

# **ZTE AX320 WiMAX USB MODEM USER MANUAL**

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## 1. Introduction

### 1.1 Welcome to ZTE AX320 WiMAX USB MODEM

Thank you for choosing ZTE AX320 WiMAX USB MODEM (hereinafter referred to as **Modem**).

It is next generation mobile broadband that's designed to work as fast around town as it does at home. With Modem, 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 Modem has coverage.

Getting started with Modem is simple: no wires means no service calls. Just install FreshTel Internet Access software, connect your Modem to your computer, activate your Modem service.

To guarantee your Modem always in its best condition, please read this manual carefully and keep it for future use.

The pictures, symbols and contents in this manual are just for your reference. They might not be completely identical with your Modem. Please subject to the real object. ZTE operates a policy of continuous development and reserves the right to update and modify the technical specifications in this document at any time without prior notice.

### 1.2 Safety Warning and Notice

#### To the user

- Some electronic devices are susceptible to electromagnetic interference sent by Modem if inadequately shielded, such as electronic system of vehicles. Please consult the manufacturer of the device before using the Modem if necessary.
- Operating laptop and Modem may interfere with medical devices like hearing aids and pacemakers. Please always keep the Modem more than 20 centimeters away from such medical devices when they are in using. Power off Modem if it is necessary. Consult a physician or the manufacturer of the medical device before using the Modem.
- Be aware of the usage limitation when using a Modem at places such as oil warehouses or chemical factories, where there are explosive gases or explosive products being processed. Do not use Modem if necessary.
- Do not use Modem at gas station.
- The Modem contains sensitive electronic circuitry. Do not expose the Modem to any liquids, high temperatures or shock.
- Store the Modem out of the reach of small children. The Modem may cause injury if used as a toy.
- Only use original accessories or accessories that are authorized by the manufacturer. Using unauthorized accessories may affect your Modem's performance, damage your Modem and violate related national regulations.



- There are no user serviceable parts inside the Modem. Unauthorized dismantling or repair of the Modem will void the warranty.
- This Modem generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

#### Modem

- Avoid using the Modem near metallic structure device or establishment that can emit electromagnetic wave. Otherwise it may influence receiving of signals.
- Don't use the Modem immediately after a sudden temperature change e.g. from an air conditioned environment to high temperature and humidity outside. In such cases there could be condensing moisture inside the Modem which can cause internal damage. Unplug the Modem and leave it for 30 minutes before use.
- Take the Modem carefully. Don't drop, bend, knock or harshly treat it to avoid destructive damage.
- Do not attempt to disassemble the Modem by yourself. Changes and modifications made to the Modem without the approval of manufacturer could void your authority to operate this Modem.

#### In Aircraft

- Please power off the Modem before the airplane takes off. In order to protect airplane's communication system from interference, it is never allowed to use the Modem when it is in flight. Using it before the airplane taking off should get aircrew's permission according to safety regulations.

### 1.3 Cleaning and Maintenance

- The Modem is non-waterproof, please keep it dry and store in shady and cool place.
- Do not use or store the device in dusty or dirty areas, since its moving parts and electronic components can be damaged in such environment.
- If you want to clean your Modem, please use clean fabric that is a bit wet or anti-static. Do not use harsh chemical cleaning solvents or strong detergents to clean your Modem, such as alcohol, dilution agent and benzene. Power-off your Modem before you clean it.

### 1.4 Limited Warranty

The warranty does not apply to defects or errors in the product caused by:

- (a) Reasonable abrasion.
- (b) Misuse including mishandling, physical damage, improper installation, unauthorized disassembly of the product.
- (c) Water or any other liquid damage.
- (d) Any unauthorized repair or modification.



- (e) Power surges, lightning damage, fire, flood or other events outside ZTE's reasonable control.
- (f) Use of the product with any unauthorized third party products such as generic chargers.
- (g) Any other cause beyond the range of normal usage for products.

End User shall have no right to reject, return, or receive a refund for any product from ZTE under the above-mentioned situations.

This warranty is end user's sole remedy and ZTE's sole liability for defective or nonconforming items, and is in lieu of all other warranties, expressed, implied or statutory, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, unless otherwise required under the mandatory provisions of the law.

### 1.5 Limitation of Liability

ZTE shall not be liable for any loss of profits or indirect, special, incidental or consequential damages resulting from or arising out of or in connection with using this product, whether or not ZTE had been advised, knew or should have known the possibility of such damages.

