
3G WiFi Router

Model: WIFI-TW510R

USER MANUAL



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1. Product Overview

1.1 Introduction

Thank you for purchasing the 3G WiFi Router (WIFI-TW510R) of TeleWins(HK). Co., Ltd.

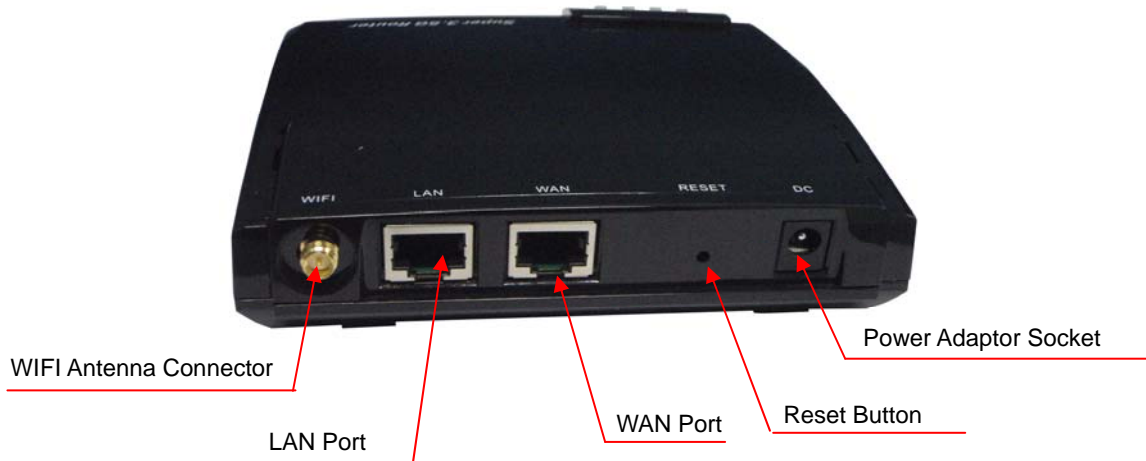
The WIFI-TW510R lets you share your broadband Internet access quickly and easily with connection to a 3G/2G (EVDO / HSPA / TD-SCDMA / EDGE) USB modem. It also supports connection to an ADSL/cable modem or Ethernet. It can reduce the cost for multiple Internet access via 3G or wired broadband.

You just need to connect the router to a USB modem or an ADSL/cable modem via the USB port, and then each WiFi-enabled device (such as a notebook, desktop PC, PDA, game console, cell phone, MP3 player) can connect to the Internet when within the range of the router. The router can support 20 to 30 users.

It can also help you share your ADSL broadband connection quickly and easily.

1.2 Appearance





1.3 Indicators

| LED | | Status | Description |
|------|---------------------------|------------|---|
| PWR | Power Indicator | Red | The power supply is normal. |
| | | Off | The router is turned off. |
| WIFI | WIFI Connection Indicator | On | The WIFI connection is established. |
| | | Off | The WIFI connection is not established. |
| WAN | WAN Connection Indicator | On | The WAN connection is established via the WAN Port. |
| | | Flickering | The router is transferring data via the WAN Port. |
| | | Off | The WAN connection is not established. |
| LAN | LAN Connection Indicator | On | The LAN connection is established via the LAN Port. |
| | | Flickering | The router is transferring data via the LAN Port. |
| | | Off | The LAN connection is not established. |

1.4 Interfaces

| Interface | Description |
|------------------------|--|
| USB Modem Port | To insert a compatible 3G/2G USB modem. |
| WIFI Antenna Connector | To connect with the WIFI antenna included in the package. |
| LAN Port (RJ45) | To connect with the PC, HUB or other Ethernet network devices via the CAT-5 Ethernet cable included in the package. |
| WAN Port (RJ45) | To connect with a cable/DSL modem or the Ethernet. |
| Power Adaptor Socket | To connect with the AC/DC adaptor included in the package. |
| Reset Button | To reset the router and restore it to factory default settings when the button is pressed via the end of a paper clip or other small-pointed object. |

1.5 Application

The WIFI-TW510R is suited for the places where 3G network or ADSL is available:

- Coffee shops, lounge bars, hotels, restaurants;

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- Beaches, gardens, swimming pools...;
- Sports area and recreation centers, like bowling, billiards...;
- Homes, apartments, enterprises, small offices, SOHO in need of Internet sharing;
- Exhibition and convention sites;
- Mobile vehicles (trains, ships, buses, RVs, etc.)

2. Installing the Router

2.1 Installation Steps

- 1) Locate the router as per the installation environment requirement specified in Section 2.2. If you want to use the WiFi function, you'd better choose the place which has less obstruction between the router and WiFi-enabled devices (e.g. your PC with wireless network card).
- 2) You can choose to let the router access the Internet either via 3G network or your existing cable/DSL modem.
 - **Via 3G network:** make sure that your 3G broadband service provided by your local ISP/operator is available, then insert the 3G USB modem into the **USB Modem Port** when the router is powered off.
 - **Via cable/DSL modem:** connect your cable/DSL modem to the **WAN Port** of the router via an Ethernet cable.
- 3) Adjust the antennas to upright direction.
- 4) Connect your PC to the **LAN Port** of the router via the Ethernet cable included in the package.
- 5) Connect the AC/DC adaptor to the **Power Adaptor Socket** and into a wall outlet. The router will start to work automatically.
- 6) Power on your PC and/or your cable/DSL modem.
- 7) Configure the router via web browser on your PC as per Section 3.

