User Guide

BBA Mesh

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About This Guide

This guide is a complement of Quick Installation Guide. The Quick Installation Guide instructs you on quick internet setup, and this guide provides details of each function and shows you the way to configure these functions appropriate to your needs.

Note: Features available in the mesh device may vary by model and software version. Mesh device availability may also vary by region or ISP. All images, steps, and descriptions in this guide are only examples and may not reflect your actual mesh device experience.

Conventions

In this guide the following conventions are used:

Convention	Description
Underlined	Underlined words or phrases are hyperlinks. You can click to redirect to a website or a specific section.
Teal	Contents to be emphasized and texts on the web page are in teal, including the menus, items, buttons, etc.
>	The menu structures to show the path to load the corresponding page. For example, Advanced > Wireless > WDS means the WDS function page is under the Wireless menu that is located in the Advanced tab.
Note:	Ignoring this type of note might result in a malfunction or damage to the device.
Tips:	Indicates important information that helps you make better use of your device.
symbols on the web page	• Click to edit the corresponding entry. • Click to delete the corresponding entry. • click to enable or disable the corresponding entry. • Click to view more information about items on the page.

More Info

The latest software, management app and utility can be found at Download Center at https://www.tp-link.com/support/download/.

The Quick Installation Guide can be found where you find this guide or inside the package of the mesh device.

Specifications can be found on the product page at https://www.tp-link.com.

TP-Link Community is provided for you to discuss our products and share knowledge at https://community.tp-link.com.

Our Technical Support contact information can be found at the Contact Technical Support page at https://www.tp-link.com/support/.

*Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage are not guaranteed and will vary as a result of 1) environmental factors, including building materials, physical objects, and obstacles, 2) network conditions, including local interference, volume and density of traffic, product location, network complexity, and network overhead, and 3) client limitations, including rated performance, location, connection, quality, and client condition.

*Use of Wi-Fi 6 (802.11ax), and features including OFDMA, MU-MIMO, 1024-QAM, and HT160 require clients to also support the corresponding features.

*Saving clients' battery power requires clients to also support the 802.11ax Wi-Fi standard. Actual power reduction may vary as a result of network conditions, client limitations, and environmental factors.

*Use of WPA3 requires clients to also support the corresponding feature.

*This mesh device may not support all the mandatory features as ratified in Draft 3.0 of IEEE 802.11ax specification.

*Further software upgrades for feature availability may be required.

Chapter 1

Get to Know About Your Device

This chapter introduces what your device can do and shows its appearance.

It contains the following sections:

- Product Overview
- Appearance

1. 1. Product Overview

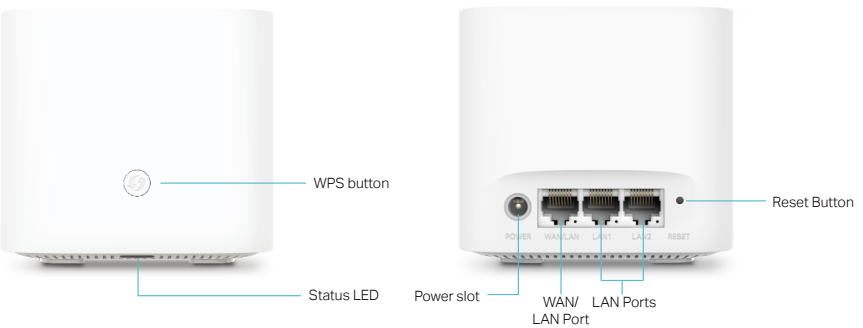
The Whole Home Mesh Wi-Fi AP is designed to extend your network coverage. You can use multiple APs to create a seamless, intelligent and easy-to-configure mesh network that covers the entire home.

The Mesh Wi-Fi system consists of a Main AP, one or more agents. The Main AP connects to a wired router, a modem or gateway, the agents extend the wireless coverage of your network.

1. 2. Appearance

The device has an LED that changes its behavior according to its working status, and a WPS button, three RJ-45 Ethernet ports, a power port, and a RESET button.

Note: The appearance of the product is for illustration only, it may be different from your device, please refer to the actual product.



You can check the device's working status by following the LED Explanation table.

LED Explanation

Status	Indication
Flashing yellow	The device is starting up or resetting.
Yellow	The connection quality of the device is normal.
Flashing blue	The device is ready for setup.
Fast flashing blue	The device is establishing a WPS or mesh connection.
Blue	The device has been set up, but the internet is unavailable.
Flashing white/green	The device is upgrading the firmware.
White/green	The device is all set up and connected to internet.
Flashing red	The device has lost connection.

LED Explanation	
Status	**Indication**
Red	The device has an issue.
Off	Power is off, or the status LED is turned off.

For information about the button and ports, you can refer to the explanation table below.

Item	Description
WPS button	Press the button to start a WPS or mesh sync process.
Power port	For connecting the device to a power socket via the provided power adapter.
WAN/LAN port	For connecting the device to: a) a wired router(access point mode) b) a DSL/Cable modem, the Ethernet outlet or other internet devices(router mode). c) your PC or other Ethernet network devices.
LAN1, LAN2 ports	For connecting your PC or other Ethernet network devices.
RESET button	Press and hold the button for at least 5 seconds to reset the device into its factory default settings.

Chapter 2

Connect the Device

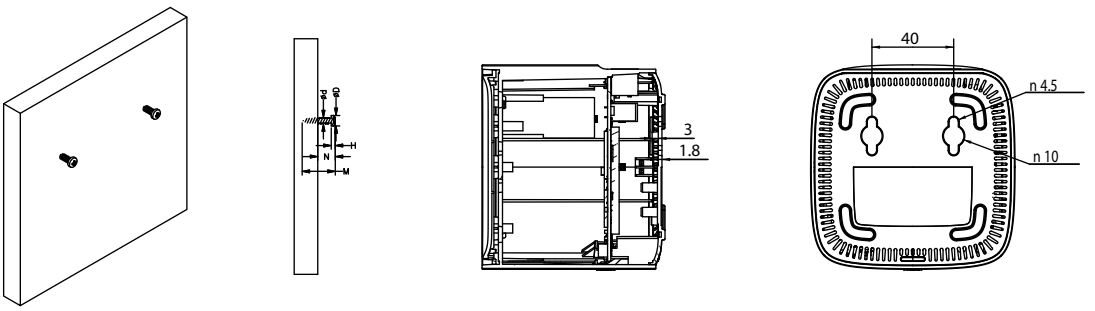
This chapter contains the following sections:

- Position the Device
- Connect Your Device

2. 1. Position the Device

- The device should not be located in a place where it will be exposed to moisture or excessive heat.
- Place the device in a location where it can be connected to multiple devices as well as to a power source.
- Make sure the cables and power cord are safely placed out of the way so they do not create a tripping hazard.
- Keep the device away from devices with strong electromagnetic interference, such as Bluetooth devices, cordless phones and microwaves.
- The device can be placed on a shelf or desktop.

Generally, the device is placed on a horizontal surface, such as on a shelf or desktop. The device also can be mounted on the wall as shown in the following image.



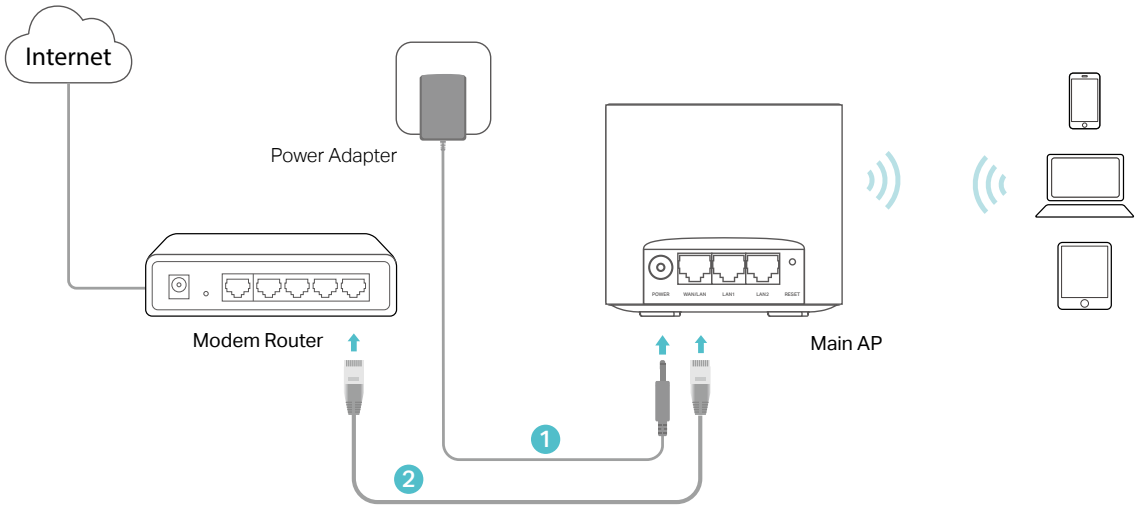
NOTE:
4.67 mm < D < 9.85 mm
d < 4.5 mm
H < 3 mm
4.8 mm < N
20 mm ≤ M

Note:

The diameter of the screw should be between 4.67 mm and 9.85 mm, and the center distance of two screws is 40 mm. The screws should be at least 20 mm in length to hold the device, and the screw head raised above the wall surface should be about 4.8 mm.

