Wi-Fi 4G LTE Router

User Guide

Copyright Statement

© 2020 Shenzhen Tenda Technology Co., Ltd. All rights reserved.

Tenda is a registered trademark legally held by Shenzhen Tenda Technology Co., Ltd. Other brand and product names mentioned herein are trademarks or registered trademarks of their respective holders. Copyright of the whole product as integration, including its accessories and software, belongs to Shenzhen Tenda Technology Co., Ltd. No part of this publication can be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means without the prior written permission of Shenzhen Tenda Technology Co., Ltd.

Disclaimer

Pictures, images and product specifications herein are for references only. To improve internal design, operational function, and/or reliability, Tenda reserves the right to make changes to the products without obligation to notify any person or organization of such revisions or changes. Tenda does not assume any liability that may occur due to the use or application of the product described herein. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information and recommendations in this document do not constitute the warranty of any kind, express or implied.

Preface

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

Conventions

This user guide is applicable to 4G09, 4G06 and 4G03. Unless specified, 4G09 is used for illustration in this guide. The contained images and UI screenshots are subject to the actual products.

Product model	Description
4G09	AC1200 Dual-band Wi-Fi 4G+ LTE Router
4G06	N300 Wi-Fi 4G VoLTE Router
4G03	N300 Wi-Fi 4G LTE Router

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

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.

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

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.
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.com.cn
Website	https://www.tendacn.com/		

Contents

1 Get to know your device 1

1.1 Introduction 1

1.2 LED indicators 1

1.3 Ports and buttons 3

1.4 Label 5

2 Web UI 6

2.1 Log in to the web UI 6

2.2 Log out of the web UI 7

2.3 Web UI layout 8

3 Internet status 9

3.1 Internet status 9

3.1.1 Under 3G/4G router mode 9

3.1.2 Under wireless router mode 12

3.2 Wireless information 16

3.3 System information 17

3.3.1 Basic information 17

3.3.2 Connection status 18

3.3.3 LAN status 19

3.3.4 Wi-Fi status 20

3.3.5 IPv6 status 21

3.4 Online device information 22

3.4.1 Add devices to the blacklist 22

3.4.2 Remove devices from the blacklist 23

4 Internet settings 24

4.1 Access the internet with a SIM card 24

4.1.1 Change mobile network preference 25

4.1.2 Create an APN profile mannully to access the internet 27

4.2 Access the internet through the WAN port 28

4.2.1 Access the internet with a PPPoE account 28

4.2.2 Access the internet through dynamic IP address 30

4.2.3 Access the internet with static IP address information 32

5 Wi-Fi settings 35
5.1 Wi-Fi name & password 35
5.1.1 Overview 35
5.1.2 Separate the 2.4 GHz Wi-Fi name from 5 GHz Wi-Fi name 36
5.1.3 Change the Wi-Fi name and Wi-Fi password 37
5.1.4 Hide the Wi-Fi network 38
5.1.5 Connect to a hidden Wi-Fi network 39
5.2 Wi-Fi schedule 41
5.2.1 Overview 41
5.2.2 An example of configuring Wi-Fi schedule 41
5.3 Wireless repeating (wireless router mode) 43
5.3.1 Overview 43
5.3.2 Extend the existing Wi-Fi network 44
5.4 Channel & bandwidth 54
5.5 Transmit power 56
5.6 WPS 57
5.6.1 Overview 57
5.6.2 Connect devices to the Wi-Fi network using the WPS button 57
5.6.3 Connect devices to the Wi-Fi network through the web UI of the router 59
5.6.4 Connect devices to the Wi-Fi network using the PIN code of the router 61
5.7 Beamforming+ 62
5.8 AP mode (wireless router mode) 64
5.9 Anti-interference 70
6 SMS (3G/4G router mode) 71
6.1 Manage SMS messages 71
6.1.1 Send SMS messages 71
6.1.2 Delete SMS messages 73
6.2 Set the message center number 75
6.3 Inquire information by sending USSD commands 76
7 Guest network 77
7.1 Overview 77
7.2 An example of configuring the guest network 79
8 Parental control 81
8.1 Overview 81
8.2 Configure the parental control rule 82

8.3 An example of adding parental control rules 83
9 VPN 85
9.1 PPTP server 85
9.1.1 Overview 85
9.1.2 Enable internet users to access resources of the LAN 86
9.2 Online PPTP users 91
9.3 PPTP/L2TP client 92
9.3.1 Overview 92
9.3.2 Access VPN resources with the router 93
10 IPv6 (wireless router mode) 94
10.1 IPv6 WAN settings 94
10.1.1 Connect to the IPv6 network of ISPs 94
10.1.2 IPv6 tunnel 102
10.2 IPv6 LAN settings 117
11 Advanced settings 119
11.1 Operating mode 119
11.1.1 Overview 119
11.1.2 Set the router to wireless router mode 119
11.2 SIM PIN (3G/4G wireless router mode) 122
11.2.1 Unlock the SIM card 122
11.2.2 Disable PIN lock for the SIM card 125
11.2.3 Set a PIN code for the SIM card 126
11.2.4 Change the PIN code of SIM card 126
11.3 Mobile data 127
11.3.1 Overview 127
11.3.2 An example of mobile data configurations 128
11.4 Bandwidth control 130
11.4.1 Overview 130
11.4.2 Set the upload and download speed limit for users 130
11.5 IPTV (wireless router mode) 132
11.5.1 Overview 132
11.5.2 Watch IPTV programs through the router 133
11.5.3 Watch multicast videos through the router 134
11.6 Tenda WiFi App (wireless router mode) 136
11.7 Sleeping mode 140

11.8 LED control 141
11.9 Filter MAC address 142
11.9.1 Overview 142
11.9.2 Only allow specified device to access the internet 142
11.10 Firewall 145
11.11 Static route 146
11.11.1 Overview 146
11.11.2 Add a static route rule 147
11.12 DDNS 149
11.12.1 Overview 149
11.12.2 Enable internet users to access LAN resources using a domain name 150
11.13 Virtual server 153
11.13.1 Overview 153
11.13.2 Enable internet users to access LAN resources 153
11.14 DMZ host 157
11.14.1 Overview 157
11.14.2 Enable internet users to access LAN resources 157
11.15 UPnP 161
11.16 TR069 162
12 System settings 165
12.1 LAN settings 165
12.2 DHCP reservation 167
12.2.1 Overview 167
12.2.2 Assign static IP addresses to LAN clients 167
12.3 WAN settings (wireless router mode) 169
12.3.1 Change MTU value 169
12.3.2 Change the WAN speed and duplex mode 170
12.3.3 Change the MAC address of the WAN port 171
12.3.4 Change the service name and server name 171
12.4 Time settings 173
12.4.1 Sync system time with the internet time 173
12.4.2 Set the time manually 173
12.5 Login password 174
12.6 Reboot and reset 175
12.6.1 Reboot the router 175

12.6.2 Reset the router 175
12.7 Upgrade firmware 177
12.7.1 Online upgrade 177
12.7.2 Local upgrade 178
12.8 Backup/Restore 180
12.8.1 Backup the configurations of the router 180
12.8.2 Restore previous configurations of the router 181
12.9 Remote management 183
12.9.1 Overview 183
12.9.2 Enable Tenda techical support to acces and manage the web UI 184
12.10 System status 186
12.10.1 Basic information 186
12.10.2 Connection status 187
12.10.3 LAN status 189
12.10.4 Wi-Fi status 190
12.10.5 IPv6 status 191
12.11 System log 192
12.12 Automatic maintenance 193
Appendix 194
A.1 Configuring the computer to obtain an IPv4 address automatically 194
A.1.1 Windows 10 194
A.1.2 Windows 8 197
A.1.3 Windows 7 199
A.2 Acronyms and abbreviations 201

1 Get to know your device

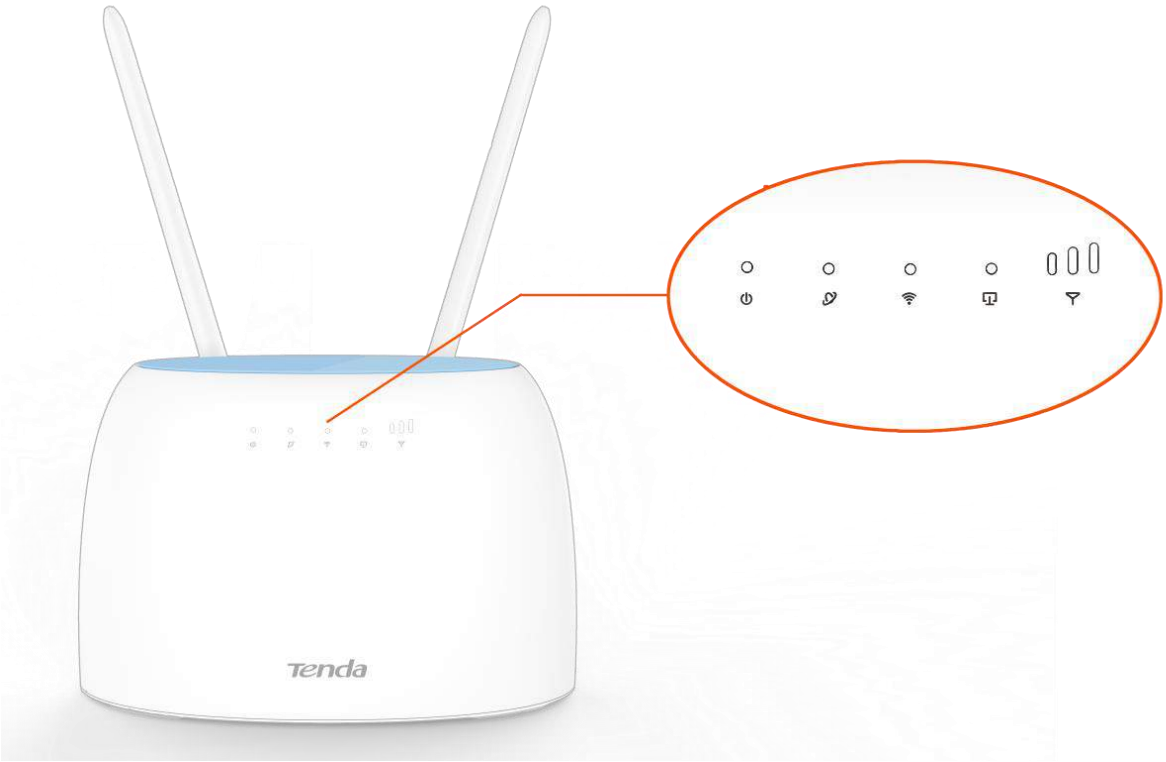
1.1 Introduction

The Wi-Fi 4G router series, powered by built-in 4G module, provides fast 4G LTE internet access. It realizes instant internet access with just a SIM card and achieves simultaneous communication with multiple devices. Different models feature varied performance and functions.

Model / Feature	4G03	4G06	4G09
4G LTE category	CAT4	CAT4	CAT6
Wi-Fi network	2.4 GHz	2.4 GHz	2.4 GHz & 5GHz
Wireless rate	2.4 GHz: 300 Mbps	2.4 GHz: 300 Mbps	2.4 GHz: 300 Mbps 5 GHz: 867 Mbps
4G antennas	Internal	Two 5 dBi external antennas	Two 5 dBi external antennas
Ethernet port	2*FE	2*FE	2*GE
App management	√	√	√
Telephone port	-	√	-

1.2 LED indicators

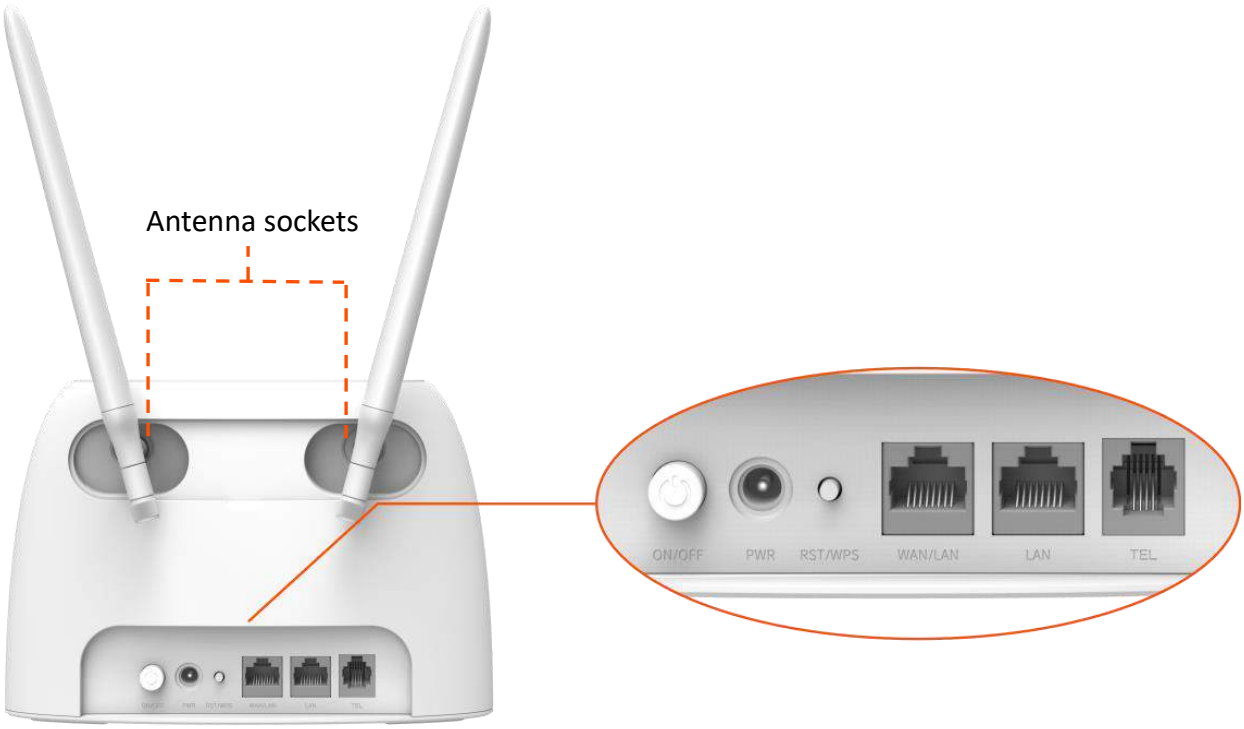
The Wi-Fi 4G router series share the same LED indicators. 4G09 is used for illustration here.



LED indicator	Status	Description
(Power indicator)	Solid on	The router is powered on properly.
	Off	The router is powered off or not powered on properly.
(Internet indicator)	Solid on	The router is connected to the internet.
	Off	The router fails to connect to the internet.
(Wi-Fi indicator)	Solid on	The Wi-Fi network of the router is enabled.
	Blinking	The router is performing WPS negotiation.
	Off	The Wi-Fi network is disabled.
(LAN indicator)	Solid on	At least one device is connected to a LAN port of the router.
	Off	No device is connected to any port of the router.
(Signal strength indicator)	3 bars	Excellent signal.
	2 bars	Good signal.
	1 bar	Fair signal.
	Off	No 4G/3G signal.

1.3 Ports and buttons

Only 4G06 is equipped with a telephone port, while 4G09 and 4G03 are not. 4G06 is used for illustration here.

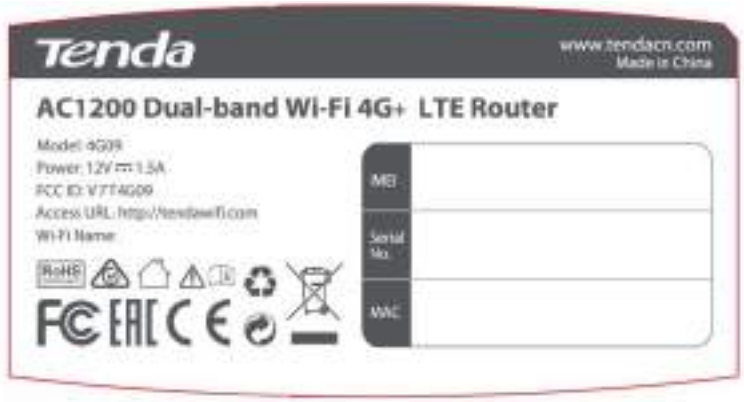


Port/Button	Description
ON/OFF	Power on/off button. It is used to power on or power off the router.
PWR	Power jack. It is used to connect to the included power adapter.
RST/WPS	It serves as both reset and WPS button. • Reset: When the router is working properly, hold down the button for about 8 seconds and release it when all indicators light off and then light up. The router is restored to factory settings. • WPS: Press the button and release it, the (Wi-Fi) LED indicator blinks. The router gets ready for WPS negotiation. Configure WPS-enabled wireless devices within 2 minutes to start WPS negotiation with the router.
WAN/LAN	It is a fast Ethernet port, which can serve as a WAN port or a LAN port. By default, it is a LAN port. • When the router is under 3G/4G router mode, it serves as a LAN port. • When the router is under wireless router mode, it serves as a WAN port. • When the wireless repeating function is enabled, do not connect any device to this port. • When the AP mode is enabled, it serves as a LAN port.

Port/Button	Description
LAN	It is a LAN port used to be connected to wired devices, such as a computer. When the IPTV function is enabled under the wireless router mode, it serves as the IPTV port to be connected to the set top box.
TEL	Telephone port. It is used to connect to a landline telephone using the included telephone cable for voice service. • Voice service is only available under the 3G/4G router mode with a SIM card inserted, and ensure that the mobile data is enabled and the router can access the internet before using the voice service. • Internet access is unavailable when you are making phone calls through 3G network.
Antenna sockets	It is used to connect to the detachable antennas.

1.4 Label

The bottom label shows the Access URL, Wi-Fi Name, IMEI, Serial No. and MAC address of the router. See the following figure.



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

Wi-Fi Name: It specifies the default Wi-Fi name of the router.

IMEI: It is the unique mobile device identification code of the router.

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

MAC: It specifies the MAC address of the router.

2 Web UI

2.1 Log in to the web UI

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

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**.

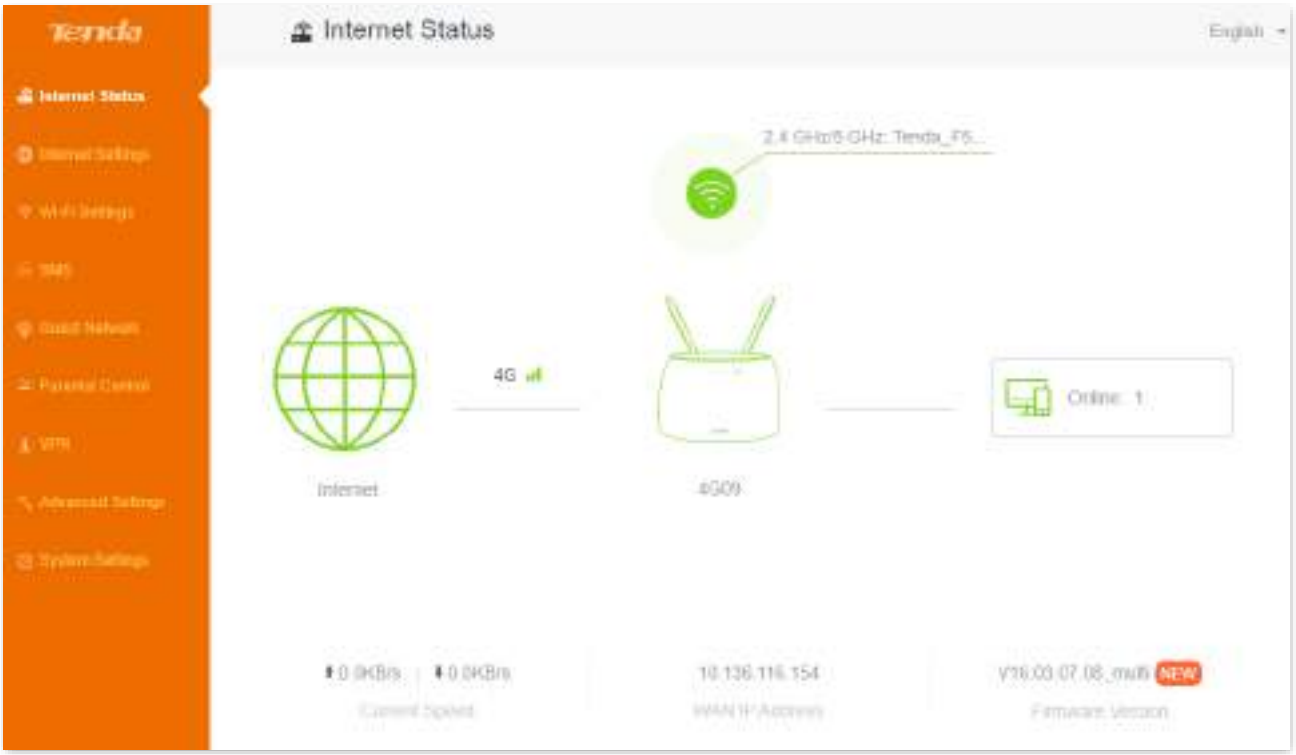
---End

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 of the router, and Configuring the computer to obtain an IP address automatically.
- Restore the router to factory settings and try again.

The following page appears.



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.

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:

- View the internet status
- View wireless information
- View system information
- View online devices information

3.1 Internet status

TIP

The router supports both 3G/4G router mode and wireless router mode, and function may differ under different modes. Refer to Operating mode to set the operating mode of the router.

3.1.1 Under 3G/4G router mode

To view the internet status:

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

Step 2 Choose **Internet Status**.

---End

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

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

Try the following solutions:

- Navigate to **Internet Settings**, and ensure that the **Mobile Data** and **Data Roaming** functions are enabled, and the mobile data option is set to **4G Preferred**.
- Navigate to **Internet Settings**, and ensure that the dial-up settings parameters are identified by the router automatically. If not, check whether the SIM card is inserted properly, or refer to create an APN profile manually to access the internet to configure the router.
- If the SIM card is identified successfully but no internet access is available, your SIM card may have run out of money. Contact your ISP for more help.

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

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

3.1.2 Under wireless router mode

To view the internet status:

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

Step 2 Choose **Internet Status**.

---End

When the link between the **Internet** and **4G09** is clear as shown below, the router is connected to the internet successfully and you can access the internet via the router.

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

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

When “The user name and password are incorrect.” is shown 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:

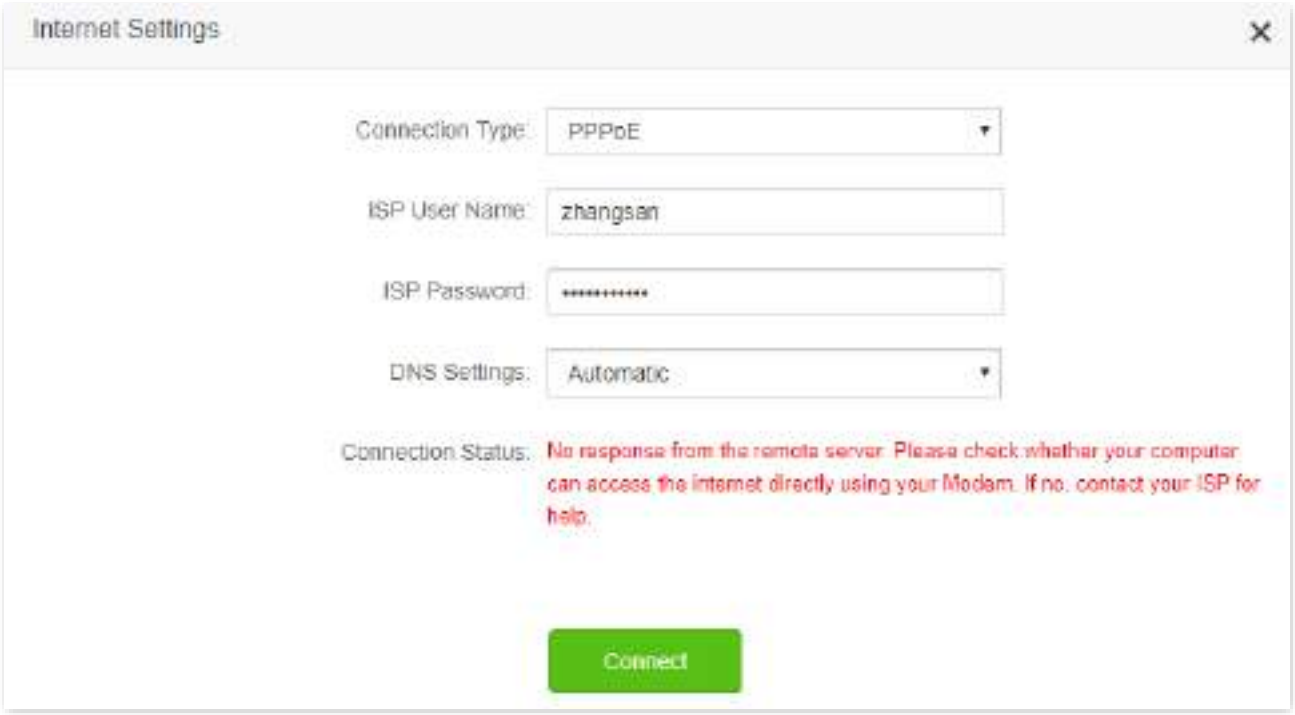
- Pay attention to case sensitivity, such as “Z” and “z”.
- Pay attention to similar letters and numbers, such as “I” and “1”.
- Ensure the completeness of account parameters, such as “0755000513@163.gd”, not “0755000513”

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.

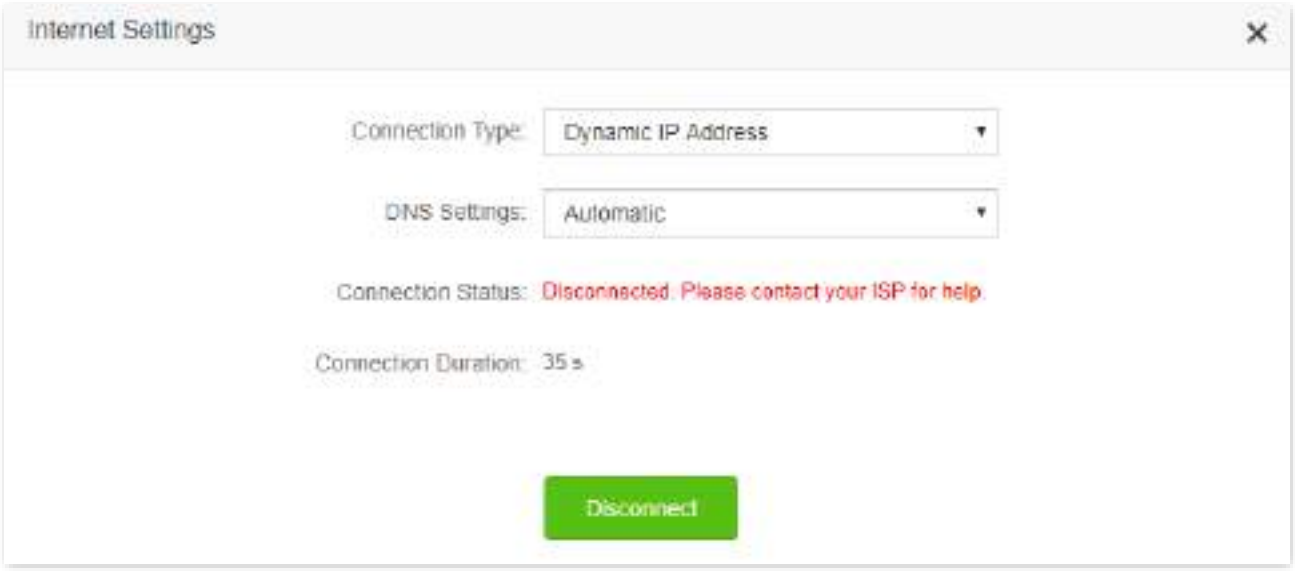
If the problem persists, contact your ISP for help.



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.
- Ensure that your internet service does not expire.

If the problem persists, contact Tenda technical support.


Internet Settings
Connection Type:
Dynamic IP Address
DNS Settings:
Automatic
Connection Status:
Disconnected. Please contact your ISP for help.
Connection Duration:
35 s
Disconnect

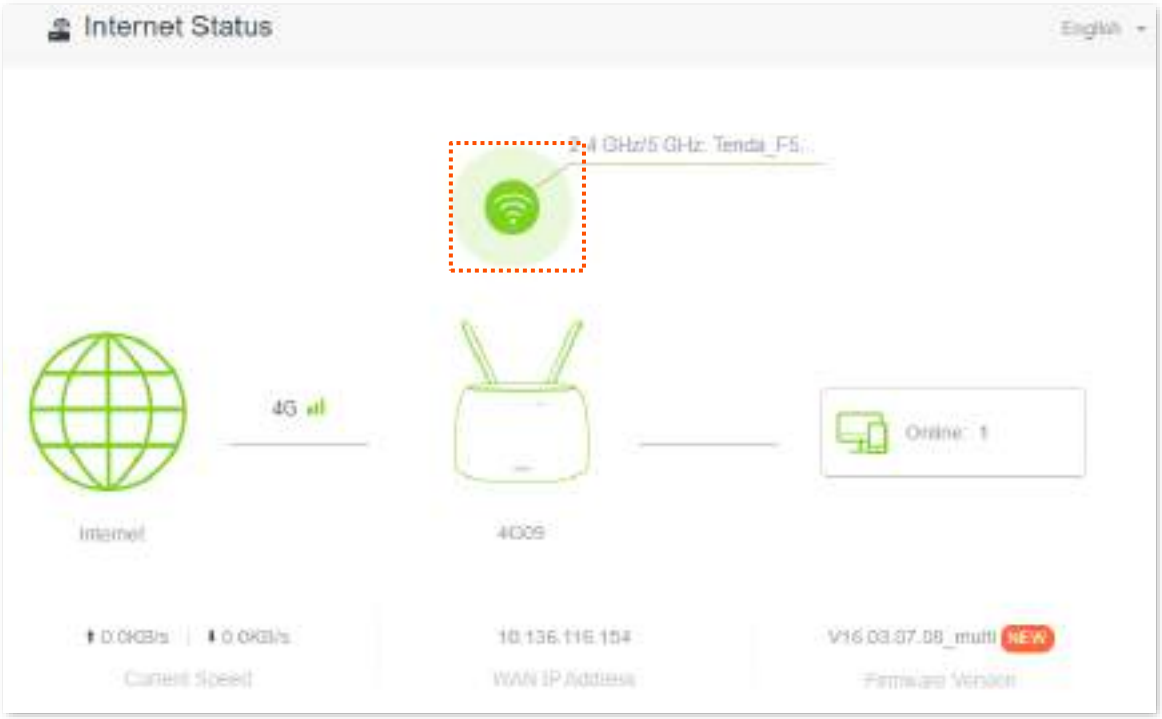
3.2 Wireless information

To view or configure 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

You can change wireless parameters as required.

3.3 System information

To view the system information:

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

Step 2 Choose **Internet Status**.

Step 3 Click .

