patch may simplify the process. See "FAQs and Troubleshooting" on page 46.*

- When adding a new Wi-Fi network, the following window appears:

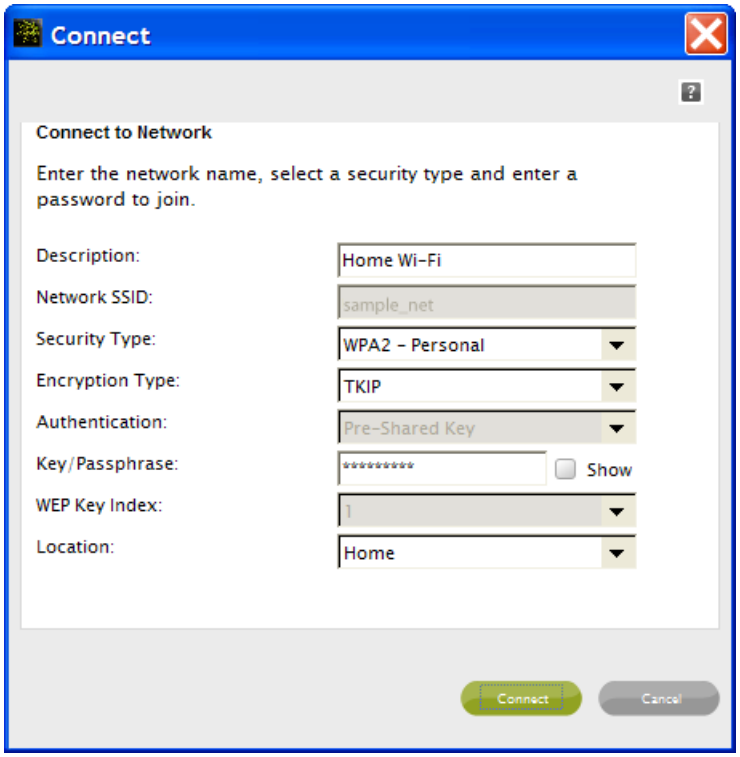

Figure 5.2: Connect to Network

- ***Description*** (optional) – Enter a description for the network. If no description is entered, the Network SSID will be used.
- ***Network SSID*** – This field is automatically populated with the broadcast Network SSID.
- ***Security Type*** – Select the security type used by the network. Options may include ***No Authentication (Open)***, ***WEP***, ***WPA2 - Personal***, ***WPA - Personal***, ***WPA2 - Enterprise***, ***WPA - Enterprise***, and ***802.1x***. Consult your network documentation for the required settings.
- ***Encryption Type*** – Select the encryption method required by the network. Most recent networks use ***TKIP*** or ***AES***. Older access points frequently use ***WEP*** encryption. Consult your network documentation for the required settings.

- ***Authentication*** – Select the type of authentication credentials required by the Wi-Fi network. If the network uses a static key or a passphrase for authentication, select ***Pre-Shared Key*** and enter the value into the Password field. Other authentication options include ***PEAP [MSCHAPv2]*** and ***EAP-TLS***. Consult your network documentation for the required settings.

Note	*If the network uses* Protected EAP [PEAP (MSCHAPv2)] *or* EAP-TLS*, Windows will prompt for user credentials as required.*

- ***Key/Passphrase*** – If using Pre-Shared Key authentication, enter the static key or passphrase here.
- ***WEP Key Index*** – Select which WEP key index to use (only if WEP encryption is in use).
- ***Location*** – Select ***Public***, ***Home***, or ***Office*** for the network. This is used for seamless roaming prioritization (see "6.1.1 Prioritization Rules" on page 35).

Once the values are configured, click ***Connect*** to initiate the Wi-Fi connection.

3. Once the network is configured it appears with a checkmark in the "Known" column in the All Available Networks view.

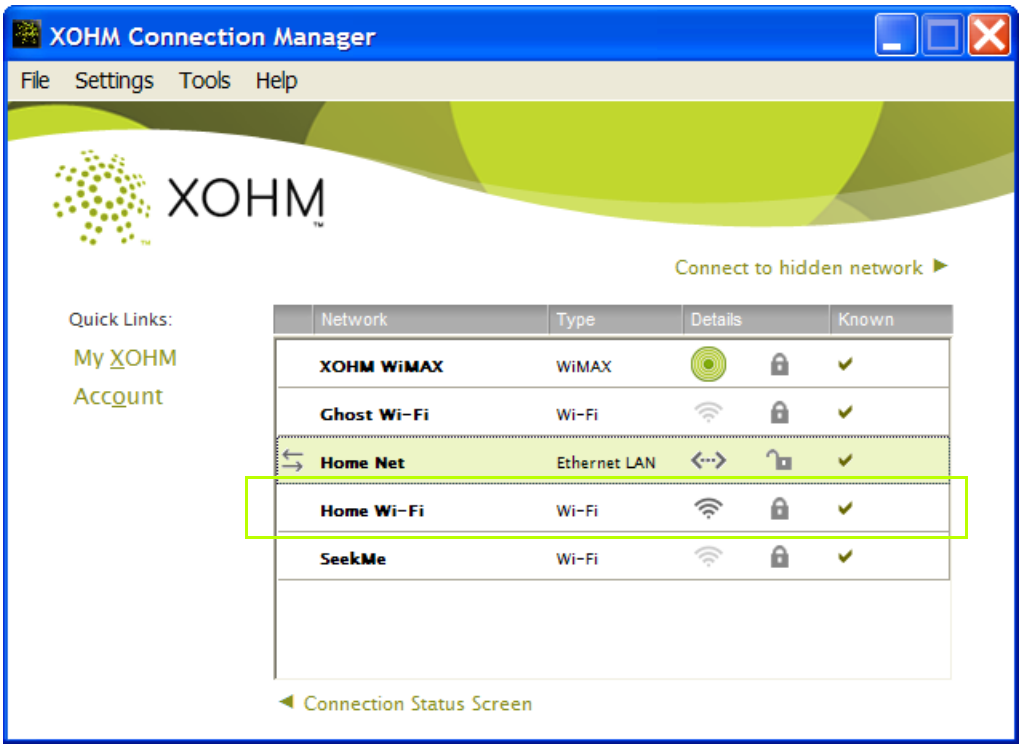

Figure 5.4: Wi-Fi Network Added

5.2 Configuring Wi-Fi Networks From the Network Configuration Panel

To configure Wi-Fi Networks from the Network Configuration Panel:

