



AX1800 Wi-Fi 6 5G NR Router

User Guide

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Preface

Thank you for choosing Tenda! Please read this user guide before you start.

This user guide is applicable to 5G03. The contained images and UI screenshots are subject to the actual products.



Product model	Description
5G03	AX1800 Wi-Fi 6 5G NR Router

Conventions

The typographical elements that may be found in this document are defined as follows.

Item	Presentation	Example
Cascading menus	>	System > Live Users
Parameter and value	Bold	Set User Name to Tom .
Variable	Italic	Format: <i>XX:XX:XX:XX:XX:XX</i>
UI control	Bold	On the Policy page, click the OK button.
Message	“ ”	The “Success” message appears.

The symbols that may be found in this document are defined as follows.

Symbol	Meaning
	This format is used to highlight information of importance or special interest. Ignoring this type of note may result in ineffective configuration, loss of data or damage to device.
	This format is used to highlight a procedure that will save time or resources.

For more documents

If you want to get more documents of the device, visit www.tendacn.com and search for the corresponding product model.

The related documents are listed as below.

Document	Description
Datasheet	It introduces the basic information of the device, including product overview, selling points, and specifications.
Quick Installation Guide	It introduces how to set up the device quickly for internet access, the descriptions of LED indicators, ports and buttons, FAQs, statement information, and so on.

Technical Support

If you need more help, contact us by any of the following means. We will be glad to assist you as soon as possible.



Hotline

Global: (86) 755-27657180
(China Time Zone)

United States: 1-800-570-5892
(Toll Free: 7 x 24 hours)

Canada: 1-888-998-8966
(Toll Free: Mon - Fri 9 am - 6 pm PST)

Hong Kong: 00852-81931998



Email

support@tenda.com.cn



Website

<https://www.tendacn.com/>

Revision History

Tenda is constantly searching for ways to improve its products and documentation. The following table indicates any changes that might have been made since the 5G03 was introduced.

Version	Date	Description
V1.0	2022-07-30	Original publication.

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1

Get to know your device

This chapter introduces the product in the following sections:

- [Introduction](#)
- [Appearance](#)




1.1 Introduction

The AX1800 Wi-Fi 6 5G NR Router, powered by the Wi-Fi 6 technology, works at both 2.4 GHz and 5 GHz and supports a much higher broadband access of 1800 Mbps. With the OFDMA and BSS coloring technologies, it supports instant internet access with a Nano SIM card and simultaneous communication with up to 128 devices. Tenda's patented Miniaturized Dual-band antennas enable the router to provide a wide coverage over 1290 square feet and the WPA3 Wi-Fi ensures safe and reliable internet access.

1.2 Appearance

1.2.1 LED indicator



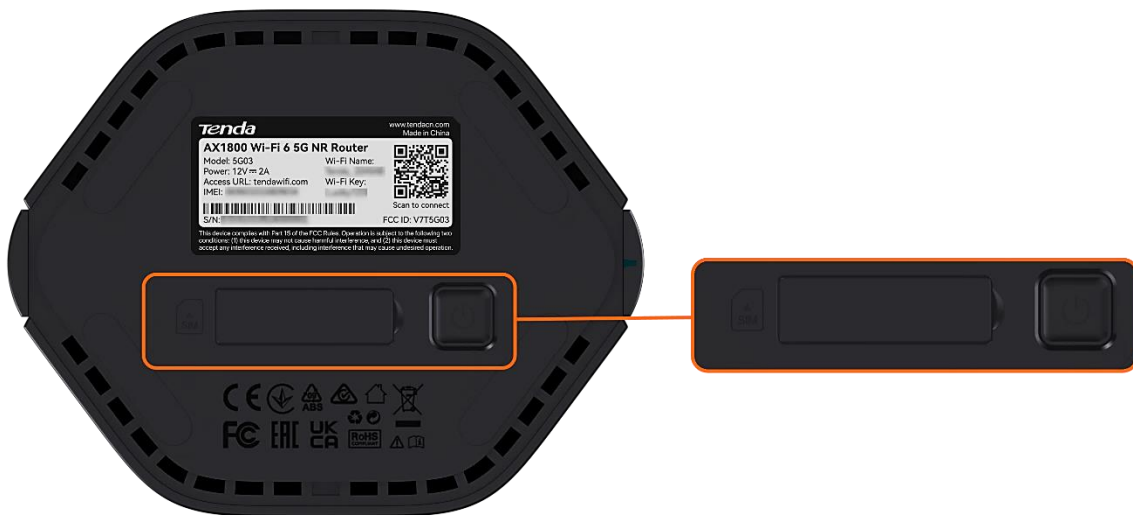
LED indicator	Status	Description
 Internet LED indicator	Solid on	The router is connected to the internet.
	Off	No internet access is available.
 5G/4G signal strength LED indicator	Solid green	Good 5G signal.
	Blinking green slowly	Poor 5G signal.
	Solid orange	Good 4G signal.
	Blinking orange slowly	Poor 4G signal.
	Off	No 5G/4G signal.
 Wi-Fi LED indicator	Solid on	The Wi-Fi network is enabled.
	Blinking	The router is networking by the MESH button. For details, see Add a Mesh agent .
	Off	The Wi-Fi network is disabled.

1.2.2 Ports and buttons





- Back view



- Bottom view

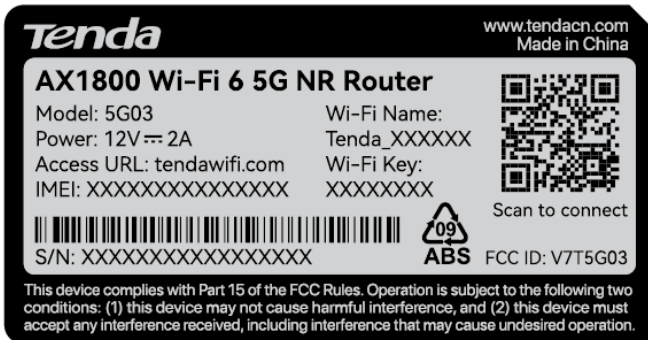


Position	Port/Button	Description
Back	1	TS-9 antenna sockets.
	2	Used to connect self-prepared N77 or N78 external antennas to extend 5G NR signals.

Position	Port/Button	Description
		<p>USB-C 3.0 interface.</p> <p>Used for firmware upgrade.</p>
	MESH	<p>WPS/Mesh button.</p> <ul style="list-style-type: none"> • WPS: When it is used as a WPS negotiation button, you can connect to the WiFi network of the router without entering the WiFi password. • Mesh: When it is used as a Mesh networking button, you can extend your network with another device that supports the Mesh function. <p>Method: Short press the button for about 3 seconds, and the  LED indicator blinks fast. Within 2 minutes, enable the WPS function of the other WPS-supported device to establish a WPS connection or press the MESH/WPS button of another device to negotiate with the router.</p>
	LAN1	<p>LAN port.</p> <p>Used to connect to wired devices, such as a computer.</p>
	WAN/LAN2	<p>WAN or LAN port.</p> <p>By default, the router is under 4G/5G router mode and this port serves as a LAN port. When the router is set to the wireless router mode or the Failover function is enabled, this port serves as a WAN port.</p>
	PWR	<p>Power jack.</p> <p>Used to connect to a power source to supply power for the router.</p>
		<p>Nano SIM card slot.</p> <p>Insert your SIM card into this slot.</p>
Bottom	RST	<p>Reset button.</p> <p>Hold down the button for about 8 seconds, and release it when all LED indicators light off and then light up. The router is reset.</p>
		<p>Power button.</p> <p>Used to turn on or off the router.</p>

1.2.3 Label

The bottom label shows the Wi-Fi name, Wi-Fi key, access URL, IMEI and serial number of the router. See the following figure.



Model: Specifies the model of the router.

Wi-Fi Name: Specifies the default Wi-Fi name of the router.

Power: Specifies the power supply for the router.

Access URL: Specifies the default address used to log in to the web UI of the router.

Wi-Fi Key: Specifies the default Wi-Fi password of the router.

IMEI: Specifies the unique mobile device identification code of the router.

S/N: Specifies the serial number required if you need technical assistance to repair your router.

FCC ID: Specifies the Federal Communications Commission Identification number of the router.

2

Quick setup

This chapter describes how to connect the devices and enable internet access. It contains the following sections:

- [Set up the router](#)
- [Access the internet](#)

2.1 Set up the router

Step 1 Open the SIM card cover on the bottom panel of the router.



Step 2 Insert a Nano SIM card into the slot. Then close the cover.






TIP

- Only Nano SIM cards can be used.
- To ensure performance and avoid damage to the SIM card, do not insert or remove the SIM card when the router is running.
- To remove the SIM card, gently press the SIM card until it clicks. The SIM card will automatically pop out.

Step 3 Use the included power adapter to connect the power jack of the router to a power source.

Step 4 Press the  button on the router to turn it on.

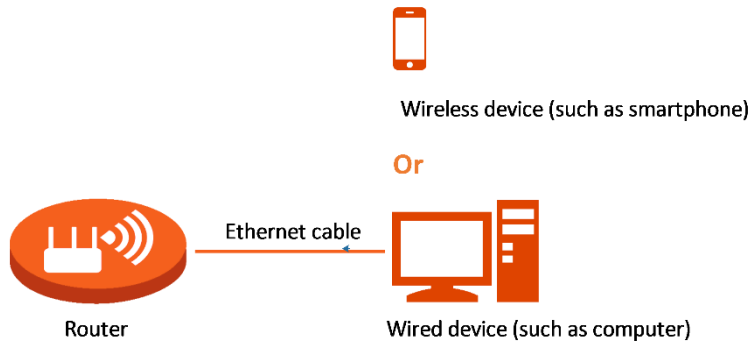
All LED indicators light up and then off immediately. Wait a moment and then the ,  and  indicators light up in sequence when the router is connected to the internet properly.

---End

2.2 Access the internet

After the setup completes properly, you can:

- Connect your wired device, such as a computer, to the **LAN1** or **WAN/LAN2** port of the router using an Ethernet cable.
- Connect your wireless device, such as a smartphone, to the Wi-Fi network of the router using the **Wi-Fi Name** and **Wi-Fi Key** labeled on the bottom panel of the router.



3 Web UI

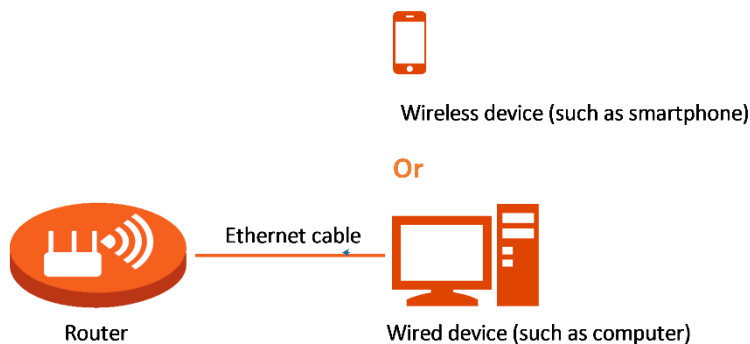
This chapter introduces basic information of the web UI in the following sections:

- [Log in to the web UI](#)
- [Log out of the web UI](#)
- [Web UI layout](#)

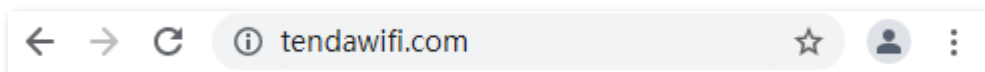
3.1 Log in to the web UI

Step 1 Connect your smartphone to the Wi-Fi network, or connect your computer to a LAN port of the router (By default, the WAN/LAN2 and LAN port are both LAN ports).

In the following steps, computer connection is used for illustration.



Step 2 Start a browser on the computer and enter **tendawifi.com** in the address bar to access the web UI.



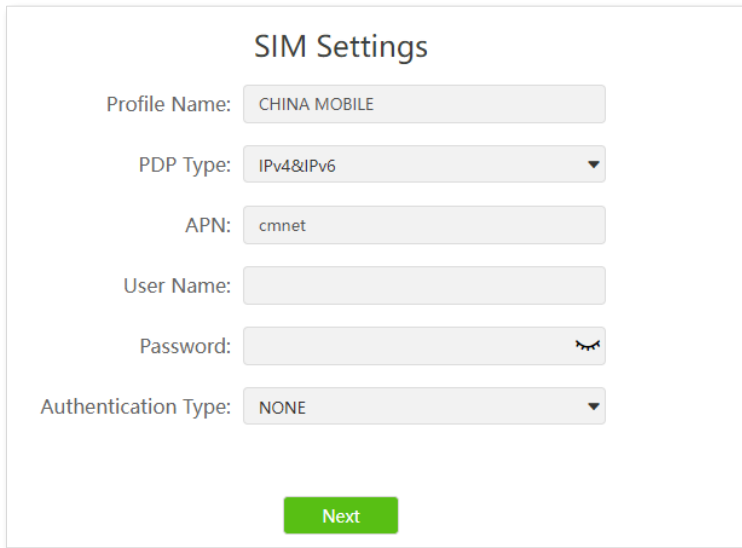
Step 3 Log in to the web UI.

- If this is your first login:

1. Click **Start**.



2. Click **Next**.



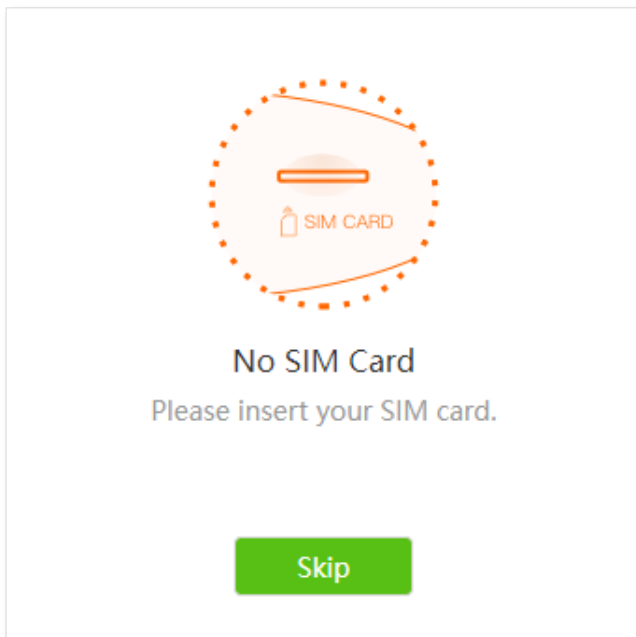
The image shows a 'SIM Settings' screen with the following fields:

- Profile Name: CHINA MOBILE
- PDP Type: IPv4&IPv6
- APN: cmnet
- User Name: (empty)
- Password: (empty)
- Authentication Type: NONE

A green 'Next' button is located at the bottom center of the screen.



If you did not insert a SIM card and want to continue, click **Skip**.



3. Set the Wi-Fi name, Wi-Fi password and web UI login password as required. Then, click **Next**.



- To use the same password for Wi-Fi access and web UI login, select **Sync the login password with the Wi-Fi password**.
- If you do not want to use a web UI login password, select **Not Password**. In this case, any client can access the network without a password. This option is not recommended as it leads to low network security.

Wi-Fi Settings

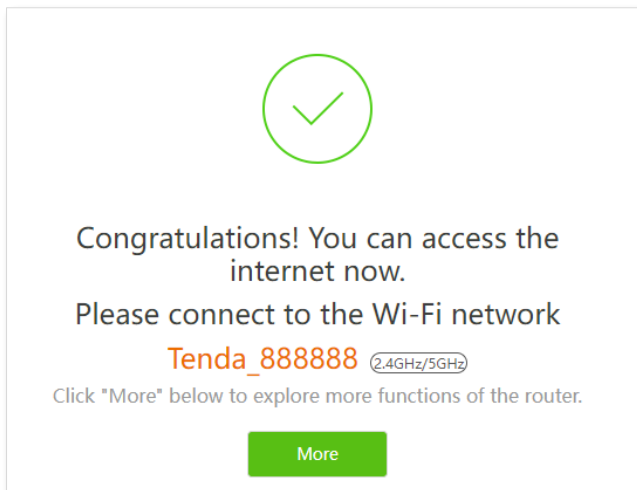
Wi-Fi name for 2.4 GHz & 5 GHz.
Smart devices will auto-connect to the better Wi-Fi network.

Sync the login password with the Wi-Fi password.

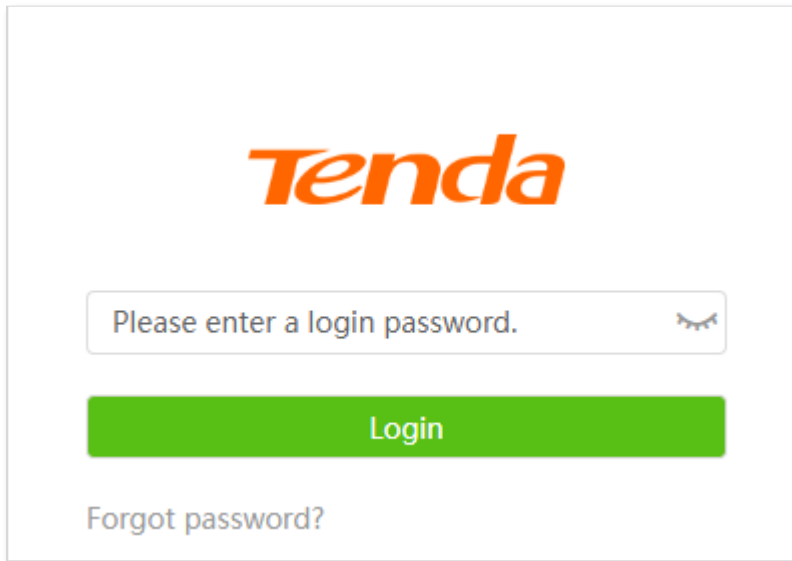
No Password

[Next](#)

4. Wait until the configuration takes effect. Click **More** to log in to the web UI.



- If you have finished quick setup before, enter the login password, and click **Login**.



---End

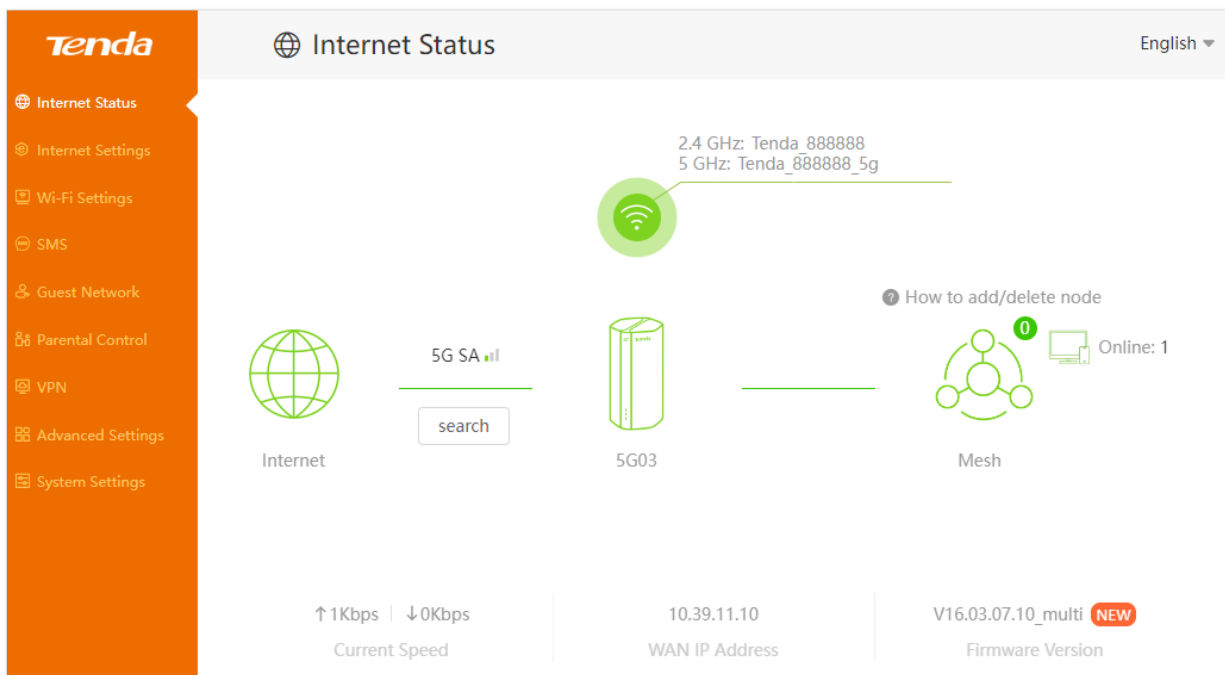


TIP

If the above page does not appear, try the following solutions:

- Ensure that the router is powered on properly.
- Ensure that the computer is connected to a LAN port of the router, and [Configuring the computer to obtain an IP address automatically](#).
- [Restore the router to factory settings](#) and try again.

The following page appears.

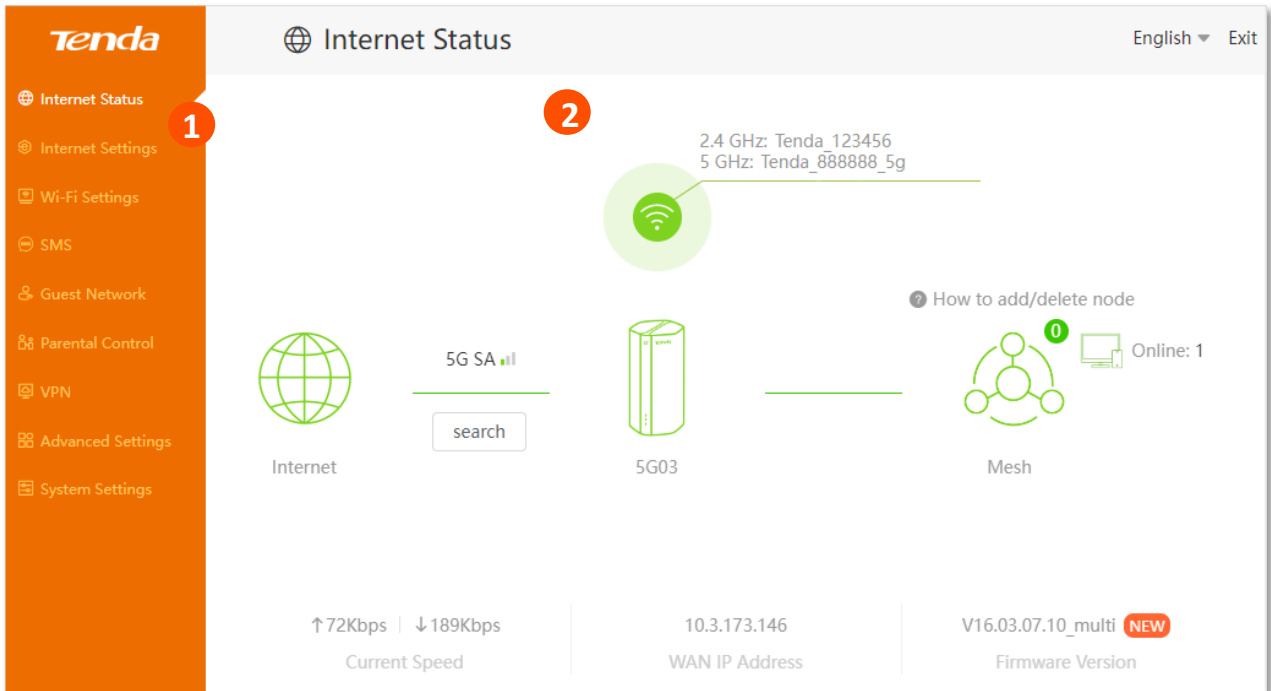


3.2 Log out of the web UI

If you log in to the web UI of the router and perform no operation within 5 minutes, the router logs you out automatically. You can also log out by clicking **Exit** at the top right corner of the web UI.

3.3 Web UI layout

The web UI of the router consists of two sections, including the navigation bar and the configuration area. See the following figure.



SN	Name	Description
1	Navigation bar	Used to display the function menu of the router. Users can select functions in the navigation bar and the configuration page will appear in the configuration area.
2	Configuration area	Used to modify or view your configurations.

4

Internet status

This module allows you to view basic network and system information, including information of the router and connected devices, and perform signal tests.

This chapter includes the following sections:

- [Internet connection](#)
- [Signal test](#)
- [Wireless information](#)
- [System information](#)
- [Mesh agent information](#)
- [Online device information](#)

4.1 Internet connection



The router supports both 4G/5G router mode and wireless router mode, and functions may differ under different modes. Refer to [Operating mode](#) to set the operating mode of the router.

4.1.1 Under 4G/5G router mode

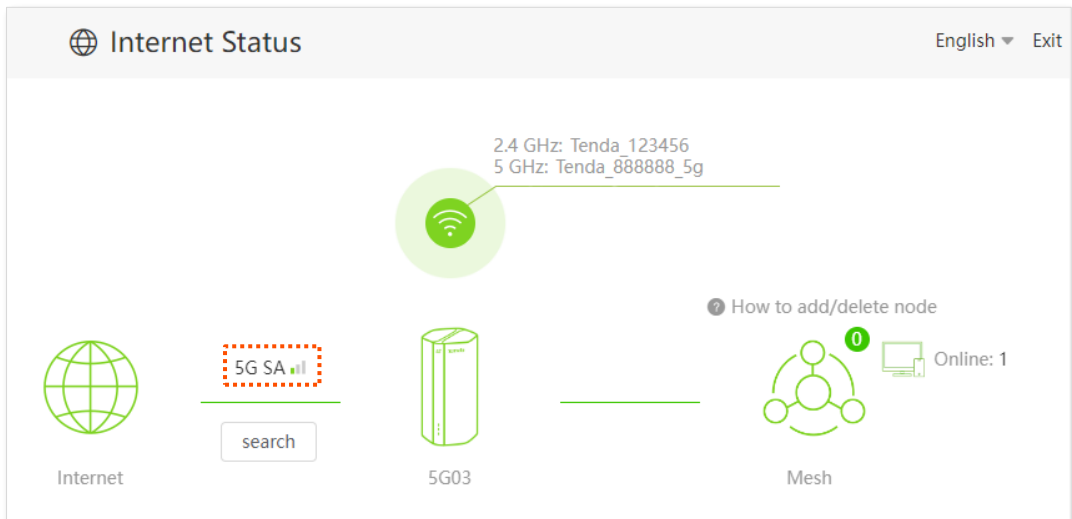
To view the internet status:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

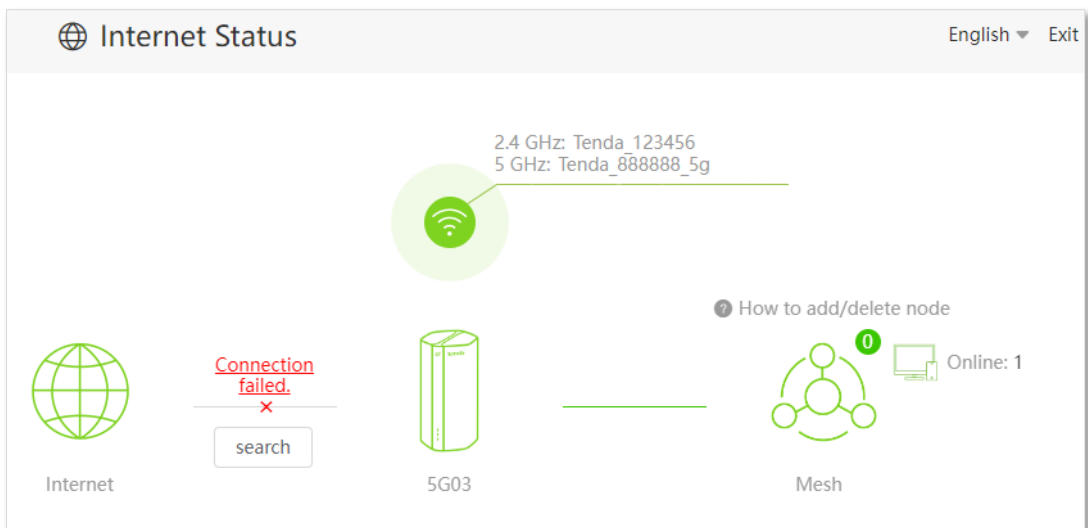
Step 2 Choose **Internet Status**.

---End

When the connection between the Internet and the router is shown as below, the router is connected to the internet successfully.



When a red cross and "Connection failed." are shown between the Internet and the Router, it indicates that the internet connection is abnormal.



Try the following solutions:

- Navigate to **Internet Settings**, and ensure that the **Mobile Data** and **Data Roaming** functions are enabled, and the mobile data option is set to **5G SA Preferred**.
- Navigate to **Internet Settings**, and ensure that the dial-up settings parameters are identified by the router automatically. If not, check whether the SIM card is inserted properly, or refer to [create an APN profile manually to access the internet](#) to configure the router.
- If the SIM card is identified successfully but no internet access is available, your SIM card may have run out of money. Contact your ISP for more help.

When a red cross and “**Please unlock the SIM card**” are shown between the Internet and the Router, it indicates that the SIM card is locked. Refer to [Unlock the SIM card in the web UI](#).

When a red cross and “**No SIM card inserted**” are shown between the Internet and the Router, ensure the SIM card is inserted properly.

4.1.2 Under wireless router mode

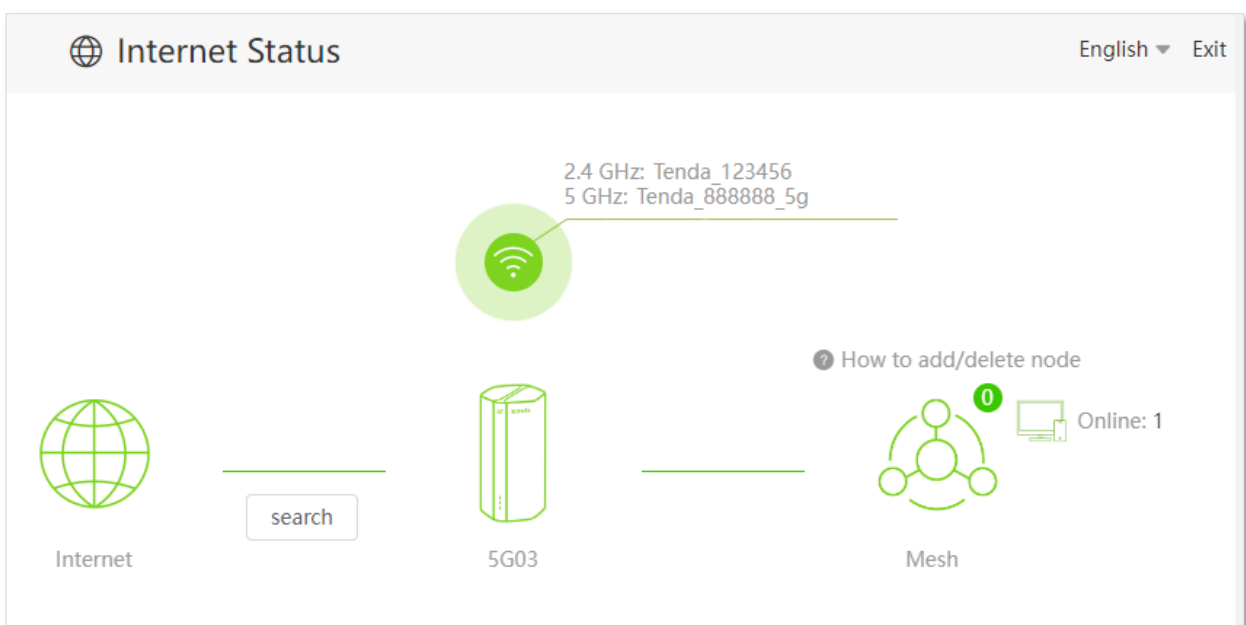
To view the internet status:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

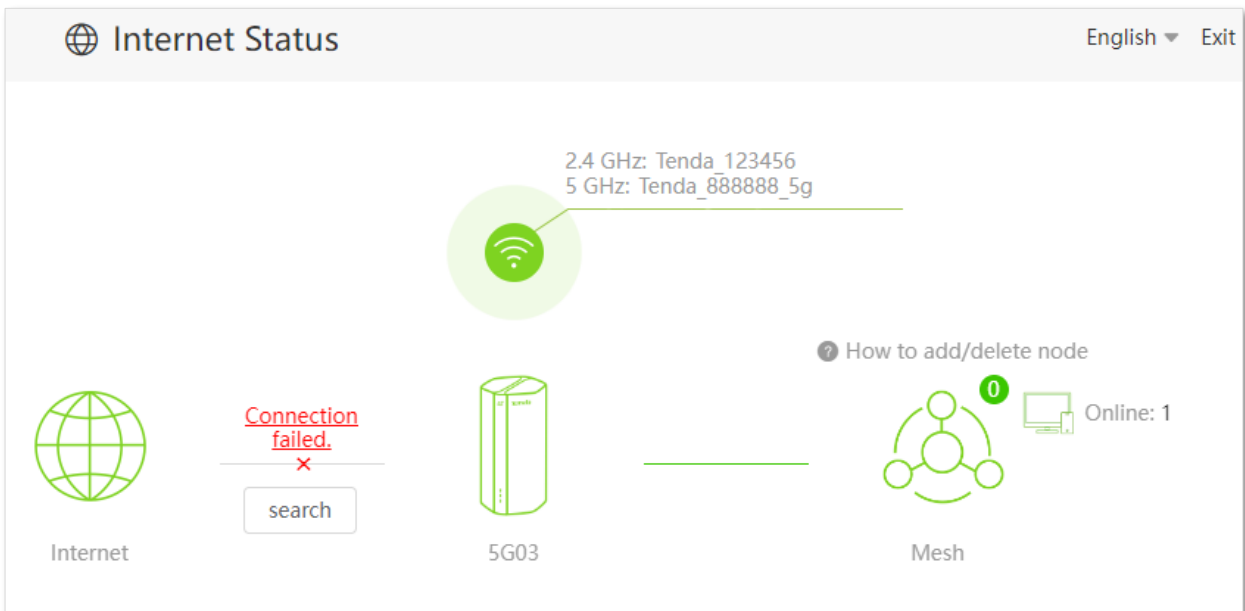
Step 2 Choose **Internet Status**.

---End

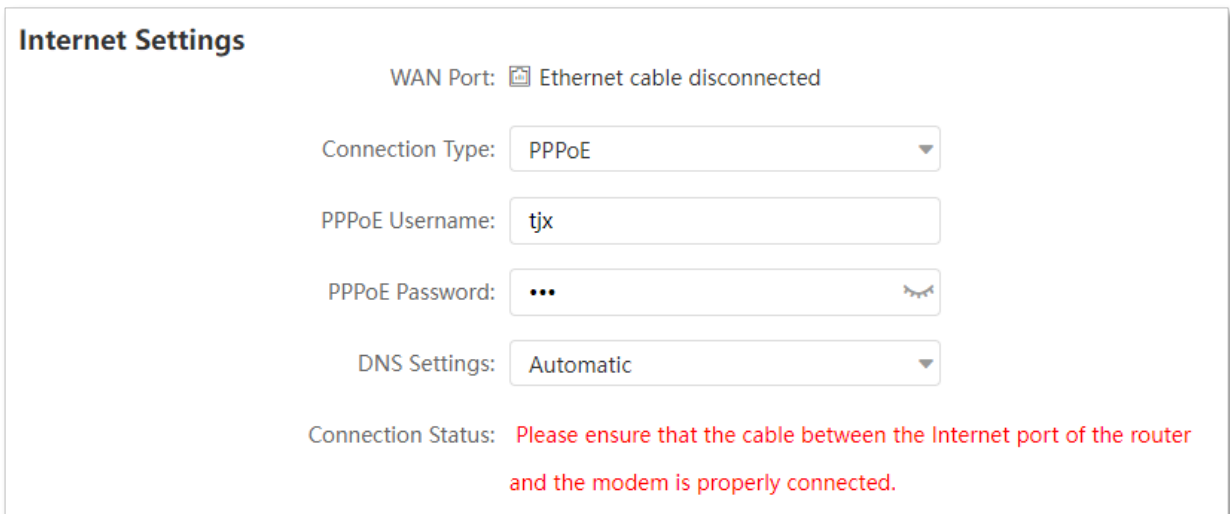
When the link between the **Internet** and **5G03** is clear as shown below, the router is connected to the internet successfully and you can access the internet using the router.



When a red cross and “[Connection failed.](#)” are shown between the **Internet** and the **Router**, it indicates that the internet connection is abnormal. Please click [Connection failed.](#) to navigate to the **Internet Settings** page and refer to the following scenarios and solutions.



When “[Please ensure that the cable between the Internet port of the router and the modem is properly connected](#)” is shown after **Connection Status** on the page, ensure that the Ethernet cable between the WAN/LAN port of the router and the modem is connected properly. If the problem persists, contact the technical support for help.



When “**The user name and password are incorrect.**” is shown after **Connection Status** on the page, it indicates that the user name and password you entered are incorrect. Please re-enter the user name and password.



Please consider the following tips when entering the user name and password:

- Pay attention to case sensitivity, such as “Z” and “z”.
- Pay attention to similar letters and numbers, such as “l” and “1”.
- Ensure the completeness of account parameters, such as “0755000513@163.gd”, rather than “0755000513”.

If the problem persists, contact your ISP for help.

Internet Settings

WAN Port: Ethernet cable connected

Connection Type:

PPPoE Username:

PPPoE Password:

DNS Settings:

Connection Status: **The user name and password are incorrect.**

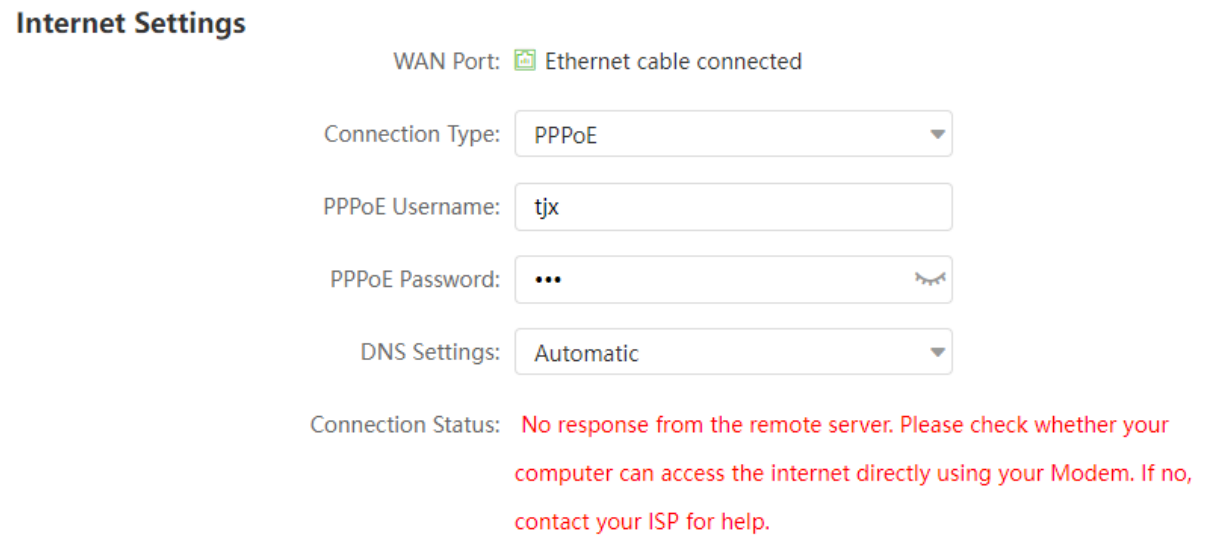
Failover Settings

Failover:

When “**No response from the remote server. Please check whether your computer can access the internet directly using your Modem. If no, contact your ISP for help.**” is shown after **Connection Status** on the page as below, try the following methods:

- Ensure that the Ethernet cable is connected properly.
- Ensure that you choose the proper connection type. Contact your ISP for any doubt about the connection type.
- Power off the router for several minutes, then power it on and try again.

If the problem persists, contact your ISP for help.



The screenshot shows the 'Internet Settings' configuration page. At the top, it indicates 'WAN Port: Ethernet cable connected'. Below this, there are four input fields: 'Connection Type' set to 'PPPoE', 'PPPoE Username' set to 'tjx', 'PPPoE Password' (masked with dots), and 'DNS Settings' set to 'Automatic'. At the bottom, the 'Connection Status' is displayed in red text: 'No response from the remote server. Please check whether your computer can access the internet directly using your Modem. If no, contact your ISP for help.'

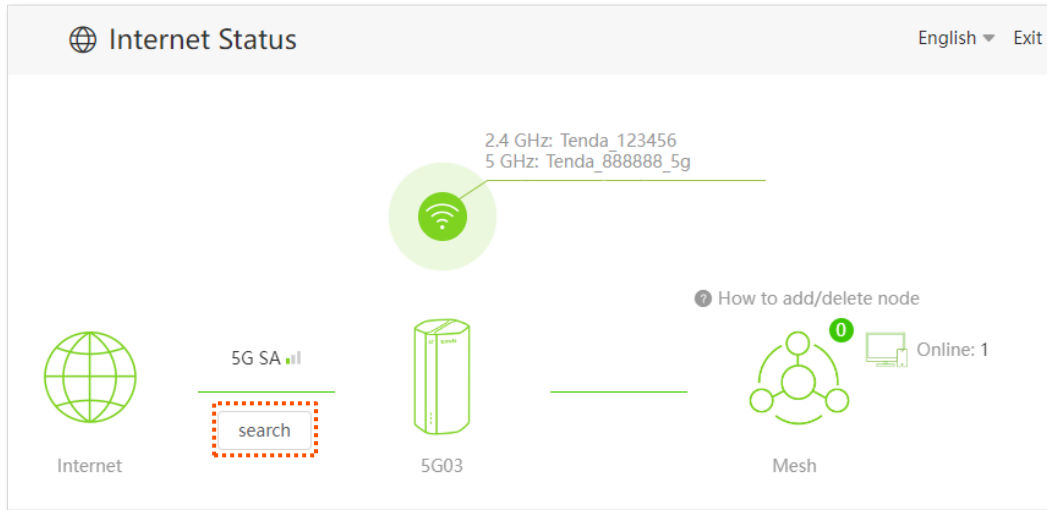
When “**Disconnected. Please contact your ISP for help.**” is shown on the page, try the following methods:

- Modify the MAC address of WAN port by referring to [Change the MAC address of the WAN port](#).
- Use another device to configure the router.
- Ensure that your internet service does not expire.
- If the problem persists, contact Tenda technical support.

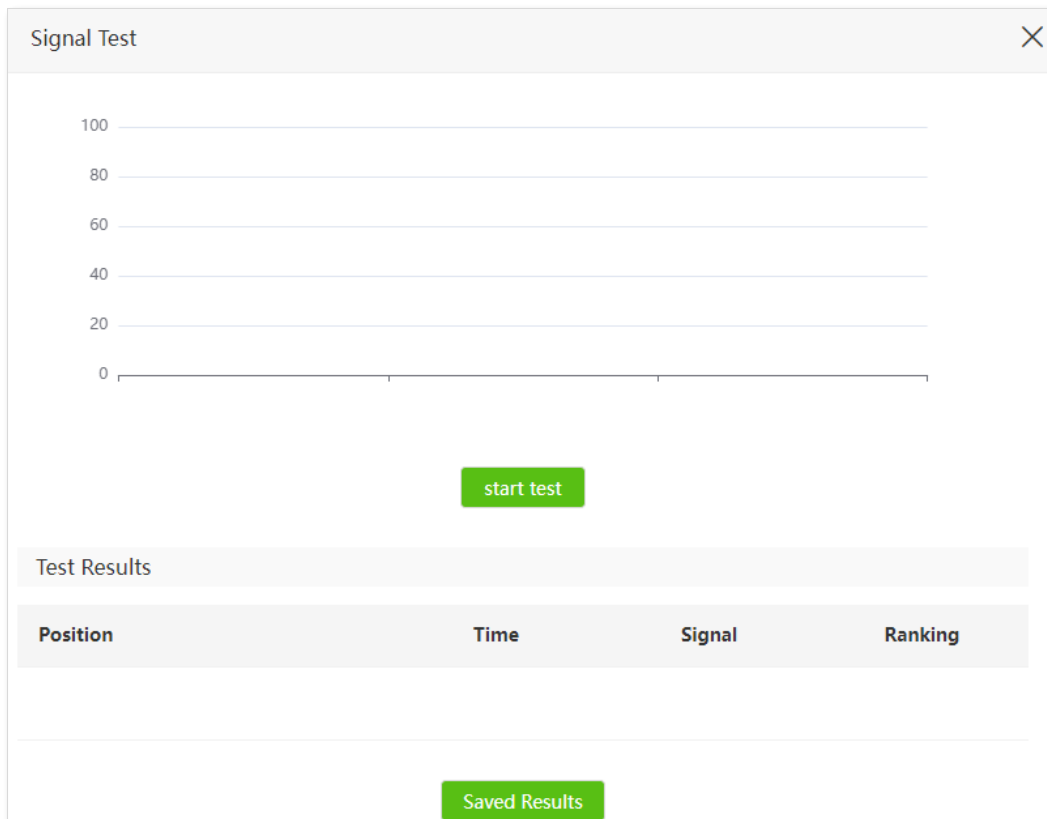
4.2 Signal test

To find the best 5G/4G signal:

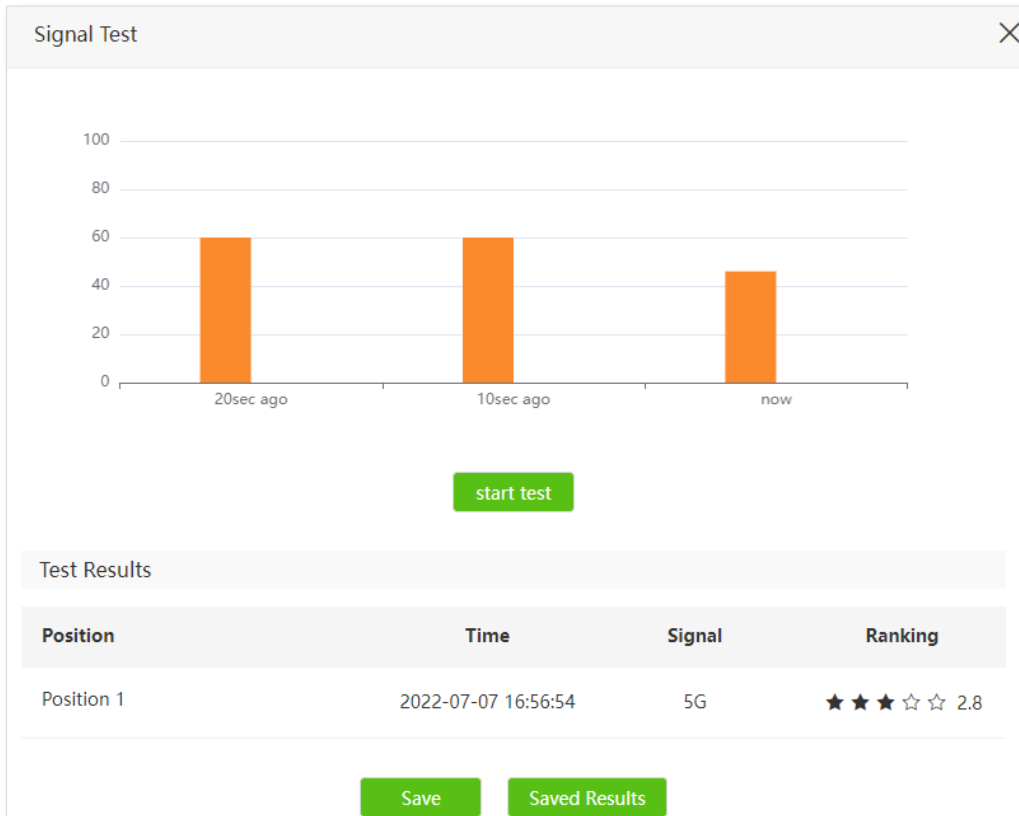
- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Internet Status**.
- Step 3** Click **search**.



- Step 4** Click **start test**.

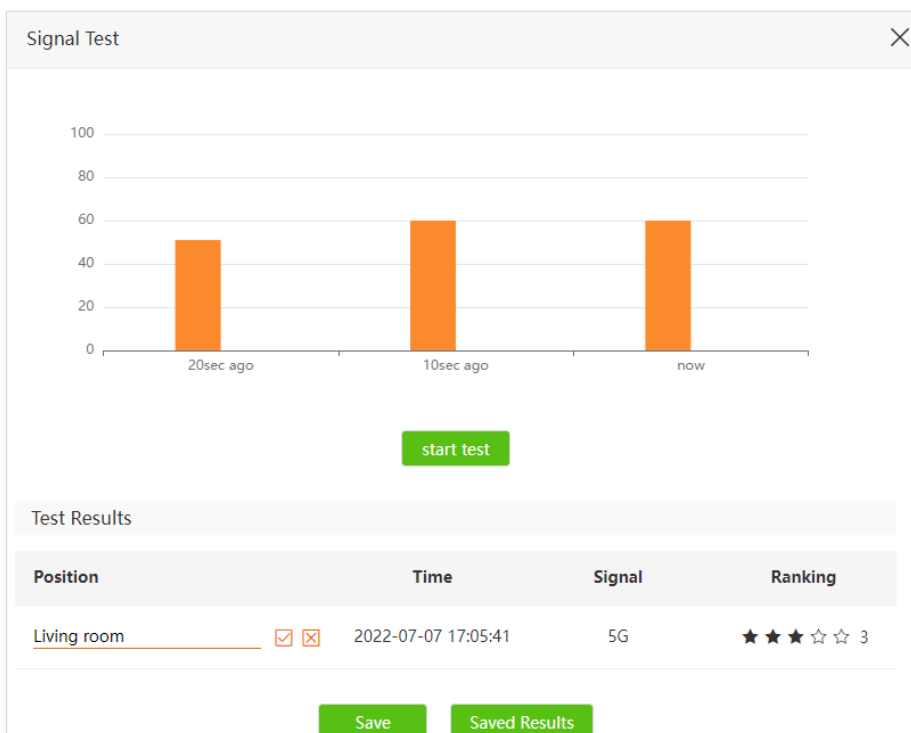


Step 5 Wait until the test result is displayed.



You can hover your mouse over the orange column to view the specific signal strength values.

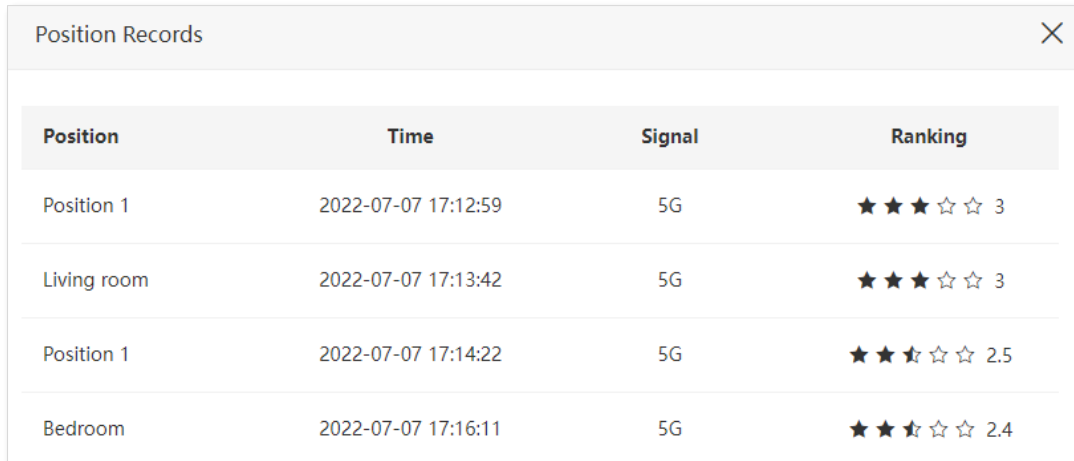
Step 6 (Optional) Click the position name, rename it and click to set the position name to one easily recognized. In this example, it is renamed as **Living room**.



Step 7 Click **Save** to save the test result.

Step 8 Move the router to another position, and repeat the preceding steps to test the signal strength at the new position.

Step 9 Click **Saved Results** to view all test results that you saved before. Compare them to find the position with the best signal strength. Then you can place the router at that position to get the best signal.



Position	Time	Signal	Ranking
Position 1	2022-07-07 17:12:59	5G	★★★☆☆ 3
Living room	2022-07-07 17:13:42	5G	★★★☆☆ 3
Position 1	2022-07-07 17:14:22	5G	★★★☆☆ 2.5
Bedroom	2022-07-07 17:16:11	5G	★★★☆☆ 2.4

---End

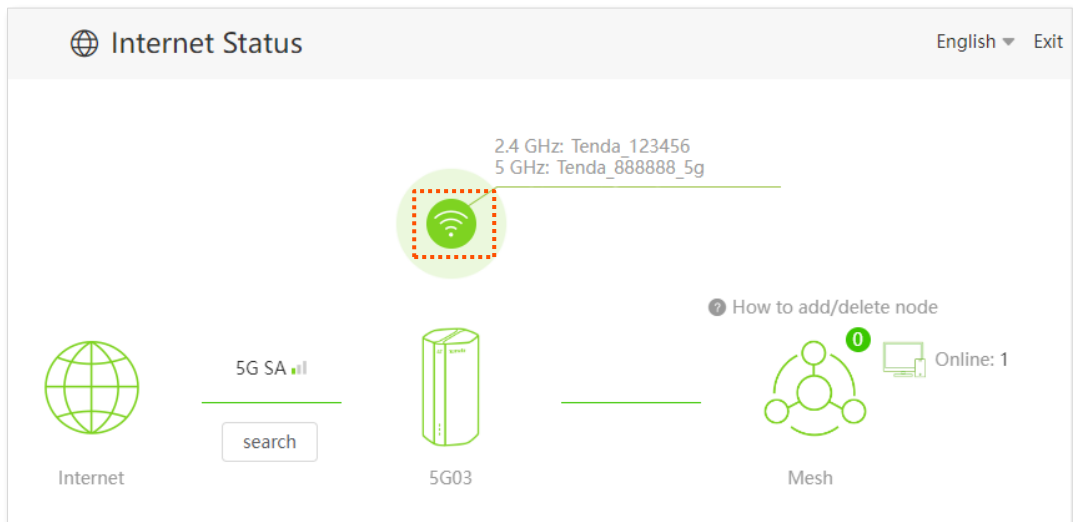
4.3 Wireless information

To view or configure the wireless information:

Step 10 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

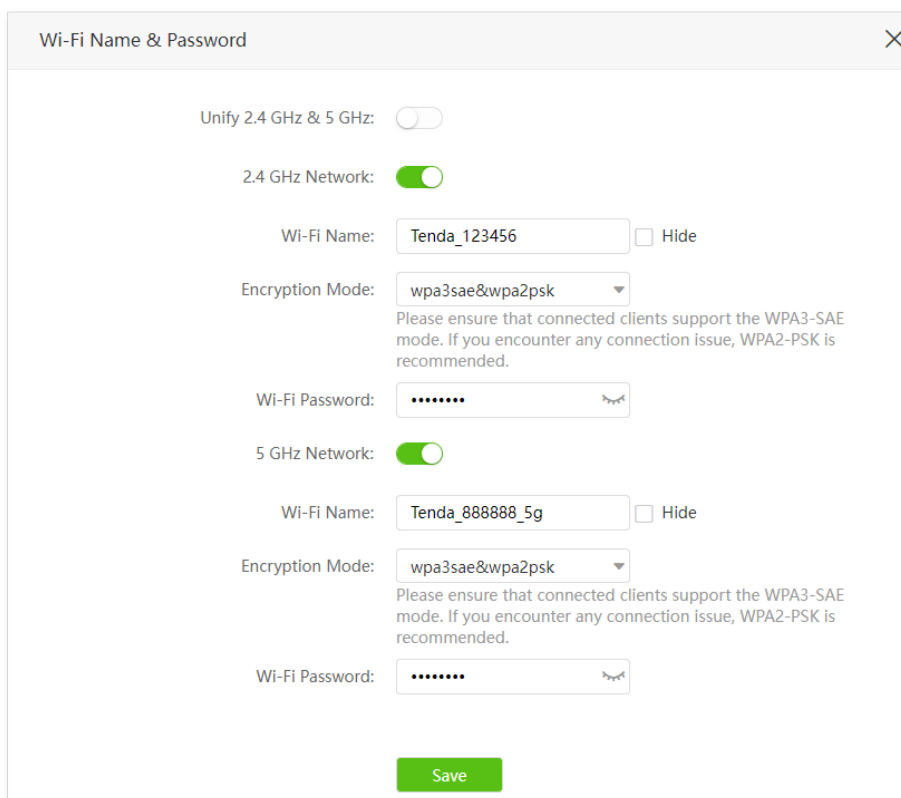
Step 11 Choose **Internet Status**.

