XOHM Modem User Guide
MAX-206m2 by ZyXEL

2/29/08

Table of Contents

Welcome to XOHM

XOHM is a wireless Internet service that lets you get online at broadband speed. The XOHM WiMAX network connects you to the people you need, the entertainment you love and the information you can't live without. You'll connect to the Internet using your choice of computer without long-term contracts or complications.

Getting started with XOHM is simple: just connect your **XOHM Modem MAX-206m2 by ZyXEL** (XOHM Modem) to your computer and activate your XOHM membership, and you've got broadband.

This guide covers all the information required to set up, install, and configure your XOHM Modem.

- **Get Started**

- **Your XOHM Modem Settings**

- **Troubleshooting**

- **User Information and Warranty**

For more information about XOHM WiMAX, visit **www.xohm.com**.

Section 1

Get Started

XOHM™
WiMAX

Section 1A

Your XOHM Modem

This section outlines the basic layout of your modem and connections.

What's in the box

XOHM Modem MAX-206m2 by ZyXEL

Power adapter

Ethernet cable

Get Started Guide

User Guide

Before setting up your XOHM Modem, make sure you have all the items listed above. If any items are missing, contact your XOHM retailer or call **XOHM Care** at **877-333-XOHM** (877-333-9646).

Modem requirements

Credit card for activation

32MB RAM minimum (64MB recommended)

20MB available hard disk space

One available 10/100Mbps Ethernet port

Compatible with web browsers Internet Explorer 6 and higher, Firefox 1.5 and higher, and Safari 2.0. Other browser engines may also be sufficient.

Get to know your device

Your XOHM Modem lets you connect to the XOHM WiMAX network to provide fast and easy wireless connectivity to the Internet in your home or office.

WiMAX overview

WiMAX Tower

Internet

XOHM Modem
MAX-206m2 by ZyXEL

Computer or
Home Network

Telephones
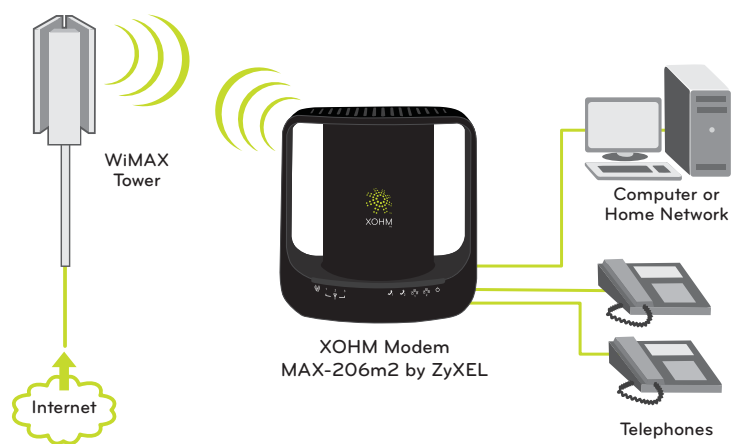
Device connectors (back of device)

Power Adapter
Reset Button
Remote Antenna *[optional]*
Telephones *[future service]*
Computer / Wi-Fi Router

1. **Power jack (black):** Connects the power adapter to power the modem.
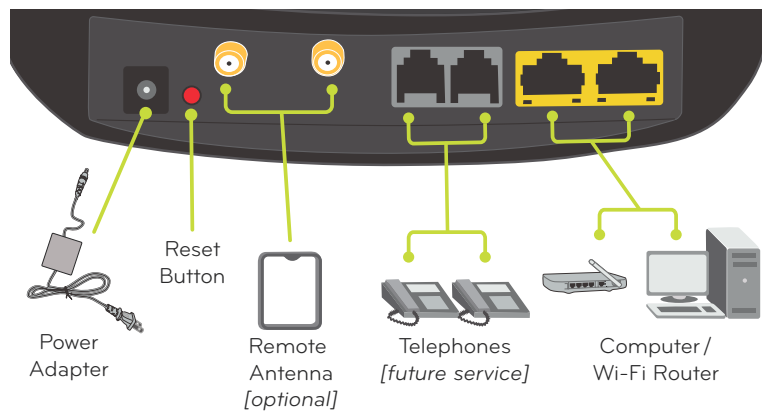2. **Reset button (red):** Resets the unit back to factory defaults (use ONLY as a last resort).
3. **Antenna connectors (gold):** Connect a remote antenna (available separately) to extend a signal from a strong area (such as near a window) to a weaker area where it may be more convenient to place the modem.
4. **Phone ports 1 / 2 (gray):** Connect telephones to the modem. **[Future service.]**
5. **Ethernet ports 1/2 (yellow):** Connects the modem to computers and/or a Wi-Fi router.

