AC1200 Dual-band Router

User Guide

Copyright Statement

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Preface

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

Conventions

This user guide is applicable to the following routers. AC8 is used for illustration in this guide unless it is specified. The contained images and UI screenshots are subject to the actual products.

Product model	Description
AC8	AC1200 Dual-band Gigabit Wireless Router
AC7	AC1200 Smart Dual-Band WiFi Router
AC5	AC1200 Smart Dual-band WiFi Router

Typographical conventions in this User Guide:

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

Symbols in this User Guide:

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

Acronyms and Abbreviations

Acronym or Abbreviation	Full Spelling
DDNS	Dynamic Domain Name System
DHCP	Dynamic Host Configuration Protocol
DMZ	Demilitarized Zone
DNS	Domain Name System
IPTV	Internet Protocol Television

Acronym or Abbreviation	Full Spelling
IPv4	Internet Protocol Version 4
IPv6	Internet Protocol Version 6
ISP	Internet Service Provider
PPP	Point To Point Protocol
PPPoE	Point-to-Point Protocol over Ethernet
PPTP	Point to Point Tunneling Protocol
SSID	Service Set Identifier

Technical Support

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

 **Hotline**	Global: (86) 755-27657180 (China Time Zone)
	United States: 1-800-570-5892 (Toll Free: 7 x 24 hours)
	Canada: 1-888-998-8966 (Toll Free: Mon - Fri 9 am - 6 pm PST)
	Hong Kong: 00852-81931998
 **Email**	support@tenda.cn

Content

1 Knowing your device

1.1 LED indicator

1.1.1 AC8/AC5

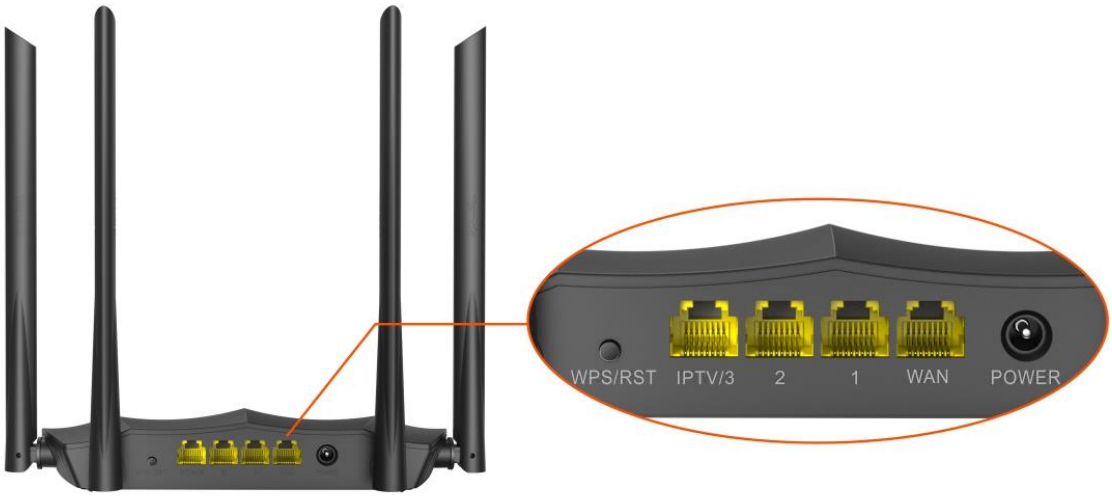
LED indicator	Status	Description
LED indicator	Solid on	The router is starting or connected to the internet successfully.
	Slow blinking	The router fails to connect to the internet.
	Fast blinking for 3 seconds	A wired device is connected or disconnected to the router.
	Fast blinking for 8 seconds	The migration of PPPoE user name and password succeeds.
	Fast blinking for 2 minutes	The router is performing WPS negotiation.

1.1.2 AC7

LED indicator	Status	Description
SYS	Solid on	• The router is starting. • If the indicator still light solid on after the router completes startup, it indicates that the system is faulty.
	Blinking	The system is working properly.
WiFi	Solid on	At least the 2.4 GHz or 5 GHz WiFi network is enabled.
	Fast blinking	Data is being transmitted wirelessly.
	Slow blinking	The router is performing WPS negotiation.
	Off	The WiFi network is disabled.
WAN	Solid on	The WAN port is connected properly.
	Blinking	Data is being transmitted over the WAN port.
	Off	The WAN port is disconnected or improperly connected.
LAN	Solid on	The LAN port is connected properly.
	Blinking	Data is being transmitted over the LAN port.
	Off	No device is connected to any LAN port of the router properly.

1.2 Ports and buttons

1.2.1 AC8/AC5



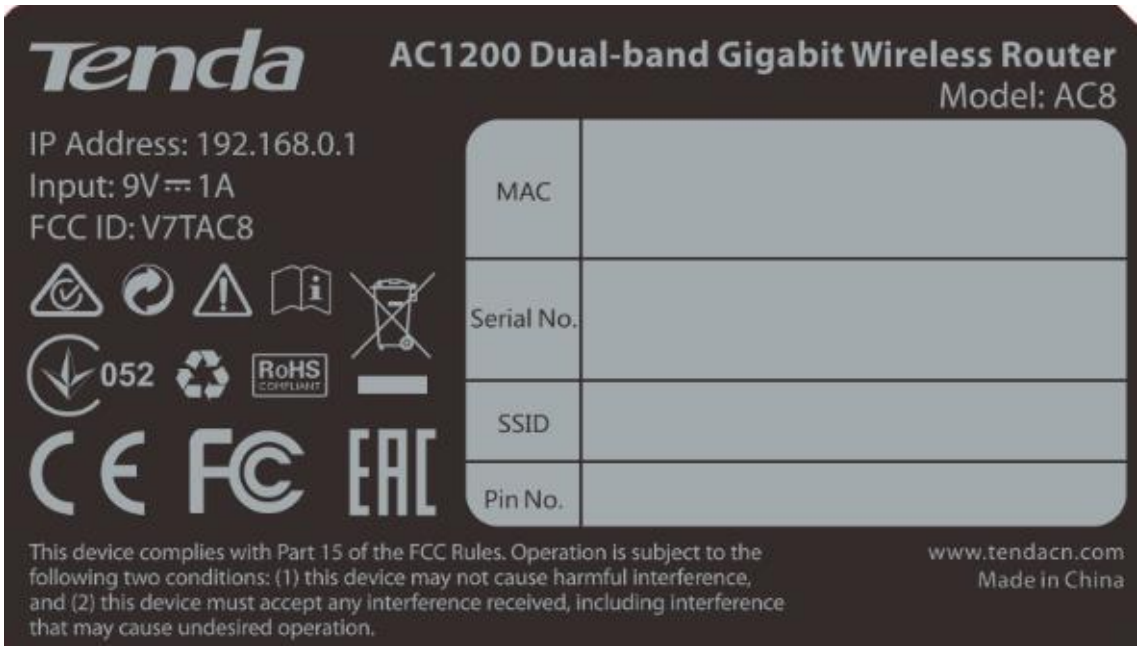
Button/Port	Description
WPS/RST	Used to start the WPS negotiation process, or to reset the router. • **WPS**: Press the button of the router for 1 to 3 seconds. Within 2 minutes, enable the WPS function of the other WPS-supported device to establish a WPS connection. • **Reset**: Hold down the button for about 8 seconds, and then release it when the LED indicator blinks fast. The router is reset successfully.
IPTV/3	By default, it is a LAN port. If the IPTV function of the router is enabled, it serves only as an IPTV port used to connect to a set-top box.
1/2	Used to connect to the wired devices such as computers or switches.
WAN	Used to connect this router to the internet, such as a LAN port from the modem or the Ethernet jack provided by your ISP.
POWER	Used to connect to the included power adapter.

1.2.2 AC7

Port/Button	Description
POWER	Power jack. Used to connect to the included power adapter.
WIFI	Used to enable/disable the WiFi network of the router.
RST/WPS	Used to start the WPS negotiation process, or to reset the router. • **WPS**: Press the button of the router for 1 to 3 seconds. Within 2 minutes, enable the WPS function of the other WPS-supported device to establish a WPS connection. • **Reset**: Hold down the button for about 8 seconds. Release it when all the LED indicators blink once. The router is reset successfully.
WAN	Used to connect this router to the internet, such as a LAN port from the modem or the Ethernet jack provided by your ISP.
1/2	They are LAN ports used to connect to the wired devices such as computers or switches.
3/IPTV	By default, it is a LAN port. If the IPTV function of the router is enabled, it serves only as an IPTV port used to connect to a set-top box.

1.3 Label

The bottom label shows the SSID, login IP address, serial number and MAC address of the router. See the following figure. Here AC8 is used for illustration.



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

MAC: It specifies the MAC address of the router.

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

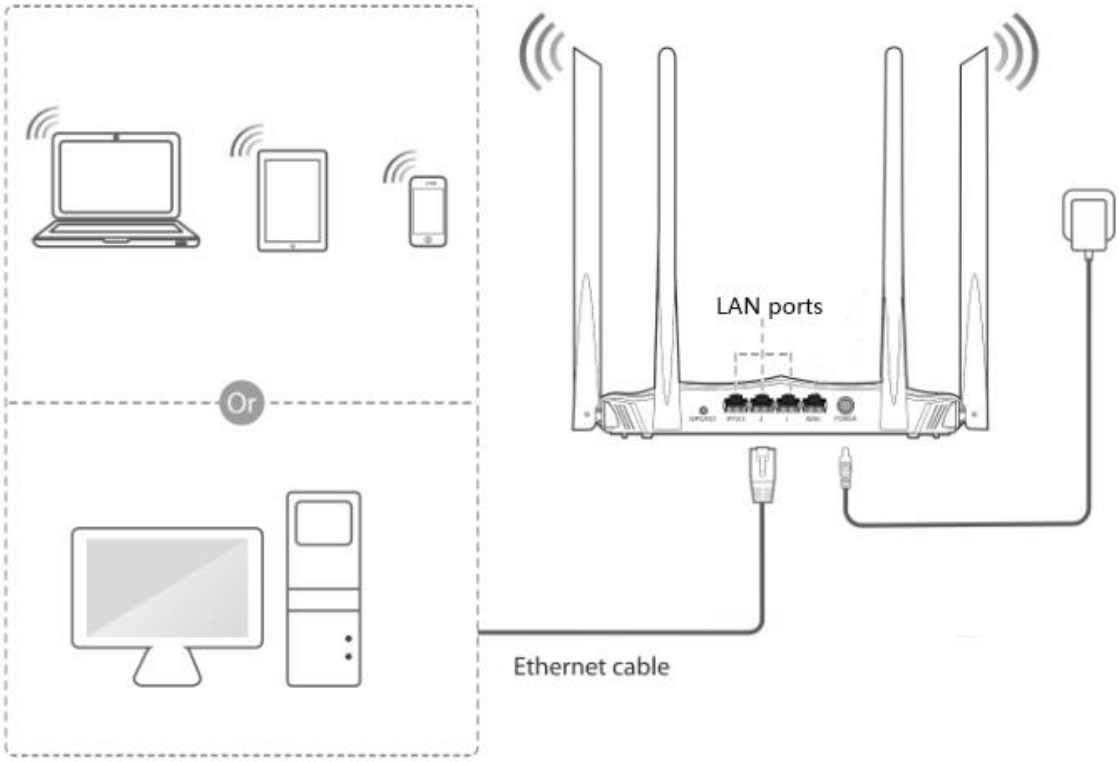
SSID: It specifies the default WiFi name of the router.

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

2 Web UI

2.1 Logging in to the web UI

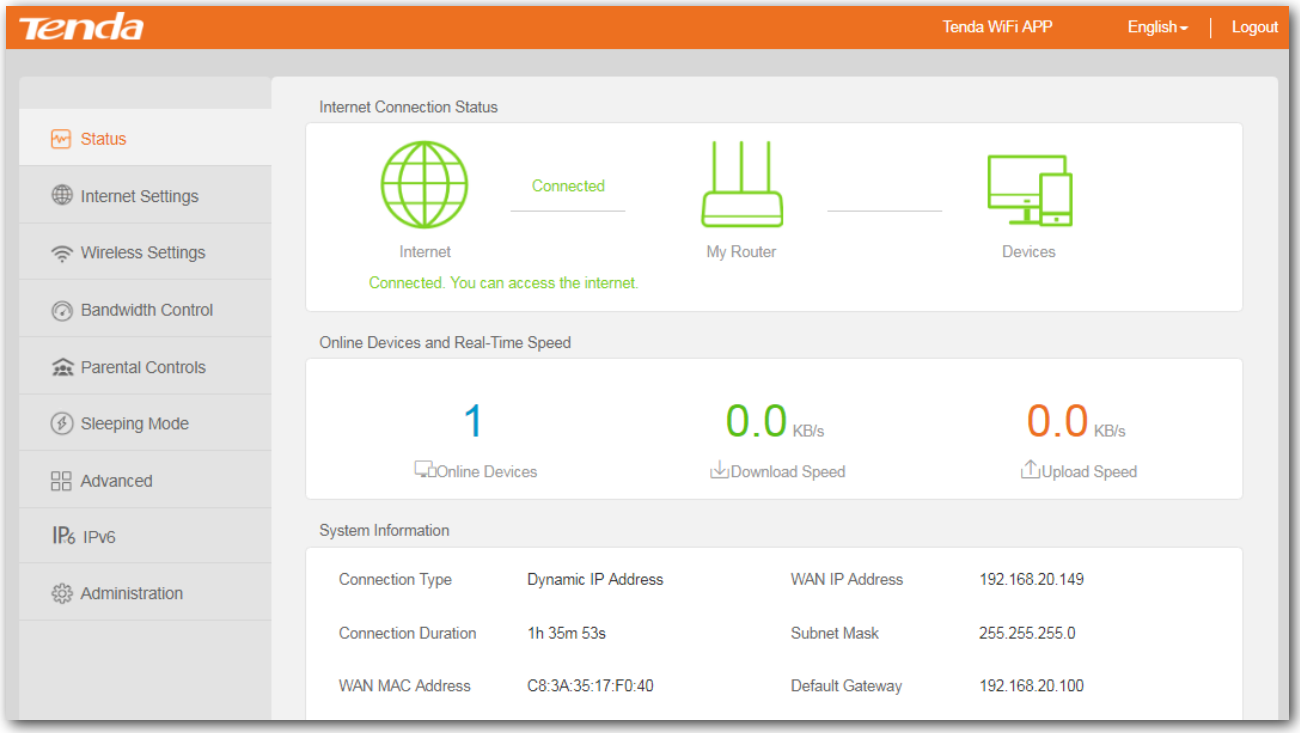
Step 1 Connect your smartphone to the wireless network, or connect your computer to a LAN port of the router.



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

---End

The following page appears.



TIP

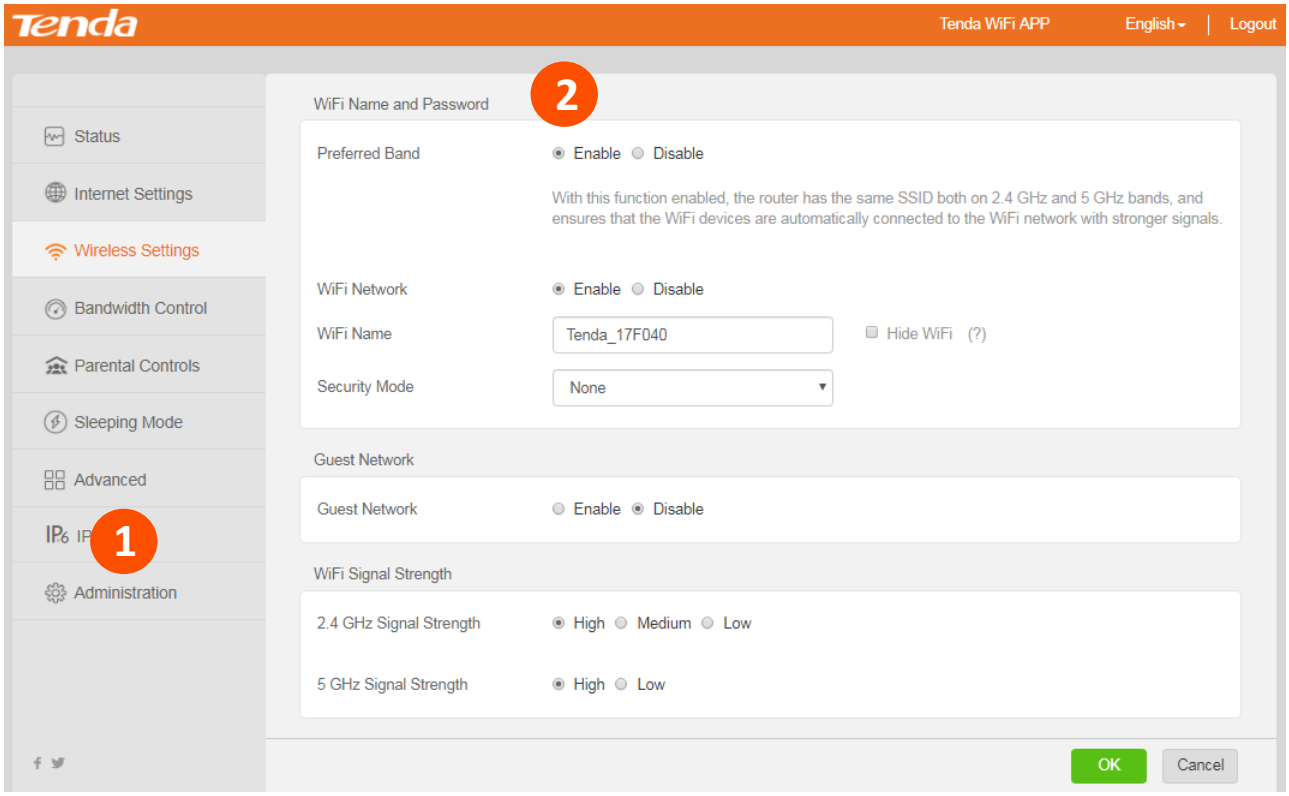
If the above page doesn't appear, check whether the computer is obtaining an IP address automatically. Refer to A.1 configuring the computer to obtain an IP address automatically.

2.2 Logging 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 **Logout** on the upper 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	Used to display the function menu of the router. Users can select functions in the navigation bar and the configuration appears in the configuration area.
2	Configuration area	Used to modify or view your configurations.

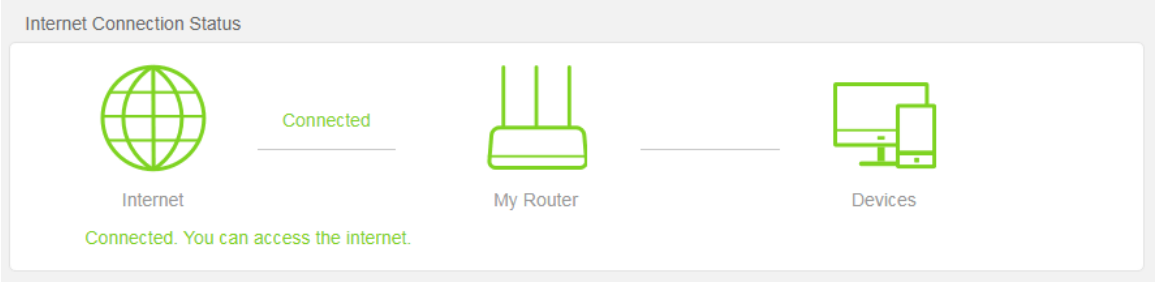
3 Status

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

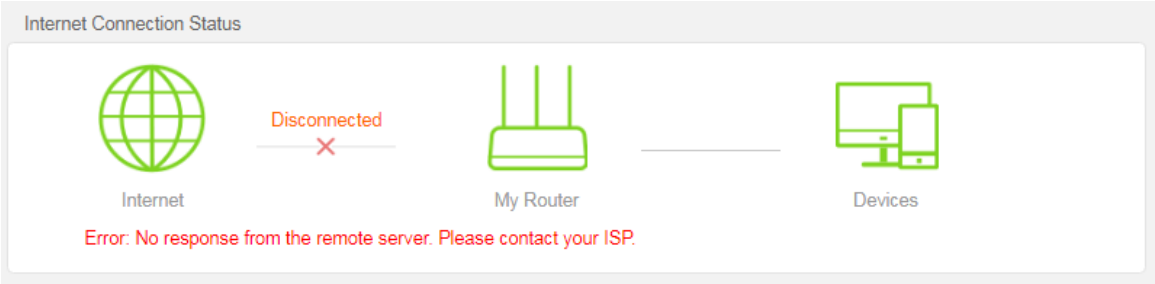
- View internet connection status
- View online devices information
- View system information

3.1 Viewing Internet connection status

- If the message “Connected. You can access the internet” shows on the page, the internet is accessible.

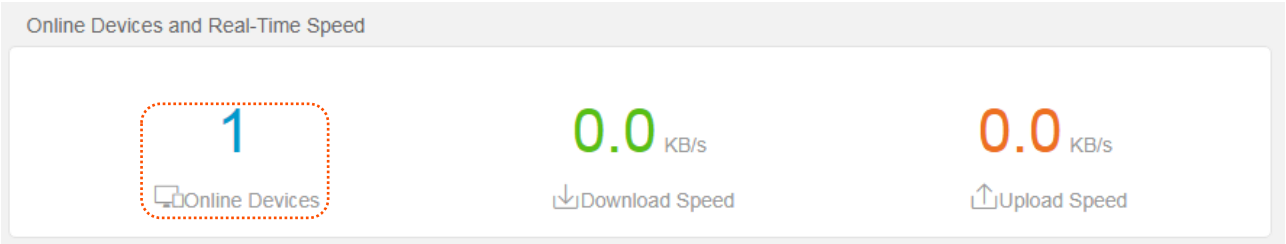


- If a red cross appears, the internet connection is abnormal. Please follow the onscreen instruction to resolve the issue.

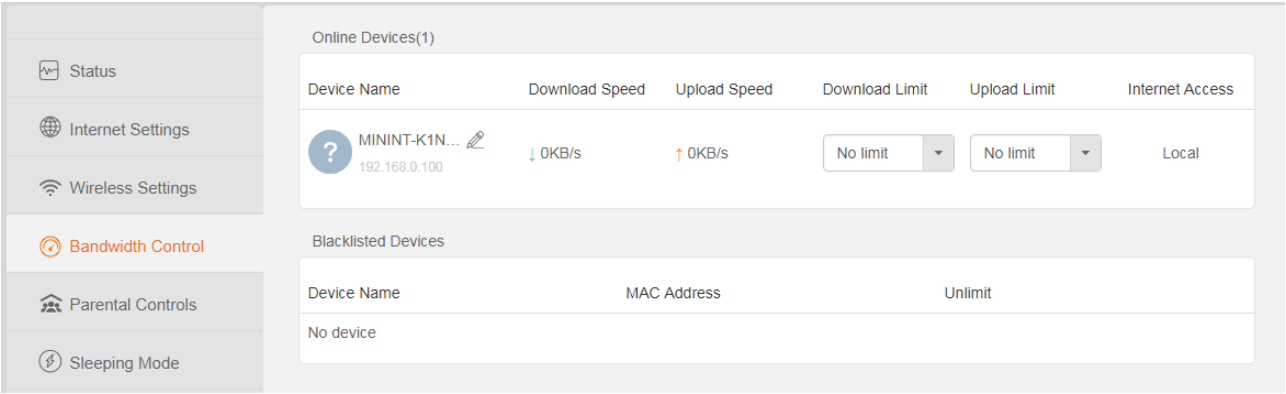


3.2 Viewing online devices and real-time speed

This section displays the number of online devices and the real-time upload/download speed.

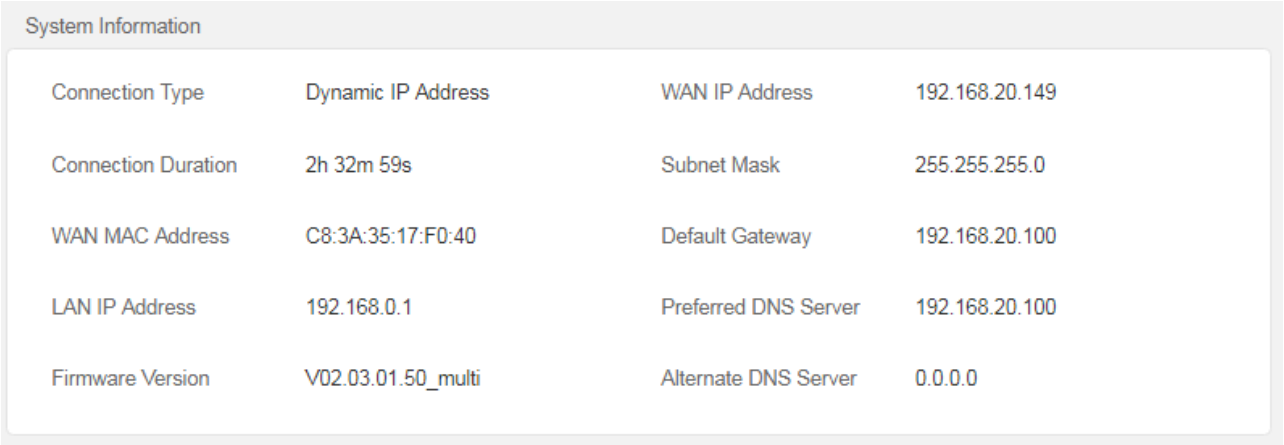


To control the bandwidth of online devices, click Online Devices to enter the configuration page.



3.3 Viewing system information

This section displays the basic information of the router, including connection type, connection duration, WAN IP address and so on.



Parameter description

Parameter	Description
Connection Type	It displays the current connection type of the router.
Connection Duration	It specifies the time that has elapsed since the router connects to the internet successfully.
WAN MAC Address	It specifies the MAC address of the WAN port of the router.
LAN IP Address	It specifies the IP address of the LAN port for the router.
Firmware Version	It specifies the current version number of the router's firmware.
WAN IP Address	It specifies the IP address of the WAN port.
Subnet Mask	It specifies the subnet mask of the WAN port.
Default Gateway	It specifies the default gateway of the WAN port.
Preferred DNS Server	It displays the preferred DNS server address of the WAN port.
Alternate DNS Server	It displays the Alternate DNS server address of the WAN port. If you do not set this parameter, it shows **0.0.0.0**.

4 Internet settings

On this page, you can complete the internet settings if you did not finish them by the quick setup wizard, or change the settings as well. The router supports Router, WISP, Universal Repeater and AP mode. By default, the router works in router mode.

4.1 Router mode

In router mode, this router can connect to the internet through the WAN port, and provide both wired and wireless network for clients. Applicable scenarios are as follows.

The following table may help you understand your internet connection type.

Parameter	Description
PPPoE	If you directly connect an Ethernet cable with internet connectivity to your computer, you can access the internet only after setting up a dial-up connection on the computer using a user name and password provided by your ISP.
Dynamic IP	If you directly connect an Ethernet cable with internet connectivity to your computer, you can access the internet without configuring your computer.
Static IP Address	If you directly connect an Ethernet cable with internet connectivity to your computer, you can access the internet only after setting static IP address and other related information on your computer, your connection type is static IP address.

If you are still uncertain about your internet connection type, consult your ISP.

