

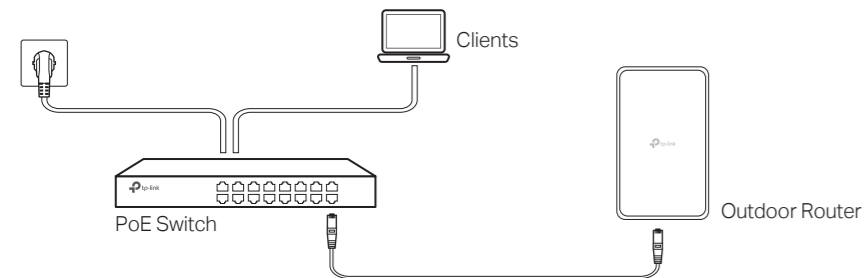
# Quick Installation Guide

## 5G Outdoor Router Wi-Fi 7

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### Option 2: Via PoE Switch

Connect an Ethernet cable from the PoE switch to the Ethernet port. The PoE switch should comply with 802.3at.



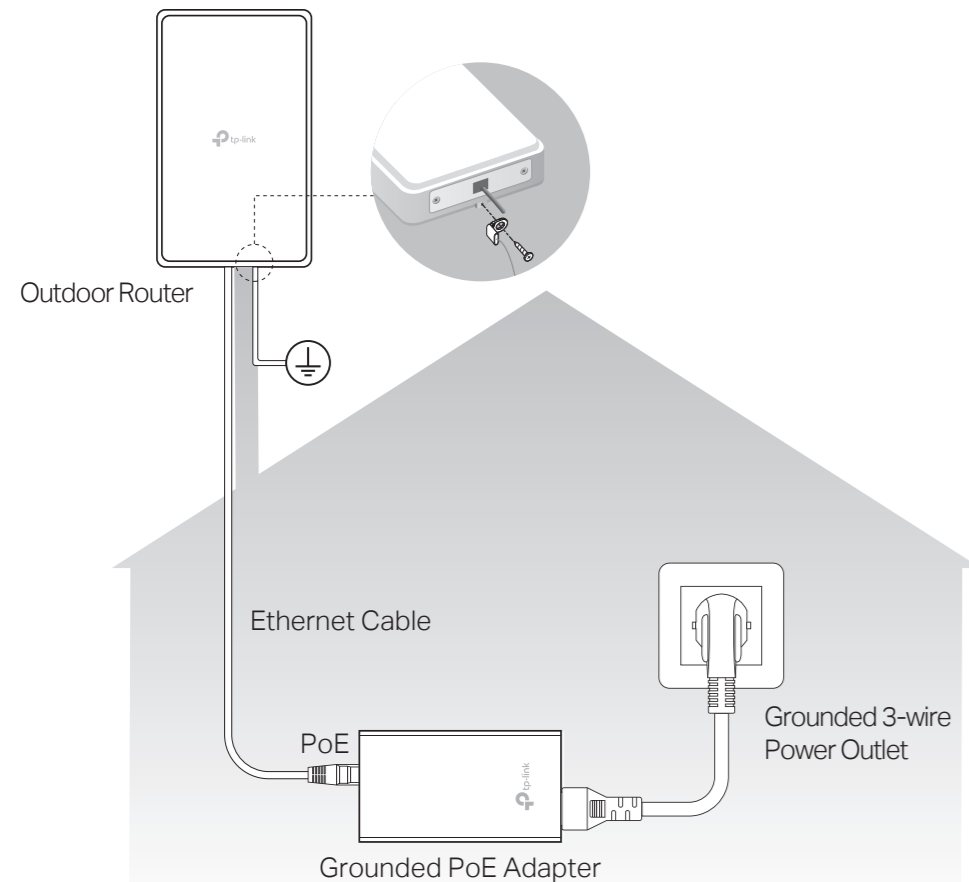
**Note:** The outdoor router can be powered via a PSE device (such as a PoE switch) which complies with Power Source Class 2 (PS2) or Limited Power Source (LPS) and Electrical Energy Source Class 1 (ES1) of IEC 62368-1.