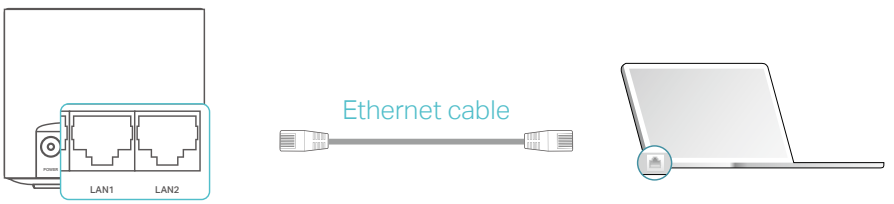
2. 2. Connect Your Device

If you want to set up this device as a regular router or as the Main AP for Mesh Wi-Fi system, follow the steps below to connect your device.



1. Connect the power adapter to the AP.
2. Connect the WAN/LAN port of the AP to your wired router's Ethernet port via an Ethernet cable.
3. Verify the status LED (on the bottom of the device) is flashing blue before continuing with the configuration.
4. Connect your computer to the AP.
   - **Method 1: Wired**

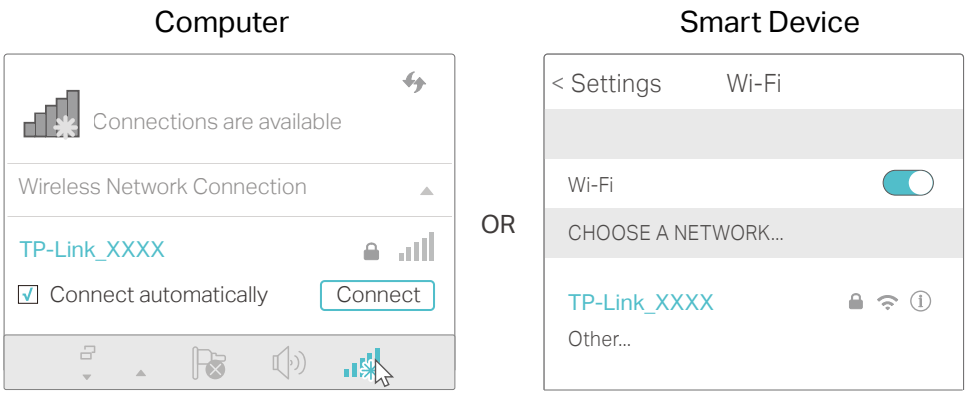
     Turn off the Wi-Fi on your computer and connect the computer to the LAN port of the AP using an Ethernet cable.



   - **Method 2: Wireless**

     1) Find the SSID (Network Name) and Wireless Password printed on the label at the bottom of the AP.

     2) Click the network icon of your computer or go to Wi-Fi Settings of your smart device, and then select the SSID to join the network.


Computer
Connections are available
Wireless Network Connection
TP-Link_XXXX
Connect automatically
Connect
OR
Smart Device
< Settings
Wi-Fi
Wi-Fi
CHOOSE A NETWORK...
TP-Link_XXXX
Other...

Chapter 3

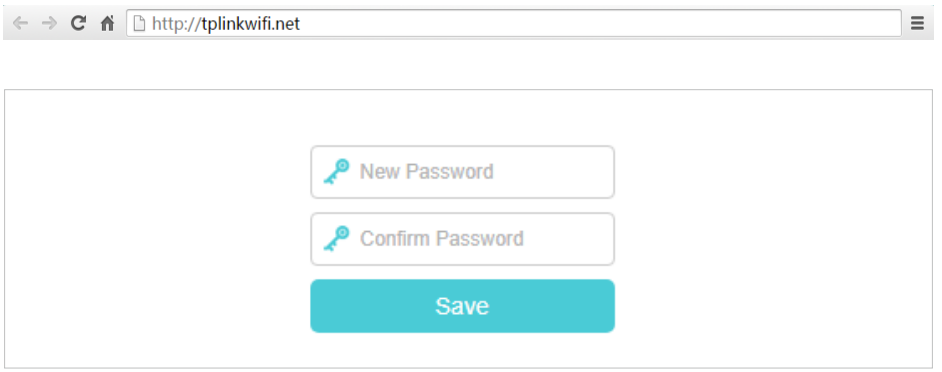
Log In to Your Device

This chapter introduces how to log in to the web management page of the device.

With the web management page, it is easy to configure and manage your device. The web management page can be used on any Windows, Macintosh or UNIX OS with a Web browser, such as Microsoft the Internet Explorer, Mozilla Firefox or Apple Safari.

Follow the steps below to log in to your device.

1. Set up the TCP/IP Protocol in Obtain an IP address automatically mode on your computer.
2. Launch a web browser and enter http://tplinkwifi.net or http://192.168.88.1 in the address bar. Create a strong login password for secure management and click Save. Then, enter the password again on the login window and click Log in to log in to your AP.



Note:

1. If the dialog boxes shown in the images above do not appear, it suggests that your IE Web-browser has been set to a proxy. You can go to Tools > Internet Options > Connections > LAN Settings, and clear the Using Proxy check box, and click OK.
2. If the login window does not appear, please refer to the FAQ section.

Chapter 4

Set Up Internet Connection

This chapter introduces how to connect your mesh device to the internet. The mesh device is equipped with a web-based Quick Setup wizard. It has necessary ISP information built in, automates many of the steps and verifies that those steps have been successfully completed. Furthermore, you can also set up an IPv6 connection if your ISP provides IPv6 service.

It contains the following sections:

- Use Quick Setup Wizard
- Quick Setup Via TP-Link Aginet App
- Manually Set Up Your Internet Connection
- Set Up the Mesh Device as an Access Point
- Set Up an IPv6 Internet Connection

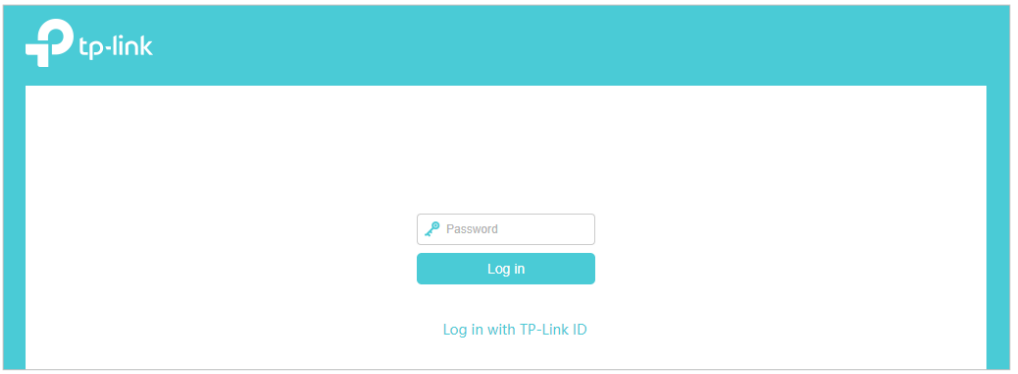
4. 1. Use Quick Setup Wizard

The Quick Setup Wizard will guide you to set up your mesh device.

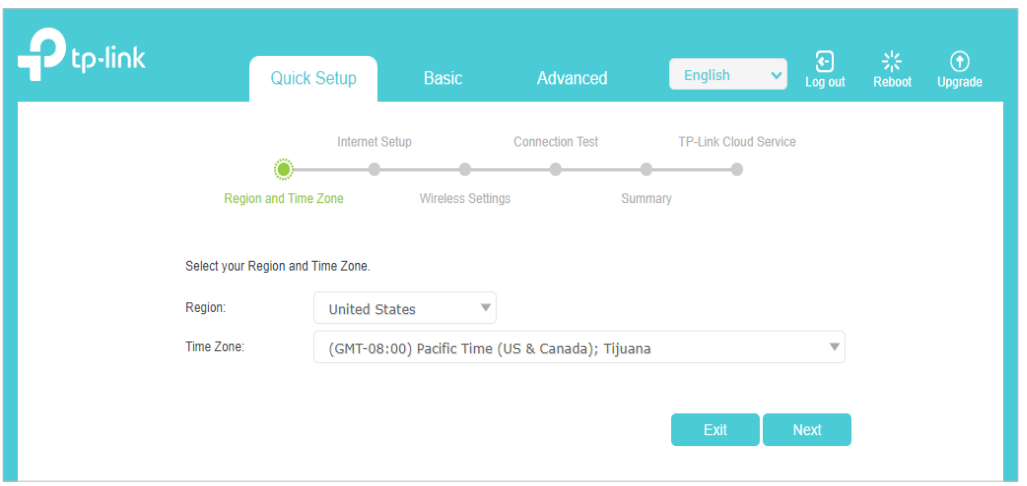
Tips:
If you need the IPv6 internet connection, please refer to the section of Set Up an IPv6 Internet Connection.

Follow the steps below to set up your mesh device.

