



User's Guide

TEW-656BRG
1.01

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FCC Interference Statement

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 radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

CE Declaration of Conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022/A1 Class B.

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Introduction

Congratulations on your purchase of this outstanding product: The TEW-656BRG connects to the Internet with a compatible wireless mobile USB dongle from a 3G* Internet service provider such as AT&T™, T-Mobile™, or Verizon™**.

Compatible with USB dongles from every mobile provider, this compact router connects to the Internet anywhere there is a 3G* mobile connection.

No installation is required, simply plug the 3G* USB adapter into the router to share a single Internet connection. The latest wireless encryption protects your valuable data. Wi-Fi Protected Setup (WPS) integrates other WPS supported clients at the touch of a button. An on/off switch on the back of the device saves battery life.

Features:

- High-speed data rates up to 150Mbps using an IEEE 802.11n connection***
- Works with UMTS/HSPA, WCDMA (HSDPA), CDMA2000 (EV-DO), and TD-SCDMA mobile networks
- 1x USB 2.0 port connects respective third party wireless mobile 3G dongles, from ISPs such as AT&T™, Sprint™, T-Mobile™, or Verizon™**
- Built-in antennas provide high-speed performance and expansive wireless coverage
- Advanced Firewall protection with Network Address Translation (NAT) and Stateful Packet Inspection (SPI)
- Access restriction with Internet Access Control by URL, Domain, packet type, and MAC address
- Built in pre-configured virtual servers and Application Level Gateway services for special Internet applications
- Universal Plug and Play (UPnP) for auto discovery and support for device configuration of Internet applications
- Easy setup via Web browser using the latest versions of Internet Explorer, FireFox, Netscape, Safari, and Chrome
- One touch wireless security setup using the Wi-Fi Protected Setup (WPS) button
- Complete wireless security with WPA/WPA2-PSK support
- Dynamic DNS service support
- Quality of Service (QoS) prioritization controls
- SNMP V2c support
- Routing Information Protocol (RIP) table support
- Easy setup installation wizard with built-in WAN auto detection
- 3- year limited warranty

*Go to www.trendnet.com for a list of compatible 3G USB modems

**Must have an active Internet plan with the respective third party mobile provider

***Maximum wireless signal rates are referenced from IEEE 802.11 theoretical specifications. Actual data throughput and coverage will vary depending on interference, network traffic, building materials, and other conditions.

Wireless Performance Considerations

There are a number of factors that can impact the range of wireless devices.

1. Adjust your wireless devices so that the signal is traveling in a straight path, rather than at an angle. The more material the signal has to pass through the more signal you will lose.
2. Keep the number of obstructions to a minimum. Each obstruction can reduce the range of a wireless device. Position the wireless devices in a manner that will minimize the amount of obstructions between them.
3. Building materials can have a large impact on your wireless signal. In an indoor environment, try to position the wireless devices so that the signal passes through less dense material such as dry wall. Dense materials like metal, solid wood, glass or even furniture may block or degrade the signal.
4. Antenna orientation can also have a large impact on your wireless signal. Use the wireless adapter's site survey tool to determine the best antenna orientation for your wireless devices.
5. Interference from devices that produce RF (radio frequency) noise can also impact your signal. Position your wireless devices away from anything that generates RF noise, such as microwaves, radios and baby monitors.
6. Any device operating on the 2.4GHz frequency will cause interference. Devices such as 2.4GHz cordless phones or other wireless remotes operating on the 2.4GHz frequency can potentially drop the wireless signal. Although the phone may not be in use, the base can still transmit wireless signal. Move the phone's base station as far away as possible from your wireless devices.

If you are still experiencing low or no signal consider repositioning the wireless devices or installing additional access points. The use of higher gain antennas may also provide the necessary coverage depending on the environment.

Package List

- TEW-656BRG
- Multi-Language Quick Installation Guide
- CD-ROM (User's Guide)
- Power adapter (5V, 1.2A)
- USB power cable
- Carrying case



Hardware

Front Panel

The figure below shows the front panel of the 150Mbps Mobile Wireless N Router.



Front Panel

POWER

This indicator lights green when the unit receives power and the battery is charging. The indicator lights red when the unit is on and the battery is low.

Ethernet (Link/ACT)

This indicator light green when a device is connected to Ethernet port. The indicators blink green during data transmission.

3G/WLAN (ACT)

This indicator lights green when there are wireless device is active. The indicator flashes during data transmission.

Bottom Panel

The figure below shows the rear panel of the 150Mbps Mobile Wireless N Router.



Bottom Panel

Ethernet connections.

POWER Switch

Switch to turn off/on the device.

POWER

Plug the power adapter to this power jack

WPS

Push this button to execute the Wi-Fi Protected Setup process.

RESET

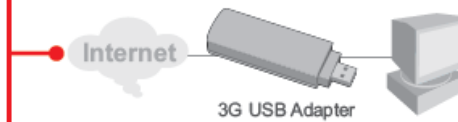
Use a pin-shaped item to push to reset this device to factory default settings. It will be a useful tool when the manager forgot the password to login, and needs to restore the device back to default settings.

Getting Started

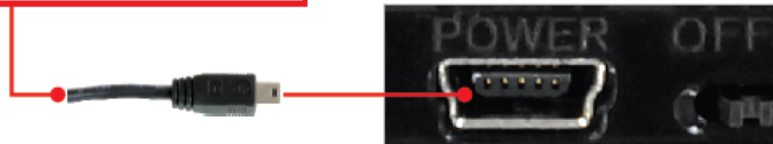
Installation

1. Verify that you have an Internet connection when connecting the 3G USB adapter to your computer. Open your browser (e.g. Internet Explorer) and type in a URL (e.g. <http://www.trendnet.com>) in the address bar.

Note: You may need to activate your Internet connection. Please contact your ISP for more information.



2. Connect the Mini-USB end of the power adapter to the TEW-656BRG.



3. Connect the power adapter to a power outlet.

4. Connect your 3G USB adapter to the USB port on the TEW-656BRG.



5. Move the Power switch to the On position.



6. Verify that the following panel lights are on: Wireless (Blue) and 3G (USB) (Blue).

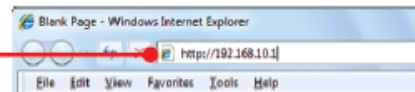


7. Connect your computer wirelessly to the TEW-656BRG. The default SSID (Wireless Network Name) of the TEW-656BRG is TRENDnet656. Contact the manufacturer of your wireless network adapter and make sure the wireless network adapter is configured with the proper SSID.

Note:

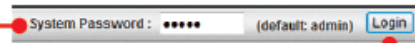
Gather all information related to your Internet Connection before you start. If necessary, contact your Internet Service Provider (ISP).

1. Open your web browser, type **http://192.168.10.1** in the Address bar, and then press **Enter**.



2. Enter the System Password, and then click **Login**. By default:

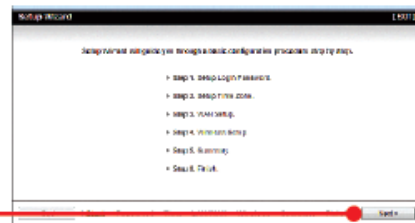
System Password: **admin**



3. Select **Wizard** and then click **Enter**.



4. Click **Next**.



5. Enter the Old password (By default, the **Password is admin**), enter a **New Password**, reconfirm the **New Password** and then click **Next**.



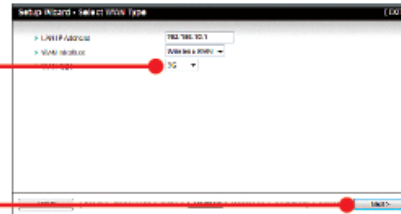
Note:

1. Setting a password prevents other users from accessing the TEW-656BRG configuration.
2. It is recommended that you enter a new password. If you decide to change this setting, please write down the new password.
3. Password is limited to up to 8 characters.

6. Select your Time Zone and then click **Next**.



7. Select 3G or iBurst (the example shown is for 3G). Then click **Next**. Configure the settings based on information provided by your ISP. Follow the wizard instructions to complete the configuration. Note: Each WAN type may have different options.



Note:

The example below is for Auto-detection. If the Setup Wizard could not automatically detect your Internet connection, select Manual and input the information using the information provided by your ISP.

8. Select **Auto-Detection** and then click **Next**.



8. Select **Auto-Detection** and then click **Next**.



9. You will need to configure the following:
Wireless Module (Enable/Disable): The default setting (Enable) must be selected.
Network ID (SSID): The SSID is the wireless network name of your wireless network (e.g. wireless router or access point). Enter a unique SSID. Do not use anything that would be identifying like "Smith Family Network". Choose something that you would easily identify when searching for available wireless networks.
Channel: In most cases, the default setting should be fine.



Note:

1. To protect your network from any unauthorized access it is recommended to enable wireless encryption.
2. The example below is for WPA2-PSK (AES) security. If you select WPA-PSK or WPA2-PSK, make sure your wireless adapters support WPA or WPA2. If your wireless adapters do not support WPA or WPA2, then select WEP.