2.2 Installation Environment Requirements

- The router shall not be located where it will be exposed to moisture or excessive heat.
- The effective WiFi signal range of router is 100 meters indoors and 300 meters outdoors.
- Make sure that the Ethernet cables and power cords are placed securely and do not create a tripping hazard.
- The router can be placed horizontally on a table or vertically into the desktop socket.

3. Configuration via Web Browser

3.1 Login

- 1) Open the web browser (Microsoft IE 5.0 or later / Netscape Navigator 6.0 or later) on your PC that is connected to the router. In the Address bar, type "192.168.1.1" (the default IP address of the router) and then press "Enter", the login window as shown in the figure below will appear to let you input the user name and password.



- 2) Enter the default User name and Password (both are "admin") and then click the OK button. Then the configuration interface of the router will be displayed as below. You can click the left menu, the corresponding help information will be displayed on the right.

WI-FI ROUTER WITH UMTS/HSPA/EVDO/TDSCDMA

| | | |
|--|---|--|
| 3G Router Model No:3G Router System Status WAN Setting LAN Setting WLAN Setting Security Forwarding Routing Setting System Tools | <p>Wireless</p> <p>Wireless Radio: Enable</p> <p>Name (SSID): 3GRouter</p> <p>Channel: 6</p> <p>Mode: 54Mbps(802.11b/g)</p> <p>MAC Address: 00:0E:E8:DC:CA:1F</p> <p>IP Address: 192.168.1.1</p> <hr/> <p>WAN</p> <p>WAN Type: HSPA (Connected Successfully) <input type="button" value="Connect"/> <input type="button" value="Disconnect"/></p> <p>IP Address: 172.17.252.130</p> <p>Subnet Mask: 255.255.255.255</p> <p>Default Gateway: 10.64.64.64</p> <p>Keep Online Time: 394</p> <p>Signal Quality: 12/31</p> <p>Receive: 219719 bytes</p> <p>Transmit: 53332 bytes</p> <p>Primary DNS: 202.106.195.68</p> <p>Secondary DNS: 202.106.46.151</p> | <p>Router Status Help</p> <p>The Status page displays the router's current status and configuration. All information is read-only.</p> <p>Firmware Version: The current software version of the router.</p> <p>Hardware Version: The current hardware version of the router.</p> <p>LAN: The following is the information of LAN.</p> <ul style="list-style-type: none"> • MAC Address - The physical address of the router, as seen from the LAN. • IP Address - The LAN IP address of the router. • Subnet Mask - The subnet mask associated with LAN IP address. <p>Wireless: These are the current settings or information for Wireless.</p> <ul style="list-style-type: none"> • Wireless Radio - Indicates whether the wireless radio feature of the router is enabled or disabled. • Name (SSID) - SSID of the router. • Channel - The current channel in use. • MAC Address - The physical address of the router, as seen from the Wireless |
|--|---|--|

3.2 System Status

In the web configuration interface, click **Status** in the left menu to check the current working status, parameter settings and system logs of the router. There are 2 sub-menus: **Status** and **Syslog**.

3.2.1 Status

In the web configuration interface, click **System Status** -> **Status** in the left menu to check the current status and settings of the router as shown in below figure. All information is read-only. The description of each field is listed below.

Router Status

Firmware Version: 3G Router V4.10
Hardware Version: V1.01

LAN

MAC Address: 00:0C:20:09:44:95
IP Address: 192.168.1.1
Subnet Mask: 255.255.255.0

Wireless

Wireless Radio: Enable
Name (SSID): 3GRouter
Channel: 6
Mode: 54Mbps(802.11b/g)
MAC Address: 00:0E:E8:DC:CA:1F
IP Address: 192.168.1.1

WAN

WAN Type: HSPA (Connected Successfully)
IP Address: 172.17.252.130
Subnet Mask: 255.255.255.255
Default Gateway: 10.64.64.64
Keep Online Time: 394
Signal Quality: 12/31
Receive: 219719 bytes
Transmit: 53332 bytes
Primary DNS: 202.106.195.68
Secondary DNS: 202.106.46.151

System Time: Tue Oct 27 16:04:38 UTC+0800 2009

| Fields | Description |
|-------------|--|
| LAN | Current settings and information of the LAN Port, including the MAC Address, IP Address, and Subnet Mask. |
| Wireless | Current settings and information of the WiFi connection, including the Wireless Radio, SSID, Channel, Mode, MAC Address, and IP address. |
| WAN | Current settings and information of the WAN Port, including the WAN Type, IP Address, Subnet Mask, Default Gateway, Keep Online Time, Signal Quality, Receive, Transmit, Primary DNS, and Secondary DNS. |
| System Time | The total uptime of the router since its last boot-up or reset. |

3.2.2 System Logs

In the web configuration interface, click **System Status -> Syslog** in the left menu to check the system status and logs of the router as shown in below figure. All information is read-only. The description of each field is listed below.

The screenshot shows the 'Router Informations' page. It is divided into two main sections: 'System' and 'Syslog'.
System Section:
 - Memory Size: 32MB
 - System Uptime: 00:48:46
 - Memory Used: 29%
Syslog Section:
 A scrollable text area containing the following log entries:
 [1970-01-01 00:00:01] The system current version: V4.10.
 [1970-01-01 00:00:30] The SPI firewall had been enabled.
 [1970-01-01 00:00:30] The system allow ICMP packet to enter into it.
 [1970-01-01 00:00:30] The system clear all rules of the SPI firewall.
 [2009-10-28 10:36:11] The system had obtained the internet time successfully.
 At the bottom of the Syslog section, there is a 'Refresh' button.

| Fields | Description |
|---------------|---|
| Memory Size | The total size of router's internal memory. |
| System Uptime | The total uptime of the router since its last boot-up or reset. |
| Memory Used | The used size of router's internal memory. |
| Syslog | The system logs of the router. |

3.3 WAN Setting

In the web configuration interface, click **WAN Setting** in the left menu to configure the WAN (wide area network) connection of the router (i.e. how the router access the Internet). There are 3 sub-menus: Basic Setting, MAC Clone and DDNS.