### Important Tips: Lightning and ESD Protection

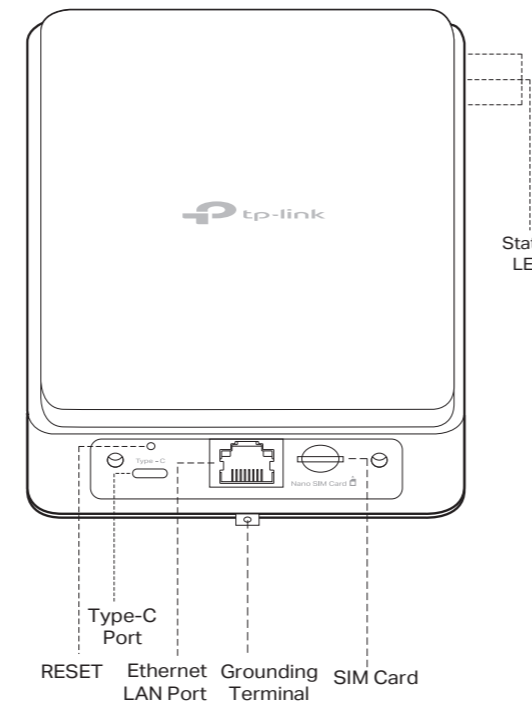
Before mounting the Outdoor Router, you should consider Lightning and ESD Protection to ensure safety.

Proper grounding is extremely important for outdoor devices. To reduce the damage of potential lightning and ESD attacks, connect the grounding terminal to grounding facilities using a proper grounding wire, which should meet the local installation requirements.

Secure the grounding wire to the grounding terminal using pliers, then fasten the grounding terminal to the router with a screw.

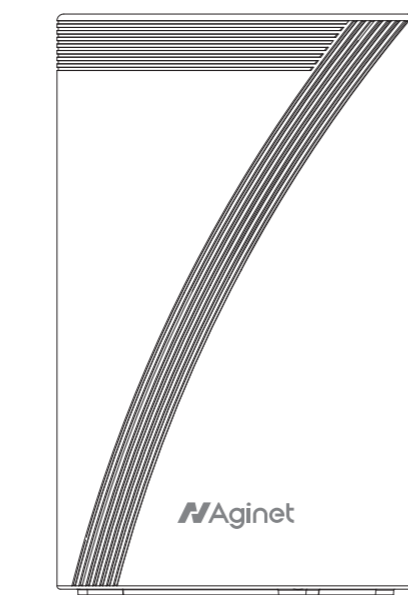


## Appearance



### LED Explanation (NE225-Outdoor)

LED	Status	Indication
Signal Strength	Green	The signal strength is above 75%.
	Yellow	The signal strength is between 50% and 75%.
	Red	The signal strength is below 50%.
	Flashing red / Off	There is signal, but no internet connection. No mobile network signal.
Network Type/Bluetooth	Green	The device is on a 5G network.
	Yellow	The device is on a 4G network.
	Red	The device is on a 3G network.
	Flashing blue / Off	The device is connecting to Bluetooth. The device is not registered on the network.
Power	Green	The device is powered on and working properly.
	Flashing green / Off	The device is initializing, RESET or upgrading. The device is powered off.



### LED Explanation (HB410)

LED 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.
Red	The device has been set up, but the internet is unavailable.
Flashing green	The device is upgrading firmware or there is a new firmware available.
Green	The device is all set up and connected to internet.
Flashing red	The device has lost connection.

## 3 Optimal Position Detection

Before mounting, use the Aginet app to measure 5G signal strength and find the optimal position for your Outdoor Router.

**Tip:** To ensure secure mounting on poles/walls/windows without risk of falling, you can first refer to the mounting instructions in Step 4 to identify suitable positions. Then follow the steps below to determine which spot offers the best signal.

### Step 1. Get Your Aginet App

Download and install the Aginet app.

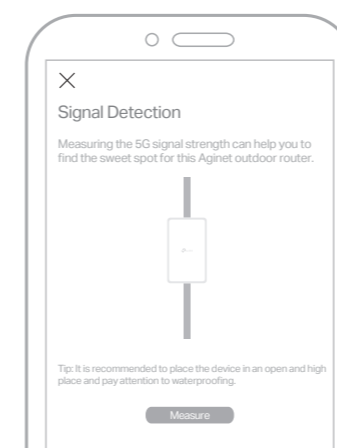
You can easily set up and manage your network through the Aginet app. Search for Aginet on the Apple App Store or Google Play, or simply scan the QR code below.



### Step 3. Detect and Adjust Installation Position

1. Place your router at a desired place on the pole/wall/window, and tap Measure to begin signal detection.

- Tips:
- To get a more accurate result, please don't move around your router while measuring.
  - If it takes a long time to measure, you can tap Mark this location for later measuring by naming it.



2. The signal strength at the current position is displayed (Excellent, Good, Normal, Poor and No Signal). You can tap More Details to view the network details.

3. Follow the on-screen instructions to continue measuring until an ideal position is detected. Then save or continue to adjust the position as prompted.

