OUTDOOR ROUTER

SKU: WRT2

BROADBAND 3G/4G MODEM
Instruction Manual

1. Introduction

With an integrated broadband cellular modem and Wi-Fi booster, the WRT2 3G/4G modem can receive 3G/4G mobile phone signals and establish a Wi-Fi hotspot to connect your smartphone, computer, tablet, camera, TV box to the internet.

After inserting SIM card into build-in SIM card slot and connect the 3G/4G modem to the power adapter, a Wi-Fi hotspot is instantly established. The Wi-Fi output power is adjustable between 20/27/30dBm. WPA/WPA2 encryption standards ensure your wireless connection is safe from intruders.
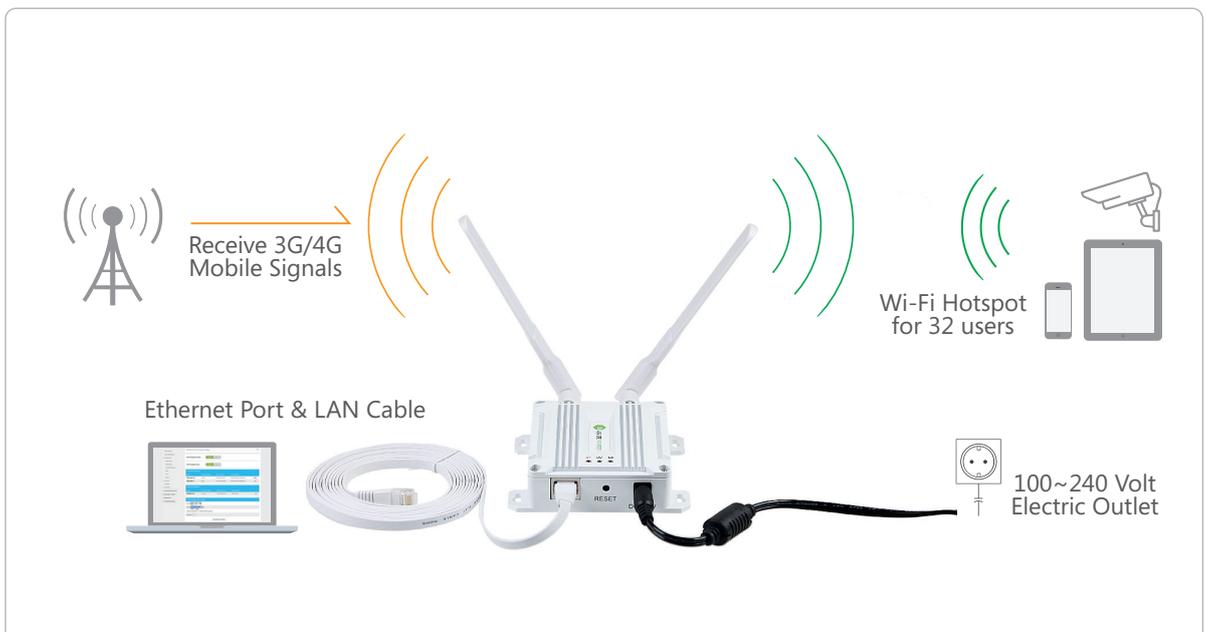
Receive 3G/4G Mobile Signals

Wi-Fi Hotspot for 32 users

Ethernet Port & LAN Cable

100~240 Volt Electric Outlet

2. Hardware overview

2.1 Package contents

- 1 x 3G/4G modem
- 2 x Omni antenna
- 1 x 12V 2A power supply
- 1 x 3-Meter LAN cable
- 1 x SIM card adapter

