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ZTE

MF29

ZTE MF29
Wireless Router
User Manual

LEGAL INFORMATION

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Glossary

- AC: Alternating Current
- APN: Access Point Name
- DC: Direct Current
- DHCP: Dynamic Host Control Protocol
- DNS: Domain Name System (or Service or Server)
- DoS: Denial of Service
- EDGE: Enhanced Data GSM Evolution
- ESSID: Expanded Service Set Identifier
- Ethernet: A frame-based computer networking technology for local area networks (LANs)
- GSM: Global System for Mobile Communications
- GPRS: General Packet Radio Service
- HSDPA: High Speed Downlink Packet Access
- HSUPA: High Speed Uplink Packet Access
- IP: Internet Protocol
- LAN: Local Area Network
- LED: Light - emitting Diode
- MHz: Megahertz
- MTU: Maximum Transmission Unit
- PDP: Packet Data Protocol
- PIN: Personal Identification Number
- PPP: Point to Point Protocol
- PSTN: Public Switched Telephony Network
- PUK: PIN Unlocking Key
- RSSI: Radio Signal Strength Indicator
- RF: Radio Frequency
- SIP: Session Initiated Protocol
- UPnP: Universal Plug and Play
- (U)SIM: (Universal) Subscriber Identification Module
- WCDMA: Wideband CDMA (Code-Division Multiple Access)
- WEP: Wired Equivalent Privacy
- WLAN: Wireless LAN
- WPA-PSK: Wi-Fi Protected Access–PreShared Key

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General Information

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.

Declaration

We, ZTE Corporation, declared that:

- The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
- This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

Notes:

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

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°C, and the storage temperature range is -20°C ~ +60°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 Router Appearance Disfiguration.
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, disassemble, 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, accident, actions of third parties or other events outside ZTE's reasonable control.
vi. Usage of products of third Parties, or usage in conjunction with third party products provided that such defects is due to the combined usage.
vii. Any other cause beyond the range of normal usage for Products. End User shall have no right to reject, return, or receive a refund for any Product from ZTE under the above-mentioned situations.

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

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.

Emergency Call

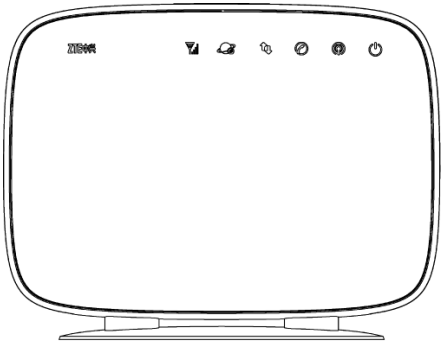
Do not rely on the 3G Wireless Router to provide emergency call in all situations.

Your 3G Wireless Router only supports emergency dialing when there is power and connection to the mobile network. If the power fails, the router can not work. If you have no network coverage you will not be able to make emergency calls. The 3G Wireless Router does not include a lifeline facility (wired access to the PSTN).

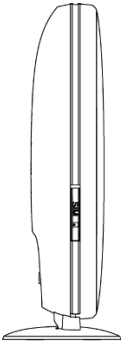
Getting Started

The wireless router operates on the HSUPA/HSDPA/UMTS network and GSM/GPRS/ EDGE network and supports voice and data service.

Appearance



Top view



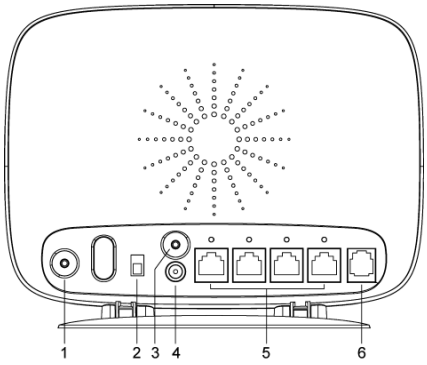
Left view

LED Indicator

Indicator	State	Description
	ON	External power supply works normally.
	OFF	External power supply is disconnected or power off.
	ON	RF signal is normal.
	Twinkling	RF signal is poor.
	OFF	RF signal is not available.

	ON	Green: Register to UMTS/HSDPA/HSUPA network.
		Blue: Register to UMTS/HSDPA/HSUPA network, and receive a new SMS.
		Red: Register to GSM/GPRS/EDGE network.
		Pink: Register to GSM/GPRS/EDGE network, and receive a new SMS.
	OFF	Not register to any network.
	ON	Wi-Fi works normally.
	Twinkling	Data transmission.
	OFF	The Wi-Fi function is disabled.
	ON	Connected to WAN.
	Twinkling	Attempt to connect to WAN.
	OFF	Not connect to WAN.
	ON	The telephone is off hook.
	Twinkling	The telephone is in calling.
	OFF	The telephone is idle.

Interface Description

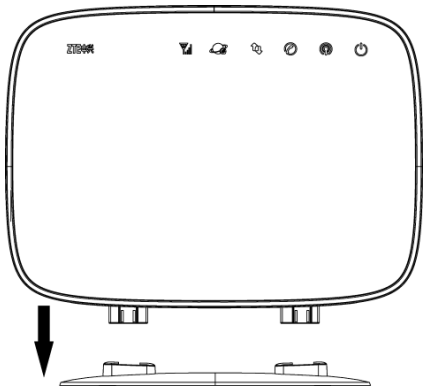


1. **WPS**: WPS button is used to start Wi-Fi Protected Setup authentication process.
2. **POWER Switch**: Turn the router ON or OFF.
3. **Reset**: Restore the router to default values.
4. **POWER Socket**: Connection to the external power supply.
5. **LAN 1 ~ LAN 4**: Ethernet connections to computer.
6. **PHONE**: Standard RJ11 connector for Telephone.