### 1.6 Functions

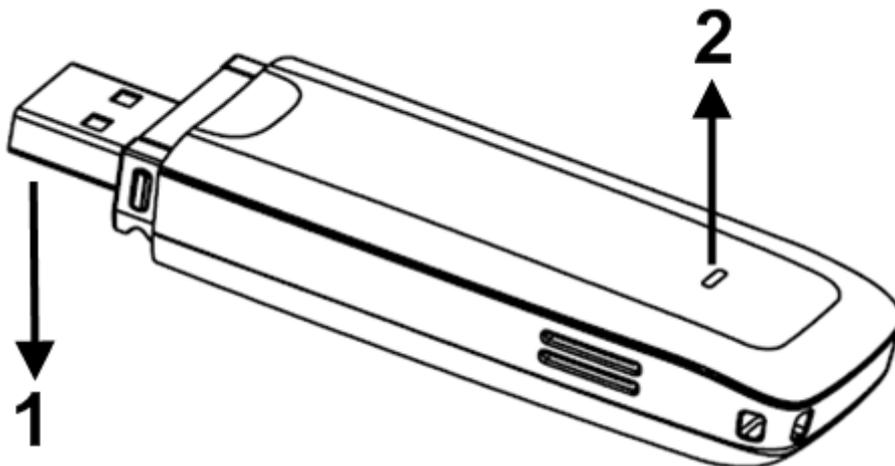
Functions: Data service, Connection management, etc.

### 1.7 Specification

Mode of Access	WiMAX (Worldwide Interoperability for Microwave Access)
WiMAX Protocol	802.16e (IEEE 802.16-2005)
Frequency Allocation	3400-3600MHz
Dimension (W*D*H)	86.7 mm x 27.4 mm x 13 mm
Weight	About 56 g

### 1.8 Appearance

1. USB Connector    2. Indicator Light



## 1.9 LED Indications

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

- ◆ **Green status light** – Solid Green indicates the Modem is powered and service is available. Flashing Green indicates data activity (send/receive).
- ◆ **Amber status light** – Flashing Amber indicates a transitional state (initialization, firmware updates, acquiring network).
- ◆ **Red status light** – Indicates a problem state (no network service available, other errors).

## 1.10 Working Condition

Working temperature: -10°C ~ +55°C [14°F ~ 131°F]

Working humidity: 5% ~ 95%

Storage temperature: -40°C ~ +70°C [-40°F ~ 158°F]

Storage humidity: 5% ~ 90%



## 2. Installing and Uninstalling the Modem

### 2.1 System Requirements

The system requirements provided here reflect only the standards required to install and run FreshTel Internet Access. Please see your Modem support documentation for additional specifications.

◆ Operating System:

Windows OS family (2000, 32 and 64 bit editions for 2003, XP, Vista & Win7)

MAC OS

Linux RedHat (RHEL, Fedora) Debian (Debian, Ubuntu)

◆ Ports: One available USB port.

◆ System Configuration:

Processor: 466 MHz or higher (1 GHz or higher recommended).

Hard Disk: 50 MB available disk space required.

RAM: 256 MB minimum (512 MB or higher recommended).

Storage: 50 MB available disk drive space (100 MB or more recommended).

### 2.2 Inserting the Modem

Insert the Modem as shown below:



When you insert the Modem into a computer for the first time, your system will detect the new hardware automatically.

### 2.3 Installing FreshTel Internet Access

FreshTel Internet Access has the following features:

- ◆ FreshTel Internet Access 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 FreshTel Internet Access from the system tray and then launch another connection manager program.
- ◆ To return to WiMAX service of Modem, turn off the other connection manager program and then launch FreshTel Internet Access.

