

**Huawei OptiXstar EN8145B7Ns**

## **Quick Start for QR code**

|              |            |
|--------------|------------|
| <b>Issue</b> | 01         |
| <b>Date</b>  | 2024-11-26 |



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# Security Declaration

## Vulnerability

Huawei's regulations on product vulnerability management are subject to the *Vul. Response Process*. For details about this process, visit the following web page:

<https://www.huawei.com/en/psirt/vul-response-process>

For vulnerability information, enterprise customers can visit the following web page:

<https://securitybulletin.huawei.com/enterprise/en/security-advisory>

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# 1 Placing the Device

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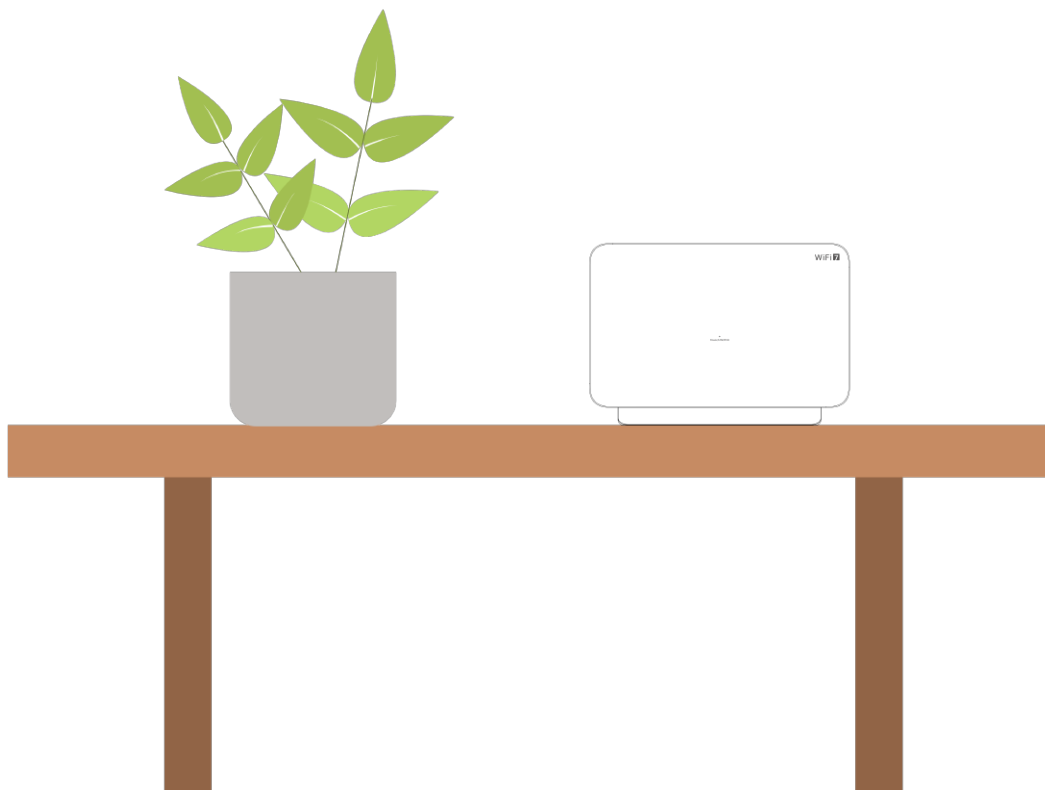
## NOTE

- Do not install the ONT and user cables outdoors or in an outdoor cabinet.
- The ONT can be mounted onto a wall or placed on a desk. Do not install the ONT in other modes, such as ceiling.
- Keep 10 cm clearance on all sides to ensure adequate ventilation.
- It is recommended that the computer and ONT be put far away from electric appliances that generate strong magnetic or electric fields, such as microwave ovens.
- The ONT applies only to home scenarios, and does not apply to scenarios such as hotels, shops, coffee bars, tea restaurants, Internet cafes, studios, enterprises, or other densely populated scenarios.
- When operating optical fibers, pay attention to the operation safety according to the following laser hazard level.