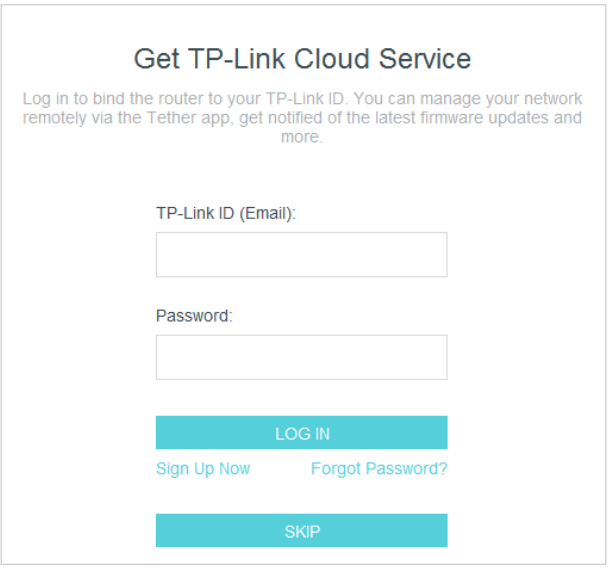
1. Visit http://tplinkwifi.net or http://192.168.88.1, and log in with the password you set for the mesh device.



2. Follow the step-by-step instructions to complete Quick Setup configuration or go to Quick Setup for configuration to connect your mesh device to the internet. Then follow the step-by-step instructions to connect your mesh device to the internet.



3. To enjoy a more complete service from TP-Link (remote management, TP-Link DDNS, and more.), log in with your TP-Link ID or click Sign Up Now to get one. Then follow the instructions to bind the mesh device to your TP-Link ID.



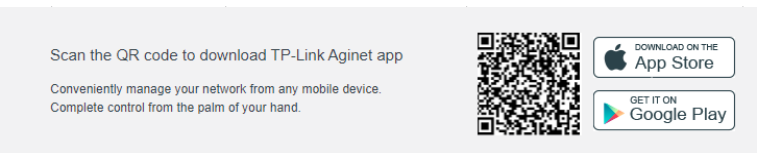
Note:

- To learn more about the TP-Link Cloud service, please refer to the TP-Link Cloud Service section.
- If you do not want to register a TP-Link ID now, you may click Skip to proceed.
- If you have changed the preset wireless network name (SSID) and wireless password during the Quick Setup process, all your wireless devices must use the new SSID and password to connect to the mesh device.

4. 2. Quick Setup Via TP-Link Aginet App

The Aginet app runs on iOS and Android devices, such as smartphones and tablets.

1. Launch the Apple App Store or Google Play store and search "TP-Link Aginet" or simply scan the QR code to download and install the app.



2. Launch the Aginet app and log in with your TP-Link ID.

Note: If you don't have a TP-Link ID, create one first.

3. Tap the Create a Network button and select how you will connect your device to the internet. Follow the steps to complete the setup and connect to the internet.
4. Connect your devices to the newly configured wireless networks of the mesh device and enjoy the internet!

4. 3. Manually Set Up Your Internet Connection

In this part, you can check your current internet connection settings. You can also modify the settings according to the service information provided by your ISP.

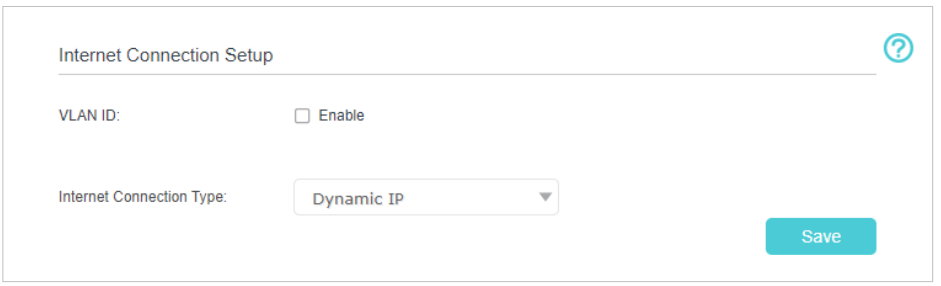
Follow the steps below to check or modify your internet connection settings.

1. Visit http://tplinkwifi.net or http://192.168.88.1, and log in with your TP-Link ID or the password you set for the mesh device.
2. Go to Basic > Internet.
3. Follow the instructions on the page to continue the configuration. Parameters on the figures are just used for demonstration.

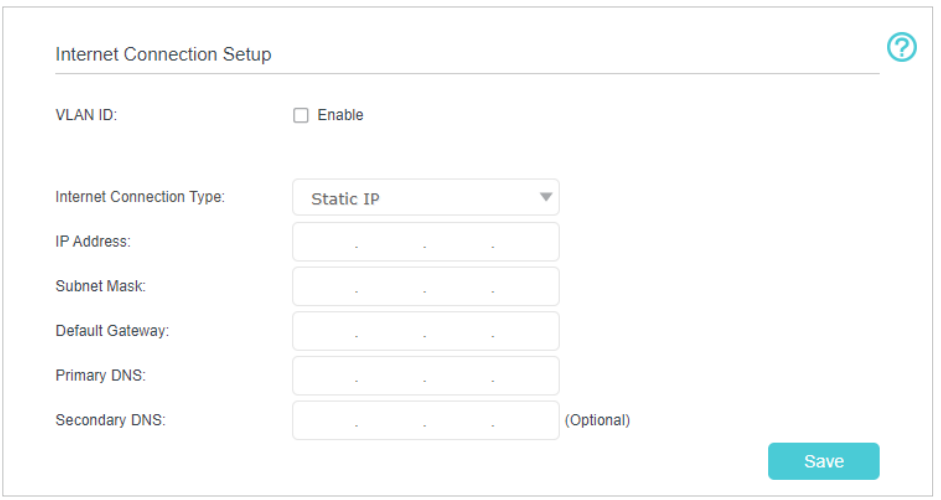
Note:

Since different connection types require different cables and connection information, you can also refer to the demonstrations to determine your connection type.

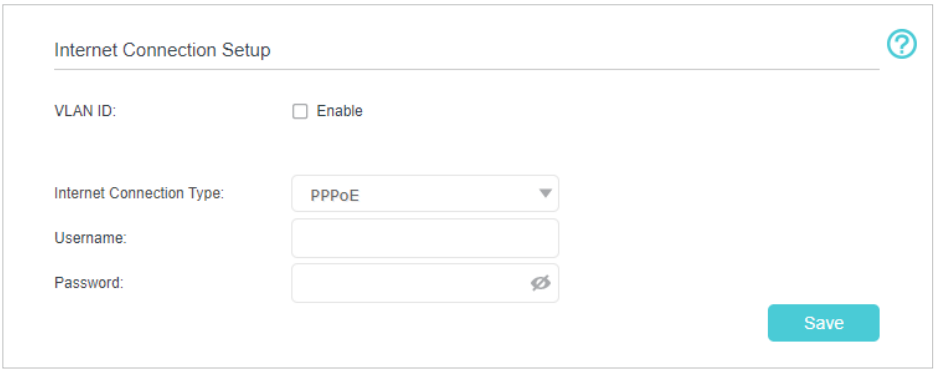
1) If you choose Dynamic IP, the IP address and Subnet Mask are assigned automatically by the ISP. Dynamic IP users are usually equipped with a cable TV or fiber cable.



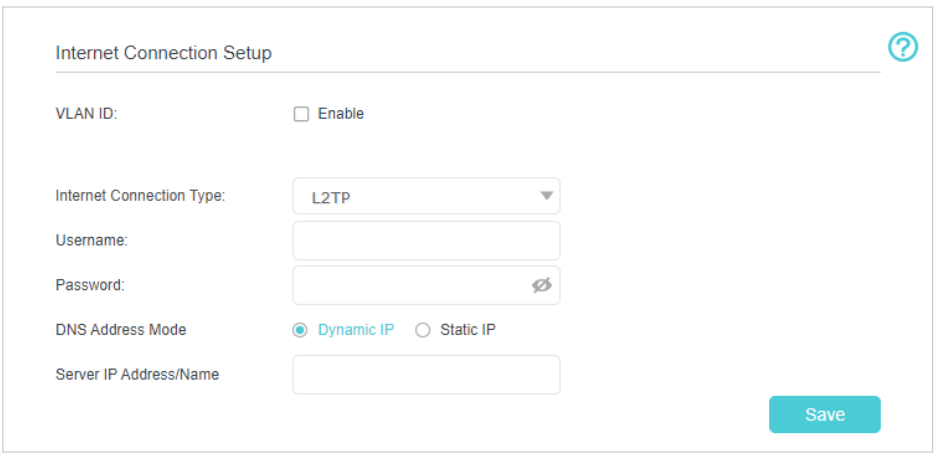
2) If you choose Static IP, enter the information provided by your ISP in the corresponding fields.