Modem LED display (front panel)

WiMAX Signal   Strength Indicator   Phone 1 & 2   LAN 1 & 2   Power
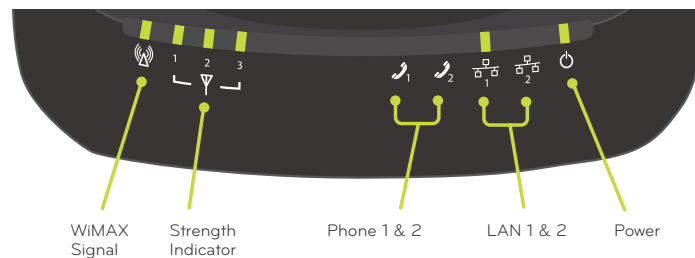
1. **WiMAX LEDs:** The leftmost LED indicates WiMAX connectivity. A blinking LED indicates that the unit is ranging, while a solid LED indicates that a connection has been established and that the modem is ready to transmit and receive. The three LEDs to the right indicate the signal strength of the reception (1-3). These LEDs will be green when illuminated.

> **Note** — Signal Strength LEDs: *The number of signal strength LEDs illuminated reflects the strength of the WiMAX signal being received by the XOHM Modem; however, the strength of signal does not affect the speed of your connection. As long as there is sufficient signal strength to make a connecton, you may achieve maximum connection speed.*

2. **Phone 1 / Phone 2 LEDs:** Illuminates when the VoIP "line" is in use. If no voice accounts are configured, the LED will be off. If a voice account is configured and registered, the LED will be green. When the connected phone is off-hook, the LED will blink. When there is new voicemail on the account, the LED will be amber (optional). **[Future service.]**

3. **LAN 1 / LAN 2 LEDs:** Illuminates when the modem is connected to the computers or other networking devices. This LED will be green, and will flash as data is sent through the connection.

4. **Power LED:** Indicates if the unit has power and is operating correctly. A blinking LED indicates the unit is loading the firmware and configuration, while a solid LED indicates the unit is ready for operation. This LED will be green.

Positioning your modem

Your XOHM Modem has a convenient, contemporary design that allows for simple setup. Some things to keep in mind when setting up your modem:

Only use your XOHM Modem indoors. Avoid moisture or extreme temperatures.

For improved reception, place the modem near a closed window.

Position the modem within easy access of a reliable power supply.

Make sure the modem is near enough to your computer to easily connect the modem to the computer using the supplied Ethernet cable.

The unit's omnidirectional antennas are built into the sides ("handles") of the modem case. Make sure to provide ample space around the device to ensure maximum WiMAX signals.

Make sure the modem is near enough to your computer to easily connect the modem to the computer using the supplied Ethernet cable.

6dBi Omnidirectional Antennas

Where possible, keep your modem at least one foot away from other electronic devices, such as Wi-Fi routers and cordless phones, to avoid potential signal interference.

Accessories

Go to *www.xohm.com* to find accessories for your device, such as remote antennas and battery packs.
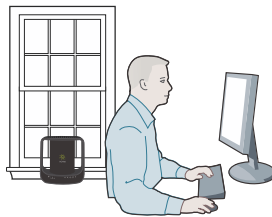
Tip	If you wish to place the XOHM Modem in a location where it does not receive an adequate signal, we recommend that you purchase the optional remote antenna to extend the signal from a stronger area (such as near a window).

Install Your XOHM Modem

Set up the modem

1. Find a place for your XOHM Modem. See "Positioning your modem" on page 6 for details and suggestions.

2. Disconnect any existing LAN (Ethernet) connections or routers from the computer you are going to be using for your XOHM Modem. (Don't worry: We'll get you hooked up to your router when we're finished.)

3. Plug in the modem and connect it to your computer.
   - Insert the round end of the power adapter into the modem's power port and plug the other end into a power source. (The Power LED should illuminate.)
   - Insert one end of the supplied Ethernet cable to your computer and the other end into the yellow *LAN 1* port. (The LAN 1 LED should illuminate.)

4. Check the modem's indicator lights to confirm your WiMAX signal. It may take a few moments for the signal to find your modem.

   ▪ If the *WiMAX Signal* indicator is solid green, the modem is receiving a WiMAX signal. Proceed to step 5.

   ▪ If the *WiMAX Signal* indicator is blinking, try moving the modem to a different location (nearer a window or away from other electronics). Wait several seconds at each location to see if you're getting a signal.

   ▪ If you cannot acquire a WiMAX signal, call *XOHM Care* at *877-333-XOHM* (9646).