3G/4G Modem	Antennas	Power Adapter	LAN Cable	SIM Adapter

2.2 Port, switch and indicator

3G/4G Antenna

WiFi 2.4G Antenna

Indicator: WiFi Signal

Indicator: Mobile Signal

Power Socket

Reset Button

Ethernet Port

Micro SIM Card Slot
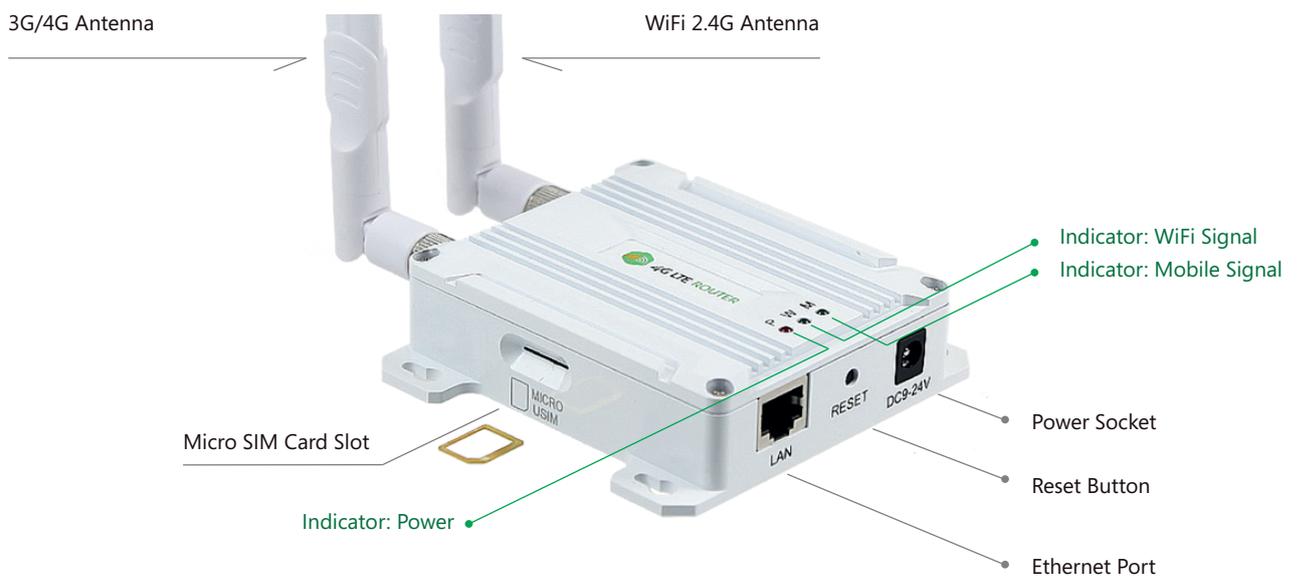
Indicator: Power

2.3 Indicator description

Indicator	Status	Description
Power	Red Off	System is up and ready No input power
Mobile signal	Green Green flash slowly Green flash quickly Off	Received 3G/4G signal, but cannot connect due to no SIM card or no money in SIM card. Received 3G/4G signal, but no data transmission. Received 3G/4G signal, transmitting data via the mobile network. The 3G/4G signal has not been acquired.
Wi-Fi signal	Green Green flashing Off	Wi-Fi hotspot is working, no user connection. Wi-Fi hotspot is working, and the user has connected. Wi-Fi function has been closed.

3. Installation

3.1 Insert the micro SIM card

Insert micro SIM/USIM card (12x15mm) into the SIM card slot.

Make sure SIM card pins are facing down and notch on the bottom right.

A nono to micro SIM card adapter is provided in the package.

⚠ The micro SIM card is not included in the package.

3.2 Insert the antennas

The 3G/4G router uses 2pcs omni directional antennas. Install 3G/4G on the left base connector marked "Mobile", and install another Wi-Fi antenna on the right base connector which marked "Wi-Fi".

Twist the connector on antennas in the clockwise direction to fix them on the modem. Bend the antenna to 90 degrees when you put the modem on a horizontal surface.

✂ Connect to extension mount or outdoor antenna

To improve the 3G/4G mobile signal reception, or extend the signal coverage, you can connect the modem to an extension mount or attach to an outdoor antenna which has SMA male connectors.

