1 USB Modem Introduction

1.1 Introduction

Thank you for choosing the ZTE MF668 USB modem. Please read this manual carefully and keep it for future reference.

The pictures, symbols and contents in this manual are for reference only. They are correct at the time of publication but might not be completely identical with your modem. We operate a policy of continuous development. We reserve the right to update the technical specifications in this document at any time without prior notice.

The HSPA+ modem is a multi-mode 3G high speed modem suitable for GSM/GPRS/WCDMA/EDGE/HSDPA/HSPA+ networks. It uses the USB 2.0 standard interface for easy connection to any laptop or desktop computer. It is compatible with 2G and 3G mobile networks, allowing connection with wireless data and SMS services to give you high speed data access wherever you are.

1.2 Safety Warning and Notice

To the owner
- Some electronic devices are susceptible to electromagnetic interference. The modem is a transmitting device and may cause interference to sensitive electronic equipment such as audio systems, vehicle systems and medical equipment. Please consult the manufacturer of the other device before using the modem.
- Operating of a laptop or desktop computer with the modem may interfere with medical devices like hearing aids and pacemakers. Please keep the modem more than 20 centimetres away from such medical devices. Turn the modem off if necessary. Consult a physician or the manufacturer of the medical device before using the modem near such devices.
- Be aware of the regulations when using the modem at places such as oil warehouses or chemical factories, where there are explosive gases or explosive products being processed. Turn off your modem as instructed.
- Don't touch the antenna area unnecessarily while connected. This can affect your modem performance and reduce the signal quality.
- Store the modem out of the reach of children. The modem may cause injury or get damaged.
- The modem contains sensitive electronic circuitry. Do not expose the modem to any liquids, high temperatures or shock.
- 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.
- Avoid using the modem in areas that emit electromagnetic waves, or in enclosed metallic structures (eg. elevators).
- The modem is not waterproof. Please keep it dry and store it in a cool, dry place.
- Don't use the modem immediately after a sudden temperature change (eg. 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.
- Always handle the modem with care. Be careful not to drop or bend the modem.
- There are no user serviceable parts inside the modem. Unauthorised dismantling or repair of the modem will void the warranty.

1.3 RF Safety Information

The USB Wireless modem is a transmitting device with similar output power to a mobile phone. It uses an internal antenna to connect to the mobile network. To get the best performance from your device, do not cover or shield the device in any way as this will lead to increased output power. Always leave a clear space around the device to allow the transmit and receive signals to propagate. It is not intended to be used as a handheld or body worn device but the SAR tests have been completed and exceed Canadian and US regulatory requirements.

Radio Frequency Energy

Your handset is a low-power radio transmitter and receiver. When switched on it intermittently transmits radio frequency (RF) energy (radio waves). The transmit power level is optimized for best performance and automatically reduces when there is good quality reception. Maximum power is only used at the edge of network coverage so under most circumstances the power output is very low. Under poor network conditions the phone will transmit at a higher power, may get hot and will have a significantly shorter battery life.

Declaration of Conformity

THIS MODEL PHONE MEETS THE GOVERNMENT'S REQUIREMENTS FOR EXPOSURE TO RADIO WAVES.

Your wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. *Tests for SAR are conducted using standard operating positions accepted by the FCC with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to wireless base station antenna, the lower the power output.

Before a phone model is available for sale to the public in the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government-adopted requirement for safe exposure. The tests are performed in positions and locations as required by the FCC for each model.

The highest SAR values, as reported to the FCC for this model phone when worn on the body, are 0.959W/kg for Cellular 850MHz and 1.02W/kg for PCS 1900MHz. (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements.)

While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement. For body-worn operation, this model has been tested and meets the FCC RF exposure guidelines when used with the ZTE accessories supplied or designated for this product. Use of other accessories may not

ensure compliance with FCC RF exposure guidelines. While there may be differences between the SAR levels of various phones and at various positions. In all cases, products are designed to be within the guidelines.

FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications & Internet Association (CTIA) web site: http://www.phonefacts.net or the Canadian Wireless Telecommunications Association (CWTA) web site: http://www.cwta.ca.