10. Select the desired **Authentication** mode, select the desired **Encryption** type, enter characters for your Pre-Shared key and then click **Next**. For WPA-PSK or WPA2-PSK, the Pre-Shared Key must be between 8 and 63 ASCII or 64 HEX characters. Make sure to copy down the Pre-Shared Key.

Setup Wizard - Wireless Settings

Authentication: WPA2-PSK
Encryption: AES
Pre-shared key: 1234567890

Next

11. Click **Apply Settings**.

Setup Wizard - Summary

Please confirm the information below

(Main Setting)

WLAN Type	802.11n
AP Mode	Disabled
SSID	TEW-656BRG
Password	1234567890

(Advanced Setting)

Wireless	Enabled
SSID	TEW-656BRG
SSID Broadcast	Off
Authentication	WPA2-PSK
Encryption	AES
Pre-shared key	1234567890

Apply Settings

12. Click **OK**.

Message from web page

Note: Any changes to the wireless settings will be applied once the unit reboots. Please make sure to connect using the applied settings.

OK

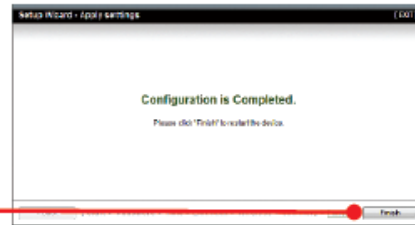
13. Wait around 40 seconds while the TEW-656BRG reboots.

Setup Wizard - Apply Settings

System is applying the settings. Please wait 40 seconds.

Next

14. Click **Finish**.

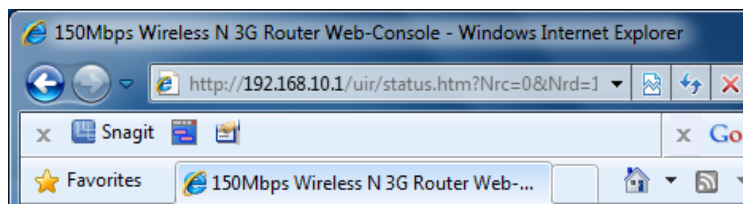


15. Open up your browser and enter in a URL (e.g. www.trendnet.com) to verify that you have Internet connection.

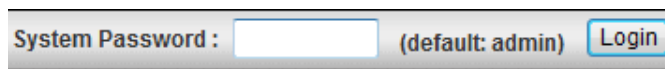


Configure with the Setup Wizard

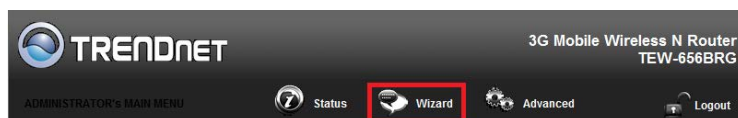
Type in the IP Address
(<http://192.168.10.1>)



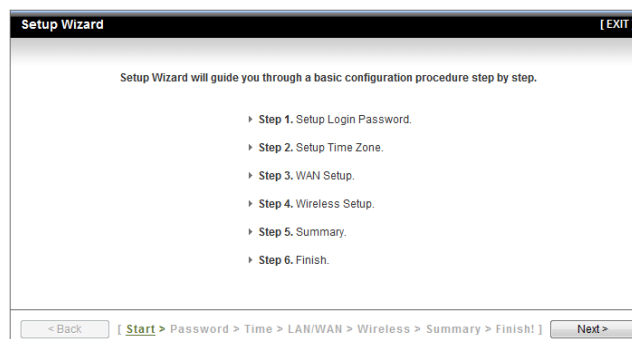
Type in the default password “**admin**” in the System Password and then click ‘**login**’ button.



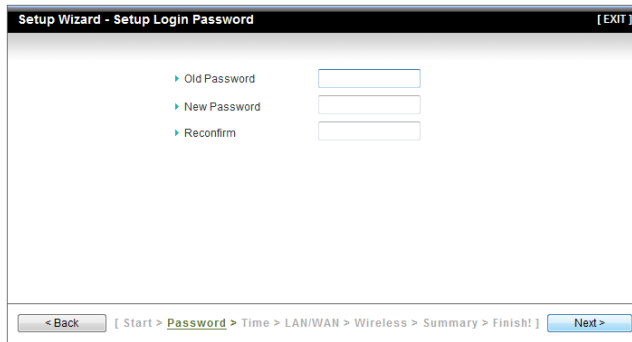
Click “**Wizard**” on the top of the screen.



Press “**Next**” to start the Setup Wizard.



Step 1: Change System Password.
Set up your system password.
(Default : **admin**)



Setup Wizard - Setup Login Password [EXIT]


▶ Old Password

▶ New Password

▶ Reconfirm

< Back [Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!] Next >

Step 2: Select Time Zone.



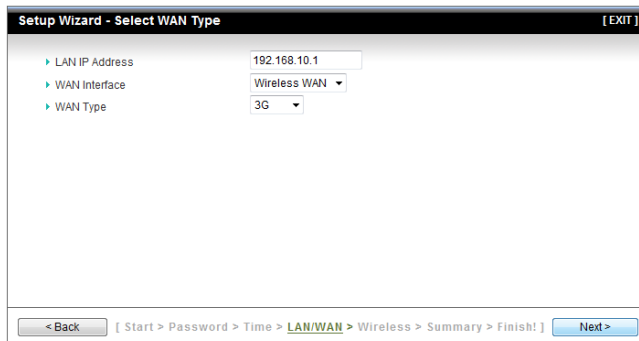
Setup Wizard - Setup Time Zone [EXIT]

(GMT-08:00) Pacific Time (US & Canada) ▼

Detect Again

< Back [Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!] Next >

Step 3: Select Wan Type.
Please set the WAN interface as “Wireless WAN” and the WAN type as “3G”.



Setup Wizard - Select WAN Type [EXIT]

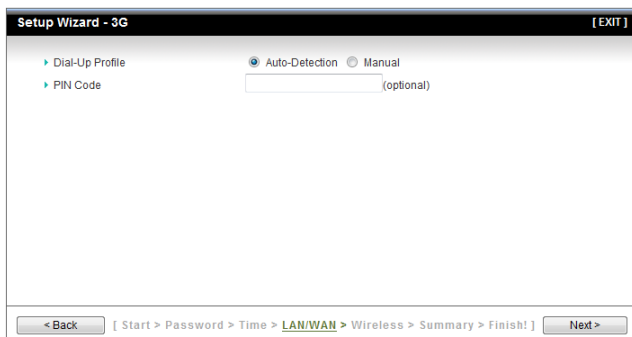
▶ LAN IP Address 192.168.10.1

▶ WAN Interface Wireless WAN ▼

▶ WAN Type 3G ▼

< Back [Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!] Next >

Step 4: Set up 3G profile.
Select “Auto Detection”.



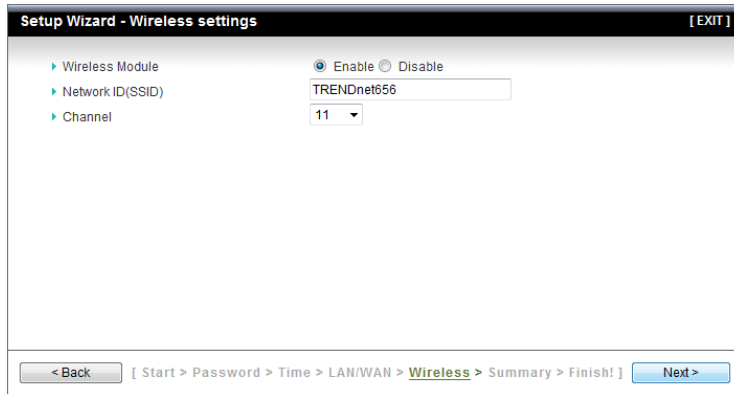
Setup Wizard - 3G [EXIT]

▶ Dial-Up Profile ☒ Auto-Detection ☐ Manual

▶ PIN Code (optional)

< Back [Start > Password > Time > LAN/WAN > Wireless > Summary > Finish!] Next >

Step 5: Set up your Wireless Network.
Set up your SSID.



Setup Wizard - Wireless settings [EXIT]

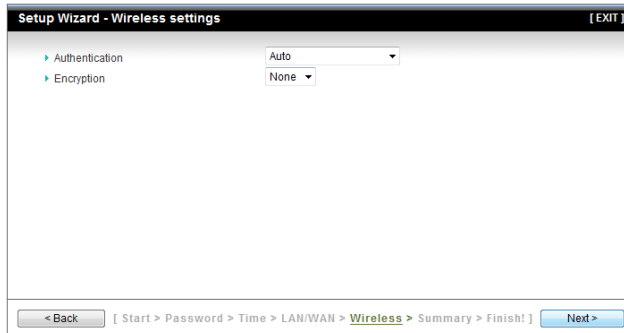
Wireless Module ☒ Enable ☐ Disable

Network ID(SSID) TRENDnet656

Channel 11

< Back [Start > Password > Time > LAN/WAN > **Wireless** > Summary > Finish!] Next >

Step 6: Set up Wireless Security.
Set up your Authentication and Encryption.