**Note:** You can view the last 10 measure records and select the desired installation location.

### Step 2. Connect to the Outdoor Router

Before connecting to the router, make sure that you have authorized Bluetooth permission for Aginet app and turned on your phone's Bluetooth.

1. Open the Aginet app and tap Create a Network and select your device type. Follow the steps to complete the setup and choose a method to connect to the router's Bluetooth.



**Scan QR code:** Scan the QR code on the device label and the router will be automatically connected to your phone.

**For manually select:** Your phone will automatically search for nearby Bluetooth devices. Select the target router and wait for the connection to succeed.

2. Wait until successfully pairing with the router's Bluetooth. If you connect the Bluetooth manually, enter the device password on the product label or the password you create for the router, and then start SIM card detection.

**Note:** Please make sure your SIM card is correctly inserted, otherwise signal detection maybe unavailable.

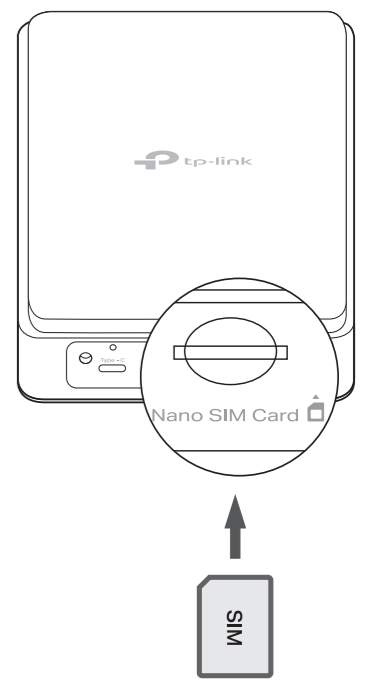
## Connect the Outdoor Router (NE225-Outdoor)

### 1 Insert SIM Card if not Installed

**Note:** Do not power on the 5G outdoor router during this process.

Unbox your 5G Outdoor Router. Insert the SIM card if not pre-installed by your service provider.

Remove the waterproof cover plate and insert the SIM card securely into the slot at the bottom of the 5G Outdoor Router, making sure that the SIM card is inserted correctly with gold contacts facing down.

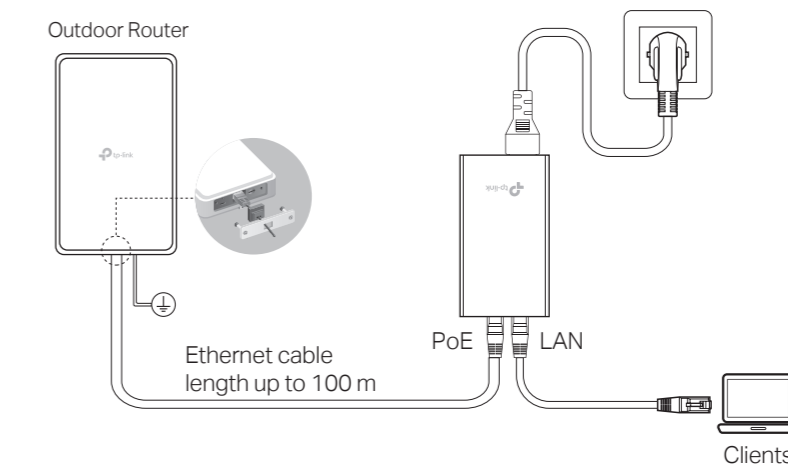


### 2 Power on the Outdoor Router

The Outdoor Router can be powered via the provided passive PoE adapter or a PSE device (such as a PoE switch) which complies with LPS or PS2 standard.

#### Option 1: Via Passive PoE Adapter

- Connect the Outdoor Router to a Power over Ethernet (PoE) adapter.
- Connect the power connector on the PoE adapter to the socket.



#### Mounting the PoE Adapter (Optional)

**Note:** To ensure the passive PoE adapter is attached most securely, it is recommended to install the adapter with the Ethernet port facing upward.