WiMAX
Signal   LAN 1   Power

5. Launch your web browser.

   ▪ The XOHM website will be displayed.

   ▪ Follow the onscreen instructions to set up your XOHM membership and submit your order.

6. Wait for activation and provisioning to complete. (It may take up to 20 minutes.)

   ▪ During provisioning, make sure not to disconnect your modem, as doing so will interrupt the process.

   ▪ Your XOHM Modem will automatically power cycle (turn off and back on) during provisioning. When the *WiMAX Signal* indicator returns to solid green, your modem is active and ready to use.

7. To confirm your modem's status, navigate to your favorite website. If you are able to access only the XOHM site and no other website, provisioning may not be complete. Wait a few minutes and try again.

Connect to your router or network

Once you have set up your XOHM Modem and confirmed your web connection, you can set up your router or network as needed.

1. Consult your router's documentation for setup details.

2. Disconnect the Ethernet cable from your computer and connect it to the router's *Internet* port. (It will go directly from the XOHM Modem's LAN 1 port to the router.)

Note	Be sure to keep a minimum distance of 1 foot between the XOHM Modem and your Wi-Fi router to avoid signal interference.

3. Connect an Ethernet cable from the router to your computer.

4. Make sure the modem's *LAN 1* indicator is illuminated and test connectivity by launching the web browser. If you are having difficulties, double-check your router's settings.
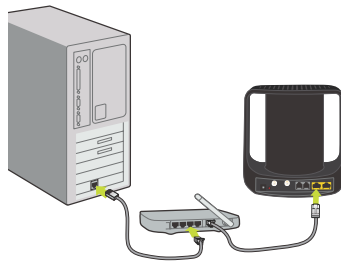

Tip	For added security, you may wish to change your modem password after setting up your router. See "Access the advanced settings menu" on page 14 for more information.

Section 1C

Telephone (VoIP) Settings

Your XOHM Modem is able to support VoIP (Voice over Internet Protocol) telephony, meaning you will be able to use your XOHM WiMAX connection to provide both voice and Internet services.

Coming soon: Telephone and voice (VoIP) service from XOHM will be available in the future. Visit *www.xohm.com* frequently for details and announcements.

Telephone (VoIP) Settings
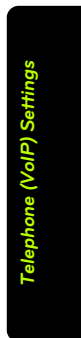
Your XOHM Modem Settings

XOHM™
WiMAX

Section 2A

Modem Advanced Settings Overview

This section reviews all the basic settings options available through the XOHM advanced settings menu.

| Note | *The screen images in this user guide are illustrative and may not reflect the final software.* |

Access the advanced settings menu

1. Open the computer's web browser, type *http://192.168.100.1* in the address bar, and press *Enter*. The modem login screen will be displayed.

2. Enter the User Name, leave the Password blank, and then click *Login*.
   - The default User Name is *user1*. The password remains blank.

3. You may be prompted to enter a new password.
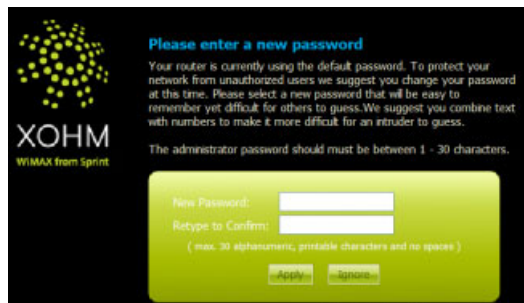
- To keep using the default password, click *Ignore* or *Clear* and continue to the next steps.

- To change the password, enter and retype a new password and click *Apply* to change the password. You will need to complete step 2 again to log in with your new password before continuing.

4. The advanced settings Home screen appears.

menu bar   Home area icons
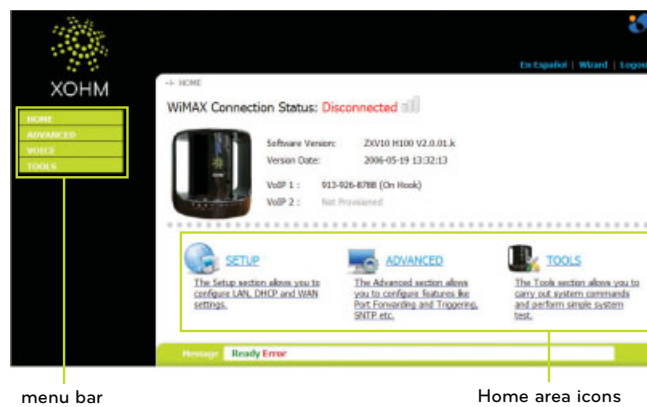
5. From the advanced settings screen, you can access your settings options either through the Home area icons in the middle of the window or through the menu bar options on the left side of the window.