4.1.1 Setting up an internet connection with PPPoE

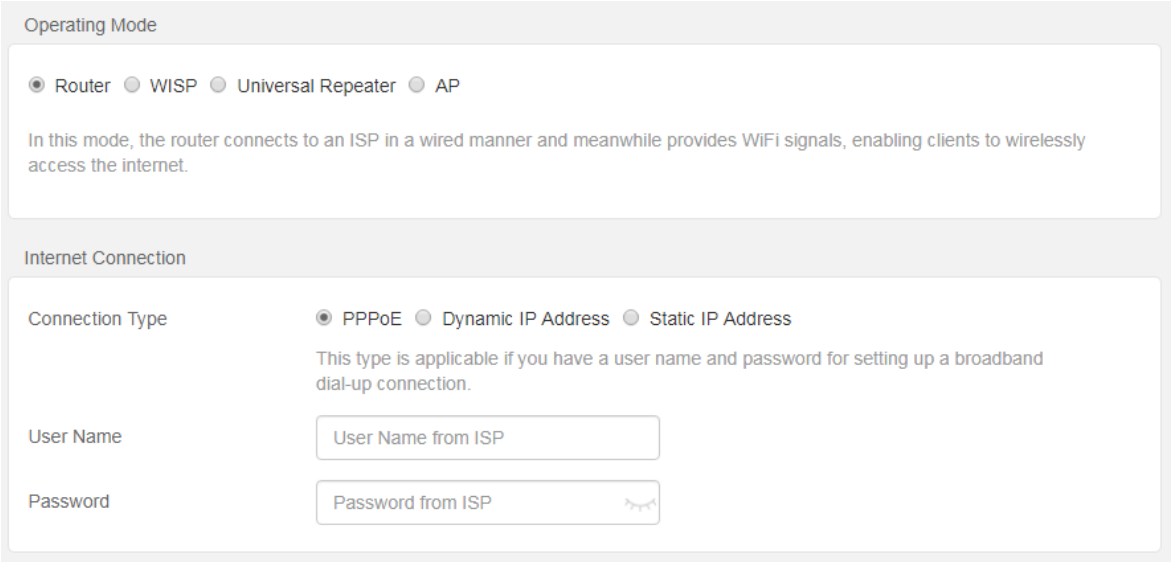
Step 1 Choose **Internet Settings** to access the configuration page.

Step 2 Set **Operating Mode** to **Router**.

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

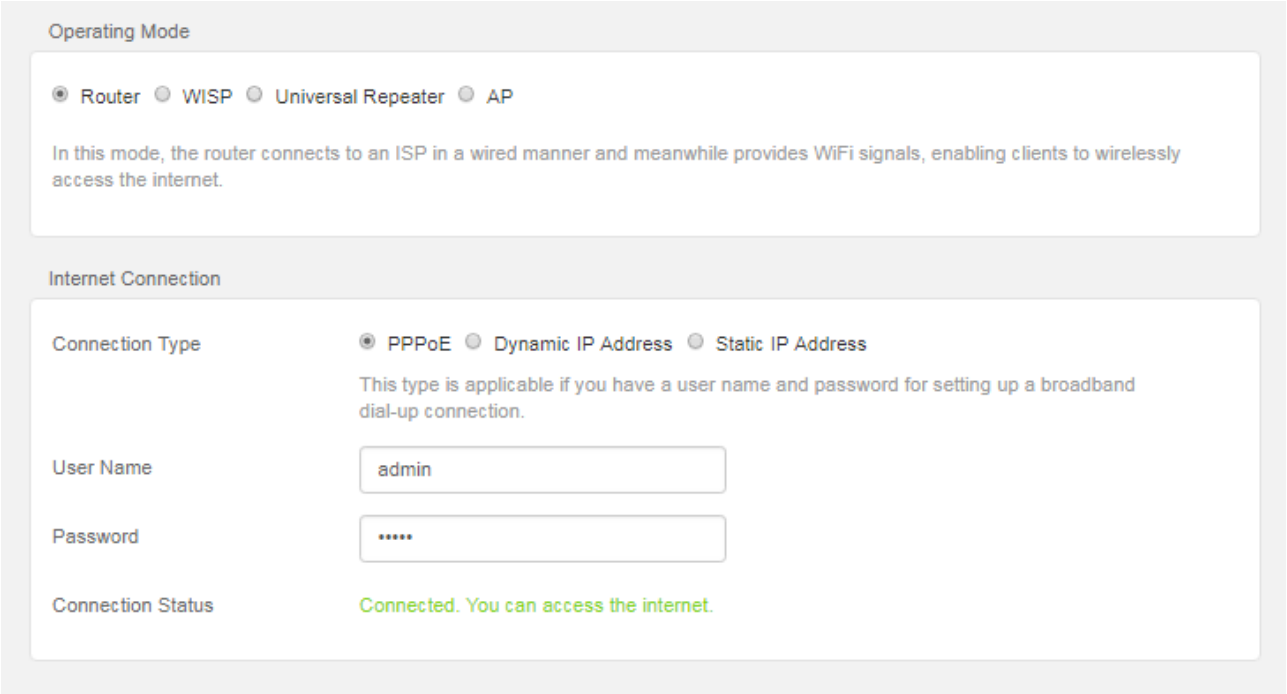
Step 4 Enter **User Name** and **Password** provided by your ISP.

Step 5 Click **OK** at the bottom of the page**.**



---End

After the settings take effect, check the connection status. If "**Connected. You can access the internet.**" is displayed, the router is connected to the internet successfully.



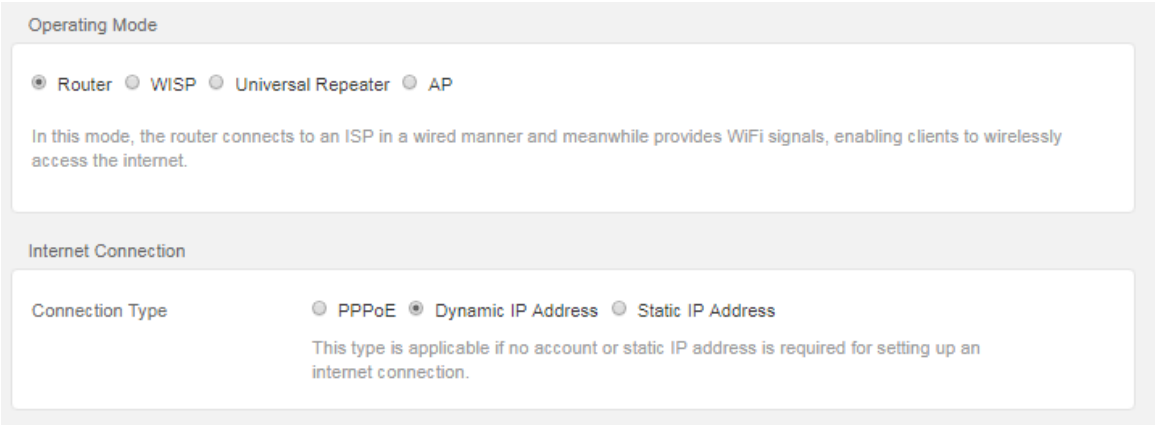
4.1.2 Setting up an internet connection with dynamic IP

Step 1 Choose **Internet Settings** to access the configuration page.

Step 2 Set **Operating Mode** to **Router**.

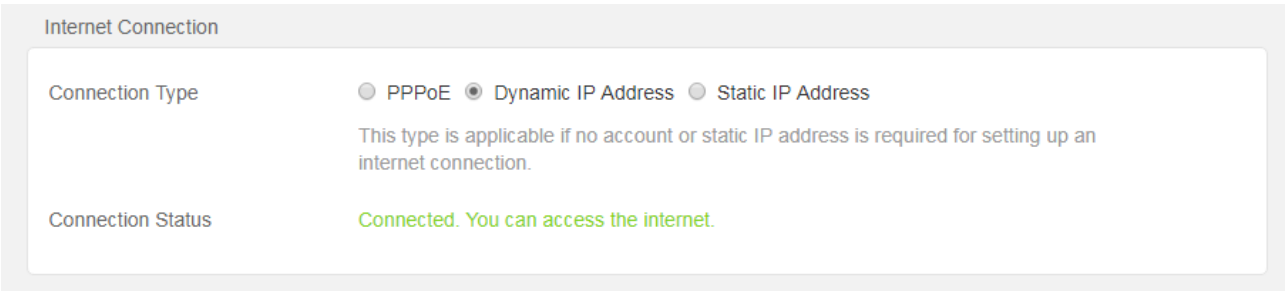
Step 3 Set **Connection Type** to **Dynamic IP Address**.

Step 4 Click **OK** at the bottom of the page**.**



---End

After the settings take effect, check the connection status. If "**Connected. You can access the internet.**" is displayed, the router is connected to the internet successfully.



4.1.3 Setting up an internet connection with static IP

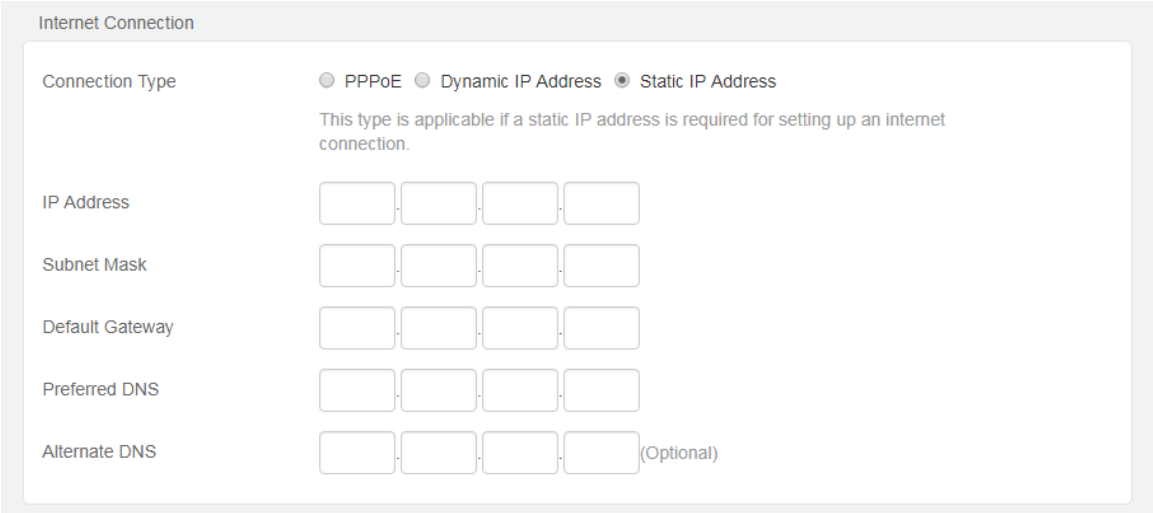
Step 1 Choose **Internet Settings** to access the configuration page.

Step 2 Set **Operating Mode** to **Router**.

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

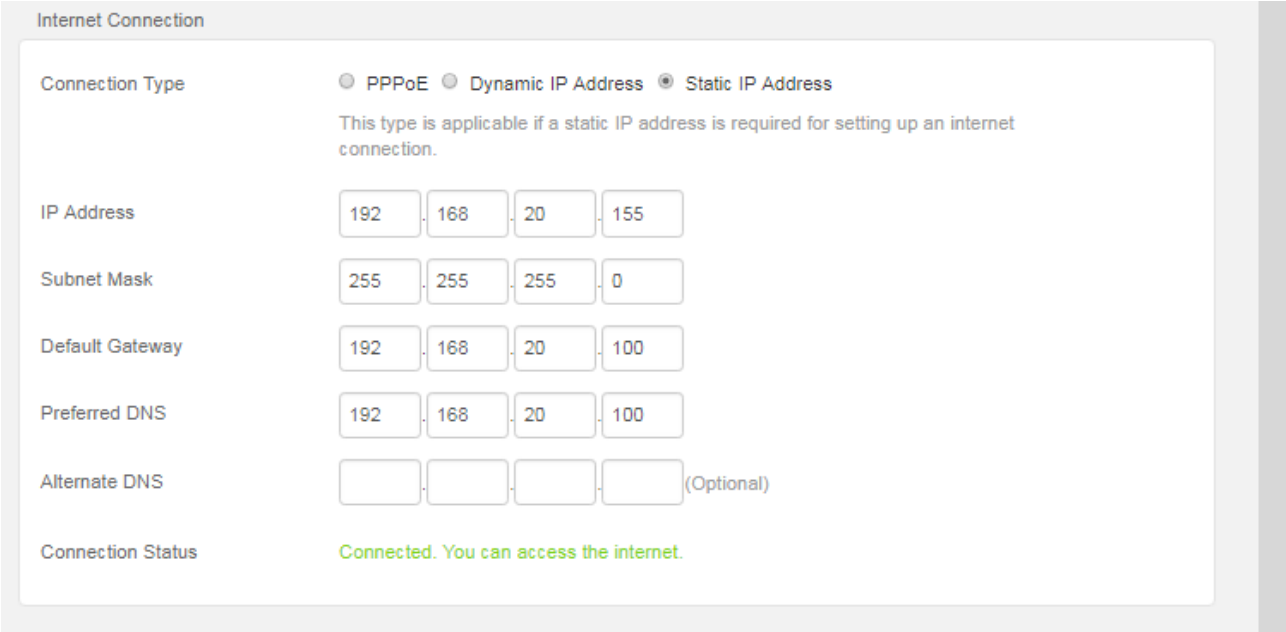
Step 4 Set the required parameters provided by your ISP.

Step 5 Click **OK** at the bottom of the page**.**



---End

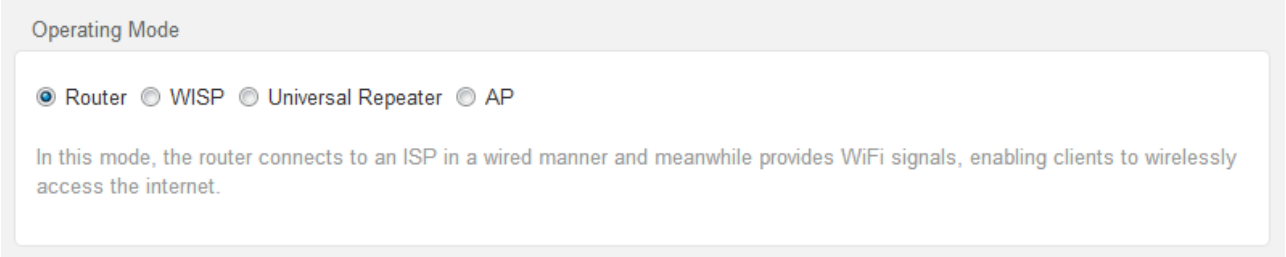
After the settings take effect, check the connection status. If "**Connected. You can access the internet.**" is displayed, the router is connected to the internet successfully.



4.2 WISP mode

In WISP mode, this router can connect to a WiFi hotspot provided by ISP in a wireless manner, and provide both wireless and wired network for clients to access internet.

Choose **Internet Settings** to access the configuration page.



An example of configuring WISP mode

Application scenario

Tom lives in the countryside, and it is not convenient for him to connect the internet in a wired manner. To solve the problem, he sets the new router AC8 to WISP to connect to the ISP hotspot wirelessly.

Tom's ISP provides a hotspot for internet with the information below:

- SSID: ISP_A
- WiFi password: 87654321
- PPPoE user name: Tom
- PPPoE password: Tom123

Network topology

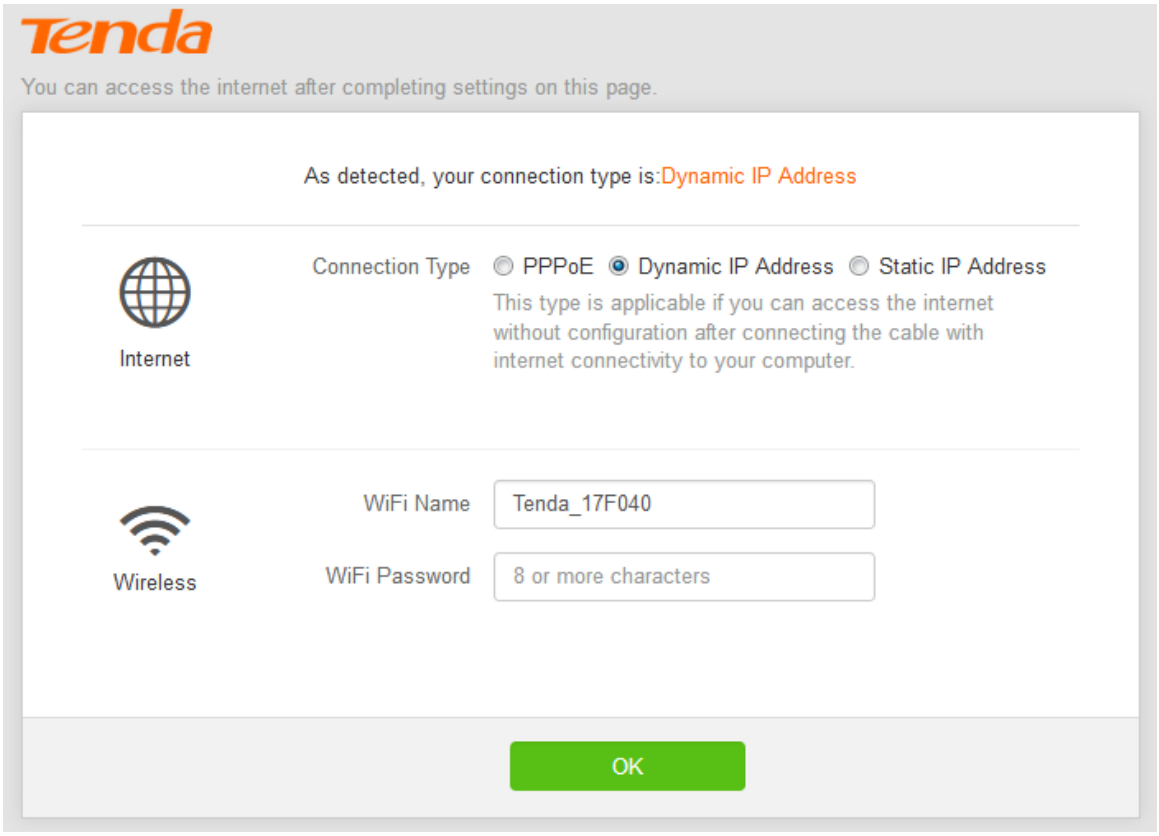
Configuration procedure

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

Step 2 (Optional). Set **Connection Type** to **Dynamic IP Address**, and click **OK**.

TIP

This step applies to the first setup of the router, used for you to skip the quick setup page.

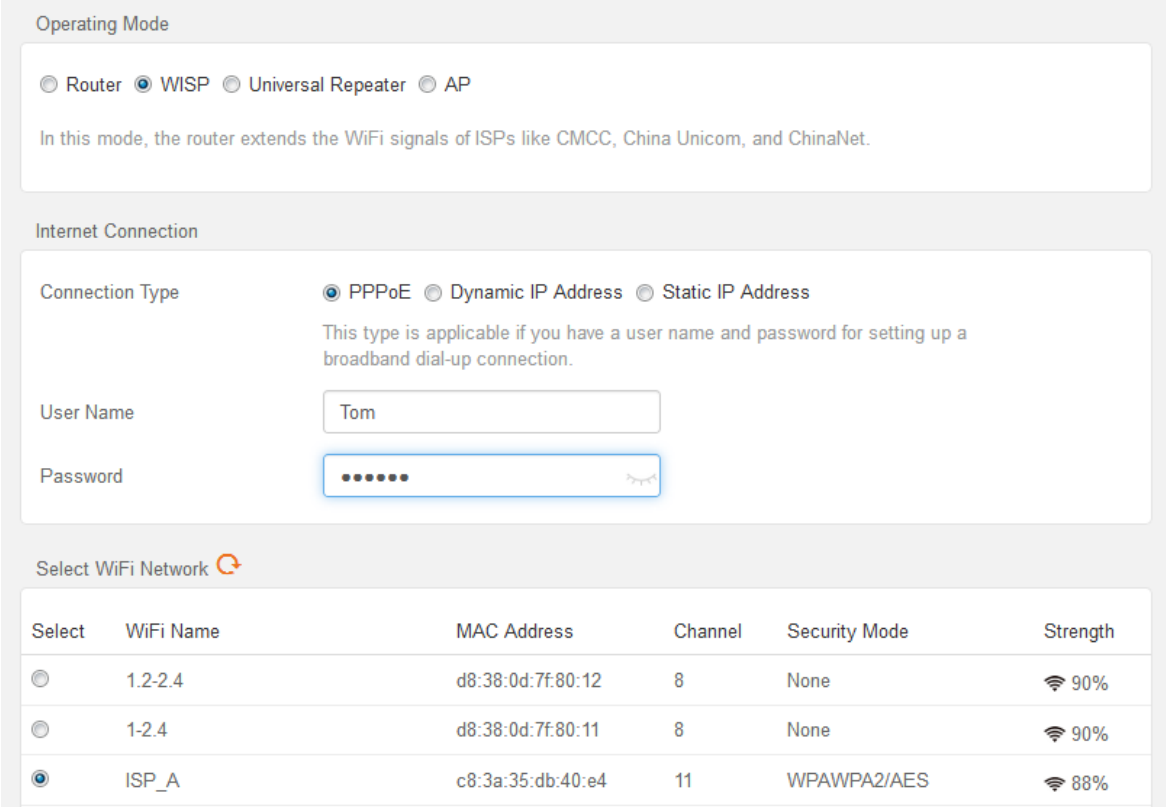


Step 3 Choose **Internet Settings** to access the configuration page.

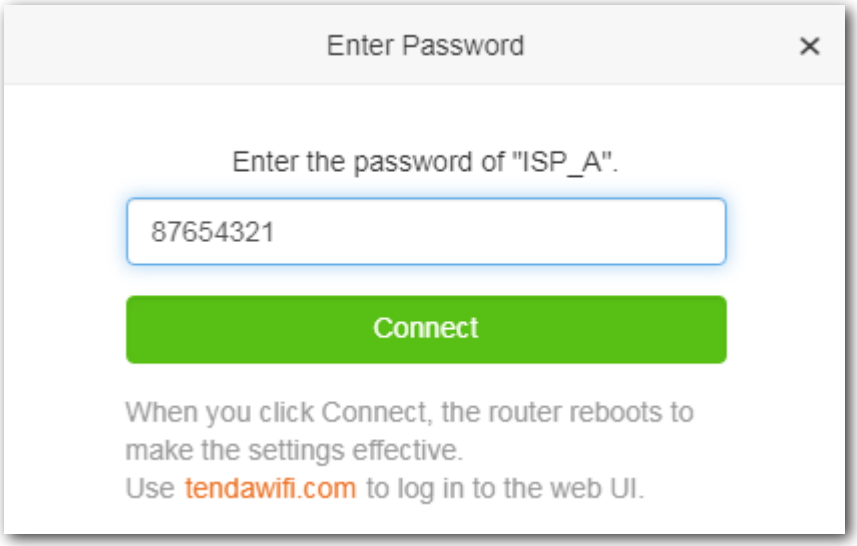
Step 4 Set **Operating Mode** to **WISP.**

Step 5 Select the **Connection Type** of your ISP hotspot, which is **PPPoE** in this example. Enter the PPPoE user name and password provided by your ISP, which is **Tom/Tom123** in this example.

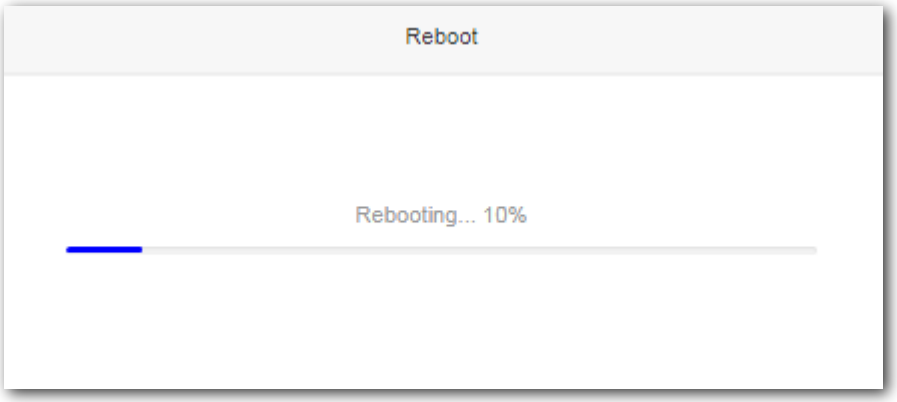
Step 6 Choose the ISP hotspot, which is **ISP_A** in this example.



Step 7 Enter the password of the WiFi network **ISP_A**, which is **87654321** in this example.

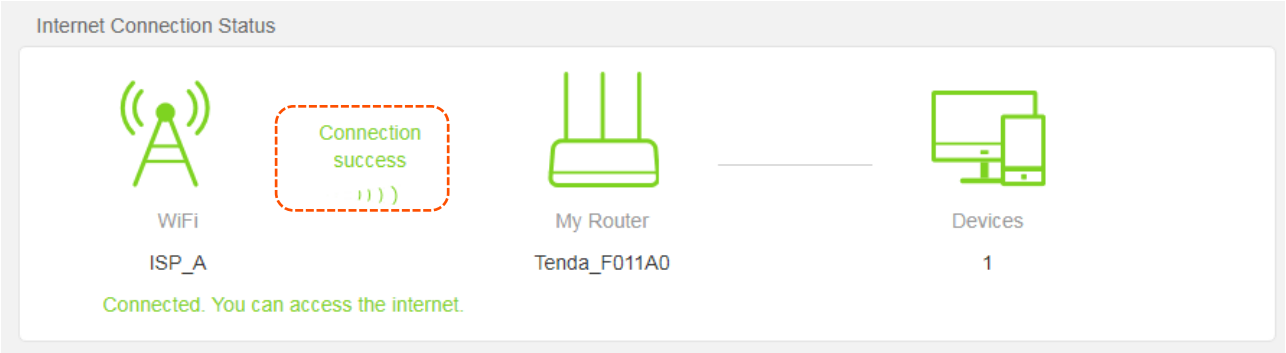


Step 8 Click **Connect.**



---End

Wait until the progress bar is complete. Log in to the web UI of the router again with the domain name **tendawifi.com**. Choose **Status** > **Internet Connection Status** to check the connection status.

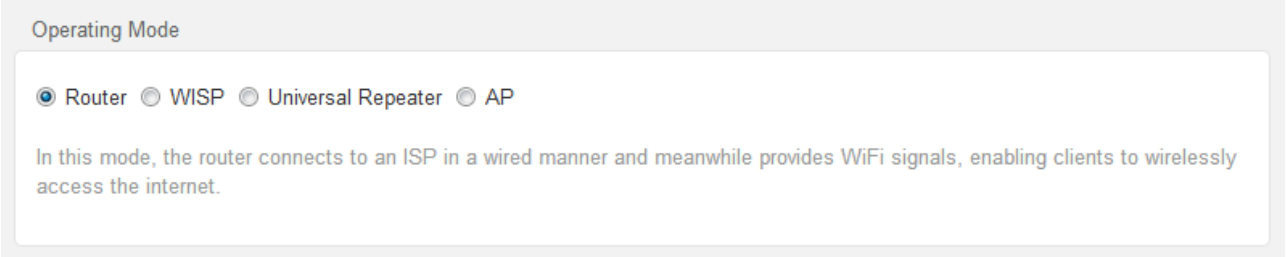


You can check the SSIDs for this router and the upstream device. If you need to change the router's SSID and password, please go to the **Wireless Settings** page.

4.3 Universal repeater mode

In universal repeater mode, the router can bridge the upstream wireless signals and expand your wireless network coverage.

Choose **Internet Settings** to access the configuration page.