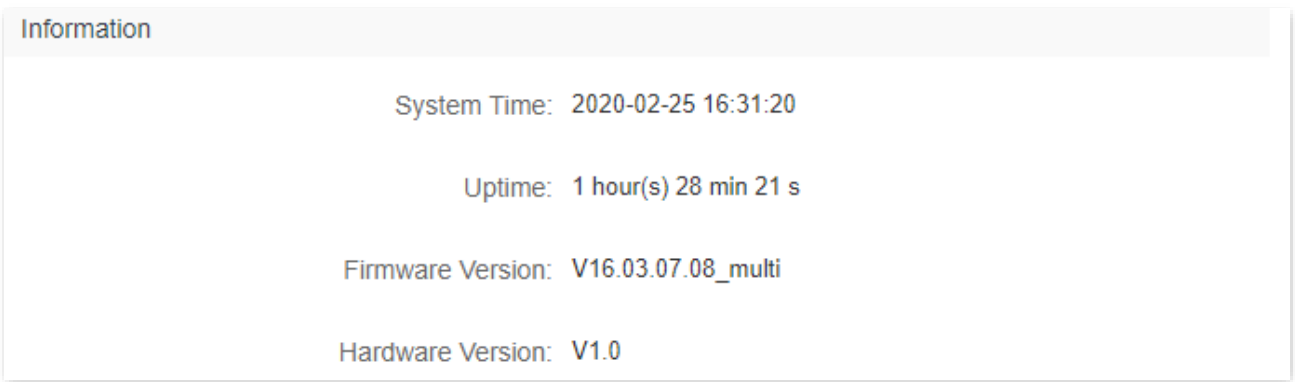
---End

TIP

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

3.3.1 Basic information

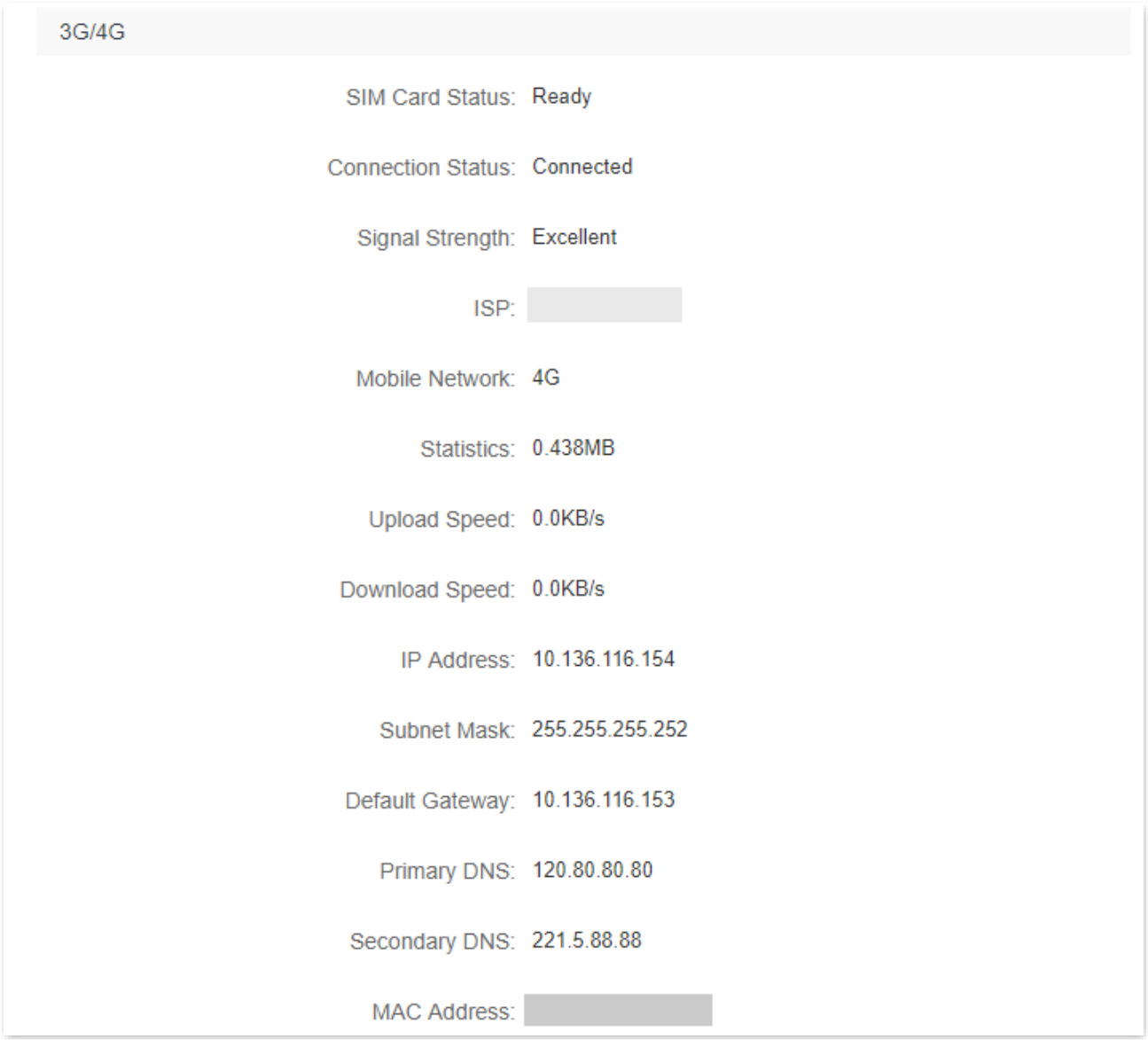
In this part, you can view the basic information of the router, such as system time, uptime and firmware version and hardware version.



3.3.2 Connection status

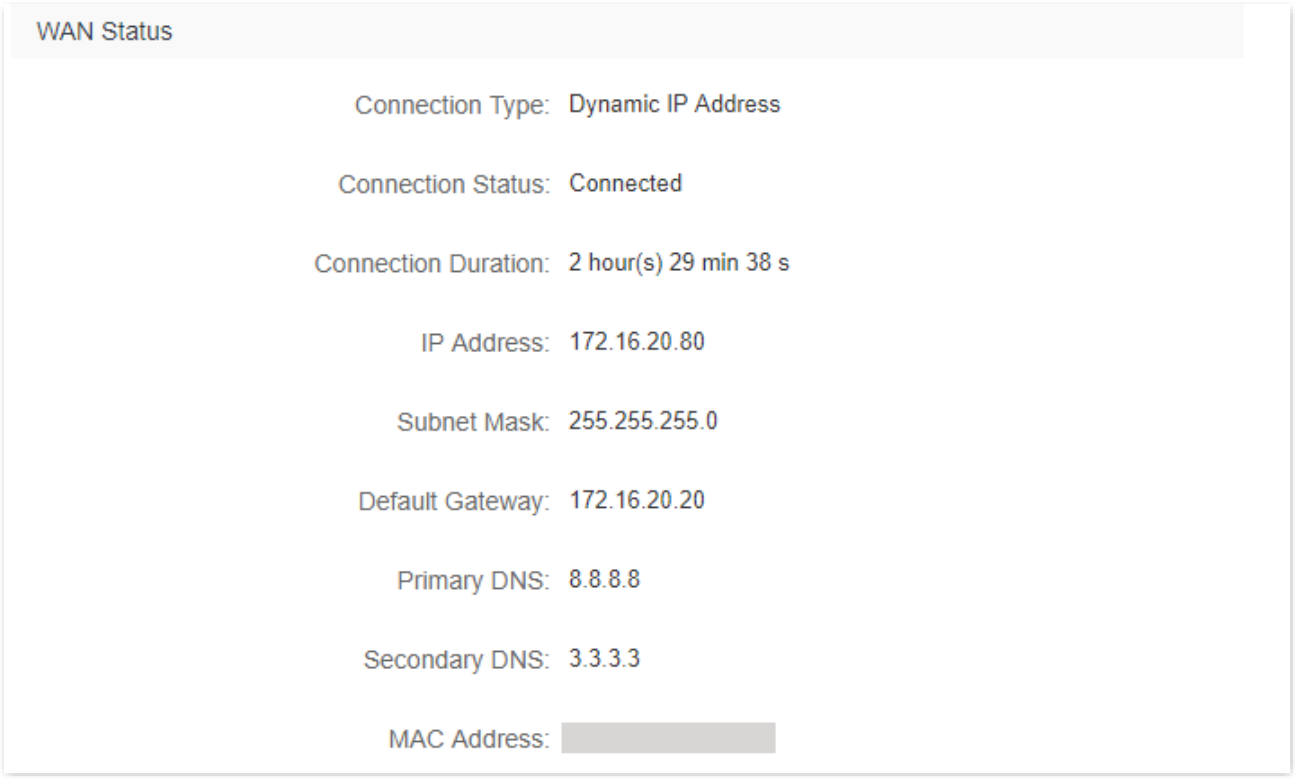
3G/4G router mode

Under the 3G/4G router mode, you can view the information of the SIM card and 3G/4G network in this part.



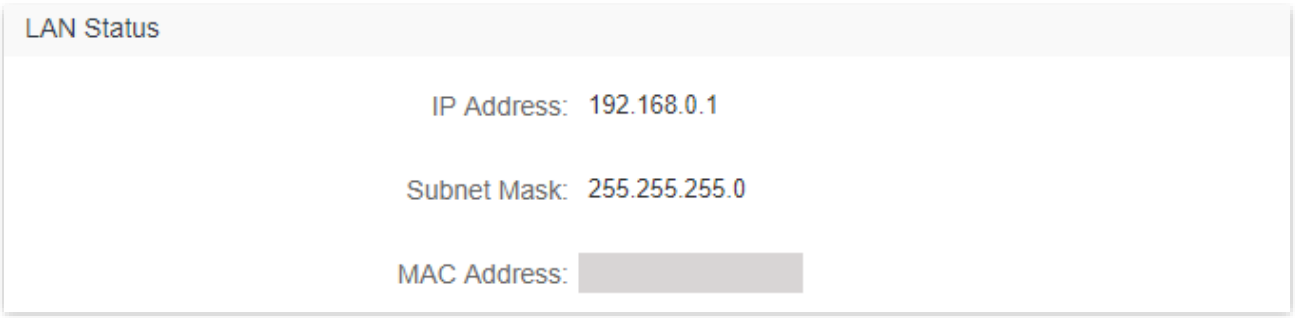
Wireless router mode

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



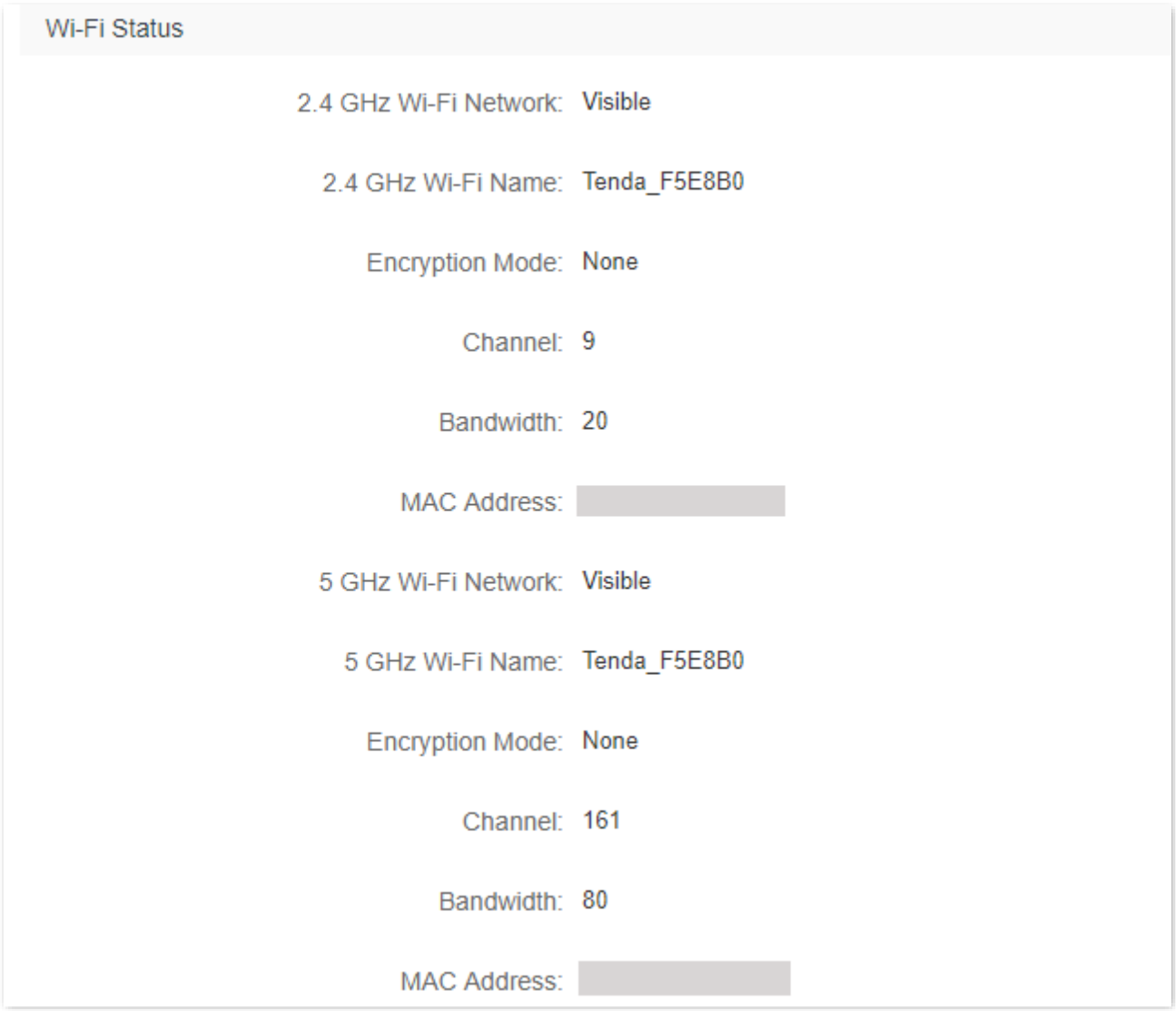
3.3.3 LAN status

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



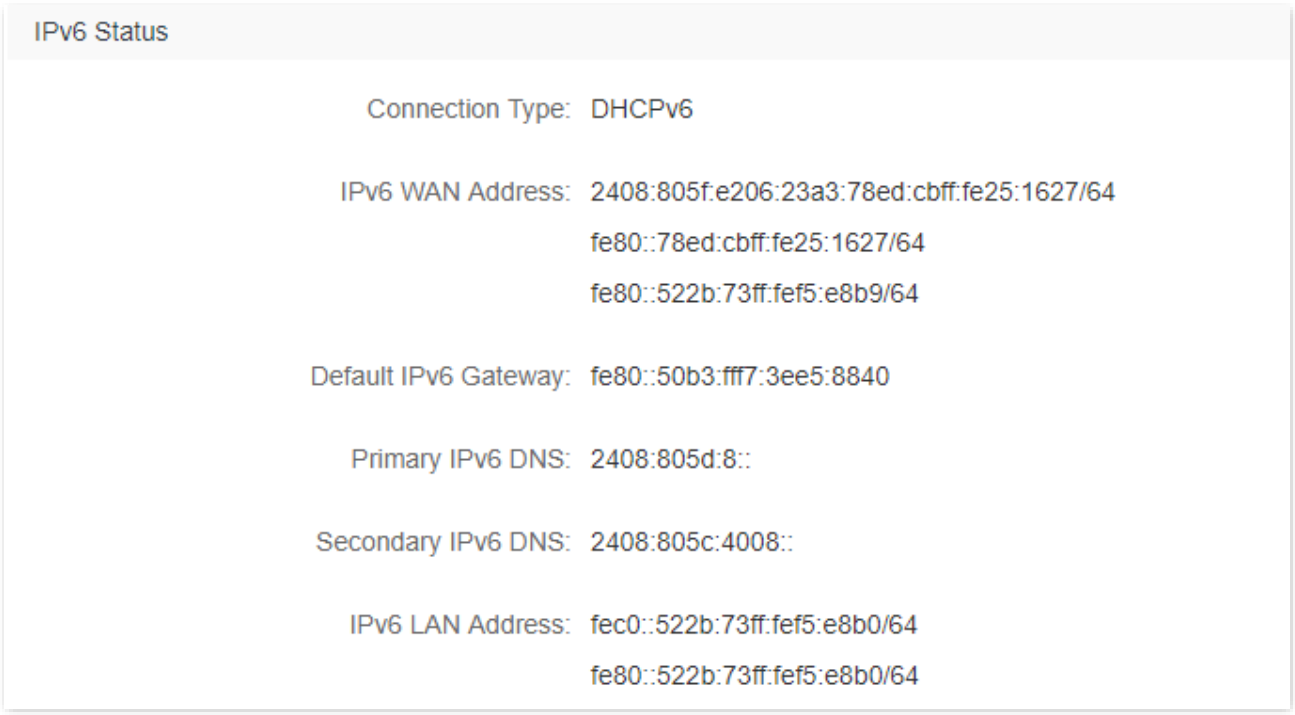
3.3.4 Wi-Fi status

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

In 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 view and add devices to the blacklist.

To access the page:

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

Step 2 Choose **Internet Status**.

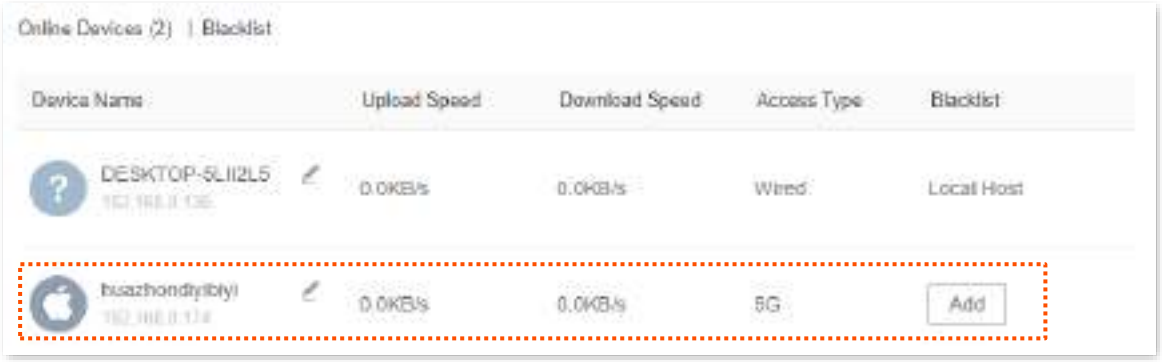
Step 3 Click .

---End

3.4.1 Add devices to the blacklist

Adding devices to the blacklist to block the internet access:

Step 1 Choose **Online 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 the information of 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

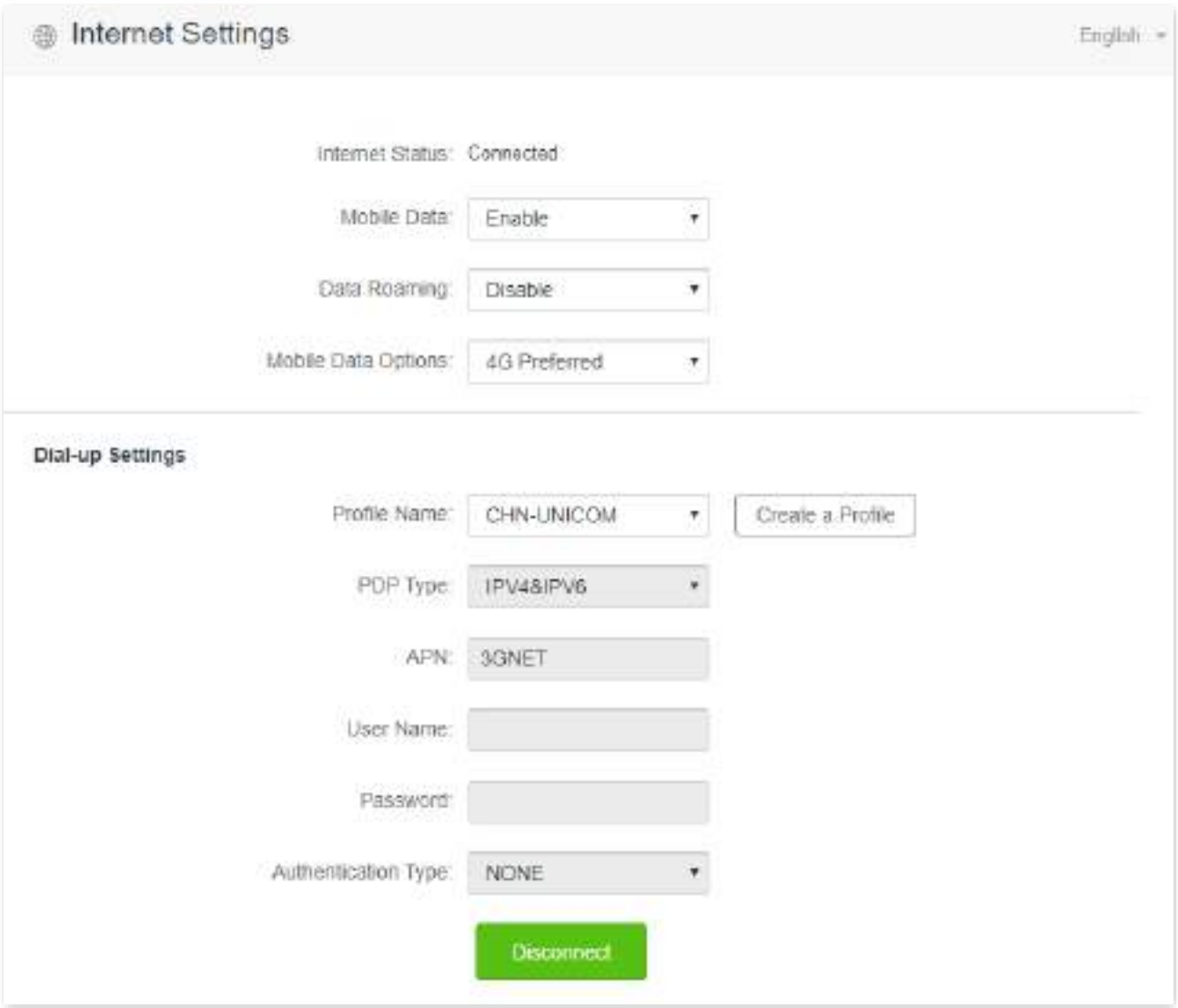
4 Internet settings

By configuring the internet settings, you can achieve the shared internet access (IPv4) for multiple users within the LAN. The router supports accessing the internet under both 3G/4G router mode and wireless router mode, and the configuring procedures differ.

4.1 Access the internet with a SIM card

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

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



Parameter description

Parameter	Description
Internet Status	It specifies the internet connection status of the SIM card.
Mobile Data	It is used to enable or disable the mobile data traffic. When it is disabled, you cannot access the internet through the router.
Data Roaming	It is used to enable or disable data roaming for the SIM card inserted in the router. Data roaming means the data usage produced when you are outside the coverage of your ISP. You can disable data roaming to avoid roaming data usage and charges.
Mobile Data Options	It specifies the mobile network type for internet access.
Profile Name	Generally, all these parameters are predefined in the SIM card. The router will identify these parameters automatically, which cannot be changed, and use them for dial-up. If the router fails to identify these parameters of your SIM card, you must enter them manually by clicking **Create a Profile** and dial up for internet access. If the router cannot identify these parameters, contact your ISP for them.
PDP Type	
APN	
User Name	
Password	
Authentication Type	
Create a Profile	It is used to create an APN dial-up profile when the router fails to identify these parameters automatically.

4.1.1 Change mobile network preference

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

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

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.

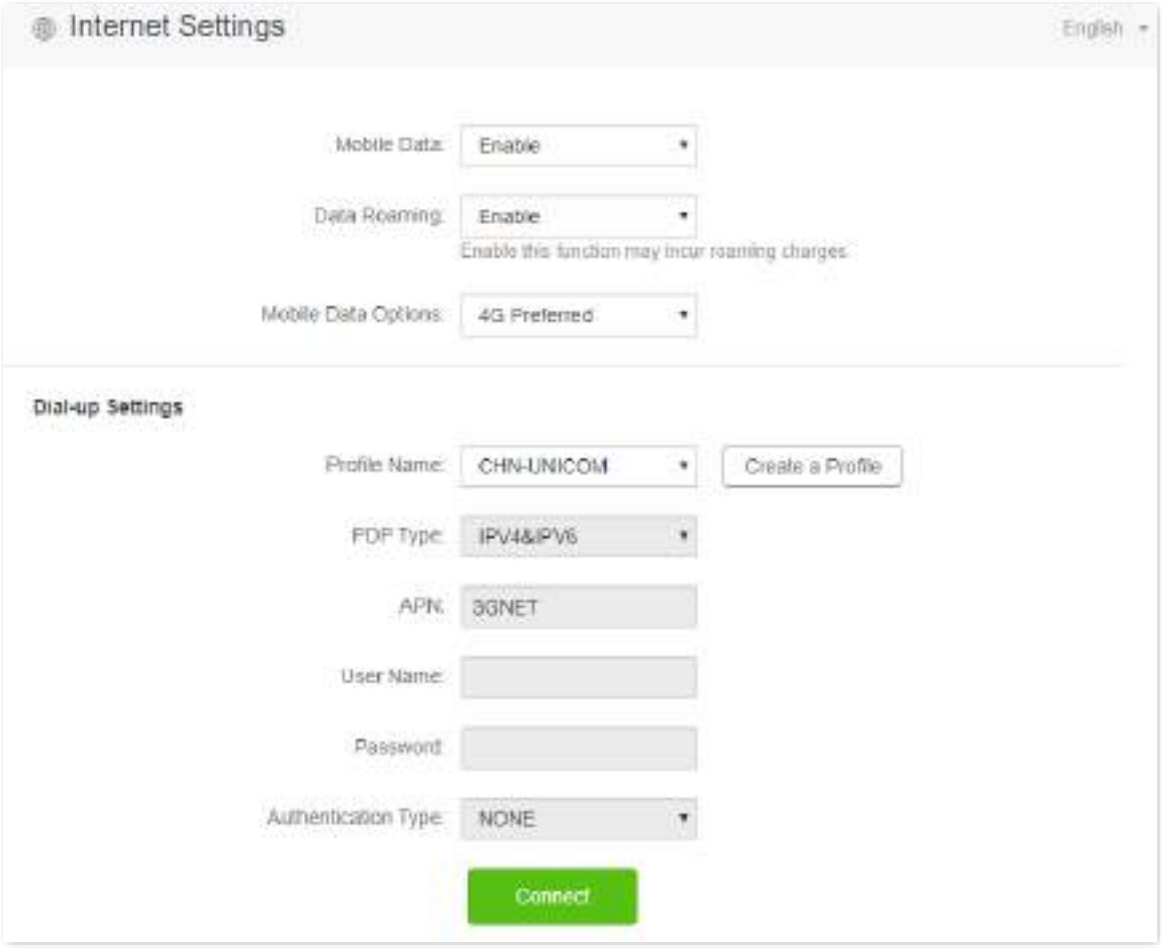
Step 2 Choose **Internet Settings**.

Step 3 Set **Mobile Data** to **Enable**.

Step 4 Set **Data Roaming** to **Enable**.

Step 5 Set **Mobile Data Option** to **4G Only**.

Step 6 Click **Connect**.



---End

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

4.1.2 Create an APN profile mannully to access the internet

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

Configuring procedure:

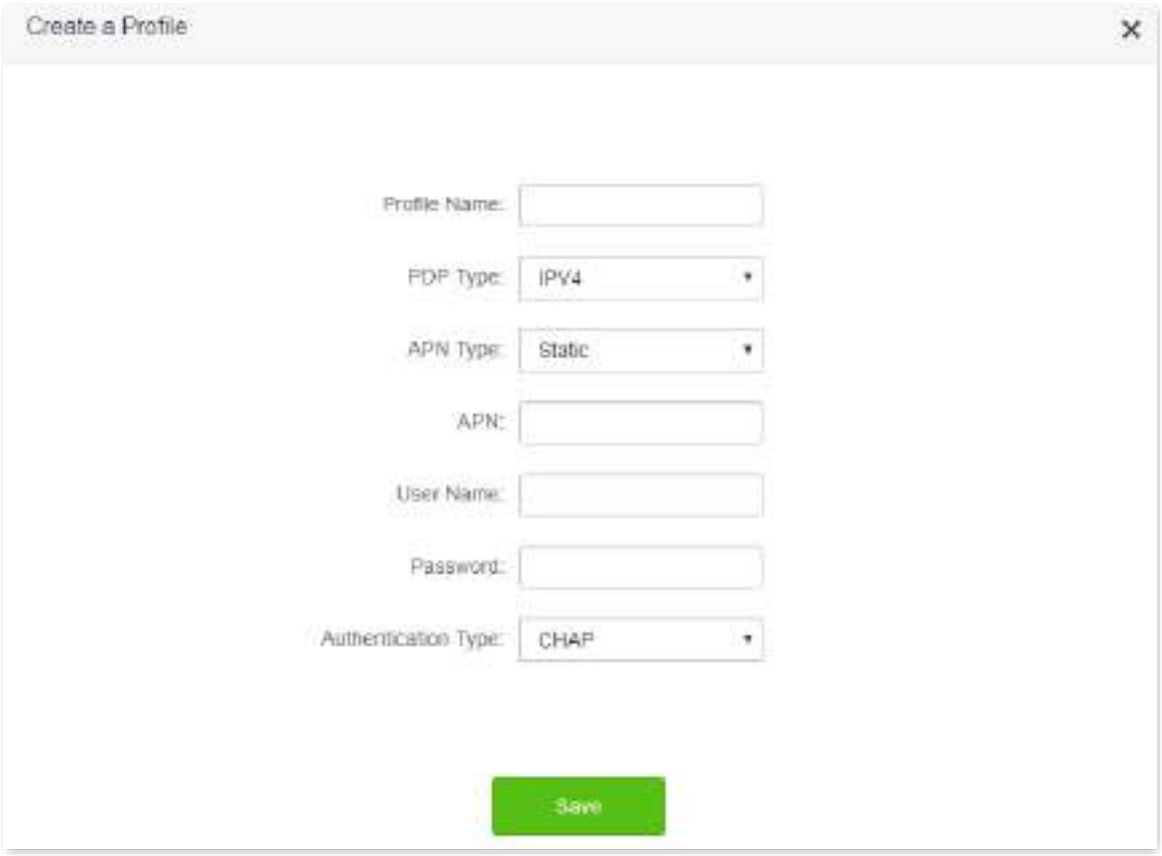
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Settings**.

Step 3 Click **Create a Profile**.

Step 4 Enter required parameters inquired from your ISP.

Step 5 Click **Save**.



---End

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

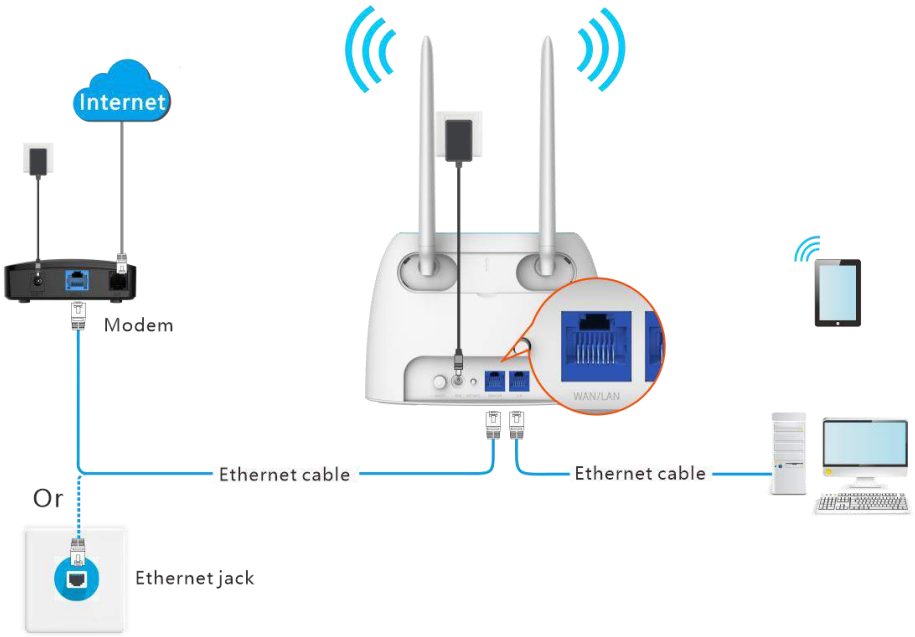
4.2 Access the internet through the WAN port

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

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

4.2.1 Access the internet with a PPPoE account

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



Configuring procedure:

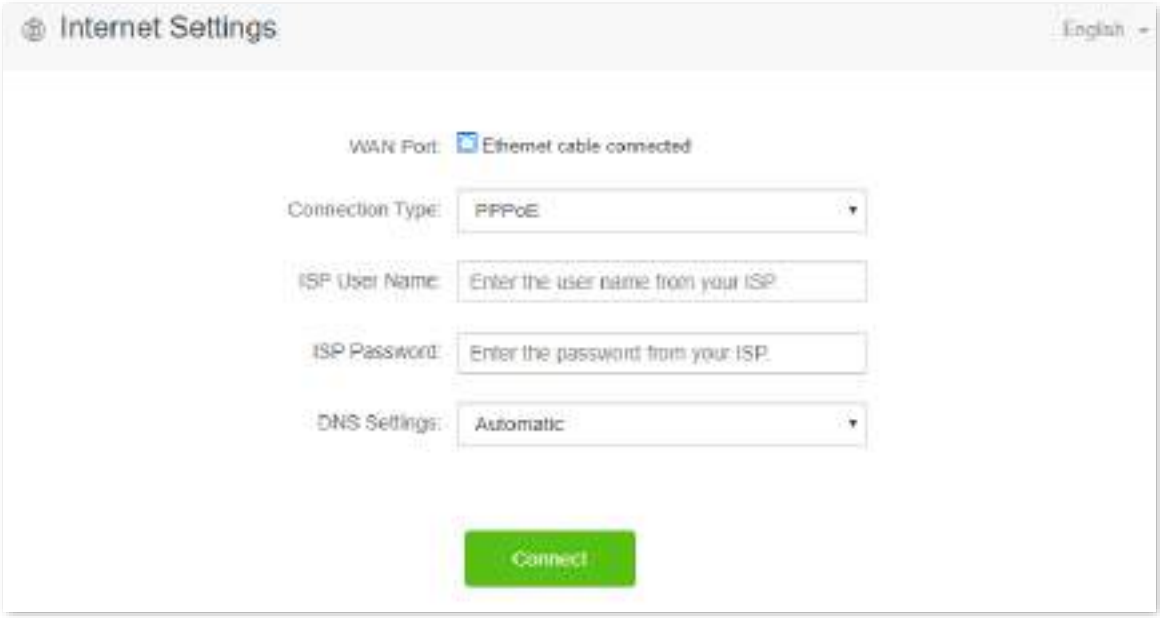
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Settings**.