3.3.1 Basic Setting

In the web configuration interface, click **WAN Setting -> Basic Setting** in the left menu. Firstly, you

shall choose the type of WAN connection: Static IP Address, Dynamic IP Address, PPP over Ethernet, or 3G.

WAN Setting

WAN

- Static IP Address(ISP assigns you a static IP address)
- Dynamic IP Address(Obtain an IP address from ISP automatically)
- PPP over Ethernet(Some ISPs require the use of PPPoE to connect to their services)
- 3G

If you need the router to access the Internet via 3G network (you have inserted a 3G USB modem to the router), please choose the option of 3G.

If you need the router to access the Internet via a cable/DSL modem (you have connected a cable/DSL modem to the router), please make the right choice as per the following guideline:

- If no any login parameters (e.g. fixed IP address, login ID) are given by your ISP, please choose **Dynamic IP** (the default choice);
- If a fixed IP address is given by your ISP, please choose **Static IP**;
- If a username and a password are given by your ISP, please choose **PPP over Ethernet**.

If you are not sure which connection type you use currently, please contact your ISP to obtain the correct information.

1) Dynamic IP

If you choose **Dynamic IP**, the router will automatically get the IP parameters from your ISP. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

WAN Setting

WAN

- Static IP Address(ISP assigns you a static IP address)
- Dynamic IP Address(Obtain an IP address from ISP automatically)
- PPP over Ethernet(Some ISPs require the use of PPPoE to connect to their services)
- 3G

| | | |
|----------------------|--|------------|
| MTU | <input type="text" value="1500"/> | (576~1500) |
| Host Name | <input type="text"/> | |
| Primary DNS | <input type="text" value="192.168.1.1"/> | |
| Secondary DNS | <input type="text" value="192.168.1.1"/> | |

| Fields | Description |
|-------------------------------|---|
| MTU | Maximum Transmission Unit. The normal value for most Ethernet networks is 1500 bytes. For some ISPs you may need to enter a lower value. But this is rarely required and shall not be done unless you are sure that it's necessary for your ISP connection. |
| Primary DNS and Secondary DNS | If your ISP gives 1 or 2 DNS addresses, enter them in the corresponding fields. Otherwise, the DNS servers will be assigned dynamically by your ISP. |

2) Static IP

If you choose **Static IP**, you shall have fixed IP parameters specified by your ISP. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

WAN Setting

WAN

Static IP Address(ISP assigns you a static IP address)
 Dynamic IP Address(Obtain an IP address from ISP automatically)
 PPP over Ethernet(Some ISPs require the use of PPPoE to connect to their services)
 3G

WAN IP Address
WAN Subnet Mask
WAN Gateway
WAN MTU (576~1500)
Primary DNS
Secondary DNS

| Fields | Description |
|-----------------|---|
| WAN IP Address | Enter the fixed IP address in dotted-decimal notation provided by your ISP. |
| WAN Subnet Mask | Enter the subnet mask in dotted-decimal notation provided by your ISP. Usually the value is 255.255.255.0. |
| WAN Gateway | Enter the IP address of gateway in dotted-decimal notation provided by your ISP. |
| WAN MTU | Maximum Transmission Unit. The normal value for most Ethernet networks is 1500 bytes. For some ISPs you may need to enter a lower value. But this is rarely required and shall not be done unless you are sure that it's necessary for your ISP connection. |
| Primary DNS and | Enter 1 or 2 DNS addresses in dotted-decimal notation provided by your |

| | |
|---------------|------|
| Secondary DNS | ISP. |
|---------------|------|

3) PPP over Ethernet

If you choose **PPP over Ethernet**, you shall have the login username and password offered by your ISP. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

WAN Setting

WAN

Static IP Address(ISP assigns you a static IP address)
 Dynamic IP Address(Obtain an IP address from ISP automatically)
 PPP over Ethernet(Some ISPs require the use of PPPoE to connect to their services)
 3G

PPPoE Username
PPPoE Password
MTU (546~1492)
PPPoE Service Name
Primary DNS
Secondary DNS

| Fields | Description |
|-----------------------------------|---|
| PPPoE Username and PPPoE Password | Enter the user name and password provided by your ISP. These fields are case-sensitive. |
| MTU | Maximum Transmission Unit. The default value is 1492 bytes, which is usually OK. For some ISPs you may need to enter a lower value. But this shall not be done unless you are sure that it's necessary for your ISP connection. |
| PPPoE Service Name | This shall not be entered unless you are sure that it's necessary for your ISP connection. |
| Primary DNS and Secondary DNS | If your ISP does not automatically send DNS address to the router during the login, enter the IP addresses in dotted-decimal notation of the primary and/or secondary (if available) DNS server of your ISP. |

4) 3G

If you choose **3G**, you shall have the APN offered by your 3G ISP. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

WAN Setting

WAN

Static IP Address(ISP assigns you a static IP address)
 Dynamic IP Address(Obtain an IP address from ISP automatically)
 PPP over Ethernet(Some ISPs require the use of PPPoE to connect to their services)
 3G

