

ZTE MF29A

Wireless Router

User Guide



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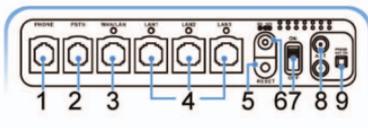
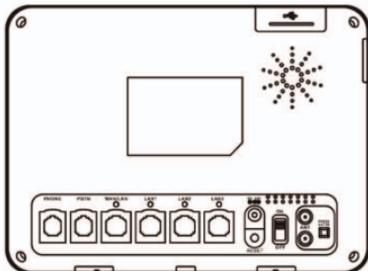
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Getting Started

The router operates on the HSUPA+/HSUPA/HSDPA/WCDMA networks and GSM/GPRS/EDGE networks and supports voice and data service.

Appearance



Indicators

Indicator	State	Description
1 WAN signal strength indication	On	Signal strength is very good or good (RSSI \geq -90dBm)
	Blinking	Signal strength is weak (-100dBm < RSSI < -90dBm)
	Off	No signal
2 Network mode indication	Blue	Registered to 3G network
	Red	Registered to 2G network
	Off	Not Registered
3 WAN connection status indication	On	WAN connection established (PDP activated)
	Blinking	WAN connection establishing (PDP activating)
	Off	WAN connection not established (PDP not activated)
4 Phone status indication	Off	PSTN not connected
	Blinking	Calling via PSTN
	On	PSTN connected
5 Phone status indication	Off	Local phone hang up
	Blinking	Phone picked up, ringing or network CS registering
	On	In calling

Indicator	State	Description
6 Wi-Fi indication	Off	WLAN shut down
	Blinking	WLAN working normally with data transmission
7 Power indication	On	External power supply working normally.
	Off	External power supply disconnected or powered off.

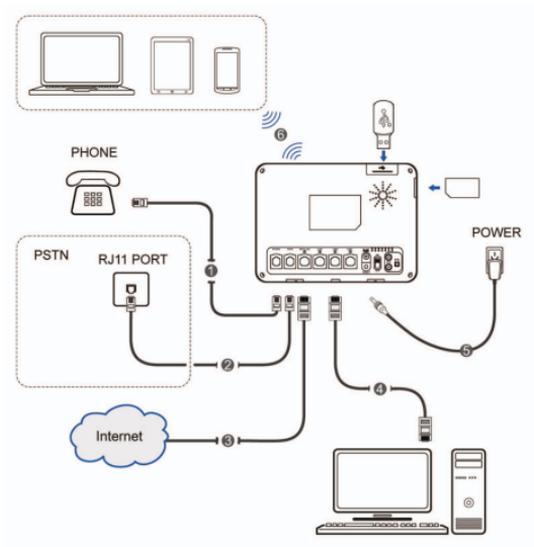
Interface Description

1. Phone	Standard RJ11 connector for Telephone
2. PSTN	Standard RJ11 connector for PSTN
3. WAN/LAN	Ethernet connector to Internet
4. LAN1~LAN3	Ethernet connector to computer
5. Reset	Reset button
6. POWER Socket	Connector to the external power supply.
7. ON/OFF	Turn the router ON or OFF.
8. ANT	Connector to external antenna
9. PRESS ANT ON	This button is only used for external antenna. If you connect the external antenna, please press it. Otherwise the RSSI signal of the router will be poor, and your device may not access the Internet.

Connecting Your Device

Follow the number to connect your device.

NOTE: If you want to use the mobile network to go to Internet, you need to insert your SIM card first.



Switching on Your Device

1. Turn the power switch on to get started. Make sure that the phone is on hook before you power it on.

NOTE: Do not put anything on the top of the router. Do not lay routers to overlap each other during usage.

2. Wait 1~2 minutes after turning the router on before you use the service. The 3G & POWER indicator should be lit on.

NOTES:

- When the router is turned off, an incoming caller will hear the prompt like “The number you have dialed is currently unavailable.”
- If the 3G LED is blinking constantly, try to move the router to another location. The router takes 1~2 minutes to initialize, attach to the network and obtain an IP address.

Power Supply

For normal operation, connect the router to the external power adapter. In case of power failure or when there is no available external power supply, the router will not work.

About (U)SIM Card

Avoid handling the (U)SIM card unnecessarily. Hold the card by the edges to prevent static damage. Keep the (U)SIM card away from electrical and magnetic appliances.

If you cannot get service, make sure that

- You are in an area which has network coverage.
- You are using the correct (U)SIM card.

Internet Access

Configuring Your PC

Follow the following steps and figures for Windows XP to configure the Internet Protocol for your connection.

NOTES:

- [Wireless Network Connection](#) is used for [Wi-Fi](#) connection.
- [Local Area Connection](#) is used for [Network Cable](#) connection.

1. Right-click **My Network Places**, and then select **Properties**.



2. Right-click the icon for Connection, and then select **Properties**.



3. Select **Internet Protocol(TCP/IP)**, and then click **Properties**.



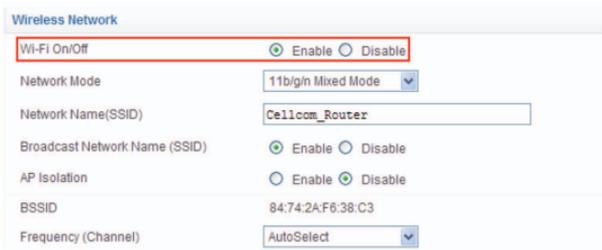
4. Select these two items, and then click **OK** to finish the configuration.



Wireless Connection (Optional)

If you want to use Wi-Fi to connect your router, please refer to the following steps.

1. Make sure that the WLAN works normal. Please check the Wi-Fi Setting on the WebGUI Configuration page or check the Wi-Fi indicator .