Step 12 Click .



---End

You can change wireless parameters as required. For details, see [Wi-Fi name & password](#).



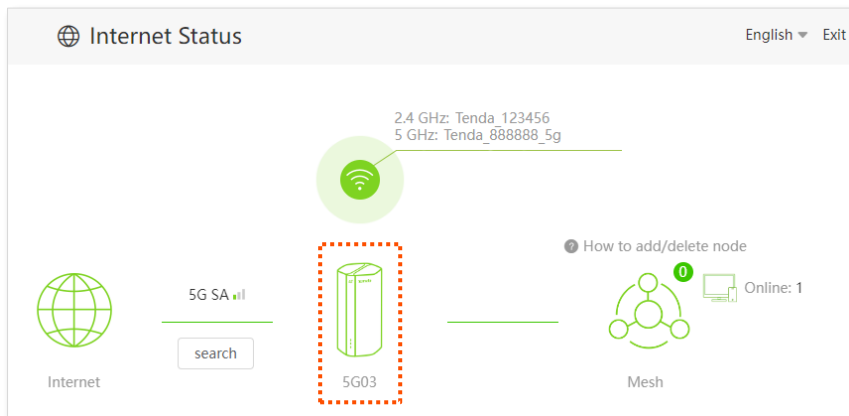
4.4 System information

To view the system information:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Status**.

Step 3 Click  .



---End

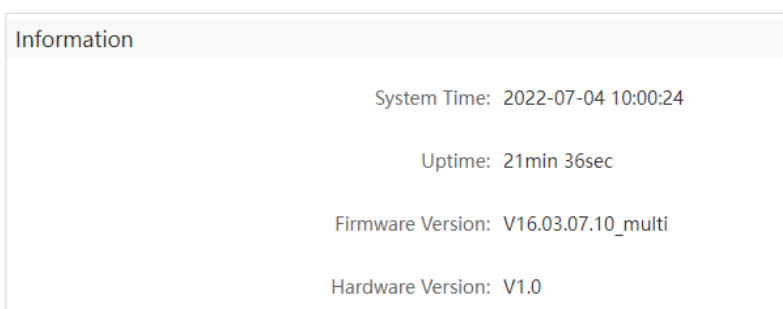


TIP

For detailed description of parameters on this page, refer to [System status](#).

4.4.1 Basic information

In this part, you can view the basic information of the router, such as system time, uptime and firmware version and hardware version.



4.4.2 Connection status

4G/5G router mode

Under the 4G/5G router mode, you can view the information of the SIM card and 4G/5G network in this part. For details about the parameter description, see [4G/5G](#).

4G/5G

SIM Card Status: Ready

Connection Status: Connected

Signal Strength: Fair

ISP: CHINA MOBILE

Mobile Network: 5G SA

Statistics: 34.888MB

Upload Speed: 0Kbps

Download Speed: 1Kbps

IP Address: 10.35.28.89

Subnet Mask: 255.255.255.248

Default Gateway: 10.35.28.90

Primary DNS: 120.196.165.7

Secondary DNS: 221.179.38.7

MAC Address: [REDACTED]

Access Band: N41

IMEI: [REDACTED]

IMSI: [REDACTED]

UL Frequency: 2515.86MHz

DL Frequency: 2524.95MHz

CELL ID: [REDACTED]

CQI: 10

Point A ARFCN: 503172

SSB ARFCN: 504990

SS-RSRP: -109dBm

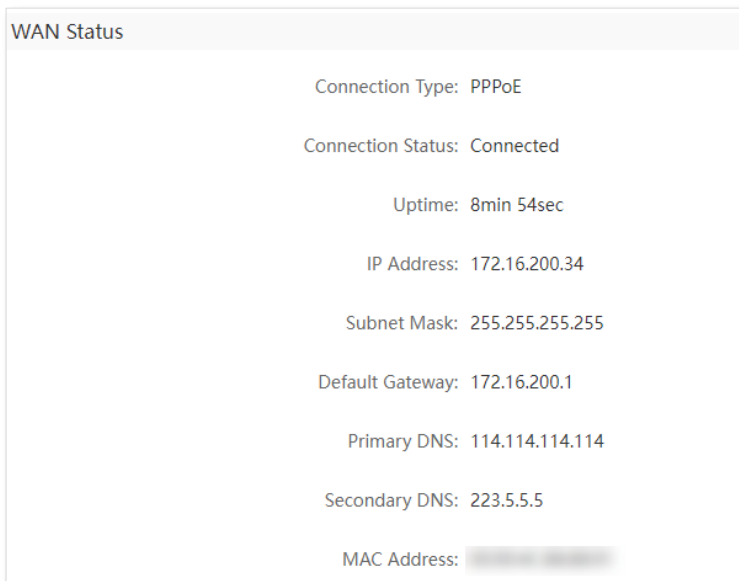
SS-RSRQ: -1dB

SS-RSSI: -109dBm

SS-SINR: 15dB

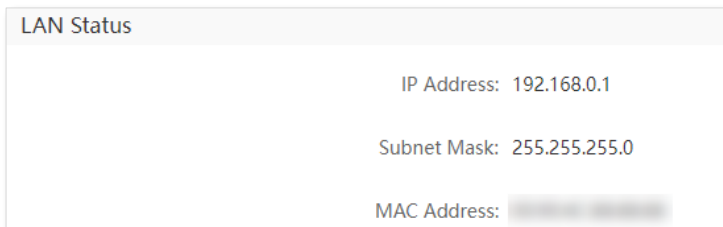
Wireless router mode

Under the wireless router mode, you can view the information of the WAN port, including connection type, connection status and connection duration. For details about the parameter description, see [Wireless router mode](#).



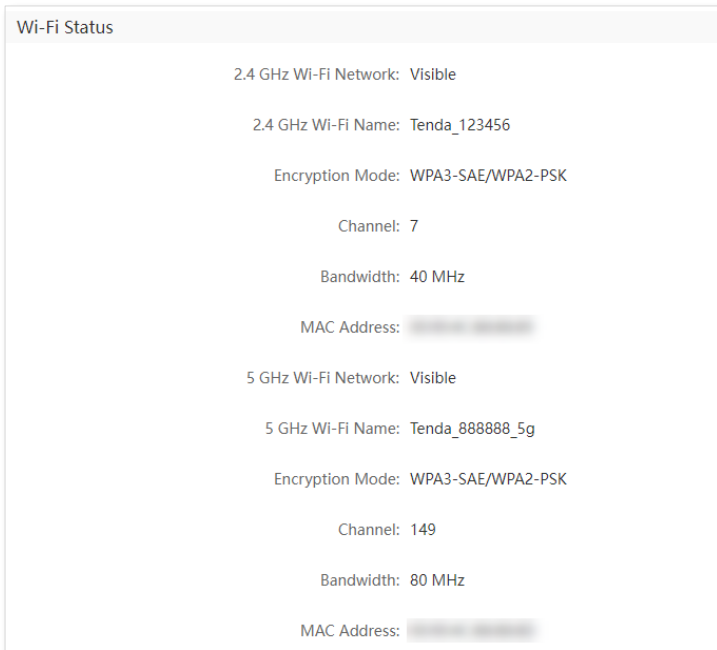
4.4.3 LAN status

In this part, you can view the LAN information, such as LAN IPv4 address, subnet mask and MAC address. For details about the parameter description, see [LAN status](#).



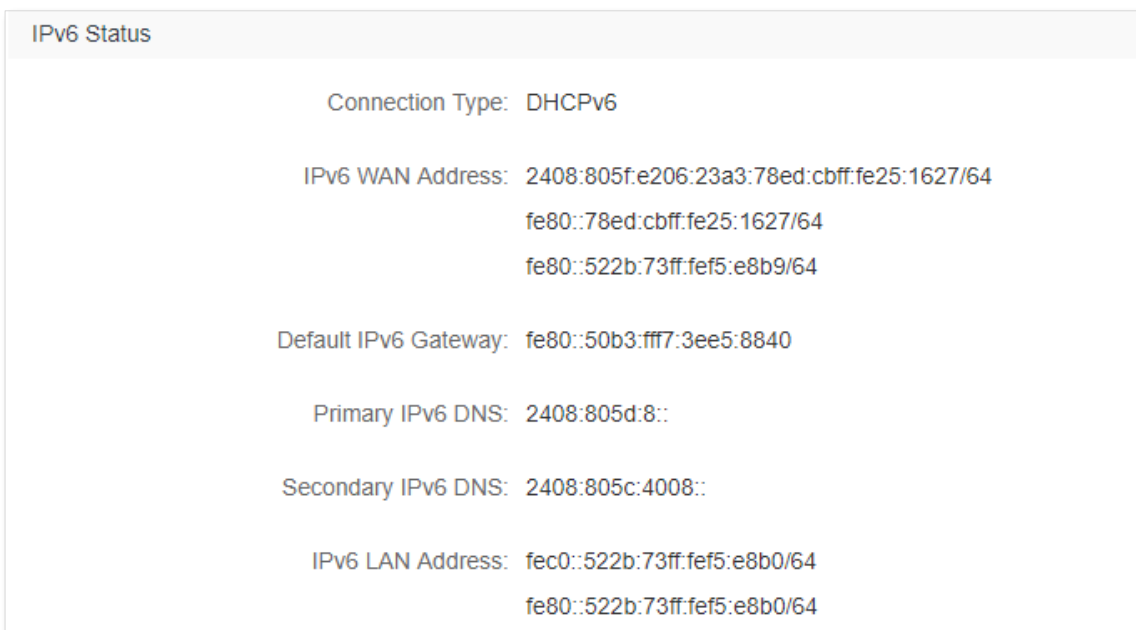
4.4.4 Wi-Fi status

In this part, you can view the information of 2.4 GHz and 5 GHz Wi-Fi network, including the visibility, hotspot name and encryption mode. For details about the parameter description, see [Wi-Fi status](#).



4.4.5 IPv6 status

This part is only displayed when the [IPv6](#) function is enabled. You can view the information of IPv6 connection, including connection type, IPv6 WAN address and IPv6 LAN address. For details about the parameter description, see [IPv6 status](#).



4.4.6 Mesh status

In this part, you can view the information of Mesh network, including the number of Mesh agents.

MESH Status
MESH Agent: 0

4.5 Mesh agent information

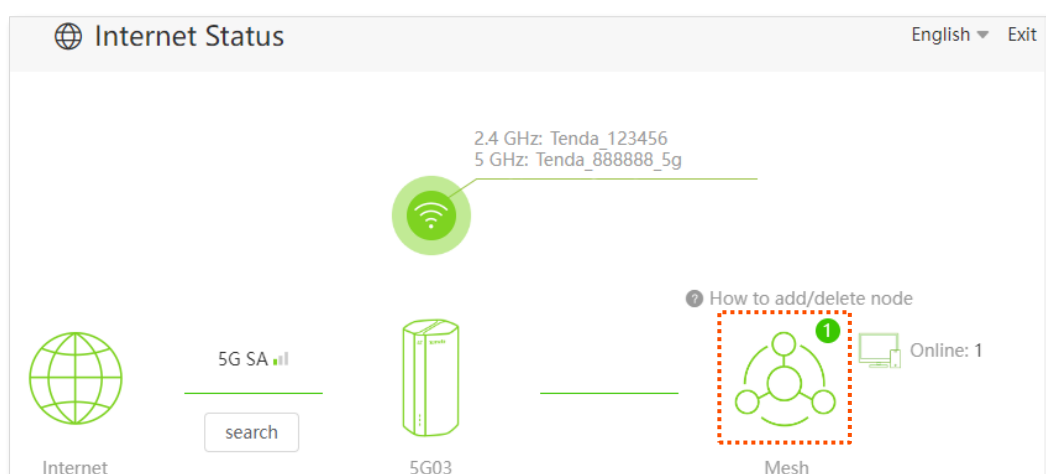
With the Mesh function, the router can function as a primary node to expand your network. On this page, you can view the information of Mesh devices connected to the router, including the node name, MAC address, IP address and connection quality. You can also view and add devices to the blacklist.

To access the page:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Status**.

Step 3 Click  .



---End

The following dialog box is displayed.

Node Name	MAC Address	IP	Connection Quality
tenda	[blurred]	192.168.0.165	■ Excellent

Connection Quality: ■ Excellent ■ Fair ■ Poor

Parameter description


Parameter	Description
Node Name	It specifies the name of the Mesh device connected.
MAC Address	It specifies the MAC address of the Mesh device connected.
IP	It specifies the IP address of the Mesh device connected.
Connection Quality	It specifies the connection quality between the router and the Mesh device connected.


4.5.1 Add a Mesh agent

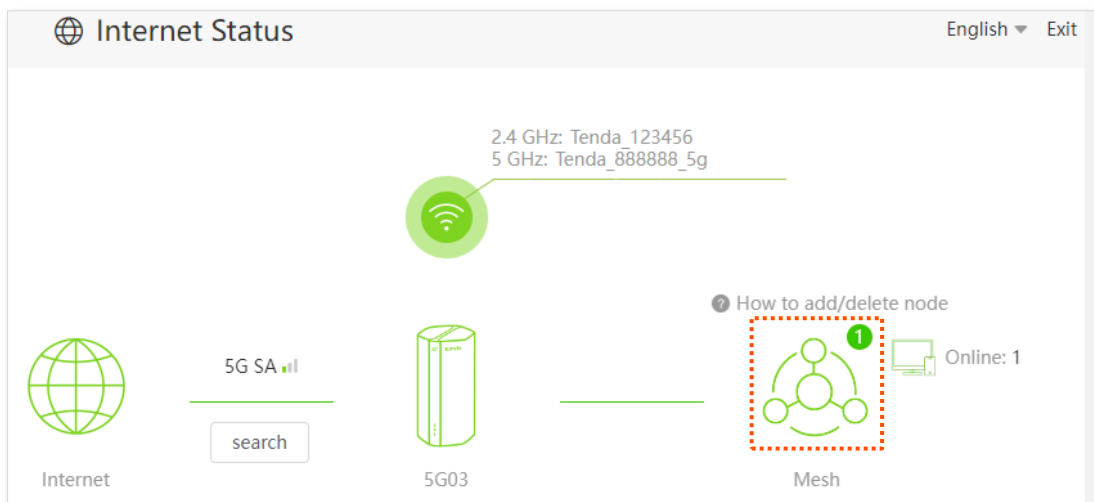


- Currently, 5G03 can be used as the primary node to network with devices that support the EASYMESH R2 protocol.
- Please ensure that the new device you want to add has never been used. If not, reset it first.

To add a Mesh agent:

- Step 1** Power on the router and connect it to the internet properly.
- Step 2** Place the new device in an elevated and open position within 3 meters from your router and power it on.
- Step 3** Press the **MESH** button of the router for about 1 to 3 seconds. The  LED indicator blinks fast. Within 2 minutes, press the **MESH/WPS** button of the new device for 1 to 3 seconds to negotiate with this router.

When the  LED indicator of the router blinks slowly for 10 seconds and then lights solid on, the networking is successful and the new device becomes a secondary node in the network. The information of the Mesh agent is displayed on the **Internet Status** page of the router.



- Step 4** Refer to the following relocation tips to locate the new device to a proper position:
 - Ensure that the distance between any two nodes is within their coverage range.
 - Keep your nodes away from electronics with strong interference, such as microwave ovens, induction cookers, and refrigerators.
 - Place the nodes in a high position with few obstacles.

- Step 5** Power on the new device again and check that its internet connection status is correct according to its user guide.

---End

4.5.2 Remove a Mesh agent

To remove a Mesh agent, reset the Mesh device by pressing the reset button of the Mesh device for about 8 seconds. The resetting operation may vary with devices.

4.6 Online device information

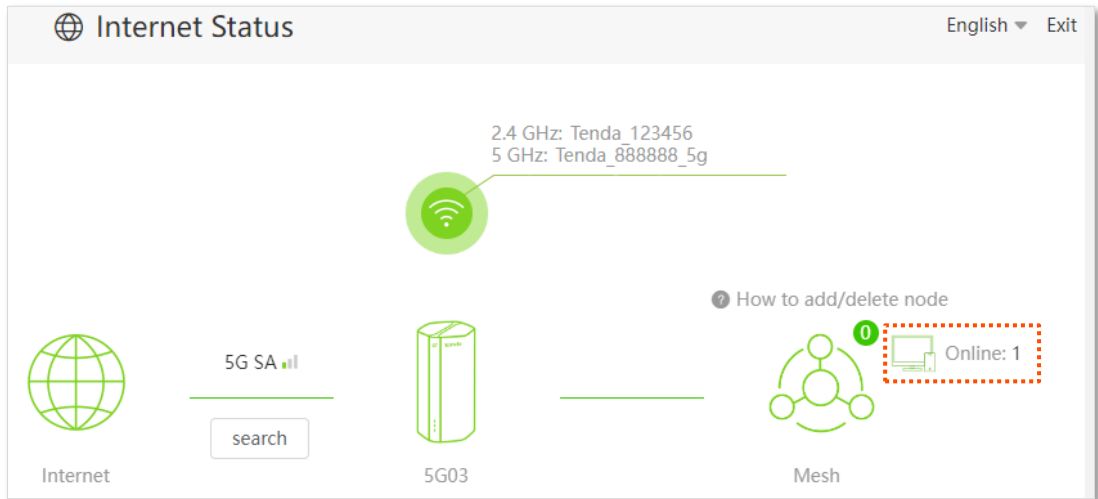
In this page, you can view the information of devices connected to the router, including the upload speed, download speed and access type. You can also view and add devices to the blacklist.

To access the page:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Status**.

Step 3 Click  Online: .

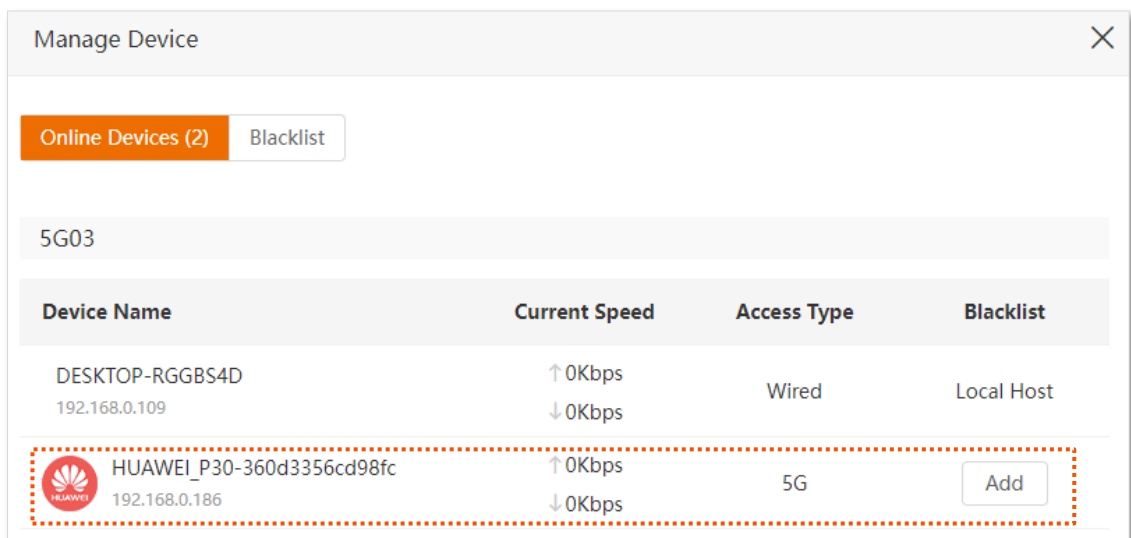


---End

4.6.1 Add devices to the blacklist


Adding devices to the blacklist to block the internet access:

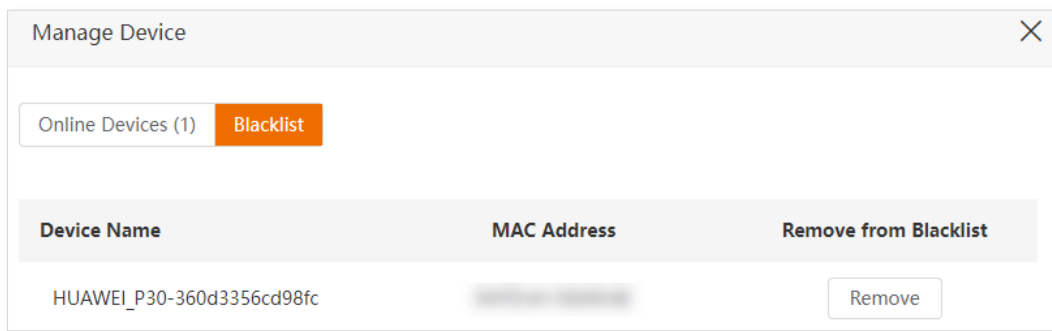
Step 1 Click **Online Devices**, and target the device to be added.



Step 2 Click **Add**.

---End

On the **Internet Status** page, click  Online: , and then click **Blacklist**, you can view the information of devices that are added to the blacklist.

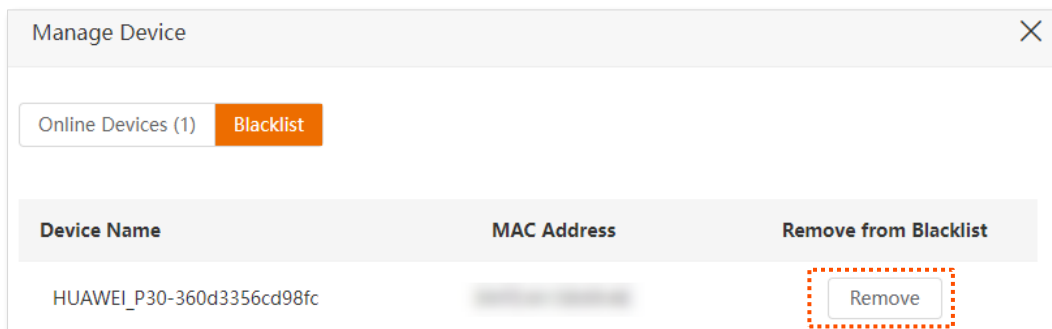


4.6.2 Remove devices from the blacklist

To remove devices from the blacklist as required:

Step 1 Click **Blacklist**, and target the device to be removed from the blacklist.

Step 2 Click **Remove**.



---End

The device can access the internet through the router now.

5 Internet settings

By configuring the internet settings, you can achieve the shared internet access (IPv4) for multiple users within the LAN. The router supports accessing the internet under both 4G/5G router mode and wireless router mode, and the configuring procedures differ.

This chapter includes the following sections:

- [Access the internet with a SIM card](#)
- [Access the internet through the WAN port](#)
- [Set failover connection](#)

5.1 Access the internet with a SIM card



If you are configuring the router for the first time or after restoring it to factory settings, refer to the quick installation guide to configure the internet access. After that, you can change the internet settings by following the instructions here.

To access the configuration page, [log in to the web UI of the router](#), and navigate to **Internet Settings**.

The screenshot displays the 'Internet Settings' configuration page. At the top, there is a header with the router icon, the title 'Internet Settings', and a language dropdown set to 'English' with an 'Exit' button. Below the header, the 'Internet Settings' section shows 'Connection Status: Connected'. Underneath, there are three dropdown menus: 'Mobile Data' set to 'Enable', 'Data Roaming' set to 'Disable' (with a note: 'Enable this function may incur roaming charges.'), and 'Mobile Data Options' set to '5G SA Preferred'. The 'Dial-up Settings' section includes a 'Profile Name' dropdown set to 'CHINA MOBILE' with a 'Create a Profile' button, 'PDP Type' set to 'IPv4&IPv6', 'APN' set to 'cmnet', 'User Name', 'Password', and 'Authentication Type' set to 'NONE'. The 'Failover Settings' section shows 'Failover' set to 'Disable'. At the bottom, there is a green 'Disconnect' button.

Parameter description

Parameter	Description	
Internet Settings	Connection Status	It specifies the internet connection status of the SIM card.
	Mobile Data	It is used to enable or disable the mobile data traffic. When it is disabled, you cannot access the internet through the router.

Parameter	Description
Data Roaming	<p>It is used to enable or disable data roaming for the SIM card inserted in the router.</p> <p>Data roaming means the data usage produced when you are outside the coverage of your ISP. You can disable data roaming to avoid roaming data usage and charges.</p> <p> TIP</p> <p>To use the data roaming function, you need to subscribe to the data roaming service using the SIM card.</p>
Mobile Data Options	<p>It specifies the mobile network type for internet access.</p> <ul style="list-style-type: none"> • 5G SA Preferred: 5G SA, 5G NSA, 4G and 3G can be used in sequence based on the signal strength. • 5G NSA: 5G NSA and 4G can be used in sequence based on the signal strength. • 4G Only: Only the 4G network is used. • 3G Only: Only the 3G network is used.
Dial-up Settings	<p>Profile Name</p> <p>PDP Type</p> <p>APN</p> <p>User Name</p> <p>Password</p> <p>Authentication Type</p> <p>Generally, all these parameters are predefined in the SIM card. The router will identify these parameters automatically, which cannot be changed, and use them for dial-up.</p> <p>If the router fails to identify these parameters of your SIM card, you have to enter them manually by clicking Create a Profile and dial up for internet access.</p> <p> TIP</p> <p>If the router cannot identify these parameters, contact your ISP for them.</p>
	<p><input type="button" value="Create a Profile"/></p> <p>It is used to create an APN dial-up profile when the router fails to identify these parameters automatically.</p>
Failover Settings	<p>Failover</p> <p>It is used to enable or disable the failover function. When the failover function is enabled, you can set parameters of the operating mode other than the current one, and the router will switch to the other mode automatically upon internet access failure of the current mode, therefore ensuring an uninterrupted internet access for clients under the router. For details, see Set failover connection.</p>

5.1.1 Change mobile network preference

When you are already able to access the internet with a SIM card, you can also change the preference towards mobile data, data roaming and preferred network type.

Assume that you are using the router outside the coverage of the ISP of your SIM card and want to use 4G network only.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Internet Settings**.
- Step 3** Set **Mobile Data** to **Enable**.
- Step 4** Set **Data Roaming** to **Enable**.
- Step 5** Set **Mobile Data Option** to **4G Only**.
- Step 6** Click **Connect**.

Internet Settings

Mobile Data:

Data Roaming:
Enable this function may incur roaming charges.

Mobile Data Options:

Dial-up Settings

Profile Name:

PDP Type:

APN:

User Name:

Password:

Authentication Type:

Failover Settings

Failover:

---End

After the configuration, refresh the configuration page. When **Connected** is shown after **Connection Status**, you can use the 4G network only to access the internet outside the coverage of your ISP.

Internet Settings

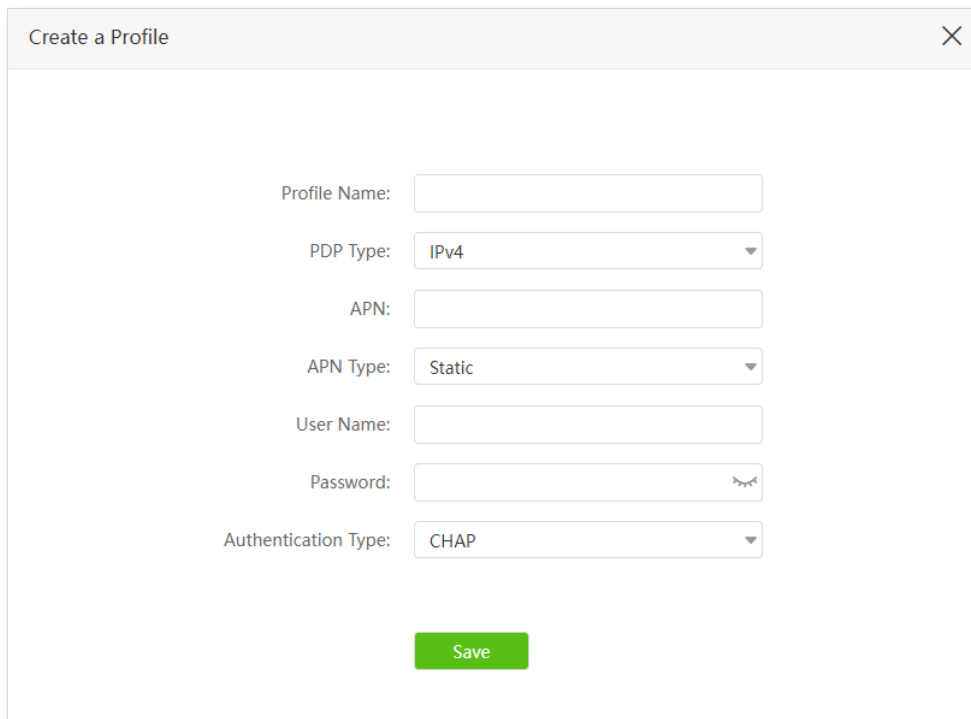
Connection Status: Connected

5.1.2 Create an APN profile manually to access the internet

If the router cannot identify APN parameters automatically and access the internet, you can add a new APN profile manually for dial-up. Contact your ISP for these parameters.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Internet Settings**.
- Step 3** Click **Create a Profile**.
- Step 4** Enter required parameters inquired from your ISP.
- Step 5** Click **Save**.



The screenshot shows a web form titled "Create a Profile" with a close button (X) in the top right corner. The form contains the following fields and options:

- Profile Name:
- PDP Type:
- APN:
- APN Type:
- User Name:
- Password:
- Authentication Type:

At the bottom center of the form is a green "Save" button.

---End

Wait a moment; the router will use the parameters you entered to dial up for internet access. When the **Connected** is shown after **Internet Status**, you can access the internet with the APN profile you create.

5.2 Access the internet through the WAN port

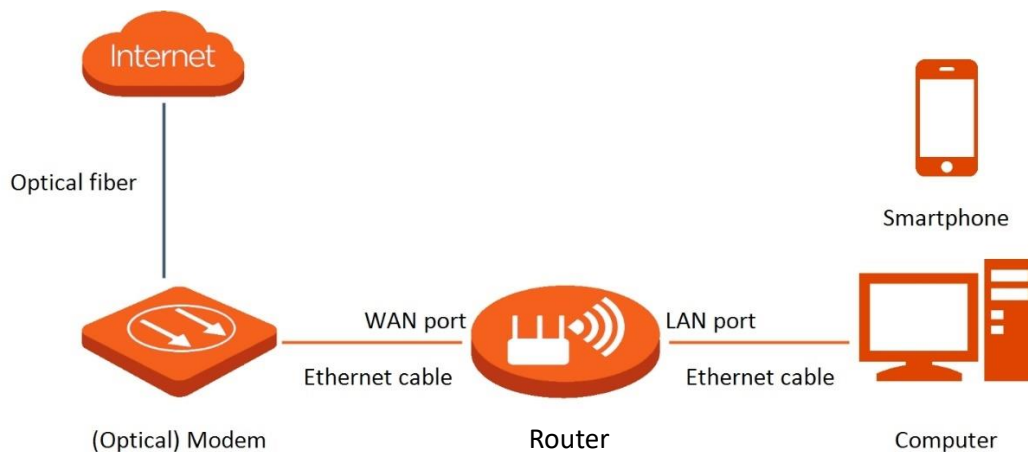
If you want to connect your broadband to the router to access the internet, you can set the router to wireless router mode (refer to [Operating mode](#)) and access the internet through the WAN port.



Parameters for accessing the internet are provided by your ISP. Contact your ISP for any doubt.

5.2.1 Access the internet with a PPPoE account

If the ISP provides you with PPPoE user name and password, you can choose this connection type to access the internet. The application scenario is shown below.



Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Internet Settings**.
- Step 3** Set **Connection Type** to **PPPoE**.
- Step 4** Enter the **PPPoE Username** and **PPPoE Password**.
- Step 5** Click **Connect**.

Internet Settings

WAN Port: Ethernet cable connected

Connection Type:

PPPoE Username:

PPPoE Password:

DNS Settings:

Failover Settings

Failover:

---End

Wait a moment until “**Connected. You can access the internet now.**” is shown on the page, and you can access the internet.

Internet Settings

WAN Port: Ethernet cable connected

Connection Type:

PPPoE Username:

PPPoE Password:

DNS Settings:

Connection Status: **Connected. You can access the internet now.**

Uptime: 1min 8sec

Failover Settings

Failover:

If you fail to access the internet, try the following methods:

- If “**No response from the remote server. Please check whether your computer can access the internet directly using your Modem. If no, contact your ISP for help.**” is shown on the page, you are recommended to choose [access the internet through a dynamic IP address](#).
- If the problem persists, refer to [View the internet status](#) to find a solution.

Parameter description

Parameter	Description
Connection Type	<p>It specifies how your router connects to the internet, including:</p> <ul style="list-style-type: none"> • PPPoE: Select this type if you access the internet using the PPPoE account and PPPoE password. • Dynamic IP Address: Select this type if you can access the internet by simply plugging in an Ethernet cable. • Static IP Address: Select this type if you want to access the internet using fixed IP information.
PPPoE Username	When PPPoE is chosen as Connection Type , you need to enter the user name and password provided by your ISP to access the internet.
PPPoE Password	

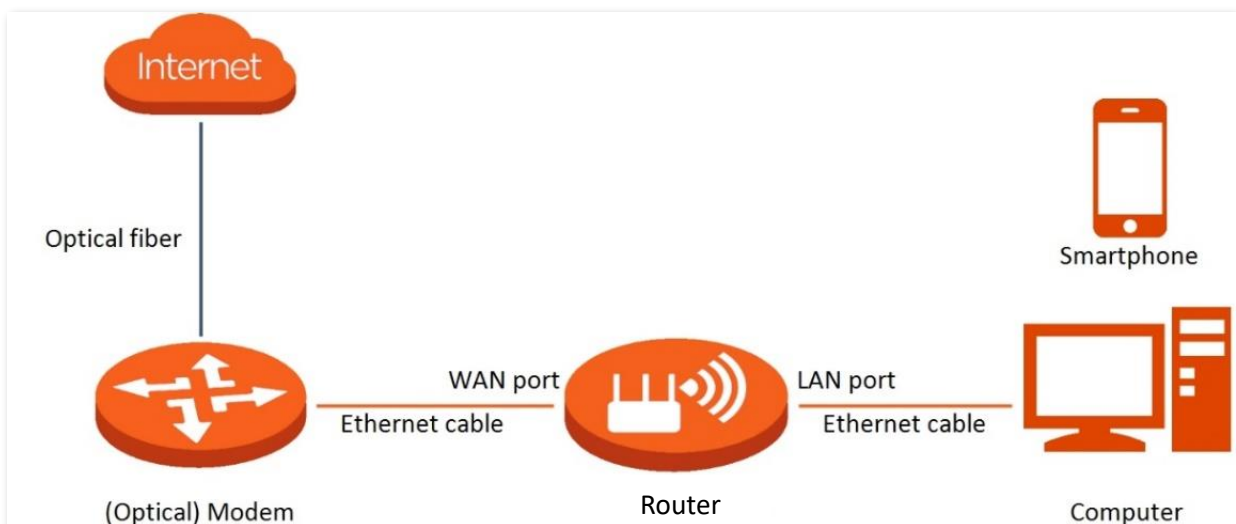
Parameter	Description
DNS Settings	<p>It specifies the obtaining method of WAN port DNS address, which is Automatic by default.</p> <ul style="list-style-type: none"> • Automatic: The router obtains a DNS server address from the DHCP server of the upstream network automatically. • Manual: The DNS server address is configured manually.
Connection Status	<p>It specifies the internet connection status.</p> <ul style="list-style-type: none"> • When “Connected. You can access the internet now.” is shown here, the router is connected to the internet successfully. • When other information is shown here, the router fails to connect to the internet. Please take corresponding measures according to the tips provided.
Uptime	It specifies the duration since the router is connected to the internet.

5.2.2 Access the internet through a dynamic IP address

Generally, accessing the internet through dynamic IP address is applicable in the following situations:

- Your ISP does not provide PPPoE user name and password, or any information including IP address, subnet mask, default gateway and DNS server.
- You have a router with internet access and want to add a 5G03 as the other one.

The application scenario is shown below.



Configuration procedure:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Settings**.

Step 3 Set **Connection Type** to **Dynamic IP Address**.

Step 4 Click **Connect**.

The screenshot shows the 'Internet Settings' configuration page. At the top, it indicates 'WAN Port: Ethernet cable connected'. Below this, there are three dropdown menus: 'Connection Type' is set to 'Dynamic IP Address', 'DNS Settings' is set to 'Automatic', and 'Failover Settings' is set to 'Failover: Disable'. A green 'Connect' button is located at the bottom center of the settings panel.

---End

Wait a moment until “**Connected. You can access the internet now.**” is shown after **Connection Status** on the page, and you can access the internet.

If you fail to access the internet, refer to [View the internet status](#) to find a solution.

Parameter description

Parameter	Description
DNS Settings	<p>It specifies the obtaining method of WAN DNS address, which is Automatic by default.</p> <ul style="list-style-type: none">• Automatic: The router obtains a DNS server address from the DHCP server of the upstream network automatically.• Manual: The DNS server address is configured manually.
Connection Status	<p>It specifies the internet connection status.</p> <ul style="list-style-type: none">• When “Connected. You can access the internet now.” is shown here, the router is connected to the internet successfully.• When other information is shown here, the router fails to connect to the internet. Please take corresponding measures according to the tips provided.
Uptime	<p>It specifies the duration since the router is connected to the internet.</p>

5.2.3 Access the internet with static IP address information

When your ISP provides you with information including IP address, subnet mask, default gateway and DNS server, you can choose this connection type to access the internet.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Internet Settings**.
- Step 3** Set **Connection Type** to **Static IP Address**.
- Step 4** Enter **IP Address**, **Subnet Mask**, **Default Gateway** and **Primary/Secondary DNS Server**.
- Step 5** Click **Connect**.

Internet Settings

WAN Port: Ethernet cable connected

Connection Type: Static IP Address

IP Address: . . .

Subnet Mask: . . .

Default Gateway: . . .

Primary DNS Server: . . .

Secondary DNS Server: . . .

Failover Settings

Failover: Disable

Connect


---End

Wait a moment until “**Connected. You can access the internet now.**” is shown after **Connection Status** on the page, you can access the internet.

If you fail to access the internet, refer to [View the internet status](#) to find a solution.

Parameter description

Parameter	Description
IP Address	When Static IP Address is chosen as Connection Type , enter the fixed IP address
Subnet Mask	information provided by your ISP.

Parameter	Description
Default Gateway	 TIP
Primary DNS Server	If your ISP only provides one DNS server, you can leave the secondary DNS server blank.
Secondary DNS Server	
Connection Status	<p>It specifies the internet connection status.</p> <ul style="list-style-type: none"> When “Connected. You can access the internet now.” is shown here, the router is connected to the internet successfully. When other information is shown here, the router fails to connect to the internet. Please take corresponding measures according to the tips provided.
Uptime	It specifies the duration since the router is connected to the internet.

5.3 Set failover connection

5.3.1 Overview

The router can work under either 4G/5G router mode or wireless router mode. By configuring the failover function, you can set parameters of the operating mode other than the current one. If the internet access under the current operating mode fails, the router switches to the other mode automatically, therefore ensuring an uninterrupted internet access for clients under the router.



Before setting the failover function, ensure that you insert a SIM card into the router, and connect the WAN port of the router to the internet at the same time.

To access the configuration page, [log in to the web UI of the router](#), and navigate to **Internet Settings**, and locate the **Failover Settings** part. This function is disabled by default.

- When the failover function is enabled under the 4G/5G router mode, the page is shown as below. You can configure the failover connection by referring to [Access the internet through the WAN port](#).

Failover Settings

Failover:

Connection Type:

DNS Settings:

- When the failover function is enabled under the wireless router mode, the page is shown as below. You can configure the failover connection by referring to [Access the internet with a SIM card](#).

Failover Settings

Failover:

Profile Name:

PDP Type:

APN:

User Name:

Password:

Authentication Type:

5.3.2 Example of setting up failover connection

Scenario: You used to insert a SIM card in the router to access the internet, but you install a smart home gateway after subscribing to the broadband service recently.

Goal: Set the router to access the internet through the broadband, and use the SIM card as backup in case of broadband failure.

Solution: Connect the broadband to the router and insert the SIM card into the router, and configure the failover function.

Assume that the ISP provides a PPPoE user name and PPPoE password for setting up internet connection.

Configuring procedures:

Step 1 Start a web browser on a device connected to the router and visit tendawifi.com to log in to the web UI of the router.

Step 2 Change operating mode.

1. Choose **Advanced Settings > Operating Mode**.
2. Choose **Wireless Router Mode**, and click **Save**.

Operating Mode ✕

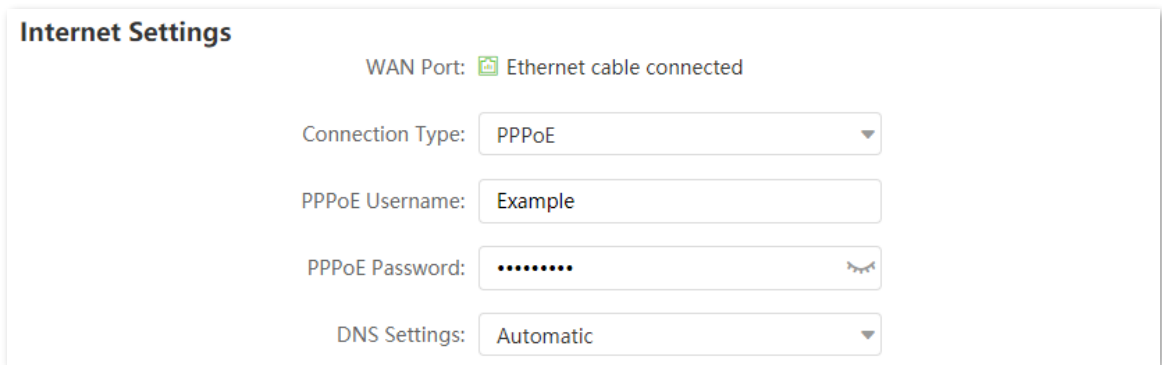
Operating Mode: 4G/5G Router Mode Wireless Router Mode

Wait for the router to reboot to enable the setting.

Step 3 Configure internet access.

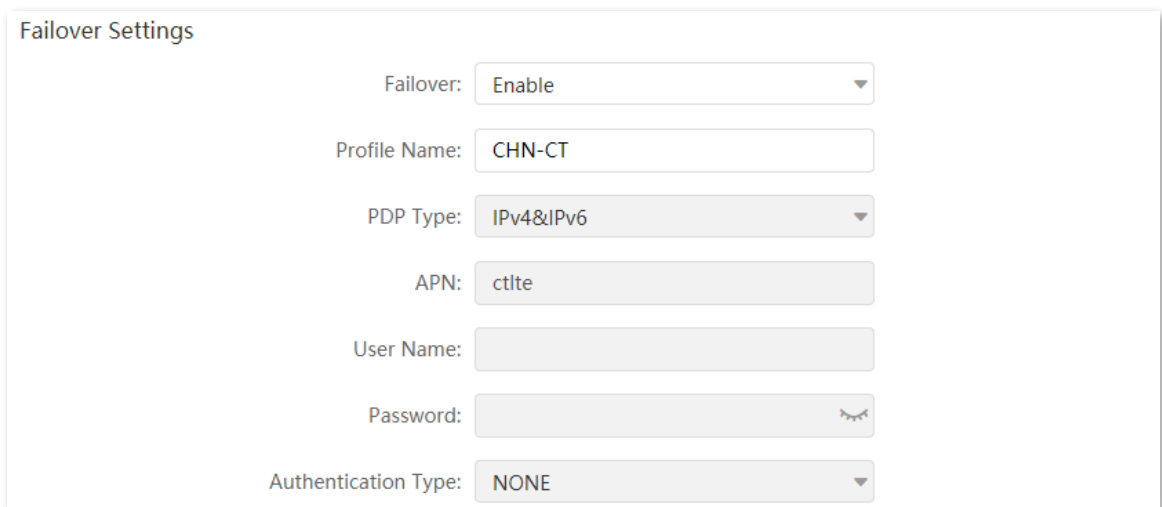
1. Connect the **WAN/LAN** port of the router to the LAN port of your smart home gateway.
2. Log in to the web UI of the router, and choose **Internet Settings**.

3. Set **Connection Type** to **PPPoE**, and enter the **PPPoE Username** and **PPPoE Password** provided by your ISP.



The screenshot shows the 'Internet Settings' configuration page. At the top, it indicates 'WAN Port: Ethernet cable connected'. Below this, there are several fields: 'Connection Type' is set to 'PPPoE' in a dropdown menu; 'PPPoE Username' is 'Example'; 'PPPoE Password' is masked with dots and has a visibility toggle icon; and 'DNS Settings' is set to 'Automatic' in a dropdown menu.

4. Set **Failover** to **Enable**, and the router fills parameters concerning 4G/5G internet access automatically.



The screenshot shows the 'Failover Settings' configuration page. The 'Failover' option is set to 'Enable' in a dropdown menu. Below it, 'Profile Name' is 'CHN-CT', 'PDP Type' is 'IPv4&IPv6' in a dropdown menu, 'APN' is 'ctlte', 'User Name' is empty, 'Password' is empty with a visibility toggle icon, and 'Authentication Type' is 'NONE' in a dropdown menu.

5. Click **Connect** on the bottom.

---End

When the **Connection Status** turns “**Connected. You can access the internet now.**”, the router is connected to the internet successfully and you can enjoy uninterrupted internet access guaranteed by both the broadband and SIM card.

6 Wi-Fi settings

This chapter introduces basic Wi-Fi settings, including changing the Wi-Fi name, password and encryption mode, separating the 2.4 GHz and 5 GHz networking, setting the wireless repeating, OFDMA and Mesh functions, and modifying the channel and bandwidth and transmit power.

This chapter includes the following sections:

- [Wi-Fi name & password](#)
- [Wi-Fi schedule](#)
- [Wireless repeating](#)
- [Channel & bandwidth](#)
- [Transmit power](#)
- [WPS](#)
- [AP mode](#)
- [OFDMA](#)
- [MESH](#)

6.1 Wi-Fi name & password

6.1.1 Overview

To access the configuration page, [log in to the web UI of the router](#), and navigate to **Wi-Fi Settings > Wi-Fi Name & Password**.

On this page, you can configure basic Wi-Fi parameters, such as the Wi-Fi name and password.

Wi-Fi Name & Password

Unify 2.4 GHz & 5 GHz:

2.4 GHz Network:

Wi-Fi Name: Hide

Encryption Mode:

Please ensure that connected clients support the WPA3-SAE mode. If you encounter any connection issue, WPA2-PSK is recommended.

Wi-Fi Password:

5 GHz Network:

Wi-Fi Name: Hide

Encryption Mode:


Please ensure that connected clients support the WPA3-SAE mode. If you encounter any connection issue, WPA2-PSK is recommended.

Wi-Fi Password:

Save

Parameter description

Parameter	Description
Unify 2.4 GHz & 5 GHz	It is used to enable or disable the Unify 2.4 GHz & 5 GHz function, which is disabled by default. When this function is enabled, the 2.4 GHz and 5 GHz Wi-Fi networks share the same SSID and password. Devices connected to the Wi-Fi network will use the network with better connection quality automatically.
2.4 GHz Network	You can enable or disable the 2.4 GHz network and 5 GHz network separately when the Unify 2.4 GHz & 5 GHz function is disabled.

Parameter	Description
5 GHz Network	<ul style="list-style-type: none"> If the wireless devices, such as smartphones, are far away from the router, or blocked from the router by a wall, it is recommended that the wireless devices be connected to the 2.4 GHz network. If the wireless devices are close to the router, it is recommended that the wireless devices be connected to the 5 GHz network.
Wi-Fi Name	It specifies the Wi-Fi network name (SSID) of the corresponding Wi-Fi network.
Hide	<p>It is used to hide the Wi-Fi name of the Wi-Fi network to improve the security level of the Wi-Fi network.</p> <p>When this function is enabled, the Wi-Fi network is invisible to wireless devices. You need to enter the Wi-Fi name of the network on your wireless devices (such as a smartphone) manually if you want to join the network.</p>
Encryption Mode	<p>It specifies the encryption modes supported by the router, including:</p> <ul style="list-style-type: none"> WPA2-PSK: The network is encrypted with WPA2-PSK/AES, which has a higher security level than WPA-PSK. WPA/WPA2-PSK (recommended): It indicates that WPA-PSK and WPA2-PSK are adopted to encrypt the network, providing both security and compatibility.
Wi-Fi Password	<p>It specifies the password for connecting to the Wi-Fi network. You are strongly recommended to set a Wi-Fi password for security.</p> <p> TIP</p> <p>It is recommended to use the combination of numbers, uppercase letters, lowercase letters and special symbols in the password to enhance the security of the Wi-Fi network.</p>

6.1.2 Unify the 2.4 GHz and 5 GHz Wi-Fi networks

The router supports 2.4 GHz and 5 GHz Wi-Fi networks, which are separated by default. You can unify their Wi-Fi names and passwords as required.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Wi-Fi Settings > Wi-Fi Name & Password**.
- Step 3** Enable **Unify 2.4 GHz & 5 GHz**.
- Step 4** Set **Wi-Fi Name** and **WiFi Password**.

In this example, the Wi-Fi networks are named **Tenda_002668**.

Step 5 Click **Save**.

Wi-Fi Name & Password

Unify 2.4 GHz & 5 GHz:

Enable Wi-Fi network:

Wi-Fi Name: Hide

Encryption Mode:

Wi-Fi Password:

Save

---End

Now you can connect to the Wi-Fi networks using the same Wi-Fi name and password.

6.1.3 Separate the 2.4 GHz Wi-Fi name from 5 GHz Wi-Fi name

The router supports both 2.4 GHz and 5 GHz Wi-Fi networks, which can be set separately with different names and passwords. If you want to separate the Wi-Fi names of the two networks, follow the procedures below.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Wi-Fi Settings > Wi-Fi Name & Password**.
- Step 3** Disable **Unify 2.4 GHz & 5 GHz**.
- Step 4** Customize the **Wi-Fi Name** and **Wi-Fi Password** of each Wi-Fi network.

Step 5 Click **Save**.

Wi-Fi Name & Password

Unify 2.4 GHz & 5 GHz:

2.4 GHz Network:

Wi-Fi Name: Hide

Encryption Mode: ▼
Please ensure that connected clients support the WPA3-SAE mode. If you encounter any connection issue, WPA2-PSK is recommended.

Wi-Fi Password:

5 GHz Network:

Wi-Fi Name: Hide

Encryption Mode: ▼
Please ensure that connected clients support the WPA3-SAE mode. If you encounter any connection issue, WPA2-PSK is recommended.

Wi-Fi Password:

---End

When completing the configurations, you can connect to the Wi-Fi networks of the router to access the internet.

6.1.4 Change the Wi-Fi name and Wi-Fi password

The router supports both 2.4 GHz and 5 GHz Wi-Fi networks.

Assume that you want to change the 2.4 GHz Wi-Fi name and password to **John_Doe_2.4GHz** and **Tenda+Wireless24**, and the 5 GHz Wi-Fi name and password to **John_Doe_5GHz** and **Tenda+Wireless5**. Both networks adopt **WPA/WPA2-PSK (recommended)** as the encryption type.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Wi-Fi Settings > Wi-Fi Name & Password**.
- Step 3** Disable **Unify 2.4 GHz & 5 GHz**.
- Step 4** Change the parameters of the 2.4 GHz network.
 1. Change the **Wi-Fi Name** of the 2.4 GHz network, which is **John_Doe_2.4GHz** in this example.

2. Choose an **Encryption Mode**, which is **WPA/WPA2-PSK (recommended)** in this example.
3. Change the **Wi-Fi Password** of the 2.4 GHz network, which is **Tenda+Wireless24** in this example.

Step 5 Change the parameters of the 5 GHz network.

1. Change the **Wi-Fi Name** of the 5 GHz network, which is **John_Doe_5GHz** in this example.
2. Choose an **Encryption Mode**, which is **WPA/WPA2-PSK (recommended)** in this example.
3. Change the **Wi-Fi Password** of the 5 GHz network, which is **Tenda+Wireless5** in this example.

Step 6 Click **Save**.

Wi-Fi Name & Password

Unify 2.4 GHz & 5 GHz:

2.4 GHz Network:

Wi-Fi Name: Hide

Encryption Mode:

Wi-Fi Password:

5 GHz Network:

Wi-Fi Name: Hide

Encryption Mode:

Wi-Fi Password:

Save

---End

When completing the configurations, you can connect your wireless devices to any Wi-Fi networks of the router to access the internet.

6.1.5 Hide the Wi-Fi network

The hidden Wi-Fi networks are invisible to wireless devices, thus improving the security of the networks.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Wi-Fi Settings > Wi-Fi Name & Password**.
- Step 3** Tick **Hide** of the target network.
- Step 4** Click **Save**.

Wi-Fi Name & Password

Unify 2.4 GHz & 5 GHz:

2.4 GHz Network:

Wi-Fi Name: Hide
If this function is enabled when the Mesh networking function is enabled, adding a Mesh secondary node may fail.

Encryption Mode:

Wi-Fi Password:

5 GHz Network:

Wi-Fi Name: Hide
If this function is enabled when the Mesh networking function is enabled, adding a Mesh secondary node may fail.

Encryption Mode:

Wi-Fi Password:

Save

---End

When configuration is completed, the corresponding Wi-Fi network name is invisible to wireless devices.

6.1.6 Connect to a hidden Wi-Fi network

When a Wi-Fi network is hidden, you need to enter the Wi-Fi name manually first and connect to it.

Assume that the Unify 2.4 GHz & 5 GHz function is enabled and the parameters are:

- Wi-Fi name: Jone_Doe
- Encryption type: WPA/WPA2-PSK (recommended)
- Wi-Fi password: Tenda+Wireless245



If you do not remember the wireless parameters of the Wi-Fi network, [log in to the web UI of the router](#) and navigate to **Wi-Fi Settings > Wi-Fi Name & Password** to find it.

Procedure for connecting to the hidden Wi-Fi network on your wireless device (Example: iPhone)

Step 1 Tap **Settings** on your phone, and choose **WLAN**.

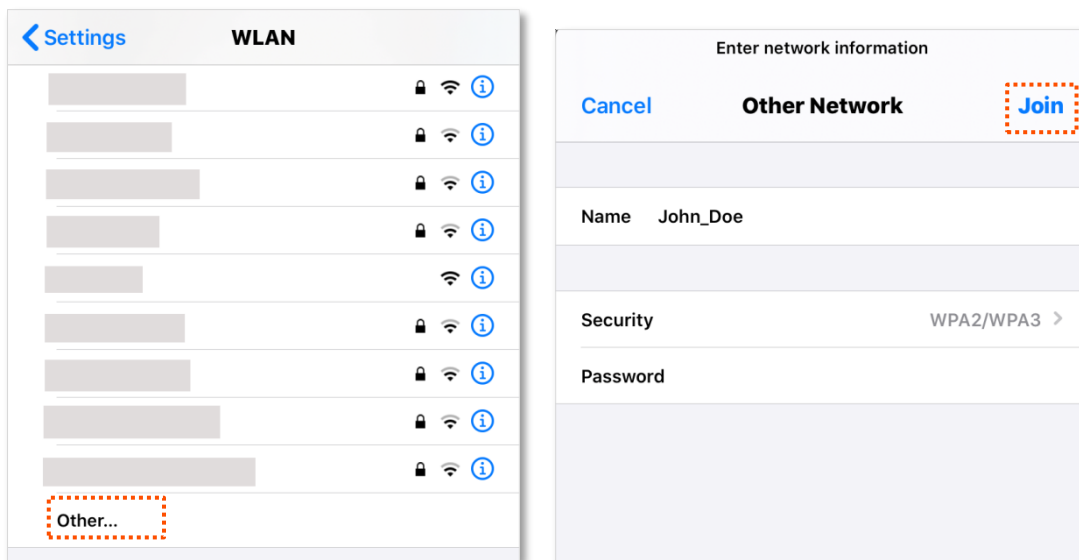
Step 2 Enable **WLAN**.

Step 3 Scroll the Wi-Fi list to the bottom, and tap **Other....**

Step 4 Enter the Wi-Fi name and password, which are **John_Doe** and **Tenda+Wireless245** in this example.

Step 5 Set security to **WPA2/WPA3** (If WPA2/WPA3 is not available, choose WPA2).

Step 6 Tap **Join**.