Installation

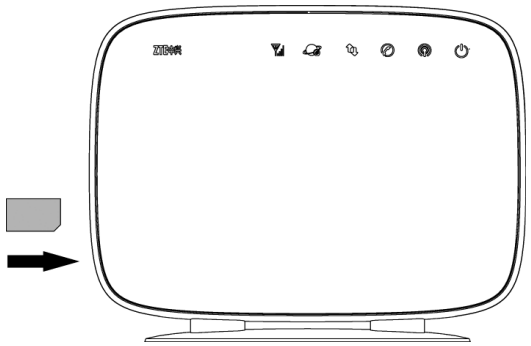
Installing the Base

Direct the router towards the locking catches on the base and push the router downward to lock the router into its place, as following shown.



Inserting the (U)SIM Card

1. Pull out the (U)SIM rubber cover located on the side of the router.
2. Firmly insert the (U)SIM card into the slot until it clicks into place.



3. Get the (U)SIM rubber cover back to your router.

Notes:

Please power off the router and remove the external power adapter before removing or inserting the (U)SIM card, if not, the router or (U)SIM card may be damaged.

Connecting to Phone

Connect the telephone to the **PHONE** port with a phone cable (RJ11).

Connecting to Computer

Connect your computer to the **LAN** port with an Ethernet cable (RJ45).

Notes:

The router will adapt the Ethernet cable style (crossover or straight) automatically.

Connecting with the External Power

Connect the external power adaptor to a standard power outlet. Insert the plug into the socket at the rear of the router.

Switching on Your Device

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

Notes:

Do not put anything on the top of the router. Do not lay routers to overlap each other when using.

2. Wait 1~2 minutes after turning the router on before you use the service. The Power light 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.”

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 can 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.

Voice

Making a Call

Before making a call, make sure:

- The (U)SIM card is installed.
- The telephone cable (RJ11) is connected properly.
- The Power light is on.
- The RSSI light is on.

To make a call:

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

Notes:

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

Making a Trunk Call

If you are making a trunk call, add the area code as normal.

E.g. 03 9612 3456

Making an International Call

If you are making an international call, key in the international access code followed by the country code, area code and number.

E.g. 00 11 64 12 345678

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.

Internet Access

The router does not require any drivers, and it supports all operating systems with Ethernet LAN capability, such as Windows 2000, XP, Vista, MAC OS X and Linux. The router supports four computers surfing on internet using Ethernet cable at the same time.

Notes:

All the parameter settings in this chapter are just for your reference. Please contact your service provider for detail.

Preparation

Before using the data service, make sure:

- The (U)SIM card is installed.
- The Ethernet cable is connected properly.
- The Power light is on.
- The RSSI light is on.
- The Network light is on.

Web browser requirement:

It is suggested that you use one of these web browsers to connect to the internet.

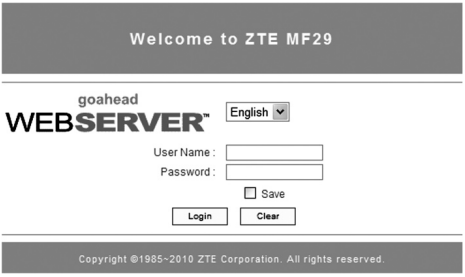
- IE 6.0 or later
- Firefox 2.0 or later
- Netscape version 9.0 or later

Login

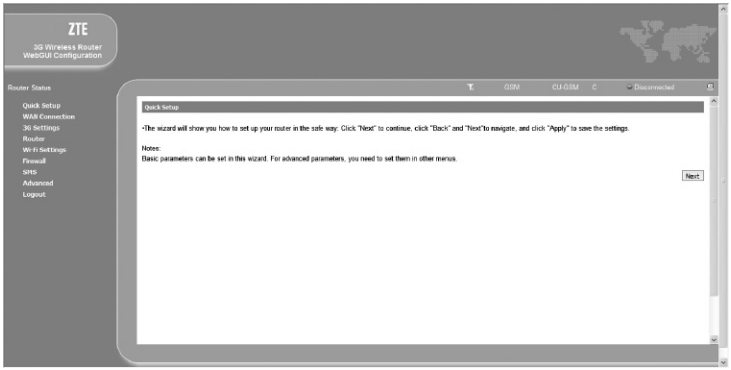
The router can be connected by RJ45 or by Wi-Fi (the SSID is “ZTE Wireless Network”). By either connection mode, you should set to obtain an IP address automatically in the attribution setting of Internet protocol (TCP/IP).

After your computer gets the IP address (like 192.168.0.101) from the router, open a web browser and type “http://192.168.0.1” in the address bar. Select language: 中文 or **English**, and then input the user name and password.

User Name: admin
Password: admin



Click the **Login** button to log in the router.
Notes:
If you check **Save** after you give user name and password, the router will save them, next time when you want to log in the router with the same user name and password, what you need to do is click the **Login** button.
When you successfully login, the router status web page appears:



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

- **Index area:** Show configuration list for your router.
- **Content area:** Show the detail configuration.