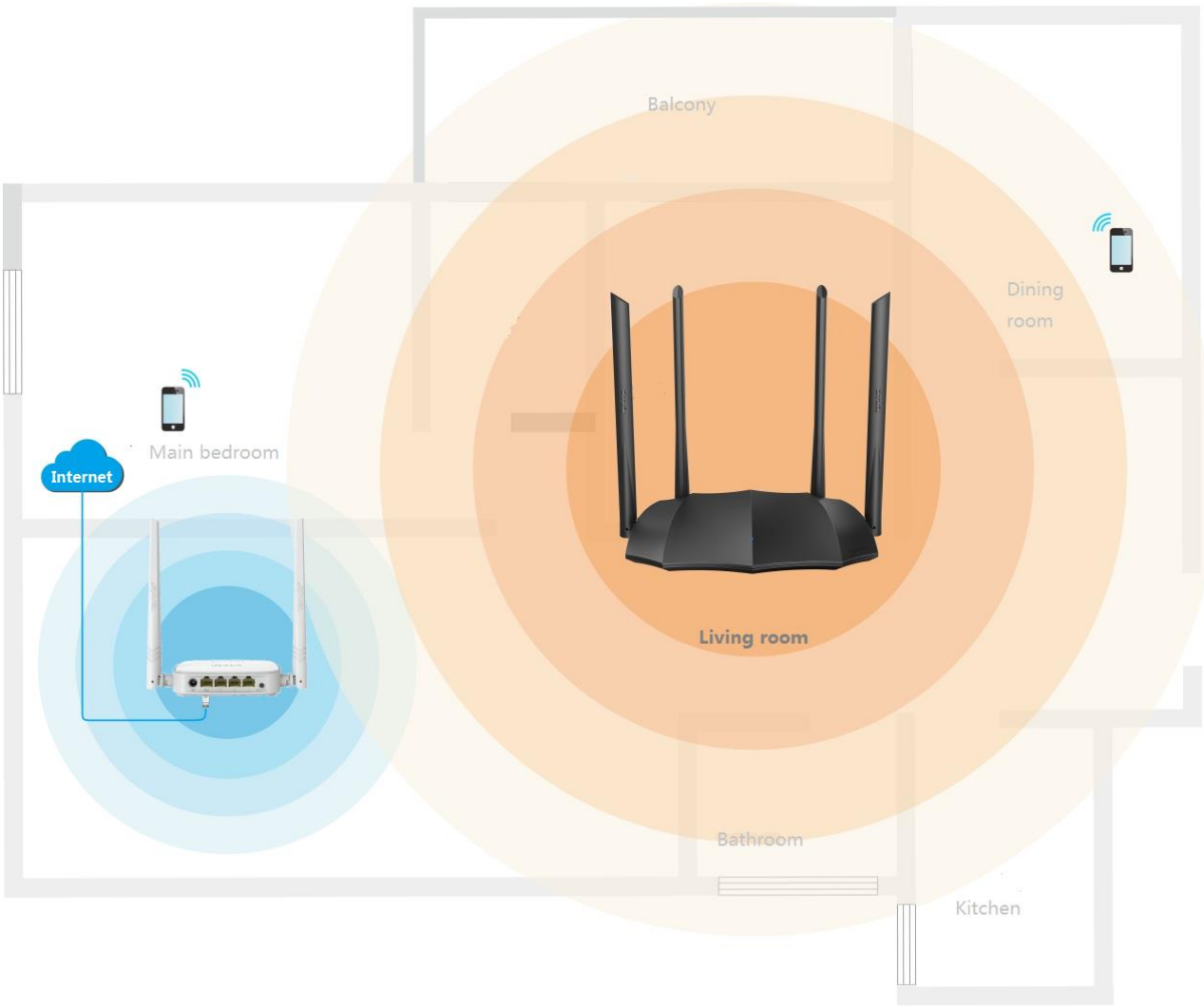
An example of configuring universal repeater mode

Application scenario

Tom uses a wireless router (main router) for internet access in his apartment. The router is placed in the main bedroom, so the WiFi signal is strong in the main bedroom, but too poor in the dining room and balcony to access the internet. To solve the problem, Tom bought a Tenda AC8 router, and placed it in the living room.

The universal repeater mode of AC8 can meet the requirement.

Network topology



Assumption

- SSID of the main router: Tom’s WiFi
- WiFi password of the main router: 12345678
- WiFi security mode of the main router: WPA/WPA2-PSK Mixed

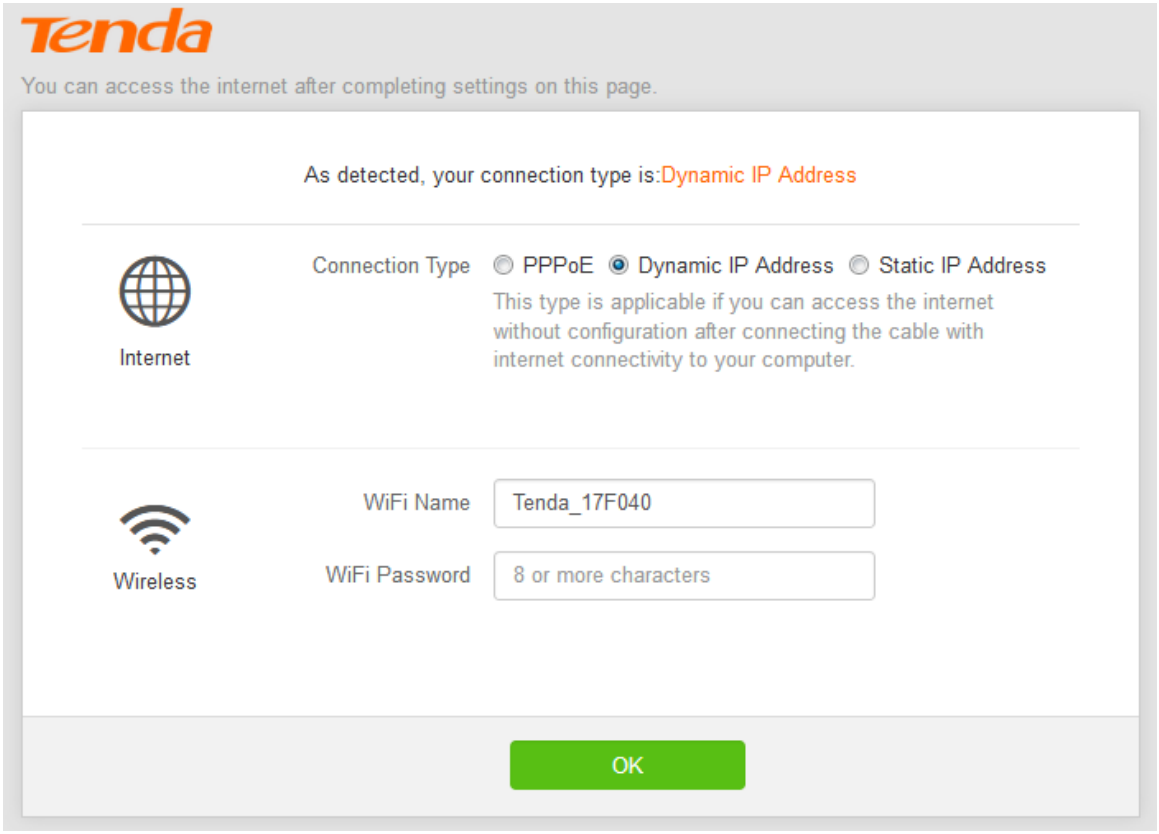
Configuration procedure

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

Step 2 (Optional). Set **Connection Type** to **Dynamic IP Address**, and click **OK**.

TIP

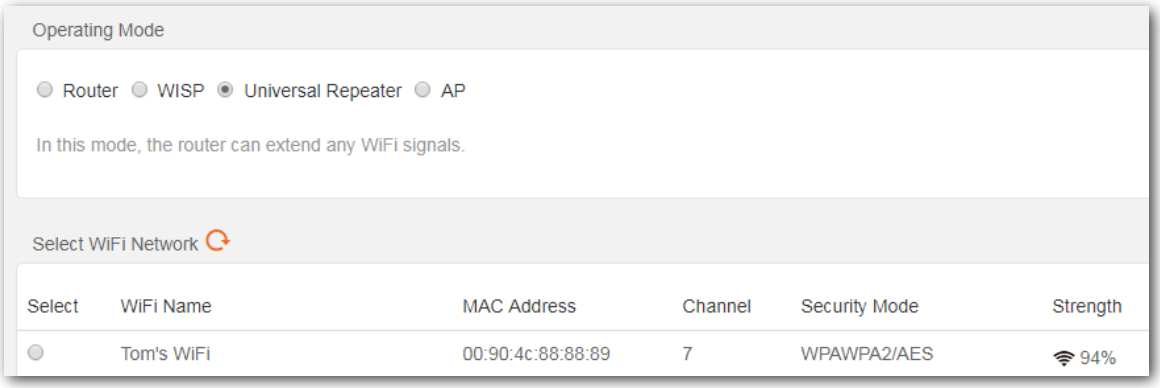
This step applies to the first setup of the router. It is used for you to skip the quick setup page.



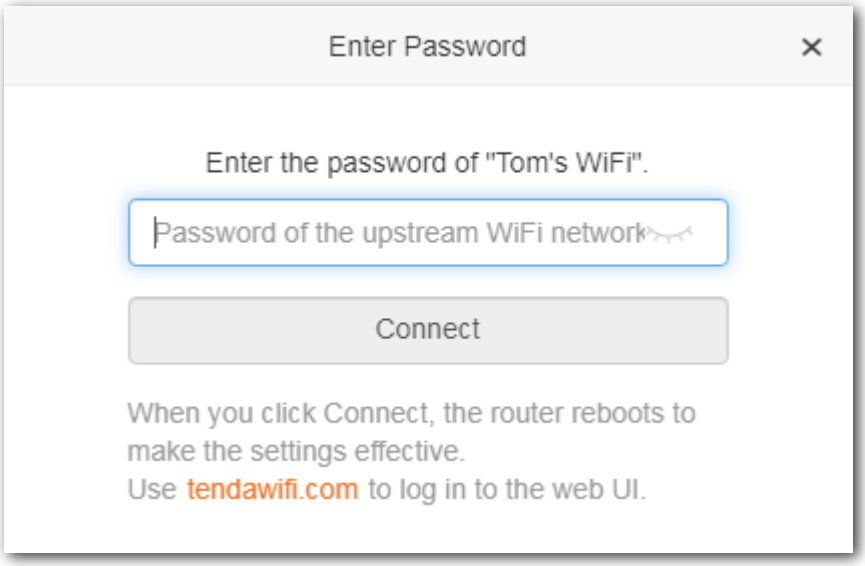
Step 3 Choose **Internet Settings** to access configuration the page.

Step 4 Set **Operating Mode** to **Universal Repeater.**

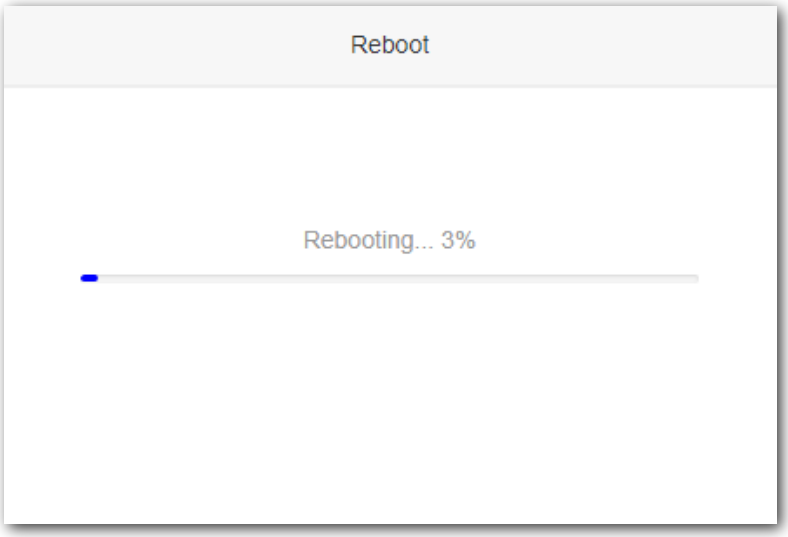
Step 5 Select the WiFi name to be extended, which is **Tom's WiFi** in this example.



Step 6 Enter the password of the selected WiFi network, which is **12345678** in this example.

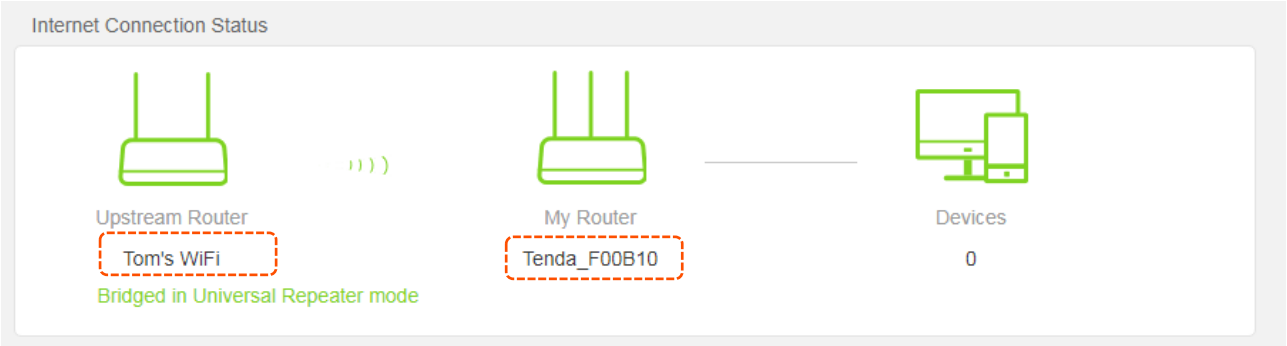


Step 7 Click **Connect**.



---End

Wait until the progress bar is complete. Log in to the web UI of the router again with the domain name **tendawifi.com**. Choose **Status** > **Internet Connection Status** to check the connection status and the SSIDs for this router and the upstream device.



To change the router's SSID and password, please go to the **Wireless Settings** page.

4.4 AP mode

In AP mode, the router connects to the internet using an Ethernet cable and converts wired network into wireless network to provide wireless network coverage. In AP mode, the WAN port also serves as a LAN port. Applicable scenarios are as follows.

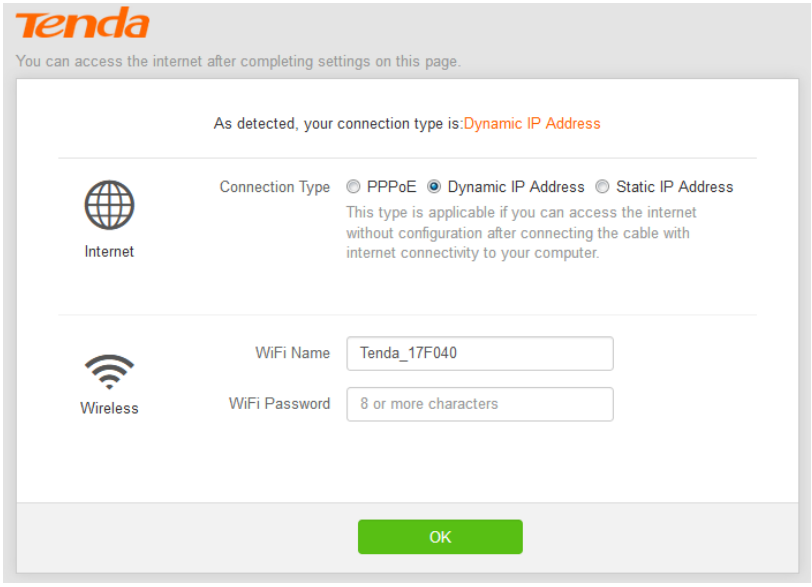
Configuration procedure

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

Step 2 (Optional). Set **Connection Type** to **Dynamic IP Address**, and click **OK**.

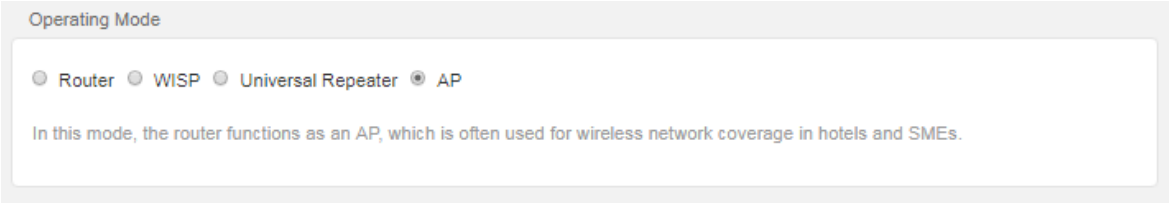
TIP

This step applies to the first setup of the router. It is used for you to skip the quick setup page.

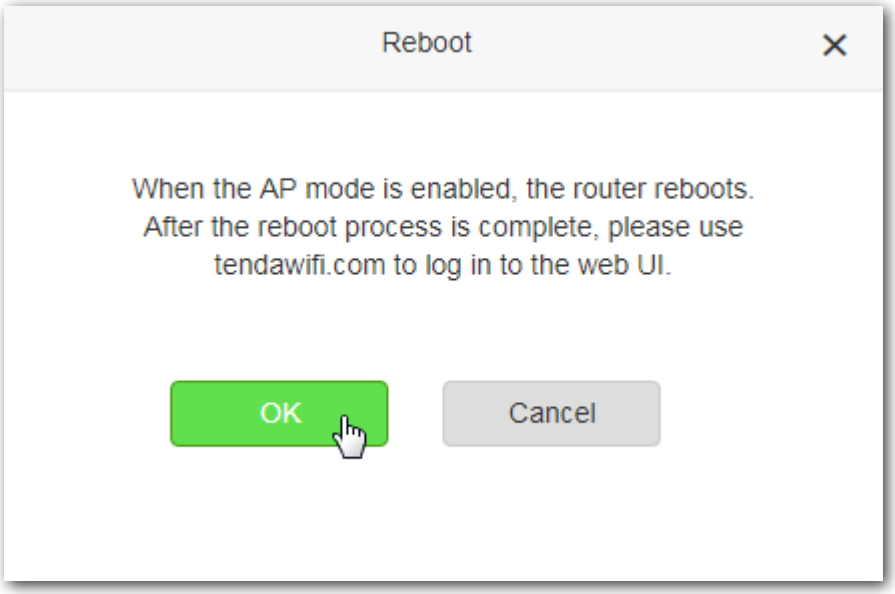


Step 3 Choose **Internet Settings** to access the configuration page.

Step 4 Set **Operating Mode** to **AP**, and click **OK** at the bottom of the page.



Step 5 Click **OK** in the popup window.



Step 6 Connect a LAN port of the router to a LAN port of the upstream device which is connected to the internet successfully.

---End

When the router completes rebooting, the computer connected to the router by an Ethernet cable can access the internet, and wireless device such as smartphones can connect to the WiFi network of the router to access the internet.

5 Wireless settings

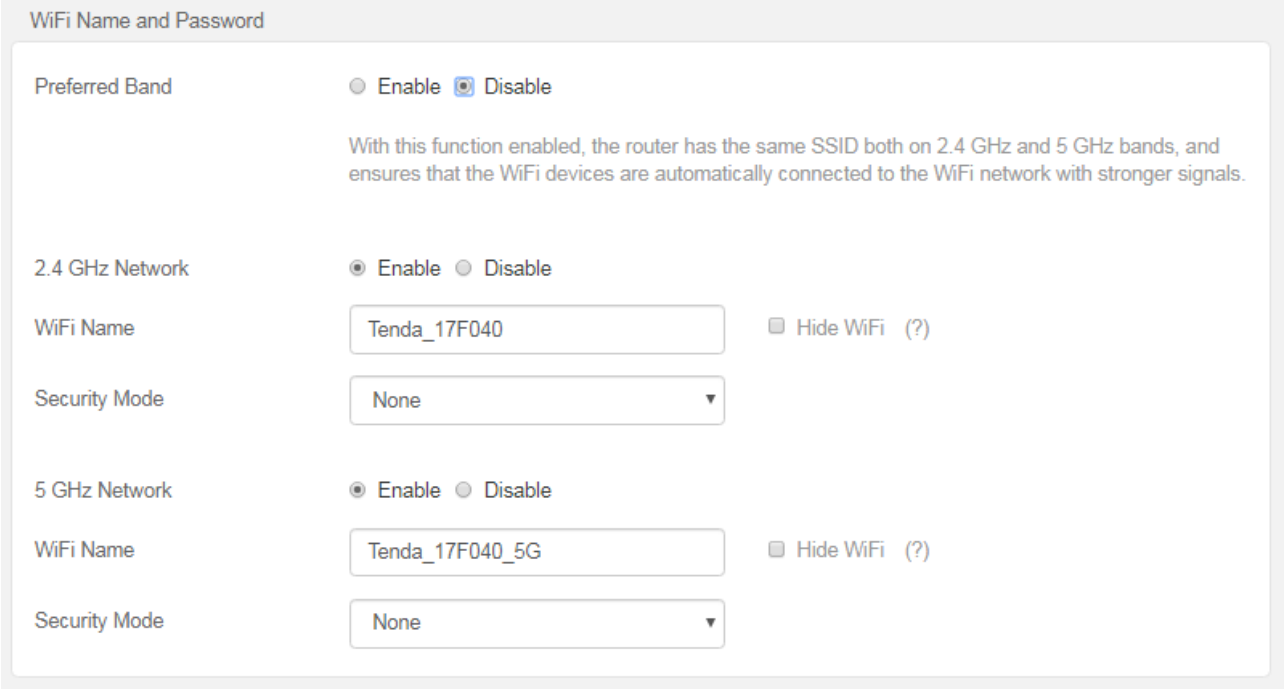
5.1 WiFi name and password

5.1.1 Overview

This router supports 2.4 GHz and 5 GHz WiFi networks. Features of these two signals are listed as follows.

- 2.4 GHz signal has longer wireless transmission distance than 5 GHz signal.
- 2.4 GHz signal has better wall penetration capacity than 5 GHz signal.
- 5 GHz signal has higher wireless transmission speed than 2.4 GHz signal.
- 5 GHz is less congestion, interference, and more stable than 2.4 GHz signal.

You can set the WiFi names, encryption modes, and WiFi passwords for two WiFi networks on the **WiFi Name and Password** page. To access the configuration page, click **Wireless Settings** and move to **WiFi Name and Password** module.



Parameter description

Parameter	Description
Preferred Band	Used to turn on or off the Preferred Band function. When it is enabled, the WiFi names of 2.4 GHz and 5 GHz networks are the same. And only one WiFi signal is displayed. When you connect to the WiFi network, a better-quality WiFi signal will be automatically connected.
2.4 GHz Network/5 GHz network	Used to enable or disable the wireless networks of the router.
WiFi Name	It specifies the wireless network name (SSID) of the WiFi network.
Security Mode	It specifies the encryption modes supported by the router, including: • **None**: It indicates that a wireless 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**: It indicates that WPA-PSK is adopted to authenticate users. • **WPA2-PSK**: It indicates that WPA2-PSK is adopted to authenticate users. • **WPA/WPA2-PSK Mixed:** It indicates that WPA-PSK and WPA2-PSK are adopted to authenticate users.
WiFi Password	Used to connect a wireless network. You are recommended to use the combination of digits, letters and special characters for higher security. Selecting **None** indicates that wireless clients can connect to the wireless network without entering a password. Select this option only when necessary since it leads to weak network security.
Hide WiFi	With this function enabled, wireless clients cannot detect the SSID, and you need to manually enter the SSID on the wireless clients to access the wireless network. By default, this function is disabled.

5.1.2 Customizing your WiFi name and password

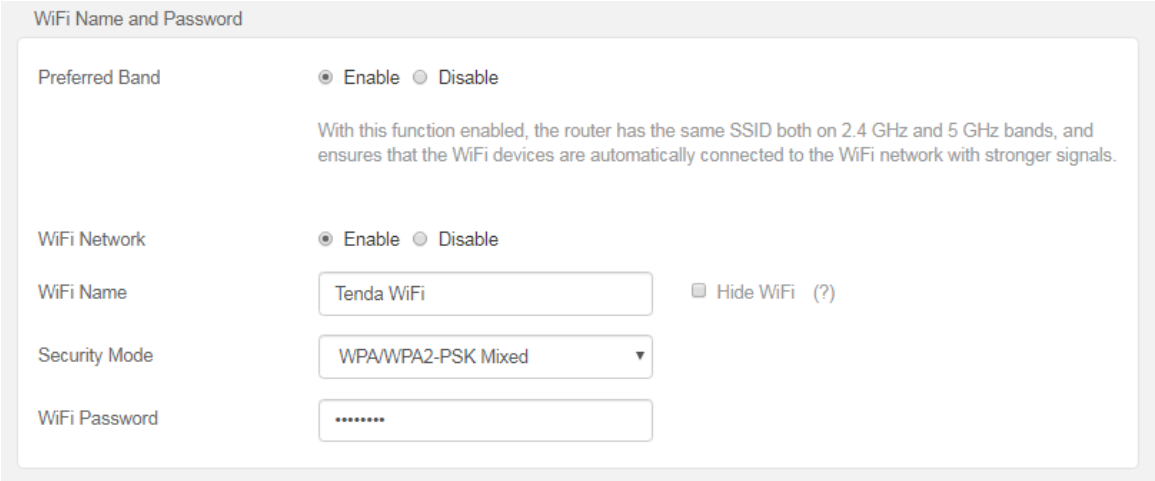
Step 1 Click **Wireless Settings** to enter the page, and locate to **WiFi Name and Password** module**.**

Step 2 Customize your WiFi name, such as **Tenda WiFi**.

Step 3 Set **Security Mode** to **WPA/WPA2-PSK Mixed** for better security and compatibility.

Step 4 Specify your WiFi Password, such as **123456789**.

Step 5 Click **OK** at the bottom of the page**.**



---End

When the configurations complete, you need to re-connect to the new WiFi network with by entering the new password.

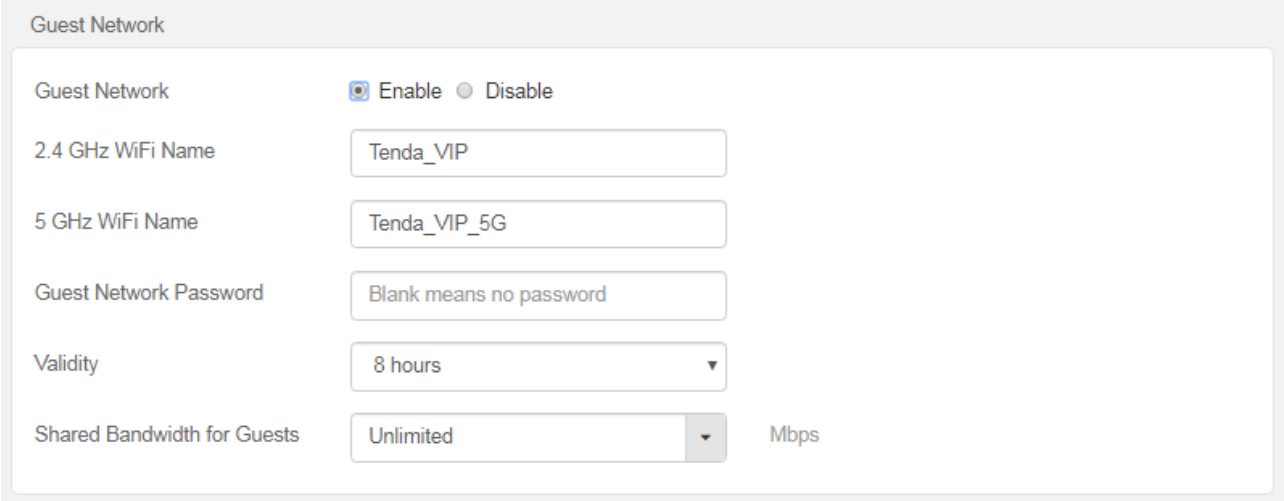
5.2 Guest network

5.2.1 Overview

In this module, you are able to enable/disable the Guest Network function and change guest network's WiFi name and password.