In the United States and Canada, the SAR limit for mobile phones used by the public is 1.6watts/kg (w/kg) average over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

1.4 System Requirements

The USB Modem supports any PC or MAC system using the USB 2.0 interface and operating systems listed below:

Operating System: Windows 2000 / XP / Vista, 7 and MAC OS X 10.4 and above

Recommended Configuration:
    CPU   PowerPC or Intel (500MHz or above)
    Hard Disk   20MB or above available
    RAM   128M or above

The performance of the modem may be reduced if the configuration is below the recommended requirement.

1.5 Technical Specifications

Networks	HSPA+/HSUPA/HSDPA/UMTS/GSM/GPRS/EDGE
Frequency Bands	HSPA+/HSUPA/HSDPA/UMTS 850/1900/2100 MHz
	GSM/GPRS/EDGE 850/900/1800/1900 MHz
Dimensions	77mm x 28mm x 12mm
Weight	Approx. 30g
Data Rate	HSPA+ Mode up to 21Mbps
	HSUPA Mode up to 5.76Mbps
	HSDPA Mode up to 7.2Mbps
	UMTS Mode up to 384 Kbps
	EDGE Mode up to 236.8Kbps
	GPRS Mode up to 57.6Kbps
Working Voltage	5V
Current Consumption	Resting 100mA rms Max: 450mA rms

| Maximum Emitted Power	3G Mode: 250mW 2G Mode: 2W
Interface Type	USB Standard (2.0)
Supported Systems	Compatible with PC and MacOS as listed
Functions	SMS service, data service, internet, applied management, supports MicroSD
MicroSD Capacity	Up to 8GB
Operating Range	-10ºC to +55ºC

2 Installation

2.1 Unpacking

Check the following articles are in the package: Modem, USB Extension cable, Quick Start Guide and User Manual.

2.2 Software Installation

2.2.1 Insert the SIM Card into the Modem

The SIM card is the Subscriber Interface Module provided by your Service Provider. Before using the modem make sure the SIM card supports data services. Insert the SIM card as shown with the gold contacts facing down and the beveled edge facing outwards of the device. **Push the SIM card in as far as it will go**.
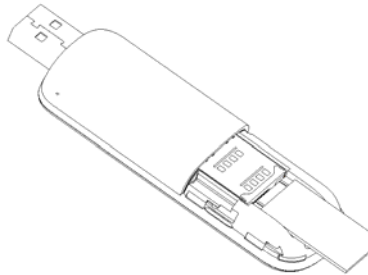
2.2.2 Connecting the Modem and computer

Before connecting the modem for the first time, uninstall all previous versions of the software and reboot the computer.

Insert the modem into an available port on your computer. Alternatively, you may use the supplied USB cable to connect the modem to the computer. In most cases the single cable should suffice. However, to increase the power delivered to the modem, use the double USB cable if required

2.2.3 First Time Software Installation

1. Uninstall all previous versions of the USB Modem software and restart the computer
2. The installation program should launch automatically. If this feature is disabled on your computer, double click the **Rogers Connection Manager** CD drive that appears on your desktop and select **Rogers Connection Manager**.
3. Press **Continue** on the welcome page.
4. Select a destination to install the software on the volume **Macintosh HD**, and then click **Continue**.
5. Select Installation Type and then click **Install**.
6. Please enter user name and password to be authenticated, and left click **OK** to install.
7. Click **Continue Installation** and make sure that installing requires restarting the computer.
8. Left click **Restart** to restart the computer and finish software installation.

Notes:
- If you have problems with the installation after the operations above, please contact your service provider for help.

- After the installation, select **Finder > Applications** and there will be a **Rogers Connection Manager** program listed. The Wireless Data Card is ready to work normally.

2.3 Using your Modem

Insert your modem into an available USB port on your computer. Your computer will launch the Connection Manager application automatically. The modem will initialize and the main user interface will appear. If the application does not launch, double click **Finder > Applications > Rogers Connection Manager** to run the software.