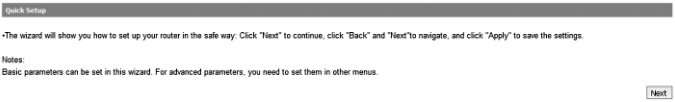
Settings

Do not change any settings unless instructed by your service provider. To make changes to your settings you need to disconnect the router from the network. After making changes reboot your router by turn off and on again.

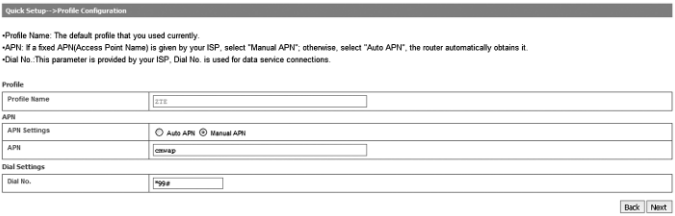
Quick Setup

The **Quick Setup** helps you to quickly set the basic settings of your router. The following sections describe the steps and parameters of **Quick Setup**.

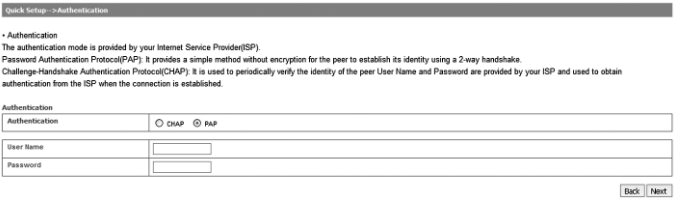
1. Read the guide carefully, and then click the **Next** button.



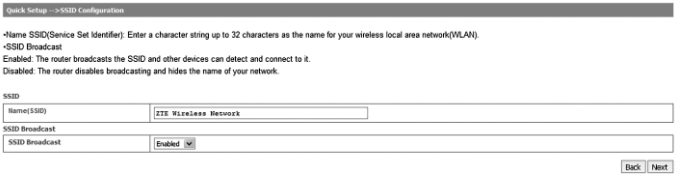
2. Set the Profile Configuration and then click the **Next** button.



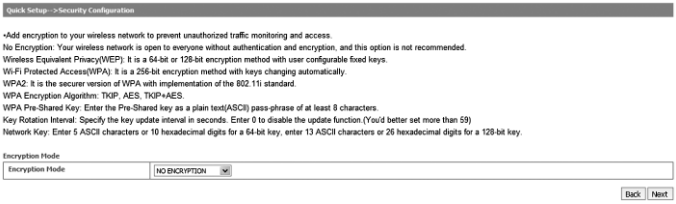
3. Set the Authentication and then chick the **Next** button.



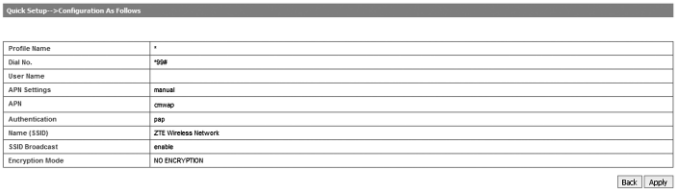
4. Set the SSID Configuration and then click the **Next** button.



5. Set the Security Configuration and then click the **Next** button.

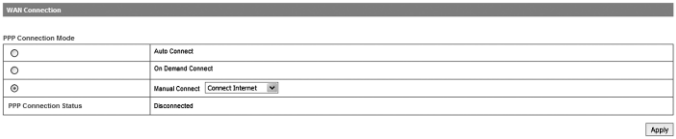


6. Show all the configurations and then click the **Apply** button to complete. If you want to modify, please click the **Back** button. (The figure is only for your reference as shown below).



WAN Connection

Click **WAN Connection**, you can configure how to connect to the Internet.



There are three connection modes:

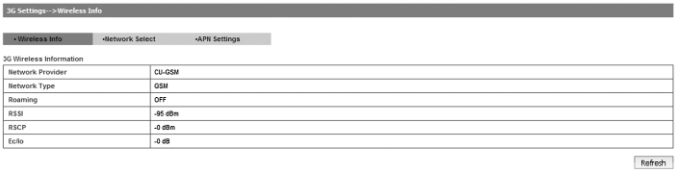
- **Auto Connect**: The router will automatically connect to WAN when it is powered on.
- **On Demand Connect**: The connection will be established when data transmission is required.
- **Manual Connect**: Connect to Internet or disconnect from Internet manually.

Click the **Apply** button to confirm your configuration, and then the PPP connection status will be shown in the figure.

3G Settings

Wireless Info

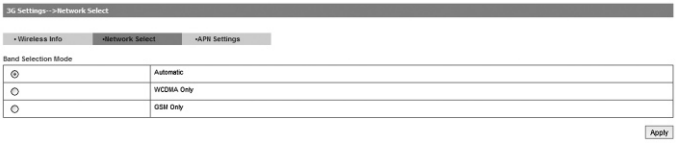
Select **3G Settings > Wireless Info**, the 3G wireless information is shown in the following figure:



Click the **Refresh** button to update the wireless information.