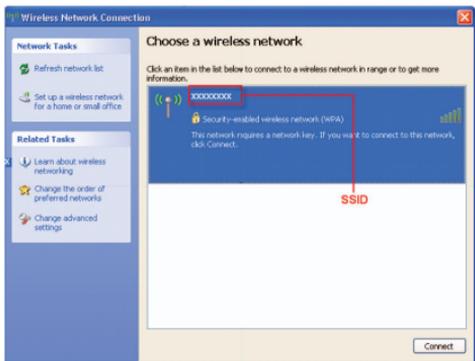
Wireless Network	
Wi-Fi On/Off	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Network Mode	11b/g/n Mixed Mode
Network Name (SSID)	Cellcom_Router
Broadcast Network Name (SSID)	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
AP Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
BSSID	84:74:2A:F6:38:C3
Frequency (Channel)	AutoSelect

2. Use your normal Wi-Fi application on the client to search for the available wireless networks.



NOTE: Please set the client to obtain an IP address automatically, and the client will get an IP address like “192.168.0.100”.

3. Select the SSID of your device, and then click **Connect**.



4. Input the password, and then click **Connect**.



NOTE: There may require the password for Wi-Fi connection. Please check the label on your device to get the default.

5. Wait a moment, and then the client will connect to your device successfully.



Accessing the Internet

Before accessing the Internet, please make sure:

- Your device is connected via network cable or Wi-Fi.
 - Your PC is configured.
1. Login the WebGUI Configuration Page.
 2. Select the **Operation Mode**.

You may configure the operation mode suitable for you environment.

- Bridge
- Cable Broadband
- 3G Gateway

Apply

NOTE:

If you select the Bridge mode, you need to connect your clients to the LAN ports via Ethernet cable, and use normal methods to surf directly on your clients. If you want to use other operation mode after Bridge, you need to restore your device.

3. Configure the **WAN Connection**. (Optional)

NOTE: This step is used for Cable Broadband mode and 3G/4G Gateway mode.

- For Cable Broadband
- ▶ Please select **PPPoE**, and input the User Name and Password.

NOTE: Your service provider gives you the User Name and Password.

WAN Setting

WAN Mode PPPoE

PPPoE

User Name

Password

Auto Connect

Manual Connect Connect Internet

WAN Connection Status Disconnected

Apply

► Please select **Static** and input all the parameters.

NOTE: Your service provider gives you the static address information.

WAN Setting

WAN Mode Static

Static

IP Address

Subnet Mask

Default Gateway

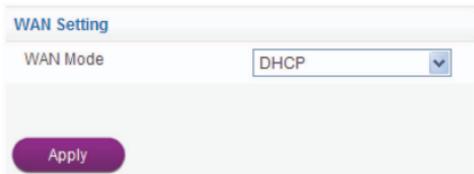
Primary DNS Server

Secondary DNS Server

Apply

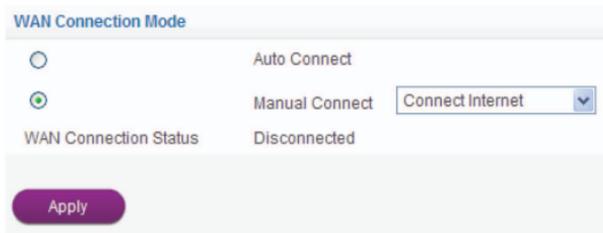
- ▶ Please select **DHCP**.

NOTE: Your service provider does not give you any parameters.



The screenshot shows a configuration window titled "WAN Setting". It contains a label "WAN Mode" followed by a dropdown menu with "DHCP" selected. Below the dropdown is a purple "Apply" button.

- For 3G Gateway



The screenshot shows a configuration window titled "WAN Connection Mode". It features two radio buttons: "Auto Connect" (unselected) and "Manual Connect" (selected). To the right of "Manual Connect" is a dropdown menu with "Connect Internet" selected. Below these options, the "WAN Connection Status" is displayed as "Disconnected". A purple "Apply" button is located at the bottom of the window.

4. Begin to enjoy your Internet service.

Voice

Making a Call

You have two ways to make a call:

- Through (U)SIM card.
- Through PSTN.

To make a call:

1. Pick up the handset.
2. Key in the telephone number.
3. You can either press # key on the telephone to send the call, or wait 4~8 seconds for the call to be connected automatically.
4. The call will be connected.

NOTE: If there is no 3G indication, the RF signal is unavailable. Change the location of the router and make sure nothing is blocking it.

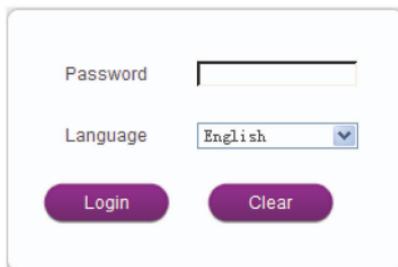
Answering a Call

When the phone rings, pick up the handset to answer it. If the telephone has hands-free function you also can answer the call by pressing the **Hands-free** button. Press the **Hands-free** button again to end the call.

WebGUI Configuration

Accessing the Configuration Page

1. Make sure the connection between your device and the client is correct.
2. Launch the Internet browser and enter `http://192.168.0.1` in the address bar.
NOTE: It is recommended that you use IE (6.0 or later), Firefox (2.0 or later), Opera (10.0 or later), Safari (4.0 or later) or Chrome (5.0 or later).
3. The login page appears as follows.



The image shows a login form with the following elements:

- A label "Password" followed by a text input field.
- A label "Language" followed by a dropdown menu currently set to "English".
- Two purple buttons: "Login" and "Clear".

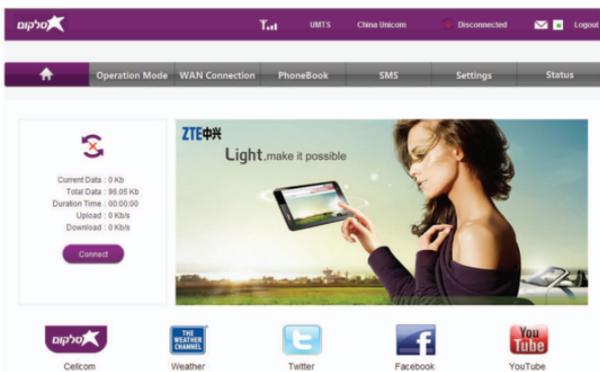
Login

In the WebGUI Configuration page, select the desired language and input the password (the default Password is **admin**).