While it's a good idea to familiarize yourself with these menus and options, rest assured that you may never need to use any of them. Your XOHM Modem's initial setup, detailed in the previous sections, is designed to automatically detect and assign the correct settings for the majority of installations.

Advanced settings menu options

Home area icons

- **Setup** – displays the LAN Configuration screen
- **Advanced** – displays the Port Configuration screen
- **Tools** – displays the Certificates screen (My Certificates and Trusted CAs)

Menu bar

Though some headings are the same, the menu bar may offer additional sub-menu options:

- **Advanced**
  - **Port Configuration** – displays the full Port Configuration screen, with tabs for **General, Port Forwarding,** and **Trigger Port**
- **Voice**
  - **Service Configuration** – displays the Server Configuration screen
  - **Phone** – displays the Phone Configuration screen

Note	*The* **Voice** *settings menu will not be used, because telephone and voice (VoIP) support from XOHM for your modem will not be available upon product launch.* **The XOHM WiMAX network will be adding telephone/voice (VoIP) support in the future.** *Visit* www.xohm.com *for details and announcements.*

- **Tools**
  - **Certificates** – displays the Certificates screen (same as Home area **Tools** option)
 - **Password Setup** – displays the Password Setup screen

Using the settings menus

The settings menus use just a few simple tools to help you make changes.

- Most of the menus allow you to enter or change values directly. If you're satisfied with the changes, click **Apply** at the bottom of the screen to save your settings. If you want to cancel your changes, click **Reset**.
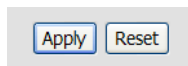
- Many settings options allow you to choose from drop-down lists, which are indicated with an arrow next to the field. Click on the arrow, then select an option to set it.
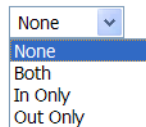
- Certain menus contain lists that allow you to edit, delete, or export settings. In these cases you will highlight a line and click on the action you want to take: **Edit** ( ), **Delete** ( ), or **Export** ( ).

The following sections detail the various menu and settings options available for your XOHM Modem.

Section 2B

Advanced Menu

This section reviews all the settings options available through the menu bar's *Advanced* menu.

Display the Advanced menu

1. From the settings screen (see "Access the advanced settings menu" on page 14), click *Advanced* in the menu bar on the left side of the screen to expand the Advanced menu.

2. Select *Port Configuration* to display the NAT Configuration menu.

Port Configuration

The Port Configuration menus allow you to control which modem ports are open for incoming traffic, such as applications and game hosting. There are 3 submenus.

Note	The Port Configuration settings do not apply for remote management of the modem. For any questions regarding remote management or similar advanced functioning please call **XOHM Care** *at* **877-333-XOHM** *(9646).*

General

The **General** tab lets you enable or disable Network Address Translation (NAT) and set the maximum NAT session per user.
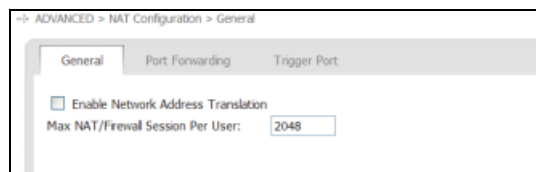
Port Forwarding

The Port Forwarding menu lets you forward outside ports to inside devices so that users from the Internet can use shared resources such as web servers, remote workstations, gaming platforms, etc.

Note	*Port forwarding does NOT apply to normal browsing or downloading by users behind the modem, and no additional settings are needed for those functions on this menu.*					

There are 11 configurable rules and one "Default Rule." When the modem receives an unsolicited packet from the Internet, it will first look at rules 1-11 to see if the traffic's port matches a rule. If not, the modem will see if a Default Server is present, and if so, pass the packet to the Default Server. If no Default Server exists, the traffic is dropped.

The modem can use one port or a port range for forwarding traffic, depending on which port(s) the application being forwarded uses. If only one port is needed, the Start and End ports should be set to the same value.

Port forwarding entries can be edited by clicking on the **Edit** (🖊) icon in the Action column. You can also use the **Delete** (🗑) icon to remove a port forwarding rule.

In the screenshot below, a user has Windows Remote Desktop set up on his computer, which is assigned IP address 192.168.100.33. Rule 1 is Edited (opening the Edit menu for the rule) and set to Active. A Service Name is given to it for reference. The Start and End Ports specified at port 3389, the default communication port for Remote Desktop. Finally, the Server IP Address of the computer is specified. Now, the user can access their Remote Desktop from the Internet, so long as they know the WAN (public) IP or DNS address that the modem is using.