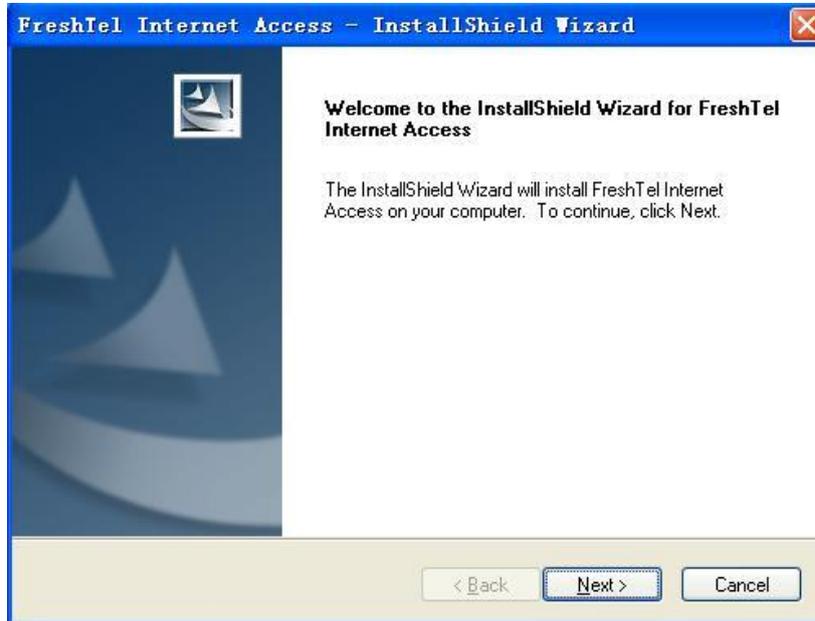
The following steps show customers how to install driver and FreshTel Internet Access for the Modem on Windows XP Operating System.

**Note: Please make sure that you have uninstalled the previous versions.**

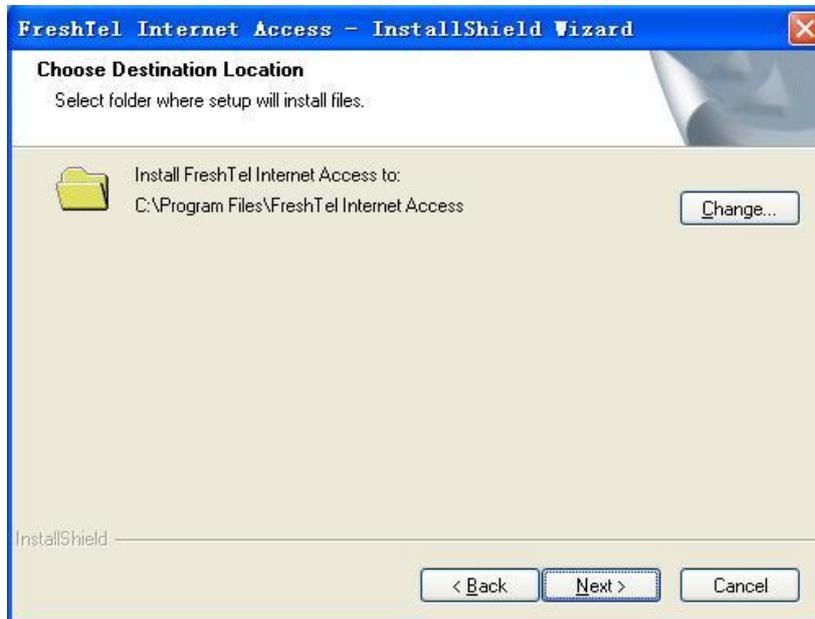


1) When you insert the Modem into your computer for the first time, the below screen should appear automatically, please click **Next** button.

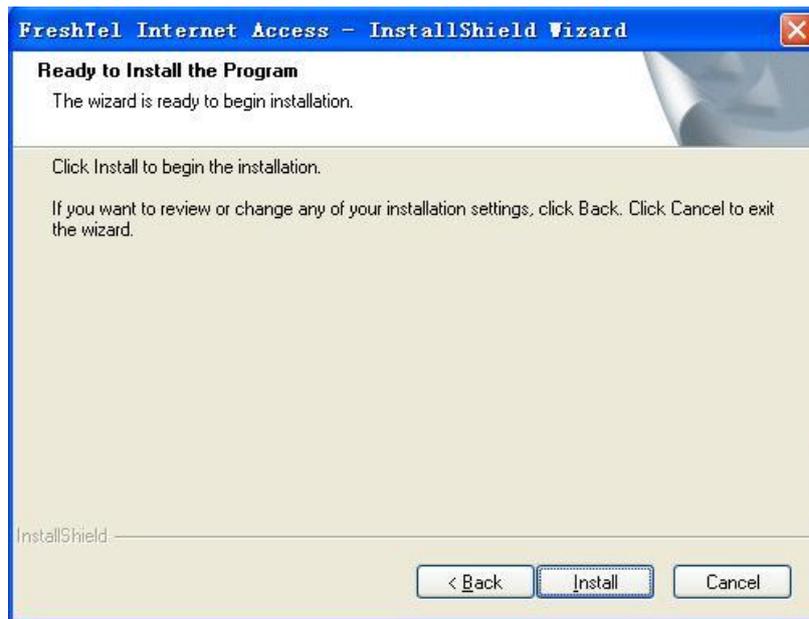
**Note: Some antivirus software and firewall software will prevent the CD-ROM Autorun. If the below screen does not appear automatically, you need to check the configuration of your computer and make sure that the CD Self-start function is turned on. If this question still exist, you can click My Computer and start the installation program by run the \*.exe from the ZTE\_WiMAX\_MODEM.**