---End

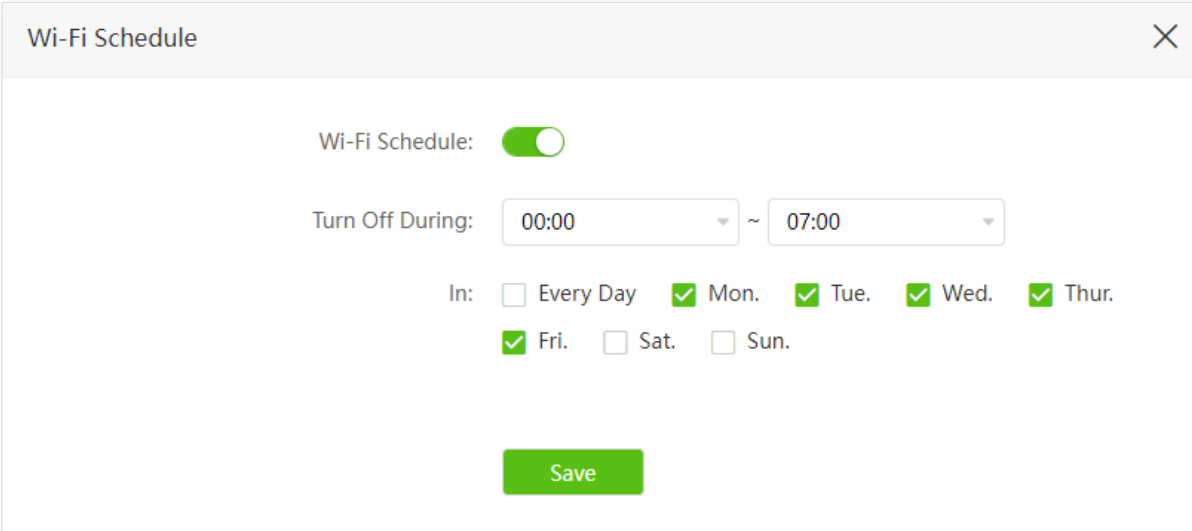
When completing the configurations, you can connect to the hidden Wi-Fi network to access the internet.

6.2 Wi-Fi schedule

6.2.1 Overview

This Wi-Fi Schedule function allows you to disable the Wi-Fi networks of the router at specified periods. By default, this function is disabled.

To access the configuration page, [log in to the web UI of the router](#), and choose **Wi-Fi Settings > Wi-Fi Schedule**.



- The Wi-Fi schedule function can be enabled only when the Mesh function is disabled.
- To make the Wi-Fi schedule function work properly, please ensure the system time is synchronized with the internet time. Refer to [Sync system time with the internet time](#) for configuration.

Parameter description

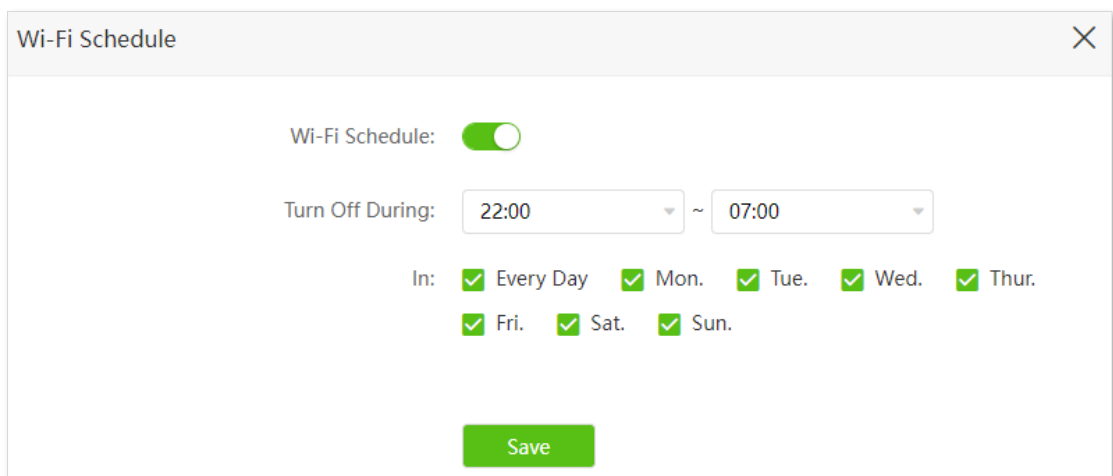
Parameter	Description
Wi-Fi Schedule	It is used to enable/disable the Wi-Fi schedule function.
Turn Off During	It specifies the period when the Wi-Fi networks are disabled.
In	It specifies the day(s) on which the Wi-Fi networks are disabled during the specified period.

6.2.2 Example of configuring a Wi-Fi schedule

Assume that you want to disable the Wi-Fi network from 22:00 to 07:00 every day.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Wi-Fi Settings > Wi-Fi Schedule**.
- Step 3** Enable **Wi-Fi Schedule**.
- Step 4** Set a period for the Wi-Fi networks to be disabled, which is **22:00~07:00** in this example.
- Step 5** Set the days when the function works, which is **Every Day** in this example.
- Step 6** Click **Save**.



Wi-Fi Schedule

Wi-Fi Schedule:

Turn Off During: 22:00 ~ 07:00

In: Every Day Mon. Tue. Wed. Thur.
 Fri. Sat. Sun.

Save

---End

When the configuration is completed, the Wi-Fi networks will be disabled from 20:00 to 7:00 every day.

6.3 Wireless repeating



This function is only available under the wireless router mode when the Mesh function is disabled. Refer to [Operating mode](#) to set the operating mode of the router.

6.3.1 Overview

By configuring the wireless repeating function, you can extend the coverage of the existing Wi-Fi network.

To access the configuration page, [log in to the web UI of the router](#), and choose **Wi-Fi Settings > Wireless Repeating**.

This function is disabled by default. When it is enabled, the page is shown as below.



- When the wireless repeating function is enabled, some other functions will be unavailable, such as Wi-Fi schedule, guest network and WPS.
- When wireless repeating is enabled, do not connect any device to the WAN port of the router.

Wireless Repeating

Wireless Repeating:

Repeating Mode: WISP Client+AP

Upstream Wi-Fi Name:

Save

Parameter description

Parameter	Description
Wireless Repeating	It is used to enable/disable the Wireless Repeating function.
Repeating Mode	<p>Two repeating modes are available:</p> <ul style="list-style-type: none">• WISP: Generally used to bridge the hotspot of ISPs.• Client+AP: Able to bridge all kinds of Wi-Fi network. <p> TIP</p> <ul style="list-style-type: none">• When WISP mode is chosen and the LAN IP address of the router is at the same network segment as that of the upstream device, the router will change the LAN IP address to a different network segment to avoid conflict.• After the router is set to WISP mode, you are required to access the internet by referring to the configuring procedure in Access the internet through the WAN port according to the connection type you choose.

Parameter	Description
Upstream Wi-Fi Name	It specifies the Wi-Fi name that you want to bridge. If you select Enter a Wi-Fi name manually , you are required to enter the Wi-Fi Name , Frequency Band and Encryption Mode and Encryption Algorithm manually.
Upstream Wi-Fi Password	It specifies the Wi-Fi password of the Wi-Fi name that you want to bridge.
Wi-Fi Name	It is required when Upstream Wi-Fi Name is set to Enter a Wi-Fi name manually . It specifies the Wi-Fi name that you want to bridge.
Frequency Band	It is required when Upstream Wi-Fi Name is set to Enter a Wi-Fi name manually . It specifies the frequency band of the upstream Wi-Fi that you want to bridge.
Encryption Mode	It is required when Upstream Wi-Fi Name is set to Enter a Wi-Fi name manually . It specifies the encryption mode of the upstream Wi-Fi that you want to bridge. When you select any encryption mode other than None , Encryption Algorithm is required.
Encryption Algorithm	It is required when Upstream Wi-Fi Name is set to Enter a Wi-Fi name manually and Encryption Mode is set to any encryption mode other than None . It specifies the encryption algorithm of the upstream Wi-Fi that you want to bridge.

6.3.2 Extend the existing Wi-Fi network

When there is already a router with internet access in your home, you can refer to the configurations in this part to extend the Wi-Fi network coverage.

Assume that your existing Wi-Fi name and password are:

- Upstream Wi-Fi name: Home_Wi-Fi
- Wi-Fi password: MyHomeWiFi

Method 1: Set the new router to WISP mode

Configuration procedure:

Step 1 Place the new router near the existing router and power it on.

Step 2 Connect your wireless device to the Wi-Fi network of your new router, or connect a computer to the LAN port of the new router.



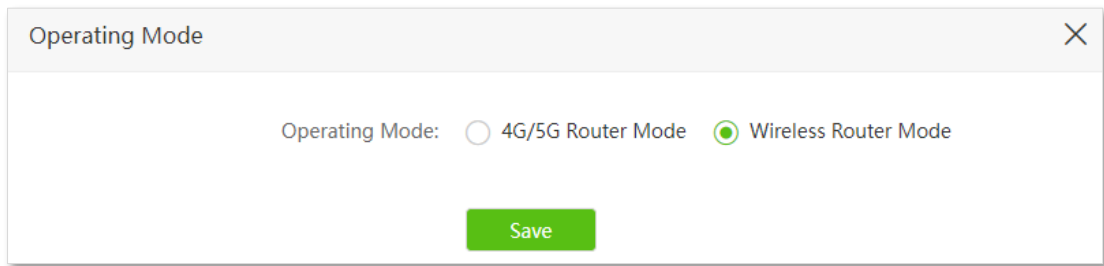
Do not connect any device to the WAN port of the new router.

Step 3 [Log in to the web UI of the new router.](#)

Step 4 Set the new router to wireless router mode.

1. Choose **Advanced Settings > Operating Mode**.

2. Select **Wireless Router Mode**, and click **Save**.



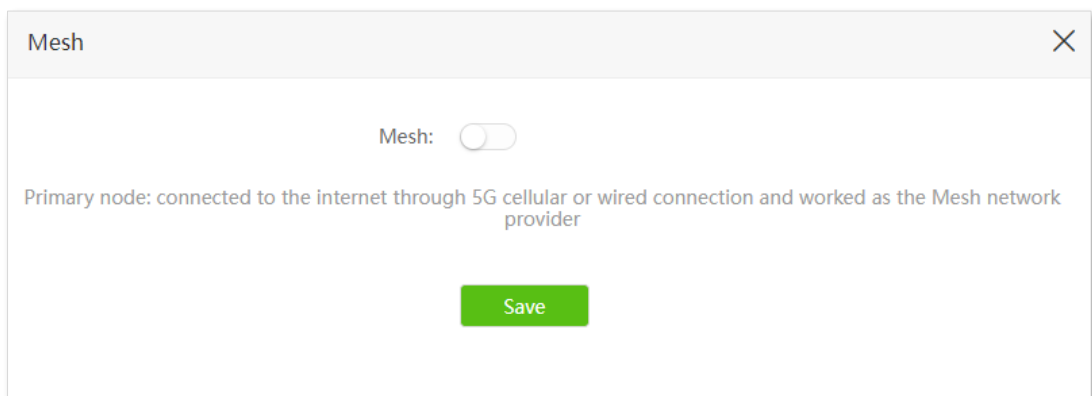
The screenshot shows a window titled "Operating Mode" with a close button (X) in the top right corner. Inside the window, the text "Operating Mode:" is followed by two radio button options: "4G/5G Router Mode" (which is unselected) and "Wireless Router Mode" (which is selected, indicated by a green dot). Below these options is a green "Save" button.

- Step 5 Disable the Mesh function.



If you have disabled the Mesh function before, skip to **Step 6** to proceed with the configuration.

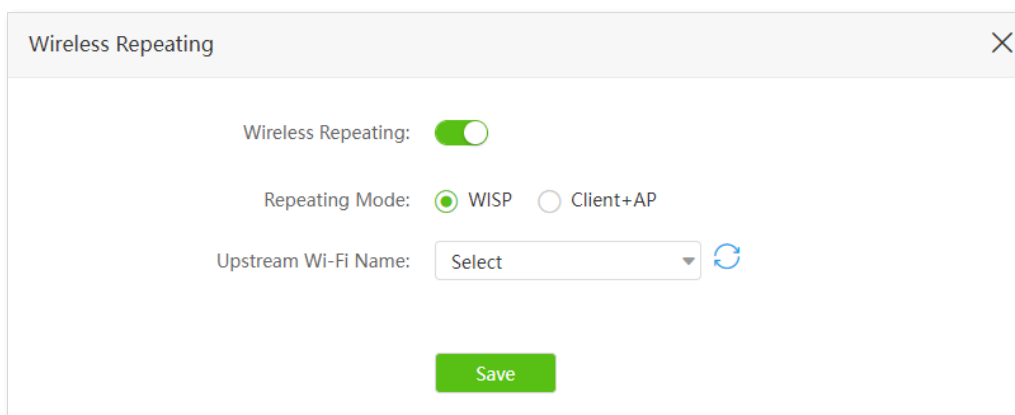
1. Choose **Wi-Fi Settings > Mesh**.
2. Disable **Mesh**, and click **Save**.



The screenshot shows a window titled "Mesh" with a close button (X) in the top right corner. Inside the window, the text "Mesh:" is followed by a toggle switch that is currently turned off. Below this, there is a descriptive text: "Primary node: connected to the internet through 5G cellular or wired connection and worked as the Mesh network provider". At the bottom of the window is a green "Save" button.

- Step 6 Set the new router to WISP mode.

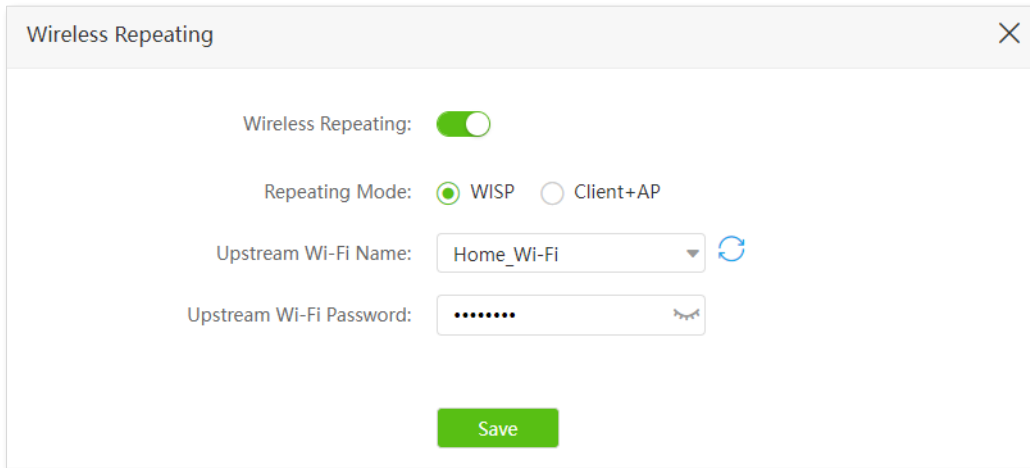
1. Choose **Wi-Fi Settings > Wireless Repeating**.
2. Enable **Wireless Repeating**, and select **WISP**.
3. Click **Select** to select an existing Wi-Fi network, which is **Home_Wi-Fi** in this example.



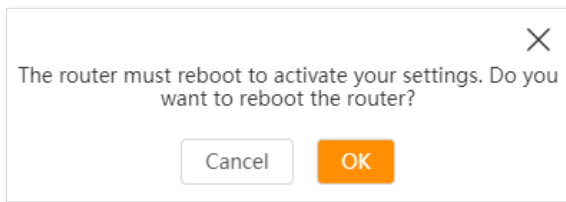
The screenshot shows a window titled "Wireless Repeating" with a close button (X) in the top right corner. Inside the window, the text "Wireless Repeating:" is followed by a toggle switch that is turned on. Below this, the text "Repeating Mode:" is followed by two radio button options: "WISP" (which is selected, indicated by a green dot) and "Client+AP" (which is unselected). Below these options is a text input field labeled "Upstream Wi-Fi Name:" with the word "Select" inside and a dropdown arrow on the right. To the right of the input field is a blue circular refresh icon. At the bottom of the window is a green "Save" button.

- Step 7 Enter the **Upstream Wi-Fi Password**, which is **MyHomeWiFi** in this example.

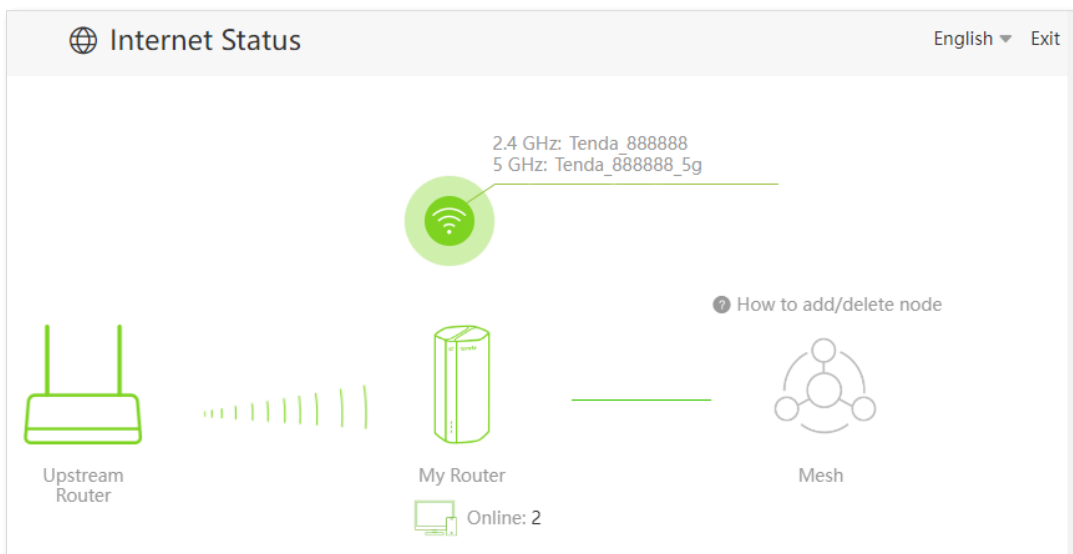
Step 8 Click **Save**.



Step 9 Click **OK**, and wait for the router to reboot.



Step 10 [Log in to the web UI of the new router](#) again, navigate to **Internet Status** to check whether the wireless repeating succeeds.



Step 11 Relocate the new router and power it on by referring to the following suggestions.

- Between the original router and the uncovered area, but within the coverage of the original router.
- Away from the microwave ovens, electromagnetic ovens and refrigerators.
- Above the ground with few obstacles.



Do not connect any device to the WAN port of the new router after setting the router to WISP mode.

---End

To access the internet, connect your computer to a LAN port of the new router, or connect your smartphone to the Wi-Fi network of the new router.

You can find the Wi-Fi name and password on the **Wi-Fi Settings > Wi-Fi Name & Password** page. If the network is not encrypted, you can also set a Wi-Fi password on this page for security.

Wi-Fi Name & Password

Unify 2.4 GHz & 5 GHz:

Enable Wi-Fi network:

Wi-Fi Name: Hide

Encryption Mode:

Please ensure that connected clients support the WPA3-SAE mode. If you encounter any connection issue, WPA2-PSK is recommended.

Wi-Fi Password:

Save



If you cannot access the internet, try the following solutions:

- Ensure that the existing router is connected to the internet successfully.
- Ensure that your wireless devices are connected to the correct Wi-Fi network of the new router.
- If the computer connected to the router for repeating cannot access the internet, ensure that [the computer is configured to obtain an IP address and DNS sever automatically](#).

Method 2: Set the new router to Client+AP mode

Configuration procedure:

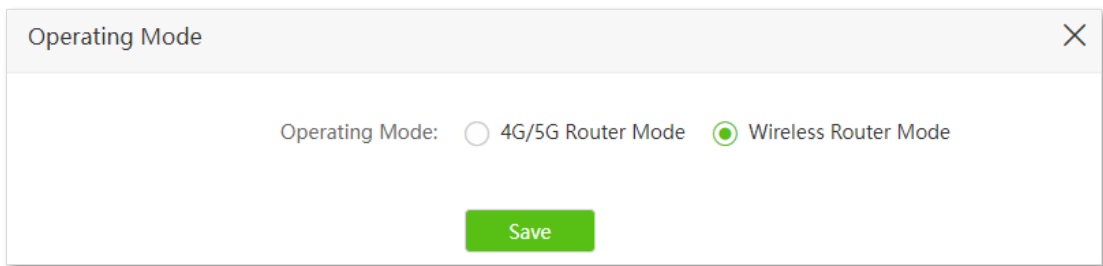
- Step 1** Place the new router near the existing router and power it on.
- Step 2** Connect your wireless device to the Wi-Fi network of your new router, or connect a computer to the LAN port of the new router.



Do not connect any device to the WAN port of the new router.

- Step 3** [Log in to the web UI of the new router](#).
- Step 4** Set the router to wireless router mode.

1. Choose **Advanced Settings > Operating Mode**.
2. Select **Wireless Router Mode**, and click **Save**.



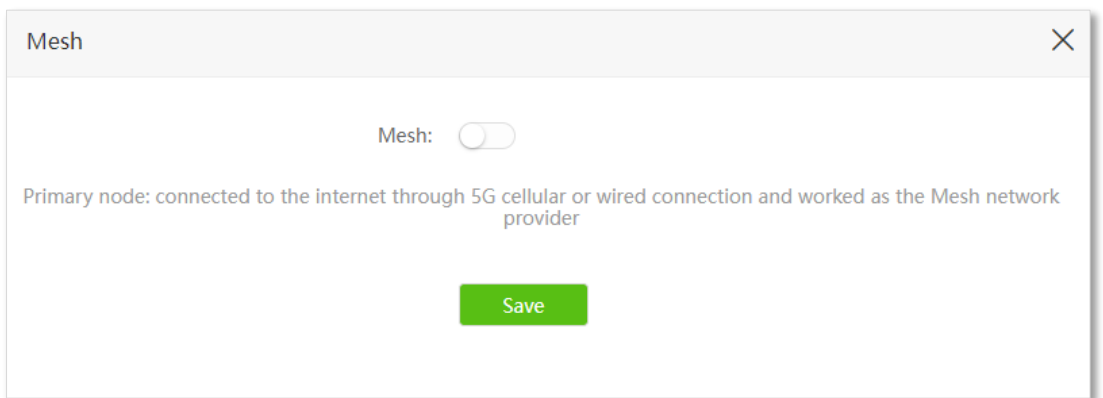
The screenshot shows a window titled "Operating Mode" with a close button (X) in the top right corner. Inside the window, there is a label "Operating Mode:" followed by two radio button options: "4G/5G Router Mode" (which is unselected) and "Wireless Router Mode" (which is selected, indicated by a green dot). Below these options is a green "Save" button.

Step 5 Disable the Mesh function.



If you have disabled the Mesh function before, skip to **Step 6** to proceed with the configuration.

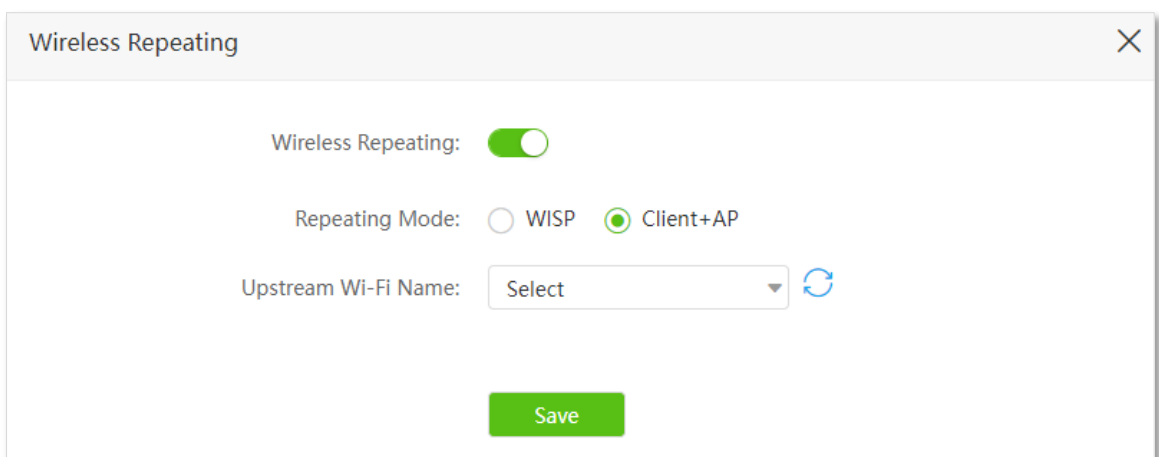
1. Choose **Wi-Fi Settings > Mesh**.
2. Disable **Mesh**, and click **Save**.



The screenshot shows a window titled "Mesh" with a close button (X) in the top right corner. Inside the window, there is a label "Mesh:" followed by a toggle switch that is currently turned off. Below this is a line of text: "Primary node: connected to the internet through 5G cellular or wired connection and worked as the Mesh network provider". At the bottom of the window is a green "Save" button.

Step 6 Set the new router to **Client+AP** mode.

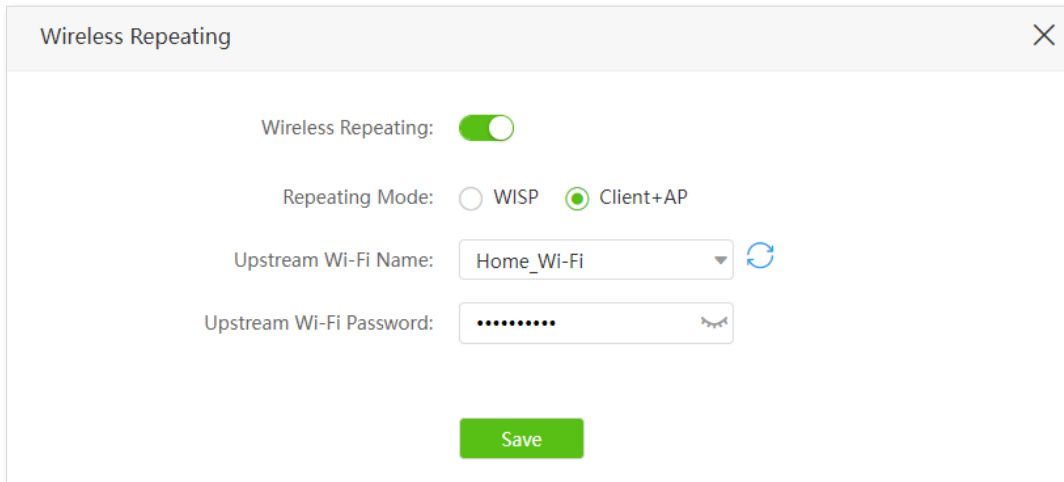
1. Choose **Wi-Fi Settings > Wireless Repeating**.
2. Enable **Wireless Repeating**, and choose **Client+AP**.
3. Click **Select** to select the existing Wi-Fi network, which is **Home_Wi-Fi** in this example.



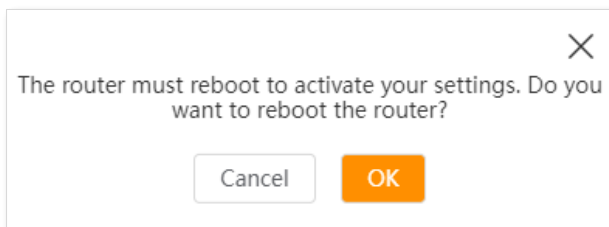
The screenshot shows a window titled "Wireless Repeating" with a close button (X) in the top right corner. Inside the window, there is a label "Wireless Repeating:" followed by a toggle switch that is turned on. Below this is a label "Repeating Mode:" followed by two radio button options: "WISP" (unselected) and "Client+AP" (selected, indicated by a green dot). Below these options is a label "Upstream Wi-Fi Name:" followed by a dropdown menu showing "Select" and a refresh icon. At the bottom of the window is a green "Save" button.

Step 7 Enter the **Upstream Wi-Fi Password**, which is **MyHomeWiFi** in this example.

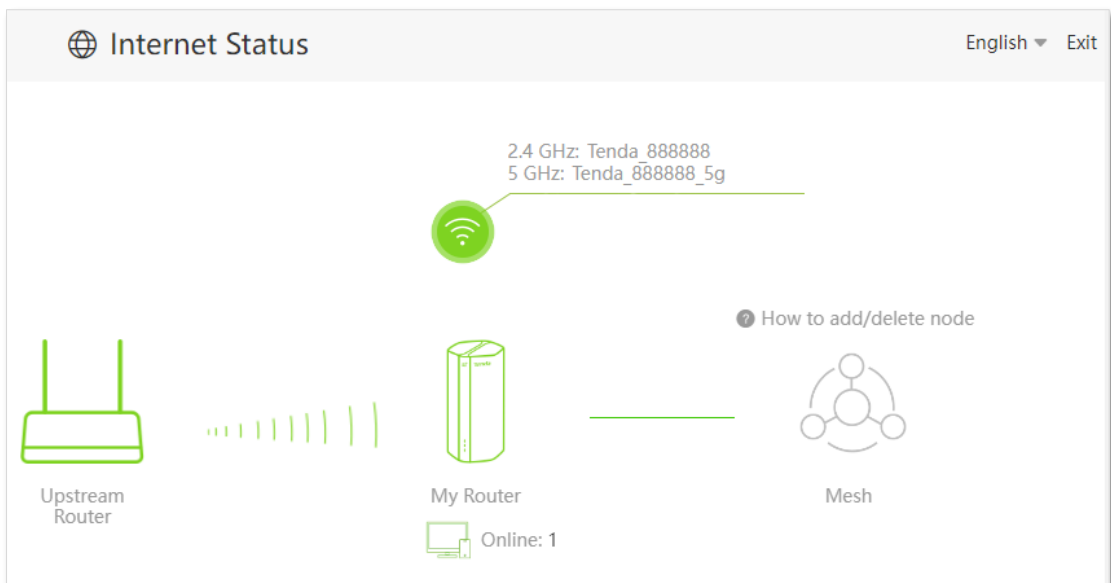
Step 8 Click **Save**.



Step 9 Click **OK**, and wait for the router to reboot.



Step 10 Log in to the web UI of the router again, navigate to **Internet Status** to check whether the wireless repeating succeeds.



Step 11 Relocate the new router and power it on by referring to the following suggestions.

- Between the original router and the uncovered area, but within the coverage of the original router.
- Away from the microwave ovens, electromagnetic ovens and refrigerators.
- Above the ground with few obstacles.



After the new router is set to Client+AP mode:

- Do not connect any device to the WAN port of the new router.
- The LAN IP address of the router will change. Please log in to the web UI of the router by visiting **tendawifi.com**. If there is another network device with the same login domain name (tendawifi.com) with the router, log in to the upstream router and find the IP address obtained by the new router in the client list. Then you can log in to the web UI of the router by visiting the IP address.

---End

To access the internet, connect your computer to the LAN port of the new router, or connect your smartphone to the Wi-Fi network of the new router.

You can find the Wi-Fi name and password on the **Wi-Fi Settings > Wi-Fi Name & Password** page. If the network is not encrypted, you can also set a Wi-Fi password on this page for security.

Wi-Fi Name & Password

Unify 2.4 GHz & 5 GHz:

Enable Wi-Fi network:

Wi-Fi Name: Hide

Encryption Mode: ▼

Please ensure that connected clients support the WPA3-SAE mode. If you encounter any connection issue, WPA2-PSK is recommended.

Wi-Fi Password:

Save



If you cannot access the internet, try the following solutions:

- Ensure that the existing router is connected to the internet successfully.
- Ensure that your wireless devices are connected to the correct Wi-Fi network of the new router.
- If the computer connected to the router cannot access the internet, ensure that [the computer is configured to obtain an IP address and DNS sever automatically](#).

6.4 Channel & bandwidth

In this module, you are allowed to change network mode, wireless channel, and wireless bandwidth of 2.4 GHz and 5 GHz Wi-Fi networks.

To access the configuration page, [log in to the web UI of the router](#), and choose **Wi-Fi Settings > Channel & Bandwidth**.



To guarantee the wireless performance, it is recommended to maintain the default settings on this page without professional instructions.

Channel & Bandwidth ✕

2.4 GHz Network

Network Mode:

Channel:

Bandwidth:

5 GHz Network

Network Mode:

Channel:

Bandwidth:

Parameter description

Parameter	Description
Network Mode	<p>It specifies various protocols adopted for wireless transmission.</p> <p>2.4 GHz Wi-Fi network supports 11b/g mixed, 11b/g/n and 11b/g/n/ax mixed modes.</p> <ul style="list-style-type: none">• 11b/g mixed: It indicates that devices compliant with IEEE 802.11b or IEEE 802.11g protocol can connect to the 2.4 GHz Wi-Fi network of the router.• 11b/g/n mixed: It indicates that all devices can connect to the router if they are compliant with IEEE 802.11b or IEEE 802.11g protocol, or work at 2.4 GHz with IEEE 802.11n protocol.• 11b/g/n/ax mixed: It indicates that devices compliant with the IEEE 802.11b or IEEE 802.11g protocol, and devices working at 2.4 GHz and compliant with the IEEE 802.11n or IEEE 802.11ax protocol can connect to the 2.4 GHz Wi-Fi network of the router. <p>5 GHz Wi-Fi network supports 11a/n/ac mixed and 11a/n/ac/ax mixed modes.</p> <ul style="list-style-type: none">• 11a/n/ac mixed: It indicates that all devices that are compliant with IEEE 802.11a or IEEE 802.11ac protocol, or work at 5 GHz with IEEE 802.11n protocol can connect to the router.• 11a/n/ac/ax mixed: It indicates that devices compliant with the IEEE 802.11a or IEEE 802.11ac protocol, and devices working at 5 GHz and compliant with the IEEE 802.11n or IEEE 802.11ax protocol can connect to the router.
Channel	<p>It specifies the channel in which the Wi-Fi network works.</p> <p>By default, the wireless channel is Auto, which indicates that the router selects a channel for the Wi-Fi network automatically. You are recommended to choose a channel with less interference for better wireless transmission efficiency. You can use a third-party tool to scan the Wi-Fi signals nearby to understand the channel usage situations.</p>
Bandwidth	<p>It specifies the bandwidth of the wireless channel of a Wi-Fi network. Please change the default settings only when necessary.</p> <ul style="list-style-type: none">• 20: It indicates that the channel bandwidth used by the router is 20 MHz.• 40: It indicates that the channel bandwidth used by the router is 40 MHz.• 20/40: It specifies that a router can switch its channel bandwidth between 20 MHz and 40 MHz based on the ambient environment. This option is available only at 2.4 GHz.• 80: It indicates that the channel bandwidth used by the router is 80 MHz. This option is available only at 5 GHz.• 20/40/80: It specifies that a router can switch its channel bandwidth among 20 MHz, 40 MHz, and 80 MHz based on the ambient environment. This option is available only at 5 GHz.

6.5 Transmit power


In this module, you can adjust the wall-penetration capability and wireless coverage of the router by setting the transmit power.

To access the configuration page, [log in to the web UI of the router](#), and choose **Wi-Fi Settings > Transmit Power**.

Transmit Power ✕

2.4 GHz Network:

5 GHz Network:

Parameter	Description
Signal Strength	<p>It specifies the mode of signal strength. The default mode is High.</p> <ul style="list-style-type: none">• High: It is typically used to meet wireless coverage requirements in large or multi-barrier environments.• Medium: It is typically used to meet wireless coverage requirements in medium-area or less-obstacle environments.• Low: It is typically used to meet wireless coverage requirements in small area or barrier-free environments. <p> TIP</p> <p>It is recommended to select the Low mode if the network experience is satisfactory enough under this mode.</p>

6.6 WPS

6.6.1 Overview

The WPS function enables wireless devices, such as smartphones, to connect to Wi-Fi networks of the router quickly and easily.


To access the configuration page, [log in to the web UI of the router](#), and choose **Wi-Fi Settings > WPS**.

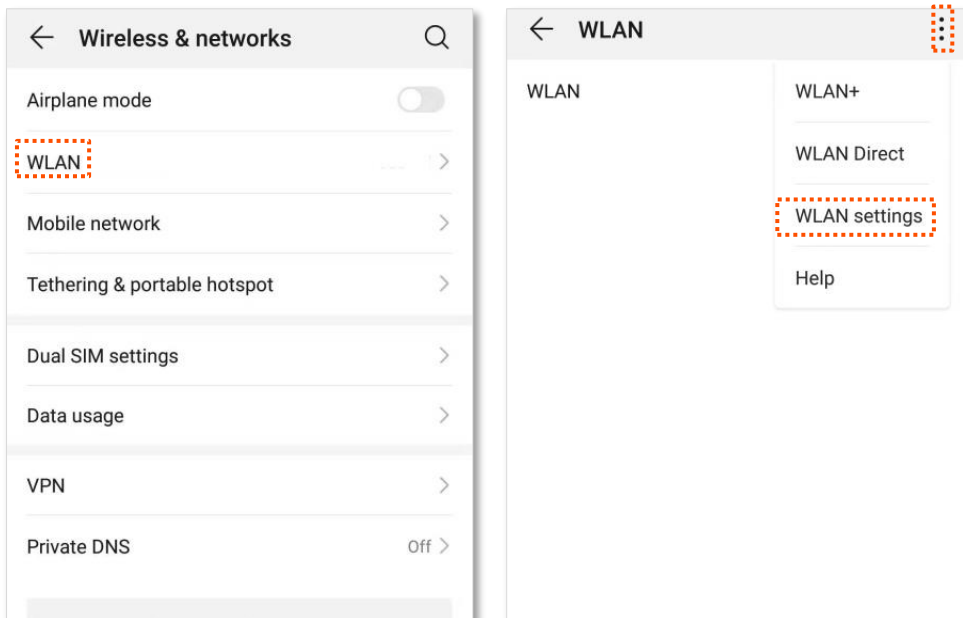


This function is only applicable to WPS-enabled wireless devices.

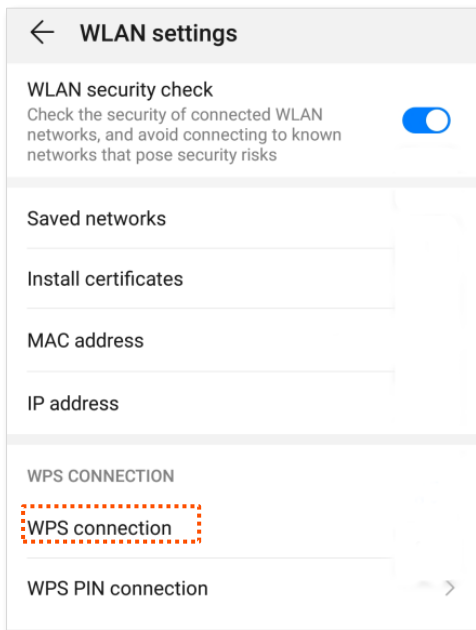
6.6.2 Connect devices to the Wi-Fi network using the WPS button

Configuration procedure:

- Step 1** Find the **MESH** button at the back of the router, and hold it down for 1 to 3 seconds. The Wi-Fi indicator blinks fast.
- Step 2** Configure the WPS function on your wireless devices **within 2 minutes**. Configurations on various devices may differ (Example: HUAWEI P10).
 1. Find **WLAN** settings on the phone.
 2. Tap , and choose **WLAN settings**.

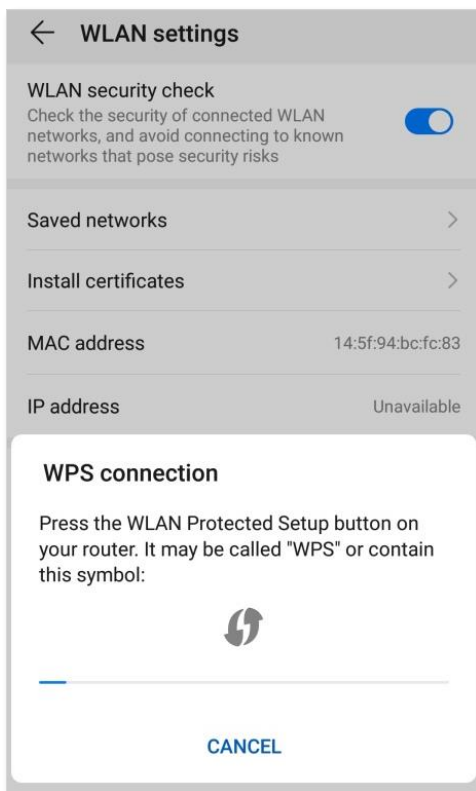


3. Choose **WPS connection**.



---End

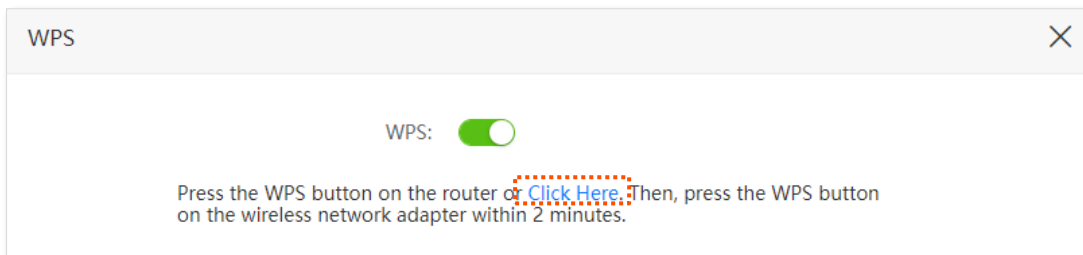
Wait a moment until the WPS negotiation is completed, and the phone is connected to the Wi-Fi network.




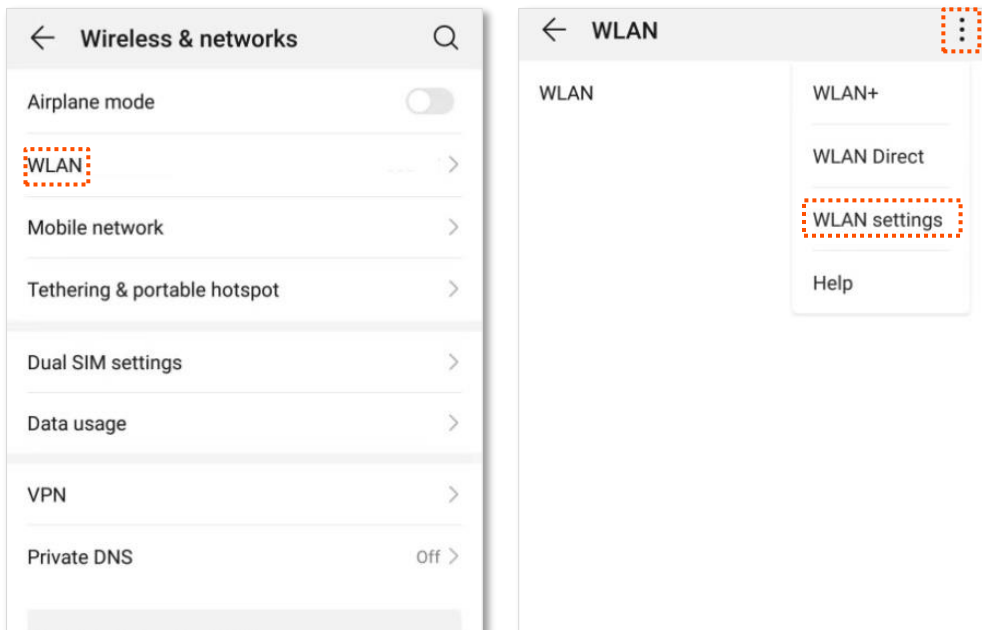
6.6.3 Connect devices to the Wi-Fi network through the web UI of the router

Configuration procedure:

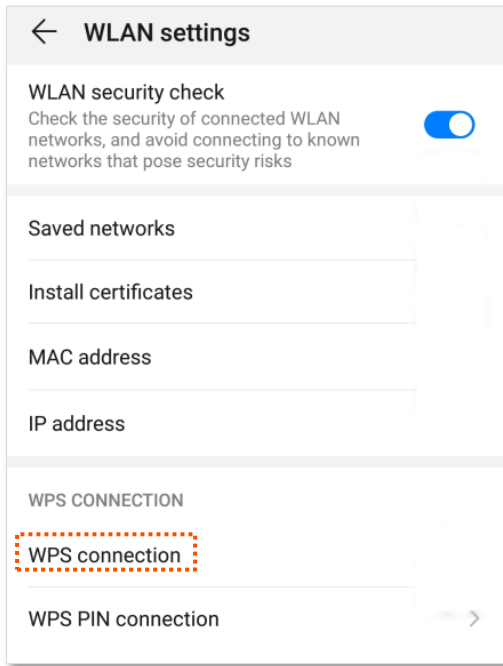
- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Wi-Fi Settings > WPS**.
- Step 3** Click [Click Here](#).



- Step 4** Configure the WPS function on your wireless devices **within 2 minutes**. Configurations on various devices may differ (Example: HUAWEI P10).
 1. Find **WLAN** settings on the phone.
 2. Tap , and choose **WLAN settings**.

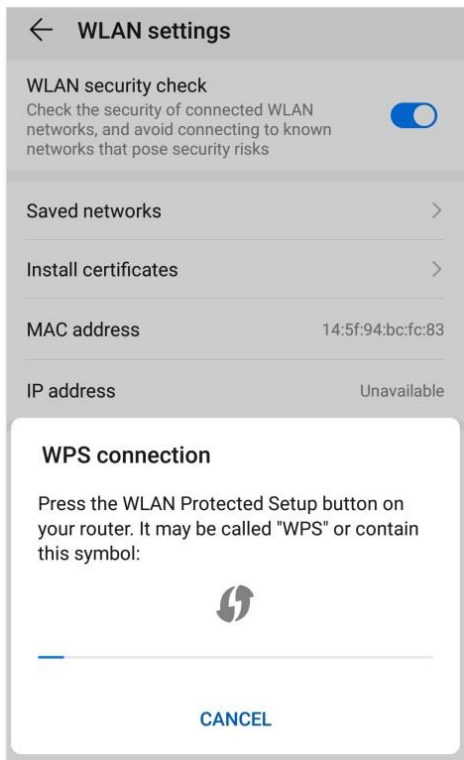


3. Choose **WPS connection**.



---End

Wait a moment until the WPS negotiation is completed, and the phone is connected to the Wi-Fi network.



6.7 AP mode



This function is only available under the wireless router mode. Refer to [Operating mode](#) to set the operating mode of the router.

When you have a smart home gateway which only provides wired internet access, you can set the router to work in AP mode to provide wireless coverage.



When the router is set to AP mode:

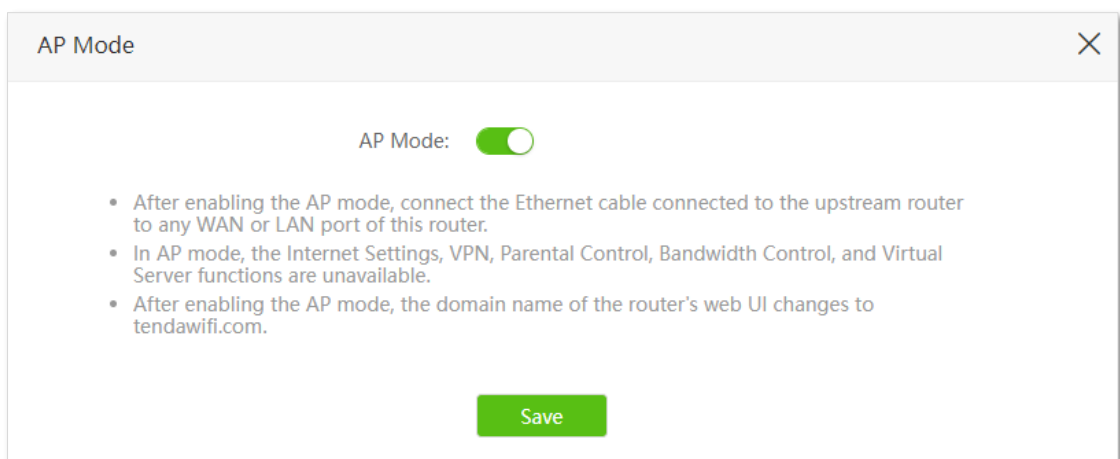
- Every physical port can be used as a LAN port.
- The LAN IP address of the router will be changed. Please log in to web UI of the router by visiting **tendawifi.com**.
- Functions, such as bandwidth control and virtual server, will be unavailable. Refer to the web UI for available functions.

Configuration procedure:

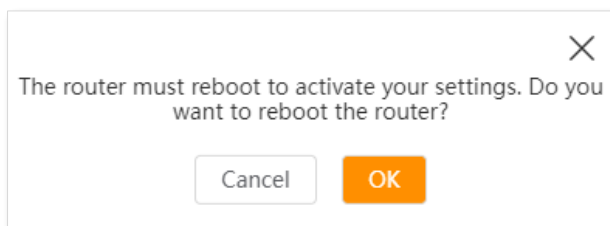
Step 1 [Log in to the web UI of the router.](#)

Step 2 Set the router to AP mode.

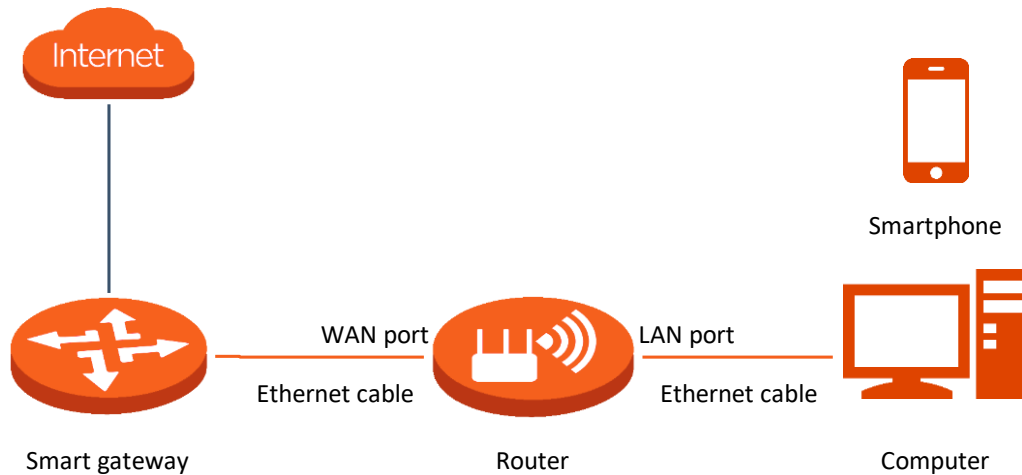
1. Navigate to **Wi-Fi Settings > AP Mode**.
2. Enable **AP Mode**.
3. Click **Save**.



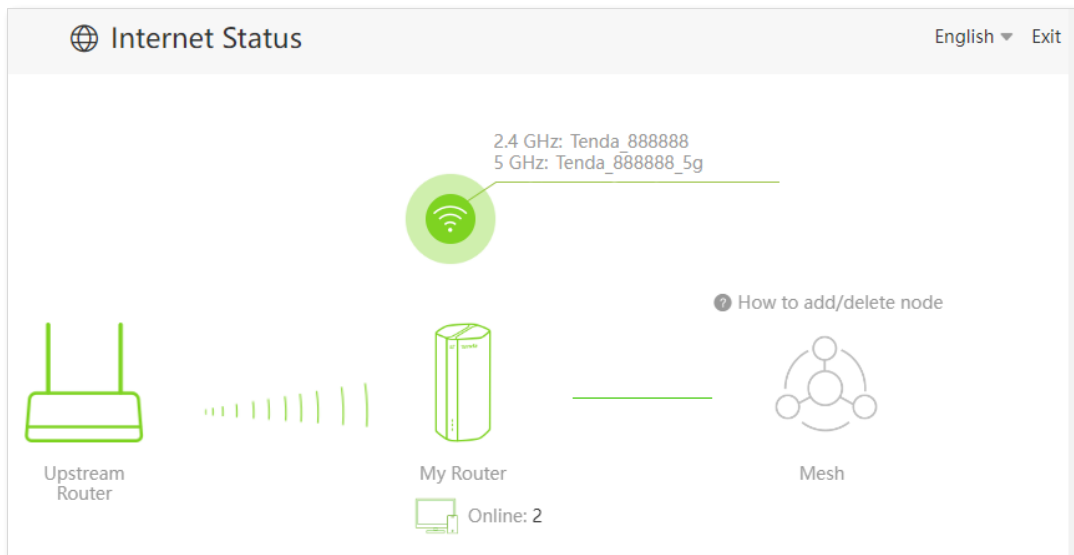
Step 3 Click **OK**, and wait for the router to reboot.



Step 4 Connect the upstream device, such as a gateway, to any port of the router.



Step 5 [Log in to the web UI of the router](#) again, and navigate to **Internet Status** to check if the AP mode is configured successfully.



NOTE

If there is another network device with the same login domain name (tendawifi.com) with the router, log in to the upstream router and find the IP address obtained by the new router in the client list. Then you can log in to the web UI of the router by visiting the IP address.

---End

To access the internet, connect your computer to physical port, or connect your smartphone to the Wi-Fi network.

You can find the Wi-Fi name and password on the **Wi-Fi Settings > Wi-Fi Name & Password** page. If the network is not encrypted, you can also set a Wi-Fi password on this page for security.

Wi-Fi Name & Password ✕

Unify 2.4 GHz & 5 GHz:

Enable Wi-Fi network:

Wi-Fi Name: Hide

Encryption Mode: ▼

Please ensure that connected clients support the WPA3-SAE mode.
If you encounter any connection issue, WPA2-PSK is recommended.

Wi-Fi Password:



If you cannot access the internet, try the following solutions:

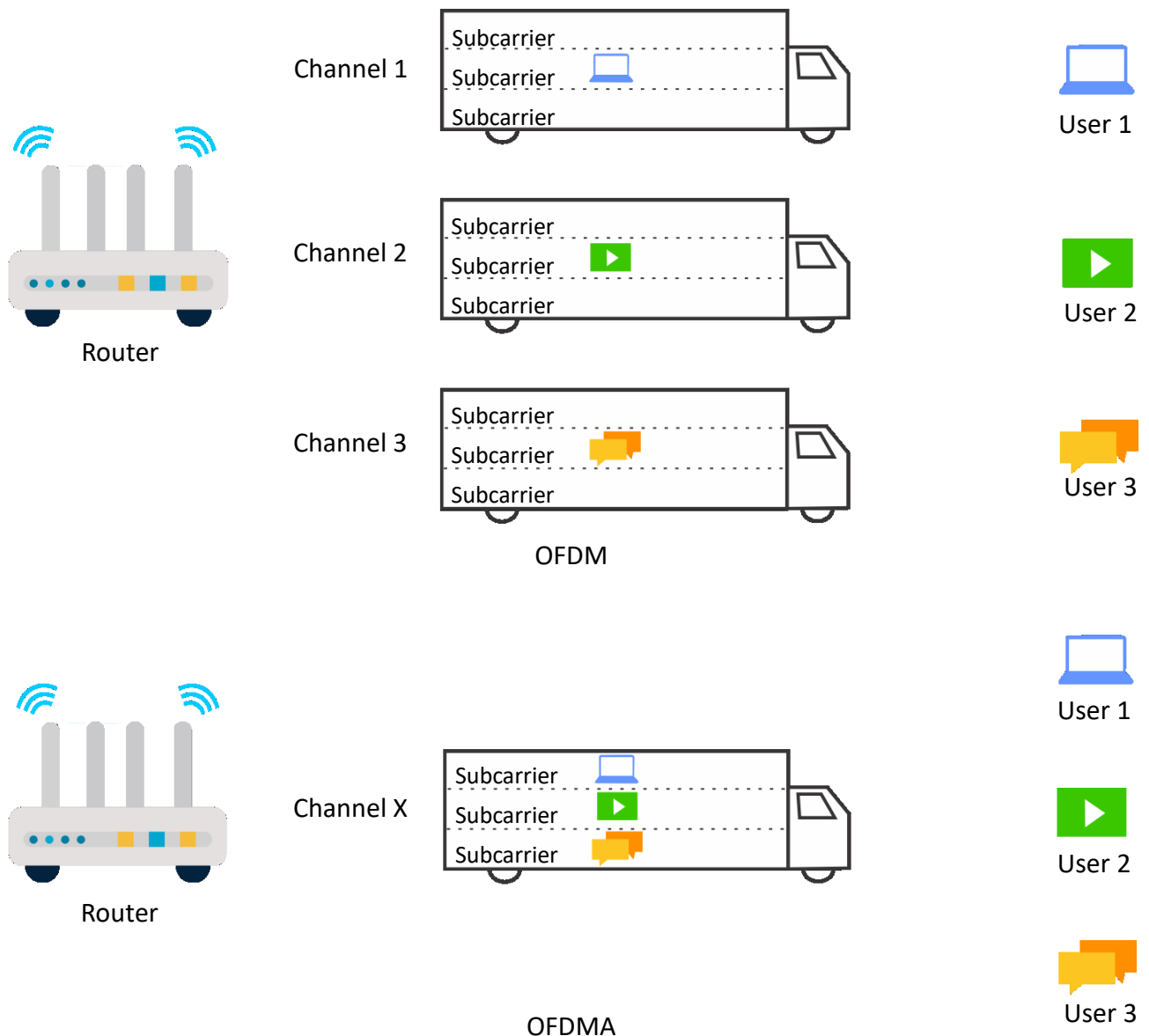
- Ensure that the existing router is connected to the internet successfully.
 - Ensure that your wireless devices are connected to the correct Wi-Fi network of the new router.
 - If the computer connected to the router cannot access the internet, ensure that [the computer is configured to obtain an IP address and DNS sever automatically](#).
-

6.8 OFDMA

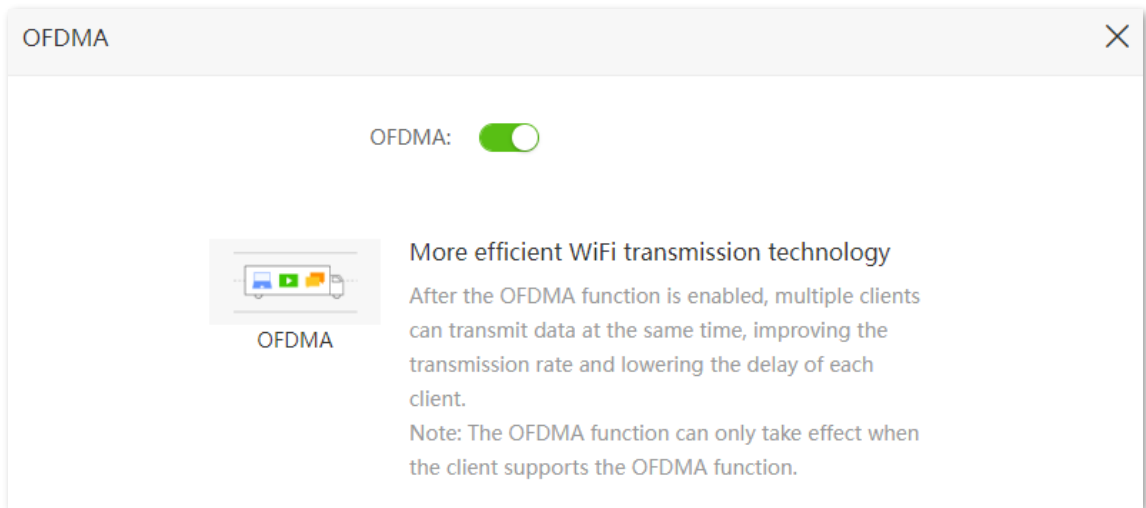
In telecommunications, Orthogonal Frequency-division Multiplexing (OFDM) is a type of digital transmission and a method of encoding digital data on multiple carrier frequencies. OFDM divides a channel into subcarriers, but only a single user can transmit on all of the sub-carriers at any given time.

