

Dual Band Gigabit Wi-Fi 6 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 dual-band gigabit WiFi 6 routers. Functions may differ with product models, and RX3 is used for illustration in this guide unless otherwise specified. The contained images and UI screenshots are subject to the actual products.

Conventions

Typographical conventions in this User Guide:

Item	Presentation	Example
Cascading Menus	>	Click **Status** > **Device Status**
Parameter and value	Bold	Set **User Name** to **Tom**.
UI control	Bold	On the **Policy** page, click the **OK** button.
Variable	Italic	Format: *XX:XX:XX:XX:XX:XX*
Message	“ ”	The “Success” message appears.

Symbols in this User Guide:

Item	Meaning
NOTE	This format is used to highlight information of importance or special interest. Ignoring this type of note may result in ineffective configurations, loss of data or damage to device.
TIP	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
Quick Installation Guide	It introduces how to set up the device quickly for internet access, the descriptions of LED indicators, ports, and buttons, FAQ, statement information, and so on.
User Guide	It introduces how to set up more functions of the device for more requirements, including all functions on the web UI of the device.

Document	Description
Data Sheet	It introduces the basic information of the device, including product overview, selling points, and specifications.

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.cn
Website	www.tendacn.com		

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1 Get to know your device

1.1 Introduction

The dual band gigabit Wi-Fi 6 router adopts the next generation Wi-Fi 6 standard, reaching a dual-concurrent rate of up to 2976 Mbps (2.4 GHz: 574 Mbps, 5GHz: 2402 Mbps). It incorporates MU-MIMO and OFDMA technologies, improving network performance and capacity. The WPA3 security protocol, guest network and parental control function ensure the safety and stability of your WiFi networks.

TIP

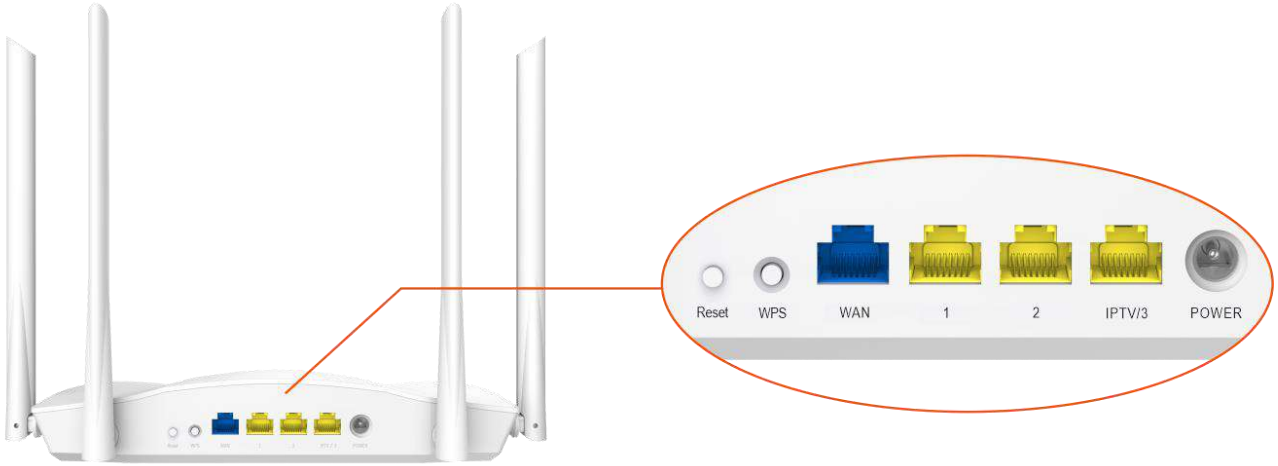
The wireless rate differs with product models and is illustrated with RX9 Pro above. The specific wireless rate is subject to the actual product.

1.2 LED indicator



LED indicator	Status	Description
LED indicator	Solid on	The system is starting up, or the router is already connected to the internet.
	Blinking slowly	The router is not connected to the internet.
	Blinking fast for 3 seconds	A device is connected to or disconnected from an Ethernet port of the router.
	Blinking fast for 2 minutes	The router is pending for or performing WPS negotiation.
	Off	The system is faulty, or the router is not powered on properly.

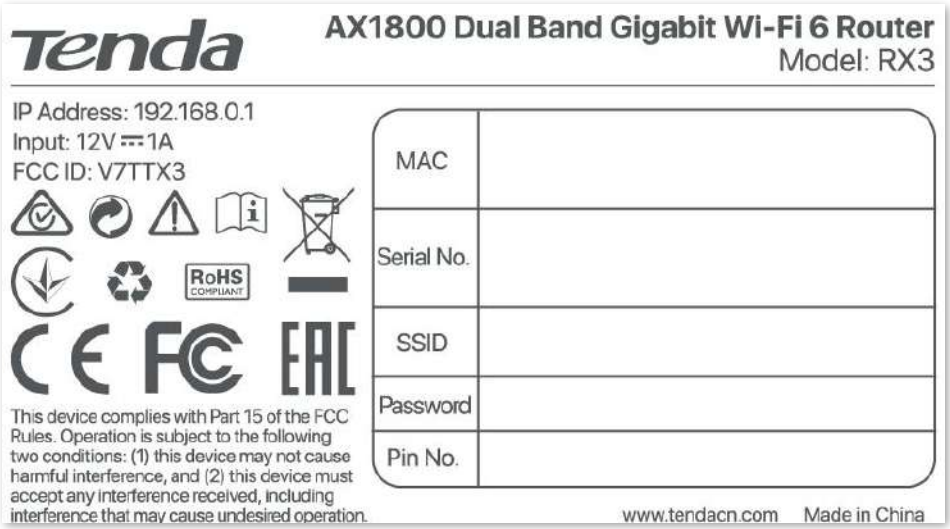
1.3 Ports and buttons



Jack/Port/Button	Description
Reset	Used to restore the factory settings of the router. **Method**: When the router is working normally, hold down the button for about 8 seconds, and release it when the LED indicator blinks fast. The router is restored to factory settings.
WPS	Used to start the WPS negotiation of the router, which enables connection to the WiFi network without entering the password. **Method**: Press the button, and the LED indicator blinks fast. Within 2 minutes, enable the WPS function of a WPS-enabled device to establish a WPS connection.
WAN	10/100/1000 Mbps auto-negotiation WAN port. Used to connect to a modem or the Ethernet jack using an Ethernet cable for internet access.
1, 2	10/100/1000 Mbps auto-negotiation LAN port. Used to connect to computers, switches or game machines, etc.
IPTV/3	10/100/1000 Mbps auto-negotiation LAN/IPTV port. It is a LAN port by default. When the IPTV function is enabled, it can only serve as an IPTV port to connect to a set top box.
POWER	Power jack. Please use the included power adapter to connect this jack to a power source for power supply.

1.4 Label

The bottom label shows the login IP address, MAC address of the router, serial number, SSID, password and Pin No. See the following figure..



IP Address: It specifies the default address used to log in to the web UI of the router.

MAC: It specifies the MAC address of the router.

Serial No.: It is required if you need technical assistance to repair your device.

SSID: It specifies the default WiFi name of the router.

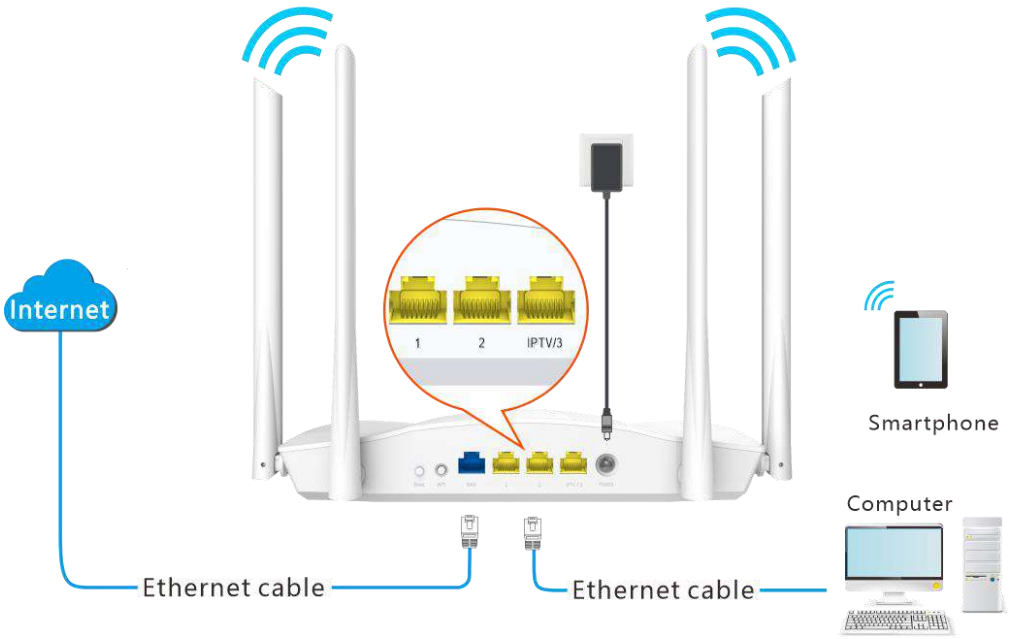
Password: It specifies the default WiFi password of the router.

Pin No.: It specifies the PIN code of the router.

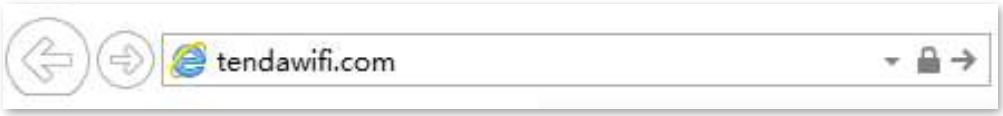
2 Web UI

2.1 Log in to the web UI

Step 1 Connect your smartphone to the WiFi network, or connect your computer to a LAN port (1, 2 or IPTV/3) of the router.



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



Step 3 Enter the login password, and click **Login**.



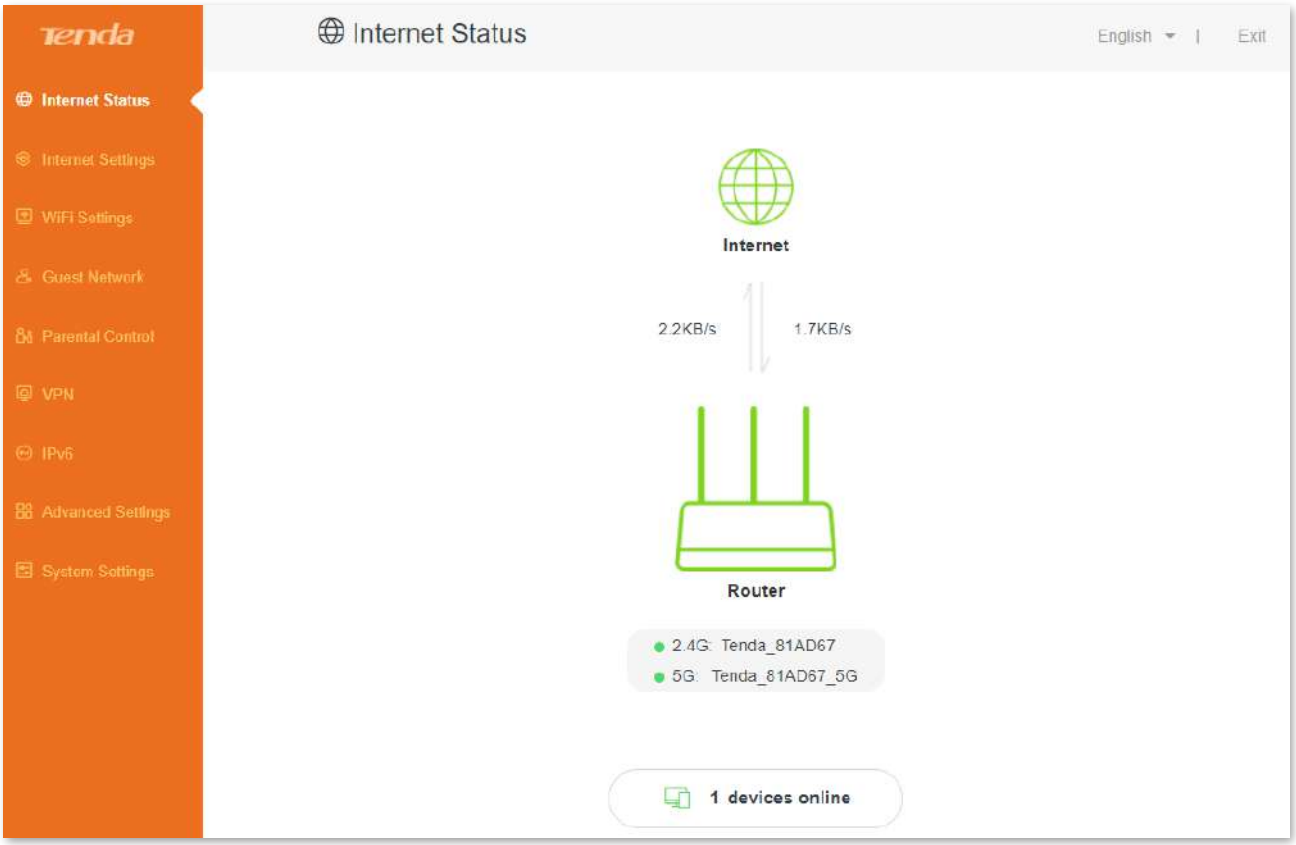
---End

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 (1, 2 or IPTV/3) of the router, and configure the computer to obtain an IP address automatically.
- Restore the router to factory settings and try again.

The following page appears.

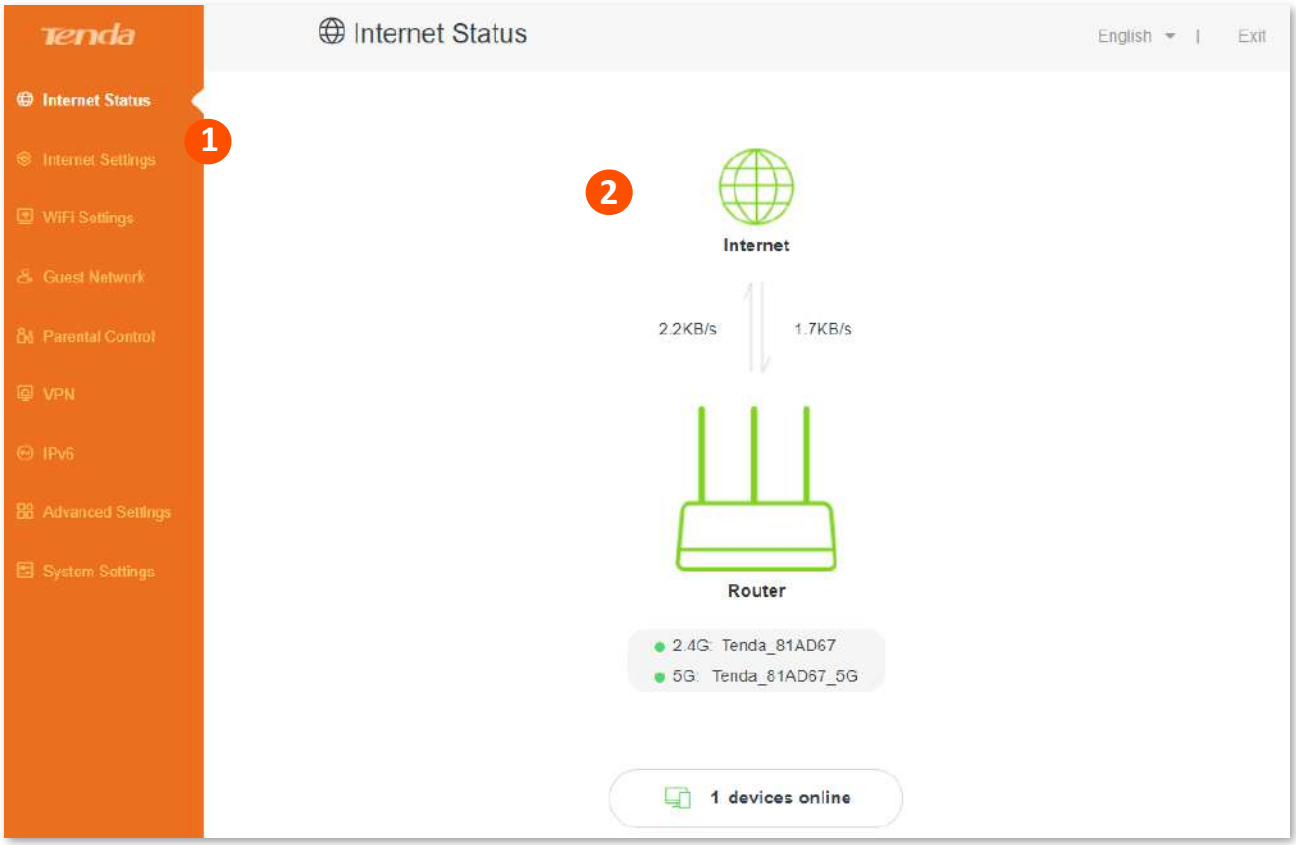


2.2 Log out of the web UI

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.

2.3 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.



TIP

Features displayed in gray are not available or cannot be configured under the current condition.

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

3 Internet status

Log in to the web UI of the router and choose **Internet Status** to enter the page. On this page, you can check:

- Internet status
- Wireless information
- System information
- Online devices information

3.1 Internet status

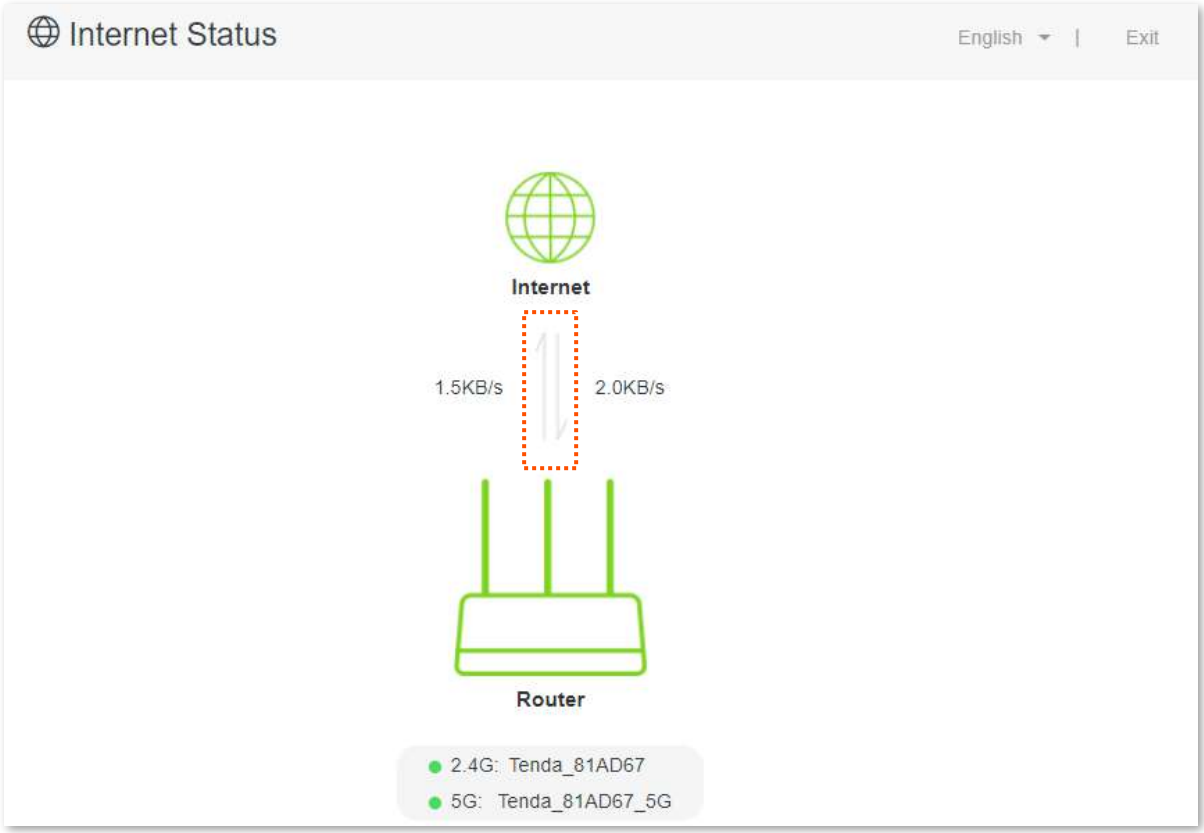
To view internet status:

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.

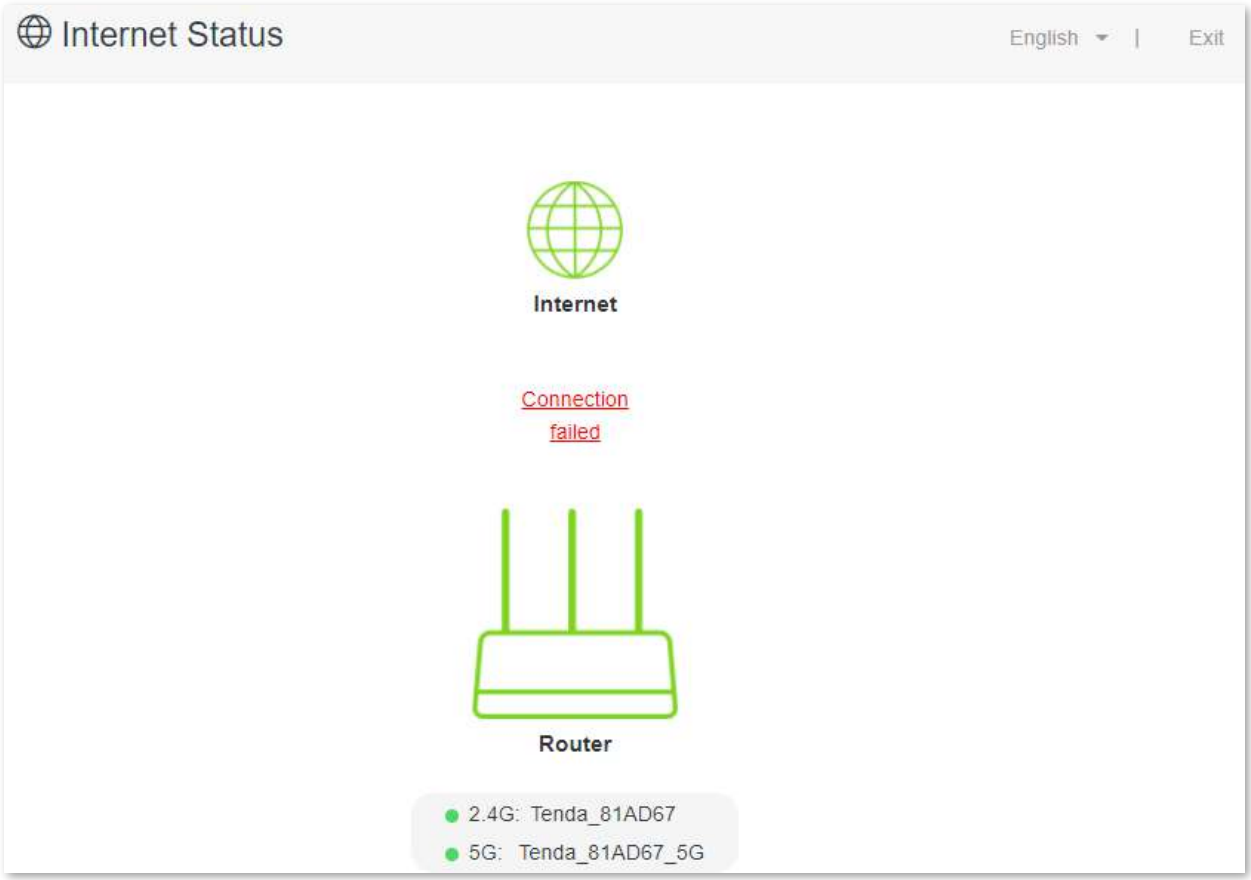
Step 2 Choose **Internet Status**.

---End

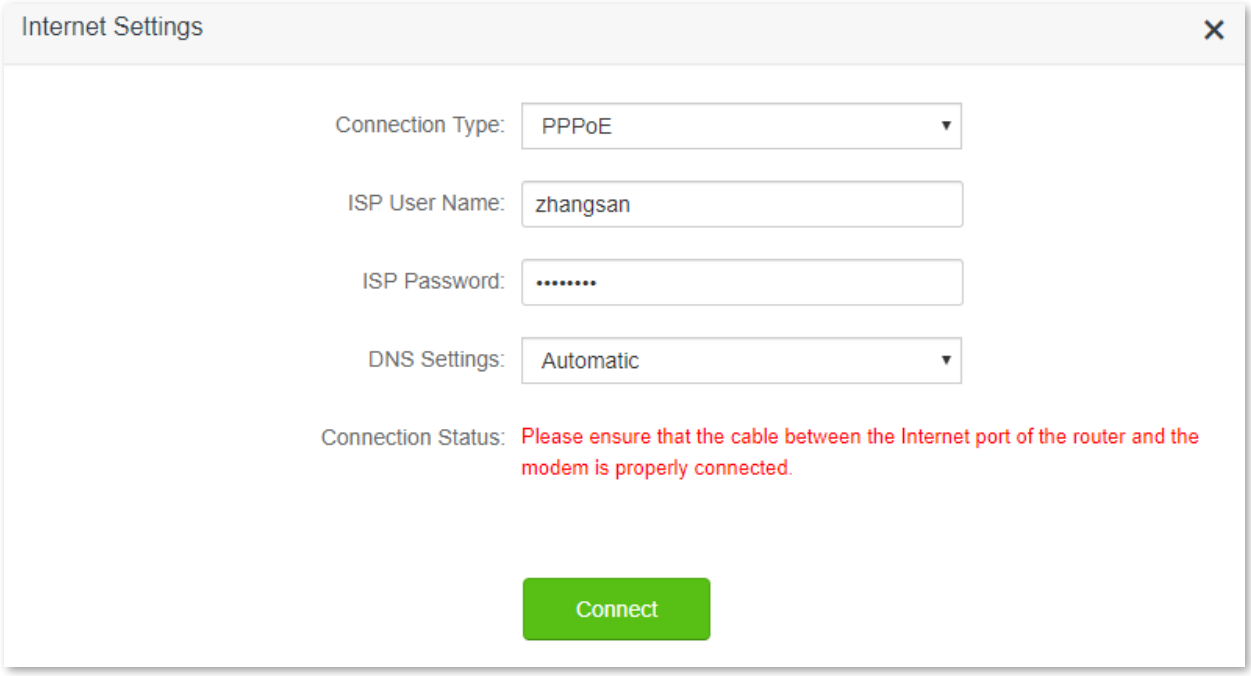
When the **Internet** and the **Router** are connected as shown below, the router is connected to the internet successfully.



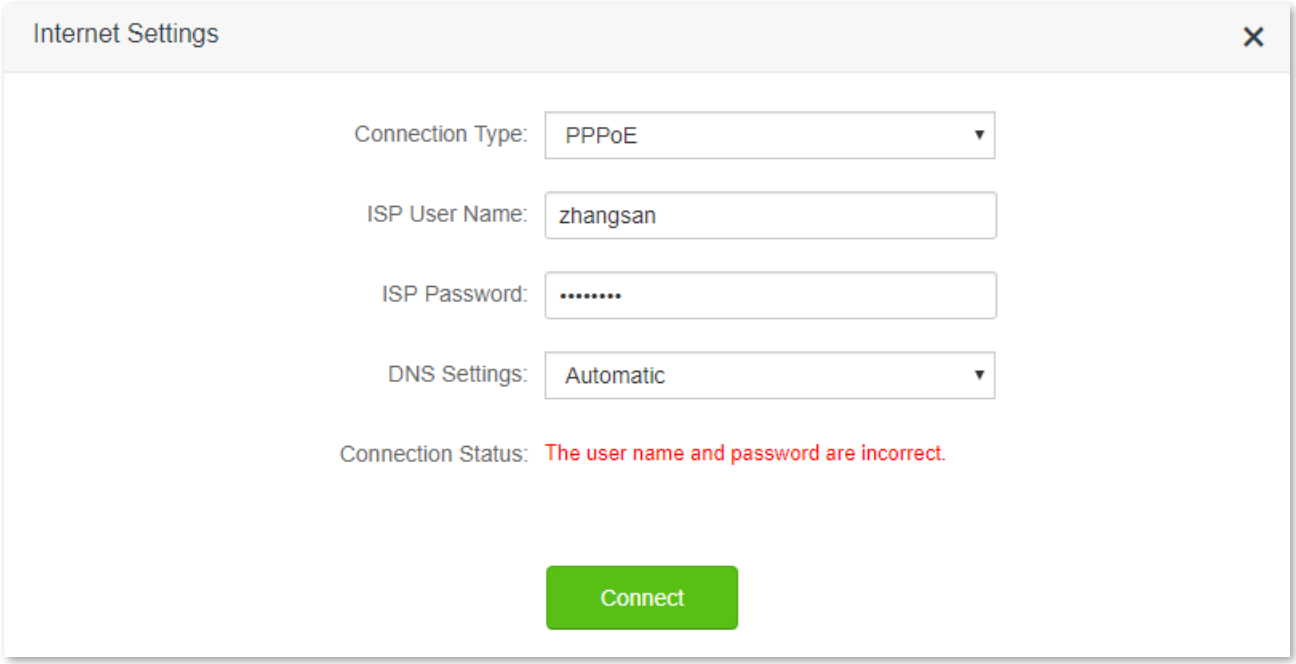
When a red cross and "Connection failed" are shown between the **Internet** and the **Router**, it indicates that the internet connection is abnormal. Please click Connection failed to navigate to the **Internet Settings** page and follow the instructions to solve the problem.



When "Please ensure that the cable between the Internet port of the router and the modem is properly connected" is shown on the page, ensure that the WAN port of the router and the LAN port of the modem or the Ethernet jack are connected properly. If the problem persists, contact the technical support for help.



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



NOTE

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

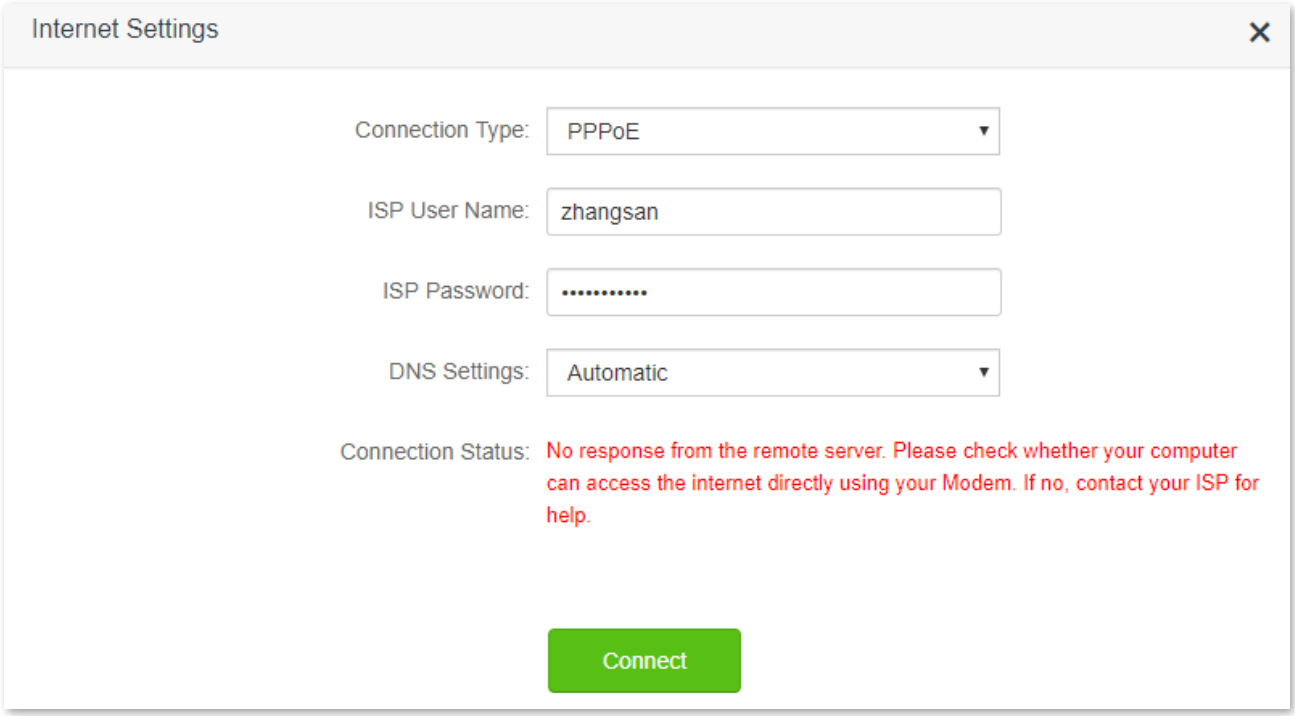
- Pay attention to case sensitivity, such as “Z” and “z”.
- Pay attention to similar letters and numbers, such as “I” and “1”.
- Ensure the completeness of account parameters, such as “0755000513@163.gd”, rather than “0755000513”

If the problem persists, contact your ISP for help.

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 on the page as below, try the following methods:

- Ensure that the Ethernet cable in 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.

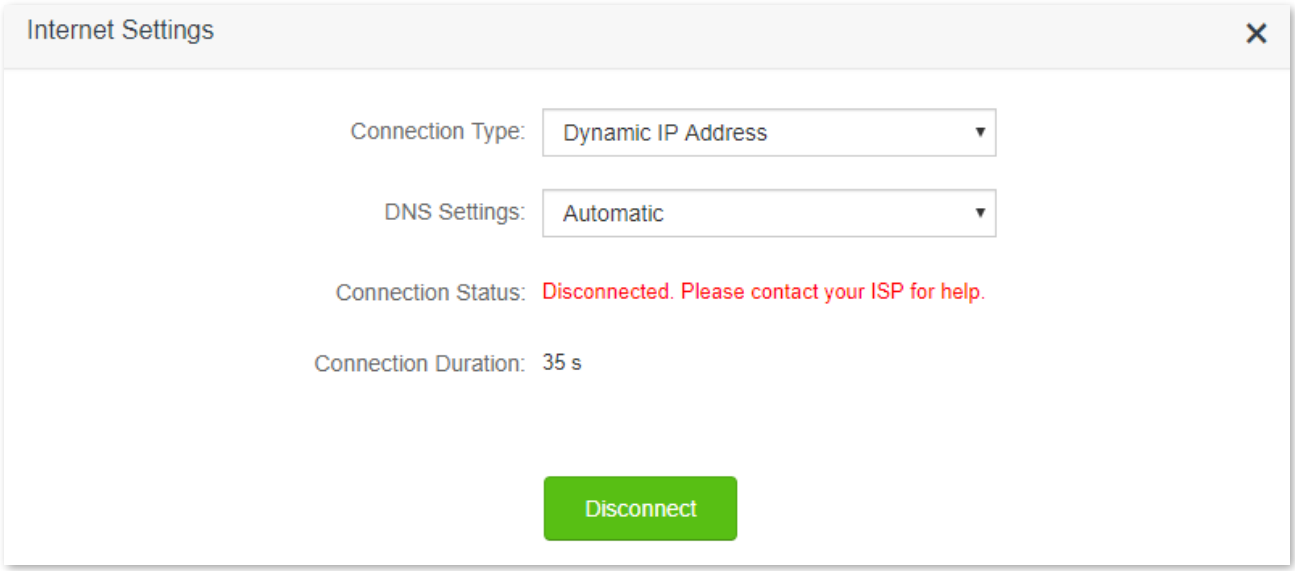
If the problem persists, contact your ISP for help.



When "Disconnected. Please contact your ISP for help." is shown on the page as below, try the following methods:

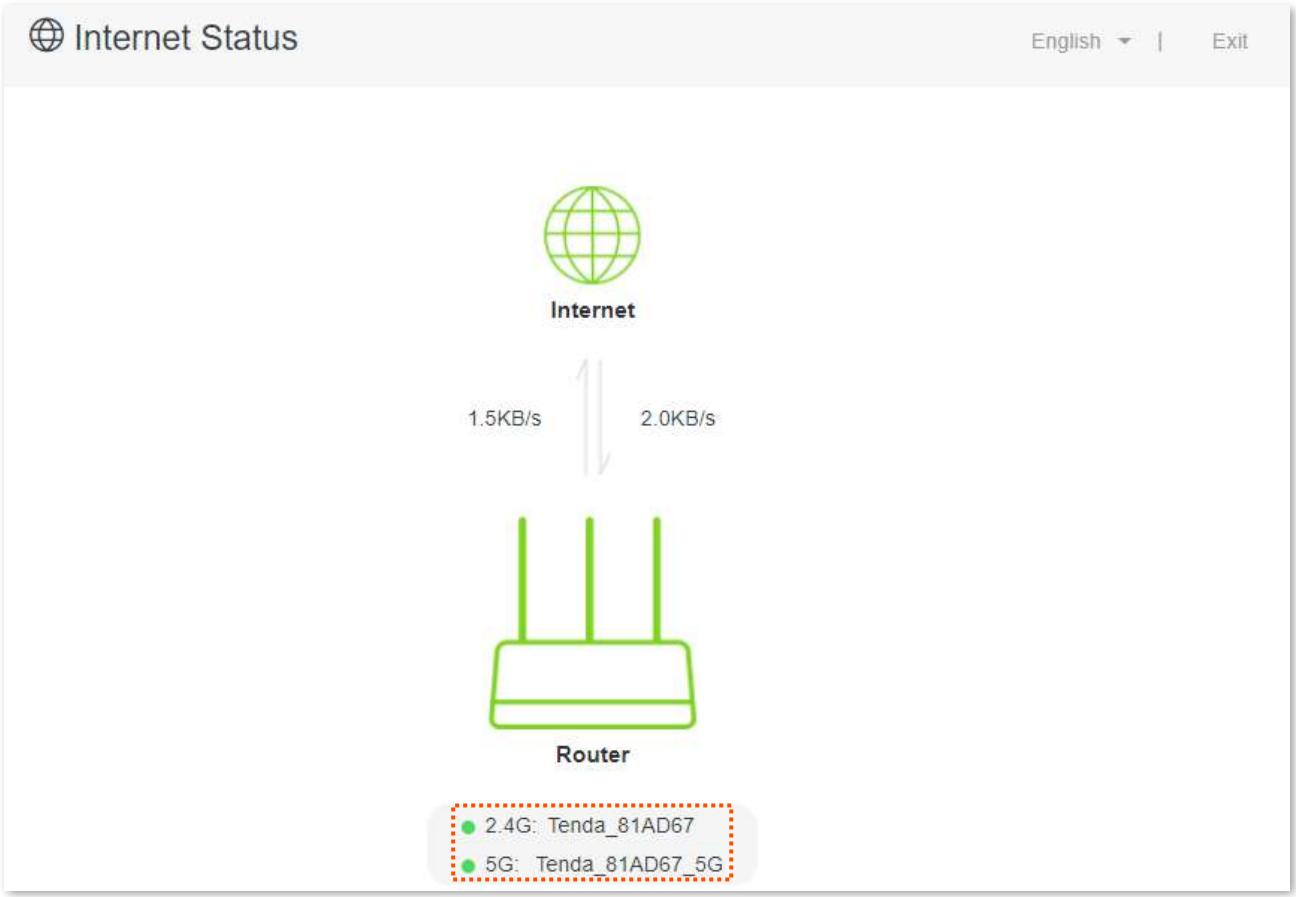
- Modify the MAC address of WAN port by referring to Change the MAC address of the WAN port.
- Use another device to configure the router again.
- Ensure that your internet service does not expire.

If the problem persists, contact Tenda technical support.



3.2 Wireless information

To view the WiFi names of the router, 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. Choose **Internet Status**, and you can find the WiFi names on this page.



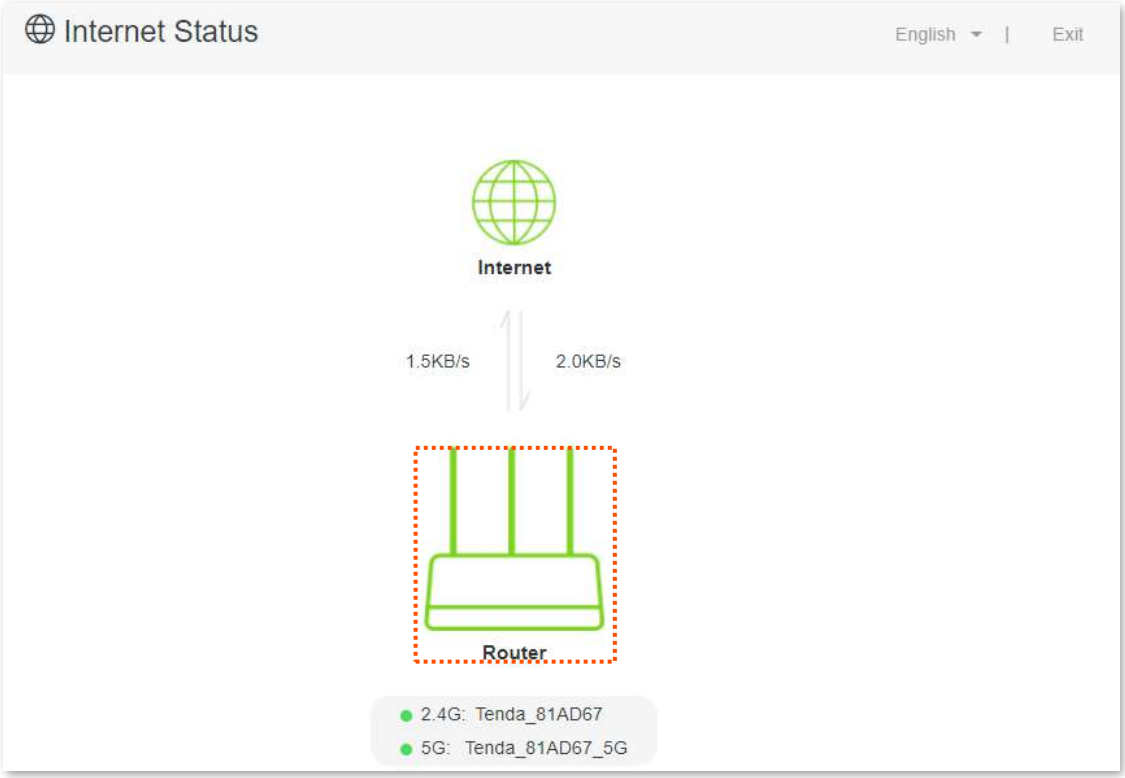
3.3 System information

To view the wireless 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 .



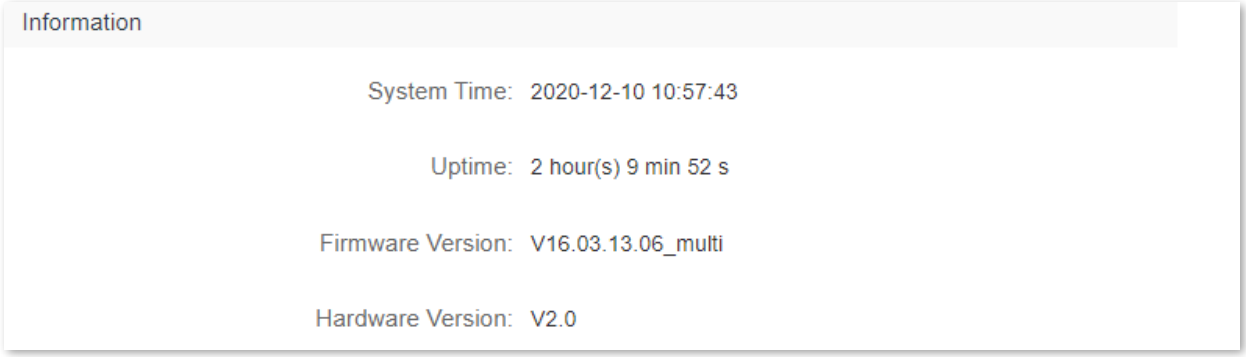
---End

TIP

For detailed description of parameters on this page, refer to System status.

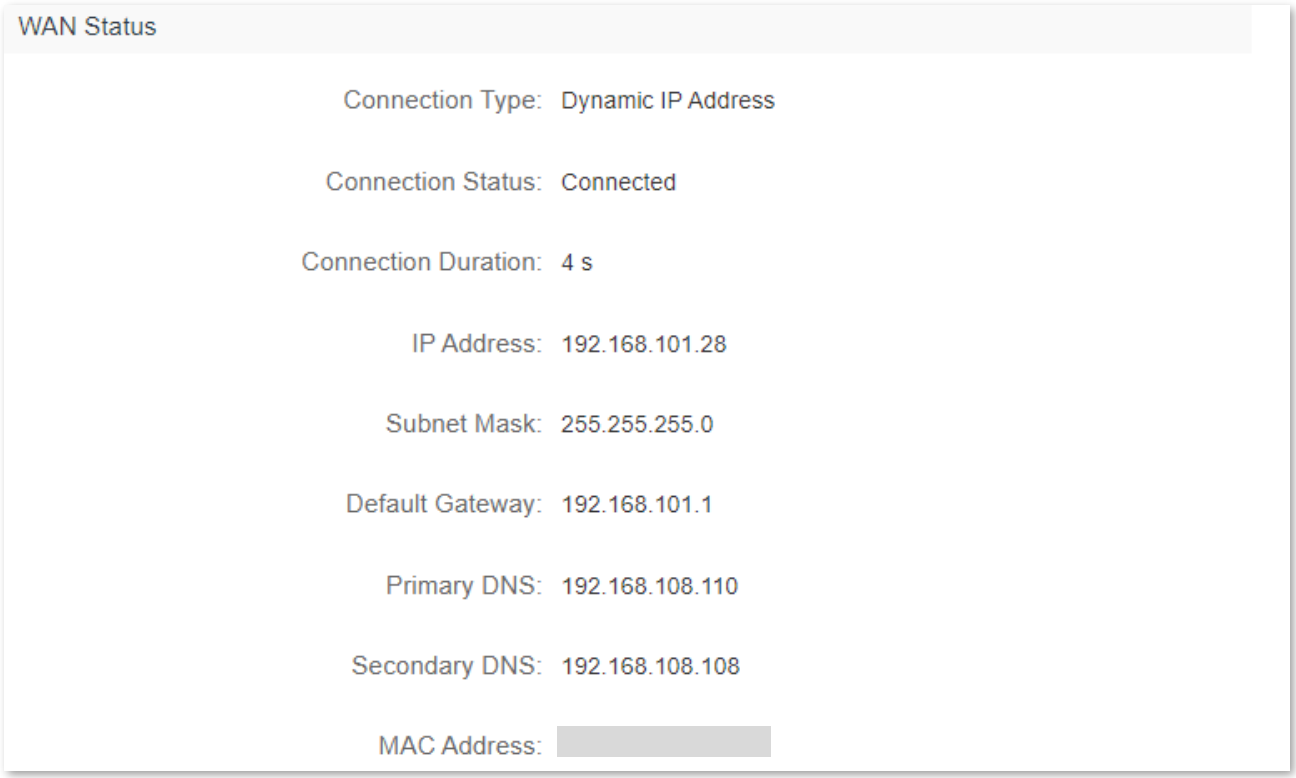
3.3.1 Basic information

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



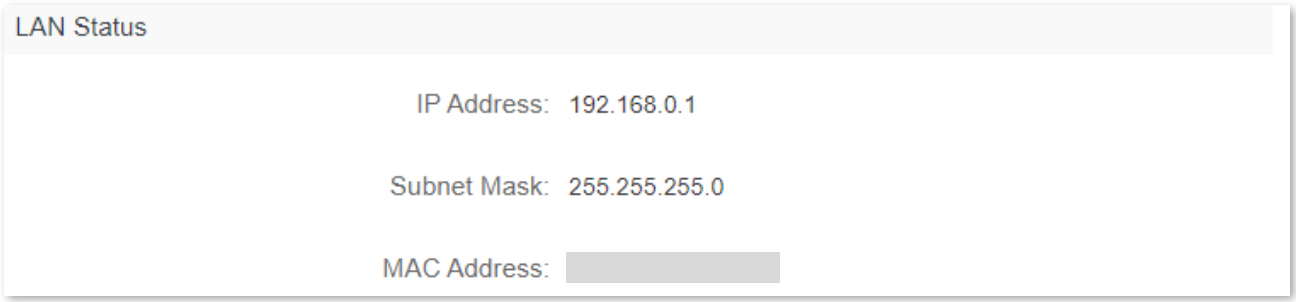
3.3.2 WAN status

In this part, you can view the information of the WAN port, including connection type, connection status and connection duration, etc.



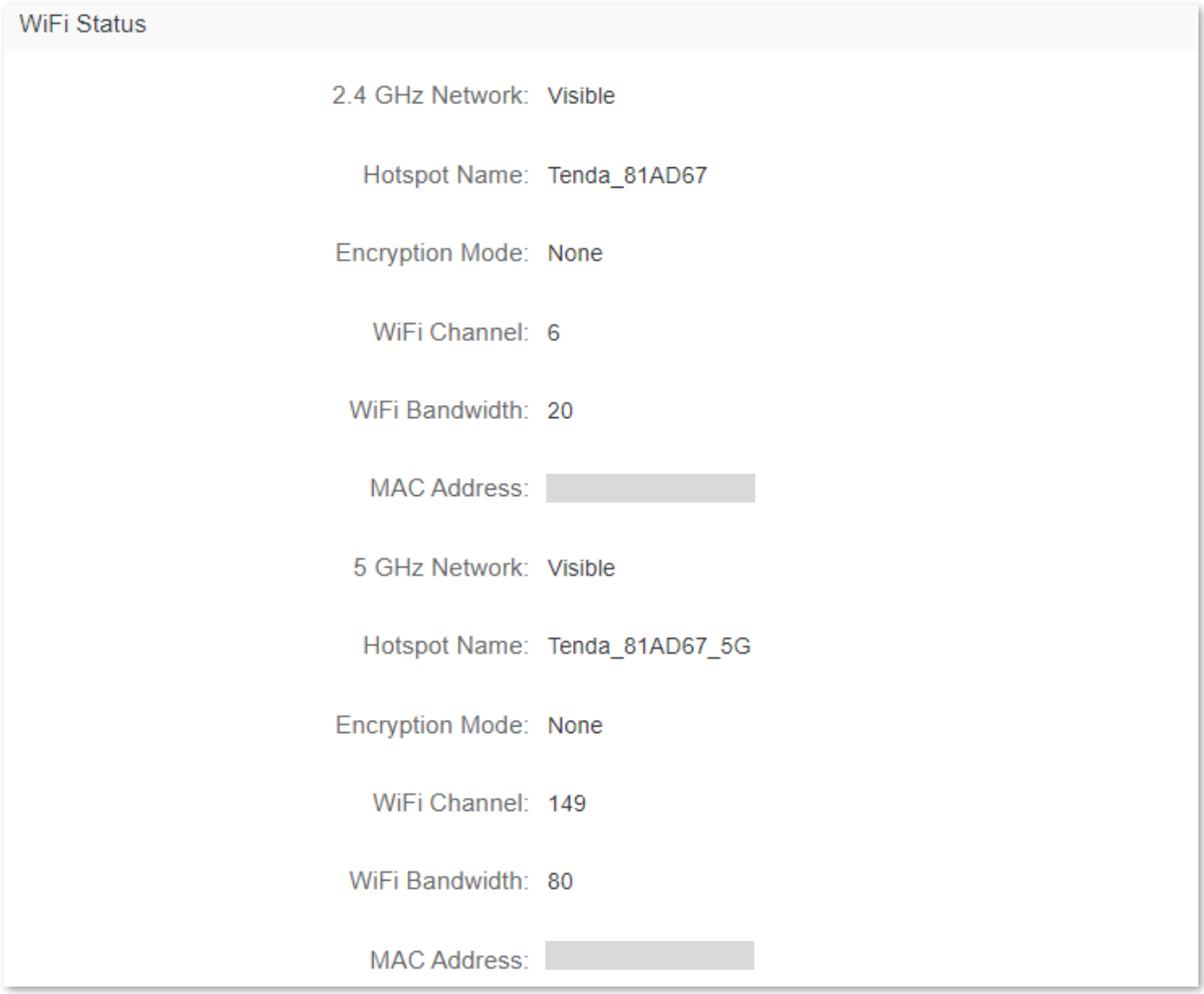
3.3.3 LAN status

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



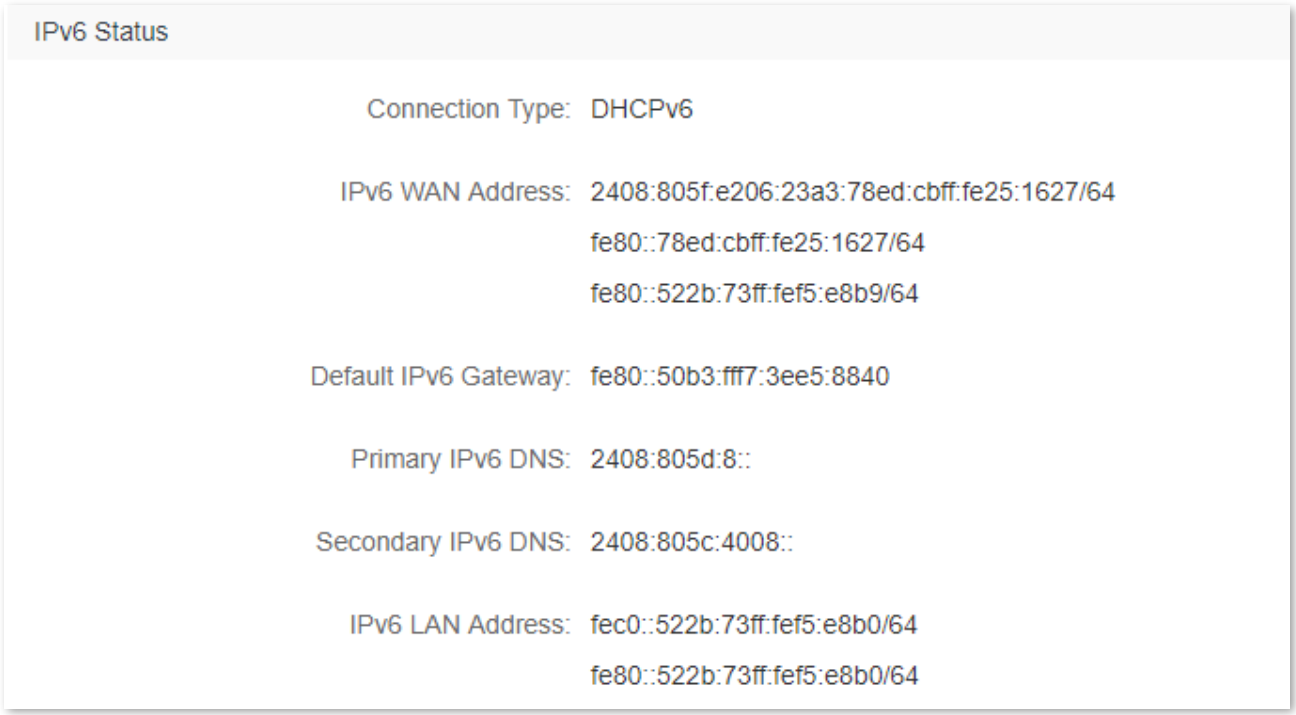
3.3.4 WiFi status

In this part, you can view the information of 2.4 GHz and 5 GHz WiFi network, including visibility, hotspot name and encryption mode, etc.



3.3.5 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.



3.4 Online device information

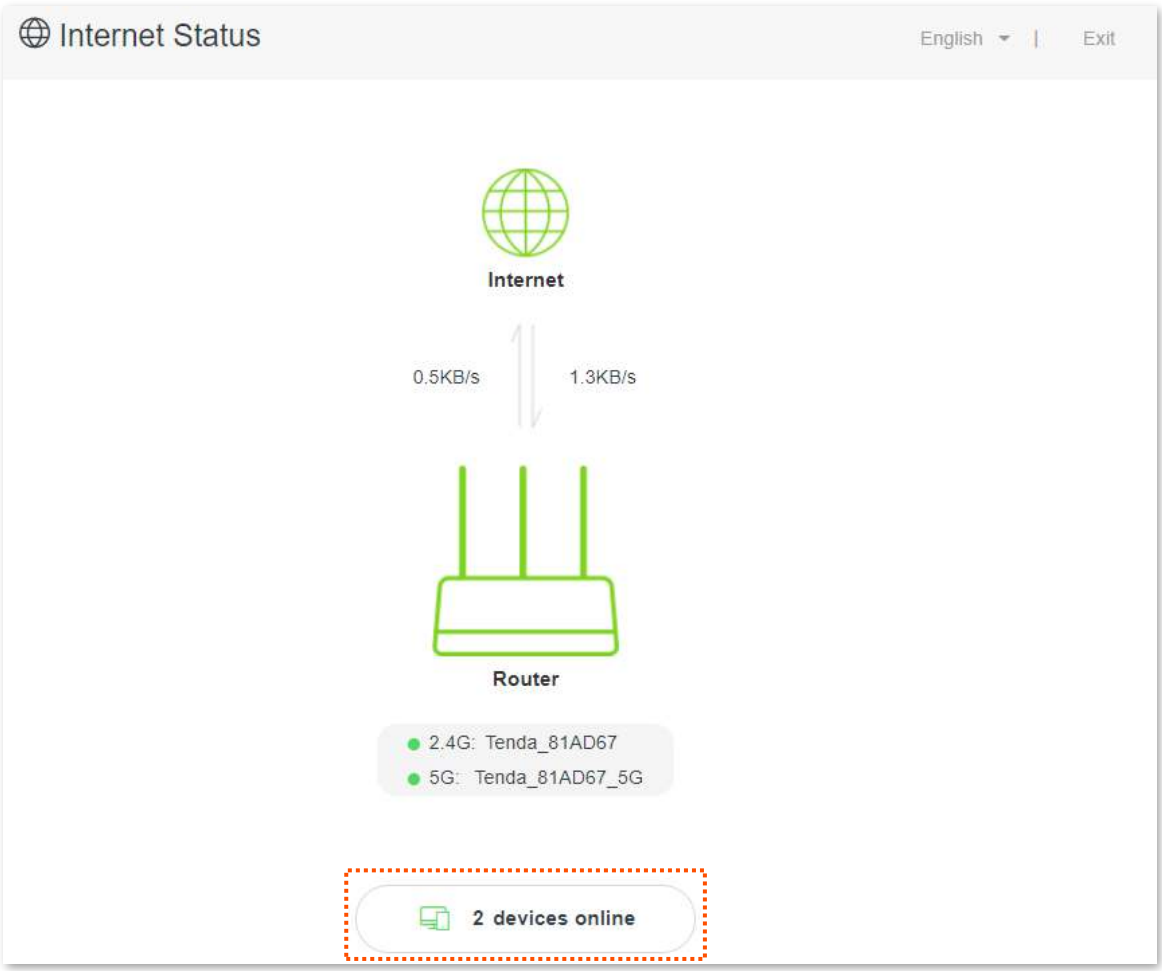
On this page, you can view the information of devices connected to the router, including the upload speed, download speed and access type, etc. You can also add devices to the blacklist.