Trigger Port

The *Trigger Port* allows you to configure up to 12 "trigger" ports that can open and close as necessary, instead of being always open.

Section 2C

Voice Menu

Reminder	*Though your modem is capable of supporting VoIP (Voice over Internet Protocol) telephony, telephone and voice (VoIP) support from XOHM will not be available upon product launch.* **The XOHM WiMAX network will add telephone/voice (VoIP) support in the future.** *Visit www.xohm.com for details and announcements.*

Section 2D

Tools Menu

This section reviews all the settings options available through the menu bar's *Tools* menu, including certificate management, remote management, modem logs, and password setup.

Display the Tools menu

1. From the settings screen (see "Access the advanced settings menu" on page 14), click *Tools* in the menu bar on the left side of the screen to expand the Tools menu.
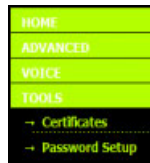
2. Select *Certificates* or *PasswordSetup* to display the corresponding menus.

Certificates

This menu is used for creating and importing certificates for use in authentication. Certificates play a vital role in the WiMAX authentication process. Therefore, this menu will be extremely important if the certificate must be changed or replaced.

WARNING	Before changing any Certificates settings, please consult with XOHM Care by calling 877-333-XOHM (9646).

My Certificates

The **My Certificate** screen lets you create and import peer certificates that can either be self-signed or submitted manually or automatically to a Certificate Authority (CA), so that a CA can verify the identity of the MAX-206M2 as an authorized network (WiMAX) client.
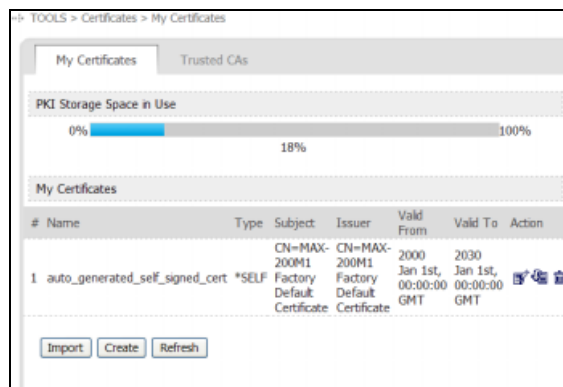
Click *Create* to display the certificate creation screen, and then enter the appropriate information for your certificate. Once you're finished, you can either accept the certificate as self-signed or you can submit it for approval by a CA, which would allow you to add the certificate through the "Trusted CAs" tab.
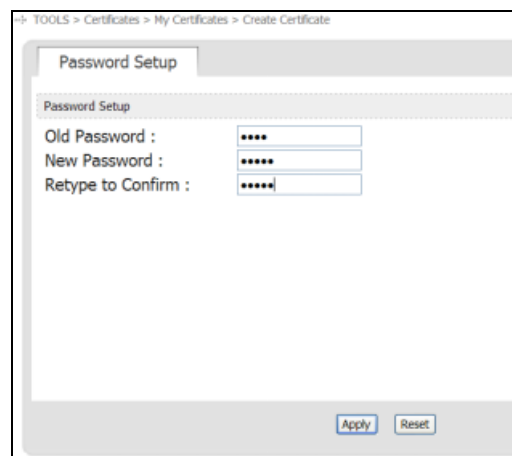
Trusted CAs

This menu is used to import certificates from trusted CAs to fully incorporate mutual authentication via certificates. Clicking *Import* allows you to upload a signed certificate from a CA to the XOHM Modem in order to verify the identity of the CA.
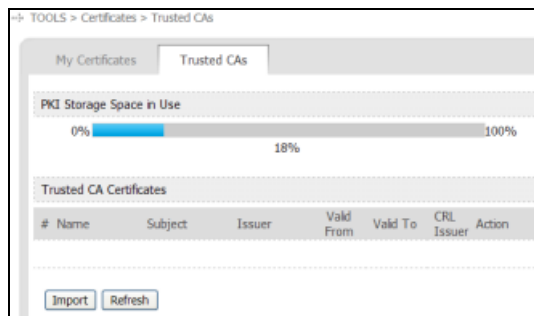
Password Setup

The *Password Setup* screen lets you reset your XOHM Modem password.

Enter your old password, and then enter and reenter the new password and click *Apply* to save the new password.

Section 3

Troubleshooting

XOHM™
WiMAX

Troubleshooting

This section addresses common problems and solutions for use with your XOHM Modem. For more information, visit *www.xohm.com*.

Frequently Asked Questions

System

What are the minimum system requirements to be able to run the XOHM Modem, MAX-206m2 by ZyXEL?