**Step 1:** Remove the mounting bracket from the passive PoE Adapter.

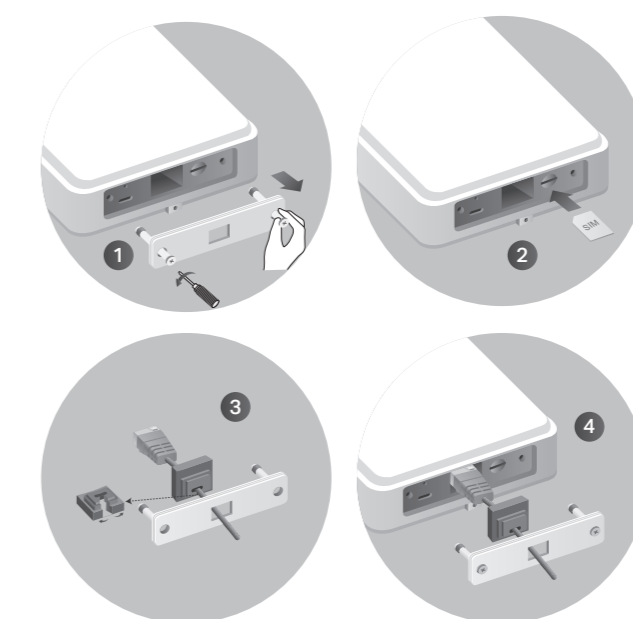
Drill two holes on the wall and insert the plastic wall anchors into the holes. Secure the mounting bracket to the wall. Make sure the shoulders at the corners of the mounting bracket are on the outside and pointing upward.

**Step 2:** Attach the passive PoE adapter to the mounting bracket (for PoE Adapter) by sliding the adapter in the direction of the arrows until it locks into place.

## 4 Mount your Outdoor Router

**Note:** Before mounting, please power off the outdoor router by disconnecting the PoE adapter from it.

### Step 1. Connect the Cable



**1** Loosen the screws with a Phillips screwdriver while holding them securely, then detach the Waterproof Cover Plate by pulling it outward with your hand.

**2** With the gold contacts facing down, insert the nano SIM card into the slot until you hear a click.

**3** First fit an Ethernet cable through the Waterproof Cover Plate, then through the Rubber Stopper's slit.

**Note:** The wider side of the Rubber Stopper should face the port.

**4** Connect the cable to the port and replace the Waterproof Cover Plate, leading the cable through the slot of the plate.

**Note:** Please align the Rubber Stopper to the Slot of the Waterproof Cover Plate.

**Note:** Make sure the Rubber Stopper is fully inserted and properly aligned with the Slot of the Waterproof Cover Plate. After that, tighten the screws firmly.

### Step 2. Mount your Outdoor Router

The Outdoor Router can be pole-mounted, wall-mounted or glass-mounted. Follow the steps below for the appropriate installation.

#### Option 1: Pole Mounting

1. Install the chain bolt to the bracket. Lead the end of the pole mounting strap through the groove on the bracket to install the bracket against the pole.

**Note:** You can secure the mounting bracket vertically or horizontally as needed.

2. Use two M5 hex socket screws to install the backplane to the Outdoor Router.

3. Align the backplane on the back of the Outdoor Router with the slot of the mounting bracket. Push and slide the Outdoor Router down until it locks into place. Use the chain bolt to secure the backplane and mounting bracket.

**Note:** You can adjust the installation angle horizontally as needed, with an adjustment range of 90°.

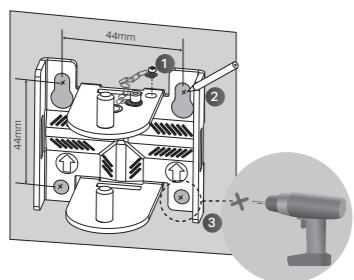
**⚠** The outdoor router can only be used in upright direction as shown in the image.

## Step 2. Mount your Outdoor Router

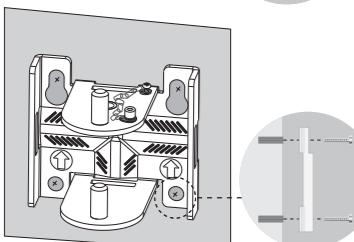
The Outdoor Router can be pole-mounted, wall-mounted or glass-mounted. Follow the steps below for the appropriate installation.

### Option 2: Wall Mounting

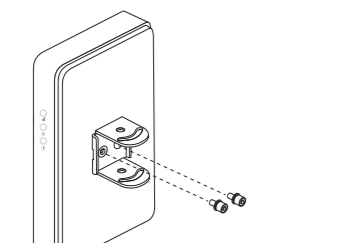
1. Install the chain bolt to the bracket. Place the mounting bracket in the right position. Mark four positions for the screw holes. Drill four 6 mm holes for the screws at the marked positions.



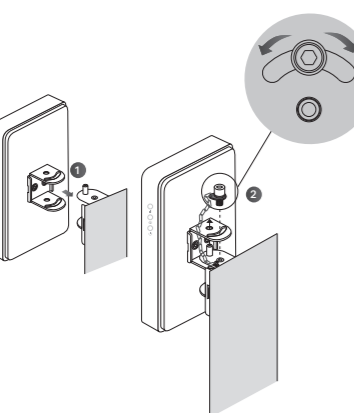
2. Insert the plastic wall anchors into the 6 mm holes. Align the bracket to the plastic wall anchors and drive the self-tapping screws into the anchors through the bracket.