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 and ensures the bandwidth of your main network.

To access the configuration page, click **Wireless Settings** and move to **Guest Network** module. By default, the Guest Network function is disabled. The following figure shows the interface when the function is enabled.



Parameter description

Parameter	Description
Guest Network	Used to enable the Guest Network function.
2.4 GHz/5 GHz WiFi Name	It specifies the WiFi name of the router's guest network. By default, Tenda_VIP is for 2.4 GHz WiFi network and Tenda_VIP_5G for 5 GHz WiFi network. You can change the SSIDs if required. To distinguish the guest network from the main network, you are recommended not to set the same name for these four networks.
Guest Network Password	It specifies the password for the router's two guest networks.
Validity	It specifies the validity of the guest networks. The Guest Network function will be disabled automatically out of the specified time.
Shared Bandwidth for Guests	It allows you to specify the maximum download speed for all devices connected to the guest networks. By default, the bandwidth is not limited.

5.2.2 Setting up the guest network

Step 1 Choose **Wireless Settings** to enter the page, and move to **Guest Network** module.

Step 2 Set **Guest Network** to **Enable**.

Step 3 Change **2.4 GHz WiFi Name**, such as to **Tom**.

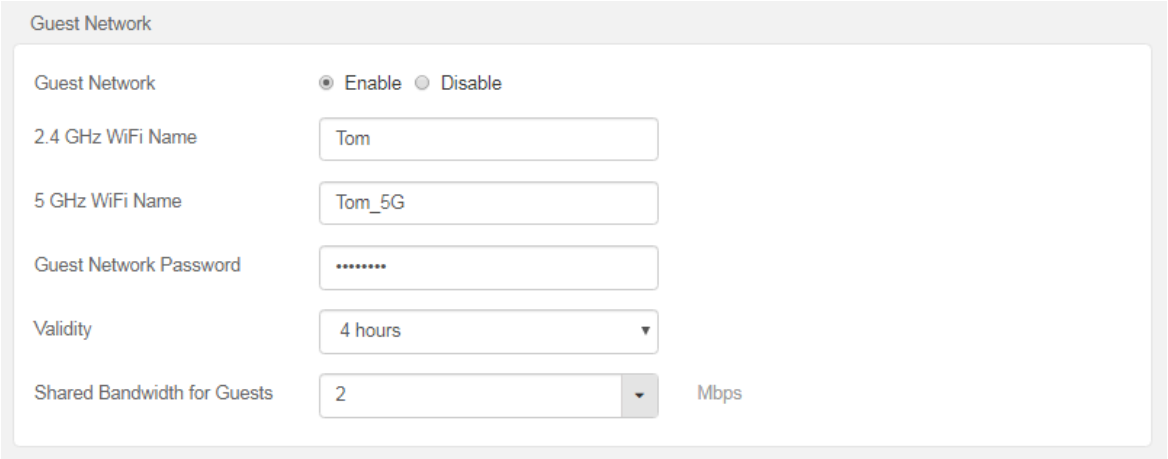
Step 4 Change **5 GHz WiFi Name**, such as to **Tom_5G**.

Step 5 Set **Guest Network Password**, such as to **987654321**.

Step 6 (Optional) Select a validity time from the **Validity** drop-down box, which is **4 hours** in this example.

Step 7 (Optional) Set the bandwidth in the **Shared Bandwidth for Guests** drop-down box, which is **2** in this example.

Step 8 Click **OK** at the bottom of the page.



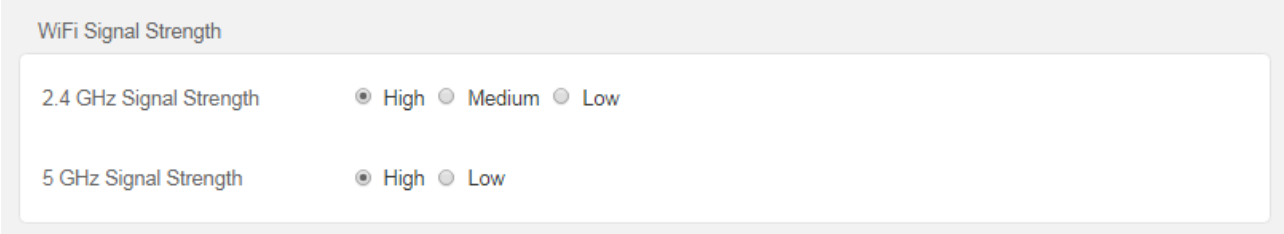
---End

After configuration, wireless devices such as smartphones, connected to **Tom** or **Tom_5G** share a downloading speed of 2 Mbps, and can access the internet for 4 hours.

5.3 WiFi signal strength

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

To access the configuration page, click **Wireless Settings** and move to **WiFi Signal Strength** module.

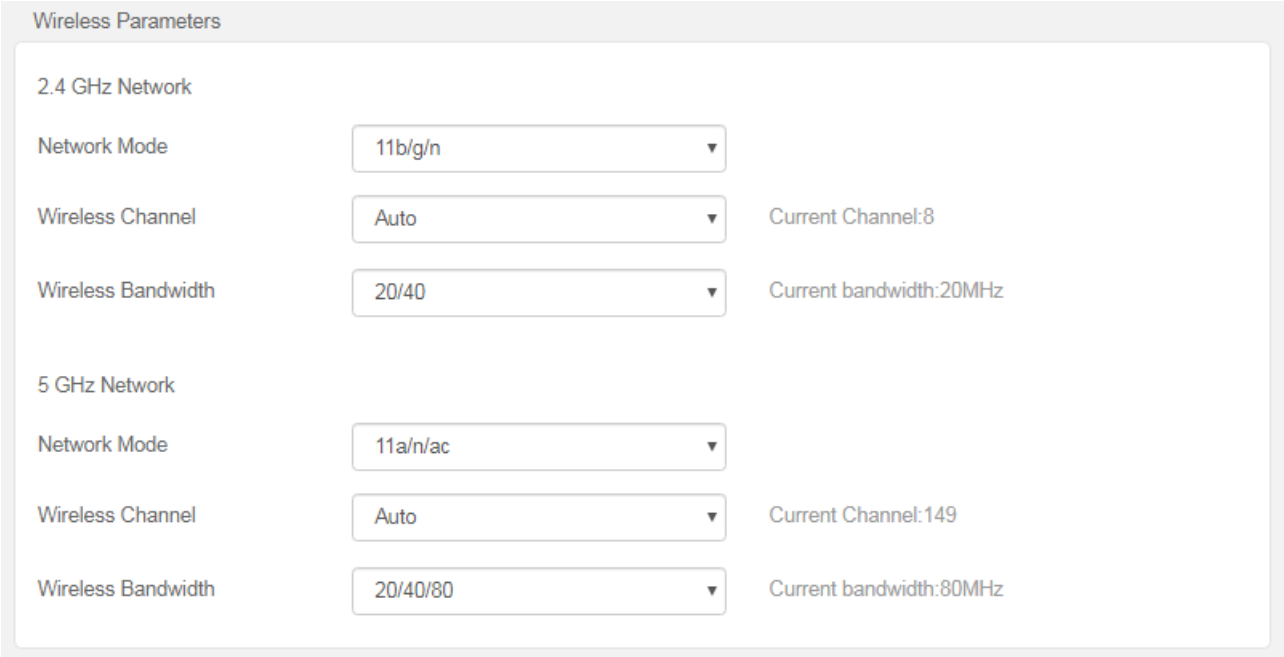


Parameter	Description
2.4/5 GHz Signal Strength	The mode of signal strength. The default mode is **High**. • **High**: It is typically used to meet wireless coverage requirements in large or multi-barrier environments. • **Medium**: It is typically used to meet wireless coverage requirements in medium-area or less-obstacle environments. • **Low**: It is typically used to meet wireless coverage requirements in small area or barrier-free environments. TIP If the WiFi function works properly in low mode, you are recommended to select the low mode.

5.4 Wireless parameters

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

To access the configuration page, click **Wireless Settings** and move to **Wireless Parameters** module.



Parameter description

Parameter	Description
Network Mode	It specifies various protocols adopted for wireless transmission. • **11b/g mixed**: It indicates that devices compliant with IEEE 802.11b or IEEE 802.11g protocol can connect to 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. • **11n**: It indicates that devices compliant with IEEE 802.11n can connect to the router. • **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 can connect to the router if they are compliant with IEEE 802.11a or IEEE 802.11ac protocol, or work at 5 GHz with IEEE 802.11n protocol.
Wireless Channel	It specifies the operating channel of a WiFi network. By default, the wireless channel is **Auto**, which indicates that the router selects a channel for the wireless network automatically. You are recommended to choose a channel with less interference for better wireless transmission efficiency. You can use a third-party tool to scan the WiFi signals nearby to understand the channel usage situations.

Parameter	Description
Wireless Bandwidth	It specifies the bandwidth of the wireless channel of a WiFi network. Change the default settings only when necessary. • **20**: It indicates that the channel bandwidth of a router is to 20 MHz. • **40**: It indicates that the channel bandwidth of a 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 of a 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 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 WiFi signal. With beamforming, the router transmits radio signal in the direction of the client, thus creating a stronger, faster and more reliable wireless communication.

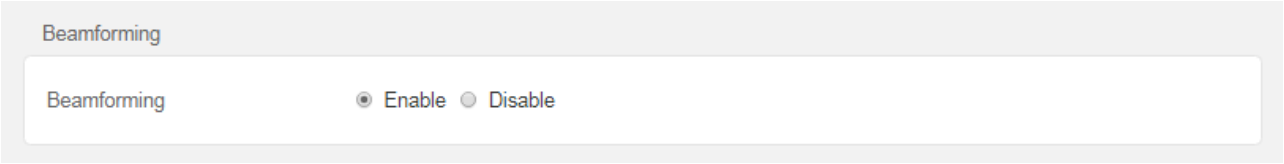
The key benefits of beamforming are:

- Extended WiFi coverage and fewer dead spots.
- Stable WiFi connection for voice and HD video.
- Better WiFi throughput.
- Less unnecessary RF interference.

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

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

To access the configuration page, click **Wireless Settings,** and move to the **Beamforming** module. By default, the Beamforming function is enabled.



5.6 WPS

5.6.1 Overview

The WPS function enables wireless devices such as smartphones to connect to WiFi networks of the router quickly and easily.

5.6.2 Connecting devices to the WiFi network using WPS

NOTE

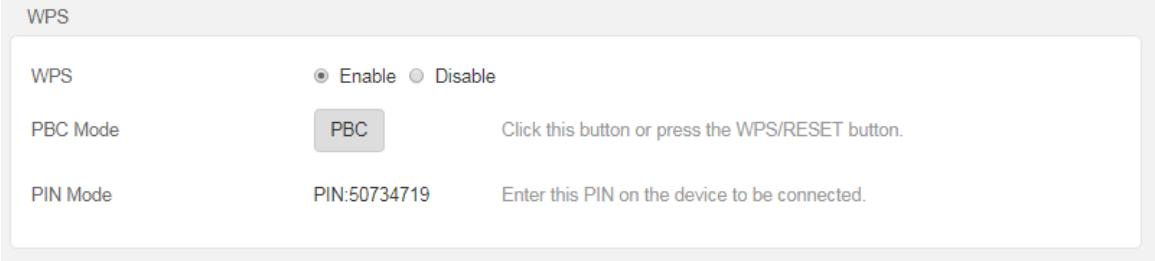
This function is only applicable to WPS-enabled wireless devices.

Method 1: Through the web UI of the router

Step 1 Click **Wireless Settings** and move to the **WPS** module.

Step 2 Click **PBC**. The LED indicator (WiFi LED indicator if there is more than one LED indicator on the router) blinks fast (AC8 and AC5) or blinks slow (AC7).

Step 3 Set WPS on a smartphone or computer installed with wireless network adapter within 2 minutes.



---End

Wait until the smartphone or computer is connected to the WiFi network of the router successfully.

Method 2: Through the WPS button on the router

Step 1 Press the **WPS/RST (RST/WPS)** button on the router. The LED indicator (WiFi LED indicator if there is more than one LED indicator on the router) blinks fast (AC8 and AC5) or blinks slow (AC7).

Step 2 Set WPS on a smartphone or computer installed with wireless adapter within two minutes.

---End

Wait until the smartphone or computer is connected to the WiFi network of the router successfully.

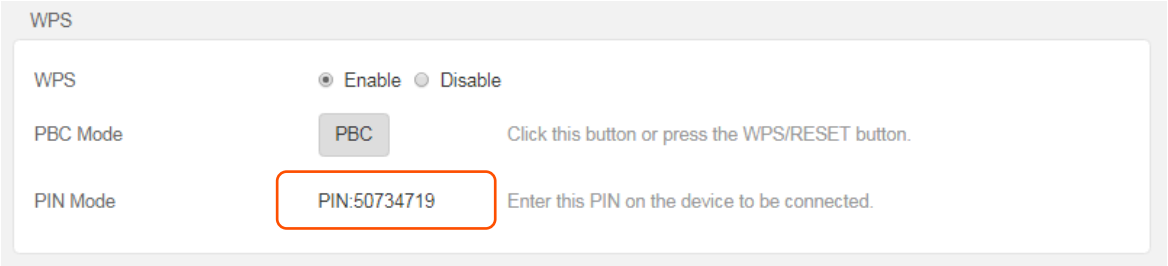
Method 3: Through pin code on the web UI

NOTE

WPS connection using pin code is generally applied on a computer with a wireless adapter. Please refer to relevant adapter's user guide for detailed instructions.

Step 1 Click **Wireless Settings** and move to the **WPS** module.

Step 2 Record the pin number of the router.



Step 3 Enter the pin code on the wireless device for connection.

---End

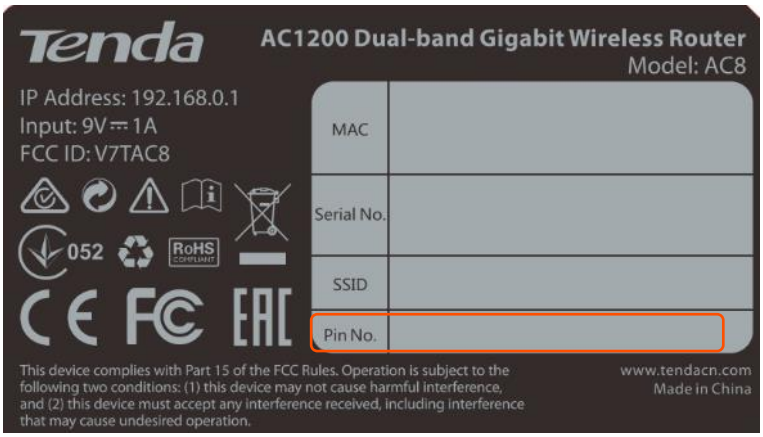
Wait until the smartphone or computer is connected to the WiFi network of the router successfully.

Method 4: Through pin code on the router

NOTE

WPS connection using pin code is generally applied on a computer with a wireless adapter. Please refer to relevant adapter's user guide for detailed instructions.

Step 1 Check the PIN number on the bottom label of the router.



Step 2 Enter the pin code on the wireless device for connection.

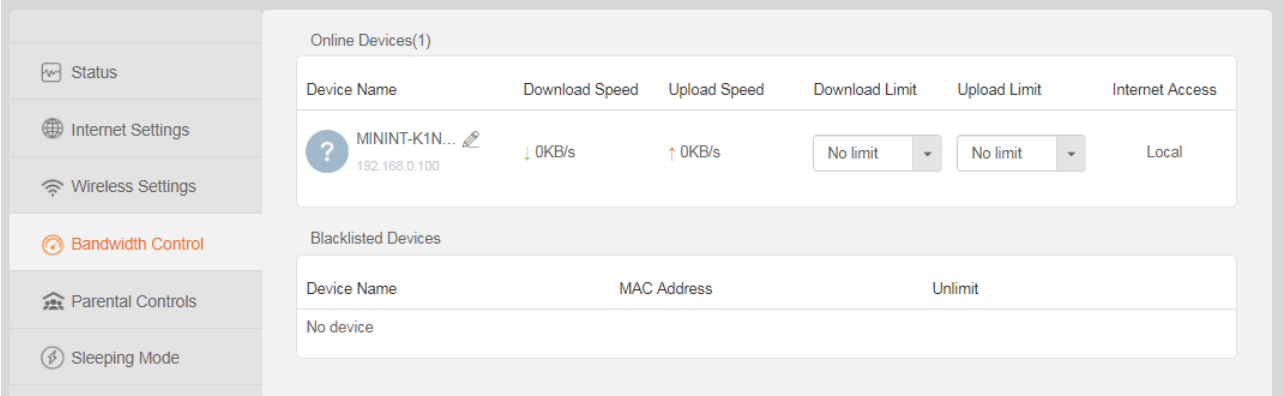
---End

Wait until the smartphone or computer is connected to the WiFi network of the router successfully.

6 Bandwidth control

In this section, you are allowed to view on-line device(s), block unknown device(s), and set maximum download/upload speed for online devices.

Click **Bandwidth Control** to enter the configuration page.



Parameter description

Parameter		Description
Online Devices	Device Name	It displays the information of the online device, including device name and IP address. You can click to customize the device name for easier management.
	Download/Upload Speed	It specifies the current upload and download speeds of the device.
	Upload/Download Limit	It allows you to specify the maximum upload and download speeds for the device.
	Internet Access	It allows you to allow/disallow the device to access the internet through the router. The current management computer cannot be controlled. **Local** stands for the device which is managing the router currently. : It indicates that the device is able to access the internet. : It indicates that the device is unable to access the internet.
Blacklisted Devices	Device Name	It specifies the device name of a blocked device.
	MAC Address	It specifies the MAC address of a blocked device.
	Unlimit	Used to remove a blocked device from the blacklist. After being removed from the blacklist, the device can reconnect to the router for internet access.

6.1 Configuring bandwidth control

Step 1 Click **Bandwidth Control** to enter the configuration page.

Step 2 Specify **Download/Upload Limit** as required.

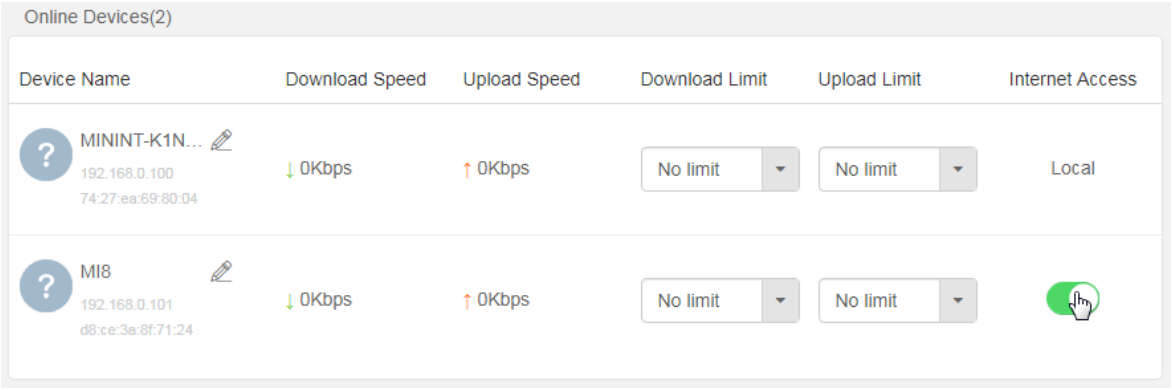
Step 3 Click **OK** at the bottom of the page.

---End

6.2 Blocking a device

Step 1 Click **Bandwidth Control** to enter the configuration page.

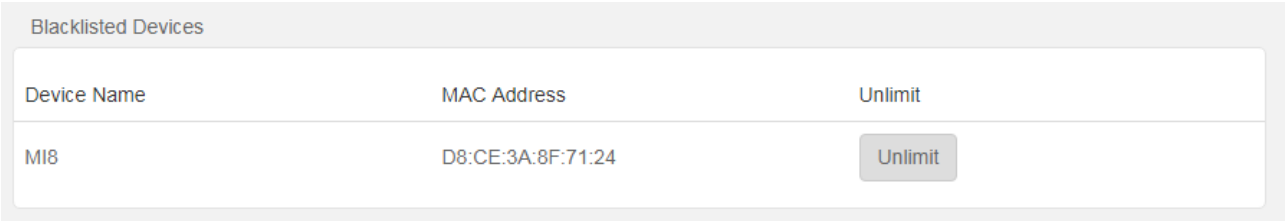
Step 2 Click  corresponded to the device to be blocked to change the status to .



Step 3 Click **OK** at the bottom of the page.

---End

The blocked device is displayed automatically in the blacklist**.** Click **Unlimit** to unblock a device from the blacklist.

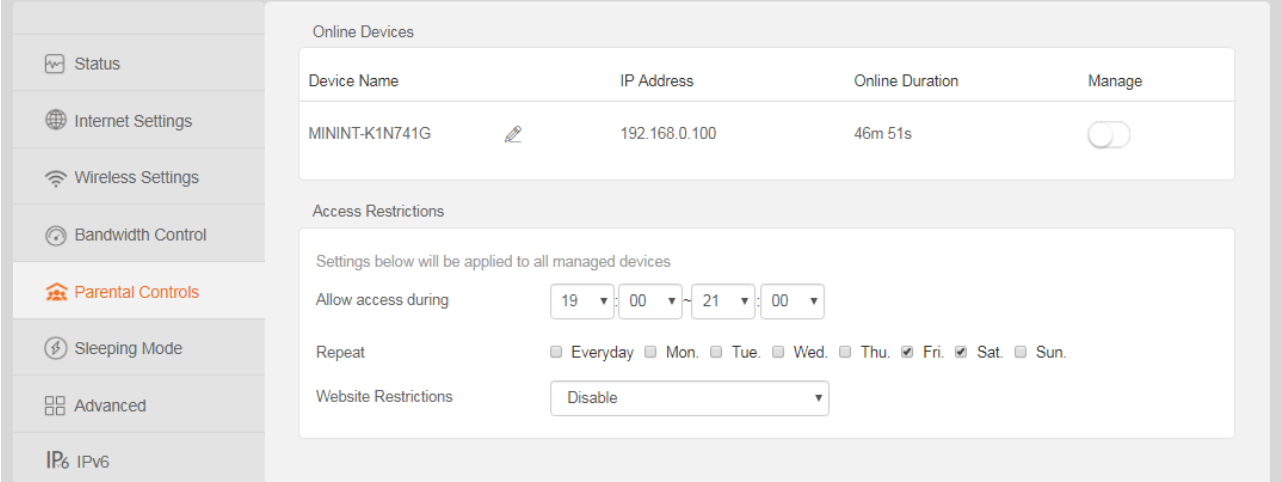


7 Parental controls

7.1 Overview

The parental controls function allows you to block inappropriate and malicious websites, and control online devices to access allowed websites at allowed time.

Choose **Parental Controls** to enter the configuration page.



Parameter description

Parameter		Description
Online Devices	Device Name	It specifies the name of the online device. You can click to customize the device name for easier management.
	IP Address	It specifies the IP address of the online device.
	Online Duration	It specifies the time that has elapsed since the device connects to the router successfully.
	Manage	It specifies the status of a rule. You can enable/disable the rule by switching the button.
Access Restrictions	Allow access during	It specifies the time period when internet connection is allowed.
	Repeat	It specifies the dates when internet connection is allowed.
	Website Restrictions	It specifies the modes of website restrictions. • **Disable**: It specifies that all websites are accessible. • **Only Permit**: It specifies that only the websites listed in **Unblocked Websites** are accessible. • **Only Forbid**: It specifies that only the websites listed in **Blocked Websites** are inaccessible.

7.2 An example of configuring parental controls

Tom uses AC8 to set up a network in his apartment. He wants his daughter Sindy to focus on her homework from 20:00 to 22:00 instead of YouTube video on weekdays.

The parental controls function can meet this requirement.

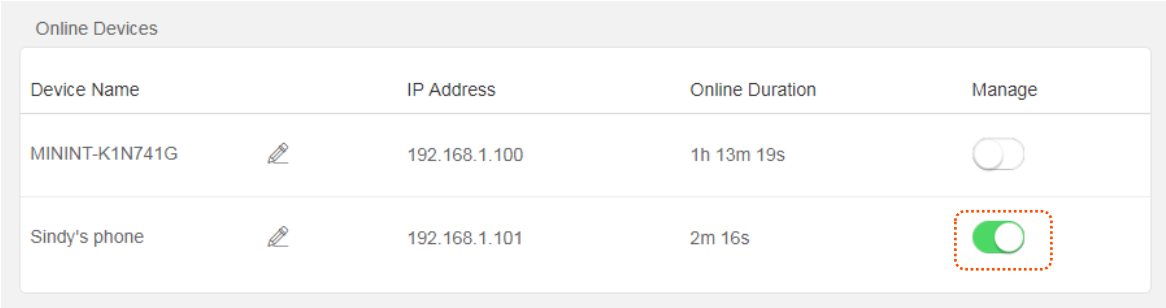
TIP

A parental controls rule takes effect based on the IP address. Thus, to ensure that the rule takes effect correctly, you are recommended to use the IP-MAC binding function to bind an IP address to the device you want to control. Refer to IP-MAC binding for details.

Configuration procedure

Step 1 Choose **Parental Controls** to enter the configuration page.

Step 2 Click the button to change the state to .

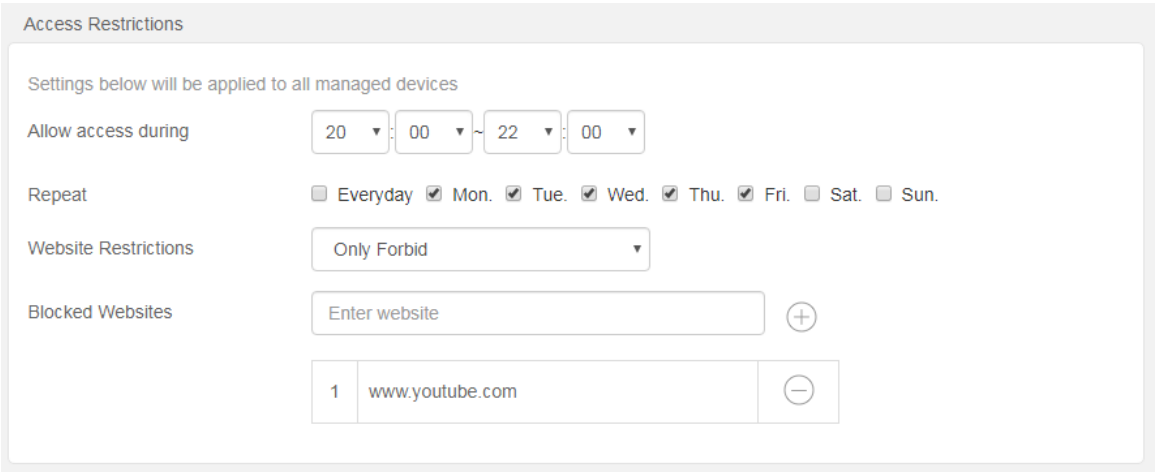


Step 3 Set **Allow access during** to the period for the rule to take effect, which is **20:00-22:00** in this example.

Step 4 Set the date on which the rule takes effect, which is Monday to Friday in this example.

Step 5 Set **Website Restrictions** to **Only Forbid**.

Step 6 Set **Blocked Websites** to **www.youtube.com**, and click .



Step 7 Click **OK** at the bottom of the page.