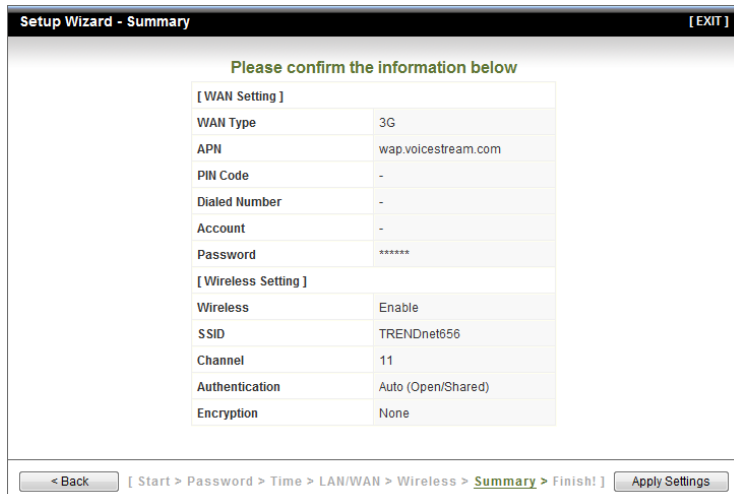
Setup Wizard - Wireless settings [EXIT]

Authentication Auto

Encryption None

< Back [Start > Password > Time > LAN/WAN > **Wireless** > Summary > Finish!] Next >

Step 7: Apply your Setting.
Then click “**Apply Setting**”.



Setup Wizard - Summary [EXIT]

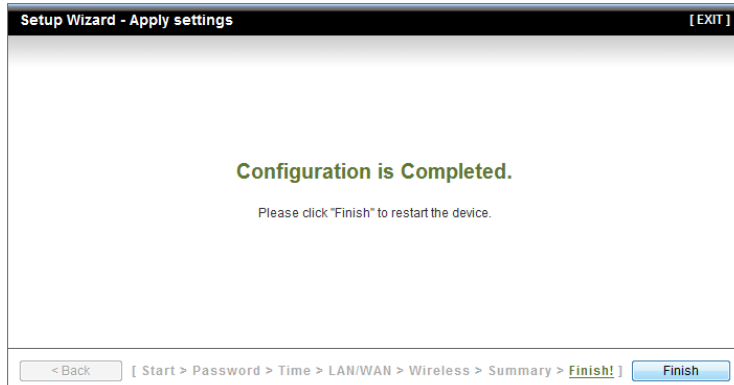
Please confirm the information below

[WAN Setting]	
WAN Type	3G
APN	wap.voicestream.com
PIN Code	-
Dialed Number	-
Account	-
Password	*****

[Wireless Setting]	
Wireless	Enable
SSID	TRENDnet656
Channel	11
Authentication	Auto (Open/Shared)
Encryption	None

< Back [Start > Password > Time > LAN/WAN > Wireless > **Summary** > Finish!] Apply Settings

Step 8:
Click “**Finish**” to complete it.



Setup Wizard - Apply settings [EXIT]

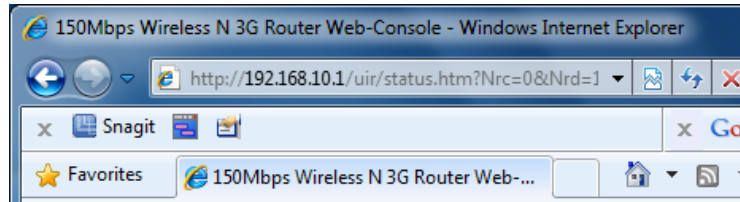
Configuration is Completed.

Please click "Finish" to restart the device.

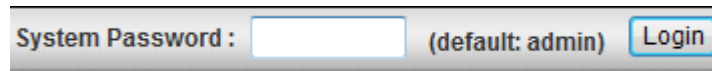
< Back [Start > Password > Time > LAN/WAN > Wireless > Summary > **Finish!**] Finish

Advance Configuration

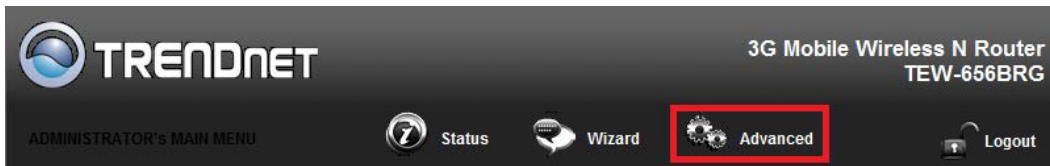
Whenever you want to configure the device, you can access the Configuration Menu by opening a web-browser and typing in the IP Address of the device. The default IP Address is: 192.168.10.1



Enter the default password “**admin**” in the System Password and then click the ‘**login**’ button.

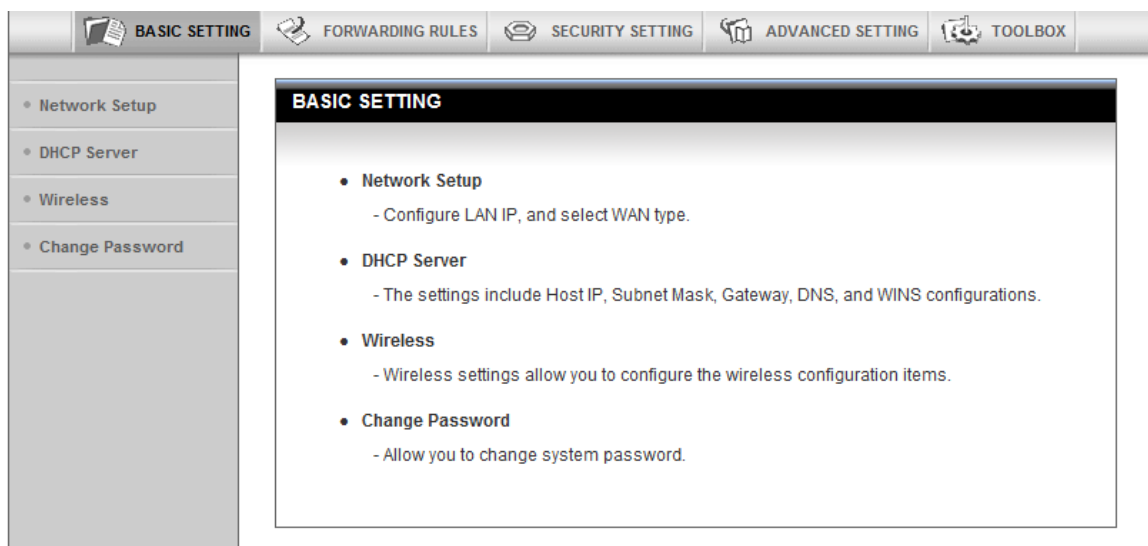


Click “**Advanced**” option on the top of the screen to enter the advance configuration of the device.



Basic Setting

This section enables users to configure the basic settings like WAN and LAN parameters, Wireless settings including wireless encryption and the unit’s Password.



Network Setup

LAN Setup	
Item	Setting
▶ LAN IP Address	192.168.10.1
▶ Subnet Mask	255.255.255.0
Internet Setup [HELP]	
▶ WAN Type	3G
▶ Dial-Up Profile	<input checked="" type="radio"/> Auto-Detection <input type="radio"/> Manual
▶ PIN Code	(optional)
▶ Connection Control	Auto Reconnect (always-on)
▶ Keep Alive	<input checked="" type="radio"/> Disable <input type="radio"/> LCP Echo Request ▶ Interval 10 seconds ▶ Max Failure Time 3 times <input type="radio"/> Ping Remote Host ▶ Host IP ▶ Interval 60 seconds
<div>Save Undo</div>	

LAN IP Address: The local IP address of this device. The computers on your network must use the LAN IP address of this device as their Default Router. You can change it if necessary. Default LAN IP is [192.168.10.1](#)

Subnet Mask: Input your Subnet mask. (All devices in the network must have the same subnet mask.) The default subnet mask is 255.255.255.0.

Internet Setup	
[Help]	
▶ WAN Interface	Wireless WAN
▶ WAN Type	3G
▶ Dial-Up Profile	<input type="radio"/> Auto-Detection <input checked="" type="radio"/> Manual
▶ Country	Albania
▶ Telecom	Vodafone
▶ 3G Network	WCDMA/HSPA
▶ APN	(optional)
▶ PIN Code	(optional)
▶ Dialed Number	
▶ Account	(optional)
▶ Password (optional)
▶ Authentication	<input checked="" type="radio"/> Auto <input type="radio"/> PAP <input type="radio"/> CHAP
▶ Primary DNS	(optional)
▶ Secondary DNS	(optional)
▶ Connection Control	Auto Reconnect (always-on)
▶ Keep Alive	<input type="radio"/> Disable <input type="radio"/> LCP Echo Request ▶ Interval 10 seconds ▶ Max. Failure Time 3 times <input checked="" type="radio"/> Ping Remote Host ▶ Host IP ▶ Interval 60 seconds
<div>Save Undo</div>	

For 3G WAN Networking. The WAN fields may not be necessary for your connection. The information on this page will only be used when your service provider requires you to enter a User Name and Password to connect with the 3G network. Please refer to your 3G documentation or service provider for additional information.

Dial-Up Profile: Select “Auto-Detection” or “Manual” to continue. If “Auto-Detection” is selected, the device will try to configure some ISP specific dial-up parameters automatically according to the **Country**, **Telecom**, and **3G Network** information you entered..