Click **Login** to log in the device.

NOTE: If you check **Save** after type in password, the device will save it. Next time when you want to login the device with the same password, what you need to do is click **Login**.

When you login, the following interface appears.



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

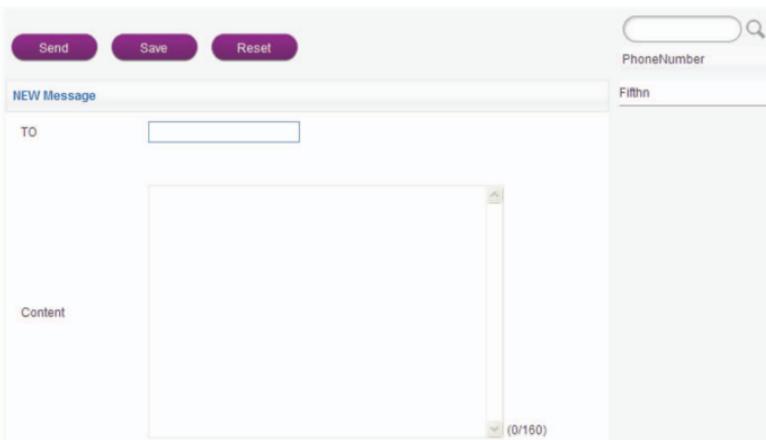
- **Index area:** Show the configuration list for your device.
- **Content area:** Show the detailed configuration.
- **System Information Area:** Show the system status and different kinds of tips.

SMS

This function allows you to send or receive short messages. And you can use this function only in 3G Gateway mode. You need to login the WebGUI configuration page first.

Sending SMS

1. Select **SMS > New Message** to access the following figure:

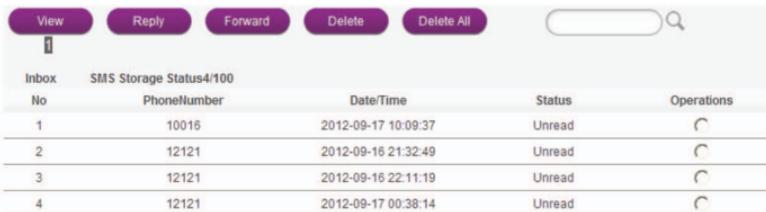


The screenshot shows a web interface for sending an SMS. At the top, there are three purple buttons: 'Send', 'Save', and 'Reset'. To the right is a search bar with a magnifying glass icon and the label 'PhoneNumber'. Below this is a header bar with 'NEW Message' on the left and 'Fifth' on the right. The main area is divided into two sections: 'TO' with a text input field, and 'Content' with a large text area. The text area has a vertical scrollbar and a character count '(0/160)' at the bottom right.

2. Enter the recipient's phone number.
3. Enter a message.
4. Click **Send** to send the message.

Reading SMS

1. Select **SMS > SIM/Device > Inbox** to access the following figure:



The screenshot shows a mobile messaging application interface. At the top, there are five purple action buttons: 'View', 'Reply', 'Forward', 'Delete', and 'Delete All'. To the right of these buttons is a search bar with a magnifying glass icon. Below the buttons, the text 'SMS Storage Status4/100' is displayed. The main area contains a table with the following columns: 'No', 'PhoneNumber', 'Date/Time', 'Status', and 'Operations'. The table lists four messages, all with a status of 'Unread'.

No	PhoneNumber	Date/Time	Status	Operations
1	10016	2012-09-17 10:09:37	Unread	⌂
2	12121	2012-09-16 21:32:49	Unread	⌂
3	12121	2012-09-16 22:11:19	Unread	⌂
4	12121	2012-09-17 00:38:14	Unread	⌂

2. Select the SMS in the list.
3. Click **View** to read this SMS.

TIP:

The following table shows you the other operations.

Reply	Reply to the selected message sender
Forward	Forward message to other person
Delete	Delete the selected message
Delete	All Delete all the messages

Settings

Do not modify any settings unless instructed by your service provider.

Please disconnect the device from the network before changing the settings.

3G Settings

Band Select

Select **Settings > 3G Settings > Band Select** and the Band Selection Mode is shown in the following figure:

Band Selection Mode

Registration Mode Automatic Manual

Automatic

3G Only (All Bands)

2G Only (All Bands)

Apply

- **Automatic:** Device searches for available network.
- **3G Only (All Bands):** Device searches for WCDMA network only.
- **2G Only (All Bands):** Device searches for GSM network only.

Click **Apply** to confirm your configuration.

Wi-Fi Settings

Station list

Select **Settings > Wi-Fi Setting > Station List**, the wireless network stations are shown in the following figure:

Station	MAC Address	IP Address	Host Name
---------	-------------	------------	-----------

Basic

Select **Settings > Wi-Fi Setting > Basic**, the wireless network basic parameters are shown in the following figure:

Wireless Network	
Wi-Fi On/Off	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Network Mode	11b/g/n Mixed Mode
Network Name(SSID)	Cellcom_Router
Broadcast Network Name (SSID)	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
AP Isolation	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
BSSID	84:74:2A:F6:38:C3
Frequency (Channel)	AutoSelect
Wireless Distribution System(WDS)	
WDS Mode	Disable
HT Physical Mode	
Operating Mode	<input checked="" type="radio"/> Mixed Mode <input type="radio"/> Green Field
Channel BandWidth	<input type="radio"/> 20 <input checked="" type="radio"/> 20/40
Guard Interval	<input type="radio"/> Long <input checked="" type="radio"/> Auto
MCS	Auto
Reverse Direction Grant(RDG)	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Aggregation MSDU(A-MSDU)	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Auto Block ACK	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Decline BA Request	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