Network Select

Select **3G Settings > Network Select**, the Mode Preference and Band Settings are shown in the following figure:

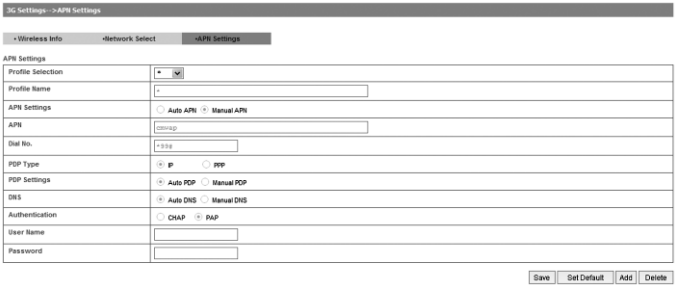


- **Automatic**: Router searches for valid network according to the wireless network.
- **WCDMA Only**: Router searches for WCDMA network only.
- **GSM Only**: Router searches for GSM network only.

Click the **Apply** button to confirm your configuration.

APN Setting

Select **3G Settings > APN Setting**, the APN parameters are shown in the following figure:



- **APN Settings**: APN address mode. If a fixed APN is provided by your service provider, select **Manual APN**. Otherwise select the **Auto APN**, and the router will automatically obtain this parameter.
- **APN**: APN string.
- **Dial No.**: This dial number is used for data service connection.
- **PDP Type**: Packet Data Protocol (PDP) Type IP is recommended unless service provider instruct others.
- **PDP Settings**: PDP address mode. If a fixed IP address is given by your service provider, select **Manual PDP**. Otherwise select the **Auto PDP** and the router will automatically obtain this parameter.
- **DNS**: If a fixed IP address is given by your service provider, then choose **Manual DNS**, otherwise, choose **Auto DNS**, and the router will automatically obtain parameters.
- **Authentication**: Password Authentication Protocol (PAP) provides a simple method without encryption for the peer to establish its identity using a 2-way handshake. Challenge-Handshake Authentication Protocol (CHAP) is used to periodically verify the identity of the peer using a 3-way handshake.
- **User Name**: User name is used to obtain authentication from the ISP

when the connection is established.

- **Password**: Password is used to obtain authentication from the ISP when the connection is established.

Click the **Add** button to define a new APN profile, and then click the **Save** button to save the profile. Click the **Set Default** button to set the parameters to their default value. Select one profile and click the **Delete** button to delete it.

Notes:

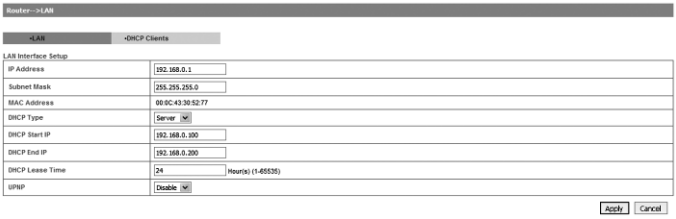
You can not set the selected APN profile as default until the connection is disabled.

You can not edit or delete the current default APN profile.

Router

LAN

Select **Router > LAN**, the LAN parameters are shown in the following figure:

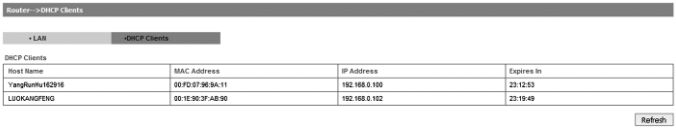


- **IP Address**: IP address for LAN interface.
- **Subnet Mask**: Subnet mask for the IP address.
- **MAC Address**: MAC address for the LAN interface.
- **DHCP Type**: Define the DHCP type. By default, router is set as DHCP server.
- **DHCP Start IP**: Allocate start IP address for IP pool.
- **DHCP End IP**: Allocate end IP address for IP pool. The DHCP End IP address should be larger than the DHCP Start IP address.
- **DHCP Lease Time**: Define how long the leased IP address will be expired, and will relocate new IP address.
- **UPNP**: Enable Universal Plug and Play(UPNP) or not.

Click the **Apply** button to confirm your configuration.

DHCP Clients

Select **Router > DHCP Clients**, the DHCP clients parameters are shown in the following figure:



Click the **Refresh** button to update the DHCP clients.

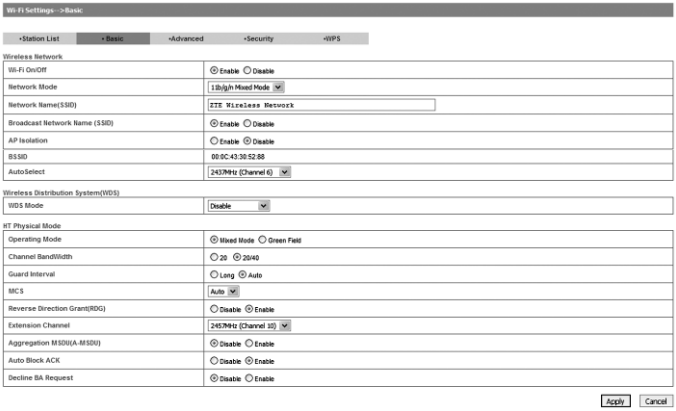
Wi-Fi Settings

Station List

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

Basic

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



- **Wi-Fi On/Off**: Enable Wi-Fi or not.
- **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.
- **AP Isolation**: When **Enabled** is selected, each of your wireless client will not 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 enable router to communicate with other APs, WDS connection is two-way communication, APs should know each others wireless MAC address. And make sure that all APs share the same channel.