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

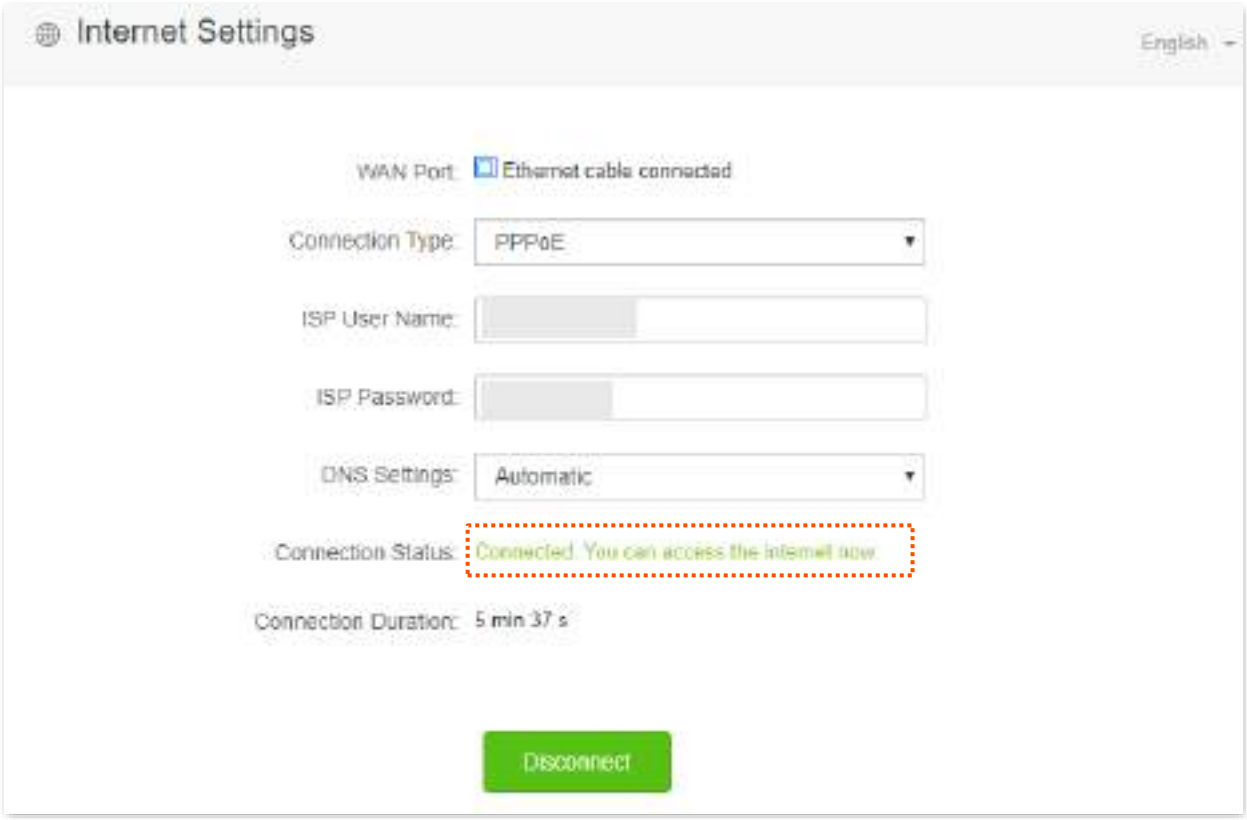
Step 4 Enter the **ISP User Name** and **ISP Password**.

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.



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

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

Parameter description

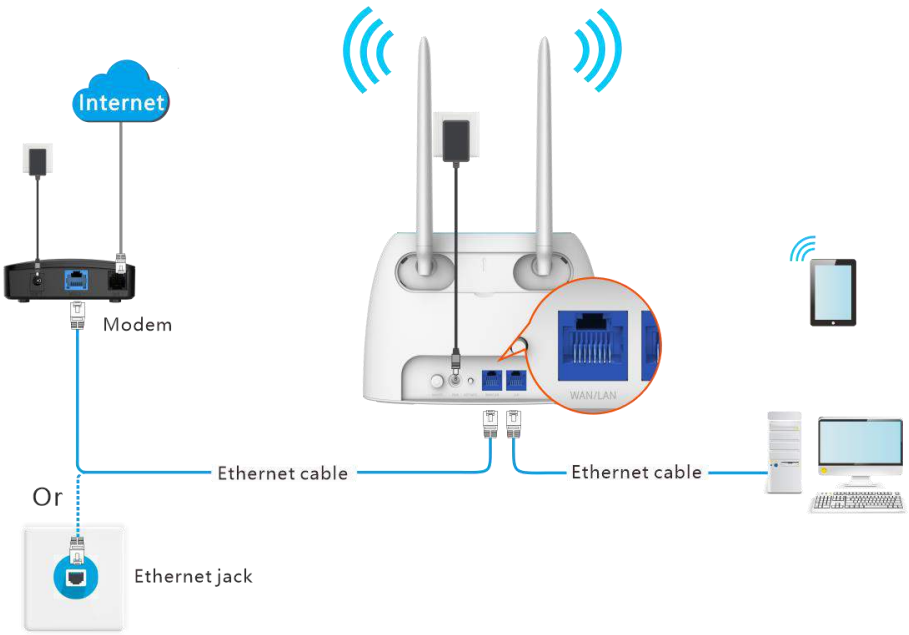
Parameter	Description
ISP User Name	When PPPoE is chosen as the connection type, you need to enter the user name and password provided by your ISP to access the internet.
ISP Password	
DNS Settings	It specifies the obtaining method of WAN port DNS address, which is **Automatic** by default. • Automatic: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

4.2.2 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 have a router with internet access and want to add a 4G09 as the other one.

The application scenario is shown below.



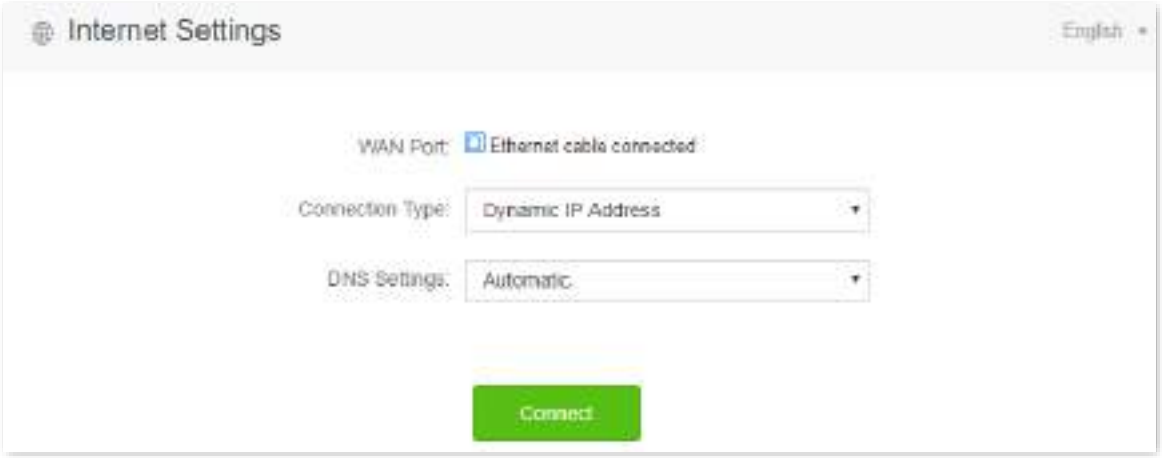
Configuring procedure:

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**.

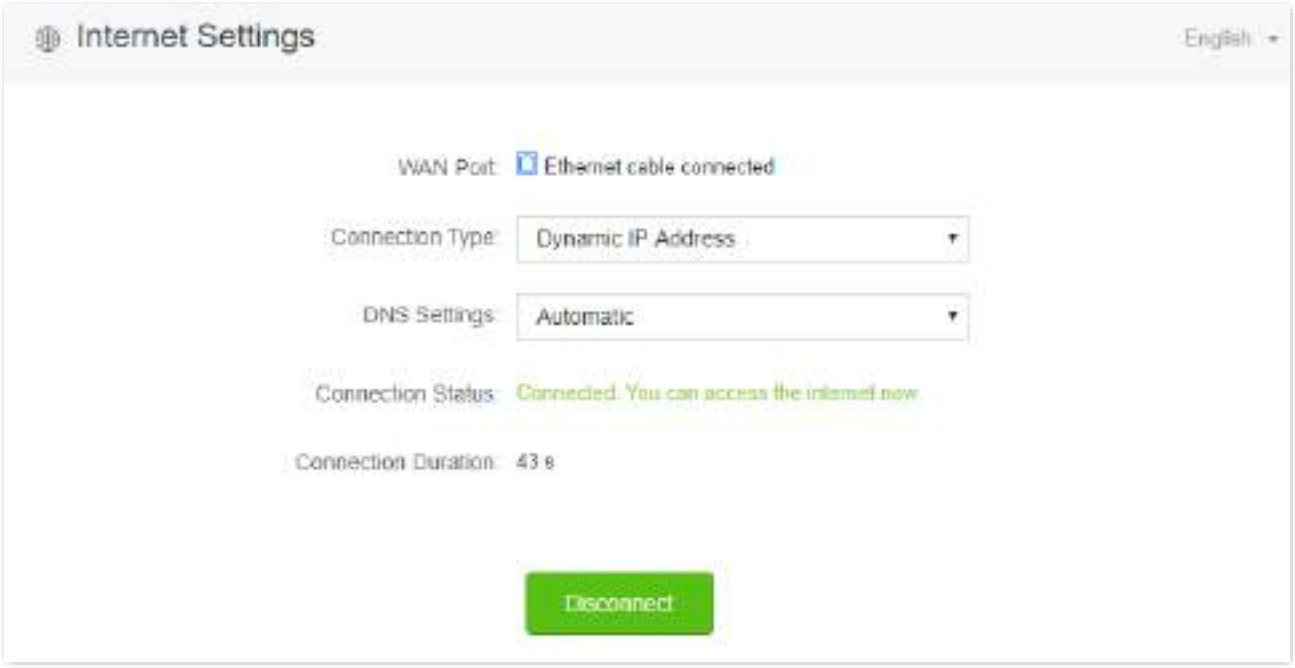
Step 3 Set **Connection Type** to **Dynamic IP Address**.

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 the information shown here.
Connection Duration	It specifies the duration since the router is connected to the internet.

4.2.3 Access the internet with static IP address information

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

Configuring procedure:

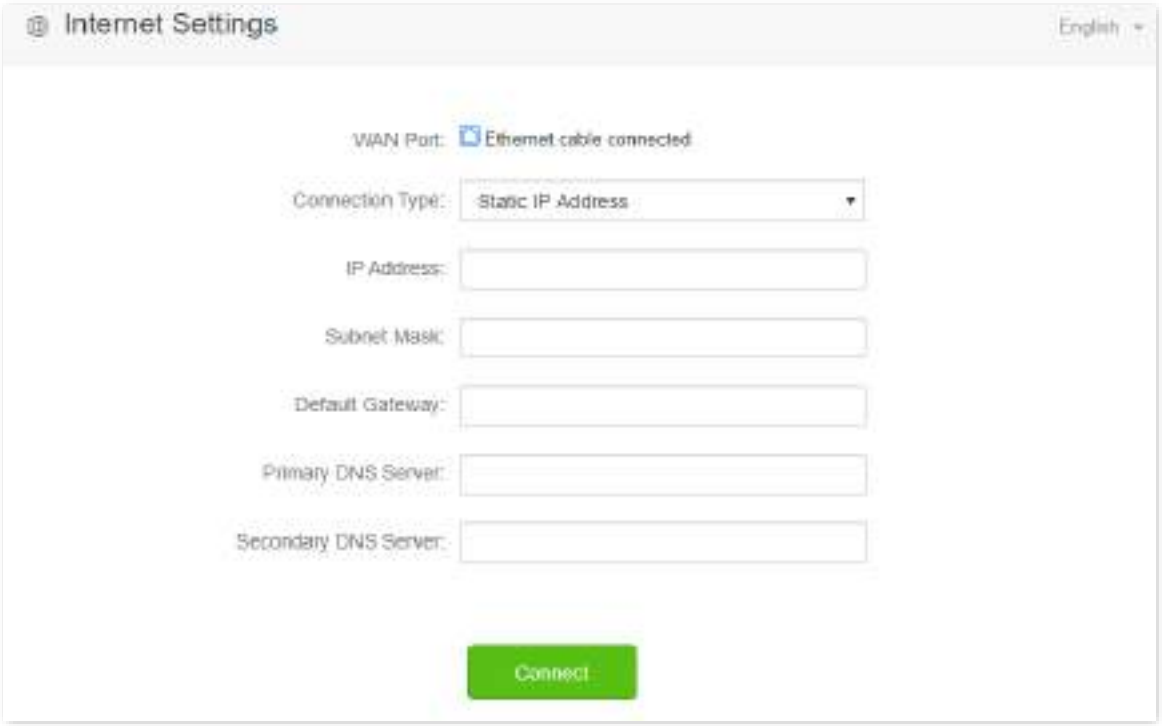
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Internet Settings**.

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

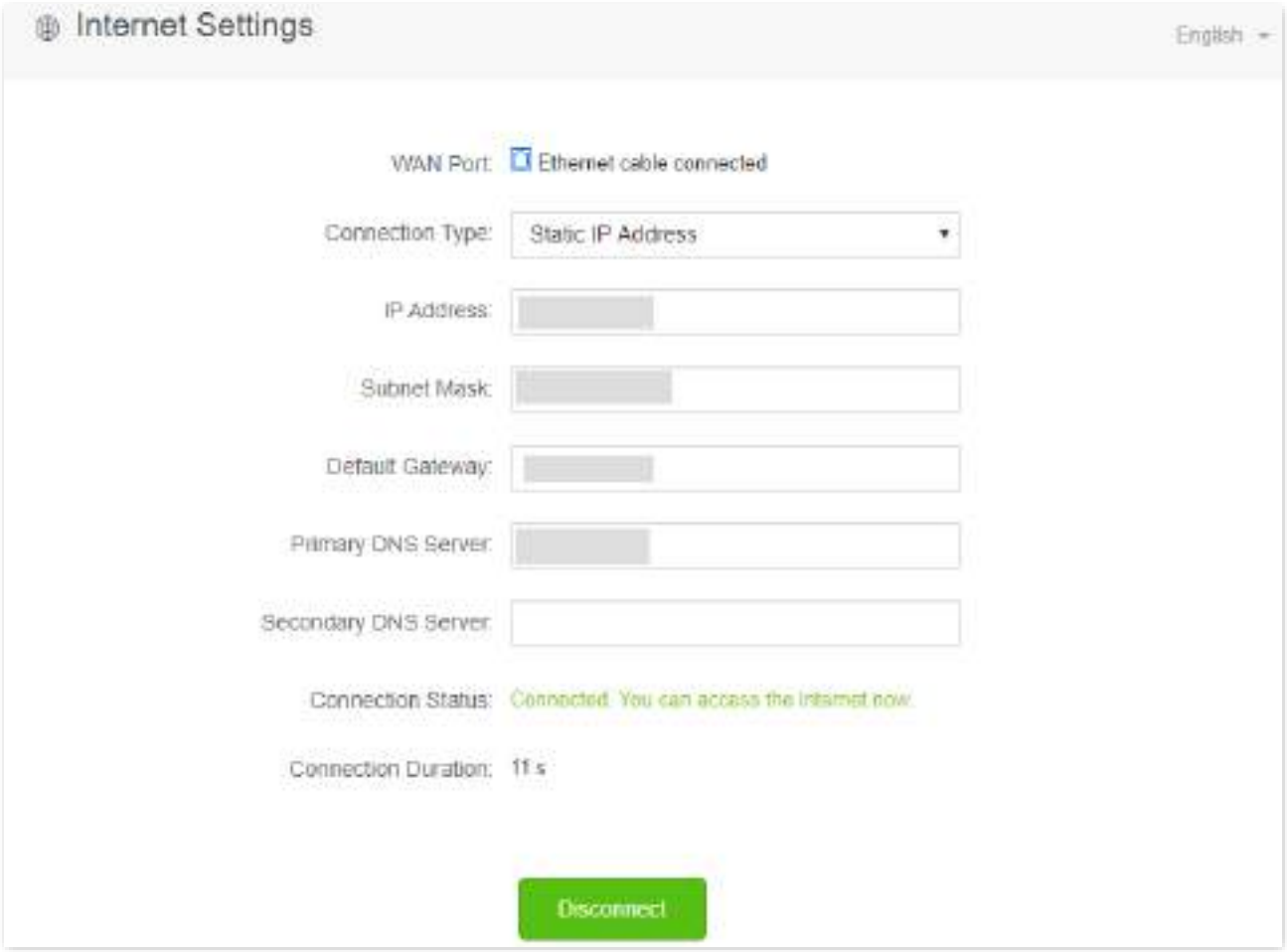
Step 4 Enter **IP Address**, **Subnet Mask**, **Default Gateway** and **Primary/Secondary DNS server**.

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 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 on the page.
Connection Duration	It specifies the duration since the router is connected to the internet.

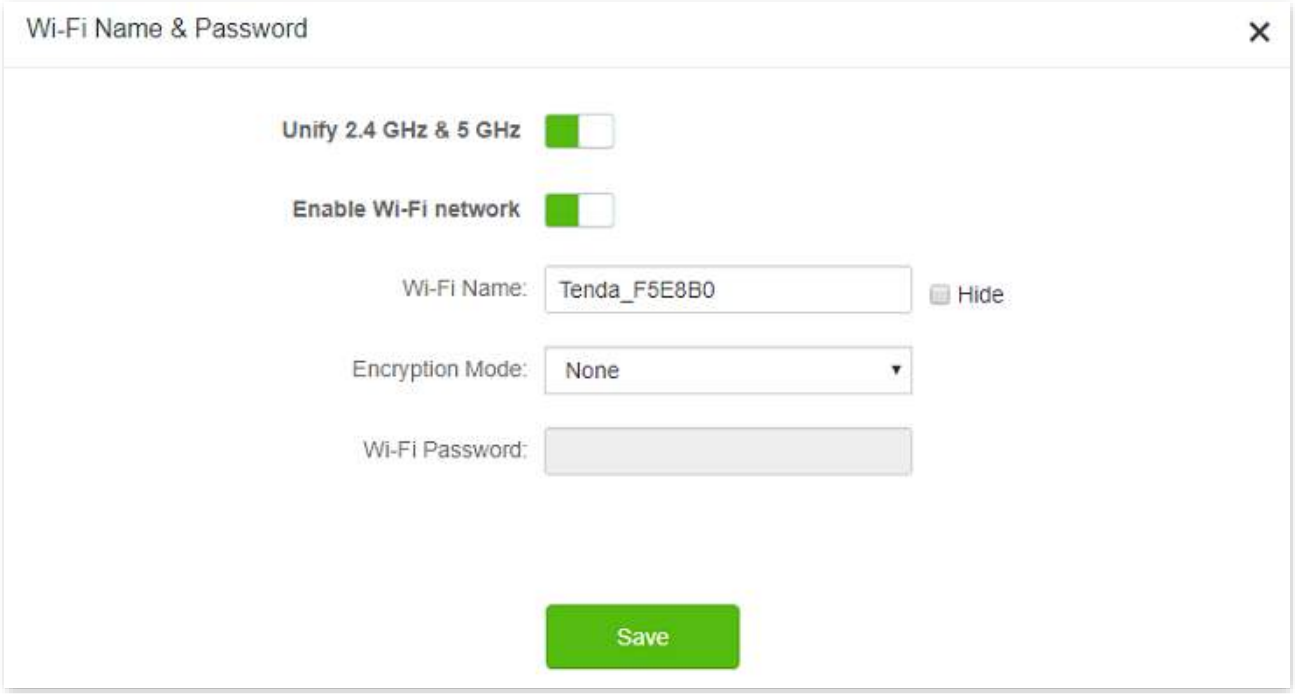
5 Wi-Fi settings

5.1 Wi-Fi name & password

5.1.1 Overview

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

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



Parameter description

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

Parameter	Description
2.4 GHz Network	You can enable or disable the 2.4 GHz network and 5 GHz network separately when the Unify 2.4 GHz & 5 GHz function is disabled. • If the wireless 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 wireless devices are close to the router, it is recommended to connect to the 5 GHz network.
5 GHz Network	
Wi-Fi Name	It specifies the Wi-Fi network name (SSID) of the corresponding Wi-Fi network.
Hide	It is used to hide the Wi-Fi name of the Wi-Fi network, to improve the security level of the Wi-Fi network. When this function is enabled, the Wi-Fi network is invisible to wireless devices. You need to enter the Wi-Fi name of the network on your wireless devices (such as a smart phone) manually if you want to join the network.
Encryption Mode	It specifies the encryption modes supported by the router, including: • **None**: It indicates that the Wi-Fi 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):** It indicates that WPA-PSK and WPA2-PSK are adopted to encrypt the network, providing both security and compatibility.
Wi-Fi Password	It specifies the password for connecting to the Wi-Fi network. You are strongly recommended to set a Wi-Fi password for security. It is recommended to use the combination of numbers, uppercase letters, lowercase letters, and special symbols in the password to enhance the security of the Wi-Fi network.

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

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

Configuring procedure:

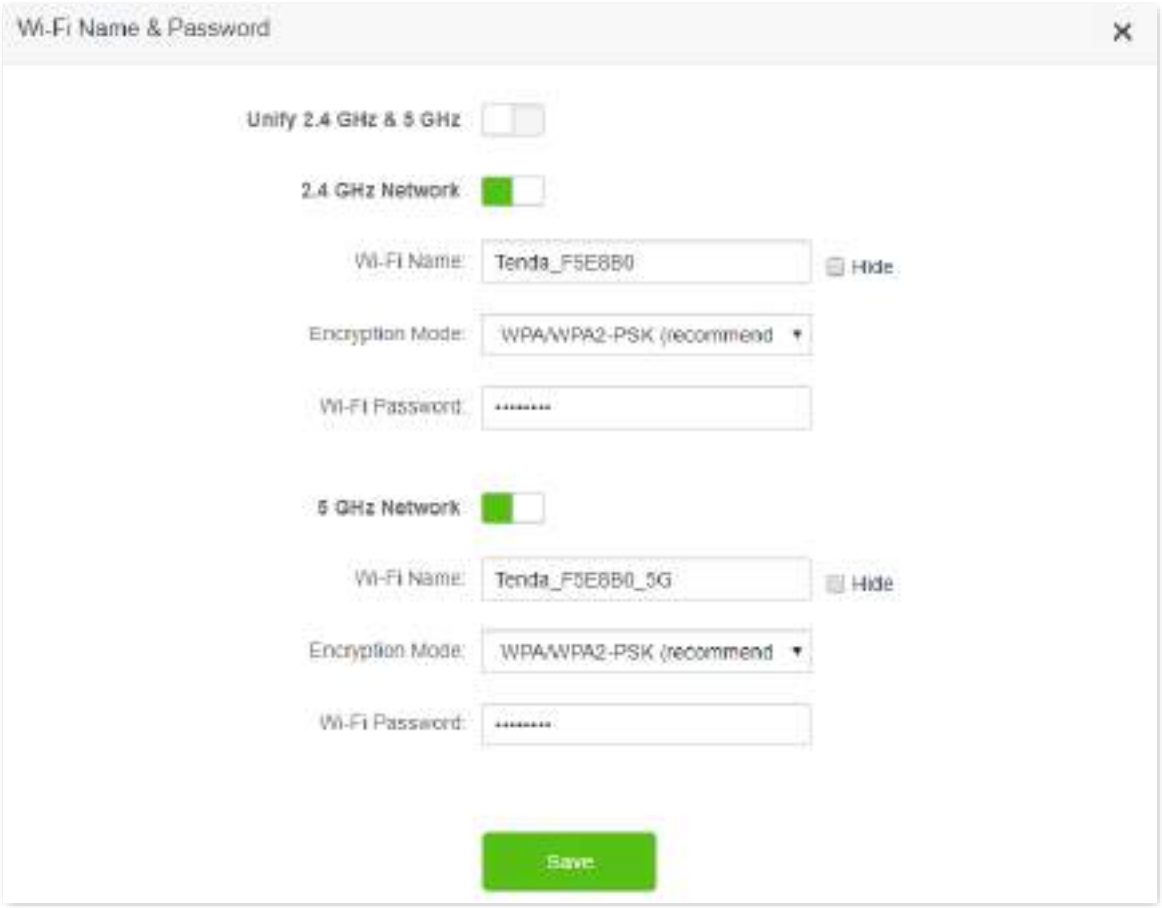
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Wi-Fi Settings** > **Wi-Fi Name & Password.**

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

Step 4 Customize the **Wi-Fi Name** and **Wi-Fi Password** of each Wi-Fi network.

Step 5 Click **Save**.



---End

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

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

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

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

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 **Wi-Fi Settings** > **Wi-Fi Name & Password.**

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

Step 4 Change the parameters of the 2.4 GHz network.

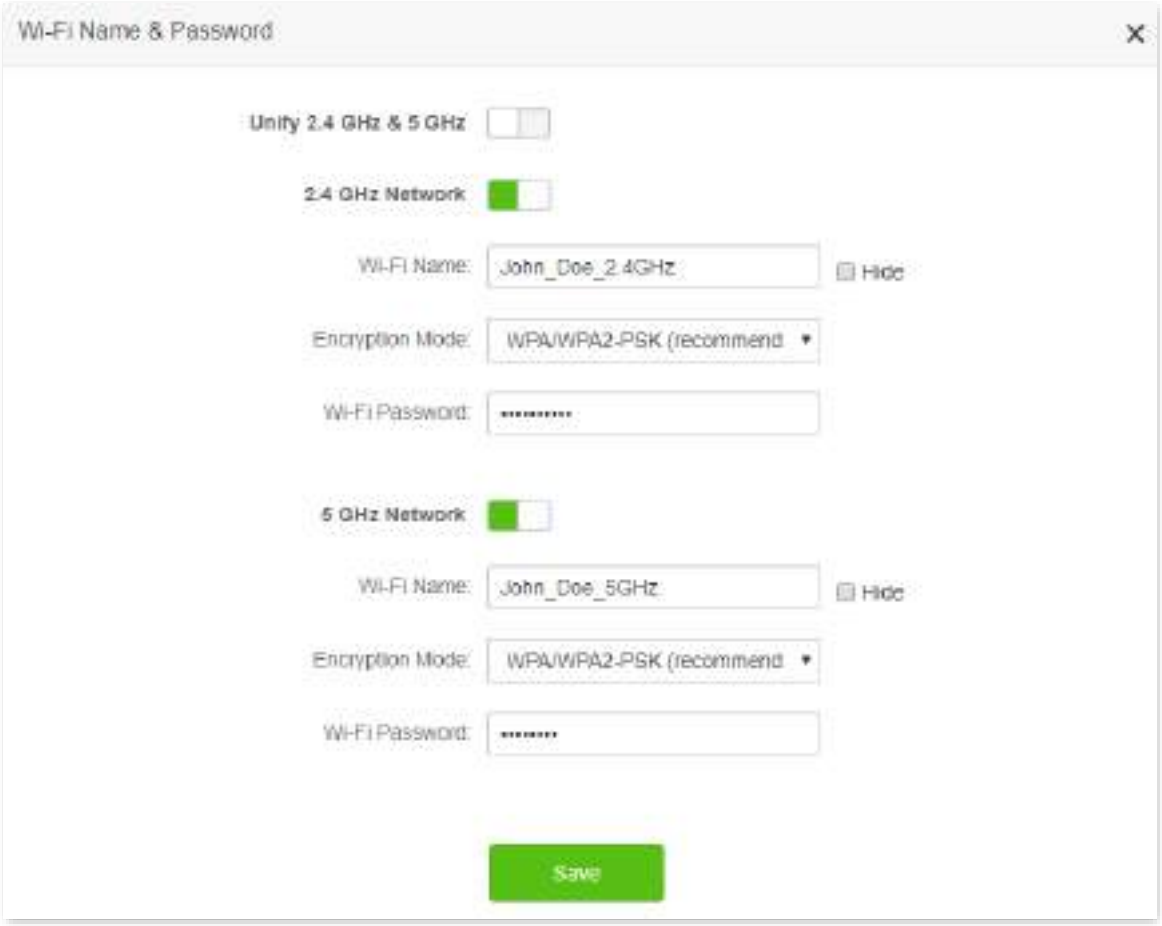
1. Change the **Wi-Fi Name** of the 2.4 GHz network, which is **John_Doe_2.4GHz** in this example.

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

Step 5 Change the parameters of the 5 GHz network.

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

Step 6 Click **Save**.



---End

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

5.1.4 Hide the Wi-Fi network

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

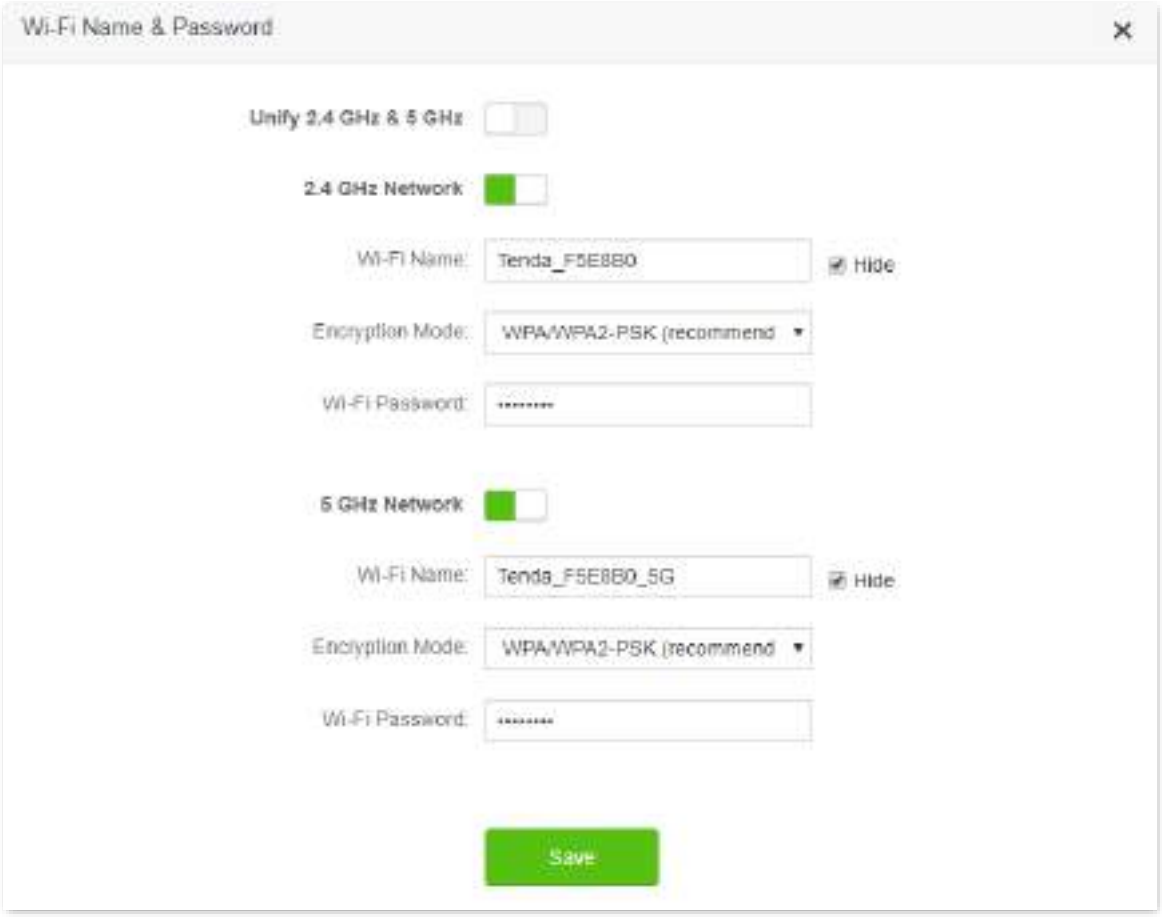
Configuring procedure:

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 **Wi-Fi Settings** > **Wi-Fi Name & Password.**

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

Step 4 Click **Save**.