- **Wi-Fi On/Off:** Enable or disable Wi-Fi.
- **Network Mode:** If all of the wireless devices connect with this router in the same transmission mode, performance will be improved by choosing the appropriate wireless mode.
- **Network Name(SSID):** Service Set Identifier (SSID). Enter a string less than 32 characters as the name for your wireless local area network (WLAN).
- **Broadcast Network Name(SSID):** Disable or Enable (Default) this function. If **Enable** is selected, the router broadcasts the SSID, and other devices can detect and connect to it. If **Disable** is selected, the other devices cannot detect the router. You can only connect to the router by manual setting.
- **AP Isolation:** When **Enabled** is selected, each of your wireless clients will not be able to communicate with each other. When **Disable** is selected, each of your wireless clients will be able to communicate with each other.
- **BSSID:** MAC address of the Wi-Fi.
- **Frequency(Channel):** Choose the appropriate channel to optimize the performance and coverage of your wireless network.
- **WDS Mode:** WDS mode make the router to communicate with other APs, WDS connection is two-way communication, APs should know each other's wireless MAC address. And make sure that all APs share the same SSID and channel.

WDS configuration is shown below:

Step	Description
1.Set the SSID and the same channel for APs	It is strongly recommended to manually set the SSID and the same channel.

Step	Description
2. Select WDS mode: Disable, Lazy Mode, Bridge Mode or Re- peater Mode	<p>If you select Disable, WDS is disabled.</p> <p>If you select Lazy Mode, WDS is enabled, and set wireless MAC address only on the peer APs.</p> <p>If you select Bridge Mode, WDS is enabled, and set the peer APs wireless MAC address on router. When you set Bridge Mode, your PC can not search for SSID of AP after connected.</p> <p>If you select Repeater Mode, WDS is enabled, and set the peer APs wireless MAC address on router. When you set Repeater Mode, your PC can search for SSID of AP after connected.</p>
3. Select Phy mode : CCK, OFDM, HTMIX or GREENFIELD	<p>CCK: 802.11b</p> <p>OFDM: 802.11g</p> <p>HTMIX: 802.11b/g/n Mixed Mode</p> <p>GREENFIELD: 802.11b/g Mixed Mode</p>
4. Select Encrypt Type : WEP, TKIP, AES	<p>If you select NONE, all the data transmitted without encryption, and other station can access router.</p> <p>If you select the Encrypt Type, you should set all APs the same Encrypt type and password to make the data transfer.</p>
5. Set peer AP's wireless MAC address on router	<p>Only Repeater Mode and Bridge Mode need this.</p>

The HT physical Mode parameters are shown below:

- **Operating Mode:** In **Mixed Mode**, packets are transmitted with a preamble compatible with the legacy 802.11a/g, the rest of the packet has a new format. In **Green Field**, high throughput packets are transmitted without a legacy compatible part.
- **Channel Bandwidth:** Set the HT physical channel bandwidth.
- **Guard Interval:** Guard interval is to introduce immunity to propagation delays, echoes and reflections, to which digital data is normally very sensitive.
- **MCS:** The Modulation and Coding Scheme (MCS) is a value that determines the modulation, coding and number of spatial channels.
- **Reverse Direction Grant(RDG):** Enable **RDG** or not.
- **Extension Channel:** Set extension channel. Extension channel is also able to send and receive data.
- **Aggregation MSDU(A-MSDU):**To enable Hyper Throughput TX Aggregate MAC Service Data Unit, select **Enable**.
- **Auto Block ACK:** Select to block ACK (Acknowledge Number) or not during data transferring. When you enable the WDS function, you should set to enable **Auto block ACK** to prevent the other effect during data transferring.
- **Decline BA Request:** Select to reject peer BA-Request or not.

Click **Apply** to confirm your configuration.

Advanced

Select **Wi-Fi Setting > Advanced**, the advanced wireless network parameters are shown in the following figure:

Advanced Wireless	
Beacon Interval	<input type="text" value="100"/> ms (range 20 - 999, default 100)
Data Beacon Rate (DTIM)	<input type="text" value="1"/> ms (range 1 - 255, default 1)
Fragment Threshold	<input type="text" value="2346"/> (range 256 - 2346, default 2346)
RTS Threshold	<input type="text" value="2347"/> (range 1 - 2347, default 2347)
TX Power	<input type="text" value="100"/> (range 1 - 100, default 100)
Short Preamble	<input type="radio"/> Enable <input checked="" type="radio"/> Disable
Short Slot	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Tx Burst	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Pkt_Aggregate	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Country/Area Code	<input type="text" value="IL (Israel)"/> ▼

Wi-Fi Multimedia	
WMM Capable	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
APSD Capable	<input type="radio"/> Enable <input checked="" type="radio"/> Disable

- **Beacon Interval:** The router broadcasts beacon message to announce that it has buffered frames to deliver. The default value is 100 (ms). Beacons are packets sent by an access point to synchronize a wireless network. It is recommended to specify a beacon interval value.
- **Data Beacon Rate(DTIM):** A Delivery Traffic Indication Message(DTIM) informs next clients to listen to broadcast and multicast messages.

- **Fragment Threshold:** This value should remain at its default value of 2346. If you experience a high packet error rate, you may slightly increase your fragment threshold. Setting the fragment threshold too low may result in poor performance.
- **RTS Threshold:** Request To Send (RTS) threshold should be remained as the value of 2347. If you encounter inconsistent data flow, only minor modifications are recommended.
- **TX Power:** Transmit power should be remained as the value of 100.
- **Short Preamble:** The length of CRC block in the frames during the wireless communication.
- **Shot Slot:** To indicate that 802.11g is using a shot time slot because there is no legacy station(802.11b) present.
- **Tx Burst:** Tx burst allows router to deliver better throughput in the same period and environment in order to increase speed.
- **Pkt_Aggregate:** Increase efficiency by aggregating multiple application packets data into a single transmission frame. In this way, 802.11n networks can send multiple data packets with the fixed overhead cost in just a single frame.