## Mounting an ONT on the Desk

The figure below shows an ONT that is horizontally placed on a desk.



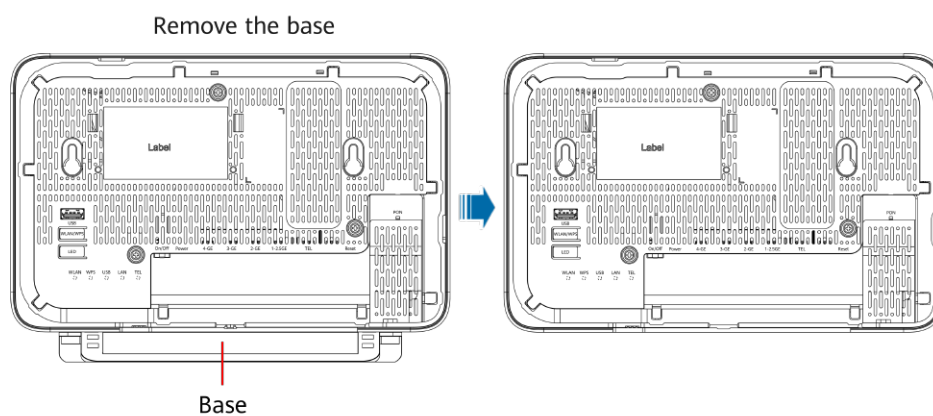
 **NOTE**

The appearance shown in this document may be different from the actual appearance of the product. The actual product prevails.

## Mounting an ONT onto the Wall

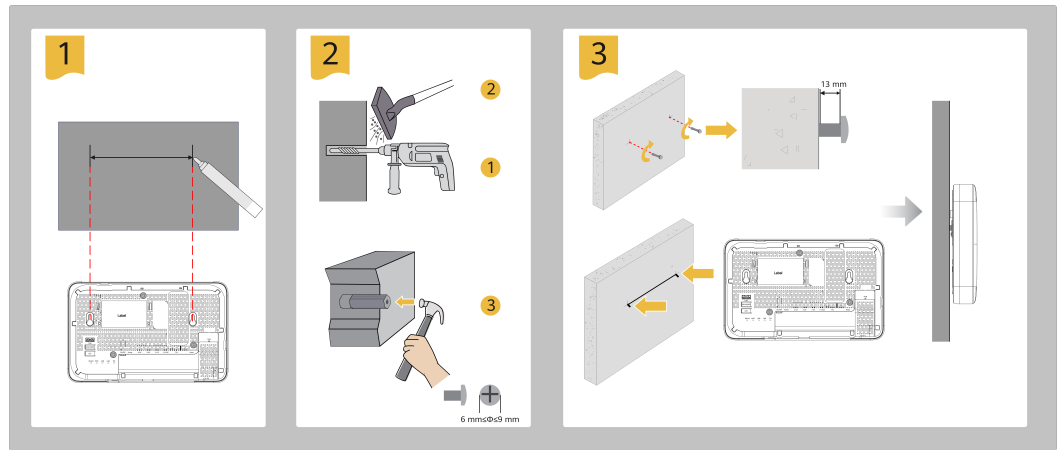
**NOTICE**

Using a Phillips screwdriver to remove the base of the Main FTTR before mounting it on a wall through gourd holes.