APN
Pin Code
Dialed Number
Username
Password
Primary DNS
Secondary DNS

| Fields | Description |
|-------------------------------|---|
| APN | Access Point Name. The name used to identify a UMTS/GPRS service in the global 3G/GSM network. Some 3G operators adopt "internet" as their APN. Please consult your local 3G ISP to get the correct APN and enter it in this field. |
| Pin Code | A numeric value used to lock your SIM card. If required, please enter the PIN code of your SIM card in this field. The code will be stored by the router and you will not have to re-enter it unless you change the SIM card. |
| Dialed Number | Enter the dial number provided by your ISP. |
| Username and Password | Enter the user name and password provided by your ISP. Both values are corresponding to the APN previously entered. |
| Primary DNS and Secondary DNS | If your ISP does not automatically send DNS address to the router during the login, enter the IP addresses in dotted-decimal notation of the primary and/or secondary (if available) DNS server of your ISP. |

3.3.2 MAC Clone

In the web configuration interface, click **WAN Setting** -> **MAC Clone** in the left menu. Some ISPs will require you to register your MAC address. If the MAC address of your router is not the registered one, you can clone the MAC address that is registered with your ISP to the router.

| Fields | Description |
|-------------------------------|---|
| Use the device's MAC Address | Choose this to maintain the MAC address of the router, if you have registered the router's MAC address or your ISP doesn't require registering MAC address. |
| Use this PC's MAC Address | Choose this to change the MAC address of the router to that of the PC which is connecting to the router, if you have registered the PC's MAC address. |
| Use the following MAC Address | Choose this and enter the MAC address that is provided by your ISP. |

3.3.3 DDNS

In the web configuration interface, click **WAN Setting** -> **DDNS** in the left menu. Via this function, you can assign a fixed host and domain name to a dynamic Internet IP address. It is useful when you are hosting your own website, FTP server, or other server behind the router. Before using this function, you need to sign up for DDNS service providers (e.g. www.dyndns.org, www.TZO.com, or www.3322.org). The DDNS service provider will give you a password or key and then you can set up a DDNS connection as per the following instructions.

- 1) Select a DDNS service provider in the field of **DDNS Service**.
- 2) Enter the **User Name** of your DDNS account.
- 3) Enter the **Password** of your DDNS account.
- 4) Enter the **Host Name** which is given by your DDNS service provider.
- 5) Click the **Save Settings** button to make your settings take effect.
- 6) You can check the DDNS connection status in the field of **Status**.

DDNS Settings

DDNS

DDNS Service:

User Name:

Password:

Host Name:

Internet IP Address: 218.18.39.229

Status: Connected

3.4 LAN Setting

In the web configuration interface, click **LAN Setting** in the left menu to configure the LAN (local area network) connection of the router (i.e. how the router share the Internet access). There are 3 sub-menus: **Basic Setting**, **DHCP Setting** and **DHCP Table**.

3.4.1 Basic Setting

In the web configuration interface, click **LAN Setting -> Basic Setting** in the left menu. You can configure the IP parameters of the LAN Port. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

LAN Setting

LAN

IP Address:

Subnet Mask:

| Fields | Description |
|-------------|--|
| IP Address | Specify the IP address of LAN Port of the router in dotted-decimal notation. (The default setting is 192.168.1.1.) |
| Subnet Mask | An address code that determines the size of the LAN. Usually specify it as 255.255.255.0. |

3.4.2 DHCP Setting

In the web configuration interface, click **LAN Setting -> DHCP Setting** in the left menu to configure

the DHCP parameters of your LAN. The router is set up by default as a DHCP (Dynamic Host Configuration Protocol) server, which provides TCP/IP configuration to all the devices that are connected the router on the LAN. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

DHCP Settings

DHCP Server

DHCP Server: Disable Enable

Start IP Address:

End IP Address:

Address Lease Time: minutes (1~2880 minutes, the default value is 120)

Default Domain: (optional)

Primary DNS: (optional)

Secondary DNS: (optional)

| Fields | Description |
|-------------------------------|---|
| DHCP Server | By default, the DHCP Server is enabled. If you disable it, you shall have another DHCP server in your LAN or manually configure the IP address for each device in your LAN. |
| Start IP Address | Specify the first IP address in your LAN. The default setting is 192.168.1.2. |
| End IP Address | Specify the last IP address in your LAN. The default setting is 192.168.1.254. |
| Address Lease Time | Specify the length of time (in minutes) that the device in your LAN can use the current IP address it has been assigned to. The default setting is 120 minutes. |
| Default Domain | Optional setting. Enter the domain name of your LAN. |
| Primary DNS and Secondary DNS | Optional setting. Enter the IP addresses in dotted-decimal notation of the primary and/or secondary (if available) DNS server of your ISP. |

3.4.3 DHCP Table

In the web configuration interface, click **LAN Setting -> DHCP Table** in the left menu to check the IP parameters of each DHCP client (i.e. the devices in your LAN). The status interface will show as below.

| DHCP Client Table | | |
|--|-----------------|-------------------|
| Client List | | |
| IP Address | Host | MAC Address |
| 192.168.1.3 | hxtan-libing-eg | 00:0C:29:1B:41:3F |
| <input type="button" value="Refresh"/> | | |

| Fields | Description |
|-------------|---|
| IP Address | The IP address that is assigned to the DHCP client. |
| Host | The host name of the DHCP client. |
| MAC Address | The MAC address of the DHCP client. |

3.5 WLAN Setting

In the web configuration interface, click **WLAN Setting** in the left menu to configure the WiFi connection of the router. There are 3 sub-menus: **Basic Setting**, **Security** and **Advanced Setting**.