---End

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

5.1.5 Connect to a hidden Wi-Fi network

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

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

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

TIP

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

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

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

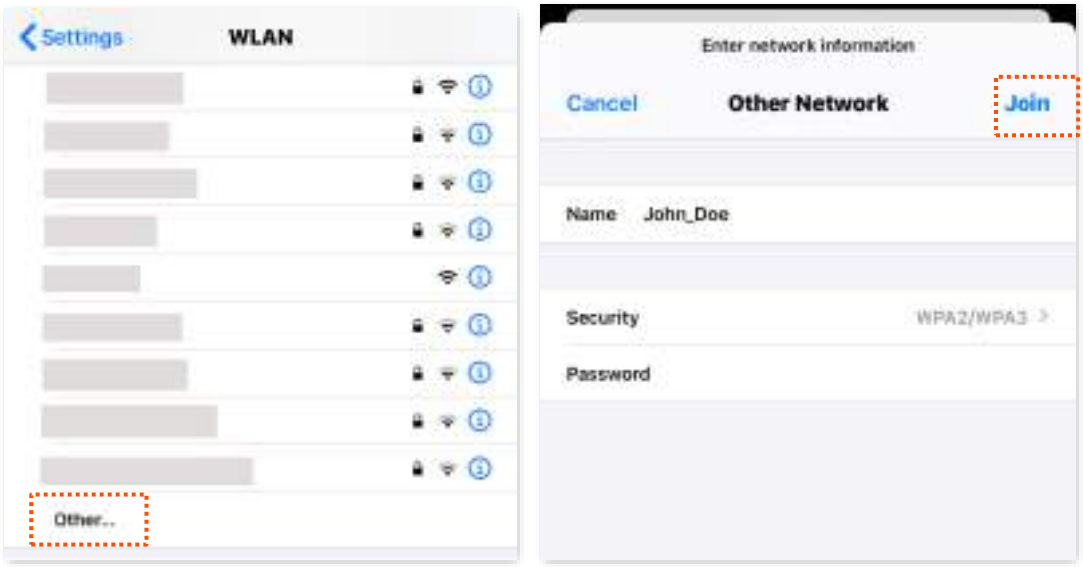
Step 2 Enable **WLAN**.

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

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

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

Step 6 Tap **Join**.



---End

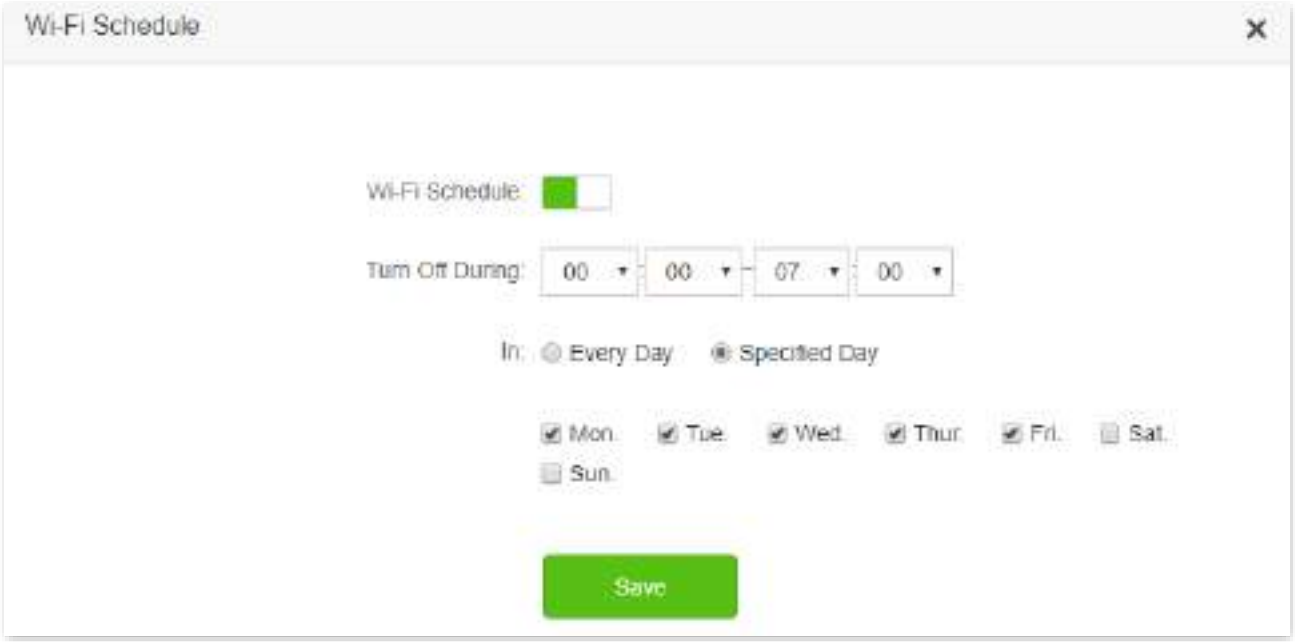
When completing the configurations, you can connect to the hidden Wi-Fi network to access the internet.

5.2 Wi-Fi schedule

5.2.1 Overview

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

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



NOTE

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

5.2.2 An example of configuring Wi-Fi schedule

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

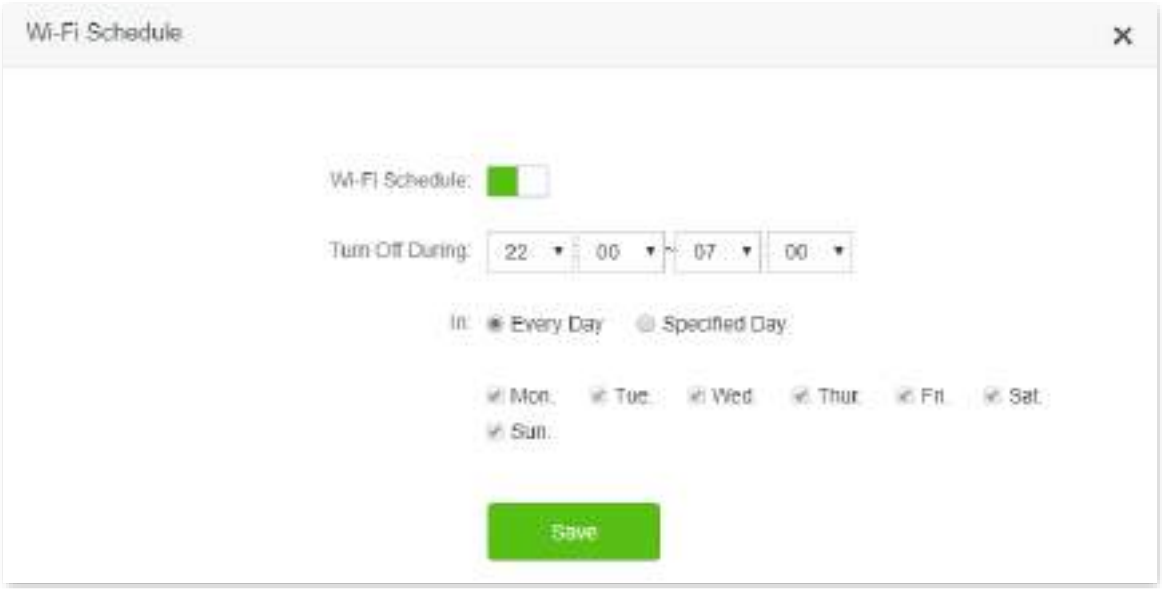
Step 2 Choose **Wi-Fi Settings** > **Wi-Fi Schedule.**

Step 3 Enable **Wi-Fi Schedule.**

Step 4 Set a period for the Wi-Fi networks to be disabled, which is **22:00~07:00** in this example.

Step 5 Set the days when the function works, which is **Every Day** in this example.

Step 6 Click **Save**.



---End

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

5.3 Wireless repeating

TIP

This function is only available under the wireless router mode. Refer to Operating mode to set the operating mode of the router.

5.3.1 Overview

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

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

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

NOTE

- When the wireless repeating function is enabled, some other functions will be unavailable, such as Wi-Fi 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 Wi-Fi 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 Access the internet through the WAN port

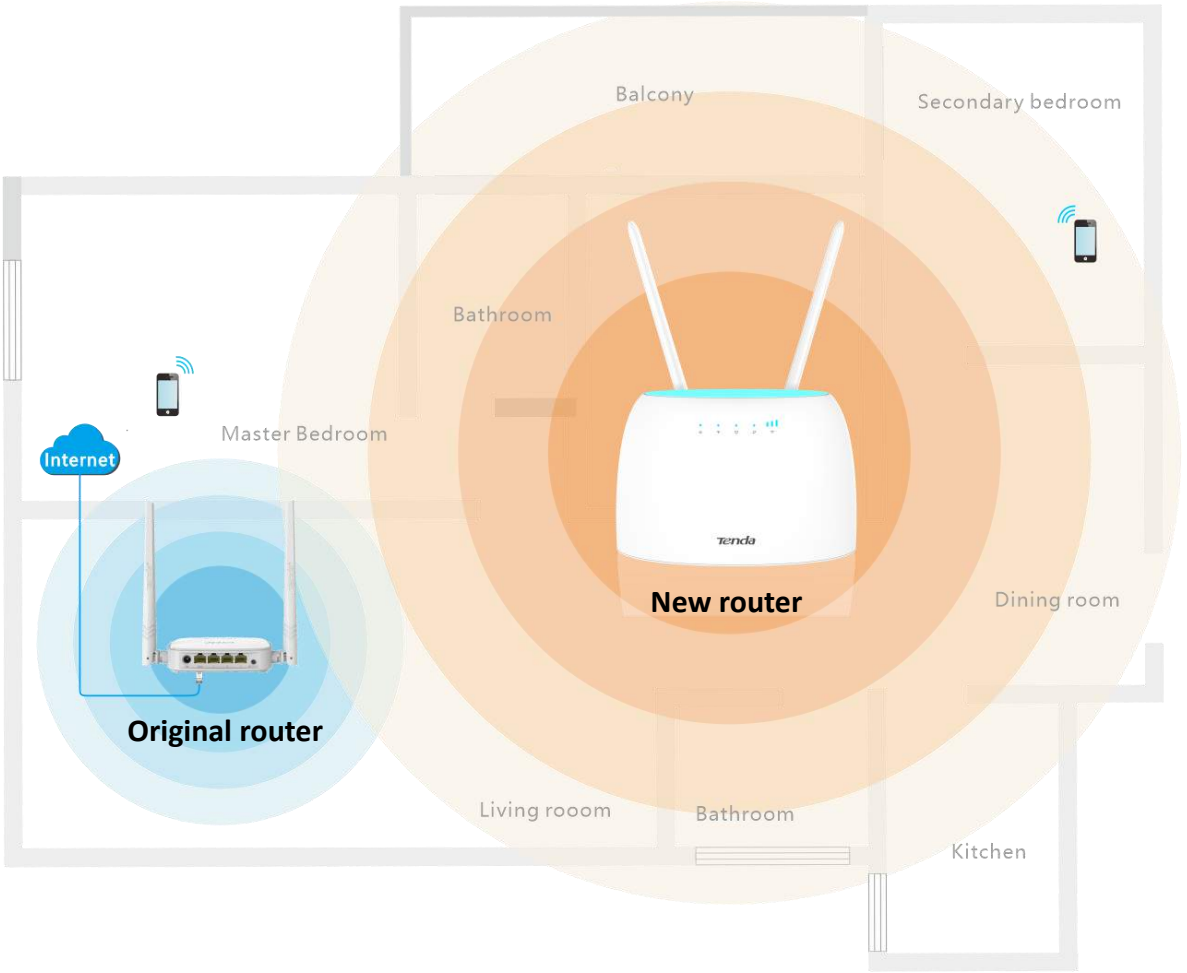
Parameter	Description
	according to the connection type you choose.
Upstream Wi-Fi Name	It specifies the Wi-Fi name that you want to bridge. If you choose **Enter a Wi-Fi name manually**, you are required to enter the **Wi-Fi Name**, **Frequency Band** and **Encryption Mode, Encryption Algorithm** and **Upstream Wi-Fi Password** manually.
Upstream Wi-Fi Password	It specifies the Wi-Fi password of the Wi-Fi name that you want to bridge.

5.3.2 Extend the existing Wi-Fi network

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

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

- Upstream Wi-Fi name: Home_Wi-Fi
- Wi-Fi password: 12345678

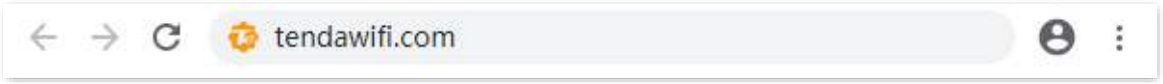


Method 1: Set the new router to WISP mode

Configuring procedure:

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 wireless device to the Wi-Fi network of your new router, or connect a computer to the LAN port of the new router. Do not connect any device to the WAN port of the new router.
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.



TIP

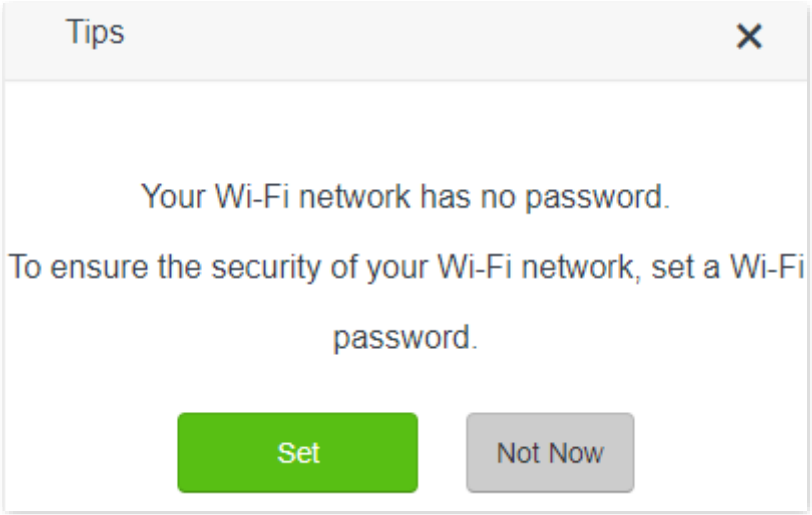
If you have finished the quick setup wizard before, skip to **Step 2** to proceed with the configuration.

3. Click **Start**.

4. Click **Skip**.

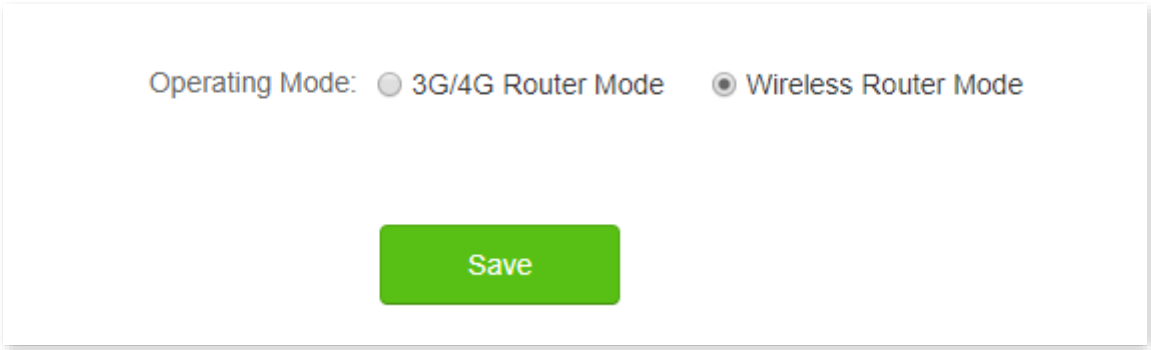
5. Do not set login and Wi-Fi password now by ticking **No Password**, and click **Next**.

6. Click **Not Now**.



Step 2 Set the router to wireless router mode.

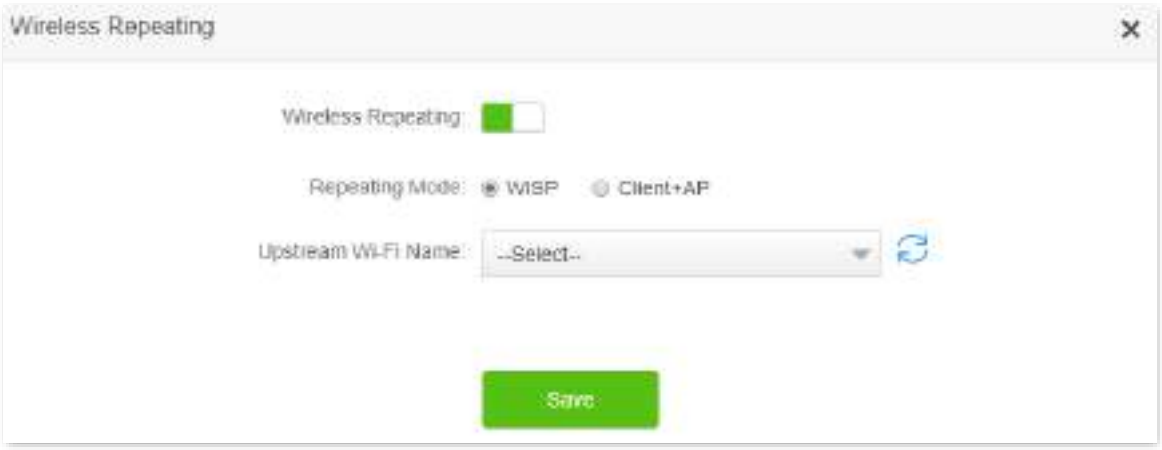
1. Choose **Advanced Settings** > **Operating Mode**.
2. Click **Wireless Router Mode**, and click **Save**.



Step 3 Set the new router to WISP mode.

1. Choose **Wi-Fi Settings** > **Wireless Repeating**.
2. Enable **Wireless Repeating**, and choose **WISP**.

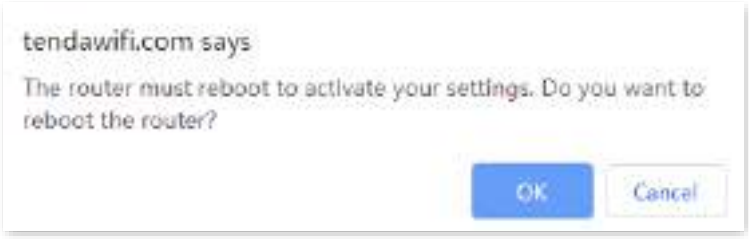
3. Click **Select** to select an existing Wi-Fi network, which is **Home_Wi-Fi** in this example.



Step 4 Enter the **Upstream Wi-Fi Password**, which is **12345678** in this example.

Step 5 Click **Save**.

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



Step 7 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 **My router** failed, try the following solutions:

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

Step 8 Relocate the new router and power it on by referring to the following suggestions.

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

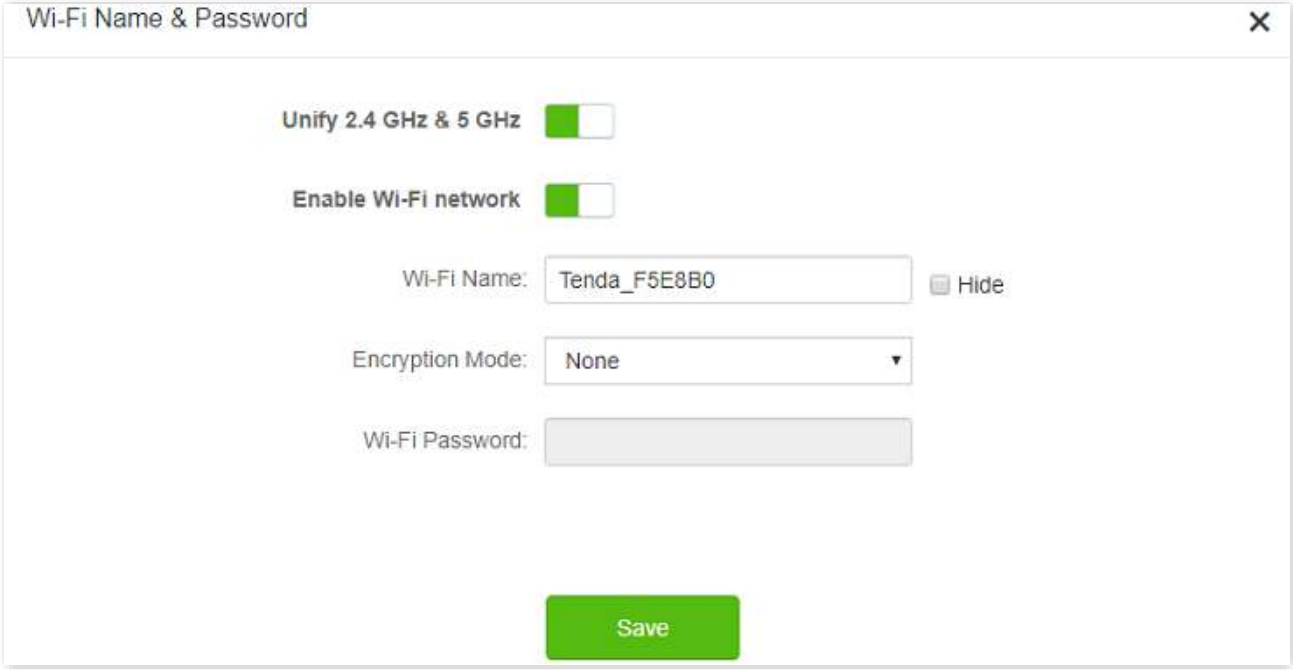
NOTE

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 Wi-Fi network of the new router.

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



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

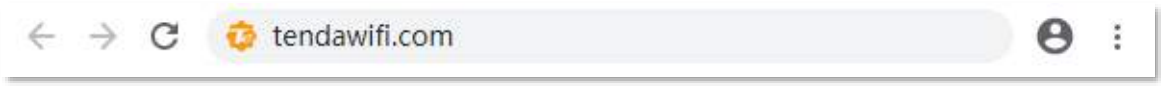
- Ensure that the existing router is connected to the internet successfully.
- Ensure that your wireless devices are connected to the Wi-Fi network of the new router.
- If the computer connected to the router for repeating cannot access the internet, ensure that the computer is configured to obtain an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

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

Configuring procedure:

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 wireless device to the Wi-Fi network of your new router, or connect a computer to the 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.



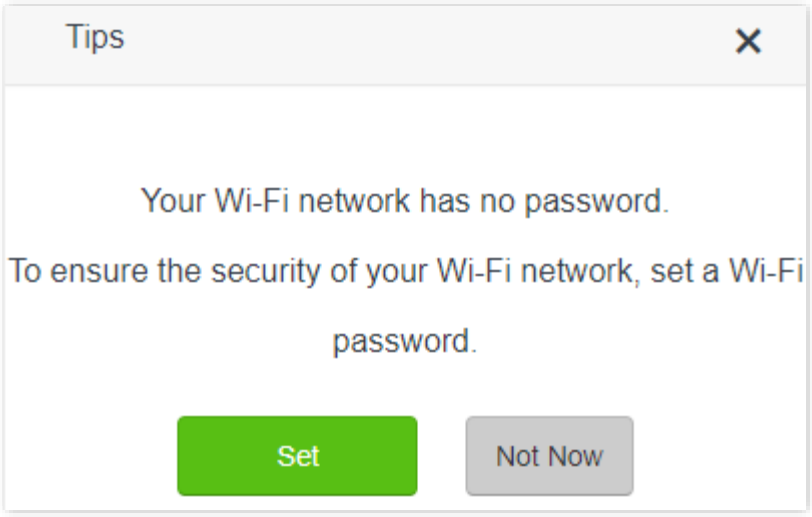
If you have finished the quick setup wizard before, skip to **Step 2** to proceed with the configuration.

3. Click **Start**.

4. Click **Skip**.

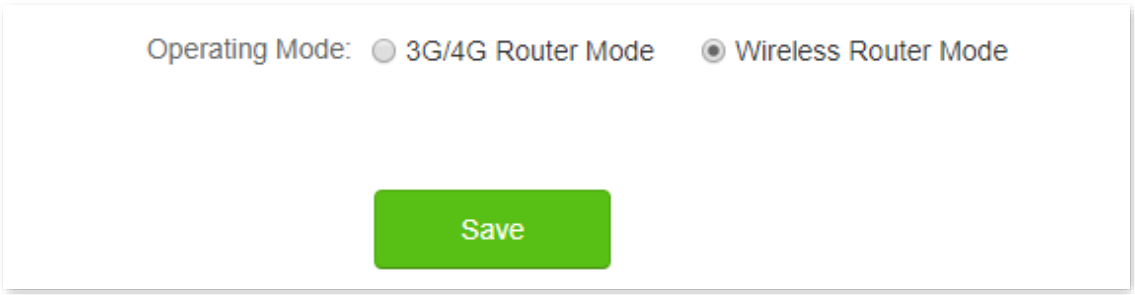
5. Do not set login and Wi-Fi password now, and click **Next**.

6. Click **Not Now**.



Step 2 Set the router to wireless router mode.

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

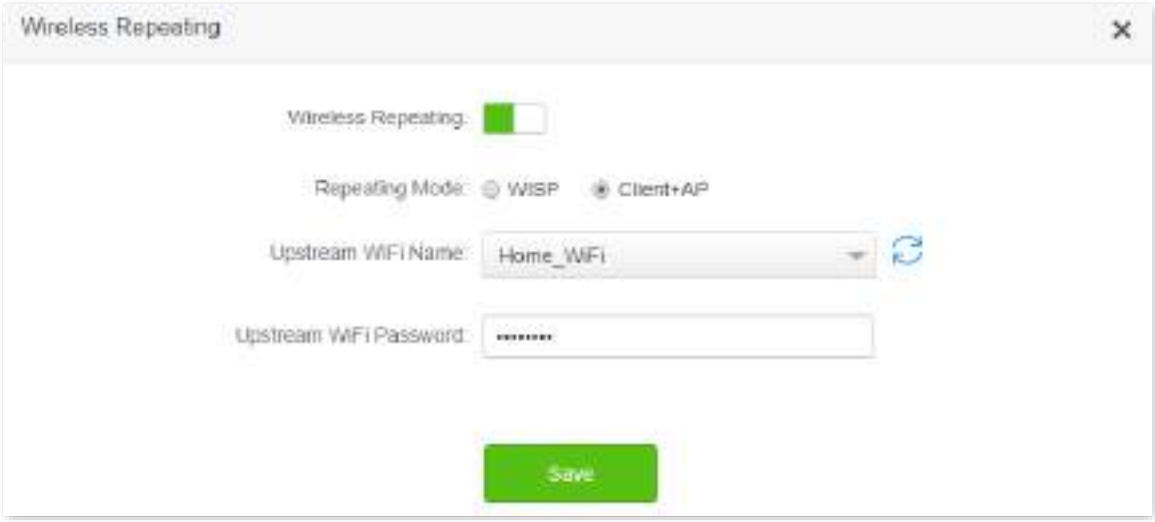


Step 3 Set the new router to **Client+AP** mode.

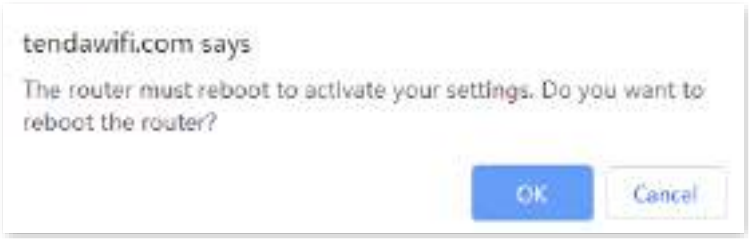
1. Choose **Wi-Fi Settings** > **Wireless Repeating**.
2. Enable **Wireless Repeating**, and choose **Client+AP**.
3. Click **Select** to select the existing Wi-Fi network, which is **Home_Wi-Fi** in this example.

Step 4 Enter the **Upstream Wi-Fi Password**, which is **12345678** in this example.

Step 5 Click **Save**.



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



Step 7 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 **My router** failed, try the following solutions:

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

Step 8 Relocate the new router and power it on by referring to the following suggestions.

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

NOTE

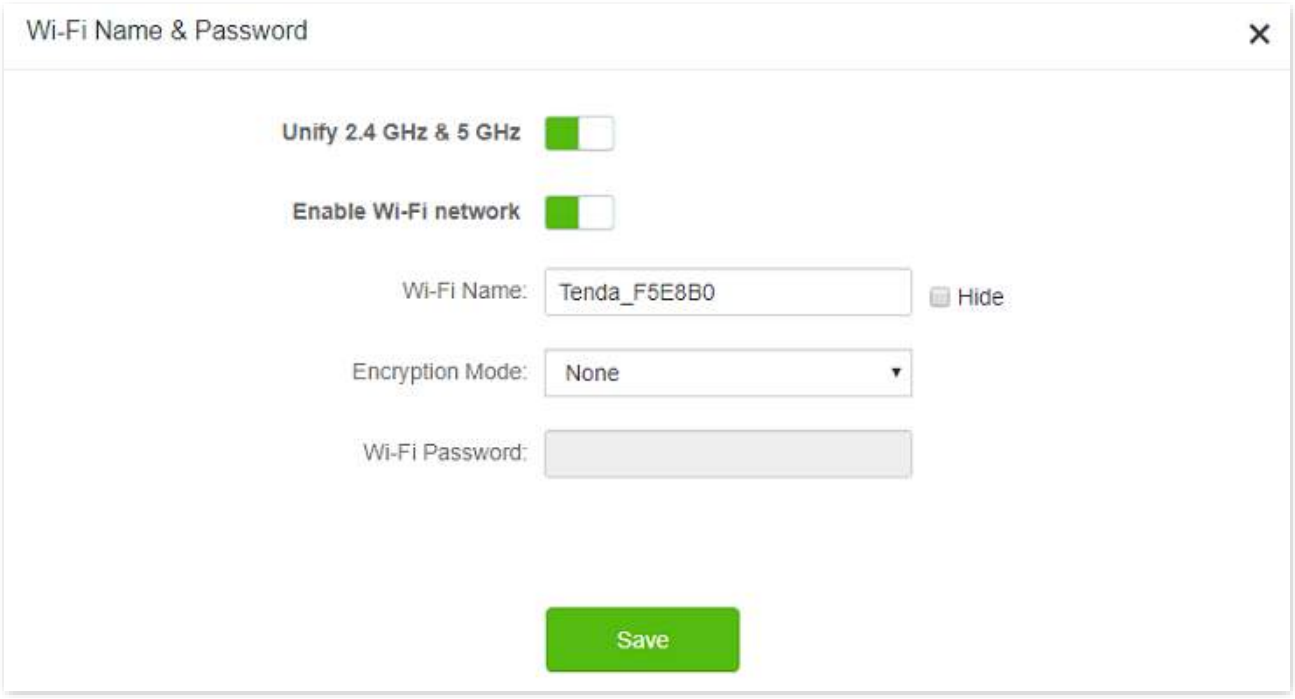
After the new router is set to Client+AP mode:

- 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.