1. Mark two positions with the same spacing as that between the two mounting holes of the ONT using a marker on a wall.

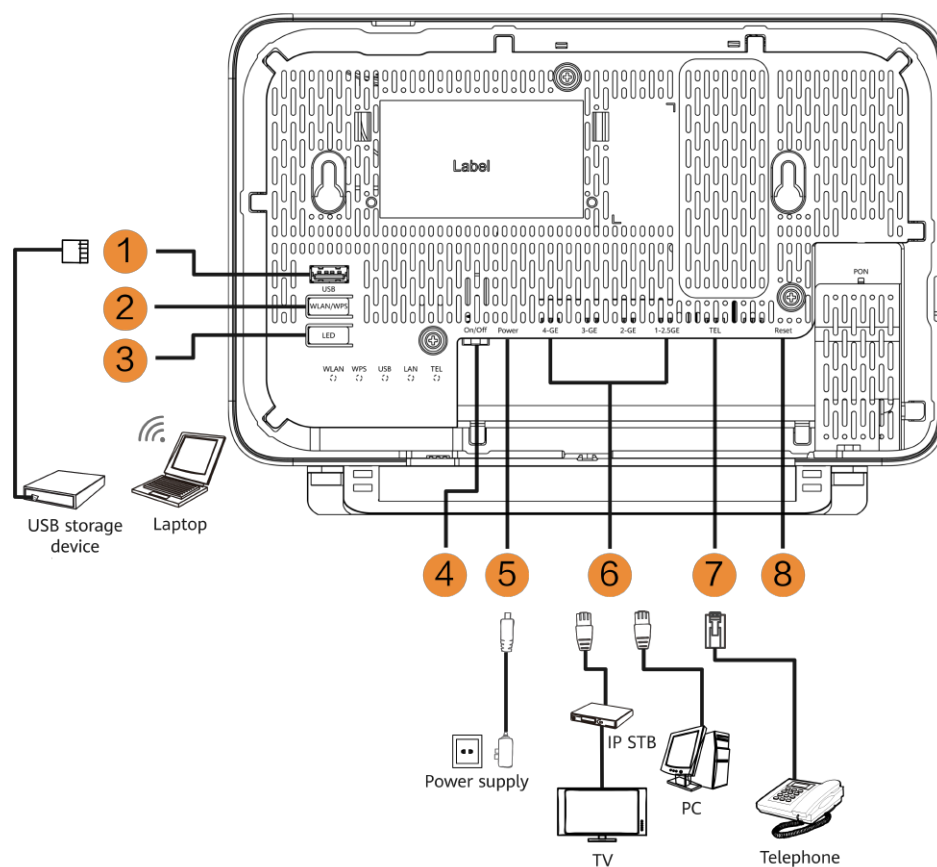
2. Select a proper drill bit according to the outer diameter of the screws. Use a hammer drill to drill the marked positions on the wall. Then clean the holes and install two expansion bolts.
3. Use a screwdriver to fasten the screws into the expansion bolts, reserving 13 mm ends out of the wall, and mount the ONT onto the screws.

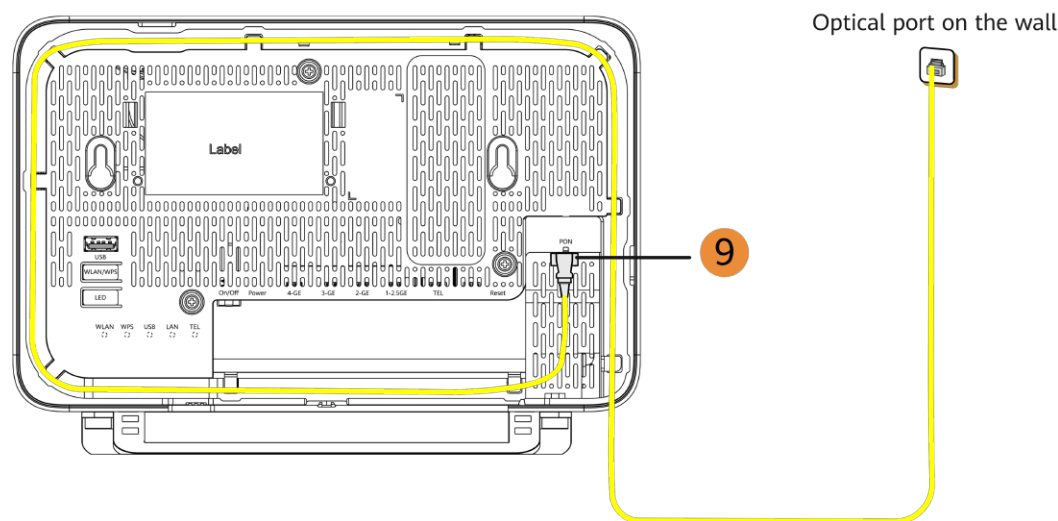


**NOTE**

It is recommended that the screw be about 4 mm in diameter and longer than 30 mm. The screw head should be between 6 mm and 9 mm in diameter.