2.4 LED Indicator

LED Indicator	USB Modem Working Status
Yellow	Power on. Not registered on the 2G or 3G network
Green Solid	Registered on the 2G network.
Green blinking	Active data transfer on the 2G network
Blue solid	Registered on the 3G network.
Blue blinking	Active data transfer on the 3G network.
Red solid	Roaming status or no SIM card
Red blinking	Active data transfer in roaming status

2.5 Removing the Modem Safely

Please close the application software first and then pull out the modem or USB cable.

2.6 Uninstalling the Software

If you need to uninstall the software, close the application first and then select **Finder > Applications > Rogers Connection Manager**.   Select **Move to Trash** in the right click menu of **Rogers Connection Manager** on the computer.

You need to restart your computer if you wish to re-install the software.

3 Functions & Operation

3.1 Main Interface

The Mac PC interface comprises three parts: Function Buttons, System Information Bar, and User Information area.
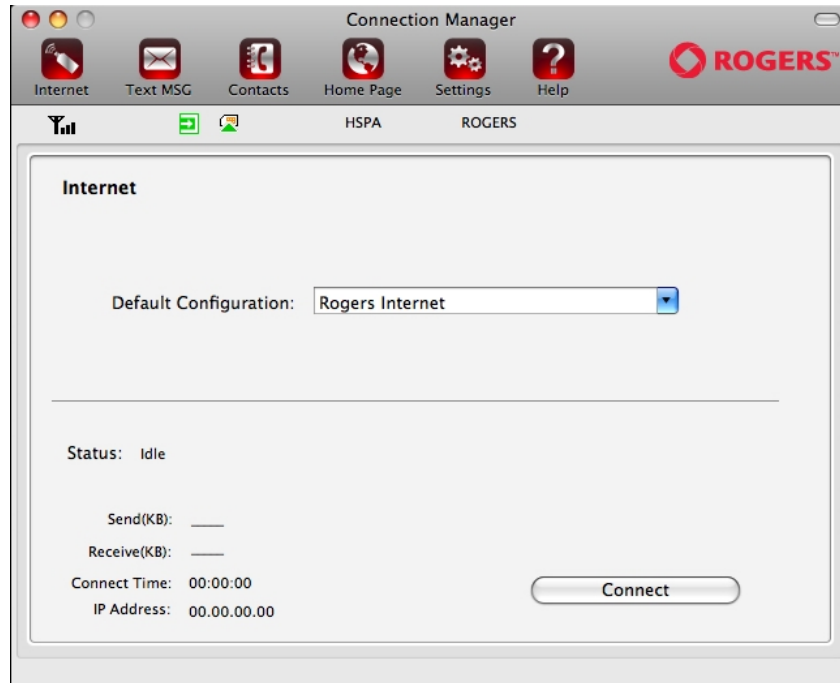
Function Buttons
Use the Function buttons to carry out the corresponding operations:

	Connects to the internet		Messages Interface
	View your Contacts		Opens the Rogers Home Page
	Change system settings		View the Help file

System Information Bar
Use the System Information Bar to monitor your network and modem status:

Y..ıll	Shows network signal strength		Modem Connected
	New SMS message in your Inbox		Modem disconnected
R	SIM card is roaming		SIM card inserted
HSPA	Current network type: EDGE, GPRS, HSPA or HSPA+		SIM card not inserted
Rogers	Name of your service provider		

User Area
This section shows user information such as the time connected and data usage.

3.3 Connecting to the Internet

Once you are connected you can browse web pages and access the Internet through the modem. You can also receive Text Messages while surfing the Internet.

Connect to the Internet

Click the **Internet** button and then click **Connect** to establish a connection to the internet.

Connect

The card requires a few seconds to verify your connection. The data amount, time connected, etc. are displayed in the main window. You can access the Internet and receive email by launching your usual applications (Browser or Mail software).

Disconnect from the Internet
When you are connected to the internet the **Connect** button changes to **Disconnect.** Click **Disconnect** to end your session.

Disconnect

3.4 Text Messages

Click the **Text Message** icon to use access the messaging interface.

Inbox: Stores the received text messages.
Sent Items: Stores the successfully sent text messages.
Draft: Saves any text messages not sent. The drafts can only be saved on the computer.
New: Compose a new message.