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 .

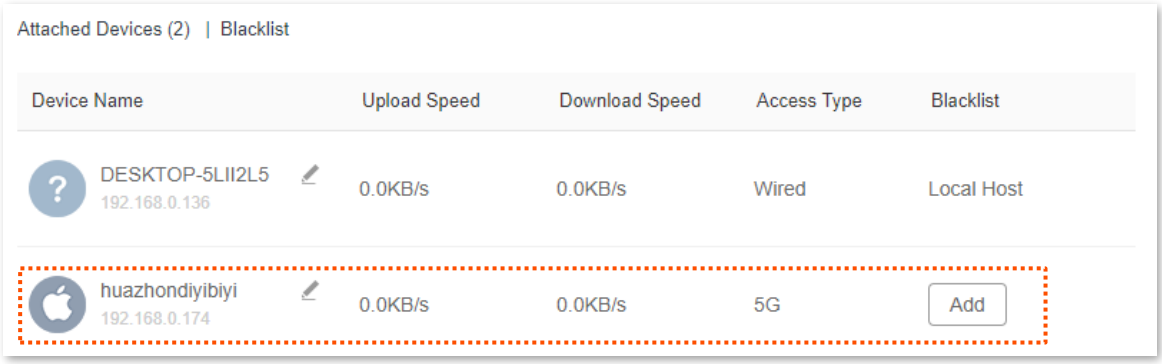


---End

3.4.1 Add devices to the blacklist

Add devices to the blacklist to block the internet access:

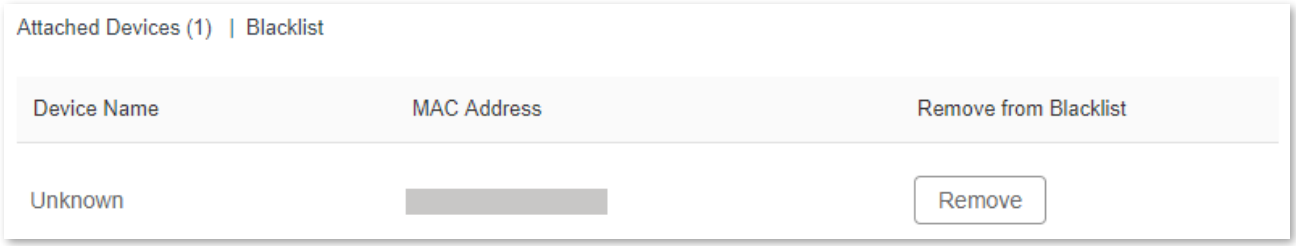
Step 1 Choose **Attached Devices**, and target the device to be added.



Step 2 Click **Add**.

---End

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

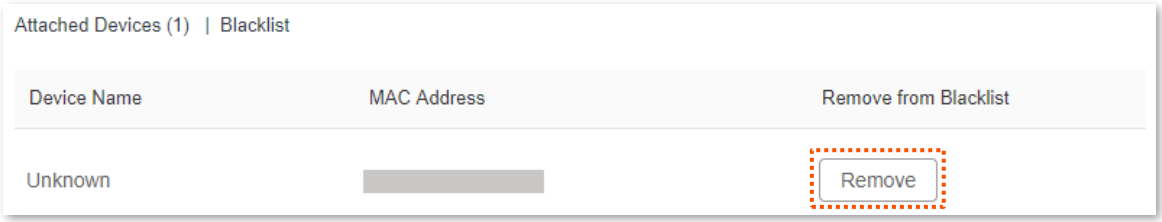


3.4.2 Remove devices from the blacklist

To remove devices from the blacklist as required:

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

Step 2 Click **Remove**.



---End

4 Internet settings

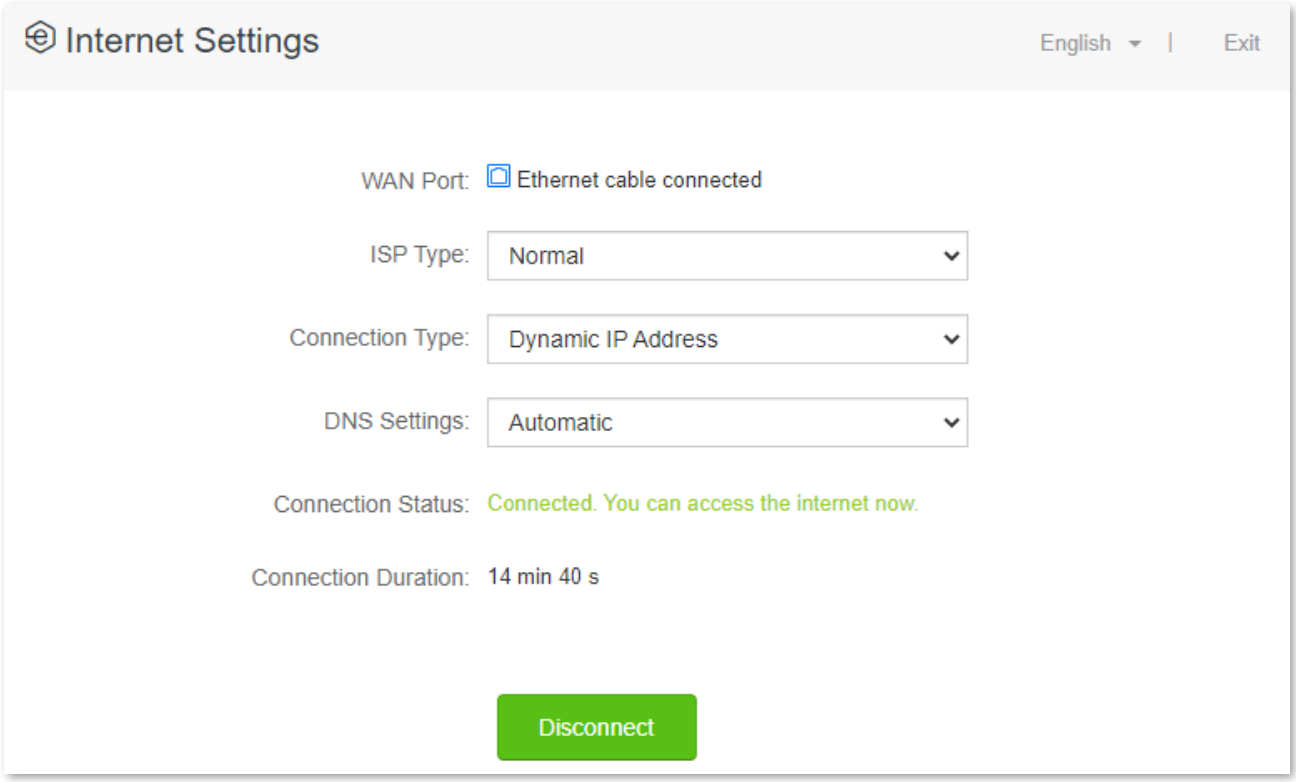
By configuring the internet settings, you can achieve the shared internet access (IPv4) for multiple users within the LAN.

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 then, you can change the internet settings by following the instructions in this chapter.

TIP

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

To access the configuration page, log in to the web UI of the router, and navigate to **Internet Settings**.



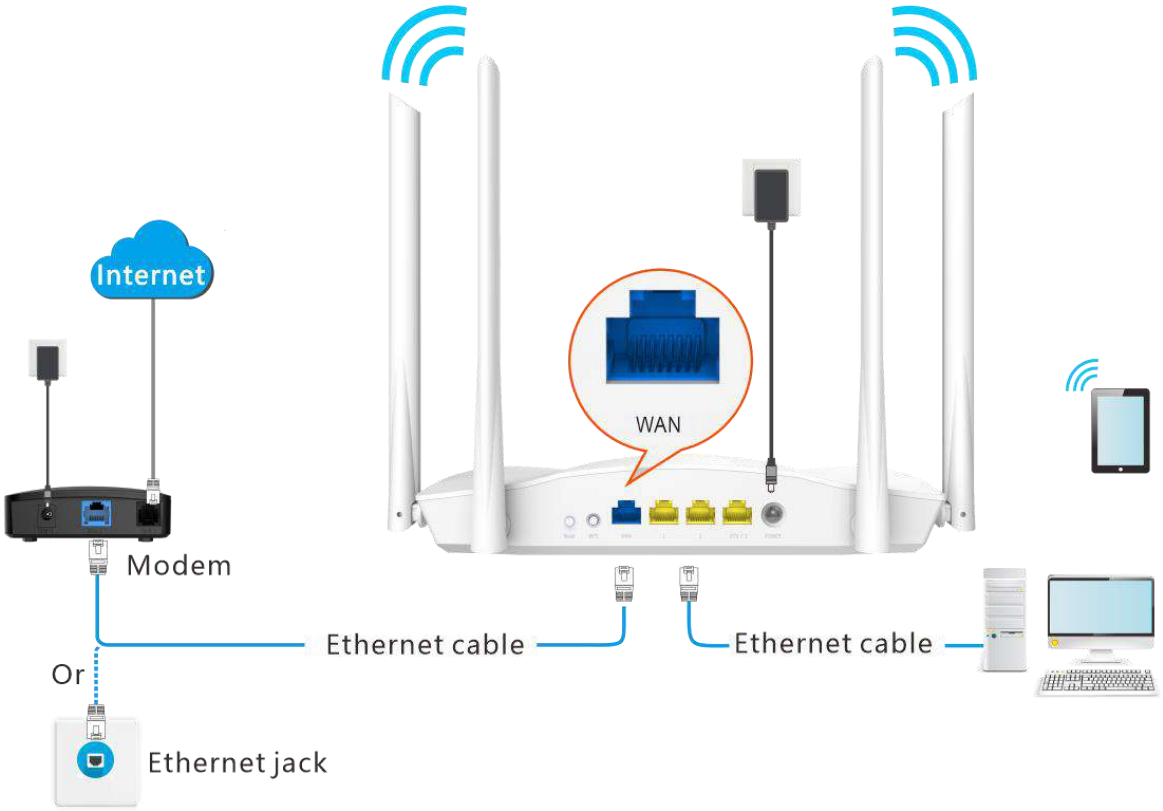
Parameter description

Parameter	Description
WAN Port	It specifies the Ethernet cable connection status on the WAN port.
ISP Type	It specifies your Internet Service Provider (ISP).
Connection Type	It specifies the way which the router uses to connect to the internet.
DNS Settings	It specifies the obtaining method of WAN port DNS address, which is **Automatic** by default. • **Automatic**: The router obtains a DNS server address from the DHCP server of the

Parameter	Description
	upstream network automatically. • **Manual**: The DNS server address is configured manually.
Connection Status	It specifies the internet connection status. • 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.
Connection Duration	It specifies the duration since the router is connected to the internet.

4.1 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.



Configuring procedure:

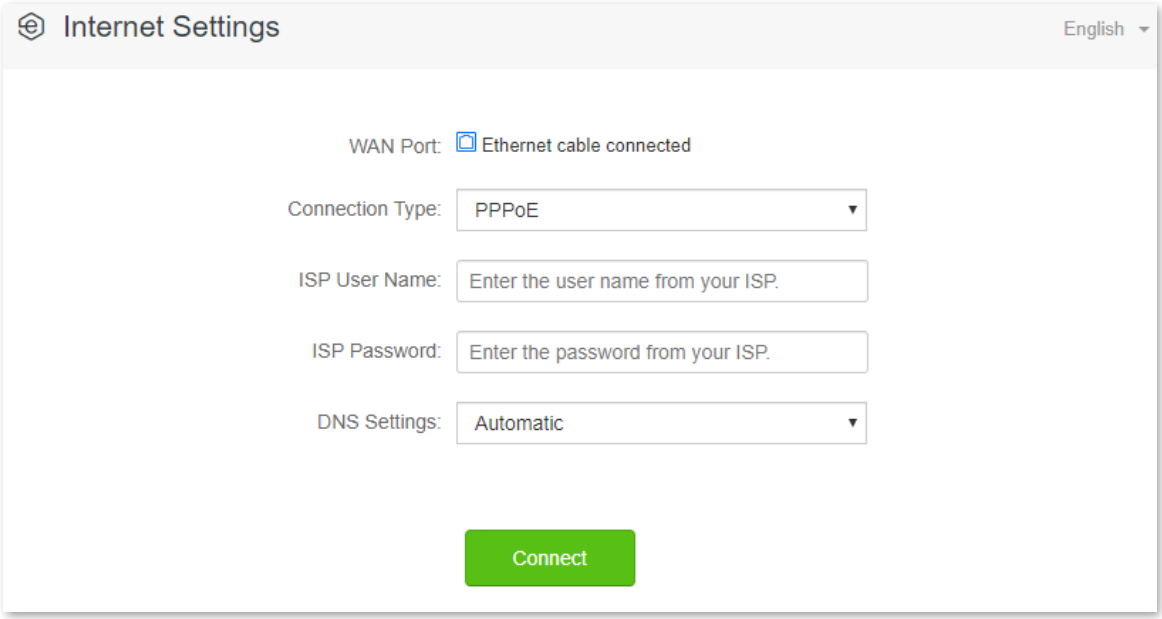
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Settings**.

Step 3 Set **Connection Type** to **PPPoE**.

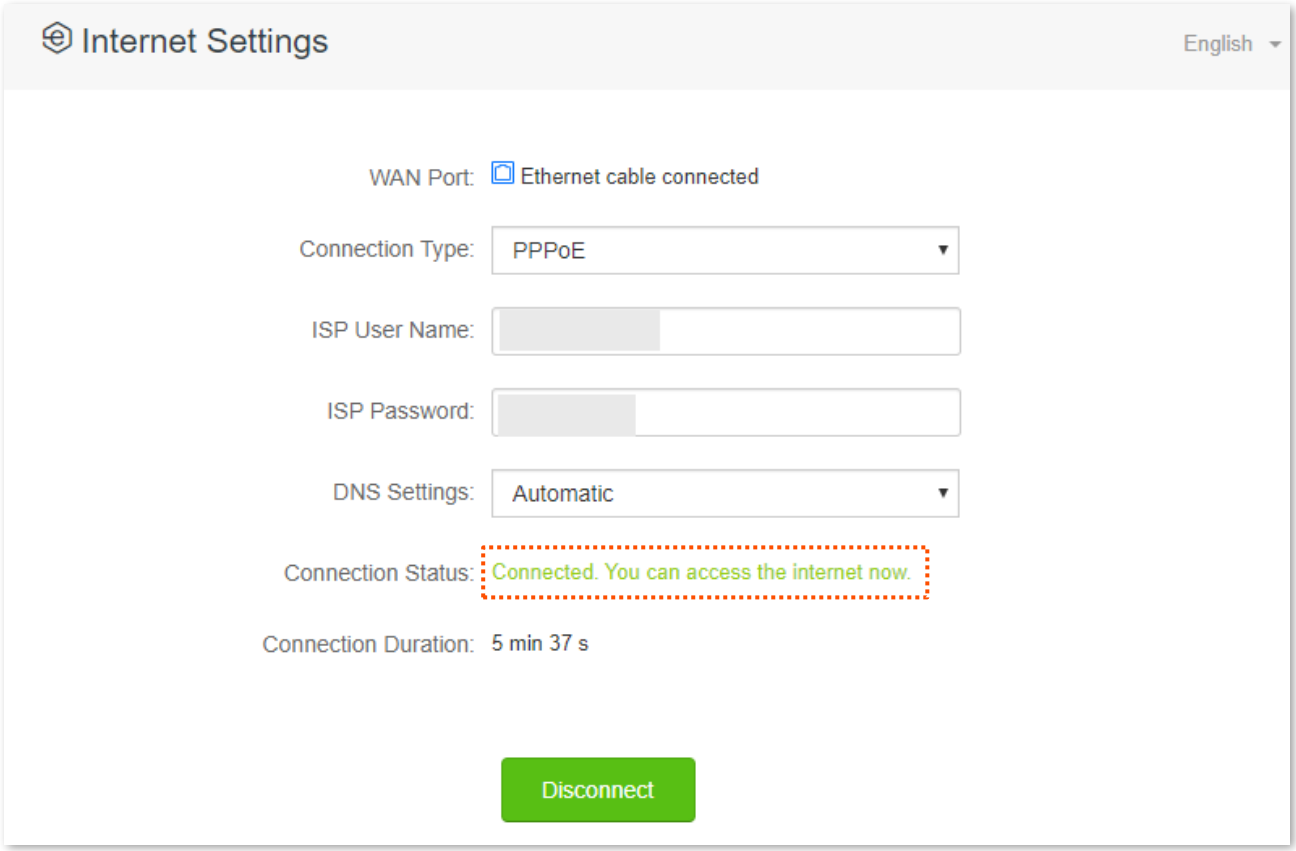
Step 4 Enter the **ISP User Name** and **ISP Password**.

Step 5 Click **Connect**.



---End

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



TIP

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 Dynamic IP Address to access the internet.
- If the problem persists, refer to View the internet status to find a solution.

Parameter description

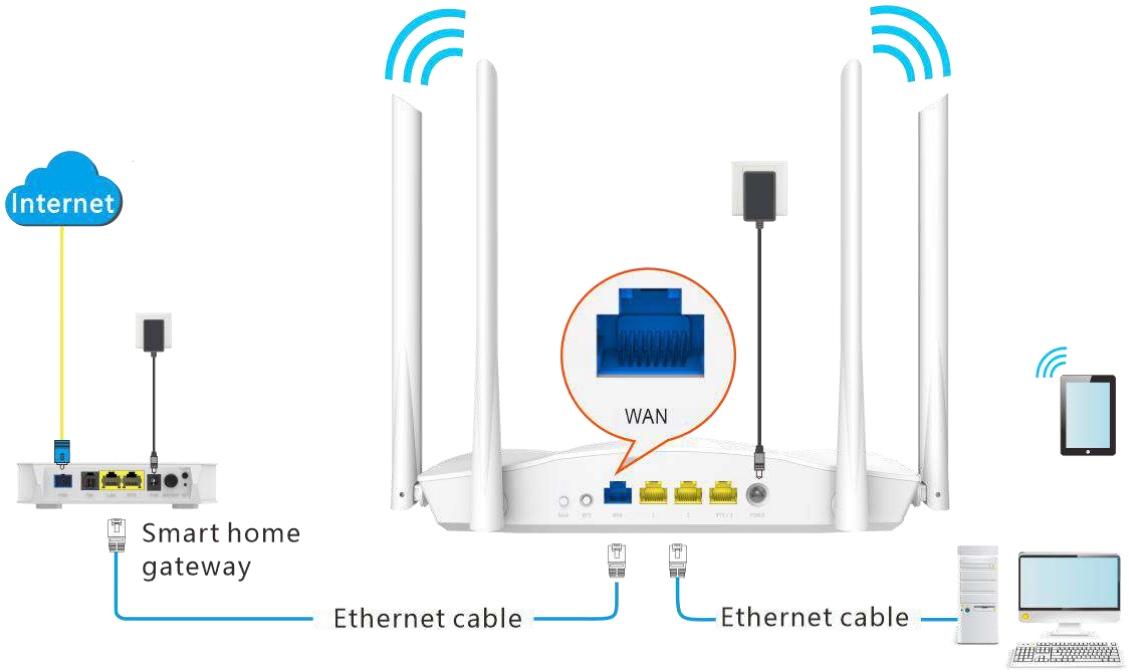
Parameter	Description
ISP User Name	When PPPoE is chosen as the connection type, you need to enter the user name and password provided by your ISP to access the internet.
ISP Password	
DNS Settings	It specifies the obtaining method of WAN port DNS address, which is **Automatic** by default. • **Automatic**: 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	It specifies the internet connection status. • 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.
Connection Duration	It specifies the duration since the router is connected to the internet.

4.2 Access the internet through 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 already have a router with internet access and want to add another router.

The application scenario is shown below.



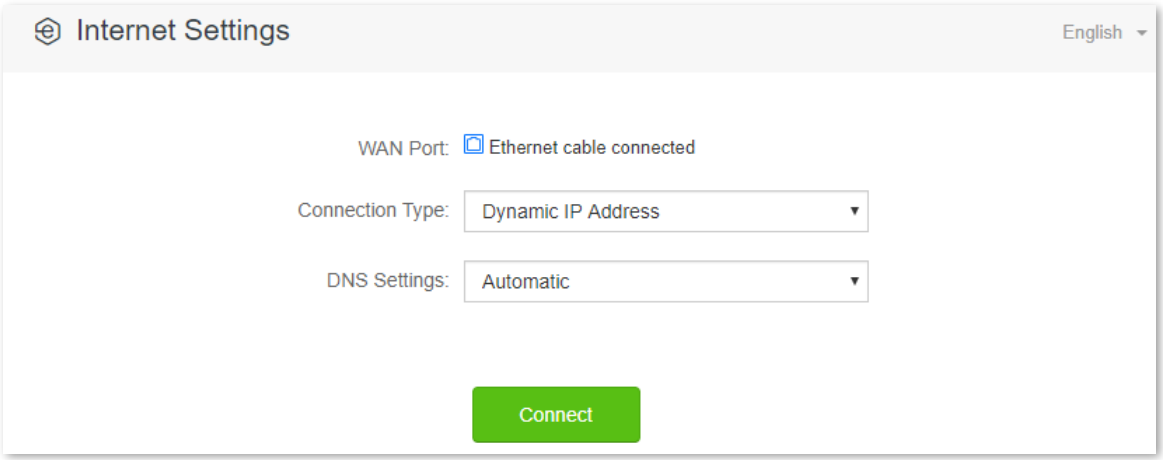
Configuring procedure:

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**.

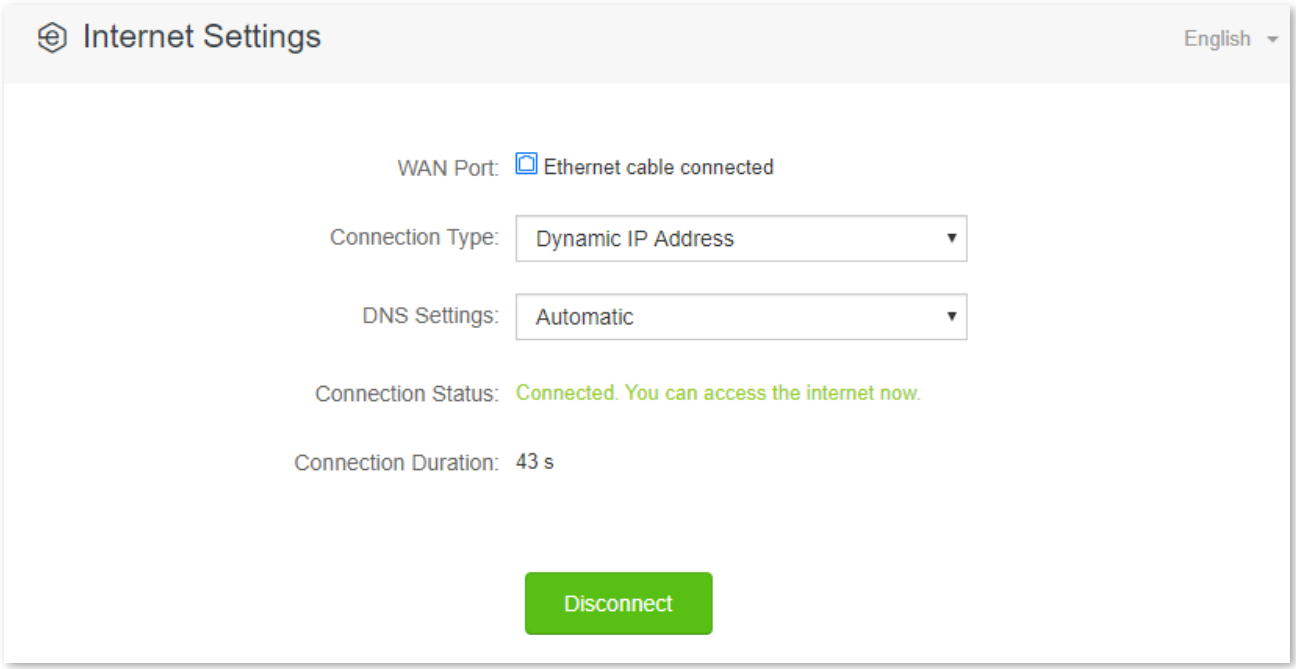
Step 3 Set **Connection Type** to **Dynamic IP Address**.

Step 4 Click **Connect.**



---End

Wait a moment until "Connected. You can access the internet now." is shown 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	It specifies the obtaining method of WAN DNS address, which is **Automatic** by default. • **Automatic**: Obtain a DNS server address from the DHCP server of the upstream network. • **Manual**: Configure the DNS server address manually.
Connection Status	It specifies the internet connection status. • 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 information shown here.
Connection Duration	It specifies the duration since the router is connected to the internet.

4.3 Access the internet with a set of 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.

Configuring procedure:

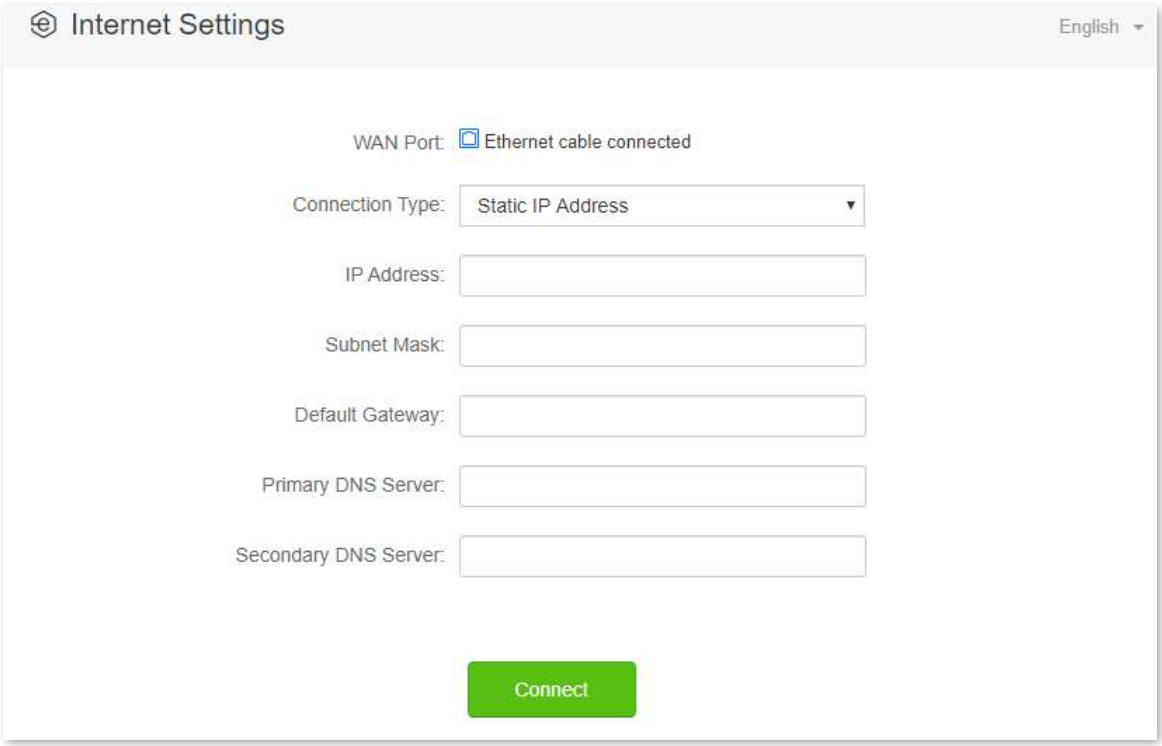
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Settings**.

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

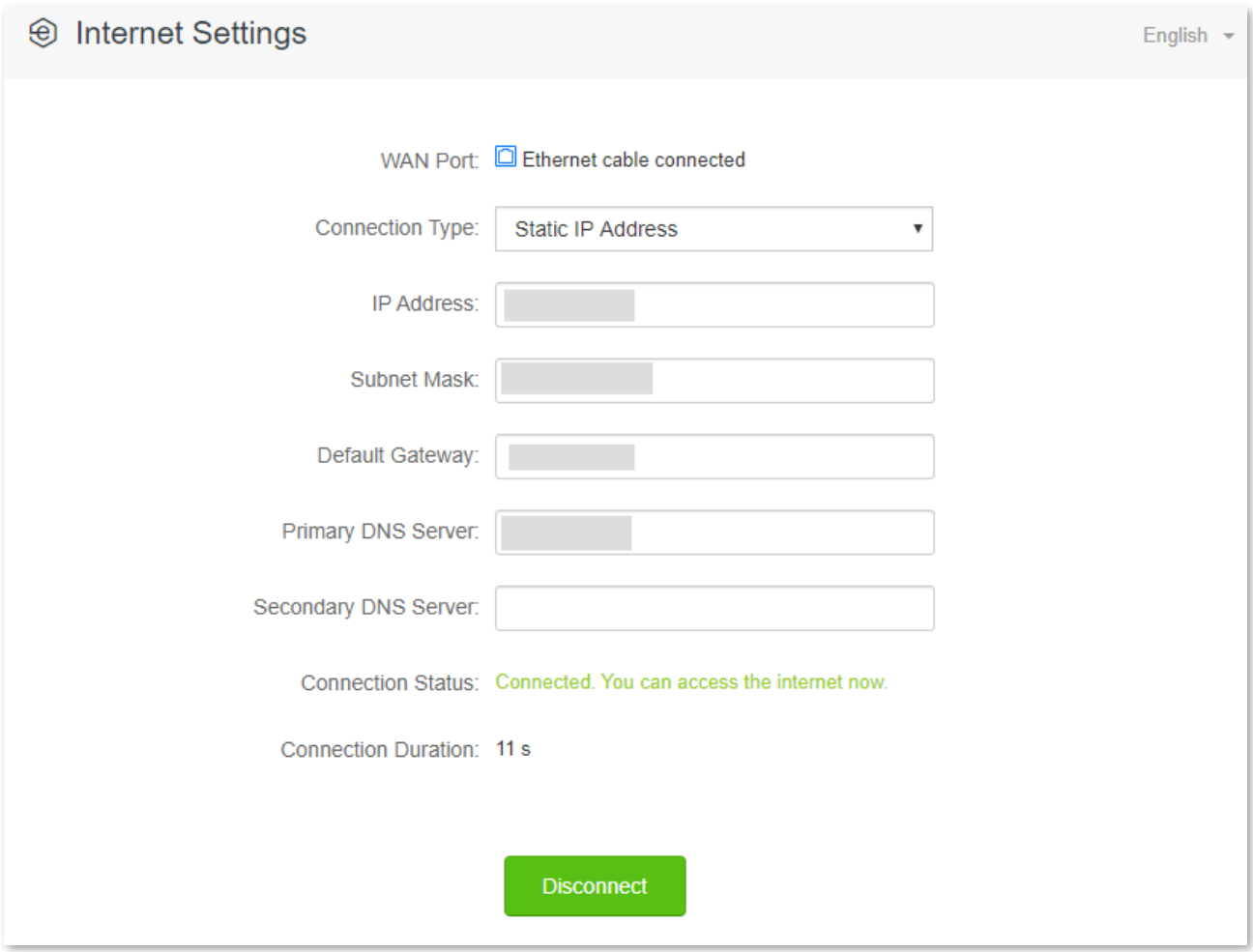
Step 4 Enter **IP Address**, **Subnet Mask**, **Default Gateway** and **Primary/Secondary DNS server**.

Step 5 Click **Connect**.



---End

Wait a moment until "Connected. You can access the internet now." is shown 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 the connection type, enter the fixed IP address information provided by your ISP. TIP If your ISP only provides one DNS server, you can leave the secondary DNS server blank.
Subnet Mask	
Default Gateway	
Primary DNS Server	
Secondary DNS Server	
Connection Status	It specifies the internet connection status. • 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 information shown here.
Connection Duration	It specifies the duration since the router is connected to the internet.

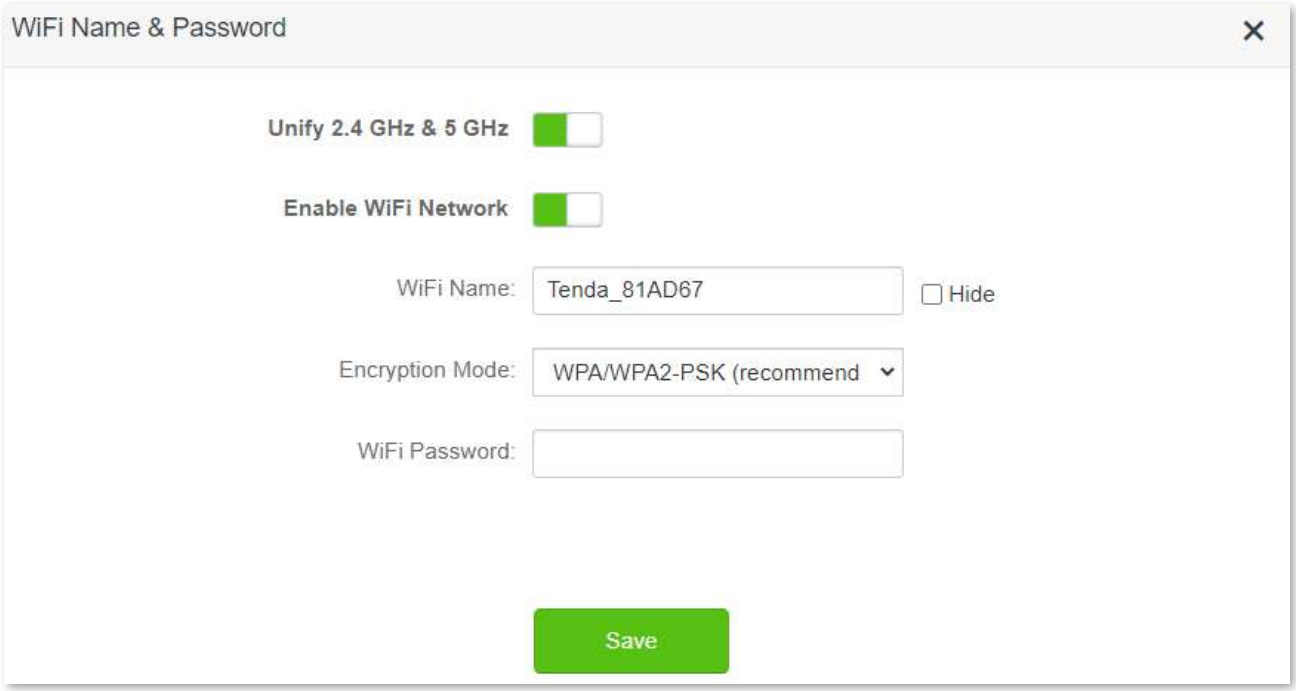
5 WiFi settings

5.1 WiFi name & password

5.1.1 Overview

To access the configuration page, log in to the web UI of the router, and navigate to **WiFi Settings** > **WiFi Name & Password**.

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



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. When this function is enabled, the 2.4 GHz and 5 GHz WiFi networks share the SSID and password. Wi-Fi enabled device connected to it will use the frequency with better connection quality.
Enable WiFi Network	It is used to enable or disable the WiFi networks of the router.

Parameter	Description
2.4 GHz Network 5 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. • If the WiFi-enabled devices such as mobile phones are far away from the router, or blocked from the router by a wall, it is recommended to connect to the 2.4 GHz network. • If the WiFi-enabled devices are close to the router, it is recommended to connect to the 5 GHz network.
WiFi Name	It specifies the WiFi network name (SSID) of the corresponding WiFi network.
Hide	It is used to hide the WiFi name of the WiFi network, improving the security level of the WiFi network. When this function is enabled, the WiFi network is invisible to WiFi-enabled devices. You need to enter the WiFi network information on your WiFi-enabled devices (such as a smart phone) manually if you want to join the WiFi network.
Encryption Mode	It specifies the encryption modes supported by the router, including: • **None**: It indicates that the WiFi network is not encrypted and any clients can access the network without a password. This option is not recommended as it leads to low network security. • **WPA-PSK**: The network is encrypted with WPA-PSK/AES, which has a better compatibility than WPA2-PSK. • **WPA2-PSK**: The network is encrypted with WPA2-PSK/AES, which has a higher security level than WPA-PSK. • **WPA/WPA2-PSK (recommended):** The network is encrypted with both WPA-PSK and WPA2-PSK, improving both security and compatibility. • **WPA3-SAE/WPA2-PSK**: The network is encrypted with both WPA3-SAE and WPA2-PSK, improving both security and compatibility. TIP WPA3-SAE is the upgraded version of WPA2-PSK. If your terminal device does not support WPA3-SAE, or you get poor WiFi experience, it is recommended to use **WPA/WPA2-PSK (recommended)**.
WiFi Password	It specifies the password for connecting to the WiFi network. You are strongly recommended to set a WiFi password for security. TIP 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 WiFi network.

5.1.2 Separate the 2.4 GHz WiFi name from 5 GHz WiFi name

The router supports both 2.4 GHz and 5 GHz WiFi networks, which are unified and only one WiFi name is displayed by default. If you want to separate the WiFi names of the two networks, follow the procedures below.

Configuring procedure:

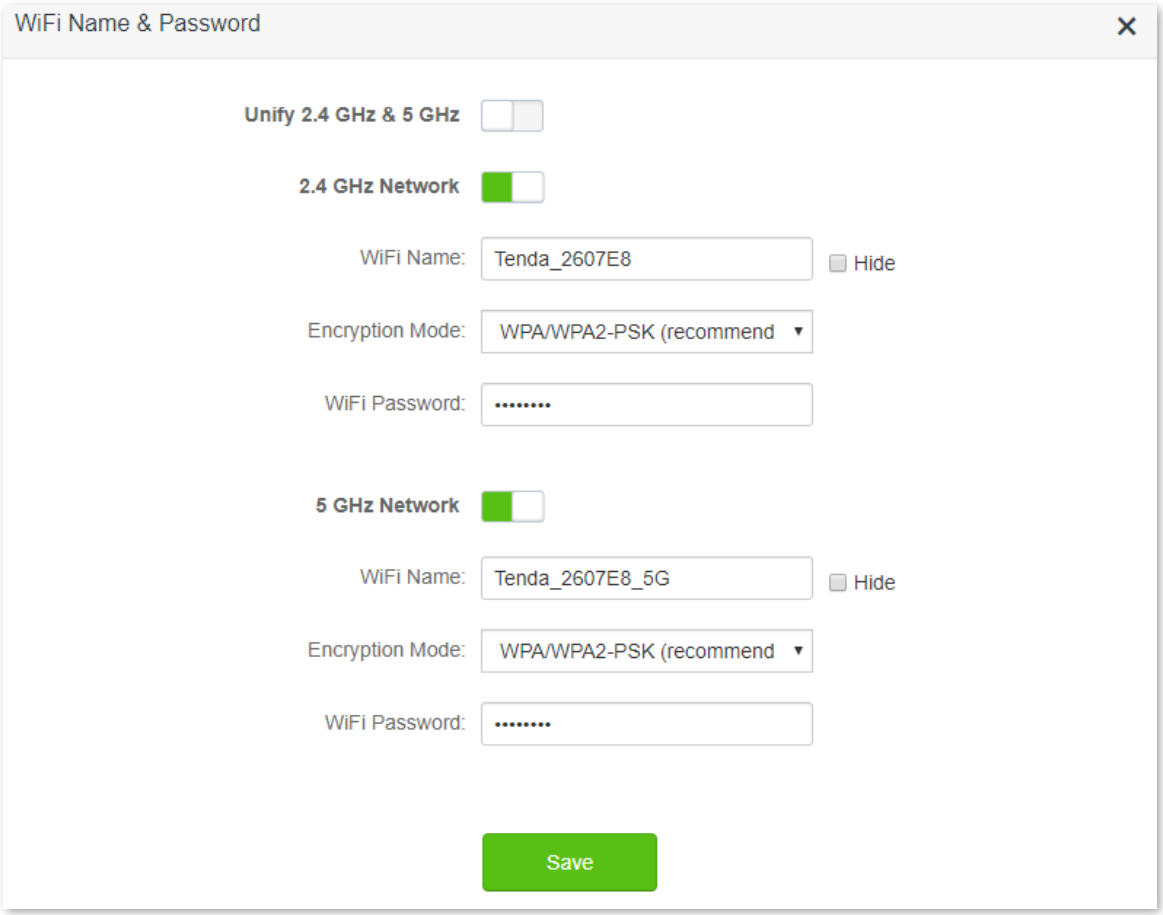
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **WiFi Settings** > **WiFi Name & Password.**

Step 3 Disable **Unify 2.4 GHz & 5 GHz**.

Step 4 Customize the **WiFi Name** and **WiFi Password** of each WiFi network.

Step 5 Click **Save**.



---End

When completing the configurations, you can connect to the WiFi networks of the router to access the internet.

5.1.3 Change the WiFi name and WiFi password

The router supports both 2.4 GHz and 5 GHz WiFi networks.

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

Configuring 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 **WiFi Settings** > **WiFi Name & Password.**

Step 3 Disable **Unify 2.4 GHz & 5 GHz**.

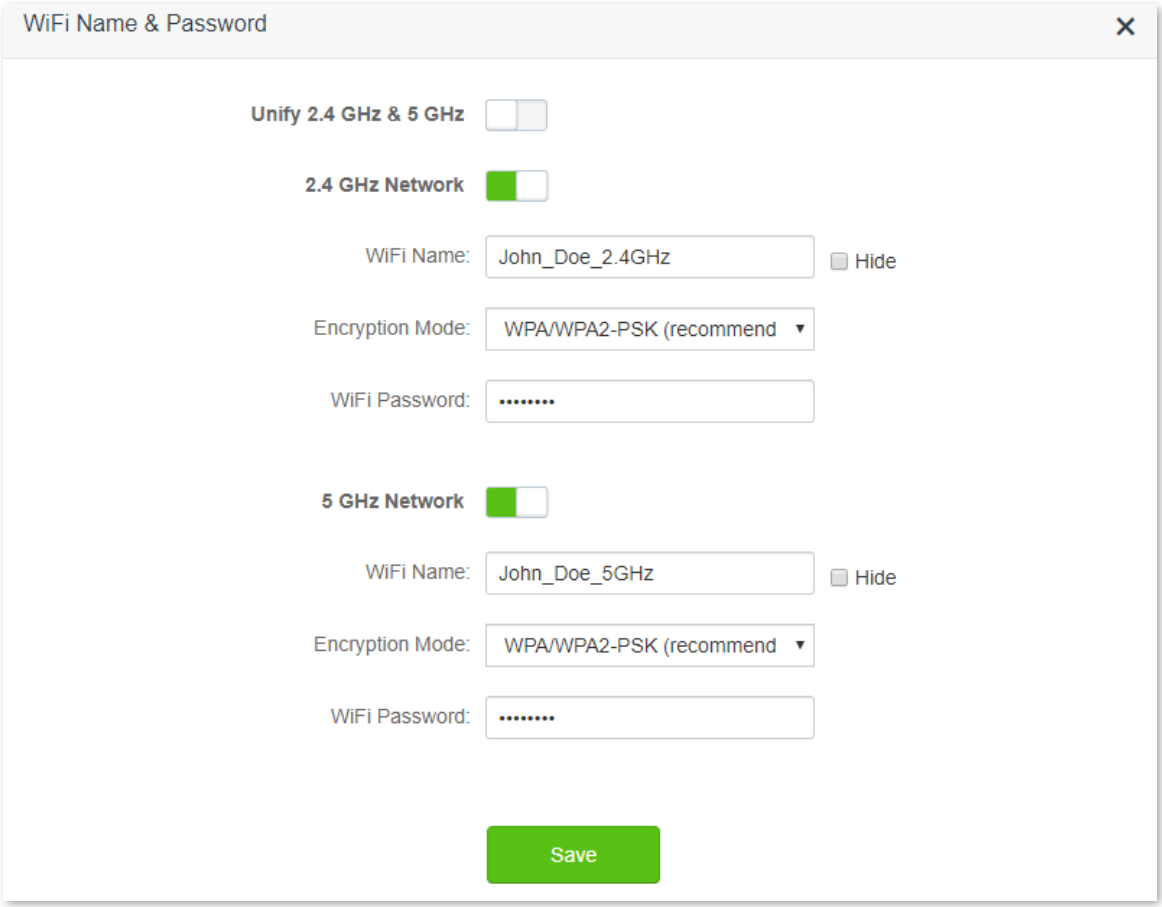
Step 4 Change the parameters of the 2.4 GHz network.

1. Change the **WiFi 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 **WiFi 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 **WiFi 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 **WiFi Password** of the 5 GHz network, which is **Tenda+Wireless5** in this example.

Step 6 Click **Save**.



---End

When completing the configurations, you can connect your WiFi-enabled devices to the WiFi networks of the router to access the internet.

5.1.4 Hide the WiFi network

The hidden WiFi networks are invisible to WiFi-enabled devices, thus improving the security of the networks.

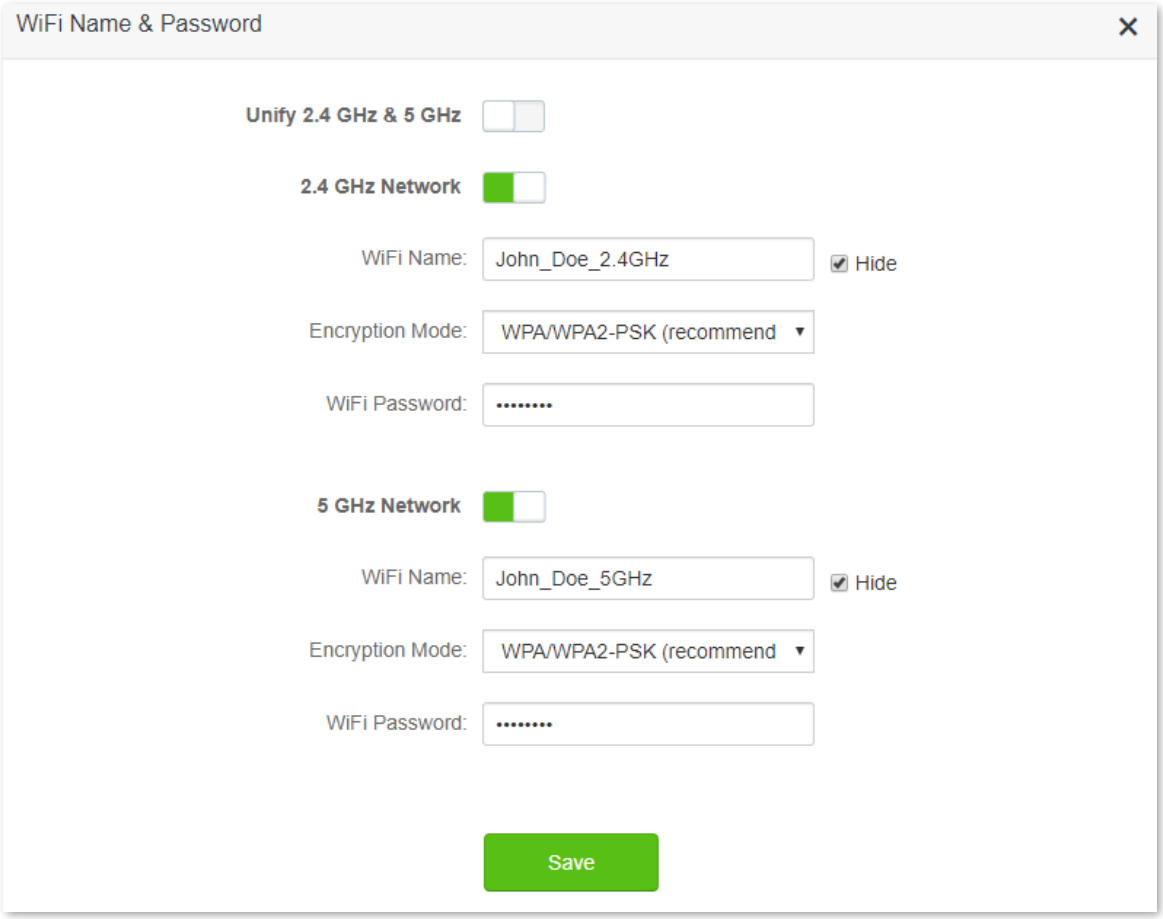
Configuring procedure:

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 **WiFi Settings** > **WiFi Name & Password.**

Step 3 Tick **Hide** of the target network.

Step 4 Click **Save**.



---End

When completing the configurations, the corresponding WiFi network is invisible to WiFi-enabled devices.

5.1.5 Connect to a hidden WiFi network

When a WiFi network is hidden, you need to enter the WiFi name manually and connect to it.

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

- WiFi name: Jone_Doe
- Encryption type: WPA/WPA2-PSK (recommended)

- WiFi password: Tenda+Wireless245

TIP

If you do not remember the wireless parameters of the WiFi network, log in to the web UI of the router and navigate to **WiFi Settings** > **WiFi Name & Password** to find them.

Connect to the WiFi network on your WiFi-enabled device (Example: iPhone):

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

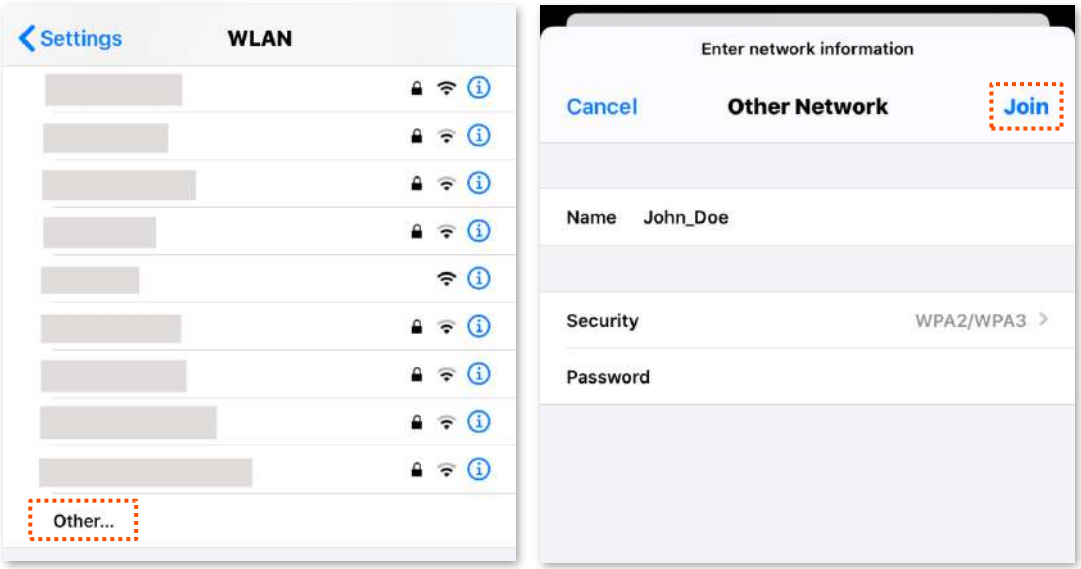
Step 2 Enable **WLAN**.

Step 3 Scroll the WiFi list to the bottom, and tap **Other…**.

Step 4 Enter the WiFi 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

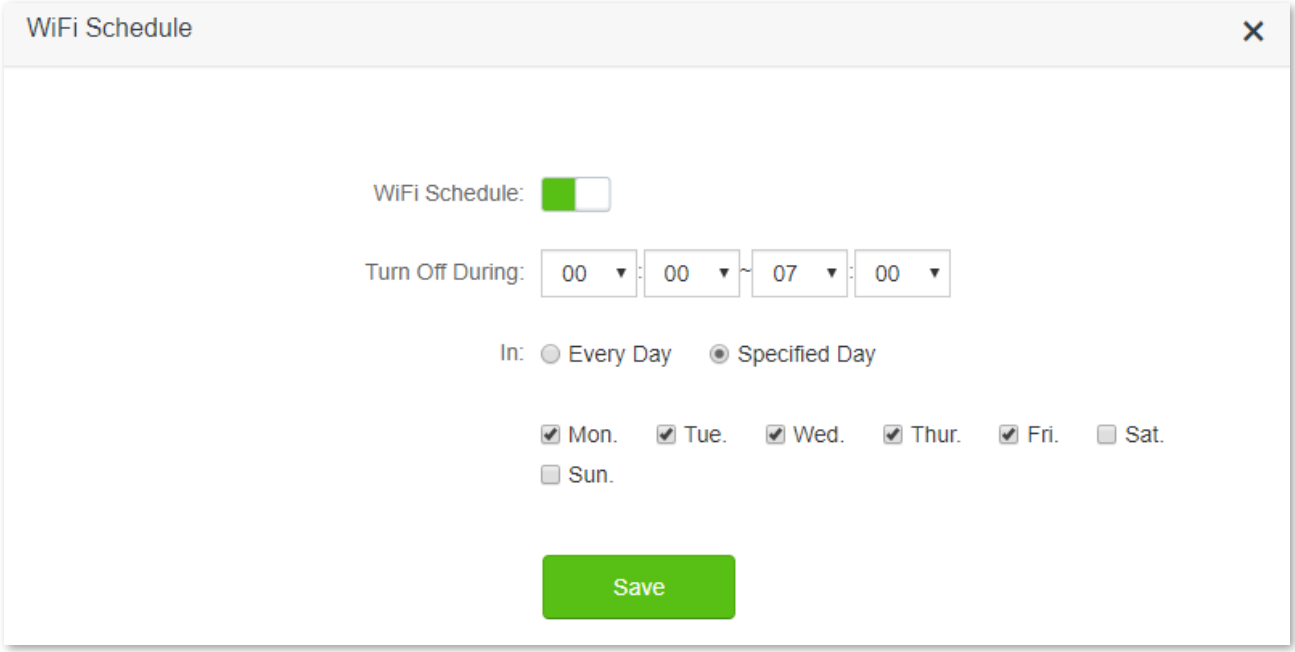
When completing the configurations, you can connect to the hidden WiFi network to access the internet.

5.2 WiFi schedule

5.2.1 Overview

This WiFi Schedule function allows you to disable the WiFi networks of the router at specified period of time. By default, this function is disabled.

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



NOTE

To make the WiFi schedule work properly, please ensure the system time is synchronized with the internet time. Refer to Sync the system time with the internet time for configuration.

Parameter description

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

5.2.2 Set a WiFi schedule

Assume that you want to disable the WiFi network from 22:00 to 7:00 every day.

Configuring 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.

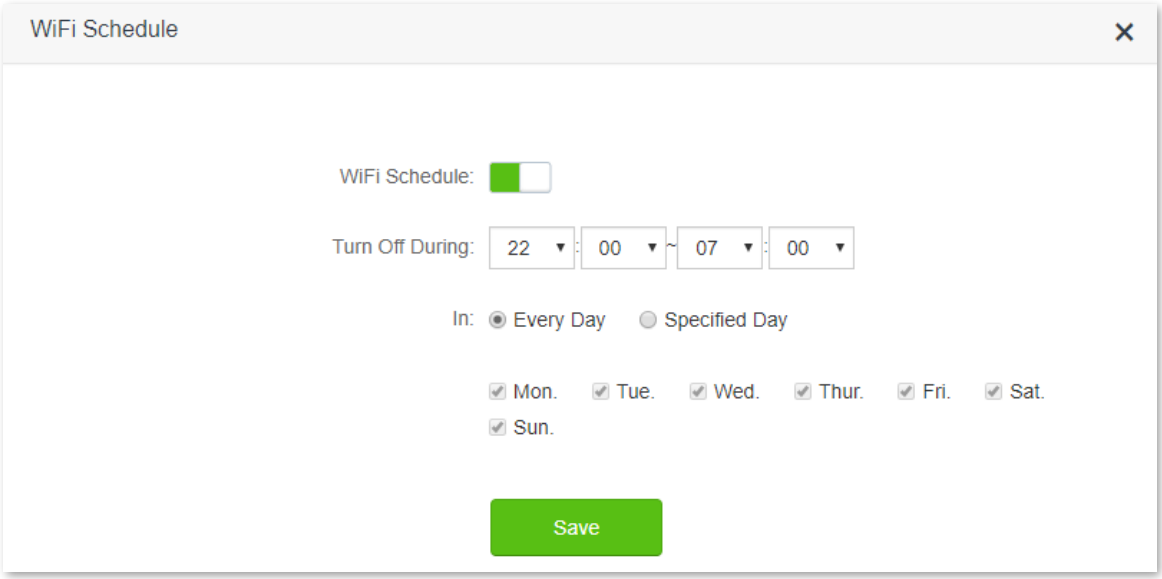
Step 2 Choose **WiFi Settings** > **WiFi Schedule.**

Step 3 Enable **WiFi Schedule.**

Step 4 Set a period for the WiFi 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**.



---End

When the configuration is completed, the WiFi networks will be disabled from 10 pm to 7 am every day.

5.3 Wireless repeating

5.3.1 Overview

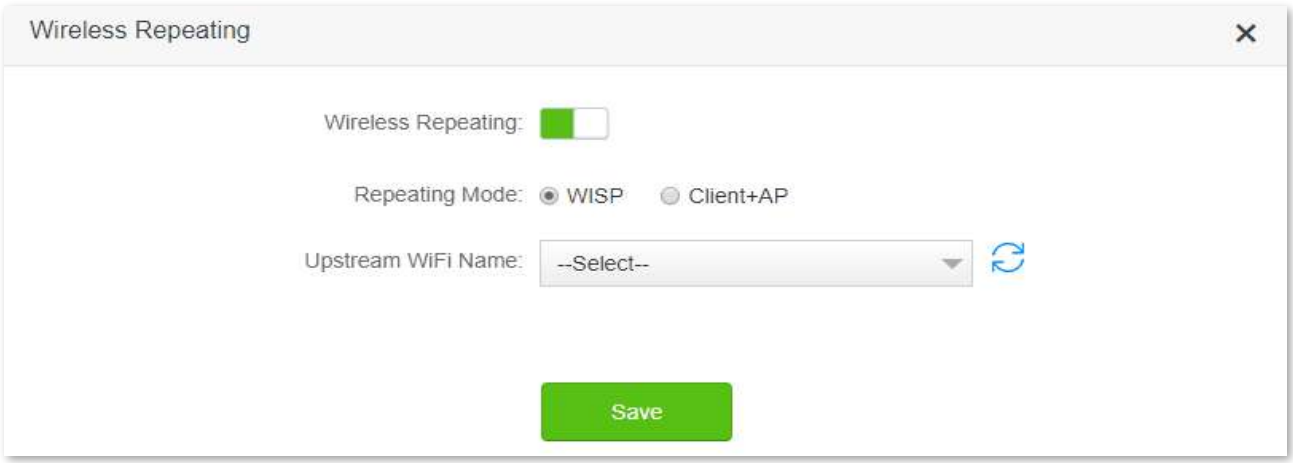
By configuring the wireless repeating function, you can extend the coverage of an existing network.

To access the configuration page, log in to the web UI of the router, and choose **WiFi Settings** > **Wireless Repeating**.