# 2 Connecting Cables





 NOTE

- The fiber connector connected to the optical port on the wall varies depending on actual conditions.
- To ensure normal use of fibers, make sure that the fiber bending radius is larger than 30 mm.

| No. | Port/Button            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | USB                    | Connects to a USB device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2   | WLAN/WPS               | <ul style="list-style-type: none"><li>• When the wireless function (WLAN) is enabled, press the WLAN/WPS switch for 1s to 5s to start Wi-Fi protected setup (WPS) negotiation.</li><li>• When the wireless function (WLAN) is enabled, press and hold the button WLAN/WPS switch for more than 5s to turn off the wireless function (WLAN).</li><li>• When the wireless function (WLAN) is disabled, tap the WLAN/WPS switch for more than 1s to turn on the wireless function (WLAN).</li></ul> |
| 3   | LED                    | <p>Indicates the indicator switch.</p> <ul style="list-style-type: none"><li>• On: The indicator is working properly.</li><li>• Off: All indicators are off.</li></ul> <p><b>NOTE</b><br/>You are advised to turn on the indicator switch to detect abnormal indicator status in a timely manner.</p>                                                                                                                                                                                            |
| 4   | On/Off                 | Turns on or off the device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5   | Power                  | Connects to a power cable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 6   | 4-GE/3-GE/2-GE/1-2.5GE | <p>Connects to a computer, IP STB, or router.</p> <ul style="list-style-type: none"><li>• GE port supports 10/100/1000 Mbit/s auto-sensing.</li><li>• 2.5GE port supports 10/100/1000/2500 Mbit/s auto-sensing.</li></ul>                                                                                                                                                                                                                                                                        |

| No. | Port/Button | Description                                                                                                                                                                                                                      |
|-----|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7   | TEL         | Connects to a telephone or fax machine.                                                                                                                                                                                          |
| 8   | Reset       | Restarts the device.<br>When the device is started, use a needle-type object to press this button to restart the device. Press and hold this button for more than 10 seconds to restore factory settings and restart the device. |
| 9   | PON         | Connects to drop cables and supports XGS-PON upstream access.                                                                                                                                                                    |

# 3 Indicator Description



| Indicator                                                  | Status                   | Description                                                                         |
|------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------|
| Indicator on the front panel<br>(Power+LOS+PON integrated) | See the following table. |                                                                                     |
| LAN (Four LAN port indicators are combined)                | Steady on                | Any network port is connected.                                                      |
|                                                            | Off                      | All the network ports are not connected.                                            |
| USB                                                        | Steady on                | The USB port is connected and working in the host mode, but no data is transmitted. |
|                                                            | Blinking                 | Data is being transmitted on the USB port.                                          |
|                                                            | Off                      | The system is not powered on or the USB port is not connected.                      |
| TEL                                                        | Steady on                | The telephone service is enabled.                                                   |
|                                                            | Blinking                 | The phone is being used.                                                            |
|                                                            | Off                      | The telephone service is disabled.                                                  |
| WLAN                                                       | Steady on                | The WLAN function is enabled.                                                       |
|                                                            | Blinking                 | Data is being transmitted.                                                          |
|                                                            | Off                      | The WLAN function is disabled.                                                      |
| WPS                                                        | Steady on                | WPS authentication is enabled.                                                      |

| Indicator | Status   | Description                                                |
|-----------|----------|------------------------------------------------------------|
|           | Blinking | Terminals such as mobile phones are accessing the network. |
|           | Off      | WPS authentication is disabled.                            |