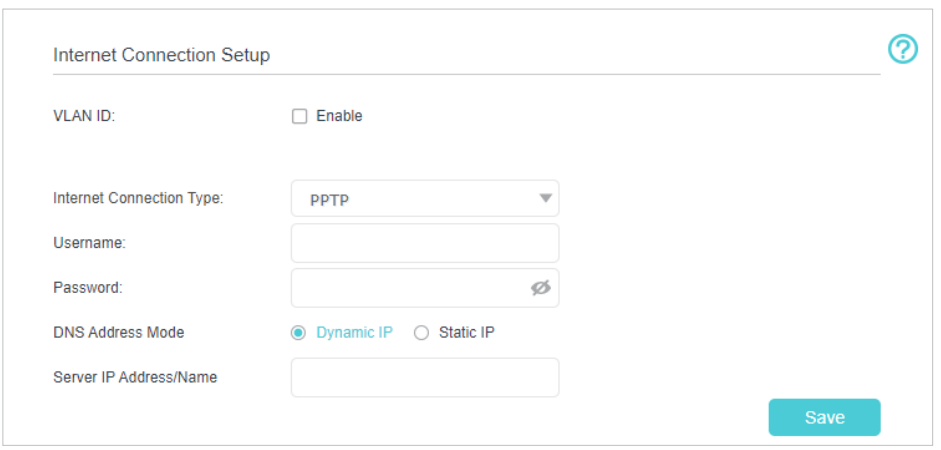
3) If you choose PPPoE, enter the username and password provided by your ISP. PPPoE users usually have DSL cable modems.



4) If you choose L2TP, enter the username and password and choose the Secondary Connection provided by your ISP. Different parameters are needed according to the Secondary Connection you have chosen.



5) If you choose PPTP, enter the username and password, and choose the Secondary Connection provided by your ISP. Different parameters are needed according to the Secondary Connection you have chosen.



4. Click Save.

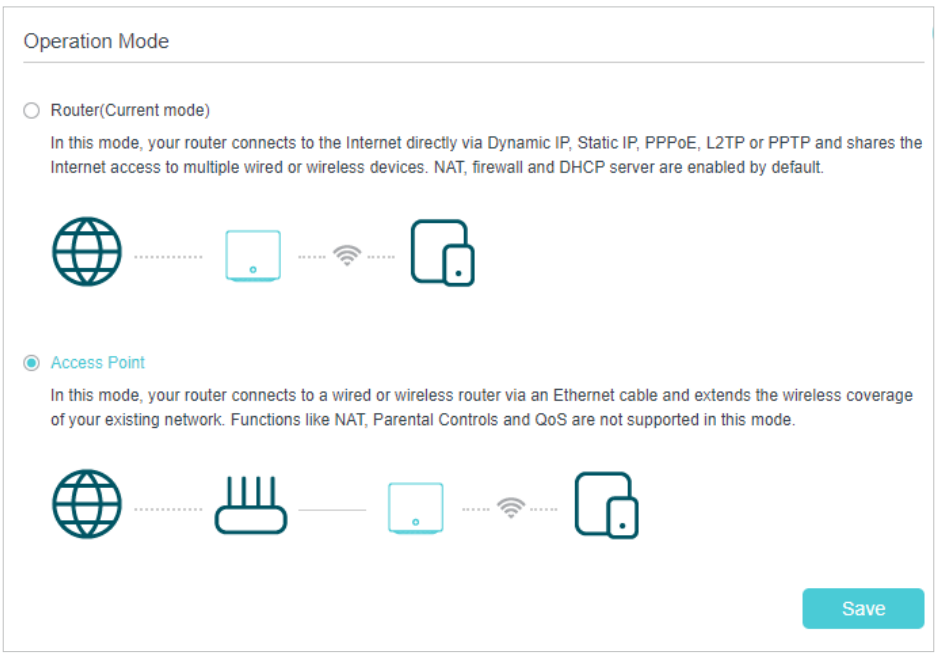
Tips:

- If you use Dynamic IP and PPPoE and you are provided with any other parameters that are not required on the page, please go to Advanced > Network > Internet to complete the configuration.
- If you still cannot access the internet, refer to the FAQ section for further instructions.

4. 4. Set Up the Mesh Device as an Access Point

The mesh device can work as an access point, transforming your existing wired network to a wireless one.

1. Visit http://tplinkwifi.net or http://192.168.88.1, and log in with your TP-Link ID or the password you set for the mesh device.
2. Go to Advanced > Operation Mode, select Access Point and click Save. The mesh device will reboot and switch to Access Point mode.



3. After rebooting, connect the mesh device to your existing wired router via an Ethernet cable.
4. Log in again to the web management page http://tplinkwifi.net or http://192.168.88.1, and go to Quick Setup.
5. Configure your wireless settings and click Next.
6. Confirm the information and click Save. Now, you can enjoy Wi-Fi.

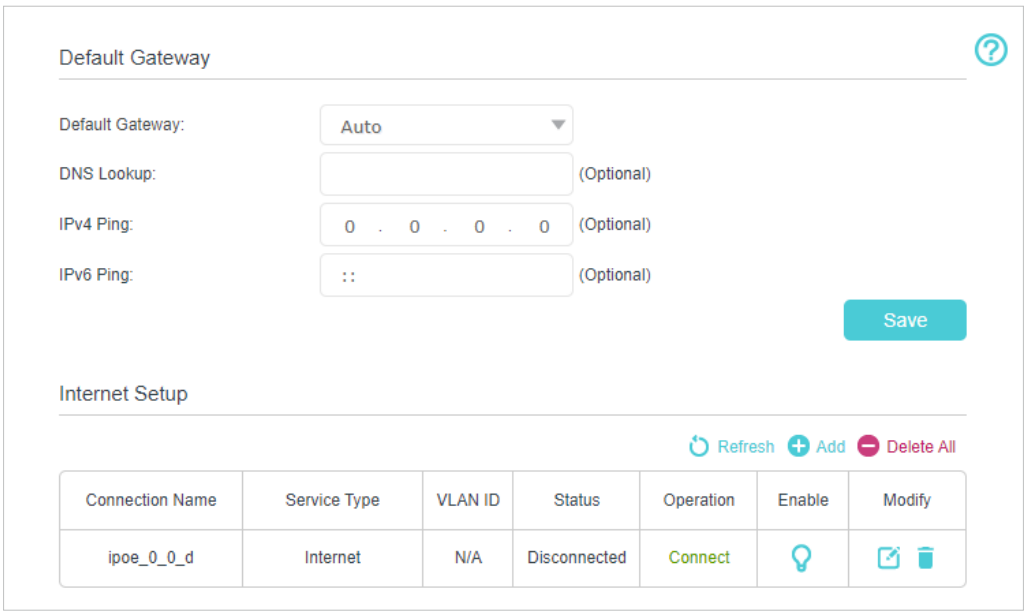
Tips:

- Functions, such as Parental Controls, QoS and NAT Forwarding, are not supported in the Access Point mode.
- Functions, such as Guest Network, are the same as those in the Router mode.

4. 5. Set Up an IPv6 Internet Connection

Your ISP provides information about one of the following IPv6 internet connection types: PPPoE(SLAAC/DHCPv6/AUTO/Passthrough), Dynamic IP(SLAAC/DHCPv6/AUTO/Passthrough), Static IP.

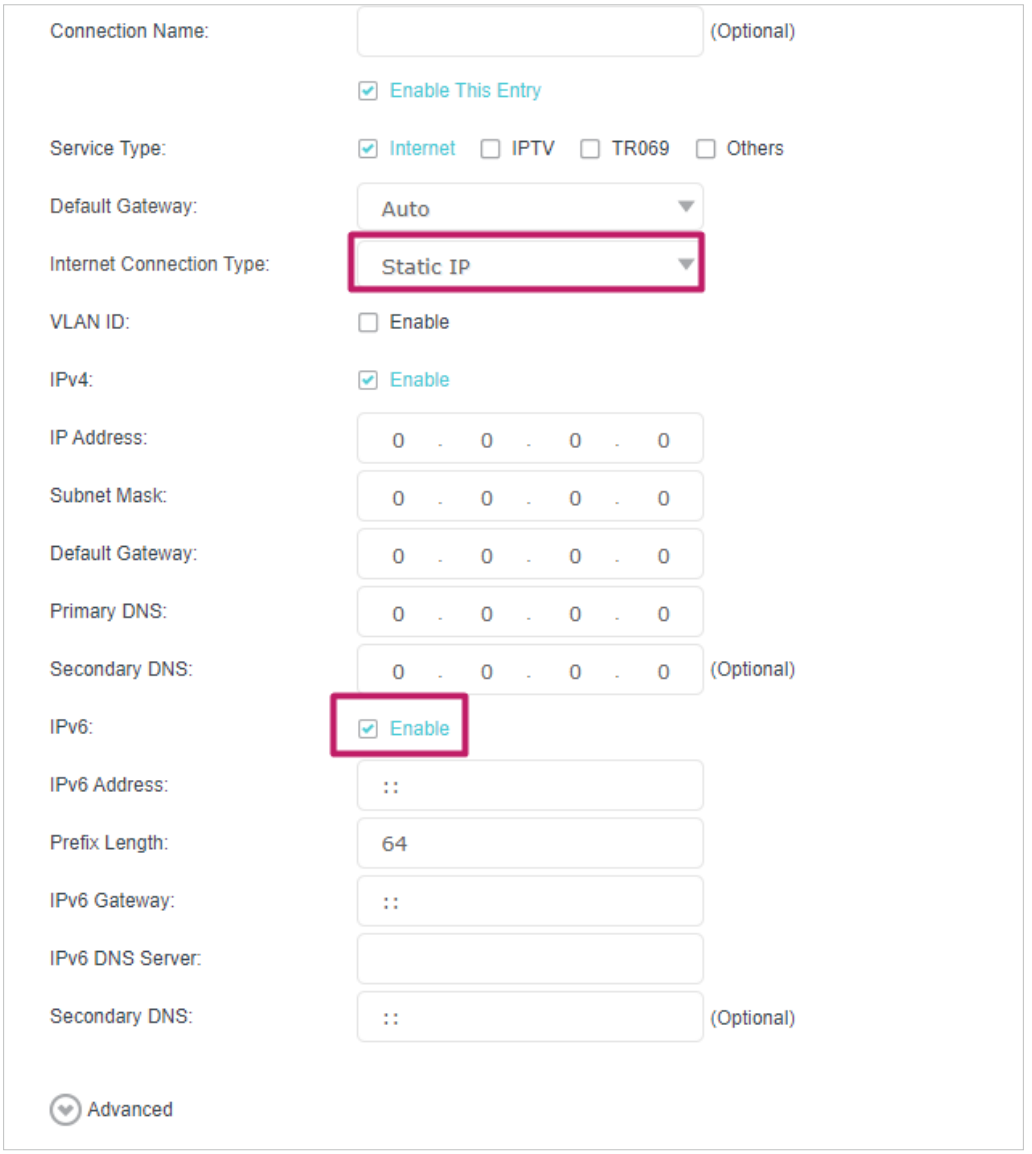
1. Visit http://tplinkwifi.net or http://192.168.88.1, and log in with your TP-Link ID or the password you set for the mesh device.
2. Go to Advanced > Network > Internet.
3. Click Add and enable IPv6 and select the internet connection type provided by your ISP.



