

ZTE USB Modem
User Manual

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1 Modem Introduction

1.1 Introduction

Thank you for using ZTE USB Modem.

To guarantee the modem always in its best condition, please read this manual carefully and keep it for further use.

The pictures, symbols and contents in this manual are just for your reference. They 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 ZTE USB Modem is a type of multi-mode, 3G modem, suitable for GSM/GPRS/WCDMA/EDGE/HSDPA network. It adopts USB interface which provides an easy interface to laptop and desktop PC. With the GSM/ GPRS/ EDGE/ UMTS/ HSDPA mobile network, it can help you carry out SMS, data service and will help you break away from the limit of time and zone, and realize wireless communication at any moment everywhere.

1.2 Warning and Notice

To the owner

- n** 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.
- n** Operating of laptop and desktop PC and modem may interfere with medical devices like hearing aids and pacemakers. Please always keep them more than 20 centimeters away from such medical devices when they are turned on. Turn the modem off if necessary. Consult a physician or the manufacturer of the medical device before using the modem.
- n** 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. Therefore, turn off your modem if required.

- n Don't touch the inner antenna area if not necessary. Otherwise it will affect your modem's performance.
- n Store the modem out of the reach of little children. The modem may cause injury if used as a toy.

Modem

- n Please use original accessories or accessories that are authorized. Using any unauthorized accessories may affect your modem's performance, and violate related national regulations about telecom terminals.
- n Avoid using the modem near metallic structure device or establishment that can emit electromagnetic wave. Otherwise it may influence receiving signals.
- n The modem is non-waterproof type, please keep it dry and store in shady and cool place.
- n Don't use the modem immediately after a sudden temperature change. In such case, it will produce dew inside and outside the modem, so don't use it until it becomes dry.
- n Take the modem carefully. Don't lose, bend or cause it struck. Otherwise it will lead to destruct damage.
- n No dismantling by non-professional and only qualified maintainer can undertake repair work.

1.3 Applicability Scope

ZTE USB Modem supports the present mainstream types of laptops and desktop PCs, such as HP, IBM, Toshiba, Lenovo, Dell, Founder, etc.

1.4 System requirements

Operating System:

Windows 2000(SP4) / XP(SP2/3) / Vista SP1

Configuration (Recommended):

CPU 500MHz Pentium or above

Hard Disk 30M or above
RAM 128M or above

The performance of the modem may be influenced if configuration is under the recommended requirement.

1.5 Functions

Functions: SMS service, data service, applied management, data concurrence, support MicroSD card, etc.

1.6 Notification of private information

Security features protect you from illegal use of your Modem and SIM card.

- n **SIM password:** The SIM password (PIN 1 code) can prevent your SIM card from illegal use. Select **ON/OFF** to enable or disable the SIM password protection; select **Change PIN 1** to set a new PIN 1 code.

Note: Three consecutive incorrect PIN 1 code entries will lock the SIM card. Then, the PUK code is needed to unlock the SIM card. The PIN 1 code and the PUK code may be provided to you together with the SIM card. If not, please contact with your network service provider. Please change it with your own private password as soon as possible.

- n **Network call bar:** You can set any combination of the following call restriction options to improve security level. Please contact with the network service provider for detailed use. The network service provider provides a 4-digit network password to enable your call restrictions.
 - Ø **International calls:** Bar all international calls.
 - Ø **All except home:** Bar international calls except local call.
 - Ø **Incoming calls:** Bar all incoming calls.
 - Ø **Incoming if abroad:** Bar all incoming calls when roaming abroad.
 - Ø **Outgoing calls:** Bar all outgoing calls.

After choosing one of the above options, choose

Select to restrict any of the following services:

- | **All services:** Restrict incoming calls, voice calls and short messages.
- | **Voice calls:** Restrict voice calls only.
- | **Data:** Restrict data only.
- | **Fax:** Restrict faxes only.
- | **Messages:** Restrict short messages only.
- | **All except messages:** Restrict all services except short messages.

After select one type of restriction services, the following can be chosen:

- | **Activate:** The restriction is functional.
 - | **Deactivate:** Delete the restriction.
 - | **Checking availability:** Check the current status of the restriction service.
- ∅ **Cancel all:** Select **Cancel all** to cancel all call restrictions setting.

Note: You need to input the network password to set or cancel network restrictions. Three consecutive incorrect password entries will lock the call restrictions service. Please contact network service provider to unlock it.