---End

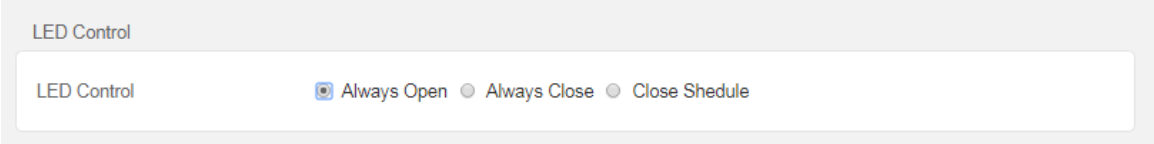
After the settings take effect, Sindy's smartphone can access any website except YouTube from 20:00 to 22:00 on weekdays, but cannot access the internet at other times.

8 Sleeping mode

8.1 LED control

This page allows you to turn on and turn off the LED indicator of the router as required.

To access the configuration page, click **Sleeping Mode**, and move to the **LED Control** module.



NOTE

To make the LED control function work properly, please ensure the system time is synchronized with the internet time.

Parameter description

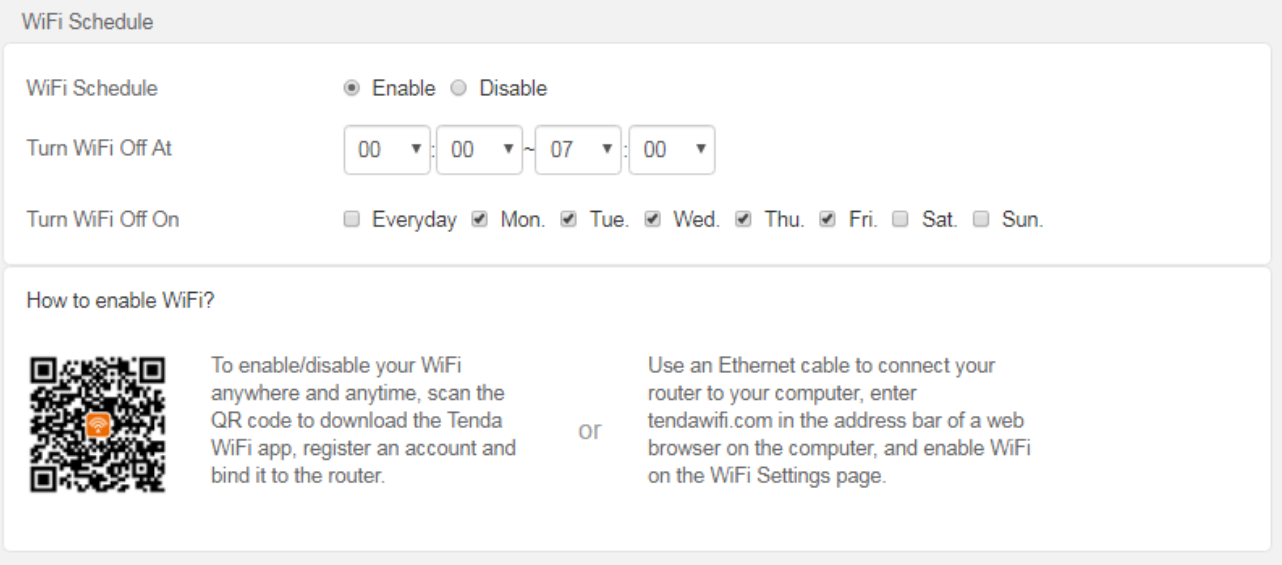
Parameter	Description
Always Open	It indicates that the LED indicator works in ordinary states.
Always Close	It indicates that the LED indicator is off even when the router is working.
Close Schedule	It specifies that the LED indicator is turned off as scheduled.

8.2 WiFi schedule

8.2.1 Overview

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

To access the configuration page, click **Sleeping Mode**, and move to the **WiFi Schedule** module.



NOTE

To make the WiFi schedule work properly, please ensure the system time is synchronized with the internet time.

Parameter description

Parameter	Description
WiFi Schedule	Used to enable/disable the WiFi Schedule function.
Turn WiFi Off At	It specifies the period when the WiFi network is disabled. In that period, wireless devices cannot search the router's WiFi networks.
Turn WiFi Off On	It specifies the day(s) when the WiFi network is disabled.

8.2.2 An example of configuring WiFi schedule

Scenario

Tom bought an AC8 for network coverage. To ensure a healthier sleeping environment, he wants to disable the WiFi networks every day during 23:00 to 7:00.

Procedures

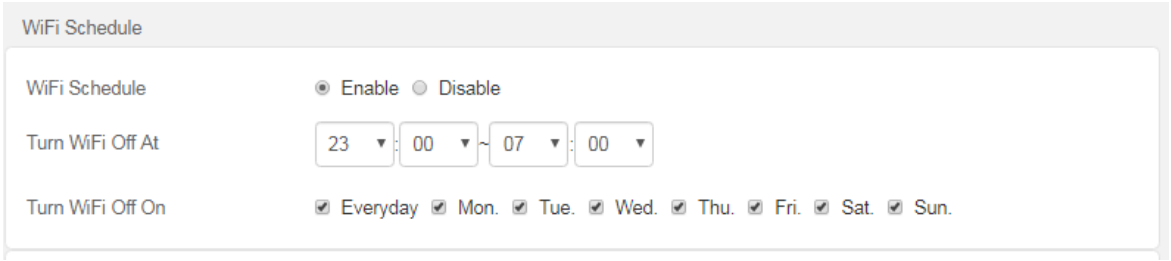
Step 1 Click **Sleeping Mode**, and move to the **WiFi Schedule** module.

Step 2 Set **WiFi Schedule** to **Enable.**

Step 3 **Turn WiFi Off At**: Set the period as needed, which is **23:00~07:00** in this example.

Step 4 **Turn WiFi Off On**: Select the schedule type as needed, which is **Every Day** in this example.

Step 5 Click **OK** at the bottom of the page.



---End

Verification

The WiFi networks are disabled from 23:00 to 07:00 every day.

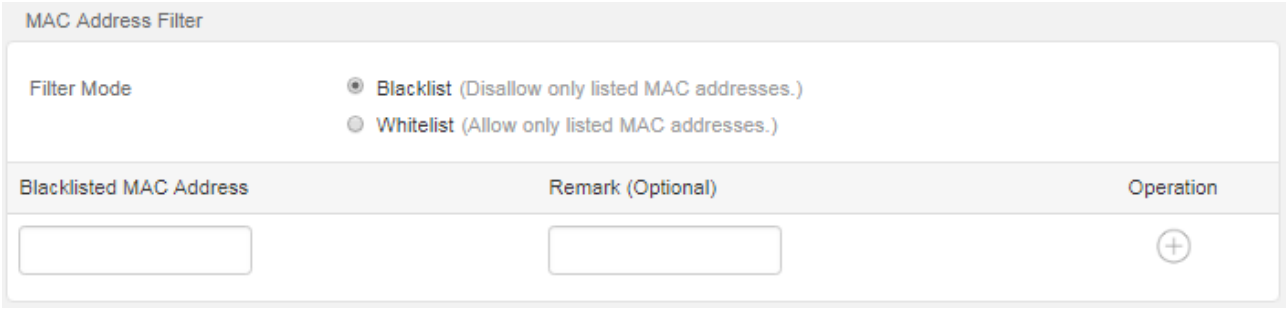
9 Advanced

9.1 MAC address filter

9.1.1 Overview

This function allows you to set a MAC address whitelist or a blacklist to enable or disable users to access the internet through the router.

Choose **Advance** and move to the **MAC Address Filter** module to access the configuration page.



Parameter description

Parameter	Description
Filter Mode	• **Blacklist**: Only the users with listed MAC addresses are not allowed to access the internet. • **Whitelist**: Only the users with listed MAC addresses are allowed to access the internet.
Blacklisted/Whitelisted MAC Address	It specifies the MAC addresses to which a rule applies.
Remark (Optional)	It specifies the description of a rule.
Operation	⊕: Click it to add a device into the blacklist/whitelist. ⊖: Click it to delete a device from the blacklist/whitelist.

9.1.2 Setting MAC address filter rules

Adding a rule

Step 1 Click **Advanced** and move to the **MAC Address Filter** module**.**

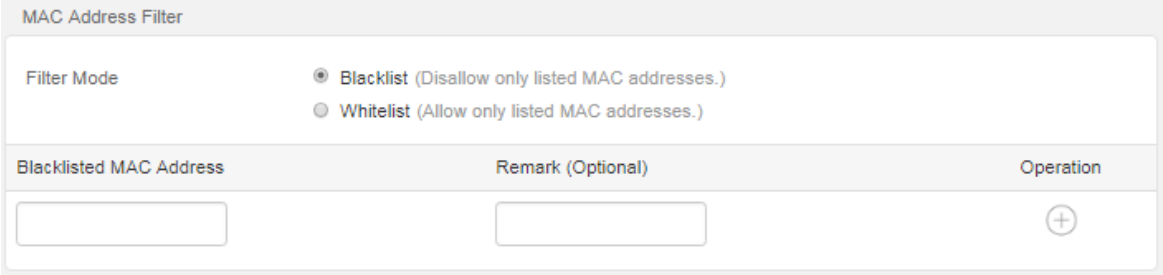
Step 2 Select a **Filter Mode.**

Step 3 Enter the MAC address to which the rule applies.

Step 4 (Optional) Enter remark information.

Step 5 Click ⊕.

Step 6 Click **OK** at the bottom of the page.



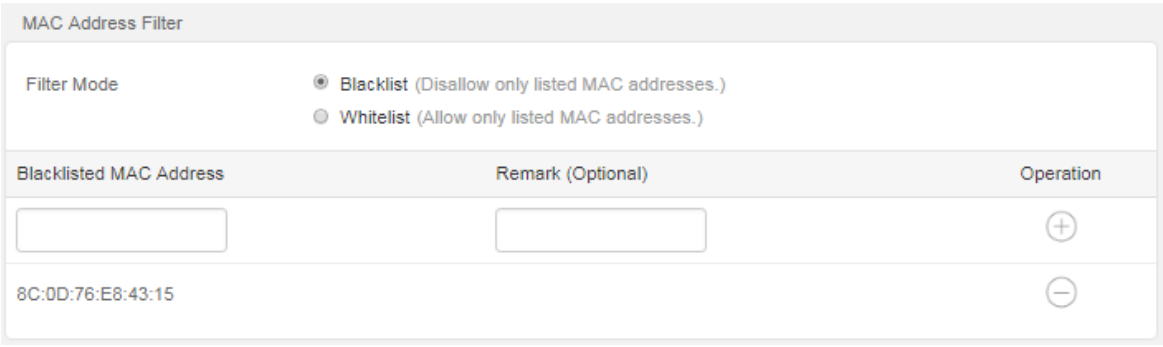
---End

Deleting a rule

Step 1 Click **Advanced** and move to the **MAC Address Filter** module.

Step 2 Click ⊖ corresponded to the MAC address filtering rule to be deleted.

Step 3 Click **OK** at the bottom of the page.



---End

9.1.3 An example of setting a MAC address filter rule

A family uses AC8 to access the internet. Recently an unknown device is found in the **Online Device** list. Under such circumstance, the MAC address filter function can be used to disallow the unknown device to connect to the WiFi network of the router for internet access.

Assume that the MAC addresses of the unknown device is D8:CE:3A:8F:71:24.

Configuration procedure

Step 1 Choose **Advanced** > **MAC Address Filter.**

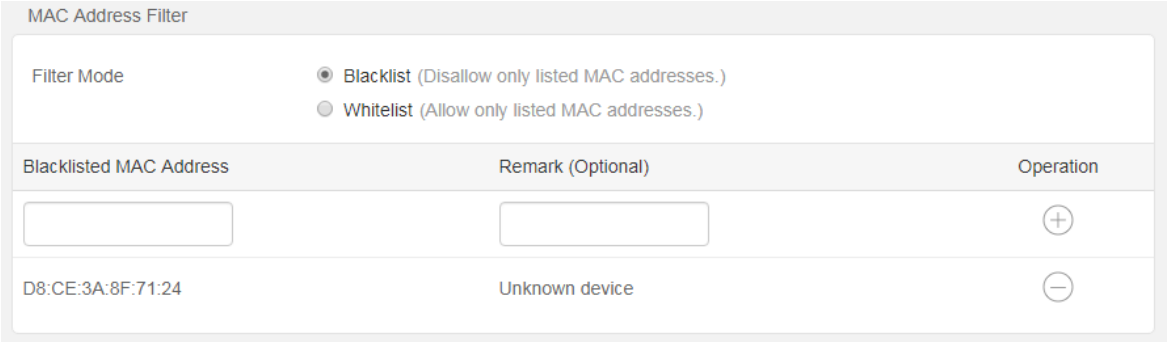
Step 2 Set **Filter Mode** to **Blacklist.**

Step 3 Enter the MAC address to be disallowed to access the internet, which is **D8:CE:3A:8F:71:24** in this example.

Step 4 Enter the remark information of the device, which is **Unknown device** in this example.

Step 5 Click ⊕ .

Step 6 Click **OK** at the bottom of the page.



---End

After you complete the settings, the unknown device cannot connect to the WiFi network to access the internet.

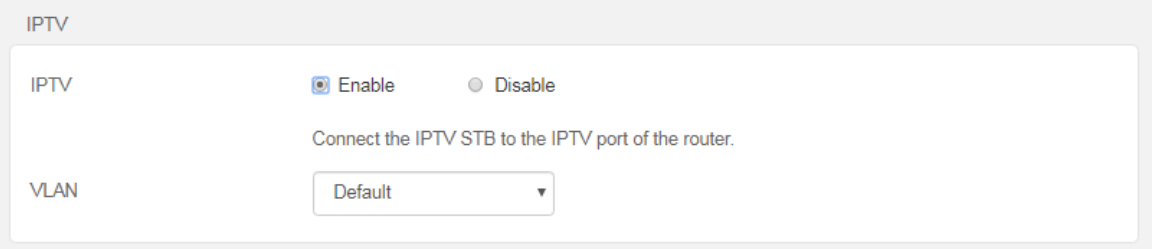
9.2 IPTV

9.2.1 Overview

IPTV is the technology integrating with internet, multimedia, telecommunication and many other technologies, providing interactive services including digital TV to family users by internet broadband lines. If the IPTV service is included in your broadband service, you are enabled to enjoy both internet access through the router and rich IPTV contents with a set-up-box.

To access the configuration page, click **Advanced** and move to the **IPTV** module.

The following figure appears after IPTV is enabled.



Parameter description

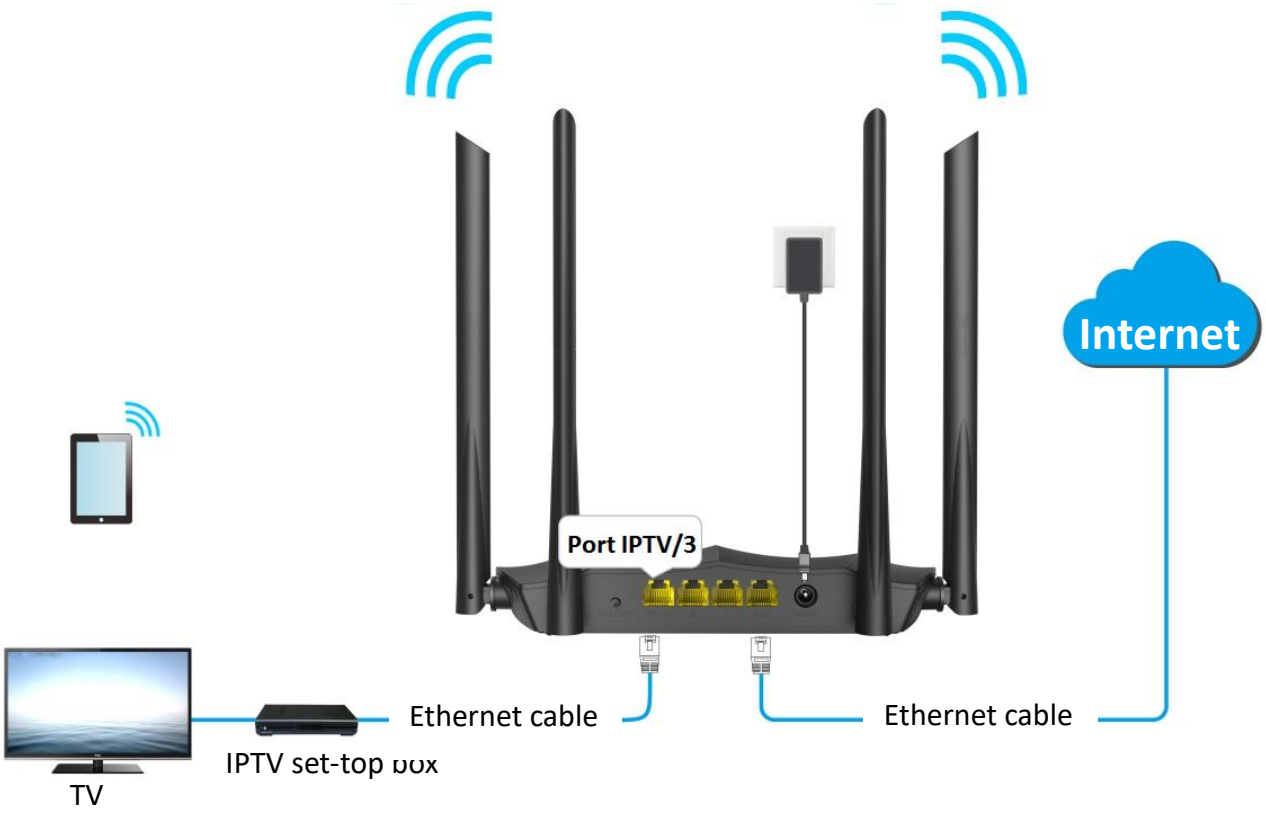
Parameter	Description
IPTV	Used to enable and disable the IPTV function of the router. When this function is enabled, the port **IPTV/3 (3/IPTV)** can be used only as an IPTV port to be connected with an IPTV set-top-box.
VLAN	It specifies the VLAN ID of your IPTV service. • If you do not have any information about VLAN provided by your ISP when IPTV service is available, please keep **Default**. • If you have VLAN ID from your ISP when IPTV service is available, please choose **Custom** VLAN and enter the VLAN value.

9.2.2 An example of configuring IPTV

Scenario

Tom subscribed to IPTV service from his ISP. His ISP provided IPTV account and password but no information about VLAN. After buying an AC8 to provide network, Tom wants to enjoy IPTV programs. The IPTV function of the router can address this requirement.

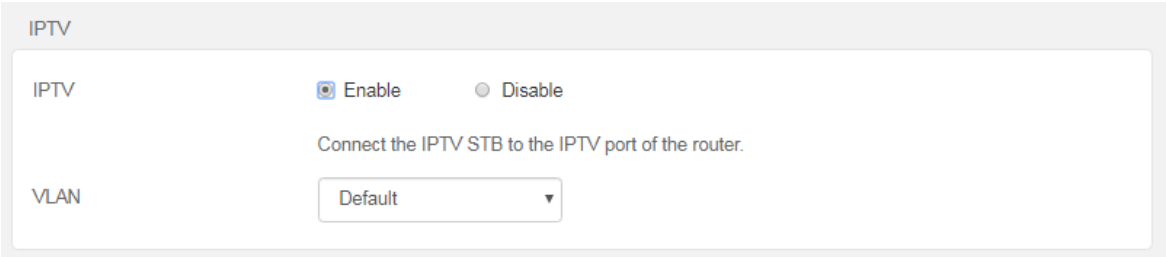
Network topology



Procedure

Step 1 Set you router.

1. To access the configuration page, click **Advanced**, and move to **IPTV** module.
2. Set **IPTV** to **Enable**.
3. Click **OK** at the bottom of the page.



Step 2 Dial up on set-top-box with the account and password provided by ISP.

---End

Verification

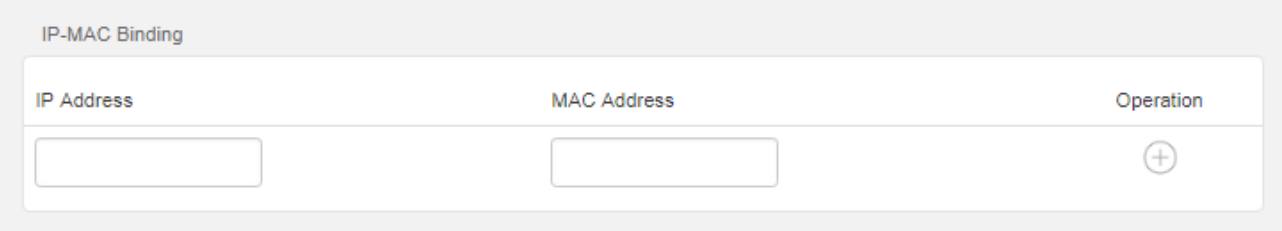
Tom can watch IPTV programs on television.

9.3 IP-MAC binding

9.3.1 Overview

The IP-MAC Binding function enables clients to obtain a fixed IP address, ensuring that the IP address-based functions, such as port forwarding, DMZ host and other functions of the router can take effect properly. This function is only effective when the DHCP server of the router is enabled.

Choose **Advanced**, and move to the **IP-MAC Binding** module to access the configuration page.



Parameter description

Parameter	Description
IP Address	It specifies the IP address to be reserved for the client with the specified MAC address. It should belong to the DHCP address pool.
MAC Address	It specifies the MAC address of the client that needs a fixed IP address.
Operation	⊕ : It is used to add an IP-MAC binding rule. ⊖ : It is used to delete an IP-MAC binding rule.

9.3.2 Configuring an IP-MAC binding rule

Adding a rule

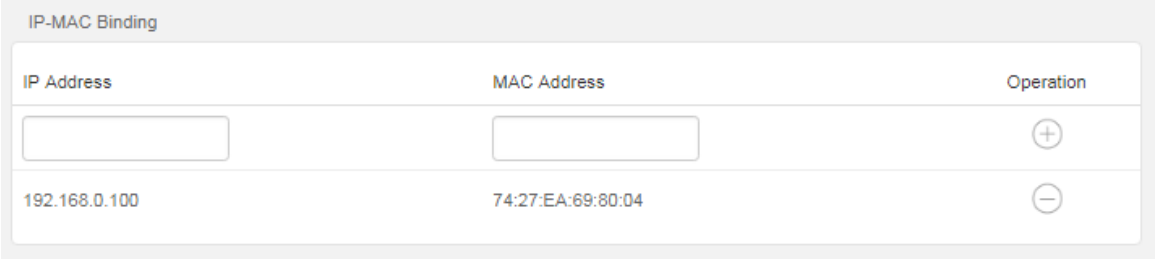
Step 1 Choose **Advanced** and move to the **IP-MAC Binding** module**.**

Step 2 Enter an IP address included in the DHCP address pool.

Step 3 Enter the MAC address of the client which needs a fixed IP address.

Step 4 Click ⊕.

Step 5 Click **OK** at the bottom of the page.



---End

Deleting a rule

Step 1 Choose **Advanced** and move to the **IP-MAC Binding** module.

Step 2 Click  corresponded to an entry to be deleted.

Step 3 Click **OK** at the bottom of the page.

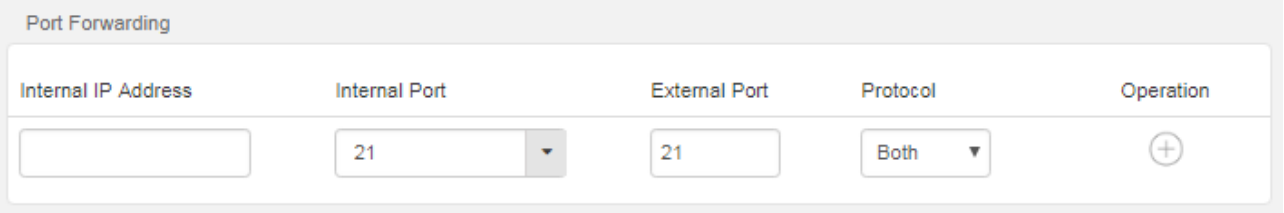
---End

9.4 Port forwarding

9.4.1 Overview

By default, internet users cannot access any service on any of your local hosts. If you want to enable internet users to access a particular service on a local host, enable this function and specify the IP address and service port of the local host. This can also prevent local network from being attacked when the internal server is opened to the internet users.

Click **Advanced**, and move to the **Port Forwarding** module to access the configuration page.

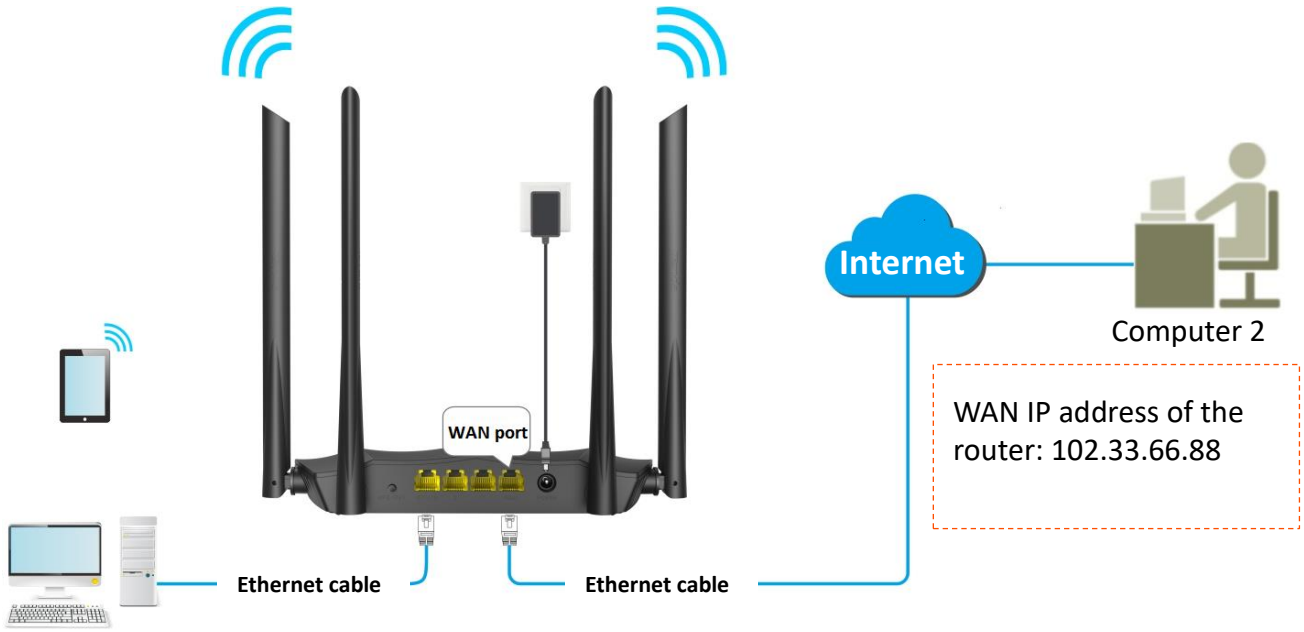


Parameter description

Parameter	Description
Internal IP Address	It specifies the IP address of a server that resides on the LAN.
Internal Port	It specifies the service port number of the internal server.
External Port	It specifies the service port number for internet users to access a specified service.
Protocol	It specifies the protocol that specified service uses. **Both** indicates that both TCP and UDP are used. If you are uncertain about it, **Both** is recommended.
Operation	It allows you to manually add and delete a port forwarding rule.

9.4.2 An example of configuring a port forwarding rule

Tom uses an AC8 to set up home network, and establishes a web server in LAN. Now he wants internet users to access the resources on the server. The port forwarding function can be enabled to meet the requirement.



Computer 1 (web server)

IP address: 192.168.0.100

Prerequisites

- The WAN IP address of the router is a public IP address, which is **102.33.66.88**.
- Computer 1 is assigned a fixed IP address, which is 192.168.0.100 (Refer to the **IP-MAC binding** function).
- The internal port of the web server is 1089. And the external port number to access the web server is also 1089.