| Indicator                                                                                                                                                                                                                                                              | Status                              | Description                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Red                                                                                                                                                                                                                                                                    | Steady on                           | The ONT is being powered on.                                                                                 |
|                                                                                                                                                                                                                                                                        | Blinking quickly (twice per second) | The ONT is prohibited by the upper-layer device or blinks abnormally. Contact the service provider for help. |
| Green                                                                                                                                                                                                                                                                  | Steady on                           | A connection is set up between the ONT and its upper-layer device.                                           |
|                                                                                                                                                                                                                                                                        | Blinking quickly (twice per second) | The ONT attempts to set up a connection with its upper-layer device.                                         |
| Note: <ul style="list-style-type: none"><li>• If the red and green indicators are off at the same time, the power supply is cut off.</li><li>• If the red and green indicators blink slowly (once every 2 seconds) at the same time, the hardware is faulty.</li></ul> |                                     |                                                                                                              |

 NOTE

If the ONT is not powered on or the power switch is turned off, all indicators are off.

# 4 Technical Specifications

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| Product                     | Function                                                                                                                                            |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Huawei OptiXstar EN8145B7Ns | <ul style="list-style-type: none"><li>• 4 Ethernet ports</li><li>• 1 POTS port</li><li>• 1 USB port</li><li>• 2.4 GHz &amp; 5 GHz Wi-Fi 7</li></ul> |

- Power adapter input: See the nameplate on the adapter.
- System power supply: See the nameplate on the device.
- Ambient temperature: 0°C to +40°C
- Ambient humidity: 5%–95% (non-condensing)
- Dimensions (H x W x D): 157 mm x 250 mm x 30 mm (excluding the base)
- Weight: About 543 g (excluding the base)
- Maximum system power consumption: 18 W

# 5 FAQs

## NOTE

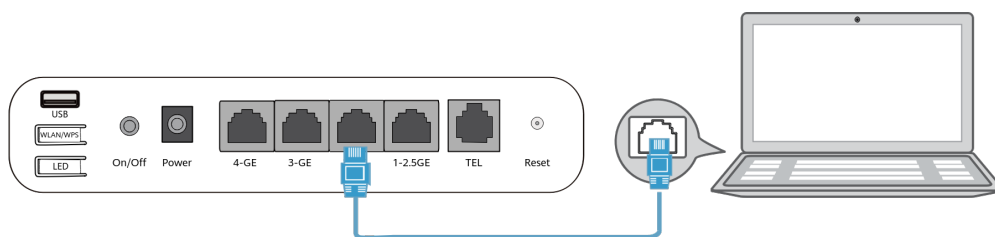
The following web page is only for reference. The actual web page of the product prevails.

## How do I log in to the Huawei ONT web page?

### NOTE

You are advised to use the latest browser to log in to the web configuration page. Chrome 58/Edge 14/Firefox 54/Safari 10/Opera 55 or later is recommended. If the browser of an earlier version is used, compatibility issues may occur.

- Wireless login
  1. Connect your mobile phone, pad, or PC to the Wi-Fi network of the Huawei ONT.
  2. Enter the IP address in the address box of a browser and press **Enter**. On the displayed login page, enter the username and password. (For details about the IP address, login username, and password, see the product nameplate.)
- Wired login
  1. Use a network cable to connect a PC to the Huawei ONT.



2. Set the IP address of the PC in the same subnet as the web address of the Huawei ONT. *For example, if the web address of the Huawei ONT is 192.168.a.b (for the web address of the Huawei ONT, see the product nameplate), set the IP address of the PC to 192.168.a.c.*

### NOTE

The preceding cable connection diagram is only for reference, and those of the actual product prevail.