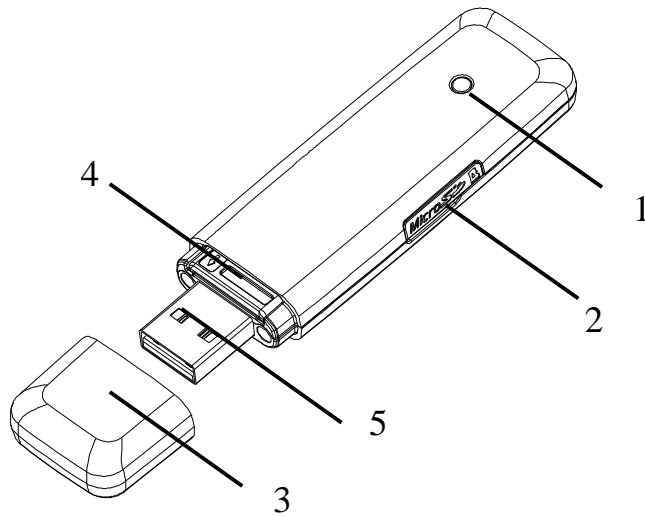
1.6 Specification

Interface Type	USB 2.0 high speed
Systems supported	Supports most types of laptop and desktop PC.
Operating systems supported	Windows 2000, XP SP2, Vista Apple MAC OS X 10.3, 10.4, 10.5
Functions	SMS service, Data service, Applications management, Data concurrent, support MicroSD card, etc.
Network Standards	HSDPA/UMTS/EDGE/GPRS/GSM
Transmission	UMTS: 384Kbps UL
	HSDPA: 3.6Mbps DL

Temperature	Storage: -20°C ~ +65°C
	Operation: -10°C ~ +55°C
Dimension	84.8×25.0×10.9mm
Weight	About 21.5g
T-Flash Capability	Support up to 4G microSD

2 Installation

2.1 Outline and Part Introduction



① Indicator

It indicates your modem status.

② Memory card slot (MicroSD card)

It is where you insert memory card (MicroSD card).

③ Modem cap

It helps your modem USB port when it is not used.

④ SIM/USIM card slot

It is where you insert the subscriber identity module/UMTS subscriber identity module (SIM/USIM) card

⑤ USB port

Connect your modem to the laptop or desktop computer.

2.2 Software Installation


The system will automatically detect and recognize the new hardware and display the new icon in the desktop status bar, indicating that the computer and the USB Modem have been connected properly. After a few seconds, the system will launch the installation automatically.

The following steps show the installation process.

- Click on the drop-down button to choose the setup language, and click **“OK”**.
- Click **“Next”** to continue.
- Read the agreement carefully. If you agree, choose **“I accept the terms of the license agreement”**, and then click **“Next”**.
- Select the folder that you want to install the software, and you can select a different location by pressing **“Change”**, then click **“Next”**.
- Wait a minute and click **“Finish”** to complete the installation.

Note: If the system does not launch installation automatically, you can run the installation program in path of My Computer → ZTEMODEM → Install.exe. If you have problems with installation after the upper operation, please contact you're your service provider.

After the installation, select the “Start → Programs” and there will be a “ZTE Join Air” program group, which includes “Join Air”

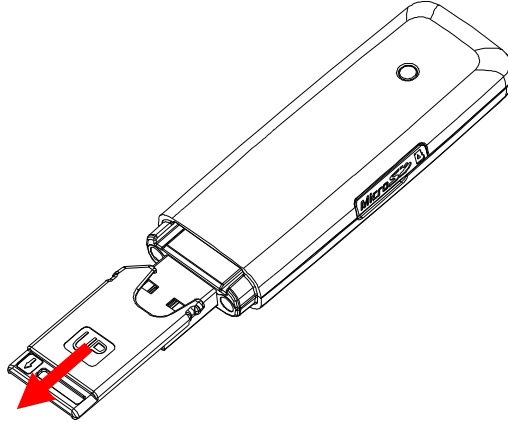
and “Uninstall”. There will be a Shortcut icon  on the desktop.