Orthogonal Frequency-division Multiple Access (OFDMA) is a multi-user version of the popular OFDM digital modulation scheme. It also divides a channel into subcarriers which is further divided into subsets, called Resource Units (RUs). These RUs can be assigned to multiple users, therefore allowing simultaneous low-data-rate transmission from several users.

The mechanisms of OFDM and OFDMA are illustrated as below respectively.



To access the configuration page, [log in to the web UI of the router](#), and choose **Wi-Fi Settings** > **OFDMA**. This function is enabled by default.



6.9 MESH

You can use the **MESH** button to network the router with devices that support the EASYMESH R2 protocol. On this page, you can enable or disable the Mesh function of the **MESH** button as required. By default, it is enabled.



TIP

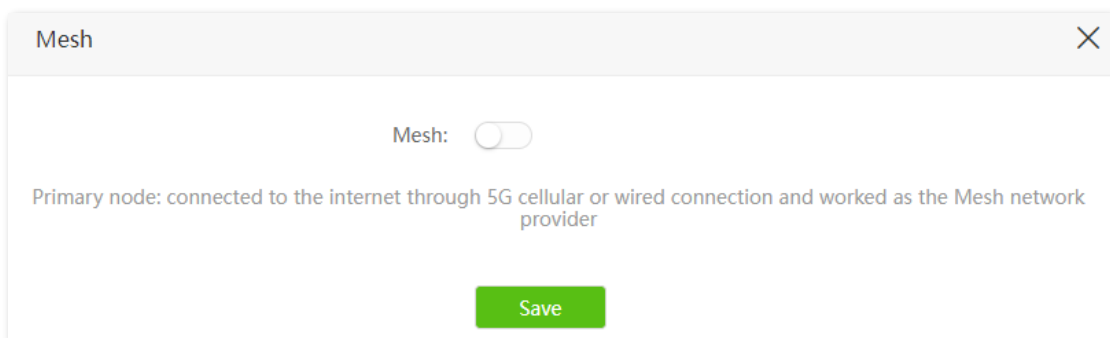
- For information security, do not toggle on **Mesh** when using the router in public areas.
- With this function disabled, you cannot form a network by using the **MESH** button on the device.
- After Mesh networking is enabled, the wireless encryption mode will be changed to WPA2-PSK.

To enable or disable the Mesh function of the **MESH** button:

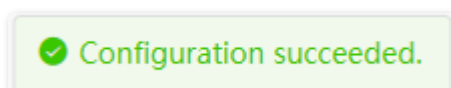
Step 1 [Log in to the web UI of the router.](#)

Step 2 Choose **Wi-Fi Settings > Mesh**.

Step 3 Toggle on or off **Mesh**.



The following message is displayed, indicating that the setting is saved successfully.



---End

7

SMS (4G/5G router mode)

This chapter introduces the SMS-related functions, which are only available under the 4G/5G router mode. Refer to [Operating mode](#) to set the operating mode of the router.

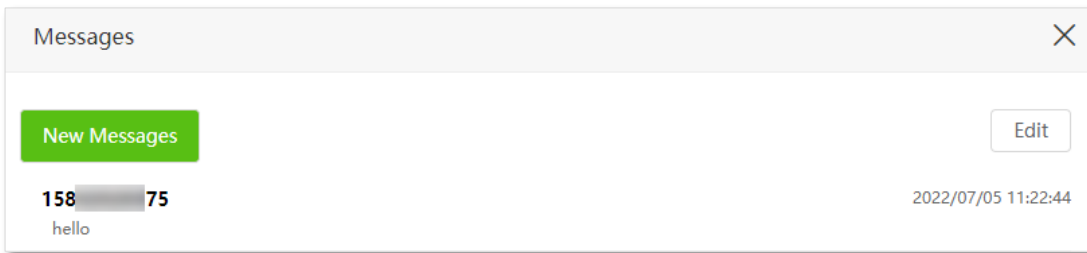
This chapter includes the following sections:

- [Manage SMS messages](#)
- [Set the message center number](#)
- [Inquire information by sending USSD commands](#)

7.1 Manage SMS messages

This router supports sending, receiving and deleting SMS messages in the web UI of the router.

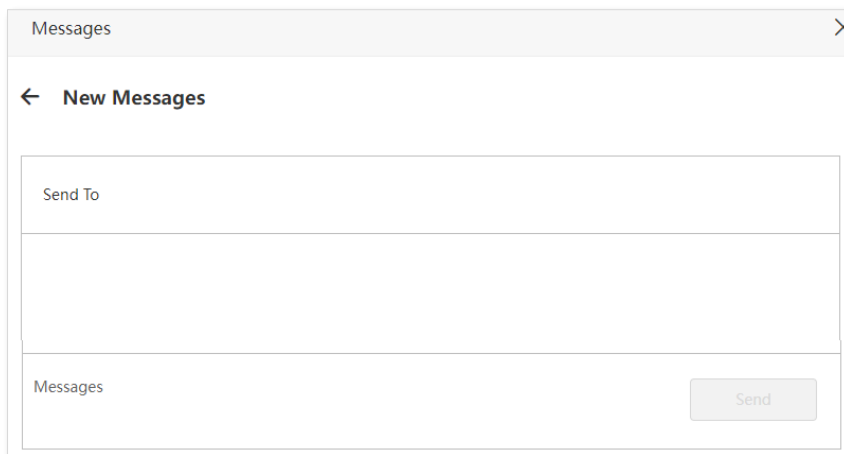
To access the page, [log in to the web UI of the router](#), and choose **SMS > Messages**.



7.1.1 Send SMS messages

Send SMS messages to a new phone number

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **SMS > Messages**.
- Step 3** Click **New Message**.
- Step 4** Enter the phone number in the **Send To** column.
- Step 5** Enter the message content in the **Messages** column at the bottom.



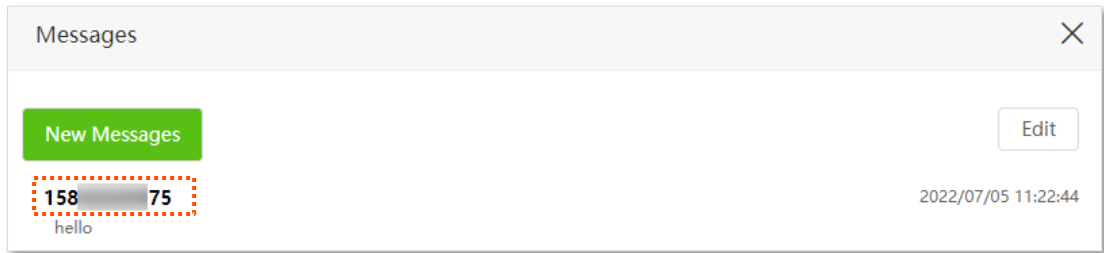
- Step 6** Click **Send** at the bottom right corner.

---End

Send messages to an existing phone number

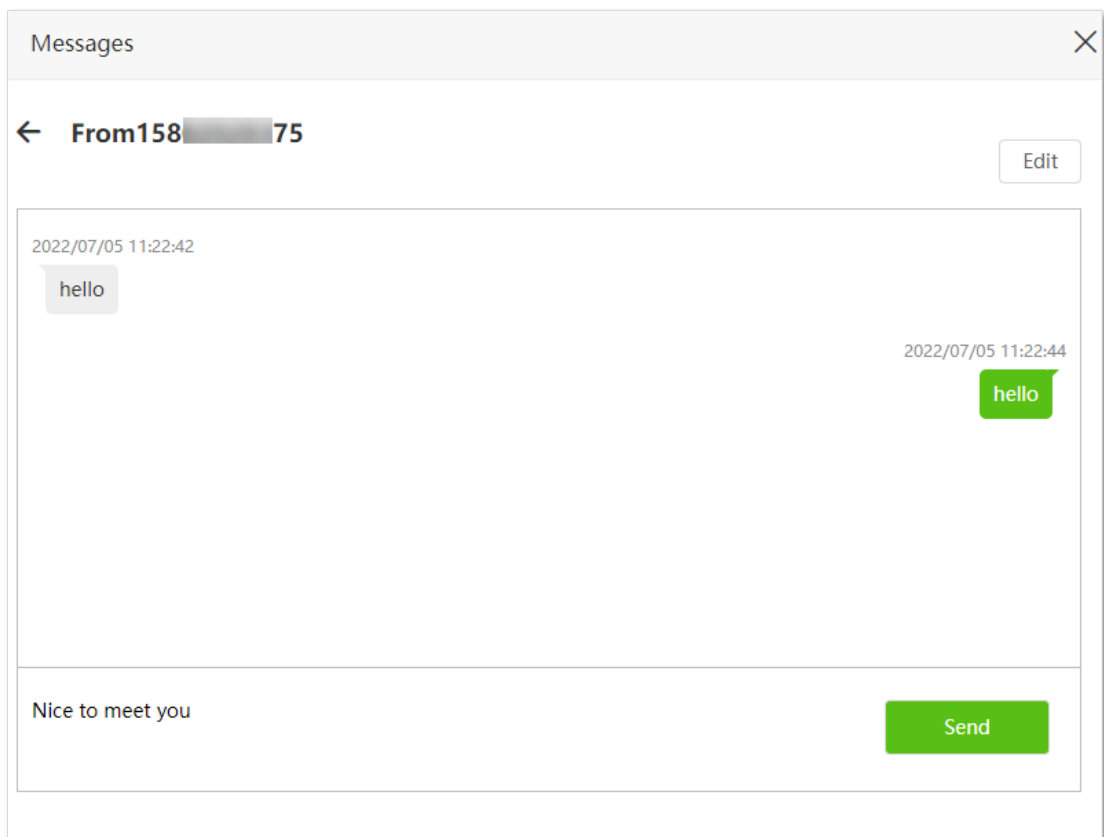
- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **SMS > Messages**.

Step 3 Click the targeted phone number.



Step 4 Enter the message content in the **Messages** column at the bottom.

Step 5 Click **Send**.



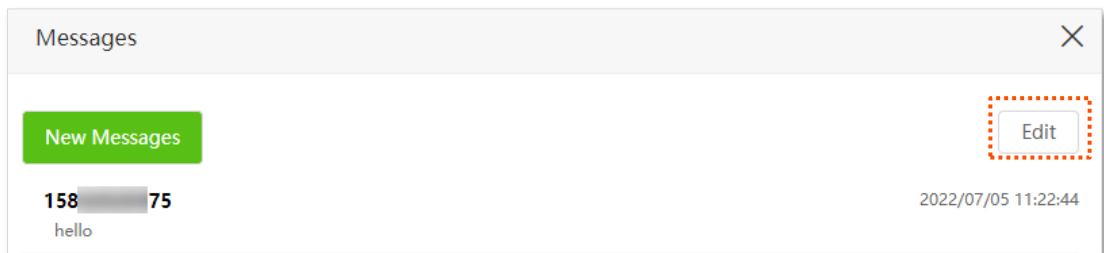
---End


After the messages are sent, you can view them on the same page.

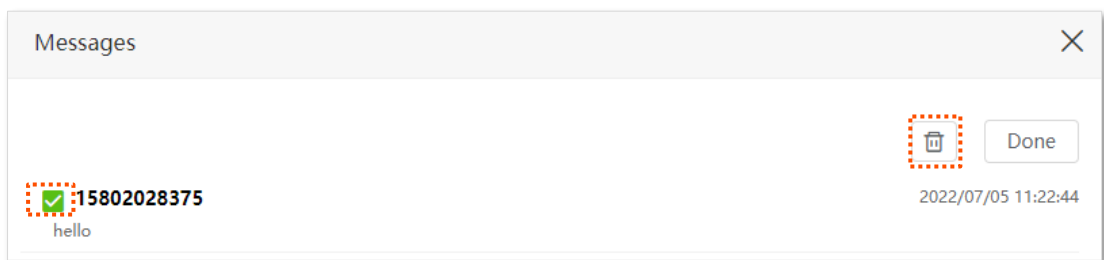
7.1.2 Delete SMS messages

Delete all messages of the same phone numbers

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **SMS > Messages**.
- Step 3** Click **Edit** on the top right corner.



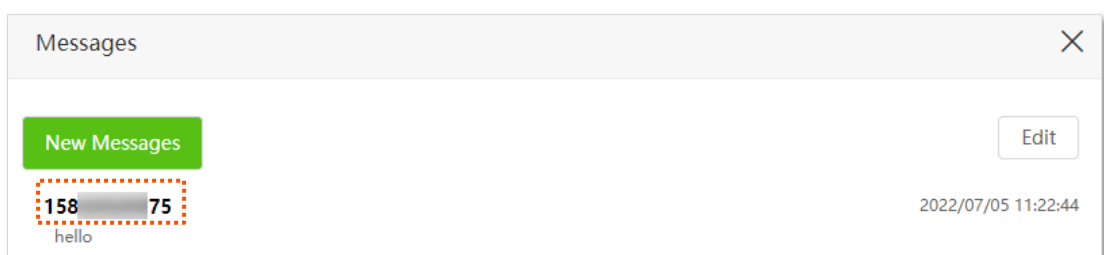
- Step 4** Select one or more phone numbers.
- Step 5** Click  to delete messages of the phone numbers. (You can click **Done** to exit the editing mode).



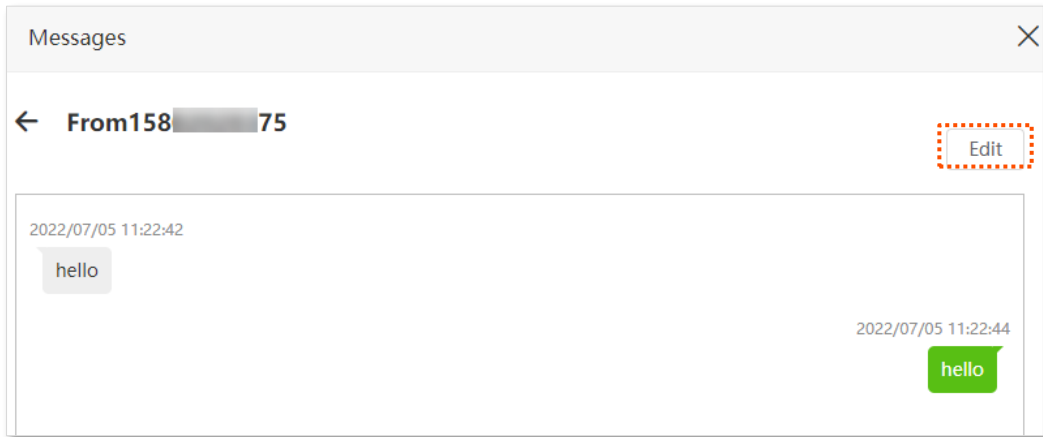
---End

Delete certain messages of the same phone number

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **SMS > Messages**.
- Step 3** Click the targeted phone number.

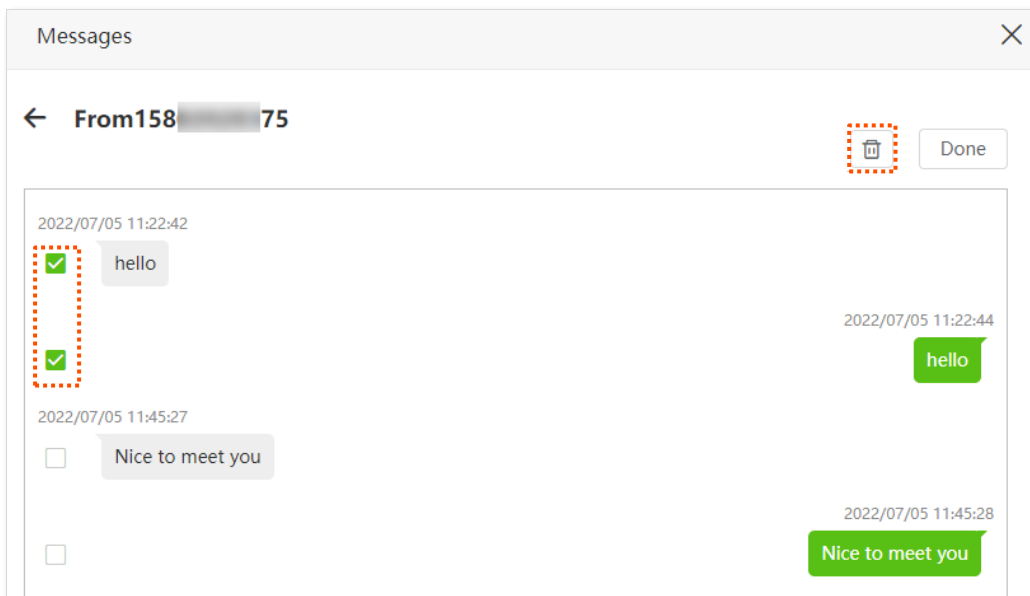


Step 4 Click **Edit**.



Step 5 Select the messages to be deleted.

Step 6 Click  (click **Done** to exit the editing mode).



---End

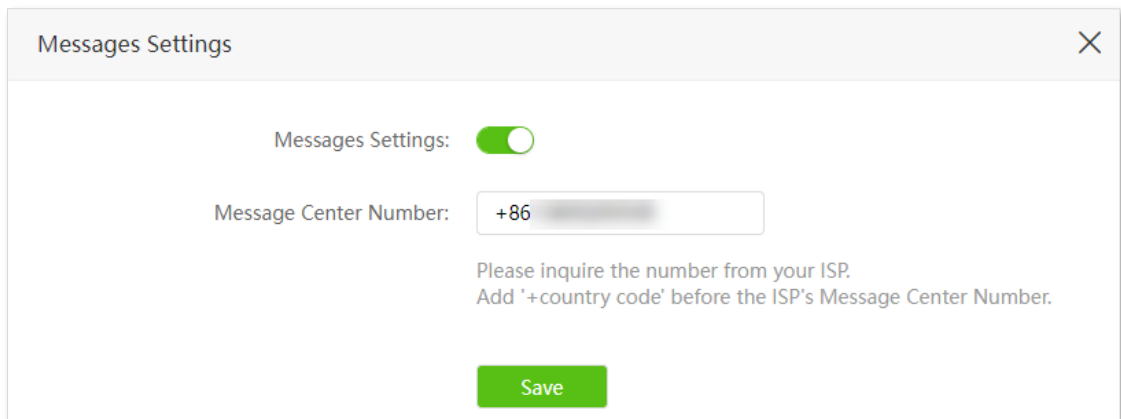
7.2 Set the message center number

Message center is the short message server for SMS messages. You will fail to send SMS messages with a wrong message center number.

The router can automatically detect the message center number after you insert a SIM card. If you have problems in sending SMS messages, you are recommended to inquire your ISP for the message center number and change it in the web UI of the router if it is wrong.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **SMS > Message Center**.
- Step 3** Enable **Messages Settings**.
- Step 4** Enter the correct **Message Center Number**.
- Step 5** Click **Save**.



Messages Settings

Messages Settings:

Message Center Number:

Please inquire the number from your ISP.
Add '+country code' before the ISP's Message Center Number.

Save

---End



Contact your ISP for correct message center number.

7.3 Inquire information by sending USSD commands

With **USSD** function, you can inquire specific information or perform specific operations by sending a special code or command to your ISP.



Such codes or commands are predetermined. You can contact your ISP to find those codes or commands.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **SMS > USSD**.
- Step 3** Enter a **USSD CMD**, such as ***108#**.
- Step 4** Click **Send**.

A screenshot of a web browser window titled "USSD" with a close button in the top right corner. The interface contains two main sections. The first section is labeled "USSD CMD:" and features a text input field containing the value "*108#" and a green "Send" button to its right. The second section is labeled "USSD Read:" and contains a large, empty rectangular box, likely intended for displaying the response from the USSD command.

---End

Wait a moment, you will get the desired information you want in the **USSD Read** box.

8

Guest network

This chapter introduces how to configure the guest network to ensure the security and bandwidth of your main network.

This chapter includes the following sections:

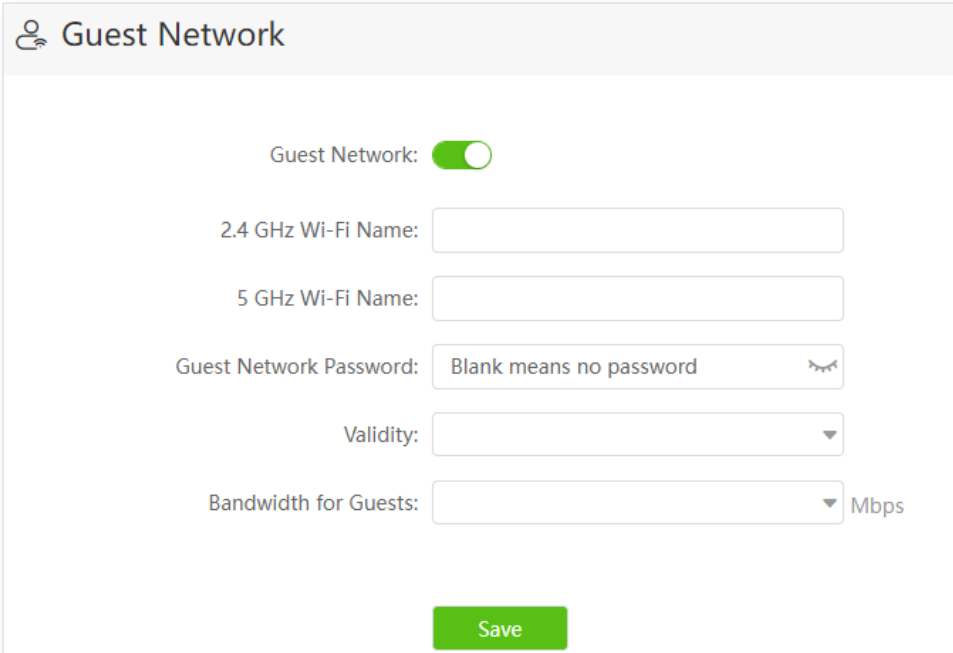
- [Overview](#)
- [Example of configuring the guest network](#)

8.1 Overview

In this module, you can enable/disable the guest network function and change the Wi-Fi name and password of the guest network.

A guest network can be set up with a shared bandwidth limit for visitors to access the internet, and isolated from the main network. It protects the security of the main network and ensures the bandwidth of your main network.

To access the configuration page, [log in to the web UI of the router](#) and navigate to **Guest Network**. This function is disabled by default.



Guest Network

Guest Network:

2.4 GHz Wi-Fi Name:

5 GHz Wi-Fi Name:

Guest Network Password:

Validity:

Bandwidth for Guests: Mbps

Save

Parameter description

Parameter	Description
Guest Network	It is used to enable or disable the guest network function.
2.4 GHz Wi-Fi Name	They specify the Wi-Fi names of the router's guest networks.
5 GHz Wi-Fi Name	To distinguish the guest network from the main network, you are recommended to set different Wi-Fi network names.
Guest Network Password	It specifies the password for the router's two guest networks.
Validity	It specifies the validity of the guest networks. The guest network function will be disabled automatically out of the validity period.
Bandwidth for Guests	It specifies the maximum upload and download speed for all devices connected to the guest networks.

8.2 Example of configuring the guest network

Scenario: A group of friends are going to visit your home and stay for about 8 hours.

Goal: Prevent the use of Wi-Fi network by guests from affecting the network speed of your computer for work purposes.

Solution: You can configure the guest network function and let your guests to use the guest networks.

Assume that the parameters you are going to set for the guest Wi-Fi network:

- Wi-Fi names for 2.4 GHz and 5 GHz networks: John_Doe and John_Doe_5G.
- Wi-Fi password for 2.4 GHz and 5 GHz networks: Example123
- The shared bandwidth for guests: 2 Mbps.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Guest Network**.
- Step 3** Enable **Guest Network**.
- Step 4** Set the **2.4 GHz Wi-Fi Name**, which is **John_Doe** in this example.
- Step 5** Set the **5 GHz Wi-Fi Name**, which is **John_Doe_5G** in this example.
- Step 6** Set the **Guest Network Password**, which is **Example123** in this example.
- Step 7** Select a validity time from the **Validity** drop-down box, which is **8 hours** in this example.
- Step 8** Set the bandwidth in the **Bandwidth for Guests** drop-down box, which is **2** in this example.
- Step 9** Click **Save**.

Guest Network

Guest Network:

2.4 GHz Wi-Fi Name:

5 GHz Wi-Fi Name:

Guest Network Password:

Validity:

Bandwidth for Guests: Mbps

---End

During the 8 hours after the configuration, guests can connect their wireless devices, such as smartphones, to **John_Doe** or **John_Doe_5G** to access the internet and enjoy the shared bandwidth of 2 Mbps.

9

Parental control

This function allows you to configure various parental control rules to control access to certain websites or block certain clients from accessing the internet.

This chapter includes the following sections:

- [Overview](#)
- [Configure the parental control rule](#)
- [Example of adding a parental control rule](#)

9.1 Overview

On the parental control page, you can view the information of online devices and configure their internet access options.



- [The blacklist rules on the MAC filter page](#) prevails when conflicting with parental control rules, while parental control rules prevail when conflicting with [the whitelist rules on the MAC filter page](#).
- A maximum of 30 parental control rules can be added.

To access the configuration page, [log in to the web UI of the router](#), and navigate to the **Parental Control** page.


Device Name	MAC Address	Uptime	Operation
DESKTOP-RGGBS4D 192.168.0.109	6C:4B:90:5F:85:0F	15min 40sec	
Unknown ---	D4:61:DA:1B:CD:89	Offline	

[+New](#)

Parameter description

Parameter	Description
Device Name	It specifies the name of the device.
MAC Address	It specifies the MAC address of the device.
Uptime	It specifies the online duration of the device.
Operation	Click to edit the parental control rule for the device. Click or to disable or enable the parental control rule for the device. Click to delete the parental control rule for the device.
+New	Click +New to add parental control rules for devices that are not connected to the router at the time.

9.2 Configure the parental control rule

Click  or **+New** to edit or add a parental control rule. The **+New** button is used for illustration here.

Parental Control ✕

Device Name:

MAC Address:

Internet Accessible At: ~

Every Day Mon. Tue. Wed. Thur.
 Fri. Sat. Sun.

Website Access Limit:

Access Control Mode: Blacklist Whitelist

Blocked Websites:

Enter website keywords separated by a comma. For example, eHow,google indicates that the eHow and Google websites are inaccessible.

Parameter	Description
Device Name	It specifies the name of the device that the parental control rule applies to. It is optional and can be left blank. If you leave it blank, the device will be named Unknown automatically.
MAC Address	It specifies the MAC address of the device that the parental control rule applies to.
Internet Accessible At	It specifies the period during which the device can access the internet.
Website Access Limit	It is used to enable or disable the website access limit function. When it is enabled, you can add websites to the blacklist or whitelist.
Access Control Mode	When the website access limit function is enabled, there are two access control modes available. <ul style="list-style-type: none">• Blacklist: The device is blocked from accessing the websites specified in the rule during the specified period, but can access other websites. The device cannot access the internet at all out of the specified period.• Whitelist: The device is allowed to access the websites specified in the rule during the specified period, but cannot access other websites. The device cannot access the internet at all out of the specified period.
Blocked Websites	They specify the websites that the device is blocked from accessing or allowed to access during the specified period. They are available only when Website Access Limit is enabled.
Unblocked Websites	


9.3 Example of adding a parental control rule

Scenario: The final exam for your kid is approaching and you want to configure your kid's internet access through the router.

Goal: You kid can only access the internet from 8:00 to 22:00 on weekends but cannot access such websites as Facebook, Twitter, Youtube and Instagram using the computer at home.

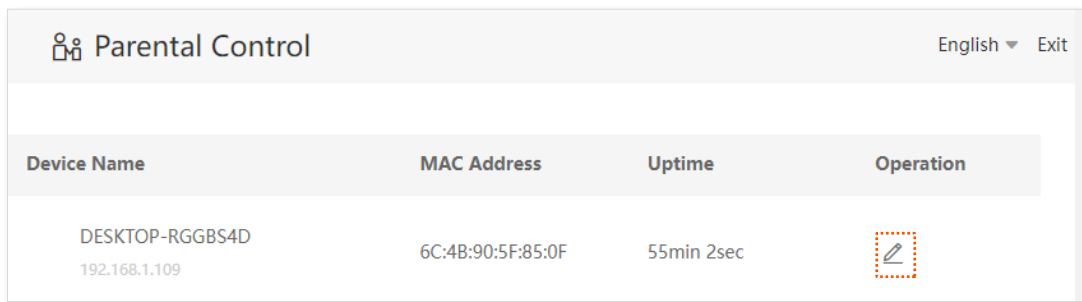
Solution: You can configure the parental control function to reach the goal.


Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Parental Control**.
- Step 3** Select the device to which the rule applies, and click  .



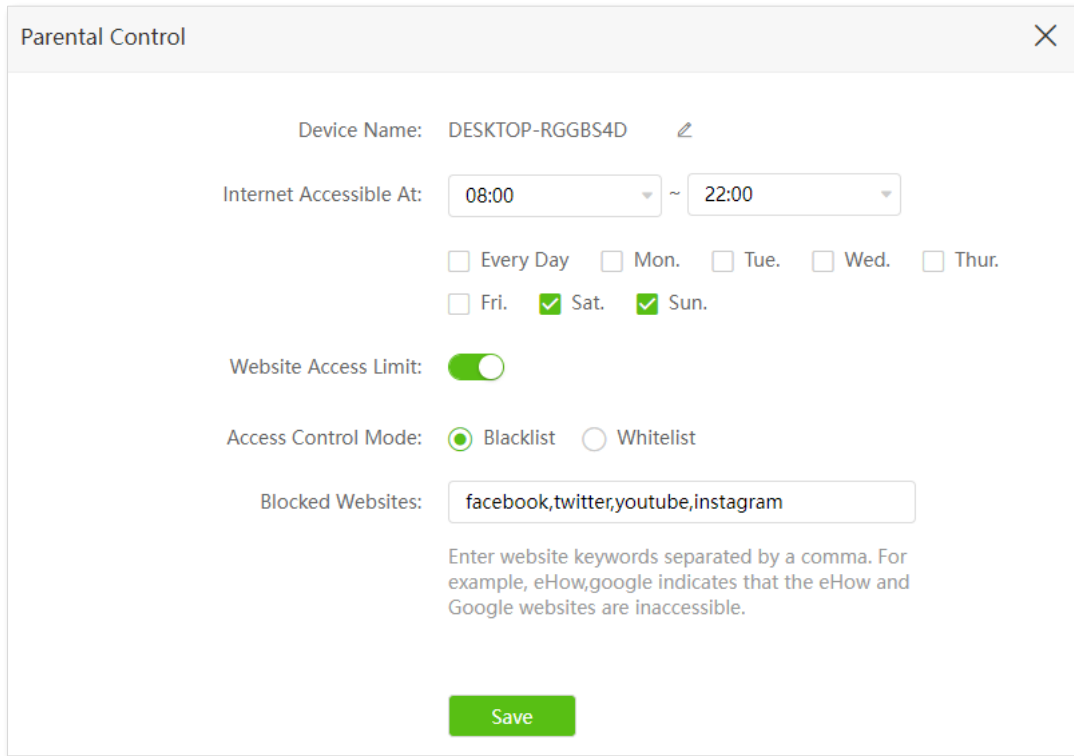
If the device to which the rule applies is not online at the time, you can click **+New** to add a parental control rule for the device.



Device Name	MAC Address	Uptime	Operation
DESKTOP-RGGBS4D 192.168.1.109	6C:4B:90:5F:85:0F	55min 2sec	

- Step 4** Specify the period when the target websites cannot be accessed, which is **8:00 ~ 22:00** in this example.
- Step 5** Choose **Specified Day**, and tick the days when the rule is applied, which are **Sat.** and **Sun.** in this example.
- Step 6** Enable **Website Access Limit**.
- Step 7** Choose **Blacklist**.
- Step 8** Set **Blocked Websites**, which is **facebook,twitter,youtube,Instagram** in this example.

Step 9 Click **Save**.



The screenshot shows a 'Parental Control' window with the following settings:

- Device Name: DESKTOP-RGGBS4D
- Internet Accessible At: 08:00 ~ 22:00
- Days: Every Day, Mon., Tue., Wed., Thur., Fri., Sat., Sun.
- Website Access Limit: (toggle)
- Access Control Mode: Blacklist, Whitelist
- Blocked Websites: facebook,twitter,youtube,instagram

Below the text input, there is a note: "Enter website keywords separated by a comma. For example, eHow,google indicates that the eHow and Google websites are inaccessible."

A green 'Save' button is located at the bottom center of the window.

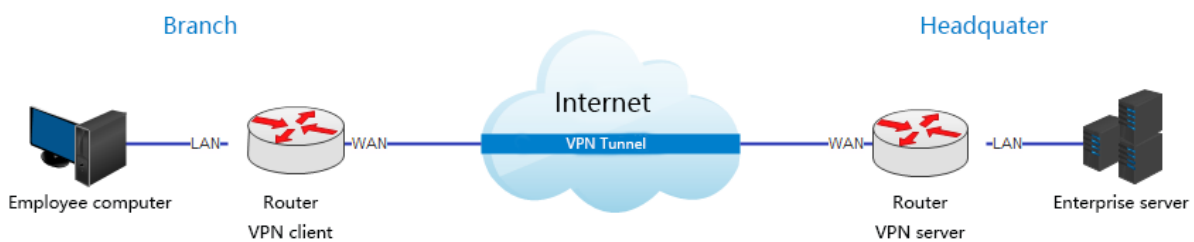
---End

After the configuration is completed, your kid can access any websites except for Facebook, Twitter, Youtube and Instagram from 8:00 to 22:00 on weekends.

10 VPN

A Virtual Private Network (VPN) is a private network built on a public network (usually the Internet). This private network exists only logically and has no actual physical lines. VPN technology is widely used in corporate networks to share resources between corporate branches and headquarters, while ensuring that these resources are not exposed to other users on the internet.

The typology of a VPN network is shown below.



This chapter includes the following sections:

- [PPTP server](#)
- [Online PPTP users](#)
- [PPTP/L2TP client](#)

10.1 PPTP server

10.1.1 Overview

This series of routers can function as a PPTP server and accept connections from a maximum of eight PPTP clients.

To access the configuration page, [log in to the web UI of the router](#) and choose **VPN > PPTP Server**. This function is disabled by default. When it is enabled, the page is shown as below.

PPTP Server

PPTP Server:





IP Address Pool: ~ 10.0.0.

MPPE Encryption:

User Name	Password	Connection Status	Operation
<input type="text"/>	<input type="text"/>	--	<input type="button" value="+ Add"/>

Parameter description

Parameter	Description
PPTP Server	It is used to enable or disabled the PPTP server. When it is enabled, the router functions as a PPTP server, which can accept the connections from PPTP clients.
IP Address Pool	It specifies the range of IP address within which the PPTP server can assign to PPTP clients. The default settings is recommended.
MPPE Encryption	It is used to enable or disable 128-bit data encryption. The encryption settings should be the same between the PPTP server and PPTP clients. Otherwise, the communication will fail.
User Name	They specify the VPN user name and password that the VPN user needs to enter when making PPTP dial-ups (VPN connections).
Password	
Connection Status	It specifies the connection status of the VPN connection.

Parameter	Description
	The available operations include:
	 : It is used to add new PPTP user accounts.
Operation	 : It is used to disable the PPTP user account.
	 : It is used to enable the PPTP user account.
	 : It is used to delete the PPTP user account.

10.1.2 Example of enabling internet users to access resources of the LAN

Scenario: You have set up an FTP server within the LAN of the router.

Goal: Open the FTP server to internet users and enable them to access the resources of the FTP server from the internet.

Solution: You can configure the PPTP server function to reach the goal. Assume that:

- The user name and password that the PPTP server assigns to the client are both **admin1**.
- The WAN IP address of router is **113.88.112.220**.
- The IP address of the FTP server is **192.168.0.136**.
- The FTP server port is **21**.
- The FTP login user name and password are both **JohnDoe**.



TIP
Ensure the WAN IP address of router is public. This function may not work on a host with a private IP address. Common IPv4 addresses are classified into class A, class B and class C. Private IP addresses of class A range from 10.0.0.0 to 10.255.255.255. Private IP addresses of class B range from 172.16.0.0 to 172.31.255.255; Private IP addresses of class C range from 192.168.0.0 to 192.168.255.255.

Configuration procedure:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

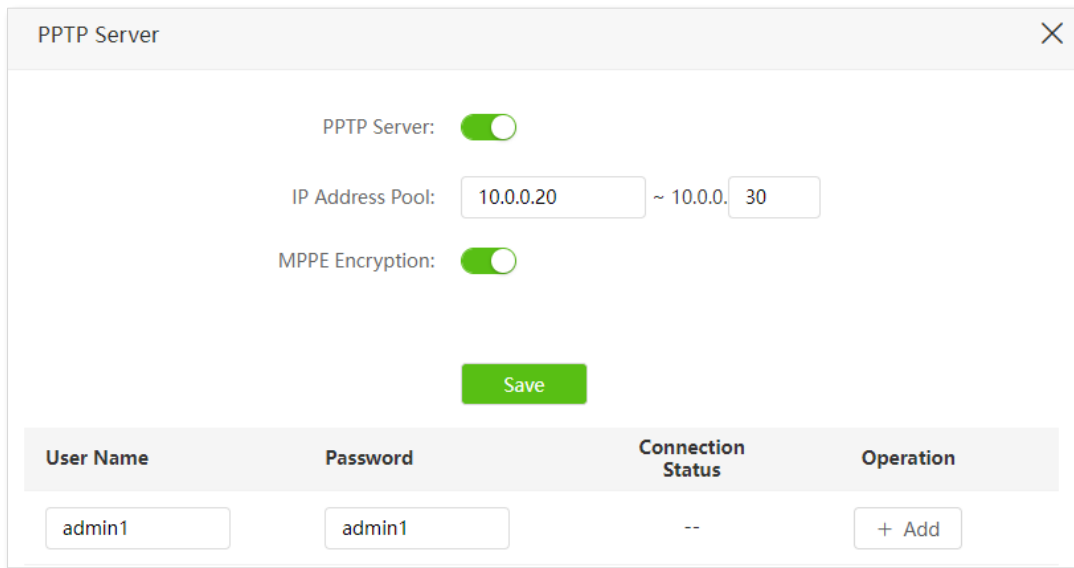
Step 2 Enable the PPTP server function.

1. Choose **VPN > PPTP Server**.
2. Enable PPTP Server.
3. Enable **MPPE Encryption**, which means that the encryption digit remains the default value "128".
4. Click **Save**.

Step 3 Add PPTP user name and password.


1. Set the **User Name** and **Password** of the PPTP server, which are **admin1** in this example.

2. Click **+Add**.



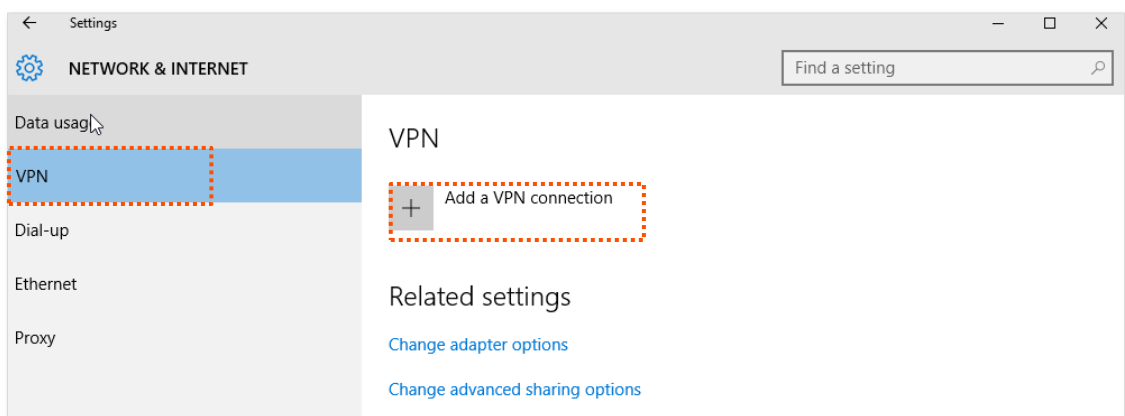
---End

When completing the configurations, internet users can access the FTP server by following these steps:

- Step 1** Click the  icon at the bottom right corner on the desktop, and then click **Network settings**.



- Step 2** Choose **VPN** on the left side, and click **Add a VPN connection**.



- Step 3** Configure the VPN parameters.
 1. Enter a connection name, such as **VPN connection**.
 2. Enter the server address, which is **113.88.112.220** in this example.
 3. Select a VPN type, which is **Point to Point Tunneling Protocol (PPTP)** in this example.
 4. Select a type of sign-in info, which is **User name and password** in this example.

5. Enter the user name and password, which are both **admin1** in this example.
6. Click **Save**.

Add a VPN connection

Connection name
VPN connection

Server name or address
113.88.112.220

VPN type
Point to Point Tunneling Protocol (PPTP)

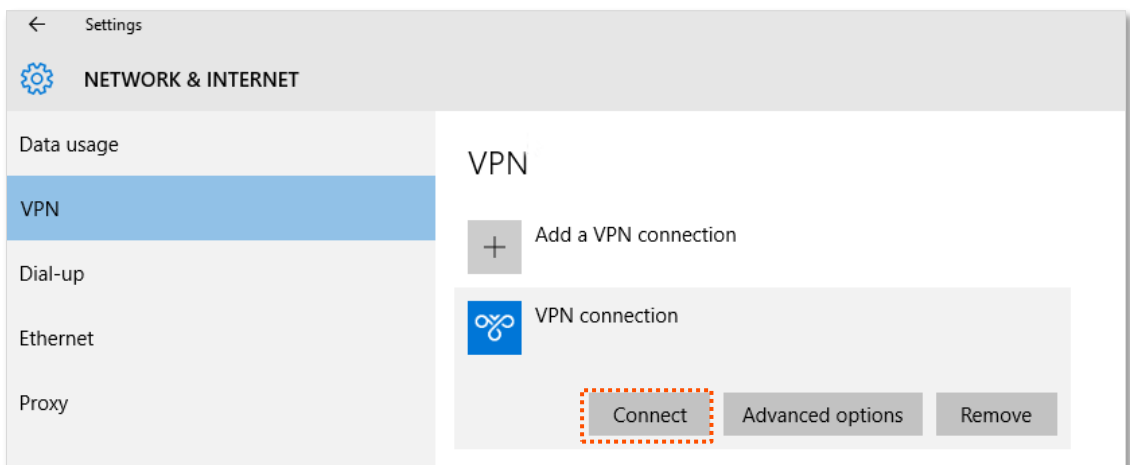
Type of sign-in info
User name and password


User name (optional)
admin1

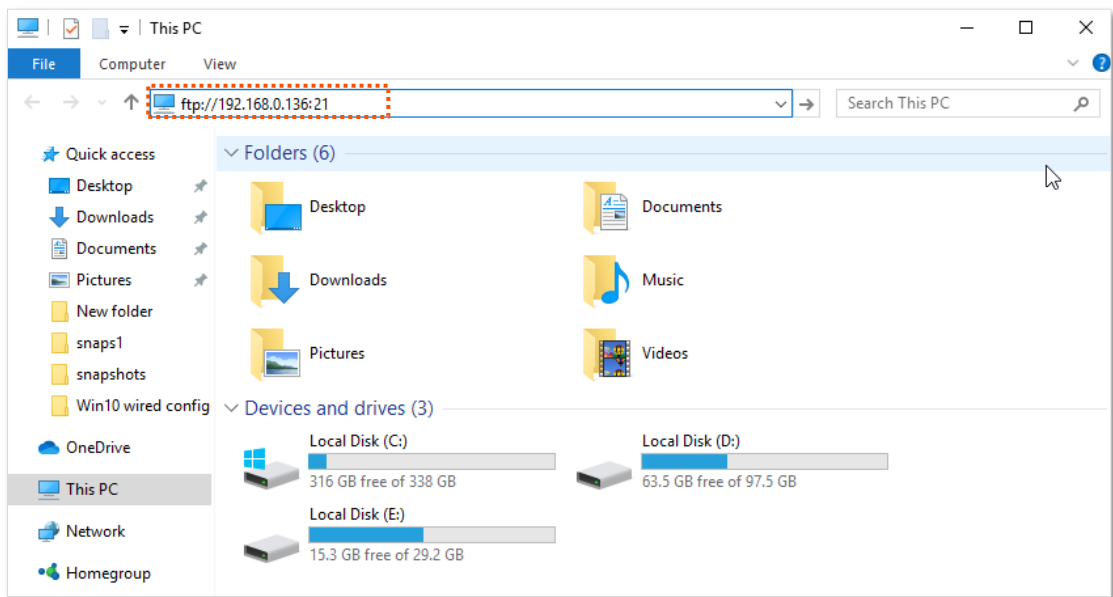
Password (optional)
••••••••

Save Cancel

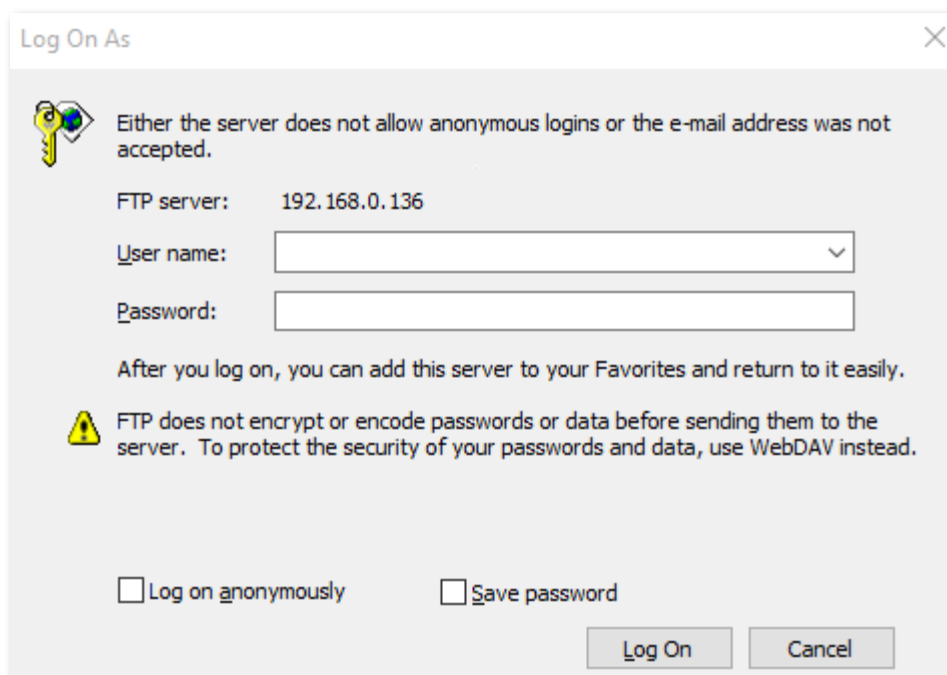
Step 4 Target the VPN connection added, and click **Connect**.



Step 5 Click the  icon on the desktop, and enter the address in the address bar to access the FTP server, which is **ftp://192.168.0.136:21** in this example.



Step 6 Enter the user name and password for logging in to the FTP server, which are both **JohnDoe** in this example, and click **Log On**.



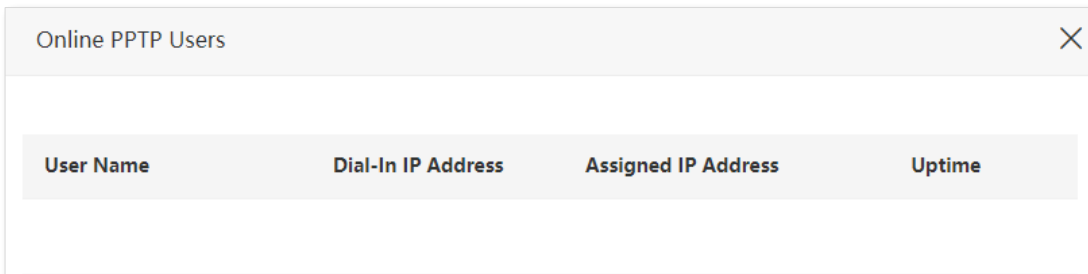
---End

By performing the steps above, you can access the resources on the FTP server.

10.2 Online PPTP users

When the PPTP server function is enabled, you can view the detailed information of VPN clients that establish connections with the PPTP server.

To access the configuration page, [log in to the web UI of the router](#) and choose **VPN > Online PPTP Users**.



The screenshot shows a web browser window titled "Online PPTP Users" with a close button (X) in the top right corner. Below the title bar is a table with four columns: "User Name", "Dial-In IP Address", "Assigned IP Address", and "Uptime". The table is currently empty.

Parameter description

Parameter	Description
User Name	It specifies the VPN user name that the VPN user uses when making PPTP dial-ups (VPN connection).
Dial-In IP Address	It specifies the IP address of the PPTP client. If the client is a router, it will be the IP address of the WAN port whose VPN function is enabled.
Assigned IP Address	It specifies the IP address that the PPTP server assigns to the client.
Uptime	It specifies the online time since the VPN connection succeeds.

10.3 PPTP/L2TP client

10.3.1 Overview

This router can function as a PPTP/L2TP client and connect to PPTP/L2TP servers.

The PPTP/L2TP client function is disabled by default. When it is enabled, the page is show as below.

PPTP/L2TP Client

PPTP/L2TP Client:

Client Type: PPTP L2TP

Server IP Address/Domain Name:

User Name:

Password:

Status: Disconnected

Parameter description

Parameter	Description
PPTP/L2TP Client	It is used to enable or disable the PPTP/L2TP client function.
Client Type	It specifies the client type that the router serves as. <ul style="list-style-type: none">• PPTP: When the router is connecting to a PPTP server, choose this option.• L2TP: When the router is connecting to a L2TP server, choose this option.
Server IP Address/Domain Name	It specifies the IP address or domain name of the PPTP/L2TP server that the router connects to. Generally, when a router serves as the PPTP/L2TP server at the peer side, the domain name or IP address should be that of the WAN port whose PPTP/L2TP server function is enabled.
User Name	They specify the user name and password that the PPTP/L2TP server assigns to the PPTP/L2TP clients.
Password	
Status	It specifies the connection status of the VPN connection.

10.3.2 Access VPN resources with the router

Scenario: You have subscribed to the PPTP VPN service when purchasing the broadband service from your ISP.

Goal: Access the VPN resources of your ISP.

Solution: You can configure the PPTP/L2TP client function to reach the goal. Assume that:

- The IP address of the PPTP server is **113.88.112.220**.
- The user name and password assigned by the PPTP server are both **admin1**.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **VPN > PPTP/L2TP Client**.
- Step 3** Enable **PPTP/L2TP Client**.
- Step 4** Select **PPTP** as **Client Type**.
- Step 5** Enter the **Server IP Address/Domain Name**, which is **113.88.112.220** in this example.
- Step 6** Enter the **User Name** and **Password**, which are both **admin1** in this example.
- Step 7** Click **Connect**.

PPTP/L2TP Client

PPTP/L2TP Client:

Client Type: PPTP L2TP

Server IP Address/Domain Name:

User Name:

Password:

Status: Disconnected

---End

When **Connected** is shown after **Status**, you can access the VPN resources of your ISP.

11

IPv6 (wireless router mode)

This router supports IPv4 and IPv6 dual stack protocols. This chapter introduces the IPv6-related functions, which are only available under the wireless router mode. Refer to [Operating mode](#) to set the operating mode of the router.

This chapter includes the following sections:

- [IPv6 WAN settings](#)
- [IPv6 LAN settings](#)

11.1 IPv6 WAN settings

11.1.1 Connect to the IPv6 network of ISPs

The router can access the IPv6 network of ISPs through three connection types. Choose the connection type by referring to the following table.

Scenario	Connection Type
<ul style="list-style-type: none">The ISP does not provide any PPPoEv6 user name and password.The ISP does not provide information about the IPv6 address.You have a router that can access IPv6 network.	DHCPv6
The IPv6 service is included in the PPPoE user name and password.	PPPoEv6
The ISP provides you with a set of information including IPv6 address, subnet mask and default gateway and DNS server.	Static IPv6 address

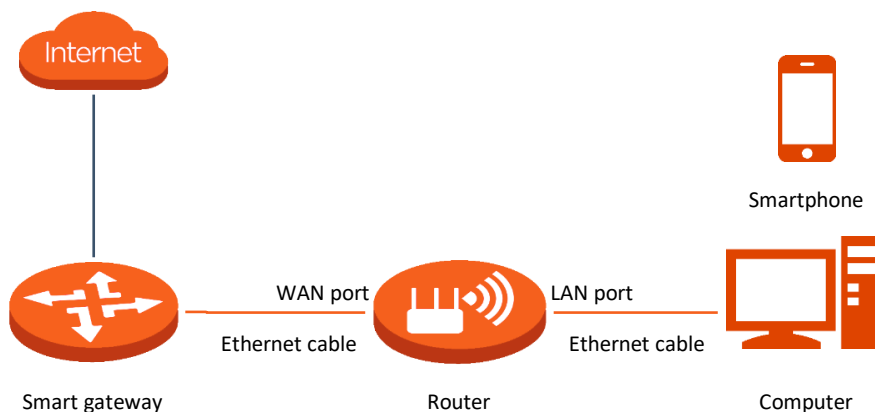


TIP
Before configuring the IPv6 function, ensure that you are within the coverage of IPv6 network and already subscribed to the IPv6 internet service. Contact your ISP for any doubt about it.

DHCPv6

DHCPv6 enables the router to obtain IPv6 address from DHCPv6 server to access the internet, which is applicable in the following scenarios.

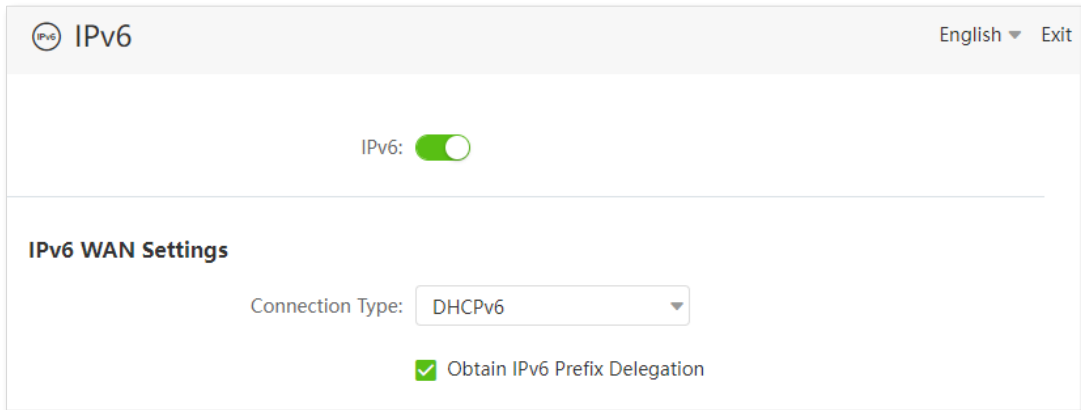
- The ISP does not provide any PPPoEv6 user name and password.
- The ISP does not provide information about IPv6 address.
- You have a router that can access IPv6 network.



Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **IPv6**.
- Step 3** Enable the **IPv6** function.
- Step 4** Set **Connection Type** to **DHCPv6**.

Step 5 Click **Save**.



---End

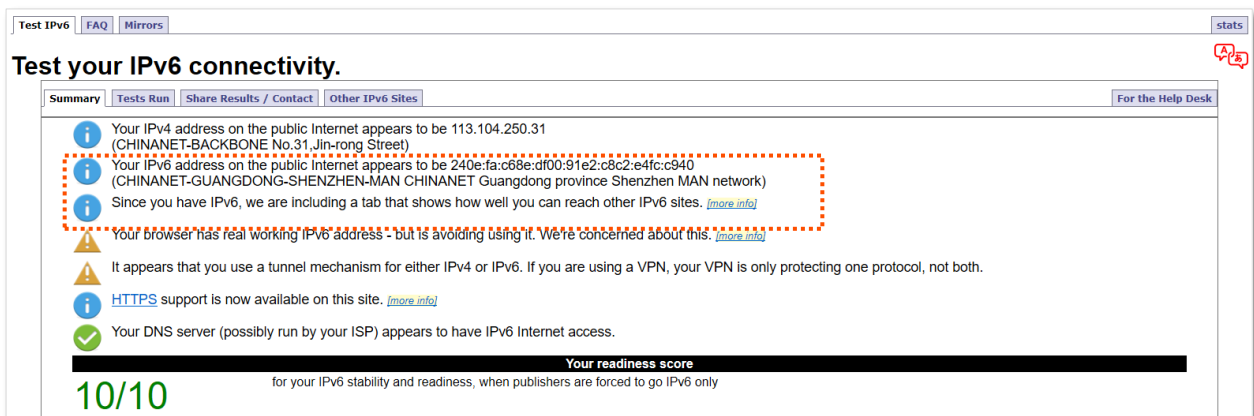
Parameter description

Parameter	Description
Obtain IPv6 Prefix Delegation	When the option is selected, the LAN port of router obtains the IPv6 prefix from its upstream device. It is recommended to keep the default setting (Selected). If the LAN port cannot obtain the PD prefix, it is because the upstream device does not support PD prefix delivery. Contact your ISP to solve this problem.

IPv6 network test:

Start a web browser on a smartphone or a computer that is connected to the router, and visit **test-ipv6.com**. The website will test your IPv6 connection status.

When “You have IPv6” is shown on the page, it indicates that the configuration succeeds and you can access IPv6 services.



If the IPv6 network test fails, try the following solutions:

- Navigate to the **System Settings > System Status**, and move to the **IPv6 Status** part. Ensure that the IPv6 WAN address is a global unicast address.
- Ensure that devices connected to router obtain their IPv6 address through DHCPv6.
- Consult your ISP for help.

PPPoEv6

Overview

If your ISP provides you with the PPPoE user name and password with IPv6 service, you can choose PPPoEv6 to access the internet.

[Log in to the web UI of the router](#), and navigate to the **IPv6**. When the connection type is set to **PPPoEv6**, the page is shown as below.

IPv6:

IPv6 WAN Settings

Connection Type:

PPPoE Username:

PPPoE Password:

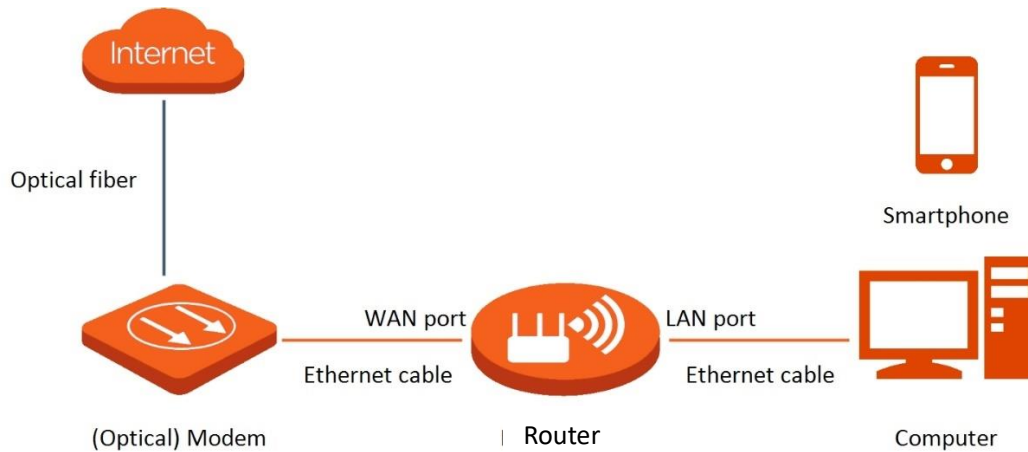
Obtain IPv6 Prefix Delegation

Parameter description

Parameter	Description
PPPoE Username	They specify the PPPoE user name and password provided by your ISP.
PPPoE Password	IPv4 and IPv6 services share the same PPPoE account.
Obtain IPv6 Prefix Delegation	When the option is selected, the LAN port of router obtains IPv6 prefix from its upstream device. It is recommended to keep the default setting (Selected). If the LAN port cannot obtain the PD prefix, it is because the upstream device does not support PD prefix delivery. Contact your ISP to solve this problem.

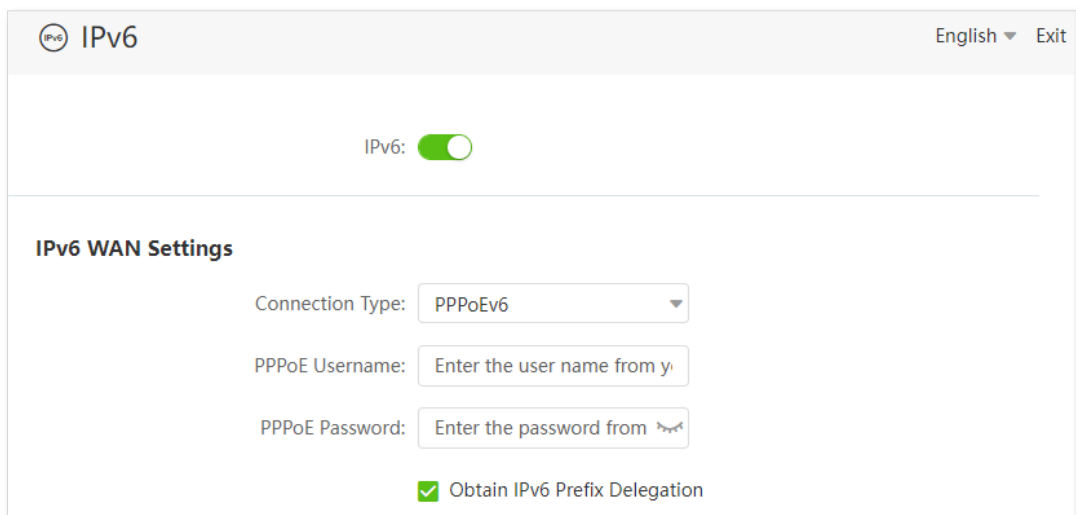
Access the internet through PPPoEv6

If the PPPoE account provided by your ISP includes the IPv6 service, you can choose PPPoEv6 to access the IPv6 service. The application scenario is shown as below.



Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit tendawifi.com to log in to the web UI of the router.
- Step 2** Choose **IPv6**.
- Step 3** Enable the **IPv6** function.
- Step 4** Set **Connection Type** to **PPPoEv6**.
- Step 5** Enter the **PPPoE Username** and **PPPoE Password**.
- Step 6** Click **Save**.



---End

IPv6 network test:

Start a web browser on a phone or a computer that is connected to the router, and visit test-ipv6.com. The website will test your IPv6 connection status.

When "You have IPv6" is shown on the page, it indicates that the configurations succeed and you can access IPv6 services.

Test IPv6 | [FAQ](#) | [Mirrors](#) | [stats](#)

Test your IPv6 connectivity.

Summary | [Tests Run](#) | [Share Results / Contact](#) | [Other IPv6 Sites](#) | [For the Help Desk](#)

- Your IPv4 address on the public Internet appears to be 113.104.250.31 (CHINANET-BACKBONE No.31,Jin-rong Street)
- Your IPv6 address on the public Internet appears to be 240e:fa:c68e:df00:91e2:c8c2:e4fc:c940 (CHINANET-GUANGDONG-SHENZHEN-MAN CHINANET Guangdong province Shenzhen MAN network)
- Since you have IPv6, we are including a tab that shows how well you can reach other IPv6 sites. [\[more info\]](#)
- Your browser has real working IPv6 address - but is avoiding using it. We're concerned about this. [\[more info\]](#)
- It appears that you use a tunnel mechanism for either IPv4 or IPv6. If you are using a VPN, your VPN is only protecting one protocol, not both.
- [HTTPS](#) support is now available on this site. [\[more info\]](#)
- Your DNS server (possibly run by your ISP) appears to have IPv6 Internet access.

Your readiness score
10/10
for your IPv6 stability and readiness, when publishers are forced to go IPv6 only

[Click to see Test Data](#)
(Updated server side IPv6 readiness stats)

If the IPv6 network test fails, try the following solutions:

- Navigate to the **System Settings > System Status**, and move to the **IPv6 Status** part. Ensure that the IPv6 WAN address is a global unicast address.
- Ensure that devices connected to router obtain their IPv6 address through DHCPv6.
- Consult your ISP for help.

Static IPv6 Address

Overview

When your ISP provides you with information including IPv6 address, subnet mask, default gateway and DNS server, you can choose this connection type to access the internet with IPv6.

[Log in to the web UI of the router](#), and navigate to the **IPv6**. When the connection type is set to **Static IPv6 Address**, the page is shown as below.

IPv6 | English | Exit

IPv6:

IPv6 WAN Settings

Connection Type: Static IPv6 Address


IPv6 Address: /

Default IPv6 Gateway:

Primary IPv6 DNS:

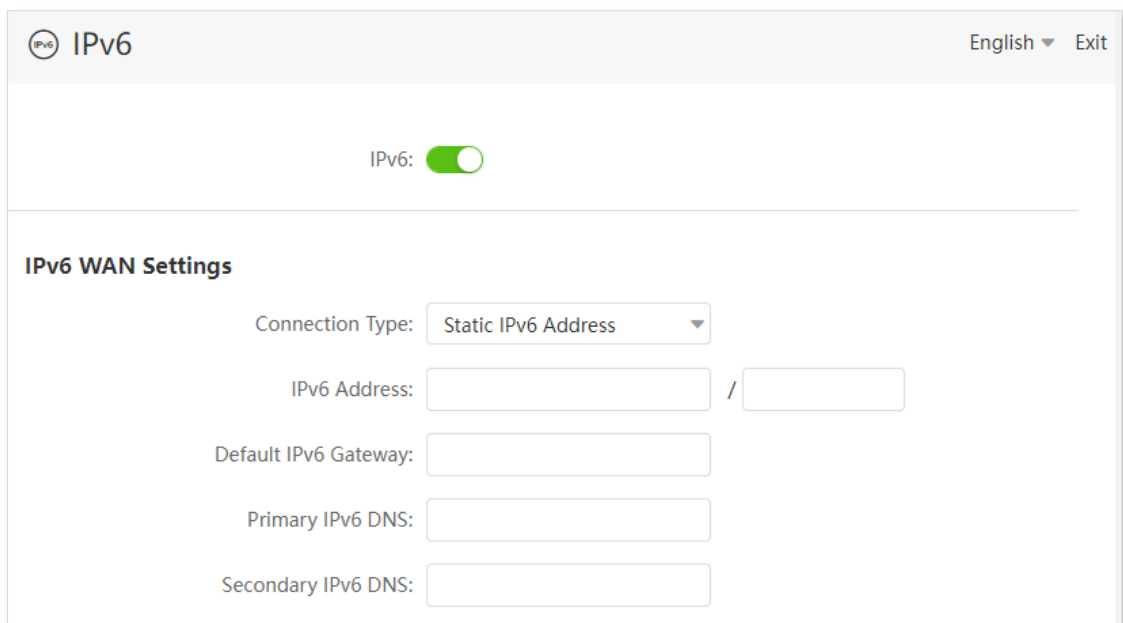
Secondary IPv6 DNS:

Parameter description

Parameter	Description
IPv6 Address	
Default IPv6 Gateway	They specify the fixed IP address information provided by your ISP.
Primary IPv6 DNS	 TIP
Secondary IPv6 DNS	If your ISP only provides one DNS address, leave the secondary IPv6 DNS blank.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **IPv6**.
- Step 3** Enable the **IPv6** function.
- Step 4** Set **Connection Type** to **Static IPv6 Address**.
- Step 5** Enter the required parameters under IPv6 WAN settings.
- Step 6** Click **Save**.



IPv6

English ▾ Exit

IPv6:

IPv6 WAN Settings

Connection Type: Static IPv6 Address ▾

IPv6 Address: /

Default IPv6 Gateway:

Primary IPv6 DNS:

Secondary IPv6 DNS:

---End

IPv6 network test:

Start a web browser on a phone or a computer that is connected to the router, and visit **test-ipv6.com**. The website will test your IPv6 connection status.

When “You have IPv6” is shown on the page, it indicates that the configurations succeed and you can access IPv6 services.

Test IPv6 | [FAQ](#) | [Mirrors](#) | stats

Test your IPv6 connectivity.

Summary | [Tests Run](#) | [Share Results / Contact](#) | [Other IPv6 Sites](#) | [For the Help Desk](#)

- Your IPv4 address on the public Internet appears to be 113.104.250.31 (CHINANET-BACKBONE No.31,Jin-rong Street)
- Your IPv6 address on the public Internet appears to be 240e:1a:006e:0100:91e2:bb82:94f6:c940 (CHINANET-GUANGDONG-SHENZHEN-MAN CHINANET Guangdong province Shenzhen MAN network)
- Since you have IPv6, we are including a tab that shows how well you can reach other IPv6 sites. [more info](#)
- Your browser has real working IPv6 address - but is avoiding using it. We're concerned about this.** [more info](#)
- It appears that you use a tunnel mechanism for either IPv4 or IPv6. If you are using a VPN, your VPN is only protecting one protocol, not both.
- [HTTPS](#) support is now available on this site. [more info](#)
- Your DNS server (possibly run by your ISP) appears to have IPv6 Internet access.

Your readiness score
10/10
for your IPv6 stability and readiness, when publishers are forced to go IPv6 only

Click to see [Test Data](#)
(Updated server side IPv6 readiness stats)

If the IPv6 network test fails, try the following solutions:

- Ensure that you have entered the correct WAN IPv6 address.
- Ensure that devices connected to router obtain their IPv6 address through DHCPv6.
- Consult your ISP for help.

11.1.2 IPv6 tunnel

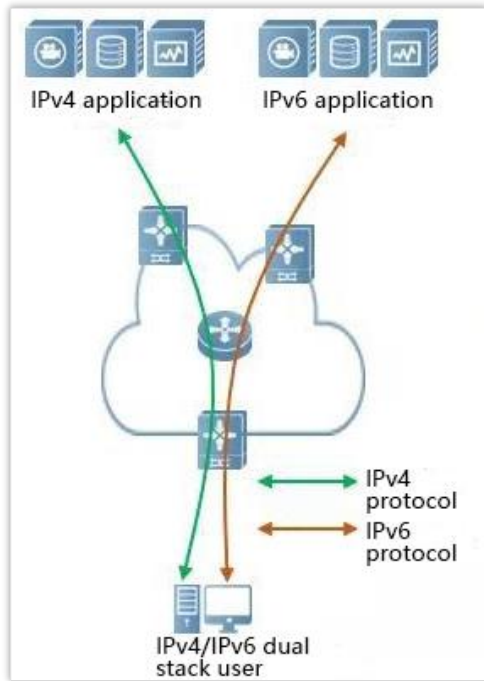
Overview

IPv6 transition mechanism

Before the IPv6 network is widely deployed, IPv6 stations are like isolated islands. Therefore, the dual stack and tunneling technologies are developed to achieve the communications between IPv6 islands.

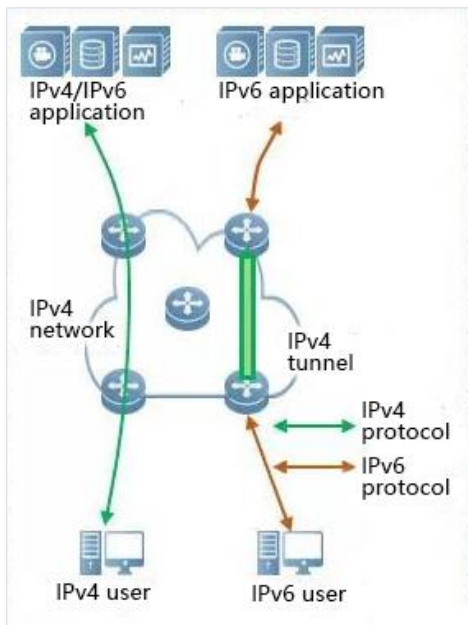
- **Dual stack technology**

With the dual stack technology, nodes within the network support both IPv4 and IPv6 protocol stack. The source node selects different protocol stacks according to the different destination nodes, and the network device selects different protocol stacks for processing and forwarding according to the protocol type of the message. The dual-stack technology can realize the coexistence of IPv4 and IPv6 networks, but it cannot solve the problem of interoperability between IPv4 and IPv6 networks, nor can it solve the problem of IPv4 address exhaustion.



- Tunneling technology**

Tunneling technology is a technology for network transmission by encapsulating one IP protocol data packet in another IP protocol data packet, including data encapsulation, transmission, and decapsulation. IPv6 tunnel technology encapsulates IPv6 packets as data in IPv4 packets and communicates across IPv4 networks. With tunneling technology, you do not need to upgrade all devices to dual stacks. You only need the border devices of IPv4/IPv6 networks to implement dual stack and tunnel functions.



Manual and automatic tunnels

Generally, a tunnel consists of three parts: the tunnel start node, which encapsulates IPv6 packets; the tunnel end point, which decapsulates IPv6 packets; the tunnel, which is actually an IPv4 path, starts the encapsulated IPv6 packets from the tunnel The node is transported to the end of the tunnel.

When the tunnel start node encapsulates an IPv6 packet in an IPv4 packet, it must determine the source and destination addresses of IPv4. The source address is the IPv4 address of the start node of the tunnel, and the destination address is the IPv4 address of the end of the tunnel.

Tunnels can be divided into manual tunnels and automatic tunnels based on how the tunnel end address is obtained.

- **Manual tunnel**

The network boundary device cannot automatically obtain the IPv4 address of the tunnel endpoint. You need to manually configure the IPv4 address of the tunnel endpoint so that the packets can be sent to the tunnel endpoint correctly. It is usually used in the tunnel between routers.

- **Automatic tunnel**

Network border devices can automatically obtain the IPv4 address of the tunnel endpoint, without the need to manually configure the IPv4 address of the endpoint. In general, the IPv6 addresses at both ends of the tunnel are in the form of special IPv6 addresses with embedded IPv4 addresses. In this way, routing devices can extract IPv4 addresses from the destination IPv6 addresses in IPv6 packets. Automatic tunnels can be used from host to host, or from host to router.

6in4 tunnel

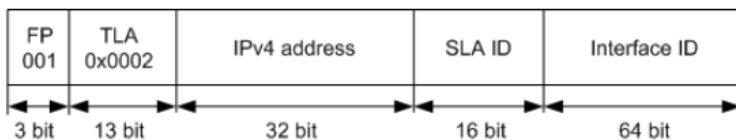
6in4 is a manual tunneling technology. It can implement IPv6 isolated island communication through manually configured tunnels without the network operator providing IPv6 interconnection services.

6to4 tunnel

6to4 is an automatic tunneling technology that enables communication between isolated IPv6 islands and between sites within the IPv6 backbone and IPv6 backbone networks without the network operator providing IPv6 interconnection services.

The 6to4 tunnel technology is used to establish a tunnel between border routers at an IPv6 site. The border router at the source site is the start node of the tunnel, and the border router at the destination site is the end point of the tunnel.

The 6to4 tunnel technology uses a special IPv6 address, that is, a 6to4 address, which starts with 2002. The IPv4 address of the border router is embedded in the prefix of this address. The address structure is shown in the figure below.

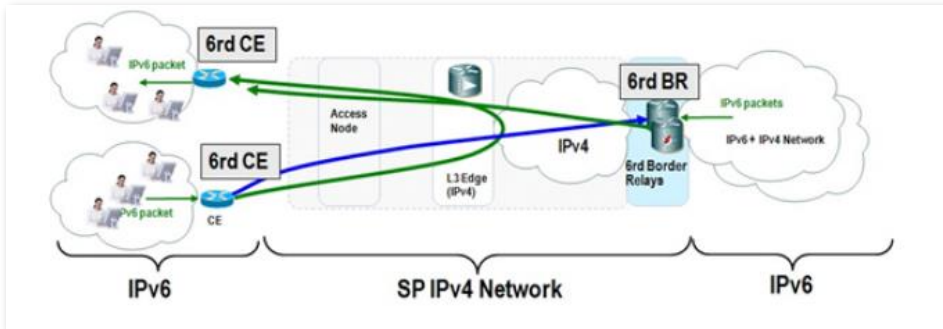


- FP: Format Prefix, which is 001
- TLA: Top Level Aggregator, which is 0x0002
- IPv4 address: The IPv4 address of the border router
- SLA ID: Site Level Aggregator, namely the ID of subnet
- Interface ID: The ID of the interface

6rd tunnel

6RD (IPv6 Rapid Deployment) is an IPv6 network transition technology solution developed on the basis of 6to4. It adds a 6RD BR (Border Relay, Border Relay Device) to an existing IPv4 network, establishes a 6in4 tunnel at the home gateway (6RD CE (Customer Edge)) and 6RD BR of IPv6 users, and provides IPv6 access to users.

The 6RD network typology is as follows.



As shown in the figure above, the 6RD tunnel technology is used to implement mutual access between IPv6 islands, and the BR can also be used to access the IPv6 network after the BR.

The main differences between 6RD and 6to4:

6RD does not need to use a specific address 2002::/16, it can use the network operator's own address block, which greatly increases the convenience of implementation.

Configure IPv6 tunnel



- Devices at both ends of the tunnel must support the dual stack protocol.
- The WAN IPv4 address of the routers must be a public IP address.

6in4 tunnel

[Log in to the web UI of the router](#), and navigate to **IPv6**. Set the connection type to **6in4 Tunnel**, enter required parameters and save the configurations.

The screenshot shows the IPv6 WAN Settings configuration page. At the top, there is a header with an IPv6 icon, the text 'IPv6', and a language dropdown set to 'English' with an 'Exit' button. Below the header, there is a toggle switch for 'IPv6' which is currently turned on. The main section is titled 'IPv6 WAN Settings' and contains three configuration fields: 'Connection Type' is set to '6in4 Tunnel', 'Remote IPv4 Address' is an empty text input field, and 'Local IPv6 Address' is an empty text input field followed by '/64'.

Parameter description

Parameter	Description
Remote IPv4 Address	It specifies the WAN IPv4 address of the dual stack router at the peer side.
Local IPv6 Address	It specifies the IPv6 address of the LAN, which needs to be customized.

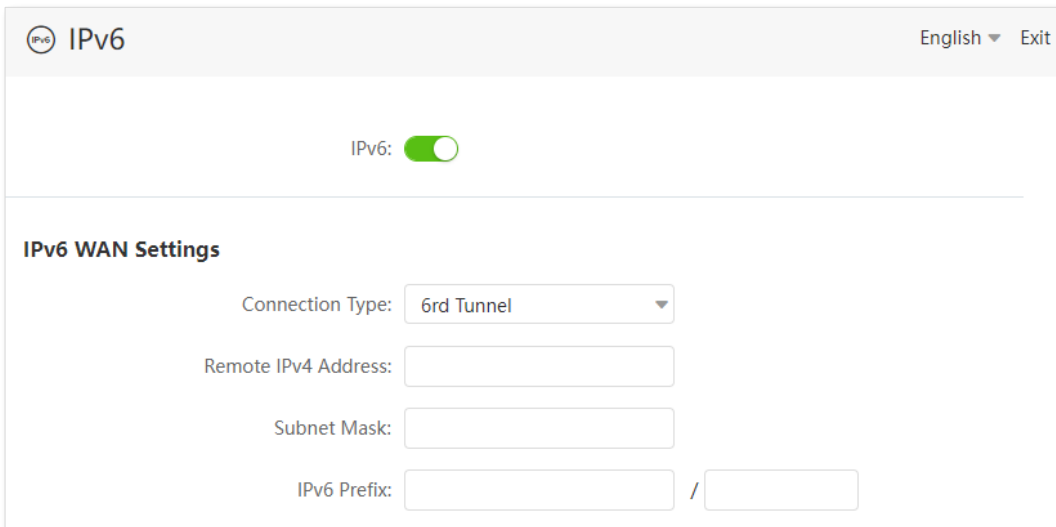
6to4 tunnel

[Log in to the web UI of the router](#), and navigate to **IPv6**. Set the connection type to **6to4 Tunnel** and save the configurations.



6rd tunnel

[Log in to the web UI of the router](#), and navigate to **IPv6**. Set the connection type to **6rd Tunnel**, enter required parameters and save the configurations.



Parameter description

Parameter	Description
Remote IPv4 Address	It specifies the WAN IPv4 address of the dual stack router or 6rd BR at the peer side.
Subnet Mask	It specifies the subnet mask of the IPv4 network. The IPv4 network at both sides should be at the same network segment.

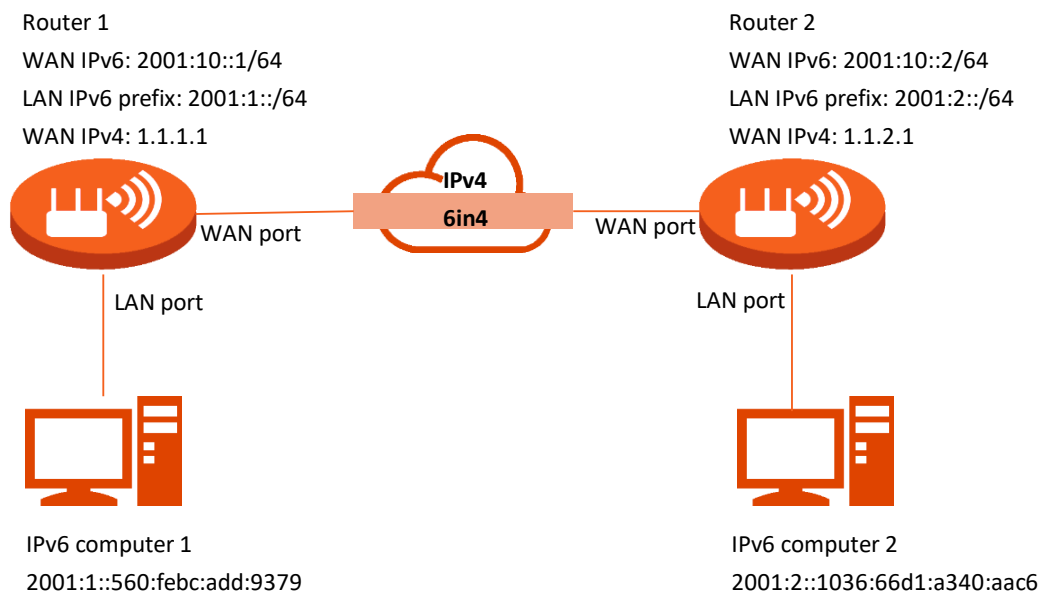
Parameter	Description
IPv6 Prefix	<p>It specifies the IPv6 prefix of the network.</p> <ul style="list-style-type: none"> When the 6rd tunnel is used to achieve the communication between isolated islands, users can customize the IPv6 prefix. If the 6rd tunnel is used to connect to the network of ISPs, contact your ISP for the IPv6 prefix.

Examples of IPv6 tunnel configuration

6in4 tunnel

As shown below, the two routers support dual stack protocol. To achieve the communication between the two hosts, you can configure the 6in4 tunnel.

Assume that the two routers are connected to IPv4 network and obtain public IPv4 addresses.



Configuration procedure:

Step 1 Configure Router 1.

1. Start a web browser on a device connected to Router 1 and visit **tendawifi.com** to log in to the web UI of the Router 1.
2. Choose **IPv6**.
3. Enable the **IPv6** function.
4. Set the connection type to **6in4 Tunnel**.
5. Enter the WAN IPv4 address of the device at the peer side, which is **1.1.2.1** in this example.
6. Customize the local IPv6 address, which is **2001:10::1/64** in this example.
7. Set the IPv6 LAN prefix length, which is **2001:1::/64** in this example.

8. Click **Save**.

The screenshot shows the IPv6 configuration window. At the top, there is a title bar with 'IPv6' and 'English' with a dropdown arrow, and an 'Exit' button. Below the title bar, there is a toggle switch for 'IPv6' which is turned on. The main content area is divided into two sections: 'IPv6 WAN Settings' and 'IPv6 LAN Settings'. In the 'IPv6 WAN Settings' section, there are three fields: 'Connection Type' set to '6in4 Tunnel', 'Remote IPv4 Address' set to '1.1.2.1', and 'Local IPv6 Address' set to '2001:1::1 /64'. These three fields are enclosed in a red dashed box. In the 'IPv6 LAN Settings' section, there are several fields: 'IPv6 LAN Address' set to 'Auto', 'IPv6 LAN Prefix Length' set to 'Manual' with a value of '2001:1:: / 64' (this field is also enclosed in a red dashed box), 'DHCPv6' set to 'Enable', 'DHCPv6 Address Assignment Method' set to 'Auto', 'IPv6 DNS' set to 'Manual', 'Primary IPv6 DNS' set to '2001:2::3', and 'Secondary IPv6 DNS' which is empty. At the bottom of the window, there is a green 'Save' button.

Step 2 Configure Router 2.

1. Start a web browser on a device connected to Router 2 and visit **tendawifi.com** to log in to the web UI of Router 2.
2. Choose **IPv6**.
3. Enable the **IPv6** function.
4. Set the connection type to **6in4 Tunnel**.
5. Enter the WAN IPv4 address of the device at the peer side, which is **1.1.1.1** in this example.
6. Customize the local IPv6 address, which is **2001:10::2/64** in this example.
7. Set the IPv6 LAN prefix length, which is **2001:2::/64** in this example.

8. Click **Save**.

The screenshot shows the IPv6 configuration window. At the top, the IPv6 toggle is turned on. The IPv6 WAN Settings section includes a red dashed box around the following fields: Connection Type (6in4 Tunnel), Remote IPv4 Address (1.1.1.1), and Local IPv6 Address (2001:10::2 /64). The IPv6 LAN Settings section includes a red dashed box around the IPv6 LAN Prefix Length (Manual) and the IPv6 address (2001:2:: /64). Other settings include DHCPv6 (Enable), DHCPv6 Address Assignment Method (Auto), IPv6 DNS (Manual), Primary IPv6 DNS (2001:2::3), and Secondary IPv6 DNS (empty). A green Save button is at the bottom.

---End

Verification

To verify whether the 6in4 tunnel is established successfully, you can ping each other on the two computers.

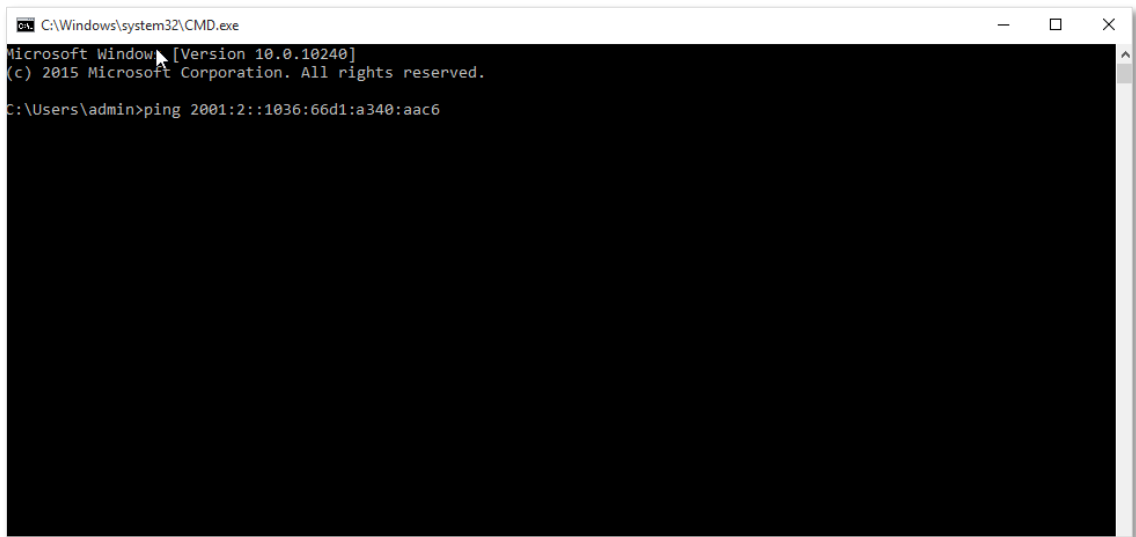
Now, ping computer 2 (IPv6 address: 2001:2::1036:66d1:a340:aac6) on computer 1.

Step 1 Use **Windows + R** shortcut to open the **Run** dialog window.

Step 2 Enter **cmd**, and click **OK**.

The screenshot shows the Windows Run dialog box. The text "Type the name of a program, folder, document, or Internet resource, and Windows will open it for you." is displayed. The "Open:" field contains the text "cmd". At the bottom, there are three buttons: OK, Cancel, and Browse...

Step 3 Enter the ping command, which is **ping 2001:2::1036:66d1:a340:aac6** in the example, and press **Enter**.

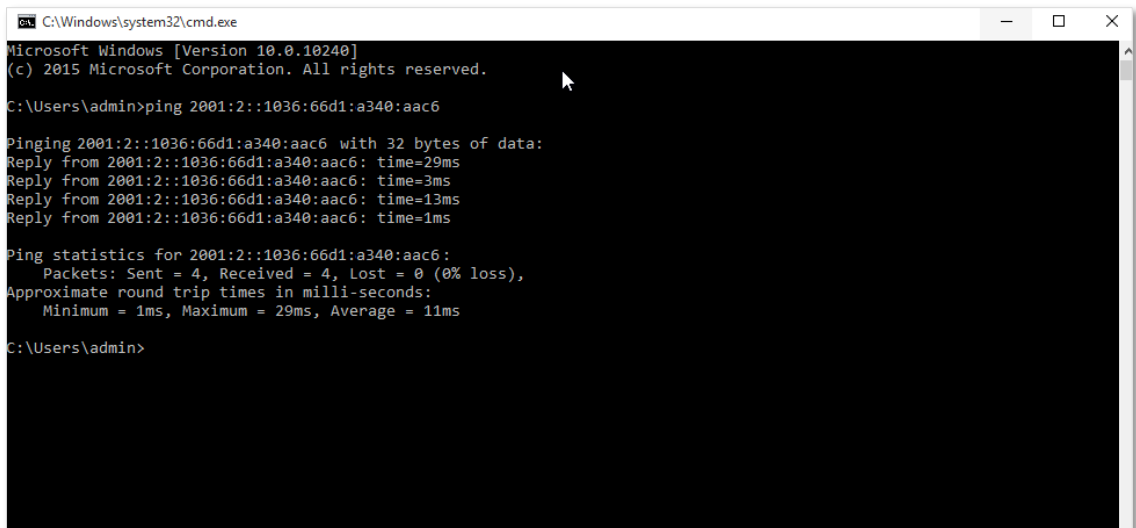


```
C:\Windows\system32\CMD.exe
Microsoft Windows [Version 10.0.10240]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\admin>ping 2001:2::1036:66d1:a340:aac6
```

---End

Wait a moment. The 6in4 tunnel configuration succeeds when the result is shown as below.



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.10240]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\admin>ping 2001:2::1036:66d1:a340:aac6

Pinging 2001:2::1036:66d1:a340:aac6 with 32 bytes of data:
Reply from 2001:2::1036:66d1:a340:aac6: time=29ms
Reply from 2001:2::1036:66d1:a340:aac6: time=3ms
Reply from 2001:2::1036:66d1:a340:aac6: time=13ms
Reply from 2001:2::1036:66d1:a340:aac6: time=1ms

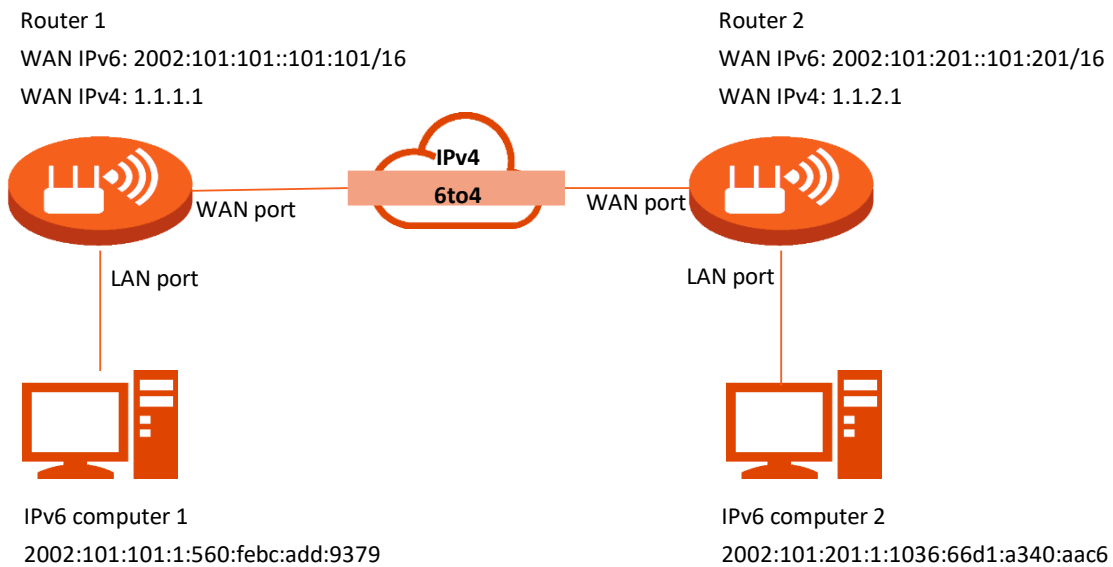
Ping statistics for 2001:2::1036:66d1:a340:aac6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 29ms, Average = 11ms

