Huawei OptiXstar V581s

Quick Start

Issue 01

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Security Declaration

Vulnerability

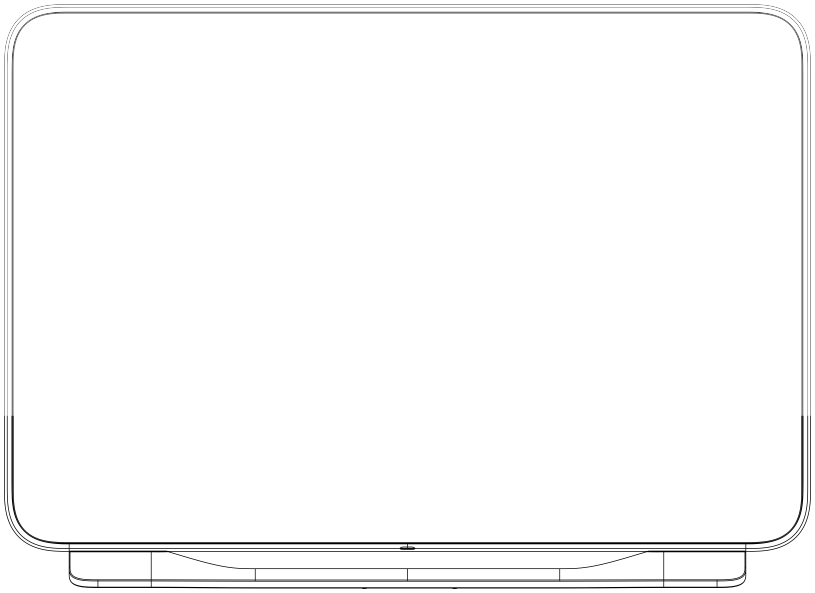
Huawei's regulations on product vulnerability management are subject to the *Vul. Response Process.* For details about this process, visit the following web page:
https://www.huawei.com/en/psirt/vul-response-process
For vulnerability information, enterprise customers can visit the following web page:
https://securitybulletin.huawei.com/enterprise/en/security-advisory

Contents

1 Device Introduction

Huawei OptiXstar V581s is a main FTTR for Huawei iFTTR OptiXstar F50 Pro+. It uses the XGS-PON and Wi-Fi 7 technologies to implement ultra-broadband access, high performance and wide coverage for users.

Figure 1-1 Appearance of the product



NOTE

- The figures in this document may differ from the actual products. The actual products prevail.
- The storage temperature and humidity of the product is compliant with ETSI EN 300 019-1-1 Class 1.2.
- The valid storage period of the product is nine months. The valid storage period refers to the period during which the product can be stored in a storage environment that meets the ETSI EN 300 019-1-1 Class 1.2 standard without performance degradation.

Accessibility Statement

Hereby, Huawei Technologies Co., Ltd. declares that the product meets the directive (EU)2019/882.

The product is designed and developed with accessibility considerations, and meets the accessibility requirements to enable their use by persons with disabilities.

- Web:
  - On the home page of the product web page, there is a switch for the accessibility mode. After you turn on the switch and log in as a common user, you can access the web page in accessibility mode.
  - The web page in accessibility mode provides basic functions for people with a disability, including user password change, restart/reset, service running status query, and WLAN parameter setting.
  - The web page meets requirements of the directive (EU) 2019/882 on web pages, and complies with the WCAG 2.2 Success Criterion in terms of web reflow, color contrast, text resizing, contrast between texts and images, text spacing, and so on.
- Documentation:
  - Product documents are provided in electronic formats, so that people with visual impairment can read the documents online.
  - The product documentation describes how to activate and use the accessibility mode.
  - The product documentation describes the meanings of indicator colors and blinking status, and the relative positions and functions of each port and button, so that people with visual impairment can use the product properly.

We will continue to improve our products to adapt to the latest technologies and changes in user requirements, and provide users with accessibility functions and services.

2 Placing the Device

CAUTION

Do not install the main FTTR and user cables outdoors or in an outdoor cabinet.