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

NOTE

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



Parameter description

Parameter	Description
Wireless Repeating	It is used to enable/disable the Wireless Repeating function.
Repeating Mode	Two repeating modes are available: • WISP mode: Generally used to bridge the hotspot of ISPs. • Client+AP mode: Able to bridge all kinds of WiFi network. TIP • When WISP mode is chosen and the LAN IP 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 procedures in Internet Settings according to the connection type you choose.
Upstream WiFi Name	It specifies the WiFi name that you want to bridge. If you choose **Enter a WiFi name manually**, you are required to enter the **WiFi Name**, **Frequency Band** and **Encryption Mode, Encryption Algorithm** and **Upstream WiFi Password** manually.

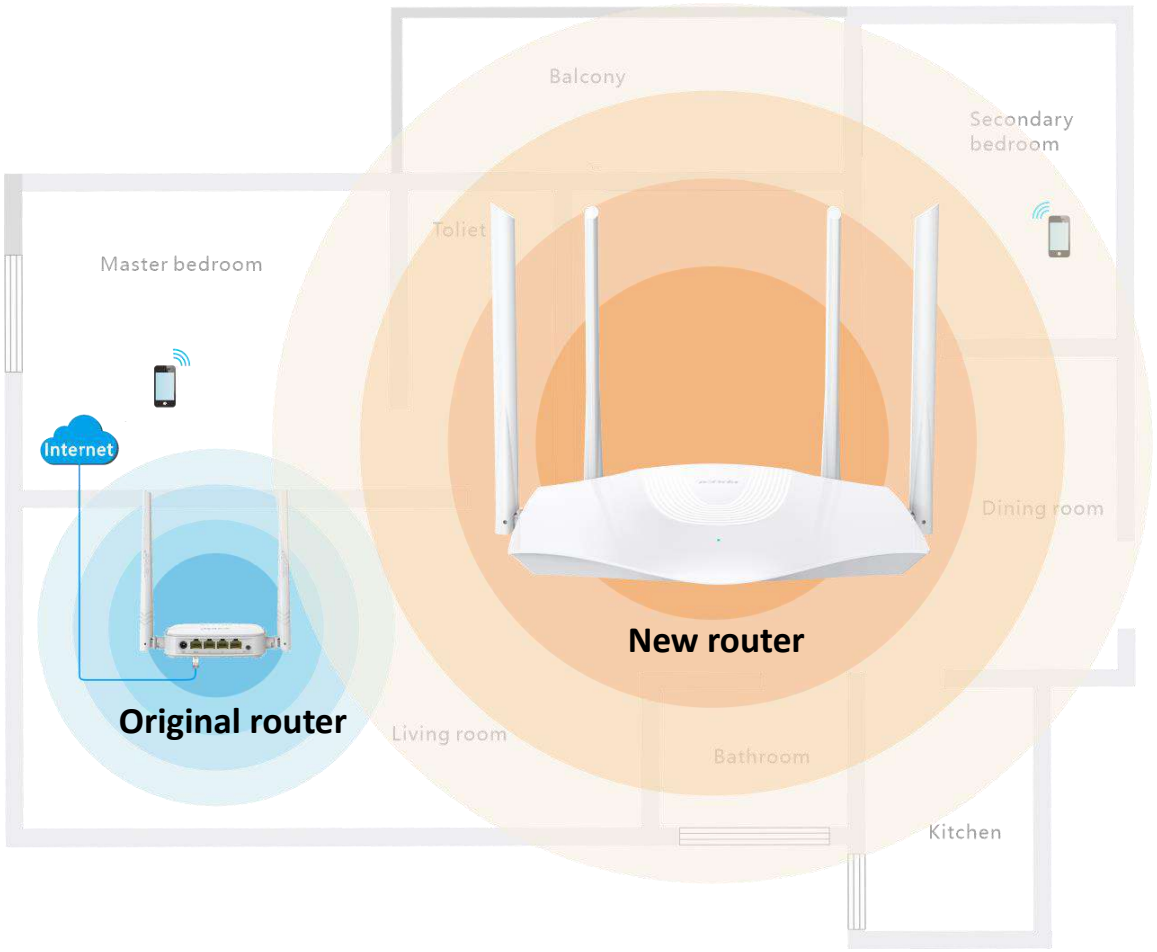
Parameter	Description
Upstream WiFi Password	It specifies the WiFi password of the WiFi name that you want to bridge.

5.3.2 Extend the existing WiFi network

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

Assume that your existing WiFi name and password are:

- WiFi name: Home_WiFi
- WiFi password: Tenda+245



Method 1: Set the new router to WISP mode

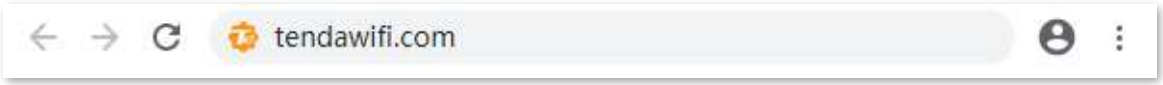
Configuring procedure:

TIP

If you have finished the quick setup wizard before, start a web browser and visit **tendawifi.com** on a connected device, then start from **Step 2**.

Step 1 Log in to the web UI of the router.

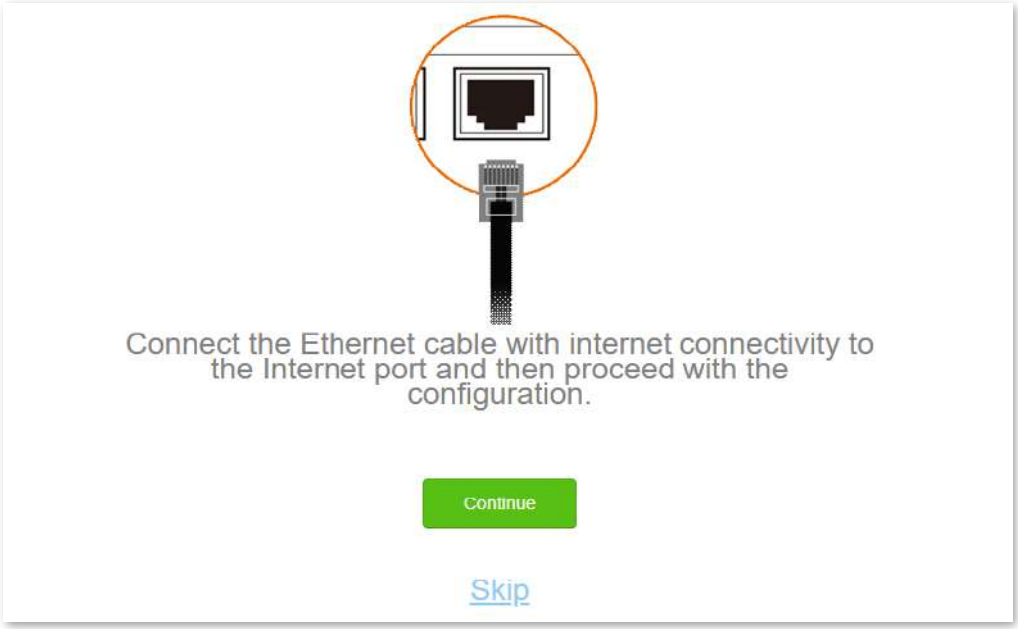
1. Place the new router near the existing router and power it on. Connect your WiFi-enabled device to the WiFi network of your new router, or connect a computer to a LAN port of the router. Do not connect any device to the WAN port of the new router.
2. Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router. A computer is used for illustration below.



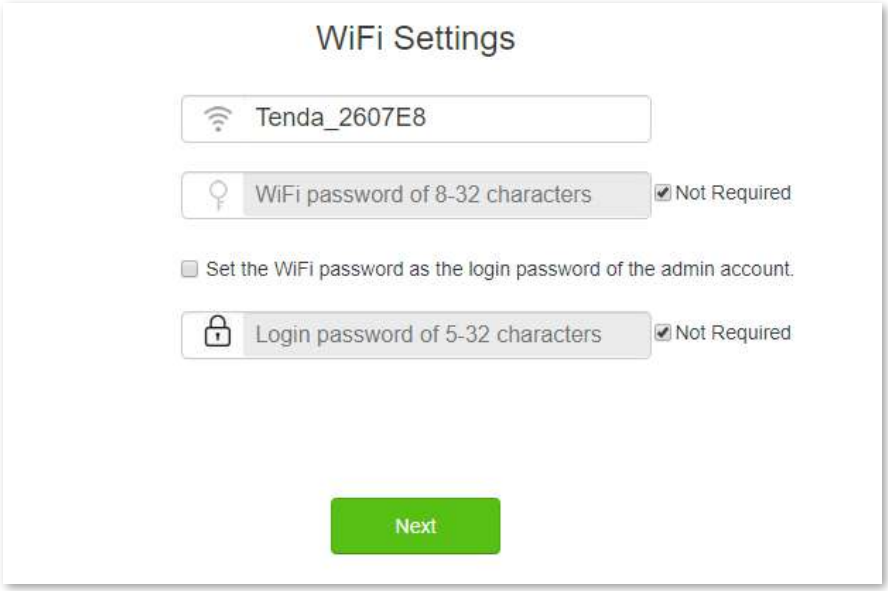
3. Click **Start**.



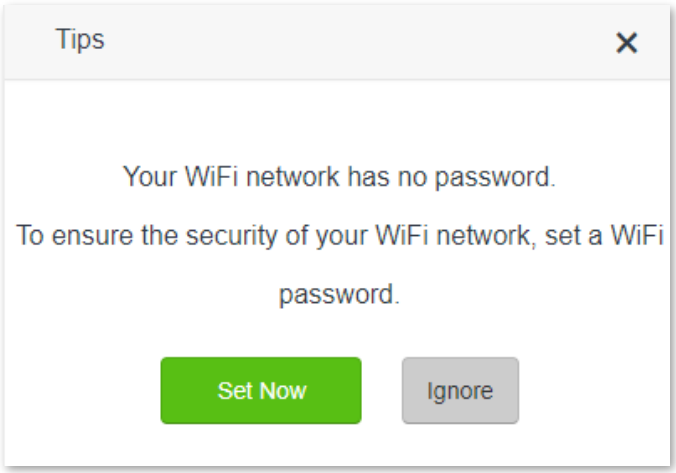
4. Click **Skip**.



5. Do not set login and WiFi password now by ticking **Not Required**, and click **Next**.

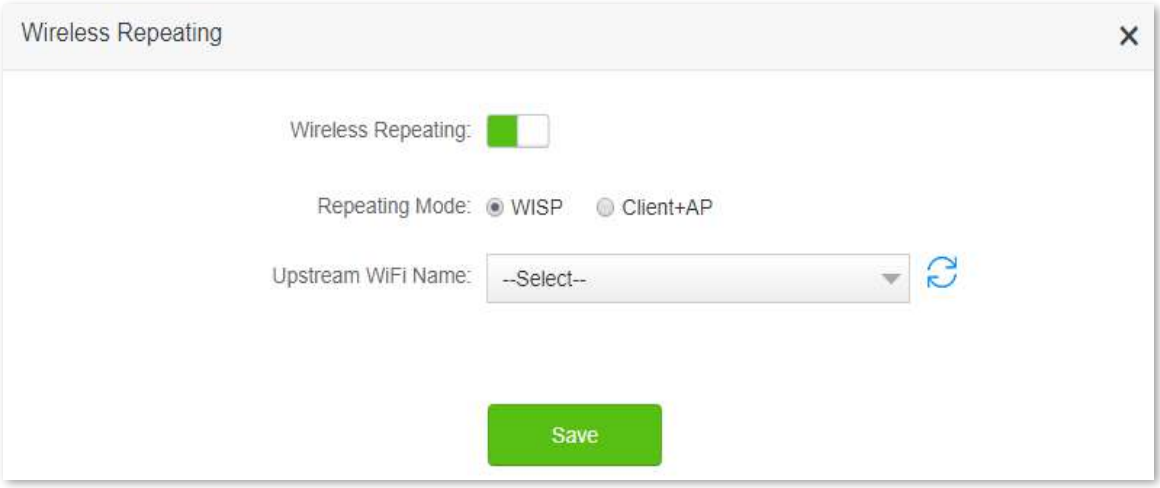


6. Click **Ignore**.

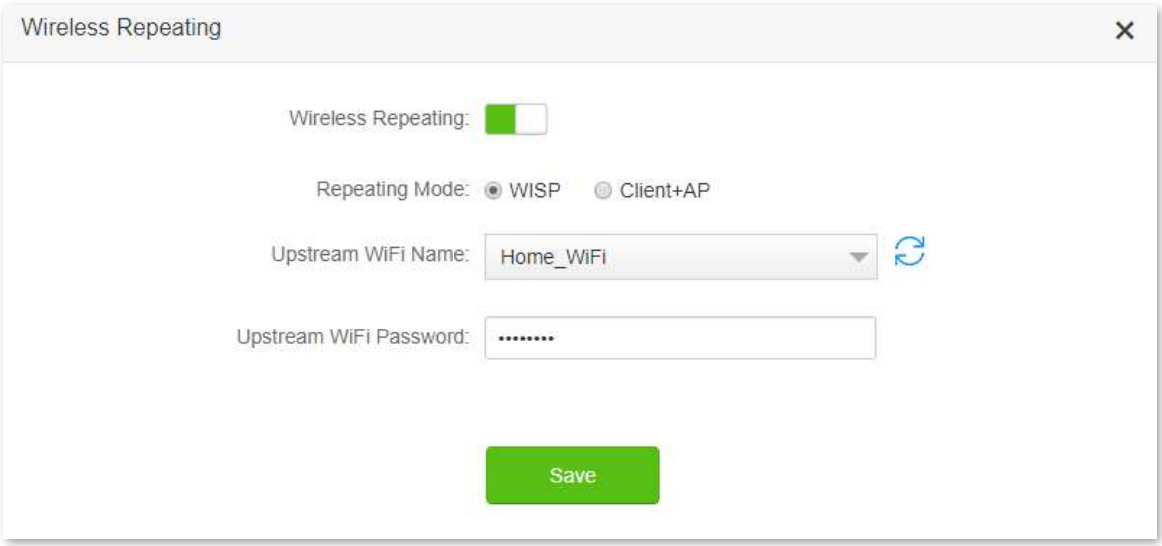


Step 2 Set the new router to WISP mode.

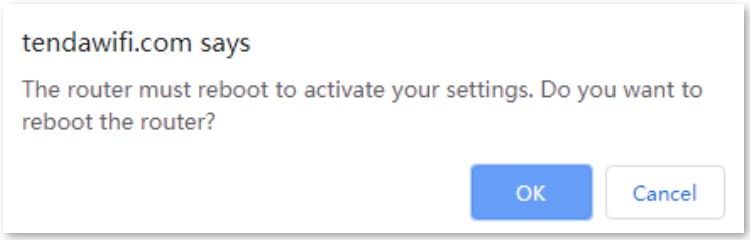
1. Choose **WiFi Settings** > **Wireless Repeating**.
2. Enable **Wireless Repeating**, and choose **WISP**.
3. Click **Select** to select an existing WiFi network, which is **Home_WiFi** in this example.



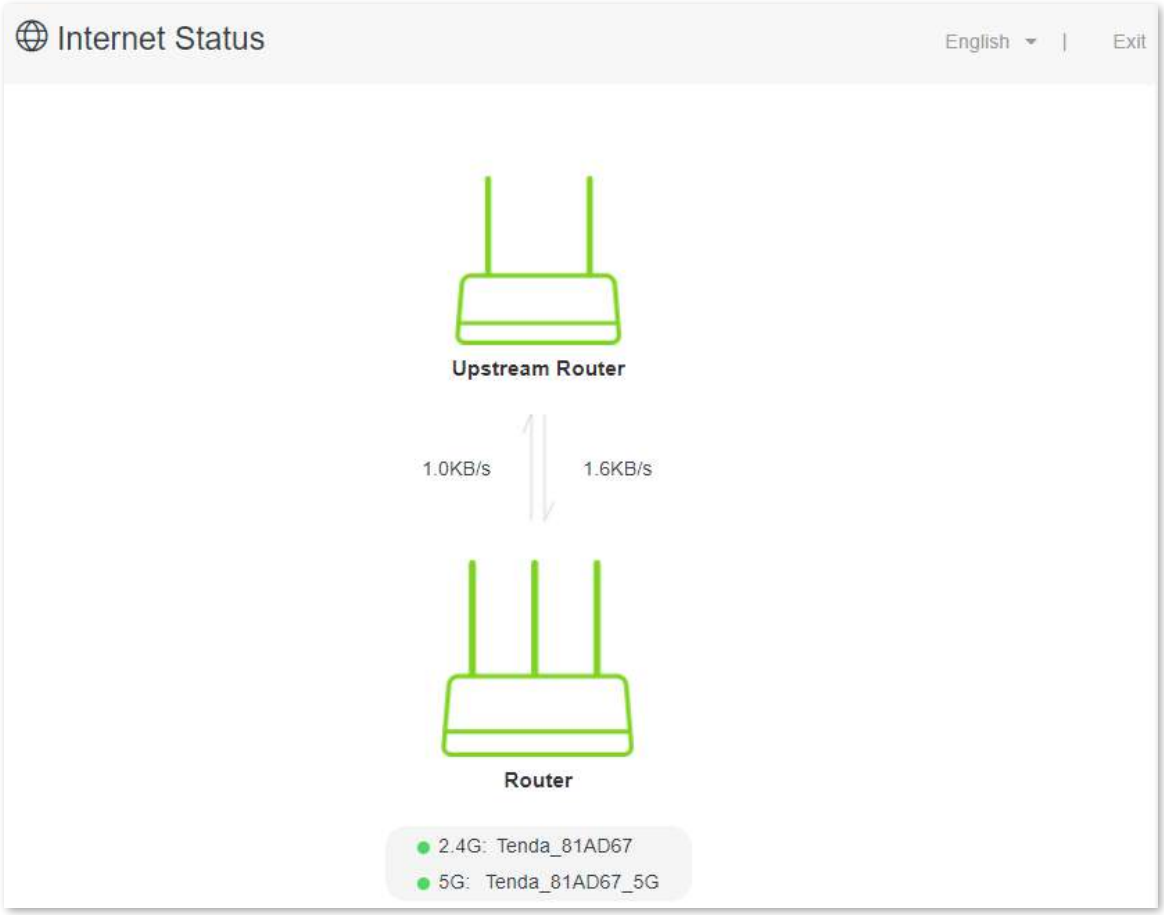
4. Enter the **Upstream WiFi Password**, which is **Tenda+245** in this example.
5. Click **Save**.



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



Step 3 Log in to the web UI of the router again, navigate to **Internet Status** to check if the wireless repeating succeeds.



TIP

If the connection between the **Upstream router** and **Router** failed, try the following solutions:

- Ensure that you have entered the correct WiFi password of the WiFi, and mind case sensitivity.
- Ensure that **Router** is within the wireless coverage of the **Upstream router**.

Step 4 Relocate the new router by referring to the following suggestions and power it on.

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

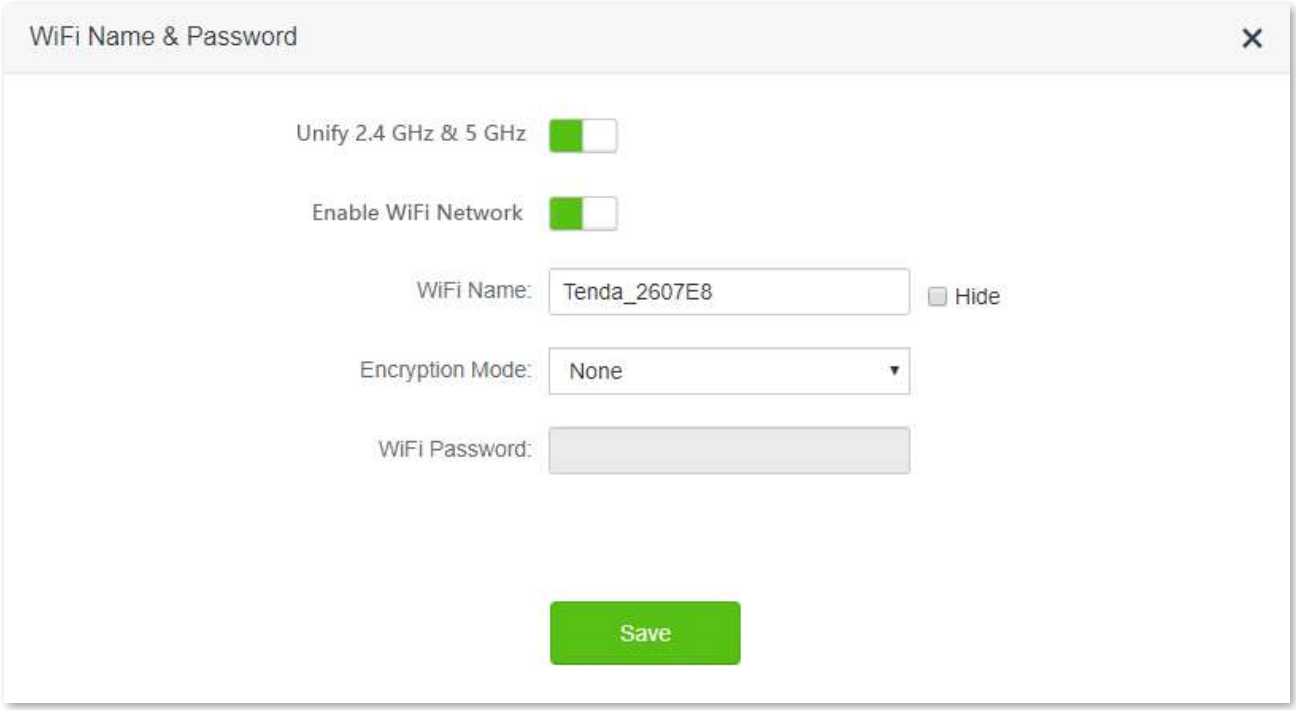
NOTE

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 smart phone to the WiFi network of the new router.

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



TIP

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

- Ensure that the existing router is connected to the internet successfully.
- Ensure that your WiFi-enabled devices are connected to the WiFi 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

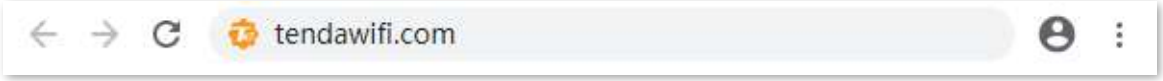
Configuring procedure:

TIP

If you have finished the quick setup wizard before, start a web browser and visit **tendawifi.com** on a connected device, and start from **Step 2**.

Step 1 Log in to the web UI of the router.

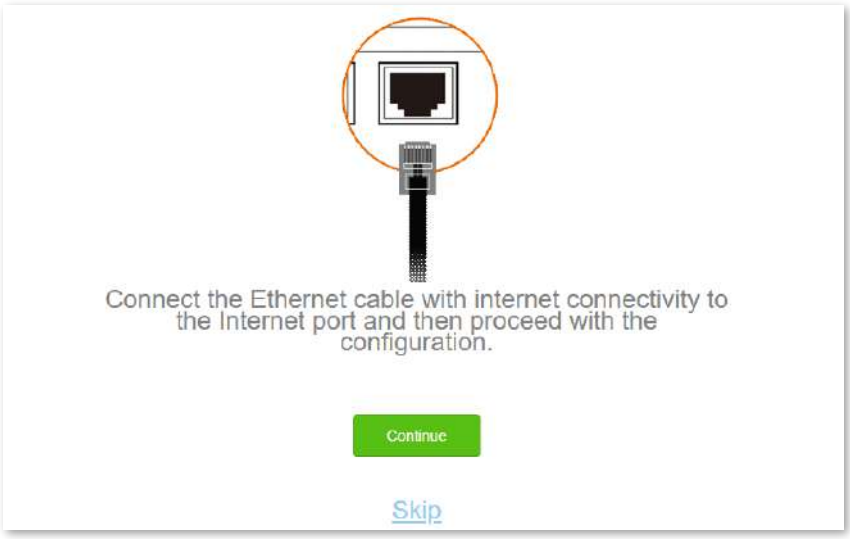
1. Put the new router near the existing router and power it on. Connect your WiFi-enabled device to the WiFi network of your new router, or connect a computer to a LAN port of the router. Do not connect any device to the WAN port of the new router.
2. Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router. A computer is used for illustration below.



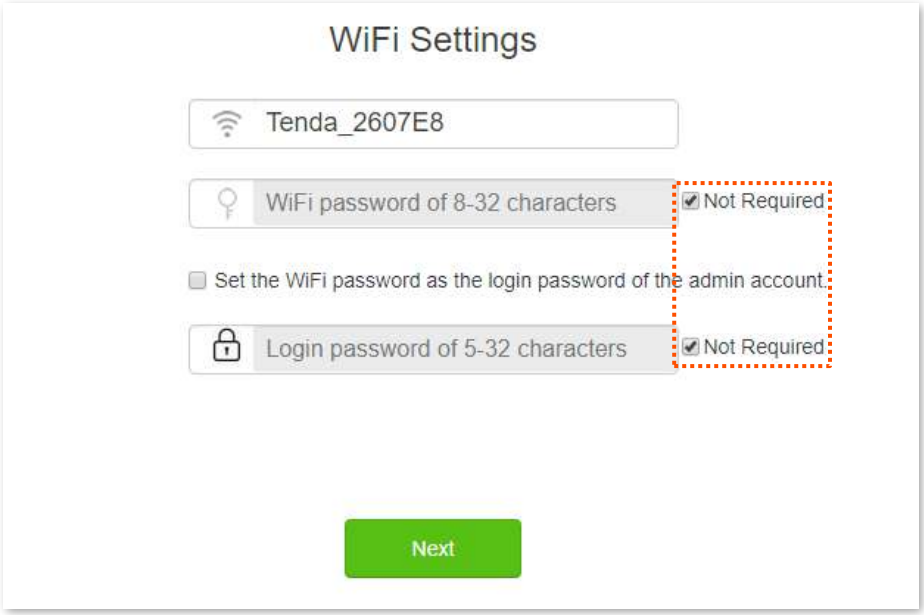
3. Click **Start**.



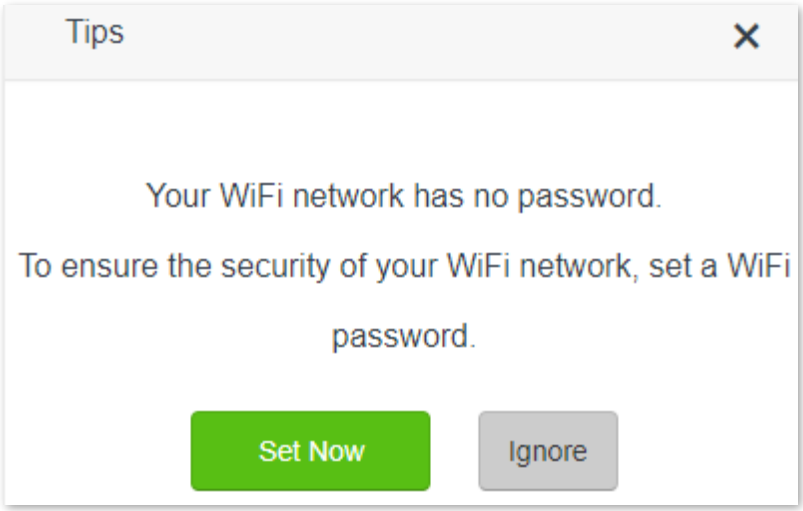
4. Click **Skip**.



5. Do not set login and WiFi password now by ticking **Not Required**, and click **Next**.

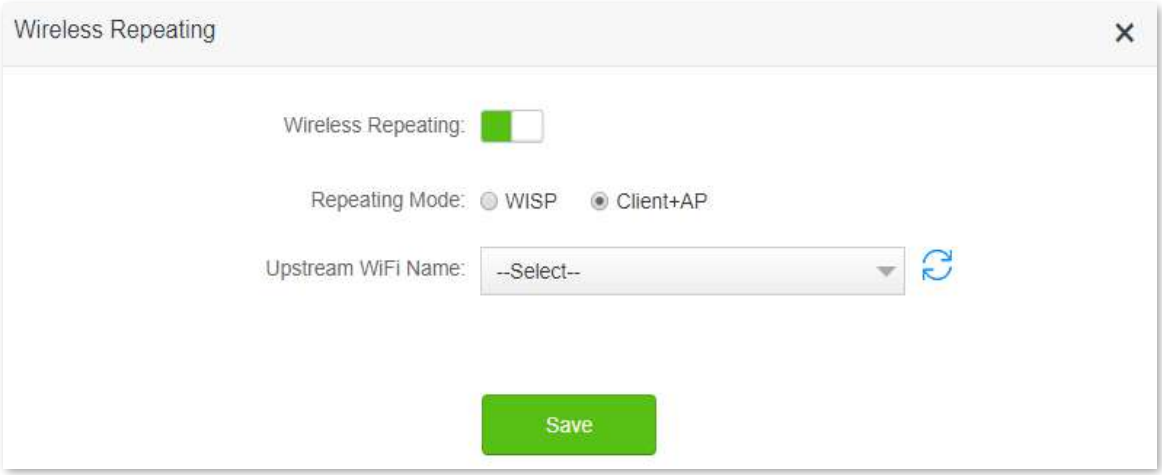


6. Click **Ignore**.

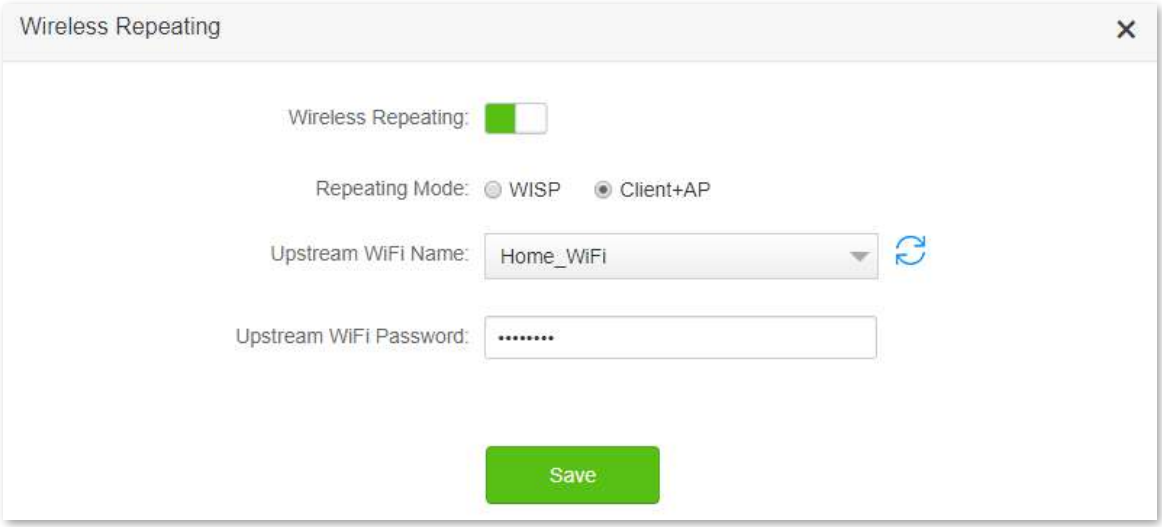


Step 2 Set the new router to **Client+AP** mode.

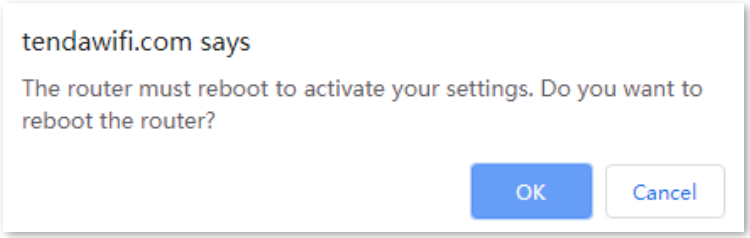
1. Choose **WiFi Settings** > **Wireless Repeating**.
2. Enable **Wireless Repeating**, and choose **Client+AP**.
3. Click **Select** to select the existing WiFi network, which is **Home_WiFi** in this example.



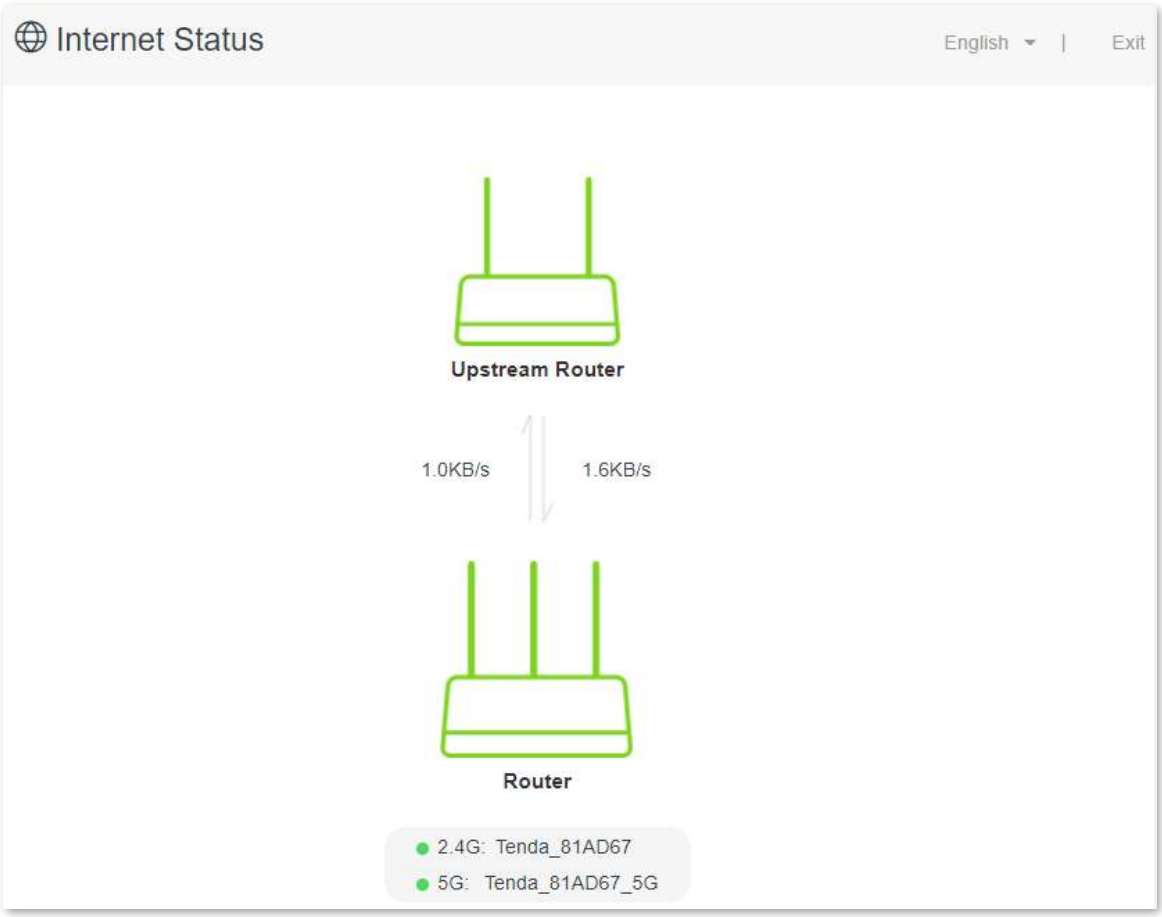
4. Enter the **Upstream WiFi Password**, which is **Tenda+245** in this example.
5. Click **Save**.



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



Step 3 Log in to the web UI of the router again, navigate to **Internet Status** to check if the wireless repeating succeeds.



TIP

If the connection between the **Upstream router** and **Router** failed, try the following solutions:

- Ensure that you have entered the correct WiFi password of the WiFi, and mind case sensitivity.
- Ensure that **Router** is within the wireless coverage of the **Upstream router**.

Step 4 Relocate the new router by referring to the following suggestions and power it on.

- Locate the new router between the original router and the uncovered area, but within the coverage of the original router.
- Away from the microwave oven, electromagnetic oven, refrigerator.
- Above the ground with few obstacles.

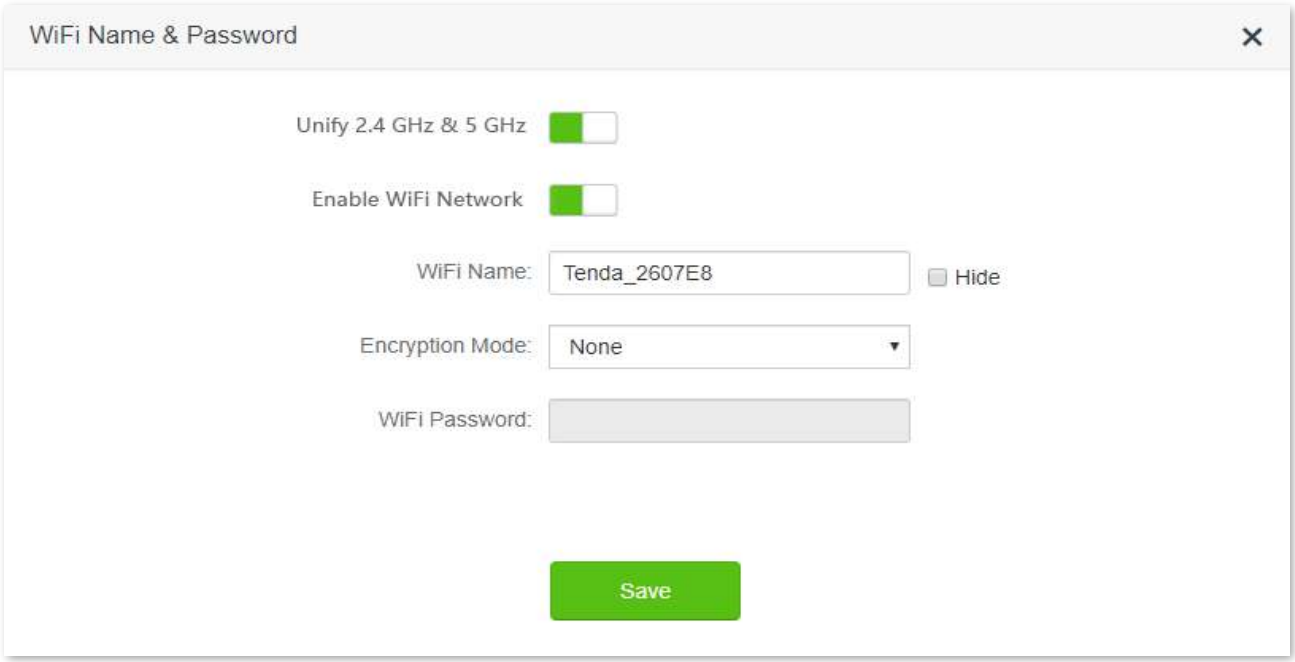
NOTE

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.

To access the internet, connect your computer to a LAN port of the new router, or connect your smart phone to the WiFi network of the new router.

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



TIP

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

- Ensure that the existing router is connected to the internet successfully.
- Ensure that your WiFi-enabled devices are connected to the WiFi 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.

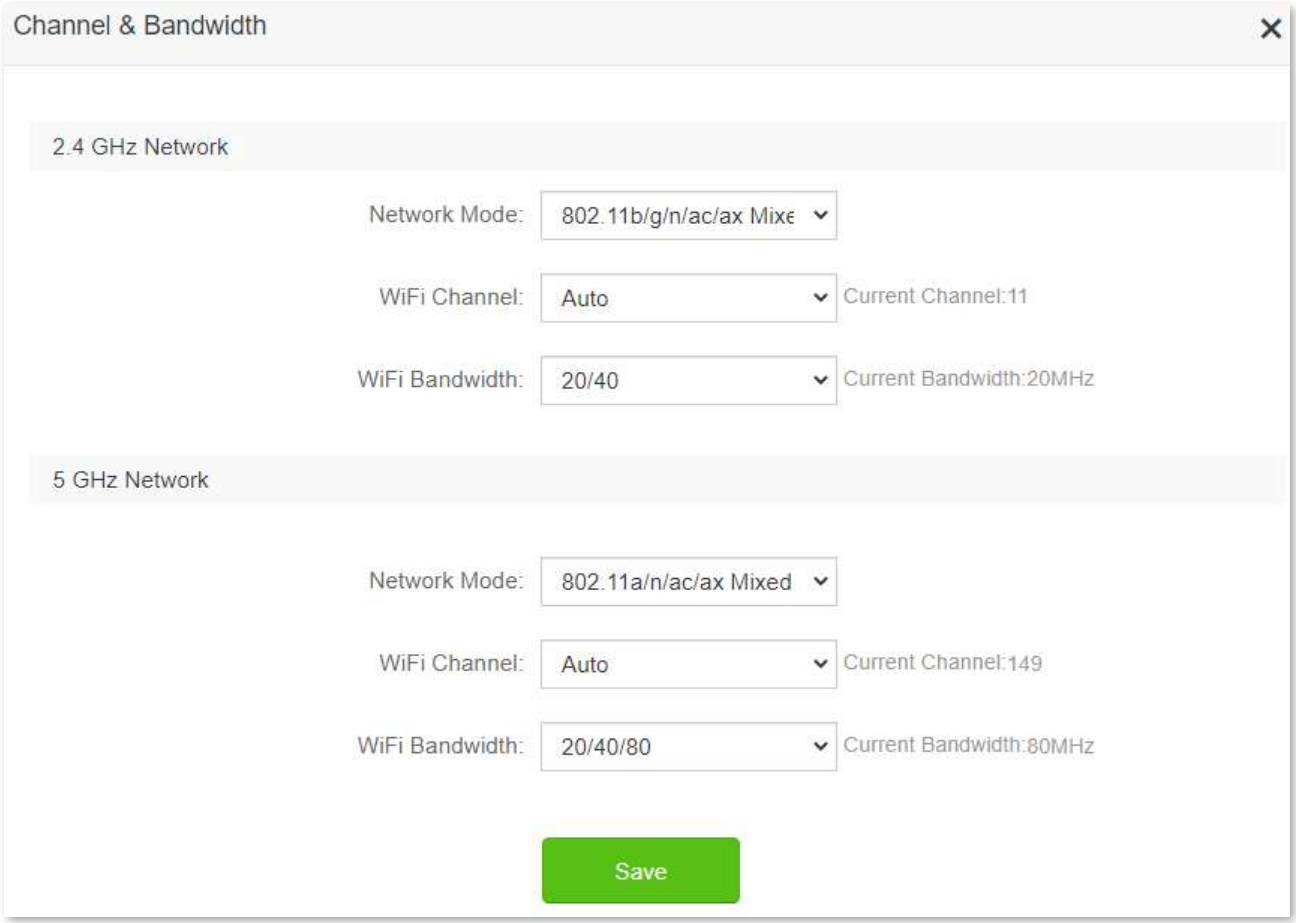
5.4 Channel & bandwidth

In this section, you are allowed to change network mode, WiFi channel, and WiFi bandwidth of 2.4 GHz and 5 GHz WiFi networks.

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

TIP

In order not to influence the wireless performance, it is recommended to maintain the default settings on this page without professional instructions.



Parameter description

Parameter	Description
Network Mode	It specifies various protocols adopted for wireless transmission. 2.4 GHz WiFi network supports the 802.11b/g/n Mixed, 802.11b/g/n/ac Mixed and 802.11b/g/n/ac/ax Mixed modes. • **802.11b/g/n 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 can connect to the 2.4 GHz WiFi network of the router. • **802.11b/g/n/ac 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 802.11 ac protocol can connect to the 2.4 GHz WiFi network of the router.

Parameter	Description
	• **802.11b/g/n/ac/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, IEEE 802.11ac or IEEE 802.11ax protocol can connect to the 2.4 GHz WiFi network of the router. 5 GHz WiFi network supports the 802.11a/n Mixed, 802.11a/n/ac Mixed and 802.11a/n/ac/ax Mixed modes. • **802.11a/n Mixed**: It indicates that devices complaint with the IEEE 802.11a protocol, and devices working at 5 GHz and compliant with the IEEE 802.11n can connect to the router. • **802.11a/n/ac Mixed**: It indicates that devices compliant with the IEEE 802.11a protocol, and devices working at 5 GHz and compliant with the IEEE 802.11n or IEEE 802.11ac protocol can connect to the router. • **802.11a/n/ac/ax Mixed**: It indicates that devices compliant with the IEEE 802.11a protocol, and devices working at 5 GHz and compliant with the IEEE 802.11n, IEEE 802.11ac or IEEE 802.11ax protocol can connect to the router.
WiFi Channel	It specifies the channel in which the WiFi network works. By default, the wireless channel is **Auto**, which indicates that the router selects a channel for the WiFi 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 WiFi signals nearby to understand the channel usage situations.
WiFi Bandwidth	It specifies the bandwidth of the wireless channel of a WiFi network. Please change the default settings only when necessary. • **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.

5.5 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 **WiFi Settings** > **Transmit Power**.



Parameter	Description
Signal Strength	It specifies the mode of signal strength. The default mode is **High**. • **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. • **Energy-saving**: It is typically used to meet wireless coverage requirements in small area or barrier-free environments and intended to reduce energy consumption. TIP It is recommended to choose the Energy-saving mode if the internet experience is satisfactory enough under this mode.

5.6 WPS

5.6.1 Overview

The WPS function enables WiFi-enabled devices, such as smartphones, to connect to WiFi networks of the router without entering the password.

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

TIP

- This function is only applicable to WPS-enabled WiFi-enabled devices.
- WiFi networks encrypted with WPA3 cannot be connected through WPS.

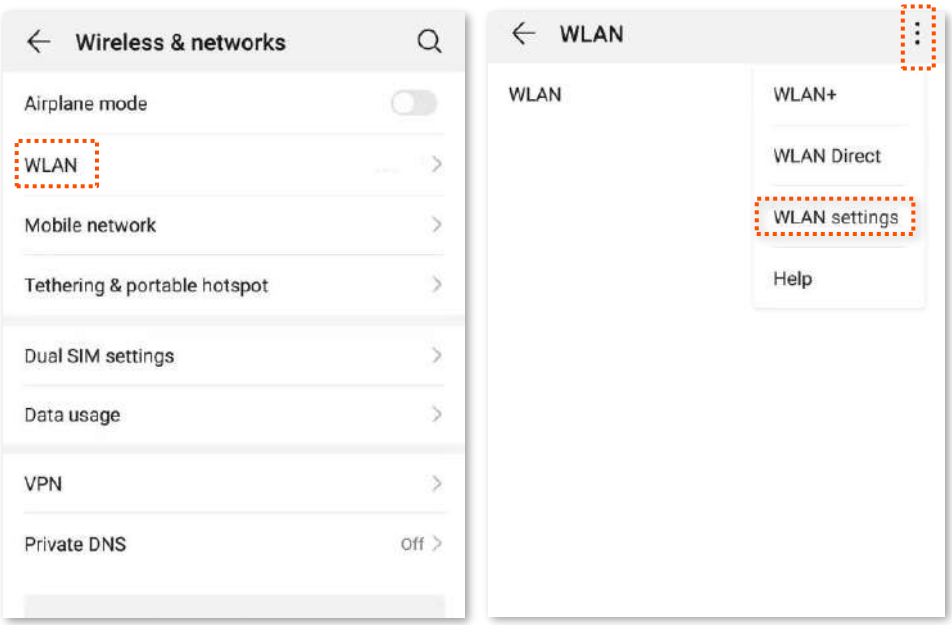
5.6.2 Connect devices to the WiFi network using the WPS button

Configuring procedure:

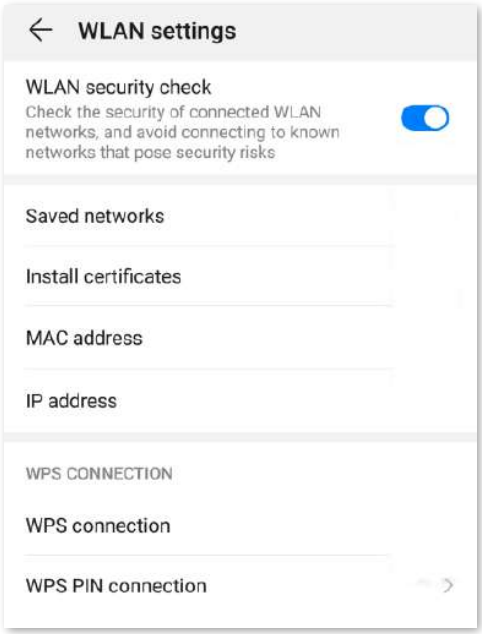
Step 1 Find the **WPS** button on the rear panel of the router, and hold it down for 1 to 3 seconds. The LED indicator blinks fast.

Step 2 Configure the WPS function on your WiFi-enabled devices **within 2 minutes**. Configurations on various devices may differ (Example: HUAWEI P10).

1. Find **Settings** on the phone.
2. Choose **WLAN**.
3. Tap ⋮, and choose **WLAN settings**.

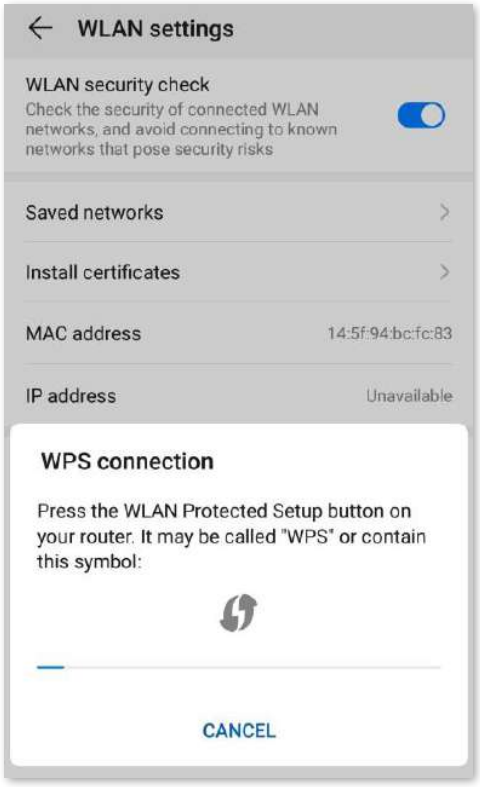


4. Choose **WPS connection**.



---End

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



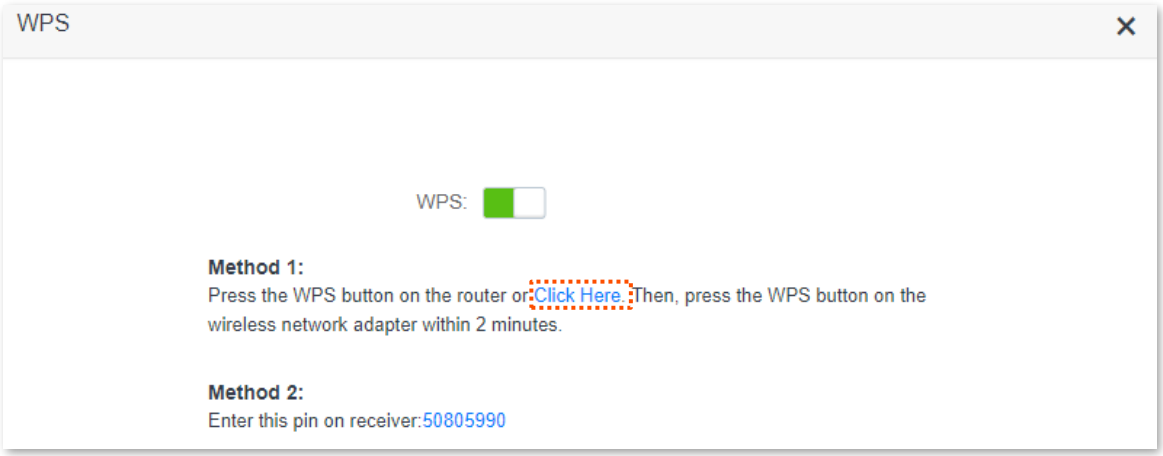
5.6.3 Connect devices to the WiFi network through the web UI of the router

Configuring 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.

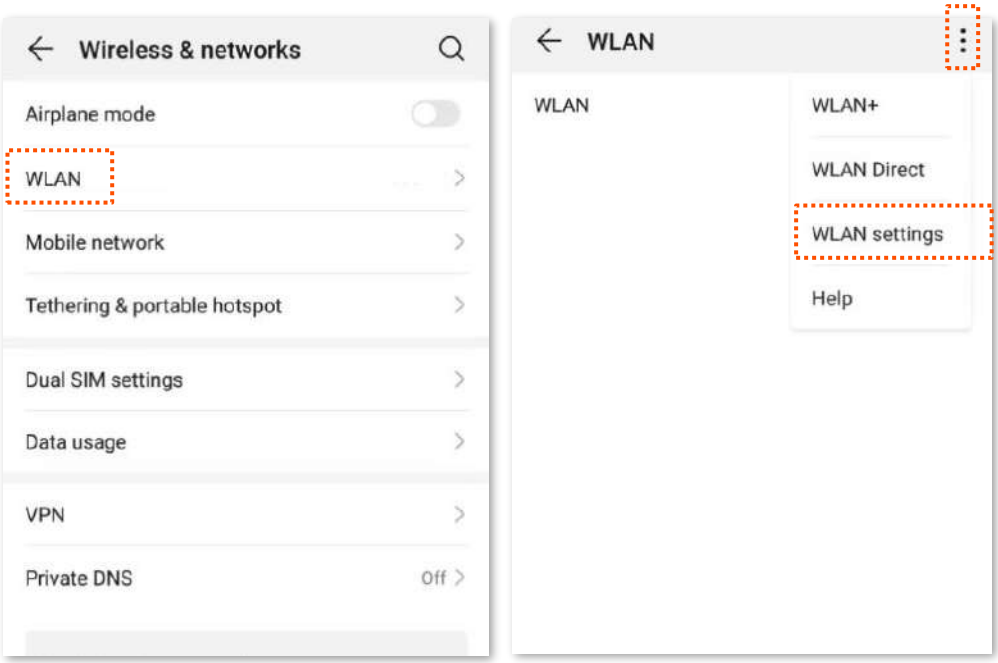
Step 2 Choose **WiFi Settings** > **WPS.**

Step 3 Click **Click Here** under **Method 1**.

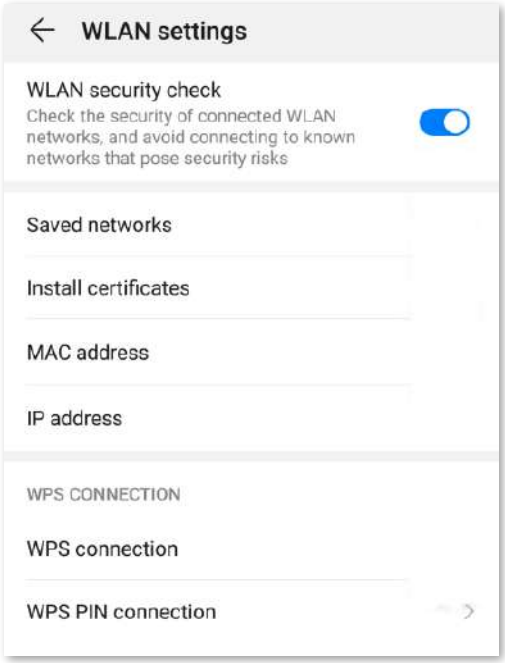


Step 4 Configure the WPS function on your WiFi-enabled devices **within 2 minutes**. Configurations on various devices may differ (Example: HUAWEI P10).

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 WiFi network.



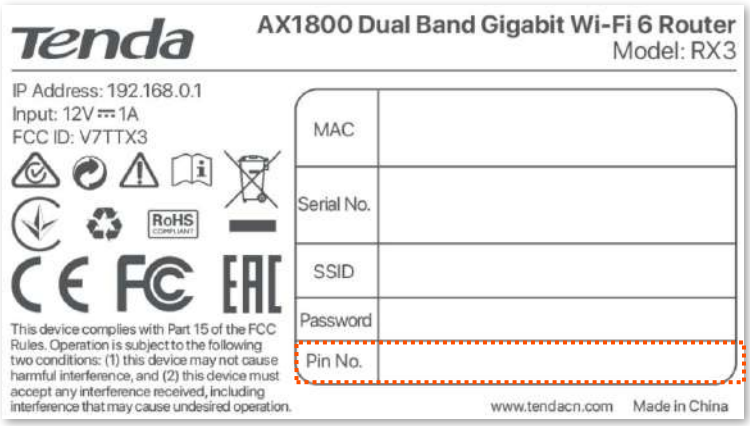
5.6.4 Connect devices to the WiFi network using the PIN code of the router

The router supports WPS connection by entering the PIN code on WiFi-enabled devices, which is usually used on WiFi network adapters. Please refer to the user guide of the WiFi network adapter for configuration details.

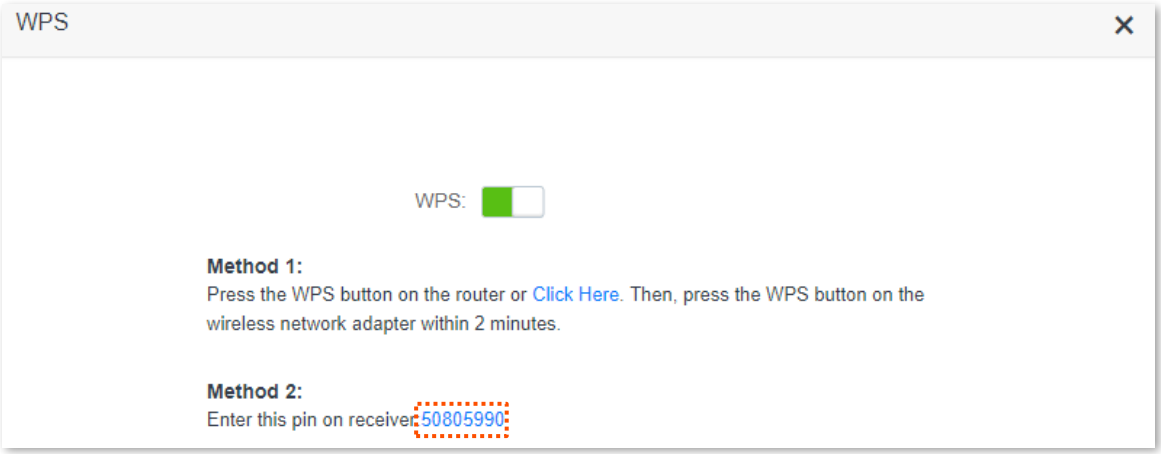
Configuring procedure:

Step 1 Find the PIN code of the router.

You can find the PIN code on the label on the bottom panel of the router.



You can also log in to the web UI of the router, and navigate to **WiFi Settings** > **WPS**. The PIN code is shown under **Method 2**.



Step 2 Enter the PIN code on the WiFi-enabled device that supports WPS connection using the PIN code.