Country Code: Select the region you live.

The Wi-Fi multimedia parameters are shown below:

- **WMM Capable:** When multimedia contents are transferred over wireless network, this function enhances data transfer performance.
- **APSD Capable:** Automatic Power Save Delivery (APSD),enable or disable data flow using APSD during transmitting for power saving.

Click **Apply** to confirm your configuration.

Security

Select **Wi-Fi Setting > Security**, the Security parameters are shown in the following figure:

The screenshot shows a configuration window for Security Policy. The 'Security Mode' is set to 'NO ENCRYPTION'. Below it, the 'Wireless MAC Filtering' section has the 'Add MAC Filtering Rule' set to 'Wireless Disable'. At the bottom, there are two buttons: 'Apply' and 'Cancel'.

Unless the encryption mode is selected, wireless transmissions to and from your wireless network can be easily intercepted and interpreted by unauthorized users.

- **WPA-PSK/WPA2-PSK:** Apply both the WPA-PSK and WPA2-PSK scheme.
- **WPA Algorithm:** **TKIP, AES or AUTO.**
- **Pass phrase:** You can input hexadecimal digits up to 64 characters or input ASCII characters choose a length of 63 characters or less.
- **Key Renewal Interval:** Define how long the key should be renewed.

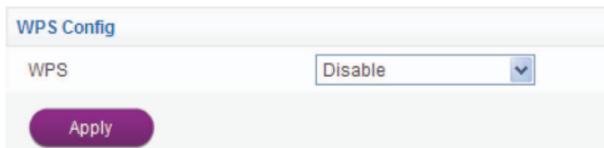
You can set **Wireless MAC Filtering**:

Add MAC Filtering Rule	Wireless Disable	If disabled, MAC address is not used to control network access.
	Wireless Allow	Set the MAC address that is allowed to access network.
	Wireless Reject	Set the MAC address that is not allowed to access network.
MAC Address		Enter Mac Address

Click **Apply** to confirm your configuration.

WPS

Select **Wi-Fi Setting > WPS** and the WPS configuration is shown in the following figure:



The screenshot shows the 'WPS Config' interface. At the top, the title 'WPS Config' is displayed in blue. Below the title, the 'WPS' setting is shown as a dropdown menu currently set to 'Disable'. A purple 'Apply' button is located at the bottom of the configuration area.

Select **Enable**, click **Apply** and the WPS settings are shown in the following figure:



The screenshot shows the 'WPS Config' interface after being updated. The 'WPS' dropdown menu is now set to 'Enable'. Below this, there is a purple 'Apply' button. A new section titled 'WPS Progress' is visible, containing 'WPS mode' with two radio button options: 'PIN' (which is selected) and 'PBC'. Below the radio buttons is a text input field labeled 'Client PIN'. A second purple 'Apply' button is located at the bottom of this section.

To set WPS, select WPS mode, the two modes are described below:

- **PIN:** Set the client's PIN code in **Client PIN** field.
- **PBC:** Press the WPS button of the router or select PBC, and then click **Apply**. Press the WPS button on the client wireless adapter within two minutes, and the negotiation process will be established.

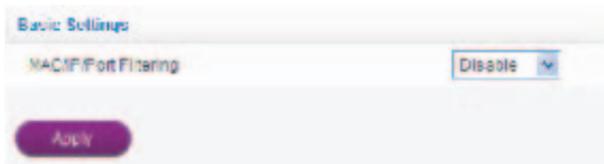
Firewall

You may setup firewall rules to protect your network from virus, worm and malicious activity on the Internet.

NOTE: You can set the maximum 10 filtering items for **MAC/IP/Port Filtering**, **URL Filtering and Port Forwarding**.

MAC/IP/Port Filtering

Select **Settings > Firewall > Mac/IP/Port Filtering**, the Mac/IP/Port Filtering is shown in the following figure:



If you select **Enable**, the filter settings will appear:

Basic Settings

MAC/IP Port Filter:

Default Policy: The packet that doesn't match with any rule will be:

MAC/IP Port Filter Settings

MAC address:

Dest IP Address:

Source IP Address:

Protocol:

Dest Port Range: - (1-65535)

Source Port Range: - (1-65535)

Action:

Comment:

No. maximum rule counts: 10

Current MAC/IP Port Filter rules in system

No.	MAC address	Dest IP Address	Source IP Address	Protocol	Dest Port Range	Source Port Range	Action	Comment
-----	-------------	-----------------	-------------------	----------	-----------------	-------------------	--------	---------

- **Default Policy:** Set how to handle the packet if none of the rules matches.
- **MAC address:** Set the MAC address that will be filtered.
- **Dest IP Address:** Set the destination IP address that will be filtered.
- **Source IP Address:** Set the source IP address that will be filtered.
- **Protocol:** Set which protocol will be used for filtering.
- **Dest Port Range:** Set the destination port numbers that will be filtered.
- **Source Port Range:** Set the source port numbers that will be filtered.
- **Action:** Set how to handle the packet if it matches with the rule.

- **Comment:** Type comment for the filter settings.

NOTE: Filtering rules are matched one by one, if met this provision, it will not continue to match the rules listed below.

Click **Apply** to confirm your configuration.

Click **Delete Selected** to delete the rule which you selected.

Click **Reset** to clear what you select or input.

To add a new rule:

1. Select **Enable** in the **Basic Settings** area.
2. Click **Apply**.
3. Input the detail information in the **Mac/IP/Port Filtering** area.
4. Click **Apply** in the **Mac/IP/Port Filtering** area.