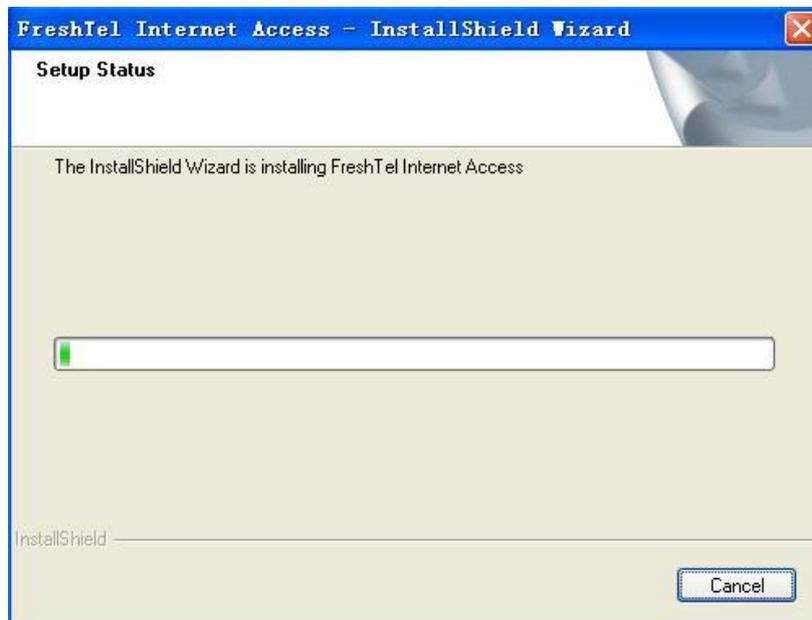
2) Click **Change** button to select destination folder and click **Next** button to go on.



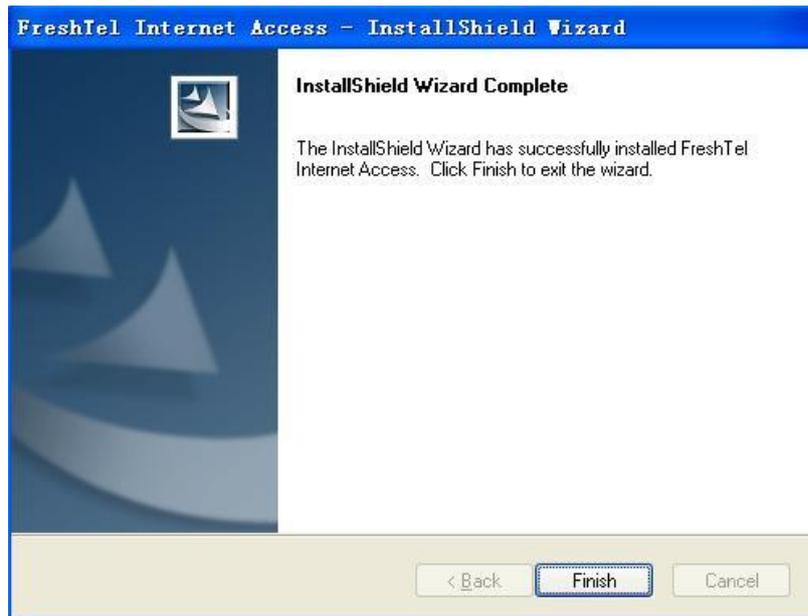
3) Click **Install** button to begin installation.



4) Install in progress.



5) Click **Finish** button to finish installation.