WARNING

1. Install devices only by professional personnel. Do not install devices without permission.

   During device installation, the installation professional personnel need to inform the user of how to log in to the web configuration page and scan the QR code to view the Quick Start documentation. The IP address, login user name, and password of the web configuration page need to be provided to the user.
2. Do not use detergents, gasoline, ammonia water, or corrosive chemical reagents to clean the device.
3. The tools and auxiliary materials that are not delivered with the equipment must be prepared by professional personnel.
4. Before using the device, read **Safety Information** carefully. Follow these precautions and instructions to ensure optimal product performance and to avoid danger and legal or regulatory violations.

Vertically placed on a desk

The main FTTR can be placed vertically on a desk.

Figure 2-1 Vertically placed on a desk

3 Connecting Cables

NOTE

To extend Wi-Fi coverage at home, ask professional technicians to connect the sub FTTR to the main FTTR using optical network components. The sub FTTR automatically synchronize Wi-Fi parameters from the main FTTR.

Figure 3-1 Cable connection diagram 1

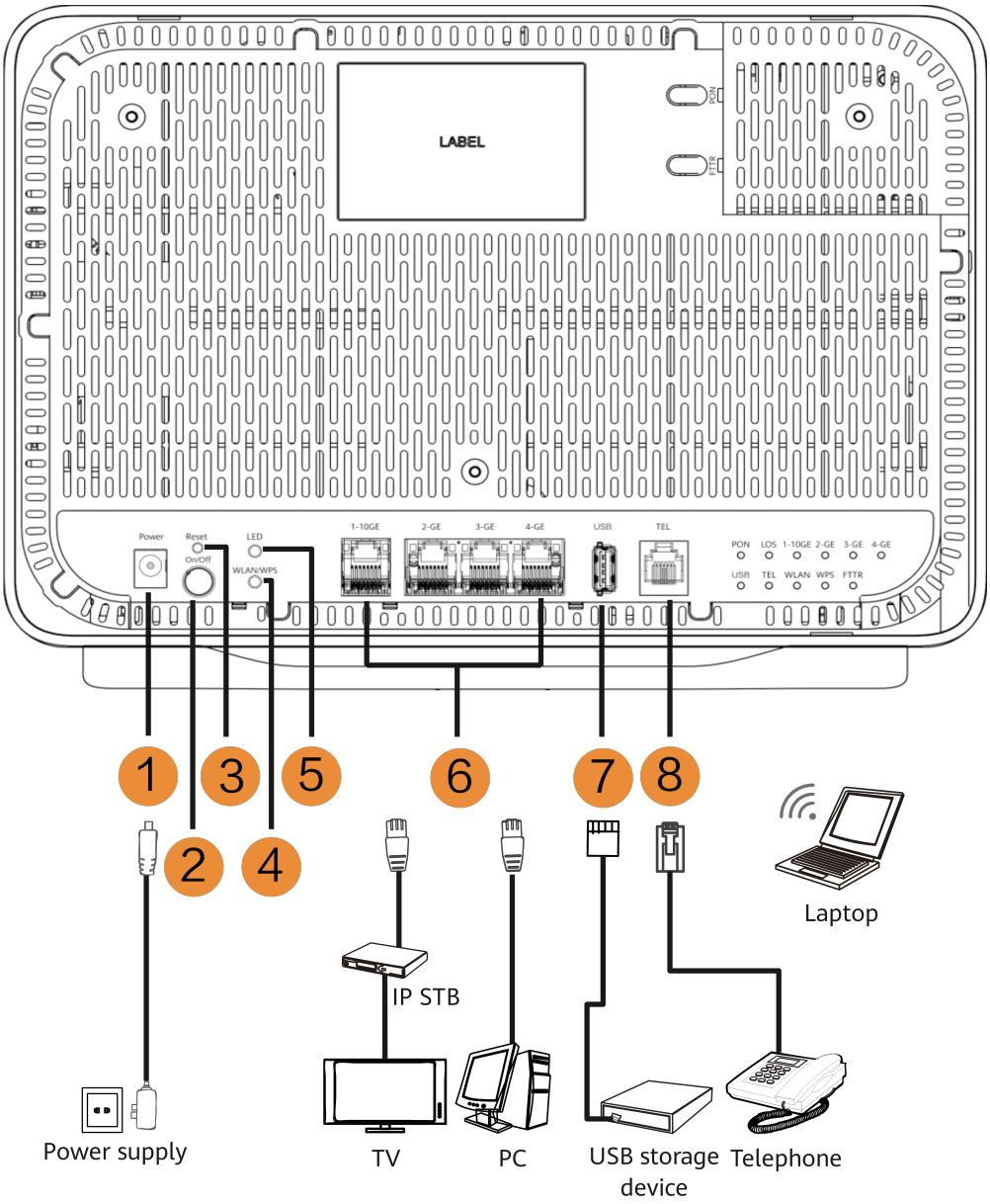
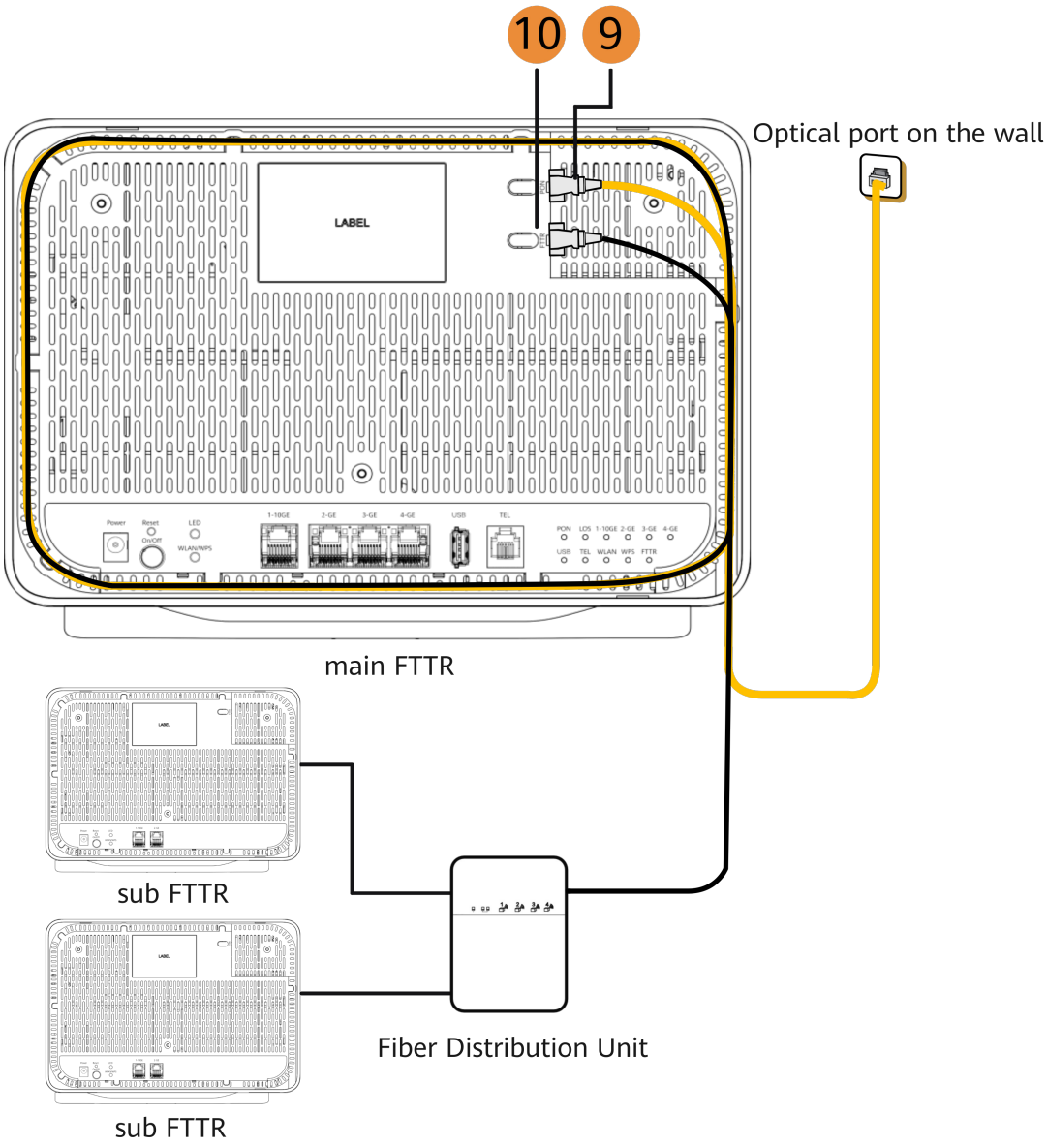


Figure 3-2 Cable connection diagram 2



NOTE

- There is a row of ports/buttons at the lower rear of the device. The ports/buttons are displayed from left to right: **Power**, **On/Off**(Underneath), **Reset**(Above), **WLAN/WPS**(Underneath), **LED**(Above), **1-10GE**, **2-GE**, **3-GE**, **4-GE**, **USB**, **TEL**(Corresponds to No. 1 to No. 8 in the following table).
- There are two ports on the rear of the device near the right side. The ports are displayed from top to bottom: **PON**, **FTTR**(Corresponds to No. 9 to No. 10 in the following table).