1. Click ***Settings > Network Configuration*** (figure 5.5) to display the Network Configuration panel (figure 5.6).

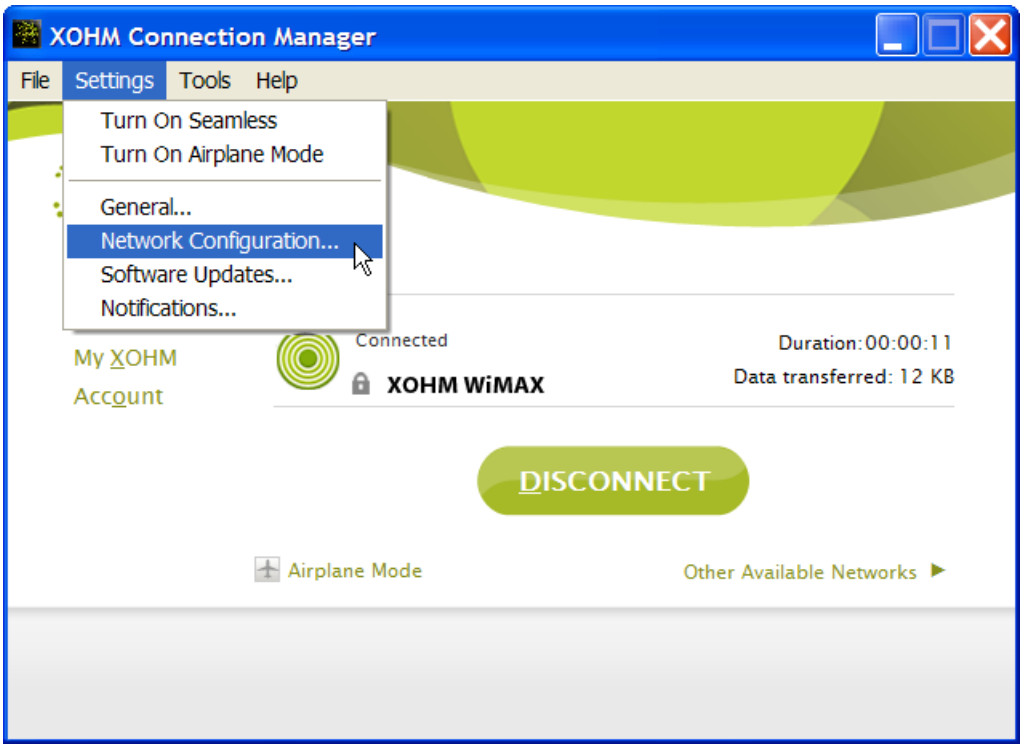

Figure 5.5: Settings > Network Configuration

2. If you're creating a new Wi-Fi profile, click ***Add New Network Configuration***.

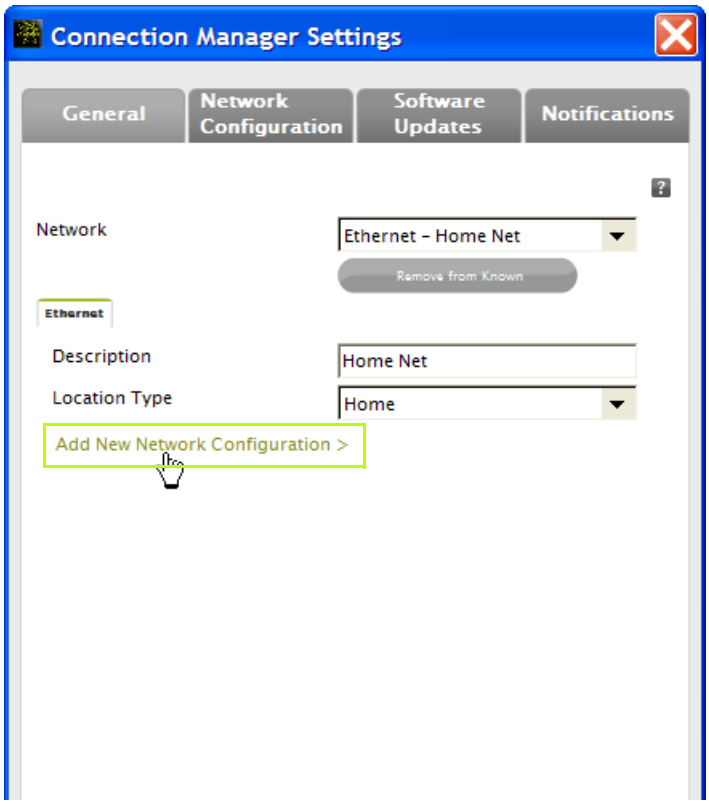

Figure 5.6: Network Configuration Panel

3. From the New Network Configuration window, select ***Wi-Fi***, select the Network Name you want to connect to, and click ***Continue***.

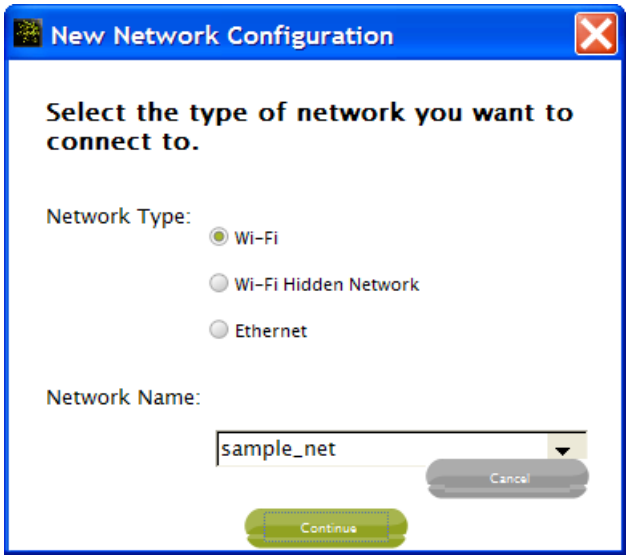

Figure 5.7: New Network Configuration

4. Enter your Wi-Fi network configuration settings.

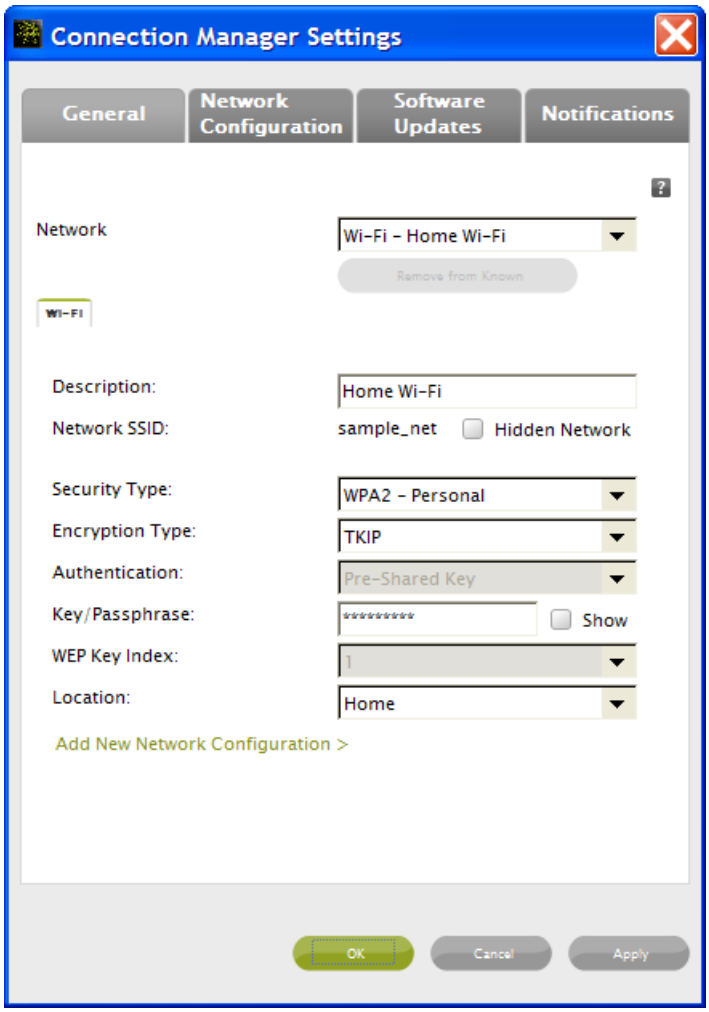

Figure 5.8: Network Configuration Settings

- ***Description*** (optional) – Enter a description for the network. If no description is entered, the Network SSID will be used.
- ***Network SSID*** – This field is automatically populated with the broadcast Network SSID.
- ***Security Type*** – Select the security type used by the network. Options may include ***No Authentication (Open)***, ***WEP***, ***WPA2 - Personal***, ***WPA - Personal***, ***WPA2 - Enterprise***, ***WPA - Enterprise***, and ***802.1x***. Consult your network documentation for the required settings.
- ***Encryption Type*** – Select the encryption method required by the network. Most recent networks use ***TKIP*** or ***AES***. Older access points frequently use ***WEP*** encryption. Consult your network documentation for the required settings.

- ***Authentication*** – Select the type of authentication credentials required by the Wi-Fi network. If the network uses a static key or a passphrase for authentication, select ***Pre-Shared Key*** and enter the value into the Password field. Other authentication options include ***PEAP [MSCHAPv2]*** and ***EAP-TLS***. Consult your network documentation for the required settings.
- ***Key/Passphrase*** – If using Pre-Shared Key authentication, enter the static key or passphrase here.
- ***WEP Key Index*** – Select which WEP key index to use (only if WEP encryption is in use).
- ***Location*** – Select ***Public***, ***Home***, or ***Office*** for the network. This is used for seamless roaming prioritization (see "6.1.1 Prioritization Rules" on page 35).

5. Once your settings are configured, click ***OK***.

5.2.1 Hidden Wi-Fi Networks

Hidden Wi-Fi networks are wireless networks that do not broadcast their SSID, or network name. Since these networks are not detectable by typical methods, specific settings must be used to allow XOHM Connection Manager to configure and use these hidden Wi-Fi networks.

To configure hidden Wi-Fi networks from the All Available Networks view:

1. From the All Available Networks view, click ***Connect to hidden network***.

Figure 5.9: All Available Networks – Connect to Hidden Network

2. Enter network values as described in section ***5.1 Configuring Wi-Fi Networks From the All Available Networks View*** on page 24, with the following exception:
   - When adding a hidden network, the ***Network SSID*** (network name) must be entered manually.