Country: Select your country.

Telecom: Select your telecom.

3G Network: Select the 3G Network

APN: Enter the APN for your PC card here.(Optional)

Pin Code: Enter the Pin Code for your SIM card. (Optional)

Dial-Number: This field should not be altered except when required by your service provider.

Account: Enter the new User Name for your PC card here, you can contact to your ISP to get it. (Optional)

Password: Enter the new Password for your PC card here, you can contact to your ISP to get it. (Optional)

Authentication: Choose your authentication.

Primary DNS: This feature allows you to assign a Primary DNS Server, contact to your ISP to get it. (Optional)

Secondary DNS: This feature allows you to assign a Secondary DNS Server, you can contact to your ISP to get it. (Optional)

Connection Control: Select your connection control. There are 3 modes to select:

Connect-on-demand: The device will link up with ISP when the clients send outgoing packets.

Auto Reconnect (Always-on): The device will link with ISP until the connection is established.

Manually: The device will not make the link until someone clicks the connect-button in the Status-page.

Keep Alive: This feature must collocate with the function "Auto" of "Auto Connect". Enable it to keep the connection always be established.

LCP Echo Request: Enter the time interval and the maximum failure count. The device will constantly send out the LCP packets for keeping the connection alive.

Ping Remote Host: Enter the Remote host IP and the time interval to send the ping packets for keeping the connection alive.

DHCP Server

DHCP Server [Help]	
Item	Setting
▶ DHCP Server	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
▶ IP Pool Starting Address	<input type="text" value="101"/>
▶ IP Pool Ending Address	<input type="text" value="200"/>
▶ Lease Time	<input type="text" value="86400"/> Seconds
▶ Domain Name	<input type="text"/>

DHCP Server: Choose either **Disable** or **Enable**. If you enable the DHCP Server function, the following settings will be effective.

- **IP Pool Starting/Ending Address:** Whenever there is a request, the DHCP server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting / ending address of the IP address pool.
- **Lease Time:** DHCP lease time to the DHCP client.
- **Domain Name:** Optional, this information will be passed to the clients. Press "**More>>**" and you can find more settings
- **Primary DNS/Secondary DNS:** Optional. This feature allows you to assign a DNS Servers
- **Primary WINS/Secondary WINS:** Optional. This feature allows you to assign a WINS Servers
- **Router:** Optional. Router Address would be the IP address of an alternate Router. This function enables you to assign another Router to your PC, when DHCP server offers an IP to your PC.

Click on "**Save**" to store your settings or click "**Undo**" to reset changes.

Press "**Clients List**" and the list of DHCP clients will be shown.

DHCP Clients List					
IP Address	Host Name	MAC Address	Type	Lease Time	Select
<div><input type="button" value="Delete"/> <input type="button" value="Back"/> <input type="button" value="Refresh"/> <input type="button" value="Fixed Mapping"/></div>					

Press "**Fixed Mapping**" and the DHCP Server will reserve the special IP for designated MAC address.

Fixed Mapping [Help]			
DHCP clients -- select one -- Copy to ID --			
ID	MAC Address	IP Address	Enable
1	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
9	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
10	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Wireless Settings

This section allows users to configure all wireless settings of the router. Allows you to set the wireless configuration items.

Wireless Setting [HELP]	
Item	Setting
Wireless Module	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Network ID(SSID)	<input type="text" value="TRENDnet656"/>
SSID Broadcast	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
Channel	<input type="text" value="11"/>
Wireless Mode	<input type="text" value="B/G/N mixed"/>
Authentication	<input type="text" value="Auto"/>
Encryption	<input type="text" value="None"/>

Wireless Module: You can enable or disable wireless function.

Network ID (SSID): Network ID is used for identifying the Wireless LAN (WLAN). Client stations can roam freely over this device and other Access Points that have the same Network ID. (The factory default setting is “default”)

SSID Broadcast: The router will broadcast beacons that have some information, including SSID so that wireless clients can know how many AP devices by scanning the network. Therefore, if this setting is configured as “Disable”, the wireless clients can not find the device from beacons.

Channel: The radio channel number. The permissible channels depend on the Regulatory Domain. The factory default setting is as follow: channel 1~11 for North America. (Channel 1~13 for European (ETSI); channel 1~ 14 for Japan).

Wireless Mode: Choose “B/G mixed”, “B only”, “G only”, “N only”, “G/N mixed” or “B/G/N mixed”. The factory default setting is “B/G/N mixed”.

Authentication mode: You may select one of authentication to secure your wireless network: Open Shared, Auto, WPA-PSK, WPA, WPA2-PSK, WPA2, WPA-PSK/WPA2-PSK, or

WPA /WPA2.

Open

Open system authentication simply consists of two communications. The first is an authentication request by the client that contains the station ID (typically the MAC address). This is followed by an authentication response from the AP/router containing a success or failure message. An example of when a failure may occur is if the client's MAC address is explicitly excluded in the AP/router configuration.

Shared

Shared key authentication relies on the fact that both stations taking part in the authentication process have the same "shared" key or passphrase. The shared key is manually set on both the client station and the AP/router. Three types of shared key authentication are available today for home or small office WLAN environments.

Auto

The AP will Select the Open or Shared by the client's request automatically.

WPA-PSK

Select Encryption and Pre-share Key Mode

If you select HEX, you have to fill in 64 hexadecimal (0, 1, 2...8, 9, A, B...F) digits.

If you select ASCII, the length of pre-share key is from 8 to 63.

Fill in the key, Ex 12345678

WPA

Check Box was used to switch the function of the WPA. When the WPA function is enabled, the Wireless user must **authenticate** to this router first to use the Network service. RADIUS Server IP address or the 802.1X server's domain-name.

Select Encryption and RADIUS Shared Key

If you select HEX, you have to fill in 64 hexadecimal (0, 1, 2...8, 9, A, B...F) digits

If you select ASCII, the length of pre-share key is from 8 to 63.

Key value shared by the RADIUS server and this router. This key value is consistent with the key value in the RADIUS server.

WPA-PSK2

WPA-PSK2 user AES and TKIP for Same the encryption, the others are same the WPA-PSK.

WPA2

WPA2 add uses AES and TKIP for encryption, the others are same the WPA.

WPA-PSK/WPA-PSK2

Another encryption options for WPA-PSK-TKIP and WPA-PSK2-AES, the others are same the WPA-PSK.

WPA/WPA2

Another encryption options for WPA-TKIP and WPA2-AES, the others are same the WPA.

By pressing **“WPS Setup”**, you can configure and enable the easy setup feature WPS (Wi-Fi Protection Setup) for your wireless network.

Wi-Fi Protected Setup	
Item	Setting
▶ WPS	<input checked="" type="radio"/> Enable <input type="radio"/> Disable
▶ AP PIN	61603820 <button>Generate New PIN</button>
▶ Config Mode	Registrar ▼
▶ Config Status	UNCONFIGURED <button>Set</button>
▶ Config Method	PIN Code ▼ <input type="text"/>
▶ WPS status	NOUSED
<input type="button" value="Save"/> <input type="button" value="Trigger"/> <input type="button" value="Cancel"/>	

WPS: You can enable this function by selecting **“Enable”**. WPS offers a safe and easy way to allow the wireless clients connected to your wireless network.

AP PIN: You can press Generate New Pin to get an AP PIN.

Config Mode: Select your config Mode from **“Registrar”** or **“Enrollee”**.

Config Status: It shows the status of your configuration.

Config Method: You can select the Config Method here from **“Pin Code”** or **“Push Button”**.

WPS status: According to your setting, the status will show **“Start Process”** or **“No used”**

Press **“Wireless Clients List”** and the list of wireless clients will be shown consequently.

Wireless Clients List	
ID	MAC Address
<input type="button" value="Back"/> <input type="button" value="Refresh"/>	

Change Password

Change Password	
Item	Setting
▶ Old Password	<input type="password"/>
▶ New Password	<input type="password"/>
▶ Reconfirm	<input type="password"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>	

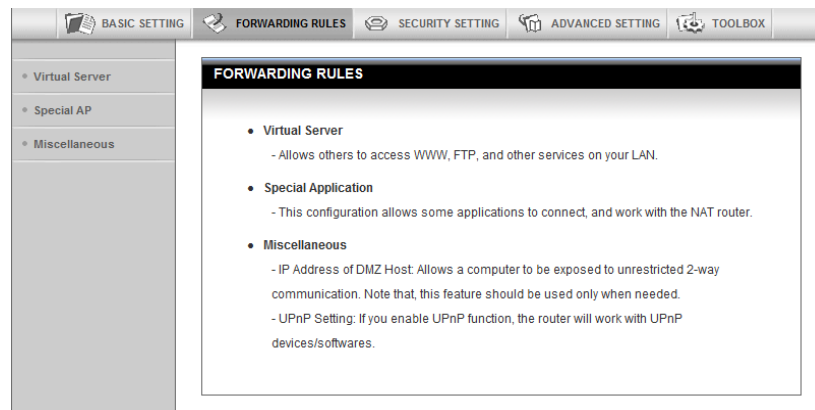
You can change the System Password here. We **strongly** recommend you to change the system password for security reason.