WDS configuration is shown below:

Step	Description
1. Set the same channel for APs.	Manually set the SSID and channel is strongly recommended.
2. Select WDS mode: Disable, Lazy Mode, Bridge Mode or Repeater Mode.	– If you select **Disable**, WDS is disabled.
	– If you select **Lazy Mode**,WDS is enabled, and set wireless MAC address only on the peer APs.
	– If you select **Bridge Mode**, WDS is enabled, and set the peer APs wireless MAC address on router.
	– If you select **Repeater Mode**, WDS is enabled, and set the peer APs wireless MAC address on router.

3. Select **Phy mode**: CCK, OFDM, HTMIX or GREENFIELD.	– CCK: 802.11b
	– OFDM: 802.11g
	– HTMIX: 802.11b/g/n Mixed Mode
	– GREENFIELD: 802.11n
4. Select **Encryp Type**: WEP,TKIP,AES.	If you select **NONE**, all the data transmitted without encryption, and other station can access router.
5. Set AP wireless MAC address on router.	Only **Repeater Mode** and **Bridge Mode**.

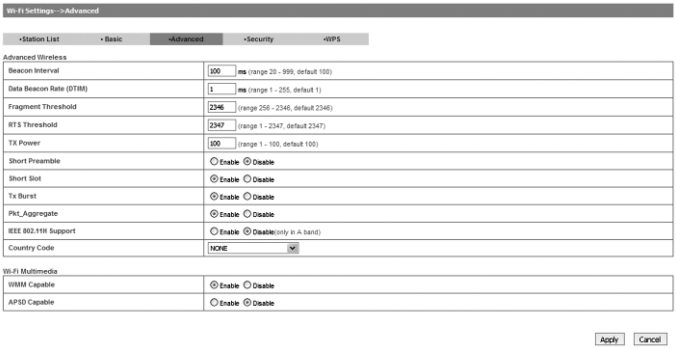
The HT physical Mode parameters are shown below:

- **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.
- **Decline BA Request**: Select to reject peer BA-Request or not.

Click the **Apply** button to confirm your configuration.

Advanced

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



- **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. Specify a beacon interval value. is recommended.
- **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.
- **IEEE 802.11H Support**: Support IEEE 802.11H or not.
- **Country Code**: Choose the right country code.

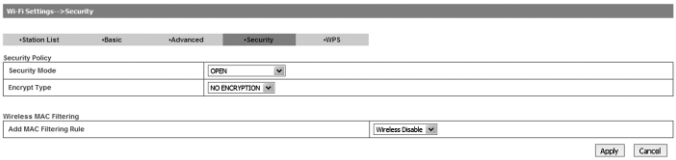
The Wi-Fi multimedia parameters are shown below:

- **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 the **Apply** button to confirm your configuration.

Security

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



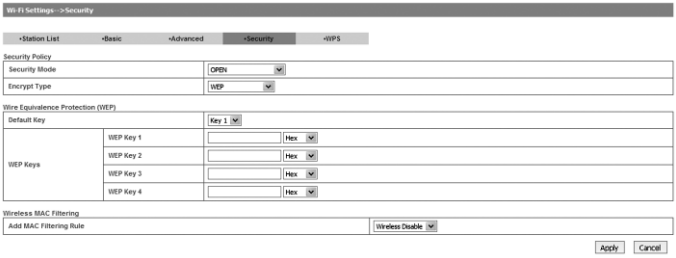
Unless one of these encryption modes is selected, wireless transmissions to and from your wireless network can be easily intercepted and interpreted by unauthorized users.

The security modes are described below:

- **Open**: You can authenticate successfully with a SSID, whether it is valid or empty.
- **Shared**: The WLAN clients who have the same WEP key with wireless gateway can pass the authentication and access the wireless network.
- **WEPAUTO**: Select WEP security automatically.
- **WPA-PSK**: WPA Pre-Shared Key, Enter the Pre-Shared key as a plain text (ASCII) pass-phrase of at least 8 characters.

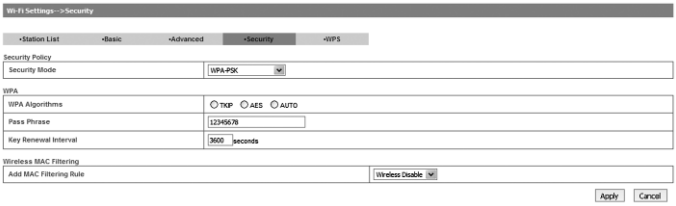
- **WPA2-PSK**: It is the securer version of WPA with implementation of the 802.11i standard.
- **WPA-PSK/WPA2-PSK**: Apply both the WPA-PSK and WPA2-PSK scheme.

If the Authentication type is **Open**, **Shared**, **WEPAUTO**, the bottom part of the configuration page displays parameters as shown.



- **WEP Keys**: At most four keys can be set in the blank. Choose the primary key index. The primary key is the only key in use at a given time. Whatever keys you enter for an access point, you must also enter the same keys for the client adapter in the same order. In other words, WEP key 1 on the AP must match WEP key 1 on the client adapter, WEP key 2 on the AP must match WEP key 2 on the client adapter, etc. A WEP is either 10 or 26 hexadecimal digits (0~9, a~f and A~F) based on whether you select 64 bits 128 bits in the Encryption Strength drop-down list.