3. Use two M5 hex socket screws to install the backplane on the Outdoor Router.



4. Align the backplane on the back of the Outdoor Router with the slot of the mounting bracket. Push and slide the Outdoor Router down until it locks into place. Use the chain bolt to secure the backplane and mounting bracket.



**Note:** You can adjust the installation angle horizontally as needed, with an adjustment range of 90°.

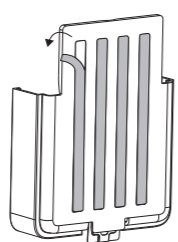
**The outdoor router can only be used in upright direction as shown in the image.**

### Option 3: Window Mounting

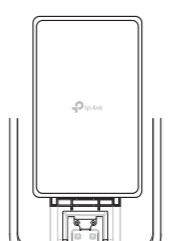
#### Tips for Window Mounting

- Avoid air bubbles by applying enough pressure for at least 30 seconds.
- It is recommended that mounting on a window not be done on a wet or rainy day.
- Ensure that the mounting area of the glass is clean, flat and dry (an area without ice, dust, oil or separating agents is recommended).
- Ideal tape application is accomplished when temperature is 21°C-38°C (70°F-100°F) and the bond is allowed to dwell 72 hours. Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended.

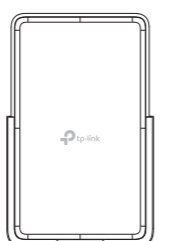
1. Tear off the double-sided tape behind the mounting bracket, and stick the bracket on the window.



2. Align the Outdoor Router with the slot of the mounting bracket. Push and slide the Outdoor Router down until it locks into place.




3. (Optional) If you want to remove the Outdoor Router from the mounting bracket, please press and hold the metal clip at the bottom of the mounting bracket. Then push and slide the Outdoor Router up until it is removed.



**The outdoor router can only be used in upright direction as shown in the image.**

## Step 3. Verify the Hardware Connection

After mounting the Outdoor Router, power it on and check the following LED status. If the Network LED  is on, your Outdoor Router is connected to the internet successfully.

**Note:** If the Network LED  does not turn on, please refer to Q2 of Need Help? in this guide.

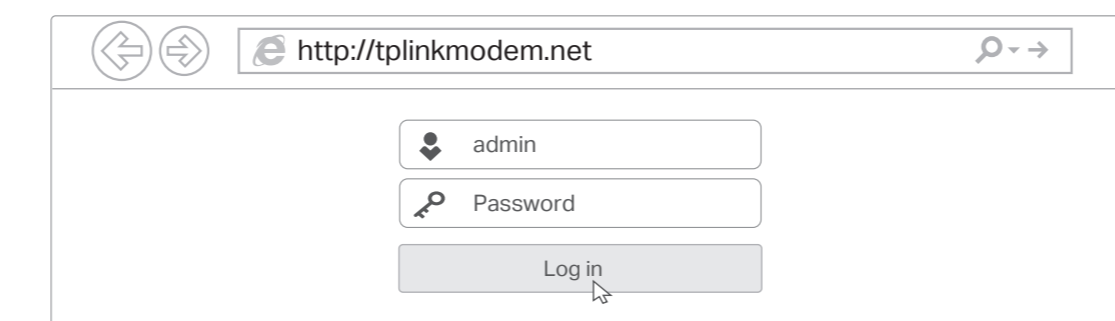
Power On    Network On    Signal Strength

For better Internet connectivity, make sure the LEDs are lit in green or yellow. Otherwise, try relocating the router to an outdoor open area where a stronger mobile network signal can be received.

## 5 Customize the Outdoor Router

1. Connect your computers to the router's LAN ports via Ethernet cables.
2. Launch a web browser and type in <http://tplinkmodem.net> or <http://192.168.254.1>. Enter **admin** as Username and enter the **Device Password** printed on the product label to get started.

**Note:** If the login page does not appear, please refer to Q1 of Need Help? in this guide.



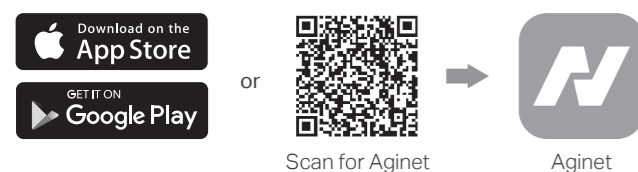
3. Follow the step-by-step instructions of the **Quick Setup** to complete the initial configuration.