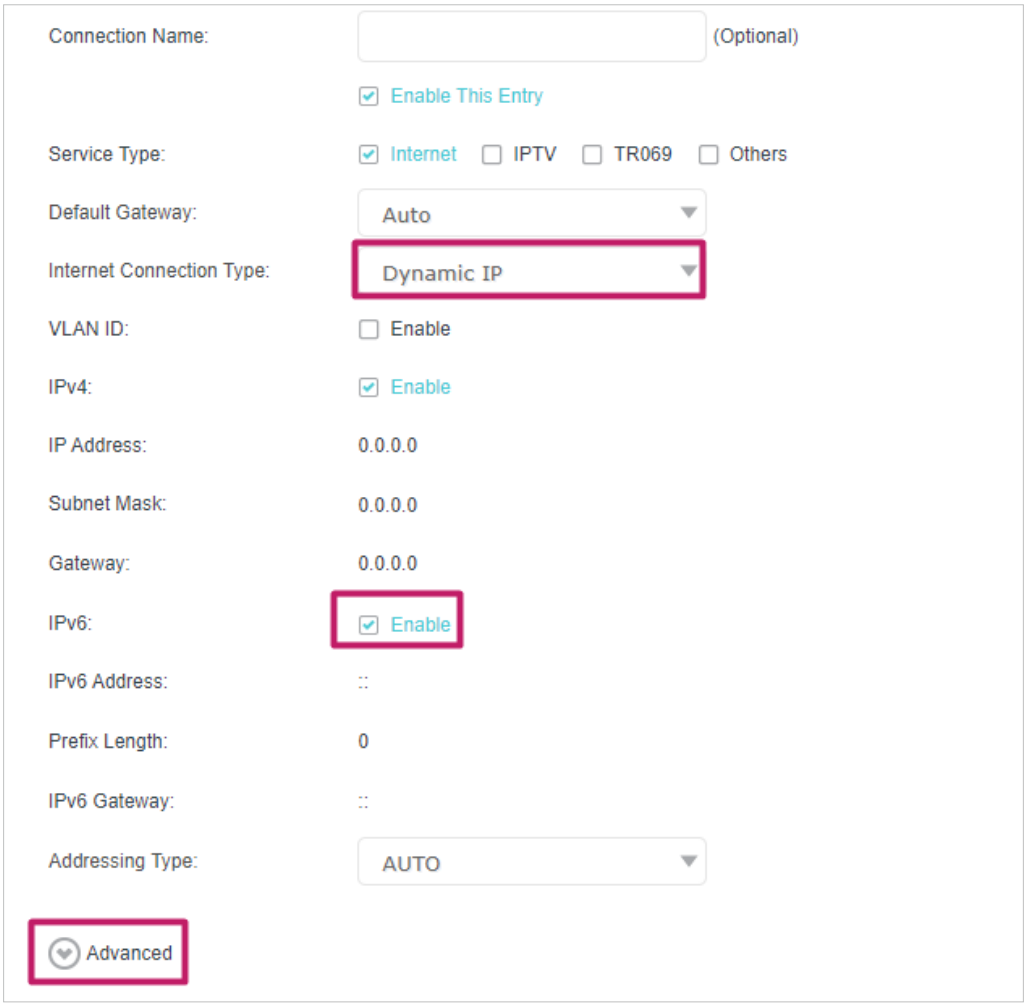
Tips:
If you do not know what your internet connection type is, contact your ISP or judge according to the already known information provided by your ISP.

4. Fill in information as required by different connection types.

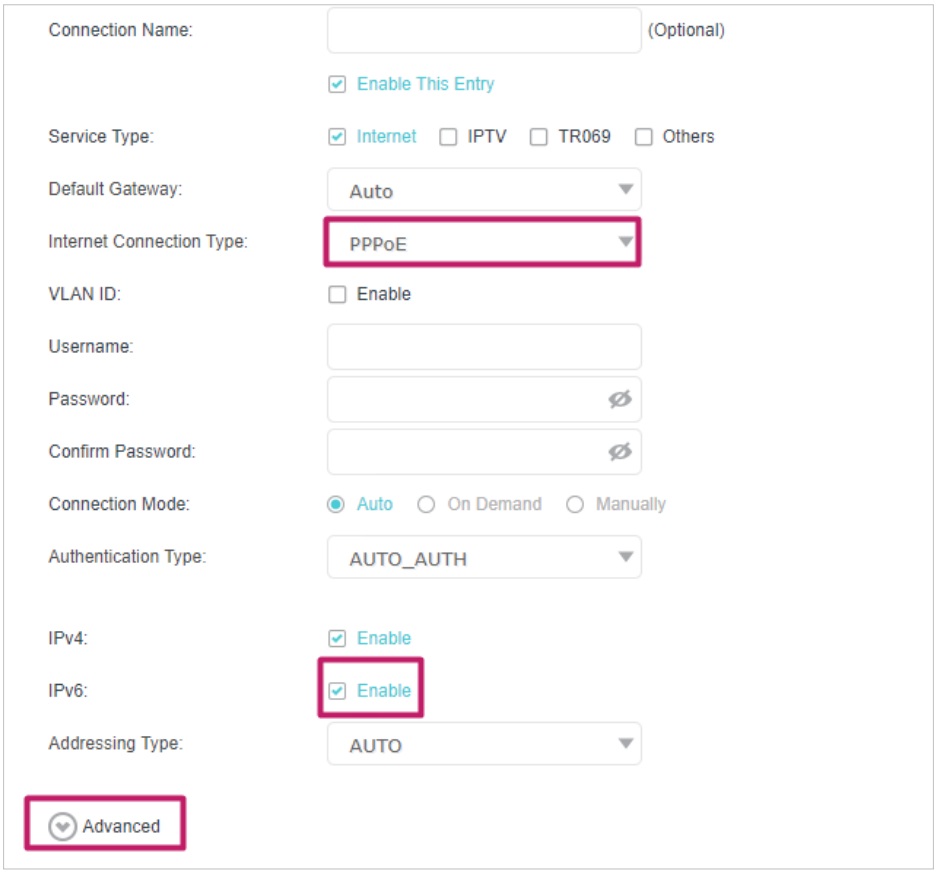
   1) Static IP: Fill in blanks and click OK.



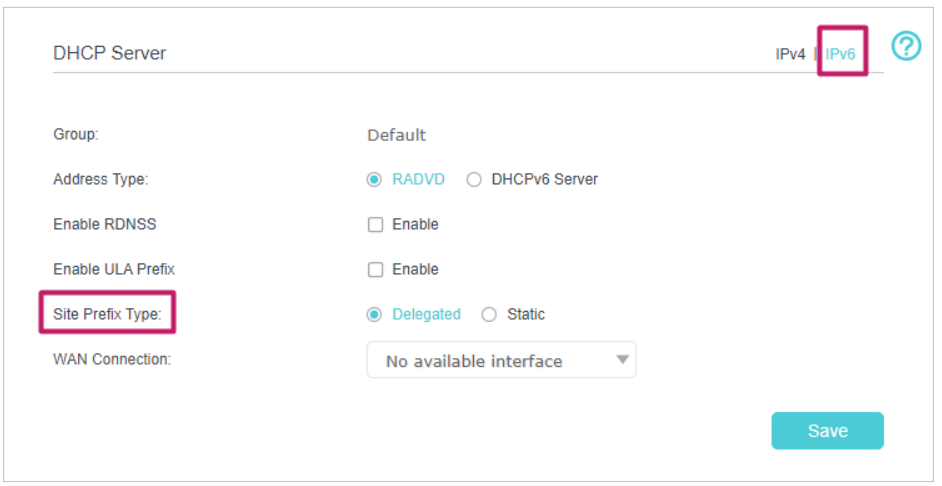
2) Dynamic IP(SLAAC/DHCPv6/AUTO/Passthrough): Click Advanced to input further information if your ISP requires. Click OK.