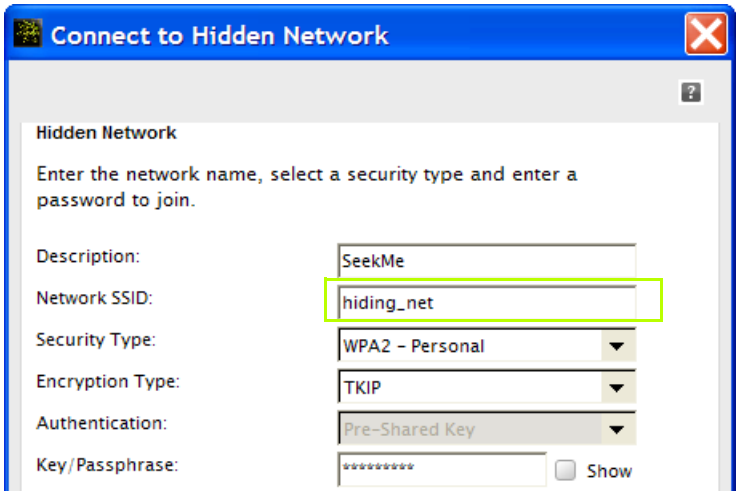

Figure 5.10: Connect to Hidden Network

To configure hidden Wi-Fi networks from the Network Configuration Panel:

1. Click ***Settings > Network Configuration***.
2. Select ***Add New Network Configuration*** and then select ***Wi-Fi Hidden Network*** in the New Network Configuration panel.

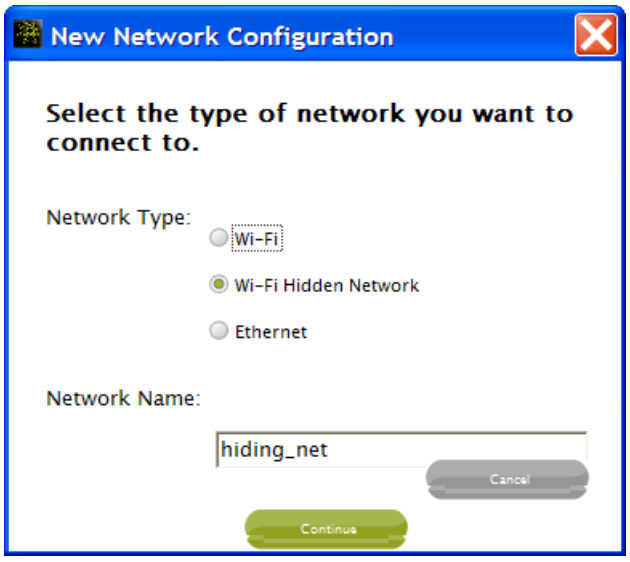

Figure 5.11: New Network – Hidden

3. Enter the Network Name (SSID) in the New Network Configuration panel and then click ***Continue***.

4. Enter network values as described in step 4 of section ***5.2 Configuring Wi-Fi Networks From the Network Configuration Panel*** on page 29, with the following exception:

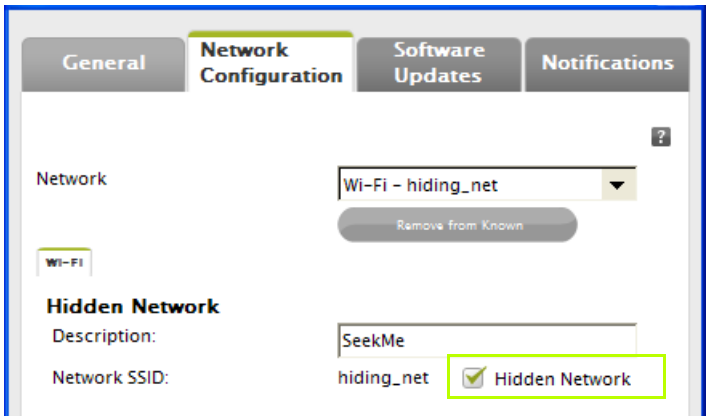

Figure 5.12: Hidden Network Checkbox

- The ***Hidden Network*** checkbox must be selected.

5.3 Wi-Fi Signal Strength

When connected to a Wi-Fi network or when viewing available networks in the Available Networks screen, grey icons indicate the relative strength of available signals. Signal strength is not an indicator of network speed.

Icon	*Signal Strength*
	***Excellent***
	***Good***
	***Average***
	Weak
	Very Weak/no signal

Figure 5.13: Wi-Fi Signal Strength

6 XOHM Connection Manager Settings

The Connection Manager Settings window is divided into four panels:

- ***General***
- ***Network Configuration***
- ***Software Updates***
- ***Notifications***

6.1 General Settings

Click ***Settings > General*** to display the General Settings panel.

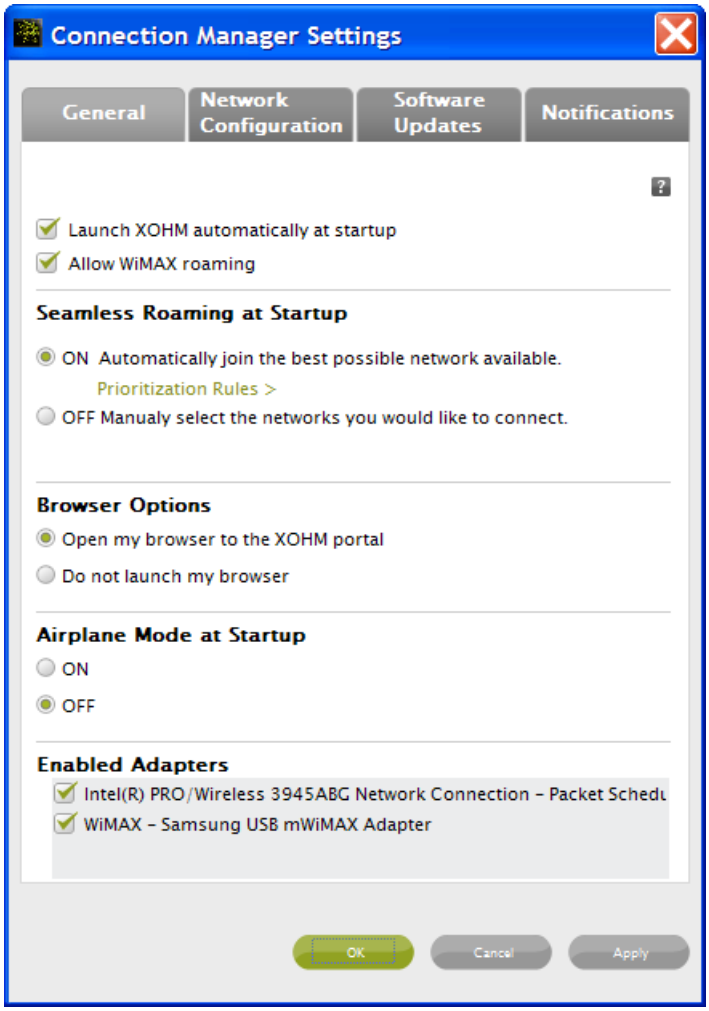

Figure 6.1: General Settings

This panel allows you to set the following options:

- ***Launch XOHM automatically at startup*** configures XOHM Connection Manager to initiate whenever your computer powers up. Leaving this option checked means you don't have to launch XOHM Connection Manager manually to get connected.

- ***Allow WiMAX roaming*** configures XOHM Connection Manager to connect to other WiMAX networks while roaming (where or when available).
- ***Seamless Roaming at Startup*** – Select ***ON*** to allow XOHM Connection Manager to automatically connect to the best available network the next time XOHM Connection Manager launches, for example, after you reboot your computer (if "Launch XOHM automatically at startup" is in effect) or after you exit and relaunch XOHM Connection Manager. Select ***OFF*** to manually connect to network of your choice. (See "6.1.1 Prioritization Rules" on page 35 for advanced settings.)
- ***Browser Options*** – Select ***Open my browser to the XOHM portal*** to automatically launch your browser and display the XOHM homepage whenever XOHM Connection Manager establishes a connection. Select ***Do not launch my browser*** if you do not wish to have your browser launch automatically upon connection.

Note	*The Brower Options are only selectable after you have activated your XOHM Card and signed up for service on the XOHM WiMAX network. If you install and use XOHM Connection Manager without activating, your browser will open to the XOHM portal each time you make a connection.*

- ***Airplane Mode at Startup*** – Select ***ON*** or ***OFF*** to set whether Airplane Mode is active the next time your computer is turned on or reboots. (See "3.4.2 Airplane Mode" on page 19.) You may want to select ON if you are going to be boarding an airplane and want to use your computer when allowed during the flight.
- ***Enabled Adapters*** is a selectable list of detected network adapters that XOHM Connection Manager is capable of managing. Selecting an adapter from the list instructs XOHM Connection Manager to manage connectivity for that adapter; if a known conflicting application is assigned to manage a selected adapter, XOHM Connection Manager disables the conflicting application and takes over adapter management. If an adapter is deselected, another application must manage connectivity for that adapter.