2.3 Hardware Installation

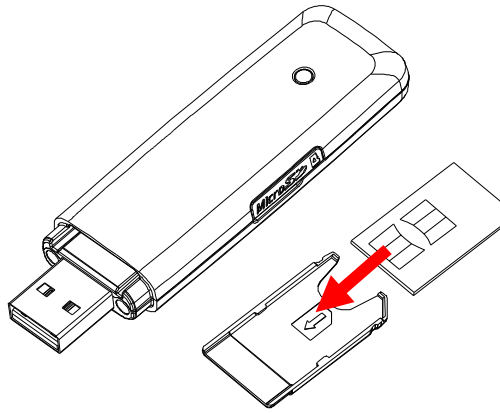
1) Insert the SIM/USIM card into the USB modem

To install SIM/USIM card

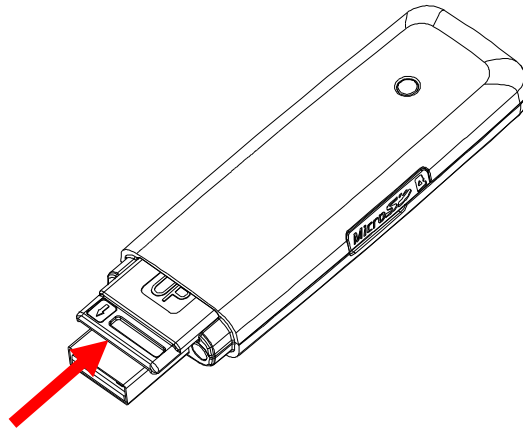
- I First take down the modem cap, then the USB connector is visible.
- I Pull the plastic socket above the USB connector out.



- I Then insert the SIM/USIM card into the socket, here make sure that metal contact area facing to the modem.

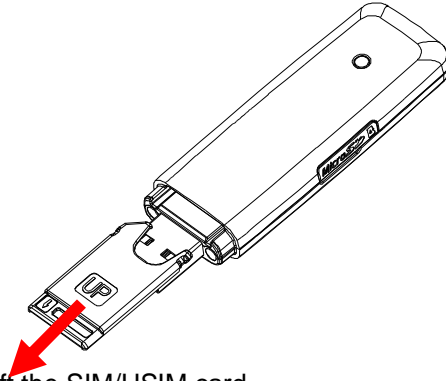


- I Insert the plastic socket into the modem. You can hear a click when the SIM/USIM card locks into place.

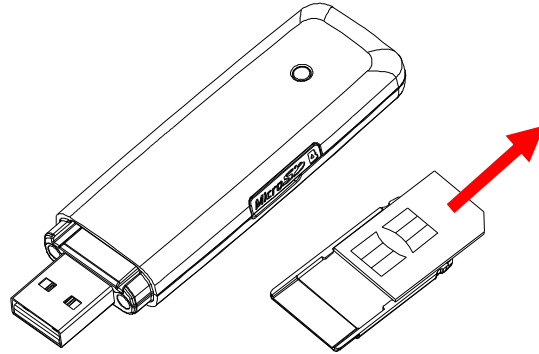


- To Remove the SIM/USIM card from the USB modem
- I First take down the modem cap.

- I Pull the plastic socket slightly, and you can hear a click when the SIM/USIM card gets unlocked.

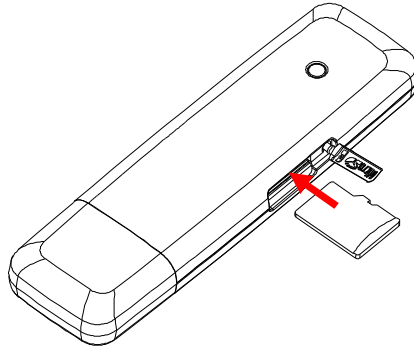


- I Take off the SIM/USIM card.



2) Install the microSD card into the USB modem:

Install microSD card in the USB modem, if you want to use it. Insert the microSD into the microSD slot from the side of the modem, the following picture indicates the correct inserting direction.



The driver of the microSD card will be installed automatically when the modem driver is installed.


3) Connect the USB modem to your PC:


1 Plug the USB modem into your computer's USB port and ensure that it is tightly inserted.

The OS automatically detects and recognizes new hardware and starts the installation wizard.

2.4 Run the Application Software

After the modem is correctly connected, click the "Start → Programs → ZTE Join Air → Join Air" menu on the laptop or desktop PC to run the application software.

Or double click the shortcut icon  to run the application software.


After the modem is initialized, the standby icon  appears in the taskbar, the modem can work properly. Double click it to pop up the main interface.

2.5 Hardware Uninstall

Close the software application then remove the hardware following the procedure below.

- Firstly click the “close” menu, and then click “OK” to close the software.
- Now you can safely remove your USB Modem.

When you use a MicroSD card in the modem:

- please left click the icon  in the Windows system tray bar. A pop-up menu indicates the USB devices list.
- Select “Safely remove the USB disk” which is relevant to the MicroSD card.