3.5.1 Basic Setting

In the web configuration interface, click **WLAN Setting -> Basic Setting** in the left menu to configure the WiFi parameters. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

| WLAN Basic Settings | |
|---|--------------------------|
| WLAN | |
| Wireless Mode | 802.11b/g |
| Wireless SSID | 3GRouter |
| Wireless Channel | 6 |
| Hide SSID | <input type="checkbox"/> |
| <input type="button" value="Save Settings"/> <input type="button" value="Cancel Settings"/> | |

| Fields | Description |
|---------------|---|
| Wireless Mode | Select the desired WiFi mode among the following options: <ul style="list-style-type: none"> - 802.11b: only WiFi-enabled devices that comply to 802.11b standard can connect to the router; - 802.11g: only WiFi-enabled devices that comply to 802.11g standard can connect to the router; - 802.11b/g: Both 802.11b and 802.11g devices can connect to the router (the default choice). |
| Wireless SSID | Specify the name of WiFi hotspot that can be recognized by your |

| | |
|-------------------------|--|
| | WiFi-enabled devices. The value can include up to 32 characters and is case-sensitive. |
| Wireless Channel | This field determines what channel (operating frequency) will be used by the WiFi module of router. It is not necessary to change the value unless you notice interference problems with another nearby WiFi access point. |
| Hide SSID | If you check this, you can protect from others trying to use your WiFi connection by hiding your SSID. |

3.5.2 Security

In the web configuration interface, click **WLAN Setting** -> **Security** in the left menu to configure the security parameters for your WiFi connection. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

| Fields | Description |
|----------------------------|--|
| Authentication Mode | Choose your desired authentication mode: Open System, Shared, WEP Auto, WPA-PSK, or WPA2-PSK. If one of the first three options is chosen, you need to set the WEP security; otherwise, the WPA-PSK security will be required to set. |
| <i>WEP Security</i> | |
| Encryption | You can enable or disable (i.e. "None" is selected) the WEP encryption. It is strongly recommended that you enable it. Otherwise, the WiFi-enabled devices will be able to connect the router without encryption. |
| WEP Encryption | Select the length of the WEP key (64-bit or 128-bit) for the encryption. The higher the encryption bit, the more secure your network, however, speed is sacrificed at higher bit levels. |

| | |
|------------------------------|--|
| Default KEY ID | Select which of the 4 keys below will be used for the encryption. The key will be required when your WiFi-enabled device is connecting to the router. |
| WEP KEY 1 ~ WEP KEY 4 | After you specify the Default KEY ID , you shall choose the key format ("HEX" or "ASCII") and enter the key setting for the selected key ID. <ul style="list-style-type: none"> - Key format: HEX format means you need to enter a code composed of hexadecimal digits (i.e. 0-9, a-f, A-F); ASCII format can accept any combination of keyboard characters. - Key length: for 64-bit encryption, a 10-digit HEX key or 5-character ASCII key is allowed; for 128-bit encryption, you can specify a 26-digit HEX key or 13-character ASCII key. |
| <i>WPA-PSK Security</i> | |
| Encryption Type | Choose the desired encryption type: TKIP or AES. |
| Passphrase | Specify the WPA passphrase within 8 to 63 characters. |

3.5.3 Advanced Setting

In the web configuration interface, click **WLAN Setting** -> **Advanced Setting** in the left menu to configure the advanced settings for your WiFi connection. Please note that, in most cases the advanced settings should remain at their default values. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

WLAN Advanced Settings

WLAN

Fragment Threshold (256-2346)

RTS Threshold (1-2347)

Beacon Period (20-999)

Dtim Period (1-255)

Tx Power (1-100)

BGProtection Auto Always On Always Off

| Fields | Description |
|---------------------------|--|
| Fragment Threshold | This field specifies the maximum size for a packet before data is fragmented into multiple packets. This field shall remain at the default setting of 2346 (bytes). If you experience a high packet error rate, you may slightly reduce this value. But a too low value may result in poor network performance. Only minor modifications are recommended. |
| RTS Threshold | This field specifies the data packet size beyond which the low-level RF protocol invokes RTS/CTS flow control. This field shall remain at the default setting of 2347 (bytes). Should you |

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| | |
|----------------------|--|
| | encounter inconsistent data flow, only minor modifications are recommended. |
| Beacon Period | This field specifies the interval between beacon packets. A beacon is a packet broadcast by the router to synchronize the wireless network. The default value is 100 (milliseconds). |
| Dtim Period | This field specifies the interval of DTIM (Delivery Traffic Indication Message). When WiFi-enabled devices receive a beacon that contains a DTIM, they normally wake up to check for pending packets. An increase in the DTIM period count allows the devices to sleep longer; however, it delays the delivery of packets. The default value is 1 (millisecond). |
| Tx Power | This field specifies the transmit power of the WiFi signal. The default value is 100. |
| BGProtection | If you have a mix of 802.11b and 802.11g devices in the network, it is recommended to enable the b/g protection mechanism, which can decrease the rate of data collision between 802.11b and 802.11g devices. <ul style="list-style-type: none">- Auto: automatically disable/enable this protection based on the status of network;- Always on: always enable this protection;- Always off: always disable this protection. |

3.6 Security

In the web configuration interface, click **Security** in the left menu to configure the security setting of the router. There are 4 sub-menus: **Firewall**, **URL Filter**, **MAC Filter** and **ACL Setting**.