---End

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

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



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 wireless devices are connected to the Wi-Fi network of the new router.
- If the computer connected to the router cannot access the internet, ensure that the computer is configured to obtain an IP address and DNS sever automatically.

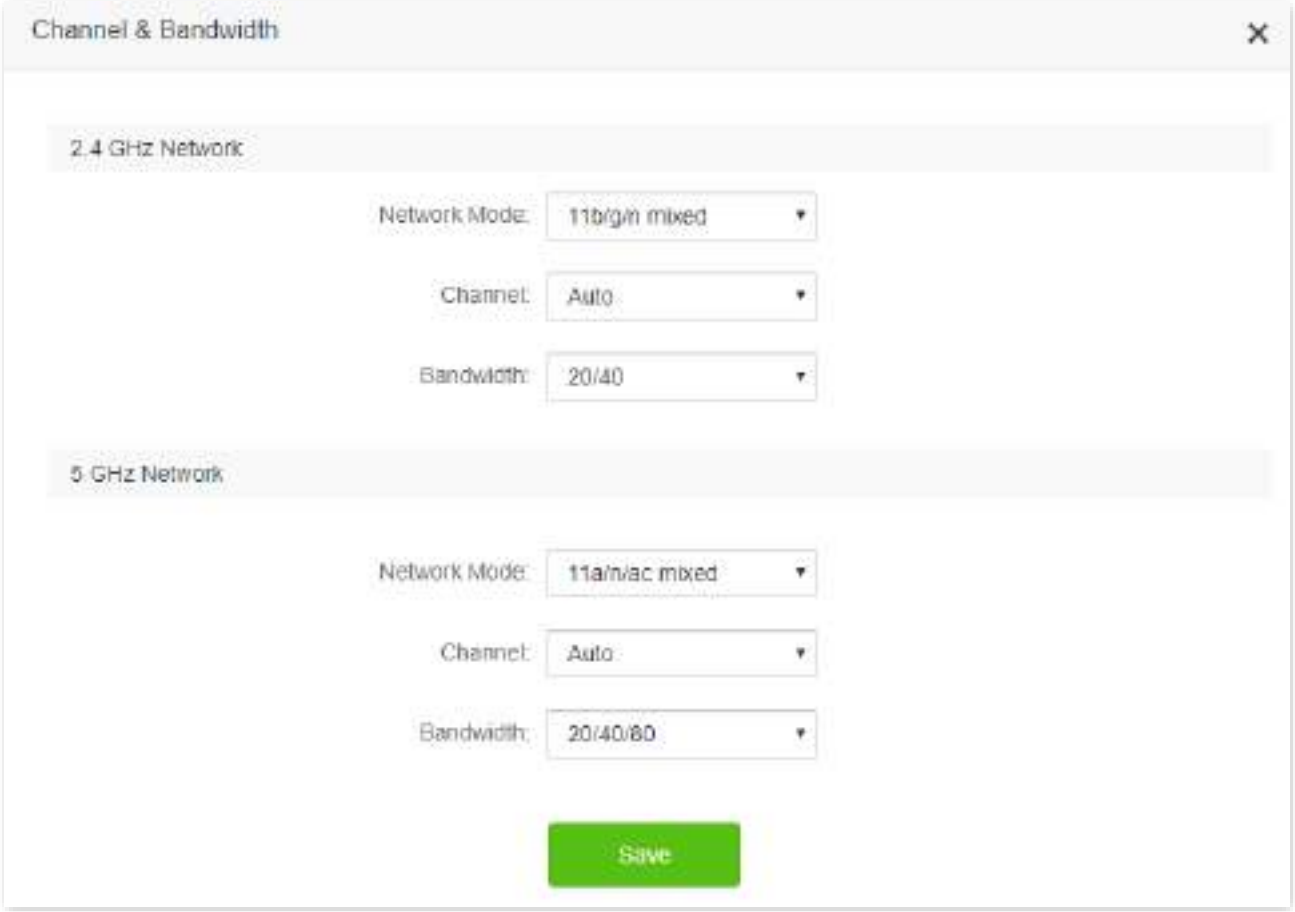
5.4 Channel & bandwidth

In this section, you can change network mode, wireless channel, and wireless bandwidth of 2.4 GHz and 5 GHz Wi-Fi networks.

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

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 Wi-Fi network supports 11n, 11b/g mixed and 11b/g/n mixed modes. • **11n**: It indicates that devices compliant with IEEE 802.11n protocol can connect to the 2.4 GHz Wi-Fi network of the router. • **11b/g mixed**: It indicates that devices compliant with IEEE 802.11b or IEEE 802.11g protocol can connect to the 2.4 GHz Wi-Fi network of the router. • **11b/g/n mixed**: It indicates that all devices can connect to the router if they are compliant with IEEE 802.11b or IEEE 802.11g protocol, or work at 2.4 GHz with IEEE 802.11n protocol

Parameter	Description
	5 GHz Wi-Fi network supports 11ac, 11a/n/ac mixed modes. • **11ac**: It indicates that devices complaint with IEEE 802.11ac protocol can connect to the router. • **11a/n/ac mixed**: It indicates that all devices that are compliant with IEEE 802.11a or IEEE 802.11ac protocol, or work at 5 GHz with IEEE 802.11n protocol can connect to the router.
Wi-Fi Channel	It specifies the channel in which the Wi-Fi network works. By default, the wireless channel is **Auto**, which indicates that the router selects a channel for the Wi-Fi network automatically. You are recommended to choose a channel with less interference for better wireless transmission efficiency. You can use a third-party tool to scan the Wi-Fi signals nearby to understand the channel usage situations.
Wi-Fi Bandwidth	It specifies the bandwidth of the wireless channel of a Wi-Fi 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 **Wi-Fi 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. • **Low**: It is typically used to meet wireless coverage requirements in small area or barrier-free environments. Tip It is recommended to choose the Low mode if the network experience is satisfactory enough under this mode.

5.6 WPS

5.6.1 Overview

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

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

NOTE

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

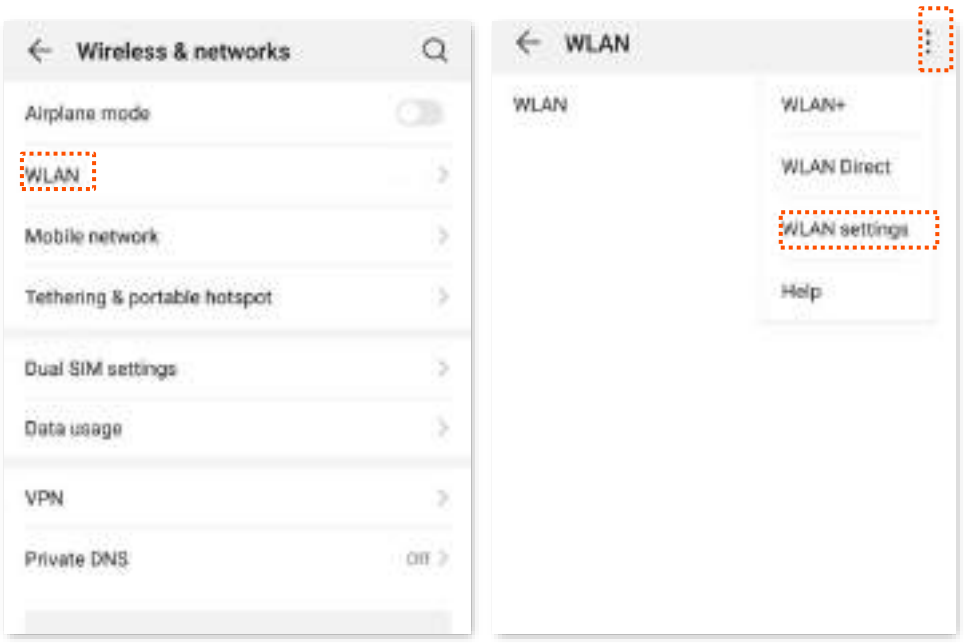
5.6.2 Connect devices to the Wi-Fi network using the WPS button

Configuring procedure:

Step 1 Find the **RST/WPS** button on the rear panel of the router, and hold it down for 1 to 3 seconds. The Wi-Fi indicator blinks slow.

Step 2 Configure the WPS function on your wireless 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 Wi-Fi network.

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

Configuring procedure:

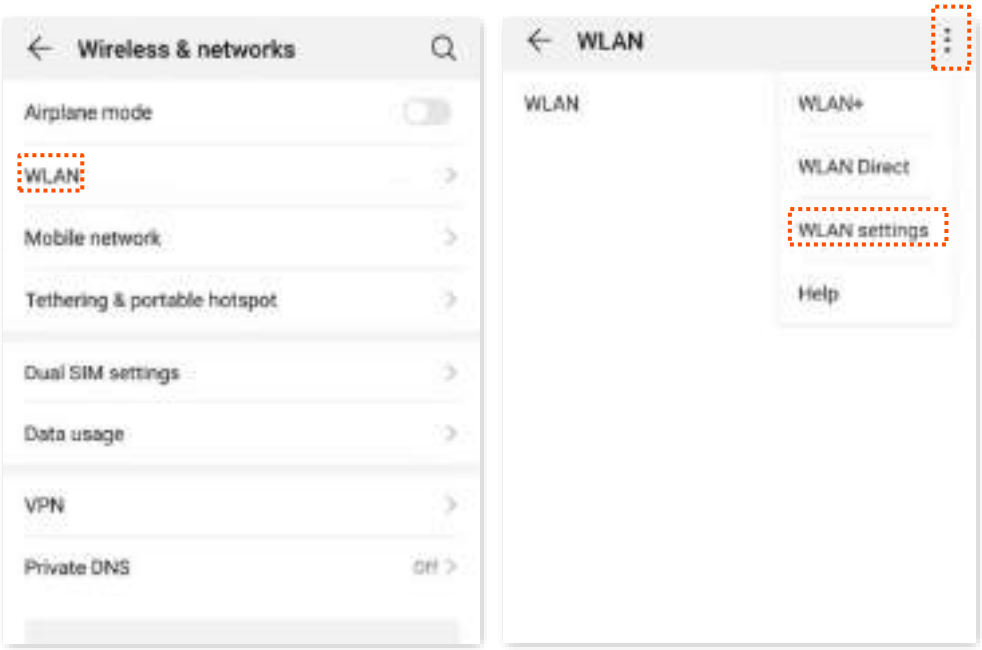
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

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

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

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

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



3. Choose **WPS connection**.

---End

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

5.6.4 Connect devices to the Wi-Fi network using the PIN code of the router

NOTE

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

Configuring procedure:

Step 1 Find the PIN code of the router by logging in to the web UI of the router, and navigate to **Wi-Fi Settings** > **WPS**. The PIN code is shown under **Method 2**.

Step 2 Enter the PIN code on the wireless device that supports WPS connection using the PIN code.

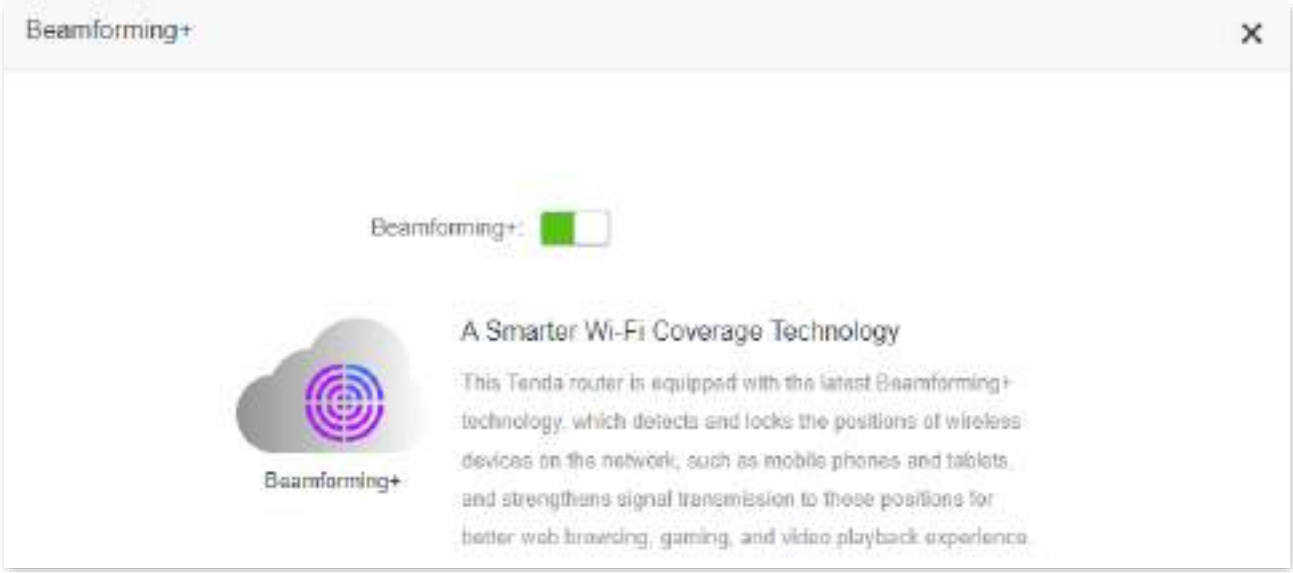
---End

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

5.7 Beamforming+

Beamforming+ is a radio wave technology written into IEEE 802.11ac standard. Traditionally, the router broadcasts the data in all directions when broadcasting a Wi-Fi signal. With beamforming, the router transmits radio signal in the direction of the client, thus creating a stronger, faster and more reliable wireless communication. This function is enabled by default.

To access the configuration page, log in to the web UI of the router, and choose **Wi-Fi Settings** > **Beamforming+**.



The following figure shows the wireless transmission when Beamforming+ is enabled.

The following figure shows the wireless transmission when Beamforming+ is disabled.

5.8 AP mode

This function is only available under the wireless router mode. Refer to Operating mode to set the operating mode of the router.

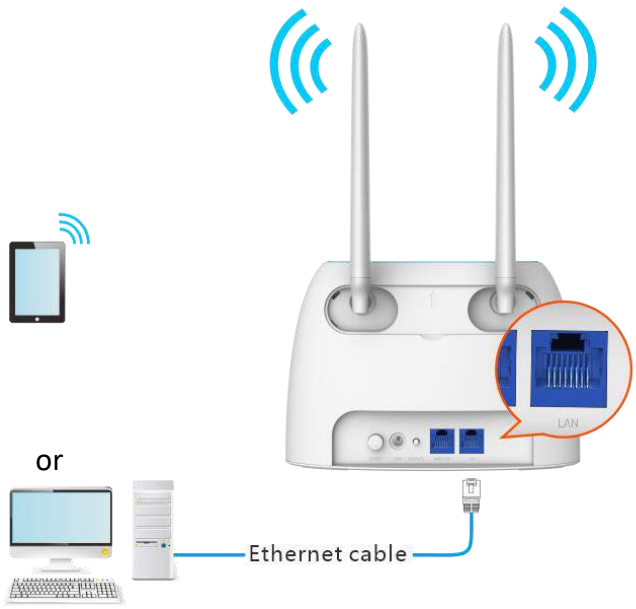
When you have a smart home gateway which only provides wired internet access, you can set the router to work in AP mode to provide wireless coverage.

When the router is set to AP mode:

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

Configuring procedure:

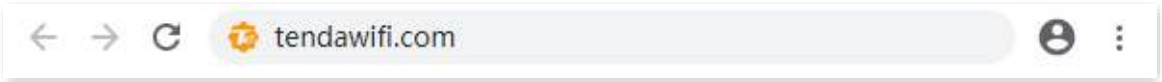
Step 1 Power on the router. Connect a computer to the LAN port of the router, or connect your smart phone to the Wi-Fi network of the router.



If you have finished the quick setup wizard before, start a web browser and visit tendawifi.com and skip to **Step 2** to proceed with the configuration.

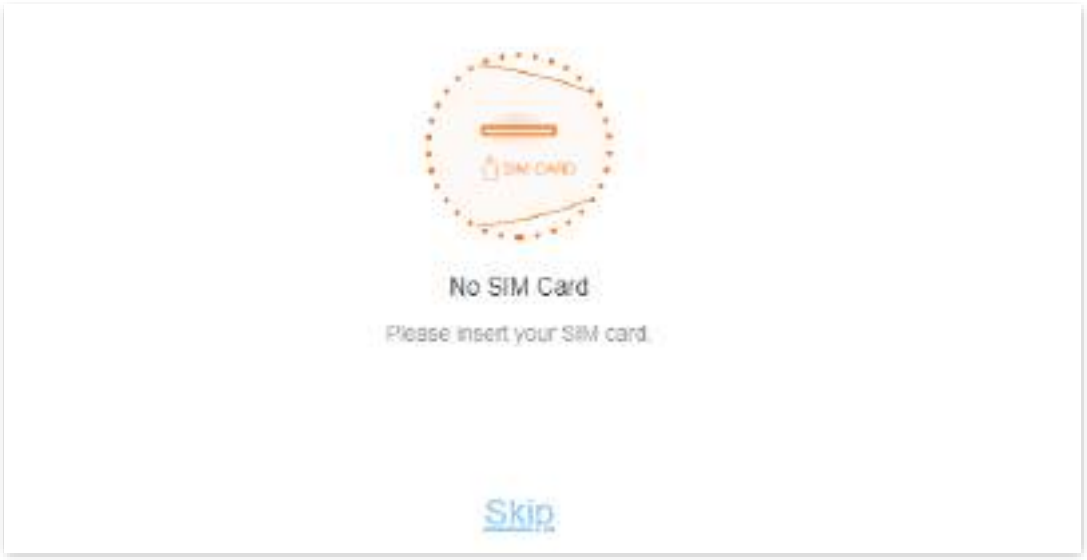
Step 2 Log in to the web UI of the router.

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.



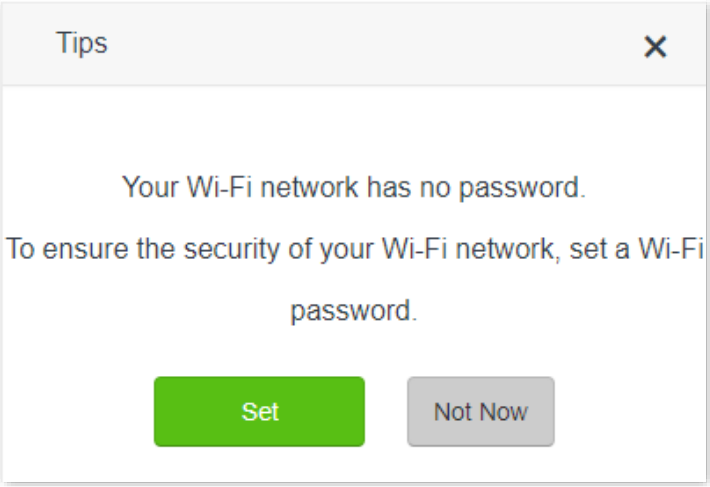
2. Click **Start**.

3. Click **Skip**.



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

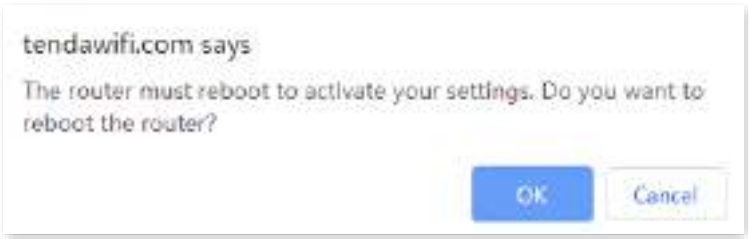
5. Click **Not Now**.



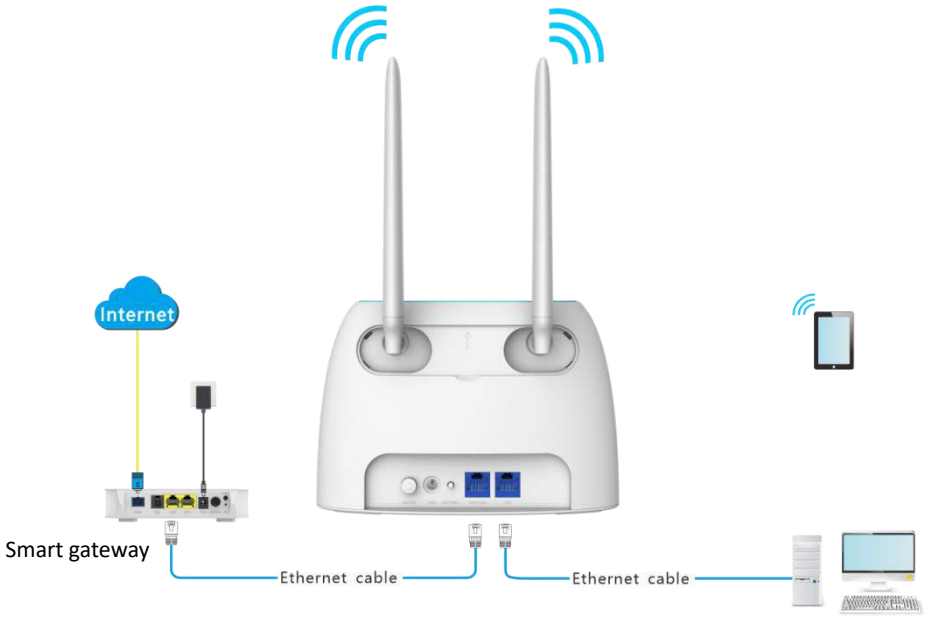
Step 3 Set the router to AP mode.

1. Navigate to **Wi-Fi 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

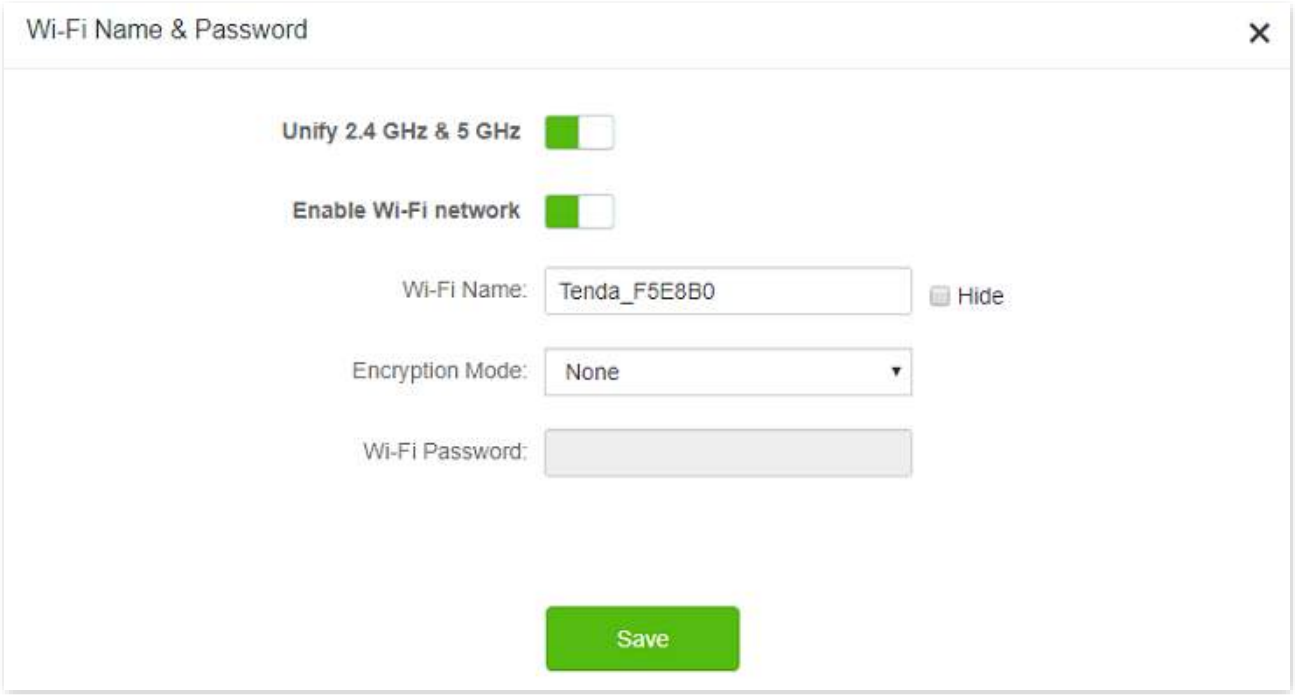
Log in to the web UI of the router again, and navigate to **Internet Status** to check if the AP mode is configured successfully.

NOTE

If there is another network device with the same login domain name (tendawifi.com) 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 physical port, or connect your smart phone to the Wi-Fi network.

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



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

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

5.9 Anti-interference

The router supports anti-interference function. When you are experiencing unsatisfactory internet access, you can try to change the anti-interference settings to improve it.

To access the configuration page, log in to the web UI of the router, and choose **Wi-Fi Settings** > **Anti-interference**.

The default setting is **Auto**.

- **Auto**: It indicates that the router will automatically adjust the receiving sensitivity according to the interference of the current environment. It is recommended to keep **Auto**.
- **Enable**: It indicates that the anti-interference ability of the router improves, but the Wi-Fi network coverage is reduced.
- **Disable**: It indicates that the wireless coverage of the router is improved. If the wireless interference in the environment is strong, it is recommended to select **Auto** or **Enable**.

6 SMS (3G/4G router mode)

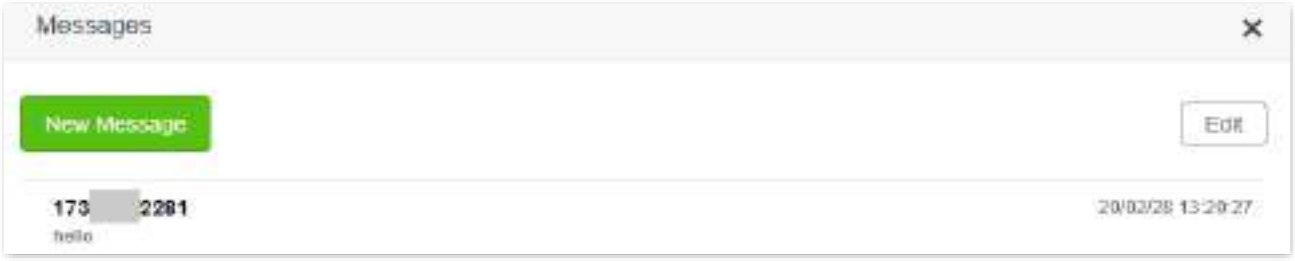
TIP

This function is only available under the 3G/4G router mode. Refer to Operating mode to set the operating mode of the router.

6.1 Manage SMS messages

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

To access the page, log in to the web UI of the router, and choose **SMS** > **Messages**.



6.1.1 Send SMS messages

Send SMS messages to a new phone number

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

Step 2 Choose **SMS** > **Messages.**

Step 3 Click **New Message**.

Step 4 Enter the phone number in the **Send To** column.

Step 5 Enter the message content in the **Message** column at the bottom.

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

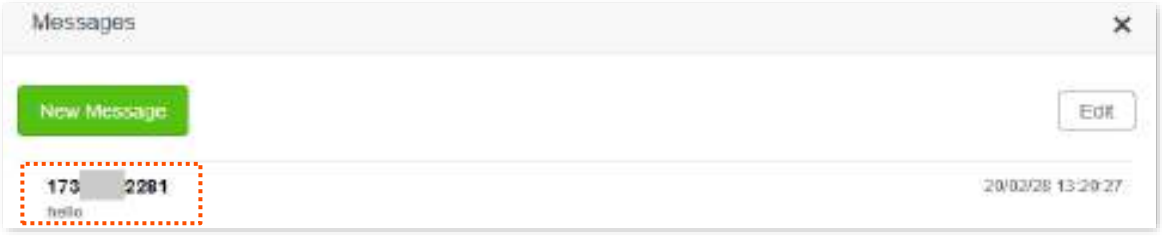
---End

Send messages to an existing phone number

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

Step 2 Choose **SMS** > **Messages.**

Step 3 Click the targeted phone number.



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

Step 5 Click **Send**.

---End

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

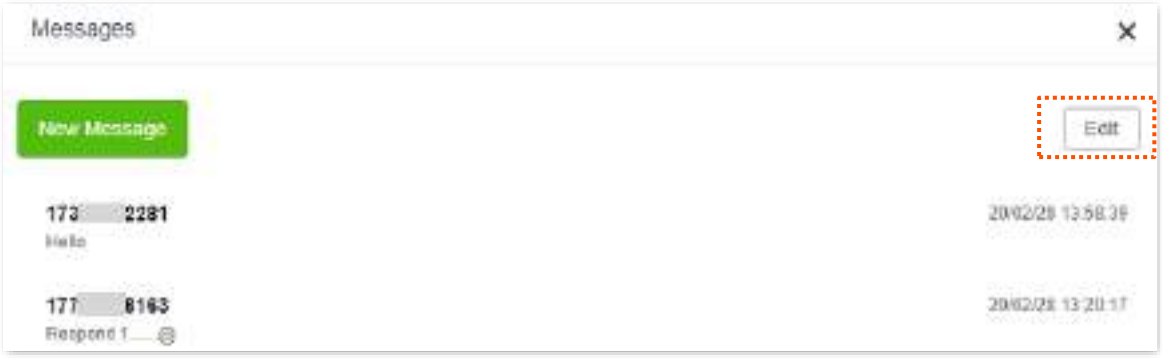
6.1.2 Delete SMS messages

Delete all messages of the same phone numbers

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

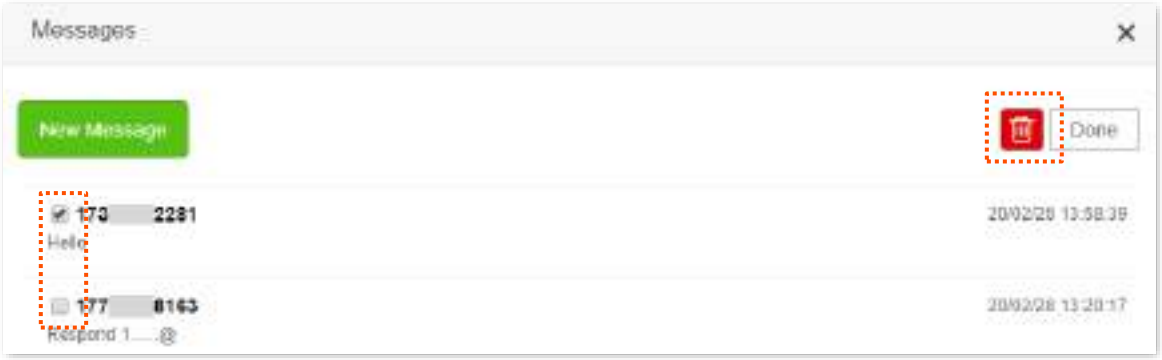
Step 2 Choose **SMS** > **Messages.**

Step 3 Click **Edit** on the top right corner.



Step 4 Select one or more phone number to be deleted.

Step 5 Click (click **Done** to cancel).