Click on **“Save”** to store your settings or click **“Undo”** to give up the changes.

Forwarding Rules

This section defines access restrictions, set up protocol and IP filters, create virtual server rules and special applications rules and DMZ (Demilitarized Zone).

Please note that certain 3G network providers issues virtual WAN IP addresses causing these features not to work. Contact your 3G network service provider for additional information.



Virtual Server

This product's NAT firewall filters out unrecognized packets to protect your Intranet, so all hosts behind this product are invisible to the outside world. If you wish, you can make some of them accessible by enabling the Virtual Server Mapping.

A virtual server is defined as a **Service Port**, and all requests to this port will be redirected to the computer specified by the **Server IP**. **Virtual Server** can work with **Scheduling Rules**, and give user more flexibility on Access control. For the details, please refer to **Scheduling Rule**.

Virtual Server [Help]				
Well known services: -- select one -- [Copy to] ID --				
ID	Service Ports	Server IP	Enable	Use Rule#
1	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
2	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
3	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
4	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
5	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
6	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
7	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
8	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
9	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
10	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼
11	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	(0) Always ▼

For example, if you have an FTP server (port 21) at 192.168.123.1, a Web server (port 80) at 192.168.123.2, and a VPN server at 192.168.123.6, then you need to specify the following virtual server mapping table:

Service Port	Server IP	Enable
21	192.168.123.1	V
80	192.168.123.2	V
1723	192.168.123.6	V

Click on “**Save**” to store your settings or click “**Undo**” to give up the changes.

Special AP

Some applications require multiple connections, like Internet games, Video conferencing, Internet telephony, etc. Because of the firewall function, these applications cannot work with a pure NAT router. **The Special Applications** feature allows some of these applications to work with this product. If the mechanism of Special Applications fails to make an application work, try setting your computer as the DMZ host instead.

ID	Trigger	Incoming Ports	Enable
1	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>

Trigger: The outbound port number issued by the application.

Incoming Ports: When the trigger packet is detected, the inbound packets sent to the specified port numbers are allowed to pass through the firewall. This device provides some predefined settings. Select your application and click “**Copy to**” to add the predefined setting to your list.

Click on “**Save**” to store your settings or click “**Undo**” to give up the changes.

Miscellaneous

Miscellaneous Items		[Help]
Item	Setting	Enable
▶ IP Address of DMZ Host	<input type="text"/>	<input type="checkbox"/>
▶ UPnP setting		<input checked="" type="checkbox"/>

IP Address of DMZ Host

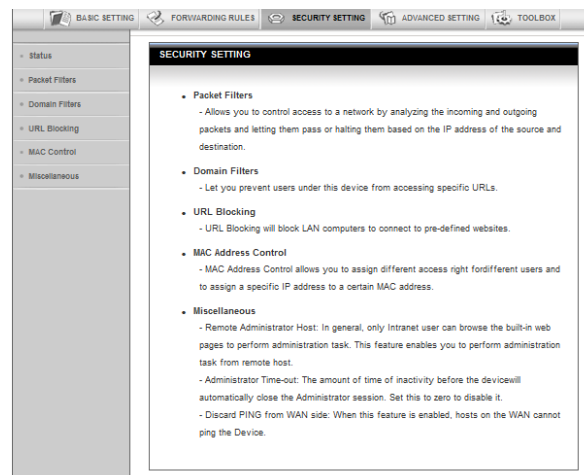
DMZ (Demilitarized Zone) Host is a host without the protection of firewall. It allows a computer to be exposed to unrestricted 2-way communication for Internet games, Video conferencing, Internet telephony and other special applications.

UPnP Setting

The device supports the UPnP function. If the OS of your client computer supports this function, and you enabled it, like Windows XP, you can see the following icon when the client computer gets IP from the device.

Click on “**Save**” to store your settings or click “**Undo**” to give up the changes.

Security Setting



Packet Filters

Packet Filter includes both outbound filter and inbound filter. And they have same way to setting.

Packet Filter enables you to control what packets are allowed to pass the router. Outbound filter applies on all outbound packets. However, inbound filter applies on packets that destined to Virtual Servers or DMZ host only. You can select one of the two filtering policies:

- Allow all to pass except those match the specified rules
- Deny all to pass except those match the specified rules

Outbound Packet Filter [Help]				
Item		Setting		
▶ OutboundPacket Filter		<input type="checkbox"/> Enable		
<input checked="" type="radio"/> Allow all to pass except those match the following rules. <input type="radio"/> Deny all to pass except those match the following rules.				
ID	Source IP	Destination IP : Ports	Enable	Use rule#
1	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	(0) Always ▼
2	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	(0) Always ▼
3	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	(0) Always ▼
4	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	(0) Always ▼
5	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	(0) Always ▼
6	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	(0) Always ▼
7	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	(0) Always ▼
8	<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="checkbox"/>	(0) Always ▼
<input type="button" value="Save"/> <input type="button" value="Undo"/> <input type="button" value="Inbound Filter..."/> <input type="button" value="MAC Level..."/>				

You can specify 8 rules for each direction: inbound or outbound. For each rule, you can define the following:

- Source IP address
- Source port
- Destination IP address
- Destination port
- Protocol: TCP or UDP or both.
- Use Rule#

For source or destination IP address, you can define a single IP address (4.3.2.1) or a range of IP addresses (4.3.2.1-4.3.2.254). An empty implies all IP addresses.

For source or destination port, you can define a single port (80) or a range of ports (1000-1999). Add prefix "T" or "U" to specify TCP or UDP protocol. For example, T80, U53, U2000-2999, No prefix indicates both TCP and UDP are defined. An empty implies all port addresses. Packet Filter can work with Scheduling Rules, and give user more flexibility on Access control. For Detail, please refer to Scheduling Rule.

Each rule can be enabled or disabled individually.

Click on **“Save”** to store your settings or click **“Undo”** to give up the changes.

Domain Filters

Domain Filter [Help]			
Item		Setting	
Domain Filter		<input type="checkbox"/> Enable	
Log DNS Query		<input type="checkbox"/> Enable	
Privilege IP Address Range		From	To
ID	Domain Suffix	Action	Enable
1	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
2	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
3	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
4	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
5	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
6	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
7	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
8	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
9	<input type="text"/>	<input type="checkbox"/> Drop <input type="checkbox"/> Log	<input type="checkbox"/>
10	* (all others)	<input type="checkbox"/> Drop <input type="checkbox"/> Log	-
<input type="button" value="Save"/> <input type="button" value="Undo"/>			

Domain Filter prevents users under this device from accessing specific URLs.

Domain Filter: Check if you want to enable Domain Filter.

Log DNS Query: Check if you want to log the action when someone accesses the specific URLs.

Privilege IP Address Range: Setting a group of hosts and privilege these hosts to access network without restriction.

Domain Suffix: A suffix of URL can be restricted, for example, ".com", "xxx.com".

Action: When someone is accessing the URL met the domain-suffix, what kind of action you want.

Check “Drop” to block the access. Check “Log” to log this access.

Enable: Check to enable each rule.

Click on “**Save**” to store your settings or click “**Undo**” to give up the changes.

URL Blocking

URL Blocking [Help]		
Item		Setting
URL Blocking		<input type="checkbox"/> Enable
ID	URL	Enable
1	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="checkbox"/>
9	<input type="text"/>	<input type="checkbox"/>
10	<input type="text"/>	<input type="checkbox"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>		

URL Blocking will block LAN computers to connect with pre-define Websites. The major difference between “Domain filter” and “URL Blocking” is Domain filter require user to input suffix (like .com or .org, etc), while URL Blocking require user to input a keyword only. In other words, Domain filter can block specific website, while URL Blocking can block hundreds of websites by simply a **keyword**.

URL Blocking: Check if you want to enable URL Blocking.

URL: If any part of the Website's URL matches the pre-defined word, the connection will be blocked.

For example, you can use pre-defined word "sex" to block all websites if their URLs contain pre-defined word "sex".

Enable: Check to enable each rule.

Click on "**Save**" to store your settings or click "**Undo**" to give up the changes.

MAC Control

Item	Setting
MAC Address Control	<input type="checkbox"/> Enable
<input type="checkbox"/> Connection control	Wireless and wired clients with C checked can connect to this device; and allow ▼ unspecified MAC addresses to connect.
<input type="checkbox"/> Association control	Wireless clients with A checked can associate to the wireless LAN; and allow ▼ unspecified MAC addresses to associate.

DHCP clients -- select one -- ID -- ▼

ID	MAC Address	C	A
1	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

MAC Address Control allows you to assign different access right for different users and to assign a specific IP address to a certain MAC address.

MAC Address Control: Check "Enable" to enable the "MAC Address Control". All of the settings in this page will take effect only when "Enable" is checked.

Connection control: Check "Connection control" to enable the controlling of which wired and wireless clients can connect with this device. If a client is denied to connect with this device, it means the client can't access to the Internet either. Choose "allow" or "deny" to allow or deny the clients, whose MAC addresses are not in the "Control table" (please see below), to connect with this device.

Association control: Check "Association control" to enable the controlling of which wireless client can associate to the wireless LAN. If a client is denied to associate to the wireless LAN, it means the client can't send or receive any data via this device. Choose "allow" or "deny" to allow or deny the clients, whose MAC addresses are not in the "Control table", to associate to the wireless LAN.