## 2 Set Up the Network

### Method 1: Via TP-Link Aginet App

1. Download and install the Aginet app.

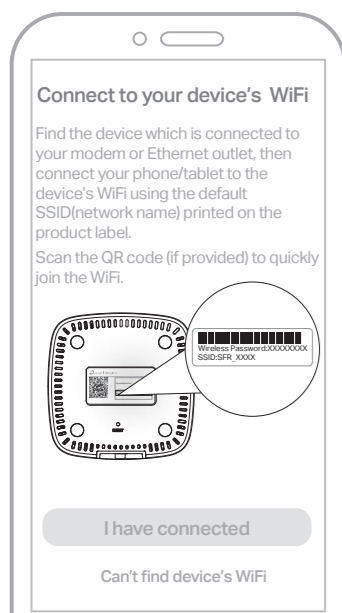
You can easily set up and manage your network through the Aginet app. Search for Aginet on the Apple App Store or Google Play, or simply scan the QR code below.



2. Set up your network on the app.

Open the Aginet app, tap **Create a Network** and find the product label on the bottom of your HB410.

You can also scan the QR code (if any) on the label to set it up faster.



3. Follow the app instructions to complete the setup.

 Enjoy the internet!

### Method 2: Via a Web Browser

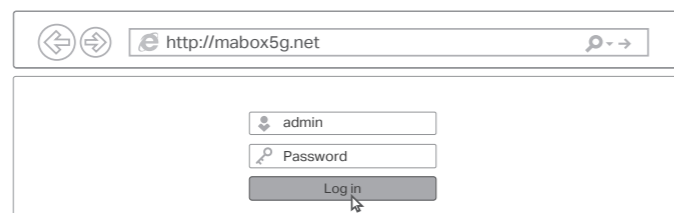
1. Connect your Laptop/PC/Mobile phone to the HB410 wirelessly or with an Ethernet cable, or simply scan the QR code.

The QR code, default wireless network name (SSID), and password are printed on the product label at the bottom of the HB410.



2. Launch a web browser, and enter <http://mabox5g.net> or <http://192.168.1.1> in the address bar. Use **admin** for Username and use the password printed on the product label to and log in to the device.

**Note:** If the login window does not appear, please refer to Q1 of Need Help? in this guide.



3. Follow the Quick Setup instructions to set up your network.

 Enjoy the internet!

## Need Help?

### Q1. What should I do if I cannot access the web management page?

- If the computer is set to a static IP address, change its settings to obtain an IP address automatically.
- Make sure <http://tplinkmodem.net> or <http://192.168.254.1> is correctly entered in the web browser (For NE225-Outdoor). Alternatively, verify that <http://mabox5g.net> or <http://192.168.1.1> is correctly entered in the web browser (For HB410).
- Use another web browser and try again.
- Reboot your router and try again.
- Disable and enable the active network adapter in use.

### Q2. What should I do if I cannot access the internet?

- For NE225-Outdoor:**
- Verify that your SIM card is a 5G/4G or WCDMA card.
  - Verify that your SIM card is in your internet service provider's service area.
  - Verify that your SIM card has sufficient credit.
  - Check the LAN connection: Open a web browser and enter <http://tplinkmodem.net> or <http://192.168.254.1> in the address bar. If the login page does not appear, refer to Q1 and then try again.
  - Launch a web browser, log in to the web management page, and check the following:
    - 1) Go to **Advanced > Network > Mobile WAN** to verify the parameters provided by your ISP are correctly entered. If the parameters are incorrect, click **Create Profile** and enter the correct parameters, then select the new profile from the **Profile Name** list.
    - 2) Go to **Advanced > Network > PIN Management** to verify if PIN is required. If it is, enter the correct PIN provided by your ISP, and click **Save**.
    - 3) Go to **Advanced > Network > Data Settings** to verify if the **Total/Monthly Used** exceeds the **Total/Monthly Allowance**. If it does, click **Correct** and set **Total/Monthly Used** to 0 (zero), or disable **Data Limit**.
    - 4) Go to **Advanced > Network > Mobile WAN** to verify that **Mobile Data** is enabled. If it is not, enable it to access the internet.
    - 5) Confirm with your ISP if you are in a roaming service area. If you are, go to **Advanced > Network > Mobile WAN** to enable **Data Roaming**.
- For HB410:**
- Check if the internet is working normally by connecting a computer directly to the modem or the router via an Ethernet cable. If it is not, contact your internet service provider.
  - For router mode, log in to the management page of the mesh device, and go to the **Status** page to check whether the IP address is valid or not. If it is, please run the **Quick Setup** again, otherwise, recheck the hardware connection.
  - Reboot your device and try again.