Table 3-1 Ports and Buttons Description

No.	Port/Button	Description
1	Power	Connects to a power cable.

No.	Port/Button	Description
2	On/Off	Turns on or off the device.
3	Reset	Restarts the device. 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.
4	WLAN/WPS	• When the wireless function (WLAN) is enabled, press the WLAN/WPS switch for 1s to 5s to start Wi-Fi protected setup (WPS) negotiation. • 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). • When the wireless function (WLAN) is disabled, tap the WLAN/WPS switch for more than 1s to turn on the wireless function (WLAN).
5	LED	Indicates the indicator switch. • On: The indicator is working properly. • Off: All indicators are off. **NOTE** You are advised to turn on the indicator switch to detect abnormal indicator status in a timely manner.
6	1-10GE (First Ethernet port from left to right)	Connects to a computer, IP STB, or router. • GE port supports 10/100/1000 Mbit/s auto-adaptation. • 10GE port supports 100/1000/2500/10000 Mbit/s auto-adaptation.
	2-GE (Second Ethernet port from left to right)	
	3-GE (Third Ethernet port from left to right)	
	4-GE (Fourth Ethernet port from left to right)	
7	USB	Connects to USB storage devices; plug-and-play USB ports reserved for users.
8	TEL	Connects to a telephone or fax machine.
9	PON	Connects to drop cables and supports XGS-PON upstream access.

No.	Port/Button	Description
10	FTTR	Indicates a P2MP optical port, which is connected to the fiber distribution unit.

4 Indicator Description

- There is an indicator on the front panel of the device, which is directly below the middle (excluding the base).
- There are two rows of indicators on the lower left of the rear of the device.
  - The first row of indicators from left to right are as follows: **PON**, **LOS**, **1-10GE**, **2-GE**, **3-GE**, **4GE**.
  - The second row of indicators from left to right are as follows: **USB**, **TEL**, **WLAN**, **WPS**, **FTTR**.

Table 4-1 Indicator Description

Indicator	Status	Description
Indicator on the front panel	Steady white	The device is started and connected to the Internet.
	Blinking white	The device has been started but is not connected to the Internet.
	Off	The device is powered off.
PON/LOS	See the following table.	
1-10GE/2-GE/3-GE/4-GE (with LED indicators)	Steady blue	The network port is connected, but no data is being transmitted.
	Blinking blue	The network port is connected and data is being transmitted.
	Off	The network port is not connected.
USB	Steady blue	The USB port is connected, but no data is being transmitted.
	Blinking blue	Data is being transmitted over the USB port.
	Off	The USB port is not connected.
TEL	Steady blue	The telephone service is enabled.

Indicator	Status	Description
	Blinking blue	The phone is being used.
	Off	The telephone service is disabled.
WLAN	Steady blue	The WLAN function is enabled.
	Blinking blue	Data is being transmitted.
	Off	The WLAN function is disabled.
WPS	Steady blue	WPS authentication is enabled.
	Blinking blue	Terminals such as mobile phones are accessing the network.
	Off	WPS authentication is disabled.
FTTR	Steady blue	Optical signals are detected on at least one downstream Sub FTTR.
	Off	No fiber is connected or no optical signal is received.

Table 4-2 PON/LOS Indicator Description

Status No.	PON	LOS	Description
	Status	Status	
1	Blinking blue rapidly (twice per second)	Off	The device is attempting to connect to the upper-layer device.
2	Steady blue	Off	The device is connected to the upper-layer device.
3	Off	Blinking red slowly (once every two seconds)	No fiber is connected or no optical signal is received.
4	Blinking blue slowly (once every two seconds)	Blinking red slowly (once every two seconds)	Indicates a hardware fault.