URL Filtering

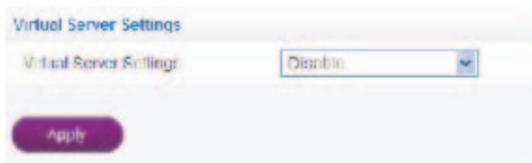
You can setup content filter to restrict the improper content access. Select **Firewall** > **URL Filtering**, the URL Filtering is shown in the following figure:

The screenshot shows a web interface for configuring URL filtering. It is divided into two main sections. The first section, 'Add a URL Filter:', includes an input field for an IP address with a placeholder example 'eg. www.facebook.com' and a 'Reset' button. Below the input field, a note states 'The maximum rule count is 10'. There are two buttons, 'Add' and 'Reset', for this section. The second section, 'Current URL Filtering', displays a table with two columns: 'No.' and 'URL'. Below the table, there are 'Delete' and 'Reset' buttons.

Type URL address, and then click **Add** to add the URL address into the filtering list. The new URL filtering item will be shown in the **Current Webs URL Filters:** field.

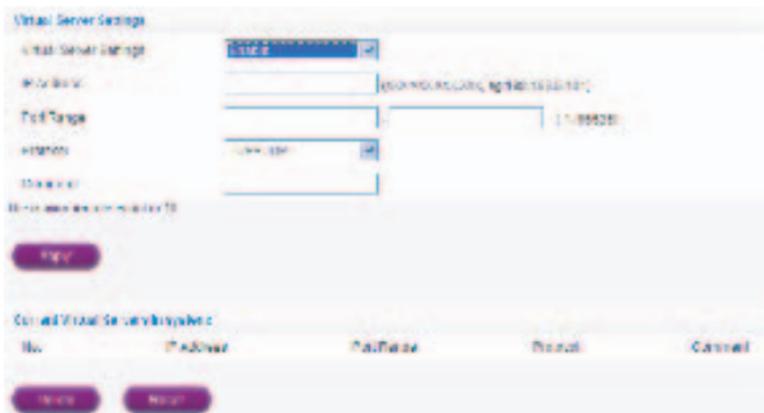
Port Forwarding

You can setup virtual servers to provide services on the Internet. Select **Firewall > Port Forwarding**, the virtual server settings is shown in the following figure:



The screenshot shows the 'Virtual Server Settings' dialog box. At the top, the title is 'Virtual Server Settings'. Below the title, there is a label 'Virtual Server Settings:' followed by a dropdown menu currently set to 'Disable'. At the bottom of the dialog, there is a purple 'Apply' button.

If you select **Enable**, the Virtual Server Settings will appear:



The screenshot shows the 'Virtual Server Settings' dialog box with 'Enable' selected in the dropdown menu. The following fields are visible and filled:

- Protocol:** TCP
- Port Range:** 8080-8080
- External:** 192.168.1.100
- Internal:** 192.168.1.100

At the bottom of the dialog, there are buttons for 'Apply', 'OK', 'Cancel', and 'Help'.

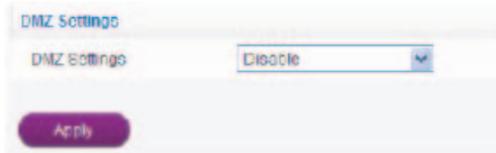
- **IP Address:** Set IP address for the virtual server.
- **Port Range:** Set port numbers for the virtual server.
- **Protocol:** Set protocol for the virtual server.

- **Comment:** Type comment for the virtual server settings.

Click **Apply** to confirm your configuration.

DMZ

You can set up a De-militarized Zone(DMZ) to separate internal network with the Internet. Select **Firewall > DMZ**, the DMZ setting is shown in the following figure:



If you select **Enable**, set the **DMZ IP Address**, and then click **Apply** to confirm your configuration.



System Security

You can configure system firewall to protect AP or router from being attacking. Select **Firewall > System Security**, the system security setting is shown in the following figure:

The screenshot shows two sections of a configuration interface. The first section, titled "Remote management", contains a label "Remote management (via WAN)" and a dropdown menu currently set to "Deny". The second section, titled "Ping from WAN Filter", contains a label "Ping from WAN Filter" and a dropdown menu also set to "Deny". At the bottom of the interface are two purple buttons: "Apply" and "Reset".

Allow or **Deny** the remote management function, **Allow** or **Deny** ping from WAN filter on requirement, and then click **Apply**.

Advanced

Management

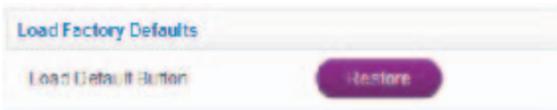
Select **Settings** > **Advanced** > **Management**, the administrator settings information is shown in the following figure:

The screenshot shows the "Administrator Settings" form. It includes three input fields: "Current Password", "New Password", and "Verify Password". At the bottom of the form are two purple buttons: "Apply" and "Cancel".

You can change the administrator's password. Click **Apply** to confirm your configuration.

Restore

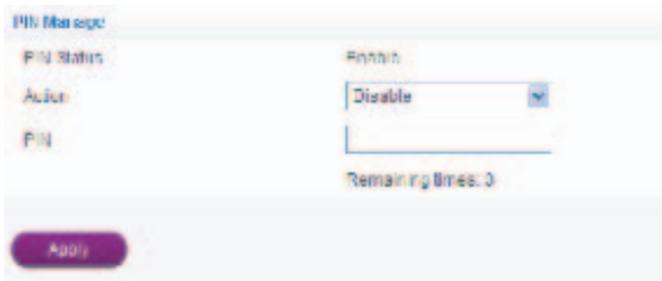
Select **Settings > Advanced > Restore**, click Restore to set all the settings to their factory default values, and then the device will restart automatically.



PIN Manage

NOTE: Pin Manage can be used in 3G Gateway mode.

Select **Settings > Advanced > PIN Manage**, the PIN manage is shown in the following figure:



If you select **Modify**, the modification parameters are shown in the following figure:

The screenshot shows a 'PIN Manage' window with the following fields and options:

- PIN Status:** Enabled
- Action:** A dropdown menu currently set to 'Modify'.
- Old PIN:** An empty text input field.
- New PIN:** An empty text input field.
- Confirm New PIN:** An empty text input field.
- Remaining Times:** A field showing '3'.

At the bottom of the window is a purple 'Apply' button.