Pull off the USB cable directly, if you want to disconnect the modem from the laptop and desktop PC.

2.6 Software Uninstall

Close the application program before the software uninstalls.

Click “Start → Programs →ZTE Join Air →Uninstall” menu on the laptop or desktop PC. And follow the system prompts to complete the application software uninstall.

- Click “**Yes**” to confirm uninstall of the software.
- Click “**Yes**” according to the indication, then the system begins to uninstall programs.
- Wait a minute and click “**Finish**” to complete the application software uninstall.

3 Functions & Operation



3.1 Interface introduction

3.1.1 Main Interface

The whole interface is divided into four parts. Related functions can be executed by operation in the related areas.

1. System information area:

Show the system status and different kinds of tips.

Icon	Explanations
	The icon indicates the network signal intensity. There are 6 stages from none to the strongest.
	The icon indicates the current network type, i.e. EDGE or GPRS, HSPA service.

2. Internet information area:

This area indicates the name of the current service providers, device condition and connection information.

3. Functional button area:

There will show various function button icons. Select different function button and it will carry out corresponding operation.



SMS: Send SMS or read SMS.




Phonebook: Save and view the different information of the contacts.



Settings: Set normal relative information for the modem.



Data Record: Show connection information.

 **Connect:** Connect to the Internet.

4. Main menu button area:

Click on the drop-down button, and select the following menu:

Log: The records of software operation.

Diagnostics: Show you the hardware information, operational information and network settings.

Help: Enter the USB modem software help.

3.1.2 Description of Mini Icons

When click the mini button, the software will minimize as an icon on the system taskbar. If connected to the Internet, the minimized software won't influence the download of data or receiving SMS. When the application window is minimized, the system icons will display on the taskbar. Double click the icon to resize the display.

1. Taskbar Icons Description:



The USB Modem is ready to connect to Internet.



The Internet is already connected.

2. The uses of Tray Icons:

Right click the tray icon to popup the operation menu:

Log: The records of software operation.


Diagnostics: Show you the hardware information, operational information and network settings.

Help: Enter the USB modem software help.

Exit: Close the software and stop the modem from working.

3.2 Connecting Internet

You can browse web pages after you have accessed to Internet with the help of modem, you can also receive SMS when surfing in the Internet.


Click the “**Connect**” button . Then the system will research available network automatically. You can click “**Cancel**” button to cancel connection.

When connected, the internet information area will show data amount, connected time, and active IE browser. Then you can access internet and receive email etc through network.

You can click “**Disconnect**” button to stop the connection when the “**Connect**” button becomes “**Disconnect**” button.

3.3 SMS

Note: To ensure that the SMS can be used properly, at first, you should setup the correct SMS center number. Refer to section “**3.5.4 SMS Settings**”.

Click the “**SMS**” icon  to switch to the SMS interface and it will show the number of messages in the inbox, sentbox and draftbox of PC and SIM/USIM card. The user can click icons of “**Inbox**”, “**Sentbox**”, “**Draftbox**” to enter relative interface.

Inbox: Save the received messages.

Sentbox: Save the successfully sent messages.

Draftbox: Save the editing SMS which haven't been sent. The

drafts can only be saved in computer, not SIM/USIM.

3.3.1 Read SMS

Click the **"Inbox"** button on the main interface, and click a message to read this SMS.

When you receive a new SMS, the system will pop-up prompt dialog box.

3.3.2 Create new message

Click **"New"** button to input the recipient's number and content.

The recipient's number can be input directly or by entering the phonebook to select one/more/group records.

The recipient's amount can be one or more. Please use ";" to separate recipients.

The SMS content can include 160 individual English characters (including English symbols). On the interface, there will show total characters and the number of sending message.

Click **"Send"**, the prompt screen will appear on the interface.

Select **"OK"**, and then the edited short messages will be sent.

After sent successfully, the SMS will be saved into sentbox automatically. If send fails, it will be saved to the draftbox automatically.

Send SMS while browse the web:

When surfing the Internet, if your network supports, you can send short messages at same time. Click **"SMS"** button icon, enter the short message interface to send short messages normally.

3.3.3 The SMS box Operating Guide


Enter any of the **Inbox / Sentbox / Draftbox** to execute the following functions:

- I **Reply:** Reply short message to the sender (which is only available in the Inbox).
- I **Forward:** Send the short message to other recipients (which is only available in the Inbox).
- I **Save Num:** Save the sender number obtained from the message to the phonebook.
- I **Move:** Change the saving location of the selected message. Move this message from PC to SIM card or from SIM card to PC. (Can not use in Draftbox)
- I **Delete:** Delete the selected short messages.