⚠ The extension mount and outdoor antenna are selling separately.

Magnetic Extension Mount
with 3-meter Coaxial Cable

3. Installation

3.3 Connect to power adapter

The 3G/4G modem works on a wide-range DC power 9~24 Volts. Connect the original power adapter on electric outlet and plugin the DC jack into the power socket on the 3G/4G modem. The power indicator on the modem will turn on.

Except for the original power adapter, the 3G/4G modem can works on 12Volt power sources including car cigar lighter. With the "5V to 12V power converter" you can power up the modem with regular 5V power bank. Car adapter and converter are not included.

Car Power Adapter   5V~12V Converter

3.4 Ethernet port

The 3G/4G modem has built-in one ethernet port for connect to a computer or indoor router via provided 3-meter LAN cable.

4. Configuration

4.1 Connect to 3G/4G modem

4.1.1 Wi-Fi / Ethernet connection

After connected to the electrical outlet, a Wi-Fi hotspot named "**MIFI_xxxx**" will be created within 20 seconds. The default encryption type is "**WPA2(AES)-PSK**", and the default Wi-Fi password is "**1234567890**".

Connect to this hotspot on a computer, laptop or smartphone. You can also connect the 3G/4G modem to your indoor router or computer via the 3-meter LAN cable.

4.1.2 TCP/IP setting

Configure TCP/IP on your connected devices, make sure IP address is within 192.168.100.101~200. The subnet mask should be **255.255.255.0**. The router address should be **192.168.100.1**.

If DHCP function is activated on your device, it will setup automatically. Otherwise, you need to configure IP manually.

On iPhone: Goes to Settings / Wi-Fi / Advanced
On Android phone: Goes to Settings / WLAN / Advanced

On Mac: Goes to System preferences / Network / Wi-Fi / Advanced / TCP/IP
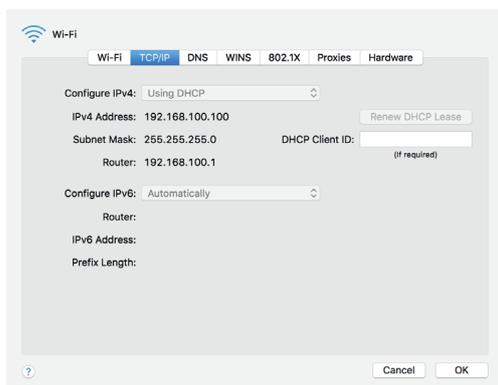
IPV4 ADDRESS	
Configure IP	Manual >
IP Address	192.168.100.101
Subnet Mask	255.255.255.0
Router	192.168.100.1

On Windows:
Goes to Start / Control panel / Network and internet / Change adapter setting (on left window panel) / Local area connection / Properties (right click) / TCP/IPv4 (Internet protocol version 4) / Properties / General

Choose "Obtain an IP address automatically" and "Obtain DNS server address automatically"

Click "OK" to exit setting. Click "OK" again in the "Local area connection properties" to apply the new configuration.

4. Configuration

4.2 Login your 3G/4G modem

The default IP address of the outdoor router is **192.168.100.1** with subnet 255.255.255.0. Make sure your smartphone or computer is connected to the router via Wi-Fi or LAN cable. Open a web browser and type **http://192.168.100.1** in the URL address bar. Use default password **admin** to login.
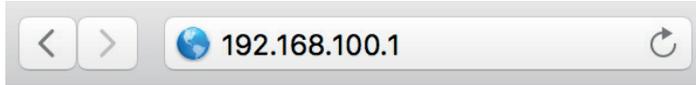
4.3 Interface overview

4.3.1 Status bar

From left to right, there are:
Network type, Operator, Signal strength, Wireless broadband connection, Cable broadband connection, SIM card, Number of users

4.3.2 Manu bar

SMS: Check received SMS messages, and send SMS message to other mobile phone numbers.
Phonebook: Check saved contacts, and add new phone numbers.
Advanced settings: See chapter 4.4.
Quick settings: The wizard will show you how to set up basic parameters of gateway safely.