Notes:
Different SIM cards have different capacities. For more information, please consult your service provider.

3.4.1 Read Text Messages

Click the **Inbox** button to read the messages saved in the box. You can use the buttons under the menu to Create New, Reply, Forward, Delete and Save.

3.4.2 Create New Message

- Click **New** and enter the recipient's number.
- The recipient's number can be entered directly or by selecting entries from your **Contacts**.
- Use a semicolon (;) to separate multiple recipients.
- Click into the text field to enter your message.
- The Text Message content can be up to 160 characters long, including symbols. Messages longer than the maximum length will be divided into 160 character messages and sent separately to the recipient.

- Click **Send** to send the message.
- After the message has been sent successfully, the Text Message will be saved in the Sent Items. If it fails to send it will be saved in the Draft box.

Send Text Messages while browsing the web
You can send Text Messages when surfing on the Internet if your network operator supports this functionality.

3.4.3 Text Message Interface Guide

Enter **Inbox**, **Sent Items**, or **Drafts** to use the tabs at the bottom of the window:

Delete: Delete the selected Text Message
Reply: Reply to the selected Text Message
Edit: Modify the message and/or forward to other recipients.
SaveTo: Save a copy of the message to the SIM or computer
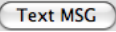
Notes
- New messages cannot be received when the SIM card is full (Different SIM cards have different capacities).
- The system will indicate if the SIM inbox is full. Messages cannot be saved until some are deleted by the user.
- New Text Messages will be saved to the SIM or computer based on the setting in **Text Message Storage Location** on the main messaging interface.

3.5 Contacts

Click the **Contacts** icon to switch to the **Contacts** interface. Contact information can be saved on the computer or SIM card. Each record includes Name, Mobile, Tel 1, Tel 2, Email and Group name.

- **Create a new contact:** Click **+** below the contact area, enter the contact information and select **OK** to finish.
- **Create a new group:** Click **+** below the group area. A new group will appear in the group list. Double-click on the group to edit the name.

If a contact is selected, you can carry out the following additional steps using the buttons at the bottom of the screen:
- **—** Delete selected records.
- **E** Edit the information of the selected record.
- **CopyTo** Copy the records between groups or from the computer to the SIM card.
- **Text MSG** Send a text message to the mobile phone numbers in the selected records.

3.5.1 Searching Records
In the search bar you can key in any part of the record characters or a phone number and the corresponding records will be displayed. Scroll to the record you want to view in detail. Click **E** to edit the information.

3.6 Home Page

The Home Page icon launches your default internet browser and directs you to the Rogers Home Page.

3.7 Settings

Click the **Settings** icon to switch to the settings interface.

Note:
Normally there is no need to change any of these settings as they are pre-configured for your network. If you change networks or are roaming you may need to modify some settings. Consult your service provider for more information.

3.7.1 Security Settings

Enable the PIN Code
You can enable a PIN code using the **PIN enable** feature. When enabled you need to enter your PIN to start the modem. The PIN code is stored on the SIM card. Consult your service provider for more information or if you forget your PIN. Click **Revise PIN** to modify the number.

3.7.2 Network Settings

Automatic: The modem selects the network automatically according to predefined configuration rules and network status (set by your service provider).
Manual: User selects network settings.

3.7.3 Check for Updates

The **Check for Updates** button will direct you to a Rogers webpage where you can check the status of your software version and upgrade if necessary.

3.8 Help

Click the **Help** icon to switch to help interface.

4 Declaration of RoHS Compliance

To minimize the impact of our electronic devices in the global environment and take more responsibility and accountability in the growth of the mobile industry, this document shall serve as formal declaration that the manufactured by ZTE CORPORATION is in compliance with the Directive 2002/95/EC of the European Parliament - RoHS (Restriction of Hazardous Substances) with respect to the following substances:

(1)Lead (Pb)
(2)Mercury (Hg)
(3)Cadmium (Cd)
(4)Hexavalent Chromium (Cr (VI))
(5)Polybrominated biphenyls (PBB's)
(6)Polybrominated diphenyl ethers (PBDE's)

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