After the installation, a shortcut icon will be created on the desktop, and **FreshTel Internet Access** and **Uninstall FreshTel Internet Access** program groups will be in the computer **Start > Programs > FreshTel Internet Access** menu.

When you launch FreshTel Internet Access, the icon of **FreshTel Internet Access** shall be present in system tray during all time of its run. There are three options: **Open**, **Menu** and **Exit**, when you right click on this icon.

- ☐ **Open:** To activate the compact view of FreshTel Internet Access Interface.
- ☐ **Menu:** To activate the extended view of FreshTel Internet Access Interface.
- ☐ **Exit:** To terminate FreshTel Internet Access.

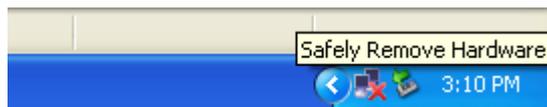
## 2.4 Removing the Modem Safely

To remove your Modem from the computer safely, please make sure that FreshTel Internet Access application has been closed. Please use the safe removal of hardware procedure. Improper operation will make the software drivers locked or corrupted.

Close the software application by clicking the close button then click **OK** to confirm.

### Safely remove the Modem

- ◆ E.g. in Windows XP, left click the icon on the Windows tray.
- ◆ Click on Safely Remove Hardware to shut down the drivers safely.



- ◆ Remove the Modem.

## 2.5 Uninstalling FreshTel Internet Access

Make sure FreshTel Internet Access is closed.



Right click on FreshTel Internet Access icon on the Windows tray. Click on **Exit** to confirm that you want to exit it.



Click **Start > (All) Programs > FreshTel Internet Access > Uninstall FreshTel Internet Access**.

Or Click **Start > Control Panel > Add or Remove Programs**, highlight **FreshTel Internet Access**, and click **Remove**.



Click **Yes** to confirm that you want to uninstall FreshTel Internet Access. After uninstalling, click **Finish** to complete



### 3. The compact view of FreshTel Internet Access Interface

#### 3.1 The compact view

FreshTel Internet Access Interface will appear in a compact view in down-right part of the screen as shown below.



You will browse the page [www.freshtel.ua](http://www.freshtel.ua), when you click Operator Logo .

You can click to the button **Menu**  for an extended view which consists of three tabs: Network, Settings and Information. For details see chapter 4. This compact view will hide when you click close  button.

The Modem/Connection status line, which shows **Modem not found** now, is above **Login/Password** field. **Login** and **Password** are for login setting which will be illuminated in next section.

**Connect** is used for connection in Internet with Modem.

**My account** in down-right part of window is to URL <http://portal.freshtel.ua> where an authorization including login and password the same as for internet access is to be passed.

#### 3.2 Login Settings

This compact mode will pop up after the installation of FreshTel Internet Access automatically. In the compact mode of FreshTel Internet Access Interface, you can input the **Login** and **Password**. For **Login** and **Password** please contact your operator. Checking the **Save login** and **password** checkbox will be convenient for your next login. The connection procedure is shown in next section. If **Autoconnect** option in **Setting** tab of extended view is checked before, **Connect** is disabled and the connection procedure will begin automatically.



### 3.3 Connection Status

**Modem not found:** The modem is not connected.



The screenshot shows a window titled 'FRESHTEL 4G' with a status message 'Modem not found'. It includes a 'Login:' field, a 'Password:' field, a checked 'Save login and password' checkbox, a 'Connect' button, and a 'My Account' link with a warning icon.

**Activating modem:** The modem is being searched.



The screenshot shows a window titled 'FRESHTEL 4G' with a status message 'Activating modem'. It includes a 'Login:' field, a 'Password:' field, a checked 'Save login and password' checkbox, a 'Connect' button, and a 'My Account' link with a warning icon.

**Modem connected:** The modem is found.



The screenshot shows a window titled 'FRESHTEL 4G' with a status message 'Modem connected'. It includes a 'Login:' field, a 'Password:' field, a checked 'Save login and password' checkbox, a 'Connect' button, and a 'My Account' link with a warning icon.

**Ready to connect:** When the modem search WiMAX network, **Ready to connect** is displayed. Input the **Login** and **Password**, click **Connect** to connect to WiMAX network.