Configuration procedure

Step 1 Choose **Advanced**, and move to **Port Forwarding** to enter the configuration page.

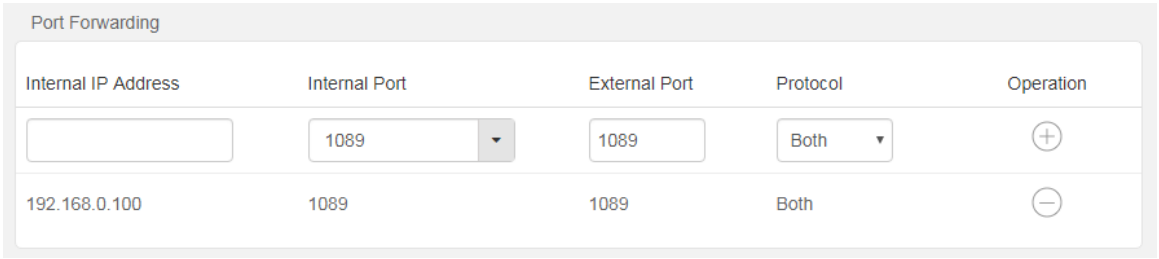
Step 2 Enter **Internal IP Address** to the IP address of the web server, which is the IP address of computer 1, **192.168.0.100**.

Step 3 Enter **Internal Port** to the port number of the web service, which is **1089** in this example.

Step 4 Enter **External Port**, which is **1089** in this example.

Step 5 Set **Protocol** to **Both**.

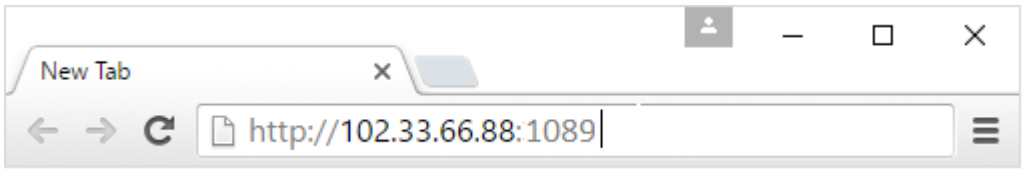
Step 6 Click , and then click **OK** at the bottom of the page.



----End

Verification

Enter *Protocol name*://*WAN port IP address*:*External port* in the address bar of a web browser on a computer over the internet to access the resources on the web server. In this example, enter **http://102.33.66.88:1089**.



NOTE

To make the port forwarding function always effective, you can use both the port forwarding function and DDNS functions to allow internet users to access the LAN server using a domain name.

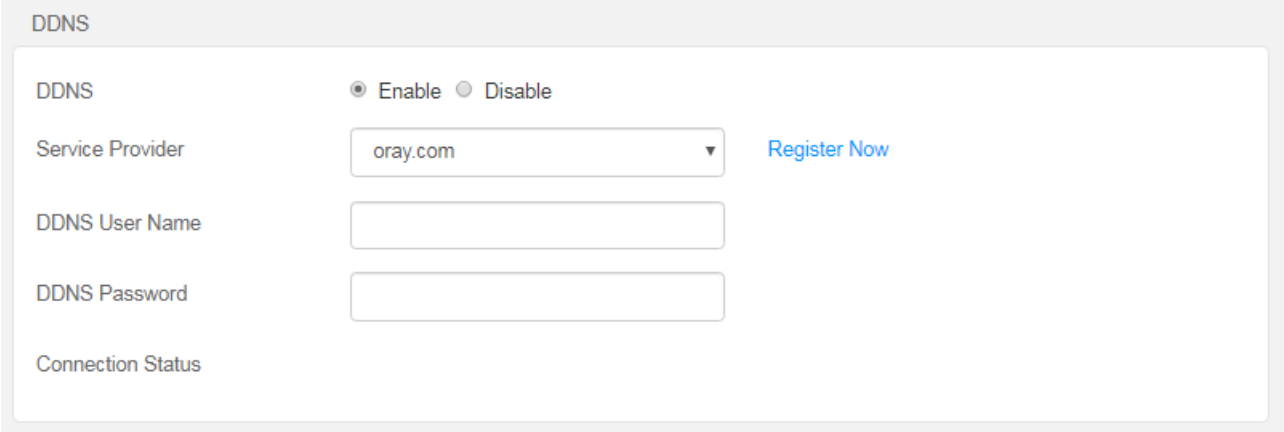
9.5 DDNS

9.5.1 Overview

DDNS is short for Dynamic Domain Name Server. When the DDNS service runs, the DDNS client on the router sends its current WAN port IP address to the DDNS server, and then the server updates the mapping relationship between the domain name and the IP address in the database to achieve dynamic domain name resolution. You can enable this function to map the router's dynamically changing WAN Port IP address (public network IP address) to a fixed domain name.

DDNS normally interworks with port forwarding, DMZ host and remote web-based management, so that the internet users can access the internal server or the router’s web UI with a domain name.

Choose **Advanced**, and move to the **DDNS** module to access the configuration page. By default, it is disabled. Select **Enable**, and the following page appears.



Parameter description

Parameter	Description
DDNS	It specifies whether to enable the DDNS function.
Service Provider	It specifies a DDNS service provider.
DDNS User Name	It specifies the user name and password registered on a DDNS service provider's website for logging in to the DDNS service.
DDNS Password	
Connection Status	It specifies the current connection status of the DDNS service.

9.5.2 An example of configuring DDNS

Winnie uses AC8 to set up network, and establishes a web server on LAN. She wants internet users to access the resources on the server with a domain name. The port forwarding function and DDNS function can be enabled to meet the requirement.

Assumption

DDNS service provider: oray.com

Domain name: tenda-winnie.imwork.net

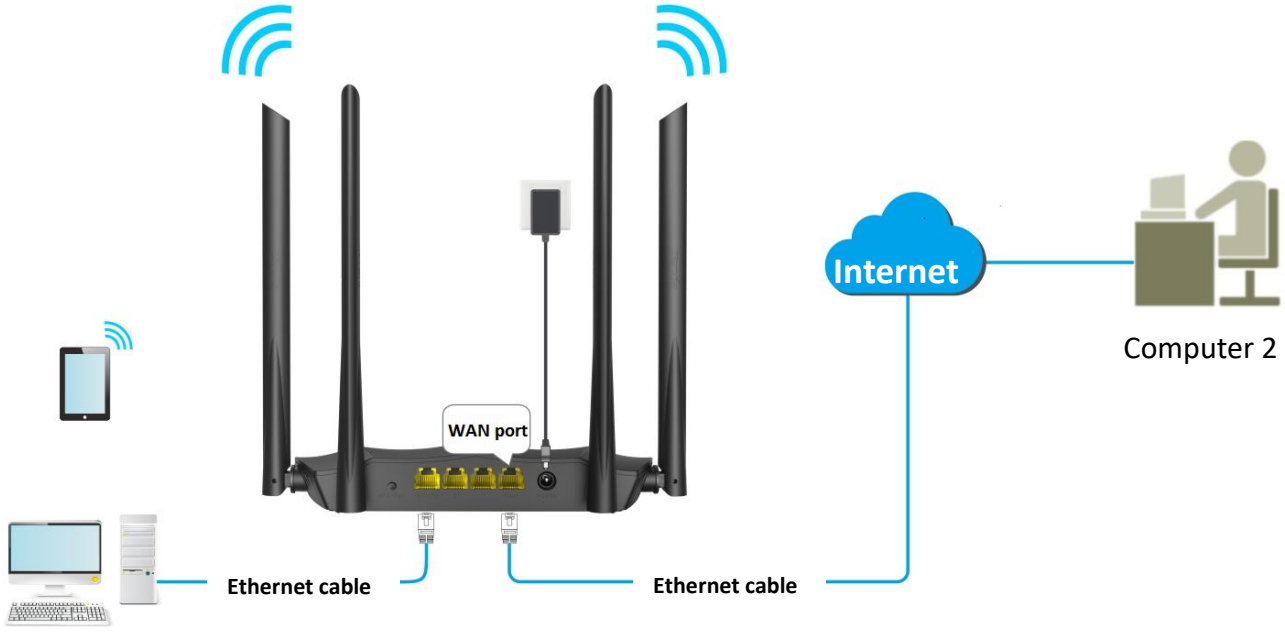
Username: tenda-winnie

Password: a1234578

Web server IP address: 192.168.0.110

Internal port number of the web server and the external port number to access the web server: 8080

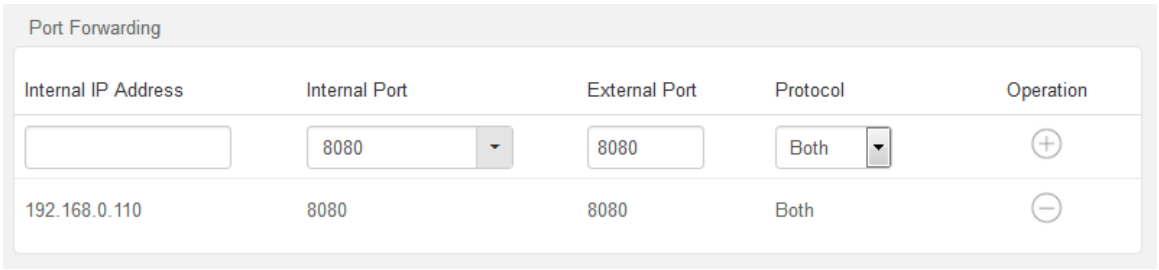
Network topology



Computer 1 (web server)

Configuration procedure

Step 1 Refer to Port forwarding to configure the port forwarding function.



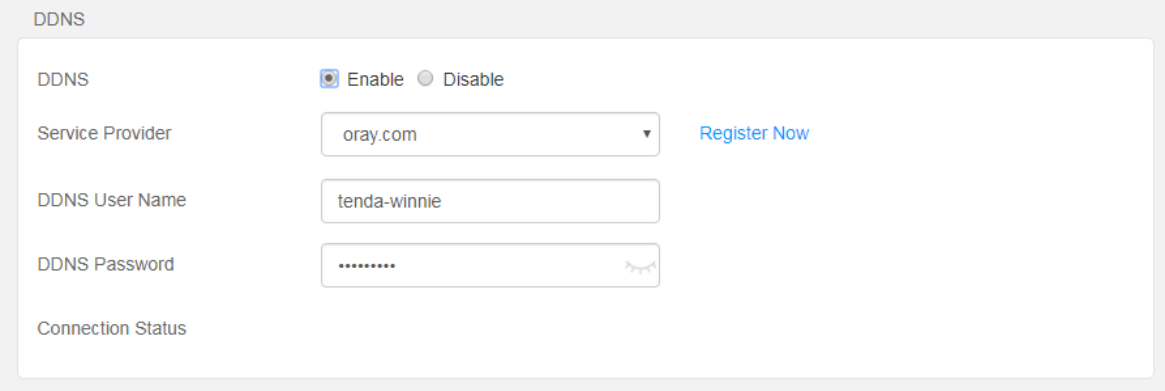
Step 2 Configure the DDNS function.

1. Choose **Advanced**, and move to **DDNS** to enter the configuration page.
2. Set **DDNS** to **Enable**.
3. Set **Service Provider** to **oray.com**.

TIP

If you do not have a DDNS account, select a service provider and click Register Now to go to the service provider's website. Register a DDNS account and memorize your user name, password, and domain name of the account.

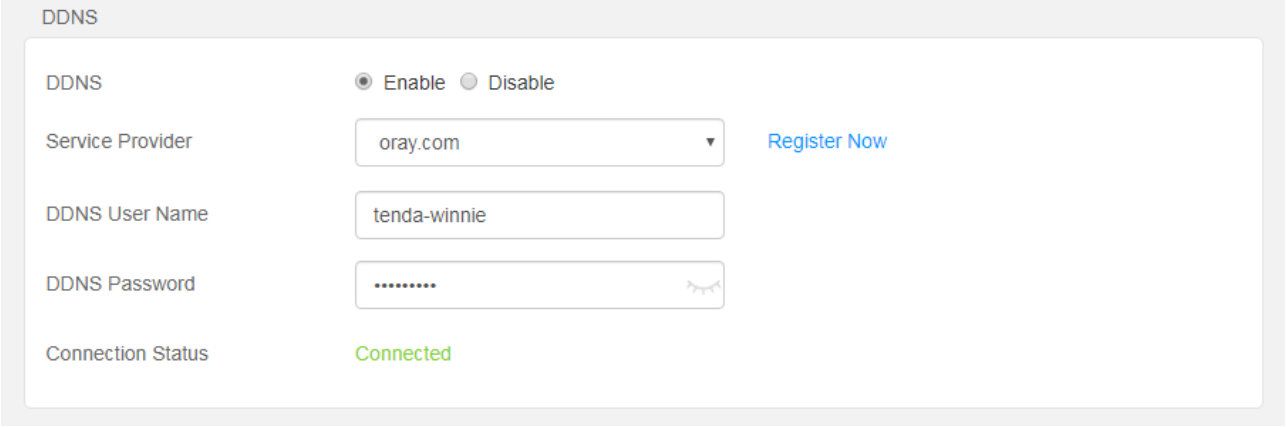
4. Enter your DDNS user name, which is **tenda-winnie** in this example.
5. Enter your DDNS password, which is **a12345678** in this example.



6. Click **OK** at the bottom of the page.

---End

Wait a moment, and refresh the page. When the **Connection Status** shows **Connected**, the configuration is saved successfully.



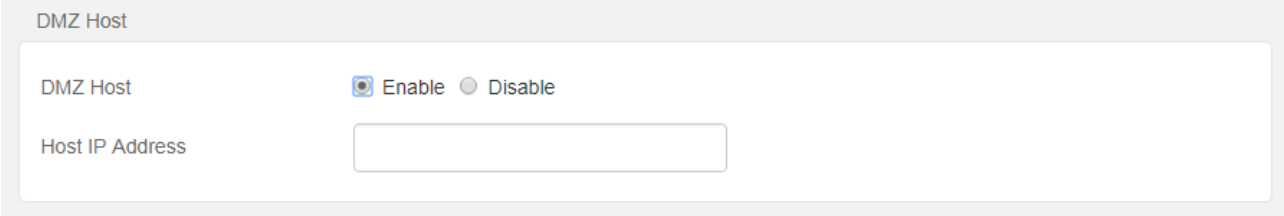
Verification

Internet users can use http://tenda-winnie.imwork.net:8080 to access the web server.

9.6 DMZ host

A DMZ host on a LAN can be accessed by the internet users without limit. It is especially used for video conferences and online games. You can set a computer with these requirements as a DMZ host for better user experience.

Choose **Advanced**, and move to the **DMZ Host** module to access the configuration page. By default, it is disabled. It shows as the following figure when you enable it.



NOTE

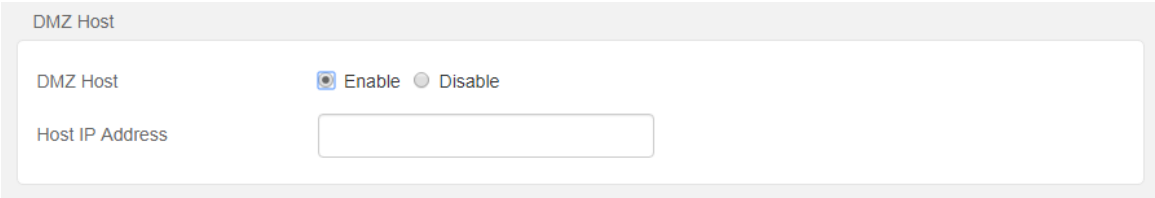
- A DMZ host is not protected by the firewall of the router. A hacker may leverage the DMZ host to attack your LAN. Therefore, enable the DMZ function only when necessary.
- Manually set the IP address of the LAN computer that functions as a DMZ host (Refer to IP-MAC binding function), as a changeable IP address may result in DMZ function failures.
- Security software, antivirus software, and the built-in OS firewall of the computer may cause DMZ function failures. Disable them when using the DMZ function. If the DMZ function is not required, you are recommended to disable it and enable your firewall, security, and antivirus software.

Configuration procedure

Step 1 Choose **Advanced**, and move to the **DMZ Host** module to enter the configuration page.

Step 2 Set **Host IP Address** to the IP address of a computer in LAN that you want to set as the DMZ host.

Step 3 Click **OK** at the bottom of the page.

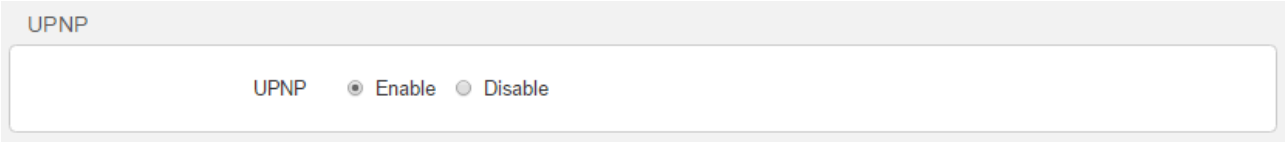


----End

9.7 UPnP

UPnP is short for Universal Plug and Play. This function enables the router to implement automatic port forwarding by automatically detecting UPnP-based application programs and enabling ports on the router for the applications. It is generally used for P2P programs, such as BitComet and AnyChat, and helps increase the download speed.

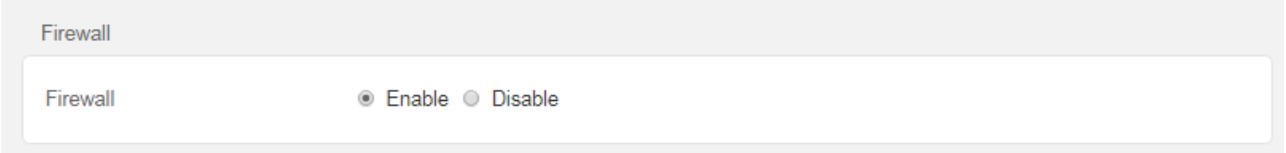
Choose **Advanced**, and move to **UPnP** module to enter the configuration page. It is enabled by default. See the following figure.



9.8 Firewall

The firewall function helps the router avoids the host on WAN to Ping the WAN IP address to prevent itself from exposing itself, meanwhile protect the router against external Ping attacks.

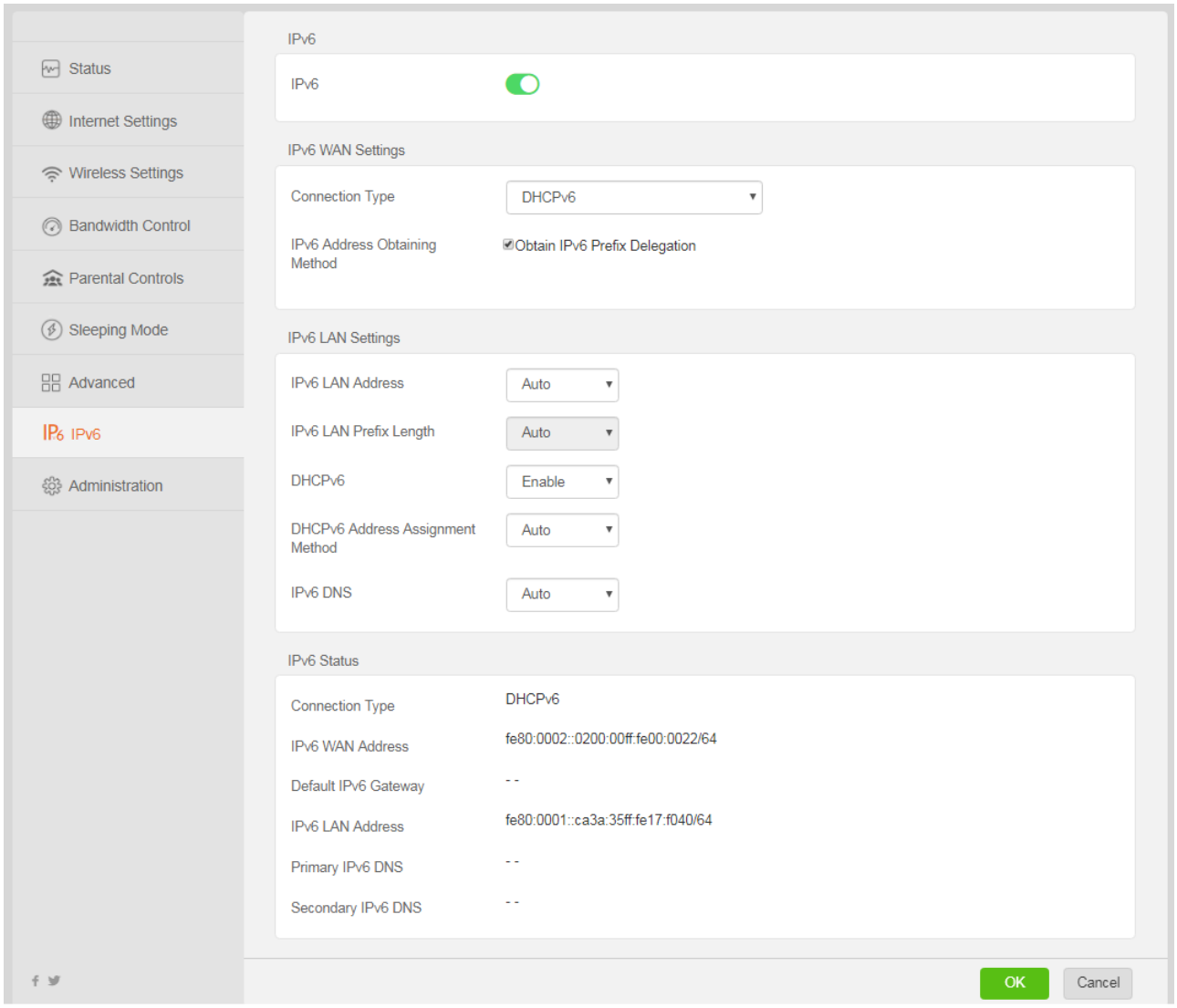
Choose **Advance**, and move to the **Firewall** module to enter the configuration page. It is enabled by default. See the following figure.



10 IPv6

Internet Protocol version 6 (IPv6) is the most recent version of the Internet Protocol (IP), the communications protocol that provides an identification and location system for computers on networks and routes traffic across the Internet. IPv6 provides a larger addressing space than Internet Protocol version (IPv4).

The IPv6 module enables you to enable IPv6 function and set up the related parameters for internet access. To access the configuration page, click **IPv6**. By default, the IPv6 function is disabled. The following figure appears when it is enabled.



Parameter description

Parameter		Description
IPv6 WAN Settings	Connection Type	Select the internet parameter obtaining method of WAN port. • **DHCPv6**: The router obtains information from the upstream device, and no information is required on this page. • **PPPoEv6**: Your ISP provides you with the PPPoE username and password. • **Static IPv6 Address**: Your ISP provides you with the IP address, subnet mask, default gateway and DNS information.
	IPv6 Address Obtaining Method	When you choose **Obtain IPv6 Prefix Delegation**, the router can obtain an IPv6 prefix from the upstream DHCP server. It can be enabled only when the WAN connection is **DHCPv6** or **PPPoEv6**. It is enabled by default. If it is disabled, you need to set IPv6 LAN address and IPv6 LAN prefix length manually.
IPv6 LAN Settings	IPv6 LAN Address	It specifies two types of IPv6 LAN address assignment. • **Auto**: The router auto-generates an IPv6 LAN address. • **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	Used to enable/disable the DHCPv6 server. If it is disabled, you have to manually set IP address settings for your connected devices for internet access.
	DHCPv6 Address Assignment Method	It specifies the assignment type of DHCPv6 address for the clients connected to the router. • **Auto**: DHCPv6 stateless configuration. Clients obtain their IPv6 address through Router Advertisement (Stateless Auto Address Configuration) and other parameters are allocated by the DHCPv6 server. • **Manual**: 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.
	IPv6 DNS	It specifies the IPv6 DNS address provided by your ISP. NOTE If your ISP only provides an IPv6 DNS address, leave the secondary IPv6 DNS blank.

Parameter		Description
IPv6 Status	Connection Type	It specifies the IPv6 connection type of the WAN port.
	IPv6 WAN Address	It specifies the IPv6 address of the WAN port.
	Default IPv6 Gateway	It specifies the IPv6 gateway address of the WAN port.
	IPv6 LAN Address	It specifies the IPv6 address of the LAN port.
	Primary IPv6 DNS	It specifies the primary/secondary IPv6 DNS address of the WAN port.
	Secondary IPv6 DNS	

11 Administration

This section describes how to manage and maintain your router and home network.

11.1 Login password

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

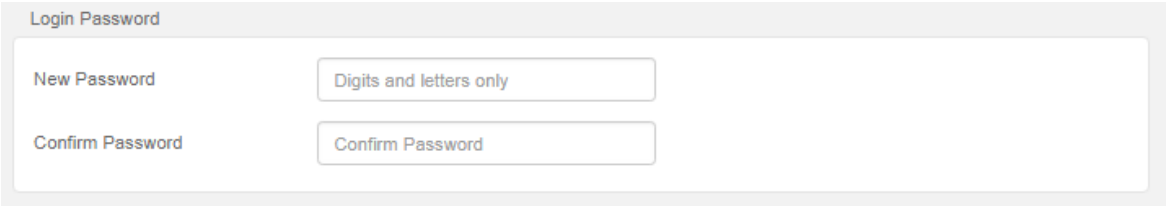
Configuration procedure

Step 1 Choose **Administration,** and move to the **Login Password** module to enter the page.

Step 2 Set a new password (5-32 characters) in **New Password** box.

Step 3 Repeat the new password in **Confirm Password** box.

Step 4 Click **OK** at the bottom of the page**.**



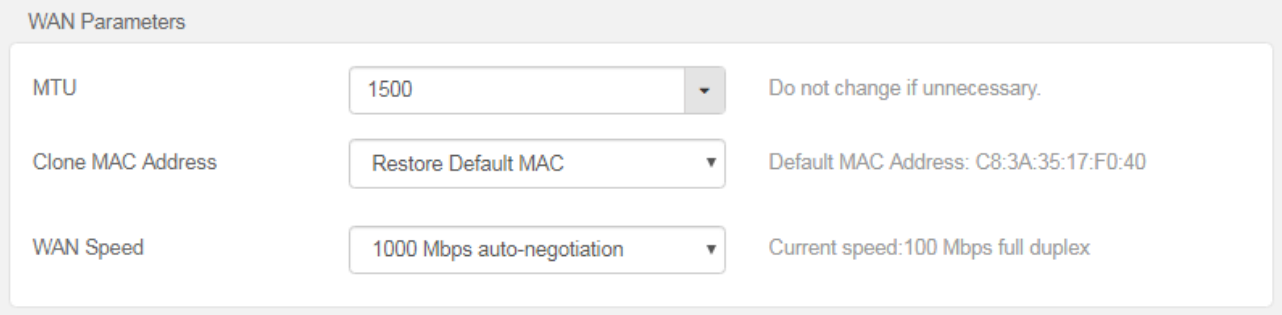
---End

The page will redirect to the login page. And you need to use the new password to login again.

11.2 WAN parameters

In the **WAN Parameters** module, you can check and modify MTU value, clone MAC address and modify WAN speed.

Choose **Administration** and move to the **WAN Parameters** module to enter the configuration page**.**



MTU

MTU specifies the maximum size of packet that the router can transmit. MTU varies based on connection types. The default setting is recommended.

You can try to change the MTU when:

- You cannot access some specific websites or encrypted websites (such as E-banking or Paypal websites).
- You cannot access a FTP or POP server.