Note	*Devices in the Enabled Adapters list that are checked and unselectable (grayed-out) are always managed by XOHM Connection Manager.*

6.1.1 Prioritization Rules

Clicking ***Prioritization Rules*** from the General panel opens the Prioritization Rules subpanel.

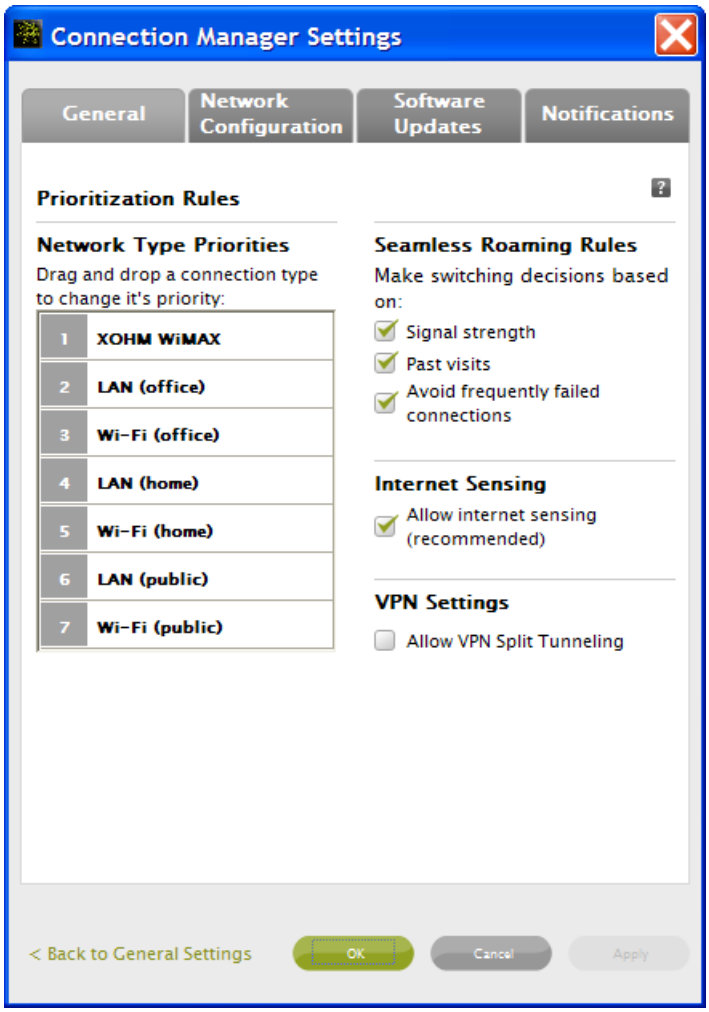

Figure 6.2: Prioritization Rules

This panel allows you to set up rules for prioritizing configured networks in seamless roaming mode. Its options include:

- ***Network Type Priorities*** – This provides an order of priority for automatic connection. For example, in the figure above ***XOHM WiMAX*** has the highest priority and would be selected first by XOHM Connection Manager; ***Wi-Fi (public)*** has the lowest priority and would be the last option attempted for connectivity (only if all higher priority options had failed to provide a successful connection). The location of network types, noted in parentheses (office, home, public), is assigned during configuration and is used in conjunction with network type to determine a connection's priority.

  The default priority list for seamless roaming is: ***LAN (office)***, ***Wi-Fi (office)***, ***LAN (home)***, ***Wi-Fi (home)***, ***XOHM WiMAX***, ***LAN (public)***, ***Wi-Fi (public)***.

  To change the order of the priorities, click on a network type and drag it to a new position.

- ***Seamless Roaming Rules*** allow you to select or deselect factors to be considered in seamless roaming.
- ***Internet Sensing*** – Selecting ***Allow Internet Sensing*** instructs XOHM Connection Manager to determine whether a connection is able to connect to a specific location (programmed by XOHM) over the Internet. Internet Sensing is designed to prevent you from connecting to a poor quality network, that is, one that cannot connect to the default target locations. If the connection cannot reach the location(s), XOHM Connection Manager will attempt the next best available connection.
- ***VPN Settings*** – Select ***Allow VPN Split Tunneling*** to allow a single connection to access both the Internet and a VPN-controlled local LAN or WAN network (for example, if you need to access a site that is not allowed by the VPN, but you still need to remain connected to your VPN). This setting only applies if you are using a VPN, and it may not be supported by all VPN hosts.

To return to the General Settings panel, click ***Back to General Settings***.

6.2 Network Configuration Settings

The Network Configuration panel lets you edit previously configured networks and add and configure networks. To display the Network Configuration panel, click ***Settings > Network Configuration***.

6.2.1 Adding Networks

1. To add a new network profile, click ***Add New Network Configuration***.

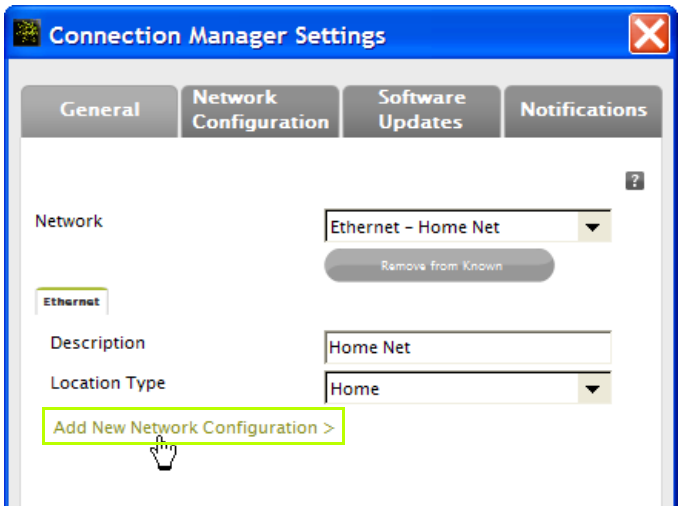

Figure 6.3: Add New Network Configuration

2. Select a network type and click ***Continue***.

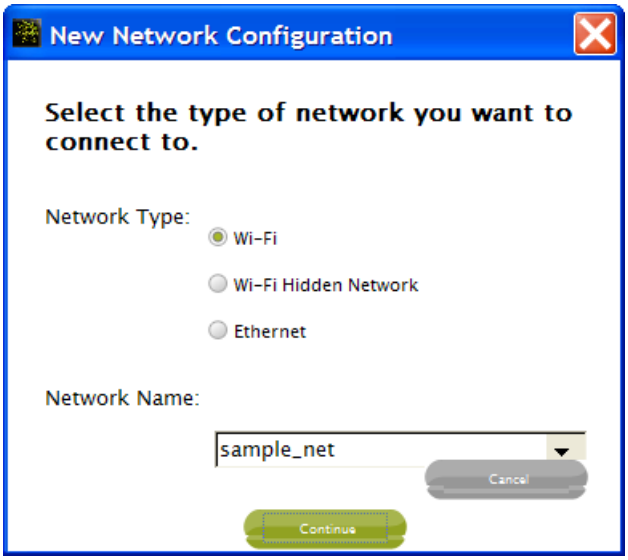

Figure 6.4: New Network Configuration

3. Enter the necessary network configuration settings, such as ***Description***, ***Security Type***, ***Encryption Type***, ***Authentication***, ***Key/Passphrase***, ***WEP Key Index***, and ***Location***. (See Section 5 Configuring Wi-Fi Networks on page 24 for details on settings.)