The minimum system requirements are:

- 32MB RAM (64MB recommended)
- 20MB available hard disk space
- Available 10/100Mbps Ethernet port
- Web browser: XOHM Internet service has been tested with Internet Explorer 6 and 7, Firefox 1.5 and 2.0, and Safari 2.0. Other browsers may also be compatible.

What operating systems are supported?

The XOHM Modem is designed to support any current operating system.

Can I use the XOHM Modem with my Wi-Fi router?

Yes. Most commercially available Wi-Fi routers can be connected to the XOHM Modem. For information about connecting a router, see "Connect to your router or network" on page 10.

Issues

My XOHM Modem is not working (lights are not coming on). What do I do?

- Make sure the modem's power adapter is plugged into an active power outlet.
- If you are using a power strip or surge protector, make sure its switch is in the "ON" position.
- Make sure the round end of the power adapter is firmly connected to the modem's power jack.
- Make sure you are using the power adapter that came with your modem. The correct adapter for the MAX-206m2 provides output power of 12V AC at 1 Amp.
- If you still see no lights, call **XOHM Care** at **877-333-XOHM** (9646).

WiMAX   Strength   Phone 1 & 2   LAN 1 & 2   Power
Signal   Indicator
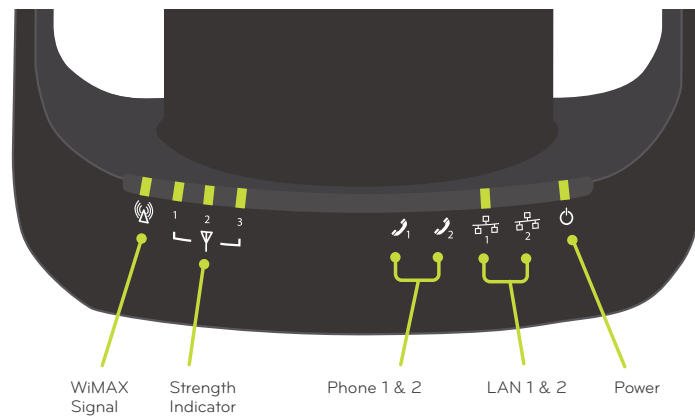
My XOHM Modem is not working properly (lights are coming on but I cannot connect).
What do I do?

- Your modem may not be receiving the proper voltage. Make sure you are using the power adapter that came with your modem. The correct adapter for the MAX-206m2 provides output power of 12V AC at 1 Amp.

- The **WiMAX Signal LED** should be illuminated if the modem is using default settings. If it is not illuminated, make sure the **Power LED** is green. If the **Power LED** is red, call **XOHM Care** at **877-333-XOHM** (9646).

- If neither of the **LAN LEDs** is illuminated:

    ▪ Make sure that your computer or router has the Ethernet cable connected to the Ethernet port and that the cable is properly seated. (The cable should "click" when it is connected.)

    ▪ Make sure the other end of the Ethernet cable is properly connected to the **LAN 1** or **LAN 2** port on the back of the XOHM Modem.

    ▪ Ethernet cables usually have clips that help secure them to Ethernet ports. If these clips are damaged or broken, the cable could slip out. If your Ethernet cables or clips are damaged or broken, replace with a new cable.

    ▪ If the cable is securely connected at both ends, but the corresponding **LAN 1** or **LAN 2** LED is still not illuminated, try using the other LAN port on the XOHM Modem.

    ▪ The computer may have a faulty Ethernet adapter.

The lights on my XOHM Modem are on, but they are all red. What do I do?

- The LED indicators on the XOHM Modem should not be red if the modem is functioning properly.

- Red LEDs may indicate faulty configuration. Press and hold the red **Reset Button** on the back of the device for 10 seconds and then release the button to restore the factory default settings. The modem will power cycle (turn off and on) during the reset process.

- If the lights remain red after reset, call **XOHM Care** at **877-333-XOHM** (9646).

The lights on my XOHM Modem are on, but they are blinking. What do I do?

Blinking lights indicate that the modem is in a process. It may be powering up, searching for a WiMAX connection, or connecting to an attached computer. For an overview of the modem's LEDs, see "Modem LED display (front panel)" on page 5.

If blinking persists and you are not able to connect with your XOHM Modem, call **XOHM Care** at **877-333-XOHM** (9646).

What do I do if my browser is not working properly?

The web interface for the XOHM Modem, MAX-206m2 (*http://192.168.100.1*) should be accessible to any computer connected to the modem. If you cannot display this page, you will not be able to reach any network device or the internet.