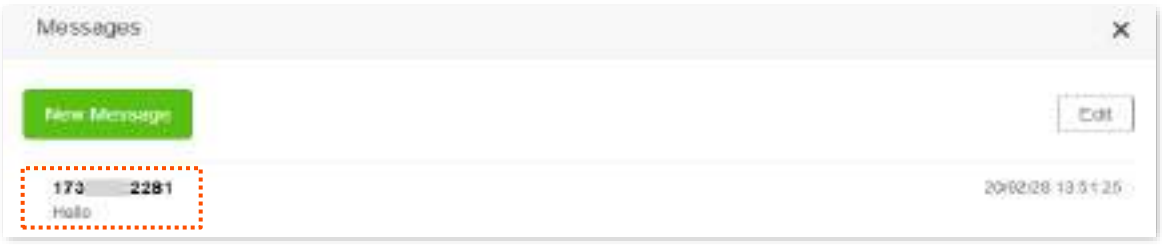
---End

Delete certain messages of the same phone number

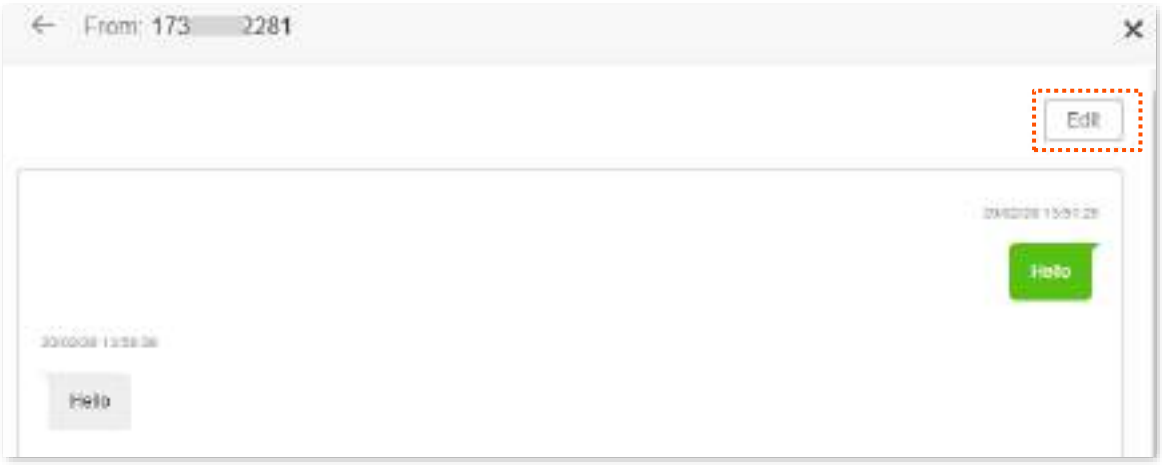
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **SMS** > **Messages.**

Step 3 Click the targeted phone number.



Step 4 Click **Edit**.



Step 5 Select the messages to be deleted.

Step 6 Click (click **Done** to cancel).

---End

6.2 Set the message center number

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

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

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 **SMS** > **Message Center**.

Step 3 Enable **Message Center**.

Step 4 Enter the correct **Message Center Number**.

Step 5 Click **Save**.

---End

NOTE

Contact your ISP for correct message center number.

6.3 Inquire information by sending USSD commands

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

NOTE

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

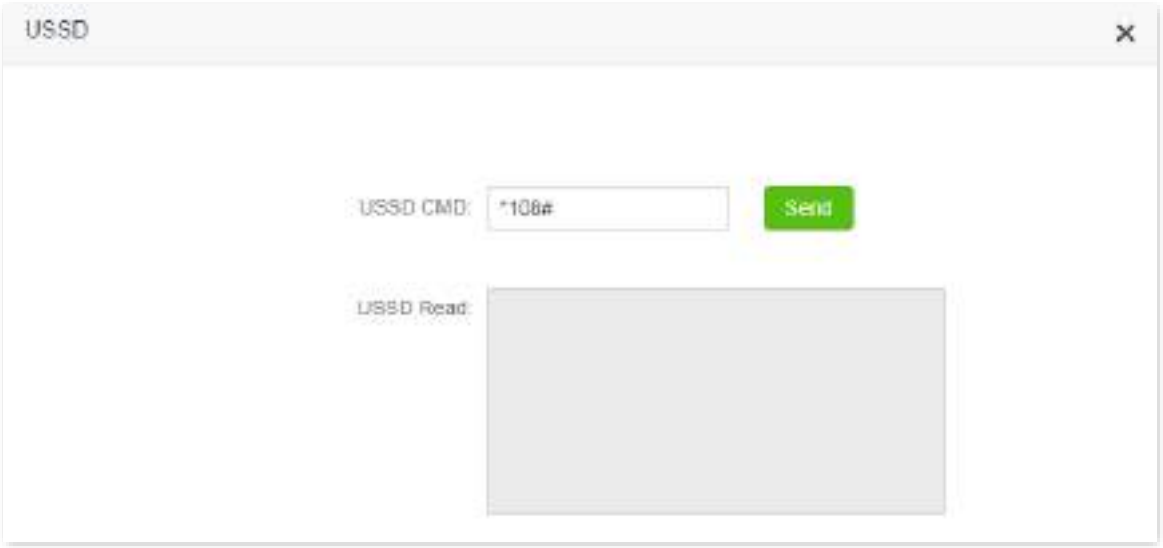
Configuring procedure:

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 **SMS** > **USSD**.

Step 3 Enter a **USSD CMD**, such as ***108#**.

Step 4 Click **Send**.



---End

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

7 Guest network

7.1 Overview

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

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

To access the configuration page, log in to the web UI of the router and navigate to 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 Wi-Fi Name	It specifies the Wi-Fi name of the router's guest network. By default, Tenda_VIP is for the 2.4 GHz Wi-Fi network and Tenda_VIP_5G for the 5 GHz Wi-Fi network.
5 GHz Wi-Fi Name	You can change the SSIDs (Wi-Fi names) as required. To distinguish the guest network from the main network, you are recommended to set different Wi-Fi network names.
Guest Network Password	It specifies the password for the router's two guest networks.

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.

7.2 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 Wi-Fi network by guests from affecting the network speed of your computer for work purposes.

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

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

- Wi-Fi names for 2.4 GHz and 5 GHz networks: John_Doe and John_Doe_5G.
- Wi-Fi password for 2.4 GHz and 5 GHz networks: 12345678.
- 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 Wi-Fi Name**, which is **John_Doe** in this example.

Step 5 Set the **5 GHz Wi-Fi Name**, which is **John_Doe_5G** in this example.

Step 6 Set the **Guest Network Password**, which is **12345678** 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

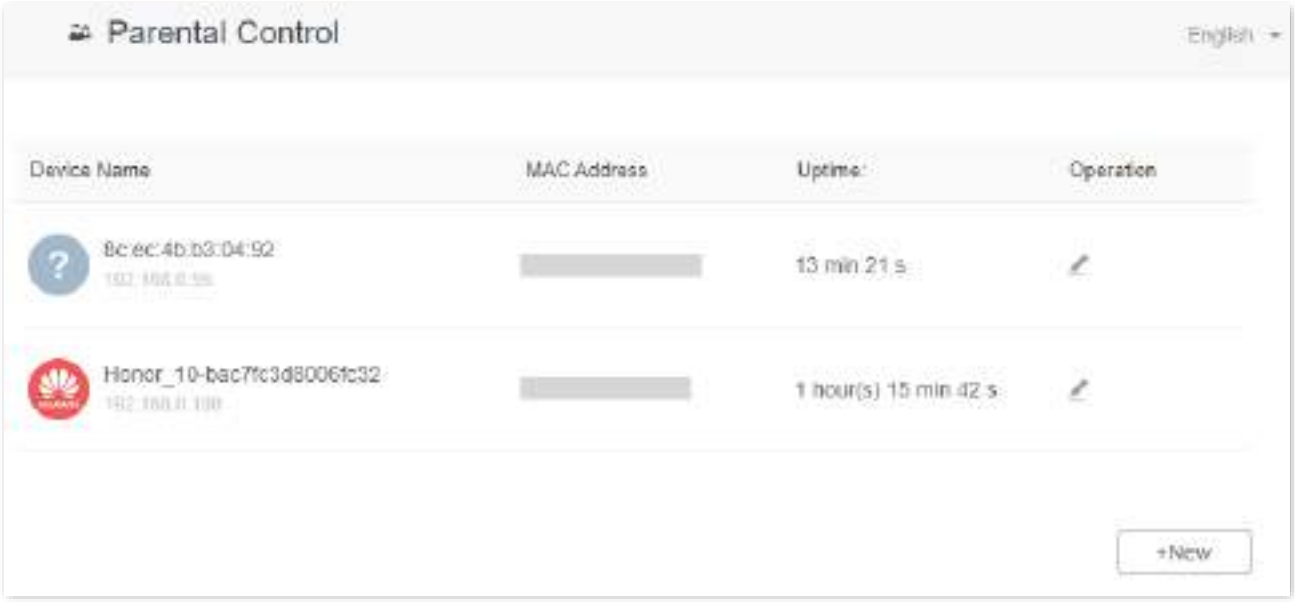
During the 8 hours after the configuration, guests can connect their wireless devices, such as smartphones, to **John_Doe** or **John_Doe_5G** to access the internet and enjoy the shared bandwidth of 2 Mbps.

8 Parental control

8.1 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.

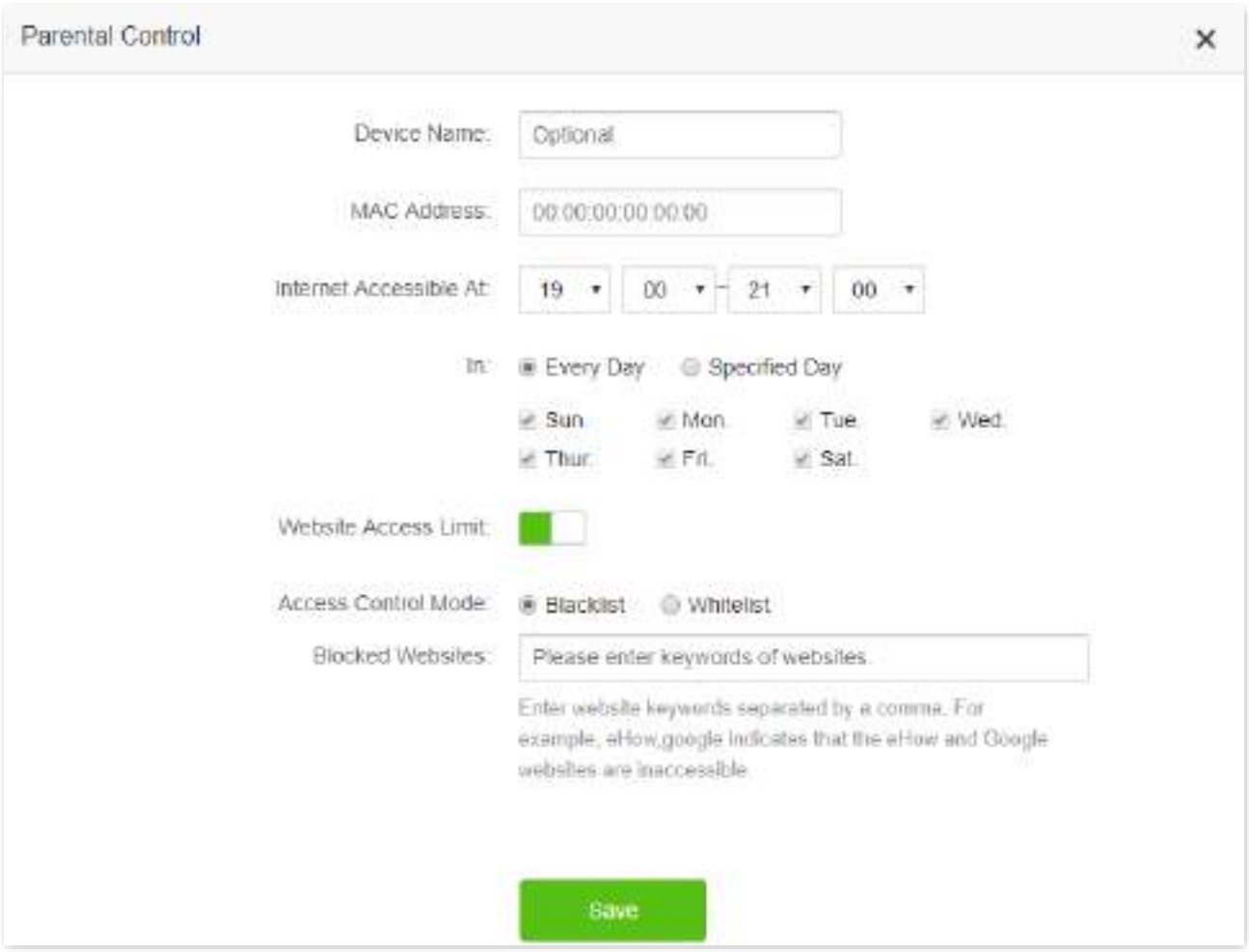


Parameter description

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.

8.2 Configure the parental control rule

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



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 at all out of the specified period. • **Whitelist**: The device can access the websites specified in the rule during the specified period, but cannot access other websites. The device cannot access the

Parameter	Description
	internet at all 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	

8.3 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: Websites, such as facebook, twitter, youtube and Instagram, are inaccessible during 8:00 to 22:00 on weekends using the computer in her room, and no internet access is available from 22:00 to 8:00.

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

Configuring procedure:

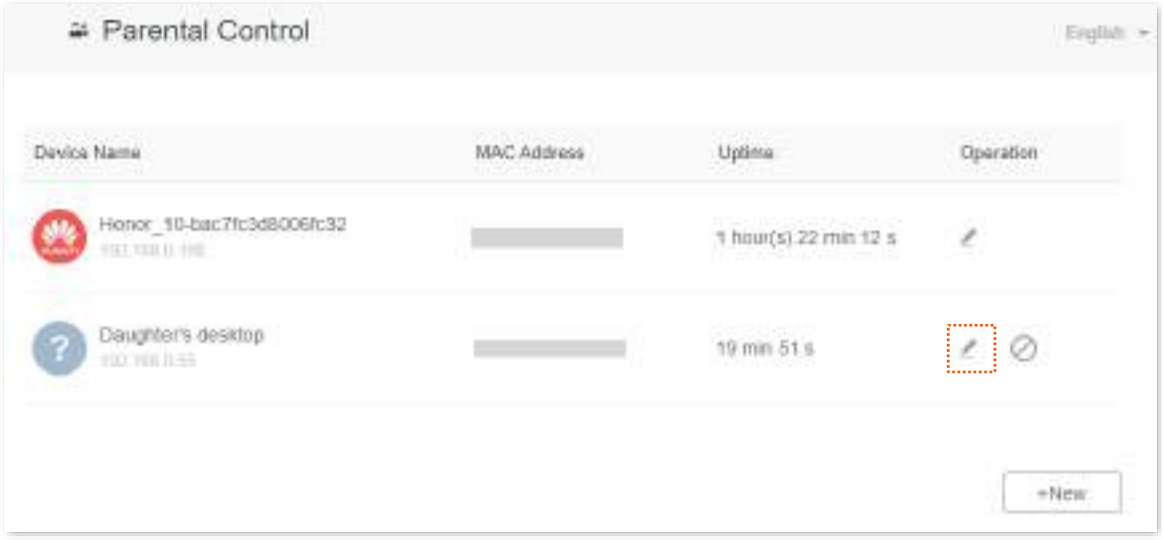
Step 1 Start a web browser on a device connected to the router and visit **tendawifi.com** to log in to the web UI of the router.

Step 2 Choose **Parental Control**.

Step 3 Choose 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.

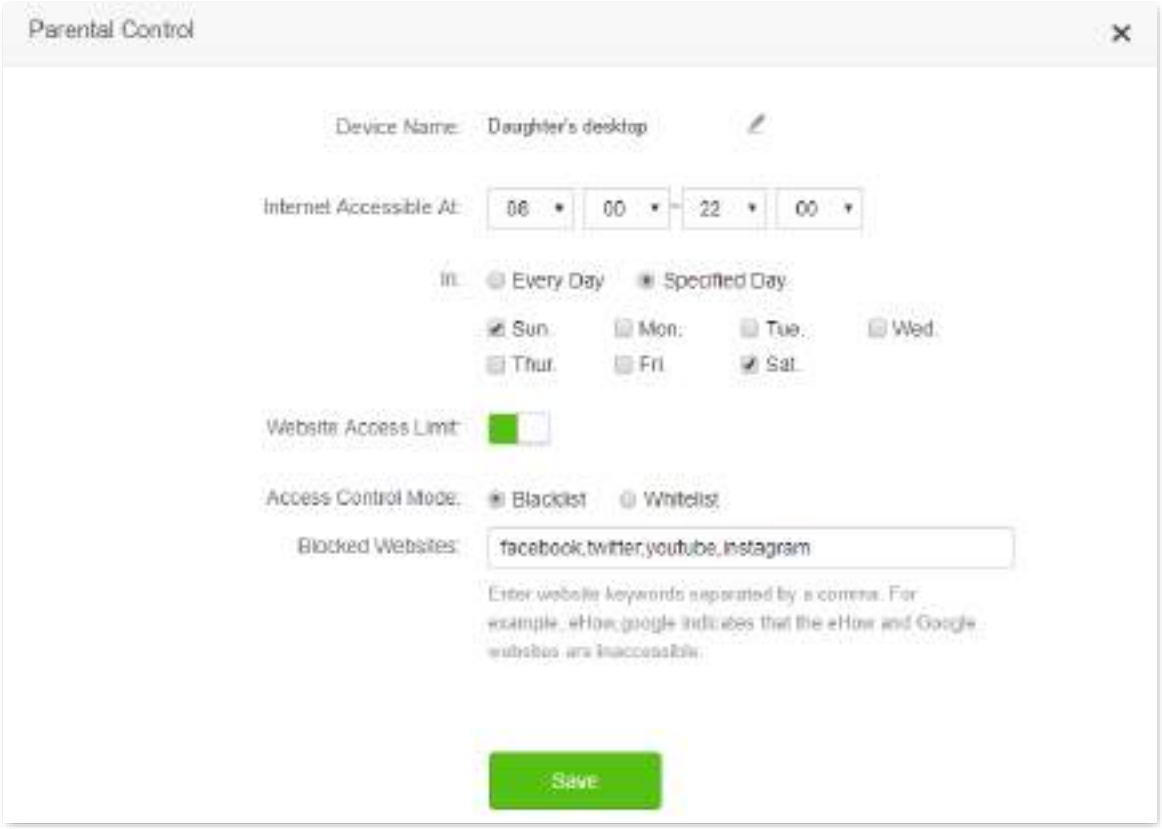
Step 5 Choose **Specified Day**, and tick the days when the rule is applied, which are **Sun.** and **Sat.** in this example.

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.

9 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.

9.1 PPTP server

9.1.1 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.

9.1.2 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 Enable the PPTP server function.

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

Step 3 Add PPTP user name and password.

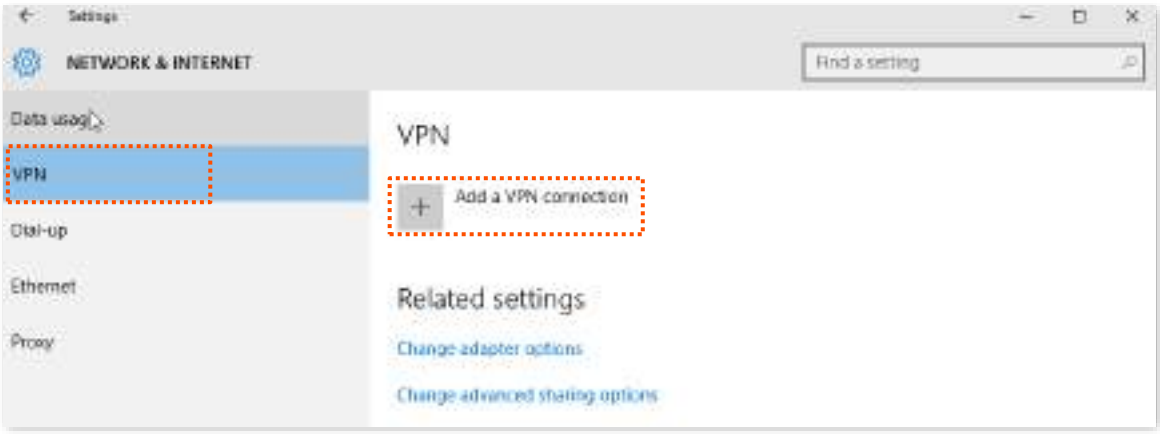
1. Set the **User Name** and **Password** of the PPTP server, which are **admin1** in this example.
2. Click **+New**.

---End

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

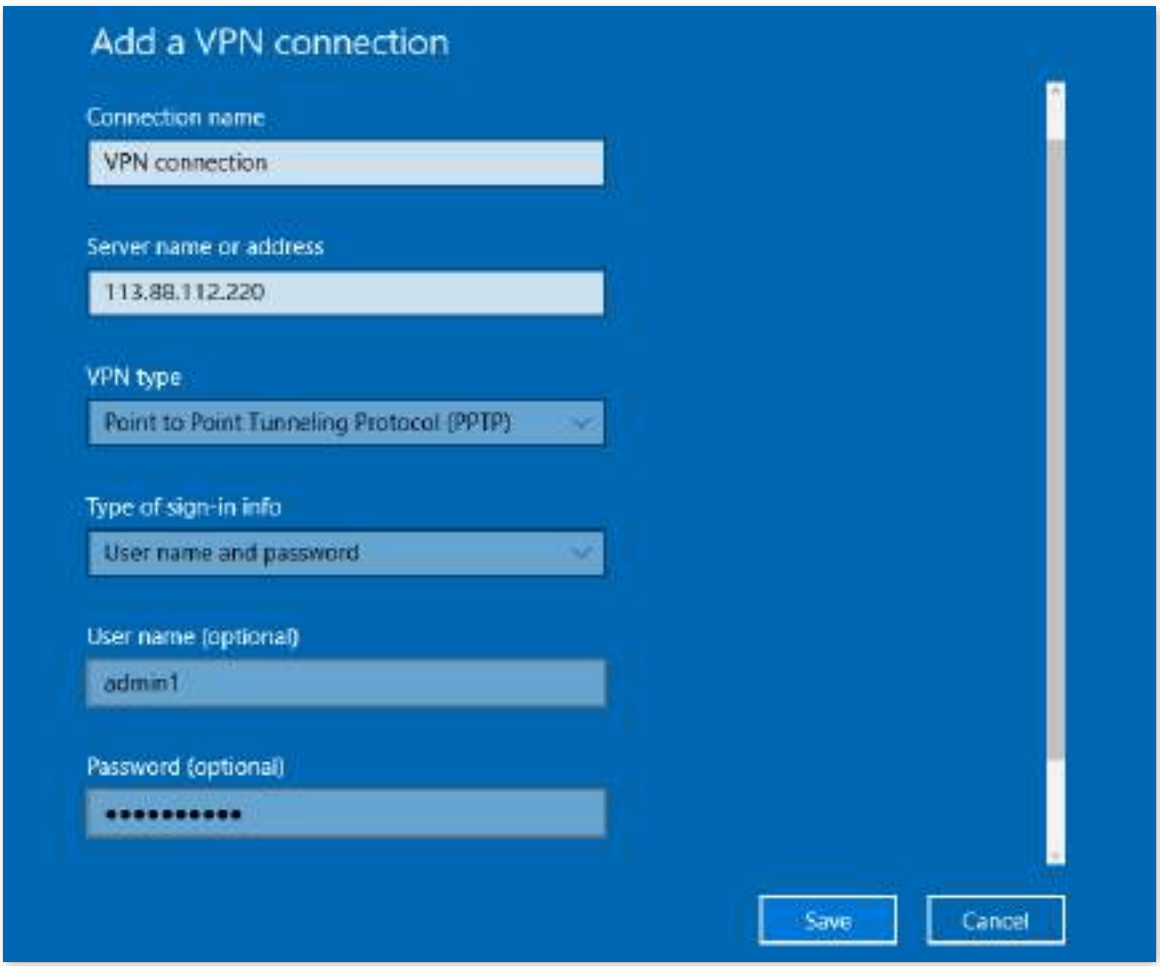
Step 1 Click the icon at the bottom right corner on the desktop, and then click **Network settings**.

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

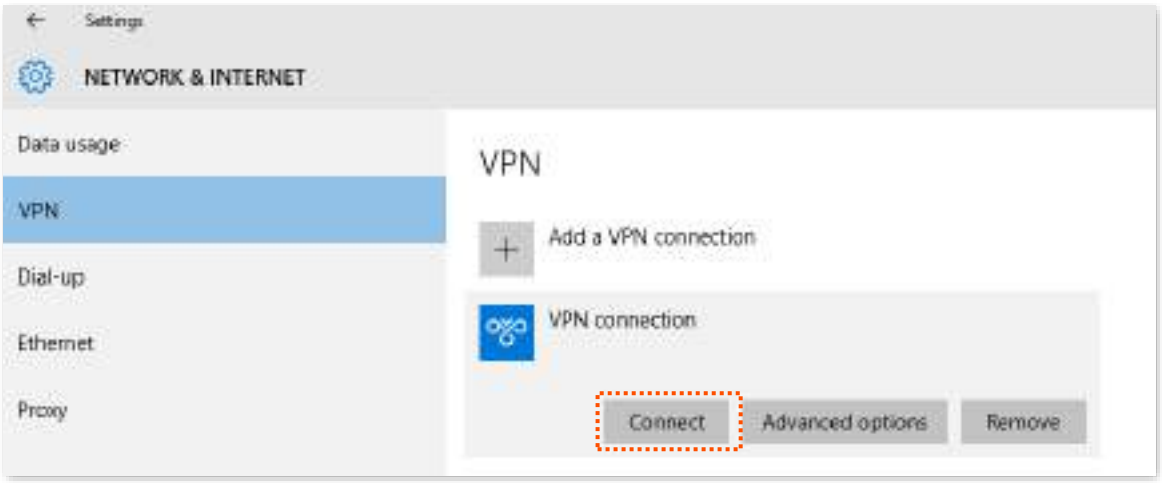


Step 3 Configure the VPN parameters.

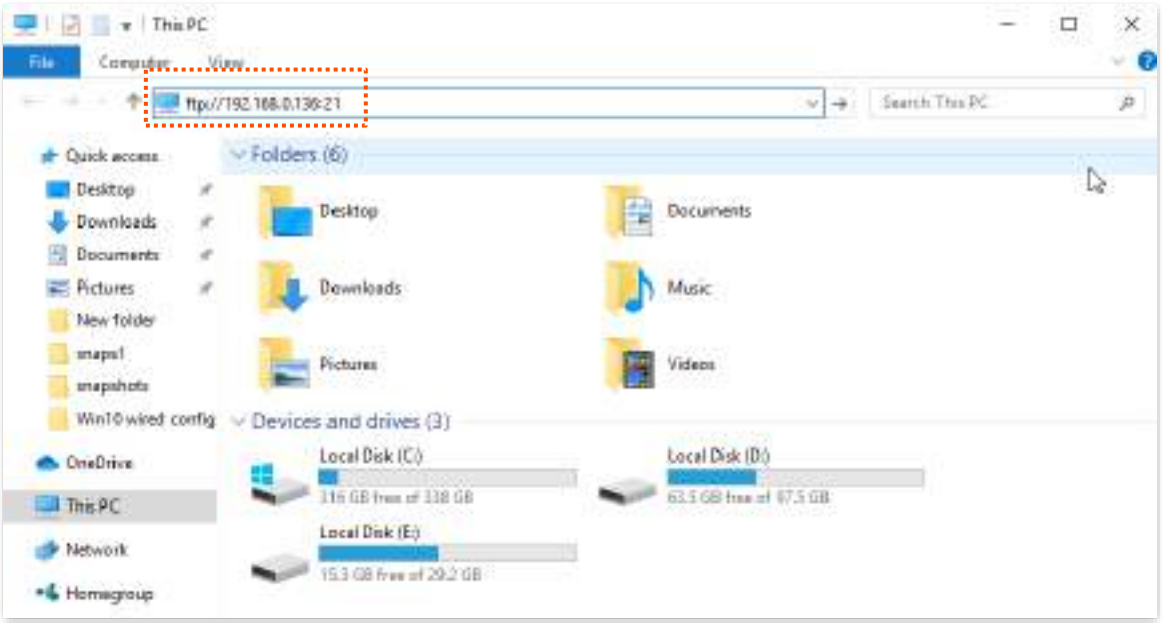
1. Enter a connection name, such as **VPN connection**.
2. Enter the server address, which is **113.88.112.220** in this example.
3. Select a VPN type, which is **Point to Point Tunneling Protocol (PPTP)** in this example.
4. Select a type of sign-in info, which is **User name and password** in this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



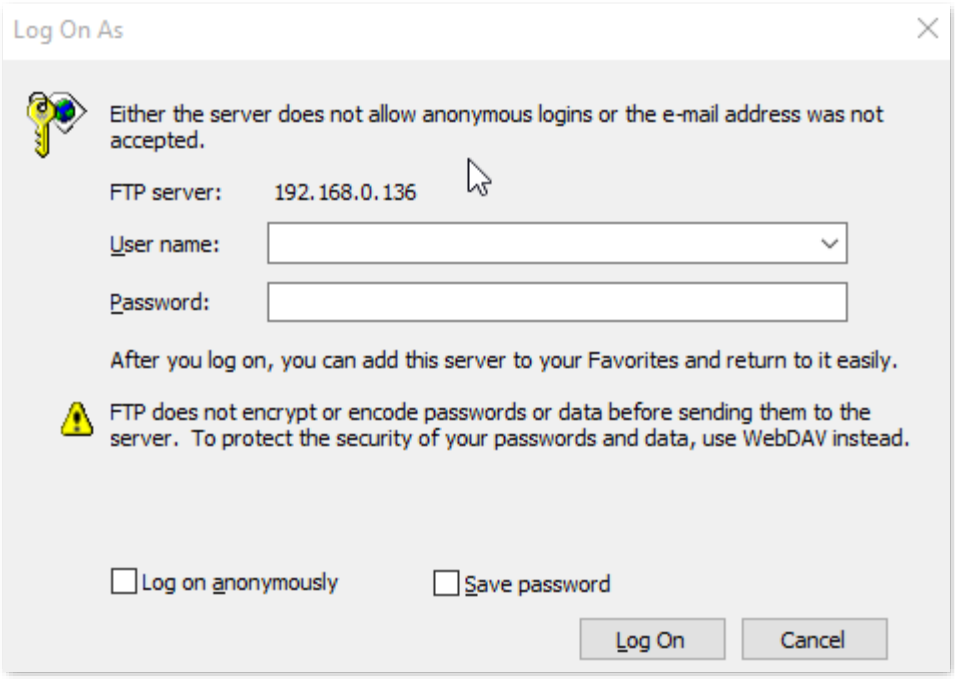
Step 4 Target the VPN connection added, and click **Connect**.



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**.