### Q3. How do I restore the router to its factory default settings?

- For NE225-Outdoor:**
- With the router powered on, press and hold the **Reset** button on the bottom panel of the router until the Power LED starts flashing, then release the button. Wait while the router resets.
  - Log in to the web management page of the router, and go to **Advanced > System Tools > Backup & Restore**, click **Factory Restore** and wait until the reset process is complete.
- For HB410:**
- While the device is powered on, press and hold the **RESET** button for at least five seconds, and then release the button.
  - Log in to the web management page of the device, go to **System Tools > Backup & Restore** and click **Factory Restore**. The device will restore and reboot automatically.

### Q4. What should I do if I forget my web management page password?

- While the device is powered on, press and hold the **RESET** button for at least five seconds, and then release the button. Then you can log in with the default password on the product label.

### Q5. What should I do if the HB410's status LED remains flashing red?

- Place the HB410 close to another configured mesh device until the status LED turns solid blue or green, then relocate the HB410.
- Refer to Q3 to reset your HB410, and then re-add it to the network using the Aginet app or via a web browser.

### Q6. What should I do if I forget my HB410's wireless network password?

- If you haven't changed the default wireless password, it can be found on the product label at the bottom of the HB410.
- Connect a computer to the HB410 via an Ethernet cable. Log in to the web management page, and go to **Basic > Wireless** to retrieve or reset your wireless password.

## Connect the Mesh Device (HB410)

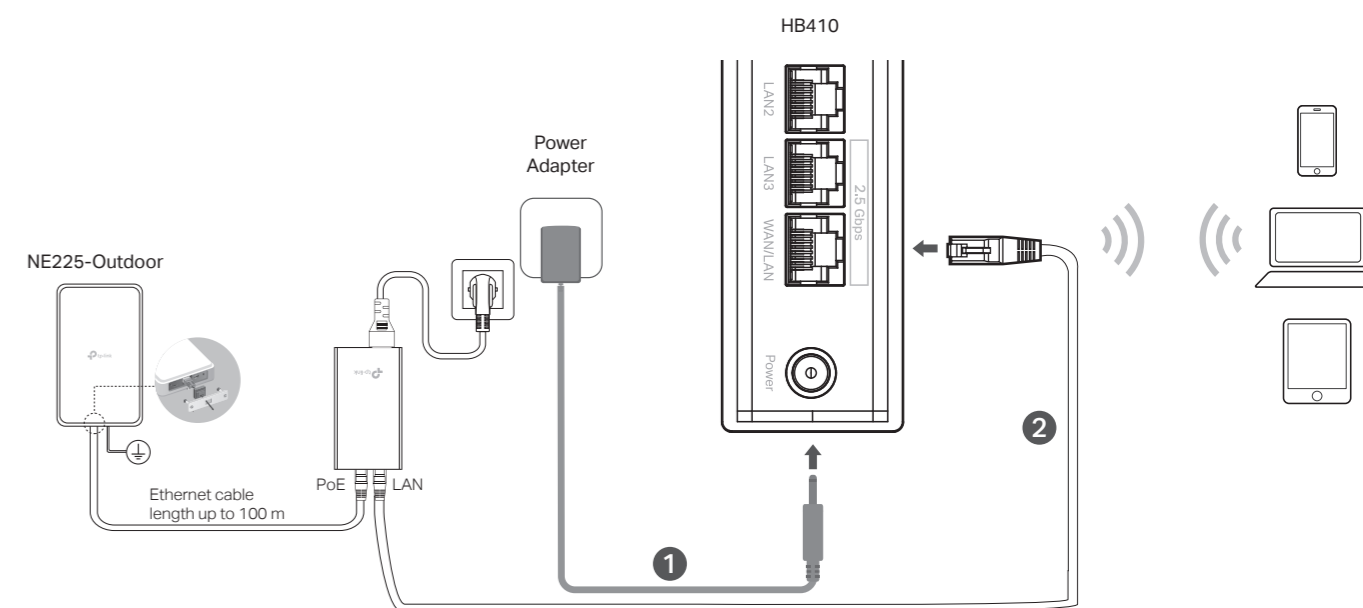
### Setup with videos

Visit <https://service-provider.tp-link.com/home-wifi-system/>, or scan the QR code, then click on the hyperlinks on the page to learn how to set up your mesh system. You can also follow the step-by-step instructions below to set up your mesh device.



## 1 Connect the Hardware

The Whole Home Mesh Wi-Fi 7 AP HB410 is designed to create a mesh wireless network throughout your home.