Click on "**Save**" to store your settings or click "**Undo**" to give up the changes.

Miscellaneous

Miscellaneous Items		[Help]
Item	Setting	Enable
▶ Administrator Time-out	300 seconds (0 to disable)	
▶ Remote Administrator Host : Port	<input type="text"/> / <input type="text"/> : <input type="text"/>	<input type="checkbox"/>
▶ Discard PING from WAN side		<input type="checkbox"/>
▶ DoS Attack Detection		<input type="checkbox"/>
<div>Save Undo</div>		

Administrator Time-out: The time of no activity to logout automatically, you may set it to zero to disable this feature.

Remote Administrator Host/Port

In general, only Intranet user can browse the built-in web pages to perform administration task. This feature enables you to perform administration task from remote host. If this feature is enabled, only the specified IP address can perform remote administration. If the specified IP address is 0.0.0.0, any host can connect with this product to perform administration task. You can use subnet mask bits "/nn" notation to specified a group of trusted IP addresses for example, "10.1.2.0/24".

NOTE:

When Remote Administration is enabled, the web server port will be shifted to 80. You can change web server port to other port, too.

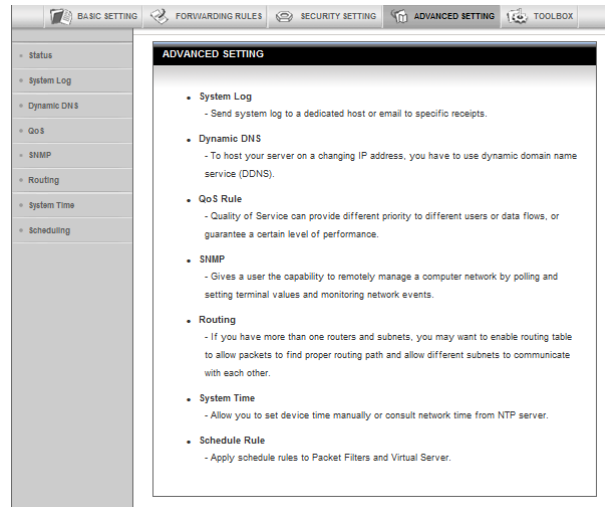
Please note that certain 3G networks provide virtual WAN IP addresses causing these features not to work. Contact your 3G network service provider for additional information.

Discard PING from WAN side: When this feature is enabled, any host on the WAN cannot ping this product.

DoS Attack Detection: When this feature is enabled, the router will detect and log the DoS attack comes from the Internet. Currently, the router can detect the following DoS attack: SYN Attack, WinNuke, Port Scan, Ping of Death, Land Attack etc.

Click on "**Save**" to store your settings or click "**Undo**" to give up the changes.

Advanced Setting



System Log

System Log [Help]		
Item	Setting	Enable
▶ IP address for syslogd	<input type="text"/>	<input type="checkbox"/>
▶ Setting of Email alert		<input type="checkbox"/>
• SMTP Server : port	<input type="text"/> : <input type="text"/>	
• SMTP Username	<input type="text"/>	
• SMTP Password	<input type="text"/>	
• E-mail addresses	<input type="text"/>	
• E-mail subject	<input type="text"/>	
<div>Save Undo</div> <div>View Log... Email Log Now</div>		

This page support two methods to export system logs to specific destination by means of syslog (UDP) and SMTP(TCP). The items you have to setup including:

IP Address for Sys log: Host IP of destination where sys log will be sent to. Check **Enable** to enable this function.

E-mail Alert Enable: Check if you want to enable Email alert (send syslog via email).

SMTP Server IP and Port: Input the SMTP server IP and port, which are connected with ':'. If you do not specify port number, the default value is 25.

For example, "mail.your_url.com" or "192.168.1.100:26".

Send E-mail alert to: The recipients who will receive these logs, you can assign more than 1 recipient, using ';' or ',' to separate these email addresses.

E-mail Subject: The subject of email alert, this setting is optional.

Click on "**Save**" to store your settings or click "**Undo**" to give up the changes.

Dynamic DNS

To host your server on a changing IP address, you have to use dynamic domain name

service (DDNS). So that anyone wishing to reach your host only needs to know the name of it. Dynamic DNS will map the name of your host to your current IP address, which changes each time you connect your Internet service provider.

Before you enable **Dynamic DNS**, you need to register an account on one of these Dynamic DNS servers that we list in **Provider** field.

Please note that certain 3G network providers issues virtual WAN IP addresses causing this feature not to work. Contact your 3G network service provider for additional information.

Dynamic DNS [Help]	
Item	Setting
▶ DDNS	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
▶ Provider	DynDNS.org(Dynamic) ▼
▶ Host Name	<input type="text"/>
▶ Username / E-mail	<input type="text"/>
▶ Password / Key	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>	

To enable **Dynamic DNS** click the check box next to **Enable** in the **DDNS** field. Next you have to enter the appropriate information about your Dynamic DNS Serve .**Provider**, **Host Name**, **Username/E-mail**, and **Password/Key**. You can get this information when you register an account on a Dynamic DNS server.

Click on “Save” to store your settings or click “Undo” to give up the changes.

QoS

QoS Rule					
Item	Setting				
▶ QoS Control	<input type="checkbox"/> Enable				
▶ Bandwidth of Upstream	<input type="text"/> kbps (Kilobits per second)				
ID	Local IP : Ports	Remote IP : Ports	QoS Priority	Enable	Use Rule#
1	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	High ▼	<input type="checkbox"/>	(0) Always ▼
2	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	High ▼	<input type="checkbox"/>	(0) Always ▼
3	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	High ▼	<input type="checkbox"/>	(0) Always ▼
4	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	High ▼	<input type="checkbox"/>	(0) Always ▼
5	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	High ▼	<input type="checkbox"/>	(0) Always ▼
6	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	High ▼	<input type="checkbox"/>	(0) Always ▼
7	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	High ▼	<input type="checkbox"/>	(0) Always ▼
8	<input type="text"/> : <input type="text"/>	<input type="text"/> : <input type="text"/>	High ▼	<input type="checkbox"/>	(0) Always ▼
<input type="button" value="Save"/> <input type="button" value="Undo"/>					

Provide different priority to different users or data flows, or guarantee a certain level of performance.

QoS Control: Check **Enable** to enable this function.

Bandwidth of Upstream: Set the limitation of upstream bandwidth

Local IP : Ports: Define the Local IP address and ports of packets

Remote IP : Ports: Define the Remote IP address and ports of packets

QoS Priority: This defines the priority level of the current Policy Configuration. Packets associated with this policy will be serviced based upon the priority level set. For critical applications High or Normal level is recommended. For non-critical applications select a Low level.

Enable: Check to enable the corresponding QOS rule.

User Rule#: The QoS rule can work with Scheduling Rule number#. Please refer to the Section 3.1.4.7 Schedule Rule.

Click on “**Save**” to store your settings or click “**Undo**” to give up the changes.

SNMP

SNMP Setting [Help]	
Item	Setting
▶ Enable SNMP	<input type="checkbox"/> Local <input type="checkbox"/> Remote
▶ Get Community	<input type="text"/>
▶ Set Community	<input type="text"/>
▶ IP 1	<input type="text"/>
▶ IP 2	<input type="text"/>
▶ IP 3	<input type="text"/>
▶ IP 4	<input type="text"/>
▶ SNMP Version	<input checked="" type="radio"/> V1 <input type="radio"/> V2c
▶ WAN Access IP Address	<input type="text"/>
<div>Save Undo</div>	

In brief, SNMP, the Simple Network Management Protocol, is a protocol designed to give a user the capability to remotely manage a computer network by polling and setting terminal values and monitoring network events.

Enable SNMP: You must check “Local”, “Remote” or both to enable SNMP function. If “Local” is checked, this device will response request from LAN. If “Remote” is checked, this device will response request from WAN.

Get Community: The community of GetRequest that this device will respond.

Set Community: The community of SetRequest that this device will accept.

IP 1, IP 2, IP 3, IP 4: Enter the IP addresses of your SNMP Management PCs. User has to configure to where this device should send SNMP Trap message.

SNMP Version: Select proper SNMP Version that your SNMP Management software supports.

WAN Access IP Address: If you want to limit the remote SNMP access to specific computer, please enter the PC’s IP address. The default value is 0.0.0.0, and it means that any internet connected computer can get some information of the device with SNMP protocol.

Click on “**Save**” to store your settings or click “**Undo**” to give up the changes.

Routing

Routing Table [Help]					
Item	Setting				
▶ Dynamic Routing	<input checked="" type="radio"/> Disable <input type="radio"/> RIPv1 <input type="radio"/> RIPv2				
▶ Static Routing	<input checked="" type="radio"/> Disable <input type="radio"/> Enable				
ID	Destination	Subnet Mask	Gateway	Hop	Enable
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>
<input type="button" value="Save"/> <input type="button" value="Undo"/>					

If you have more than one routers and subnets, you will need to enable routing table to allow packets to find proper routing path and allow different subnets to communicate with each other. The routing table allows you to determine which physical interface address to use for outgoing IP data grams.