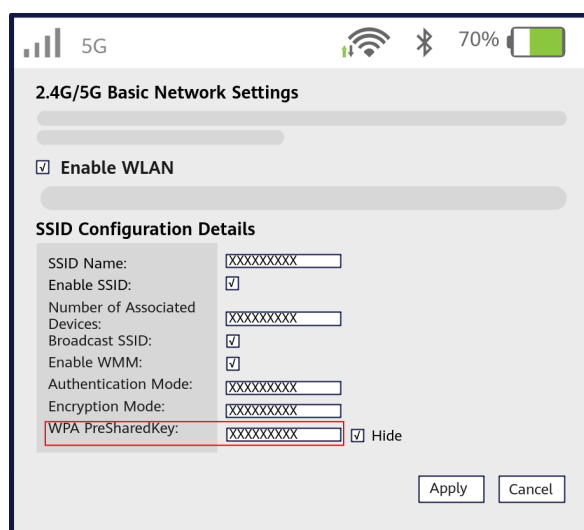
3. Log in to the web configuration page.
  - a. Open a browser. In the address box, enter the web address (printed on the nameplate of the Huawei ONT). Press **Enter**.
  - b. Enter the login user name and password (printed on the nameplate of the Huawei ONT). Click **Log In**.

 **NOTE**

- If you do not perform any operations after logging in to the system within five minutes, you will be logged out, and the system automatically returns to the login interface.
- The system will be locked for one minute if you input incorrect user name and password for three consecutive times.
- Change the initial password after logging in to the web page for the first time.

## How do I change the Wi-Fi password?

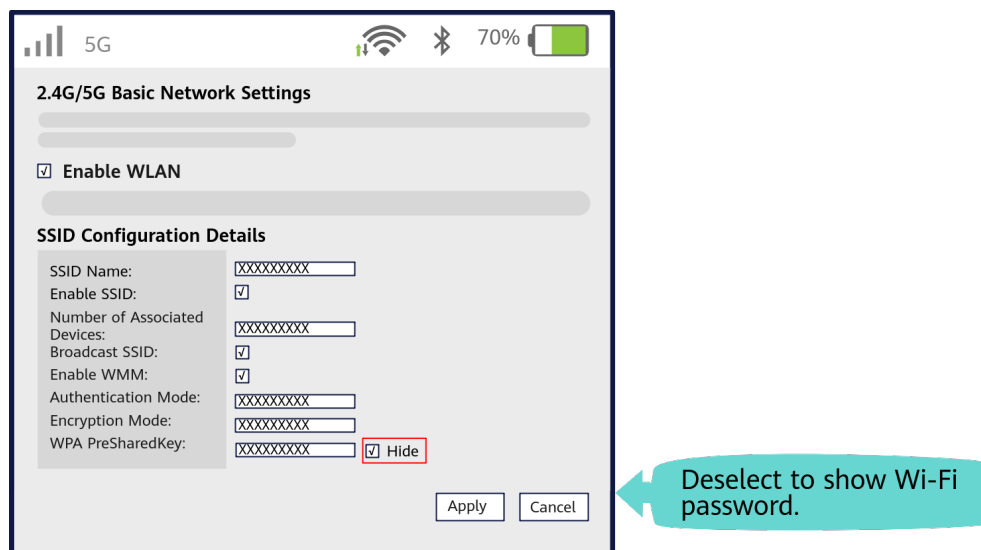
1. Log in to the Huawei ONT web page using your mobile phone, pad, or PC. For details, see "**How do I log in to the Huawei ONT web page?**"
2. Choose the **Advanced > WLAN** tab and choose **2.4G Basic Network Settings**. (If you want to configure 5GHz Wi-Fi, choose **5G Basic Network Settings**.)



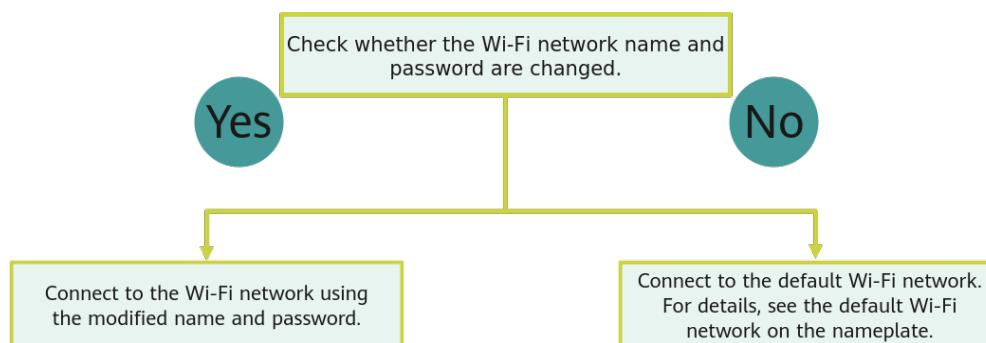
Enter a new password and click "Apply".