Type the old PIN code, and then type two times the new PIN code. Click **Apply** to confirm your configuration.

NOTE: Three times consecutive wrong PIN code entries will block the (U)SIM card. To unlock it, you need the PUK code. The PIN code and PUK code may be offered together with the (U)SIM Card. If not, please contact with network operator.

Router

NOTE: Router can be used in 3G Gateway mode and Cable Broadband mode.

Select **Settings > Advanced > Router**, the router information is shown in the following figure:

LAN Interface Setup

IP Address	192.168.0.1
Subnet Mask	255.255.255.0
MAC Address	52:54:00:12:34:56
DHCP Server	<input checked="" type="checkbox"/> Enable <input type="checkbox"/> Disable
DHCP IP Pool	192.168.0.100 192.168.0.200
DHCP Lease Time	24 hours
UPNP	<input checked="" type="checkbox"/> Enable <input type="checkbox"/> Disable

Notice: You may also need to reconnect the wireless network after committing this page.

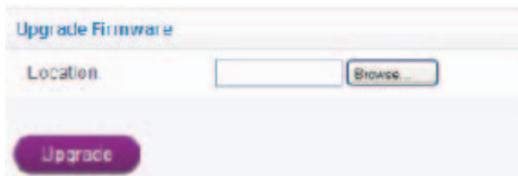
Apply Cancel

- **IP Address:** IP address for LAN interface.
- **Subnet Mask:** Subnet mask for the IP address.
- **MAC Address:** MAC address for the LAN interface.
- **DHCP Server:** Enable or disable DHCP Server function.
- **DHCP IP Pool:** Allocate begin and end IP address for IP pool.
- **DHCP Lease Time:** Define how long the leased IP address will be expired, and will relocate new IP address.
- **UPNP:** Enable or disable UPNP function.

Click **Apply** to confirm your configuration.

Upgrade

Select **Settings > Advanced > Upgrade** to upgrade the software version of the router.

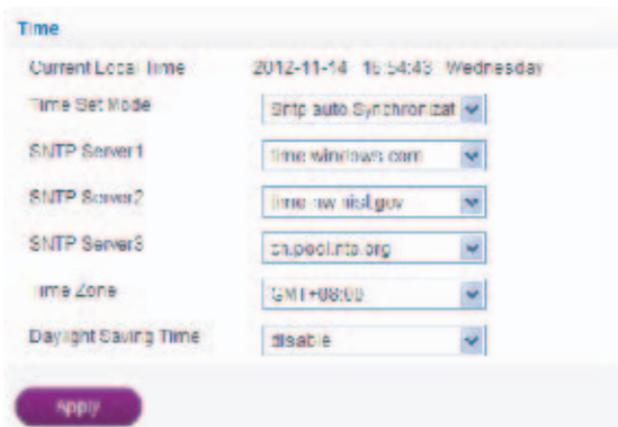


The screenshot shows the 'Upgrade Firmware' interface. It features a 'Location' text input field followed by a 'Browse...' button. Below these elements is a large purple 'Upgrade' button.

Click **Browse...**, locate the latest software version, and then click **Upgrade**.

Time & Date

Select **Settings > Advanced > Time & Date** to set the time of the router.



The screenshot displays the 'Time' configuration page. It includes the following settings:

Field	Value
Current Local Time	2012-11-14 16:54:43 Wednesday
Time Set Mode	Sntp auto Synchronizat
SNTP Server1	time.windows.com
SNTP Server2	time.nw.ridg.gov
SNTP Server3	ca.pool.nto.org
Time Zone	GMT+08:00
Daylight Saving Time	disable

At the bottom of the page is a large purple 'Apply' button.

Configuration

Select **Settings > Advanced > Configuration** to access the following interface:



The screenshot shows a web interface for configuration. It is divided into two main sections: "Export Settings" and "Import Settings".

- Export Settings:** Contains a single text input field labeled "Export Path" and a purple button labeled "Export".
- Import Settings:** Contains a text input field labeled "Settings file location", a dropdown menu currently showing "All files", and a purple button labeled "Import".

DHCP List

Select **Settings > Advanced > DHCP List** to access the following interface:



The screenshot shows a web interface for the DHCP List. At the top, there is a header "DHCP Reservation" and three tabs: "All", "Enabled", and "Disabled". Below the header is a table with columns for "IP Address", "MAC Address", and "Name".

IP Address	MAC Address	Name
192.168.1.100	08:00:27:00:00:00	PC1
192.168.1.101	08:00:27:00:00:01	PC2
192.168.1.102	08:00:27:00:00:02	PC3

Below the table, there are two text input fields labeled "IP Address" and "MAC Address", and two purple buttons labeled "Add" and "Remove". At the bottom, there is a section titled "DHCP Client List" with three tabs: "All", "Enabled", and "Disabled".

Status

Basic Status

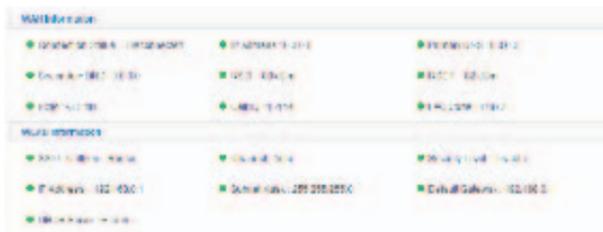
Select **Status** > **Basic Status** to show the 3G information and system information.



Click **Refresh** to update the information.

Network Status

Select **Status** > **Network Status** to show the WAN and WLAN related information.