4.4 Advanced settings

4.4.1 Power-save
Choose Wi-Fi output powers from 20dbm, 27dBm and 30dBm.

4.4.2 Router
Setup IP address, Subnet mask, DHCP server, IP pool, and DHCP lease time of the outdoor router.

4.4.3 Firewall
Setup Port, filtering, Port mapping, Port forwarding, UPnP, and DMZ of the outdoor router.

4.4.4 Update
Upload and update the firmware of the outdoor router.

4.4.5 USSD
USSD is short of Unstructured Supplementary Service Data.

4.4.5 DDNS
DDNS is short of Dynamic Domain Name Server.

4.4.5 Others
Restart and reset the outdoor router.

4. Configuration

4.5 Network connections and status

There are six blocks below the menu bar on the front page.

4.5.1 **3G/4G connect status**

On the left upper corner, you can quickly turn on / off the 3G/4G
mobile network connection and check the connection status including
upload speed, download speed, and working time.

4.5.2 **Connected devices**

Number of the devices connected to outdoor router, click the block and
check device name and MAC address.
You can block the unauthorized devices.

4.5.3 **Data management**

Help you to control the 3G/4G data usage wisely.
Click the orange color block and customize your data management
by time or by data.

4.5.4 **Status information**

On the right down corner, you can find the details of the router, including
IMEI number, IMSI number, Wi-Fi signal strength, and network name (SSID).

Click "Detail information" to view more information about the router.
The Wi-Fi encryption, SSID, and password are included in the bottom QR code.
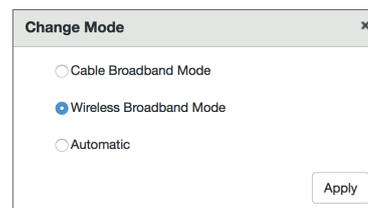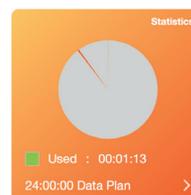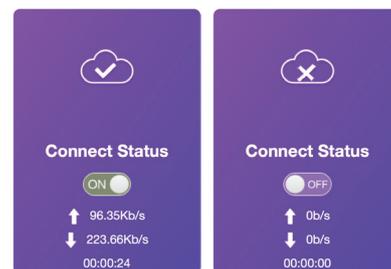
4.6 Network settings

4.6.1 **Wireless broadband mode**

Click "Wireless broadband mode" you can choose the broadband modes from
cable broadband, wireless broadband or automatic.
Click "Apply", the outdoor router will apply new setting and rebot.

Suggest keeping the broadband mode stay in default "Wireless broadband mode"
or use "Automatic".

4.6.2 **Connection settings**
Click "Network settings" to setup connection type.
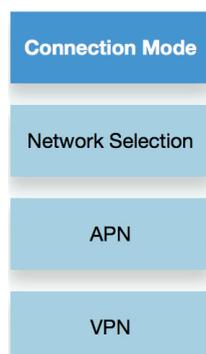
Connection mode
Turn on/off auto connect to network function.

Network selection
Turn on/off auto search available network function.

Access point name (APN)
If your service provider provides a fixed APN, select Manual APN. Otherwise, please select Auto APN.

Virtual private network (VPN)
Connect to the VPN network with PPTP type.

4. Configuration

4.6 Network settings

4.6.3 Wi-Fi settings
Click "Wi-Fi settings" to access the Wi-Fi configuration page.

SSID

Wi-Fi network name (SSID)
Setup SSID, hide SSID, wireless encryption type, Wi-Fi password, and max connection number.

WPS

Wi-Fi protected setup (WPS)
Enhance your Wi-Fi security with WPS by adding a PIN or push button configuration (PBC).