## What can I do if I forget the Wi-Fi password?

1. Log in to the Huawei ONT web page using your PC by wired login. For details, see "**How do I log in to the Huawei ONT web page?**"
2. Choose the **Advanced > WLAN** tab and choose **2.4G Basic Network Settings**. (If you want to configure 5GHz Wi-Fi, choose **5G Basic Network Settings**.)



## What can I do if I cannot connect to the Wi-Fi network?



## How to improve the Wi-Fi speed of a Huawei ONT?

1. Wi-Fi speed relies on the bandwidth provided by the ISP, so the simplest way is to upgrade to faster broadband.
2. Wi-Fi speed is affected by the Wi-Fi signal strength and quality.
  - 2.1 Determine the deployment positions of ONT based on house structures, indoor obstacles, and electrical appliance-caused interferences. If possible, put ONT in the middle of a planned coverage area and ensure that no obstacles exist and they are placed at high positions for better coverage. In addition, ensure that the ONT is far away from interference sources such as TVs, refrigerators, cordless phones, and Bluetooth devices.
  - 2.2 Note that load-bearing walls, floors, and metal coated glass may block Wi-Fi signals, avoid or reduce these obstacles between the ONT and Wi-Fi devices (such as pads, mobile phones, and laptops). For outdoor yards, large balconies, and compound rooms, etc., it is recommended to add repeaters to enhance the Wi-Fi coverage.
  - 2.3 For common places where users access the Internet, such as a living room, study room, or master room, pre-evaluate whether their signal strength is strong enough. If the signal strength is insufficient (Generally, lower than -72dBm), it is

recommended to adjust ONT positions or add new repeaters to enhance the Wi-Fi coverage.

3. Using the correct radio channel. Generally, the Huawei ONT automatically selects the optimal channel. If the network is slow or the quality turns poor from time to time, you can use a Wi-Fi scanner such as Wi-Fi Stumbler or Wi-Fi Analyzer to search for the optimal channel.

4. To prevent unauthorized network access, log in to the web interface of the router and select MAC address filtering based on your requirements.

### **What can I do if the network speed is slow?**

1. Check whether network cables are properly connected. Remove and then insert the network cables. Then, check whether the network speed is normal.
2. Check whether downloading, network video watching, or other operations occupy a large amount of bandwidth. Due to bandwidth restrictions, if some network applications occupy a large amount of network bandwidth, the network speed is slow.
3. Use another PC, mobile phone, or pad to check whether the network speed is normal.

### **A phone does not ring upon an incoming call but communication is in normal state when the phone is in off-hook state.**

The ONT supports a maximum of 60 V AC ringing current voltage. Check whether the ringing current voltage of the phone is higher than 60 V AC. If it is higher than 60 V AC, replace the phone.

### **How do I restore the Huawei ONT to factory setting?**

Press **Reset** by using a needle-type object for longer than 10s to restore factory defaults and reset the Huawei ONT. If the indicator is off and then is lit, the system restarts successfully.

#### **NOTE**

Exercise caution when restoring factory settings. This function may cause the loss of ONT configuration information and further cause an Internet access failure. If this problem occurs, contact your service provider for help.

### **How can I download Huawei ONT firmware or software?**

Huawei ONT is used with an OLT and NMS of a required version. If the versions are not the required ones, the ONT may not work.

If required, contact your internet service provider to obtain the correct ONT firmware or software.