NOTE

1. If the main FTTR is not powered on or the power switch of the main FTTR is turned off, all indicators are in the Off state.
2. What can I do if the indicator status is abnormal?

   a. Check whether the corresponding optical, network, POTS, or USB port is properly connected.

   One end of the fiber connector is located at the rear of a main FTTR, and the other end is located on the wall or in the weak-current box.

   Note: Do not look into an optical port with naked eyes.

   b. If the WLAN indicator is abnormal, press the **WLAN/WPS** button on the main FTTR to enable the WLAN function.

   c. Restart the main FTTR.

   Press the **On/Off** button to turn off the main FTTR. After a few seconds, turn on the main FTTR.

   d. If the fault persists, contact the operator's service hotline and turn to the installation and maintenance personnel for help.

5 FAQs

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.
- You can query the running status of each service unit on the web page of the device.
- If an exception occurs during using the device and the fault persists by referring to the following FAQs, contact the professional service personnel of the carrier.

5.1 How do I log in to the main FTTR web page?

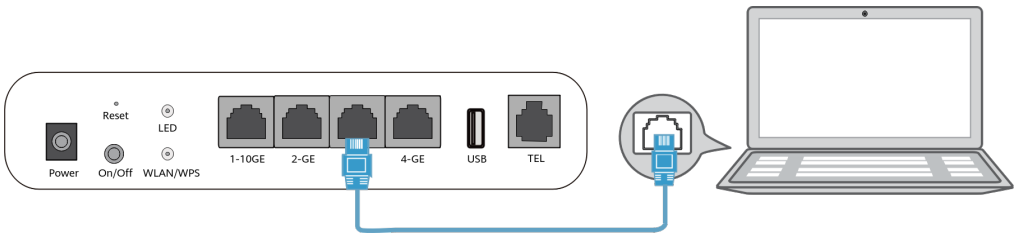
- Wireless login

1. Connect your mobile phone, pad, or PC to the Wi-Fi network of the main FTTR.
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 main FTTR.

Figure 5-1 Diagram for connectting a PC to the main FTTR



NOTE

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

2. Set the IP address of the PC in the same subnet as the web address of the main FTTR. *For example, if the web address of the main FTTR is 192.168.a.b*

(for the web address of the main FTTR, see the product nameplate), set the IP address of the PC to 192.168.a.c.

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 main FTTR). Press **Enter**.
   b. Enter the login user name and password (printed on the nameplate of the main FTTR). Click **Log In**.

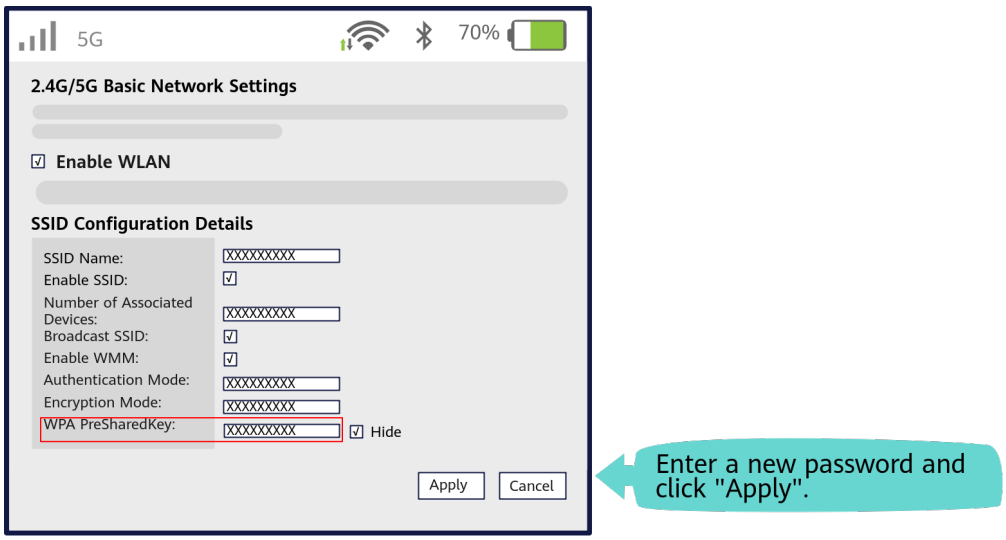
NOTE

- 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.