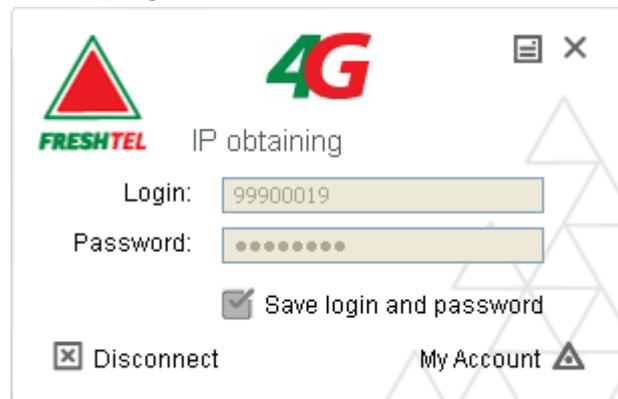
If **Autoconnect** option in **Setting** tab of extended view is set before, **Connect** is disabled and the connection procedure will begin automatically.



**Connecting:** The modem is establishing a connection to WiMAX network.



**IP obtaining:** Your modem is obtaining an IP-address.

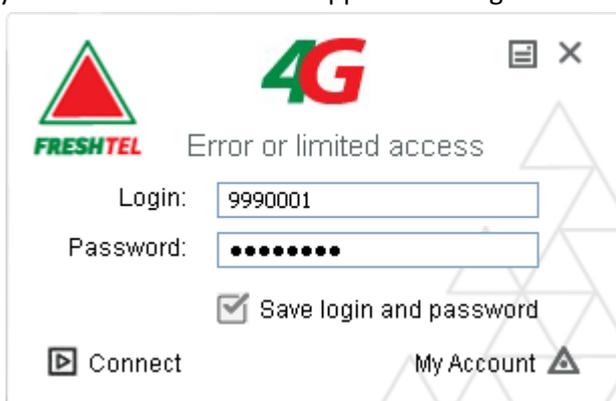


**Connected to FreshTel:** FreshTel Internet Access has connected to internet.



When the modem has connected, bars indicating the signal strength shall appear in the center area of the compact mode interface.

**Error or limited access:** This message will appear if you have entered wrong login or password, if don't have enough money to pay for services or an error happened during the connection process.



**No signal:** No signal is detected.



### 3.4 Disconnection Status

You can disconnect the Internet by clicking to **Disconnect** button.

**Disconnecting:** The modem is disconnecting from WiMAX network.





**Disconnected:** the Modem has disconnected from the WiMAX network.



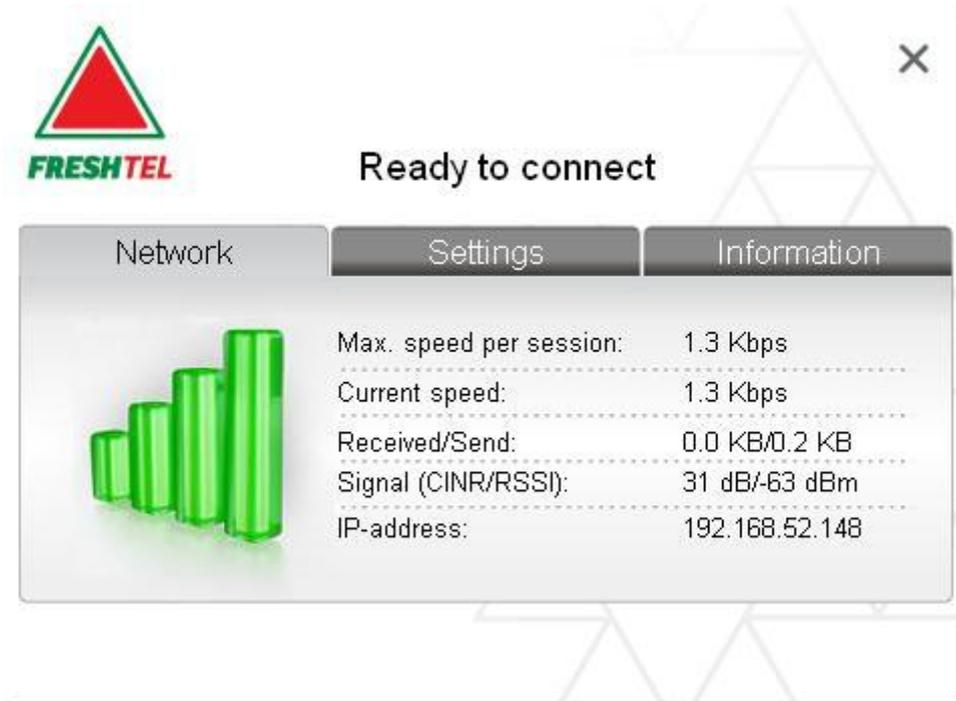
## 4. The extended view of FreshTel Internet Access Interface

### 4.1 The extended views

There are three tabs in extended views of FreshTel Internet Access Interface. Operator Logo is for browse URL [www.freshtel.ua](http://www.freshtel.ua). The Modem/Connection status line lies above three tabs, which indicates the current state of the Modem and Connection. Button Close is for hiding this view while the compact view remains.