3.6.1 Firewall

In the web configuration interface, click **Security** -> **Firewall** in the left menu to configure the firewall switch. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

You can turn the general firewall switch on or off. The default setting is on. After the general firewall is switched off, even if URL Filtering, MAC Filtering or ACL setting is enabled, their setting will become ineffective.

| Fields | Description |
|--------------------------------|--|
| Firewall | Choose to switch on or off the general SPI firewall of the router. |
| Block the ICMP Packet from WAN | If you check this, you can prevent your network from being “pinged” or detected, by other Internet users. This function also reinforces your network security by hiding your network ports. |
| Block DDoS | Choose to enable or disable the blocking of DDoS attack. |
| IPSec Passthrough | If you check this, you will allow IPSec (Internet Protocol Security) tunnels to pass through the router, which will allow your network devices to communicate via VPN. IPSec is a suite of protocols used to implement secure exchange of packets at the IP layer. |
| PPTP Passthrough | If you check this, you will allow PPTP (Point-to-Point Tunneling) tunnels to pass through the router, which will allow your network devices to communicate via VPN. PPTP is the method used to enable VPN sessions to a Windows NT 4.0 or 2000 server. |
| L2TP Passthrough | If you check this, you will allow L2TP (Layer 2 Tunneling Protocol) tunnels to pass through the router, which will allow your network devices to communicate via VPN. L2TP is a standard which allows virtual links across the Internet. |

3.6.2 URL Filter

In the web configuration interface, click **Security** -> **URL Filter** in the left menu to control the Internet access by specified URLs. URL filter can not only be used to block access to specific websites, but also it can also be used to very effectively and granularly block specific objects like banners and advertisement, search engine queries, URLs containing specific words, and access to IMs and Chats like Yahoo Messenger, Google Talk, etc.

The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

| Fields | Description |
|------------------------|---|
| URL Filter | Choose to enable or disable the URL filter. |
| Filter Mode | This field defines the global policy for the URL filtering section. <ul style="list-style-type: none"> - Only Deny: allow everything and deny only the URLs in the below list; - Only Allow: deny everything and allow only the URLs in the below list. |
| URL | Enter the URL you need to allow or deny. |
| Add to Table button | Click to add an entry to the table of URLs. |
| Delete Selected button | Choose one entry in the table and click this button to delete the entry from the table of URLs. |
| Delete All button | Click to delete all entries from the table of URLs. |

3.6.3 MAC Filter

In the web configuration interface, click **Security** -> **MAC Filter** in the left menu to control which device in your LAN may or may not communicate with the router depending on their MAC addresses. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

| Fields | Description |
|------------------------|--|
| MAC Filter | Choose to enable or disable the MAC filter. |
| MAC Address | Enter the appropriate MAC addresses into the fields. The MAC address shall be entered in this format: xx-xx-xx-xx-xx-xx (where x is any hexadecimal digit), for example, 00-0E-BE-00-B0-00-0B. |
| Username | Enter the host name of the MAC address. |
| Add to Table button | Click to add an entry to the table of MAC address. |
| Delete Selected button | Choose one entry in the table and click this button to delete the entry from the table of MAC address. |
| Delete All button | Click to delete all entries from the table of MAC address. |

3.6.4 ACL Setting

In the web configuration interface, click **Security** -> **ACL Setting** in the left menu to set up the configuration of ACL (Access Control List). An ACL is a list of instructions that tells the router which data packets are acceptable and which ones are not, depending on the source address, destination address, port number, etc.

The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

ACL Setting

ACL

Source IP Address 192.168.1. ~

Dest IP Address /24

Protocol

Dest Port Range ~

Day Everyday Work Day

Time : to :

Action

| Fields | Description |
|------------------------|--|
| Source IP Address | Enter the range of IP address of devices in your LAN to allow or deny the traffic from these devices. |
| Dest IP Address | Enter an external IP address to allow or deny outgoing traffic to this destination IP address. If you keep it empty, all IP addresses will be specified. |
| Protocol | Choose the protocol of data packet which you need to allow or deny for the traffic relative to the above IP addresses. |
| Dest Port Range | Choose the range of web ports to allow or deny outgoing traffic to these destination ports. |
| Day | Choose the working days for the ACL. |
| Time | Enter the working time for the ACL. |
| Action | Choose to accept or drop the packet defined by the above setting. |
| Add to Table button | Click to add an entry to the table of ACL. |
| Delete Selected button | Choose one entry in the table and click this button to delete the entry from the table of ACL. |
| Delete All button | Click to delete all entries from the table of ACL. |

In the web configuration interface, click **Forwarding** in the left menu to configure the security setting of the router. There are 3 sub-menus: **NAT/NAPT**, **Port Forwarding** and **DMZ**.

3.7.1 NAT/NAPT

In the web configuration interface, click **Forwarding -> NAT/NAPT** in the left menu to configure the NAT/NAPT setting. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

NAT/NAPT Settings

NAT/NAPT

NAT/NAPT Enable Disable

WEB Remote Management Enable Disable

WEB Remote Management Port (1025~65535)

| Fields | Description |
|-----------------------------------|--|
| NAT/NAPT | Choose to enable or disable the NAT (Network Address Translation) / NAPT (Network Address Port Translation) in the router. |
| WEB Remote Management | Choose to enable or disable the remote management of NAT/NAPT. |
| WEB Remote Management Port | Enter the port number used for remote management of NAT/NAPT. The default setting is 8080. |

3.7.2 Port Forwarding

In the web configuration interface, click **Forwarding -> Port Forwarding** in the left menu to configure the port forwarding. Port forwarding allows an outside user to access a certain port in your LAN through the router. With this function, you can set up public services on your LAN, such as DNS server, email server, FTP server or other specialized Internet applications (that use Internet access to perform functions such as videoconferencing or online gaming). The PC/device used for port forwarding in your LAN is defined as a service port, and all outside requests from the Internet to this service port will be redirected to the PC/device specified by the server IP address.

Please note that, any PC/device which is being forwarded to must have a static IP address assigned to it because its IP address may change when using the DHCP function.