---End

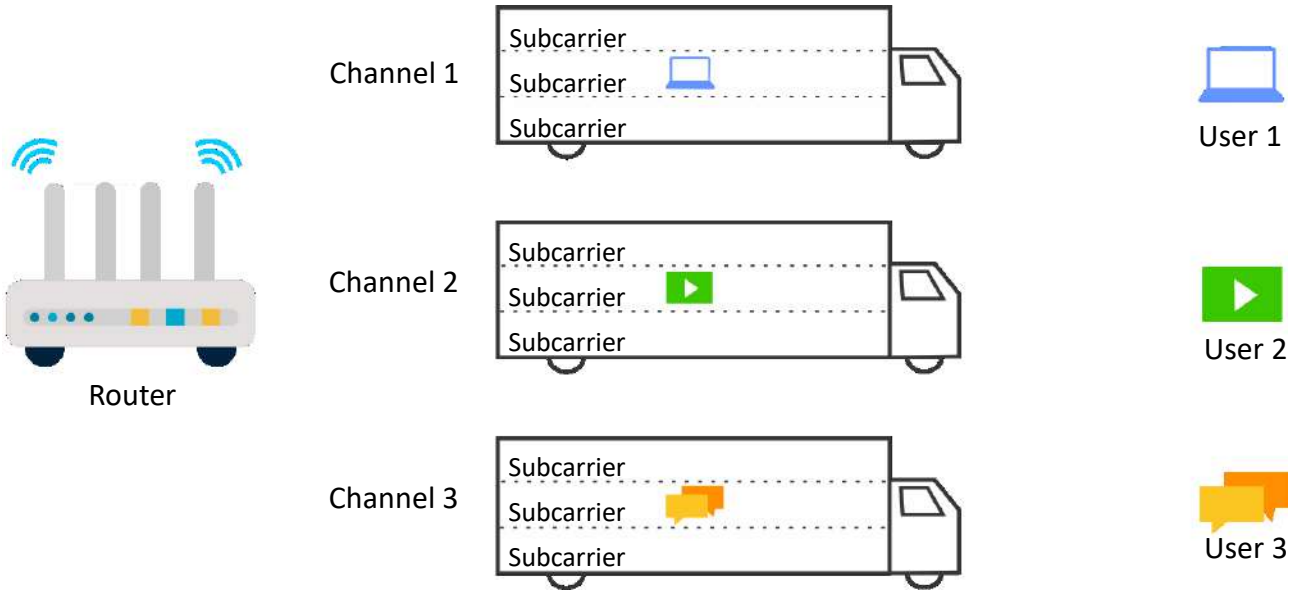
Wait a moment until the WPS negotiation is completed, and the WiFi-enabled device is connected to the WiFi network.

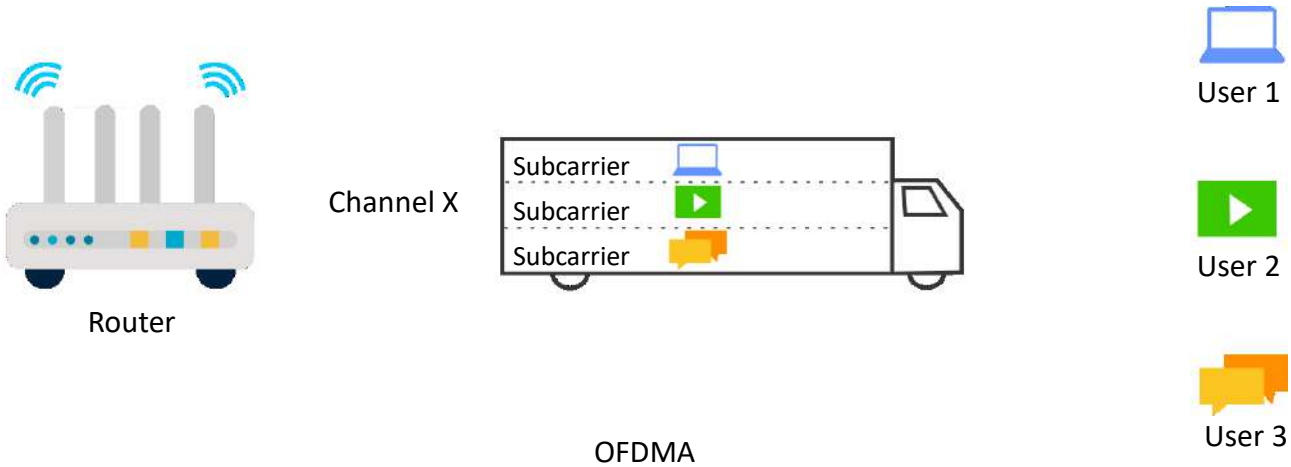
5.7 OFDMA

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.





To access the configuration page, log in to the web UI of the router, and choose **WiFi Settings** > **OFDMA**. This function is disabled by default.

5.8 AP mode

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.

TIP

When the router is set to AP mode:

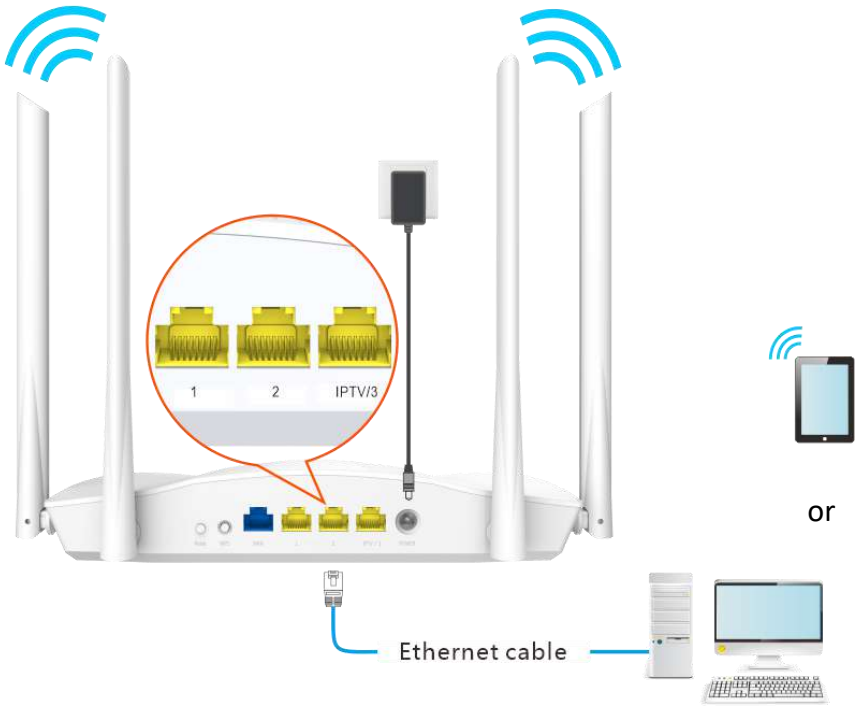
- Every physical port can be used as a LAN port.
- The LAN IP address of the router will be changed. Please log in to web UI of the router by visiting **tendawifi.com**.
- Functions, such as bandwidth control and virtual server will be unavailable. Refer to the web UI for available functions.

Configuring procedure:

TIP

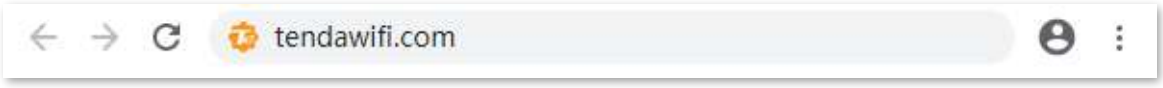
If you have finished the quick setup wizard before, start a web browser and visit **tendawifi.com** on a connected device, then start from **Step 3**.

Step 1 Power on the router. Connect a computer to a LAN port of the router, or connect your smart phone to the WiFi network of the router.



Step 2 Log in to the web UI of the router.

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. A computer is used for illustration below.



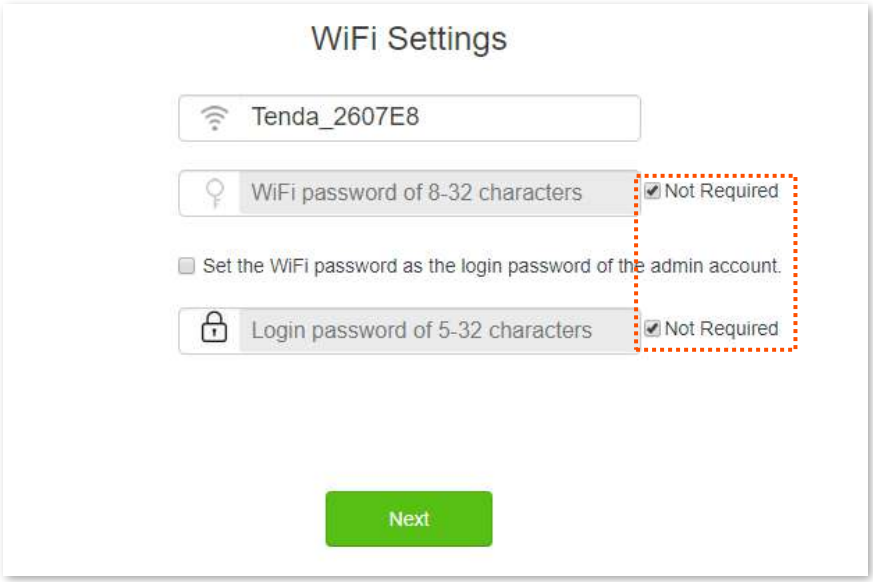
2. Click **Start**.



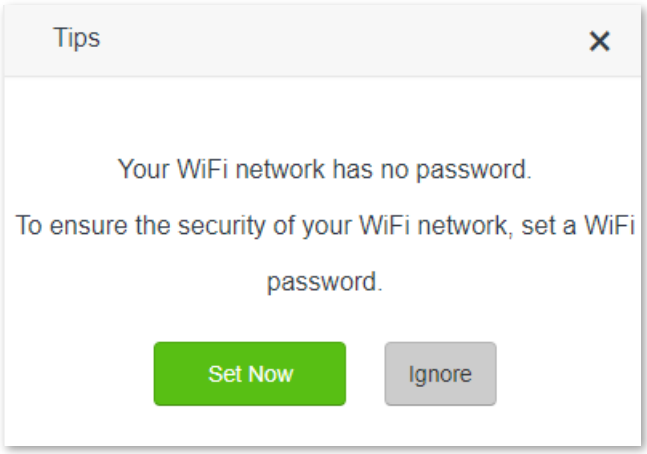
3. Click **Skip**.



4. Do not set login and WiFi password now by ticking **No Password**, and click **Next**.

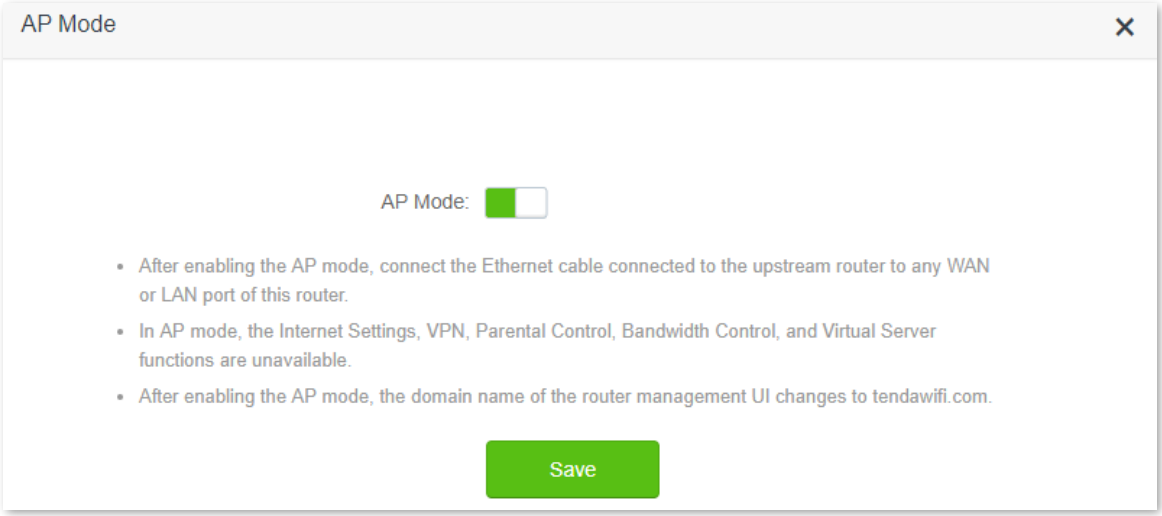


5. Click **Ignore**.

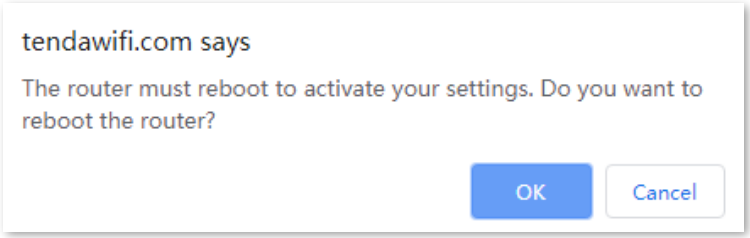


Step 3 Set the router to AP mode.

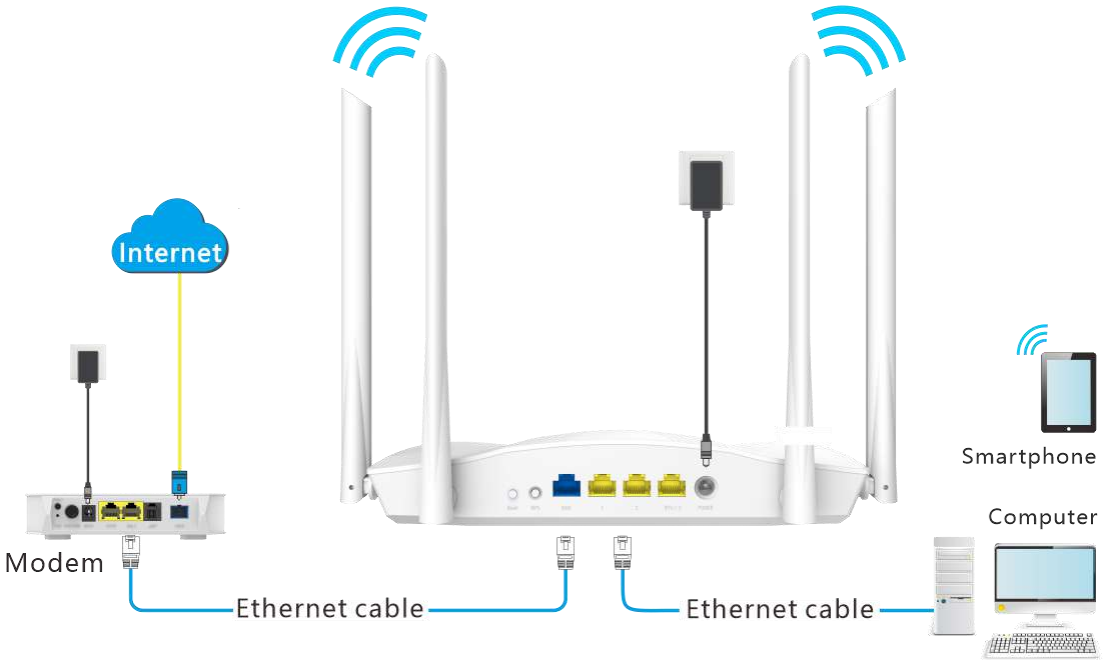
1. Navigate to **WiFi Settings** > **AP Mode**.
2. Enable **AP Mode**.
3. Click **Save**.



Step 4 Click **OK**, and wait for the router to reboot.

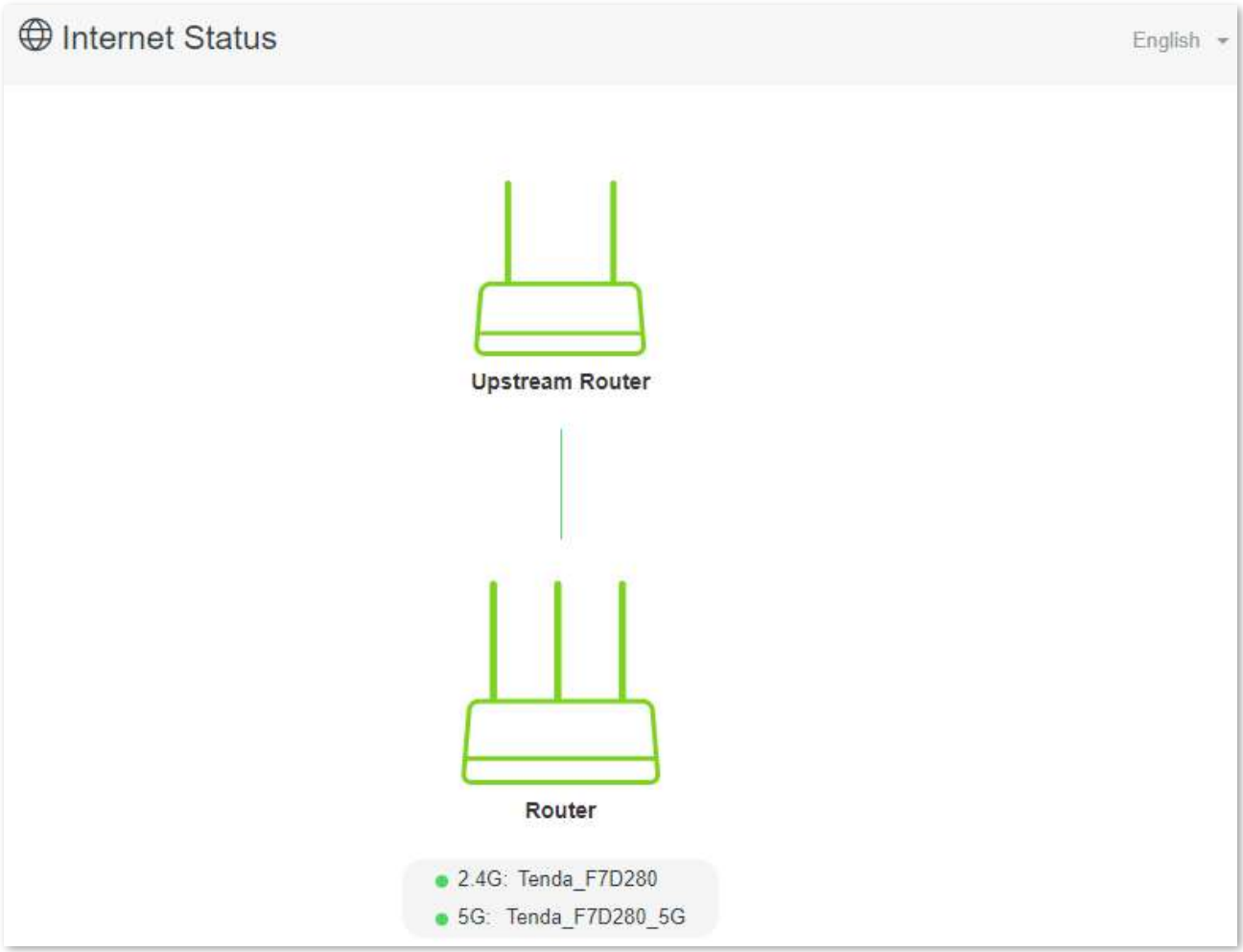


Step 5 Connect the upstream device, such as a gateway, to any port of the router.



---End

Log in to the web UI of the router again, and navigate to **Internet Status** to check if the AP mode is configured successfully.

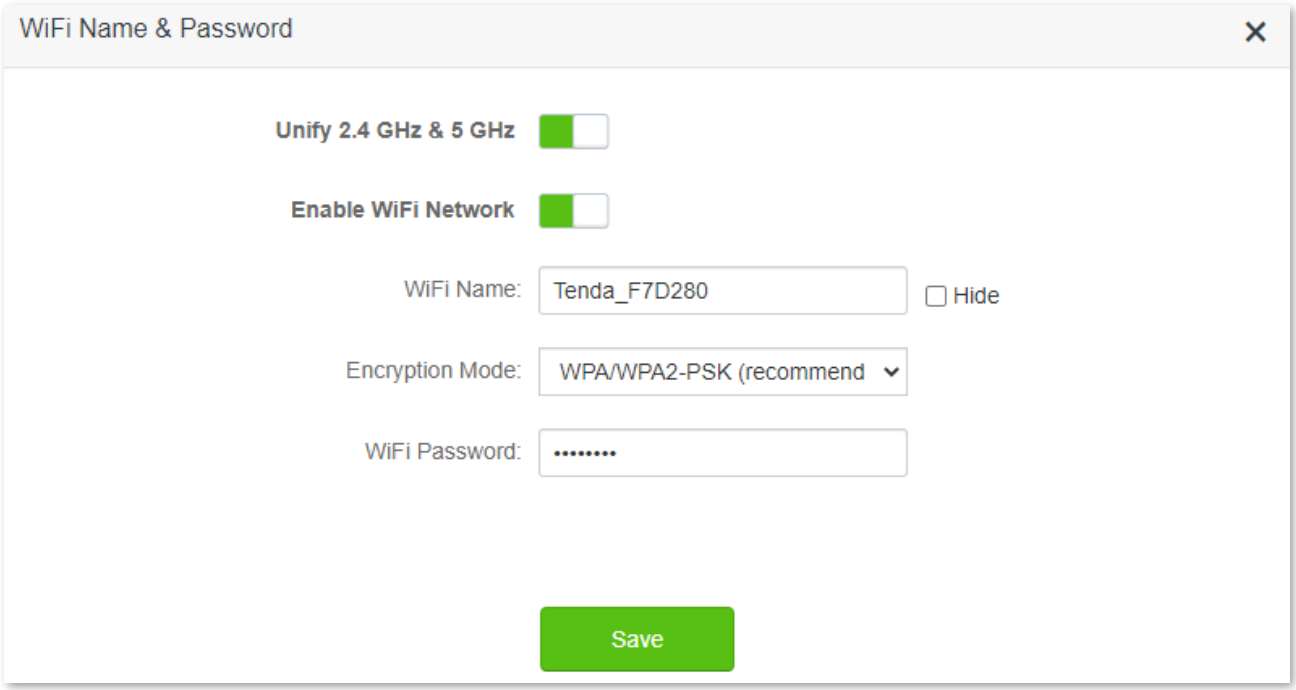


NOTE

If there is another network device with the same login domain name (tendawifi.com) as 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.

To access the internet, connect your computer to physical port, or connect your smart phone to the WiFi network.

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



TIP

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

- Ensure that the existing router is connected to the internet successfully.
- Ensure that your WiFi-enabled devices are connected to the correct WiFi 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.

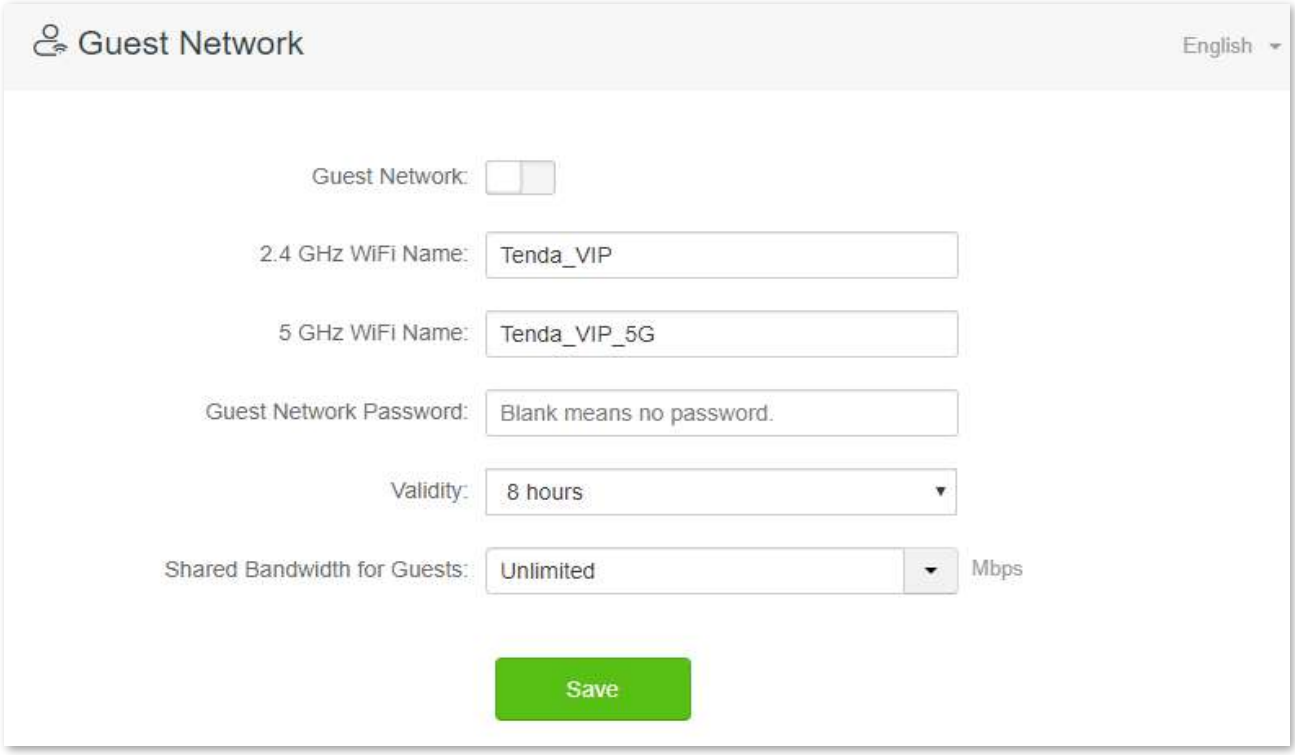
6 Guest network

6.1 Overview

In this module, you can enable/disable the guest network function and change the WiFi 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 the **Guest Network**. This function is disabled by default.



Parameter description

Parameter	Description
Guest Network	It is used to enable or disable the guest network function.
2.4 GHz WiFi Name	It specifies the WiFi name of the router's guest network. By default, Tenda_VIP is for the 2.4 GHz WiFi network and Tenda_VIP_5G for the 5 GHz WiFi network.
5 GHz WiFi Name	You can change the SSIDs (WiFi names) as required. To distinguish the guest network from the main network, you are recommended to set different WiFi network names.
Guest Network Password	It specifies the password for the router's two guest networks.

Parameter	Description
Validity	It specifies the validity of the guest networks. The guest network function will be disabled automatically out of the validity period.
Shared Bandwidth for Guests	It allows you to specify the maximum upload and download speed for all devices connected to the guest networks. By default, the bandwidth is not limited.

6.2 An 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 WiFi 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 WiFi network:

- WiFi names for 2.4 GHz and 5 GHz networks: John_Doe and John_Doe_5G.
- WiFi password for 2.4 GHz and 5 GHz networks: Tenda+245.
- The shared bandwidth for guests: 2 Mbps.

Configuring 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 the **Guest Network**.

Step 4 Set the **2.4 GHz WiFi Name**, which is **John_Doe** in this example.

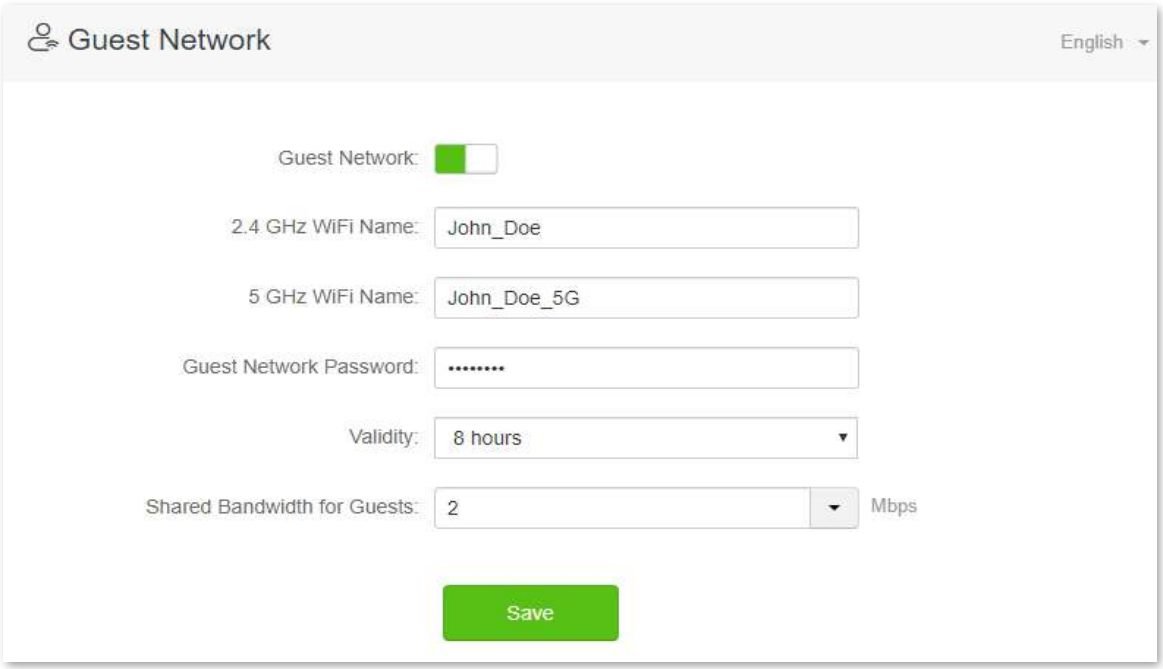
Step 5 Set the **5 GHz WiFi Name**, which is **John_Doe_5G** in this example.

Step 6 Set **Guest Network Password**, which is **Tenda+245** 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 **Shared Bandwidth for Guests** drop-down box, which is **2** in this example.

Step 9 Click **Save**.



---End

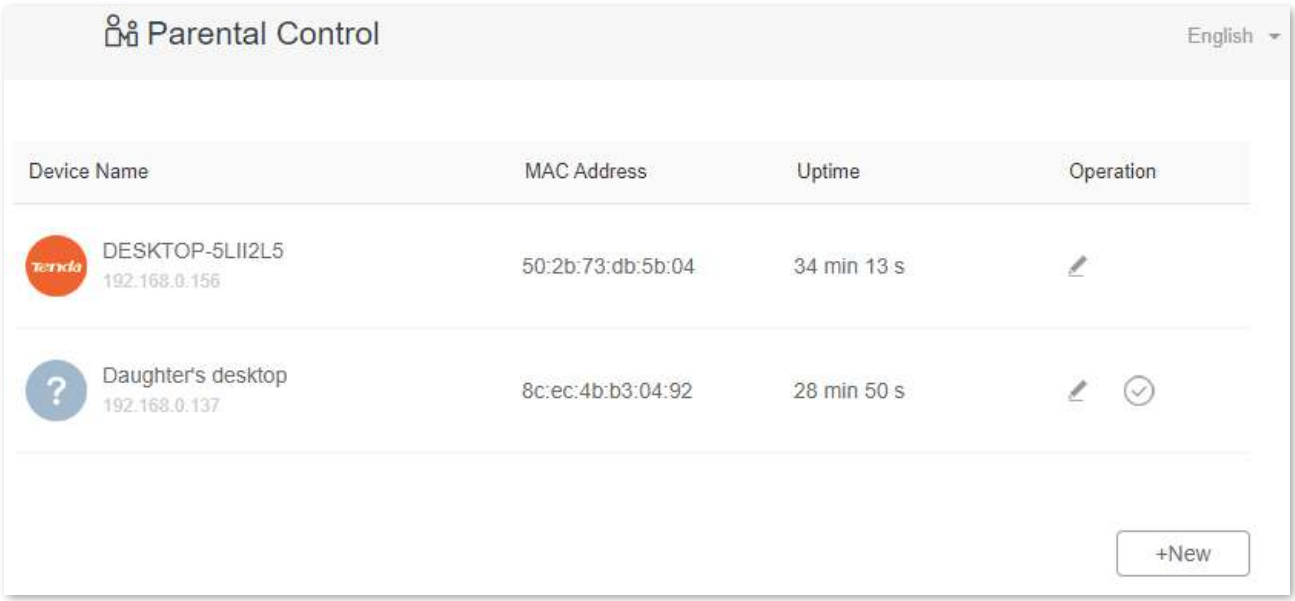
During the 8 hours after the configuration, guests can connect their WiFi-enabled devices, such as smartphones, to **John_Doe** or **John_Doe_5G** to access the internet and enjoy the shared bandwidth of 2 Mbps.

7 Parental control

7.1 Overview

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

To access the configuration page, log in to the web UI of the router, and navigate to the **Parental Control** page.

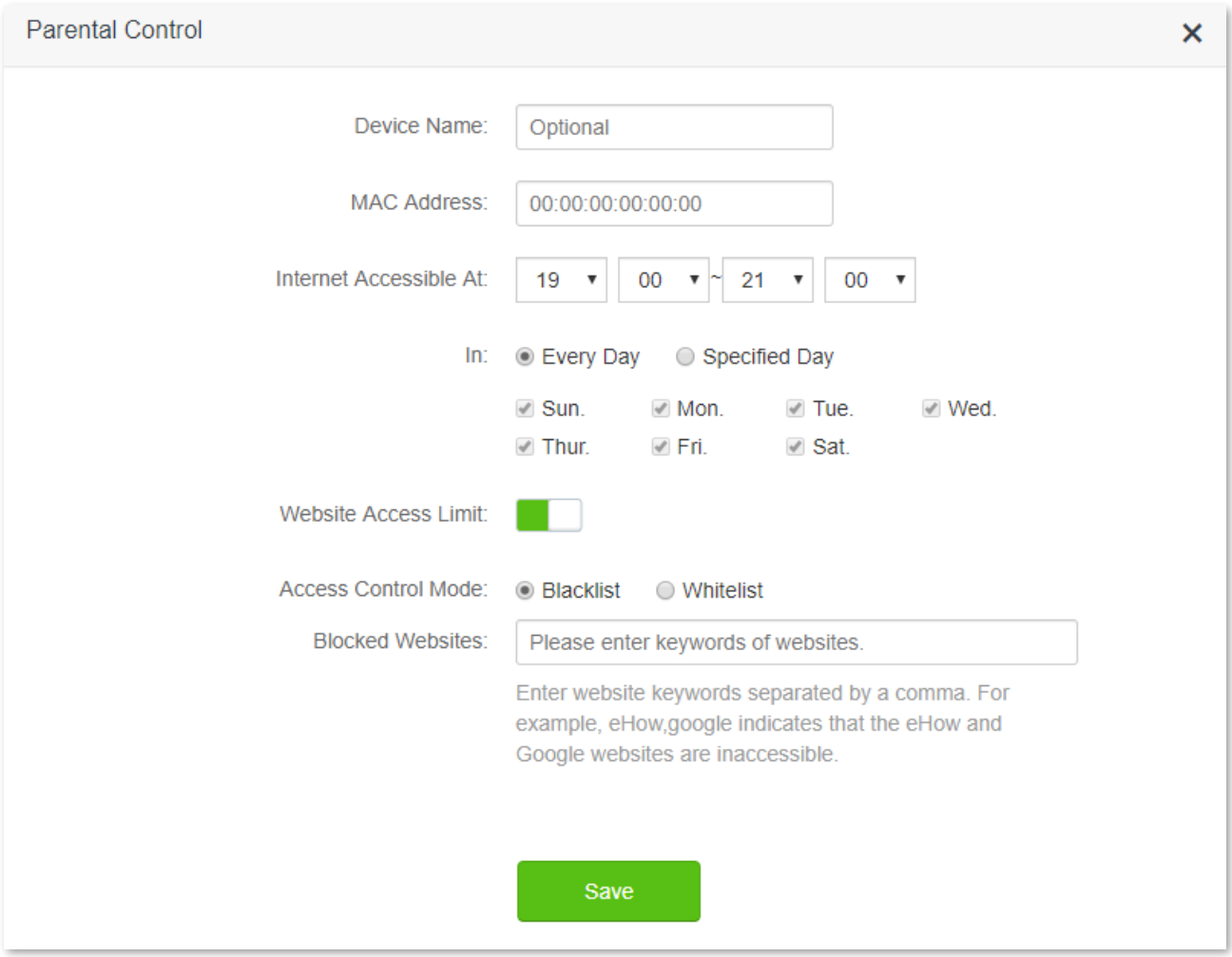


Parameter description

Parameter	Description
Device Name	It specifies the name of the online device.
MAC Address	It specifies the MAC address of the online device.
Uptime	It specifies the online duration of the device.
Operation	Click to configure the parental control rule for the device. After you have configured the parental control rule for the device, there should be a or button, which is used to enable or disable the configured rule.
+New	Click +New to add parental control rules for devices that are not connected to the router at the time.

7.2 Configure the parental control rule

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



Parameter description

Parameter	Description
Device Name	It specifies the name of the device that the parental control rule applies to.
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.
In	It specifies the days when the rule takes effect.
Website Access Limit	It is used to enable or disable the website access limit function.
Access Control Mode	When the website access limit function is enabled, there are two access control modes available. • **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 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

Parameter	Description
	access any website out of the specified period.
Blocked Websites	It specifies the websites that the device is blocked from accessing or allowed to access during the specified period.
Unblocked Websites	

7.3 An example of adding parental control rules

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

Goal: Your daughter cannot access websites, such as facebook, twitter, youtube and Instagram, during 8:00 to 22:00 on weekends using the computer in her room, and cannot access the internet from 22:00 to 8:00.

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

Configuring procedure:

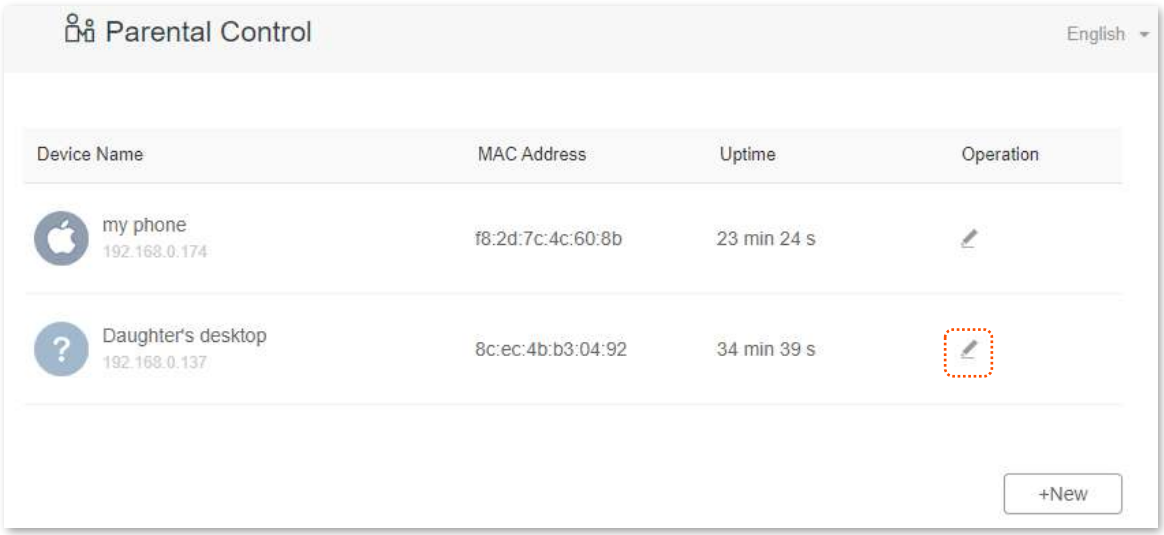
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Parental Control**.

Step 3 Find the device to which the rule applies, and click .

TIP

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.



Step 4 Specify the period when the target websites cannot be accessed, which is **8:00 ~ 22:00** in this example.

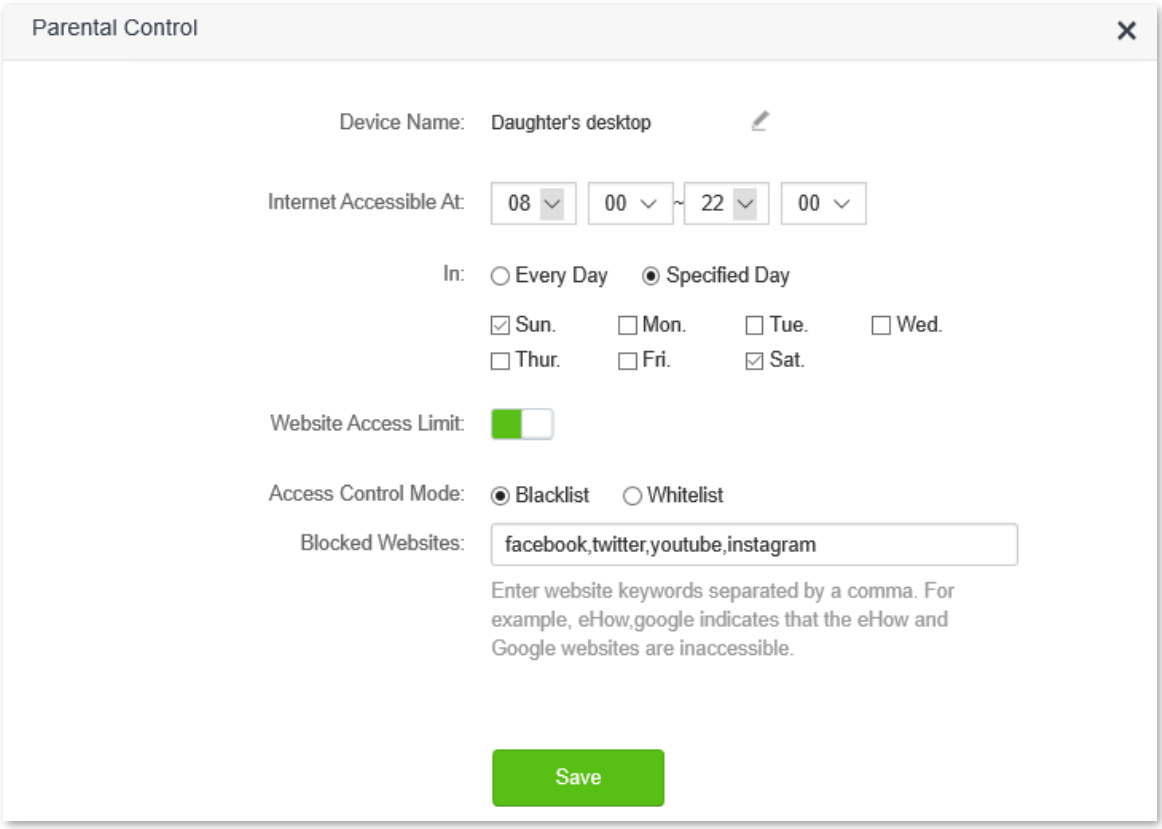
Step 5 Choose **Specified Day**, and tick the days when the rule is applied, which are **Sun.** and **Sat.** in this example.

Step 6 Enable **Website Access Limit**.

Step 7 Choose **Blacklist**.

Step 8 Set **Blocked Websites**, which is **facebook,twitter,youtube,instagram**.

Step 9 Click **Save**.



---End

After the configuration is completed, your daughter can access any websites except for facebook, twitter, youtube and instagram from 8:00 to 22:00 on weekends, and she cannot access the internet at all between 22:00 to 8:00.

8 VPN

A VPN (Virtual Private Network) 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.

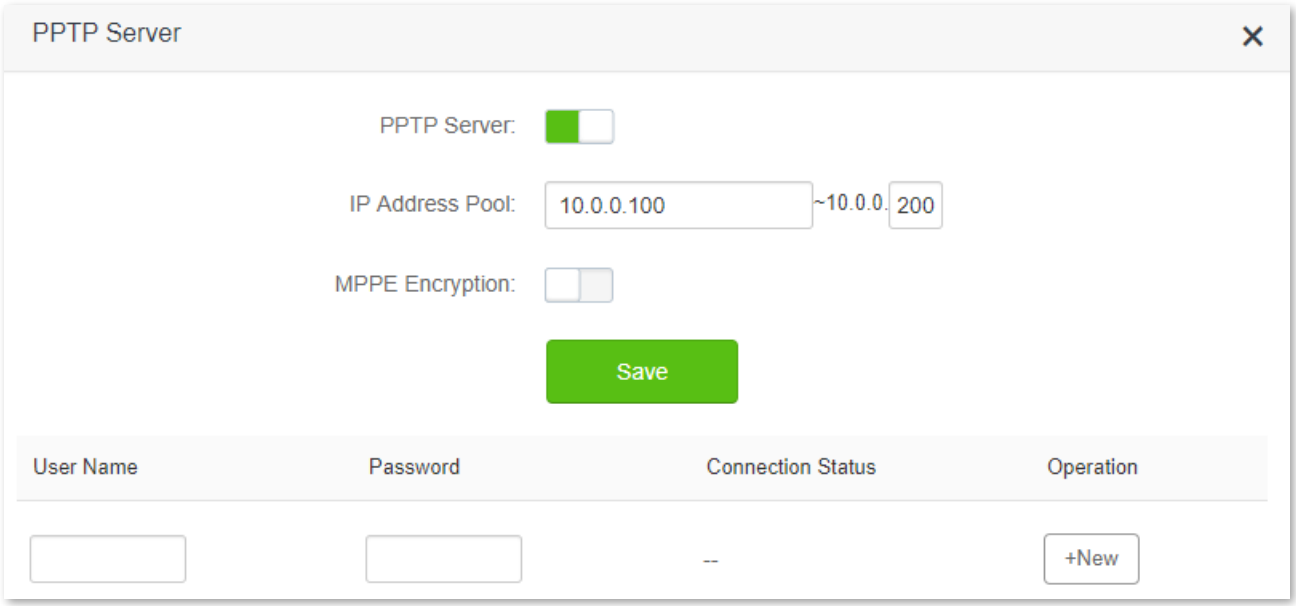


8.1 PPTP server

8.1.1 Overview

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



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 range within which the PPTP server can assign to PPTP clients. It is recommended to keep the default settings.
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 cannot be achieved normally.
User Name Password	It specifies the VPN user name and password, which the VPN user needs to enter when making PPTP dial-ups (VPN connections).
Connection Status	It specifies the connection status of the VPN connection.
Operation	The available operations include: • +New : It is used to add new PPTP user accounts. • : 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.

8.1.2 Enable 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

Please ensure the WAN IP address of router is a public network. This function may not work on a host with an IP address of a private network. 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 172.16.0.0-172.31.255.255; Private IP addresses of class C range from 192.168.0.0-192.168.255.255.

Configuring 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 Server**.

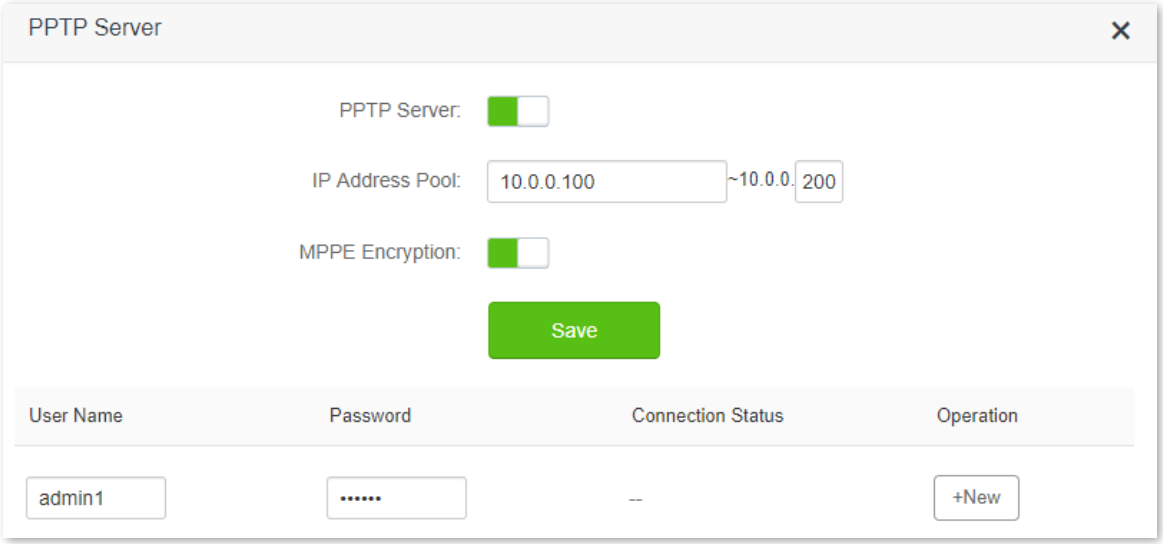
Step 3 Enable the **PPTP Server**.

Step 4 Enable the **MPPE Encryption**, which means that the encryption digit remains the default value “128”.

Step 5 Set the **User Name** and **Password** of the PPTP server, which are **admin1** in this example.

Step 6 Click **+New**.

Step 7 Click **Save.**



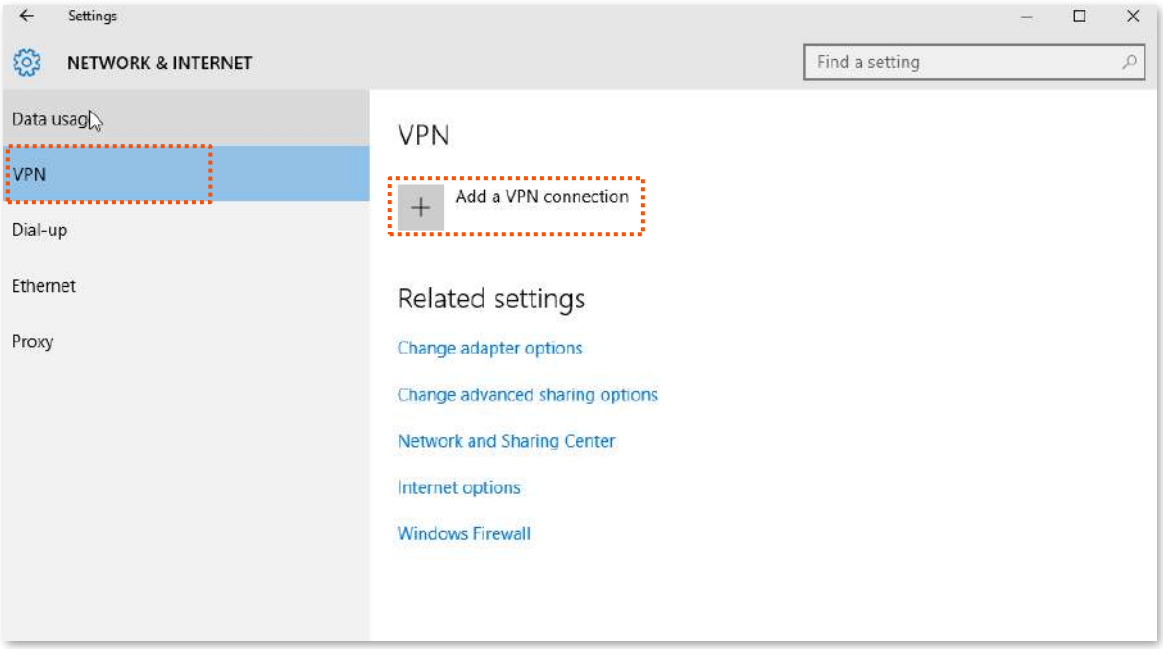
---End

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**.

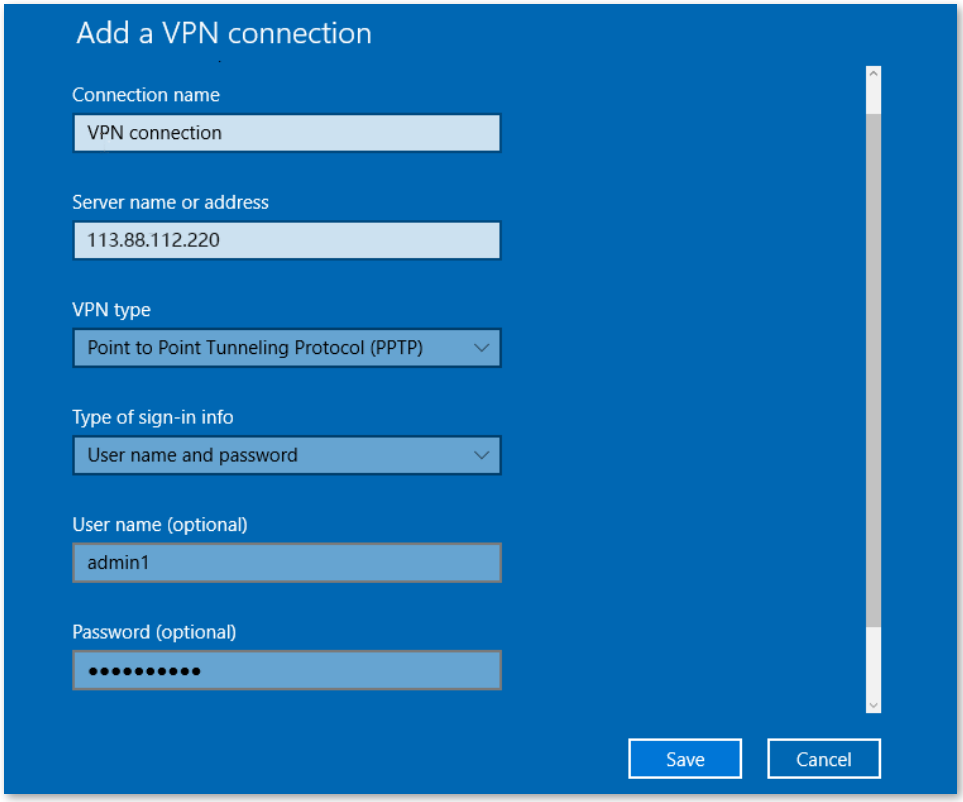


Step 2 Choose **VPN** on the left side, and click **Add a VPN connection**.

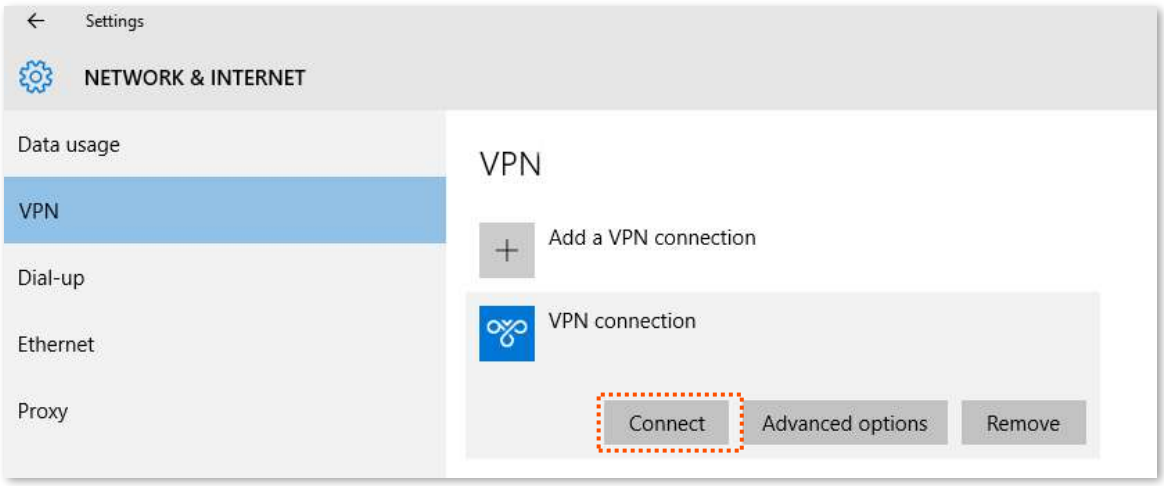


Step 3 Configure the VPN parameters.

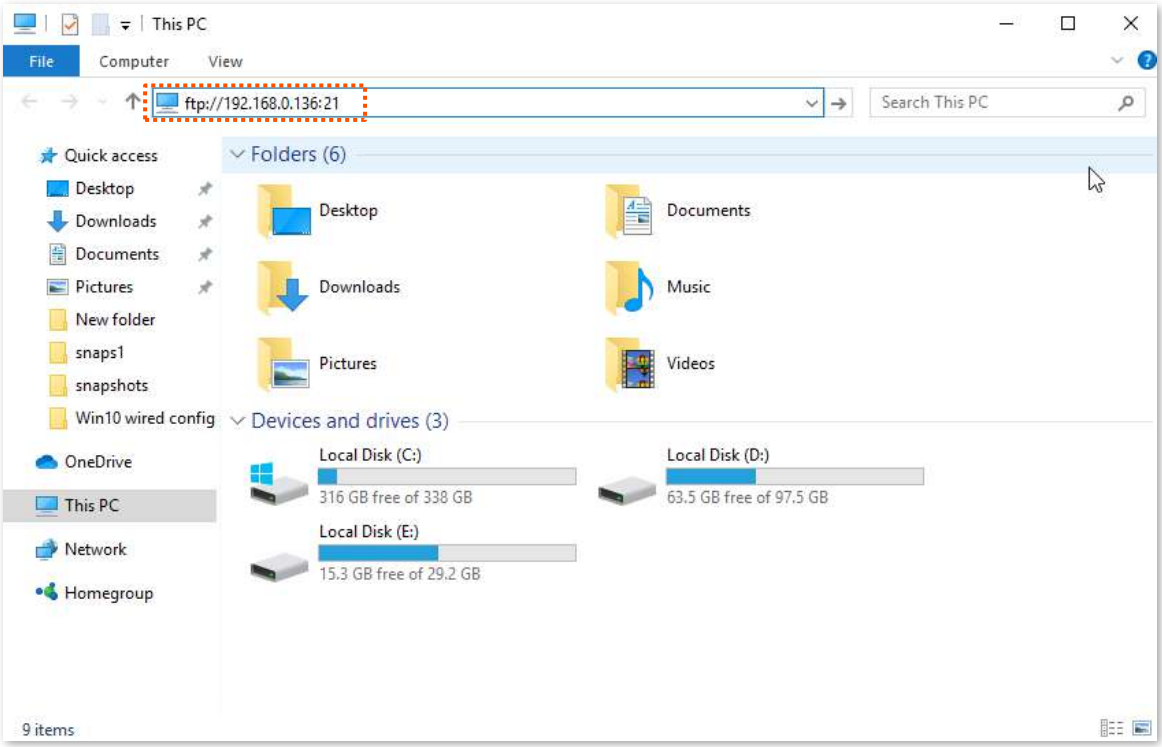
1. Enter a connection name, such as **VPN connection**.
2. Enter the server address, which is **113.88.112.220** in this example.
3. Select a VPN type, which is **Point to Point Tunneling Protocol (PPTP)** in this example.
4. Select a type of sign-in info, which is **User name and password** in this example.
5. Enter the user name and password, which are both **admin1** in this example.
6. Click **Save**.



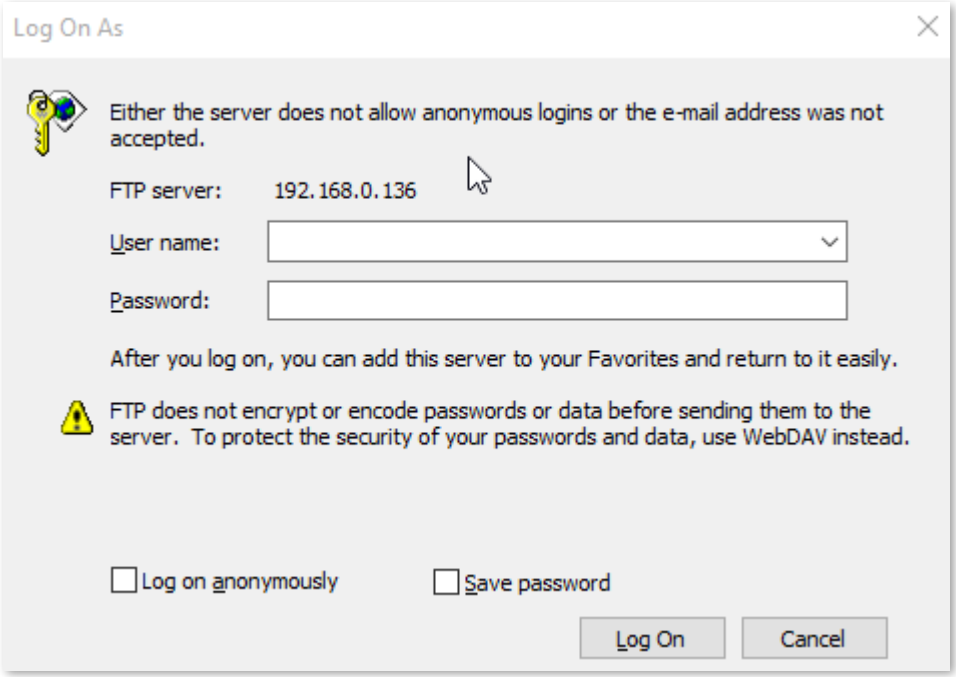
Step 4 Target the VPN connection added, and click **Connect**.