C:\Users\admin>
```

6to4 tunnel

As shown below, the two routers support dual stack protocol. To achieve the communication between the two hosts, you can configure the 6to4 tunnel.

Assume that the two routers are connected to IPv4 network and obtain public IPv4 addresses.



Configuration procedure:

Step 1 Configure Router 1.

1. Start a web browser on a device connected to Router 1 and visit **tendawifi.com** to log in to the web UI of Router 1.
2. Choose **IPv6**.
3. Enable the **IPv6** function.
4. Set the connection type to **6to4 Tunnel**.
5. Click **Save**.



Step 2 Repeat Step 1 to set the connection type of Router 2 to 6to4 Tunnel.

---End

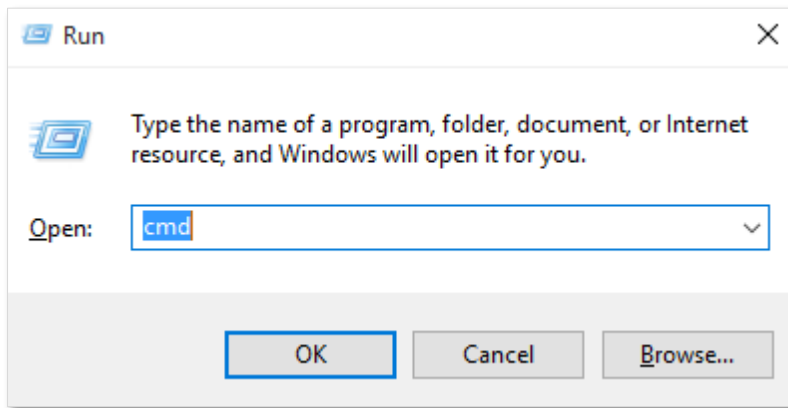
Verification

To verify whether the 6to4 tunnel is established successfully, you can ping each other on the two computers.

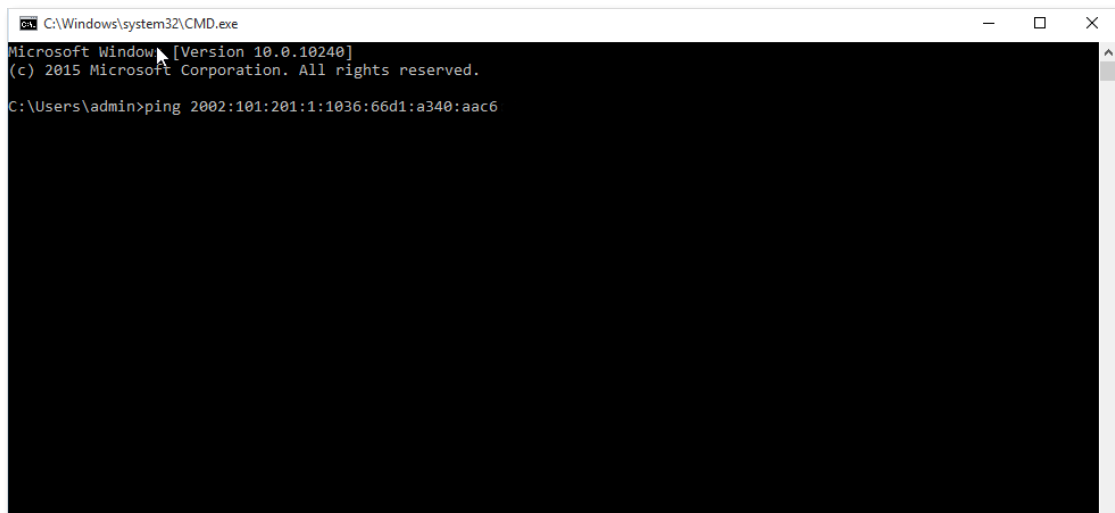
Now, ping computer 2 (IPv6 address: 2002:101:201:1:1036:66d1:a340:aac6) on computer 1.

Step 1 Use **Windows + R** shortcut to open the **Run** dialog window.

Step 2 Enter **cmd**, and click **OK**.

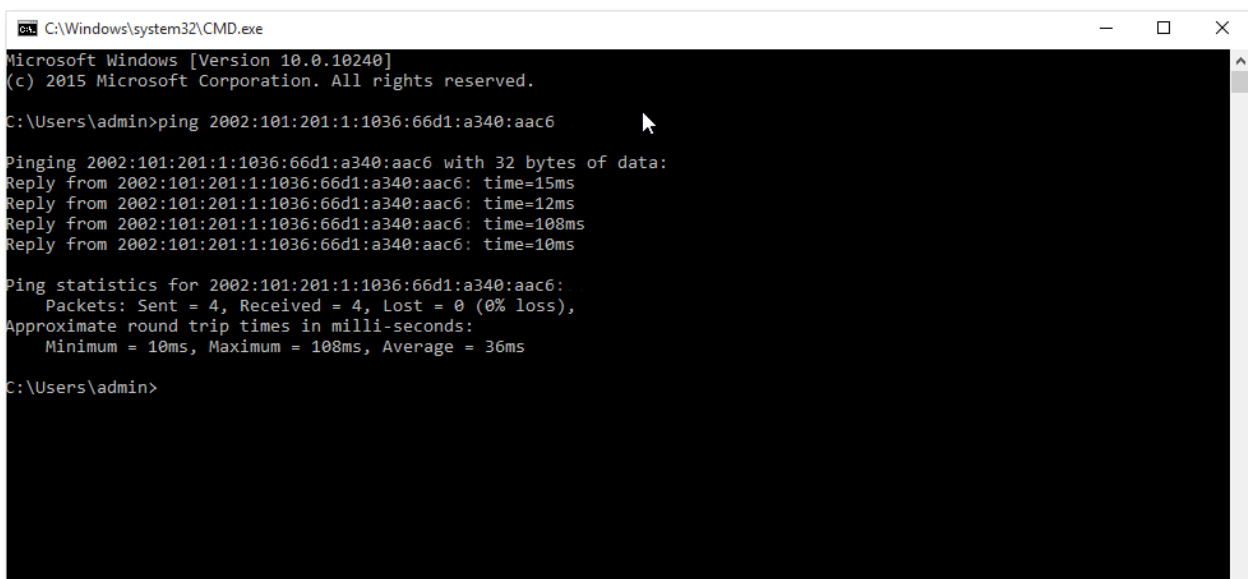


Step 3 Enter the ping command, which is **ping 2002:101:201:1:1036:66d1:a340:aac6** in the example and press **Enter**.



---End

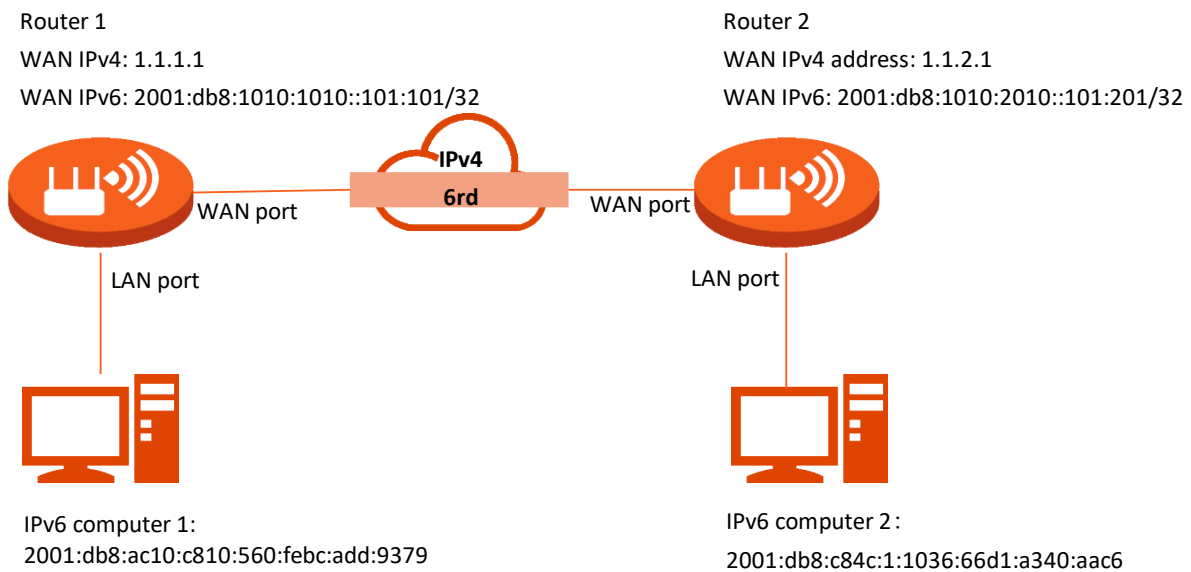
Wait a moment. The 6to4 tunnel configuration succeeds when the result is shown as below.



6rd tunnel

As shown below, the two routers support dual stack protocol. To achieve the communication between the two hosts, you can configure the 6rd tunnel.

Assume that the two routers are connected to IPv4 network and obtain public IPv4 addresses.



Configuration procedure:



TIP

Before configuring the 6rd tunnel, navigate to [View system information](#) to find the WAN IPv4 address of the router.

Step 1 Configure Router 1.

1. Start a web browser on a device connected to Router 1 and visit **tendawifi.com** to log in to the web UI of Router 1.
2. Choose **IPv6**.
3. Enable the **IPv6** function.
4. Set the connection type to **6rd Tunnel**.
5. Enter the WAN IPv4 address of the device at the peer side in **Remote IPv4 Address**, which is **1.1.2.1** in this example.
6. Enter the Subnet Mask of the IPv4 network. **240.0.0.0** is recommended.
7. Customize the **IPv6 Prefix**.

8. Click **Save**.

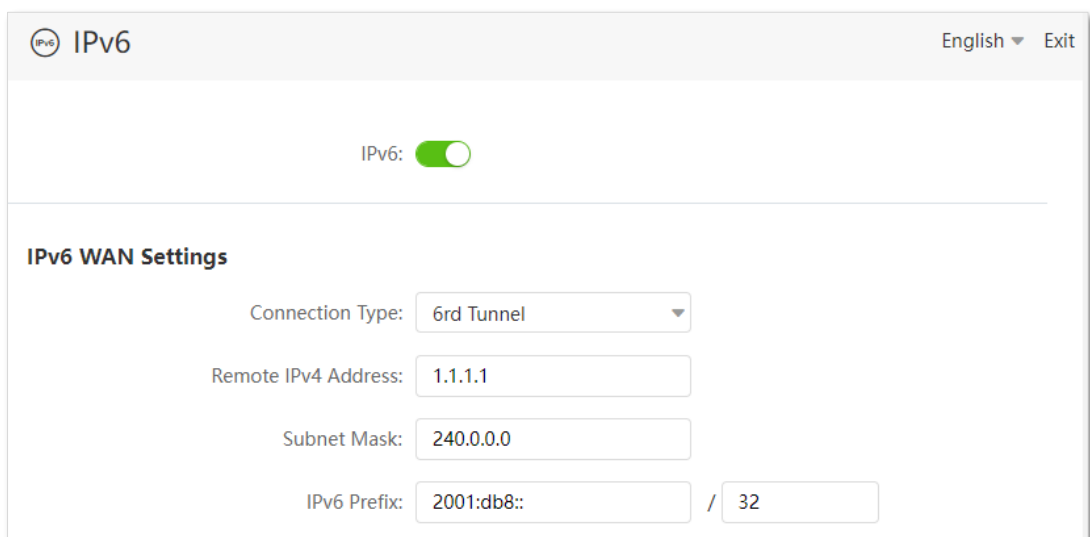


The screenshot shows the IPv6 configuration interface. At the top, there is a header with an IPv6 icon and the text "IPv6". In the top right corner, there are options for "English" and "Exit". Below the header, there is a toggle switch for "IPv6" which is currently turned on. The main section is titled "IPv6 WAN Settings" and contains the following fields:

- Connection Type: 6rd Tunnel
- Remote IPv4 Address: 1.1.2.1
- Subnet Mask: 240.0.0.0
- IPv6 Prefix: 2001:db8:: / 32

Step 2 Configure Router 2.

1. Start a web browser on a device connected to Router 2 and visit **tendawifi.com** to log in to the web UI of Router 2.
2. Choose **IPv6**.
3. Enable the **IPv6** function.
4. Set the connection type to **6rd Tunnel**.
5. Enter the WAN IPv4 address of the device at the peer side in **Remote IPv4 Address**, which is **1.1.1.1** in this example.
6. Enter the **Subnet Mask** of the IPv4 network. **240.0.0.0** is recommended.
7. Customize the **IPv6 Prefix**.
8. Click **Save**.



The screenshot shows the IPv6 configuration interface. At the top, there is a header with an IPv6 icon and the text "IPv6". In the top right corner, there are options for "English" and "Exit". Below the header, there is a toggle switch for "IPv6" which is currently turned on. The main section is titled "IPv6 WAN Settings" and contains the following fields:

- Connection Type: 6rd Tunnel
- Remote IPv4 Address: 1.1.1.1
- Subnet Mask: 240.0.0.0
- IPv6 Prefix: 2001:db8:: / 32

---End

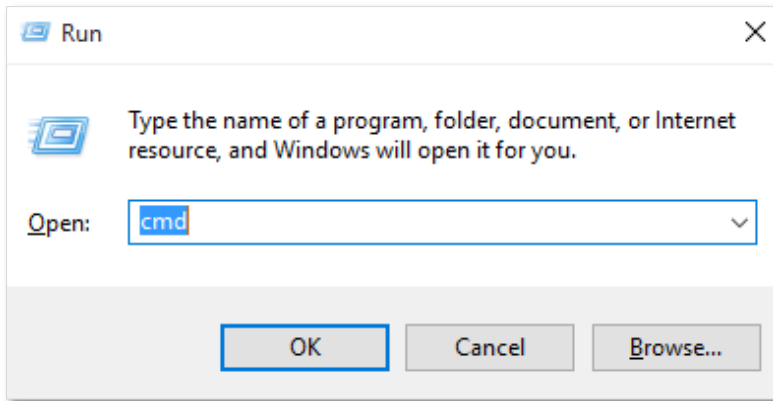
Verification

To verify whether the 6rd tunnel is established successfully, you can ping each other on the two computers.

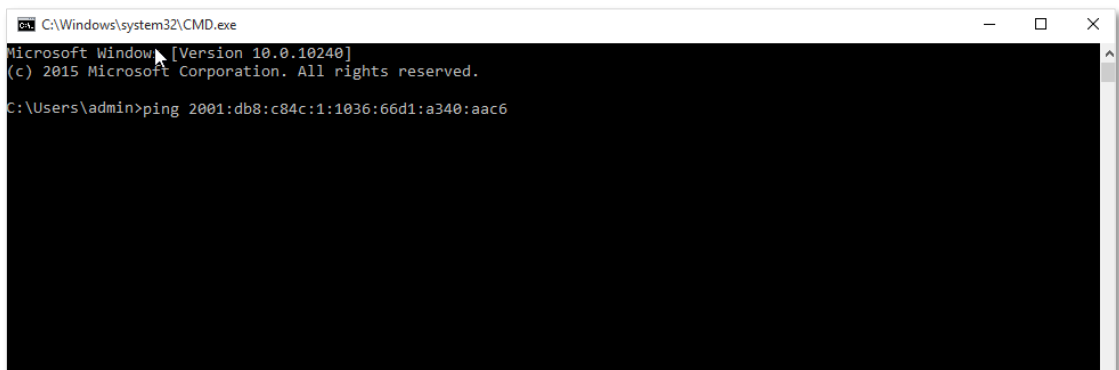
Now, ping computer 2 (IPv6 address: 2001:db8:c84c:1:1036:66d1:a340:aac6) on computer 1.

Step 1 Use **Windows + R** shortcut to open the **Run** dialog window.

Step 2 Enter **cmd**, and click **OK**.

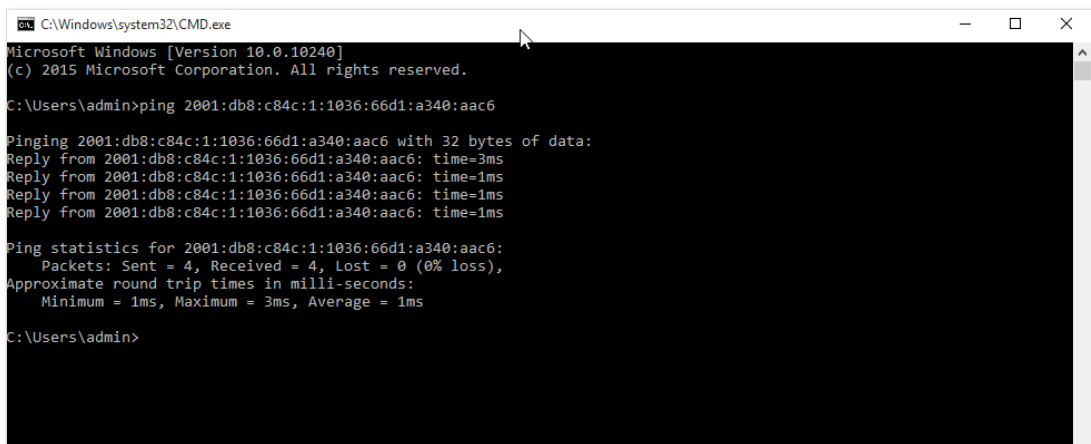


Step 3 Enter the ping command, which is **ping 2001:db8:c84c:1:1036:66d1:a340:aac6** in the example and press **Enter**.



---End

Wait a moment. The 6rd tunnel configuration succeeds when the result is shown as below.



11.2 IPv6 LAN settings

To access the page, [log in to the web UI of the router](#) and choose **IPv6**.

You can change the IPv6 LAN settings here.

IPv6 LAN Settings

IPv6 LAN Address:

IPv6 LAN Prefix Length:

DHCPv6:

DHCPv6 Address Assignment Method:


IPv6 DNS:

Primary IPv6 DNS:

Secondary IPv6 DNS:

Parameter description

Parameter	Description
IPv6 LAN Address	<p>It specifies two types of IPv6 LAN address assignment.</p> <ul style="list-style-type: none">• Auto: The router generates the IPv6 address according to its LAN IP address. By default, the prefix has 64 digits.• Manual: You need to set the IPv6 LAN address manually.
IPv6 LAN Prefix Length	<p>It specifies two types IPv6 LAN prefix address assignment.</p> <ul style="list-style-type: none">• Auto: The router obtains an LAN prefix from the upstream device.• Manual: You need to set the IPv6 LAN prefix manually.
DHCPv6	<p>Dynamic Host Configuration Protocol for IPv6 (DHCPv6) is used to assign IP addresses and prefix to IPv6 hosts on a network. It is the IPv6 equivalent of the DHCP for IPv4. This is also known as a stateful autoconfiguration.</p>
DHCPv6 Address Assignment Method	<p>It specifies the assignment type of IPv6 address information by the DHCPv6 server.</p> <ul style="list-style-type: none">• Auto: Clients obtain their IPv6 address through Router Advertisement (Stateless Address Auto Configuration) and other parameters are allocated by the DHCPv6 server.• Manual: The DHCPv6 server automatically assigns IPv6 addresses/prefixes and other network configuration parameters (for example, DNS server addresses) to clients. The user needs to manually configure the start ID and the end ID.
Start ID	<p>The configuration is required when DHCPv6 Address Assignment Method is set to</p>

Parameter	Description
End ID	<p>Manual.</p> <p>They specify the range of the last segment of the IPv6 address that the DHCPv6 server assigns to the devices. Range: 1-ffff.</p>
IPv6 DNS	<p>It specifies the LAN IPv6 DNS configuration method.</p> <ul style="list-style-type: none"> • Auto: The router obtains the IPv6 DNS address from the upstream device. • Manual: You need to configure the IPv6 DNS address manually.
Primary IPv6 DNS	<p>Enter the fixed IPv6 DNS address provided by your ISP. They are required only when IPv6 DNS is set to Manual.</p>
Secondary IPv6 DNS	<p> TIP</p> <p>If your ISP only provides one DNS server address, you can leave the secondary IPv6 DNS blank.</p>

12

Advanced settings

This chapter describes other settings you may need when using the router, including:

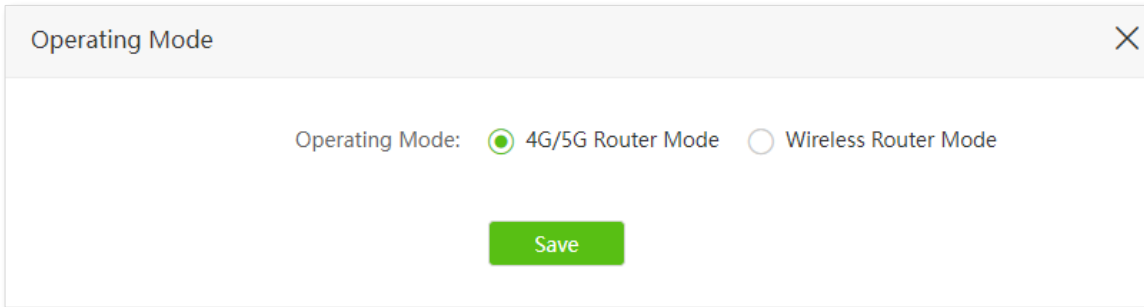
- [Operating mode](#)
- [SIM PIN \(4G/5G wireless router mode\)](#)
- [Mobile data](#)
- [Bandwidth control](#)
- [Sleeping mode](#)
- [LED control](#)
- [Filter MAC address](#)
- [Firewall](#)
- [Static route](#)
- [DDNS](#)
- [Virtual server](#)
- [DMZ host](#)
- [UPnP](#)
- [TR069](#)

12.1 Operating mode

12.1.1 Overview

In addition to providing internet access with a SIM card, the router can also be connected to a broadband. By switching the operating mode, you can access the internet through the corresponding method. The default operating mode is 4G/5G router mode.

To access the configuration page, [log in to the web UI of the router](#) and navigate to **Advanced Settings > Operating Mode**.



To access the internet:

- 4G/5G router mode: Refer to the quick installation guide or [Access the internet with a SIM card](#).
- Wireless router mode: Refer to [Access the internet through the WAN port](#).

12.1.2 Set the router to wireless router mode

If you have already used the router and is able to [access the web UI](#), navigate to **Advanced Settings > Operating Mode** to change the operating mode.

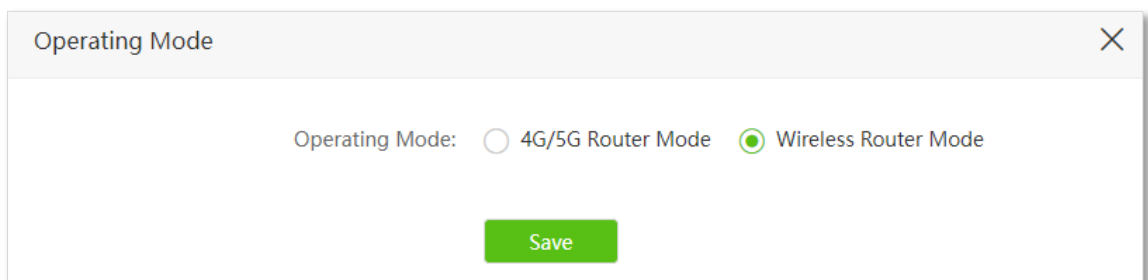
If you are using the router for the first time, or the router is reset to factory settings, follow the steps below to set the router to wireless router mode.

Configuration procedure:

Step 1 [Log in to the web UI of the router](#).

Step 2 Set the router to wireless router mode.

1. Choose **Advanced Settings > Operating Mode**.
2. Select **Wireless Router Mode**, and click **Save**.



---End

After rebooting, the router is set to wireless router mode.

12.2 SIM PIN (4G/5G wireless router mode)

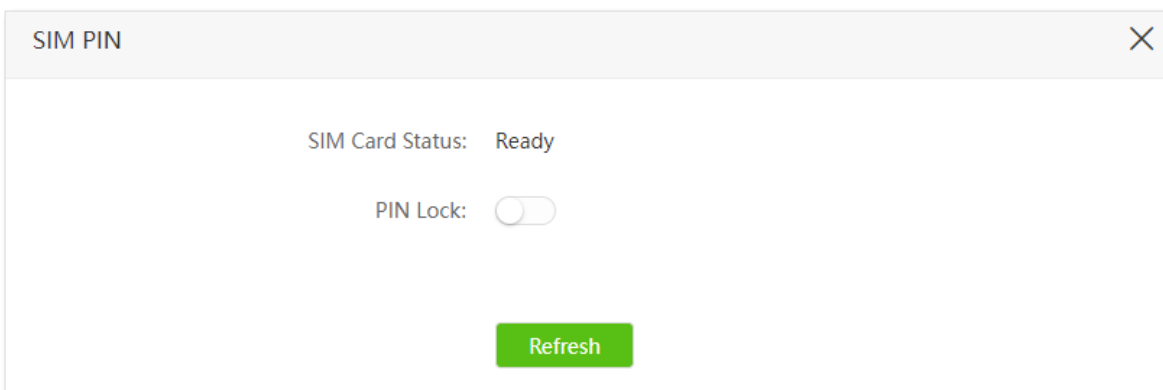


This function is only available under the 4G/5G router mode. Refer to [Operating mode](#) to set the operating mode of the router.

SIM PIN is a protective measure to prevent your SIM card from misuse. If your SIM card is locked when you insert it into the router, you are required to unlock it for internet access. You can also enable the PIN lock and specify a PIN code for an unlocked SIM card.

To access the SIM PIN setting page, [log in to the web UI of the router](#) and navigate to **Advanced Settings > SIM PIN**.

When the SIM card is not set with PIN code, the page is shown as below.



The PIN code can be set and changed by users. Contact your ISP for the original PIN code or other help.

12.2.1 Unlock the SIM card

If you want to use a locked SIM card to access the internet, you need to unlock it first.

Unlock the SIM card in the quick setup wizard

When you use the router for the first time or the router is reset, you are required to unlock the SIM card in the quick setup wizard.

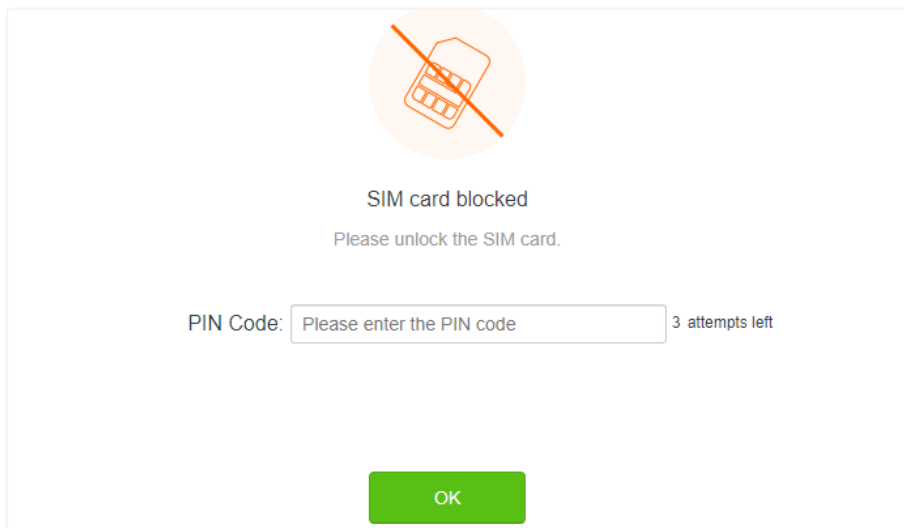
Configuration procedure:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Click **Start**.



Step 3 Enter the **PIN Code**, and click **OK**.



You can only try the PIN code for 3 times. If you fail all, you have to use PUK code to reset the PIN code. Contact your ISP for the PUK code. Otherwise the SIM card may be locked permanently after entering the wrong PUK code for 10 times.

Step 4 Follow the steps to complete the setup process.

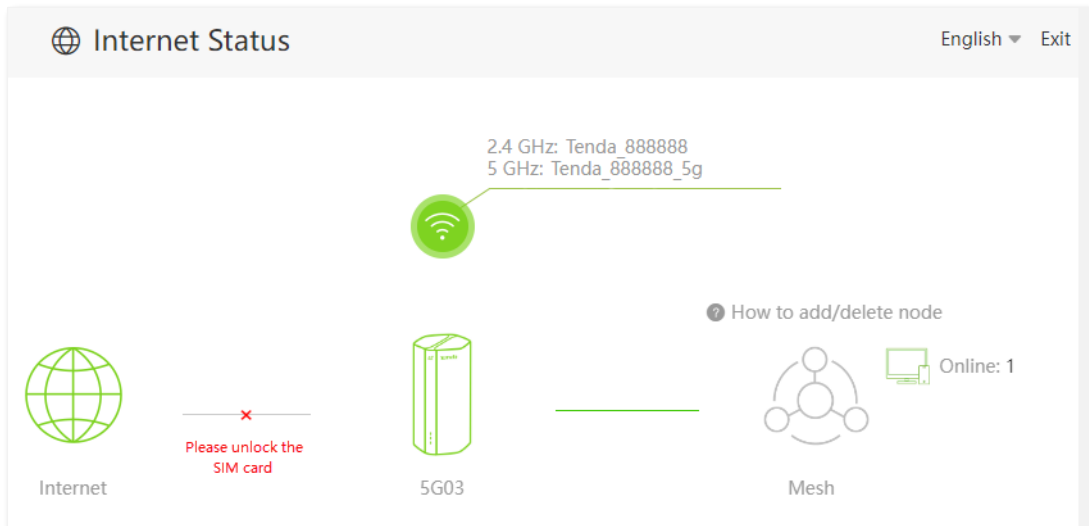
---End

Unlock the SIM in the web UI

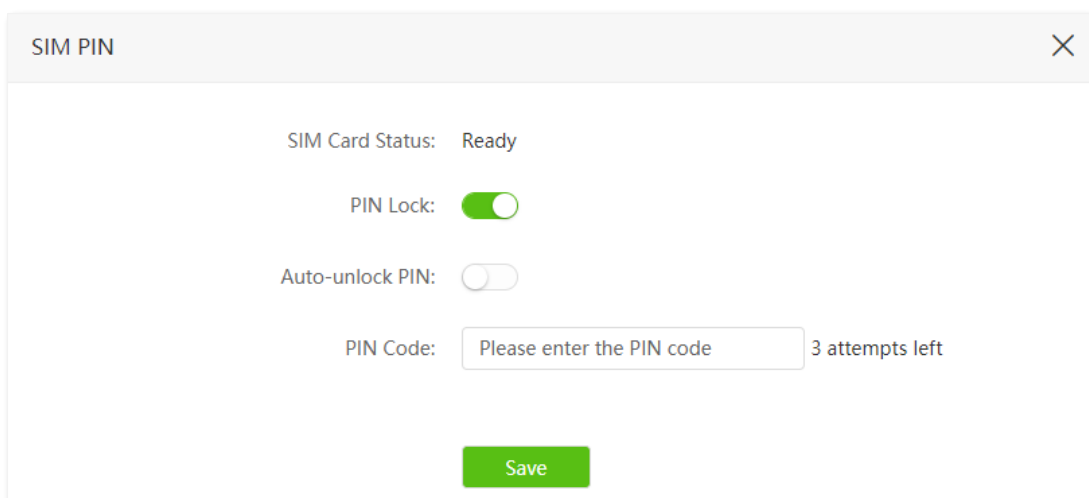
You can also unlock the SIM card when you already can access the web UI of the router.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Click **Please unlock the SIM card**, or navigate to **Advanced Settings > SIM PIN**.



- Step 3** Enter the **PIN Code**, and click **Save**.



NOTE

- You can only try the PIN code for 3 times. If you fail all, you have to use PUK code to reset the PIN code. Contact your ISP for the PUK code. Otherwise the SIM card may be locked permanently after you enter the wrong PUK code for 10 times.
- When **Auto-unlock PIN** is enabled, the router will unlock the SIM card automatically each time the router completes rebooting (the PIN code is still required after resetting).

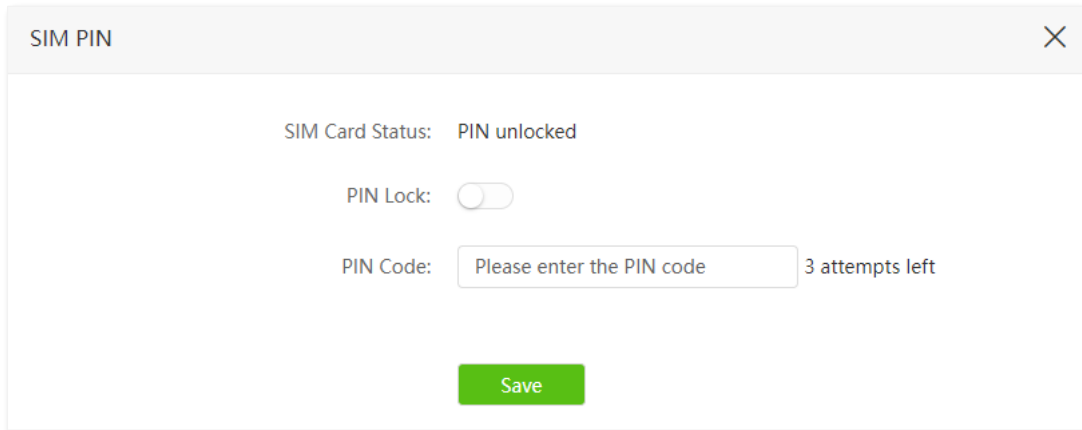
---End

12.2.2 Disable PIN lock for the SIM card

After the PIN lock for the SIM card is disabled, your SIM card will not be protected by PIN lock.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Advanced Settings > SIM PIN**.
- Step 3** Disable **PIN Lock**.
- Step 4** Enter the original **PIN Code**, and click **Save**.



SIM PIN

SIM Card Status: PIN unlocked

PIN Lock:

PIN Code: 3 attempts left

Save

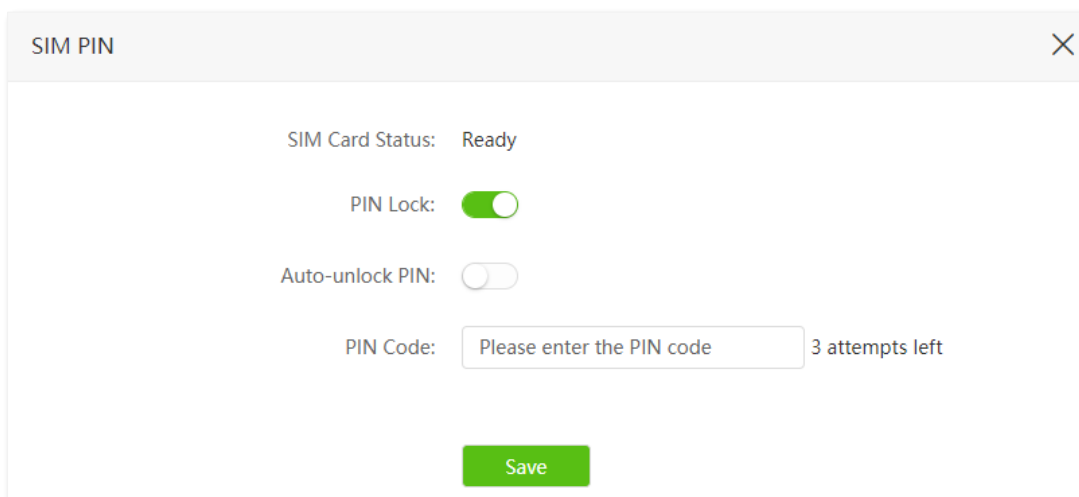
---End

12.2.3 Set a PIN code for the SIM card

You can also set a PIN code for a SIM card without PIN code.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Enable **PIN Lock**.
- Step 3** Specify a **PIN Code**, and click **Save**.



SIM PIN

SIM Card Status: Ready

PIN Lock:

Auto-unlock PIN:

PIN Code: 3 attempts left

Save



When **Auto-unlock PIN** is enabled, the router will unlock the SIM card automatically each time the router completes rebooting (the PIN code is still required after resetting).

---End

12.2.4 Change the PIN code of SIM card

To change the PIN code of the SIM card, [disable the PIN code of SIM card](#) first, then [set a PIN code for the SIM card](#).

12.3 Mobile data



This function is only available under the 4G/5G router mode. Refer to [Operating mode](#) to set the operating mode of the router.

12.3.1 Overview

You can view and update data usage statistics, and configure data usage settings, such as data usage limit and usage alert.

To access the configuration page, [log in to the web UI of the router](#) and choose **Advanced Settings > Mobile Data**.

Mobile Data ✕

Total Used: 198.251 MB

This usage statistic is for reference. You can send messages to your ISP to inquire the accurate usage statistic and update it here manually.

Data Limit:

The router automatically disconnects from the internet when the data limit is reached.

Monthly Allowance: GB

Usage Alert: 80%

SMS Alert of Usage:

Note: This function may cause SMS charges.

Monthly Data Statistics:

Start Date:

The statistics refreshes only if the system time is synchronized with the internet time. Please navigate to System Settings > Time Settings to sync.

Parameter description

Parameter	Description
Total Used	<p>It specifies the total data traffic that has been used. You can correct it by consulting you ISP and clicking Update to change it manually.</p> <p>When the Monthly Data Statistics function is enabled, the router will clear the number at the date specified in Start Date.</p>
Data Limit	<p>It is used to enable or disable the data limit function. When the function is enabled and the limit is reached, the router will disconnect from the internet automatically.</p>
Monthly Allowance	<p>It is required only when Data Limit is enabled.</p> <p>It specifies the specific maximum data usage allowed for each month.</p>
Usage Alert	<p>It is required only when Data Limit is enabled.</p> <p>It specifies when an alert will be sent. When the percentage of data traffic used reaches the limit, the router will send an alert SMS message to a specified phone number.</p>
SMS Alert of Usage	<p>It is required only when Data Limit is enabled.</p> <p>It specifies the phone number for receiving the alert SMS message.</p> <p>You can click Sent Test Message to test the phone number you entered.</p>
Monthly Data Statistics	<p>It is used to enable or disable the Monthly Data Statistics. When it is enabled, the router will clear the number of Total Used at the date specified in Start Date.</p>
Start Date	<p>It is required only when Monthly Data Statistics is enabled.</p> <p>It specifies the date at which the router clears the data statistics of the last month and start to record in the following month.</p>

12.3.2 Example of mobile data configurations

Scenario: You inserted a SIM card in the router to provide mobile internet access for your smartphone, iPad and laptop.

Goal: You want to receive SMS message alert on your smartphone and get prepared when the usage reaches a certain amount every month.

Solution: You can configure mobile data settings to reach the goal.

Assume that:

- Available data traffic: 10 GB
- Start date of data usage record: 1st each month
- Smartphone number: 188****5555
- Alert percentage: 80%

Configuration procedure:

Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Advanced Settings > Mobile Data**.

- Step 3** (Optional) Click **Update** to update the current usage data in **Total Used**.
- Step 4** Enable **Data Limit**.
- Step 5** Enter **10** in **Monthly Allowance**, and choose **GB** in the drop-down box.
- Step 6** Set **Usage Alert** to **80 %**.
- Step 7** Enter **188****5555** in **SMS Alert of Usage**.
- Step 8** Enable **Monthly Data Statistics**.
- Step 9** Enter **1** in Start Date.
- Step 10** Click **Save**.

Mobile Data
✕

Total Used: 198.251 MB Update

This usage statistic is for reference. You can send messages to your ISP to inquire the accurate usage statistic and update it here manually.

Data Limit:

The router automatically disconnects from the internet when the data limit is reached.

Monthly Allowance: GB ▾

Usage Alert: 80%

SMS Alert of Usage: Send Test Message

Note: This function may cause SMS charges.

Monthly Data Statistics:

Start Date:

The statistics refreshes only if the system time is synchronized with the internet time. Please navigate to System Settings > Time Settings to sync.

Save

---End

After completing the configuration, you will receive a SMS message when the data traffic usage reached 8 GB and cannot access the internet through the router when the data traffic usage reached 10 GB.



TIP

If you want to connect to the internet again after the data limit is reached, try the following methods:

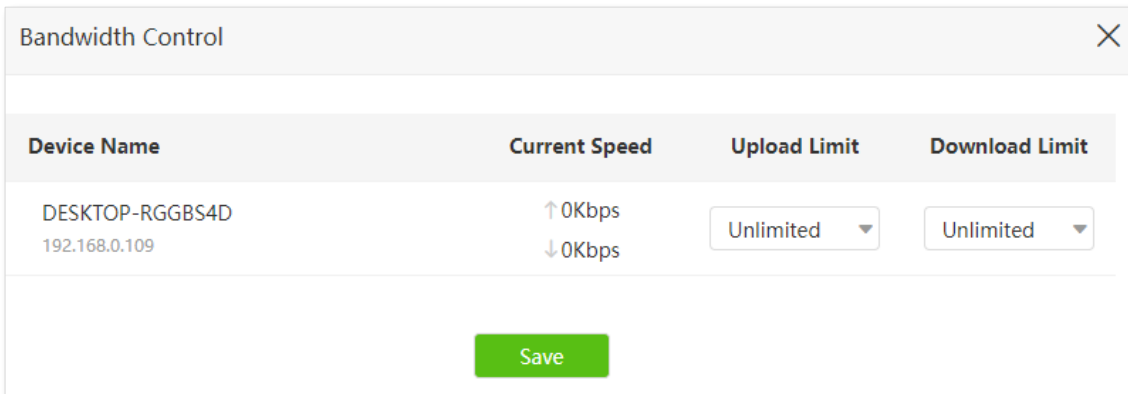
- Change the **Total Usage** by clicking **Update**.
 - Disable **Data Limit**.
 - Navigate to **Internet Settings**, and click **Connect** at the bottom of the page.
-

12.4 Bandwidth control

12.4.1 Overview

By configuring this function, you can limit the upload and download speed of devices connected to the router and allocate the bandwidth reasonably.

To access the configuration page, log in to the web UI of the router and choose **Advanced Settings > Bandwidth Control**.



Device Name	Current Speed	Upload Limit	Download Limit
DESKTOP-RGGBS4D 192.168.0.109	↑ 0Kbps ↓ 0Kbps	Unlimited	Unlimited

Save

Parameter description

Parameter	Description
Device Name	It specifies the name and IP address of the device. You can click the device name to change it.
Current Speed	It specifies the current upload and download speed of the device.
Upload Limit	They specify the upload and download speed limit for the device. You can click the drop-down box to set it as required.
Download Limit	

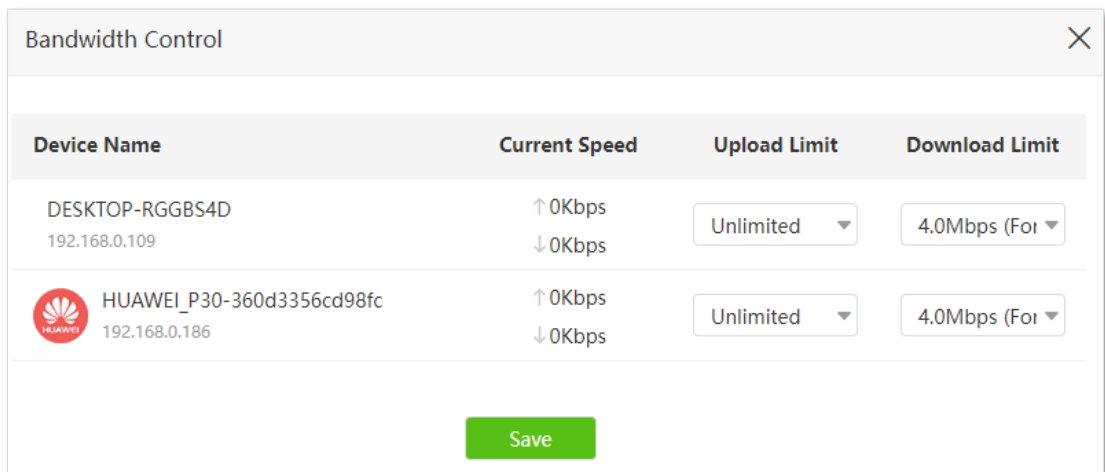
12.4.2 Set the upload and download speed limit for users

Scenario: You want to allocate bandwidth equally among connected devices and enable all connected devices to enjoy smooth 720p videos.

Solution: Configure the bandwidth control function to meet the requirement.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Advanced Settings > Bandwidth Control**.
- Step 3** Target the devices to be controlled, and set the **Download Limit** to **4.0 Mbps (For HD Video)**.
- Step 4** Click **Save**.



---End

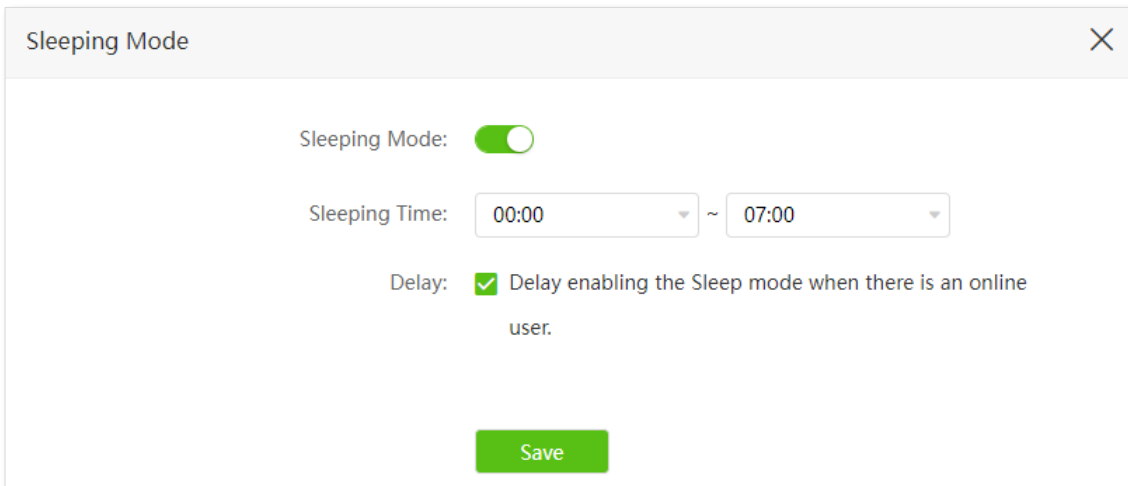
After the configuration, the highest speed for the devices is 4 Mbps (or 512 KB/s) and the requirement of 720p videos is met.

12.5 Sleeping mode

When the sleeping mode function is enabled, the router turns off its LED indicators and disables the Wi-Fi network during the specified period.

To access the configuration page, [log in to the web UI of the router](#), and choose **Advanced Settings > Sleeping Mode**.

This function is disabled by default. When it is enabled, the page is shown as below.



Sleeping Mode


Sleeping Mode:

Sleeping Time: 00:00 ~ 07:00

Delay: Delay enabling the Sleep mode when there is an online user.

Save

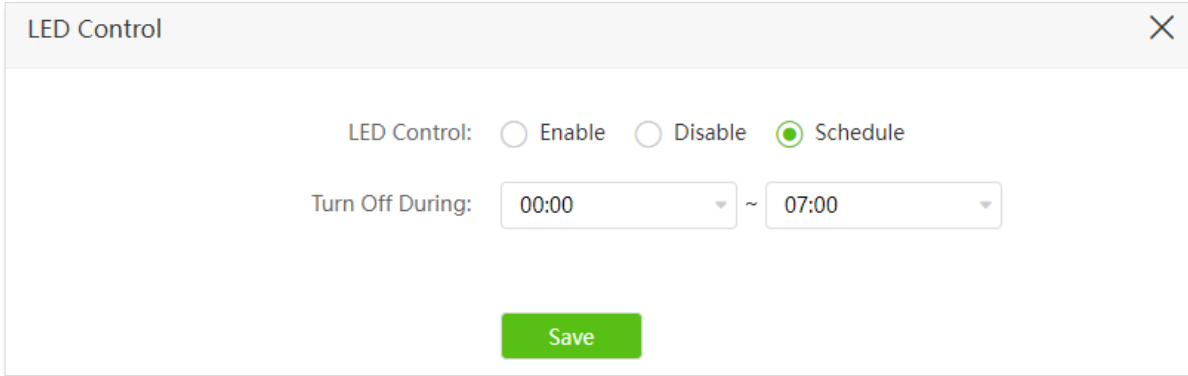
Parameter description

Parameter	Description
Sleeping Mode	It is used to enable or disable the sleeping mode.
Sleeping Time	<p>It specifies the period during which the router is under the sleeping mode.</p> <p> TIP</p> <p>If the start time you set is greater than the end time, the sleeping time starts from the start time to the end time on second day. For example, if you set Sleeping Time to 08:00~06:25, it indicates that the sleeping time starts from 08:00 to 06:25 on the second day.</p>
Delay	<p>It is used to enable or disable the Delay function.</p> <ul style="list-style-type: none">• Ticked: The function is enabled. During the sleeping time, if there is any user connected to the router and the traffic over the router's WAN port exceeds 3 KB/s within 30 minutes, the router will delay entering the sleeping mode. If there is no user connected to the router and the traffic over the router's WAN port is slower than 3 KB/s within 3 minutes, the router will enter the sleeping mode.• Unticked: The function is disabled. The router enters the sleeping mode during the sleeping time.


12.6 LED control

With the LED control function, you can control the status of the LED indicators.

To access the configuration page, [log in to the web UI of the router](#), and choose **Advanced Settings > LED Control**.



Parameter description

Parameter	Description
Enable	All LED indicators stay in their normal status.
Disable	All LED indicators are turned off.
Schedule	LED indicators are only turned off during the period specified in Turn Off During .
Turn Off During	It is required only when Schedule is selected.
	It specifies the period during which the LED indicators are turned off.
	 TIP
	If the start time you set is greater than the end time, the schedule starts from the start time to the end time on second day. For example, if you set Turn Off During to 08:00~06:25 , it indicates that the schedule starts from 08:00 to 06:25 on the second day.

12.7 Filter MAC address

12.7.1 Overview

This function enables you to add devices to the whitelist or blacklist to enable or disable specified users to access the internet through the router.



The blacklist rules on the MAC filter page prevails when conflicting with parental control rules, while parental control rules prevail when conflicting with the whitelist rules on the MAC filter page.

To access the configuration page, [log in to the web UI of the router](#), and choose **Advanced Settings > Filter MAC address**.

Blacklisted Device	MAC Address	Operation
<input type="text"/>	<input type="text"/>	+ Add

Parameter description

Parameter	Description
MAC Address Filter Mode	<p>It specifies the MAC address filter mode.</p> <ul style="list-style-type: none">• Blacklist: Wireless devices listed are unable to connect to the Wi-Fi network of the router, and wired devices listed are unable to access the internet.• Whitelist: Wireless devices listed can connect to the Wi-Fi network of the router, and wired devices listed can access the internet. <p> A maximum of 30 blacklist or whitelist rules can be added respectively.</p>
Blacklisted Device	They specify the name or remark for the device.
Whitelisted Device	
MAC Address	It specifies the MAC address of device added to the list.

Parameter	Description
Operation	<div style="display: flex; align-items: center;"> + Add : It is used to add new devices to the blacklist or whitelist. </div> <div style="display: flex; align-items: center; margin-top: 5px;"> 🗑️ : It is used to remove devices from the blacklist or whitelist. </div>
Add all online devices to the whitelist	It is only available when you set the whitelist for the first time. By clicking it, you can add all currently connected devices to the whitelist.

12.7.2 Example of only allowing specified device to access the internet

Scenario: The Wi-Fi in your home is misused by unknown users sometimes.

Goal: Only allow certain devices of family members to access the internet.

Solution: You can configure the MAC address filter function to reach the goal.

Assume that:

Device	MAC address	Status
Your own phone	8C:EC:4B:B3:04:92	Connected
Kid's phone	94:C6:91:29:C2:12	Disconnected

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **Advanced Settings > Filter MAC Address**.
- Step 3** Set the **MAC Address Filter Mode** to **Whitelist**.
- Step 4** (Optional) Enter the device name in the **Whitelist Device** field, which is **Kid's phone** in this example.
- Step 5** Enter the **MAC Address** of the device, which is **94:C6:91:29:C2:12** in this example.
- Step 6** Click **+Add**.

Filter MAC Address
✕

MAC Address Filter Mode:

Blacklist(To disallow listed devices to access the internet)

Whitelist(To allow only the listed devices to access the internet)

Whitelisted Device	MAC Address	Operation
<input type="text" value="Kid's phone"/>	<input type="text"/>	+ Add
DESKTOP-RGGBS4D	██████████	Local Host

Save

Step 7 Click **Save**.

Filter MAC Address ✕

MAC Address Filter Mode: Blacklist (To disallow listed devices to access the internet)
 Whitelist (To allow only the listed devices to access the internet)

Whitelisted Device	MAC Address	Operation
<input type="text"/>	<input type="text"/>	+ Add
DESKTOP-RGGBS4D	██████████	Local Host
Kid's phone	94:C6:91:29:C2:12	

[Add all online devices to the whitelist](#)

Save

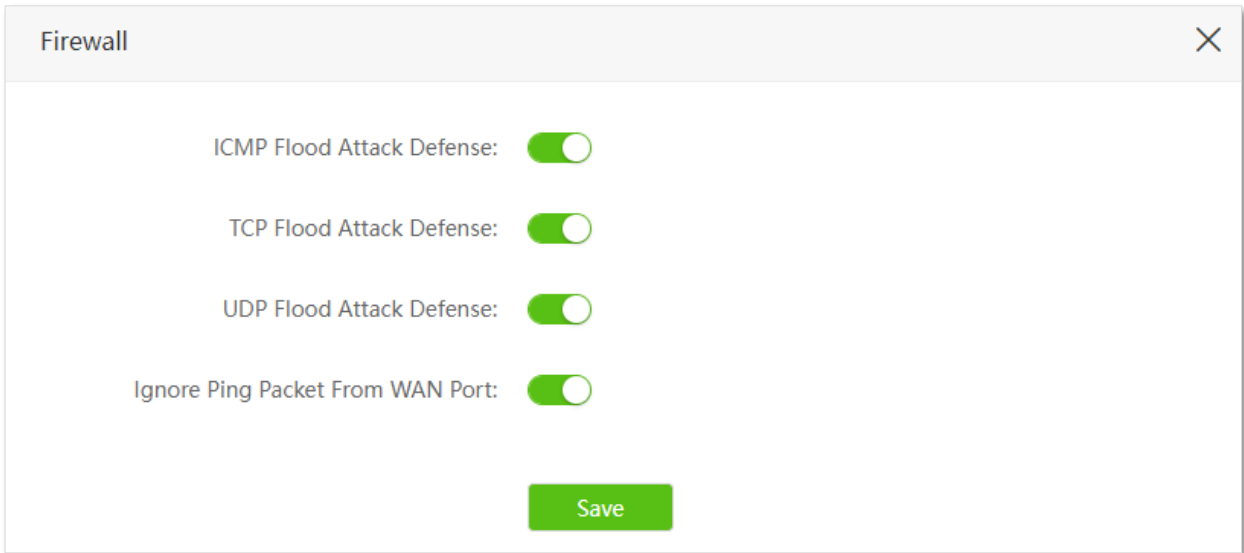
---End

When configuration is completed, only the devices added are able to access the internet through the router.

12.8 Firewall

The firewall function helps the router detect and defend ICMP flood attack, TCP flood attack and UDP flood attack, and ignore Ping packet from WAN port. It is recommended to keep the default settings.

To access the configuration page, log in to the web UI of the router, and choose **Advanced Settings > Firewall**.



Firewall

ICMP Flood Attack Defense:

TCP Flood Attack Defense:

UDP Flood Attack Defense:

Ignore Ping Packet From WAN Port:

Save

Parameter description

Parameter	Description
ICMP Flood Attack Defense	<p>It is used to enable or disable the ICMP flood attack defense.</p> <p>The ICMP flood attack means that, to implement attacks on the target host, the attacker sends a large number of ICMP Echo messages to the target host, which causes the target host to spend a lot of time and resources on processing ICMP Echo messages, but cannot process normal requests or responses.</p>
TCP Flood Attack Defense	<p>It is used to enable or disable the TCP flood attack defense.</p> <p>The TCP flood attack means that, to implement attacks on the target host, the attacker quickly initiates a large number of TCP connection requests in a short period of time, and then suspends in a semi-connected state, thereby occupying a large amount of server resources until the server denies any services.</p>
UDP Flood Attack Defense	<p>It is used to enable or disable the UDP flood attack defense.</p> <p>The UDP flood attack is implemented in a similar way with ICMP flood attack, during which the attacker sends a large number of UDP packets to the target host, causing the target host to be busy processing these UDP packets, but unable to process normal packet requests or responses.</p>
Ignore Ping Packet From WAN Port	<p>It is used to enable or disable the Ignore Ping packet from WAN Port function.</p> <p>When it is enabled, the router automatically ignores the ping to its WAN from hosts from the internet and prevent itself from being exposed, while preventing external ping attacks.</p>

12.9 Static route

12.9.1 Overview



Routing is the act of choosing an optimal path to transfer data from a source address to a destination address. A static route is a special route that is manually configured and has the advantages of simplicity, efficiency, and reliability. Proper static routing can reduce routing problems and overload of routing data flow, and improve the forwarding speed of data packets.

A static route is set by specifying the target network, subnet mask, default gateway, and interface. The target network and subnet mask are used to determine a target network or host. After the static route is established, all data whose destination address is the destination network of the static route are directly forwarded to the gateway address through the static route interface.