4. Once the network is configured, click ***OK*** to return to the Network Configuration panel.

6.2.2 Removing Networks

1. To remove previously configured networks, select a network from the dropdown list and click ***Remove from Known***.

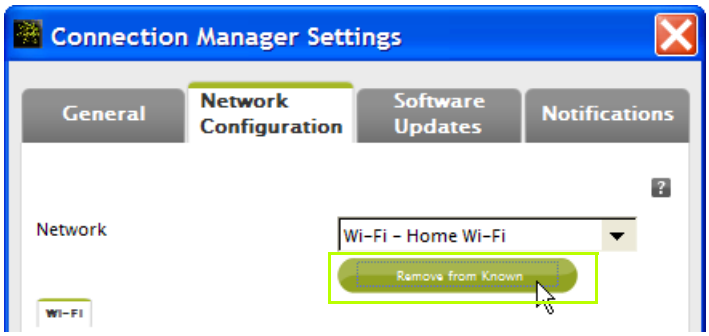

Figure 6.5: Network Configuration – Remove from Known

2. Follow the onscreen prompts to confirm the removal.

6.2.3 Editing Existing Networks

1. To edit an existing network's configuration settings, select a network from the dropdown list.

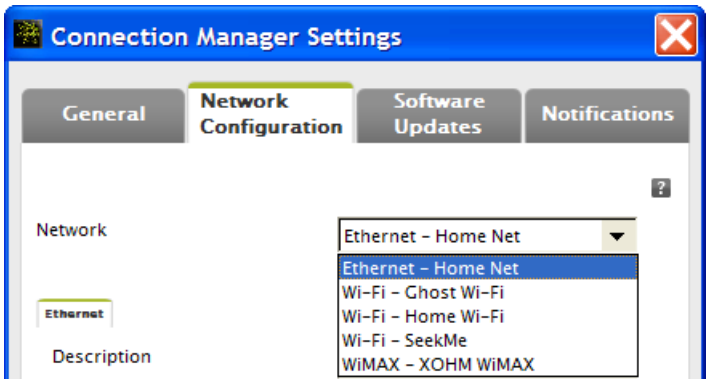

Figure 6.6: Select a Network

2. Edit the necessary network configuration settings, such as such as ***Description***, ***Security Type***, ***Encryption Type***, ***Authentication***, ***Key/Passphrase***, ***WEP Key Index***, and ***Location***. (See Section 5 Configuring Wi-Fi Networks on page 24 for details on settings.)

About Ethernet Connections

Ethernet (cabled) connections to LAN networks are always considered usable by XOHM Connection Manager. However, only LAN networks that have been configured with XOHM Connection Manager will appear in the dropdown list in the Network Configuration panel (see "Ethernet – Home Net" in figure 6.6 above). Additionally, configured LAN networks are the only LAN connections that may be selected via seamless roaming, and configuring these connections allows you to specify whether a given network is office, home, or public.

To configure Ethernet connections see "6.2.1 Adding Networks" on page 36.

6.3 Software Updates

The ***Software Updates*** tool (click ***Settings > Software Updates***) allows you to determine how XOHM Connection Manager handles available software updates.

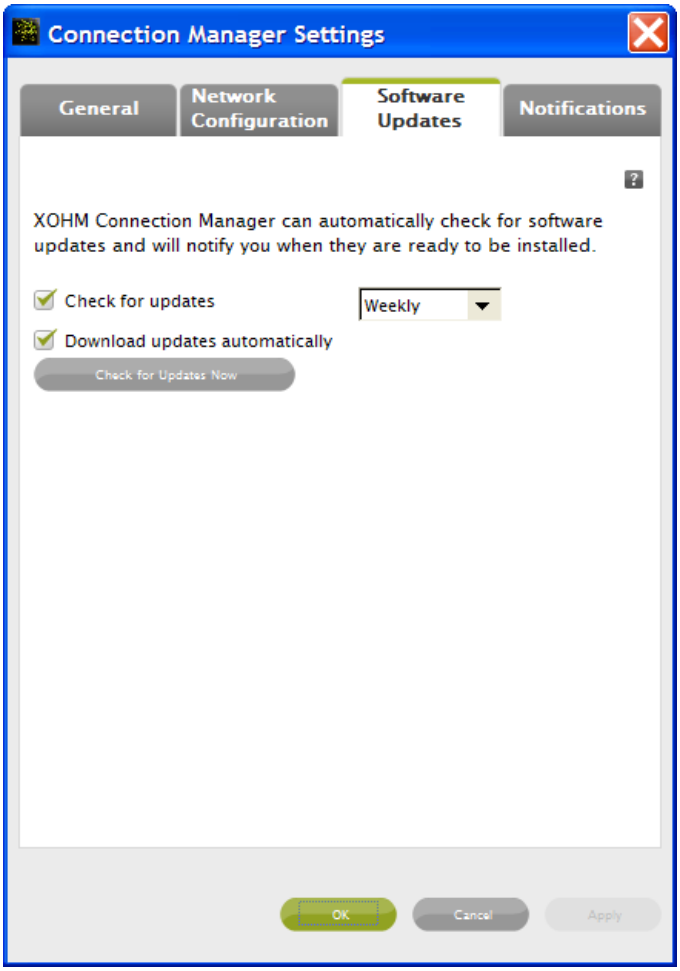

Figure 6.7: Software Updates

- ***Check for updates*** – Select this checkbox and then select an update frequency if you want XOHM Connection Manager to automatically check for updates. Deselect this checkbox if you do not want XOHM Connection Manager to check for updates.
- ***Download updates automatically*** – When selected, XOHM Connection Manager will automatically download new updates as they become available. If it is not selected, a system tray message will notify you when new updates are available to download.

Note	*If you select* **Download Later** *more than three times when updates are available, the XOHM network may suspend the application until the software updates have been downloaded.*

- ***Check for Updates Now*** – Click this button to check for new updates immediately.

When you are finished with your selections, click ***OK*** or ***Apply*** to save your settings.

6.4 Notifications

The ***Notifications*** window allows you to control what types of system tray notifications you receive from XOHM Connection Manager.

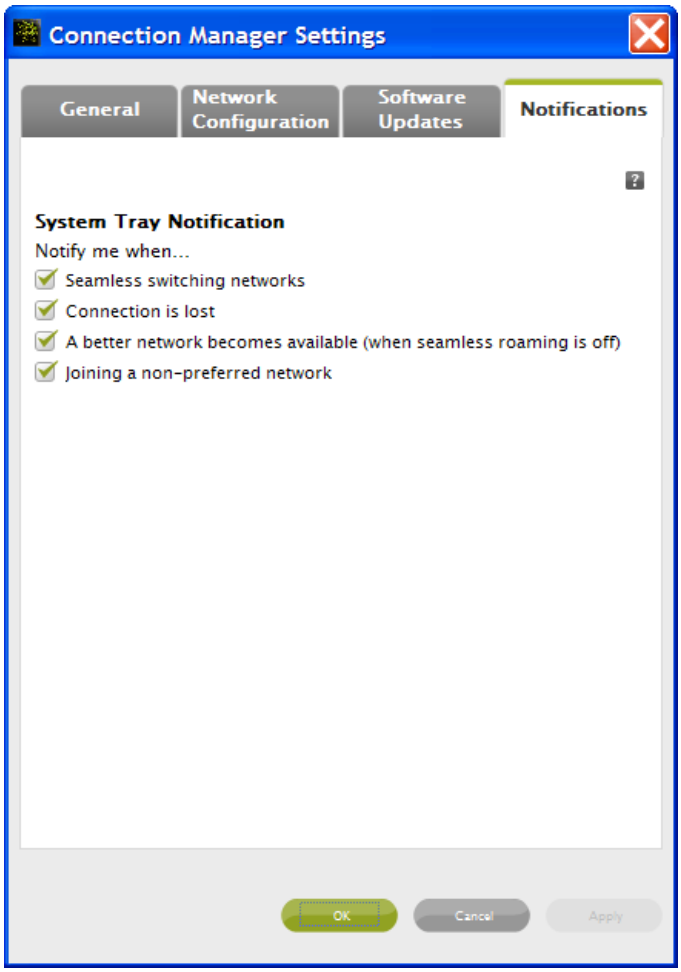

Figure 6.8: Notifications

Notification options may include:

- ***Seamless switching networks*** to inform you when any network change is made, such as between the XOHM WiMAX network, configured Wi-Fi networks, and any Ethernet (LAN) networks, when seamless roaming is on. (See "3.4.1 Seamless Roaming" on page 17.)
- ***Connection is lost*** to let you know whenever a network connection is lost.
- ***A better network becomes available (when seamless roaming is off)*** to let you know a superior network is available when XOHM Connection Manager is set to allow only manual network switching.
- ***Joining a non-preferred network*** to inform you that an unknown network is being used.

7 Tools

7.1 Connection Details

Click ***Tools > Connection Details*** to display a live snapshot of your current connection.

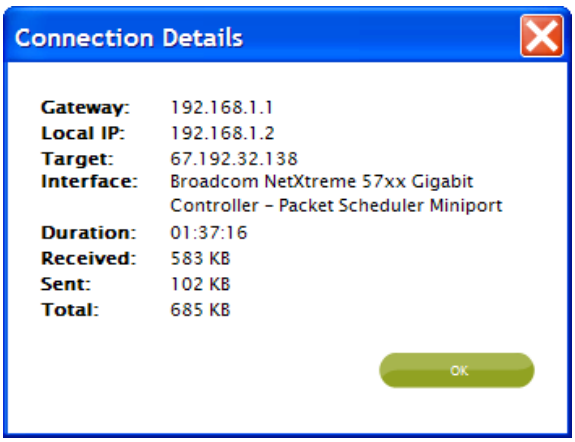

Figure 7.1: Tools – Connection Details

Connection Details provides the following information:

- ***Gateway*** – The IP address of the default gateway.
- ***Local IP*** – The IP address of the interface being used for default traffic.
- ***Target*** – The IP address being used for Internet Sensing.
- ***Interface*** – The device name associated with the current connection.
- ***Duration*** – The length of time connected to the current network
- ***Received*** – Bytes received.
- ***Sent*** – Bytes sent.
- ***Total*** – Total of bytes received and bytes sent.