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**.



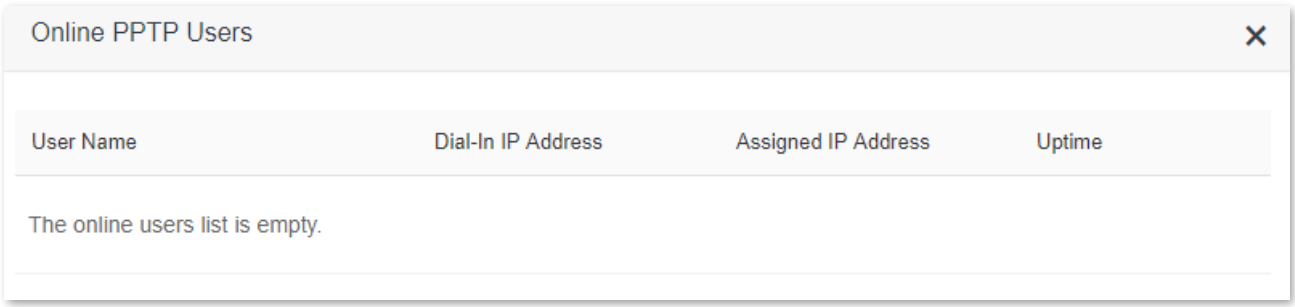
---End

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

8.2 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**.



Parameter description

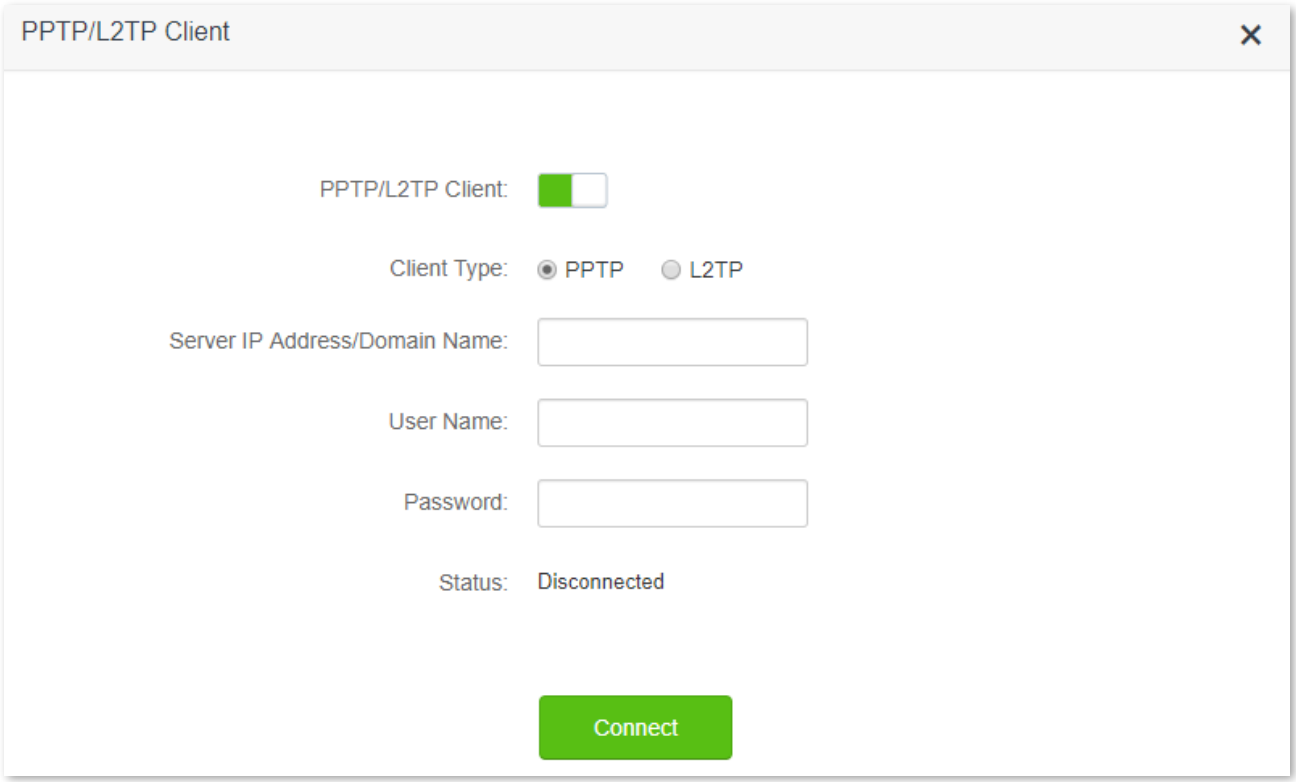
Parameter	Description
User Name	It specifies the VPN user name, which the VPN user uses when making PPTP dial-ups (VPN connection).
Dial-In IP Address	It specifies the IP address of the PPTP client. If the client is a router, it will be the IP address of the WAN port whose VPN function is enabled.
Assigned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

8.3 PPTP/L2TP client

8.3.1 Overview

This series of 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.



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, either PPTP or L2TP. • **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	It specifies 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.

8.3.2 Access VPN resources with the router

Scenario: You have subscribed 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.

Configuring 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**.

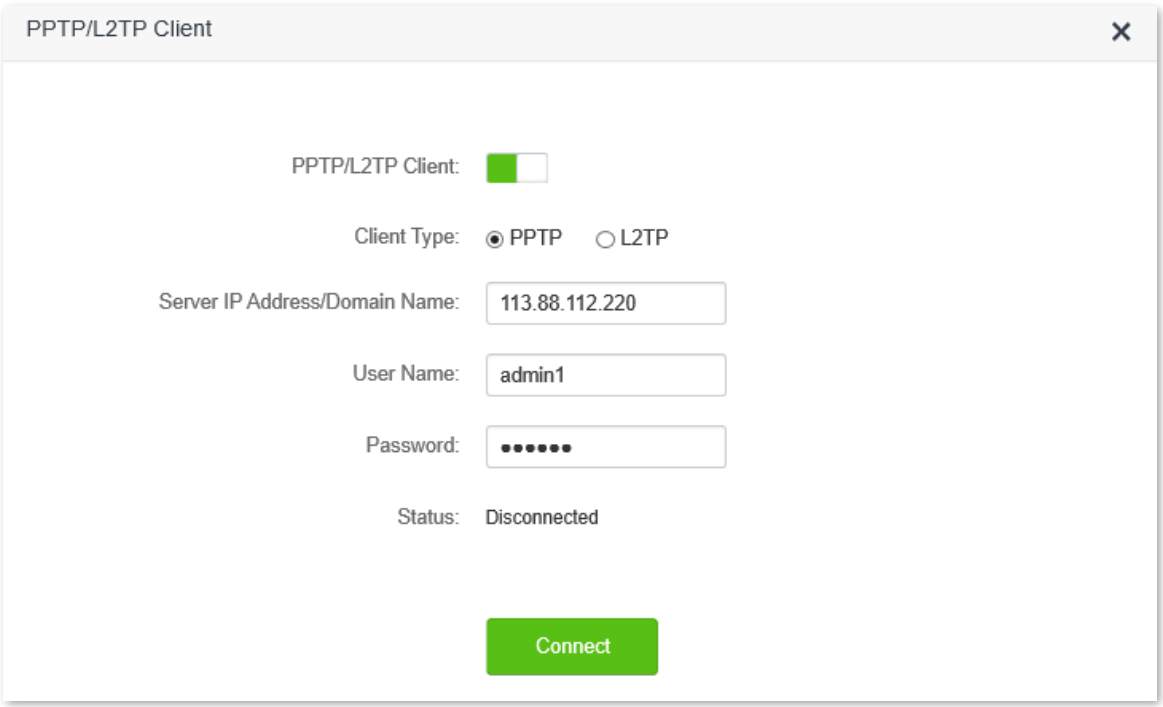
Step 3 Enable the **PPTP/L2TP Client**

Step 4 Choose **PPTP** as the 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**.



---End

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

9 IPv6

This router supports IPv4 and IPv6 dual stack protocols. In the IPv6 part, you can:

- Perform IPv6 WAN settings
- Change IPv6 LAN settings

9.1 IPv6 WAN settings

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

Scenario	Connection Type
• 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.	DHCPv6
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, default gateway and DNS server, etc.	Static IPv6 address

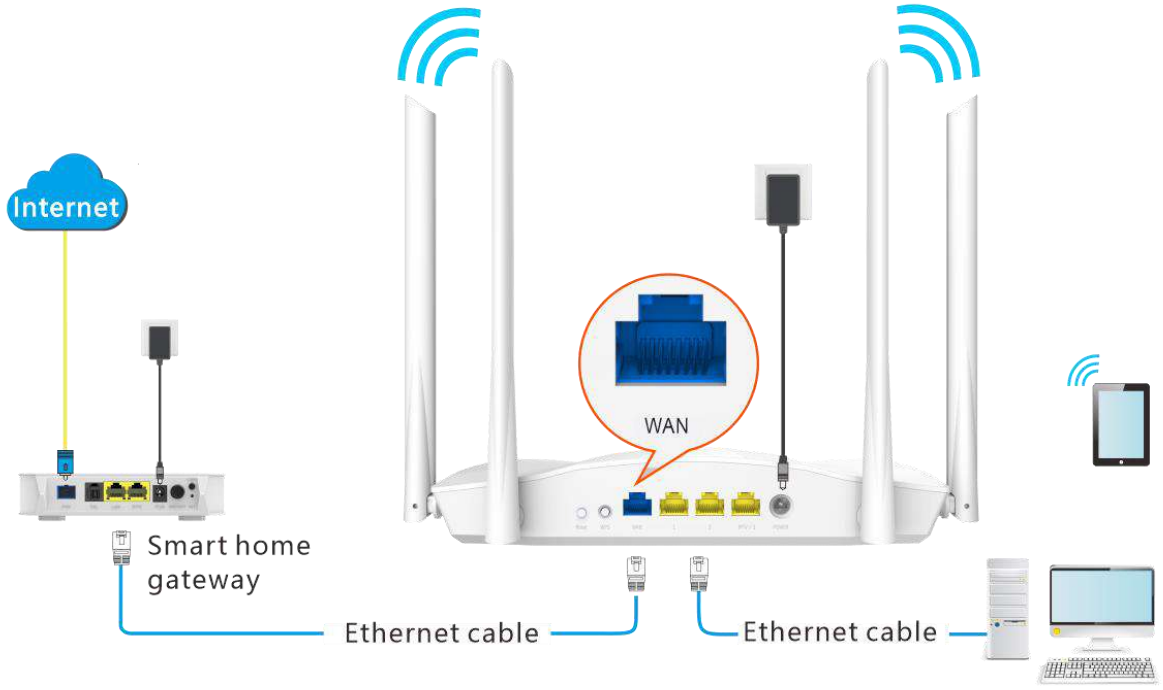
TIP

Before configuring the IPv6 function, please ensure that you are within the coverage of IPv6 network and already subscribe 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.



Configuring 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 the connection type to **DHCPv6**.

Step 5 Click **Save**.



---End

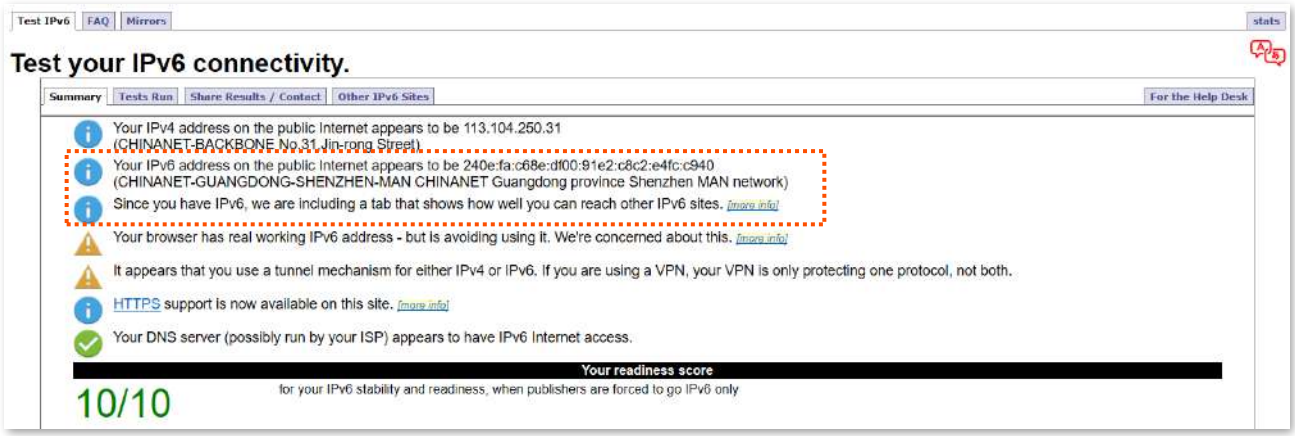
Parameter description

Parameter	Description
Obtain IPv6 Prefix Delegation	When the option is selected, the LAN port of router obtains IPv6 prefix from its upstream device. 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. TIP The router supports NAT6. When the connection type is DHCPv6, it is recommended to disable **Obtain IPv6 Prefix Delegation**, and the clients obtains IPv6 prefix from the router.

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 configuration succeeds and you can access IPv6 services.



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

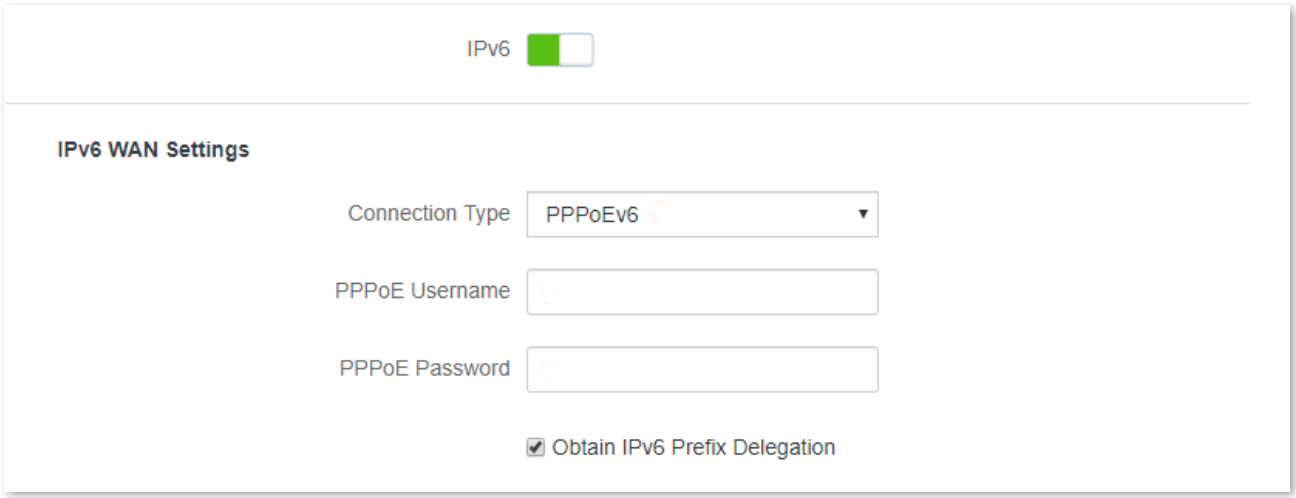
- Navigate to the **System Settings** > **System Status**, and move to the **IPv6 Status** part. Ensure that the IPv6 WAN address is a global unicast address.
- Ensure that devices connected to router obtain their IPv6 address through DHCPv6.
- Consult your ISP for help.

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.

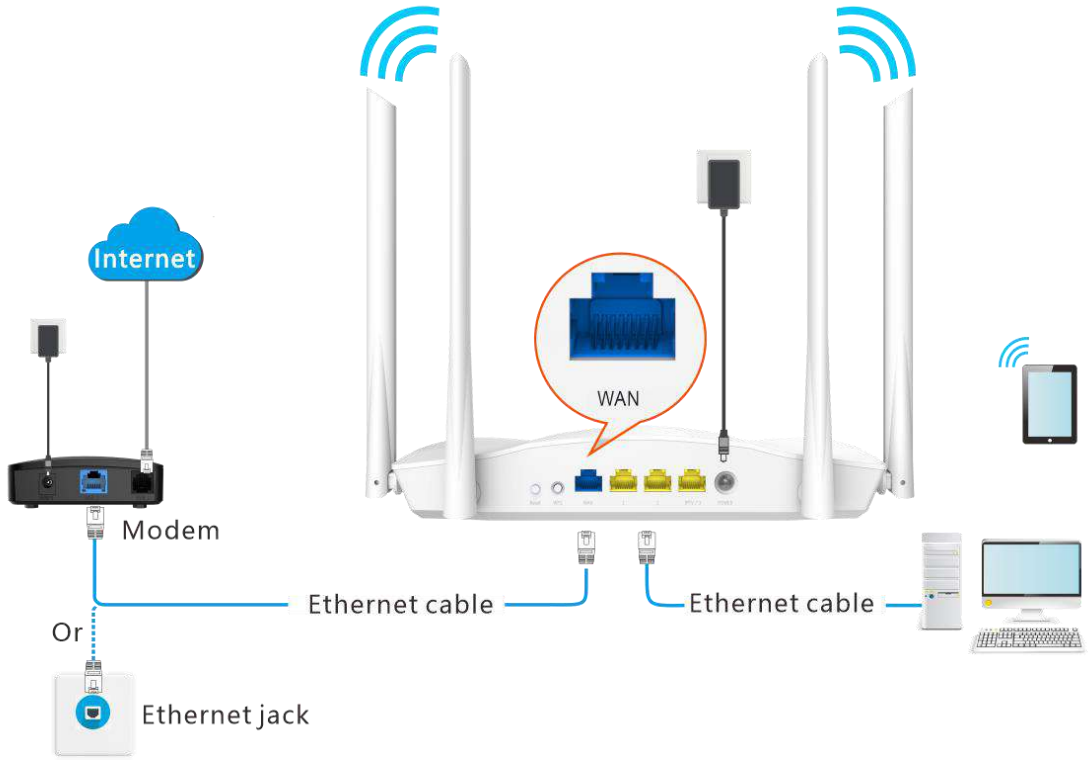


Parameter description

Parameter	Description
PPPoE Username	It specifies the PPPoE user name and password provided by your ISP. TIP IPv4 and IPv6 services share the same PPPoE account.
PPPoE Password	
Obtain IPv6 Prefix Delegation	When the option is selected, the LAN port of router obtains IPv6 prefix from its upstream device. 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. TIP The router supports NAT6. When the connection type is DHCPv6, it is recommended to disable **Obtain IPv6 Prefix Delegation**, and the clients obtains IPv6 prefix from the router.

Access the internet through PPPoEv6

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



Configuring 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.

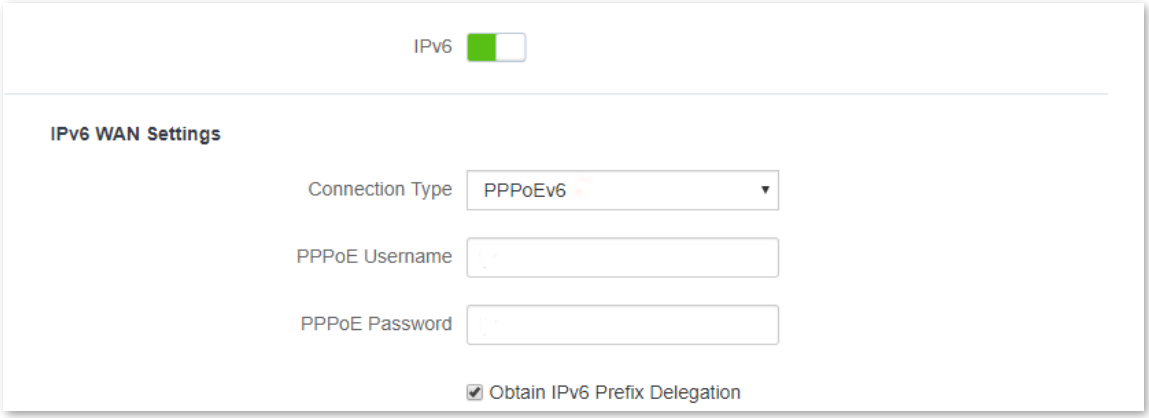
Step 2 Choose **IPv6**.

Step 3 Enable the **IPv6** function.

Step 4 Set the connection type to **PPPoEv6**.

Step 5 Enter the **PPPoE Username** and **PPPoE Password**.

Step 6 Click **Save**.

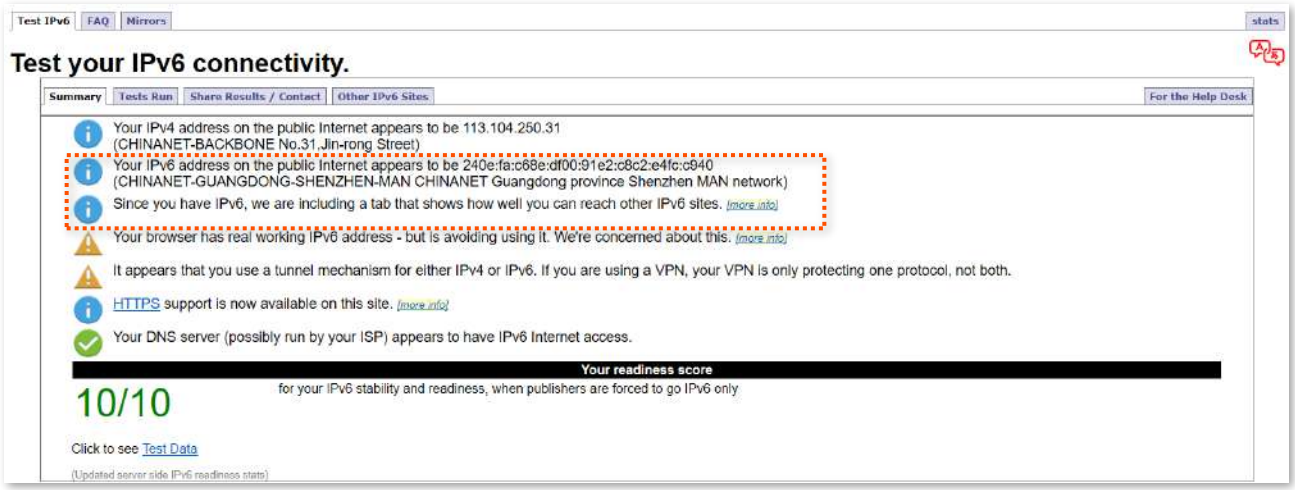


---End

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.



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

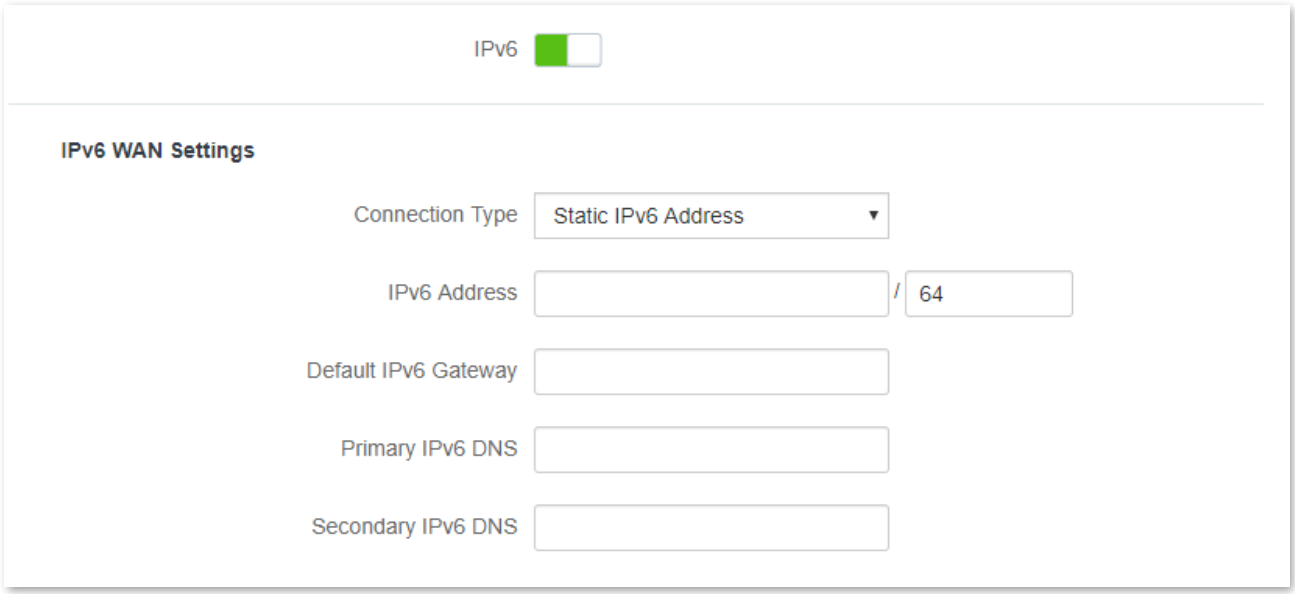
- Navigate to the **System Settings** > **System Status**, and move to the **IPv6 Status** part. Ensure that the IPv6 WAN address is a global unicast address.
- Ensure that devices connected to router obtain their IPv6 address through DHCPv6.
- Consult your ISP for help.

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.



Parameter description

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

Access the internet through PPPoEv6

Configuring 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**.

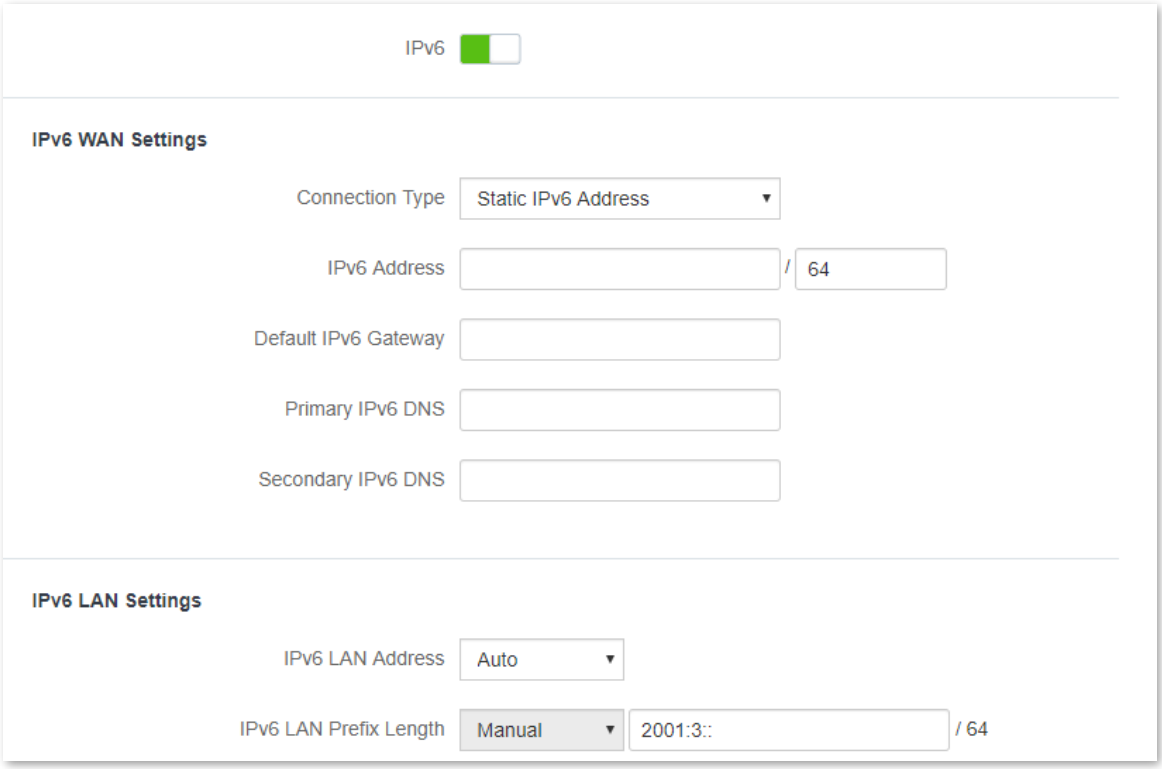
Step 3 Enable the **IPv6** function.

Step 4 Set the connection type to **Static IPv6 Address**.

Step 5 Enter the required parameters under IPv6 WAN settings.

Step 6 Enter the IPv6 LAN prefix provided by your ISP in **IPv6 LAN Prefix Length**.

Step 7 Click **Save**.

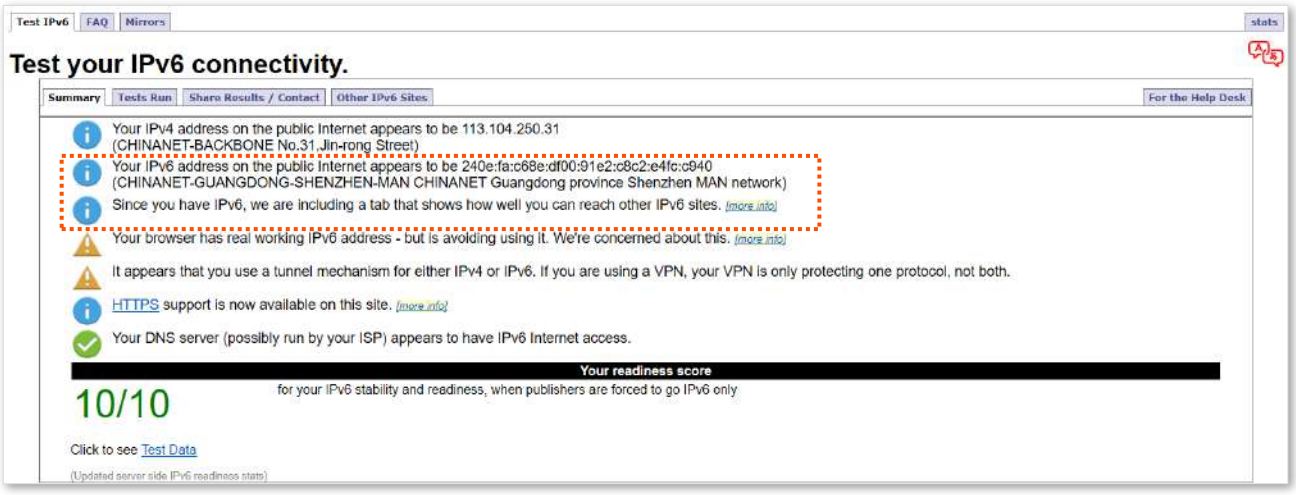


---End

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.



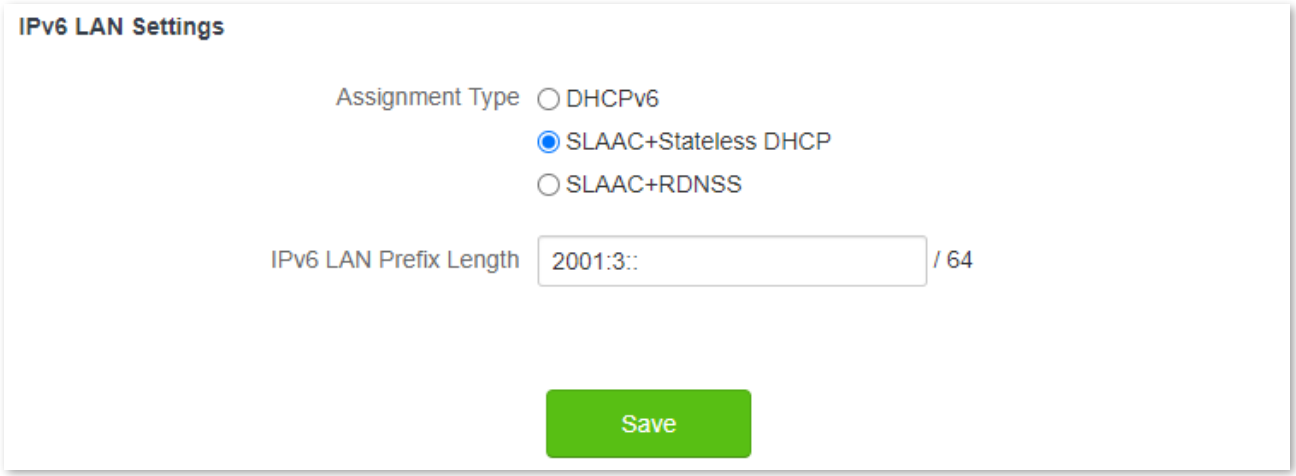
If the IPv6 network test fails, try the following solutions:

- 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.

9.2 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.



Parameter description

Parameter	Description
Assignment Type	It specifies how the router assigns IPv6 address to its clients. • **DHCPv6**: Dynamic Host Configuration Protocol for IPv6 (DHCPv6) indicates that a client obtains the complete IPv6 address information from the DHCPv6 server, including the DNS server address. The gateway address is obtained through Router Advertisement (RA). • **SLAAC+Stateless DHCP**: It indicates that a client obtains the IPv6 prefix and gateway address through RA, DNS server address from the DHCPv6 server. And the client generates its unique IPv6 address using the IPv6 prefix contained in the RA and interface ID which is generated using the EUI-64 method or generated randomly by the client. • **SLAAC+RDNSS**: It indicates that a client obtains an IPv6 prefix and gateway address through RA and DNS server address from the RDNSS option. And the client generates its unique IPv6 address using the IPv6 prefix contained in the RA and interface ID which is generated using the EUI-64 method or generated randomly by the client.
IPv6 LAN Prefix Length	It specifies the LAN IPv6 prefix. • If you enable the Obtain IPv6 Prefix Delegation option in IPv6 WAN settings, the router obtains its LAN IPv6 prefix from its upstream device. • If you disable the Obtain IPv6 Prefix Delegation option in IPv6 WAN settings, you can configure the LAN IPv6 prefix manually.

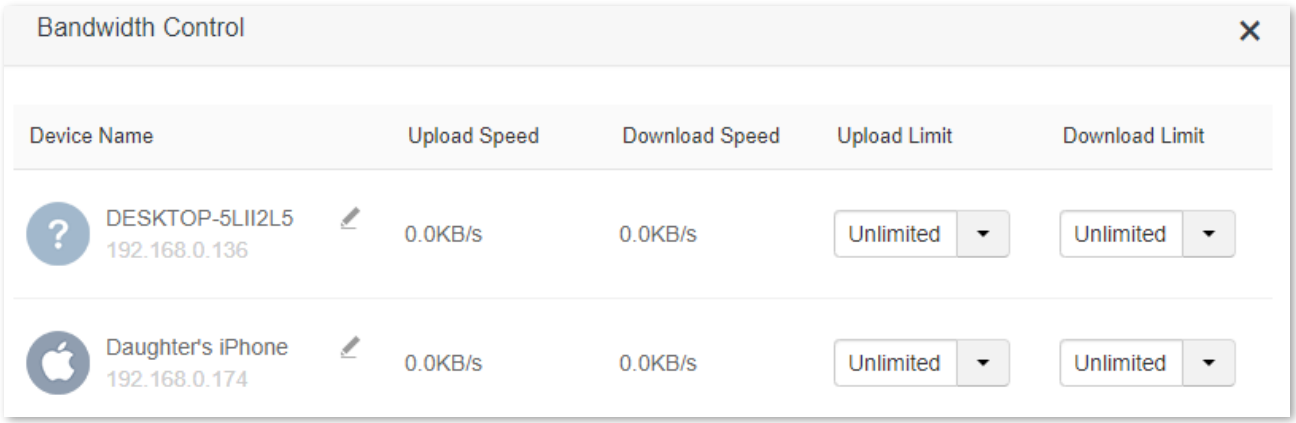
10 Advanced settings

10.1 Bandwidth control

10.1.1 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**.



Parameter description

Parameter	Description
Device Name	It specifies the name and IP address of the device. You can click to change the name of the device.
Upload Speed	It specifies the current upload and download speed of the device.
Download Limit	
Upload Limit	It specifies the upload and down load speed limit for the device. You can click the drop-down box to choose a number or set it manually.
Download Limit	

10.1.2 Set the upload and download speed limit for users

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

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

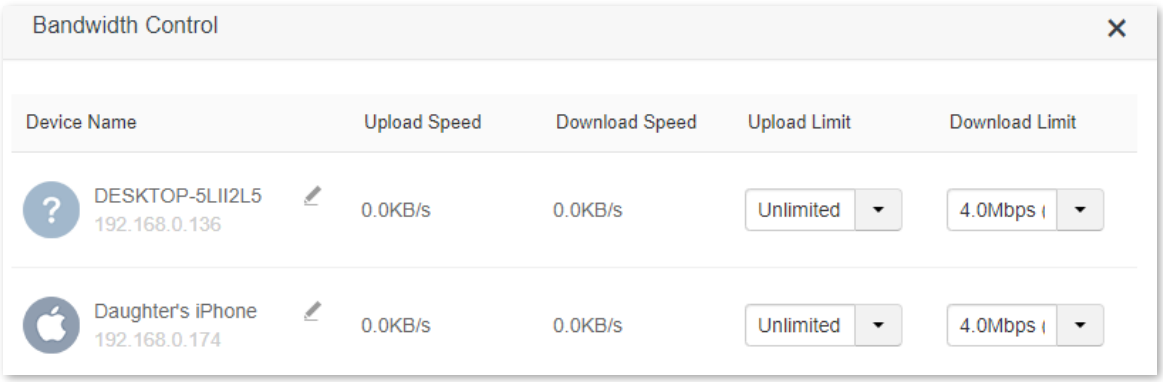
Configuring procedure:

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 device is 4 Mbps (or 512 KB/s) and satisfies the requirement of 720p videos.

10.2 IPTV

IPTV settings on this page may differ with product models. Refer to the corresponding category for guidance.

10.2.1 AX1800 series Wi-Fi 6 router

Overview

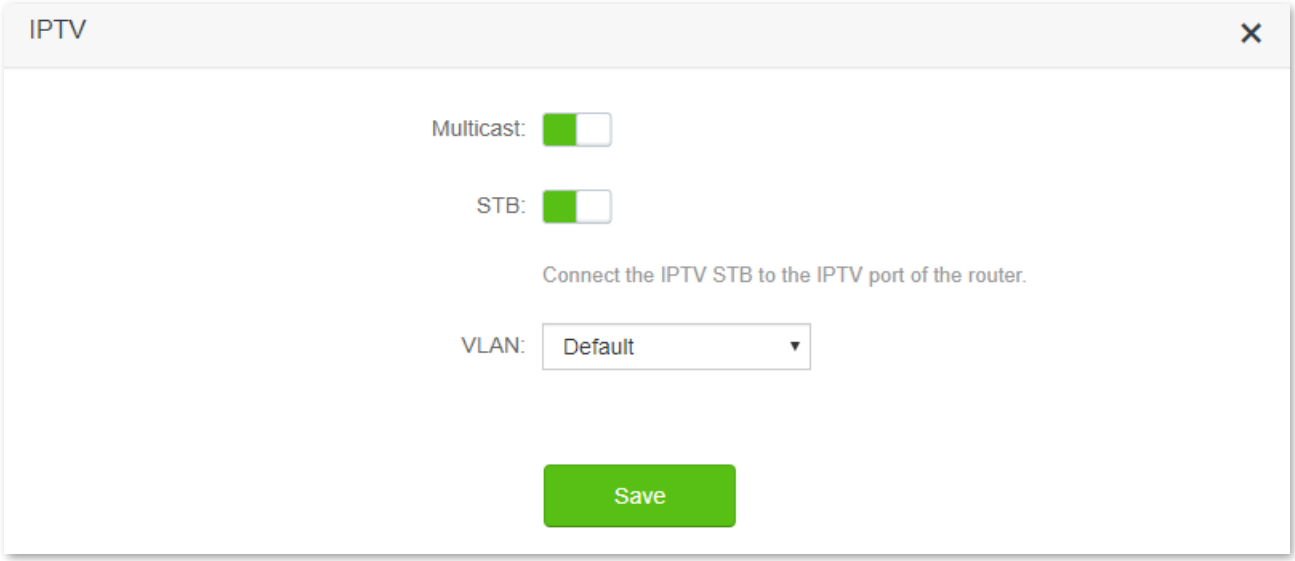
IPTV is the technology integrating internet, multimedia, telecommunication and many other technologies, providing interactive services, including digital TV, to family users by internet broadband lines.

You can set the multicast and STB functions here.

- **Multicast**: If you want to watch multicast videos from the WAN side of the router on your computer, you can enable the multicast function of the router.
- **STB** (Set Top Box): If the IPTV service is included in your broadband service, you are enabled to enjoy both internet access through the router and rich IPTV contents with a set top box.

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

The IPTV function is disabled by default. When it is enabled, the page is shown below.



Parameter description

Parameter	Description
STB	It is used to enable and disable the IPTV function of the router. When this function is enabled, the port **IPTV/3** can be used only as an IPTV port and be connected to an IPTV set top box.
VLAN	It specifies the VLAN ID of your IPTV service. • If your ISP does not provide any VLAN ID information when the IPTV service is available, please keep **Default**.

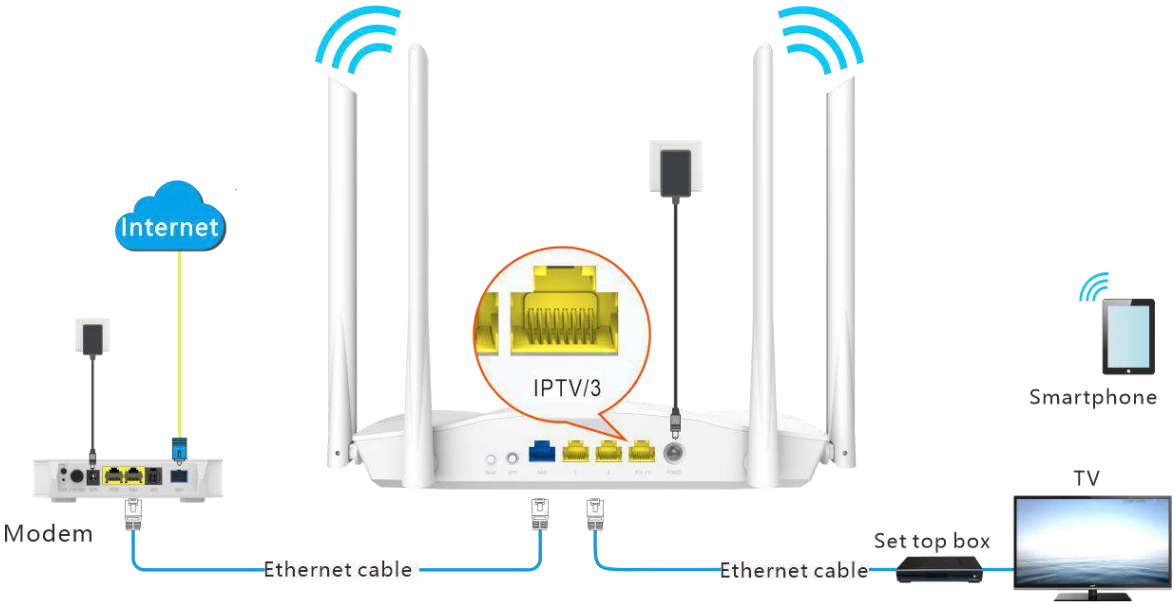
Parameter	Description
	• If you have obtained VLAN ID from your ISP when the IPTV service is available, please choose **Custom** VLAN and enter the VLAN value. • If you purchased the IPTV service in Shanghai, choose Shanghai VLAN and the desired VLAN ID.

Watch IPTV programs through the router

Scenario: The IPTV service is included in your broadband service. You have obtained the IPTV account and password from your ISP, but no VLAN information.

Goal: Watch IPTV programs through the router.

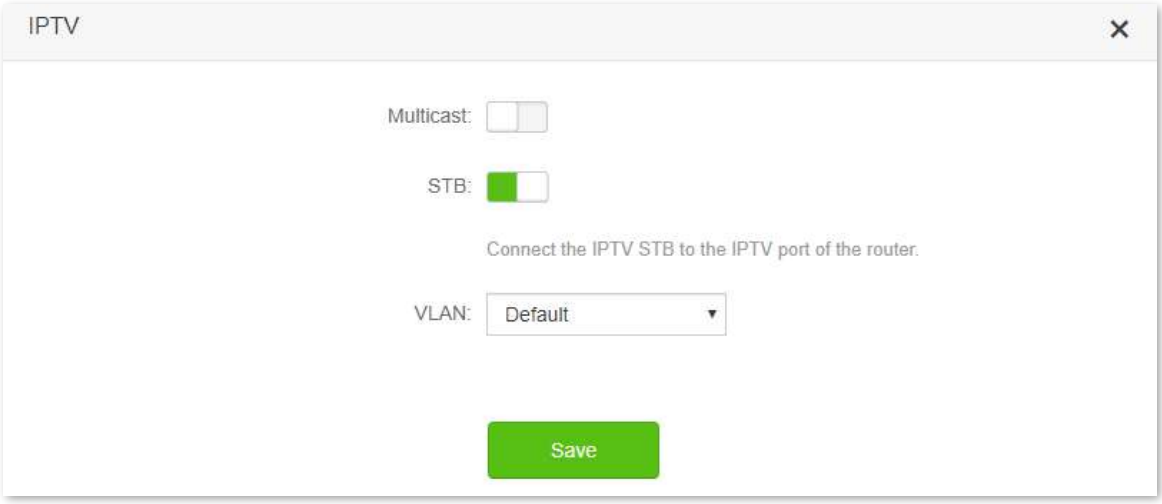
Solution: You can configure the IPTV function to reach the goal.



Configuring procedure:

Step 1 Set your router.

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.
2. Choose **Advanced Settings** > **IPTV**.
3. Enable the **STB** function.
4. Click **Save**.



Step 2 Configure the set top box.

Use the IPTV user name and password to dial up on the set top box.

---End

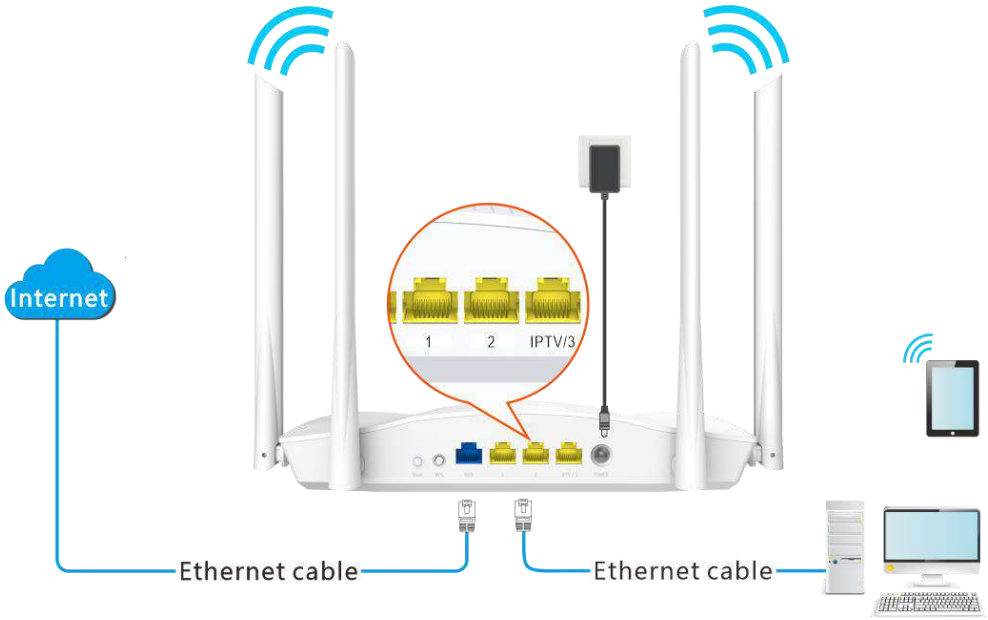
When completing the configurations, you can watch IPTV programs on your TV.

Watch multicast videos through the router

Scenario: You have the address of multicast videos.

Goal: You are able to watch multicast videos.

Solution: You can configure the multicast function to reach the goal.



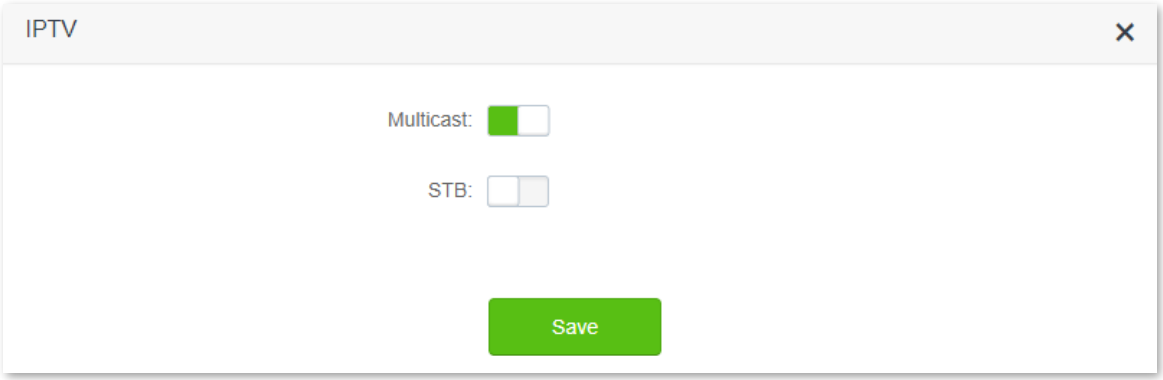
Configuring procedure:

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** > **IPTV**.

Step 3 Enable the **Multicast** function.

Step 4 Click **Save**.



---End

When completing the configurations, you can watch multicast videos on your computer.

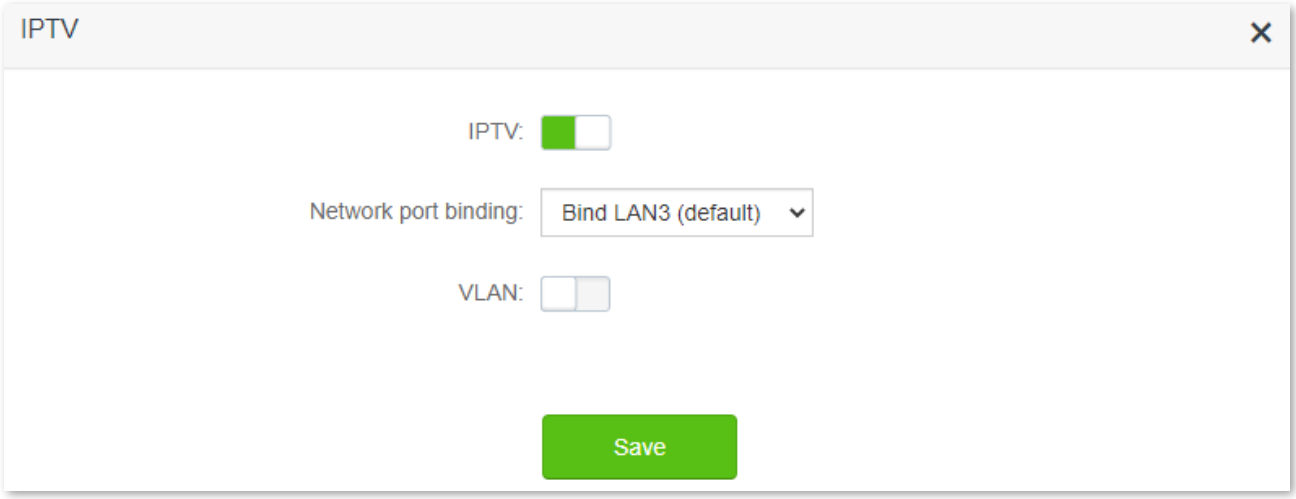
10.2.2 AX3000 series Wi-Fi 6 router

Overview

If the IPTV service is included in your broadband service, you can enable the IPTV function of the router, therefore accessing the internet and watching IPTV programs through the router at the same time.

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

The IPTV function is disabled by default. When it is enabled, the page is shown below.



Parameter description

Parameter	Description
Network port binding	It is used to set the IPTV port of the router. The IPTV port can only be used to connect to a set-top box for IPTV service when the IPTV function is enabled. By default, LAN3 (IPTV/3) is the IPTV port. you can change it as required.

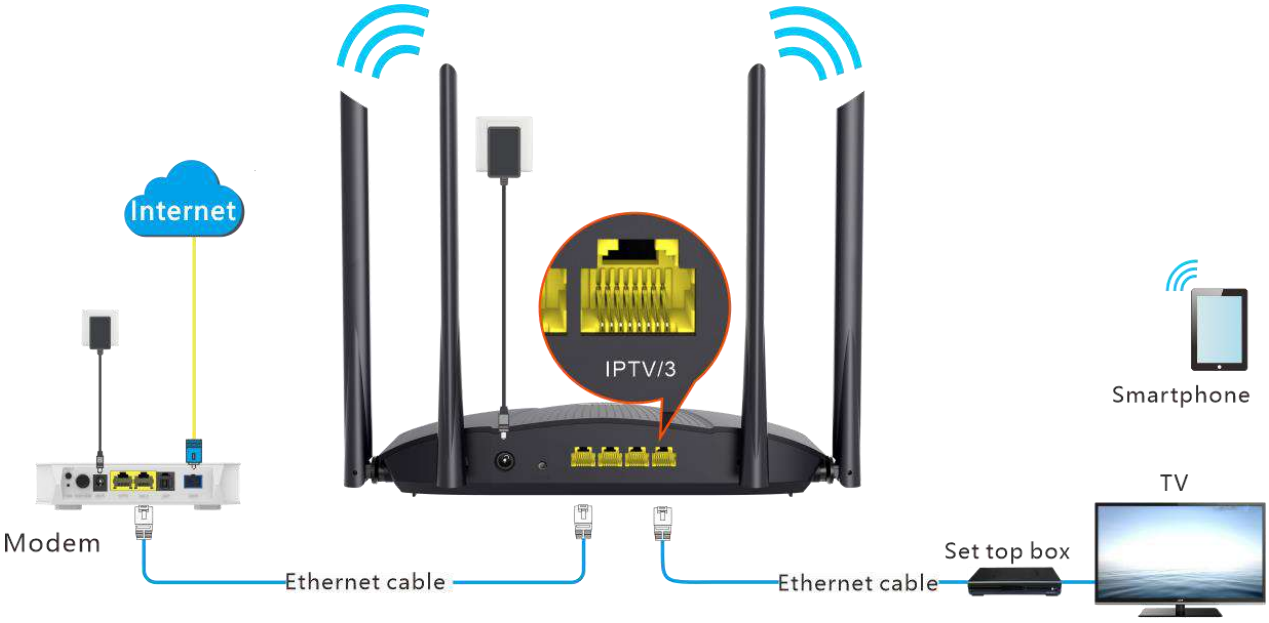
Parameter	Description
VLAN	It specifies whether to enable the VLAN function.
VLAN value setting	If your IPTV function supports VLAN, enable it and enter the VLAN value provided by your ISP.

Watch IPTV programs through the router

Scenario: The IPTV service is included in your broadband service. You have obtained the IPTV account and password from your ISP, but no VLAN information.

Goal: Watch IPTV programs through the router.

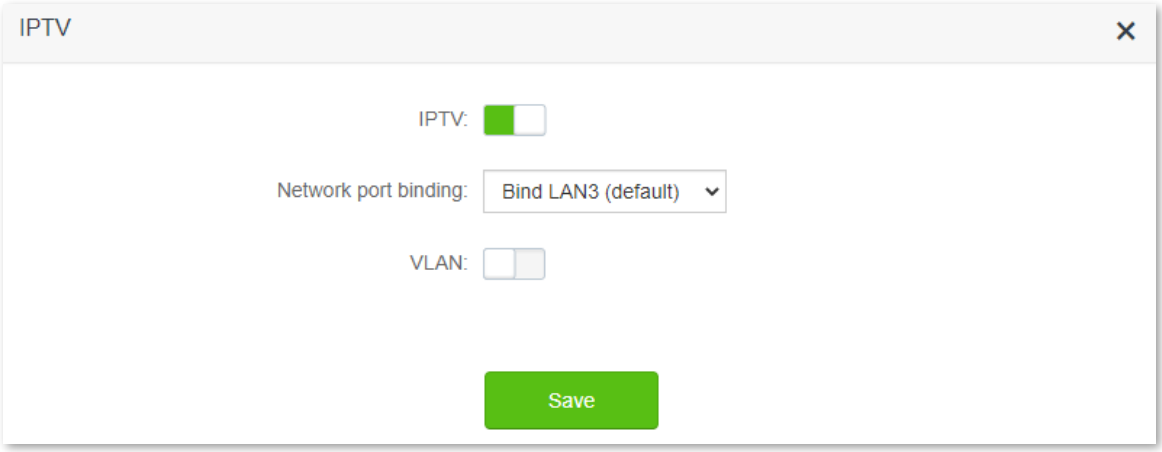
Solution: You can configure the IPTV function to reach the goal. (RX9 Pro is used for illustration here)



Configuring procedure:

Step 1 Set your router.

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.
2. Choose **Advanced Settings** > **IPTV**.
3. Enable the **IPTV** function.
4. Click **Save**.



Step 2 Configure the set top box.

Use the IPTV user name and password to dial up on the set top box.

---End

When completing the configurations, you can watch IPTV programs on your TV.

10.3 Tenda WiFi App

The router supports management through the Tenda WiFi App. With the App, you can:

- Manage your router within the LAN or through the internet.
- View and download resources on the USB storage device within the LAN and through the internet (available for routers with USB port).



To manage the router with Tenda WiFi App, follow the steps below (Example: iPhone).