### Network

The basic indices of network status, such as Max. speed per session, Current speed, Received/Send, Signal (CINR/RSSI) and IP-address, are shown. The signal strength bars are displayed in the left part of current window.



Indices are explicated in the Table 1 below.

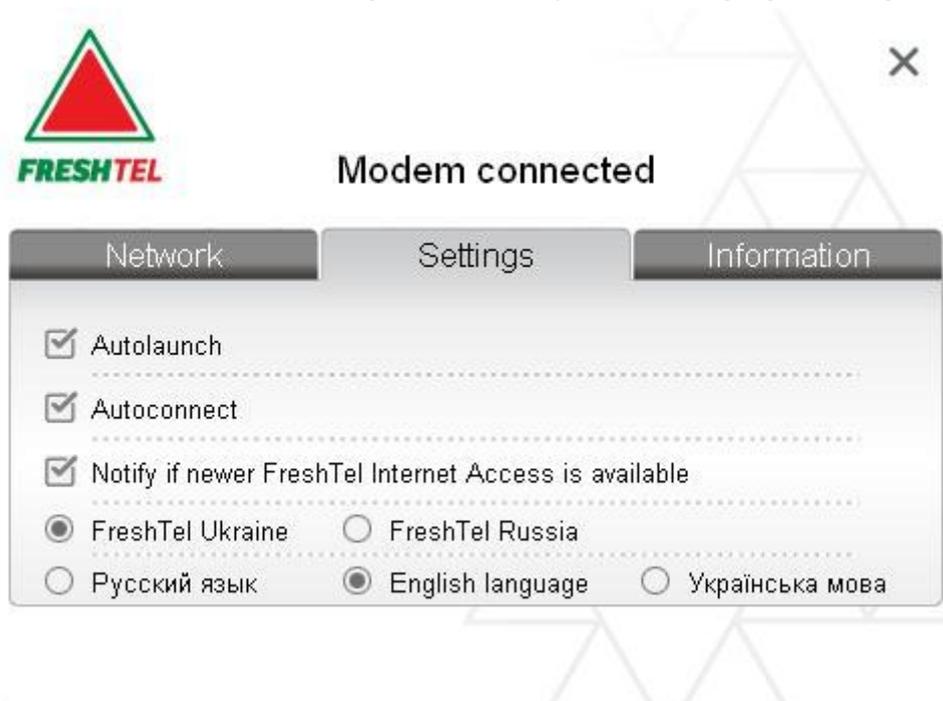
Table 1

1	<b>Operator Logo</b>	When clicked, should browse to <a href="http://www.freshtel.ua">www.freshtel.ua</a>
2	<b>Max. Speed per session</b>	Maximum Internet Speed in current session
3	<b>Current speed</b>	Connection Speed
4	<b>Received/Send</b>	Mbytes Received/Sent in current session
5	<b>Signal (CINR/RSSI)</b>	Signal CINR/RSSI parameters
5	<b>IP-address</b>	WAN IP address