7.2 Connection History

Click ***Tools > Connection History*** to display the XOHM Connection Manager's connection history. There are two levels of history available: ***History Messaging*** and ***History popup detailed log***.

7.2.1 History Messaging

The ***History Messaging*** window provides a recap of all previous connections, including successful connections, disconnections, and lost connections.

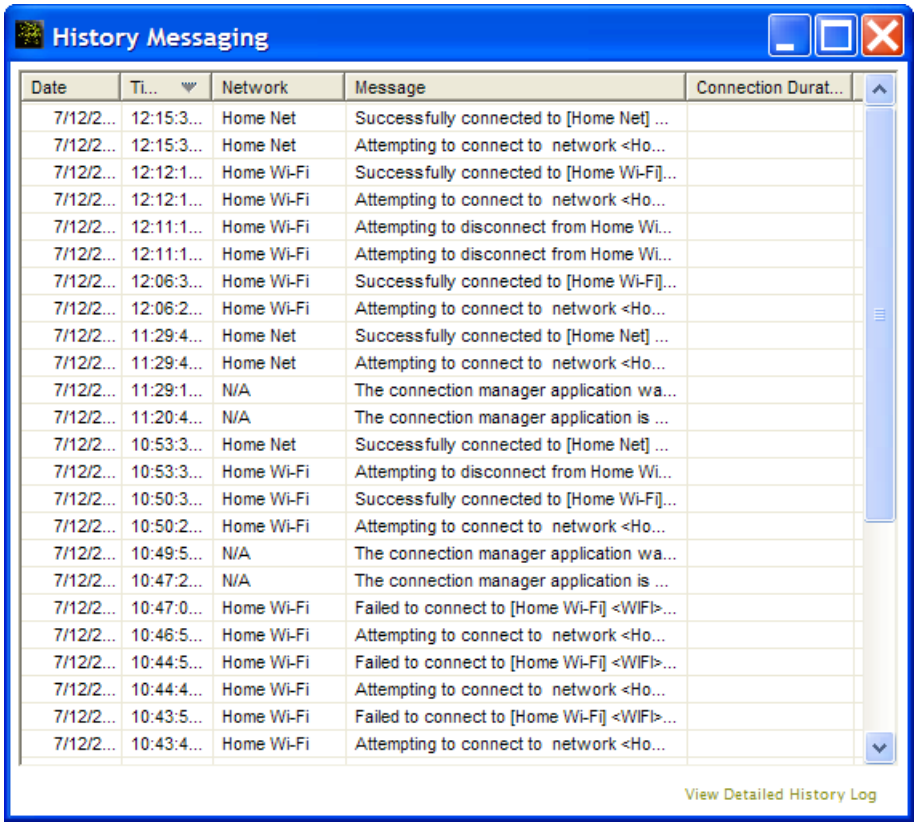

Figure 7.2: Connection History

7.2.2 History Popup Detailed Log

From the History Messaging view, click ***View Detailed History Log*** to display a more detailed summary of XOHM Connection Manager activities. Items in the History Popup Detailed Log may be selected by date and they may be sorted in any column.

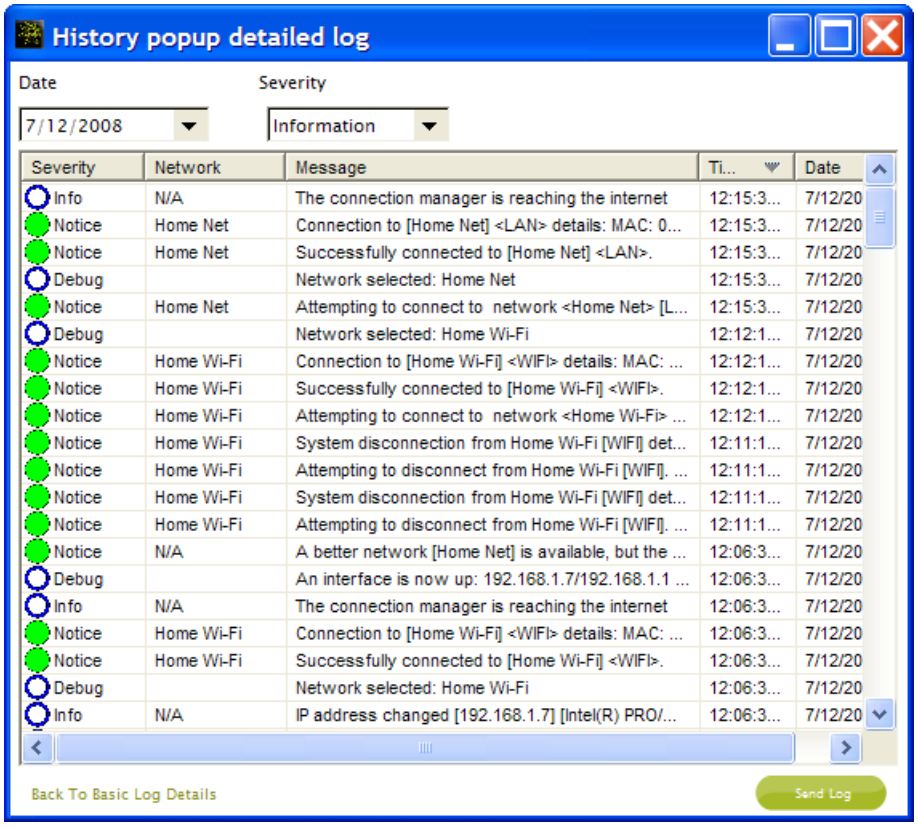

Figure 7.3: Detailed History Log

Only if instructed to do so by a XOHM Care Representative, click ***Send Log*** to email the detailed report to XOHM Care. Click ***Back To Basic Log Details*** to return to the basic History Messaging view.

Tip	*The* Send Log *feature uses your computer's email application to send the data to XOHM Care. If you don't have an email application (for example, if you use a browser email option), your XOHM Care representative will provide you with options for sending the requested information.*

7.3 Troubleshooting

The ***Troubleshooting*** menu provides a set of tools that can help debug connectivity issues within your system. Click ***Tools > Troubleshooting*** and then select an option to use the tools.

7.3.1 System Info

Click ***Tools > Troubleshooting > System Info***. The System Info troubleshooting tool provides information about your computer, the operating system, your XOHM Card (WiMAX Device), and XOHM Connection Manager.

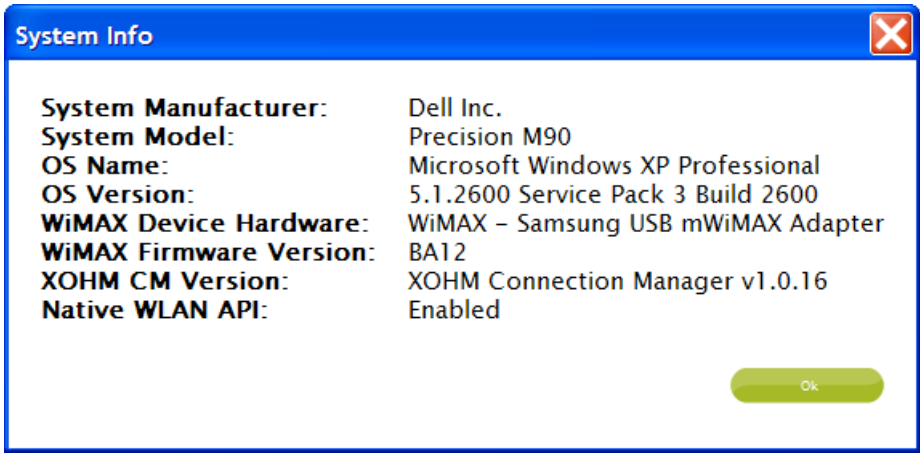

Figure 7.4: System Info

The System Info screen provides the following information:

- ***System Manufacturer*** – The computer manufacturer.
- ***System Model*** – The computer model name.
- ***OS Name*** – The Operating System name.
- ***OS Version*** – The Operating System version.
- ***WiMAX Device Hardware*** – The XOHM Card device name.
- ***WiMAX Firmware Version*** – The XOHM Card device driver version.
- ***XOHM CM Version*** – The XOHM Connection Manager version number.
- ***Native WLAN API*** – Shows whether wireless LAN API is active. See "FAQs and Troubleshooting" on page 46 for details.