To access the configuration page, [log in to the web UI of the router](#), and choose **Advanced Settings > Static Route**.

Destination Network	Subnet Mask	Gateway	Port	Operation
<input type="text"/>	<input type="text"/>	<input type="text"/>	WAN	<input type="button" value="+ Add"/>
192.168.0.0	255.255.255.0	0.0.0.0	LAN	System

Parameter description

Parameter	Description
Destination Network	<p>It specifies the IP address of the destination network.</p> <p>If Destination Network and Subnet Mask are both 0.0.0.0, this is the default route.</p> <p> TIP</p> <p>When the route of packets cannot be found in the routing table, the router will forward the packets using the default route.</p>
Subnet Mask	<p>It specifies the subnet mask of the destination network.</p>
Gateway	<p>It specifies the ingress IP address of the next hop route after the data packet exits from the interface of the router.</p> <p>0.0.0.0 indicates that the destination network is directly connected to the router.</p>
Port	<p>It specifies the interface that the packet exits from.</p>
Operation	<p><input type="button" value="+ Add"/> : It is used to add a static route rule.</p> <p> : It is used to delete a static route rule.</p>

12.9.2 Example of adding a static route rule

Scenario: You have a 5G03 and another two routers. Router1 is connected to the internet and its DHCP server is enabled. Router2 is connected to an intranet and its DHCP server is disabled.

Goal: You are able to access both the internet and intranet at the same time.

Solution: You can configure the static route function to reach the goal.



TIP

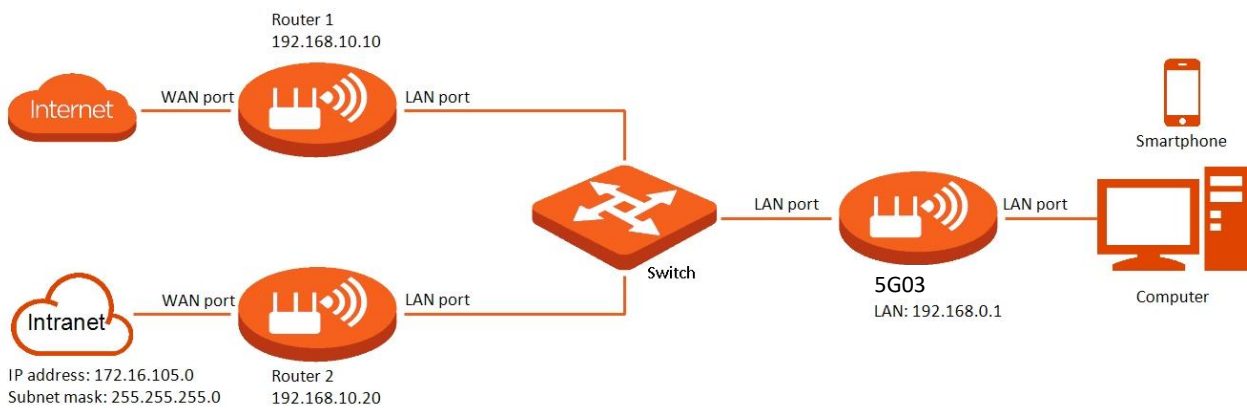
This scenario and solution is only applicable when the router is under wireless router mode.

Assume the LAN IP addresses of these devices are:

- 5G03: 192.168.0.1
- Router1: 192.168.10.10
- Router2: 192.168.10.20

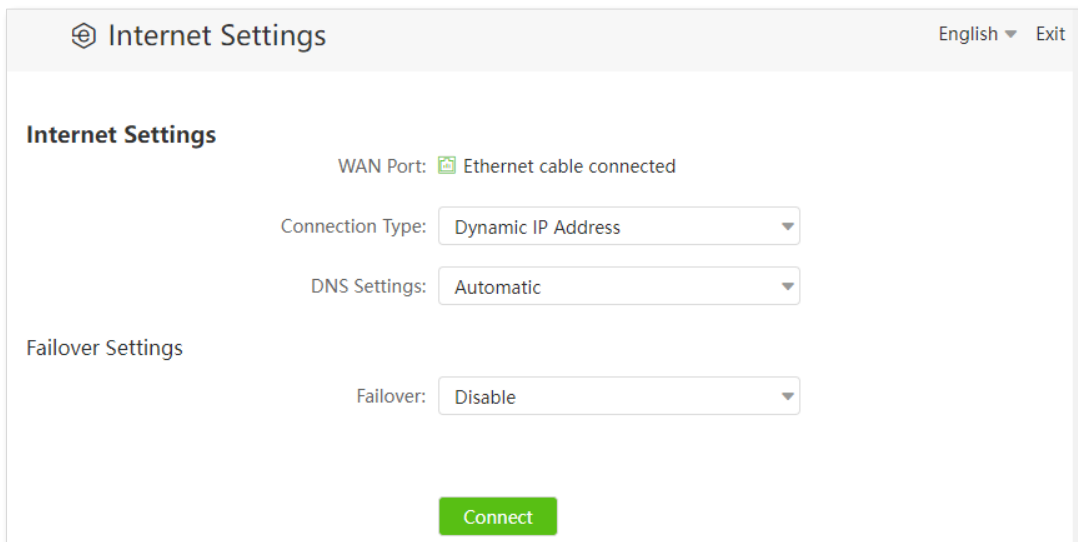
The information about the intranet:

- IP address: 172.16.105.0
- Subnet mask: 255.255.255.0



Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit tendawifi.com to log in to the web UI of the router.
- Step 2** Refer to [Access the internet through a dynamic IP address](#) to configure the internet access for 5G03.



Step 3 Add a static route rule on 5G03.

1. Choose **Advanced Settings > Static Route**.
2. Enter the IP address of the destination network, which is **172.16.105.0** in this example.
3. Enter the subnet mask of the destination network, which is **255.255.255.0** in this example.
4. Enter the ingress IP address of the next hop route, which is **192.168.10.20** in this example.
5. Click **+Add**.



---End

When completing the configurations, you can access both the internet and intranet through 5G03 at the same time.

12.10 DDNS

12.10.1 Overview

DDNS normally interworks with [virtual server](#), [DMZ host](#) and remote management, so that the internet users can be free from the influence of dynamic WAN IP address and access the internal server or the router's web UI with a fixed domain name.

To access the configuration page, [log in to the web UI of the router](#), and choose **Advanced Settings > DDNS**.

DDNS configuration page showing the following settings:

- DDNS:
- Service Provider: [Register](#)
- User Name:
- Password:
- Domain Name:
- Connection Status: Disconnected

Parameter description

Parameter	Description
DDNS	It is used to enable or disable the DDNS function.
Service Provider	It specifies the DDNS service provider.
User Name	They specify the user name and password registered on a DDNS service provider's website for logging in to the DDNS service.
Password	
Domain Name	It specifies the domain name registered on the DDNS service provider's website. If this field is invisible after choosing the service provider, it is not required.
Connection Status	It specifies the current connection status of the DDNS service.

12.10.2 Example of enabling internet users to access LAN resources using a domain name

Scenario: You have set up an FTP server within your LAN.

Goal: Open the FTP server to internet users and enable family members who are not at home to access the resources of the FTP server from the internet using a domain name.

Solution: You can configure the DDNS plus virtual server functions to reach the goal.

Assume that the information of the FTP server includes:

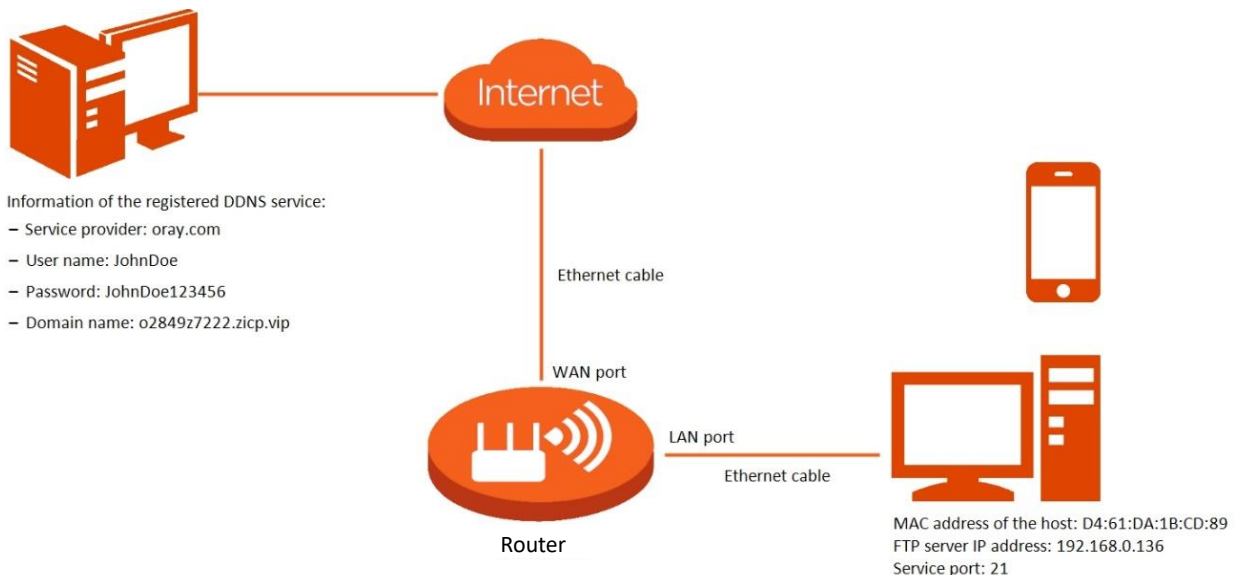
- IP address: 192.168.0.136
- MAC address of the host: D4:61:DA:1B:CD:89
- Service port: 21

The information of the registered DDNS service:

- Service provider: oray.com
- User name: JohnDoe
- Password: JohnDoe123456
- Domain name: o2849z7222.zicp.vip

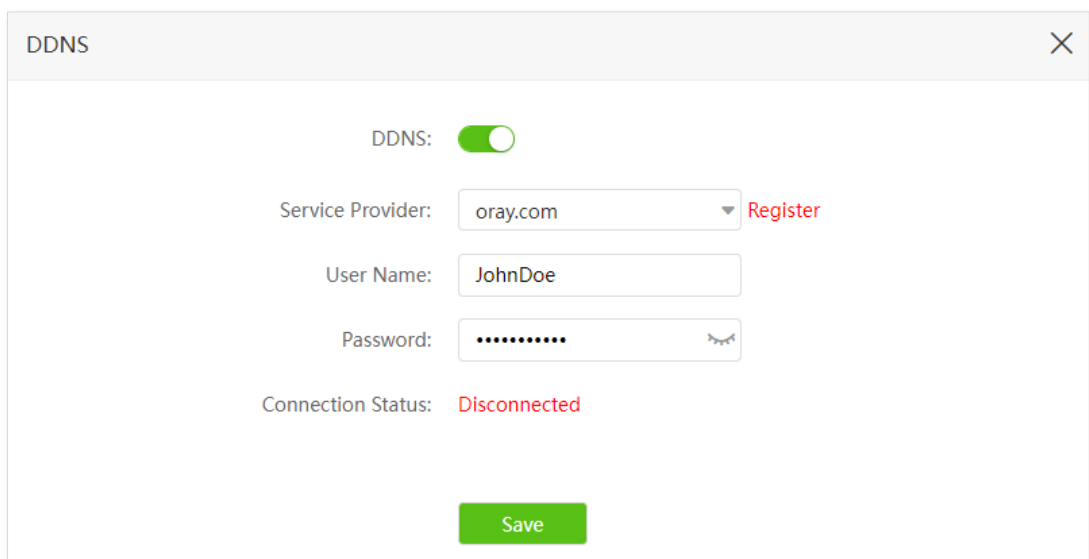


Ensure that router obtains an IP address from the public network. This function may not work on a host with an IP address of a private network or an intranet IP address assigned by ISPs that start with 100. Common IPv4 addresses are classified into class A, class B and class C. Private IP addresses of class A range from 10.0.0.0 to 10.255.255.255. Private IP addresses of class B range from 172.16.0.0 to 172.31.255.255. Private IP addresses of class C range from 192.168.0.0 to 192.168.255.255.



Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Configure the DDNS function.
1. Choose **Advanced Settings > DDNS**.
 2. Enable the **DDNS** function.
 3. Choose a service provider, which is **oray.com** in this example.
 4. Enter the user name and password, which are **JohnDoe** and **JohnDoe123456** in this example.
 5. Click **Save**.

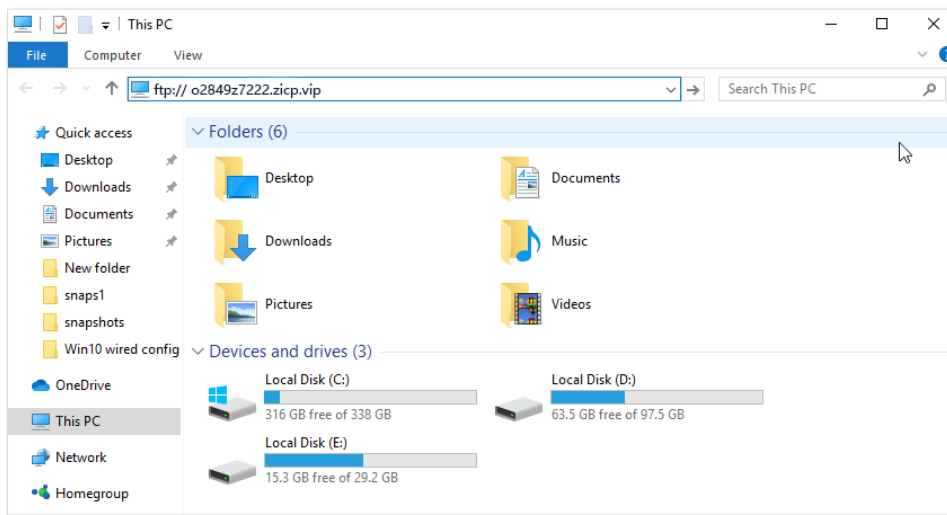


Wait a moment, when **Connection Status** turns **Connected**, the configurations succeed.

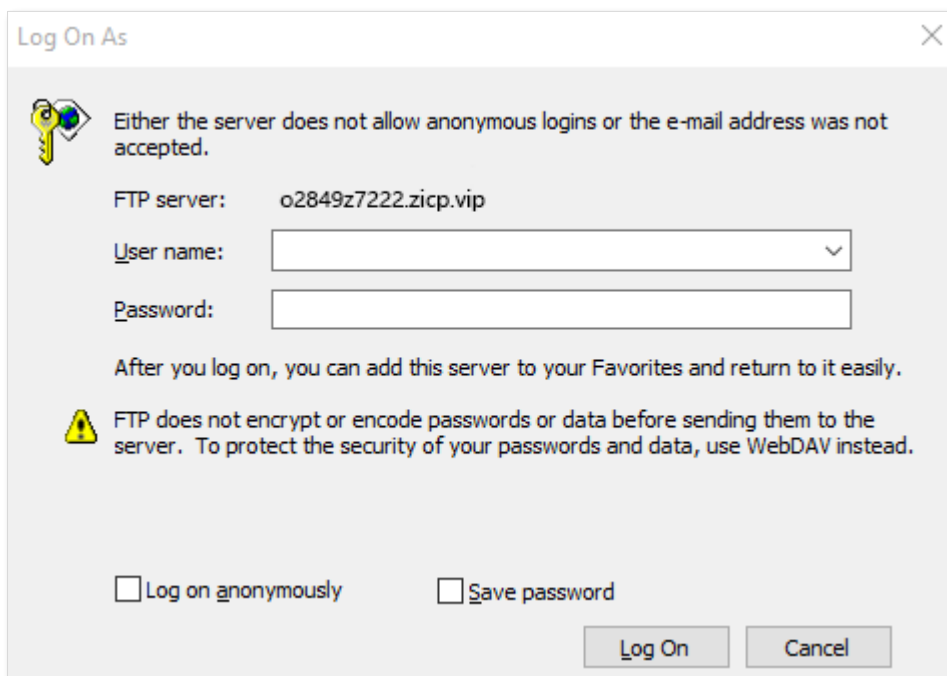
- Step 3** Configure the virtual server function (refer to [Virtual server](#))

---End

When completing the configurations, users from the internet can access the FTP server by visiting “*Intranet service application layer protocol name://the domain name*”. If the WAN port number is different from the default intranet service port number, the visiting address should be: “*Intranet service application layer protocol name://the domain name:WAN port number*”. In this example, the address is **ftp://o2849z7222.zicp.vip**.



Enter the user name and password to access the resources on the FTP server.



After the configurations, if internet users still cannot access the FTP server, try the following methods:

- Ensure that the LAN port number configured in the virtual server function is the same as the service port number set on the server.
- Close the firewall, antivirus software and security guards on the host of the FTP server and try again.

12.11 Virtual server

12.11.1 Overview

By default, internet users cannot actively access the LAN of the router.

The virtual server function opens a port of the router, and binds the LAN server to the port using the server's IP address and intranet service port. All access requests to the WAN port of the router will be directed to the server. Therefore, the server within the LAN can be accessed by internet users and the LAN can be free from attacks from the internet.

For example, the virtual server function enables internet users to access web servers or FTP servers within the LAN.

To access the configuration page, [log in to the web UI of the router](#), and choose **Advanced Settings > Virtual Server**. A maximum of 16 virtual server addresses can be added here.

Internal IP Address	LAN Port	WAN Port	Protocol	Operation
<input type="text"/>	21	<input type="text"/>	TCP	+ Add

Parameter description

Parameter	Description
Internal IP Address	It specifies the IP address of the server within the LAN of the router.
LAN Port	It specifies the service port number of the server under the LAN of the router. You can either choose a service port number in the drop-down list box, or enter a service port number manually.
WAN Port	It specifies the port of the router which is opened and accessible to internet users.
Protocol	It specifies the transport layer protocol of the service. If you are not sure about this parameter, TCP&UDP is recommended.
Operation	<input type="button" value="+ Add"/> : It is used to add a new virtual server rule. : It is used to delete an existing virtual server rule.

12.11.2 Example of enabling internet users to access LAN resources

Scenario: You have set up an FTP server within your LAN.

Goal: Open the FTP server to internet users and enable family members who are not at home to access the resources of the FTP server from the internet.

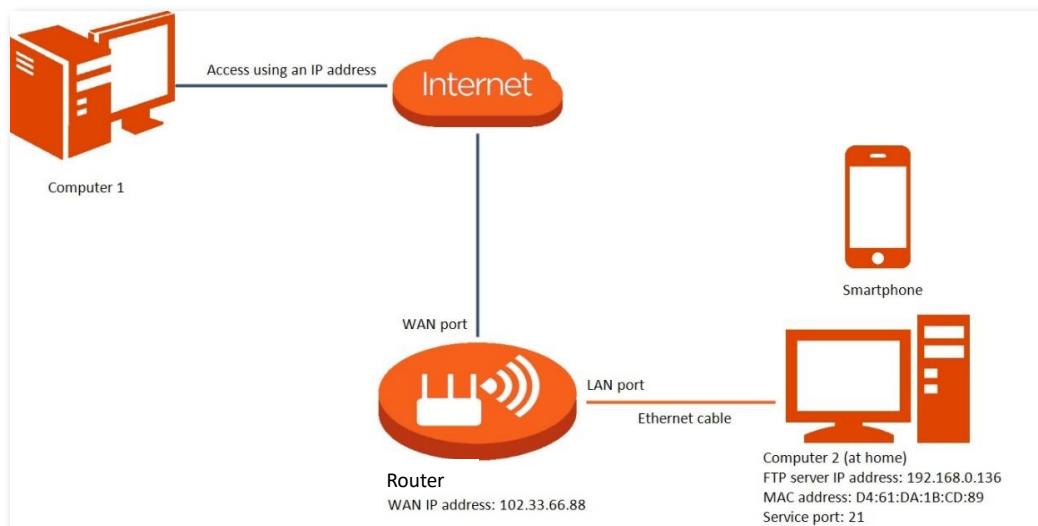
Solution: You can configure the virtual server function to reach the goal.

Assume that the information of the FTP server includes:

- IP address: 192.168.0.136
- MAC address: D4:61:DA:1B:CD:89
- Service port: 21
- The WAN IP address of the router: 102.33.66.88.



- Ensure that router obtains an IP address from the public network. This function may not work on a host with an IP address of a private network or an intranet IP address assigned by ISPs that start with 100. Common IPv4 addresses are classified into class A, class B and class C. Private IP addresses of class A range from 10.0.0.0 to 10.255.255.255. Private IP addresses of class B range from 172.16.0.0 to 172.31.255.255. Private IP addresses of class C range from 192.168.0.0 to 192.168.255.255.
- ISPs may block unreported web services to be accessed with the default port number 80. Therefore, if the default LAN port number is 80, change it to an uncommon port number (1024–65535) manually, such as 9999.
- The LAN port number can be different from the WAN port number.



Configuration procedure:

Step 1 Start a web browser on a device connected to the router and visit tendawifi.com to log in to the web UI of the router.

Step 2 Add a virtual server rule.

1. Choose **Advanced Settings > Virtual Server**.

2. Enter the **Internal IP Address**, which is **192.168.0.136** in this example.
3. Set **LAN Port** and **WAN Port**, which are **21** in this example.
4. Choose a **Protocol**, which is **TCP&UDP** in this example.
5. Click **+Add**.

Internal IP Address	LAN Port	WAN Port	Protocol	Operation
192.168.0.136	21	21	TCP&UD	+ Add

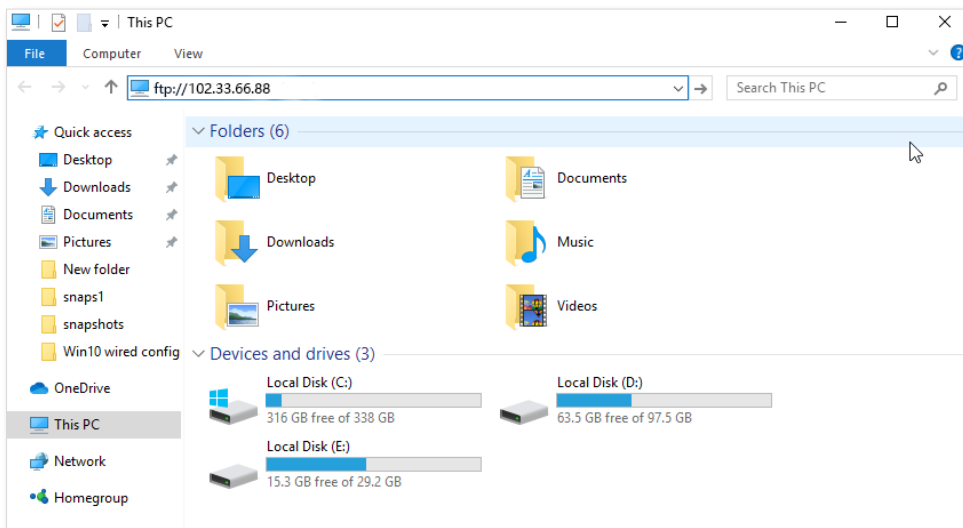
Step 3 Assign a fixed IP address to the host where the server locates.

1. Choose **System Settings > DHCP Reservation**.
2. Specify **Device Name** for the host of the server, which is **FTP server** in this example.
3. Enter the **MAC Address** of the host of the server, which is **D4:61:DA:1B:CD:89** in this example.
4. Enter the **IP Address** of host of the server, which is **192.168.0.136** in this example.
5. Click **+Add**.

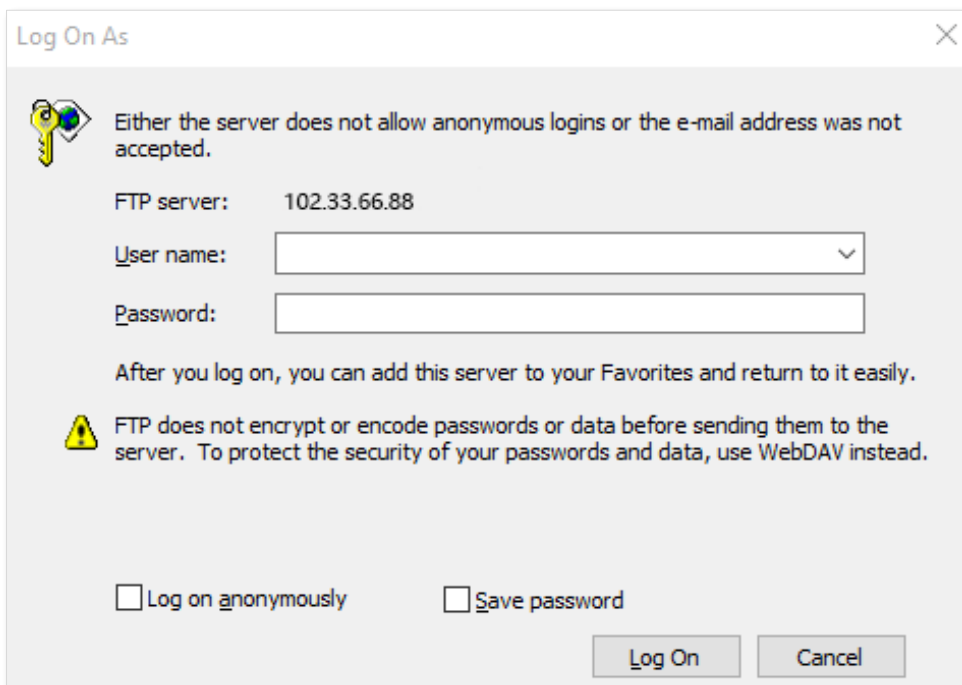
Device Name	MAC Address	IP Address	Status	Operation
Optional			---	+ Add
FTP server	D4:61:DA:1B:CD:89	192.168.0.136		
DESKTOP-RGGBS4D		192.168.0.109		

---End

When completing the configurations, users from the internet can access the FTP server by visiting *"Intranet service application layer protocol name://WAN IP address of the router"*. If the WAN port number is not the same as the default intranet service port number, the visiting address should be: *"Intranet service application layer protocol name://WAN IP address of the router:WAN port number"*. In this example, the address is **"ftp://102.33.66.88"**. You can find the WAN IP address of the router in [View system information](#).



Enter the user name and password to access the resources on the FTP server.



If you want to access the server within a LAN using a domain name, refer to the solution [DDNS + Virtual server](#).



After the configurations, if internet users still cannot access the FTP server, try the following methods:

- Ensure that the LAN port number configured in the virtual server function is the same as the service port number set on the server.
- Close the firewall, antivirus software and security guards on the host of the FTP server and try again.

12.12 DMZ host

12.12.1 Overview

A DMZ host on a LAN is free from restrictions in communicating with the internet. It is useful for getting better and smoother experience in video conferences and online games. You can also set the host of a server within the LAN as a DMZ host when in need of accessing the server from the internet.



- A DMZ host is not protected by the firewall of the router. A hacker may leverage the DMZ host to attack your LAN. Therefore, enable the DMZ function only when necessary.
- Hackers may leverage the DMZ host to attack the local network. Do not use the DMZ host function randomly.
- Security software, antivirus software, and the built-in OS firewall of the computer may cause DMZ function failures. Disable them when using the DMZ function. If the DMZ function is not required, you are recommended to disable it and enable your firewall, security, and antivirus software.

To access the configuration page, [log in to the web UI of the router](#), and choose **Advanced Settings > DMZ Host**.

DMZ Host

DMZ Host:

DMZ Host IP Address:

Save

Parameter description

Parameter	Description
DMZ Host	It is used to enable or disable the DMZ host function.
DMZ Host IP Address	It specifies the IP address of the host that is to be set as the DMZ host.

12.12.2 Example of enabling internet users to access LAN resources

Scenario: You have set up an FTP server within your LAN.

Goal: Open the FTP server to internet users and enable family members who are not at home to access the resources of the FTP server from the internet.

Solution: You can configure the DMZ host function to reach the goal.

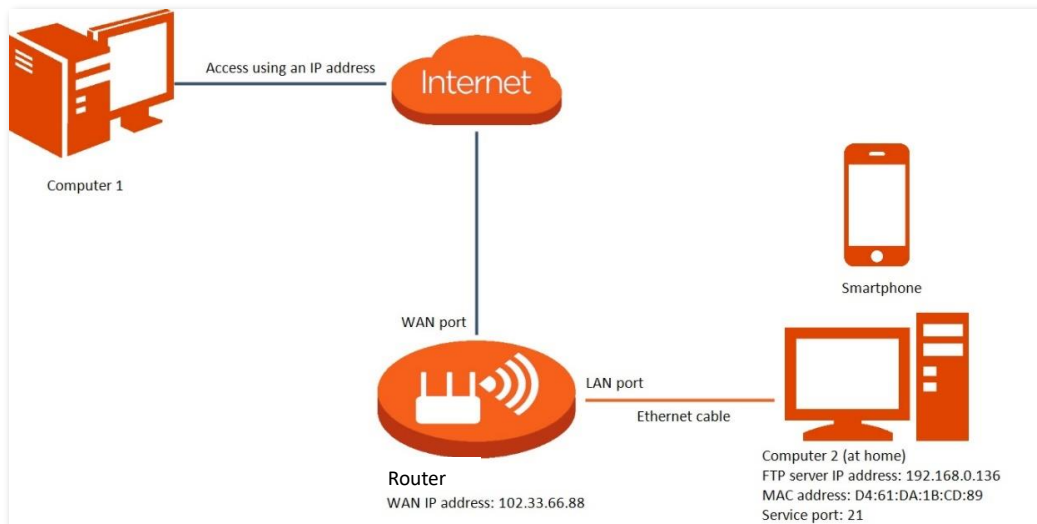
Assume that the information of the FTP server includes:

- IP address: 192.168.0.136

- MAC address: D4:61:DA:1B:CD:89
- Service port: 21
- The WAN IP address of the router: 102.33.66.88.

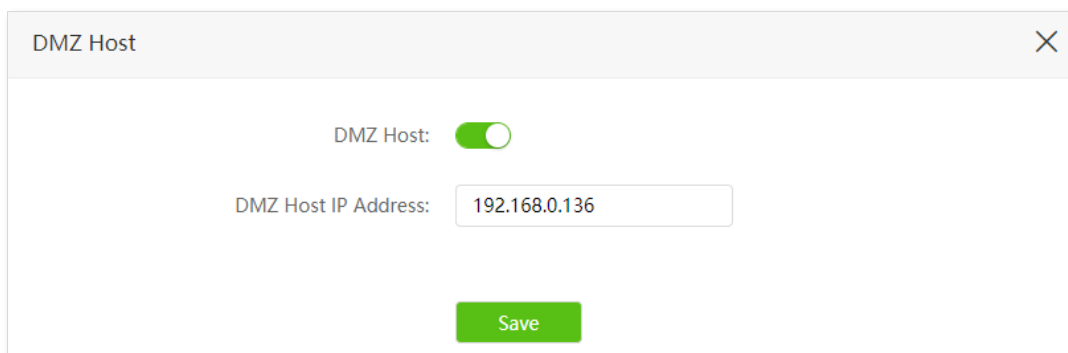


Ensure that router obtains an IP address from the public network. This function may not work on a host with an IP address of a private network or an intranet IP address assigned by ISPs that start with 100. Common IPv4 addresses are classified into class A, class B and class C. Private IP addresses of class A range from 10.0.0.0 to 10.255.255.255. Private IP addresses of class B range from 172.16.0.0 to 172.31.255.255. Private IP addresses of class C range from 192.168.0.0 to 192.168.255.255.



Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Set the server host as the DMZ host.
1. Choose **Advanced Settings > DMZ Host**.
 2. Enable **DMZ Host**.
 3. Enter the IP address of the host, which is **192.168.0.136** in this example.
 4. Click **Save**.



- Step 3** Assign a fixed IP address to the host where the server locates.
1. Choose **System Settings > DHCP Reservation**.

2. Specify **Device Name** for the server host, which is **FTP server** in this example.
3. Enter the MAC Address of the host of the server, which is **D4:61:DA:1B:CD:89** in this example.
4. Enter the reserved IP Address for the server host, which is **192.168.0.136** in this example.
5. Click **+Add**.



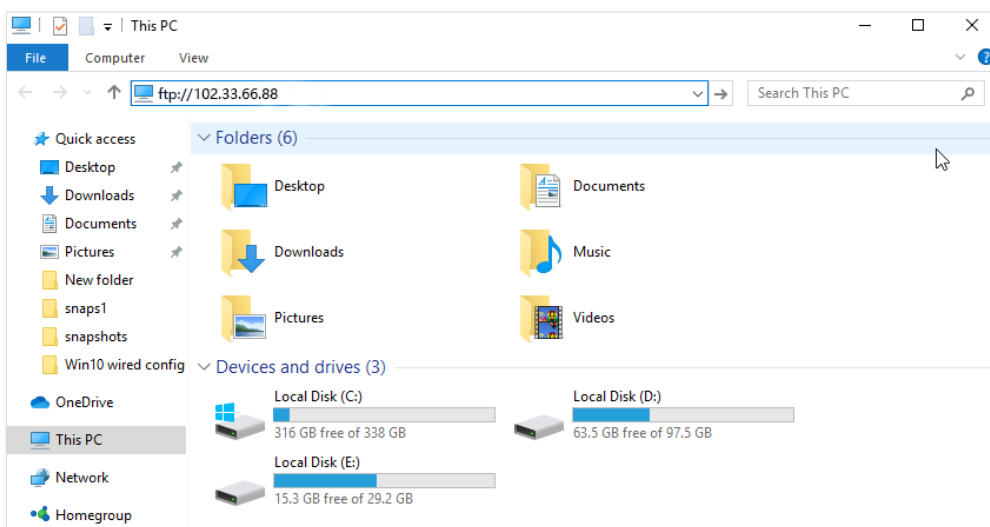
----End

When the configurations are completed, users from the internet can access the DMZ host by visiting “*Intranet service application layer protocol name://WAN IP address of the router*”. If the intranet service port number is not the default number, the visiting address should be: “*Intranet service application layer protocol name://WAN IP address of the router:intranet service port number*”.

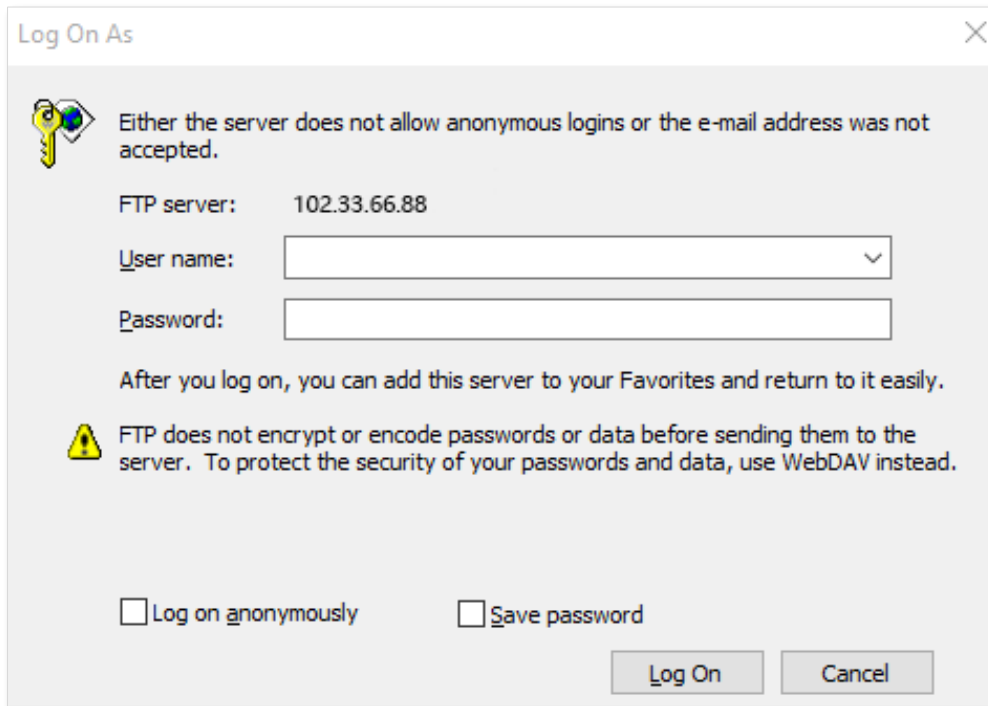
In this example, the address is “**ftp://102.33.66.88**”. You can find the WAN IP address of the router in [View system information](#).



If the default intranet service port number is 80, change the service port number to an uncommon one (1024–65535), such as 9999.



Enter the user name and password to access the resources on the FTP server.



If you want to access the server within a LAN using a domain name, refer to the solution [DMZ](#) + [DDNS](#).



After the configurations, if internet users still cannot access the FTP server, close the firewall, antivirus software and security guards on the host of the FTP server and try again.

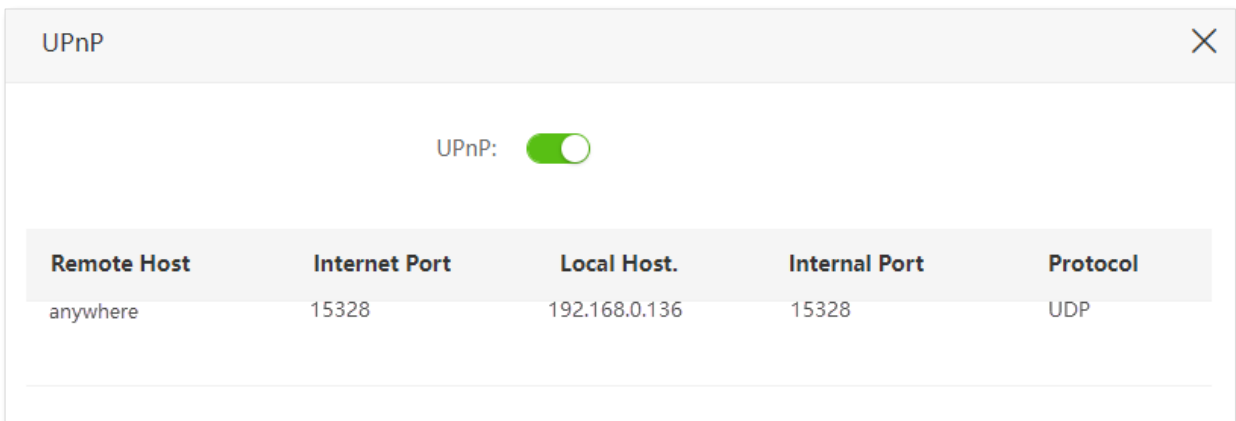
12.13 UPnP

UPnP is short for Universal Plug and Play. This function enables the router to open port automatically for UPnP-based programs. It is generally used for P2P programs, such as BitComet and AnyChat, and helps increase the download speed.

To access the configuration page, [log in to the web UI of the router](#), and choose **Advanced Settings > UPnP**.

This function is enabled by default.

When any program that supports the UPnP function is launched, you can find the port conversion information on this page when the program sends any requests.



Parameter description

Parameter	Description
UPnP	It is used to enable or disable the UPnP function.
Remote Host	It specifies the address of remote host to receive and send responses.
Internet Port	It specifies the port set on the router to map to the outer.
Local Host	It specifies the address of inner host to receive and send responses.
Internal Port	It specifies the host port which needs to be mapped.
Protocol	It specifies the mapping protocol.

12.14 TR069 settings

The CPE WAN Management Protocol (TR-069) protocol allows an Auto-Configuration Server (ACS) from the internet to perform auto-configuration, provision, collection, and diagnostics to the router. Generally, it is used by the ISP to manage the router and is disabled by default. Contact your ISP for these parameters.

To access the configuration page, [log in to the web UI of the router](#) and choose **Advanced Settings > TR069 Settings**. This function is disabled by default and the following figure shows the page with the function enabled.

TR069 Settings ✕

TR069:

ACS

URL:

ACS User Name:

ACS Password:

Enable Scheduled Notification:

Scheduled Notification Interval: Unit: Second

Connection Request

Connection Request User Name:

Connection Request Password:

Port:

STUN Connection

Enable STUN:

STUN Server Address:

STUN Server Port:

Parameter description

Parameter	Description
TR069	It is used to enable or disable the TR069 function.
URL	It specifies the domain name of the ACS.
ACS User Name	They specify the user name and password used to authenticate the router when the router connects to the ACS using the TR069 protocol.
ACS Password	
Enable Scheduled Notification	It is used to enable or disable the scheduled notification function, which enables the router to send messages to the ACS at interval.
Scheduled Notification Interval	It specifies the interval at which the router sent messages to the ACS.
Connection Request User Name	They specify the user name and password used to authenticate the ACS when the ACS sends the connection request to the router.
Connection Request Password	
Port	It specifies the port used to receive the connection request sent by the ACS.
Enable STUN	It is used to enable or disable the STUN function, which facilitates the communication between the router and the public network when the router is under a LAN.
STUN Server Address	It specifies the IP address of the STUN server.
STUN Server Port	It specifies the port of the STUN server.

13

System settings

This chapter describes the system settings, including:

- [LAN settings](#)
- [DHCP reservation](#)
- [WAN settings \(wireless router mode\)](#)
- [Time settings](#)
- [Login password](#)
- [Reboot and reset](#)
- [Upgrade firmware](#)
- [Backup/Restore](#)
- [Remote management](#)
- [System status](#)
- [System log](#)
- [Automatic Maintenance](#)

13.1 LAN settings

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > LAN Settings**.

On this page, you can:

- **Change the LAN IP address and subnet mask of the router.**
- **Change the DHCP server parameters of the router.**

The DHCP server can automatically assign IP address, subnet mask, gateway and other information to clients within the LAN. If you disable this function, you need to manually configure the IP address information on the client to access the internet. Do not disable the DHCP server function unless necessary.

- **Configure the DNS information assigned to clients.**

LAN Settings

LAN IP Address: 192 . 168 . 0 . 1

Subnet Mask: 255 . 255 . 255 . 0

DHCP Server:

IP Address Range: 192.168.0. 100 ~ 200

Lease Time: 1 day

DNS Settings:



Primary DNS Server: . . .

Secondary DNS Server: . . .

Save

Parameter description

Parameter	Description
LAN IP Address	It specifies the LAN IP address of the router, which is also the management IP address for logging in to the web UI of the router.
Subnet Mask	It specifies the subnet mask of the LAN port, used to identify the IP address range of the local area network.
DHCP Server	It is used to enable or disable the DHCP server. Once enabled, the DHCP server automatically assigns internet parameters such as IP address, subnet mask, and gateway address to the terminal device. This function is recommended to be enabled.

Parameter	Description
IP Address Range	<p>It is required only when DHCP Server is enabled.</p> <p>It specifies the range of IP addresses that can be assigned to devices connected to the router. The default range is 192.168.0.100 to 192.168.0.200.</p>
Lease Time	<p>It is required only when DHCP Server is enabled.</p> <p>It specifies the valid duration of the IP address that is assigned to a client.</p> <p>When the lease time reaches half, the client will send a DHCP Request to the DHCP server for renewal. If the renewal succeeds, the lease is renewed based on the time of the renewal application; if the renewal fails, the renewal process is repeated again at 7/8 of the lease period. If it succeeds, the lease is renewed based on the time of the renewal application. If it still fails, the client needs to reapply for IP address information after the lease expires.</p> <p>The default value is recommended.</p>
DNS Settings	<p>It is required only when DHCP Server is enabled.</p> <p>It specifies whether to allocate another DNS address to the client. When it is disabled, the LAN port IP address of the router is used as the DNS address of the client. When it is enabled, Primary DNS must be set and Secondary DNS is optional.</p> <p> TIP</p> <p>This router has the DNS proxy function.</p>
Primary DNS Server	<p>It is required only when DNS Settings is enabled.</p> <p>It specifies the primary DNS address of the router, which is assigned to the clients. You can change it if necessary.</p> <p> TIP</p> <p>Make sure that the primary DNS server is the IP address of the correct DNS server or DNS proxy. Otherwise, you may fail to access the internet.</p>
Secondary DNS Server	<p>It specifies the secondary DNS address of the router used to assign to the clients. It is an optional field and is left blank by default.</p>

13.2 DHCP reservation

13.2.1 Overview

Through the DHCP reservation function, specified clients can always obtain the same IP address when connecting to the router, ensuring that the router's "Virtual server", "DDNS", "DMZ host" and other functions can function normally. This function takes effect only when the DHCP server function of the router is enabled. A maximum of 32 devices can be added here.

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > DHCP Reservation**.

Device Name	MAC Address	IP Address	Status	Operation
Optional			---	+ Add
DESKTOP-RGGBS4D		192.168.1.109		

Parameter description

Parameter	Description
Device Name	It specifies the device name of the client.
MAC Address	It specifies the MAC address of the client.
IP Address	It specifies the IP address reserved for the client.
Status	It specifies whether the client is online or not. indicates that the client is online. indicates that the client is offline.
Operation	: It is used to add a new DHCP reservation rule. : It is used to bind the MAC address to the reserved IP address. : It is used to unbind the MAC address from the reserved IP address. : It is used to delete the DHCP reservation rule.

13.2.2 Example of assigning static IP addresses to LAN clients

Scenario: You have set up an FTP server within your LAN.

Goal: Assign a fixed IP address to the host of the FTP server and prevent the failure of access to the FTP server owing to the change of IP address.

Solution: You can configure the DHCP reservation function to reach the goal.

Assume that the information of the FTP server includes:

- Fixed IP address for the server: 192.168.0.136
- MAC address of the FTP server host: D4:61:DA:1B:CD:89

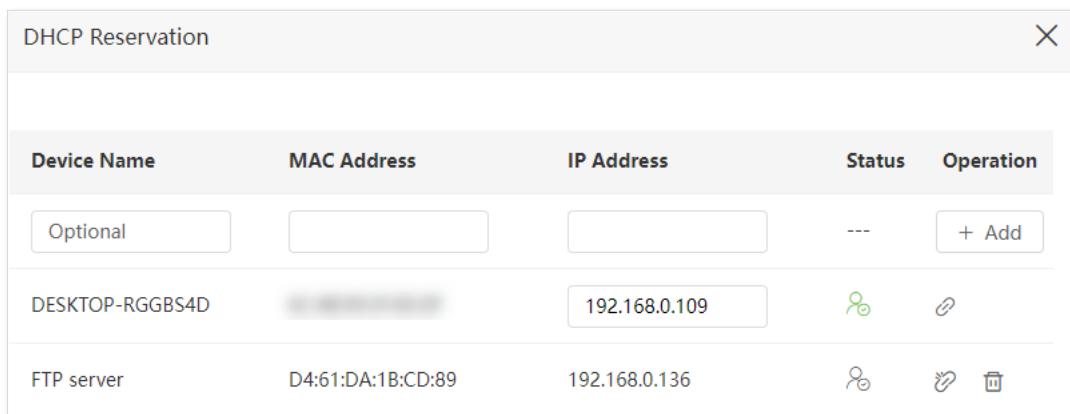
Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **System Settings > DHCP Reservation**.
- Step 3** (Optional) Enter the device name for the host, which is **FTP server** in this example.
- Step 4** Enter the MAC address of the host, which is **D4:61:DA:1B:CD:89** in this example.
- Step 5** Enter the IP address reserved for the host, which is **192.168.0.136** in this example.
- Step 6** Click **+Add**.



---End

When the configuration is completed, the page is shown as below and the FTP server host always gets the same IP address when connecting to the router, which is 192.168.0.136 in this example.



13.3 WAN settings (wireless router mode)



This function is only available under the wireless router mode. Refer to [Operating mode](#) to set the operating mode of the router.

In this module, you can check and modify MTU value, WAN speed, duplex mode, MAC address, service name and server name.

13.3.1 Change MTU value

Maximum Transmission Unit (MTU) is the largest data packet transmitted by a network device. When the connection type is PPPoE, the default MTU value is 1492. When the connection type is dynamic IP address or static IP address, the default MTU value is 1500. Do not change the value unless necessary. If you need to change it, refer to the following instructions.

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > WAN Settings**.

The screenshot shows a 'WAN Settings' dialog box with a close button (X) in the top right corner. The 'MTU' field is highlighted with a red dashed border and contains the value '1492'. Below it are three dropdown menus: 'MAC Address' set to 'Default', 'Service Name' set to 'Default', and 'Server Name' set to 'Default'. To the right of the 'Service Name' and 'Server Name' dropdowns are the instructions 'Keep the default unless necessary'. At the bottom center is a green 'Save' button.

Generally, the default value is recommended. Try to change the MTU value when:

- You cannot access some specific websites or encrypted websites (such as E-banking or Paypal websites).
- You cannot receive and send Emails or access an FTP or POP server.

You can try reducing the value of MTU gradually from 1500 until the problem is resolved (The recommended range is 1400 to 1500).

MTU application description

MTU	Application
1500	It is commonly used for non-ADSL and non-VPN dial-up connections.
1492, 1480	It is used for ADSL dial-up connections.
1472	It is the maximum value for the ping command. A packet with a larger size is fragmented.
1468	It is used for DHCP connections.
1436	It is used for VPN or PPTP connections.

13.3.2 Change the MAC address of the WAN port

If you still cannot access the internet after completing [Access the internet through the WAN port](#), it could be the result of the ISP's configuration to bind the internet account information with a fixed MAC address. In this case, you can clone and change the MAC address of the router to solve the problem.