The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

| Fields | Description |
|------------------------|---|
| Services | Choose the type of service. |
| Service Name | Specify the name of the service. |
| Service Port | Enter the range of external port numbers (the port numbers seen by users on the Internet and forwarded to your PC or device in your LAN). The format is xxx ~ yyy, where xxx is the start port number and yyy is the end port number. |
| Server IP Address | Enter the IP address of the PC/device that is running the service application in your LAN. |
| Add to Table button | Click to add an entry to the table of port forwarding rules. |
| Delete Selected button | Choose one entry in the table and click this button to delete the entry from the table of port forwarding rules. |
| Delete All button | Click to delete all entries from the table of port forwarding rules. |

3.7.3 DMZ

In the web configuration interface, click **Forwarding** -> **DMZ** in the left menu to configure the DMZ host. The DMZ (Demilitarized Zone) hosting feature allows one PC/device in your LAN to be exposed to the Internet for use of a special-purpose service such as Internet gaming or videoconferencing.

Please note that, the PC/device used for DMZ host must have a static IP address assigned to it because its IP address may change when using the DHCP function.

The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

DMZ Settings

DMZ

DMZ Enabled Disabled

DMZ Host 192.168.1.

| Fields | Description |
|----------|---|
| DMZ | Choose to enable or disable the DMZ hosting feature. |
| DMZ Host | Specify the IP address of the PC/device to be used as the DMZ host. |

3.8 Routing Setting

In the web configuration interface, click **Routing Setting** in the left menu to check the current list of static routes and configure the static routes in the router. There are 2 sub-menus: **Routing Table** and **Static Routing**.

3.8.1 Routing Table

In the web configuration interface, click **Routing Setting -> Routing Table** in the left menu to check the current list of static routes in the router as shown in below figure. All information is read-only. The description of each field is listed below.

Route Table

| Route | | | | |
|--------------|-----------------|-------------|-------------|-----------|
| Dest.Address | Netmask | Next Hop | Hop Numbers | Interface |
| 10.64.64.64 | 255.255.255.255 | * | 0 | WAN1 |
| 192.168.1.0 | 255.255.255.0 | * | 0 | LAN |
| 127.0.0.0 | 255.0.0.0 | * | 0 | lo |
| default | 0.0.0.0 | 10.64.64.64 | 0 | WAN1 |

| Fields | Description |
|--------------|---|
| Dest Address | The destination IP address of a static route. |
| Netmask | The subnet mask of a static route. |
| Next Hop | The IP address of next hop for a static route. |
| Hop Numbers | The number of hops. |
| Interface | The type of interface, which depends on where the destination IP address is located. <ul style="list-style-type: none"> - LAN: internal wired or wireless network; - WAN: the Internet; |

| | |
|--|--|
| | - Lo (loopback): a dummy network in which one PC acts like a network, necessary for certain software programs. |
|--|--|

3.8.2 Static Routing

In the web configuration interface, click **Routing Setting** -> **Static Routing** in the left menu to build static routes in the router. A static route is a pre-configured path through which the network information shall travel to reach a specific host or network. The configuration interface will show as below.

Static Routing Settings

Static Routing

Select: 1--- [v] [Delete...]

Routing Name: []

Dest Address: 0.0.0.0

Dest Netmask: 0.0.0.0

Next Hop Address: 0.0.0.0

[Save Settings] [Cancel Settings]

Follow the instructions below to set up a static route:

- 1) Select an ID for the static route in the field of **Select**.
- 2) Enter the destination IP address for the static route in the field of **Dest Address**.
- 3) Enter the subnet mask for the static route in the field of **Dest Netmask**.
- 4) Enter the IP address of next hop in the field of **Next Hop Address**.
- 5) Click the **Save Settings** button to make your settings take effect.

3.9 System Tools

In the web configuration interface, click **System Tools** in the left menu to check the current list of static routes in the router. There are 6 sub-menus: **System Time**, **Backup Setting**, **Firmware Upgrade**, **Reboot to Default**, and **Password**.

3.9.1 System Time

In the web configuration interface, click **System Tools** -> **System Time** in the left menu to check or configure the system time on the router. The configuration interface will show as below. You shall enter the values as per the following description and then click the **Save Settings** button.

The time zone is selected by the NTP (Network Time Protocol) and the router can also automatically adjust for daylight saving time.

| Fields | Description |
|-------------|--|
| Time Server | Choose the appropriate NTP server address. |
| Time Zone | Choose the appropriate time zone for your local place. |

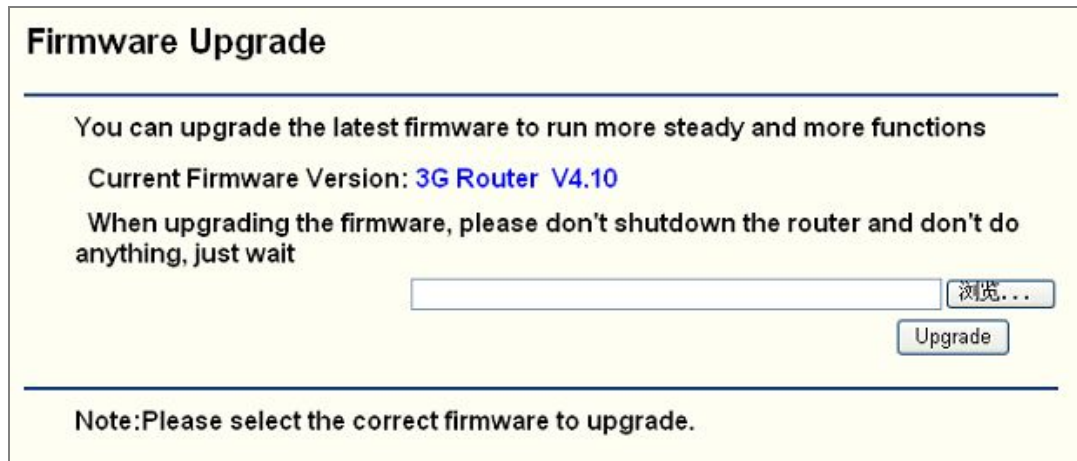
3.9.2 Backup Setting

In the web configuration interface, click **System Tools** -> **Backup Setting** in the left menu to save the current configuration of router as a backup in the PC connecting to the router, or restore the configuration backup you saved before.