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

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

Clone MAC Address

If your ISP binds your account with MAC Address of your computer that used to verify internet connectivity after you subscribed to the internet service, only this computer can access the internet with the account. In this case, you can use the Clone MAC Address function to clone the MAC address of this computer to the WAN port of the router to achieve network sharing.

Click **Restore Default MAC** to restore the MAC address of WAN port to the factory settings.

Here are two scenarios to clone MAC address.

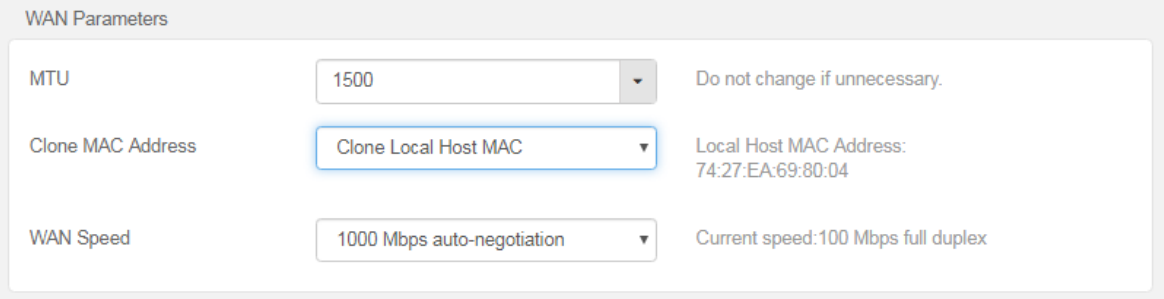
Scenario 1: The computer used to manage the router is the computer that used to access the internet.

Configuration procedure

Step 1 Choose **Administration,** and move to the **WAN Parameters** module to enter the configuration page**.**

Step 2 Set **Clone MAC Address** to **Clone Local Host MAC.**

Step 3 Click **OK** at the bottom of the page**.**



---End

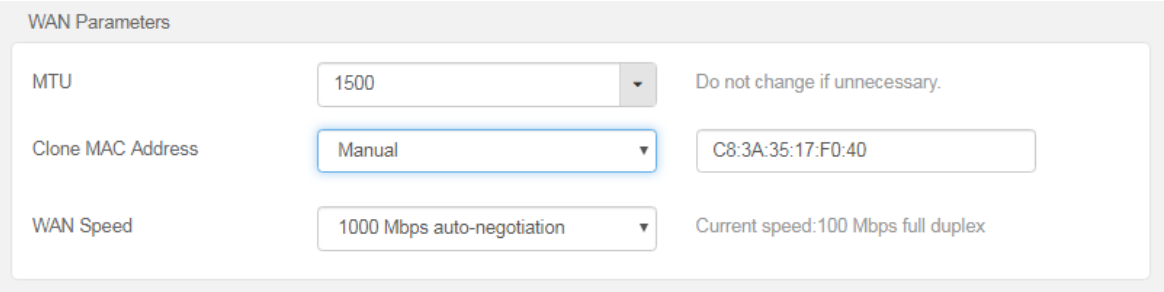
Scenario 2: The computer used to manage the router is not the computer that used to access the internet. And you need to get the MAC address of the computer that can access the internet.

Configuration procedure

Step 1 Choose **Administration,** and move to **WAN Parameters** module to enter the configuration page**.**

Step 2 Set **Clone MAC Address** to **Manual**.

Step 3 Enter the MAC address of the computer that can access the internet in the format of *xx*:*xx*:*xx*:*xx*:*xx*:*xx*.



Step 4 Click **OK** at the bottom of the page**.**

---End

WAN Speed

It specifies the speed and duplex of the WAN port. By default, the speed mode of the WAN port is 1000 Mbps auto negotiation. Change the setting only when necessary. If the router cannot access the internet after you set up it correctly, you can try to change it to a different mode.

11.3 LAN parameters

In this section, you can view and modify the LAN IP address and DHCP server parameters of the router.

The DHCP server can automatically assign IP addresses, subnet masks, gateways and other related parameters to the clients of the router.

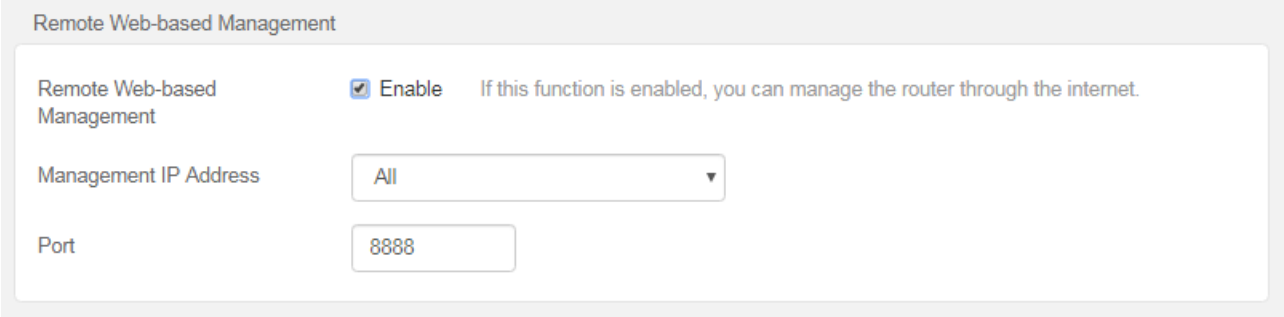
Choose **Administrator,** and move to the **LAN Parameters** module to enter the configuration page**.**

Parameter description

Parameter	Description
LAN IP Address	It specifies the LAN IP address of the router, which is also the management IP address, for logging in to the router web UI.
Subnet Mask	It specifies the subnet mask of the LAN port, used to identify the IP address range of the local area network.
DHCP Server	It specifies whether to enable DHCP server.
Start IP Address/End IP Address	It specifies the range of IP addresses that can be assigned to devices connected to the router.
Preferred DNS Server	It specifies the preferred DNS address of the router, which is used to assign to the clients. It is the LAN IP address of the router by default. You can change it if necessary.
Alternate DNS Server	It specifies the alternate DNS address of the router used to assign to the clients. It is an optional field and is left blank by default.

11.4 Remote web-based management

Generally, the web UI of the router can only be accessed on devices that are connected to the router by a LAN port or wireless connection. When you encounter a network fault, you can ask for remote technical assistance, which improves efficiency and reducing costs and efforts. By default, this function is disabled. The following figure displays as below when this function is enabled.



Configuring remote web-based management

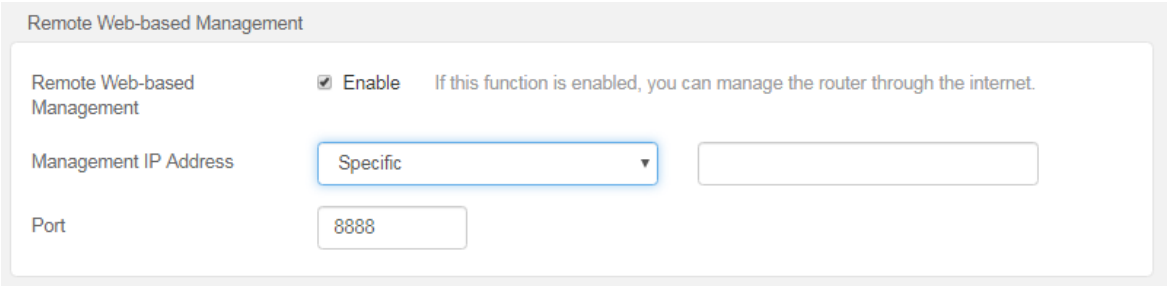
Step 1 Choose **Administration,** and move to the **Remote Web-based Management** module to enter the configuration page.

Step 2 Select the **Enable** option.

Step 3 Set **Management IP Address** to **Specific,** and enter a specified IP address.

Step 4 Enter a port number used to access the router remotely.

Step 5 Click **OK** at the bottom of the page**.**



---End

Parameter description

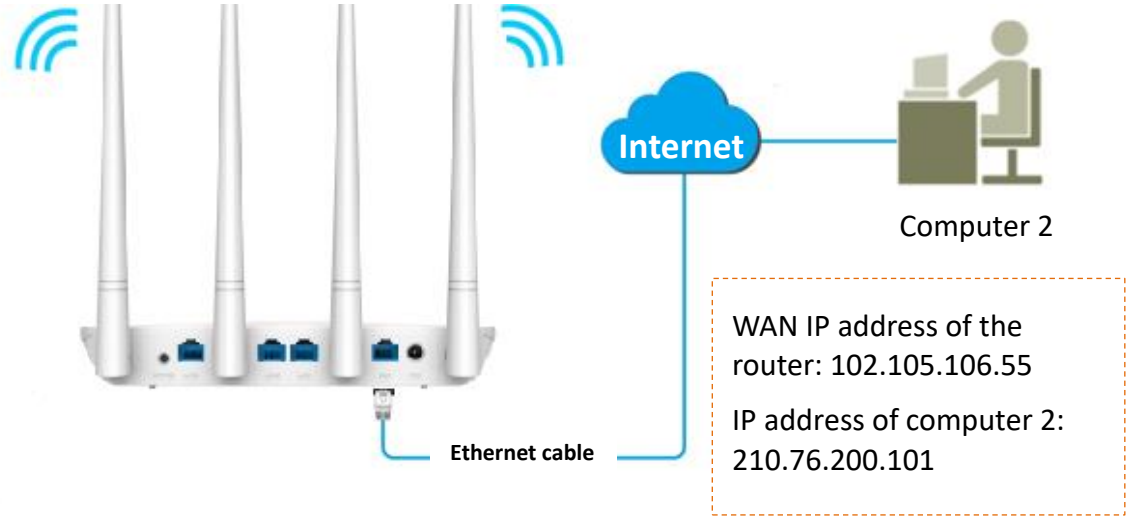
Parameter	Description
Remote Web-based Management	Used to enable/disable Remote Web-based Management function. It is disabled by default.
Management IP Address	It specifies the IP address to manage the router remotely. • **All**: It indicates that all internet users can access the web UI of the router. It is not recommended to select this option for network security. • **Specific**: It indicates that only the user with the specified public IP address is allowed to access the web UI of the router remotely. If the host for remote access is in an intranet, enter the public IP address of the computer's gateway here.

Parameter	Description
Port	It specifies the port number to access the router remotely. Port 1 to 1024 are occupied by well-known services. It is recommended to modify the port to be in the range from 1025 to 65535. To access the web UI of the router by the URL: **http://WAN IP address:port**. If DDNS is enabled on the router, you can access the web UI by **http://WAN domain name:port**.

An example of configuring remote web-based management

An AC8 is used to set up a network to in an apartment, and needs to be logged in and managed over the internet. Assume the public IP address of the router is 102.105.106.55 and that of the computer for remote management is 210.76.200.101.

The following figure shows the application scenario.



NOTE

The computer used to remotely log in to the web UI of the router must be assigned a public IP address. If it is assigned a private IP address, use the public IP address of the router to which the computer connects for remote login. Private IP addresses are not applicable to remote management.

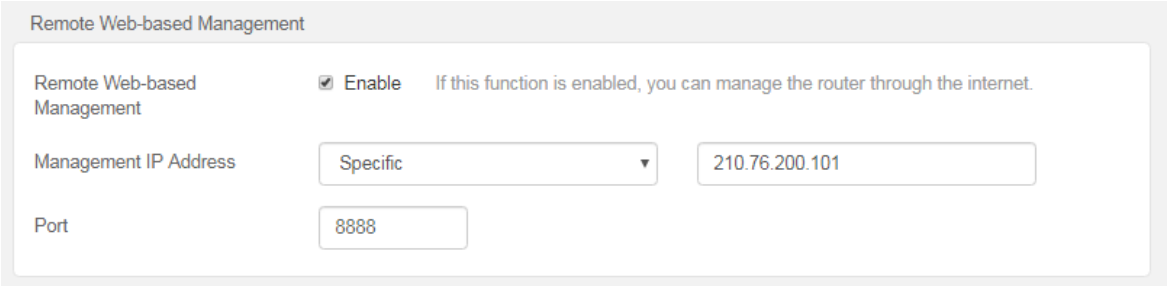
Configuration procedure

Step 1 Choose **Administration,** and move to the **Remote Web-based Management** module to enter the configuration page.

Step 2 Check the **Enable** option.

Step 3 Set **Management IP Address** to **Specific,** and enter **210.76.200.101**.

Step 4 Click **OK** at the bottom of the page.



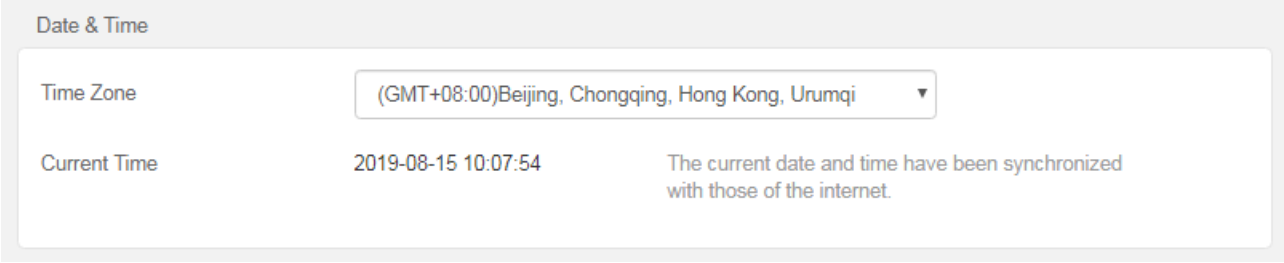
---End

After the configuration is saved, use **http://102.105.106.55:8888** to access the web UI of the router on computer 2.

11.5 Date & Time

If the system time of the router is incorrect, time-based functions of the router cannot take effect correctly, including the WiFi schedule, parental controls and Automatic Maintenance functions. When the configuration with the Quick Setup Wizard is complete, the router synchronizes its system time with the computer used to configure the router. You can change the setting manually.

Choose **Administration,** and move to the **Date & Time** module to enter the configuration page.



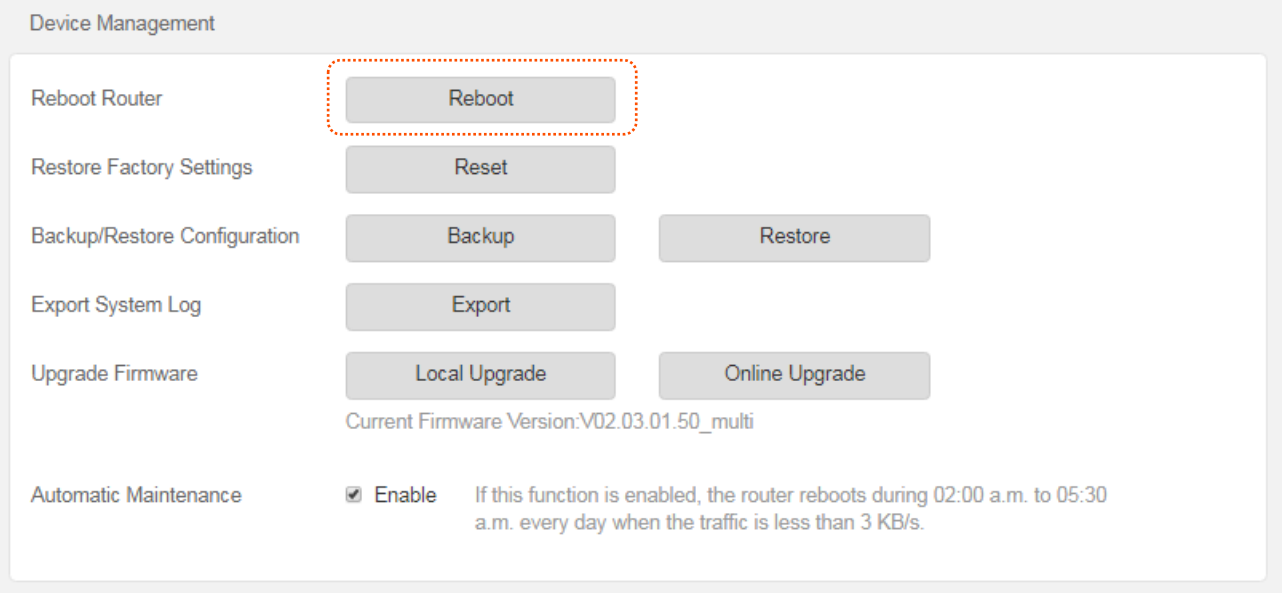
11.6 Device management

This module describes how to reboot, reset, and upgrade the router, how to back up your current configuration and restore the router to previous configuration, and how to view the system logs.

Reboot router

If a setting fails to take effect or the router fails to work properly, you can try rebooting the router.

Choose **Administration,** and move to the **Device Management** module to enter the configuration page. Click **Reboot**, confirm, and the router will restart. When the progress bar completes, it indicates the router completes restart.



TIP

Rebooting the router will disconnect all the connections. Please reboot the router when the network is idle.

Restore factory settings

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

The router can be reset on the web UI or using the **WPS/RST** or **RST/WPS** button.

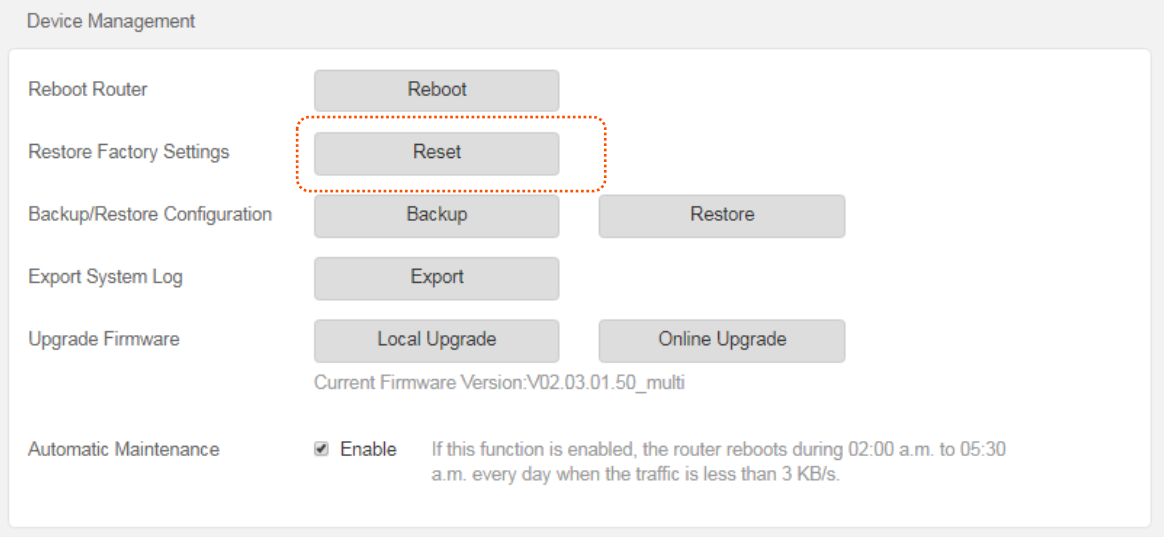
NOTE

- Resetting the router is not recommended unless you forget your login password or under the requirement of Tenda technical support. You need to reconfigure the router after it is reset.
- Ensure that the power supply of the router is normal when the router is reset.
- The default login IP address is 192.168.0.1, and login password is admin after resetting.

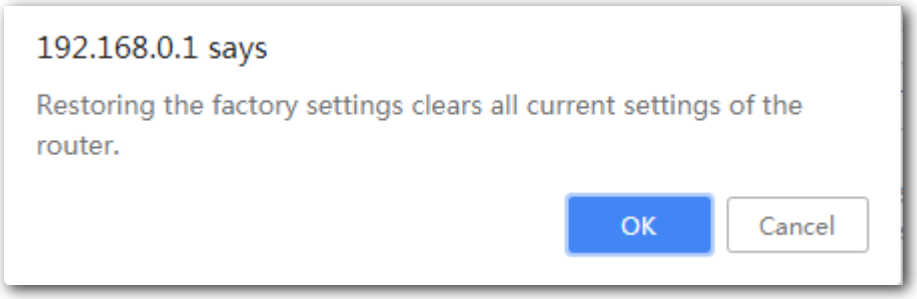
Resetting the Router on the Web UI

Step 1 Choose **Administration,** and move to the **Device Management** module to enter the configuration page.

Step 2 Click **Reset**.



Step 3 Click **OK** in the popup window.



---End

Wait for the progress bar to complete.

Resetting the Router Using the Reset Button

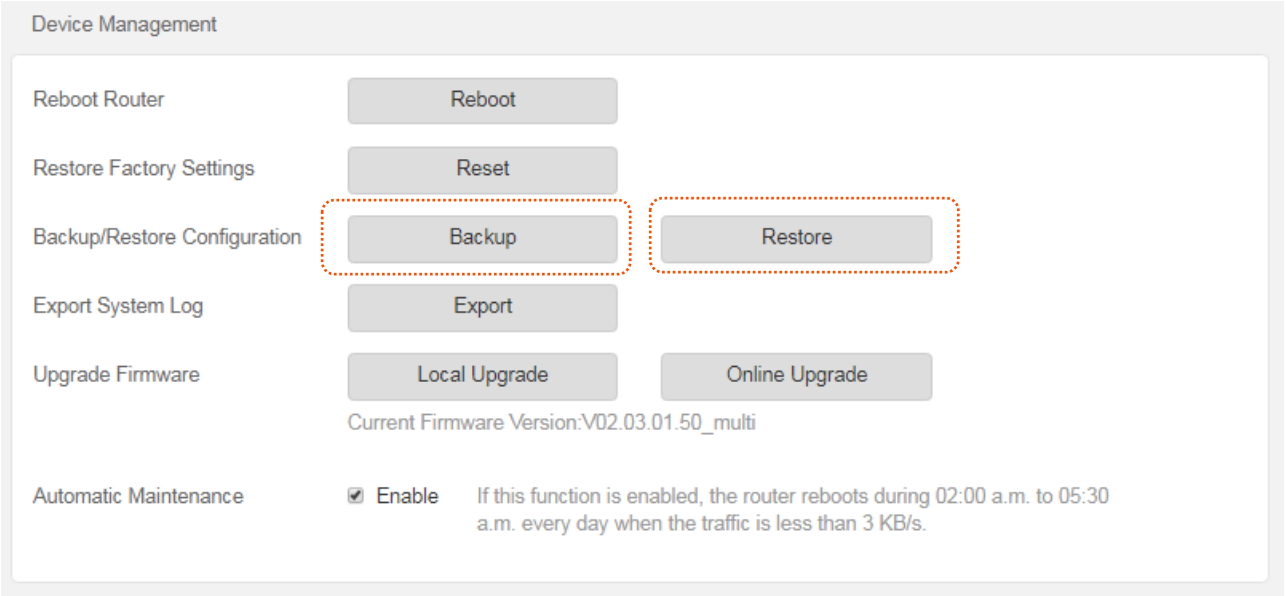
Hold down the **reset** (it can be **RST**, **WPS/RST**, **RST/WPS**, **WiFi/WPS** or **WPS/Reset**) button of the router for about 8 seconds and release it.

Backup/Restore configuration

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

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

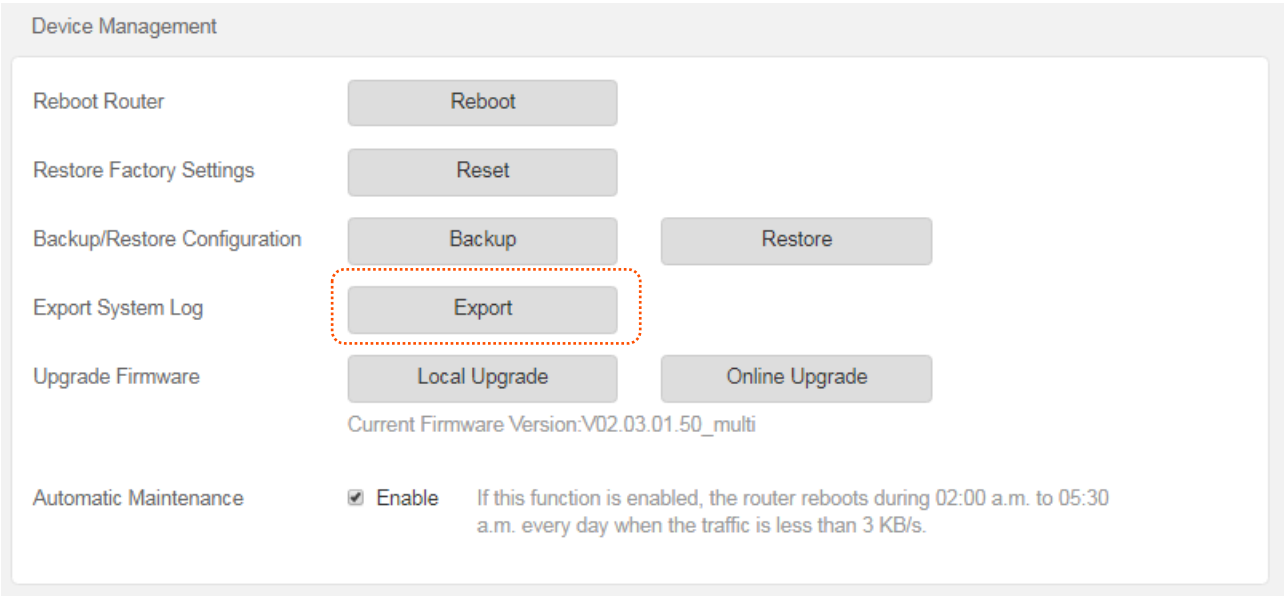
To back up or restore the configuration of your router, choose **Administration**, move to the **Device Management** module and perform the backup or restoring procedures.



Export system log

This function logs all key events that occur after the router is started. If you encounter a network fault, you can turn to system logs for fault rectification.

Choose **Administration**, and move to the **Device Management** module to access the configuration page.



Click **Export** to save system logs to your local computer.

Upgrade firmware

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

Local upgrade

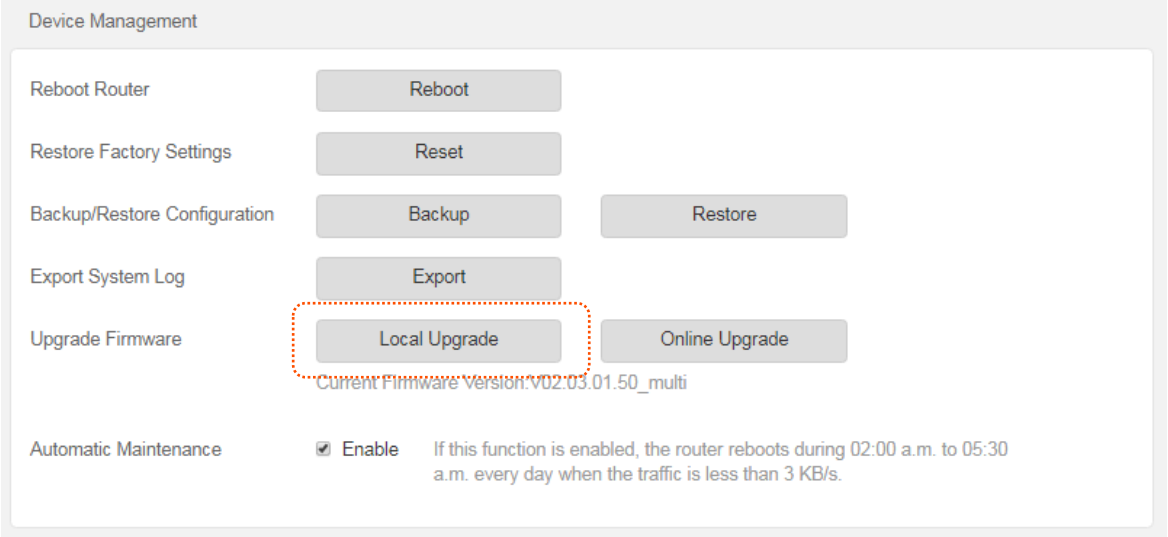
NOTE

- To enable a successful upgrade, ensure that the firmware is applicable to the router.
- When you are upgrading a firmware, do not power off the router.