- First, check the LEDs on the modem and make sure the problem is not a basic or wired problem. (See earlier FAQs.)
- If you have other wired or wireless adapters (802.11a/b/g/n, Ethernet, cellular [3G laptop adapters]) connected to other networks at the same time, your computer may not be sending traffic to the XOHM Modem. If your computer has multiple network adapters, try disabling or removing all except the XOHM Modem connection.
- Make sure that the computer is set to obtain an IP address automatically using DHCP (Dynamic Host Control Protocol). These settings may vary by operating system. By default, you should obtain an IP address from the XOHM Modem starting at 192.168.100.33.
- If your computer cannot obtain an IP address from the XOHM Modem, you may try to set a static IP address on the computer to see if you can access the modem. If the modem is using default LAN settings, the IP address on the client computer will need to be 192.168.100.2–254, with a subnet mask of 255.255.255.0, and a gateway address of 192.168.100.1.
- If all else fails, reset the modem to factory defaults by pressing and holding the red **Reset Button** on the back of the device for 10 seconds.

- If the Reset option does not work, your XOHM Modem could have corrupted firmware. Replace the modem.

My XOHM Modem is broken. How do I replace it?

● First, try the **Reset Button**. Press and hold the red **Reset Button** on the back of the device for 10 seconds and then release the button to restore the factory default settings. The modem will power cycle (turn off and on) during the reset process.

● If the Reset option does not work, please call **XOHM Care** at **877-333-XOHM** (9646).

How do I reset my XOHM Modem?

Press and hold the red **Reset Button** on the back of the device for 10 seconds and then release the button to restore the factory default settings. The modem will power cycle (turn off and on) during the reset process.

General

Can I use my XOHM Modem with more than one computer? Will that impact the quality of the service I am receiving?

With XOHM, you can connect to the Internet in more than one location, and extend your service to multiple users throughout your location. You can connect up to two computers directly to the two Ethernet ports of the XOHM Modem, or you can attach a standard Wi-Fi router to one of the Ethernet ports to create a wireless local area network. Wi-Fi-enabled computers can connect to the modem over the Wi-Fi connection. The use of more than one computer will not impact the speed of your connection. Each user will be able to connect at the same speed.

Why does my XOHM WiMAX signal vary?

Interference due to materials between the cell tower and the modem, including buildings and trees, could cause the signal to be weak in specific areas, even within the coverage area.

How do I receive the strongest signal possible?

Use the signal strength LEDs on the modem to find the room or location with the strongest signal. For more information about finding a location for your XOHM Modem, see "Positioning your modem" on page 6.

Troubleshooting

Section 4

User Information and Warranty

XOHM™
WiMAX

Section 4A

Important User Information

Regulatory Notices

The design of the ZyXEL MAX-206m2 Modem complies with U.S. Federal Communications Commission (FCC) guidelines respecting safety levels of radio frequency (RF) exposure for portable devices, which in turn are consistent with the following safety standards previously set by U.S. and international standards bodies:

- *ANSI / IEEE C95.1-1999*, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHZ to 300 GHz

- *National Council on Radiation Protection and Measurements (NCRP) Report 86, 1986*, Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields

- *International Commission on Non-Ionising Radiation Protection (ICNIRP) 1998*, Guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz)

FCC ID: I88MAX206M2

Caution: The ZyXEL MAX-206m2 Modem has been tested for compliance with FCC RF exposure limits. The ZyXEL MAX-206m2 Modem should not be used with external antennas that are not approved for use with this device. Use of this device in any other configuration may exceed the FCC RF exposure compliance limits.

This device has been tested and found to comply with the FCC limits for a Class B computing device peripheral, in accordance with the FCC's Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

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

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

● Reorient or relocate the receiving antenna

● Increase the separation between the equipment and receiver

● Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

● Consult the dealer or an experienced radio or television technician for help

This device complies with Part 15 of the FCC's Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesirable operation.

FCC guidelines stipulate that the antenna should be more than 1.8 cm from the user. This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause hamful interference.
To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

Caution: Any changes or modifications not expressly approved by Sprint could void the user's authority to use the equipment.

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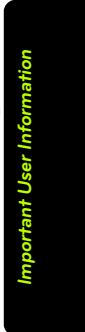
Important Notice

Because of the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the ZyXEL MAX-206m2 Modems are used in a normal manner, they should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. User accepts responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the ZyXEL MAX-206m2 Modem, or for failure of the ZyXEL MAX-206m2 Modem to transmit or receive such data.

General Precautions

- Do not operate the ZyXEL MAX-206m2 Modem in areas where blasting is in progress, where explosive atmospheres may be present, near medical equipment, life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the ZyXEL MAX-206m2 Modem MUST BE POWERED OFF. It can transmit signals that could interfere with this equipment.