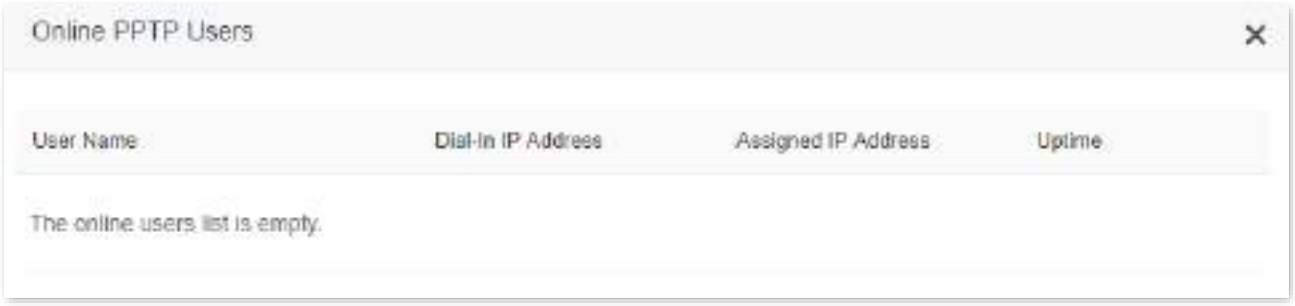
---End

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

9.2 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

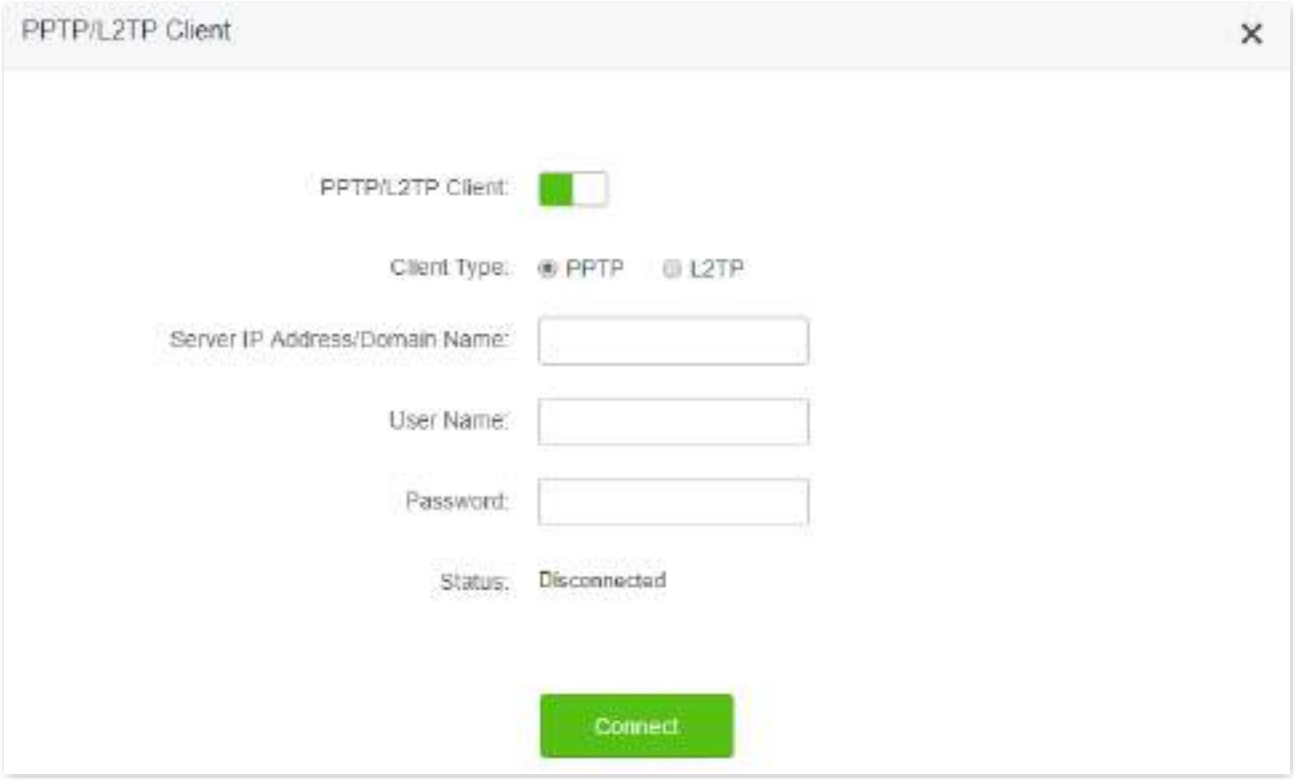
Parameter	Description
User Name	It specifies the VPN user name, which the VPN user uses when making PPTP dial-ups (VPN connection).
Dial-In IP Address	It specifies the IP address of the PPTP client. If the client is a router, it will be the IP address of the WAN port whose VPN function is enabled.
Assigned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

9.3 PPTP/L2TP client

9.3.1 Overview

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

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



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.

9.3.2 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**.

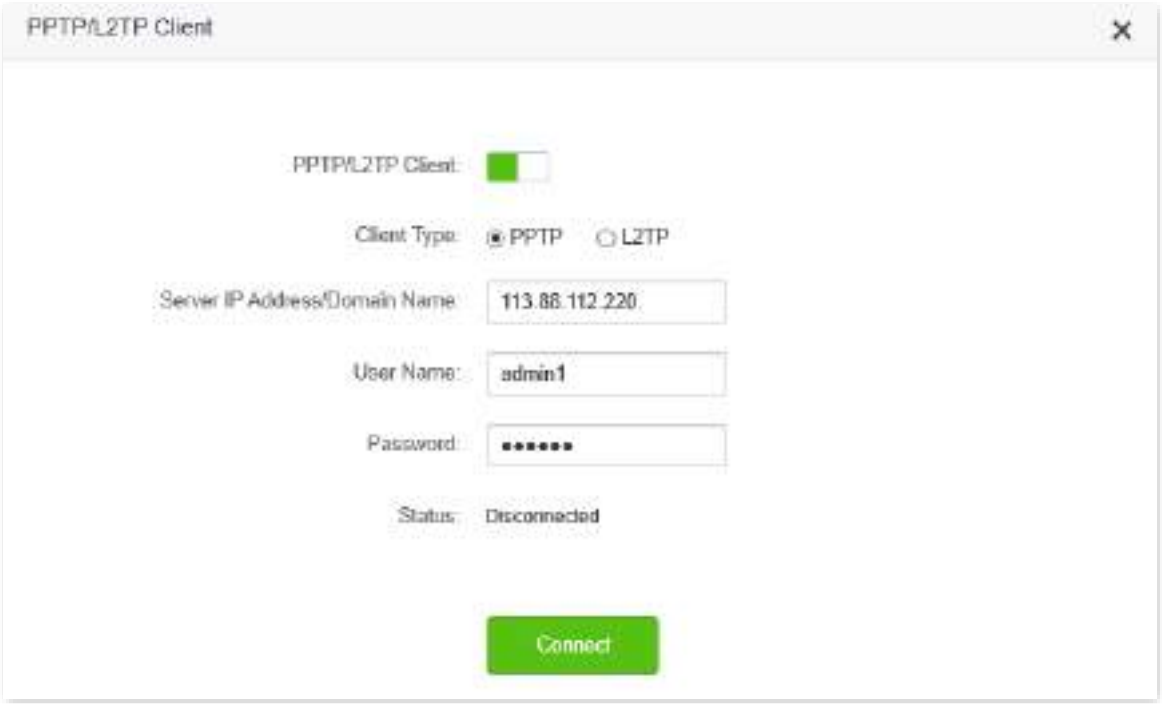
Step 3 Enable the **PPTP/L2TP Client**

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 in **Status**, you can access the VPN resources of your ISP.

10 IPv6 (wireless router mode)

TIP

This function is only available under the wireless router mode. Refer to Operating mode to set the operating mode of the router.

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

- Connect to the IPv6 network of ISPs
- Configure the IPv6 tunnel and achieve communications between IPv6 islands
- Change IPv6 LAN settings

10.1 IPv6 WAN settings

10.1.1 Connect to the IPv6 network of ISPs

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

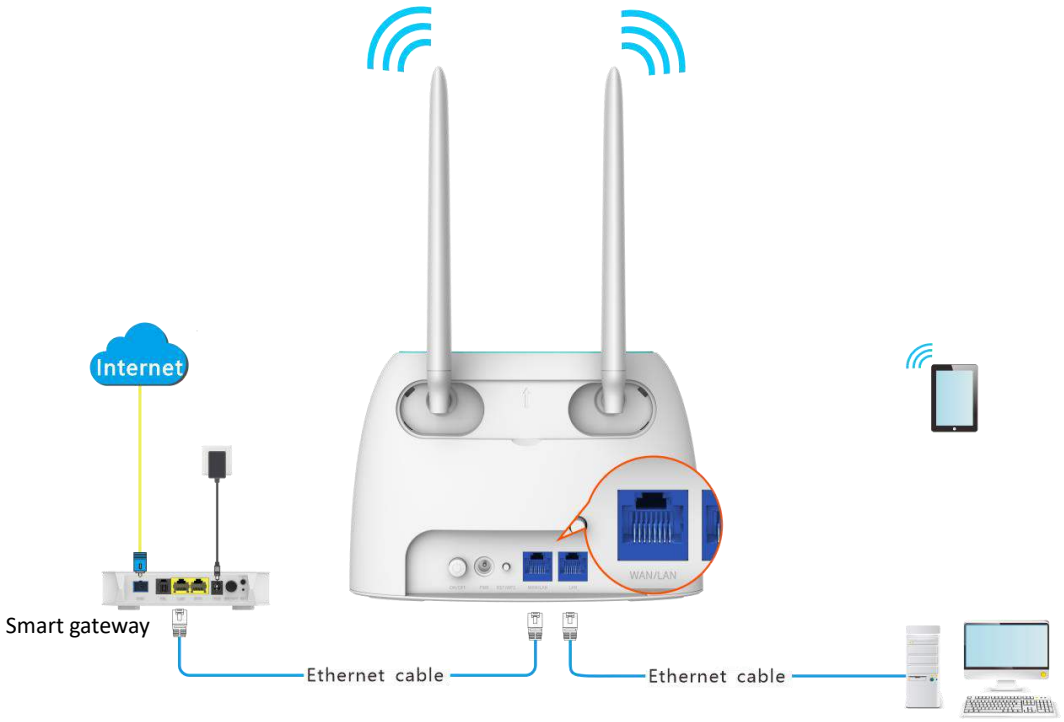
TIP

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

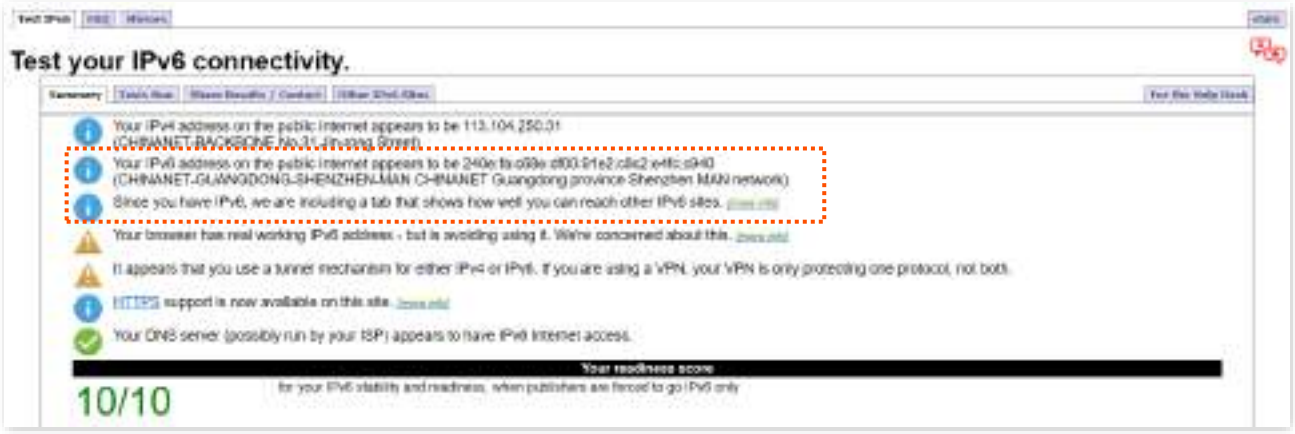
Parameter description

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

IPv6 network test:

Start a web browser on a 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:

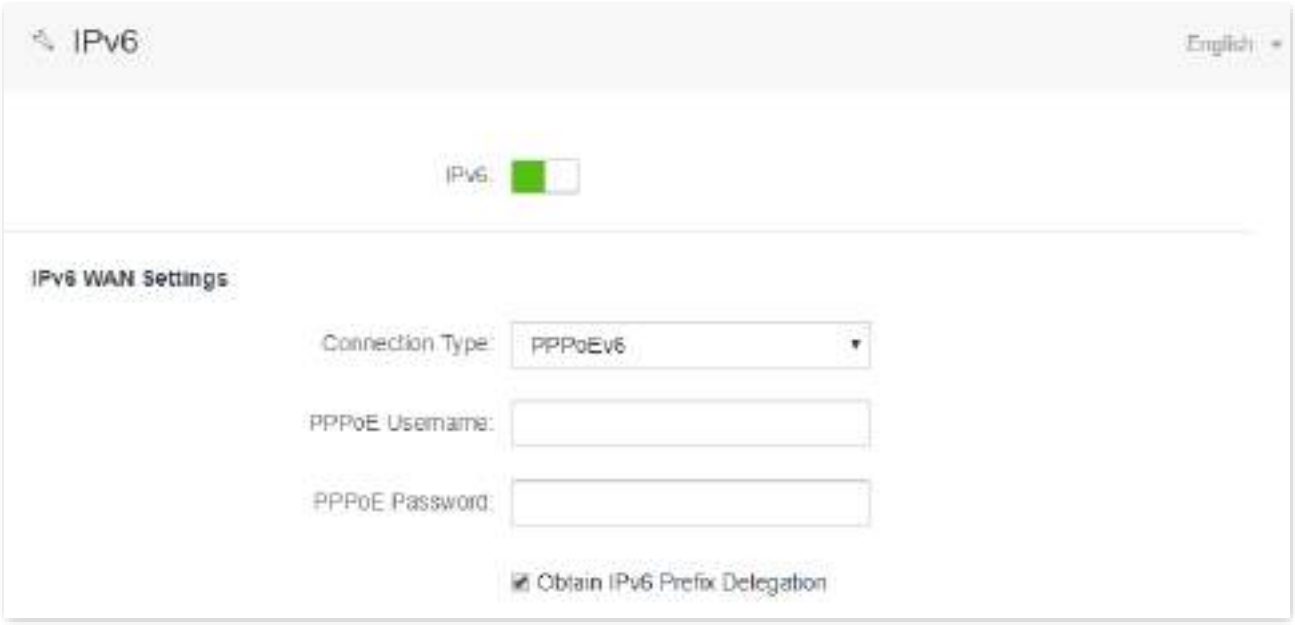
- Navigate to the **System Settings** > **System Status**, and move to the **IPv6 Status** part. Ensure that the IPv6 WAN address is a global unicast address.
- Ensure that devices connected to router obtain their IPv6 address through DHCPv6.
- Consult your ISP for help.

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.

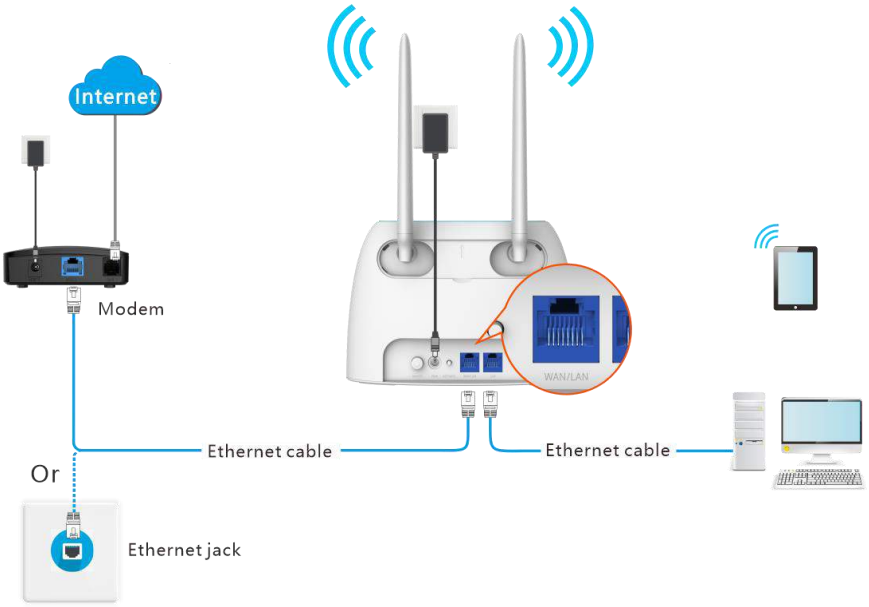


Parameter description

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. It is recommended to keep the default setting (Selected). If the LAN port cannot obtain the PD prefix, it is because the upstream device does not support PD prefix delivery. Contact your ISP to solve this problem.

Access the internet through PPPoEv6

If the PPPoE account provided by your ISP includes 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.

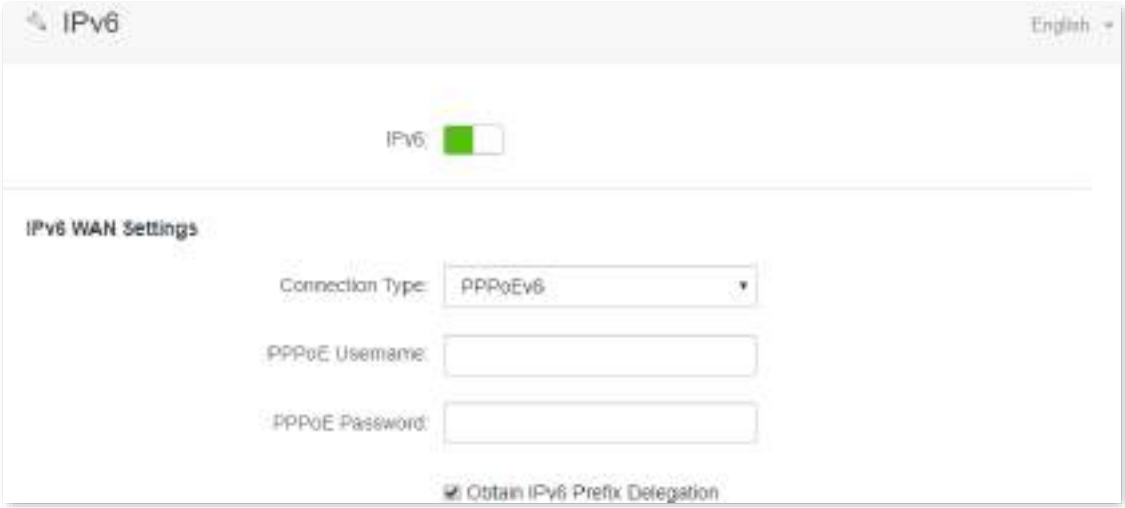
Step 2 Choose **IPv6**.

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 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.

10.1.2 IPv6 tunnel

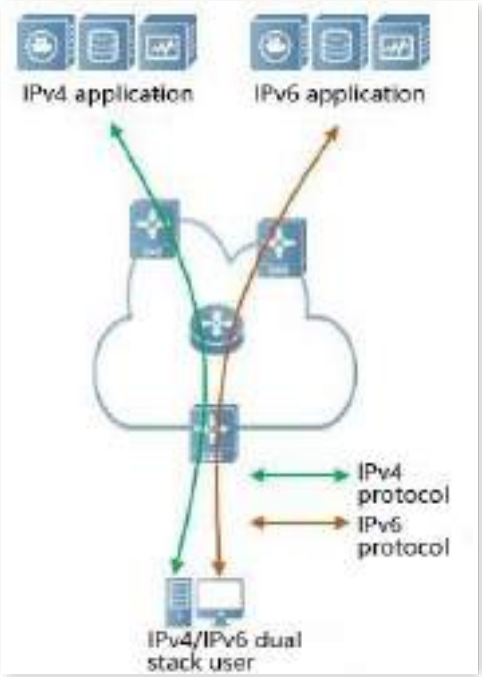
Overview

IPv6 transition mechanism

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

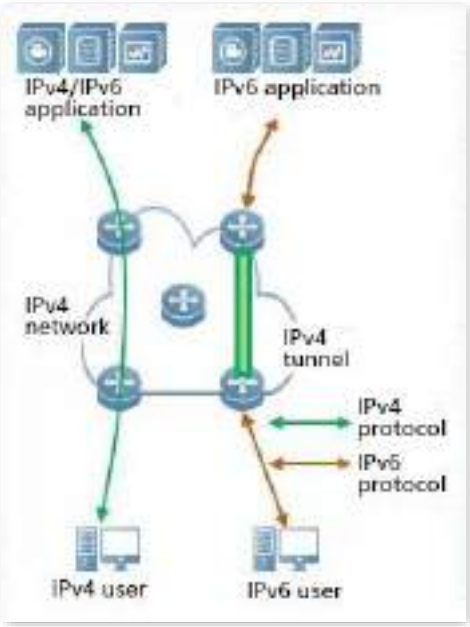
- **Dual stack technology**

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



- **Tunneling technology**

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



Manual and automatic tunnels

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

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

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

- **Manual tunnel**

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

- **Automatic tunnel**

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

6in4 tunnel

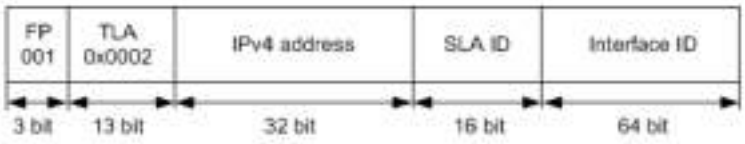
6in4 is a manual tunneling technology. It can implement IPv6 isolated island communication through manually configured tunnels without the network operator providing IPv6 interconnection services.

6to4 tunnel

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

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

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

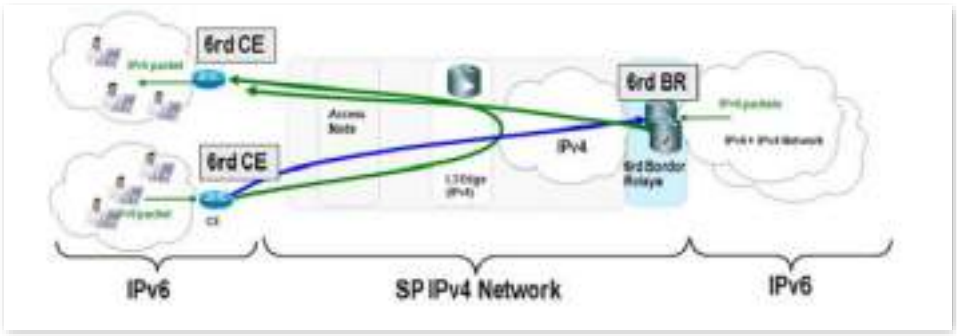


- FP: Format Prefix, which is 001
- TLA: Top Level Aggregator, which is 0x0002
- IPv4 address: The IPv4 address of the border router
- SLA ID: Site Level Aggregator, namely the ID of subnet
- Interface ID: The ID of the interface

6rd tunnel

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

The 6RD network typology is as follows.



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

The main differences between 6RD and 6to4:

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

Configure IPv6 tunnel

TIP

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

6in4 tunnel

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

Parameter description

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

6to4 tunnel

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

6rd tunnel

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

Parameter description

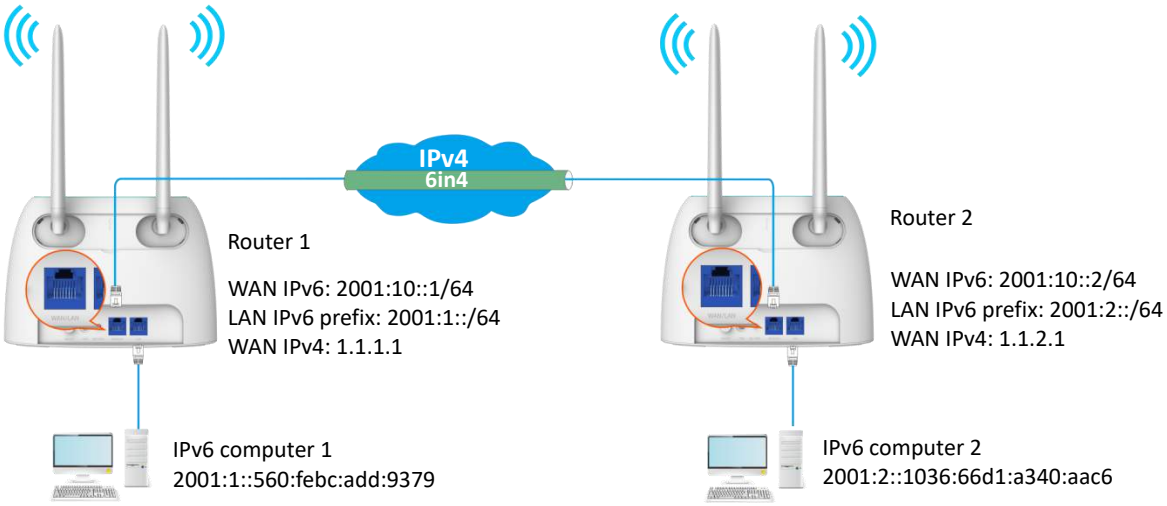
Parameter	Description
Remote IPv4 Address	It specifies the WAN IPv4 address of the dual stack router or 6rd BR at the peer side.
Subnet Mask	It specifies the subnet mask of the IPv4 network. The IPv4 network at both sides should be at the same network segment.
IPv6 Prefix	It specifies the IPv6 prefix of the network. • When the 6rd tunnel is used to achieve the communication between isolated islands, users can customize the IPv6 prefix. • If the 6 re tunnel is used to connect to the network of ISPs, contact your ISP for the IPv6 prefix.

Examples of IPv6 tunnel configuration

6in4 tunnel

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

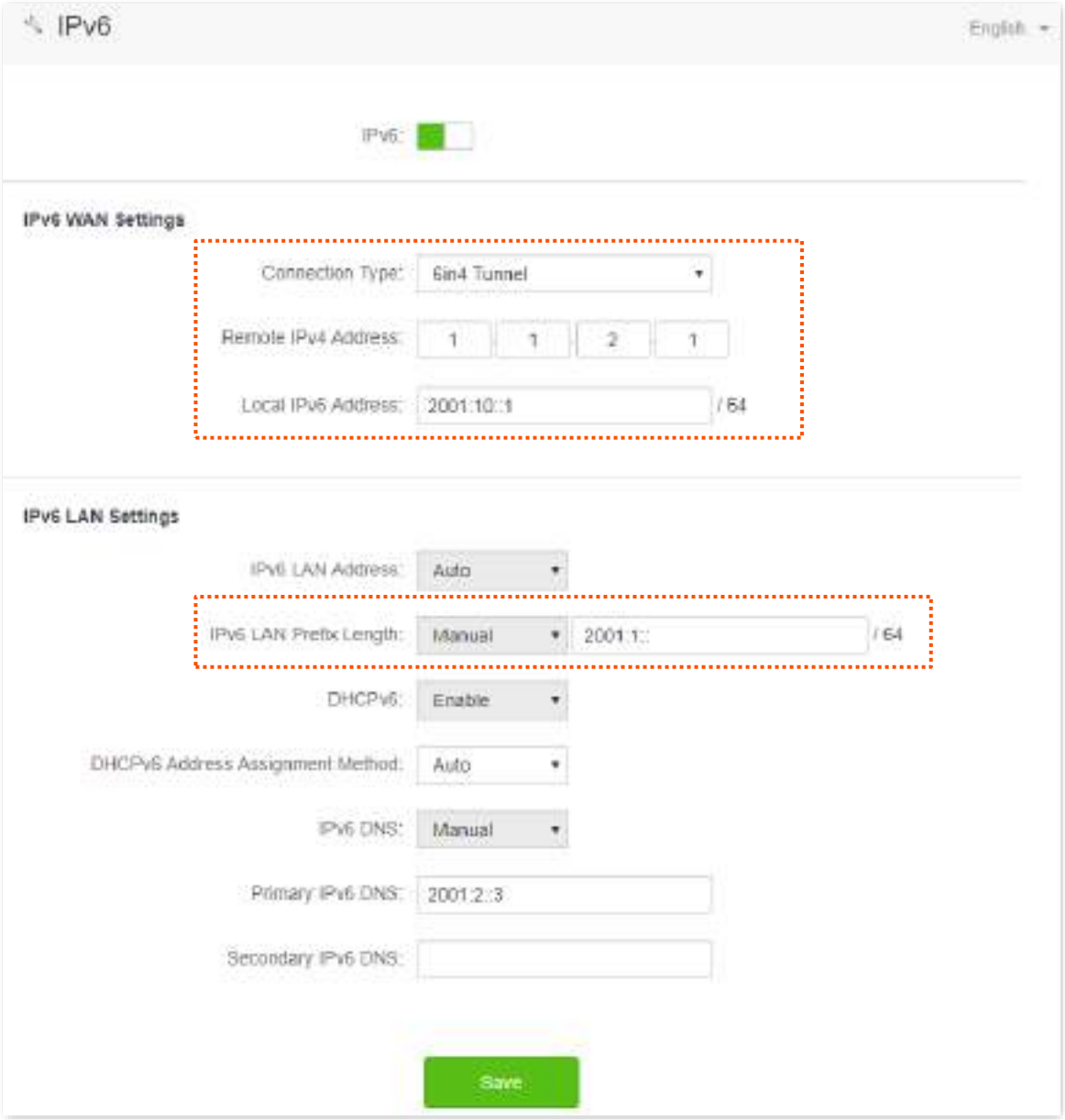
Assume that the two routers are connected to IPv4 network and obtain public IPv4 addresses.



Configuring procedure:

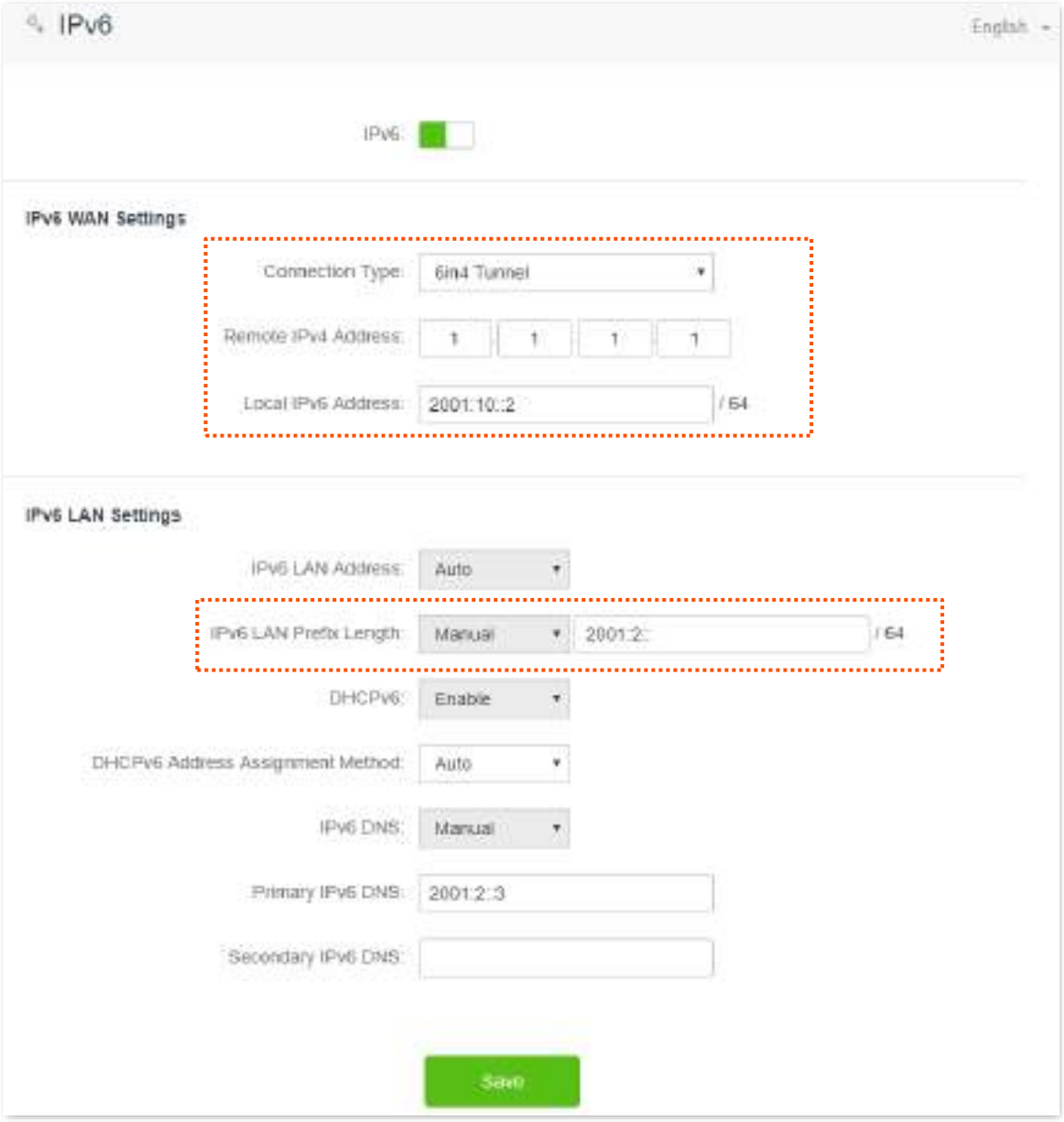
Step 1 Configure the **Router 1**.

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



Step 2 Configure the **Router 2**.