### Settings

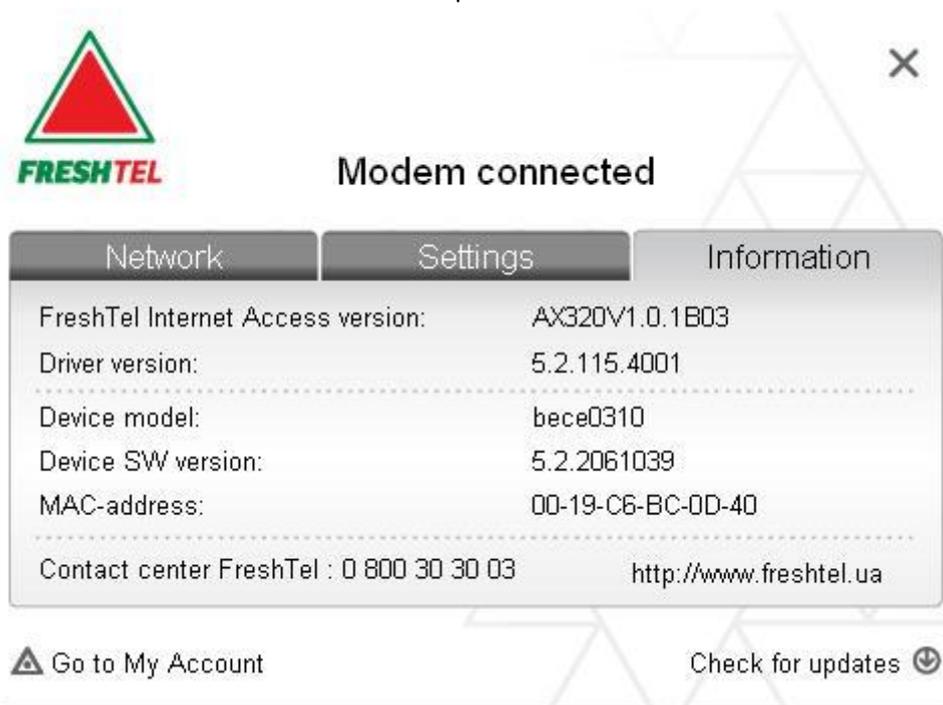
You can define the ways of launch and connection in this tab by checking **Autolaunch** and **Autoconnect**. FreshTel Internet Access will launch with OS automatically and connect to the network after that immediately when they are checked. **Notify if newer Freshtel Internet Access is available** checkbox

enables the updates procedure for regular updates. There are three Interface Language selection option boxes at the bottom of current tab. You can select your language from Ukrainian, English and Russian. All messages in user interface shall be changed immediately once the language is changed.



## Information

In this tab, information about FreshTel Internet Access can be achieved. They are FreshTel Internet Access version, Driver version, Device model, Device SW version and MAC-address. You'll get the contact center FreshTel and operator URL <http://www.freshtel.ua> is at the bottom. **Go to My account** in down-left part of window is to URL <http://portal.freshtel.ua> where an authorization including login and password the same as for internet access is to be passed. **Check for updates** button will pop-up a **Check For Updates Window** of which functions will be explained in the next section.



## 4.2 Updating FreshTel Internet Access

You can update FreshTel Internet Access version by two different types – regular and critical.

1. The regular update is chosen by checking **Notify if newer FreshTel Internet Access is available** in **Setting** tab of the extended views. This procedure shall check available update each time when connected to the Internet.
2. The critical update shall be processed in any case by checking **Check for updates** at **Information** tab of the extended views.

If a new version of software is available, the following display will popup. Click **Open** to download the new version of software and install the new software.



If the software you have installed is new, the following display will popup.



## 5. FAQs

When you meet the following problems in service, please refer to the following answers to solve it. If the problems still exist, please contact with network operator.

Problem Description	Possible Causes	Problem Solving
The installation program can not run automatically.	The system configuration is not suitable for the auto-run.	Run the autorun.exe program. If you have installed the other version of installation program please uninstall it firstly.
After restarted the computer, there is no signal all the time.	1. You are in the place where no WiMAX network covered, such as underground parking lot, tunnel etc.	Move to the place that has good signal.
	2. The Modem isn't connected well.	Pull out and insert the Modem safely again.
When the Modem is being inserted, the computer can not find it.	1. The installation programs of the Modem haven't been installed properly.	Run the installation program first and then connect the Modem. If you use the Windows XP operating system, install the drivers according to the Windows indication information to operate.
	2. The Modem isn't connected well.	Restart the computer, or connect the Modem again.
Data connection failed.	1. You are in the place where no WiMAX network covered, such as underground parking lot, tunnel etc.	Move to the place that has good signal.
	2. The network is busy now.	Try again later.
	3. The manual authentication setting is error.	Please contact your operator.
FreshTel Internet Access Interface shows incompletely.	The computer property settings are not correct.	Right-click the blank space on the desktop, access <b>Properties-&gt;Settings-&gt;Advanced</b> -> <b>General</b> interface, select <b>Normal size</b> in the <b>DPI settings</b> selection.