If the Authentication type is **WPA-PSK**, **WPA2-PSK** or **WPA-PSK/WPA2-PSK**, the bottom part of the configuration page displays WPA parameters.



- **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**:

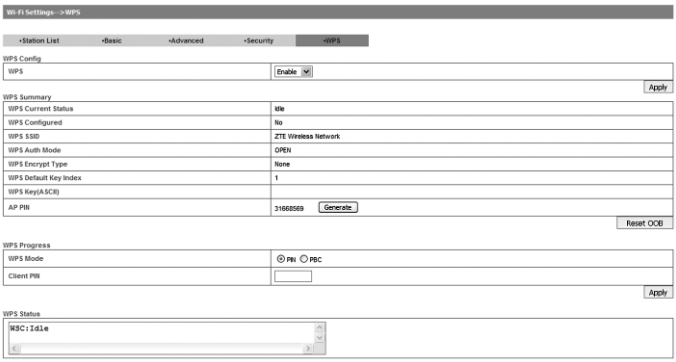
- **Wireless Disable**: If disabled, MAC address is not used to control network access.
- **Wireless Allow**: Set the MAC address that is allowed to access network.
- **Wireless Reject**: Set the MAC address that is not allowed to access network.

Click the **Apply** button to confirm your configuration.

WPS

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

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



WPS Summary, WPS Progress and WPS Status are all shown in the figure. It shows the WPS function status in the **WPS Summary**.

Click the **Generate** button to generate **AP PIN** code, click **Reset OOB** button to reset the **WPS SSID** and **WPS Key (ASCII)** as default.

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

- **PIN**: There are two ways to use PIN mode, one is set PIN code on the client's wireless adapter (you can find the PIN code in **AP PIN** field of **WPS Summary**), the other way is set the client's PIN code in **Client PIN** field.
- **PBC**: Press the WPS button of the router or select PBC, and then click the **Apply** button. Press 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.

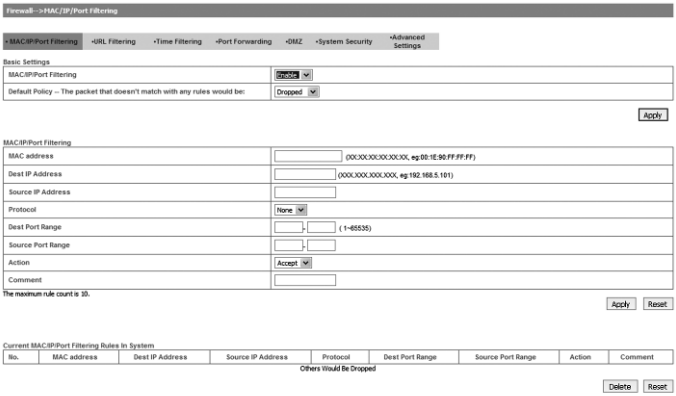
Notes:

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

MAC/IP/Port Filtering

Select **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:

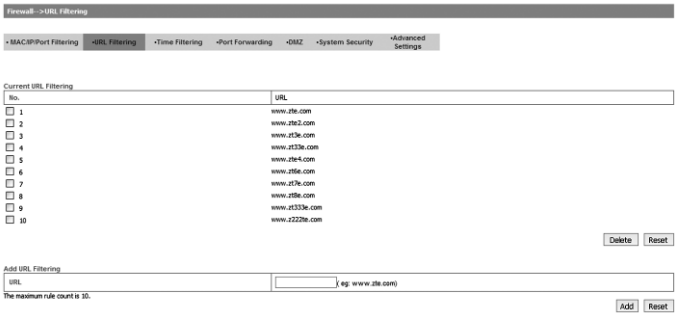


- **Default Policy**: Set how to handle the packet if none of the rules matches.
- **MAC address**: Set the MAC address that will be filtered.
- **Dest IP Address**: Set the destination IP address that will be filtered.
- **Source IP Address**: Set the source IP address that will be filtered.
- **Protocol**: 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.

Click the **Apply** button to confirm your configuration.

URL Filtering

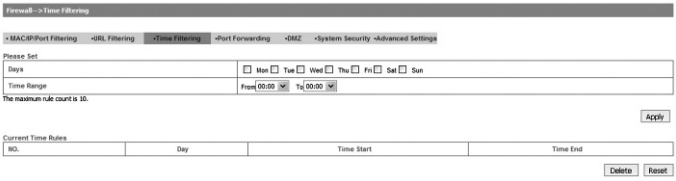
You can setup content filter to restrict the improper content access. Select **Firewall > URL Filtering**, the URL Filtering is shown in the following figure:



Type URL address, and then click the **Add** button to add the URL address into the filtering list. A new URL filtering item will be shown in the **Current Webs URL Filters:** field. Click the **Delete** button to delete the rule which you selected. Click the **Reset** button to clear what you select or input.

Time Filtering

You can set time range to disable the Internet service. Select **Firewall > Time Filtering**, the Time Filtering is shown in the following figure:

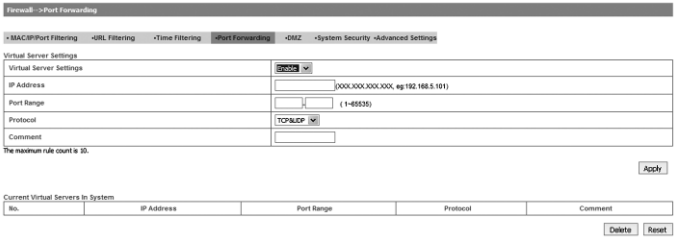


Select the **Days** and **Time Range**, and then click the **Apply** button to add the Time filtering. A new Time filtering item will be shown in the **Current Time Rules:** field. Click the **Delete** button to delete the rule which you selected. Click the **Reset** button to clear what you select or input.