If you want to select several messages, you can use the “**Ctrl**” or “**Shift**” key to execute multi-choice, and left click an item to add to selection.

New message can not be received when the SIM/USIM card is full of short messages (Different SIM/USIM cards have different capacities), the system will indicate the inbox is full and ask users to clear the inbox at USIM/SIM card side, while new message can not be saved.

3.4 Phonebook

Click “**Phonebook**” icon  to access to the phonebook window, the phonebook information can be saved in the PC or SIM/USIM card and you can choose the saved position. Each record includes contact name, mobile phone number, family phone number, office phone number, email and the group name which it belongs to.

3.4.1 Creating a new contact

- 1) Click “**New**” to add new contact.

- 2) Select **save position** to decide where you want to save your contact, **PC** or **SIM**.
- 3) Enter the name, telephone number, Email address, etc. Then click "**OK**".

3.4.2 Modifying contacts

- 1) Select a contact and then click **Edit** to modify.
- 2) After the modification, click **OK**.

3.4.3 Deleting contacts

Select one or more contacts and then click **Delete**.

3.4.4 Sending SMS to a contact

- 1) Select one or more contacts and then click "**SMS**".
- 2) You will access in the writing SMS window automatically, the selected contact mobile phone numbers will be listed in the receiver column.
- 3) Enter the contents of the message and then click "**Send**".

3.4.5 Searching for a contact

- 1) Enter the search conditions in the search condition blank.
- 2) Click "**Search**" to begin searching.
- 3) The searching results will display in the contacts window.

3.5 Settings

Click "**Settings**" icon  to switch to the settings interface. It includes: Connection settings, Network Selection settings, Preference Network settings, SMS Settings, Sound settings and Security settings.

Note: all the necessary settings have been correctly saved in your USB modem by ZTE. There is no need to change these default settings.

3.5.1 Connection

To ensure that the modem can connect the Internet properly, you should configure the connection information first.

1. Button description

Add: Add new configuration files.

Delete: Delete the selected configuration files.

Edit: Edit the selected configuration files.

2. Config File

Select “**Add**” to add new connection information to the system. There are two parts of configuration information: Common and Advance.

The Common information includes: Config File, APN, User name.

The Advance information includes: DNS, PDP server, Authentication Mode and PDP Type. If network supports “Obtain server address automatically”, the modem can obtain the assigned IP information automatically. If network does not support it, you should input the proper address manually. Please consult the network supplier of SIM/USIM card for all above information. The configuration information may be various according to the different network suppliers and network types.

3.5.2 Selection

Automatic: The system selects the network automatically by the user’s selected rules and the network status.

Manual: The network is selected by users themselves.

When the “**Manual**” is selected, click the “**Search**” button to

research the network. Wait a minute, the supplier list will show in the windows and which with the available status can be selected.

Select the network which the supplier is utilized to serve your SIM and press “**Apply**” to confirm.

3.5.3 Preference

Automatic: The system will select the available network automatically.

UMTS/HSPA: The system will only select the UMTS/HSPA network.

GPRS/EDGE: The system will only select the GPRS/EDGE network.

3.5.4 SMS Settings

SMS Center Number: Set the corresponding SMS center number via the SIM card of the supplier. You must input the correct SMS center number to use the SMS properly and the number will be provided by the network supplier. Please enter the country code before the number.

SMS Validity: Set the time limit for saving SMS in the network side. (This function needs network supports.) In option: 12 hours/A day/A week/The longest period. The default setting is the longest period permitted by the network.

Default Save Location of New SMS: Select “PC” to save in laptop or desktop PC. Select “(U)SIM Card” to save in SIM card.

State report: When selected, the network will inform you of the status for the sent messages.

3.5.5 Sound

You can set “Network connect alert, Network disconnect alert and SMS alert” by yourself. These alerts will sound on the PC side. The audio file supports MP3、WAV、WMA and MIDI format. If you select “**Mute**”, you cannot hear corresponding alert.

3.5.6 Security Settings

When “**Enable**” item is selected, please enter PIN code to use the modem and you can click “**Change**” to modify the PIN code.

3.6 Data Record

Click “**Data Record**” icon  to check the log of Internet connection history.

Select start date (in “**From**” item) and end date (in “**To**” item) on the top of the “**Data Record**” dialog box, the records during this period will be listed. Select a record which you want to delete, and click **Delete**. And you can clear the record(s) by clicking “**Clear**” button.