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



---End

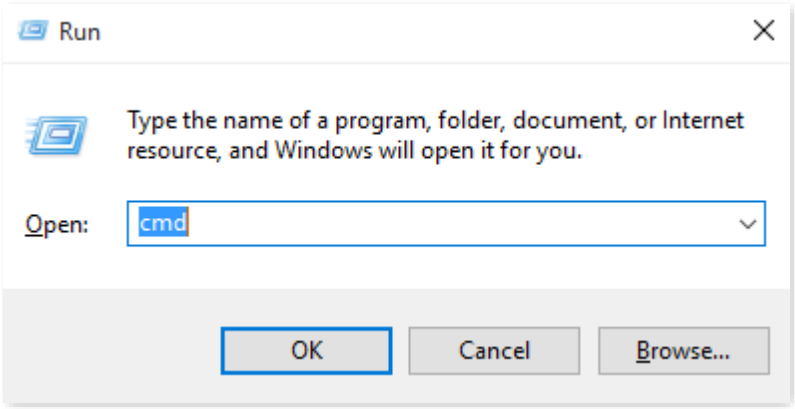
Verification

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

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

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

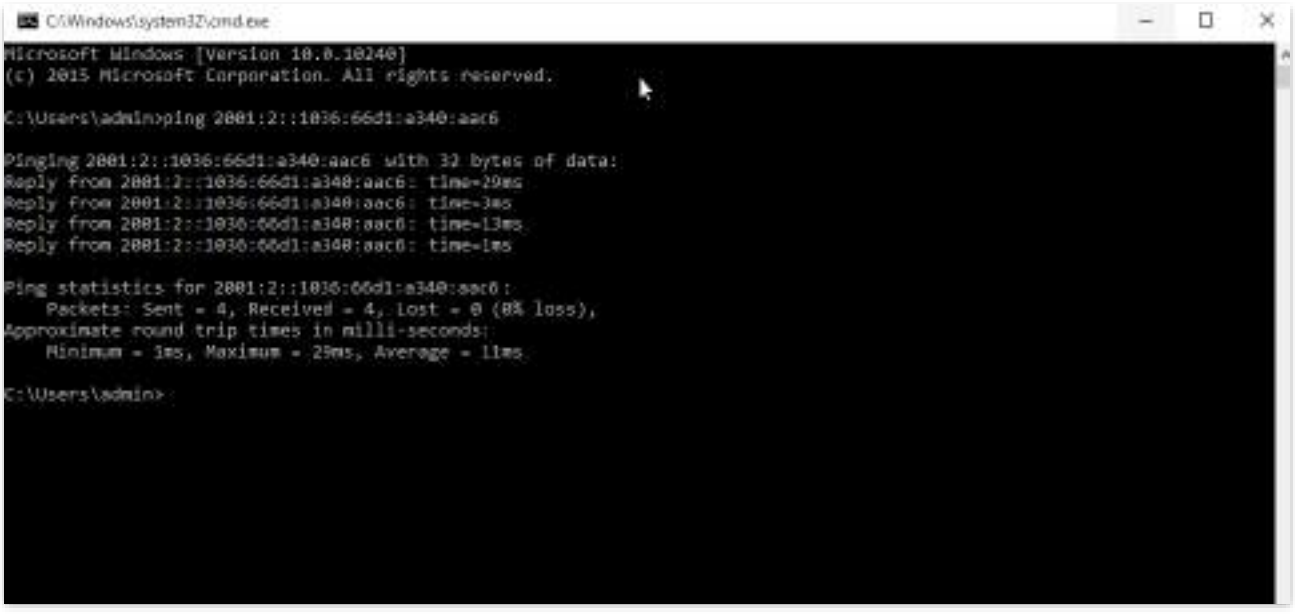
Step 2 Enter **cmd**, and click **OK**.



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

---End

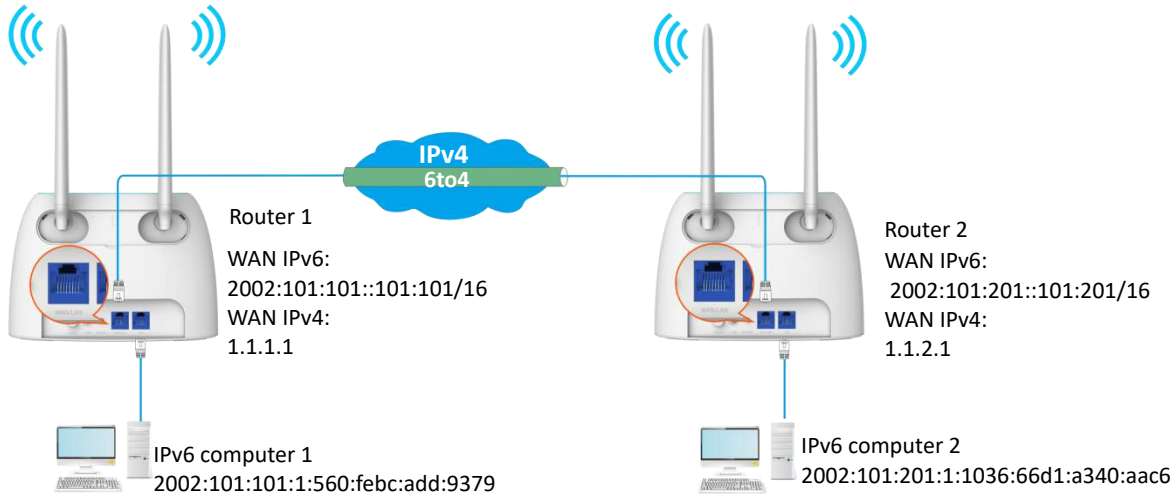
Wait a moment. The 6in4 tunnel configuration succeeds when the result is shown as below.



6to4 tunnel

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

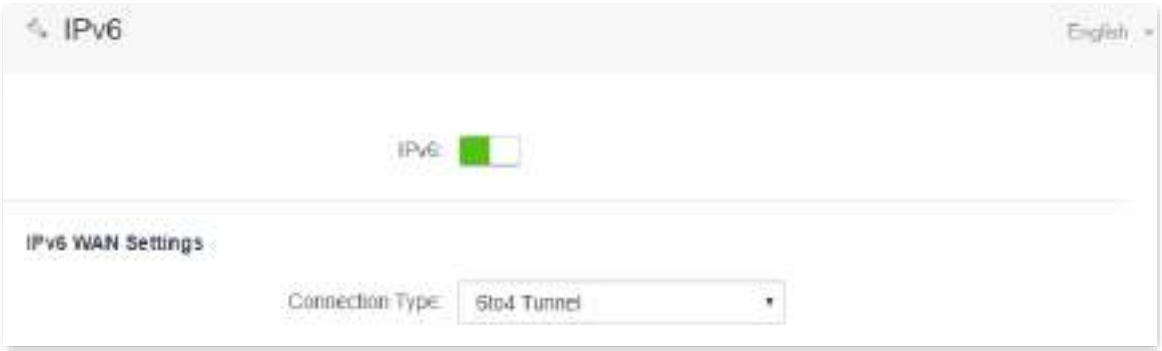
Assume that the two routers are connected to IPv4 network and obtain public IPv4 addresses.



Configuring procedure:

Step 1 Configure Router 1.

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



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

---End

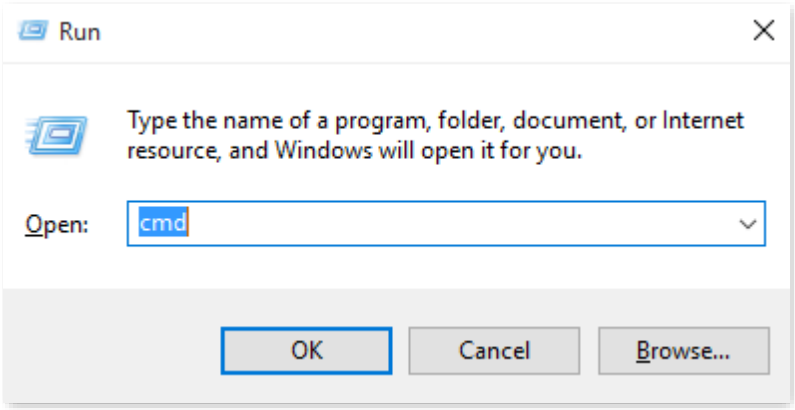
Verification

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

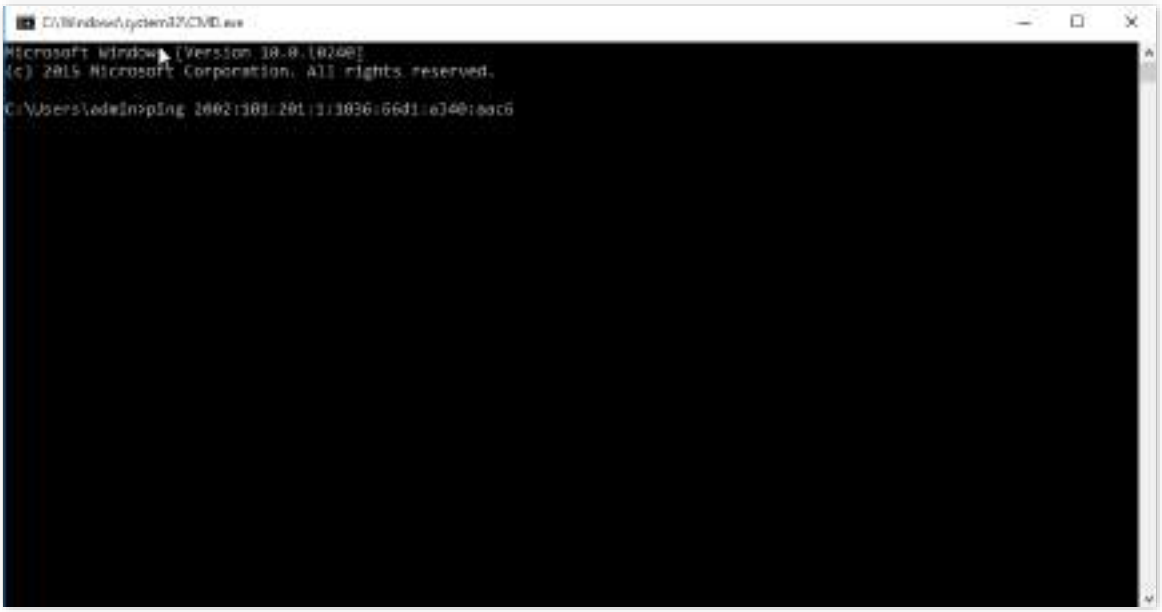
Now, ping computer 2 (IPv6 address: 2002:101:201:1:1036:66d1:a340:aac6) on computer 1.

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

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

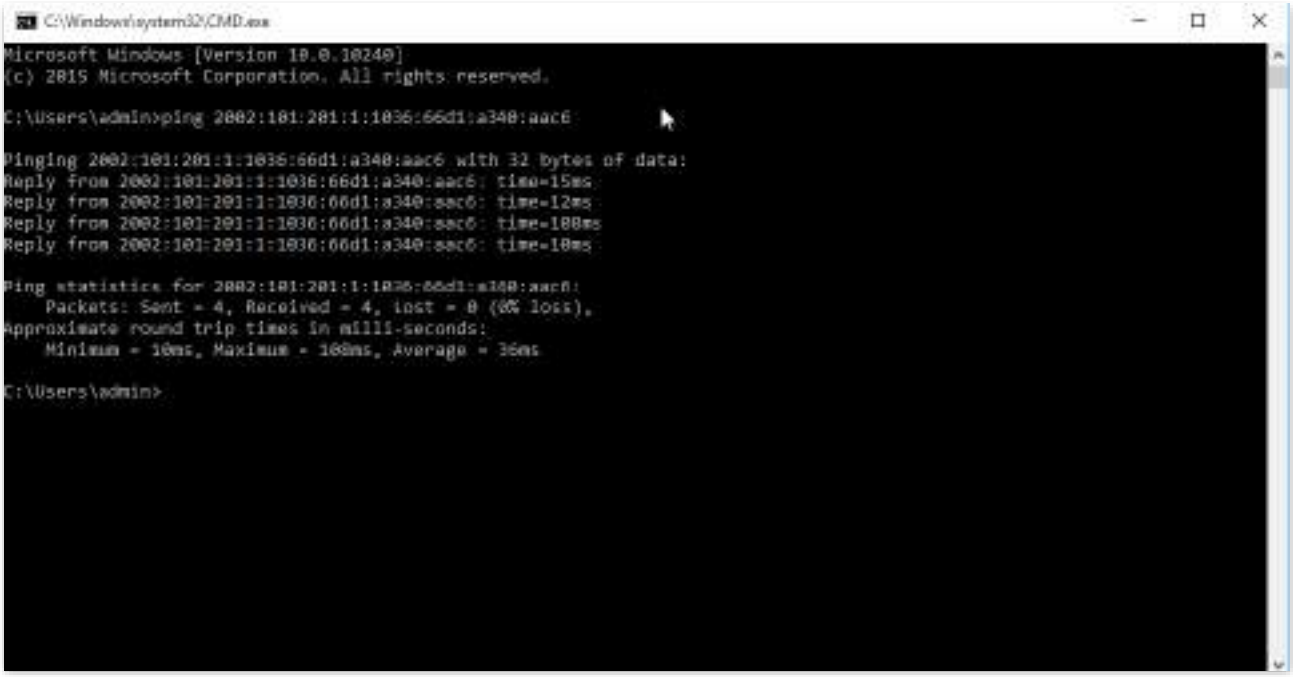


Step 3 Enter the ping command, which is **ping 2002:101:201:1:1036:66d1:a340:aac6** in the example and press **Enter**.



---End

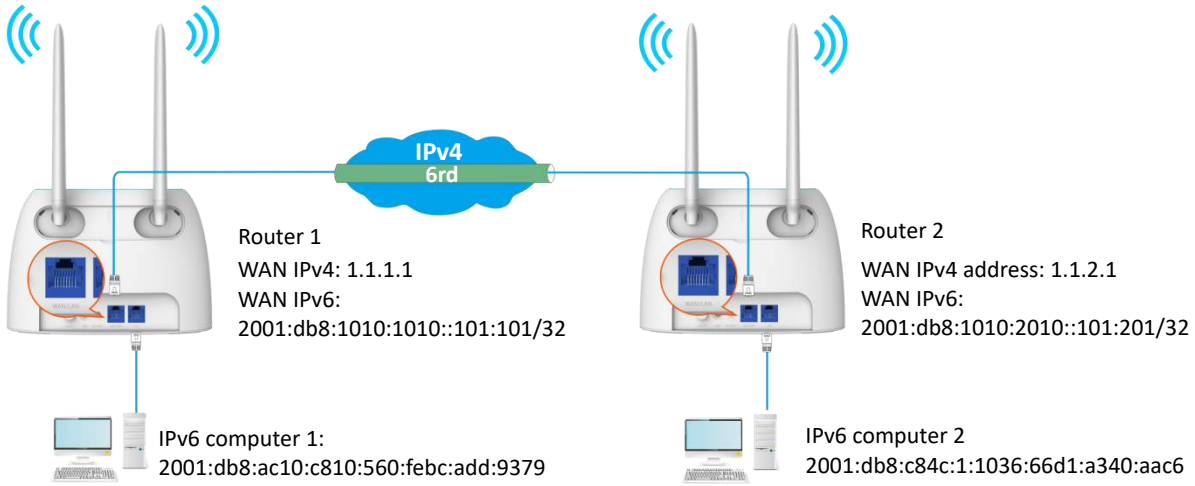
Wait a moment. The 6to4 tunnel configuration succeeds when the result is shown as below.



6rd tunnel

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

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



Configuring procedure:

TIP

Before configuring the 6rd tunnel, navigate to View system information to find the WAN IPv4 address of the router.

Step 1 Configure Router 1.

1. Start a web browser on a device connected to the router 1 and visit **tendawifi.com** to log in to the web UI of the router.
2. Choose **IPv6**.

3. Enable the **IPv6** function.
4. Set the connection type to **6rd Tunnel.**
5. Enter the WAN IPv4 address of the device at the peer side in **Remote IPv4 Address**, which is **1.1.2.1** in this example.
6. Enter the Subnet Mask of the IPv4 network. **240.0.0.0** is recommended.
7. Customize the **IPv6 Prefix** (the default is recommended).
8. Click **Save**.

Step 2 Configure Router 2.

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

---End

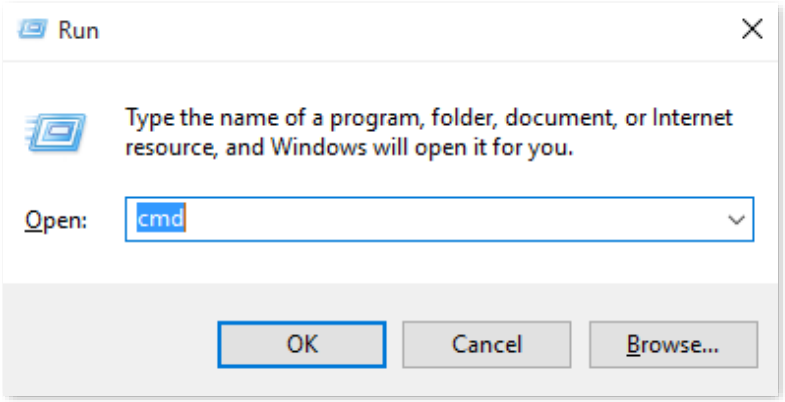
Verification

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

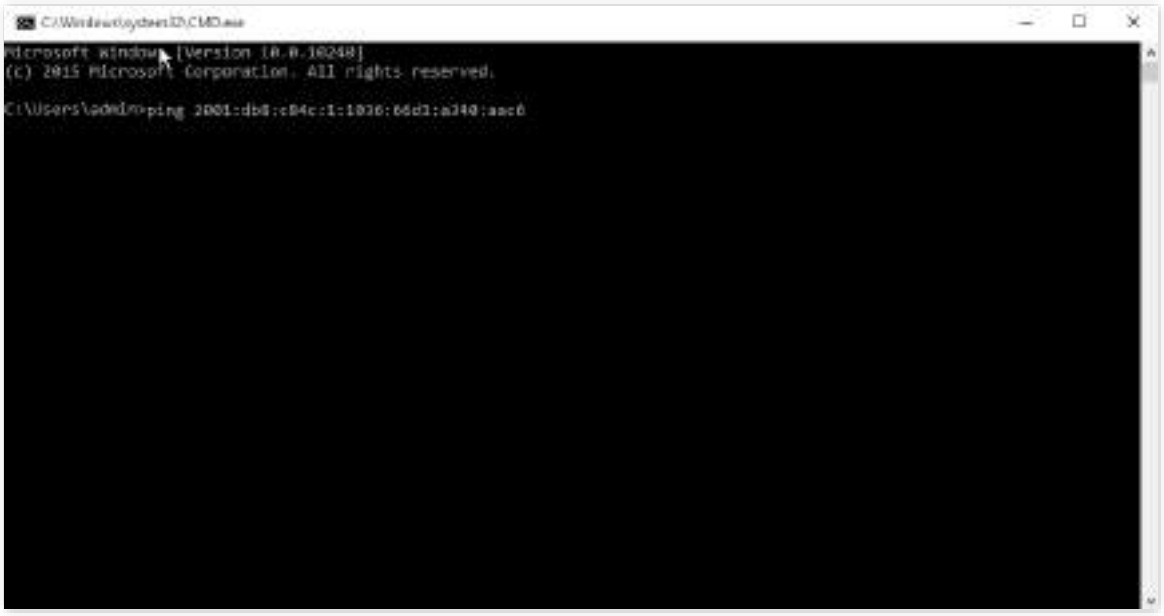
Now, ping computer 2 (IPv6 address: 2001:db8:c84c:1:1036:66d1:a340:aac6) on computer 1.

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

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

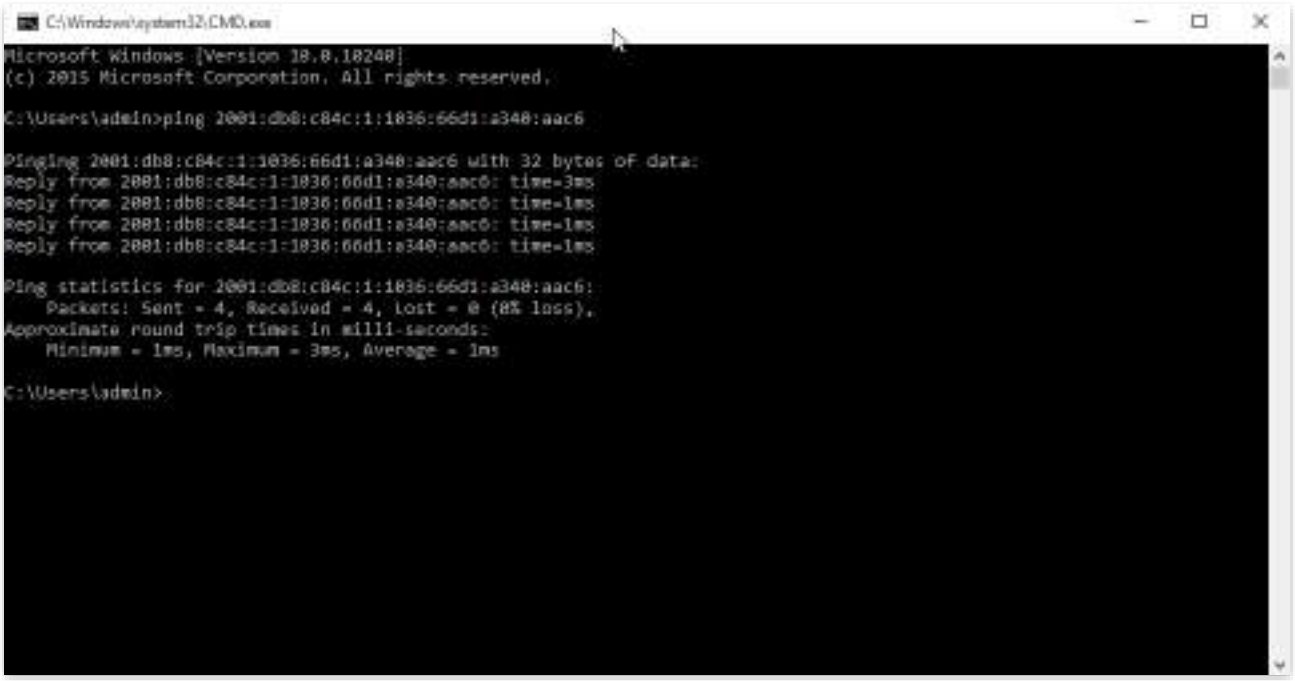


Step 3 Enter the ping command, which is **ping 2001:db8:c84c:1:1036:66d1:a340:aac6** in the example and press **Enter**.



---End

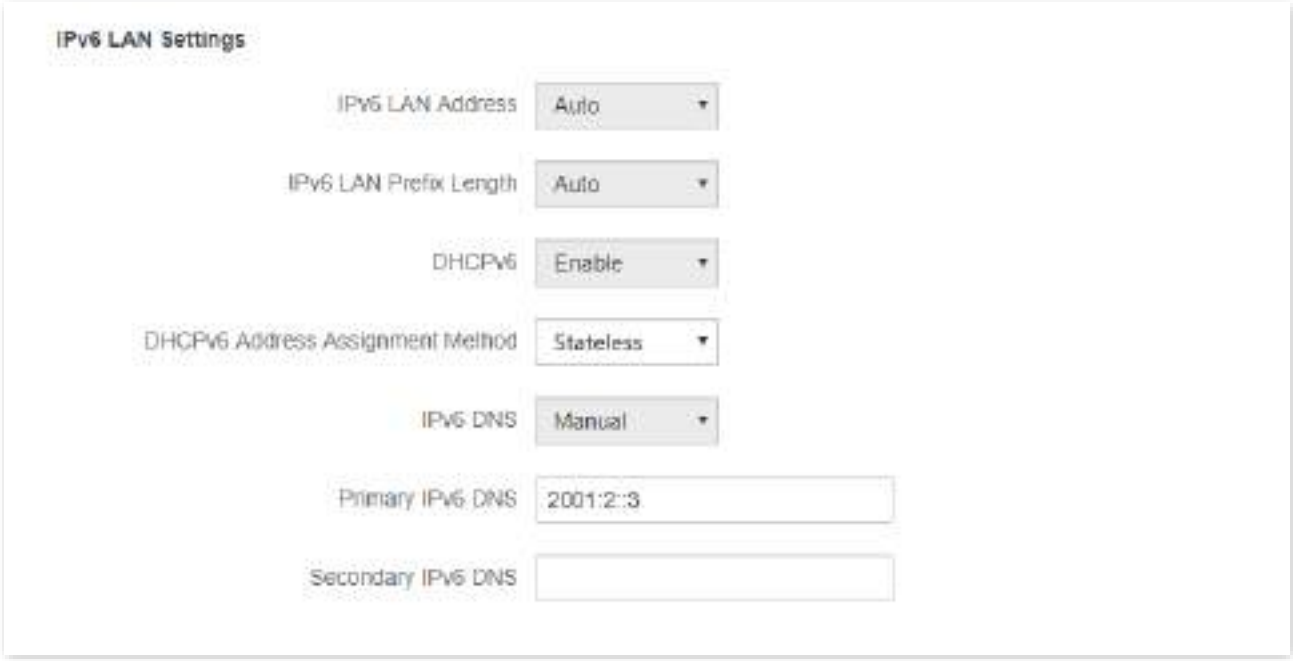
Wait a moment. The 6rd tunnel configuration succeeds when the result is shown as below.



10.2 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
IPv6 LAN Address	It specifies two types of IPv6 LAN address assignment. • **Auto**: The router generates the IPv6 address based on the LAN MAC address of the router. By default, the prefix has 64 digits. • **Manual**: You need to set the IPv6 LAN address manually.
IPv6 LAN Prefix Length	It specifies two types IPv6 LAN prefix address assignment. • **Auto**: The router obtains an LAN prefix from the upstream device. • **Manual**: You need to set the IPv6 LAN prefix manually.
DHCPv6	DHCPv6 (Dynamic Host Configuration Protocol for IPv6) is used to assign IP addresses and prefix to IPv6 hosts on a network. It is the IPv6 equivalent of the DHCP for IPv4. This is also known as a stateful autoconfiguration.
DHCPv6 Address Assignment Method	It specifies the assignment type of IPv6 address information by the DHCPv6 server. • **Stateless**: DHCPv6 stateless configuration. Clients obtain their IPv6 address through Router Advertisement (Stateless Address Auto Configuration) and other parameters are allocated by the DHCPv6 server. • **Stateful**: DHCPv6 stateful configuration. The DHCPv6 server automatically assigns IPv6 addresses/prefixes and other network configuration parameters (e.g. DNS server addresses, etc.) to clients. The user needs to manually configure the start ID and the end ID.
Start ID	The configuration is required when the DHCPv6 address assignment method is set to

Parameter	Description
End ID	stateful. It specifies the range of the last segment of the IPv6 address that the DHCPv6 server assigns to the devices. Range: 1-ffff.
IPv6 DNS	It specifies the LAN IPv6 DNS configuration method. • **Auto**: Obtain the IPv6 DNS address from the upstream device. • **Manual**: Configure the IPv6 DNS address manually.
Primary IPv6 DNS	Enter the fixed IPv6 DNS address provided by your ISP.
Secondary IPv6 DNS	If your ISP only provides one DNS server address, you can leave the secondary IPv6 DNS blank.

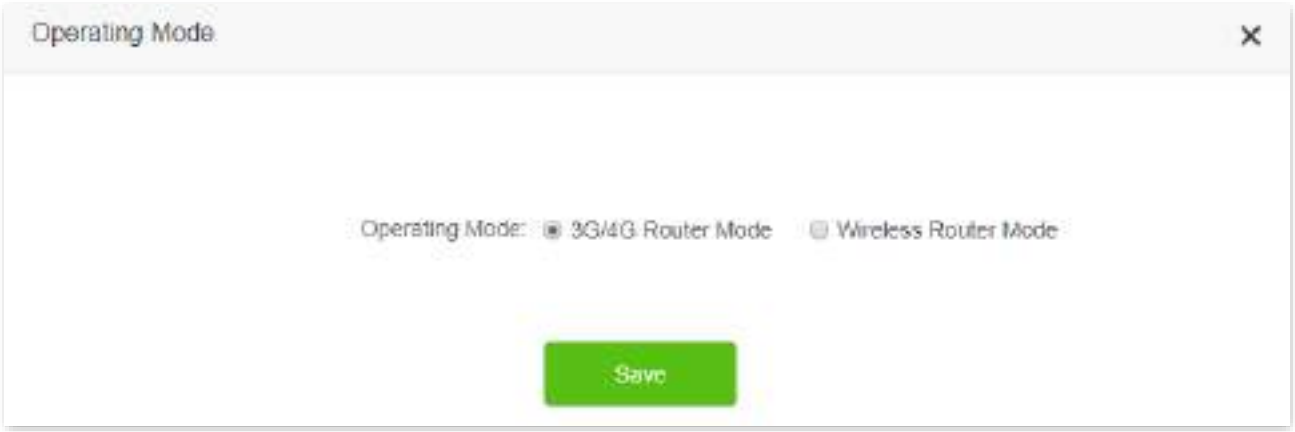
11 Advanced settings

11.1 Operating mode

11.1.1 Overview

In addition to providing internet access with a SIM card, the router can also be connected to a broadband. By switching the operating mode, you can access the internet through the corresponding method. The default operating mode is 3G/4G router mode.

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



To access the internet:

- 3G/4G router mode: Refer to the quick installation guide or Access the internet with a SIM card.
- Wireless router mode: Refer to Access the internet through the WAN port.

11.1.2 Set the router to wireless router mode

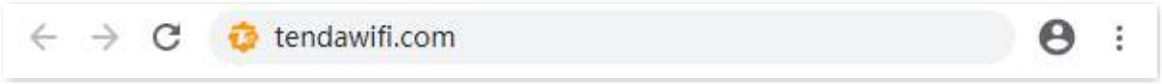
If you have already used the router and is able to access the web UI, navigate to the **Advanced Settings** > **Operating Mode** to change the operating mode.

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

Configuring procedure:

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

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

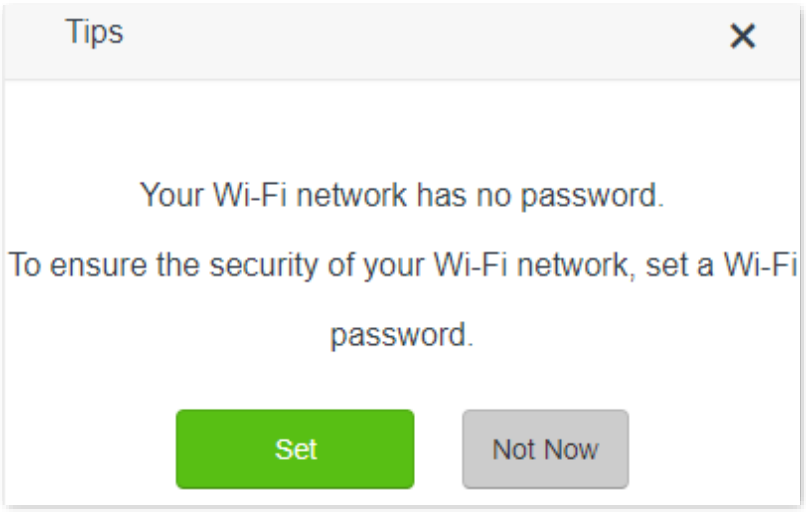


3. Click **Start.**

4. Click **Skip**.

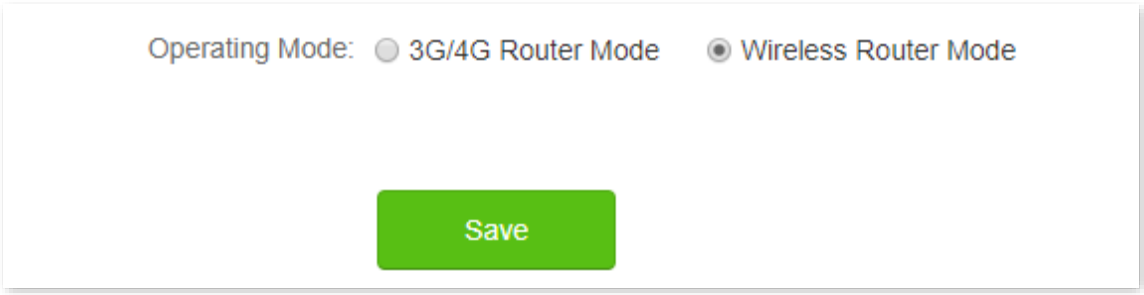
5. Do not set login and Wi-Fi password now by ticking **Not Required**, and click **Next**.

6. Click **Not Now**.



Step 2 Set the router to wireless router mode.

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



---End

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