| Fields | Description |
|----------------|--|
| Backup Button | Click to save all configurations as a backup file in the PC that is connecting to your router. |
| Restore Button | Click the Browse button to select the backup file which you want to restore then click the Restore button. |

3.9.3 Firmware Upgrade

In the web configuration interface, click **System Tools** -> **Firmware Upgrade** in the left menu to upgrade your router with the latest version of firmware to keep your router up-to-date.



If your router is not experiencing problems, there is no need to upgrade the firmware, unless the new firmware supports a new feature you need.

Click the **Browse** button to select the firmware file for upgrading, and then click the **Upgrade** button.

3.9.4 Reboot

In the web configuration interface, click **System Tools** -> **Reboot** in the left menu to reboot the router.



To reboot the router: choose **Yes** and then click the **Save Settings** button.

Some settings of the router will take effect only after rebooting, which include:

- Change of LAN IP address (the system will reboot automatically);
- MAC clone (the system will reboot automatically);
- DHCP server function;
- Static address assignment of DHCP server;
- Web service port of the router;
- Firmware upgrade (the system will reboot automatically);
- Restore the factory default setting (the system will reboot automatically);

3.9.5 Reset to Default

In the web configuration interface, click **System Tools** -> **Reset to Default** in the left menu to restore the router to factory default setting.

Restore to the Defaults

Restore Defaults

Restore Factory Defaults Yes No

Choose **Yes** and click the **Save Settings** button to reset all configurations to their default values, which include:

- Default user name: admin;
- Default password: admin;
- Default IP address: 192.168.1.1;
- Default subnet mask: 255.255.255.0;

3.9.6 Password

In the web configuration interface, click **System Tools** -> **Password** in the left menu to change the default password to login the router. It is strongly recommended to change the default password. All users who try to login the web configuration interface will be required to enter it.

To change the password:

Enter the old password, the new password and repeat the new password to confirm it, and then click the **Save Settings** button.

Password Management

Password

Old Password

New Password

Confirm Password

4. Technical Specifications

| | Specifications |
|----------------------------|--|
| Supported Frequency Band | EVDO: 800/1900 MHz, HSDPA-HSUPA: 850/1900/2100 MHz, TD-SCDMA: 2100MHz |
| Data Speed | 802.11b/g Access Point auto rate up to 54 Mbps |
| Supported 3G USB Modem | <p>Huawei: E156 / E160 / E180 / E230 (HSPA), EC226 / EC1260 (EVDO), ET128 (TD-SCDMA);</p> <p>ZTE: MF626 / MF628 / MF637U (HSPA), AC560 / AC580 / AC581 / AC2726 / AC8710 (EVDO), MU350 (TD-SCDMA);</p> <p>HAME: 620A / 621B / 628U / 630A / 638U (HSPA);</p> <p>Others: SOL MODEM-H100 / Option GI0225 / BrandLuxe C100S / Novatel MC950D / Promate eGo5 / TechFaith Flying-Angel (HSPA), Axesstel MV-140B / Pantech PX-500 / Weiwen / HMAE / Sprint MC760 / D-Link DWM-162-U5 (EVDO), RX 310 / Datang Aircard901 (TD-SCDMA)</p> |
| Interface | <ul style="list-style-type: none"> • Power interface: AC 100~240V 50/60Hz to DC 9V/1A • LAN and WAN interface: 2 RJ45 ports • External WiFi antenna • 4 LED indicators: WIFI, WAN, LAN, and POWER • 1 USB 2.0 port |
| Network Protocols | TCP/IP, DNS, DHCP (Client & Server), SNMP, NTP and Classic IP |
| Function | <ul style="list-style-type: none"> • User-friendly Web-based configuration • Firmware upgradeable via browser • Auto reconnect • Dial on demand • NAT • DHCP server • IP port forwarding • DMZ support • IP-MAC • DDNS support |
| Supported Operating System | Windows 2000/XP/Vista and Linux 2.4/2.6 |
| Casing | Optimized electromagnetic compatibility and heat extraction performance |
| Security | WiFi Protected Access™ (WPA/WPA2 Personal), 64/128-bit WEP Encryption, MAC filtering, Stateful Packet Inspection (SPI) firewall, internet policy. |
| Wifi Range | 35~100 m (indoor) / 100~300 m (outdoor) |
| Operating Temperature | 0°C ~ +70°C |
| Relative Humidity Range | 10% ~ 90% (non condensing) |
| Dimensions | 125mm X 120mm X 30mm / 220mm X 150mm X 70mm (packing) |
| Weight | 180 g / 800 g (packing) |
| Warranty Period | 1 year |
| Package Content | EVDO/HSDPA-WiFi Router, AC/DC adaptor, 1.5m CAT-5 Ethernet cable and desktop bracket |

5. Service after Sale

Your satisfaction is our priority. Offering a quick and effective technical support, we always put the customer first. Please don't hesitate to contact us by the following ways if you have any questions.

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