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:

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



- **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 the **Apply** button to confirm your configuration.

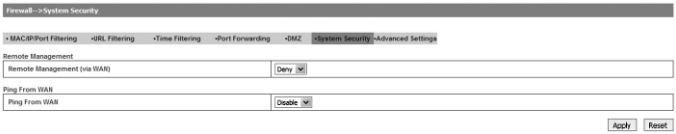
DMZ

You can setup 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 the **Apply** button to confirm your configuration.

System Security

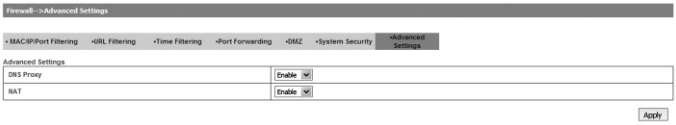
You can configure system firewall to protect AP or router from being attacking. Select **Firewall > System Security**, the system security setting is shown in the following figure:



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

Advanced Settings

Select **Firewall > Advanced Settings**, the Advanced Setting is shown in the following figure:



- **DNS Proxy**: Disable or enable to send this DNS request to high-level DNS server.
- **NAT**: Disable or enable the NAT in internal network.

Click the **Apply** button to confirm.

SMS

New Message

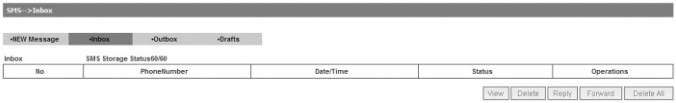
Select **SMS > New Message** to enter into New Message Interface.

Edit a new message. Click the **Send** button to send the message. Click the

Save button to save the message to Drafts. Click the **Reset** button to reedit the new message.

Inbox

Select **SMS > Inbox** to enter into Inbox Interface.



You can make the following operation: **View**/**Delete**/**Reply**/**Forward**/**Delete All**.

Outbox

Select **SMS > Outbox** to enter into Outbox Interface.

You can make the following operation: **View**/**Send**/**Delete**/**Forward**/**Delete All**.

Drafts

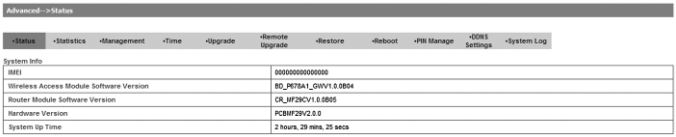
Select **SMS > Drafts** to enter into Drafts Interface.

You can make the following operation: **View**/**Send**/**Delete**/**Forward**/**Delete All**.

Advanced

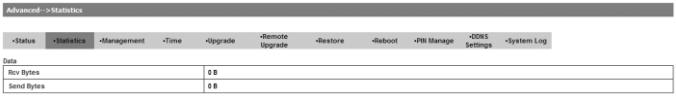
Status

Select **Advanced > Status**, the system information is shown in the following figure:



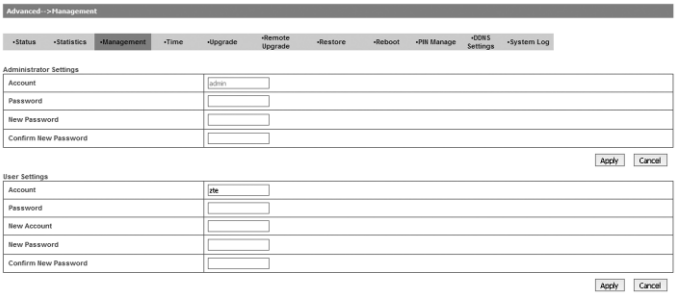
Statistics

Select **Advanced > Statistics**, the data flow statistics in this session is shown in the following figure:



Management

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



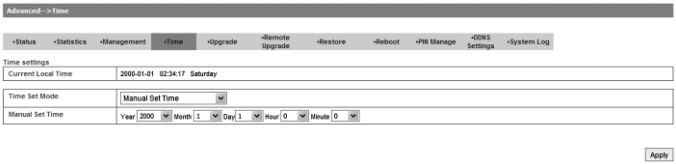
To set new account, type new account and password, and then click the **Apply** button to confirm your configuration.

Notes:

Please remember the new password which you set.

Time

Select **Advanced > Time**, the Time information is shown in the following figure:

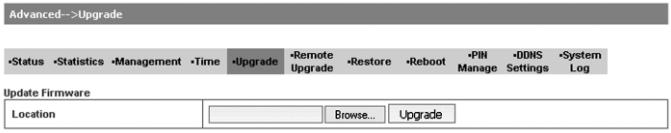


- **Time Set Mode**: Select the time set mode.
- **Manual Set Time**: Set the time manually.
- **SNTP Server IP**: Enter a server IP for time synchronization by SNTP Auto Synchronization.

Synchronize the current local time by manually, automatic synchronization from SNTP server or with host. Click the **Apply** button to confirm your configuration.