3) PPPoE(SLAAC/DHCPv6/AUTO/Passthrouth): Click Advanced to input further information if your ISP requires. Click OK.



5. Configure LAN ports. Go to Advanced > Network > LAN Settings. Fill in Site Prefix Type provided by your ISP, and click Save.



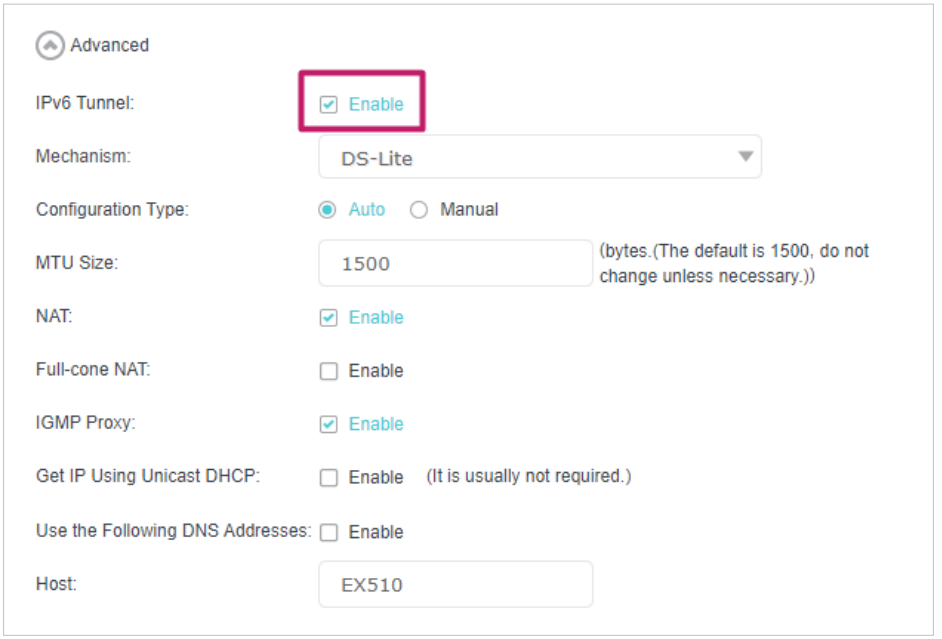
6. Click Advanced > Status to check whether you have successfully set up an IPv6 connection.

Tips:
Visit the FAQ section if there is no internet connection.

4. 6. IPv6 Tunnel

IPv6 Tunnel is a transition mechanism that enables IPv6-only hosts to reach IPv4 services or vice versa and allows isolated IPv6 hosts and networks to reach each other over IPv4-only infrastructure before IPv6 completely supplants IPv4. It is a temporary solution for networks that do not support native dual-stack, where both IPv6 and IPv4 run independently.

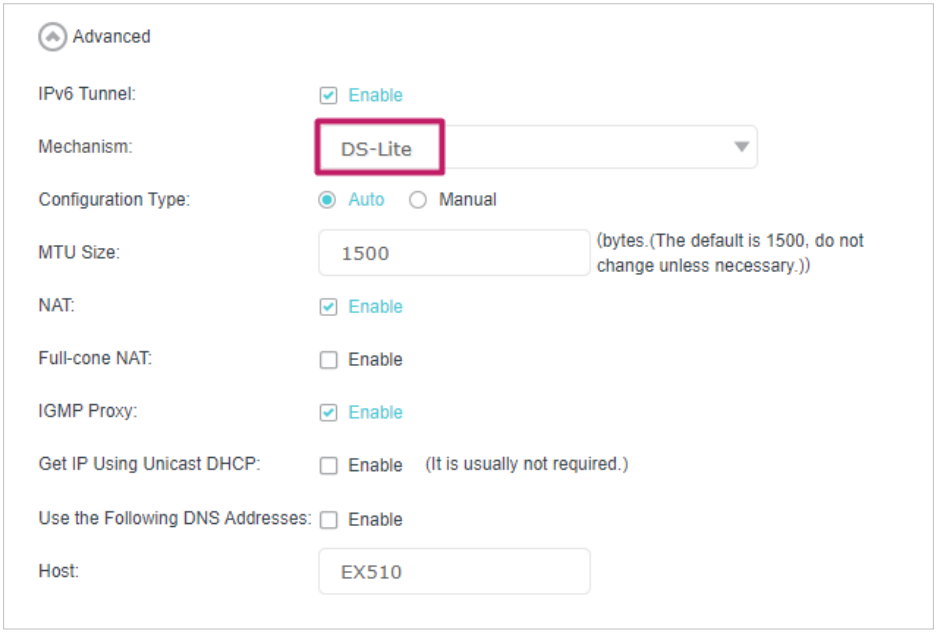
1. Visit http://tplinkwifi.net or http://192.168.88.1, and log in with your TP-Link ID or the password you set for the mesh device.
2. Go to Advanced > Network > Internet.
3. Click Add and enable IPv6 and Click Advanced to view more advanced settings.
4. Select the checkbox to enable IPv6 Tunnel.



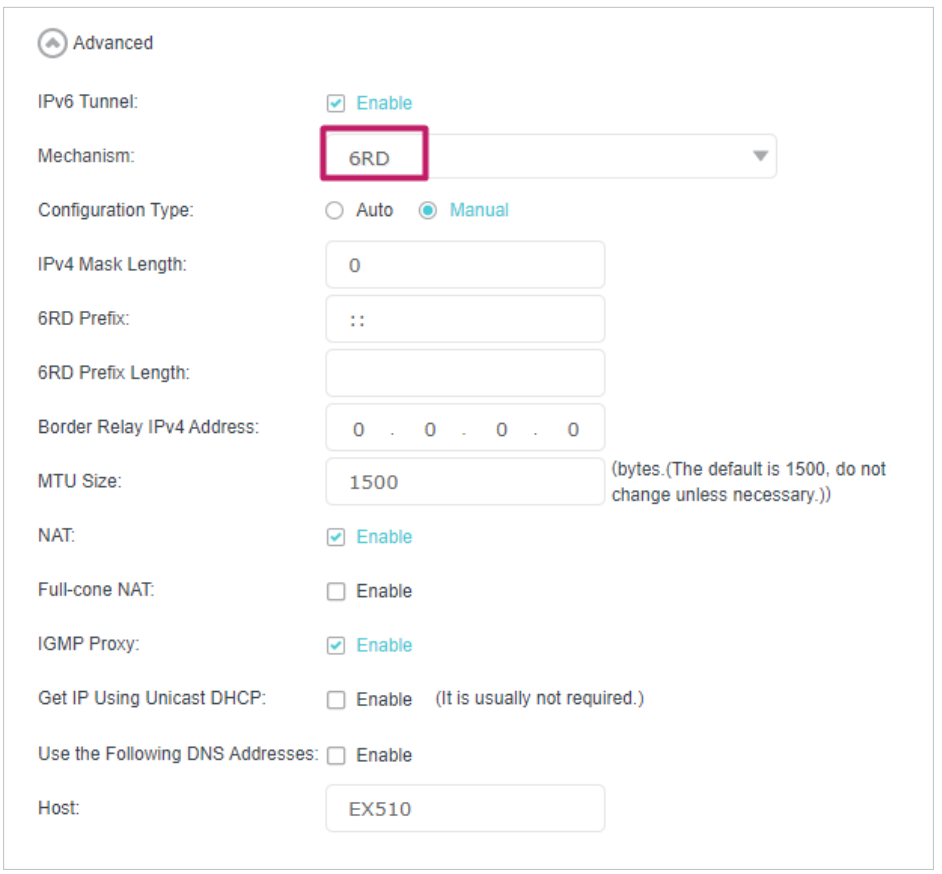
Tips:
Please check the IPv6 tunnel settings each time while reconfiguring WAN connection, as WAN connection configuration may take effect on tunnel settings.