Dynamic Routing: Routing Information Protocol (RIP) will exchange information about destinations for computing routes throughout the network. Please select RIPv2 only if you have different subnet in your network. Otherwise, please select RIPv1 if you need this protocol.

Static Routing: For static routing, you can specify up to 8 routing rules. You can enter the **destination IP address**, **subnet mask**, **Router**, and **hop** for each routing rule, and then enable or disable the rule by checking or un-checking the Enable checkbox.

Click on “**Save**” to store your settings or click “**Undo**” to give up the changes.

System Time

System Time [Help]	
Item	Setting
▶ Time Zone	(GMT-08:00) Pacific Time (US & Canada) ▼
▶ Auto-Synchronization	<input checked="" type="checkbox"/> Enable Time Server (RFC-868): Auto ▼
<input type="button" value="Save"/> <input type="button" value="Undo"/>	
<input type="button" value="Sync with Time Server"/>	
Sync with my PC (Friday February 12, 2010 11:35:34)	

Time Zone: Select a time zone where this device locates.

Auto-Synchronization: Check the “Enable” checkbox to enable this function. Besides, you can select a NTP time server to consult UTC time.

Sync with Time Server: Click on the button if you want to set Date and Time by NTP Protocol manually.

Sync with my PC: Click on the button if you want to set Date and Time using PC's Date and Time manually.

Click on **“Save”** to store your settings or click **“Undo”** to give up the changes.

Scheduling

Schedule Rule [Help]		
Item	Setting	
▶ Schedule	<input type="checkbox"/> Enable	
Rule#	Rule Name	Action
1		<input type="button" value="New Add"/>
2		<input type="button" value="New Add"/>
3		<input type="button" value="New Add"/>
4		<input type="button" value="New Add"/>
5		<input type="button" value="New Add"/>
6		<input type="button" value="New Add"/>
7		<input type="button" value="New Add"/>
8		<input type="button" value="New Add"/>
9		<input type="button" value="New Add"/>
10		<input type="button" value="New Add"/>
<input type="button" value=" << Previous"/> <input type="button" value=" Next >>"/> <input type="button" value=" Save"/> <input type="button" value=" Add New Rule..."/>		

You can set the schedule time to decide which service will be turned on or off.

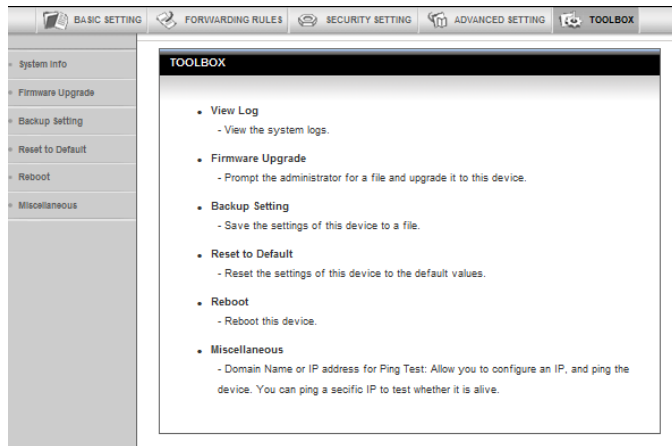
Schedule: Check to enable the schedule rule settings.

Add New Rule: To create a schedule rule, click the “Add New Rule” button. You can edit the **Name of Rule**, **Policy**, and set the schedule time (**Week day**, **Start Time**, and **End Time**). The following example configures “ftp time” as everyday 14:10 to 16:20.

Edit Schedule Rule [Help]			
Item	Setting		
▶ Name of Rule 1	<input type="text"/>		
▶ Policy	Inactivate <input type="button" value="v"/> except the selected days and hours below.		
ID	Week Day	Start Time (hh:mm)	End Time (hh:mm)
1	-- choose one -- <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>
2	-- choose one -- <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>
3	-- choose one -- <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>
4	-- choose one -- <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>
5	-- choose one -- <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>
6	-- choose one -- <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>
7	-- choose one -- <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>
8	-- choose one -- <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>
<input type="button" value=" Save"/> <input type="button" value=" Undo"/> <input type="button" value=" Back"/>			

Click on **“Save”** to store your settings or click **“Undo”** to give up the changes.

Tool Box



System Info

You can view the System Information and System log, and download/clear the System log, in this page.

System Information	
Item	Setting
▶ WAN Type	3G
▶ Display time	Fri, 12 Feb 2010 11:37:55 -0800
System Log	
Time	Log
Feb 12 10:55:51	kernel: klogd started: BusyBox v1.3.2 (2009-11-10 16:52:20 CST)
Feb 12 10:55:58	udhcpd[1466]: udhcpd (v0.9.9-pre) started
Feb 12 10:55:58	udhcpd[1466]: Unable to open /var/run/udhcpd.leases for reading
Feb 12 10:55:58	commander: handle_rbydom: rbydom_enable = 0
Feb 12 10:55:59	init: Starting pid 1503, console /dev/ttyS1: '/bin/ash'
Feb 12 10:55:59	commander: STOP LOCAL_WANTYPE_3G
Feb 12 10:56:04	udhcpd[1466]: sending OFFER of 192.168.10.101
Feb 12 10:56:04	udhcpd[1466]: sending ACK to 192.168.10.101
Feb 12 10:56:11	commander: START LOCAL_WANTYPE_3G
Feb 12 10:56:35	commander: handle_snmp: snmp_enable = 0
Feb 12 10:56:39	commander: sync-date success.
Feb 12 11:19:37	udhcpd[1466]: Received a SIGUSR1
Feb 12 11:19:42	udhcpd[1466]: Received a SIGUSR1
Feb 12 11:19:44	udhcpd[1466]: Received a SIGUSR1
Feb 12 11:20:22	udhcpd[1466]: Received a SIGUSR1
Page: 1/2 (Log Number: 18)	
<div><< Previous Next >> First Page Last Page</div> <div>Refresh Download Clear logs</div>	

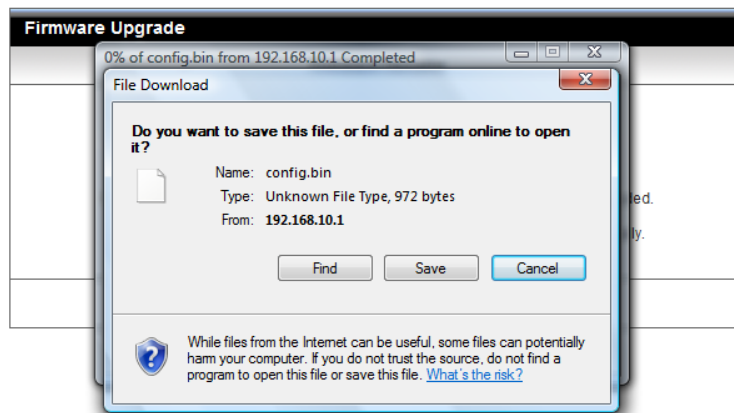
Firmware Upgrade

You can upgrade firmware by clicking “Upgrade” button.



Backup Setting

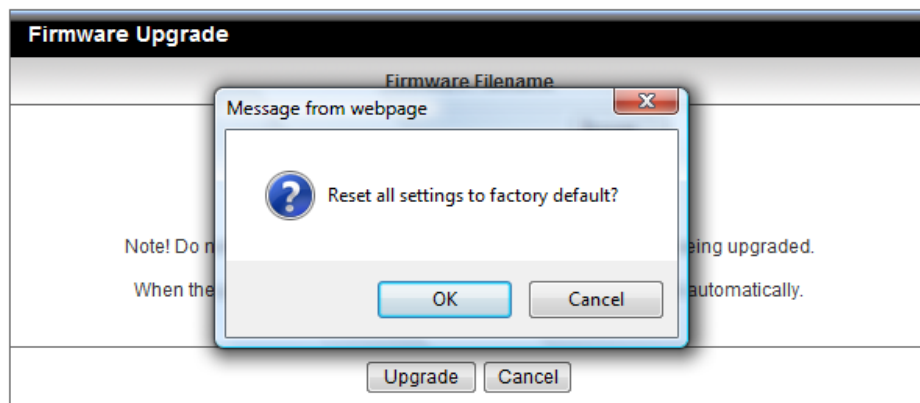
You can backup your settings by clicking the “**Backup Setting**” function item and save it as a bin file. Once you want to restore these settings, please click Firmware Upgrade button and use the bin file you saved.



You can backup your settings by clicking the “**Backup Setting**” function item and save it as a bin file. Once you want to restore these settings, please click Firmware Upgrade button and use the bin file you saved.

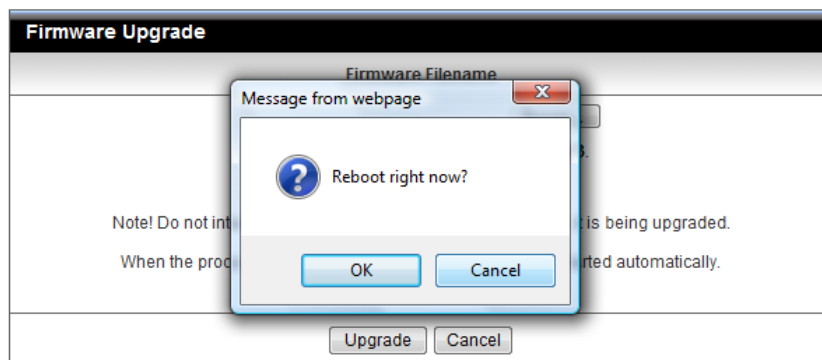
Reset to Default

You can also reset this device to factory default settings by clicking the **Reset to default** function item.