Step 1 Go to www.tendacn.com, download a firmware version of the router to your computer and unzip it.

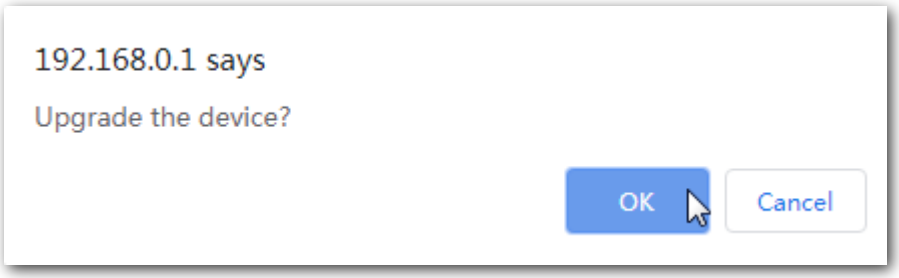
Step 2 Choose **Administration**, and move to the **Device Management** module to access the configuration page.

Step 3 Click **Local Upgrade.**



Step 4 Select the previously downloaded firmware, and click **Open.**

Step 5 Click **OK** in the appearing dialog box.



---End

Wait until the progress bar is complete. Log in to the web UI of the router again. Choose **Status** > **System Information** and check whether the upgrade is successful based on **Firmware Version**.

TIP

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

Online upgrade

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

firmware. If you want to upgrade the firmware, click **Upgrade** and the router upgrades the firmware automatically.

Configuration procedure

Step 1 Choose **Administration** > **Device Management** on the router web UI.

Step 2 Click **Online Upgrade.**

---End

Wait until the progress bar is complete. Log in to the web UI of the router again. Choose **Status** > **System Information** and check whether the upgrade is successful based on **Firmware Version**.

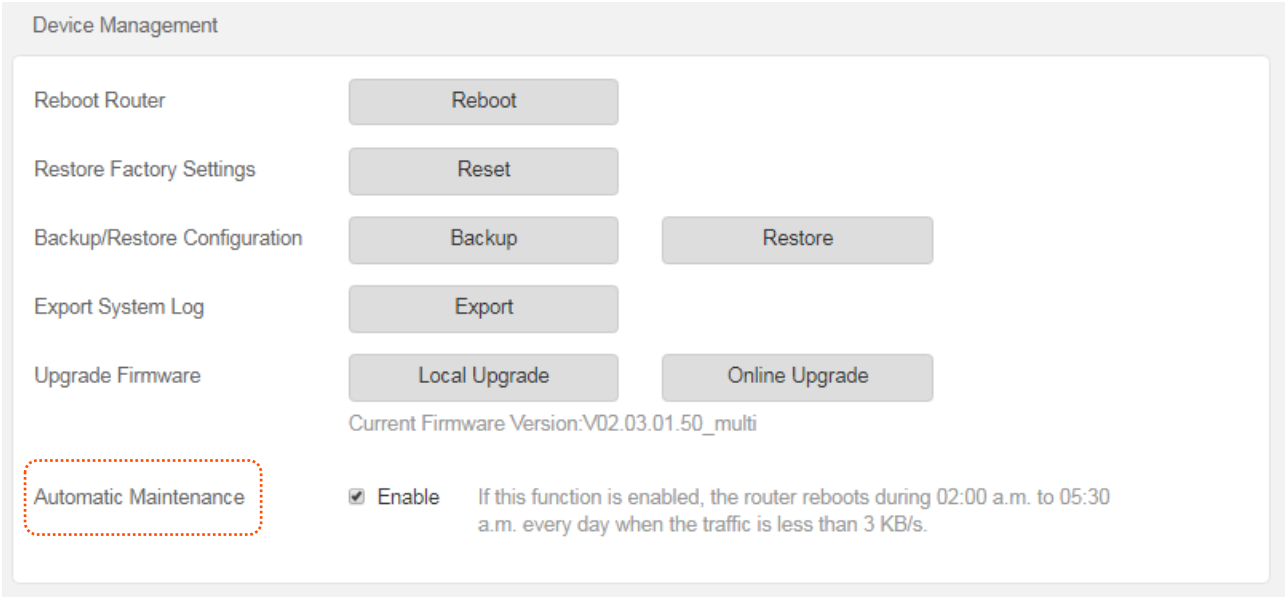
TIP

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

Automatic Maintenance

Automatic maintenance enables you to make the router restart regularly. It helps improve the stability and service life of the router.

To configure the automatic maintenance function, choose **Administration**, and move to the **Device Management**. If this function is enabled, the router reboots during 03:00~05:00 a.m. every day when the traffic is lighter than 3 KB/s. By default, this function is enabled.



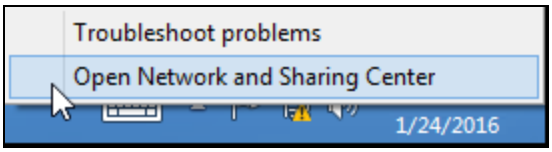
Appendix

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

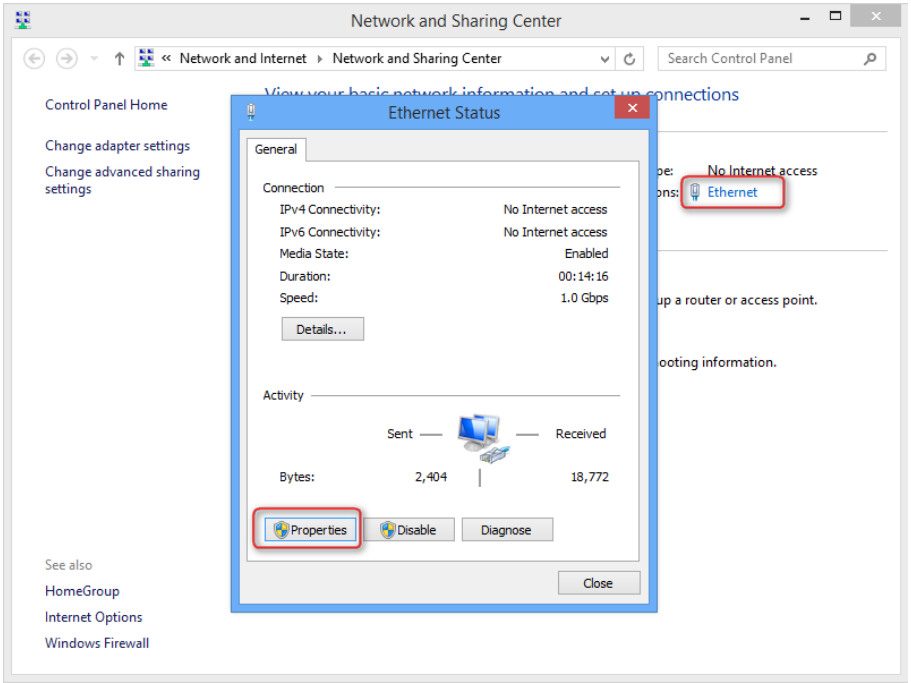
Perform the configuration procedures corresponding to Windows 8, Windows 7, and Windows 10 as required. A computer installed with a wired network adapter is used as an example to describe the procedures. The procedures for configuring computers installed with a wireless network adapter are similar.

A.1.1 Windows 8

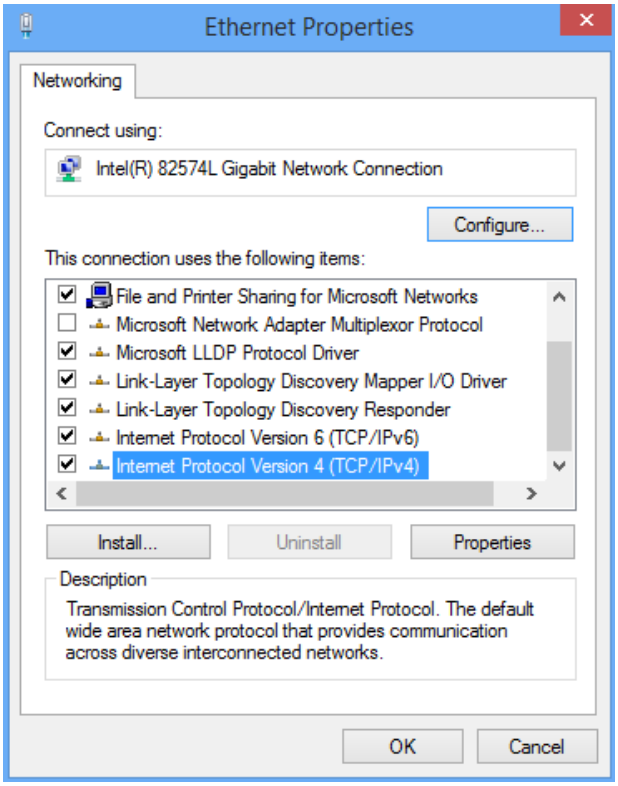
Step 1 Right-click in the lower-right corner of the desktop and choose **Open Network and Sharing Center**.



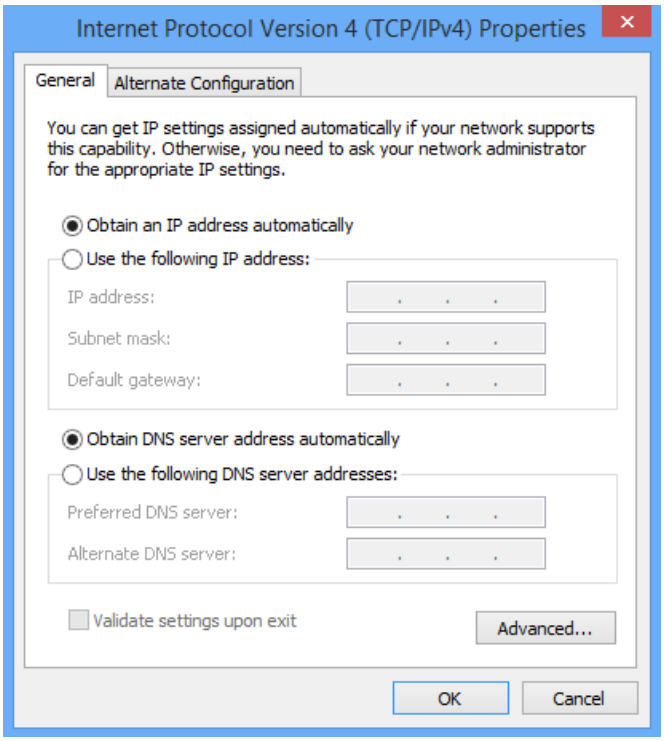
Step 2 Click **Ethernet** and then **Properties**.



Step 3 Double-click **Internet Protocol Version 4 (TCP/IPv4)**.



Step 4 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and click **OK**.

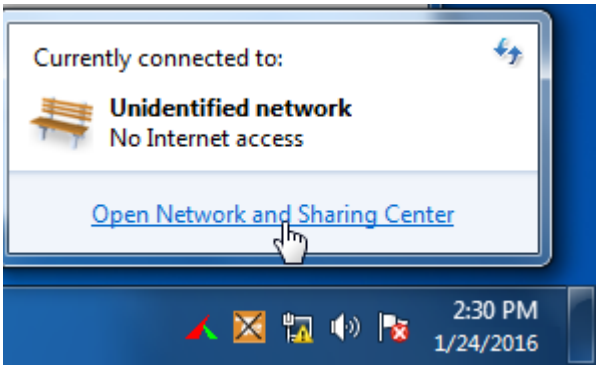


Step 5 Click **OK** in the **Ethernet Properties** window.

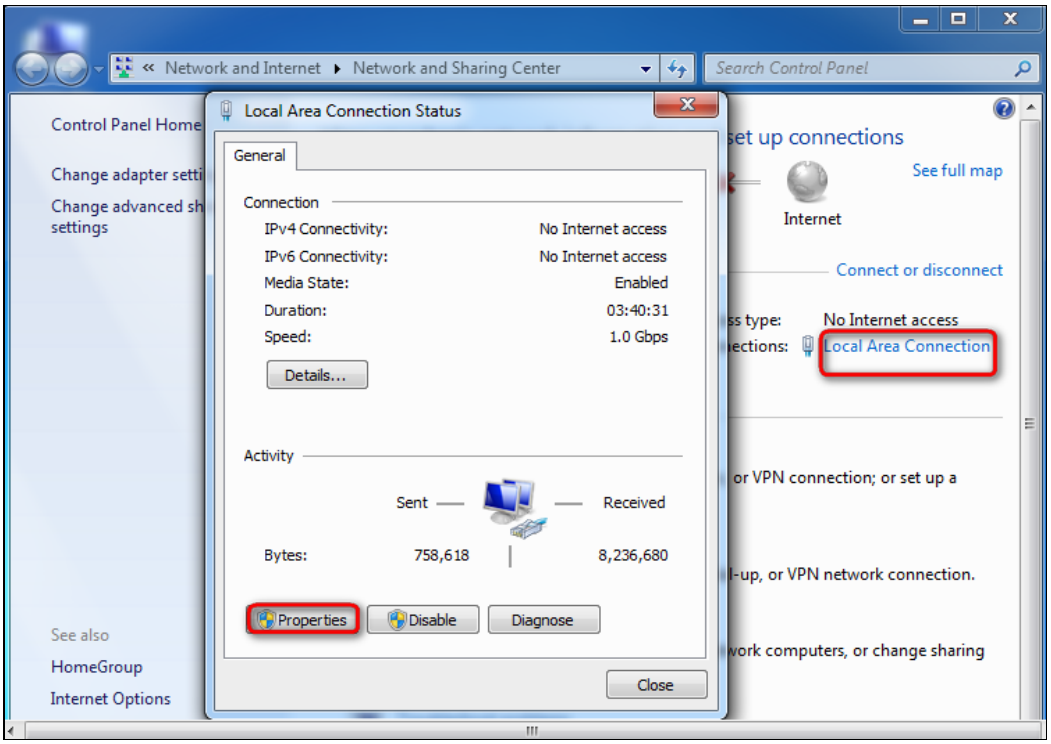
----End

A.1.2 Windows 7

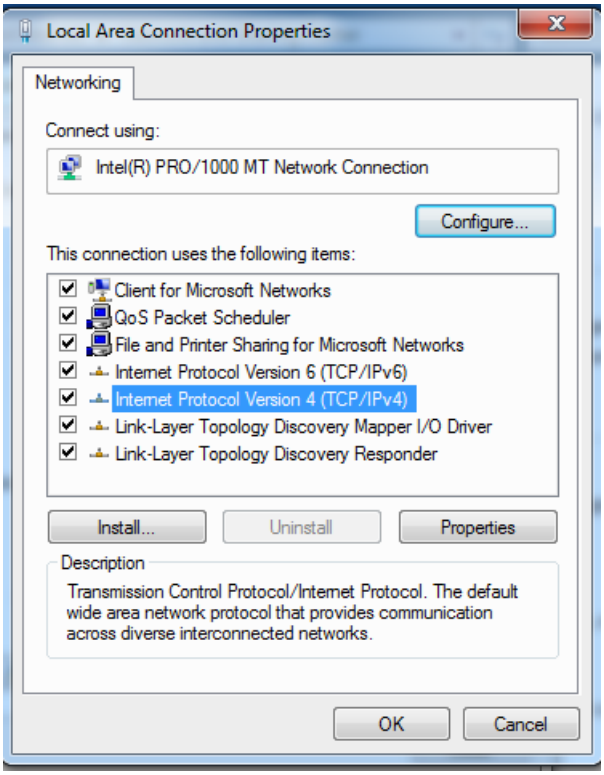
Step 1 Click in the lower-right corner of the desktop and choose **Open Network and Sharing Center**.



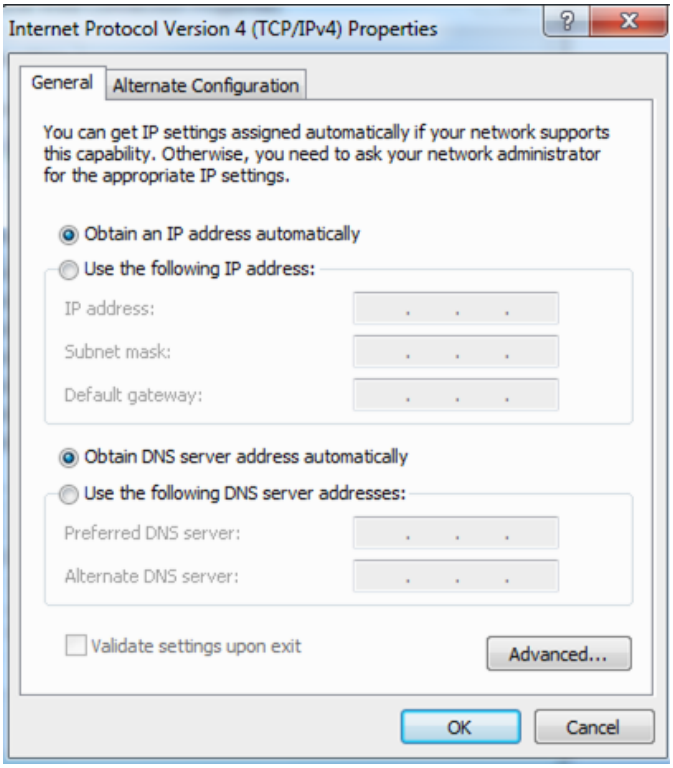
Step 2 Click **Local Area Connection** and then **Properties**.



Step 3 Double-click **Internet Protocol Version 4 (TCP/IPv4)**.



Step 4 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and click **OK**.



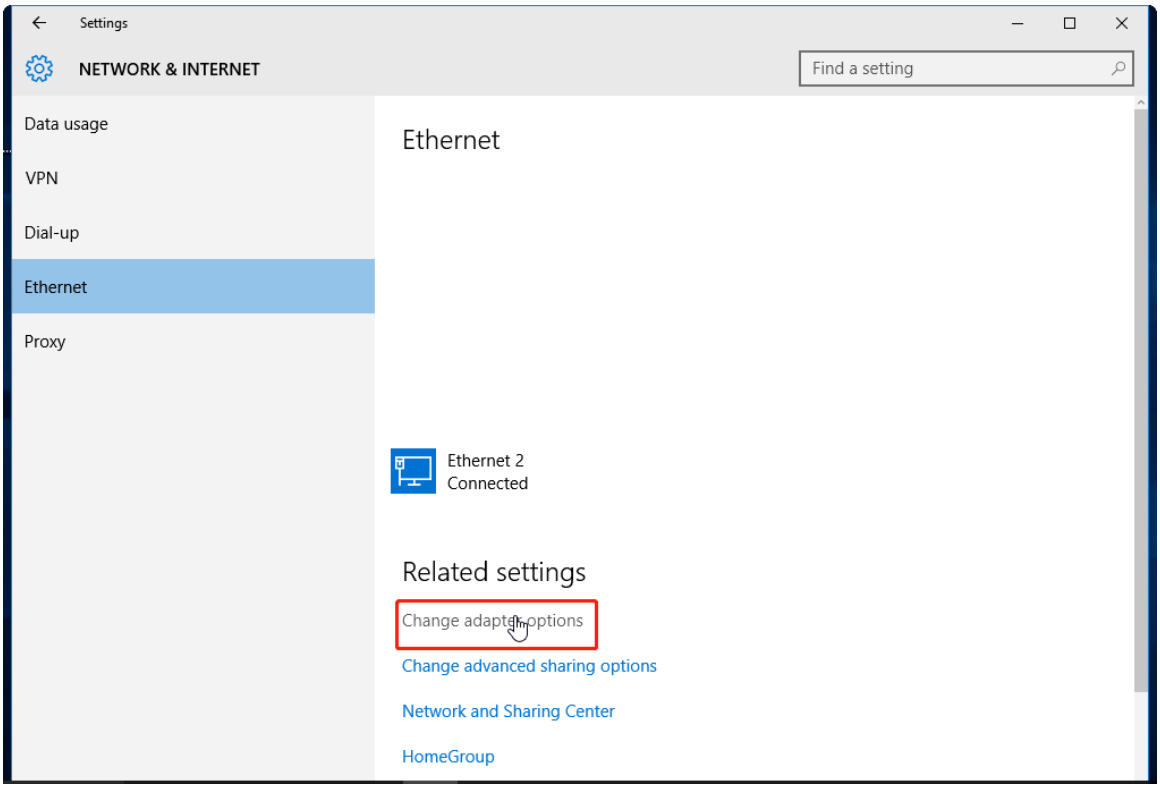
Step 5 Click **OK** in the **Local Area Connection Properties** window.

----End

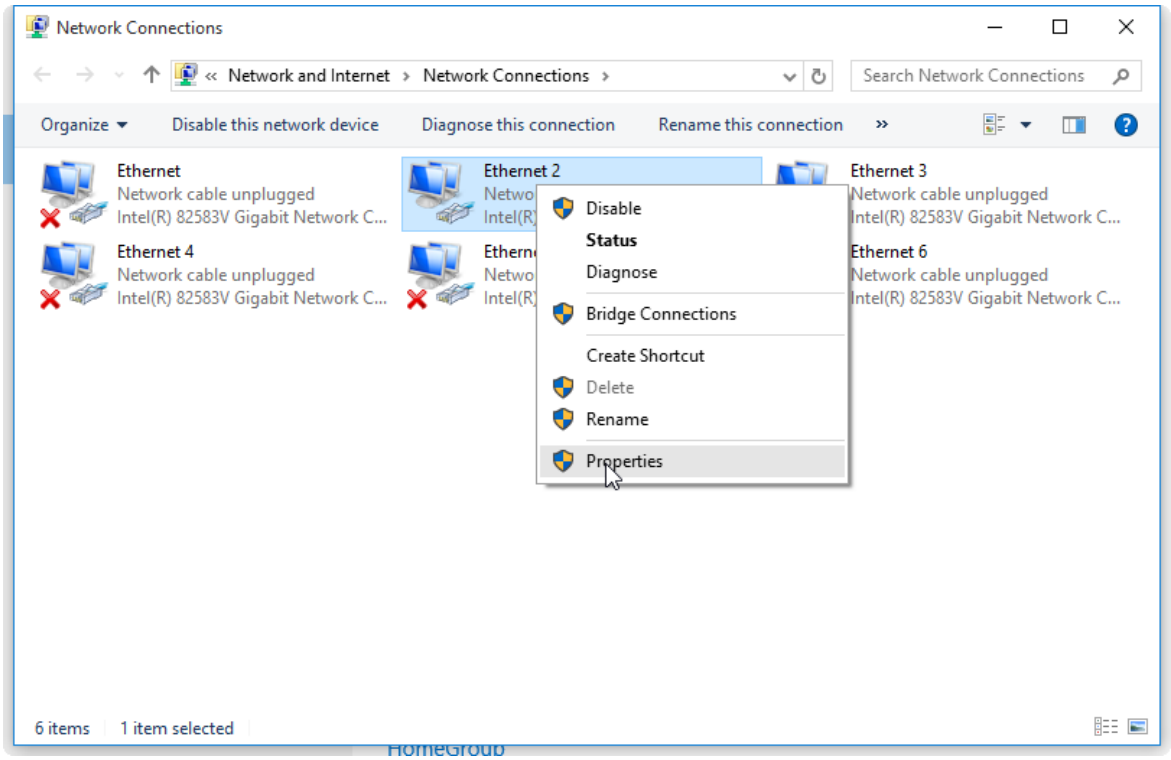
A.1.3 Windows 10

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

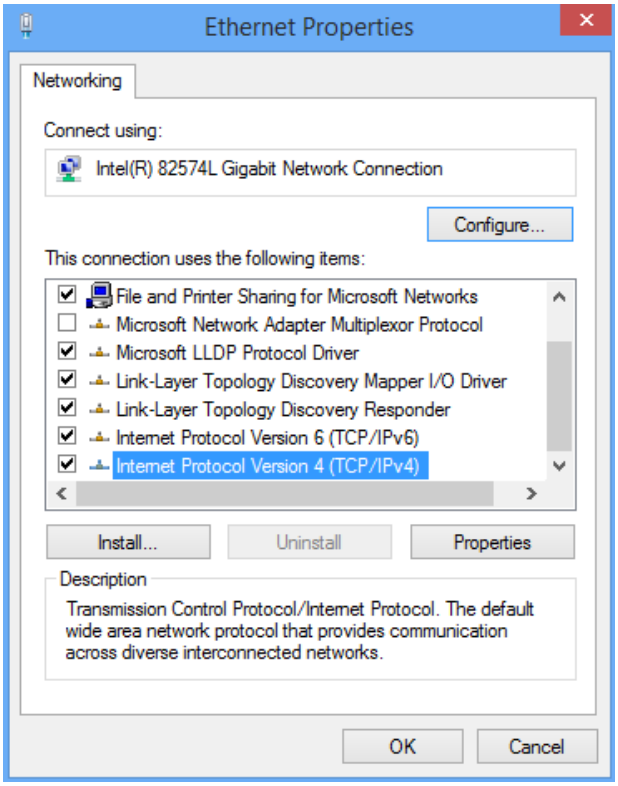
Step 2 Click **Change adapter options**.



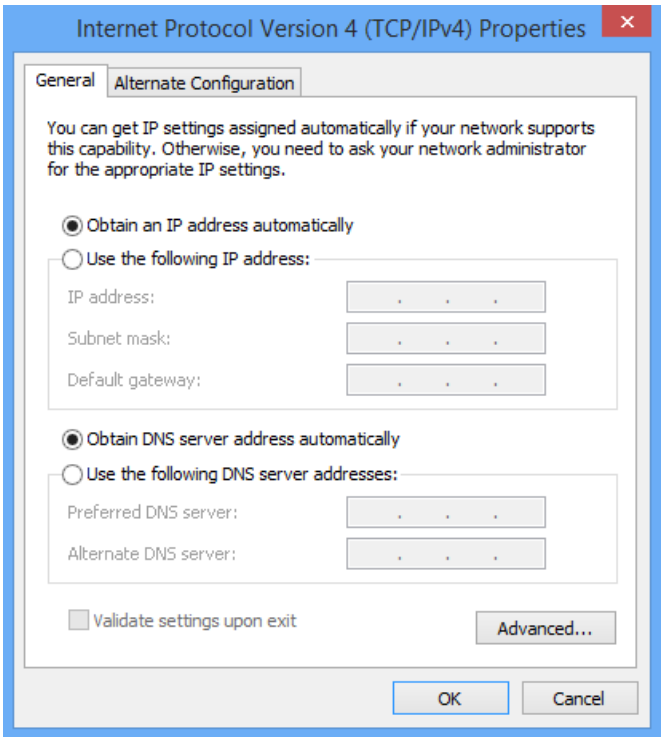
Step 3 Right click on the connection which is being connected, and then click **Properties**.



Step 4 Double-click **Internet Protocol Version 4 (TCP/IPv4)**.



Step 5 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and click **OK**.



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

----End

A.2 Default parameters

Parameter		AC8	AC7	AC5
LAN Parameters	IP Address	192.168.0.1		
	Subnet Mask	255.255.255.0		
DHCP Server	DHCP Server	Enabled		
	Start IP Address	192.168.0.100		
	End IP Address	192.168.0.200		
	Preferred DNS Server	192.168.0.1		
Operating Mode		Router mode		
Wireless Settings	WiFi Name	Tenda_*XXXXXX*. ***XXXXXX*** indicates the last 6 characters of the MAC address of the router.		
	WiFi Password	None		
IPv6		Disabled		