Configuring procedure:

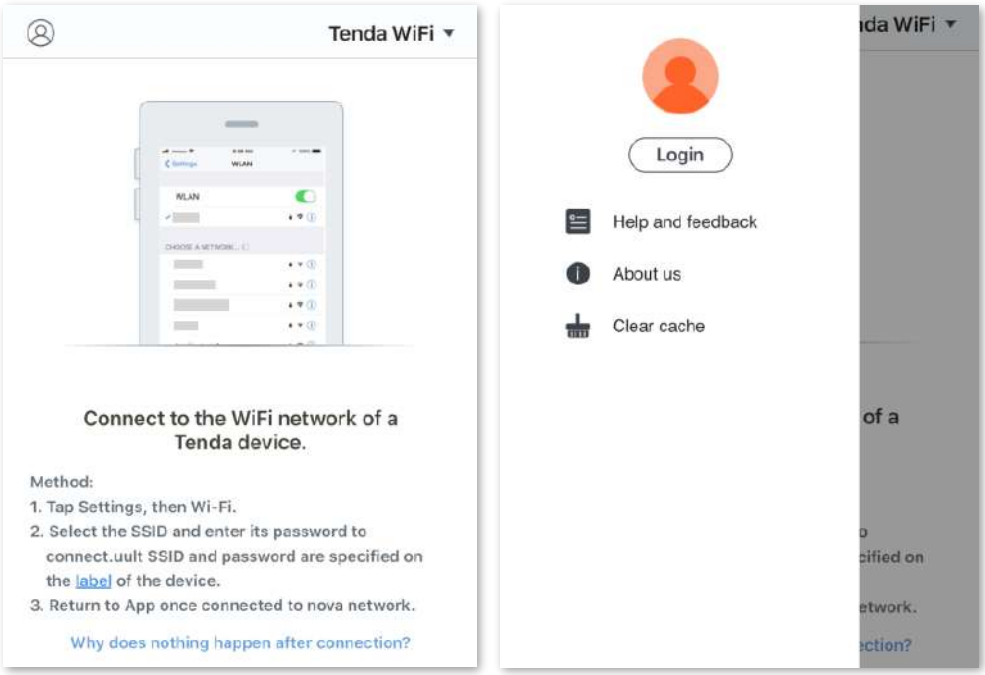
Step 1 Go to the App store and search for the **Tenda WiFi** App. Download and install it on your phone.

TIP

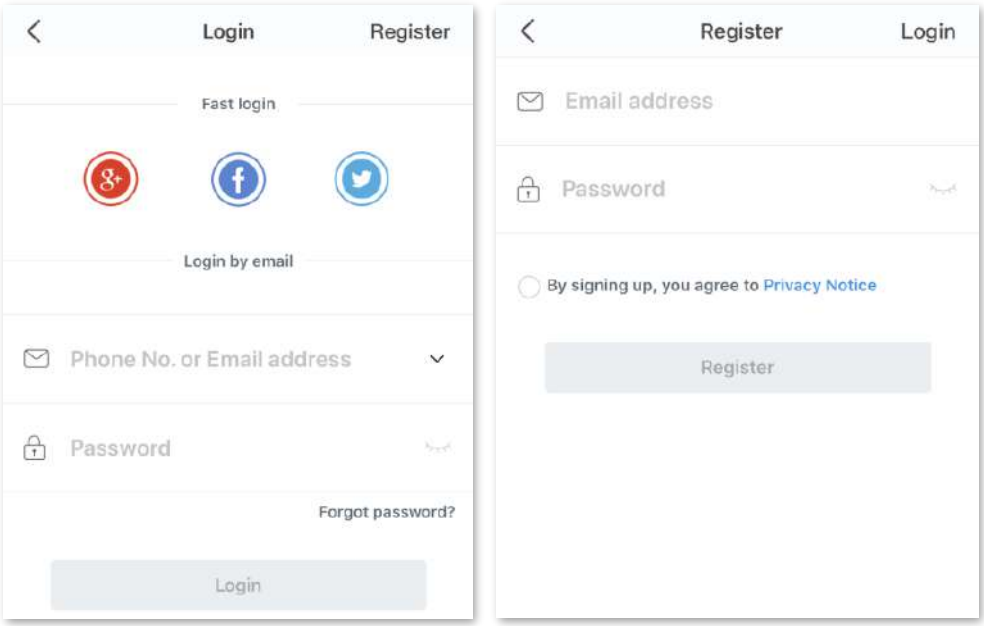
If you already have a Tenda WiFi App account or want to use the fast login approach, skip to **Step 3** and proceed with the settings.

Step 2 (Optional) Register an account in the Tenda WiFi App.

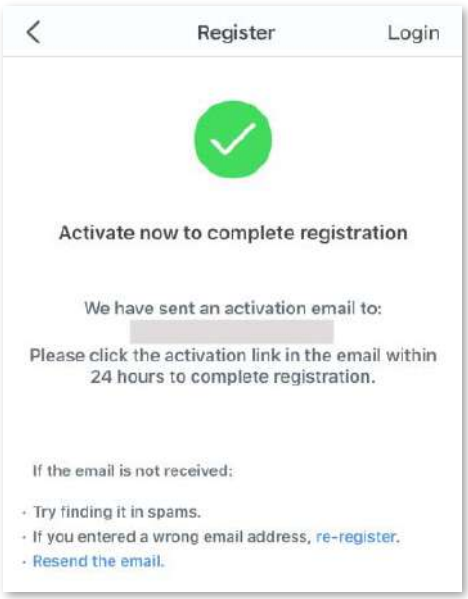
1. Open the Tenda WiFi App, tap the ⓐ at the top left corner and tap **Login**.



2. Tap **Register** at the top right corner, and register with an Email account.



3. Check the Email sent to your Email account and follow the instruction to finish the Email account confirmation process.
4. Click **Login** at the top right corner of the registration page.

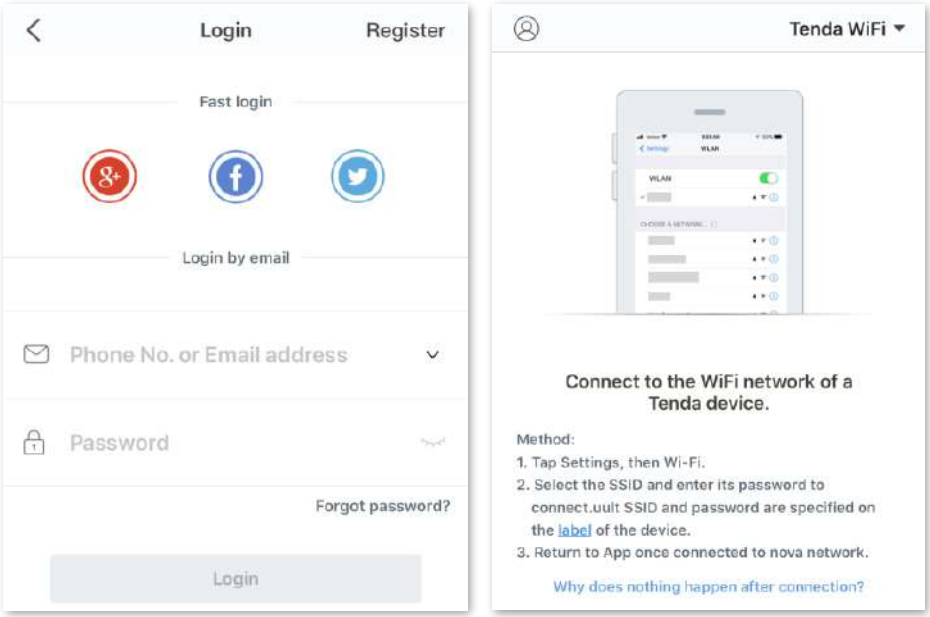


Step 3 Log in with the confirmed account.

Follow the instructions on the home page of the Tenda WiFi App to add the router.

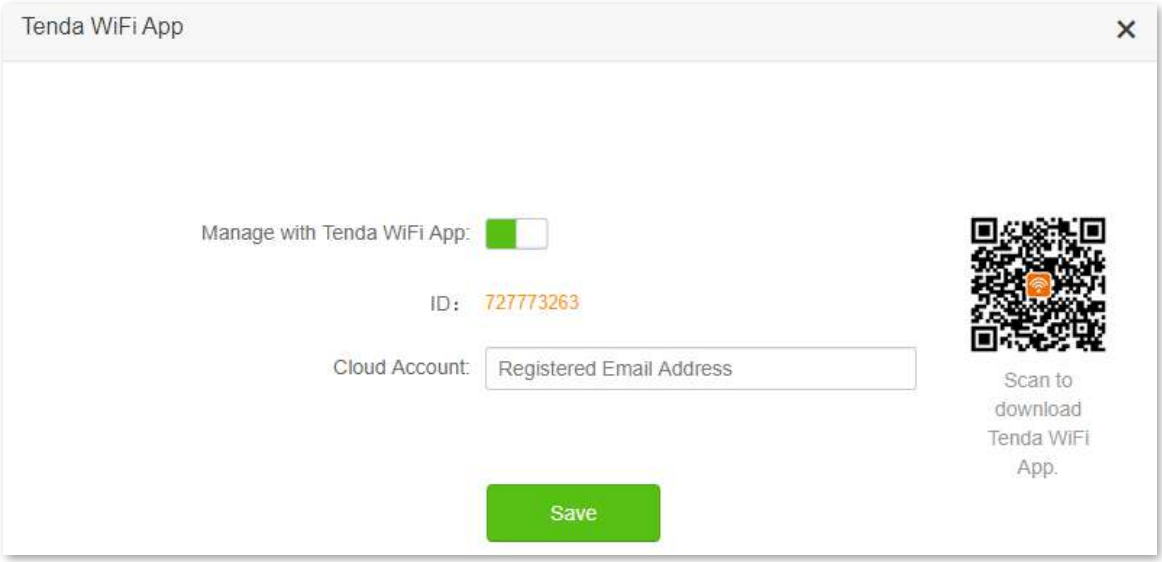
TIP

You can also choose to log in with your google, facebook and twitter account without registering a Tenda WiFi App account. Choose an option in **Fast login**.



Step 4 Bind your router with your smart phone.

1. Start a web browser on the phone connected to the router and visit **tendawifi.com** to log in to the web UI of the router.
2. Choose **Advanced Settings** > **Tenda WiFi App**.
3. Enable **Manage with Tenda WiFi App**.
4. Enter an account registered in the Tenda WiFi App in **Cloud Account**.
5. Click **Save**.



---End

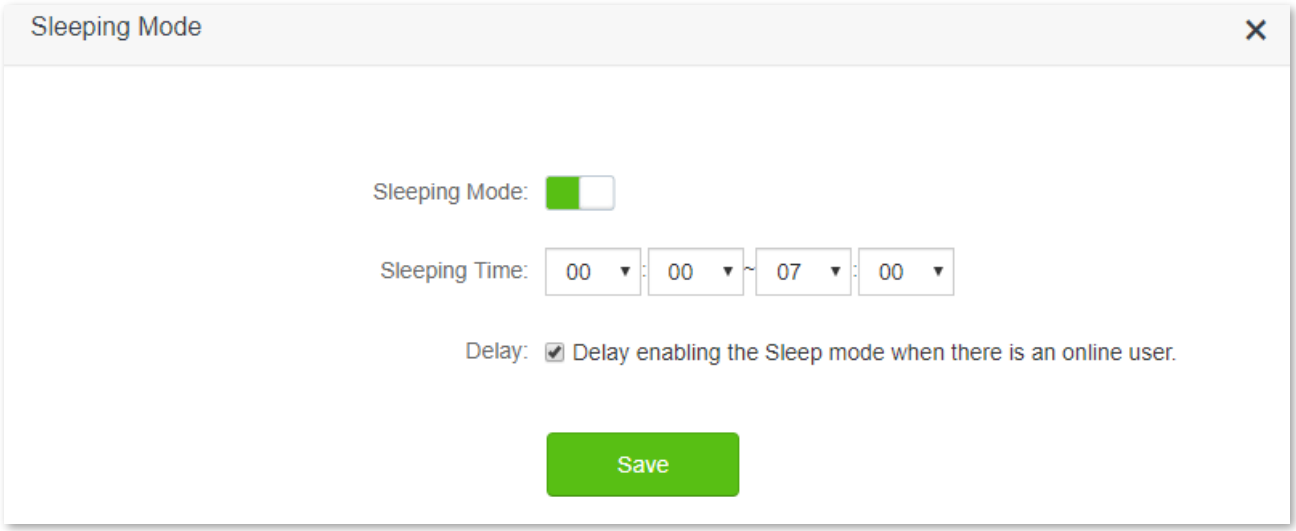
When completing the configurations, you can manage your router with Tenda WiFi App on your phone anywhere and anytime through the internet.

10.4 Sleeping mode

When the sleeping mode function is enabled, the router turns off its LED indicators and disables the WiFi 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.



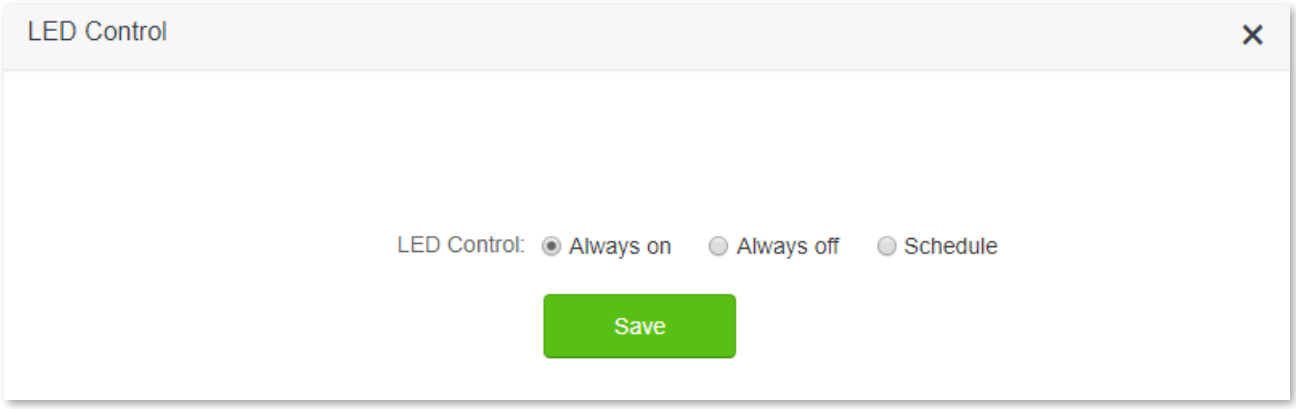
Parameter description

Parameter	Description
Sleeping Mode	It is used to enable or disable the function. When the router is under sleeping mode and you want to use the WiFi network, use the Tenda WiFi App to wake up the router.
Sleeping Time	It specifies the period during which the router is under the sleeping mode.
Delay	It is used to enable or disable the Delay function. • 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.

10.5 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

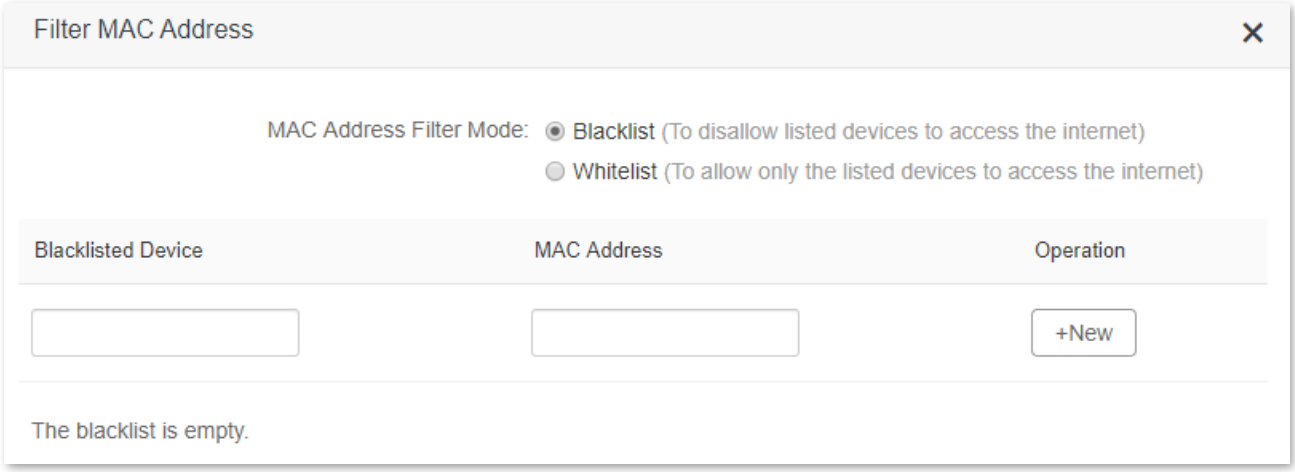
Parameter	Description
Always on	All LED indicators stay in their normal status.
Always off	All LED indicators are turned off.
Schedule	LED indicators are only turned off during the specified period.

10.6 Filter MAC address

10.6.1 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.

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



Parameter description

Parameter	Description
MAC Address Filter Mode	It specifies the MAC address filter mode. • **Blacklist**: WiFi-enabled devices listed are unable to connect to the WiFi network of the router, and wired devices listed are unable to access the internet. • **Whitelist**: WiFi-enabled devices listed are able to connect to the WiFi network of the router, and wired devices listed are able to access the internet.
Blacklisted Device	It specifies the name or remark for the device.
Whitelisted Device	
MAC Address	It specifies the MAC addresses of devices added to the list.
Operation	+New : It is used to add new devices the blacklist or whitelist. : It is used to remove devices from the blacklist or whitelist.
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.

10.6.2 Only allow specified device to access the internet

Scenario: The WiFi 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
Wife’s phone	94:C6:91:29:C2:12	Disconnected
Daughter’s phone	98:9C:57:19:D0:1B	Disconnected

Configuring 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.

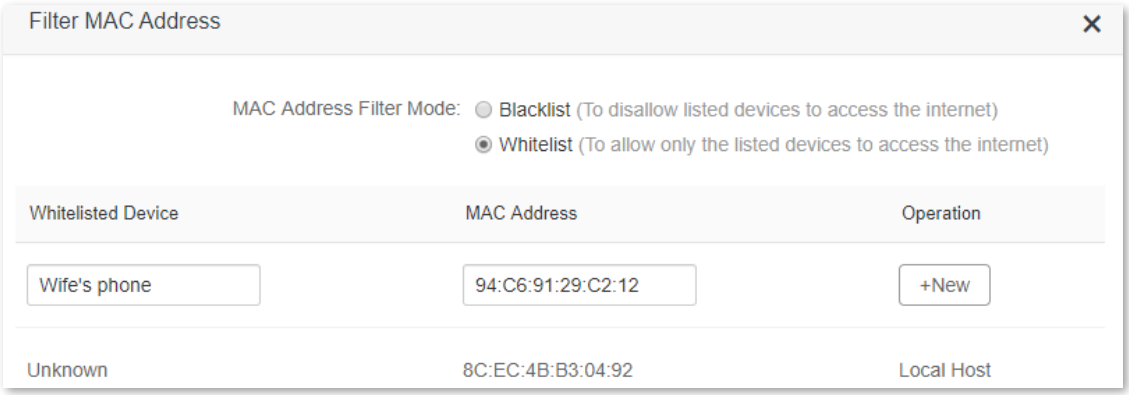
Step 2 Choose **Advanced Settings** > **Filter MAC Address**.

Step 3 Set the **MAC Address Filter Mode** to **Whitelist**.

Step 4 (Optional) Enter the device name in the **Whitelist Device** field, which is **Wife’s phone** in this example.

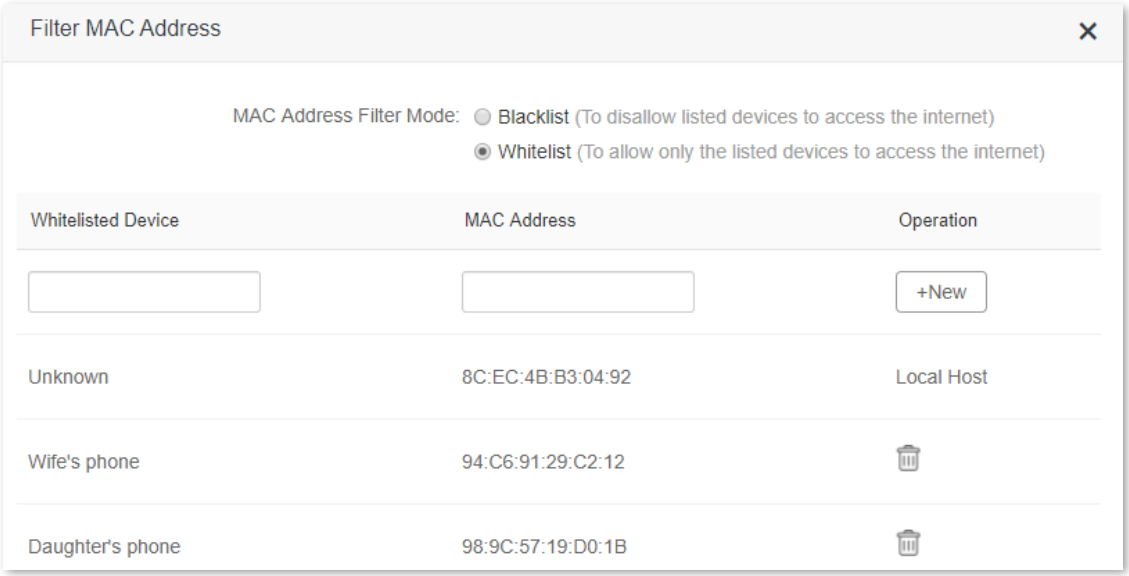
Step 5 Enter the **MAC Address** of the device, which is **94:C6:91:29:C2:12** in this example.

Step 6 Click **+New**.



Step 7 Repeat **Step 4** to **Step 6** to add **Daughter’s phone** (**98:9C:57:19:D0:1B**) to the whitelist.

Step 8 Click **Save**.



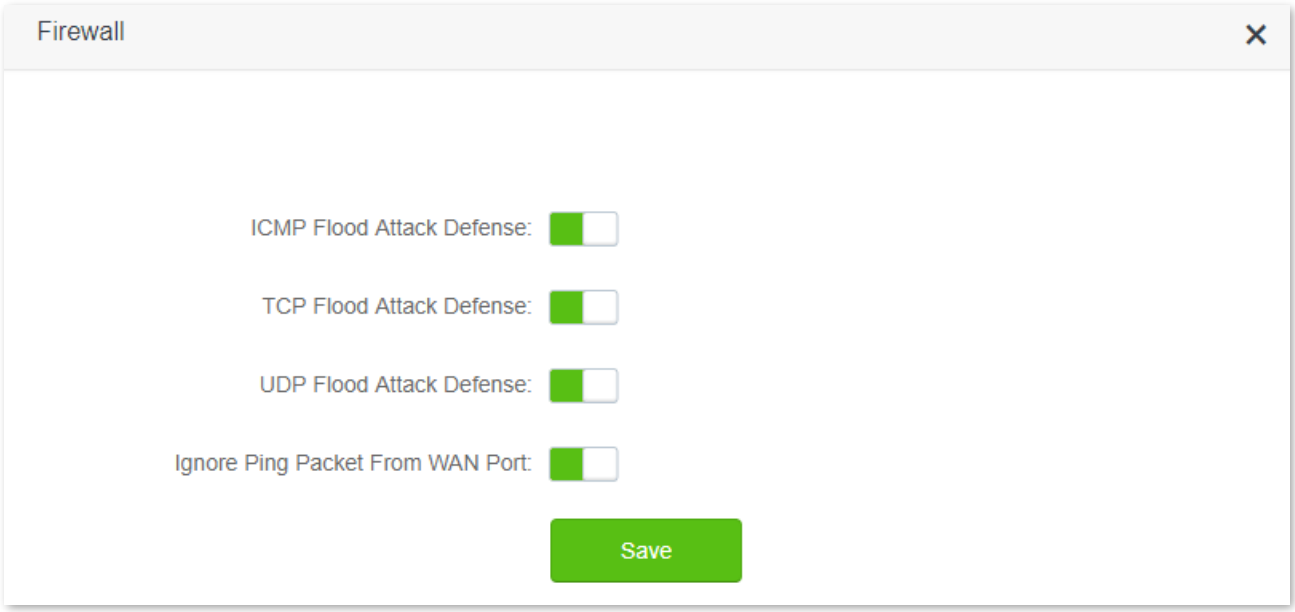
---End

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

10.7 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**.



Parameter description

Parameter	Description
ICMP Flood Attack Defense	It is used to enable or disable the ICMP flood attack defense. 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.
TCP Flood Attack Defense	It is used to enable or disable the TCP flood attack defense. 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.
UDP Flood Attack Defense	It is used to enable or disable the UDP flood attack defense. 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.
Ignore Ping Packet From WAN Port	It is used to enable or disable the Ignore Ping packet from WAN Port function. 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.

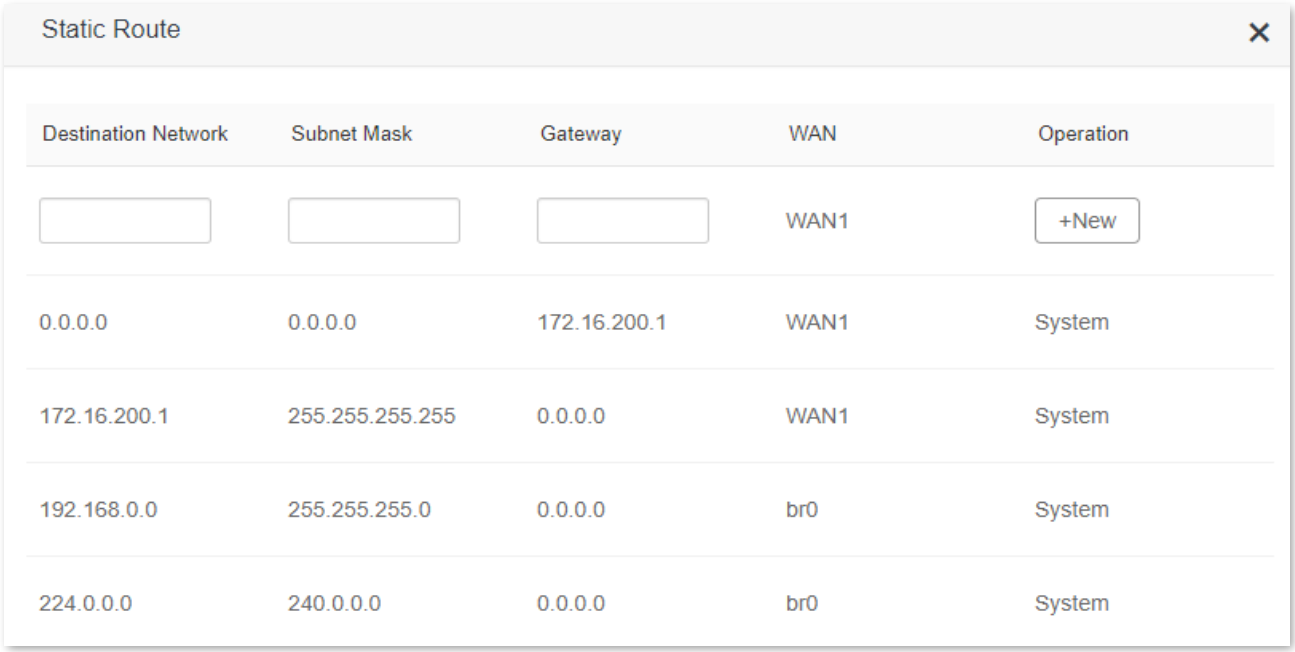
10.8 Static route

10.8.1 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**.



Parameter description

Parameter	Description
Destination Network	It specifies the IP address of the destination network. When the Destination Network and Subnet Mask are both 0.0.0.0, it indicates that this is the default route. TIP When the route of packets cannot be found in the routing table, the router will forward the packets using the default route.
Subnet Mask	It specifies the subnet mask of the destination network.
Gateway	It specifies the ingress IP address of the next hop route after the data packet exits from the interface of the router. 0.0.0.0 indicates that the destination network is directly connected to the router.

Parameter	Description
WAN	It specifies the interface that the packet exits from.
Operation	It is used to add or delete static route rules.

10.8.2 Add a static route rule

Scenario: You have an RX3 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.

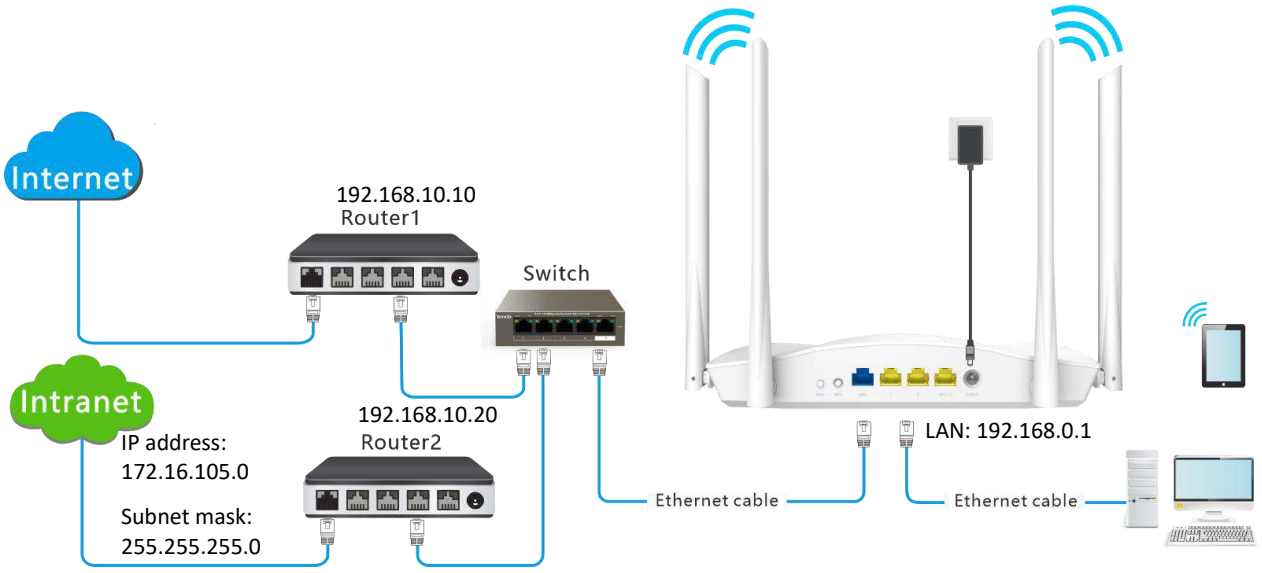
Solution: You can configure the static route function to reach the goal.

Assume the LAN IP addresses of these devices are:

- RX3: 192.168.0.1
- Router1: 192.168.10.10
- Router2: 192.168.10.20

The information about the intranet:

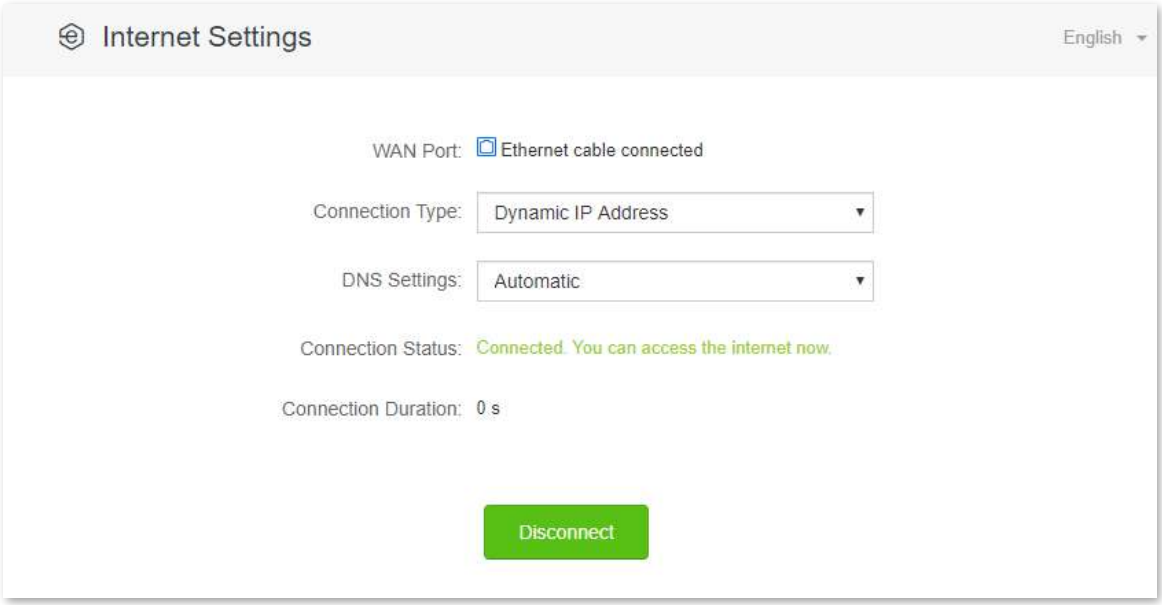
- IP address: 172.16.105.0
- Subnet mask: 255.255.255.0



Configuring procedure:

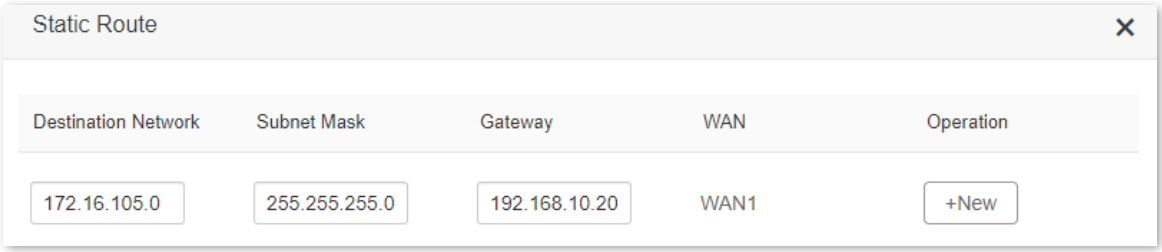
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Refer to Access the internet with a dynamic IP address to configure the internet access for RX3.



Step 3 Add a static route rule on RX3.

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 **+New**.



---End

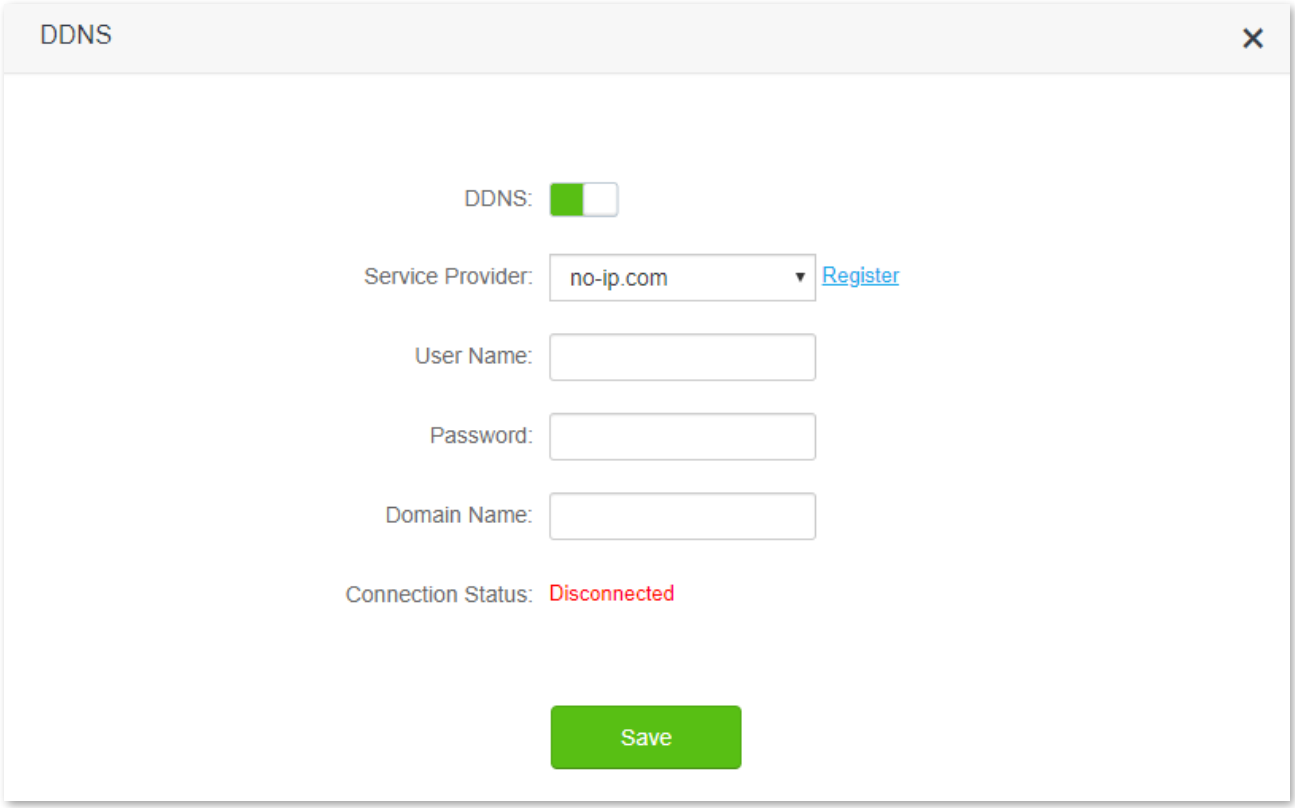
When completing the configurations, you can access both the internet and intranet through RX3 at the same time.

10.9 DDNS

10.9.1 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**.



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	It specifies 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.

10.9.2 Enable 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 with 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:

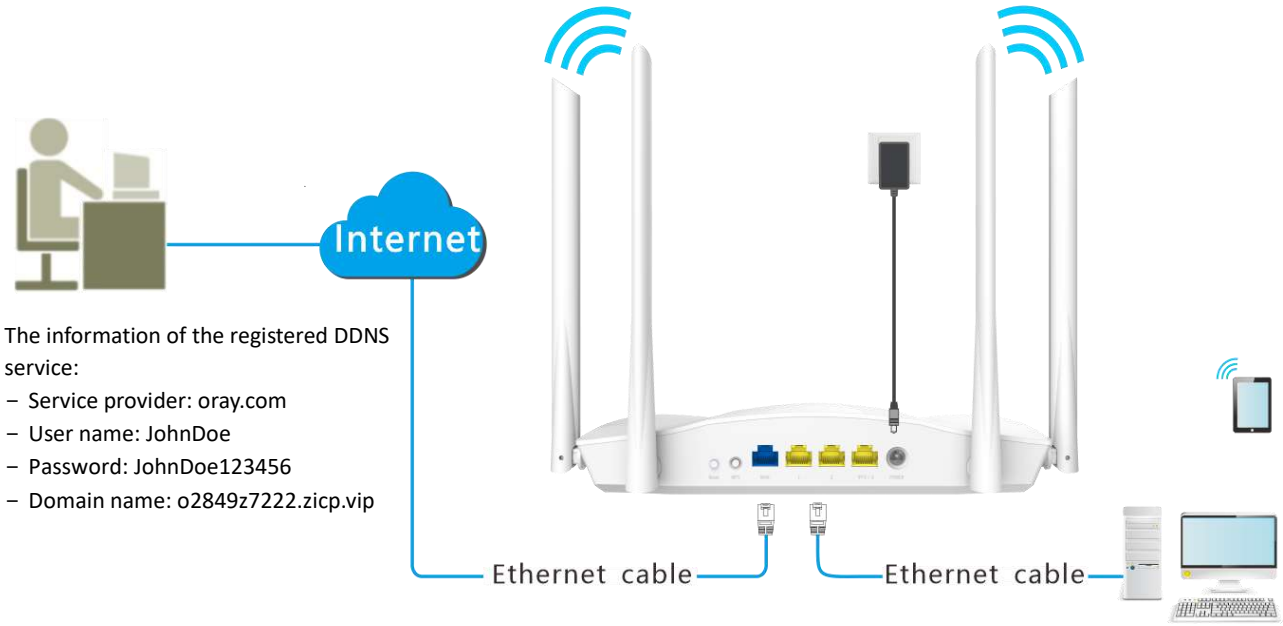
- IP address: 192.168.0.136
- MAC address of the host: D4:61:DA:1B:CD:89
- Service port: 21

The information of the registered DDNS service:

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

TIP

Please 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 172.16.0.0-172.31.255.255; Private IP addresses of class C range from 192.168.0.0-192.168.255.255.

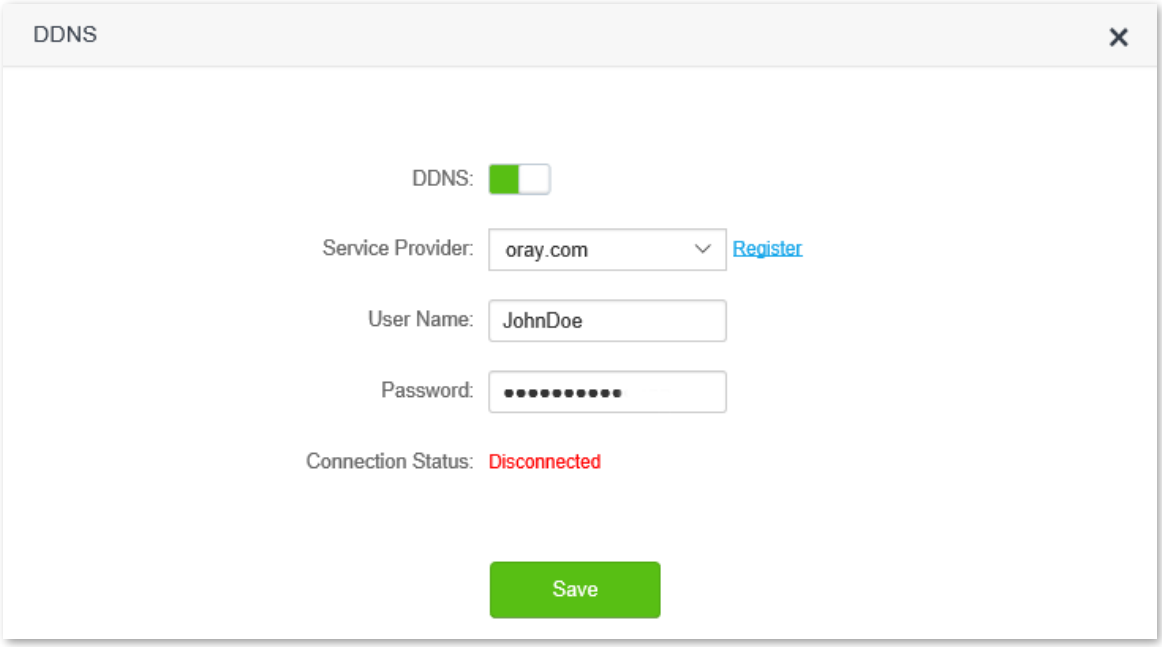


Configuring procedure:

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. Enabled 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**.

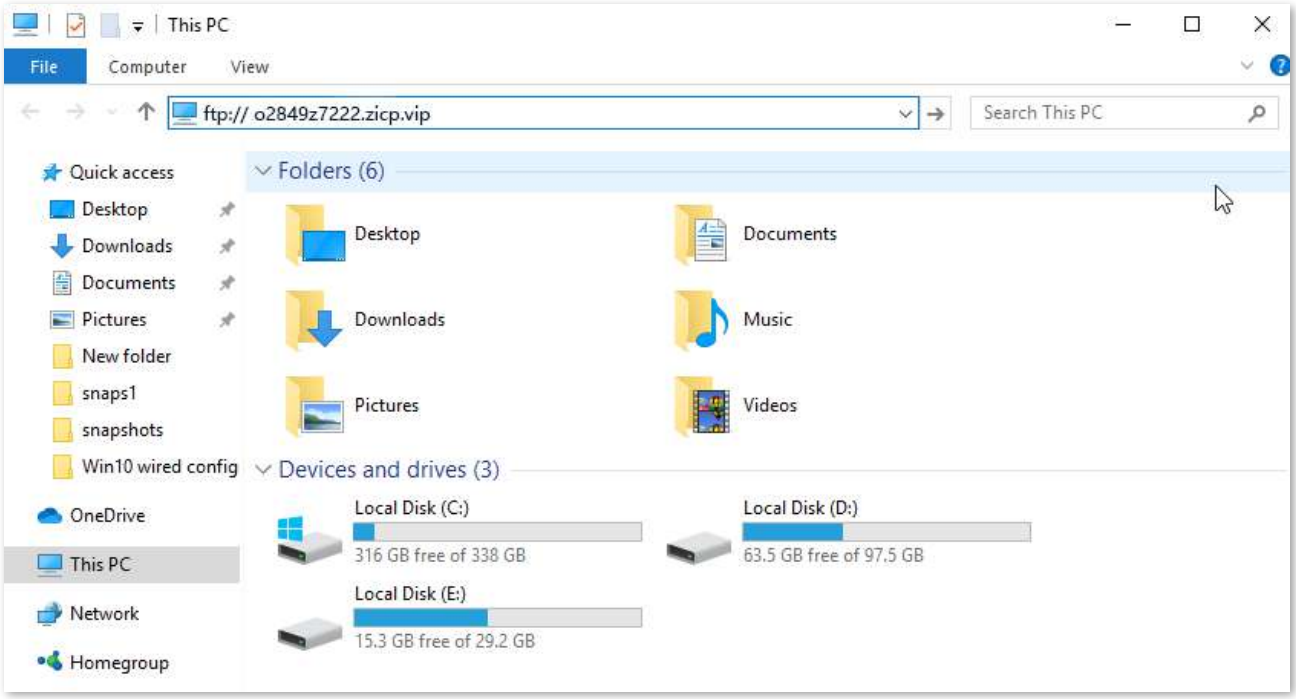


Wait a moment, when the Connection Status turns Connected, the configurations succeed.

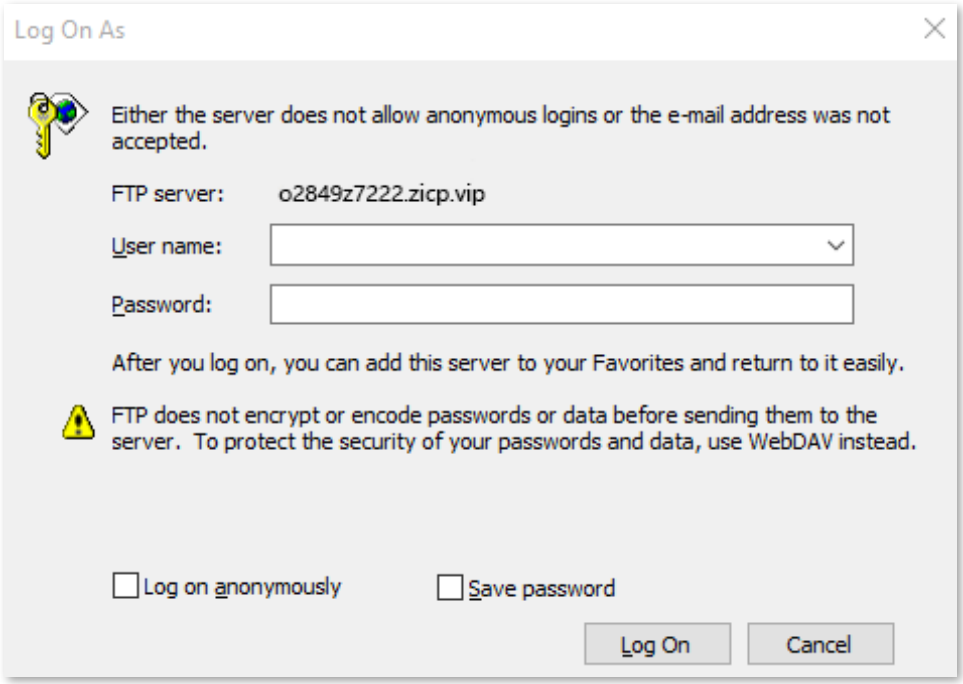
Step 3 Configure the virtual server function (refer to Virtual server)

---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 not the same as 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.



TIP

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.

10.10 Virtual server

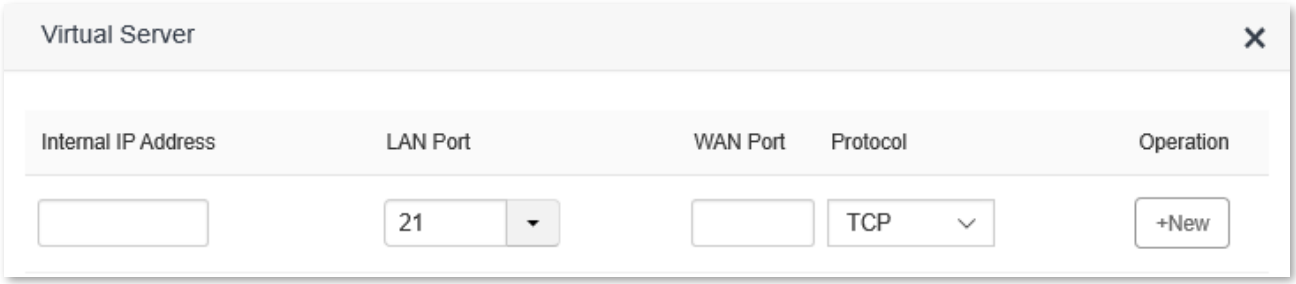
10.10.1 Overview

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**.



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 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	Available operations include: • +New: It is used to add a new virtual server rule. • : It is used to delete existing virtual server rules.

10.10.2 Enable 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.

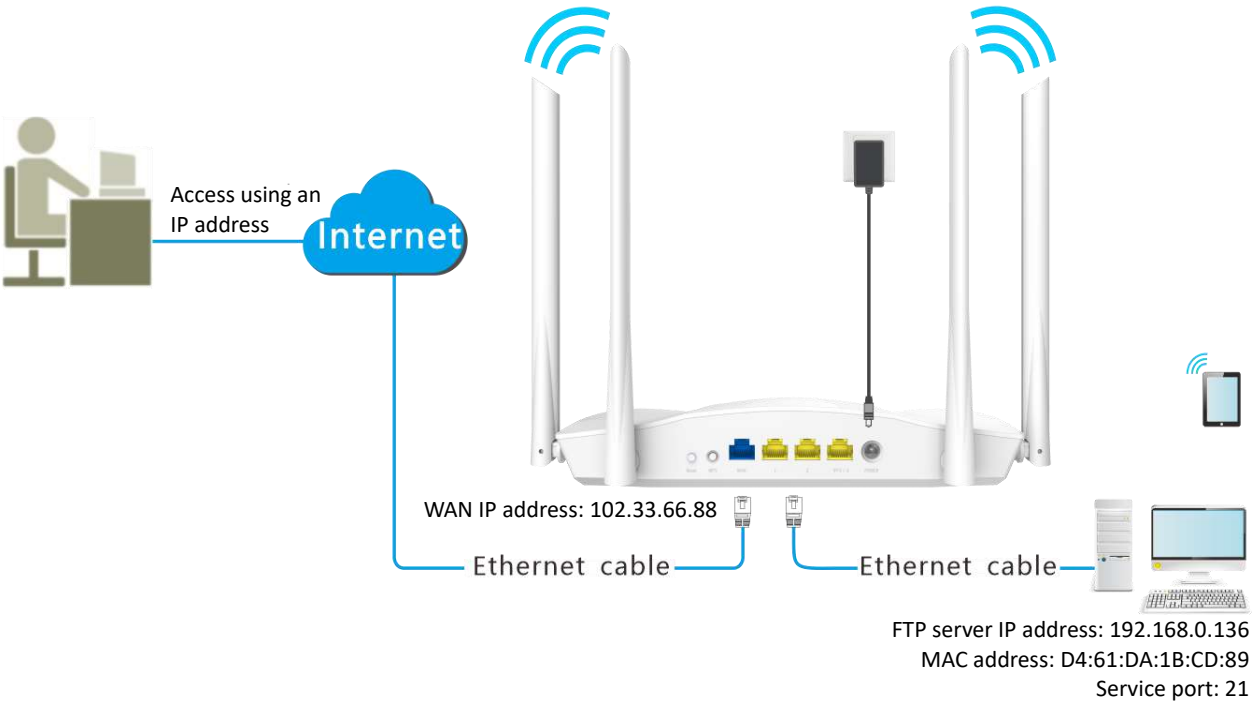
Solution: You can configure the virtual server function to reach the goal.

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.

TIP

- Please 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 172.16.0.0-172.31.255.255; Private IP addresses of class C range from 192.168.0.0-192.168.255.255.
- ISPs may block unreported web services to be accessed with the default port number 80. Therefore, when the default LAN port number is 80, please 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.

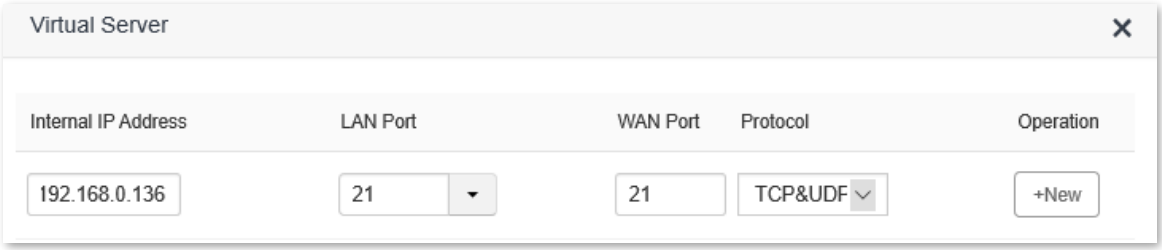


Configuring procedure:

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. Choose a **LAN Port** in the drop-down box, which is **21** in this example.
4. Choose a protocol, which is **TCP&UDP** in this example.
5. Click **+New**.



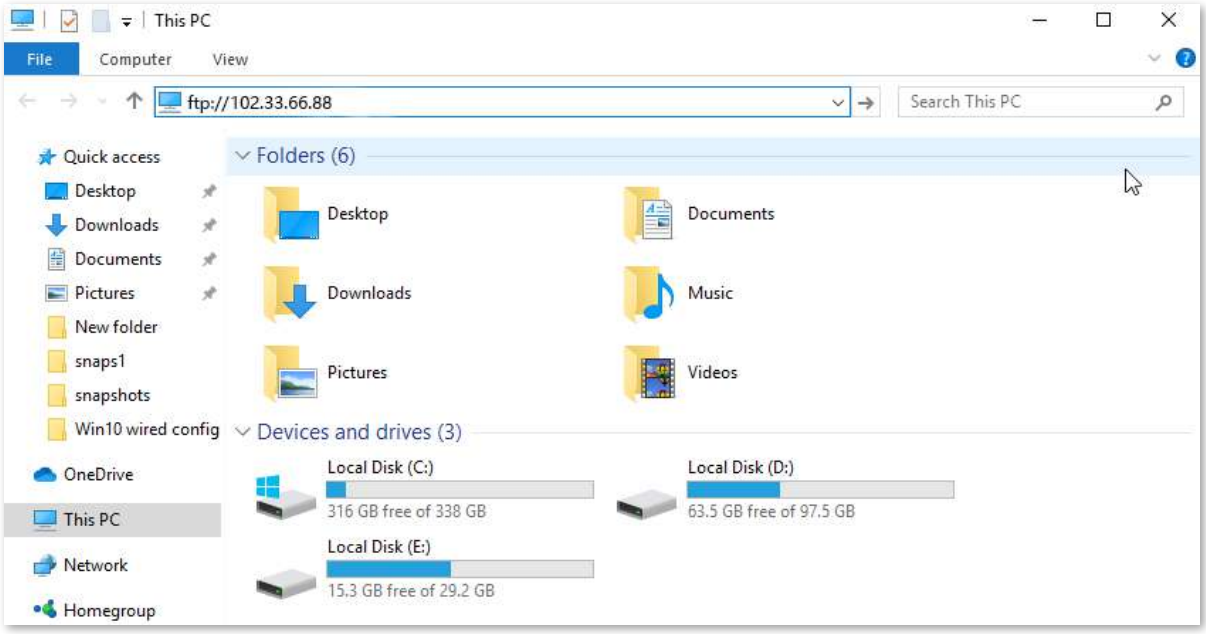
Step 3 Assign a fixed IP address to the host where the server locates.

1. Choose **System Settings** > **DHCP Reservation**.
2. Specifies a **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 **+New**.

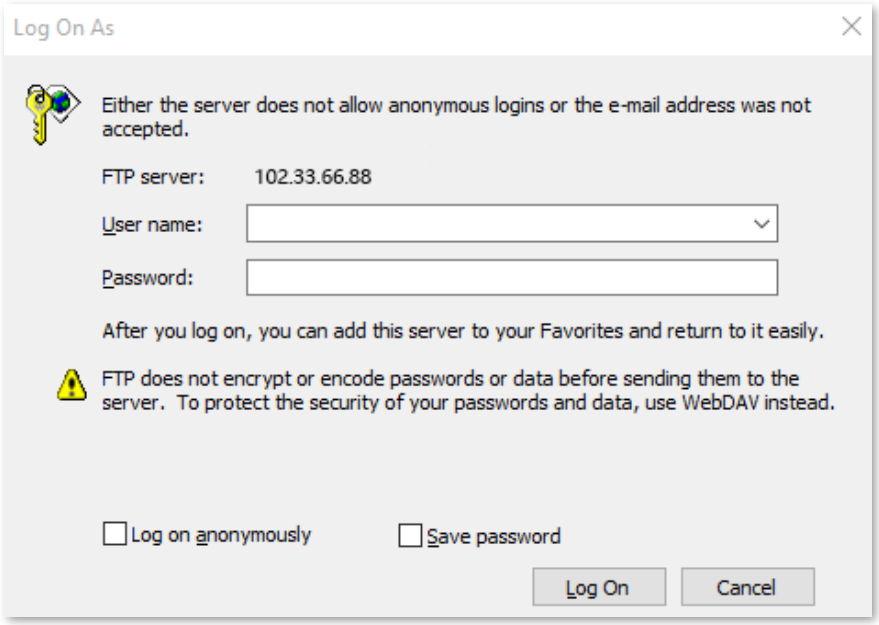


---End

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 WAN status.



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.

TIP

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.

10.11 DMZ host

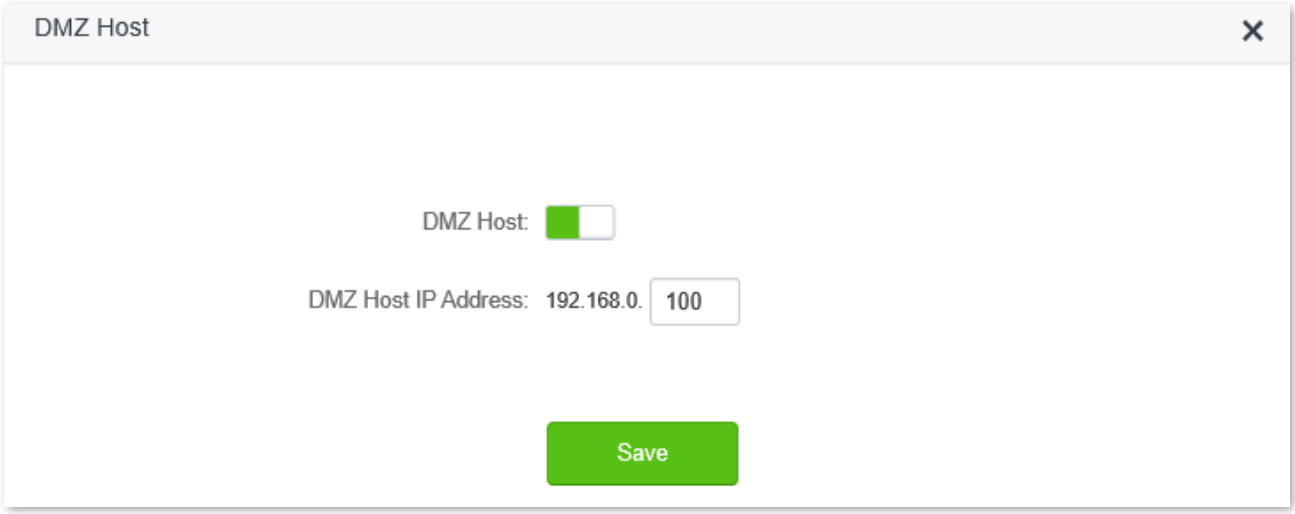
10.11.1 Overview

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.