5.2 How do I change the Wi-Fi password?

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

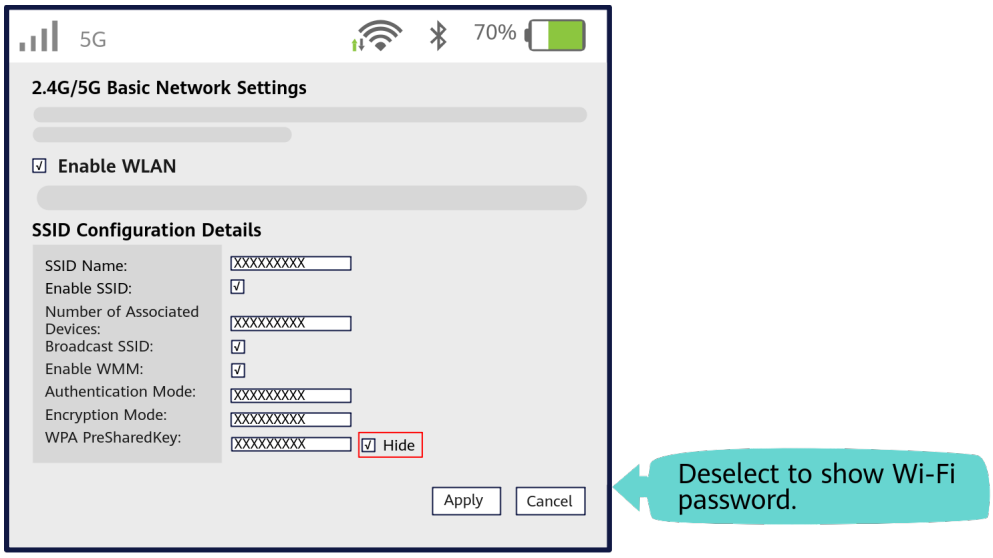
Figure 5-2 2.4G/5G Basic Network Settings



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

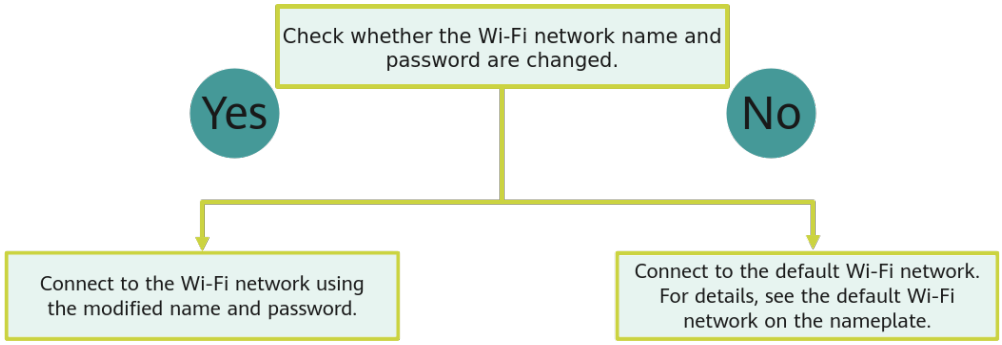
1. Log in to the main FTTR web page using your PC by wired login. For details, see "**How do I log in to the Main FTTR web page?**"
2. Choose the **Advanced > WLAN** tab and choose **2.4G Basic Network Settings**. (If you want to configure 5 GHz Wi-Fi, choose **5G Basic Network Settings**.)

Figure 5-3 2.4G/5G Basic Network Settings



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

Figure 5-4 Troubleshooting flowchart



5.5 How to improve the Wi-Fi speed of a main FTTR?

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 main FTTR based on house structures, indoor obstacles, and electrical appliance-caused interferences. If possible, put main FTTR 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 main FTTR 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 main FTTR 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 main FTTR positions or add new repeaters to enhance the Wi-Fi coverage.

3. Using the correct radio channel. Generally, the main FTTR 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.

5.6 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.

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

The main FTTR 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.

5.8 How do I restore the main FTTR to factory setting?

Press **Reset** by using a needle-type object for longer than 10s to restore factory defaults and reset the main FTTR. 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 main FTTR configuration information and further cause an Internet access failure. If this problem occurs, contact your service provider for help.

5.9 How can I download main FTTR firmware or software?

- main FTTR is used with an OLT and NMS of a required version. If the versions are not the required ones, the main FTTR may not work.
- If required, contact your internet service provider to obtain the correct main FTTR firmware or software.