5. Fill in information as required by different tunneling mechanisms.

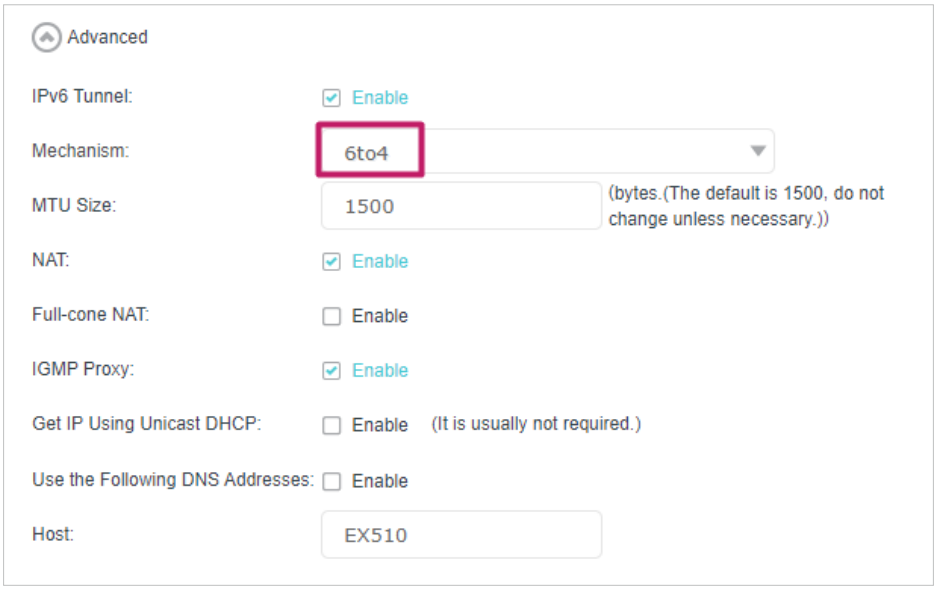
   1) DS-Lite: Fill in blanks and click OK. Select this tunneling mechanism if your ISP uses DS-Lite deployment for assigning address.



2) 6rd: Fill in blanks and click OK. Select this tunneling mechanism if your ISP uses 6rd deployment for assigning address.



3) 6to4: Fill in blanks and click OK. Select this tunneling mechanism if your ISP uses 6to4 deployment for assigning address.


Advanced
IPv6 Tunnel:
Enable
Mechanism:
6to4
MTU Size:
1500
(bytes.(The default is 1500, do not change unless necessary.))
NAT:
Enable
Full-cone NAT:
Enable
IGMP Proxy:
Enable
Get IP Using Unicast DHCP:
Enable
(It is usually not required.)
Use the Following DNS Addresses:
Enable
Host:
EX510

Chapter 5

Setup Your Network via TP-Link Aginet App

This chapter guides you on how to setup your Whole Home Mesh Wi-Fi System via TP-Link Aginet app, as well as regulatory information. Features available in Aginet app may vary by model and software version. Aginet app availability may also vary by region or ISP. All images, steps, and descriptions in this guide are only examples and may not reflect your actual mesh experience.

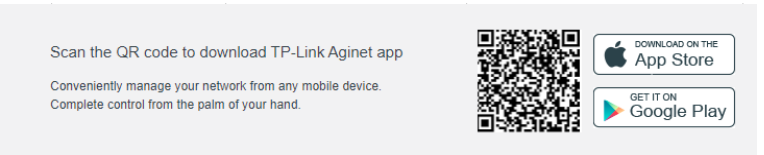
5. 1. Set Up Your Mesh Device

The intuitive Aginet app guides you through an easy setup process that gets each unit up and all your devices connected.

Follow the steps below to set up your Whole Home Mesh Wi-Fi System.

1. Download and install the Aginet app

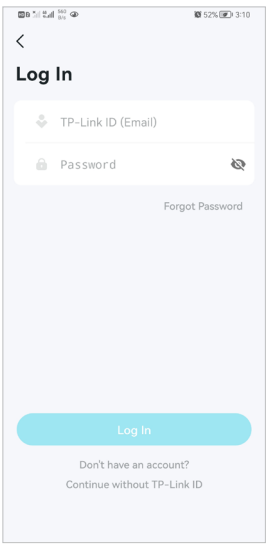
Scan the QR code below or go to Google Play or the App Store to download the Aginet app. Install the app on your Android or iOS smartphone or tablet.

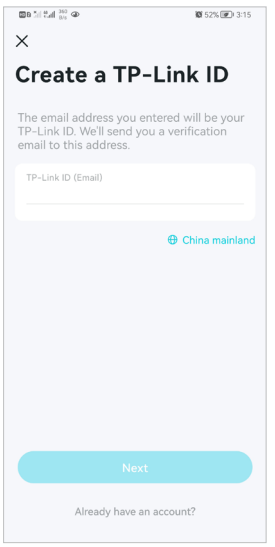


2. Log in or sign up with TP-Link ID.

Open the Aginet app. Use your TP-Link ID to log in. If you don't have a TP-Link ID, tap Don't have an account? and sign up first.

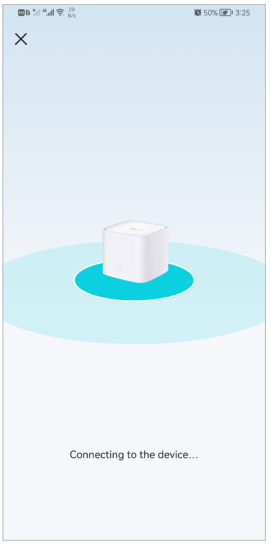
Note: If you forgot your login password, tap Forgot Password. The Aginet app will guide you through the rest.

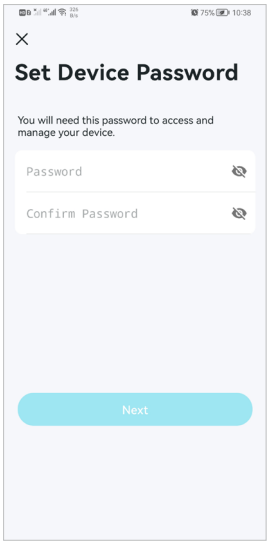




3. Plug in and power on mesh device.

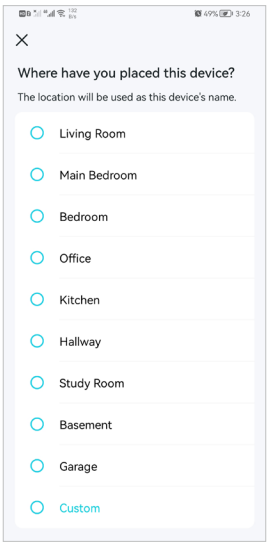
Power off your modem. Connect your mesh device to the modem and power them both on. If you don't have a modem, connect the Ethernet outlet directly to your mesh device.





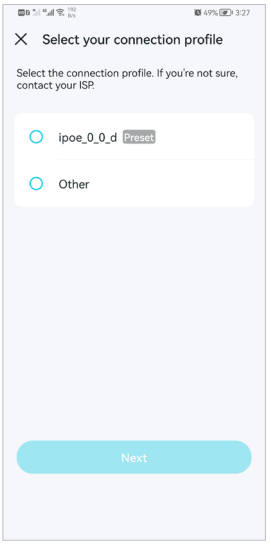
4. Select a location.

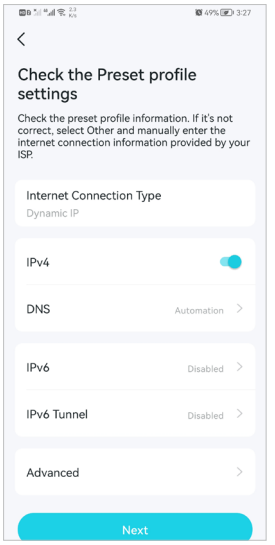
Select a location for this mesh device. If its location is not listed, you can create a new one by choosing Custom. This will be the name of your mesh device.



5. Set up internet connection.

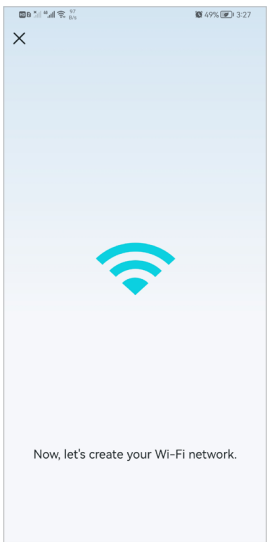
Select the internet connection type and enter the information. If you are not sure, contact your internet service provider.

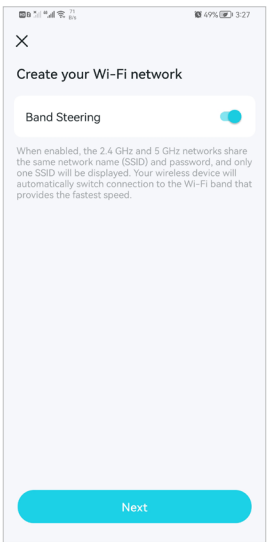


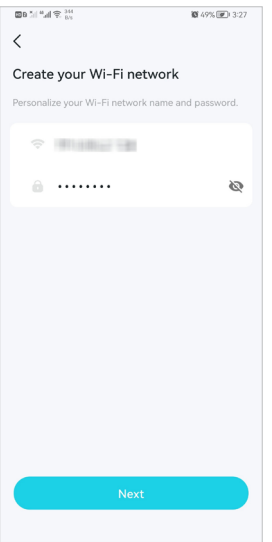


6. Create your Wi-Fi network.

Set a network name and a password. These will be the name and password you use to connect your devices to Wi-Fi.