NOTE

- 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**.



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.

10.11.2 Enable 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.

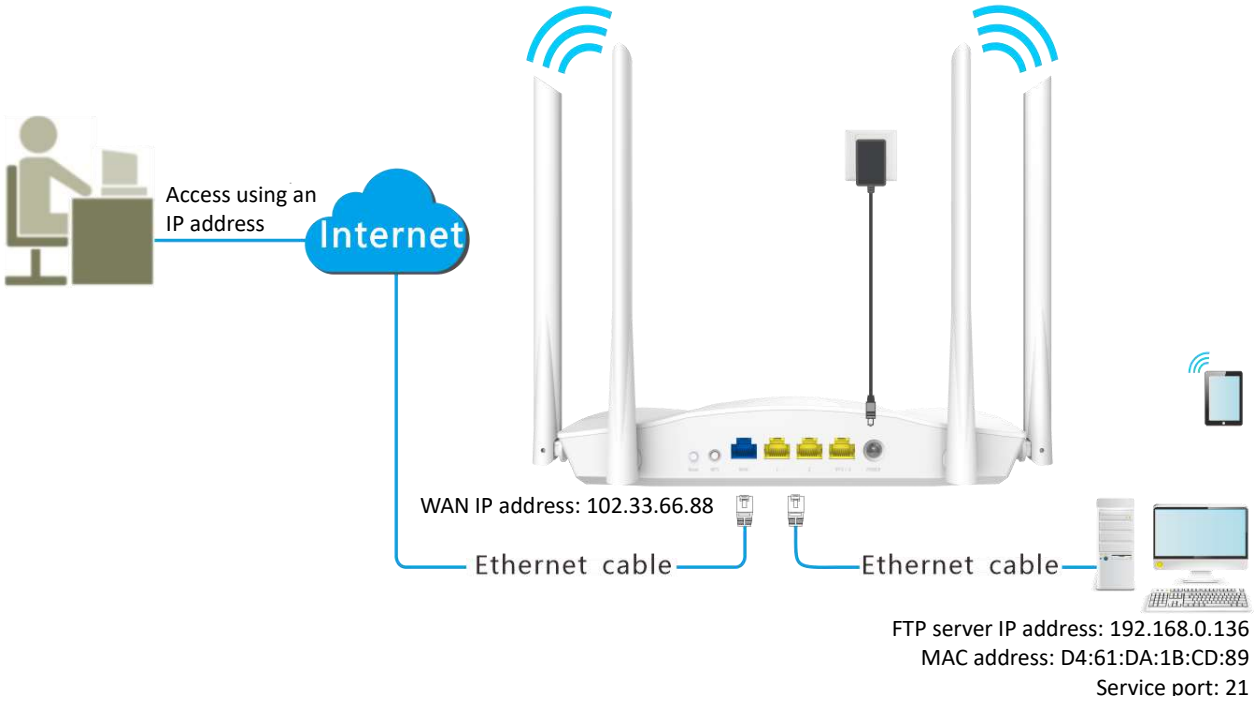
Solution: You can configure the DMZ host function to reach the goal.

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.

TIP

Please 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 172.16.0.0-172.31.255.255; Private IP addresses of class C range from 192.168.0.0-192.168.255.255.

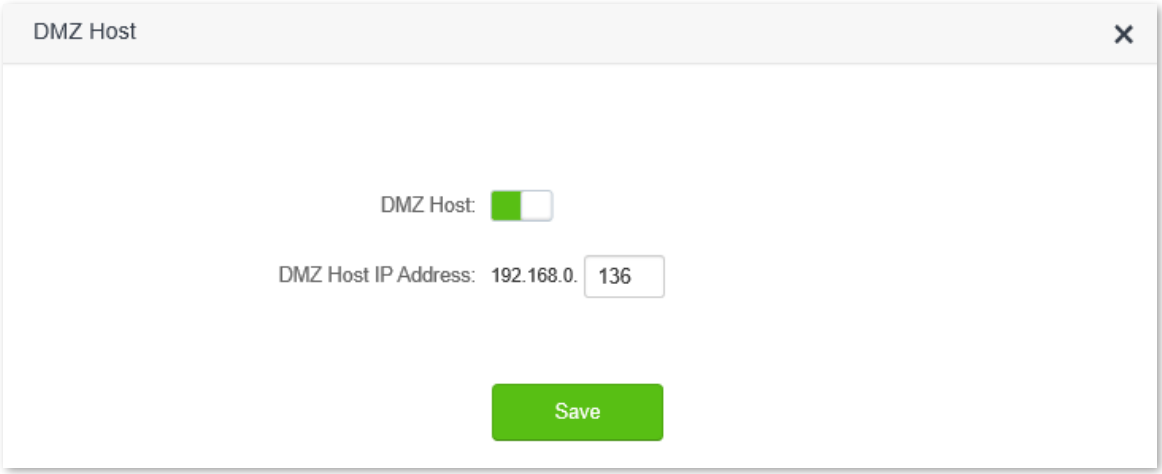


Configuring procedure:

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. Specifies a **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 **+New**.



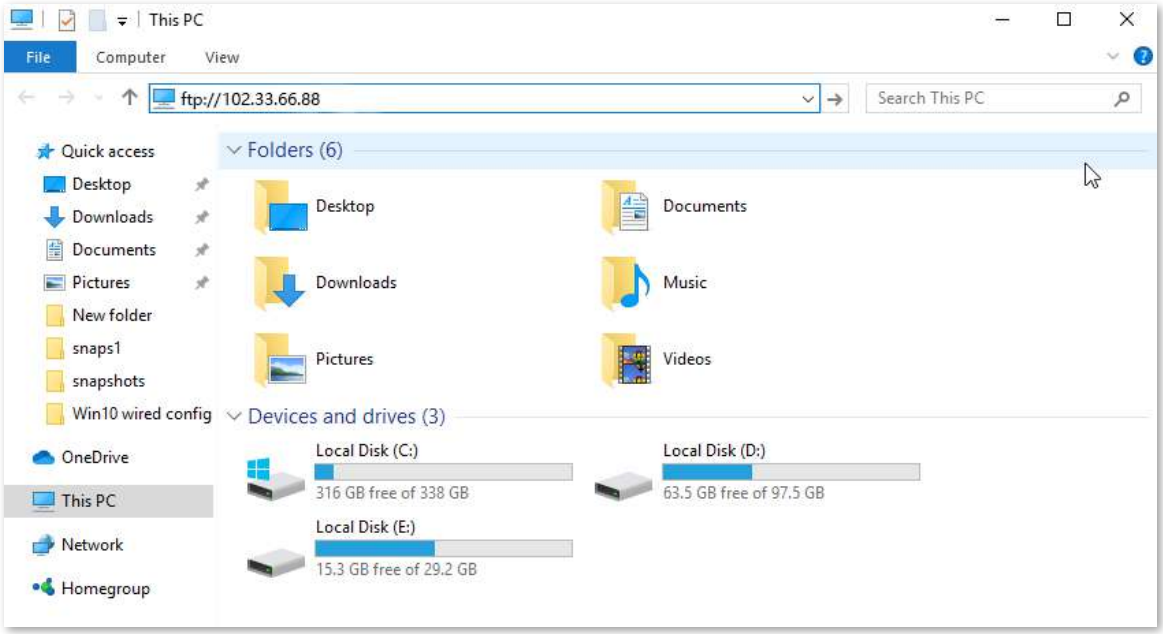
----End

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*".

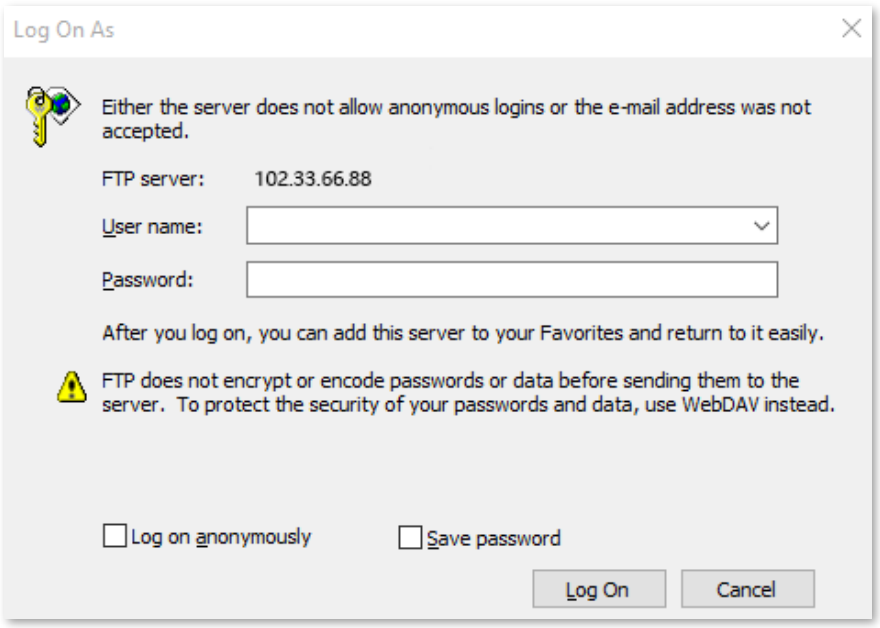
In this example, the address is "**ftp://102.33.66.88**". You can find the WAN IP address of the router in WAN status.

TIP

When the default intranet service port number is 80, please 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.

TIP

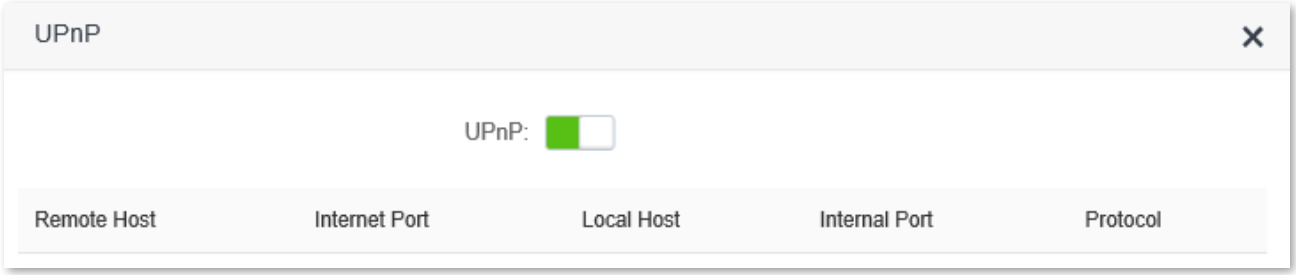
After the configurations, if internet users still cannot access the FTP server, close the firewall, antivirus software and security guards on the host of the FTP server and try again.

10.12 UPnP

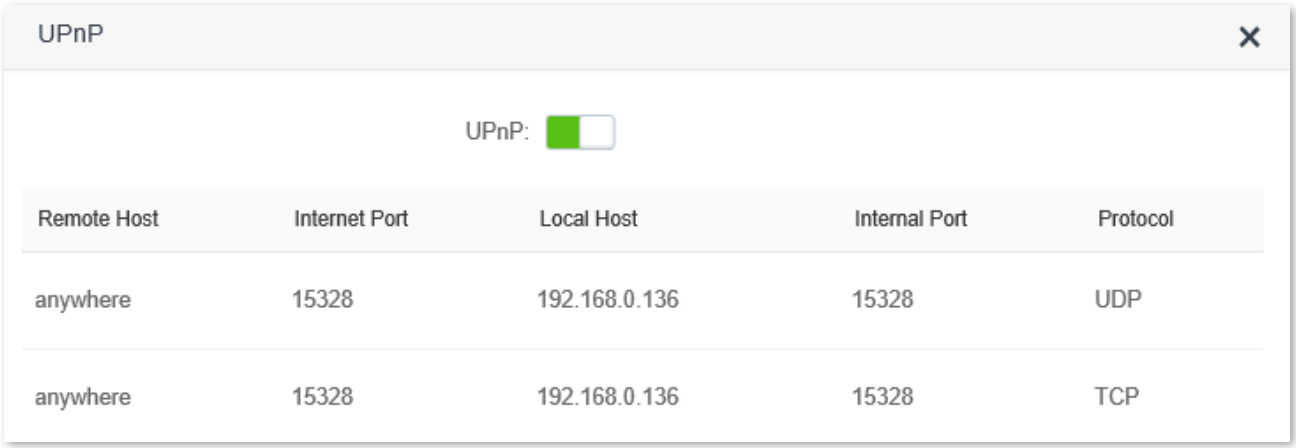
UPnP is short for Universal Plug and Play. This function enables the router open port automatically for UPnP-based programs. It is generally used for P2P programs, such as BitComet and AnyChat, and helps increase the download speed.

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.



11 System settings

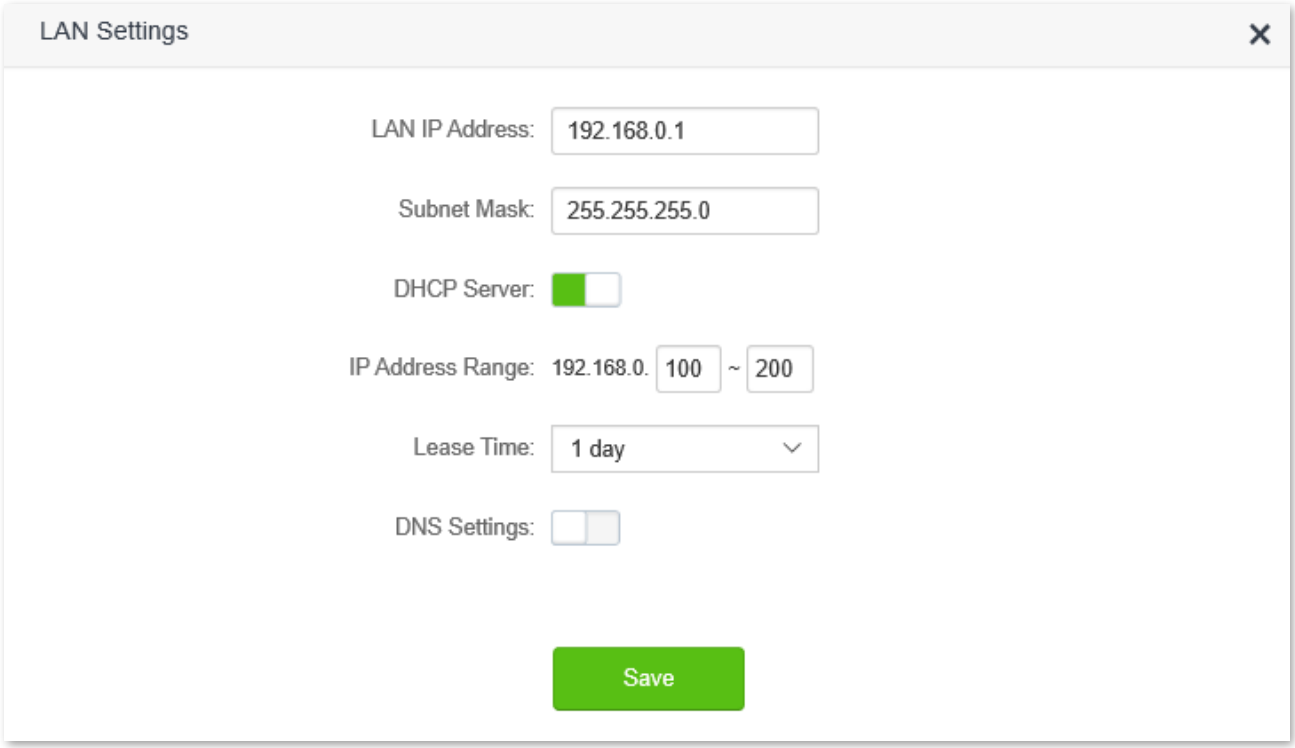
11.1 LAN settings

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.**



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.

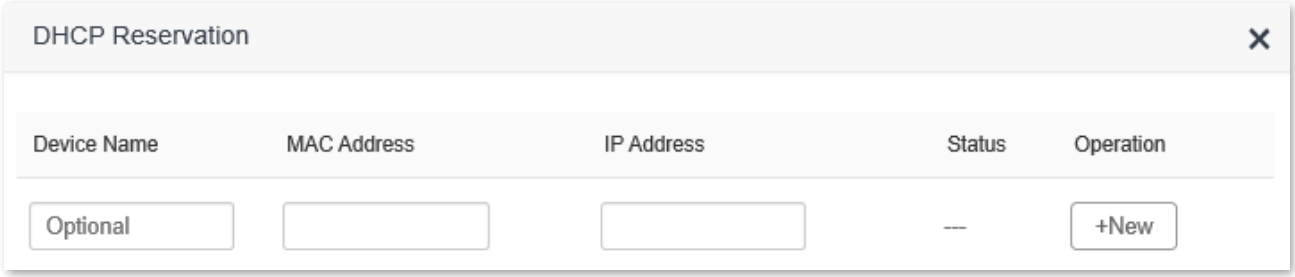
Parameter		Description
DHCP Server	IP Address Range	It specifies the range of IP addresses that can be assigned to devices connected to the router. The default range is 192.168.0.100 to 192.168.0.200.
	Lease Time	It specifies the valid duration of the IP address that is assigned to a client. When the 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. It is recommended to keep the default value.
DNS Settings	Primary DNS Server	It specifies the primary DNS address of the router, which is assigned to the clients. You can change it if necessary.  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.
	Secondary DNS Server	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.

11.2 DHCP reservation

11.2.1 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.

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



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.
Operation	The available options include: • +New: 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.

11.2.2 Assign 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:

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

Configuring 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.

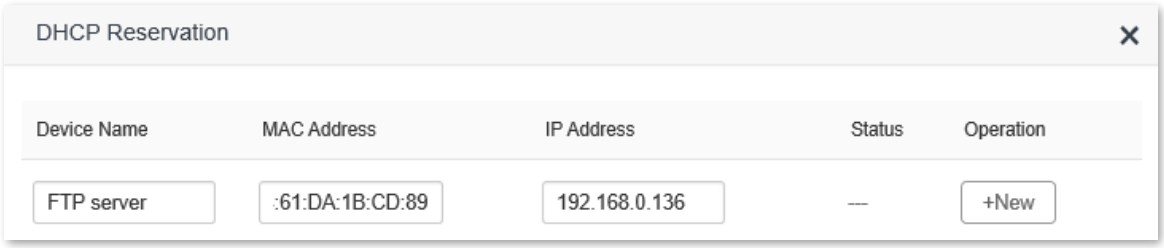
Step 2 Choose **System Settings** > **DHCP Reservation**.

Step 3 (Optional) Enter the device name for the host.

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 **+New**.



---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.



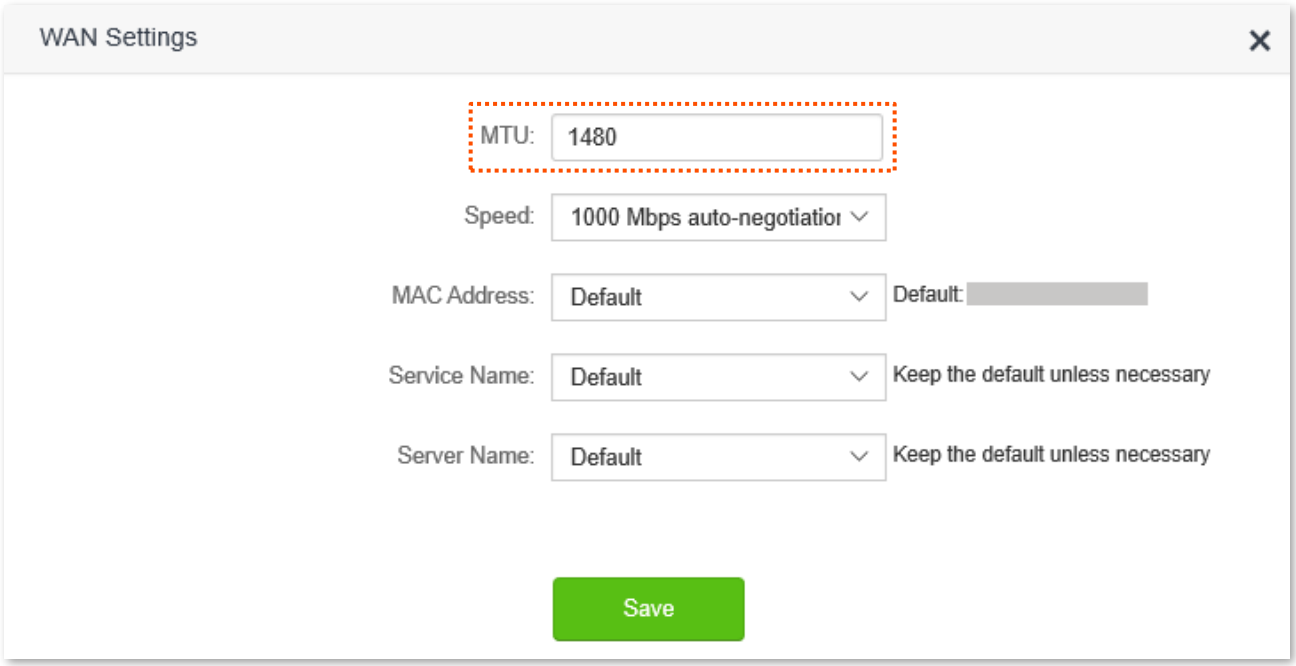
11.3 WAN settings

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

11.3.1 Change MTU value

MTU (Maximum Transmission Unit) is the largest data packet transmitted by a network device. When the connection type is PPPoE, the default MTU value is 1480. 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, please 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**.



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

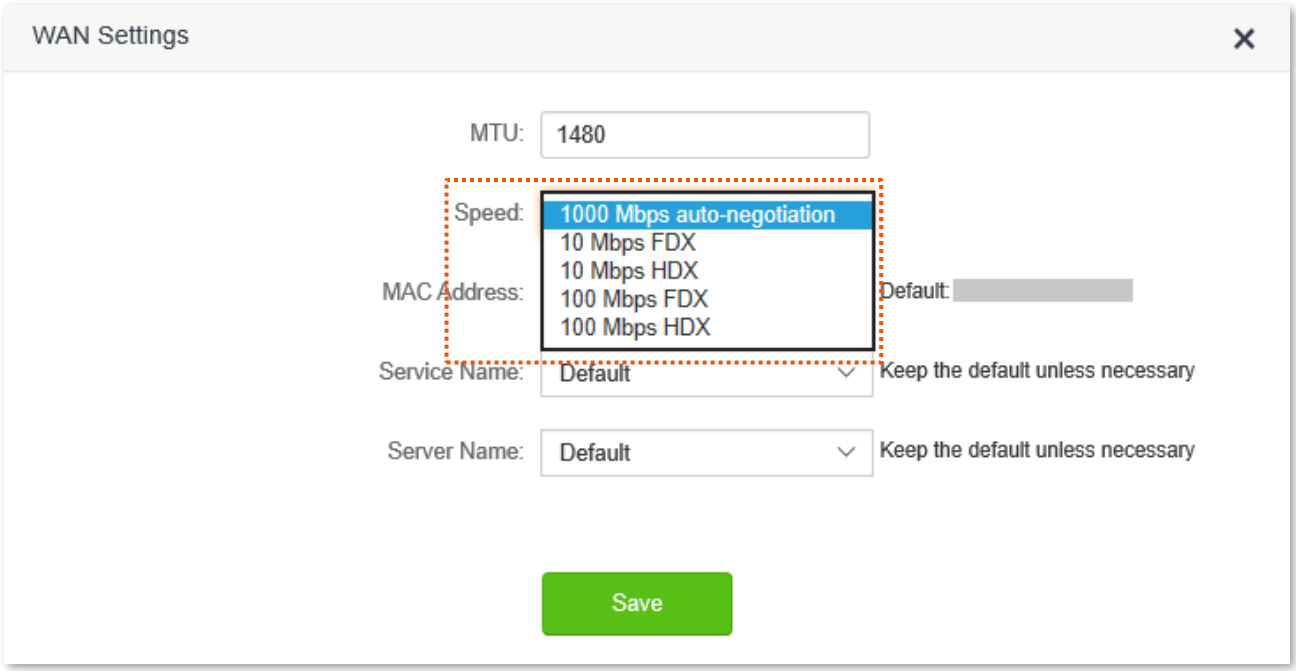
MTU	Application
1500	It is commonly used for non-ADSL and non-VPN dial-up connections.
1492, 1480	It is used for ADSL dial-up connections.
1472	It is the maximum value for the ping command. A packet with a larger size is fragmented.
1468	It is used for DHCP connections.

MTU	Application
1436	It is used for VPN or PPTP connections.

11.3.2 Change the WAN speed and duplex mode

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

When the Ethernet cable is intact and connected to the WAN port properly, but **Ethernet cable disconnected** is still shown on the **Internet Settings** page, you can try to change the **Speed** to **10 Mbps FDX** or **10 Mbps HDX** to solve the problem. Otherwise, keep the default settings.



MTU parameter description

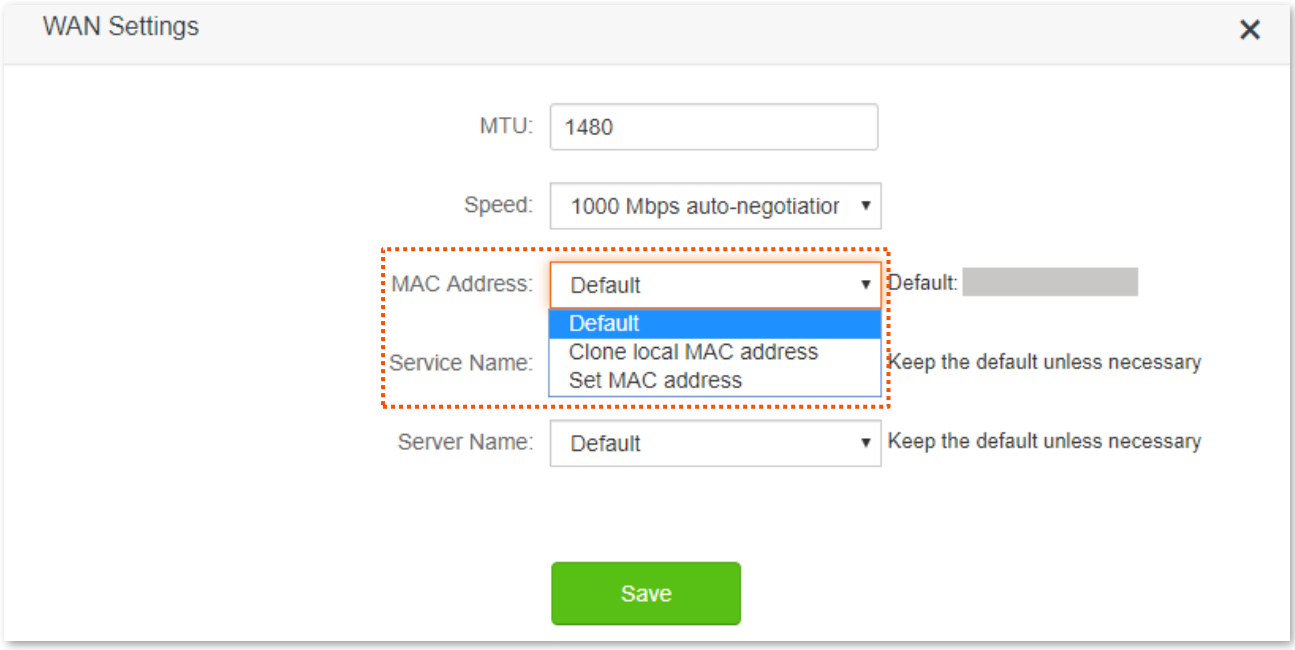
MTU	Application
1000 Mbps auto-negotiation	It indicates that the speed and duplex mode are determined through the negotiation with the peer port.
10 Mbps FDX	10 Mbps Full Duplex. It indicates that the WAN port is working at the speed of 10 Mbps, and the port can receive and send data packets at the same time.
10 Mbps HDX	10 Mbps Half Duplex. It indicates that the WAN port is working at the speed of 10 Mbps, but the port can only receive or send data packets alternately.
100 Mbps FDX	100 Mbps Full Duplex. It indicates that the WAN port is working at the speed of 100 Mbps, and the port can receive and send data packets at the same time.
100 Mbps HDX	100 Mbps Half Duplex. It indicates that the WAN port is working at the speed of 100 Mbps, but the port can only receive or send data packets alternately.

11.3.3 Change the MAC address of the WAN port

If you still cannot access the internet after completing Internet Settings, 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.**



- **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.

NOTE

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

Configuring 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 Click the drop-down box of **MAC Address**, choose **Clone local MAC address**, or **Set MAC address** and enter the desired MAC address.

Step 4 Click **Save**.

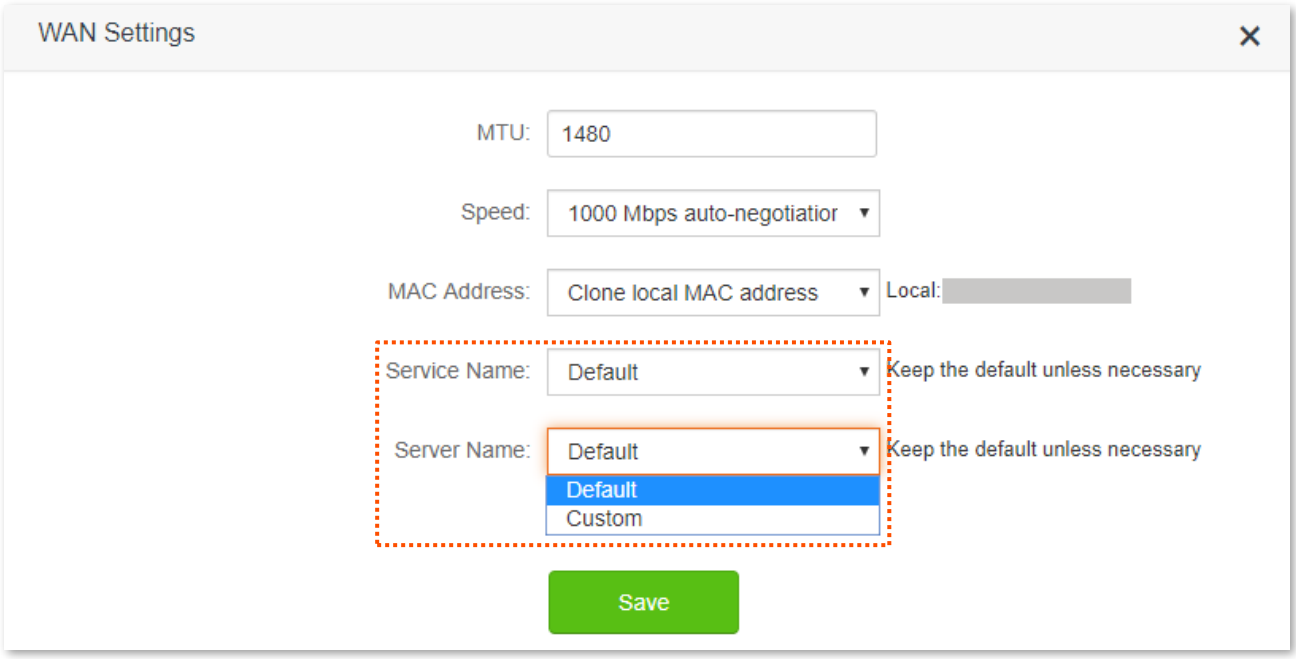
---End

11.3.4 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.**

Only when the connection type is PPPoE, you may need to change the service name and server name of the broadband service.

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.



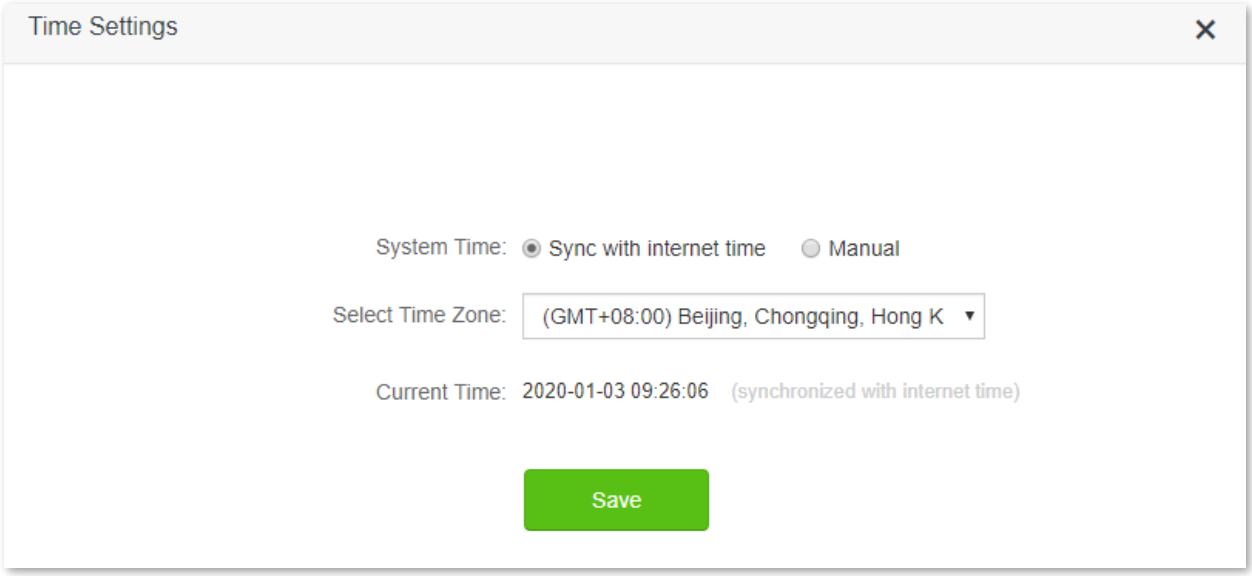
11.4 Time settings

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 functioning of functions based on time requires 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.

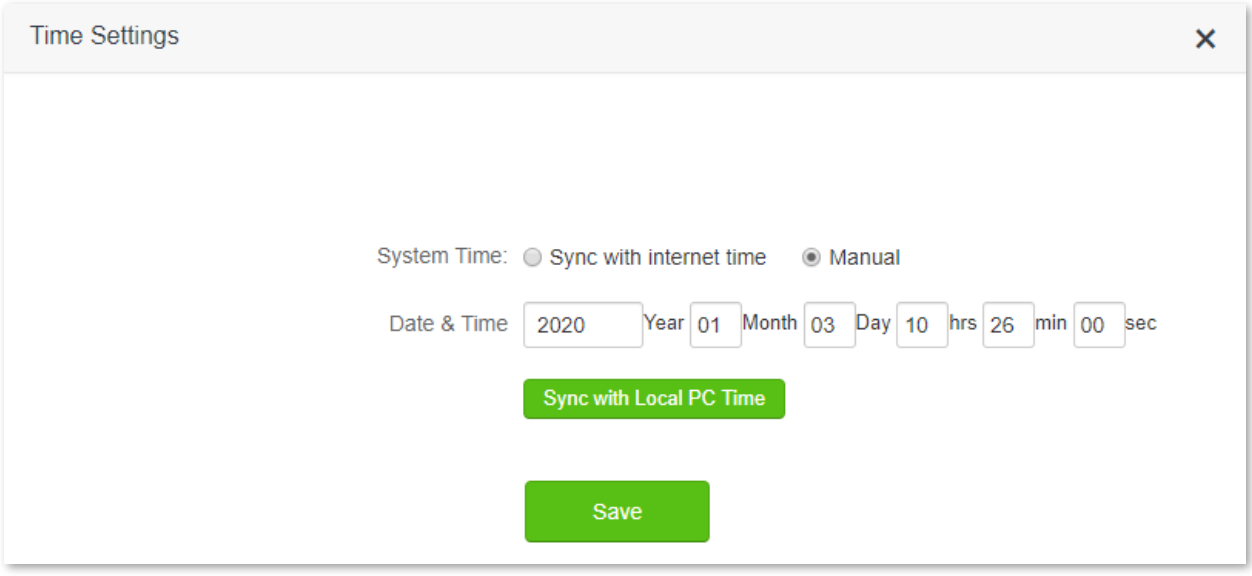
11.4.1 Sync system time with the internet time

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.



11.4.2 Set the time manually

When the system time is set to **Manual**, you can 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.

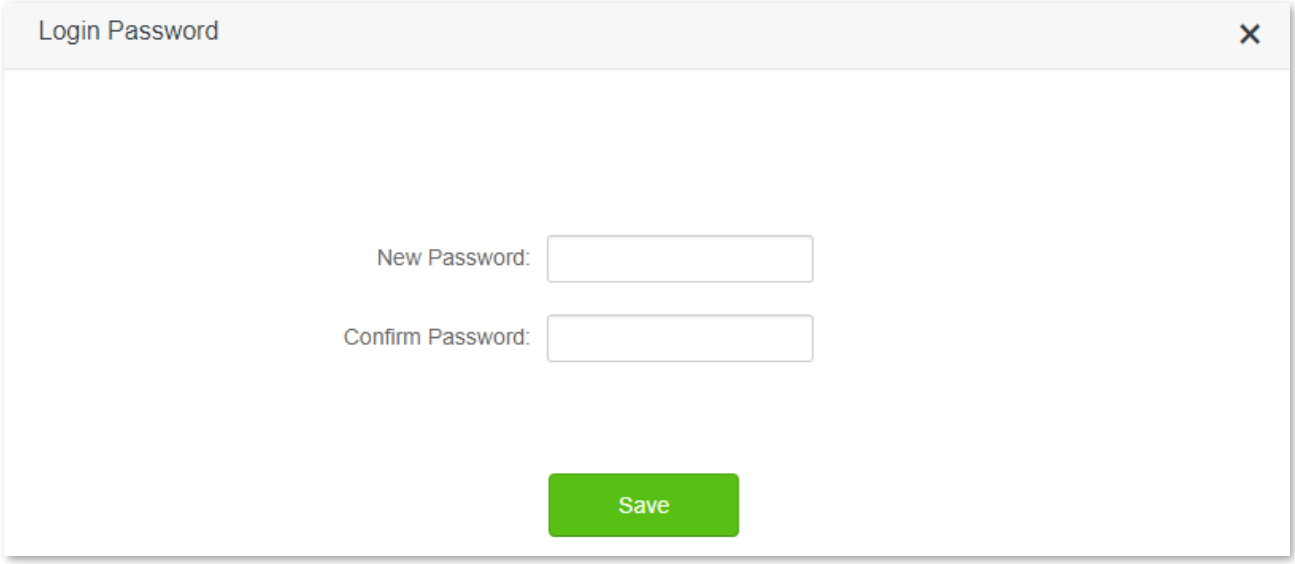


11.5 Login password

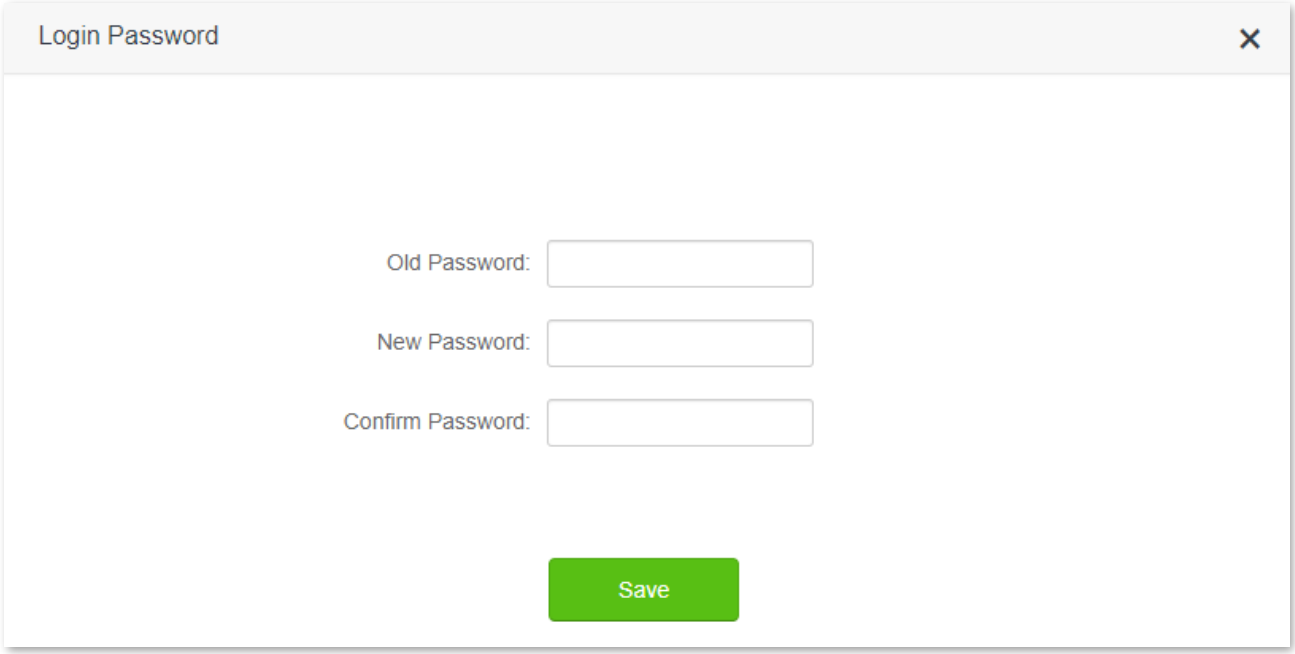
To ensure network security, a login password is recommended. A login password consisting of more types of characters, such as uppercase letters and lowercase letters, brings higher security.

To access the login password configuration page, log in to the web UI and choose **System Settings** > **Login Password**.

When you use the router for the first time, no password is required to log in to the web UI of the router and you can set a login password on this page.



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



TIP

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.

11.6 Reboot and reset

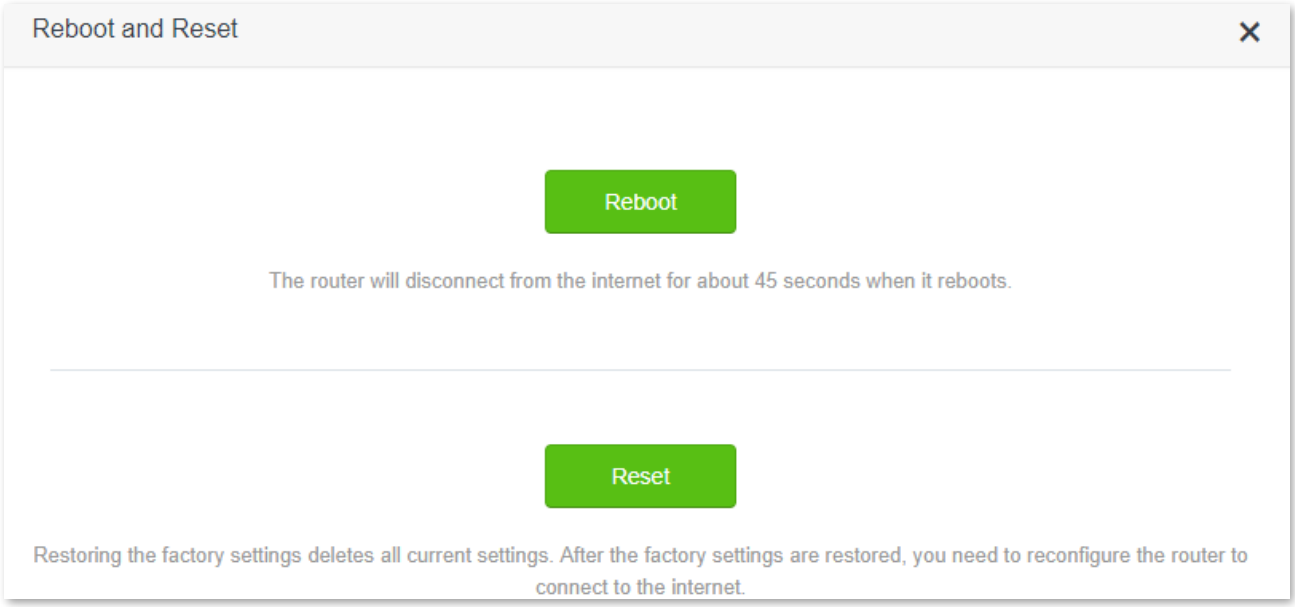
11.6.1 Reboot the router

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.

11.6.2 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

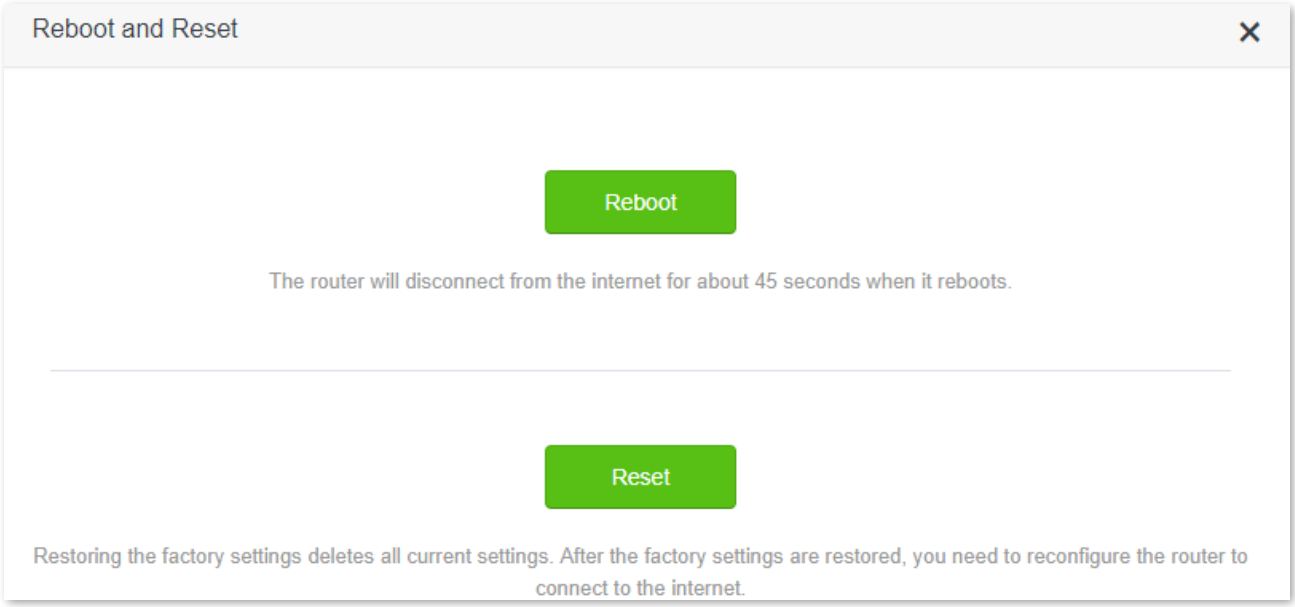
- Resetting the router is not recommended unless you cannot find a solution for the current problem anyway. You need to reconfigure the router after it is reset.
- Ensure that the power supply of the router is normal when the router is reset. Otherwise, the router could be damaged.
- The default login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

Reset the router using the reset button

Hold down the **Reset** button on the rear panel of the router for about 8 seconds and release when the LED indicators blinks fast. The router is reset successfully.

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.

11.7 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.

11.7.1 Online upgrade

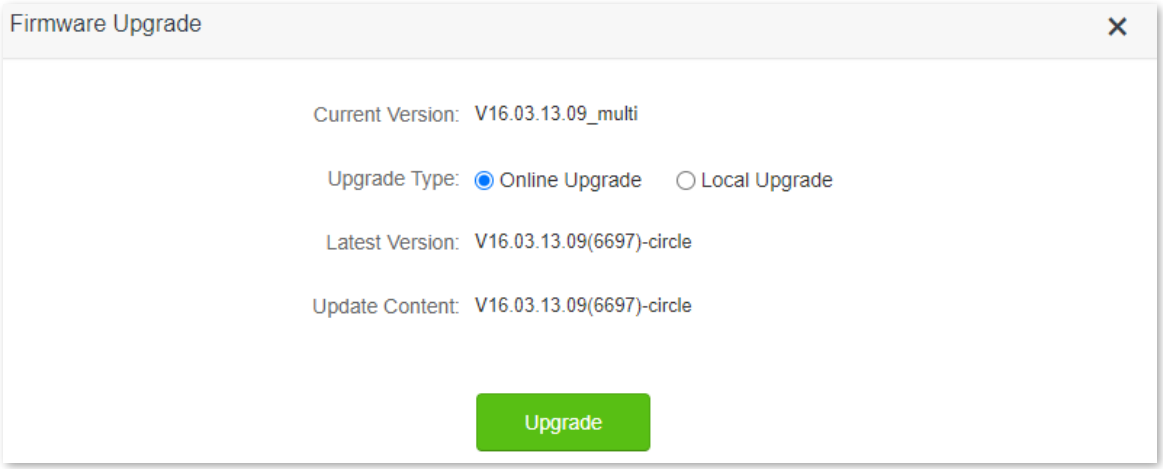
When the router is connected to the internet, it auto-detects whether there is a new firmware and displays the detected information on the page. You can choose whether to upgrade to the latest firmware.

Configuring 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 **Update**.

---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**.

TIP

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.

11.7.2 Local upgrade

NOTE

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.

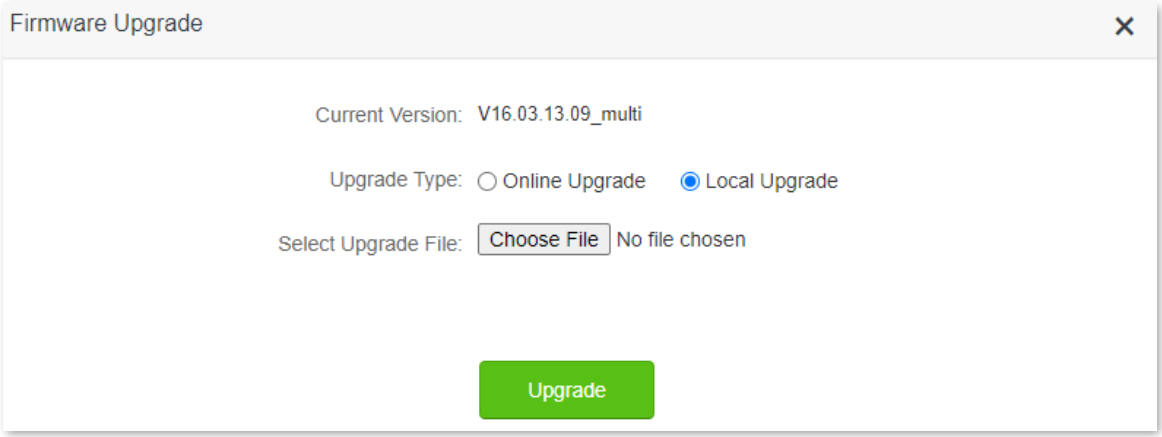
Step 1 Go to www.tendacn.com. Download an applicable firmware of the router to your local computer and unzip it.

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.

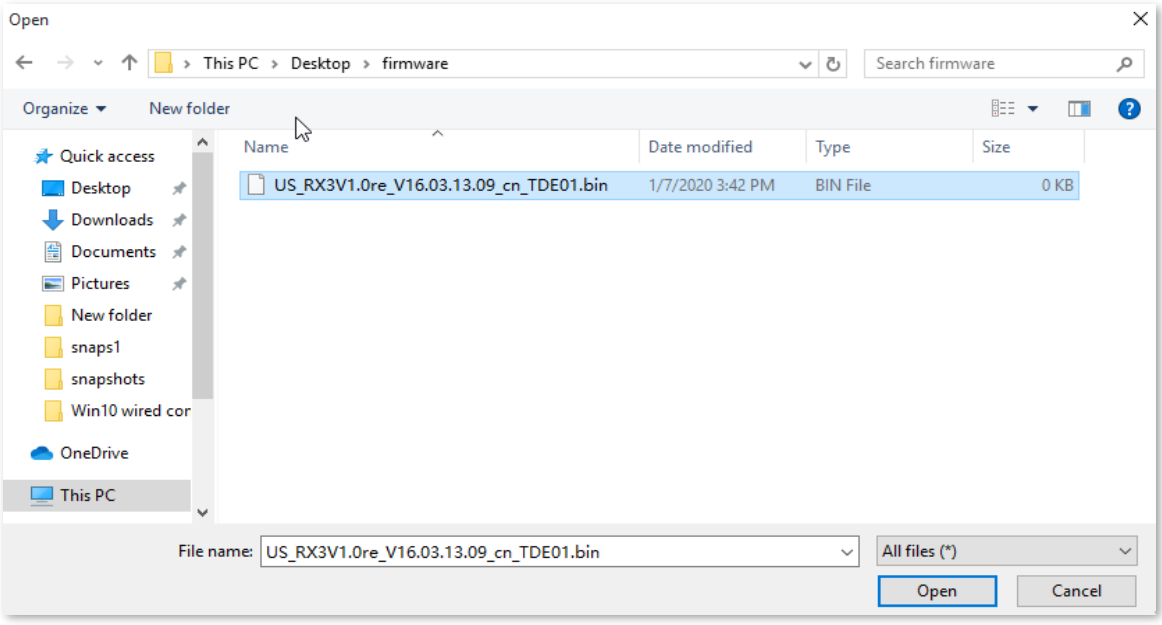
Step 3 Choose **System Settings** > **Firmware Upgrade.**

Step 4 Choose **Local Upgrade**.

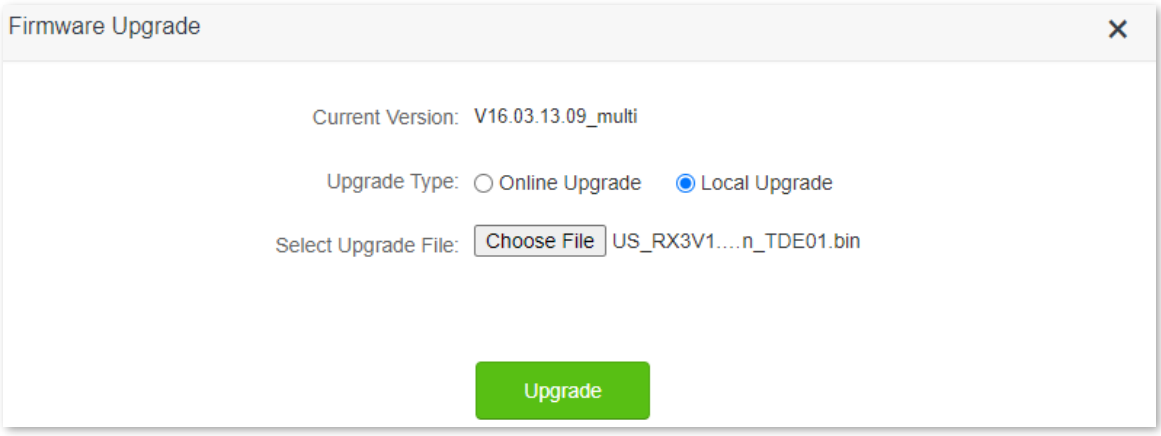
Step 5 Click **Choose File**.



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

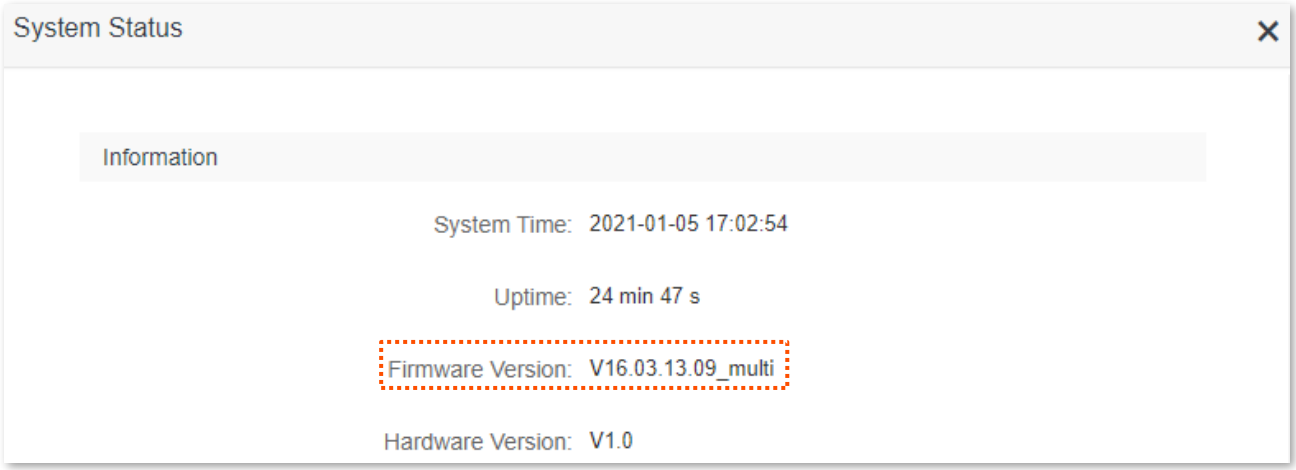


Step 7 Click **Upgrade**.



---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**.



TIP

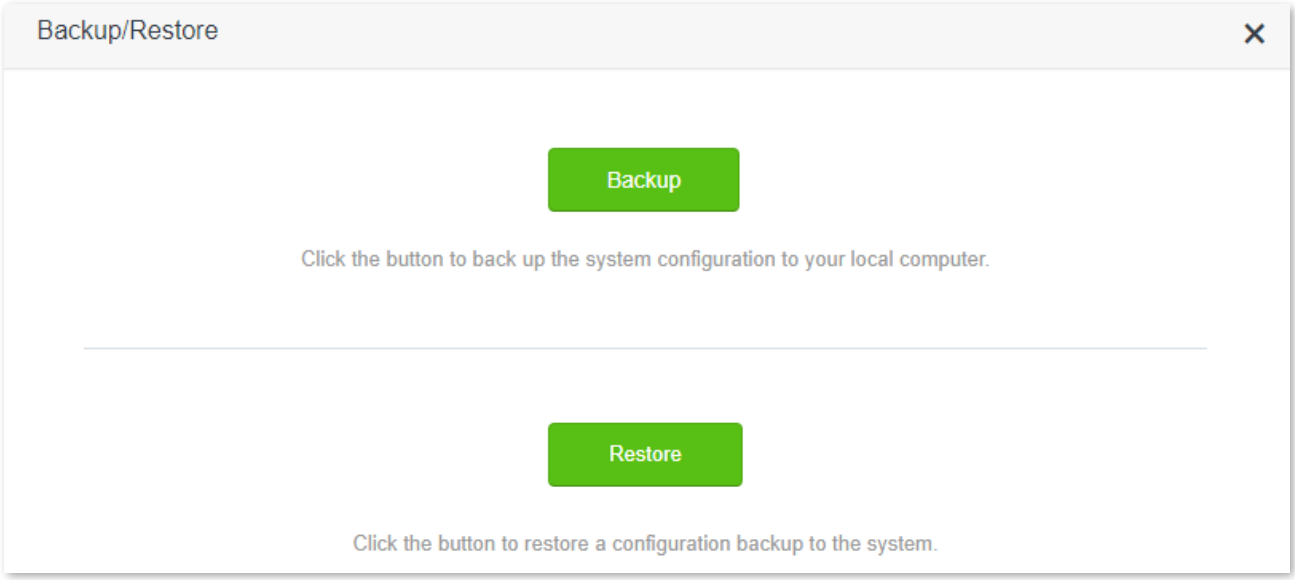
For better performance of the new firmware, you are recommended to reset the router to factory default settings and re-configure the router when the upgrading is completed.