Reboot

You can also reboot this device by clicking the **Reboot** function item.



Miscellaneous

Domain Name or IP address for Ping Test: Allow you to configure an IP, and ping the device. You can ping a specific IP to test whether it is alive.

Click on **“Save”** to store your settings or click **“Undo”** to give up the changes.

Miscellaneous Items		[Help]
Item	Setting	
▶ Domain Name or IP address for Ping Test	<input type="text"/> <input type="button" value="Ping"/>	
<input type="button" value="Save"/> <input type="button" value="Undo"/>		

Troubleshooting

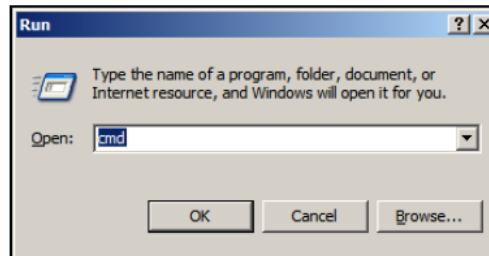
This Chapter provides solutions to problems for the installation and operation of the WiFi Mobile Router. You can refer to the following if you are having problems.

1 Why can't I configure the router even when I am wirelessly connected and the LED is lit?

Do a **Ping test** to make sure that the WiFi Mobile Router is responding.

Go to **Start > Run**.

1. Type **cmd**.



2. Press **OK**.

3. Type **ipconfig** to get the IP of default Router.

4. Type **"ping 192.168.10.1"**. Assure that you ping the correct IP Address assigned to the WiFi Mobile Router. It will show four replies if you ping correctly.

```
Pinging 192.168.123.254 with 32 bytes of data:  
Reply from 192.168.123.254: bytes=32 time<1ms TTL=64  
Reply from 192.168.123.254: bytes=32 time<1ms TTL=64  
Reply from 192.168.123.254: bytes=32 time<1ms TTL=64  
Reply from 192.168.123.254: bytes=32 time<1ms TTL=64
```

Ensure that your Ethernet Adapter is working, and that all network drivers are installed properly. Network adapter names will vary depending on your specific adapter. The installation steps listed below are applicable for all network adapters.

1. Go to **Start > Right click on "My Computer" > Properties**.
2. **Select the Hardware Tab**.
3. Click **Device Manager**.
4. Double-click on **"Network Adapters"**.
5. Right-click on **Wireless Card bus Adapter** or **your specific network adapter**.
6. Select **Properties** to ensure that all drivers are installed properly.
7. Look under **Device Status** to see if the device is working properly.
8. Click **"OK"**.

2 Problems with 3G connection?

A. What can I do if the 3G connection is failed by Auto detection?

Maybe the device can't recognize your ISP automatically. Please select Manual" mode, and filling in dial-up settings manually.

B. What can I do if my country and ISP are not in the list?

Please choose "Others" item from the list, and filling in dial-up settings manually.

C. What can I do if my 3G connection is failed even the dongle is plugged?

Please check the following items:

Make sure you have inserted a validated SIM card in the 3G data card, and the

subscription from ISP is still available

I. If you activate PIN code check feature in SIM card, making sure the PIN code you fill in dial-up page is correct

II. Checking with your ISP to see all dial-up settings are correct

III. Make sure 3G signal from your ISP is available in your environment

D. What can I do if my router can't recognize my 3G data card even it is plugged?

There might be compatibility issue with some certain 3G cards. Please check the latest compatibility list to see if your 3G card is already supported.

E. What should I insert in APN, PIN Code, Account, Password, Primary DNS, and Secondary DNS?

The device will show this information after you choose country and Telcom. You can also check these values with your ISP.

F. Which 3G network should I select?

It depends on what service your ISP provide. Please check your ISP to know this information.

G. Why my 3G connection is keep dropping?

Please check 3G signal strength from your ISP in your environment is above middle level.

3 Something wrong with the wireless connection?

A. Can't setup a wireless connection?

I. Ensure that the SSID and the encryption settings are exactly the same to the Clients.

II. Move the WiFi Mobile Router and the wireless client into the same room, and then test the wireless connection.

III. Disable all security settings such as **WEP**, and **MAC Address Control**.

IV. Turn off the WiFi Mobile Router and the client, then restart it and then turn on the client again.

V. Ensure that the LEDs are indicating normally. If no, make sure that the AC power and Ethernet cables are firmly connected.

VI. Ensure that the IP Address, subnet mask, Router and DNS settings are correctly entered for the network.

VII. If you are using other wireless device, home security systems or ceiling fans, lights in your home, your wireless connection may degrade dramatically. Keep your product away from electrical devices that generate RF noise such as microwaves, monitors, electric motors...

B. What can I do if my wireless client cannot access the Internet?

I. Out of range: Put the router closer to your client.

II. Wrong SSID or Encryption Key: Check the SSID or Encryption setting.

i. Connect with wrong AP: Ensure that the client is connected with the correct Access Point.

ii. **Right-click** on the **Local Area Connection icon** in the taskbar.

iii. Select **View Available Wireless Networks in Wireless Configure**. Ensure you have selected the correct available network.

III. Reset the WiFi Mobile Router to default setting

C. Why does my wireless connection keep dropping?

I. Out of range: Put the router closer to your client.

II. Wrong SSID or Encryption Key: Check the SSID or Encryption setting.

III. Antenna Orientation.

- i. Try different antenna orientations for the WiFi Mobile Router.
 - ii. Try to keep the antenna at least 6 inches away from the wall or other objects.
- IV. Try changing the channel on the WiFi Mobile Router, and your Access Point and Wireless adapter to a different channel to avoid interference.
- V. Keep your product away from electrical devices that generate RF noise, like microwaves, monitors, electric motors, etc.

4 What to do if I forgot my encryption key?

- I. Go back to advanced setting to set up your Encryption key again.
- II. Reset the WiFi Mobile Router to default setting

5 How to reset to default?

- I. Ensure the WiFi Mobile Router is powered on
- II. Find the **Reset** button on the right side
- III. Press the **Reset** button for 8 seconds and then release.
- IV. After the WiFi Mobile Router reboots, it has back to the factory **default** settings.

Specification

Hardware	
Standards	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n based on IEEE 802.11n (draft 2.0) technology USB: USB 2.0, USB 1.1
USB Port	1 x USB 2.0 port for 3G* USB adapter (Internet)
WAN Connection Type	USB: 3G, 3.75G
Compatible Mobile Networks	UMTS/HSPA, WCDMA (HSDPA), CDMA2000 (EV-DO), and TD-SCDMA
Compatible Carriers in USA	AT&T*, Sprint*, Verizon*, T-Mobile *
Compatible USB Modems	Visit www.trendnet.com for a list of compatible USB modems
Router/ Firewall	NAT, NATPT, and SPI Static / Dynamic Route (RIP v1/v2) UPnP, DMZ, Static/Dynamic Route support DoS (blocking ping, port scan, sync flood) MAC, port range, service, domain and URL filtering (deny or allow) and ICMP blocking
Power Switch	On/off
WPS Button	Wi-Fi Protected Setup (WPS) connects to WPS compliant devices
LED Indicator	Power, Wireless/WPS, USB (3G modem), Ethernet (WAN/LAN)
Power Adapter	5V / 1.2A power adapter USB power cable
Power Consumption	System operation: 350mA (max)
Dimension (L x W x H)	93 x 65 x 19.5 mm (3.66 x 2.56 x 0.77 in.)
Weight	66 g
Temperature	Operation: 0°~ 40°C (32°F~ 104°F) Storage: -10°~ 70°C (14°F~158 °F)
Humidity	Max 95% (non-condensing)
Certifications	CE, FCC
Wireless	
Frequency	2.400 ~ 2.484GHz
Modulation	OFDM, DSSS, BPSK, QPSK, CCK
Data Rate	802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n: up to 150Mbps
Security	64/128-bit WEP, WPA-PSK(TKIP)/WPA2-PSK(AES)
Output Power	802.11b: 13dBm @ 11Mbps 802.11g: 11dBm @ 54Mbps 802.11n: 10dBm @ 150Mbps
Receiving Sensitivity	802.11b: -85dBm @ 11Mbps 802.11g: -70dBm @ 54Mbps 802.11n: -68dBm @ 150Mbps
Channels	1~11 (FCC), 1~13 (ETSI)

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TEW-656BRG – 3 Years Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

If a product does not operate as warranted during the applicable warranty period, TRENDnet shall reserve the right, at its expense, to repair or replace the defective product or part and deliver an equivalent product or part to the customer. The repair/replacement unit's warranty continues from the original date of purchase. All products that are replaced become the property of TRENDnet. Replacement products may be new or reconditioned. TRENDnet does not issue refunds or credit. Please contact the point-of-purchase for their return policies.

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