Tip	*To view your XOHM Card's MAC address, click* **Help > About Connection Manager**.

7.3.2 Ping

Click ***Tools > Troubleshooting > Ping***, select a target, and then click ***Ping***. The Ping troubleshooting tool allows testing for connectivity on all active connections. Ping is used to verify that a particular IP address is reachable.

Two methods of Ping are supported by XOHM Connection Manager. In addition to the traditional ICMP Echo (Ping), a TCP connect on port 80 (HTTP) may be used. The TCP:80 method is useful since many firewalls block ICMP traffic.

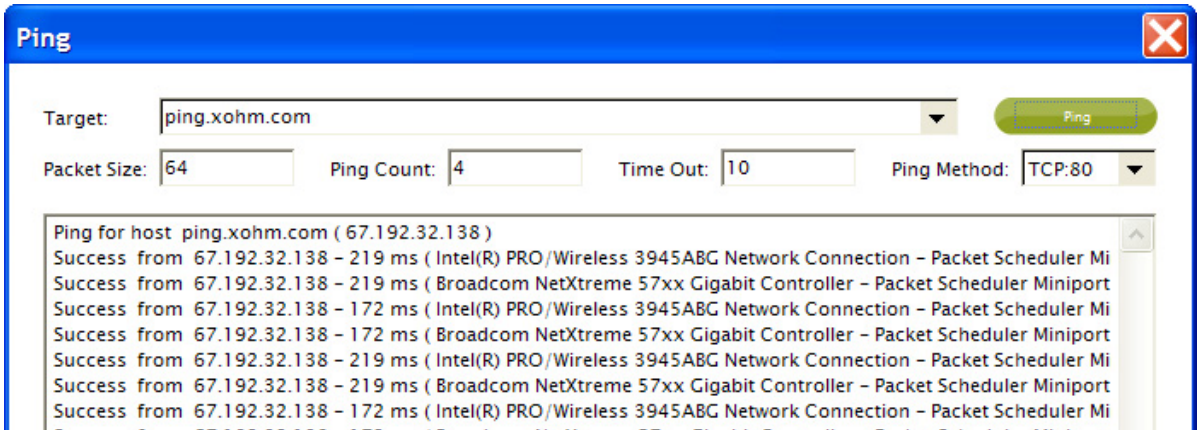

Figure 7.5: Ping

The following information is available in this view:

- ***Target*** – The ping target; either a hostname or an IP address.
- ***Packet Size*** – Size of the ping packet in bytes.
- ***Ping Count*** – Number of ping packets sent.
- ***Time Out*** – Time in seconds to wait for each reply.
- ***Method*** – Ping type, either ICMP or TCP:80
- ***Results window*** – The results are presented in this portion.

7.4 Speed Test

Click ***Tools > Speed Test***. The Speed Test tool launches a browser and connects to a webpage that can test your computer's network connection speed.

7.5 Coverage Map

Click ***Tools > Coverage Map***. The Coverage Map tool launches a browser and connects to a webpage that includes a map of current XOHM WiMAX coverage.

8 FAQs and Troubleshooting

For answers to other questions or for more information about XOHM, please visit ***www.xohm.com***.

Is there any way to import my current Wi-Fi configuration settings into XOHM Connection Manager?

It depends on your operating system and on which connection manager you have been using. If your computer is running Windows Vista or Windows XP SP3 and you are using either Windows Connection Manager or another connection manager that uses Windows profiles, XOHM Connection Manager should be able to import your Wi-Fi configuration settings.

If your computer is running Windows XP SP2 and you are using Windows Connection Manager or a connection manager that uses Windows profiles, XOHM Connection Manager may be able to utilize the ***Windows Wireless LAN API for Windows XP SP2*** to import your current Wi-Fi configuration settings. The API is available as a downloadable patch from Microsoft (KB918997); go to the Microsoft website and search for "Wireless LAN API (KB918997)" to download and install the patch.

Tip	*Whether or not XOHM Connection Manager is able to import your Wi-Fi configuration settings, it is still recommended that you record any settings and keep them stored for future reference.*

After installing XOHM Connection Manager and rebooting my Windows Vista computer, I am unable to find a signal from the XOHM network. What can I do?

Try removing your XOHM Card from the computer and reinserting it. Check the card's LED status indicator (see "Understanding the Status Light" on page 6). If it is now green instead of yellow, you are in a XOHM coverage area and you should be able to connect to the XOHM network in order to activate your service.

Can I name an Ethernet (tethered LAN) connection?

Yes. Click ***Settings > Network Configuration***, select the connection from the Network drop-down box, enter a name in the Description field, and click ***Apply***.

How do I switch between seamless and manual roaming?

Click ***Settings > General*** and then, under "Seamless Roaming at Startup," click ***ON*** to use seamless roaming or click ***OFF*** to manually select networks.

How do I change Prioritization rules?

Click ***Settings > General*** and then, under "Seamless Roaming at Startup," click ***Prioritization Rules***. Under "Network Type Priorities," drag and drop network types to set your preferred order.

Why does XOHM Connection Manager keep trying to connect to a Wi-Fi network every 30 seconds?

This may occur if you are using a hidden network (non-broadcast SSID) that is not currently available or has been incorrectly configured. To prevent connection manager from repeatedly attempting the connection, display the "All Available Networks" list, select the appropriate hidden network, and then click ***Forget***.

Figure 8.1: Network View – Forget

Note	*Clicking* **Forget** *permanently deletes all configuration information for the selected network. To use this network in the future, you will need to reconfigure it.*

Will my VPN (Virtual Private Network) drop when XOHM Connection Manager automatically switches to a different network connection during seamless roaming?

Yes. This is a normal operation of the VPN; it will shut down whenever switching network connections, whether automatically or manually. You will need to restart your VPN.

Why does XOHM Connection Manager never report that I am able to reach the Internet even though I have connectivity using my Web browser?

This may occur when personal firewalls are installed on the computer. Generally, this can be resolved by adding ***monitor.exe*** (found in the install directory C:\Program Files\XOHM\Connection Manager) as a trusted application and adding the configured Internet targets as trusted host sites (for ICMP traffic) to the firewall program. Please refer to your firewall documentation for details on setting firewall preferences and permissions.

Why does XOHM Connection Manager disconnect from a network even when it could connect properly?

XOHM Connection Manager may disconnect from a network if Internet Sensing is enabled and it cannot reach the Internet targets that have been specified (see "Internet Sensing" bullet on page 36). Internet Sensing tests Internet availability by trying to reach specific websites using the currently connected network; it will disconnect if it cannot reach the targets, even if the network seems valid.

To avoid this situation, click ***Settings > General*** and then, under "Seamless Roaming at Startup," click ***Prioritization Rules***. Under "Internet Sensing," uncheck the box next to "Allow Internet Sensing (recommended)." If you still cannot connect to the network, the Internet Sensing targets may be invalid or temporarily unreachable, for example, if both target websites are down.

Why is my Wi-Fi radio always off when using XOHM Connection Manager?

There may be another connection manager running on your computer, which would conflict with XOHM Connection Manager's control of the Wi-Fi radio. Shut down any other connection manager software or any other application that can control the Wi-Fi radio. It is recommended that you disable any conflicting applications from starting when the computer starts.

Why is WiMAX not detected?

Most likely you are not in a WiMAX coverage area. Visit ***www.xohm.com*** for information about XOHM WiMAX network coverage.

Does XOHM Connection Manager manage connections for other wireless connection cards, such as those designed for use on major cellular networks?

No. If you need to use another type of wireless connection card, you must turn off XOHM Connection Manager in the system tray and then launch that card's connection manager program. To return to XOHM WiMAX service, turn off the other connection manager program and then launch XOHM Connection Manager.

Why doesn't XOHM Connection Manager connect to a Wi-Fi network when I undock my computer from a docking station?

If your computer is running on battery power, your Ethernet network adapter may be disabled. Check your LAN network settings and adjust (enable) as necessary.

In "Network Configuration," why does the key field remain yellow after typing in the pre-shared key?

The key you entered is the wrong length. Try reentering the key.

Tip	*For more information, visit **www.xohm.com**.*

Addendum – Working With Firewalls

After you install XOHM Connection Manager and insert your XOHM Card, the network attempts to activate and provision your XOHM Card automatically. Your firewall may prevent this, stopping you from successfully activating your XOHM Card and setting up your XOHM service.

Basic Firewall Permission

Many different types of Internet security programs and firewall add-ons protect your computer against unwanted intrusions. These programs frequently run in the background and allow or deny access based on default or user-created rules and exceptions. Some programs deny new requests without warning, causing your XOHM activation and provisioning to fail.