Internet Wi-Fi

Internet Wi-Fi
Connect the outdoor router to Wi-Fi network.

The 3G/4G connection will turn off after connected. Default setting is connected to Wi-Fi if added a Wi-Fi Hotspot. You can change preferred network to "WWAN" if want to connect to 3G/4G at the priority.

Add Wi-Fi Hotspot

Click "Add" below "Wi-Fi Hotspot" will start to search available Wi-Fi networks.

Select from available Wi-Fi network list, input Wi-Fi password, click "Apply".

You can disconnect it from the "Wi-Fi hotspot" list.

Internet Wi-Fi

Internet Wi-Fi Switch	● Enable	○ Disable
Preferred Network	● Wi-Fi	○ WWAN
Current Status	Wi-Fi connected	

Add Wi-Fi Hotspot

Network Name(SSID) *	Indoor Router Wi-Fi
Security Mode	WPA2-PSK
WPA Algorithms	○ TKIP ● AES ○ AUTO
Pass Phrase *	
	☐ Display Password
	Refresh Apply Back

Advanced Settings

Advanced settings
Setup network standard, bandwidth, reign code, and frequency. The default is locked.

WLAN MAC Filter

WLAN MAC Filter
Filter the MAC address by whitelist and blacklist to control the connected devices.

4.7 SMS control

You can control the outdoor router remotely by sending SMS messages to the phone number of inserted micro SIM/USIM card.

SMS message	Function
*#01#	Turn on 3G/4G connection
*#02#	Turn off 3G/4G connection
*#03#	Turn on Wi-Fi hotspot
*#04#	Turn off Wi-Fi hotspot
*#05#	Reboot outdoor router
*#06#	Reset outdoor router to factory settings
*#07#,dialpref	3G/4G connection at the first priority
*#07#,wifipref	Wi-Fi replay at the first priority
*#08#,WRT2,outdoorrouter,add	Connect to another Wi-Fi hotspot SSID "WRT2" with password of "outdoorrouter"
*#08#WRT2,outdoorrouter,delete	Disconnect to Wi-Fi hotspot SSID "WRT2" with password of "outdoorrouter"

4.8 Reset factory settings

When the router is turned on, click and hold "Reset" button for 5 seconds until the router reboot. Or use the above SMS code *#06#.

5. Troubleshooting

5.1 Can't find Wi-Fi hotspot

Check the power adapter
Make sure power adapter output no less than 9Volt and 1Amps power.

Check the 3G/4G modem
Check if WiFi indicator on the 3G/4G modem is turn on. The Wi-Fi indicator will turn on Green after turned on the Wi-Fi function.

Remote control
Send SMS message *#03# to the phone number of inserted micro SIM/USIM card to turn on Wi-Fi function.

5.2 Forgotten password

Reset router login password
Default login password is "admin". If you changed login password and forgotten it, please use one o below methods to reset the outdoor router to factory settings.
i. Open the outdoor router case, click and hold the "Reset" button for 5 seconds until the router reboot.
ii. Send SMS message *#06# to the phone number of inserted micro SIM/USIM card.

Reset Wi-Fi password
You can set a new Wi-Fi password after login the outdoor router control panel. See chapter 4.6.3.

5.3 No internet connection

In 3G/4G router mode
Login router control panel, check the mobile connection.
i. Make sure 3G/4G wireless connection is turned on. Refer to chapter 4.5.1.
ii. Check if the cellular signal reception is good. Refer to chapter 4.3.1.
iii. Check if the inserted SIM card has money.
iiii. Check if mobile operator requires APN settings.

In Wi-Fi relay mode
Check the internet connections ability of the relayed Wi-Fi network.
Make sure the IP address of Wi-Fi hotspot is not involved in the IP address pool of the outdoor router.
The default IP pool of router is 192.168.100.101~200. Check chapter 4.4.2 to change IP pool.

6. Contacts

If you have any question or suggestion about the outdoor router, please contact us.

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