Note: Data usage is approximate only, please contact your operator for actual usage.

3.8 MicroSD card

When you use microSD card in the modem, the system will display the MicroSD card as a removable disk. You can use it freely. It is convenient for you to check the contents in your MicroSD card.

3.9 Help

Select **Help**, and switch to the help interface. Under the help

topic, you can get the useful information about function of the software, etc.

4 FAQ & Answers

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 your suppliers.

Problem Description	Possible Causes	Problem Solving
The system can not run the installation program automatically.	The system configuration is having difficulty with the auto-run software.	The device will appear as a virtual CDROM on the PC's start menu. Click on the icon and start the autorun.exe. If you have previously installed a version of the program, please uninstall it first.
After installation, the system doesn't install the driver program properly.	The system configuration is having difficulty with the auto-run software.	Please install the driver program manually. The driver program can be found in installation folder.
After the device is plugged in, the UI program doesn't run automatically.	The system configuration is incorrect.	Please open the UI program manually. You can find it on the desktop.

Problem Description	Possible Causes	Problem Solving
After restarting the computer, there is no signal indicated.	1. You are in the place where there is no GSM/ GPRS /EDGE /WCDMA /HSDPA network coverage. Such places include underground parking garages, tunnels, and some remote rural areas.	1. Change location to find a good where having signal.
	2. The device is not properly connected.	2. Close the device safely as usual, pull out the device and reinsert the device again.
	3. The SIM/USIM card isn't inserted properly.	3. Remove and reinsert the SIM/USIM card correctly.
	4. The MODEM device is positioned in such a way as that adversely affects the devices signal reception.	4. Adjust the angle / position of the MODEM device or its proximity to other electronic devices.

Problem Description	Possible Causes	Problem Solving
When the Device is being installed, the computer cannot find it.	1. The installation programs of the MODEM device have not been installed properly.	1. Run the installation program first then connect the device. Now install the drivers as normal in Windows.
	2. The device is not connected properly.	2. Restart the computer, or reconnect the device.
	3. The SIM/USIM card is not inserted properly.	3. Reinsert the SIM/USIM card correctly.
Sent Message failure.	1. The SMS center number is incorrect.	1. Your device is preconfigured so it is unlikely that it will need changing. However if it is missing or incorrect contact your operator.
	2. The network is busy or you are in an area with no signal.	2. Try later or move to an area with a stronger signal.
Date connection failed.	1. You are in the place where there is no GSM/ GPRS/ EDGE/ WCDMA/ HSDPA network coverage.	1. Move to an area with good signal.

Problem Description	Possible Causes	Problem Solving
	2. The network is busy.	2. Try later.
	3. The APN in the user configuration file is incorrect.	3. Check the APN in the user configuration file in the "Network settings".
	4. The device data is corrupted.	4. Local network access or the target server maybe experiencing problems. Retry data request.
	5. The network type has been selected manually, but is incorrect.	5. Reselect the network type according to the type of the SIM/USIM card.
Connected to the Internet, but it cannot open any website page.	1. After connection, you are unable to open web pages.	1. Check that the APN in the configuration files is correct.
	2. IE browser is causing problems.	2. Upgrade to the new version or reinstall the IE browser.

Problem Description	Possible Causes	Problem Solving
	3. Your operating system maybe infected by a virus. Worm Blaster for example can affect upload and downloaded data flow, resulting in an inability to access a website.	3. Use the professional anti-virus software to check and remove the virus.
	4. You have connected to an APN which cannot connect to the Internet.	4. This happens when you are changing any preset operator value in the setting section. Check the entry and enter the correct APN from your operator.

Health and safety information

Radio Frequency (RF) Energy

This model phone meets the government's requirements for exposure to radio waves. This phone 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:

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 a wireless base station antenna, the lower the power output. The highest SAR value for the model phone as reported to the FCC when worn on the body, as described in this user guide, is 1.17 W/kg (Body-worn measurements differ among phone models, depending upon available enhancements 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. The 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. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/fccid> after searching on **FCC ID: Q78-ZTEMF100**. For body worn operation, this modem has been tested and meets the FCC RF exposure guidelines for use with an accessory that contains no metal and the positions the handset a minimum of 0.5 cm from the body. Use of other enhancements may not ensure compliance with FCC RF exposure guidelines.

FCC Compliance

I This device complies with part 15 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference.

I This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC 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 communications. However, 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/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

I The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.