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > WAN Settings**.

The screenshot shows the WAN Settings configuration page. The MTU is set to 1492. The MAC Address dropdown menu is open, showing options: Default, Clone local MAC address, and Set MAC address. The Service Name is set to Default and the Server Name is set to Clone local MAC address. A Save button is at the bottom.

- **Default:** Keep the factory setting of MAC address.
- **Clone local MAC address:** Set the MAC address of the router to the same as that of the device which is configuring the router.
- **Set MAC address:** Manually set a MAC address.



Ensure that the cloned MAC address is that of the computer or the router which is already able to access the internet.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **System Settings > WAN Settings**.
- Step 3** Set **MAC Address** to **Clone local MAC address** or **Set MAC address**, and enter the desired MAC address.
- Step 4** Click **Save**.

---End

13.3.3 Change the service name and server name

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > WAN Settings**.

You may need to change the service name and server name of the broadband service only when the connection type is PPPoE.

If you obtain the service name and server name from your ISP when purchasing the broadband service, you can change them on this page after completing the internet settings. Otherwise, keep the default settings.

The image shows a 'WAN Settings' dialog box with the following fields and options:

- MTU:** A text input field containing the value '1492'.
- MAC Address:** A dropdown menu set to 'Clone local MAC address'. To its right, the text 'Local:' is followed by a greyed-out field.
- Service Name:** A dropdown menu currently showing 'Default'. To its right is the text 'Keep the default unless necessary'.
- Server Name:** A dropdown menu with 'Default' selected and 'Custom' as an alternative option. To its right is the text 'Keep the default unless necessary'.
- Save:** A green button located at the bottom center of the dialog.

A red dashed rectangular box highlights the 'Service Name' and 'Server Name' dropdown menus and their associated text.

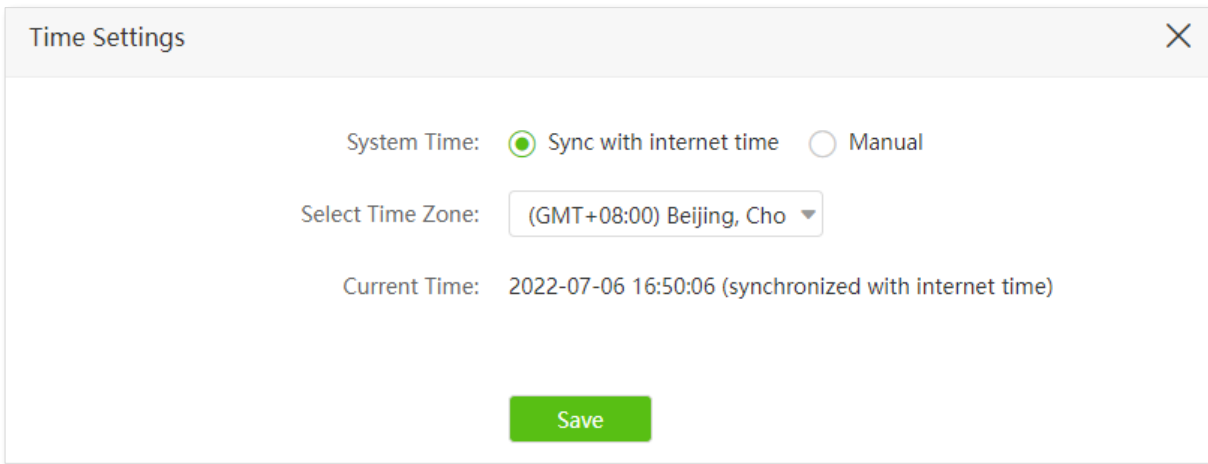
13.4 Time settings

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > Time Settings**.

You can change the time settings on this page. The time-based functions require an accurate system time. The system time of the router can be synchronized with the internet or set manually. By default, it is synchronized with the internet.

13.4.1 Sync system time with the internet time

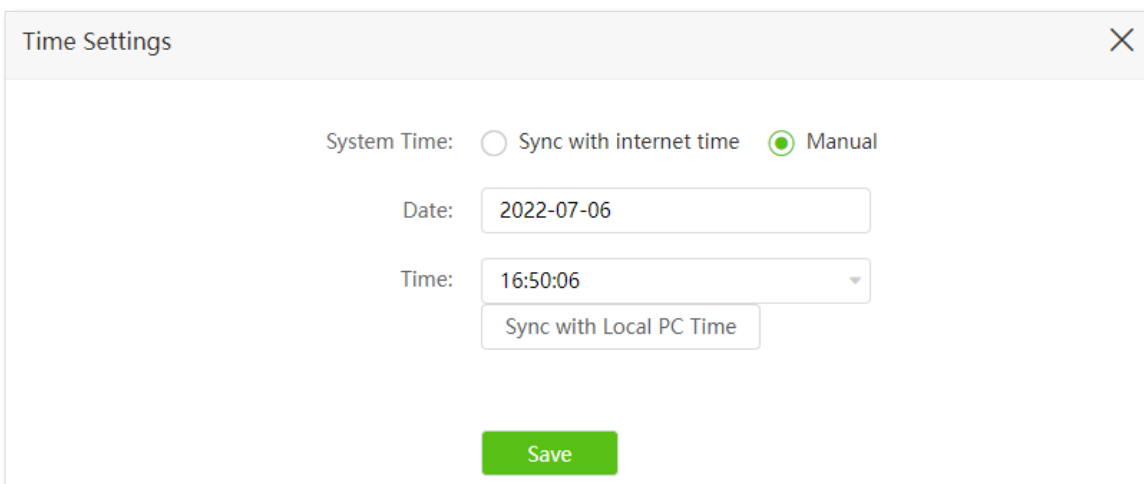
Under this mode, the router will automatically sync its time with the internet time when it is connected to the internet. You can also choose the time zone to be synchronized.



The screenshot shows a 'Time Settings' dialog box with a close button (X) in the top right corner. The 'System Time' section has two radio buttons: 'Sync with internet time' (which is selected) and 'Manual'. Below this, the 'Select Time Zone' dropdown menu is set to '(GMT+08:00) Beijing, Cho'. The 'Current Time' is displayed as '2022-07-06 16:50:06 (synchronized with internet time)'. At the bottom center, there is a green 'Save' button.

13.4.2 Set the time manually

To set the router time manually, you can set **System Time** to **Manual** and enter a desired time or sync the system time of the router with the device that is configuring the router. Besides, you need to correct it every time after you reboot the router in order to ensure the accuracy of system time.



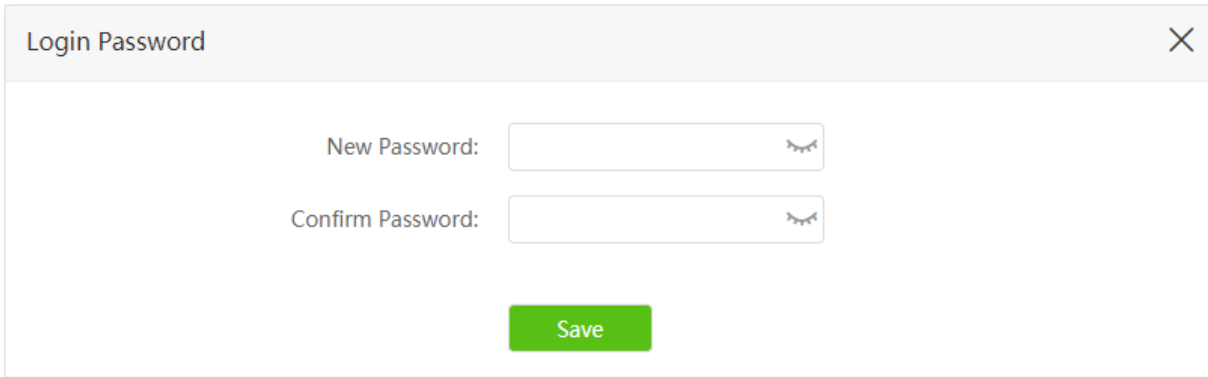
The screenshot shows the 'Time Settings' dialog box with 'Manual' selected under 'System Time'. The 'Date' field is set to '2022-07-06' and the 'Time' dropdown is set to '16:50:06'. Below the time dropdown is a button labeled 'Sync with Local PC Time'. A green 'Save' button is located at the bottom center.

13.5 Login password

To ensure network security, a router login password is recommended. A login password consisting of more types of characters, such as uppercase letters and lowercase letters, brings higher security.

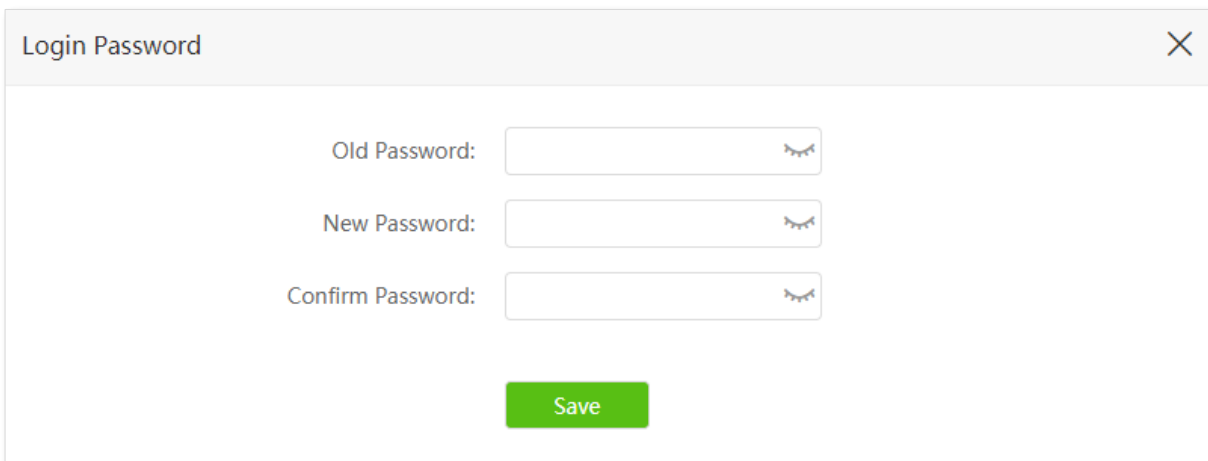
To access the configuration page, [log in to the web UI of the router](#) and choose **System Settings > Login Password**.

If you did not set a login password in quick setup wizard, you can set a login password on this page.



The screenshot shows a dialog box titled "Login Password" with a close button (X) in the top right corner. It contains two input fields: "New Password:" and "Confirm Password:". Each input field has a small eye icon to its right, indicating a password field. Below the input fields is a green "Save" button.

If you have already set a login password, you can change the password on this page and the old password is required.



The screenshot shows a dialog box titled "Login Password" with a close button (X) in the top right corner. It contains three input fields: "Old Password:", "New Password:", and "Confirm Password:". Each input field has a small eye icon to its right, indicating a password field. Below the input fields is a green "Save" button.



If you forget your login password and cannot log in to the web UI of the router, refer to [reset the router](#) to restore the router to factory settings and log in to the web UI without password.

13.6 Reboot and reset

13.6.1 Reboot the router

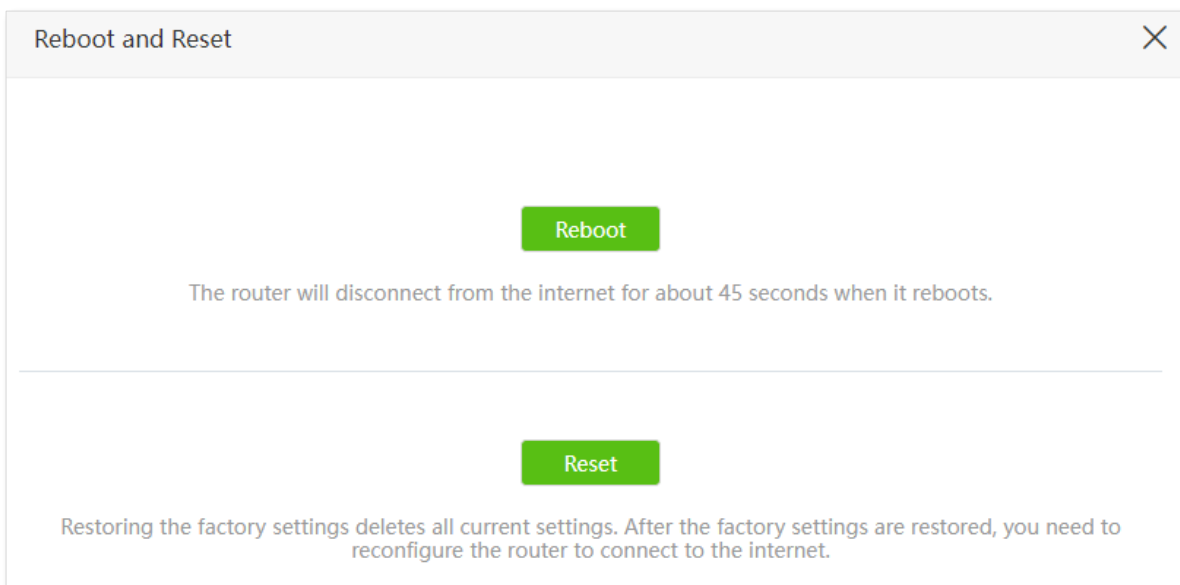
If any parameter fails to take effect or the router does not work properly, you can try rebooting the router.



TIP

Rebooting the router will disconnect all connections to the router. Reboot the router during leisure times.

To reboot the router, [log in to the web UI of the router](#) and choose **System Settings > Reboot and Reset**. Click **Reboot** to reboot the router.



Wait for a moment until the ongoing process finishes.

13.6.2 Reset the router

If you are uncertain about why the internet is inaccessible through the router or you forget the login password of the router, you can reset the router.



NOTE

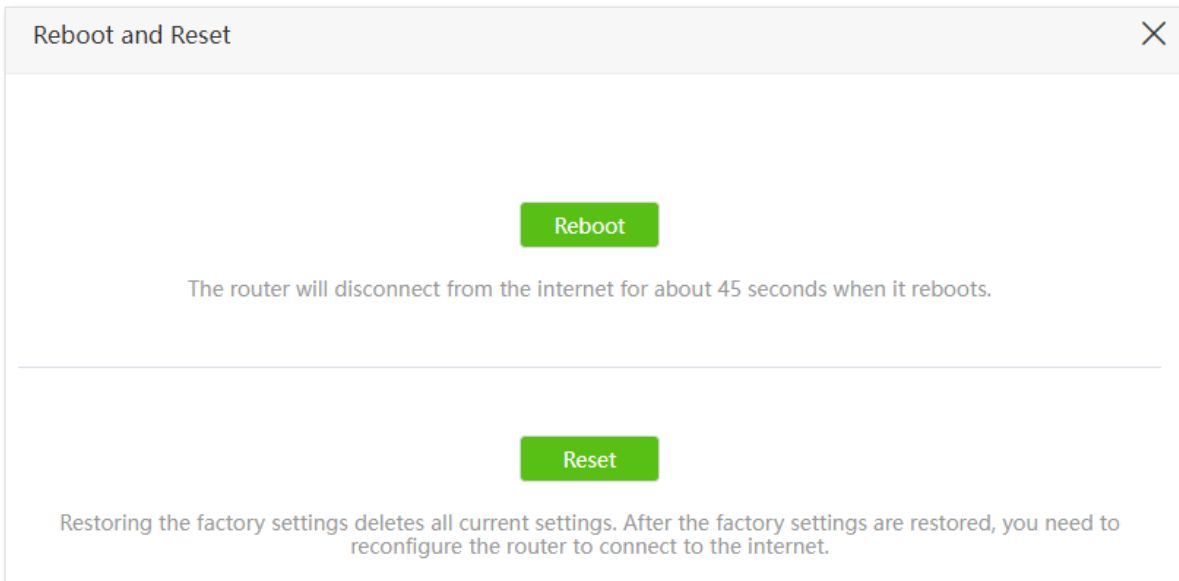
- Resetting the router is not recommended unless you cannot find a solution for the current problem anyway. You need to reconfigure the router after it is reset.
- Ensure that the power supply of the router is normal when the router is reset. Otherwise the router could be damaged.
- The default login IP address is 192.168.0.1 after resetting, and no password is required.

Reset the router using the reset button

Hold down the **RST** button on the bottom of the router for about 8 seconds and release when all LED indicators light off and then light up. The router is reset and restored to factory settings.

Reset the router on the web UI

Start a web browser and [log in to the web UI of the router](#). Choose **System Settings > Reboot and Reset**, and click **Reset**.



Wait for a moment until the ongoing process finishes.

13.7 Upgrade firmware

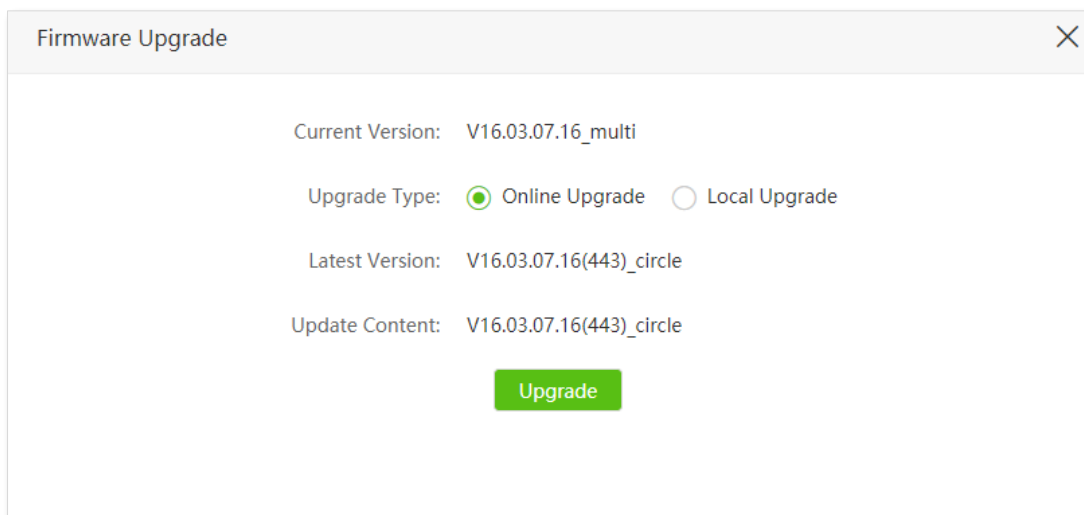
This function enables the router to obtain the latest functions and more stable performance. The router supports online firmware upgrade and local firmware upgrade.

13.7.1 Online upgrade

When the router is connected to the internet, it auto-detects whether there is a new firmware version and displays the detected information on the page. You can choose whether to upgrade to the latest firmware.

Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **System Settings > Firmware Upgrade**.
- Step 3** Wait until a new firmware version is detected.



- Step 4** Click **Upgrade**.

---End

Wait for a moment until the ongoing process finishes. [Log in to the web UI of the router](#) again. Choose **System Settings > System Status** and check whether the upgrade is successful based on the **Firmware Version**.



For better performance of the new firmware of the router, you are recommended to reset the router to factory default settings and re-configure the router when the upgrading is completed.

13.7.2 Local upgrade



In order to prevent the router from being damaged:

- Ensure that the firmware is applicable to the router.
- It is recommended to upgrade the firmware by connecting a LAN port to a computer and performing the upgrade on the web UI.
- When you are upgrading the firmware, do not power off the router.

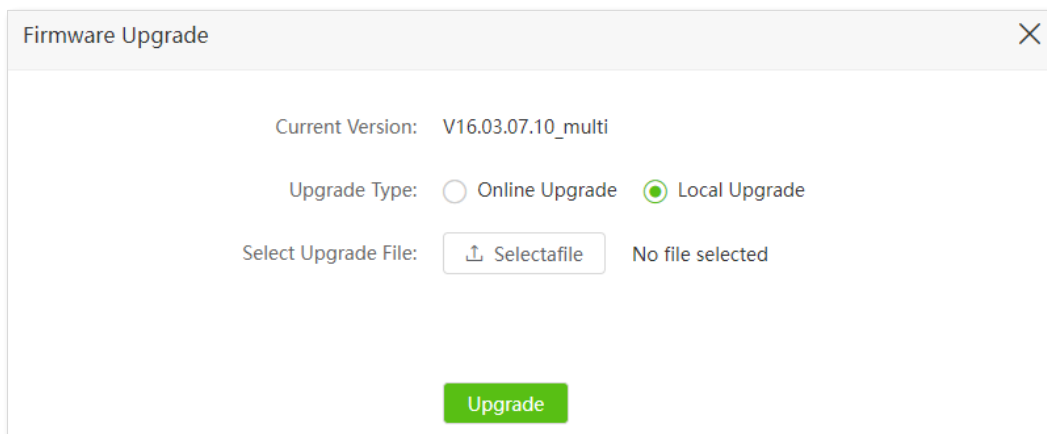
Step 1 Go to www.tendacn.com. Download an applicable firmware of the router to your local computer and unzip it.

Step 2 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

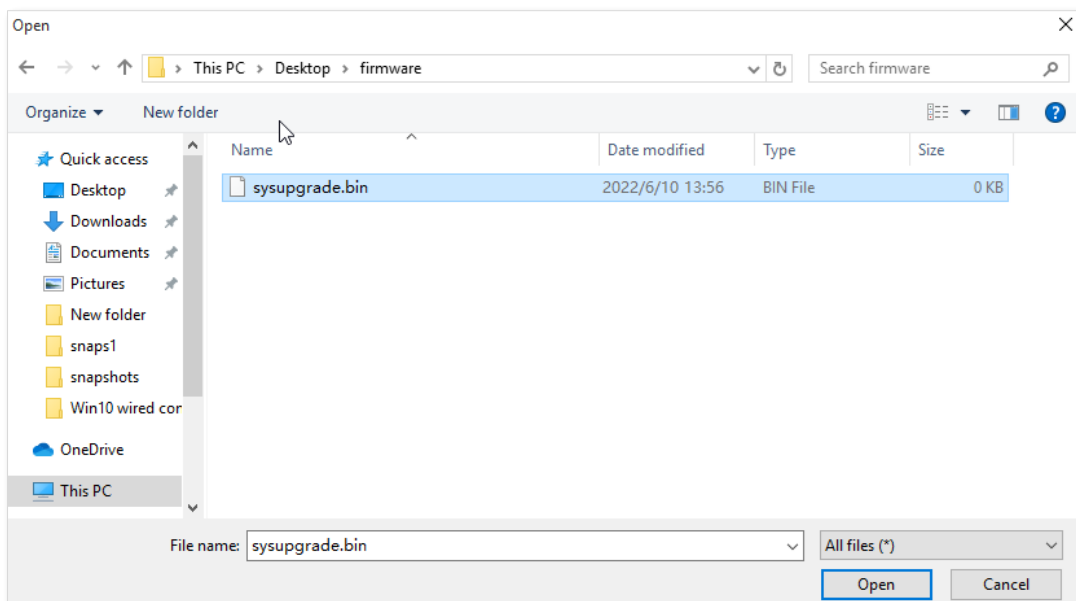
Step 3 Choose **System Settings > Firmware Upgrade**.

Step 4 Select **Local Upgrade** for **Upgrade Type**.

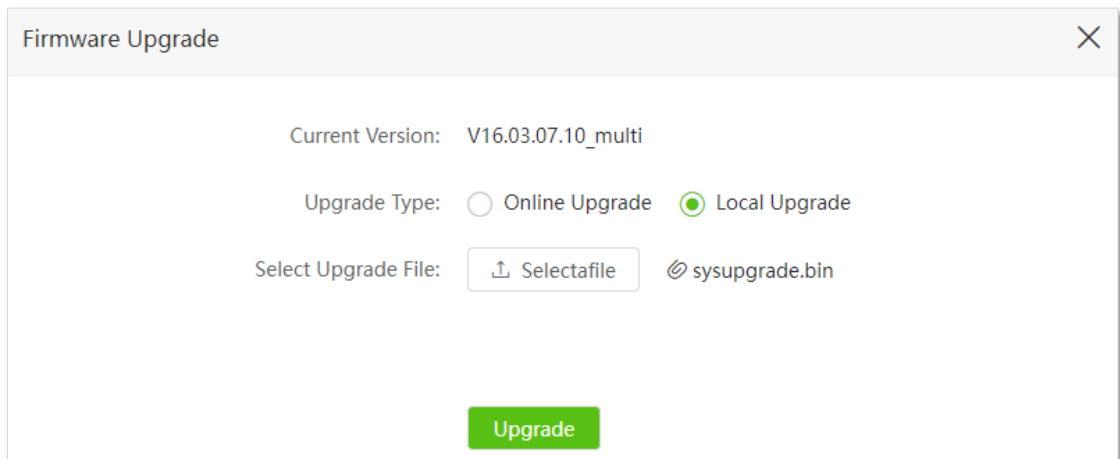
Step 5 Click  .



Step 6 Target the firmware file downloaded previously (extension: bin), and click **Open**.



Step 7 Click **Upgrade**.



---End

Wait for a moment until the ongoing process finishes. [Log in to the web UI of the router](#) again. Choose **System Settings** > **System Status** and check whether the upgrade is successful based on the **Firmware Version**.



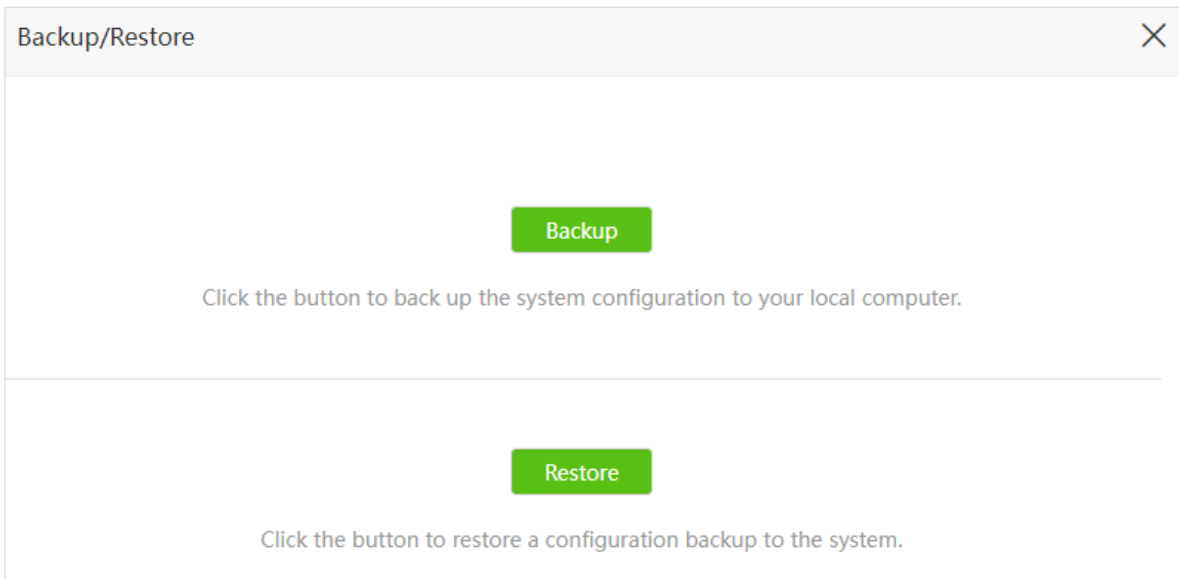
For better performance of the new firmware, you are recommended to reset the router to factory default settings and re-configure the router when the upgrading is completed.

13.8 Backup/Restore

In this module, you can back up the current configurations of the router to your computer. You are recommended to back up the configuration after the settings of the router are significantly changed, or the router works in a good condition.

After you restore the router to factory settings or upgrade it, you can use this function to restore the configurations that have been backed up.

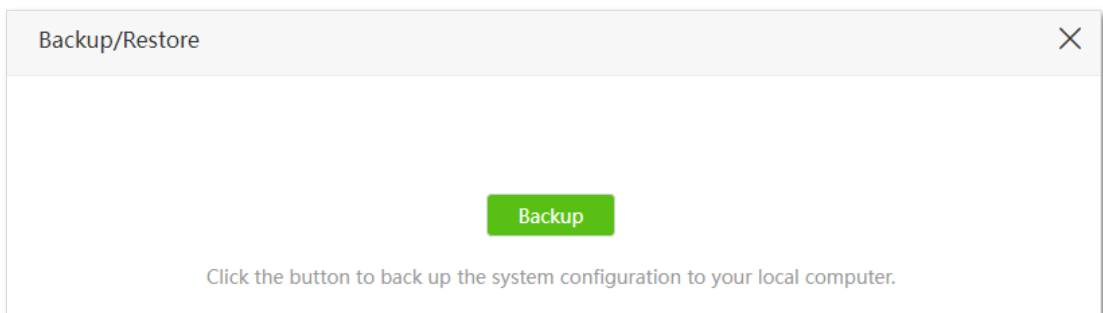
To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > Backup/Restore**.



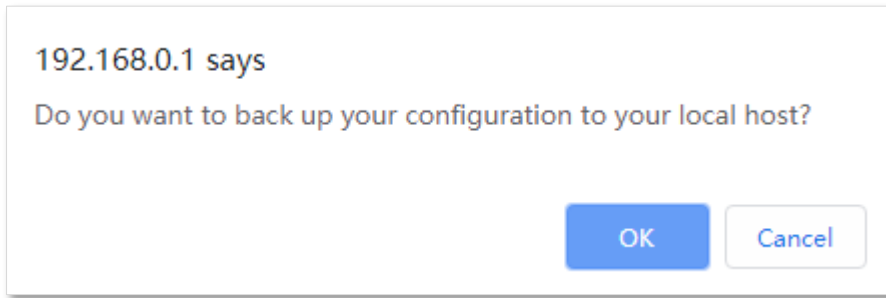
13.8.1 Backup the configurations of the router

To back up the configurations of the router:

- Step 1** Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
- Step 2** Choose **System Settings > Backup/Restore**.
- Step 3** Click **Backup**.



Step 4 Click **OK** in the pop-up window.



---End

A file named **RouterCfm.cfg** will be downloaded to your local host.

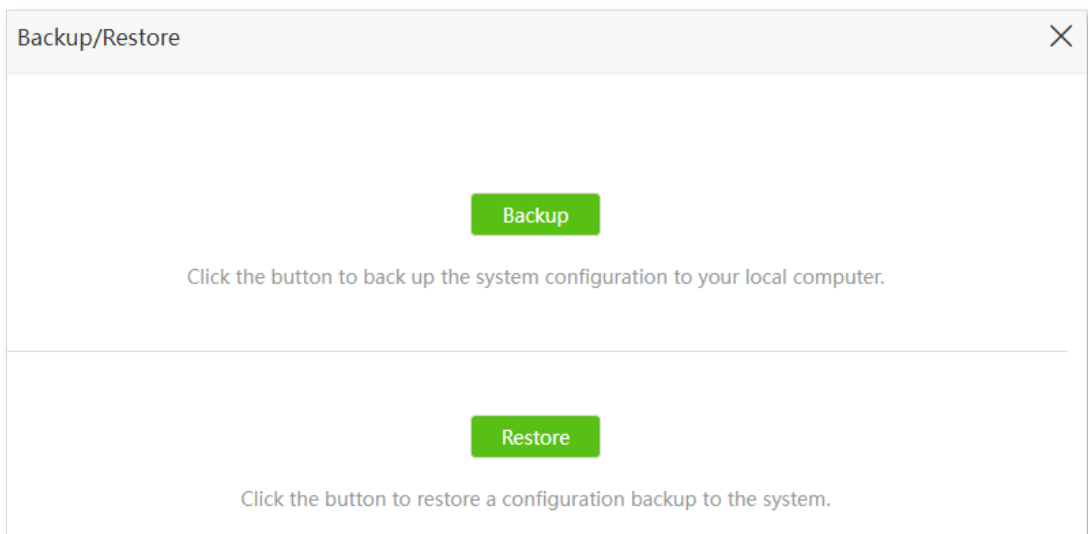
13.8.2 Restore previous configurations of the router

To restore the previous configurations of the router:

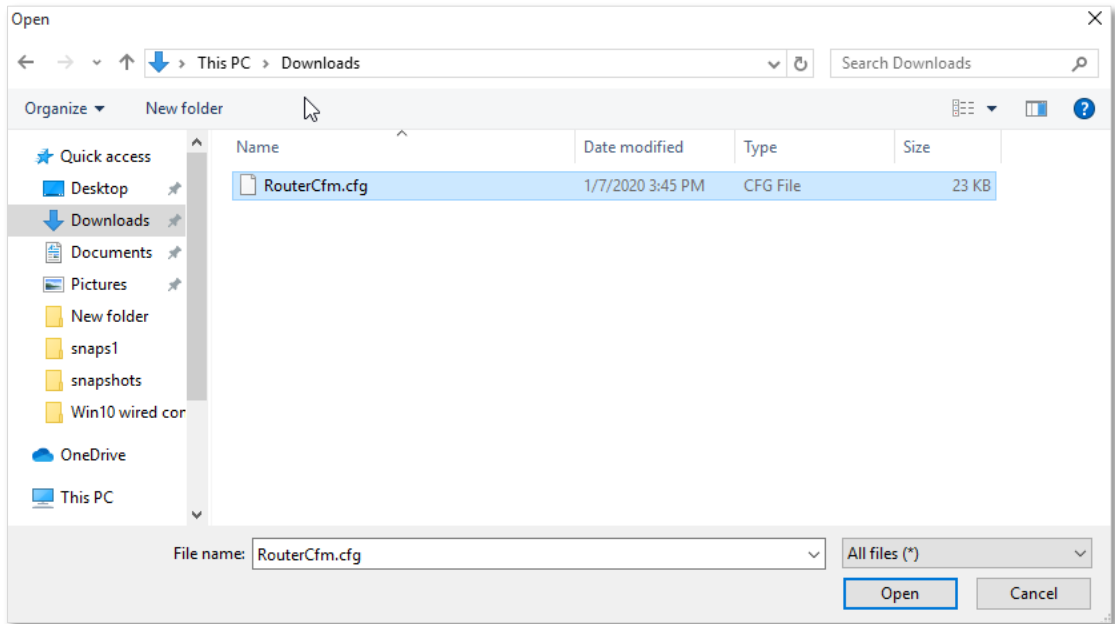
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **System Settings > Backup/Restore**.

Step 3 Click **Restore**.



Step 4 Choose the configuration file (extension: cfg) to be restored, and click **Open**.



---End

Wait for a moment until the ongoing process finishes, and the router restores previous settings.

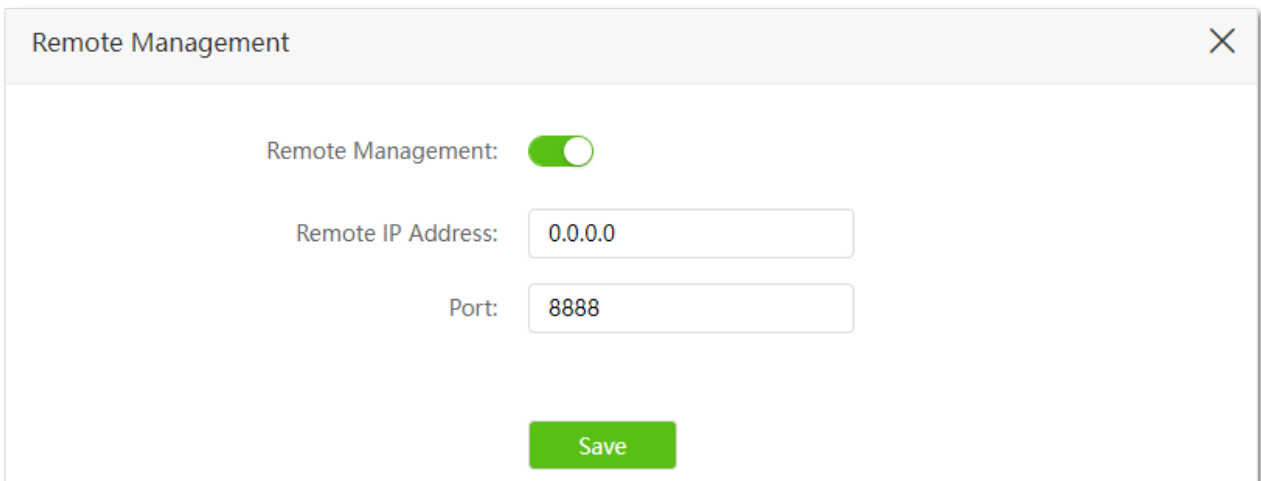
13.9 Remote management

13.9.1 Overview


Generally, the web UI of the router can only be accessed on devices that are connected to the router by a LAN port or wireless connection. When you encounter a network fault, you can ask for remote technical assistance, which improves efficiency and reduces costs and efforts.

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > Remote Management**.

By default, this function is disabled. When this function is enabled, the page is shown as below.



Parameter description

Parameter	Description
Remote Management	It is used to enable or disable the remote management function of the router.
Remote IP Address	<p>It specifies the IP address of the host which can access the web UI of the router remotely.</p> <ul style="list-style-type: none">• 0.0.0.0: It indicates that hosts with any IP address from the internet can access the web UI of the router. It is not recommended for security.• Other specified IP address: Only the host with the specified IP address can access the web UI of the router remotely. If the host is under a LAN, ensure that the IP address is the IP address of the gateway of the host (a public IP address).
Port	<p>It specifies the port number of the router which is opened for remote management. Change it as required.</p> <p> TIP</p> <ul style="list-style-type: none">• The port number from 1 to 1024 has been occupied by familiar services. It is strongly recommended to enter a port number from 1025 to 65535 to prevent conflict.• Remote management can be achieved by visiting “http://the WAN IP address of the router:port number”. If the DDNS host function is enabled, the web UI can also be accessed through “http://the domain name of the router’s WAN port:port number”.

13.9.2 Example of enabling Tenda technical support to access and manage the web UI

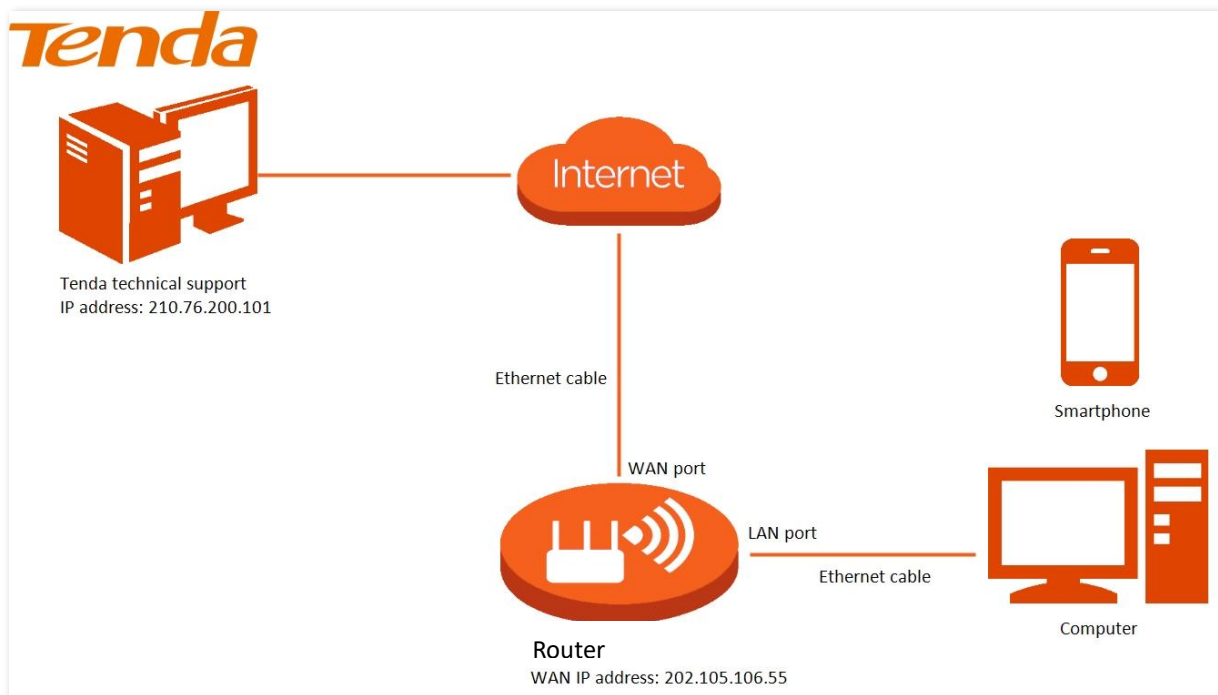
Scenario: You encounter a problem in configuring the router, and the router can access internet access.

Goal: Ask the Tenda technical support to help you configure the router remotely.

Solution: You can configure the remote management function to reach the goal.

Assume that:

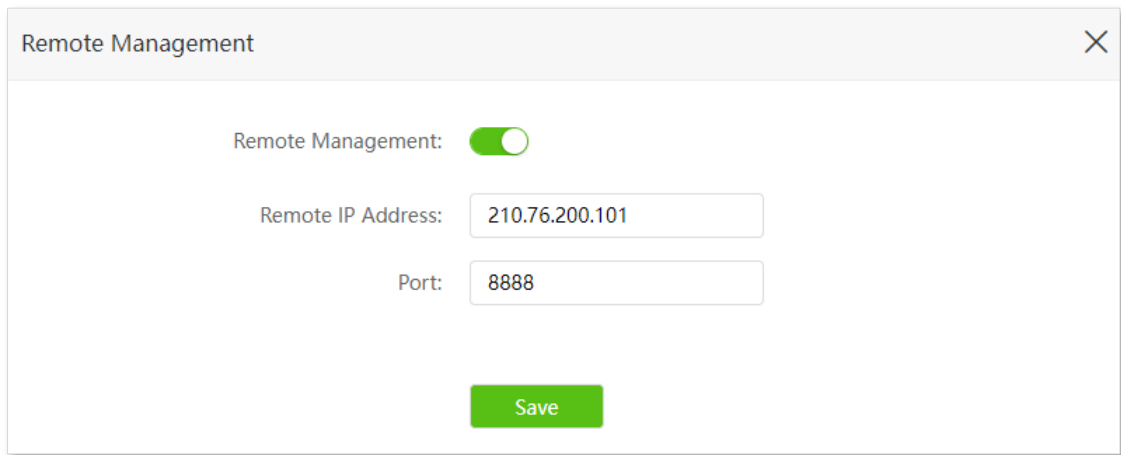
- IP address of Tenda technical support: 210.76.200.101
- WAN port IP address of the router: 202.105.106.55



Configuration procedure:

- Step 1** Start a web browser on a device connected to the router and visit tendawifi.com to log in to the web UI of the router.
- Step 2** Choose **System Settings > Remote Management**.
- Step 3** Enable **Remote Management**.
- Step 4** Enter the IP address that is allowed to access the web UI remotely, which is **210.76.200.101** in this example.

Step 5 Click **Save**.



The screenshot shows a window titled "Remote Management" with a close button (X) in the top right corner. Inside the window, there are three configuration options: "Remote Management:" with a green toggle switch that is turned on; "Remote IP Address:" with a text input field containing "210.76.200.101"; and "Port:" with a text input field containing "8888". At the bottom center of the window is a green "Save" button.

---End

When the configurations are completed, the Tenda technical support can access and manage the web UI of the router by visiting "http://202.105.106.55:8888" on the computer.

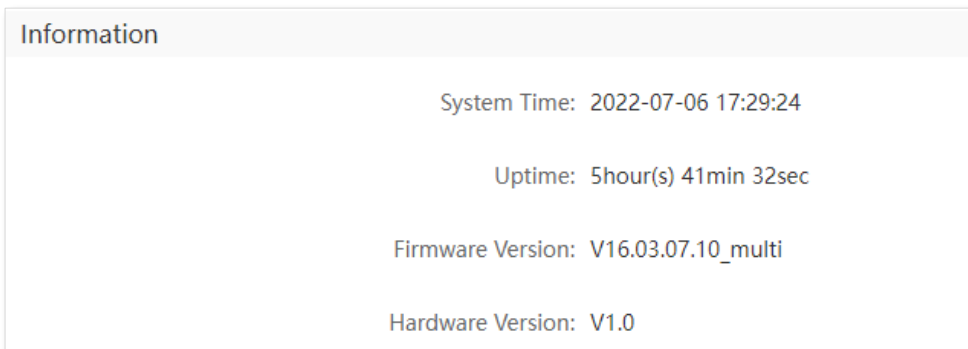
13.10 System status

To access the page, [log in to the web UI of the router](#), and choose **System Settings > System Status**.

On this page, you can find the basic information of the router, WAN status, LAN status, Wi-Fi status and IPv6 status.

13.10.1 Basic information

In this part, you can view the basic information of the router, such as system time, uptime and firmware version and hardware version.



Parameter description

Parameter	Description
System Time	It specifies the system time of the router.
Uptime	It specifies operating time of the router since it is powered on.
Firmware Version	It specifies the firmware version of the router.
Hardware Version	It specifies the hardware version of the router.

13.10.2 Connection status

4G/5G router mode

Under the 4G/5G router mode, you can view the information of the SIM card and 4G/5G network in this part.

4G/5G

SIM Card Status: Ready

Connection Status: Connected

Signal Strength: Good

ISP: CHINA MOBILE

Mobile Network: 5G SA

Statistics: 126.426MB

Upload Speed: 1Kbps

Download Speed: 0Kbps

IP Address: 10.4.34.103

Subnet Mask: 255.255.255.240

Default Gateway: 10.4.34.104

Primary DNS: 120.196.165.7

Secondary DNS: 221.179.38.7

MAC Address: [REDACTED]

Access Band: N41

IMEI: 869263050152606

IMSI: 460028020192421

UL Frequency: 2515.86MHz

DL Frequency: 2524.95MHz

CELL ID: 52047269889

CQI: 13

Point A ARFCN: 503172

SSB ARFCN: 504990

SS-RSRP: -99dBm

SS-RSRQ: 0dB

SS-RSSI: -99dBm

SS-SINR: 24dB

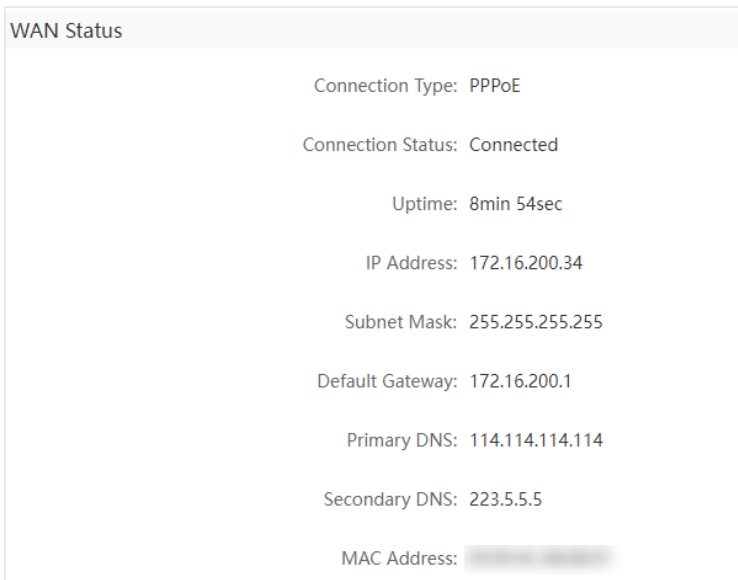
Parameter description

Parameter	Description
SIM Card Status	It specifies the SIM card status inserted in the router.
Connection Status	It specifies internet connection status of 4G/5G mobile network.
Signal Strength	It specifies the signal strength of 4G/5G mobile network, including Excellent, Good and Fair.
ISP	It specifies the ISP (Internet Service Provider) name of the SIM card.
Mobile Network	It specifies the current network type for internet access.
Statistics	It specifies the data traffic of the SIM card that has been used.
Upload Speed	It specifies the upload speed of the mobile network of the router.
Download Speed	It specifies the download speed of the mobile network of the router.
IP address	It specifies the IP address of the router obtained from the ISP.
Subnet Mask	It specifies the subnet mask of mobile network.
Default Gateway	It specifies the gateway IP address of the router.
Primary DNS	It specifies the IP address of primary and secondary DNS servers of the router.
Secondary DNS	
MAC Address	It specifies the 4G/5G MAC address of the router.
Access Band	It specifies the 4G/5G band that the router is working in.
IMEI	It specifies the International Mobile Equipment Identity (IMEI) of the SIM card.
IMSI	It specifies the international Mobile Subscriber Identity (IMSI) of the SIM card.
UL Frequency	It specifies the uplink frequency of the router.
DL Frequency	It specifies the downlink frequency of the router.
CELL ID	It specifies the Cell ID of the SIM card.
CQI	It specifies the Channel Quality Indicator (CQI) of the router.
Point A ARFCN	It specifies the point A center frequency.
SSB ARFCN	It specifies the SSB center frequency.
SS-RSRP	It specifies the Synchronization Signal-Reference Signal Received Power (SS-RSRP) of the SIM card.
SS-RSRQ	It specifies the Synchronization Signal-Reference Signal Received Quality (SS-RSRQ) of the SIM card.
SS-RSSI	It specifies the Synchronization Signal-Received Signal Strength Indicator (SS-RSSI) of the SIM card.

Parameter	Description
SS-SINR	It specifies the Synchronization Signal-Signal to Interference Noise Ratio (SS-SINR) of the SIM card.

Wireless router mode

Under the wireless router mode, you can view the information of the WAN port, including connection type, connection status and connection duration.

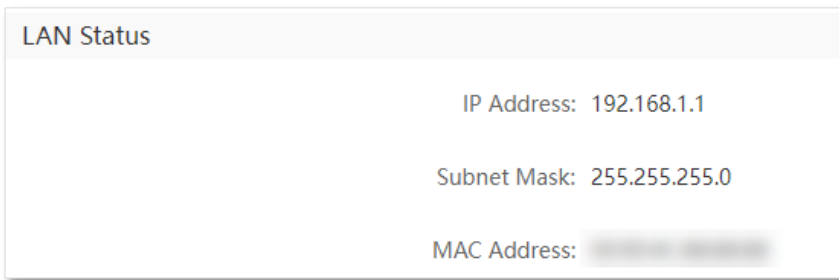


Parameter description

Parameter	Description
Connection Type	It specifies the IPv4 connection type of the WAN port.
Connection Status	It specifies internet connection status of the WAN port.
Connection Duration	It specifies the duration since the router is connected to the internet.
IP address	It specifies the WAN IP address of the router.
Subnet Mask	It specifies the WAN subnet mask of the router.
Default Gateway	It specifies the gateway IP address of the router.
Primary DNS	They specify the IP addresses of primary and secondary DNS servers of the router.
Secondary DNS	
MAC Address	It specifies the WAN MAC address of the router.

13.10.3 LAN status

In this part, you can view the information, such as LAN IPv4 address, subnet mask and MAC address.

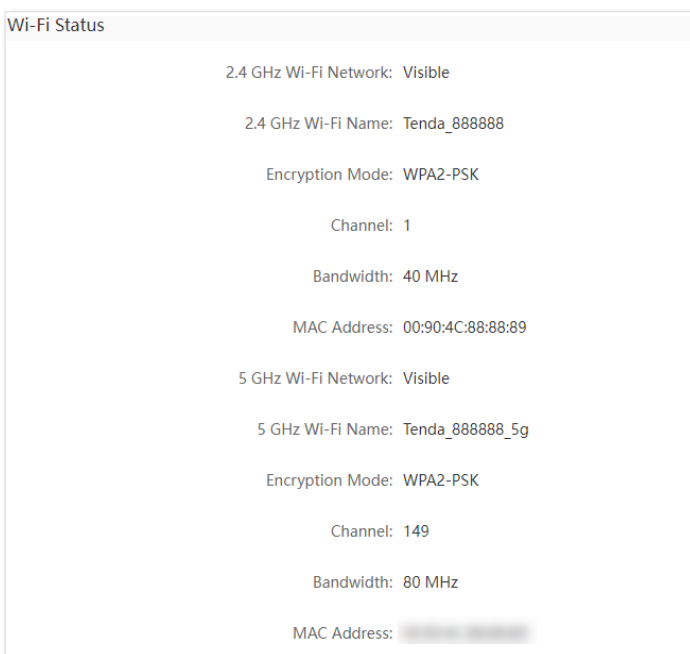


Parameter description

Parameter	Description
IP Address	It specifies the LAN IP address of the router, and also the IP address for logging in to the web UI of the router.
Subnet Mask	It specifies the LAN subnet mask of the router.
MAC Address	It specifies the LAN MAC address of the router.

13.10.4 Wi-Fi status

In this part, you can view the information of 2.4 GHz and 5 GHz Wi-Fi network, including the connection status, visibility, hotspot name and encryption mode.



Parameter description

Parameter	Description
2.4 GHz Wi-Fi Network	They specify whether the corresponding Wi-Fi networks are enabled or disabled

Parameter	Description
5 GHz Wi-Fi Network	and whether they are visible.
2.4 GHz Wi-Fi Name	They specify the 2.4 GHz Wi-Fi and 5 GHz Wi-Fi names of the router.
5 GHz Wi-Fi Name	
Encryption Mode	It specifies the encryption mode of the respective Wi-Fi network.
Channel	It specifies the channel that the respective Wi-Fi network works in.
Bandwidth	It specifies the bandwidth of the respective Wi-Fi network.
MAC Address	It specifies the MAC address of the respective Wi-Fi network.

13.10.5 IPv6 status

This part is only displayed when the IPv6 function is enabled in the wireless router mode. You can view the information of IPv6 connection, including connection type, IPv6 WAN address and IPv6 LAN address.

IPv6 Status
Connection Type: DHCPv6
IPv6 WAN Address: 2409:895a:3221:13c6:1700:a63a:de42:ecc1/128
Default IPv6 Gateway: fe80::1
Primary IPv6 DNS: 2409:8057:2000::8
Secondary IPv6 DNS: 2409:8057:2000:4::8
IPv6 LAN Address: 2409:895a:3221:13c6::1/64 fdbd:fd9:f6b6::1/60 fe80::290:4cff:fe88:8888/64

Parameter description

Parameter	Description
Connection Type	It specifies the IPv6 connection type of the router.
IPv6 WAN Address	It specifies the WAN IPv6 address of the router. After the IPv6 function is configured, the WAN port of the router obtains a global unicast IPv6 address or a tunnel address, and a link local address.
Default IPv6 Gateway	It specifies the primary DNS server address of IPv6 network.
Primary IPv6 DNS	They specify the primary and secondary DNS server addresses of IPv6 network.
Secondary IPv6 DNS	
IPv6 LAN Address	It specifies the LAN IPv6 address of the router. After the IPv6 function is configured, the LAN port of the router obtains a global unicast IPv6 address or a tunnel address, and a link local address.

13.11 System log

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > System Log**.

This function logs all key events that occur after the router is started. If you encounter a network fault, you can turn to system logs for fault rectification. A maximum of 300 system logs can be saved here.

If necessary, you can also export the system logs to your local computer by clicking **Export**.

System Log ✕

Note: If the router is not connected to the internet, the default logging time is 2010-X-X XX:XX:XX.

Number	Time	Type	Log Content
1	2022-07-06 17:43:09	system	Sync time success!
2	2022-07-06 17:42:25	system	web 192.168.1.109 login
3	2022-07-06 17:42:15	system	web 192.168.1.109 login ti...
4	2022-07-06 17:42:10	system	lan1 up
5	2022-07-06 17:42:09	system	System start.
6	2022-07-06 17:41:22	system	pppd:PPPoE Wait PADO
7	2022-07-06 17:41:22	system	pppd:PPPoE Send PADI
8	2022-07-06 17:41:22	system	pppd:PPPoE Wait for PADO...
9	2022-07-06 17:41:17	system	pppd:PPPoE Wait PADO
10	2022-07-06 17:41:17	system	pppd:PPPoE Send PADI

Page 1, Total 30 pages Total 300 items < 1 2 3 4 5 6 7 8 ... 30 >

Export



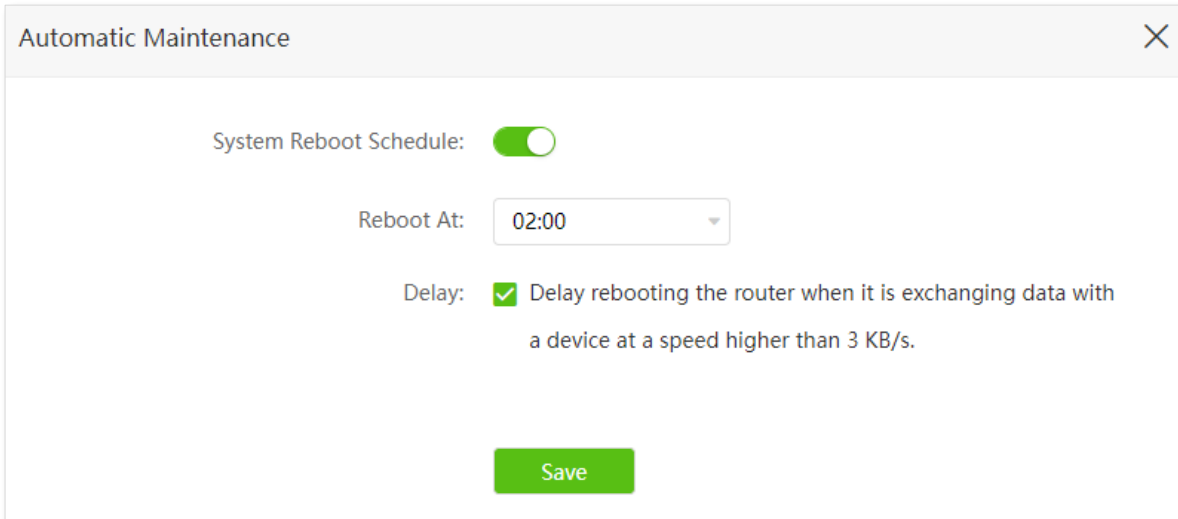
TIP
Rebooting the router will clear all previous system logs.

13.12 Automatic maintenance

Automatic maintenance enables you to make the router restart regularly. It helps improve the stability and service life of the router.

To access the configuration page, [log in to the web UI of the router](#), and choose **System Settings > Automatic Maintenance**.

This function is enabled by default.



Automatic Maintenance


System Reboot Schedule:

Reboot At: 02:00

Delay: Delay rebooting the router when it is exchanging data with a device at a speed higher than 3 KB/s.

Save

Parameter description


Parameter	Description
System Reboot Schedule	It is used to enable or disable the automatic reboot function.
Reboot At	It specifies the time when the router reboots automatically every day.
Delay	<p>It is used to enable or disable the delay function.</p> <ul style="list-style-type: none">• Ticked: The function is enabled. When the time for rebooting approaches, if there is any user connected to the router and the traffic over the router's WAN port exceeds 3 KB/s within 30 minutes, the router will delay rebooting. If there is any user connected to the router and the traffic over the WAN port does not exceed 3 KB/s within 30 minutes, or there is no user connected to the router and the traffic over the router's WAN port is slower than 3 KB/s within 3 minutes, the router will reboot automatically.• Unticked: The function is disabled. The router reboots immediately. <p> TIP</p> <p>When the system reboot schedule function is enabled, the router detects the traffic over the WAN port continuously within 2 hours after the specified reboot time and reboot when the traffic requirement for rebooting is met.</p>

Appendix

A.1 Configure the computer to obtain an IPv4 address automatically

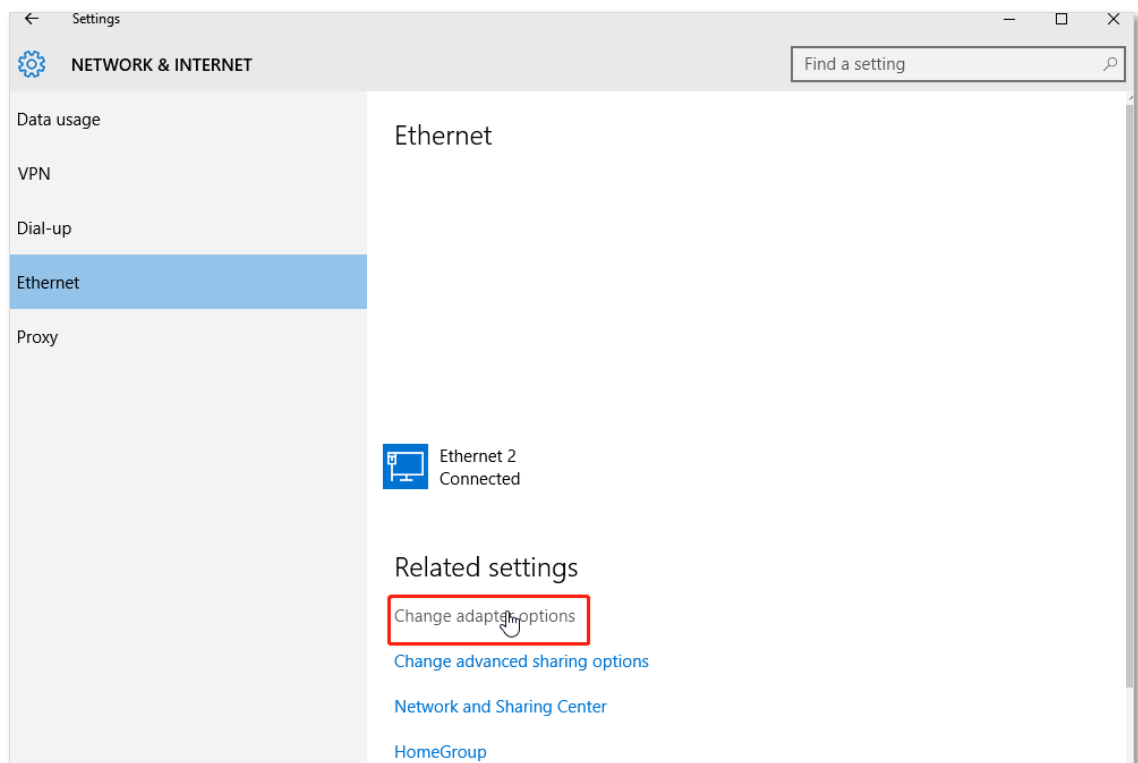
Perform the configuration procedures corresponding to [Windows 10](#), [Windows 8](#) and [Windows 7](#) and as required. A computer installed with a wired network adapter is used as an example to describe the procedures. The procedures for configuring computers installed with a Wi-Fi network adapter are similar.

A.1.1 Windows 10

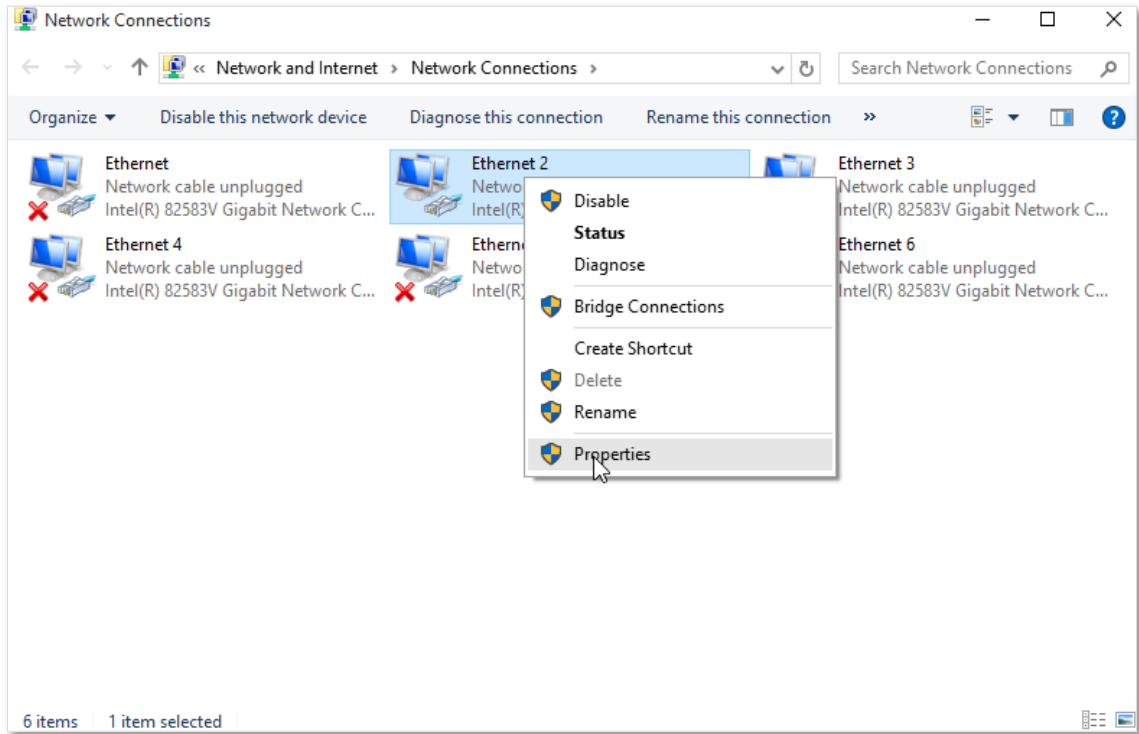
Step 1 Click  in the bottom right corner of the desktop and choose **Network settings**.



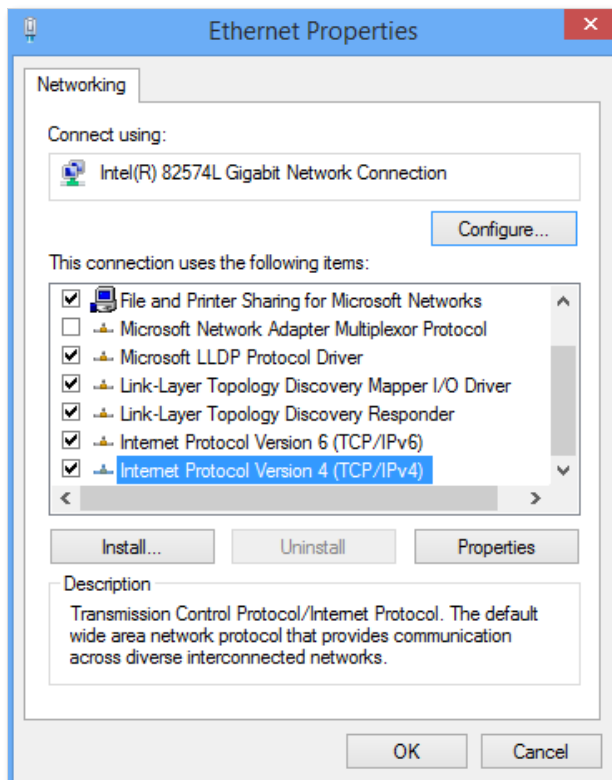
Step 2 Click **Change adapter options**.



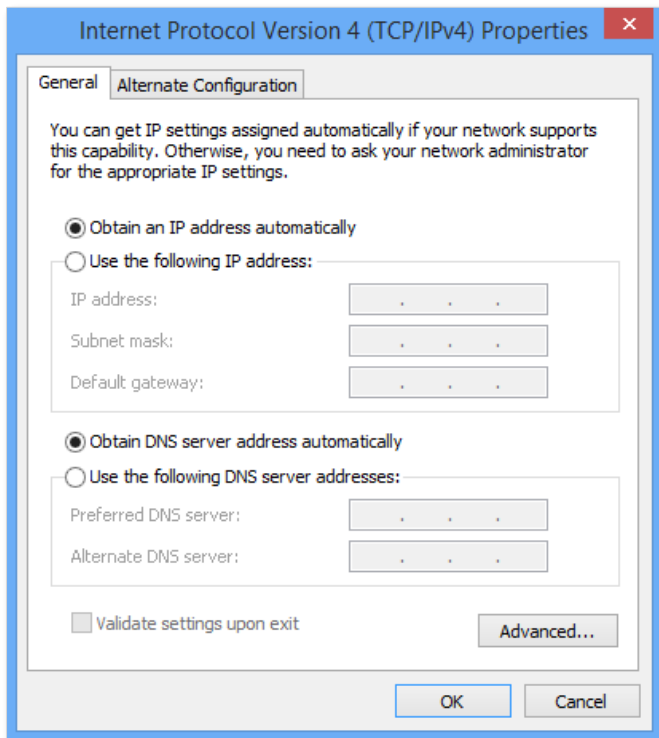
Step 3 Right-click on the connection which is being connected, and then click **Properties**.



Step 4 Double-click **Internet Protocol Version 4 (TCP/IPv4)**.




Step 5 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and click **OK**.

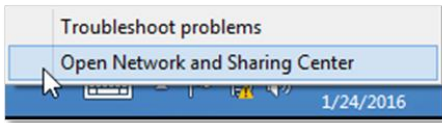


Step 6 Click **OK** in the **Ethernet Properties** window.

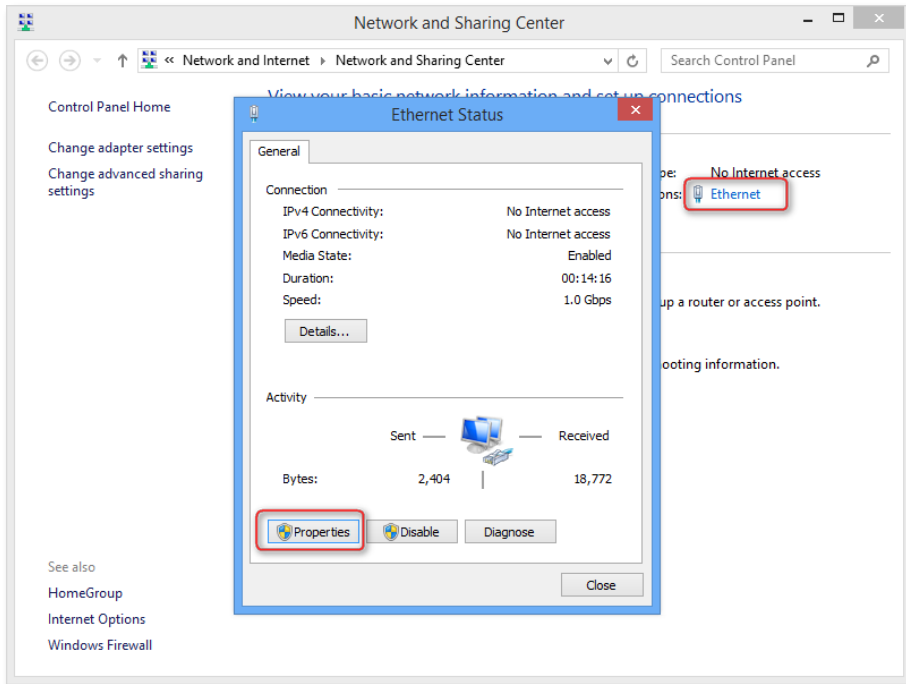
---End

A.1.2 Windows 8

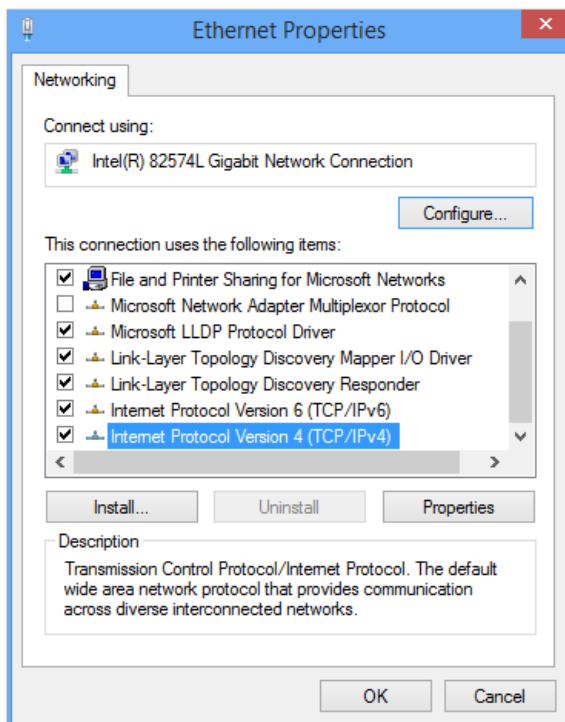
Step 1 Right-click  in the bottom right corner of the desktop and choose **Open Network and Sharing Center**.



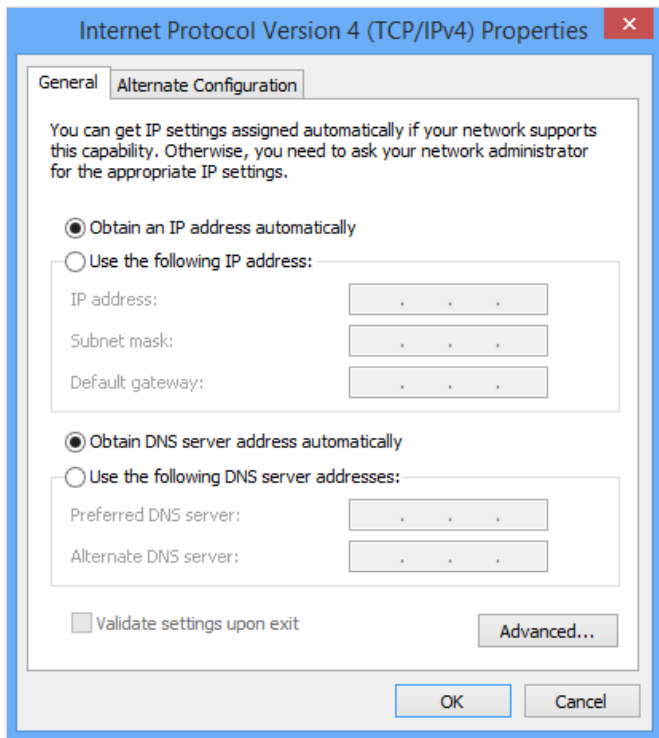
Step 2 Click **Ethernet** and then **Properties**.



Step 3 Double-click **Internet Protocol Version 4 (TCP/IPv4)**.




Step 4 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and click **OK**.

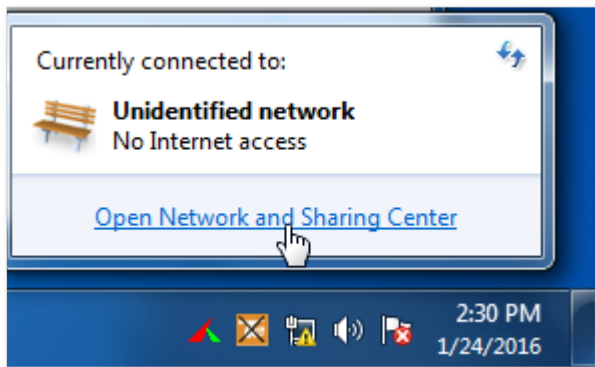


Step 5 Click **OK** in the **Ethernet Properties** window.

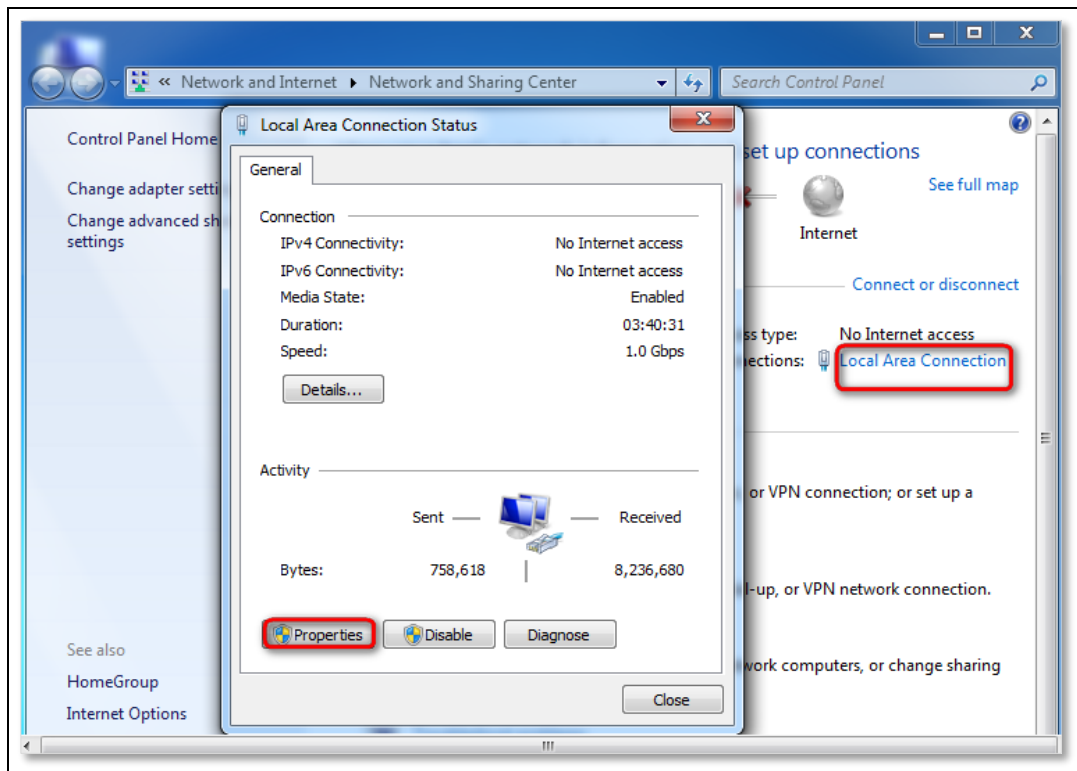
---End

A.1.3 Windows 7

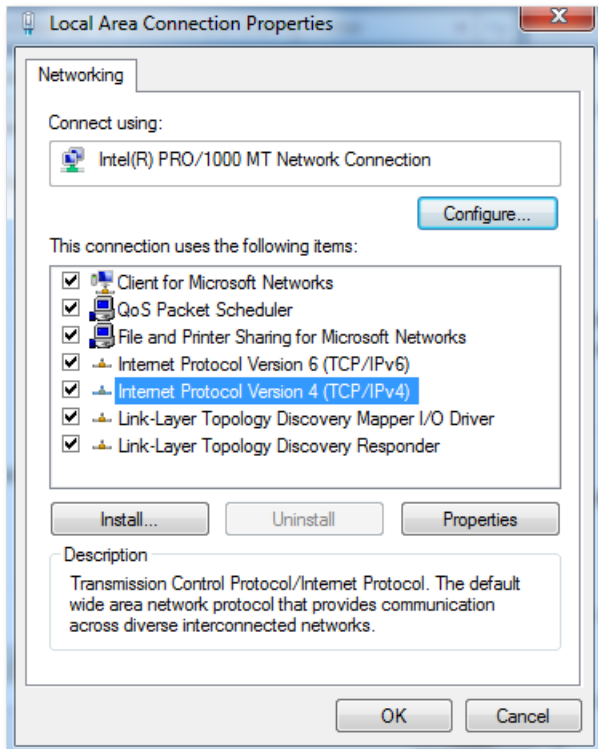
Step 1 Click  in the bottom right corner of the desktop and choose **Open Network and Sharing Center**.



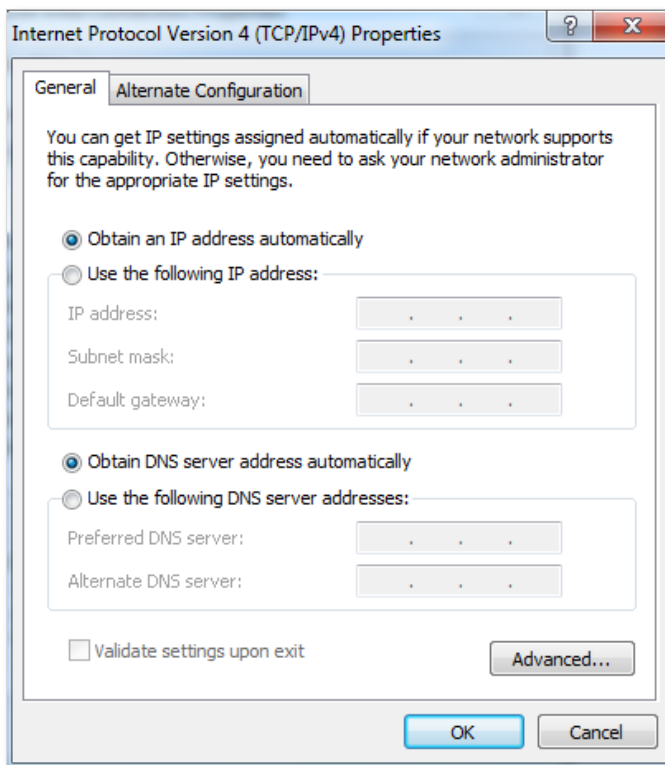
Step 2 Click **Local Area Connection** and then **Properties**.



Step 3 Double-click **Internet Protocol Version 4 (TCP/IPv4)**.



Step 4 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and click **OK**.



Step 5 Click **OK** in the **Local Area Connection Properties** window.

---End

A.2 Acronyms and abbreviations

Acronym or Abbreviation	Full Spelling
AES	Advanced Encryption Standard
BR	Border Relay
CE	Customer Edge
DDNS	Dynamic Domain Name System
DHCP	Dynamic Host Configuration Protocol
DMZ	Demilitarized Zone
DNS	Domain Name System
GMT	Greenwich Mean Time
IP	Internet Protocol
IPv4	Internet Protocol Version 4
IPv6	Internet Protocol Version 6
ISP	Internet Service Provider
L2TP	Layer 2 Tunneling Protocol
LAN	Local Area Network
MAC	Medium Access Control
MTU	Maximum Transmission Unit
OFDMA	Orthogonal Frequency-division Multiple Access
PIN	Personal Identification Number
PPPoE	Point-to-Point Protocol over Ethernet
PPTP	Point to Point Tunneling Protocol
PUK	Personal Identification Number Unlock Key
SIM	Subscriber Identity Module
SMS	Short Message Service
SSID	Service Set Identifier
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
UPnP	Universal Plug and Play
USSD	Unstructured Supplementary Service Data

Acronym or Abbreviation	Full Spelling
WAN	Wide Area Network
WISP	Wireless Internet Service Provider
WPA-PSK	WPA-Pre-shared Key