Warning and Notice

Safety Precautions

- Some electronic devices may be susceptible to electromagnetic interference. Locate the router away from TV set, radio and other electronic equipment to avoid electromagnetic interference.
- The router may interfere with medical devices like hearing aids and pacemakers. Consult a physician or the manufacturer of the medical device before using the router.
- Please keep yourself at least 20 centimeters away from router.
- Do not use your router in dangerous environments such as oil terminals or chemical factories where there are explosive gases or explosive products being processed.
- Please use original accessories or accessories that are authorized by ZTE. Unauthorized accessories may affect the router performance, damage the router or cause danger to you.
- Do not attempt to dismantle the router. There are no user serviceable parts.
- Do not allow the router or accessories to come into contact with liquid or moisture at any time. Do not immerse the router in any liquid.
- Do not place objects on top of the router. This may lead to overheating of the device.
- The device must be placed in ventilation environment for use.
- Do not expose the router to direct sunlight or store it in hot areas. High temperature can shorten the life of electronic devices.

- Do not allow children to play with the router or charger.
- Keep the length of the cable between the router and the phone less than 10 meters.
- The router is for indoor use only. Do not use the router outside. Do not connect telephone extensions which run outside of the building. These can result in lightning damage to your unit.

Cleaning and Maintaining

- Use an antistatic cloth to clean the router. Do not use chemical or abrasive cleanser as these could damage the plastic case. Turn off your router before you clean it.
- Use the router within the temperature range of -10°C ~ $+55^{\circ}\text{C}$, and the storage temperature range is -20°C ~ $+65^{\circ}\text{C}$. The humidity range is 5%~95%.
- Do not use your router during a thunderstorm. Remove the mains power pack from the wall socket.
- Do not take out your (U)SIM card unnecessarily. The (U)SIM card may be easily lost or it can be damaged by static electricity.

Limited Warranty

- This warranty does not apply to defects or errors in the Product caused by:
 - i. Reasonable abrasion.
 - ii. End User's failure to follow ZTE's installation, operation or maintenance instructions or procedures.
 - iii. End User's mishandling, misuse, negligence, or improper installation, dis-assembly, storage, servicing or operation of the Product.

- iv. Modifications or repairs not made by ZTE or a ZTE-certified individual.
- v. Power failures, surges, fire, flood, accidents, actions of third parties or other events outside ZTE's reasonable control.
- vi. Usage of third-party products, or usage in conjunction with third-party products provided that such defects are due to the combined usage.
- vii. Any other cause beyond the range of normal usage intended for the Product.

End User shall have no right to reject or return the Product, or receive a refund for the 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.

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 of this product, whether or not ZTE had been advised, knew or should have known of the possibility of such damages, including, but not limited to lost profits, interruption of business, cost of capital, cost of substitute facilities or product, or any downtime cost.

Radio Frequency (RF) Energy(Only for America)

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

This device 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 devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg.

*Tests for SAR are conducted using standard operating positions accepted by the FCC with the device 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 device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the position required to reach the network. In general, the closer you are to a wireless base station, the lower the power output.

The highest SAR value for the model device 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 device models, depending upon available enhancements and FCC requirements.)

While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section of <http://www.fcc.gov/oet/ea/fccid/> after searching on

FCC ID: Q78-ZTEMF29A.

FCC Compliance(Only for America)

This device complies with part 15 of the FCC 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 undesired operation.

Caution: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

NOTE: This equipment 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.

Disposal of Your Old Appliance



When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2002/96/EC.

All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.

The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.

For this product's recycling information based on WEEE directive, please send an e-mail to weee@zte.com.cn

Troubleshooting

Voice Related Problems

Symptoms	Possible Problems/ Solutions
No Dial Tone.	<ul style="list-style-type: none">• Please wait for 1~2 minutes after the router is turned on.• If 3G LED light is blinking, you have no good RF reception. Change the location of the router.
There is a prompt/ phone alert/ announcement as soon as I lift the phone off the hook.	Make sure your (U)SIM card is inserted correctly and the PIN number has been entered. If the PIN number has been entered incorrectly then you will need to enter the PUK code when prompted.
The line is noisy/ distorted when I lift the phone off the hook.	<ul style="list-style-type: none">• Remove any electrical appliance which is too close to the phone or router.• The cable or phone set might be faulty.
I hear a rapid engaged tone as soon as I lift the phone off the hook.	Put the phone on hook and try again. If you are connected to the Internet using the 2G (GSM) network, please disconnect this first.
After dialing the last digit I hear nothing /silence.	When you have finished dialing you can press the # key or wait 4-8 seconds to connect the call.
Can not make or receive a call when surfing on the Internet.	If you are connected using the 2G (GSM) network then you cannot surf the net and make a phone call simultaneously. Please disconnect the internet and wait 30 seconds to 1 minute before making a call.

Internet Related Problems

Symptoms	Possible Problems/ Solutions
Can not access the Internet at all.	<ul style="list-style-type: none">• Please check your configuration settings.• Please wait 1~2 minutes for the router to initialize.• Check your service indicator LED's.
The download or upload speeds are very slow.	The speed is dependent on signal strength. Check your signal strength and network type.
Can not visit the webGUI configuration page	<ul style="list-style-type: none">• Enter the correct address. The default address is http://192.168.0.1 or http://ufi.home.• Only use one network adapter in your PC.• Do not use any proxy server.
Can not establish the Wi-Fi connection between your device and client	<ul style="list-style-type: none">• Make sure the Wi-Fi function is active. Press the WPS button to enable Wi-Fi function.• Refresh network list and select the correct SSID.• Check the IP address to make sure your client can obtain an IP address automatically in the Internet protocol (TCP/IP) properties.• Type the correct network key (Wi-Fi password) when you connect to the device.

Others

Symptoms	Possible Problems/ Solutions
The RSSI signal indicator is always blinking or does not light.	<ul style="list-style-type: none">• This indicates poor reception. Try moving the router to another location near the window.• Check the ANT button to see if you have press the ANT on but without connecting the external antenna.
About the password	<ul style="list-style-type: none">• For the Wi-Fi connection password, please check the label on the device.• The default password of the webGUI configuration page is admin.• If you changed the password and forgot the new password, you need to restore the device to the factory default settings.

For more assistance, please:

- Send E-mail to **mobile@zte.com.cn**
- Visit **<http://www.zte.com.cn>**
- Call Service Hotline: **+86-755-26779999**

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