- Do not operate the ZyXEL MAX-206m2 Modem in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the ZyXEL MAX-206m2 Modem MUST BE POWERED OFF. When operating, it can transmit signals that could interfere with various onboard systems.

- The driver or operator of any vehicle should not operate the ZyXEL MAX-206m2 Modem while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some jurisdictions, operating such communications devices while in control of a vehicle is an offense.

Technical Specifications

Environmental Specifications

Operating Temperature	0°C – 55°C
Storage Temperature	-30°C – 85°C
Humidity	5% to 90% (non-condensing)
Drop	75cm drop, no damage – fully operational

Mechanical Specifications

Dimensions (W x D x H)	160mm x 118mm x 167mm
Weight	480g
Battery Pack	n/a
LED	Yes (see table below)
Antenna	Internal 6dBi omnidirectional (MIMO)

LED table

Interface	Status	LED Color
Power	ON	Solid Green
	Power input low (Battery)	Yellow
	Modem Error	Red
	OFF	OFF (no light)

Interface	Status	LED Color
LAN	Not Connected	OFF (no light)
	10 or 100Mbps (Ethernet)	Solid Green
	Activity	Stay Solid Green
VoIP 1 & VoIP 2	When the phone port's defined SIP account for outgoing calls is registered	Solid Green
	When the voice port is off-hook	Flashing Green (slow)
	When the phone port's defined SIP account for outgoing calls is registered and there is a voice message in the SIP account	Solid Yellow
	When the voice port is off-hook and there is a voice message in the SIP account	Flashing Yellow
	No registered SIP accounts or device power OFF	OFF (no light)
WAN	Signal Strength: RSSI (Power level reception) 0 LED: no signal/ 1 LED: </= -70dBm 2LED: </= -50 dBm 3LED: </= -30 dBm	Green LED ON indicates signal strength level
	LINK: WiMAX connection current Searching for a channel WiMAX network entry in progress (data being transferred)	Solid Green Flashing Green (slow) Flashing Green (fast)

Software Specifications

WiMAX Standard	IEEE 802.16e-2005
PRL (preferred roaming list)	support
Authentication	EAP-TLS, EAP-TTLS
Mobile IP	support

Transmitter Specifications

Normal Output Power	23dBm
TX Max Power	27dBm
Frequency Range	2.5GHZ – 2.7GHz
Bandwidth	5M, 10M
Modulation Method	QPSK, 16QAM, 64QAM

Receiver Specifications

Frequency Range	2.5GHZ – 2.7GHz
Bandwidth	5M, 10M
Modulation Method	QPSK, 16QAM, 64QAM
Receiver Sensitivity	-99dBm at QPSK

Important User Information

Hardware Specifications

Interface Type	Ethernet and VoIP
Common Air Interface	WiMAX
Channel Spacing	250 KHz
Transmitting (max. data rate)	Forward link: 20 Mbps Reverse link: 10 Mbps
Supply Voltage	12 V
Communication Ports	4 Ethernet
Voice Capability	2 VoIP

Manufacturer's Warranty

ZyXEL warranty

With the following warranty, ZyXEL guarantees that this product will be free from any defects, due to inferior materials or workmanship, for a period of up to two (2) years from the date of purchase. During the warranty period, should the product prove defective in workmanship and/or materials, ZyXEL's RMA center will repair the product and/or replace the defective components or the defective product without charge on following terms:

Terms

1. This warranty is valid upon shipment of product as recorded by serial number out of ZyXEL's warehouse.

2. This warranty does not award any right to compensation or cover of losses inflicted due to any alteration of the product for the purpose of matching it with national or local standards and safety regulations enforced in any country other than the country where the product was first purchased, without ZyXEL's prior written permission.

3. This warranty will not apply if the product model or serial number has been defaced, modified, removed or is illegible.

4. This warranty does not cover:

    4.1 Any adaptation and/or modification for the purpose of improvement and enhancement of the product's usual range of application as described in the user guide without ZyXEL prior written permission.

    4.2 Damages due to:
  - a) misuse, including but not limited to: (1) use of the product for the purpose other that that it is deigned for, or failure to follow ZyXEL user guide, and (2) product installation or operation in conditions other than specified by the standards and safety regulations enforced in the country of operation;
  - b) repair by anyone except for ZyXEL RMA center or dealers;
  - c) accident, lightning, water, fire, improper ventilation and other causes that does not come under ZyXEL control;
  - d) shipment except for the cases when it is carried our by the RMA;
  - e) Defects of the system in which the product was operated.

5. This warranty does not infringe upon customer's legal rights given to him by the laws currently enforced in his country as well as consumer's rights toward the dealer arising from the sale contract.

Index