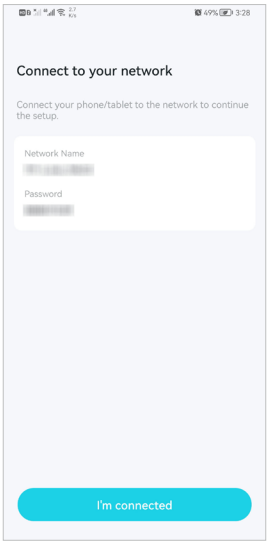


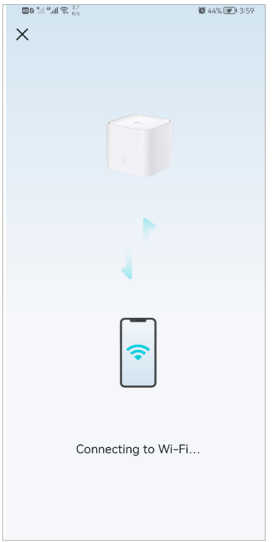




7. Connect to your Wi-Fi network.

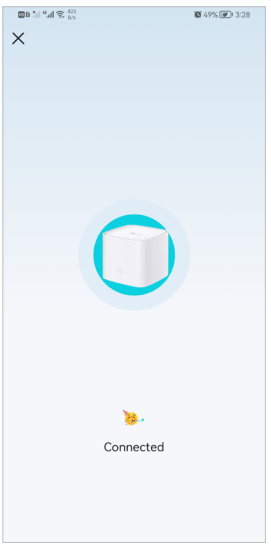
Connect your phone/tablet to the mesh device's Wi-Fi.

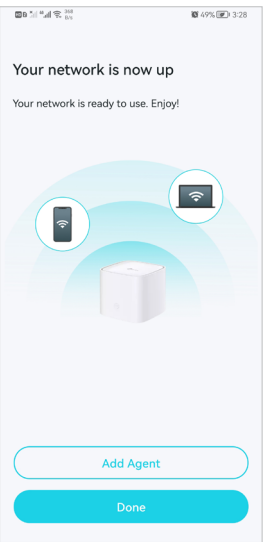




8. Setup complete.

Your mesh network is now up. Connect all devices to the mesh network. You can also Add Agent to expand the Wi-Fi coverage.

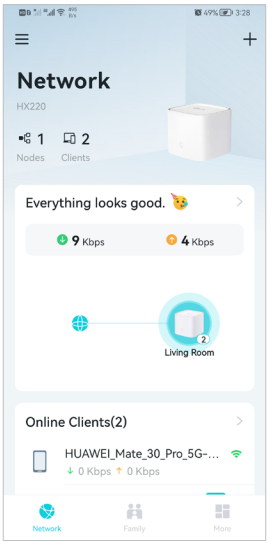




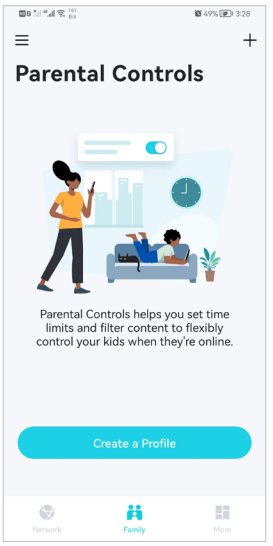
5. 2. Dashboard

After you successfully set up your mesh network, you will see the dashboard of the Aginet app. Here you can get an overview of the network status, create family profiles, and customize your home network and set up various advanced features.

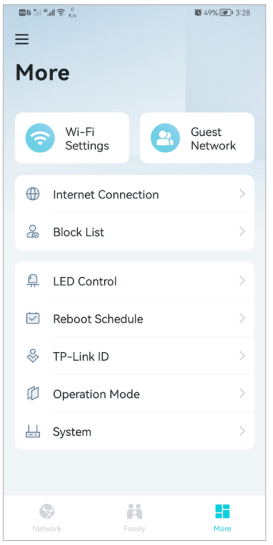
1. Tap to get an overview of the network status.



2. Tap to create family profiles.



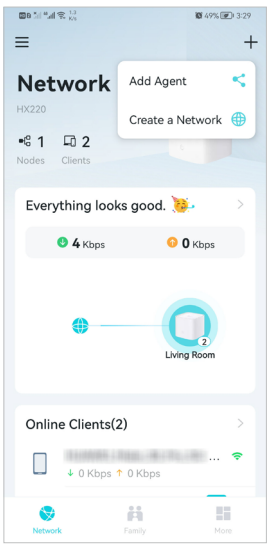
3. Tap for more features.

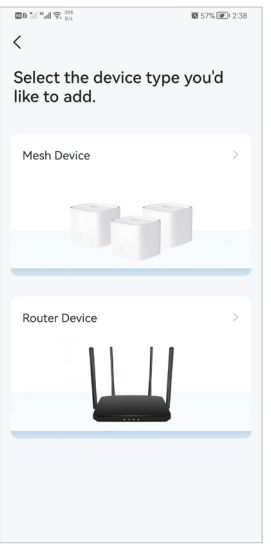


5. 3. Add More Mesh Devices

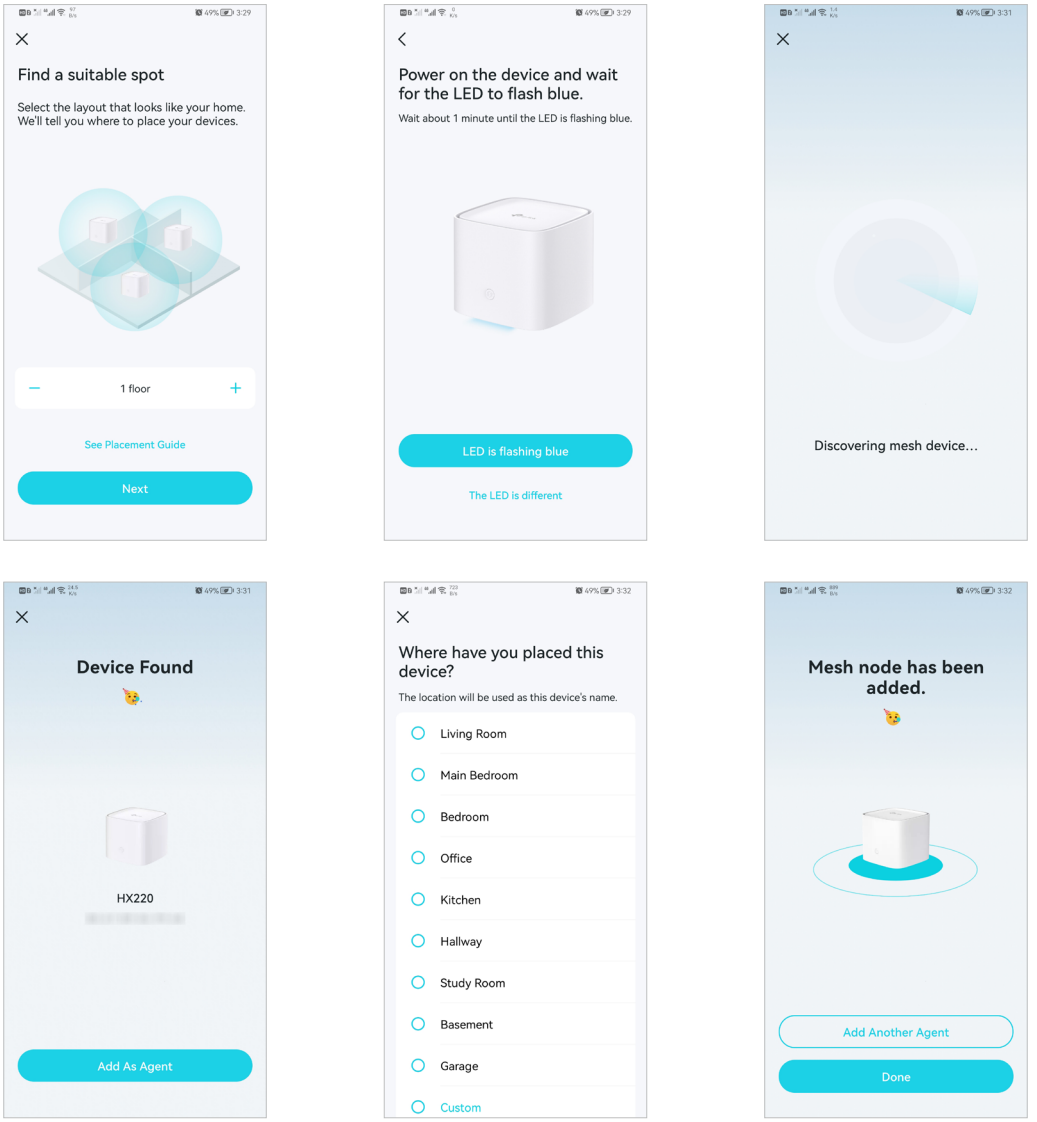
After creating a mesh network, you can add more mesh devices to the network to expand the Wi-Fi coverage and manage them easily on your Aginet app.

1. In Network, tap + > Add Agent. Then select the Mesh Device.





2. Follow app instructions to complete the setup.



5. 4. Check Mesh Device Status

In Network, you can check the working status (online/offline) of all the mesh devices, check the details (speed/mesh device's IP address & MAC address/connected clients) of each mesh device, change the mesh device's location/name, and more.

1. Tap to check all mesh devices' status.