To allow communication by the XOHM network, set up your firewall program to allow a connection through specific ports that will be provided in this section. This allows XOHM to send and receive the necessary data for activation and provisioning (and for periodic updates, if applicable), while letting you retain your current firewall protections.

It is recommended that you select the ***"Allow Always"*** option in the prompt generated by your firewall application to ensure future communications can be completed without any issues. Do this where the prompt is generated for the application named "XOHM Configuration Manager" and "Connection Manager." By following these instructions, you will ensure that the ports you are opening are ONLY allowed for the 2 applications listed above. Other applications cannot take advantage of the opened ports.

The XOHM activation and provisioning process requires OMA-DM (Open Mobile Alliance Device Management; required for device provisioning) communication with the XOHM network over a specific UDP (user datagram protocol) port: ***UDP port 2948***. In the event a firewall is very strictly configured, outbound communication from the OMA-DM client or even the Web browser may be prohibited.

Note	*While it is a generally accepted industry practice to allow "safe" or known sources to access your computer for communications purposes, any time your computer's communications port is open there is the possibility that unknown or unauthorized third parties may access your computer. XOHM does not guarantee or warrant that unknown or unauthorized third parties will not attempt to access your computer without your permission, and XOHM cannot be held responsible for any harm caused by such parties that may access your computer. Information about products offered by other companies is provided for information purposes only, and does not constitute an endorsement or recommendation for such products.*

The following pages outline examples of common firewall providers and give instructions on how to change your firewall settings to allow the necessary connections. Examples include:

Note	*Whether or not your system's firewall or version is covered here, please consult the documentation from your firewall or security program provider for additional details and updates.*

Windows XP Service Pack 2 Firewall

With the Windows Firewall, it is necessary to open each port separately. Follow the instructions below to create rules for the required ports.

To open UDP port 2948 in the Windows XP Service Pack 2 firewall:

1. Click ***Start > Control Panel > Security Center > Windows Firewall***.

Note	*Depending on whether you use* **Classic View** *or* **Category View**, *you may not see the* **Security Center** *option. If your view does not include* **Security Center**, *select* **Windows Firewall** *and proceed as below.*

2. Make sure that ***On (recommended)*** is checked. (If not, you are not using Windows Firewall and these steps do not apply.)

3. Click the ***Exceptions*** tab at the top of the window, and then click ***Add Port***.

4. For UDP port 2948, enter the following information:

   Name: XOHM Firewall Rule (example; the name may be whatever you choose)

   Port number: 2948

   UDP: (check option as pictured)

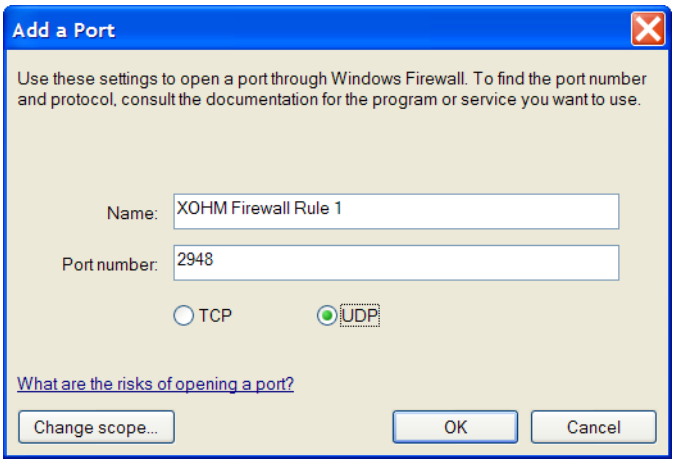

Figure 10.1: Windows XP Add a Port - UDP 2948 (firewall)

5. Click ***OK*** and then click ***OK*** again to save your Windows Firewall settings. You can now close the window and proceed with activation and provisioning.

BlackICE Defender Firewall

To open UDP port 2948 in the BlackICE Defender Firewall:

1. Click ***Start > (All) Programs > Network ICE > BlackICE Utility***.
2. Click ***Tools > Advanced Firewall Settings*** and then click ***Add***.
3. Remove the checkmark from the ***All Ports*** box and enter the following information:

   Name: XOHM Firewall Rule (or whatever you prefer)

   Port: 2948

   Type: UDP

   Mode: check ***Accept***

   Duration of Rule: check ***Forever***
4. Click ***Add*** and then click ***OK*** to save your firewall settings. You can now close the firewall settings window and proceed with activation and provisioning.

McAfee Personal Firewall Plus

To open UDP port 2948 in the McAfee Personal Firewall Plus:

1. Click ***Start > (All) Programs > McAfee > McAfee Personal Firewall Plus***.
2. Click ***Utilities***, select ***System Services***, and click ***Add***.
3. Enter the following information in the "Edit Port Configuration" screen:

   Program name: XOHM Firewall Rule (or whatever you prefer)

   Incoming UDP ports: 2948

   Description: XOHM Firewall Rule (or whatever you prefer)
4. Click ***OK*** and then check the "System Services" list to make sure your ***XOHM Firewall Rule*** has been added and is checked.
5. Click ***OK*** again to save your firewall setting. You can now close the firewall settings window and proceed with activation and provisioning.

Norton Internet Security Personal Firewall

To open UDP port 2948 in the Norton Internet Security Personal Firewall:

1. Click ***Start > (All) Programs > Norton Internet Security > Norton Internet Security*** (or click the ***Norton Protection Center*** icon in your system tray and select ***Norton Internet Security***).
2. Under ***Settings,*** click ***Personal Firewall*** and then click ***Configure***.
3. Under ***Firewall Protection***, make sure that ***On (recommended)*** is checked. (If not, you are not using Norton Internet Security Personal Firewall and these steps do not apply.)
4. Under ***Personal Firewall***, click ***Advanced Settings***, click ***Configure***, and then click ***Add***.
5. Select ***Allow*** and then click ***Next***.
6. Select ***Connections to and from other computers*** and then click ***Next***.
7. Select ***Any computer*** and then click ***Next***.
8. Under ***The protocol you want to allow***, select ***UDP***, select ***Only communications that match all types and ports listed below***, and click ***Add***.
9. In the ***Specify Ports*** window, select ***Individually specified ports*** and ***Local***, enter ***2948*** in the port number field, and click ***OK***.
10. Enter a name for the rule (such as ***XOHM Firewall Rule***) and click ***Next***.
11. Click ***Finish***. The new rule will appear in the ***General Rules*** list.
12. Click ***OK*** to save your firewall setting. You can now close the Norton Internet Security window and proceed with activation and provisioning.

Sygate Personal Firewall Pro

To open UDP port 2948 in the Sygate Personal Firewall Pro firewall:

1. Click ***Start > (All) Programs > Sygate Personal Firewall > Sygate Personal Firewall***.
2. Click ***Tools > Advanced Rules***. (If necessary, click ***OK*** to dismiss the Advanced Rule Configuration warning.)
3. Click ***Add***.
4. Under the ***General*** tab of the ***Advanced Rule Settings***, enter the following information:

   Rule Description: XOHM Firewall Rule (or whatever you prefer)

   Action: Allow this traffic (select option)

   Advanced Settings: All network interface cards (select from drop-down list)

   Apply this rule during Screensaver Mode: Both on and off (select from drop-down list)
5. Click the ***Ports and Protocols*** tab and enter the following information:

   Protocol: UDP (select from drop-down list)

   Local: 2948

   Traffic Direction: Inbound (select from drop-down list)

Note	*You may also select* UDP *in the Protocol field, enter* 2948 *in the Remote and Local fields, click* OK*, and then repeat steps 4 and 5 selecting* TCP *for the Protocol field and entering* 80, 443 *(with comma between) in the Remove and Local fields.*

6. Click ***OK*** to return to the ***Advanced Rules*** window.
7. Confirm that your rule has been added and click ***OK*** again to save your firewall settings. You can now close the Sygate Personal Firewall Pro window and proceed with activation and provisioning.

ZoneAlarm Professional

To open UDP port 2948 in the ZoneAlarm Professional firewall:

1. Click ***Start > (All) Programs > ZoneAlarm Pro > ZoneAlarm Pro***.
2. Click ***Firewall*** and then click ***Custom*** under the ***Main*** tab.
3. Under the ***Internet Zone*** tab, select ***Allow incoming UDP ports***, enter ***2948*** in the ***Ports*** field, and then click ***Apply***.

Note	*If values already exist in the* **Allow incoming UDP ports**, *place a comma after the last value before entering the new port number(s).*

4. Click ***OK*** to save your firewall settings. You can now close the ZoneAlarm Pro firewall window and proceed with activation and provisioning.

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