11.8 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.**



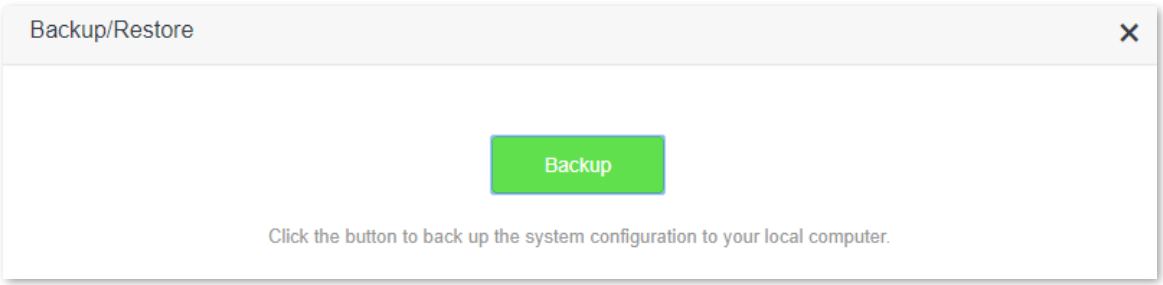
11.8.1 Backup the configurations of the router

To back up the configurations of the router:

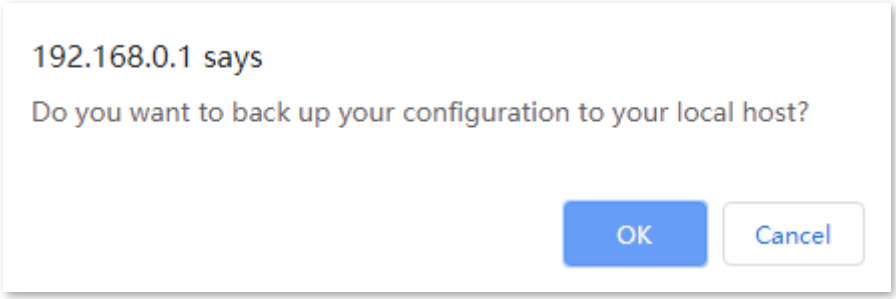
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

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.

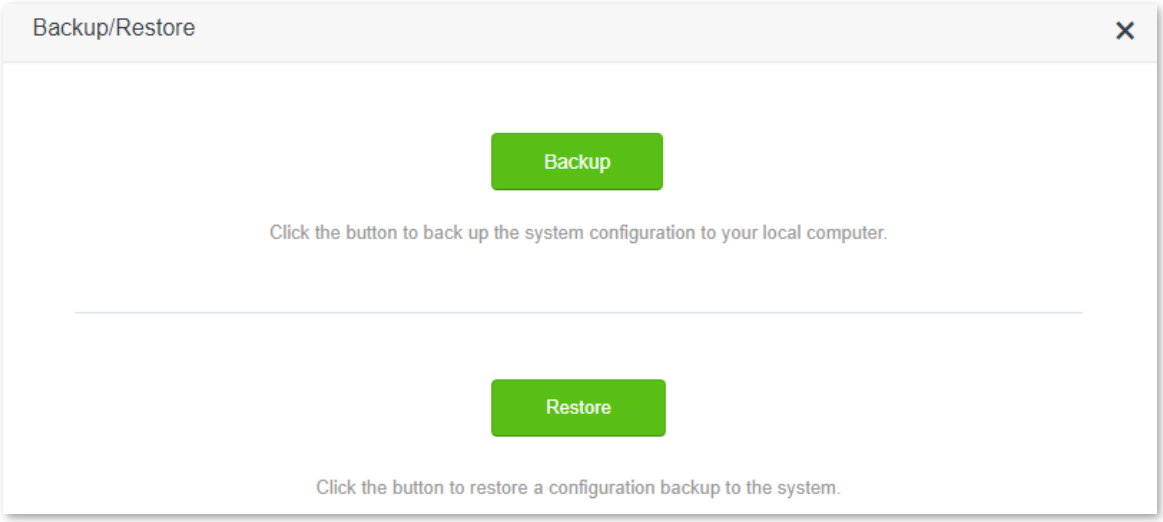
11.8.2 Restore previous configurations of the router

To restore the previous configurations of the router:

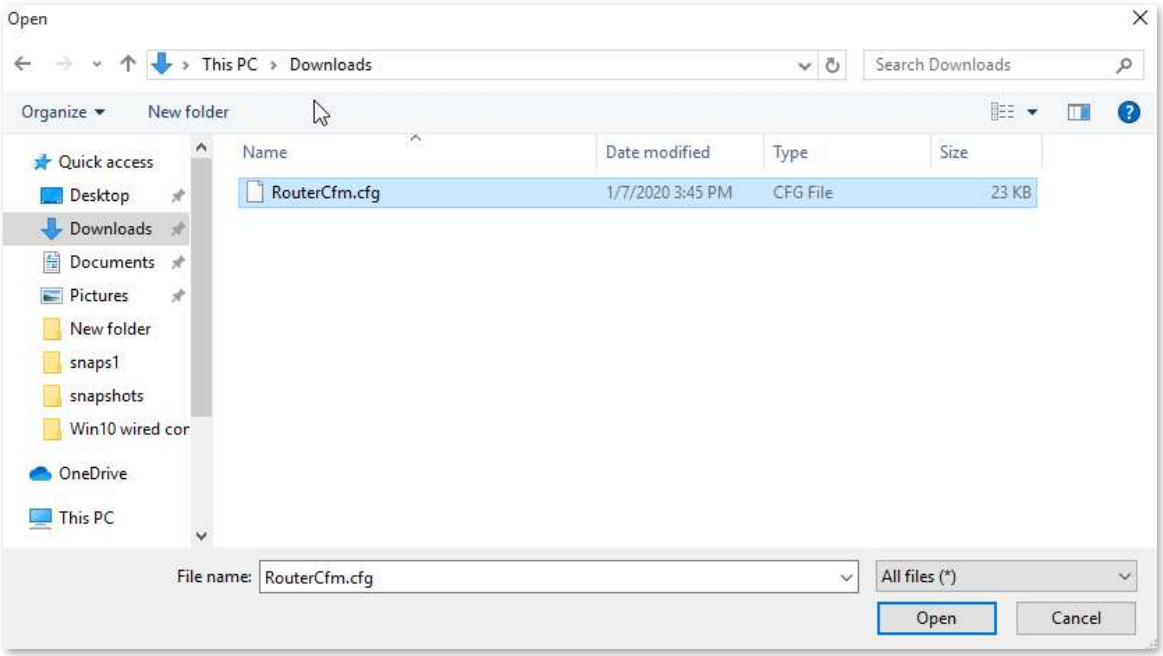
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

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

Step 3 Click **Restore**.



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



---End

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

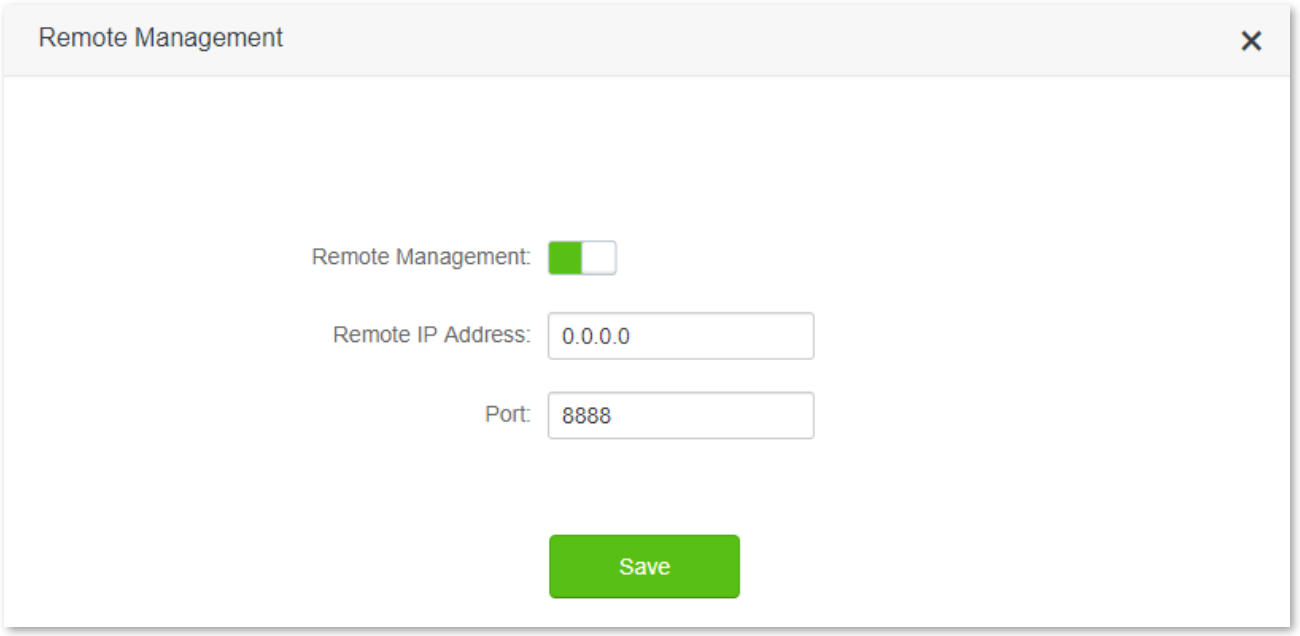
11.9 Remote management

11.9.1 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	It specifies the IP address of the host which can access the web UI of the router remotely. • 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).

Parameter	Description
Port	It specifies the port number of the router which is opened for remote management. Change it as required. TIP • 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 confliction • 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”.

11.9.2 Enable Tenda techical support to acces and manage the web UI

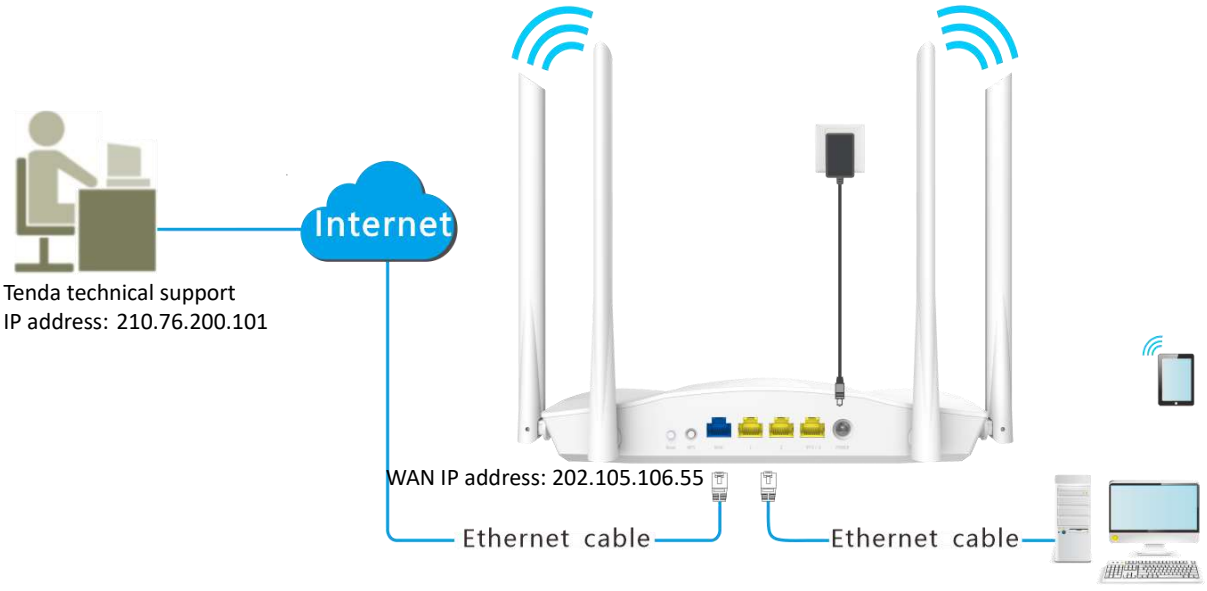
Scenario: You encounter a problem in configuring the router, and the router can access internet access.

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:

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



Configuring procedure:

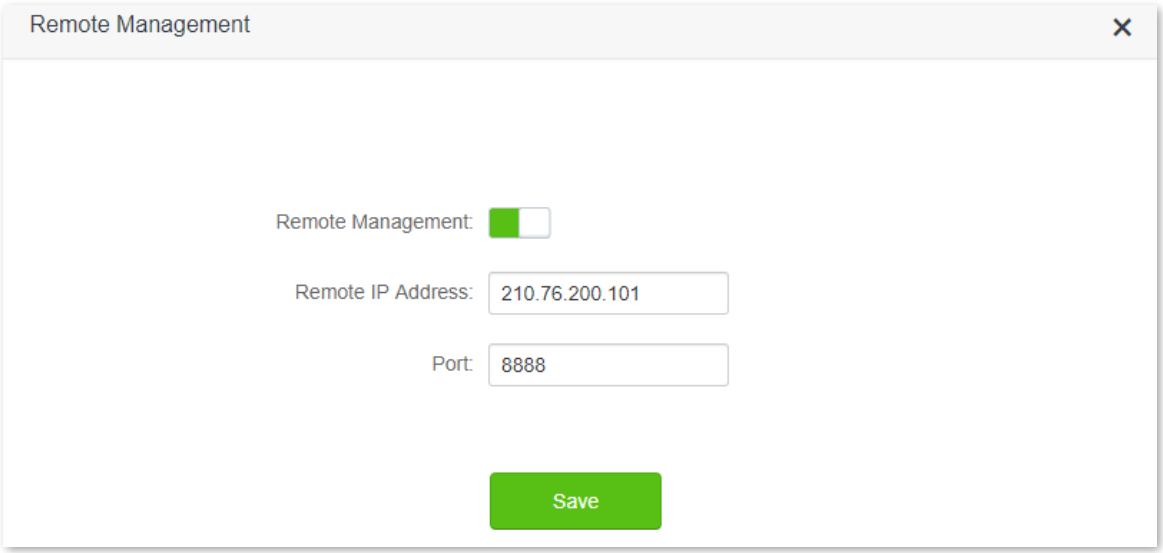
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **System Settings** > **Remote Management**.

Step 3 Enable the **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**.



---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.

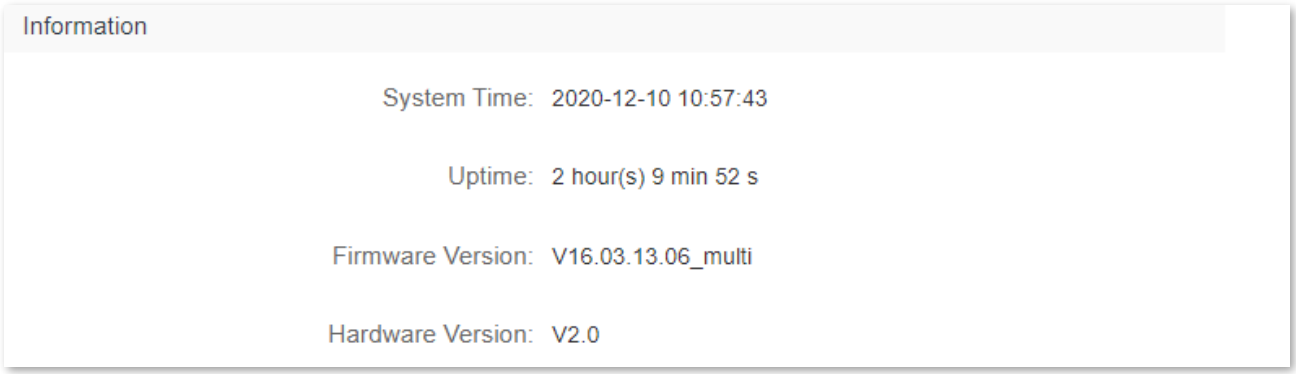
11.10 System status

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

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

11.10.1 Basic information

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

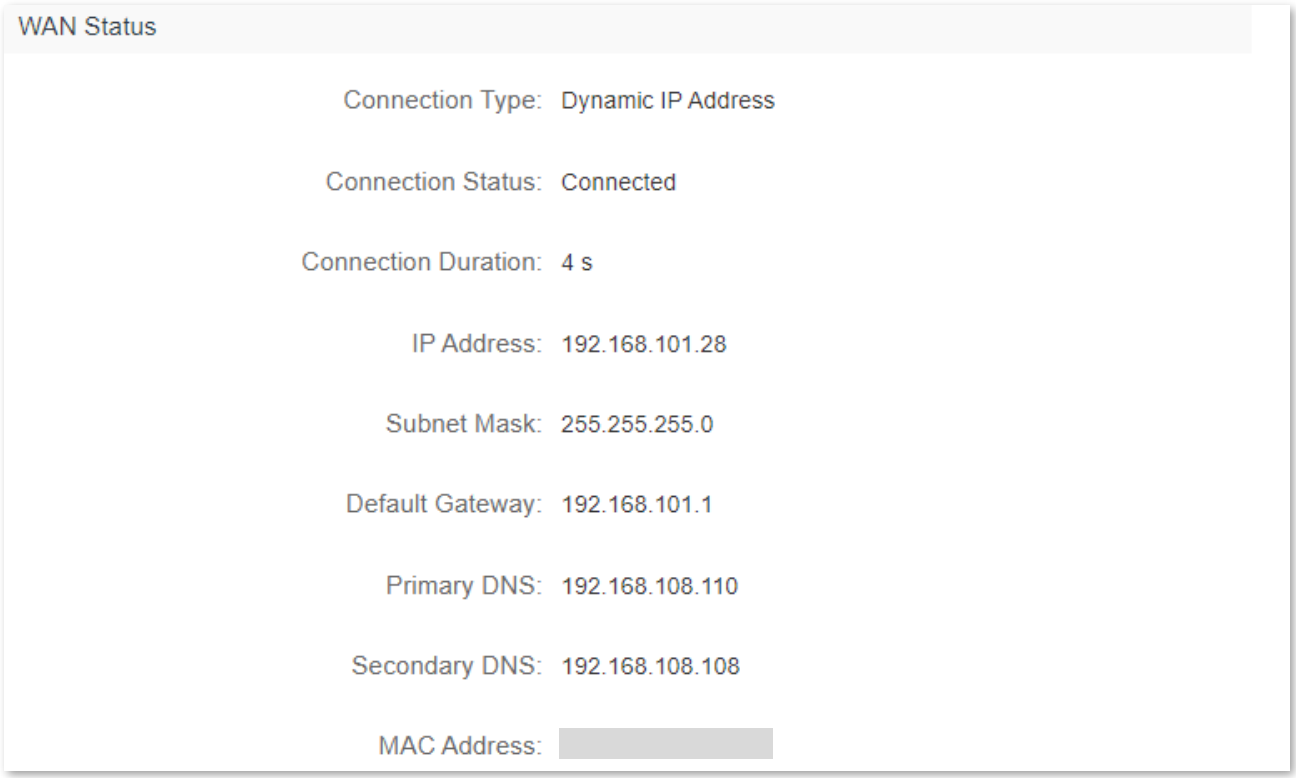


Parameter description

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.

11.10.2 WAN status

In this part, you can view the information of the WAN port, including connection type, connection status and connection duration, etc.

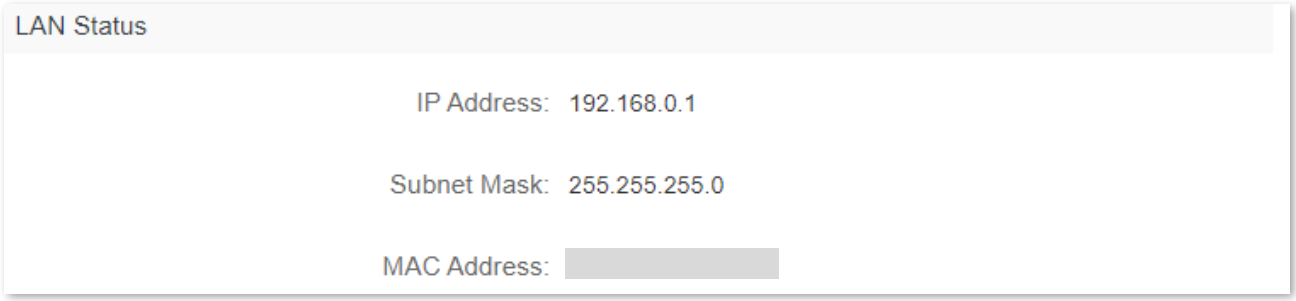


Parameter description

Parameter	Description
Connection Type	It specifies the internet IPv4 connection type of the WAN port.
Connection Status	It specifies internet connection status of the WAN port.
Connection Duratoin	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	It specifies the IP address of primary and secondary DNS servers of the router.
Secondary DNS	
MAC Address	It specifies the WAN MAC address of the router.

11.10.3 LAN status

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

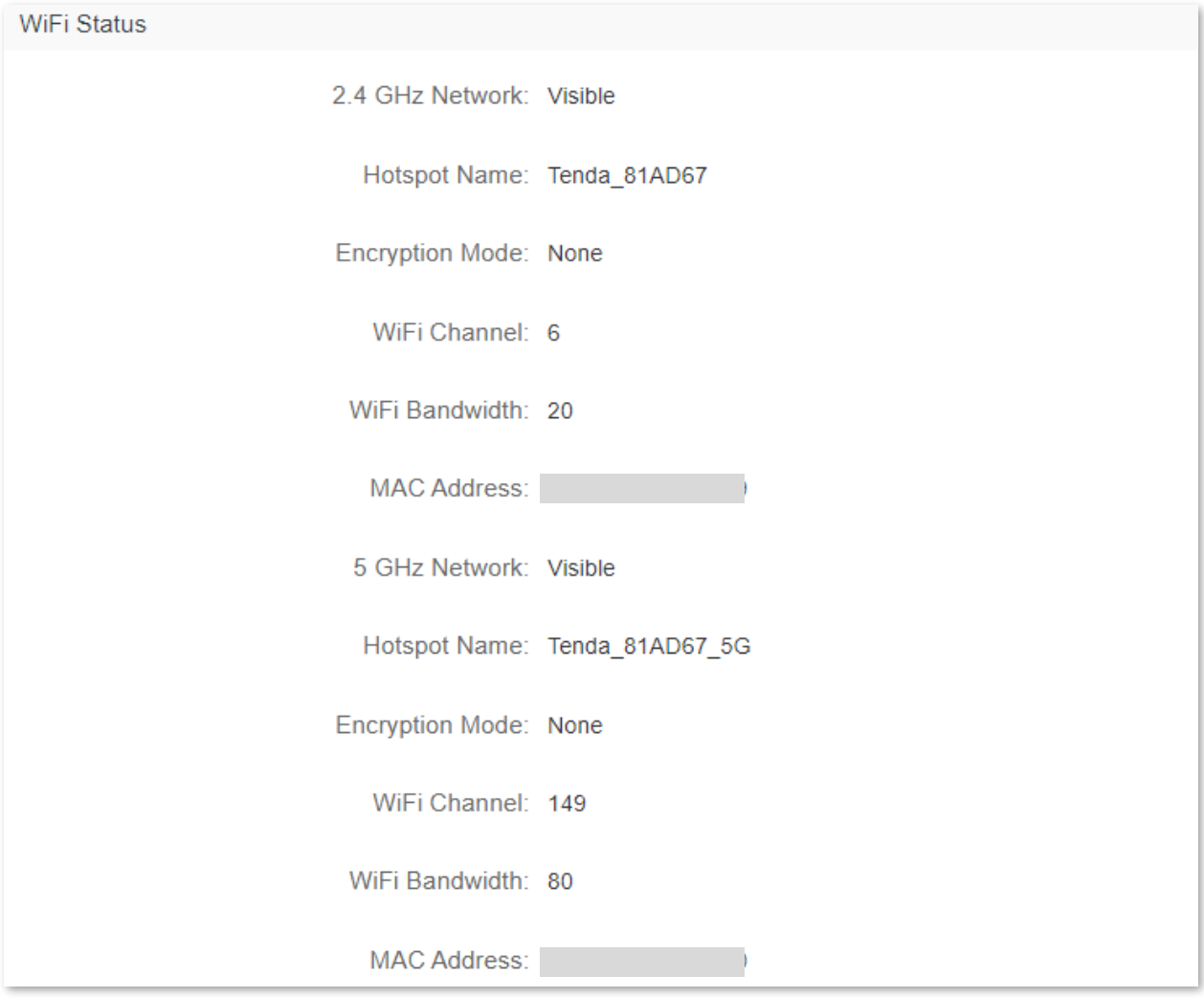


Parameter description

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.

11.10.4 WiFi status

In this part, you can view the information of 2.4 GHz and 5 GHz WiFi network, including the status, visibility, hotspot name and encryption mode, etc.

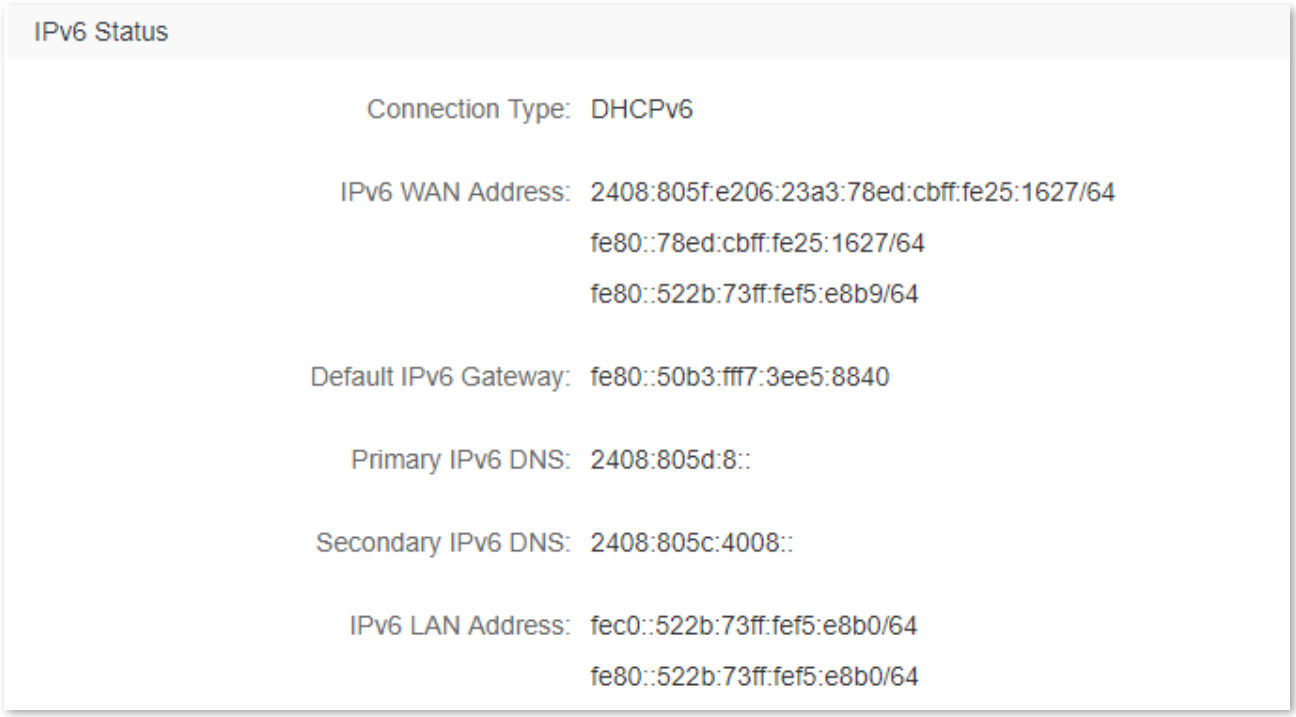


Parameter description

Parameter	Description
2.4 GHz Network	It specifies whether the corresponding WiFi network is enabled or disabled, and the visibility of the WiFi network.
5 GHz Network	
Hotspot Name	It specifies the WiFi name of the respective WiFi network.
Encryption Mode	It specifies the encryption mode of the respective WiFi network.
WiFi Channel	It specifies the channel that the respective WiFi network works in.
WiFi Bandwidth	It specifies the bandwidth of the respective WiFi network.
MAC Address	It specifies the MAC address of the respective WiFi network.

11.10.5 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.



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 default IPv6 gateway address of IPv6 network.

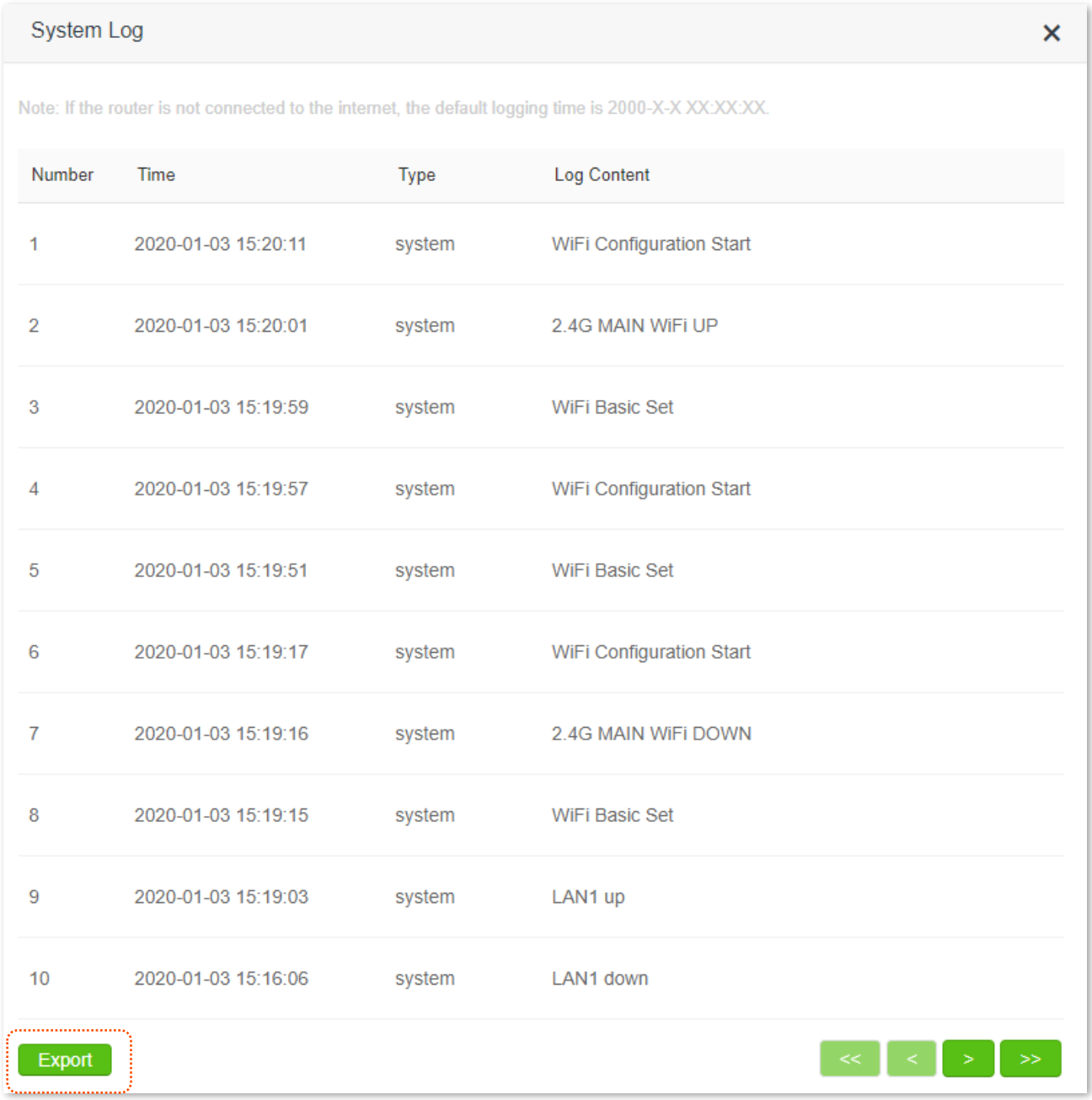
Parameter	Description
Primary IPv6 DNS	It specifies the primary and secondary DNS server address of IPv6 network.
Secondary IPv6 DNS	
IPv6 LAN Address	It specifies the LAN IPv6 address of the router. After the IPv6 function is configured, the LAN port of the router obtains a global unicast IPv6 address or a tunnel address, and a link local address.

11.11 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.

If necessary, you can also export the system logs to your local computer by clicking **Export**.



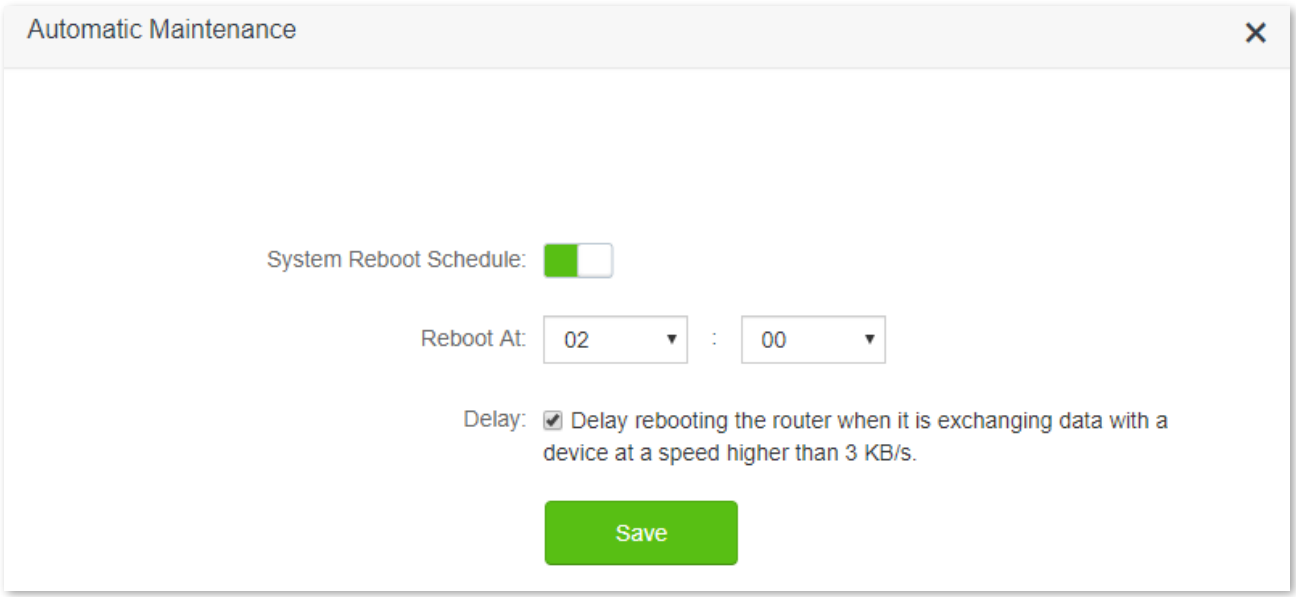
TIP

Rebooting the router will clear all previous system logs.

11.12 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.**



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 reboot automatically every day.
Delay	It is used to enable or disable the delay function. • **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 enters the sleeping mode during the sleeping time. TIP 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.

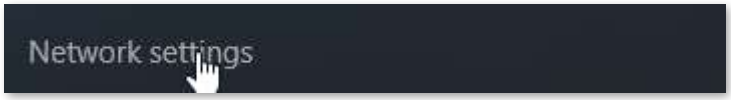
Appendix

A.1 Configuring the computer to obtain an IPv4 address automatically

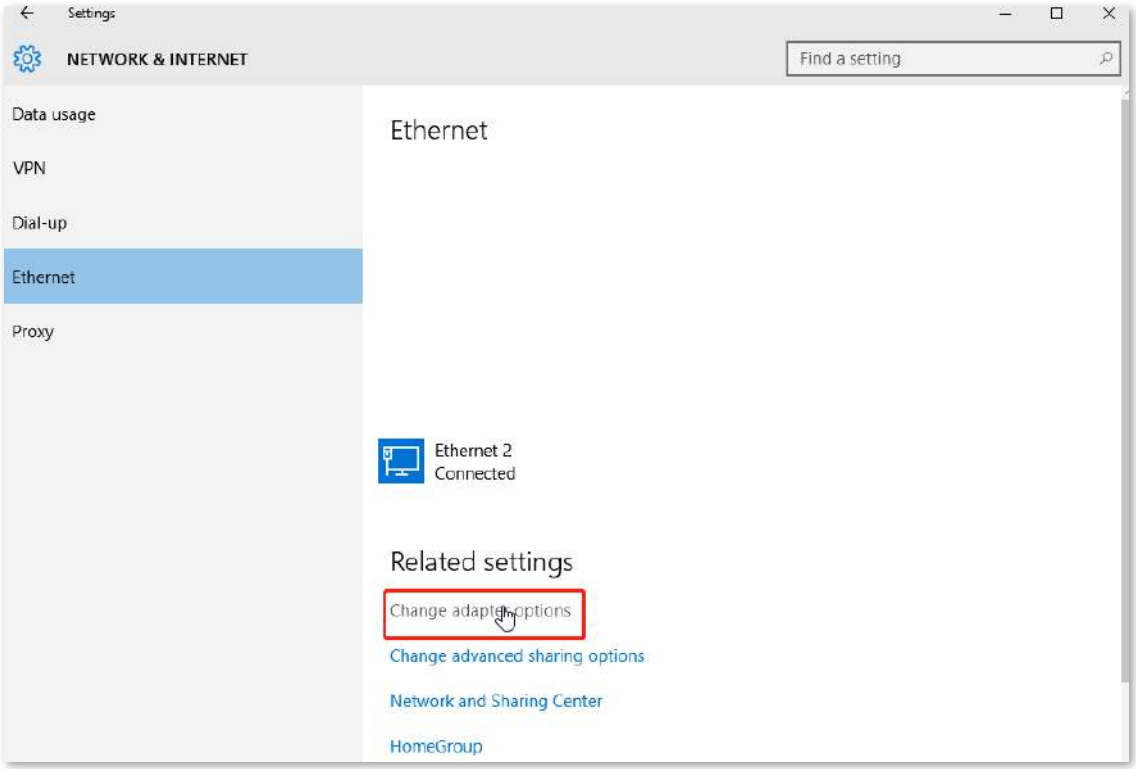
Perform the configuring procedures corresponding to Windows 10, Windows 8 and Windows 7 as required. A computer installed with a wired network adapter is used as an example to describe the procedures. The procedures for configuring computers installed with a WiFi network adapter are similar.

A.1.1 Windows 10

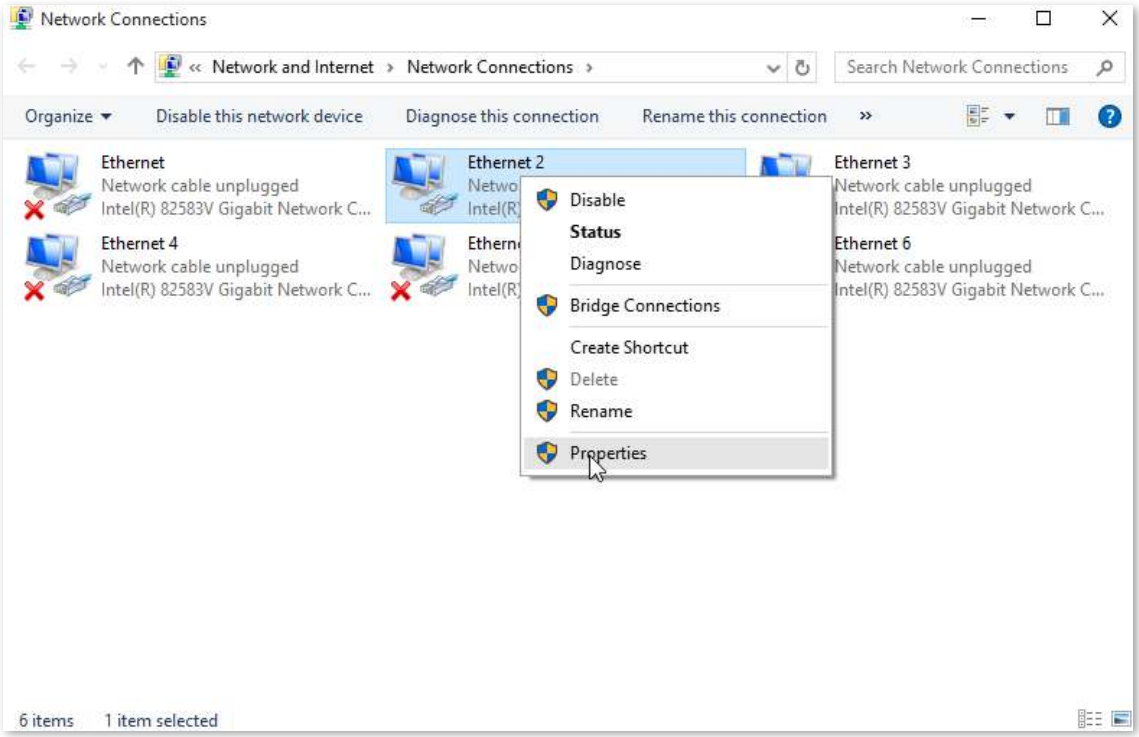
Step 1 Click  in the bottom right corner of the desktop and choose **Network settings**.



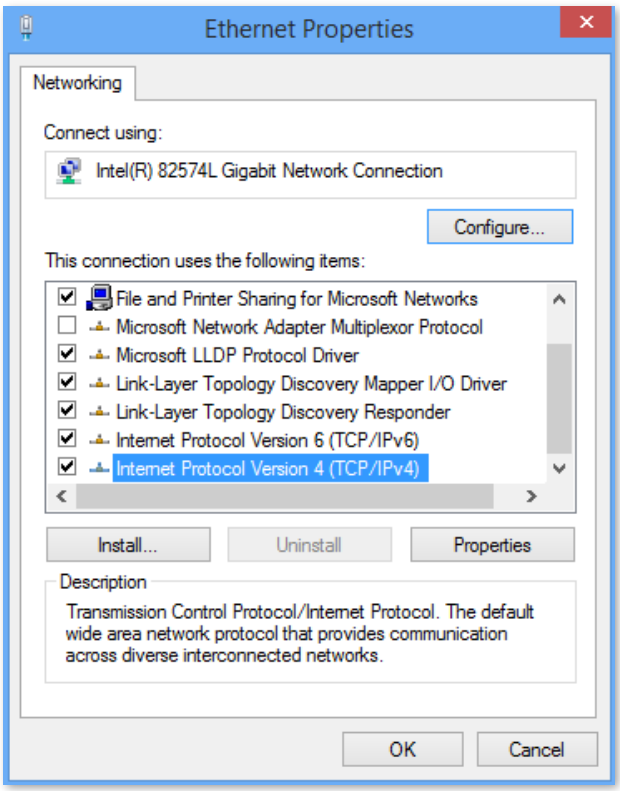
Step 2 Click **Change adapter options**.



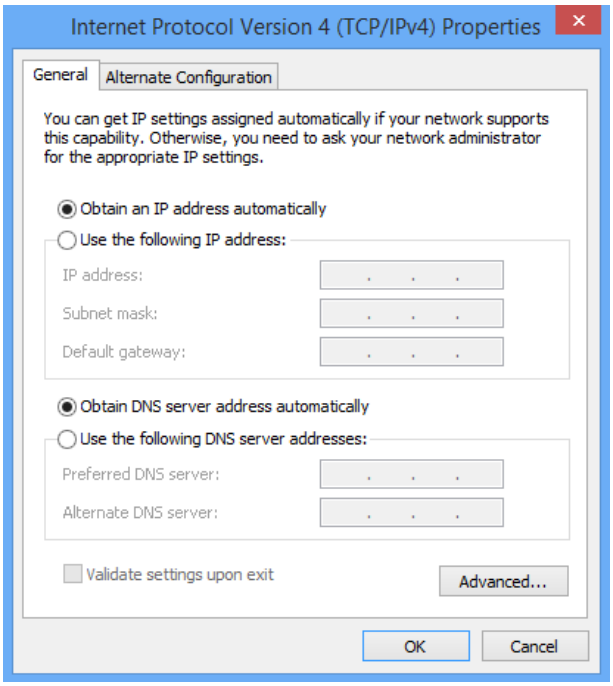
Step 3 Right click on the connection which is being connected, and then click **Properties**.



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**.

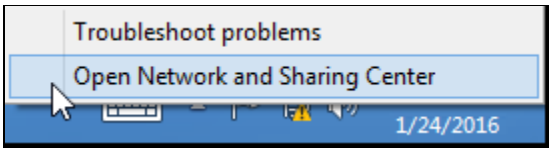


Step 6 Click **Close** in the **Ethernet Properties** window.

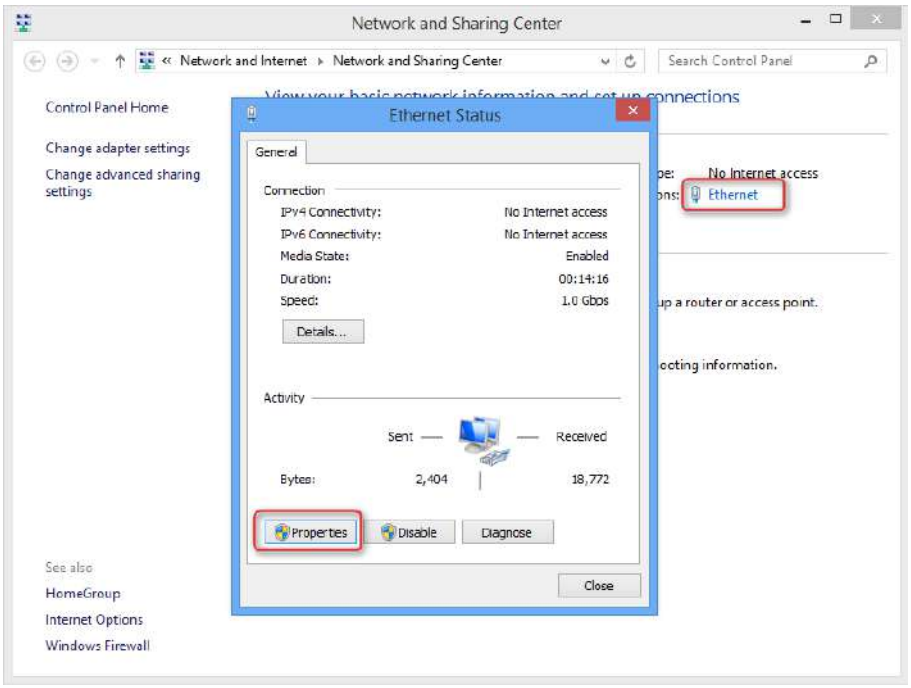
---End

A.1.2 Windows 8

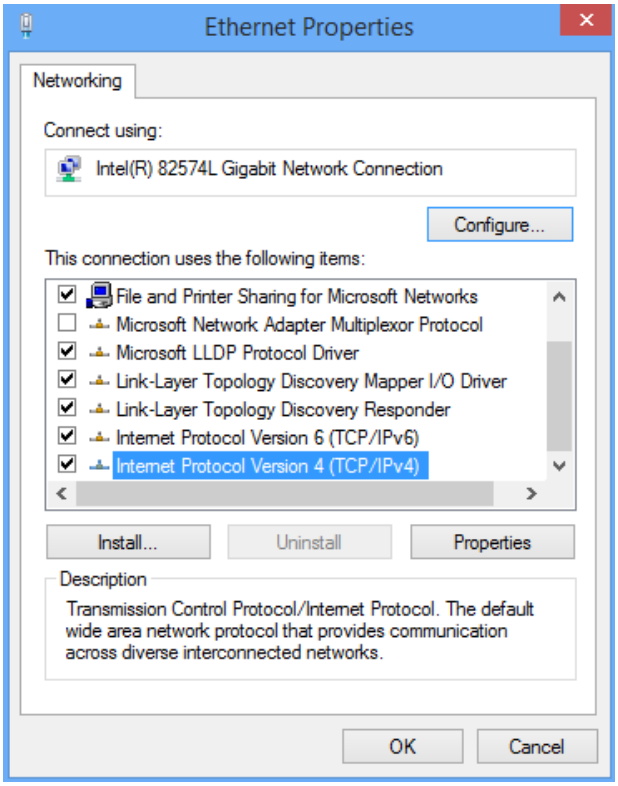
Step 1 Right-click in the bottom right corner of the desktop and choose **Open Network and Sharing Center**.



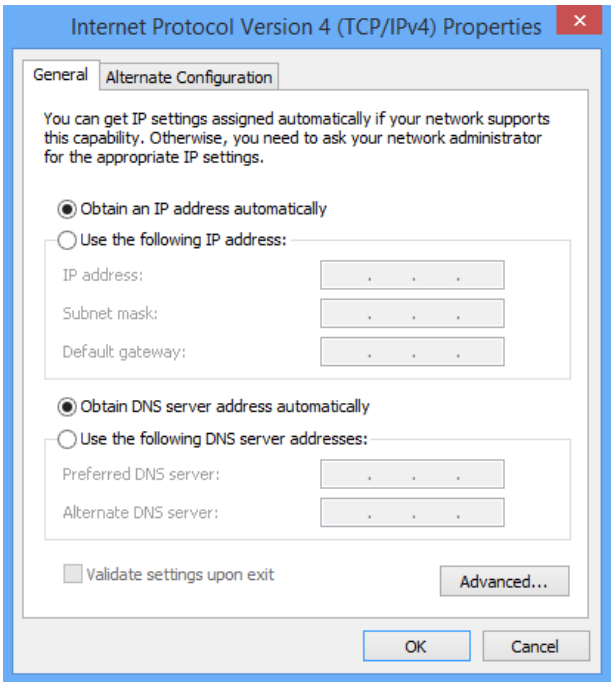
Step 2 Click **Ethernet** and then **Properties**.



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**.

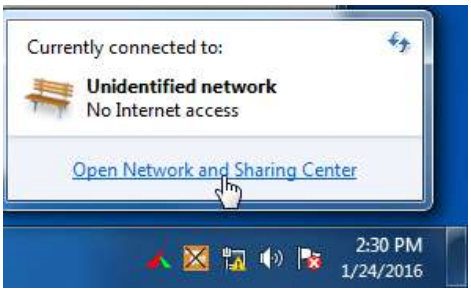


Step 5 Click **OK** in the **Ethernet Properties** window.

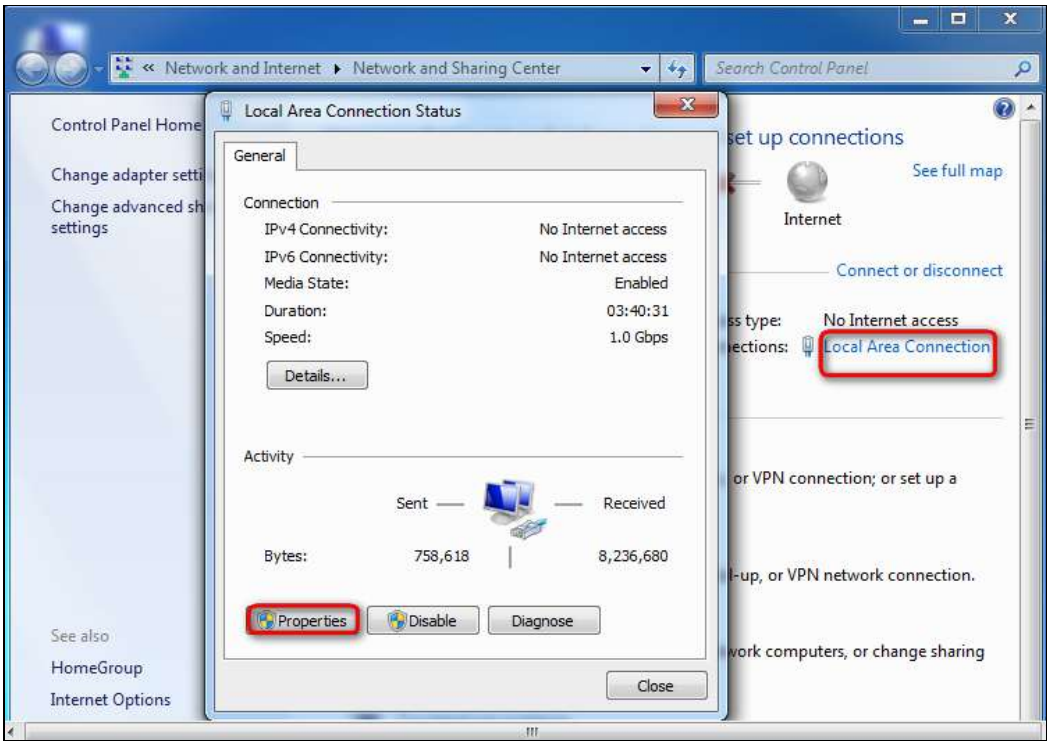
---End

A.1.3 Windows 7

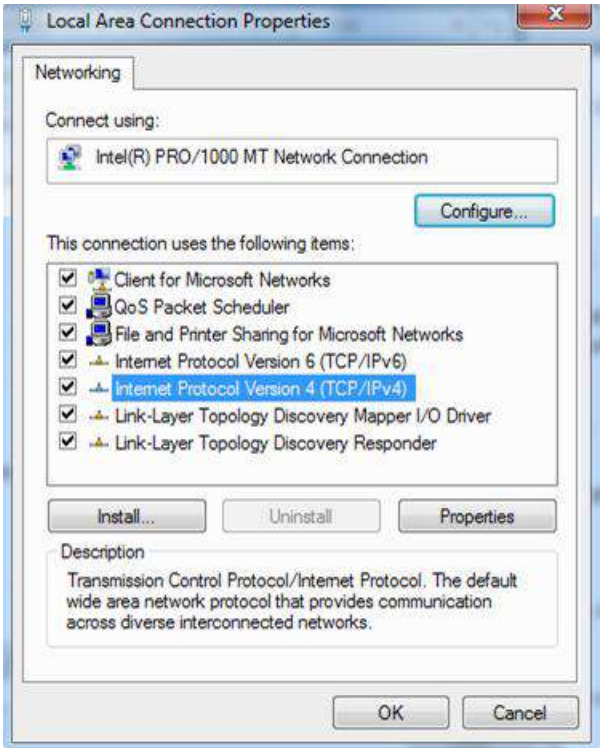
Step 1 Click in the bottom right corner of the desktop and choose **Open Network and Sharing Center**.



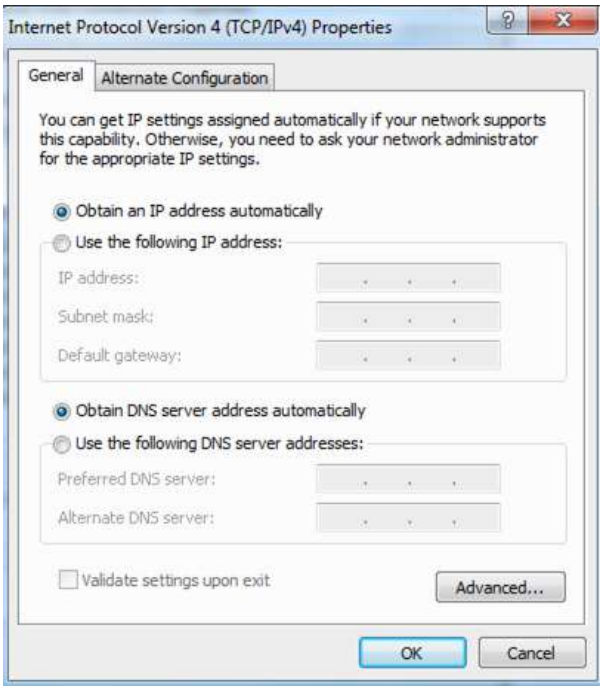
Step 2 Click **Local Area Connection** and then **Properties**.



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 Default parameters

Parameter		Default value
Login	IP address	192.168.0.1
	Password	None
LAN Parameters	IP Address	192.168.0.1
	Subnet Mask	255.255.255.0
DHCP Server	DHCP Server	Enabled
	Start IP Address	192.168.0.100
	End IP Address	192.168.0.200
	Preferred DNS Server	192.168.0.1
Operating Mode		Router mode
Wireless Settings	WiFi Name	See the label on the bottom of the router
	WiFi Password	
	OFDMA	Disabled
IPv6		Disabled

A.3 Acronyms and Abbreviations

Acronym or Abbreviation	Full Spelling
ADSL	Asymmetric Digital Subscriber Line
AES	Advanced Encryption Standard
AP	Access Point
DDNS	Dynamic Domain Name System
DHCP	Dynamic Host Configuration Protocol
DHCPv6	Dynamic Host Configuration Protocol for IPv6
DMZ	Demilitarized Zone
DNS	Domain Name System
FTP	File Transfer Protocol
GMT	Greenwich Mean Time
ICMP	Internet Control Message Protocol
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
IPTV	Internet Protocol Television
IPv4	Internet Protocol Version 4
IPv6	Internet Protocol Version 6
ISP	Internet Service Provider
L2TP	Layer 2 Tunneling Protocol
LAN	Local Area Network
LED	Light Emitting Diode
MAC	Medium Access Control
MIMO	Multiple Input Multiple Output
MTU	Maximum Transmission Unit
NAT	Network Address Translation
OFDM	Orthogonal Frequency Division Multiplexing
OFDMA	Orthogonal Frequency Division Multiple Access
PD	Prefix Delegation
PIN	Personal Identification Number

Acronym or Abbreviation	Full Spelling
POP	Post Office Protocol
PPPoE	Point-to-Point Protocol over Ethernet
PPTP	Point to Point Tunneling Protocol
RA	Router Advertisement
RDNSS	Recursive Domain Name System Server
RU	Resource Unit
SAE	Simultaneous Authentication of Equals
SLAAC	Stateless Address Autoconfiguration
SSID	Service Set Identifier
STB	Set Top Box
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
UPnP	Universal Plug and Play
USB	Universal Serial Bus
VLAN	Virtual Local Area Network
VPN	Virtual Private Network
WAN	Wide Area Network
WISP	Wireless Internet Service Provider
WPA	Wi-Fi Protected Access
WPA-PSK	WPA-Preshared Key
WPA3-SAE	WPA3-Simultaneous Authentication of Equals
WPS	Wi-Fi Protected Setup
UI	User Interface