Upgrade

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



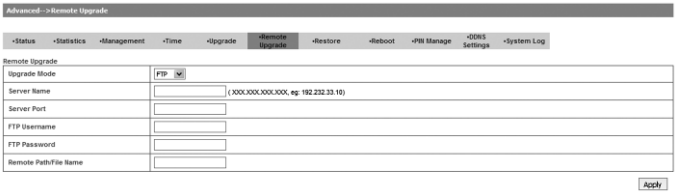
Click the **Browse...** button, locate the latest software version, and then click the **Upgrade** button.

Notes:

Do not upgrade software unless necessary. Wrongly upgrade action may cause router malfunction or can not work.

Remote Upgrade

You can upgrade your router using a remote server. Select **Advanced > Remote Upgrade** to upgrade the software version of the router.



- **Upgrade Mode**: Select upgrade mode. FTP or TFTP is available. If select TFTP, you don't need user authorization.
- **Server Name**: Remote FTP/TFTP server IP address.
- **Server Port**: The port of Remote FTP/TFTP server address.
- **FTP Username**: User name for the FTP server.
- **FTP Password**: Password for the FTP server.
- **Remote Path/File Name**: Locate upgrade file in FTP server. If TFTP is selected, you just need to type in file name.

Click the **Apply** button to confirm your configuration.

Restore

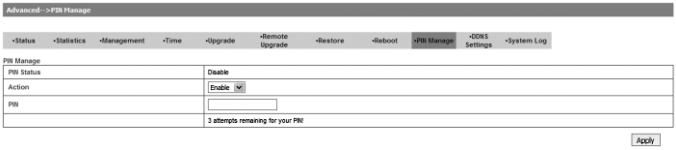
Select **Advanced > Restore**, click the **Restore** button to set all the settings to their factory default values, and the device will be turned off.

Reboot

Select **Advanced > Reboot**, click the **Reboot** to reboot the router.

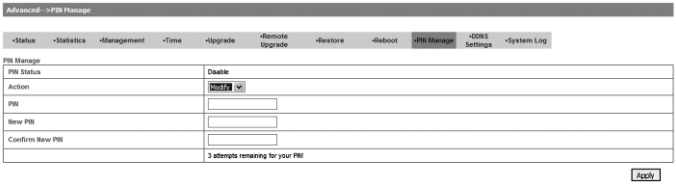
PIN Manage

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



You can enable or disable the PIN code, and click the **Apply** button to confirm.

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



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

Notes:

Three time consecutive wrong PIN code entries will lock the (U)SIM card.

DDNS Settings

Select **Advanced > DDNS Settings**, the **DDNS Settings** is shown in the following figure:

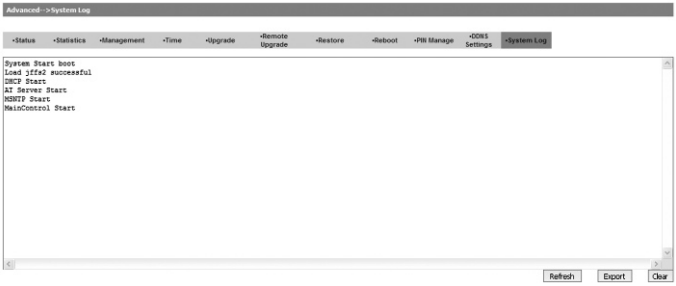
- **Dynamic DNS Provider**: Select dynamic DNS provider. Four websites are available.
- **Account**: Enter the account which is register on the website.
- **Password**: Enter the password which is register on the website.

- **DDNS**: Enter the DDNS which is register on the website.

Click the **Apply** button to confirm your configuration.

System Log

Select **Advanced > System Log**, the **System Log** is shown in the following figure:



Click the **Refresh** button to update the system log. Click the **Export** button to export the system log. Click the **Clear** button to clear the system log.

Disconnecting from the Internet

If you want to terminate your Internet connection, you can select **Disconnect Internet** from **WAN Connection** page, and click the **Apply** button.

Turn off the router can also terminate Internet connection.

Logout

1. Click the **Logout** button, a pop-up window will appear as shown in the following figure:

2. Click the **OK** button to logout the router.

Troubleshooting

- Make sure that the router is turned on and all the cables are connected correctly.
- Check the RSSI, PPP and PWR LED's are lit and NOT in a blinking state or off.

Voice Related Problems

Symptoms	Possible Problems / Solutions
No Dial Tone.	• Please wait for 1 ~ 2 minutes after the router is turned on.
	• If RSSI 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.	• 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 **#** button or wait 4-8 seconds to connect the call.
I can't make or receive a call when I am surfing on the net.	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
I cannot access the internet at all.	• 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.

Others

Symptoms	Possible Problems / Solutions
The RSSI signal indicator is always blinking or does not light.	This indicates poor reception. Try moving the router to another location near the window.

Technical Parameters

Network & Frequency Band	EDGE/GPRS/GSM: 850/900/1800/1900MHz
	HSUPA/HSDPA/WCDMA: 850/1900/2100MHz
Data Service	HSUPA 5.76 Mbps UL
	HSDPA 7.2 Mbps DL
	HSPA+ 14.4 Mbps / 21 Mbps DL
Power Adapter	Input: 100V ~ 240V (AC), 50 ~ 60Hz
	Output: 12V DC±10%, 1.5A
Dimensions (W×H×D)	199mm×146mm×32.5mm
Temperature	Storage: -20°C ~ +60°C
	Operation: -10°C ~ +55°C
Weight	About 510g