1. Connect the power adapter to the HB410.
2. Connect the WAN/LAN port of the mesh device to PoE Adapter's Ethernet port via an Ethernet cable.
3. Verify the status LED is flashing blue before continuing with the configuration.

### Power Supply

**NE225-Outdoor:**  
Manufacturer's name or trademark: TP-Link Systems Inc.  
ADDRESS: 10 Mauchly, Irvine, CA 92618  
Model Identifier: T480038-2-POE  
Input Voltage: 100~240Vac  
Input AC frequency: 50~60Hz  
Output Voltage: 48V  
Output Current: 0.375A max  
Output Power: 18W max  
Average active efficiency: 88.23% @230Vac  
No Load Power consumption: <0.1 W @230Vac  
Efficiency at low load (10%): 78.7% @230Vac

**HB410:**  
Manufacturer's name or trademark: TP-Link Systems Inc.  
ADDRESS: 10 Mauchly, Irvine, CA 92618  
Model Identifier: T120200-2C1  
Input Voltage: 100~240Vac  
Input AC frequency: 50~60Hz  
Output Voltage: 12V  
Output Current: 2A max  
Output Power: 24W max  
Average active efficiency: 86.2% min @230Vac  
No Load Power consumption: <0.1 W @230Vac

### Max Power Per Frequencies

**NE225-Outdoor:**  
Module Transmit Power:  
WCDMA: Class 3 (23 dBm ±2 dB)  
LTE-FDD: Class 3 (23 dBm ±2 dB)  
LTE-TDD: Class 3 (23 dBm ±2 dB)  
LTE B41 HPUE: Class 2 (26 dBm +2/-3 dB)  
5G NR : Class 3 (23 dBm ±2 dB)  
5G NR n41n77n78 HPUE: Class 2 (26 dBm +2/-3 dB)

**HB410:**  
Wi-Fi Transmit Power:  
CE: ≤20 dBm (2.4 GHz);  
≤23 dBm (5 GHz band 1/band 2);  
≤30 dBm (5 GHz band 3);

### RF Exposure Information

This device meets the EU requirements (2014/53/EU Article 3.1a) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.

**NE225-Outdoor:** The device complies with RF specifications when the device is used at 48 cm from your body.

**HB410:** The device complies with RF specifications when the device is used at 20 cm from your body.

### EU Declaration of Conformity

TP-Link hereby declares that the 5G Outdoor Router Wi-Fi 7 is in compliance with the essential requirements and other relevant provisions of directives 2014/53/EU, 2009/125/EC, 2011/65/EU and (EU) 2015/863. The original EU declaration of conformity may be found at <https://www.tp-link.com/en/support/ce/>

Attention: In EU member states, EFTA countries and Northern Ireland, the operation in the frequency range 5150MHz-5350MHz is only permitted indoors.



### Safety Information

- Do not attempt to disassemble, repair, or modify the device. If you need service, please contact us.
- Do not use the device where wireless devices are not allowed.
- Do not use damaged charger or USB cable to charge the device.
- Do not use any other chargers than those recommended.
- Adapter shall be installed near the equipment and shall be easily accessible.
- Use only power supplies listed in the user instructions. Refer to the User Manual on the product support page.










- NE225-Outdoor:**
- Keep the device away from fire or hot environments. DO NOT immerse in water or any other liquid.
  - Adapter should be used indoors where the ambient temperature is lower than or equal to 40°C.
  - The outdoor router can be used either indoors or outdoors.
  - Before mounting your router outdoors, waterproof it to ensure device safety and performance.
  - The waterproof cover must be secured before use!
  - The product can only be installed by instructed person or skilled person!
  - The plug on the power supply cord is used as the disconnect device, the socket-outlet shall be easily accessible.
  - Use only power supplies which are provided by manufacturer and in the original packing of this product. If you have any questions, please don't hesitate to contact us.
  - The product should be mounted within a height of 2 meters.
- Operating Temperature:** -30°C-50°C (-22°F-122°F).

- HB410:**
- Keep the device away from water, fire, humidity or hot environments. Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of device. Please use this product with care and operate at your own risk.

### Copyright

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### Explanation of the symbols on the product label

	Indoor use only
	DC voltage
	AC voltage
	RECYCLING This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment. User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.
	Energy efficiency marking (level VI)
	Polarity of output terminals
	Class II equipment
	Caution
	Operator's manual

For technical support, replacement services, user guides and other information, please visit <https://www.tp-link.com/en/support/download/> or scan the QR code.  
TP-Link Systems Inc. 10 Mauchly, Irvine, CA 92618

