Huawei FTTR - OptiXstar F50 Configuration Guide

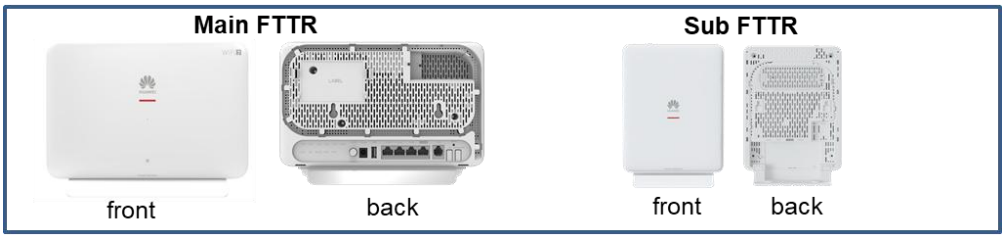
Have you ever experienced frame freezing during online meeting, frustrations in gaming because of large latency, very slow network speed while the subscription bandwidth is 1000Mbps or the Wi-Fi connection interrupted when moving around?

1.1 FTTR Introduction

Huawei fiber to the room (FTTR) solution extends fibers to every room, enabling you to enjoy a stable gigabit Wi-Fi experience in every corner of your room. When you walk around in your home, the Wi-Fi will keep connected, achieving a seamless switching experience.

Huawei FTTR is available on Amazon now, which you can search Huawei FTTR. FTTR consists of 4 parts:

- **FTTR active equipment**: Main FTTR + Sub FTTR.
  - Main FTTR is used to connect to the internet, supporting Ethernet or Fiber uplink.
  - The sub FTTR is the satellite, connecting through fiber or by Wi-Fi mesh.
  - 1 x Main FTTR can supports maximum 16 Sub FTTR.
- The main and sub devices of Huawei FTTR F50 are shown in the figures below.



- **FTTR passive components**: Fiber Distribution Unit (ATB2121-S-5U-SC/APC) + ATB (ATB2120-T-1-SA) + Transparent fiber (10m/20m/30m/100m).
  - the fiber distribution unit (ATB2121-S-5U-SC/APC) is a 1:4 splitter, 1 input connecting to Main FTTR and 4 outputs connecting sub FTTR and 1 sub port to cascade more fiber distribution unit.
  - The fiber distribution unit can be cascaded to maximum 4 level, totally with 16 outputs.
  - The ATB (ATB2120-T-1-SA) is used to store the remaining length of the fiber. It has a built-in SC/APC connector which can be removed to let the fiber go through directly.
  - The transparent fiber used by FTTR is **SC/APC connector**. The fiber is

preconnected, no need any fiber splicing. Since the length of transparent fiber is fixed – 10m/20m/30m/100m (100m is available, but not on Amazon), the ATB box is needed to store the overlength. **Two fiber can be connected through the SC/APC connector which is the same as the ATB box has, to become a longer length**.

- **FTTR accessory**: Plane corner clip + Wall-through cable supporter + External corner/Internal corner cable supporter.
  - Fiber wiring clips-Plane corner clip (FWC06) is used to stick the fiber to wall when passing through some corners.
  - Fiber wiring clips-Wall-through cable supporter (FWC07) is used to protect the fiber when going through the wall.
  - Fiber wiring clips-External corner/Internal corner cable supporter (FWC08) is used to enhance the fiber to make sure it sticks to the wall.

For more information about transparent fiber and deployment, you can refer to this video: https://e.huawei.com/de/videos/others/7b0d610cf967447b80ffcc83829fbc67

Huawei offers 2 versions of FTTR on Amazon: F50 Standard (Wi-Fi 6) and F50 Plus (Wi-Fi 7).

1.1.1 F50 Standard (Wi-Fi 6)

- Main FTTR: **Huawei OptiXstar V166a-20** provides 1x2.5GE + 3xGE + 1xPOTS + 1 x USB 2.0* + 2.4 GHz & 5 GHz Wi-Fi 6+1xoptical port (FTTR port). Uplink is GPON (by default).
- Sub FTTR: **Huawei OptiXstar K156a-21** provides 1 x 2.5 GE+1 x GE+2.4 GHz & 5 GHz Wi-Fi 6+ 1 x optical port (FTTR port).

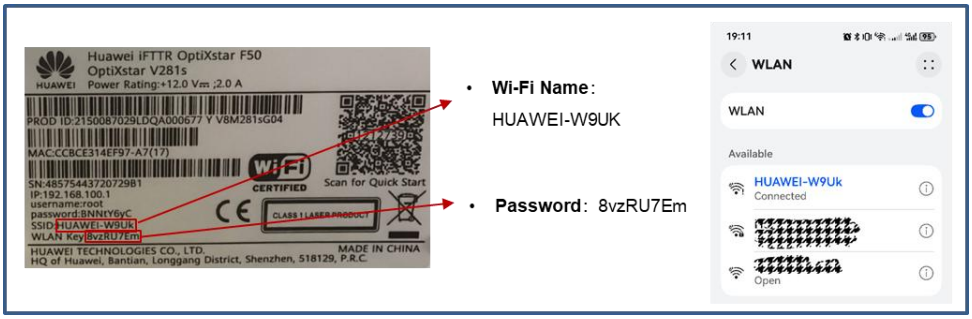
1.1.2 F50 Plus (Wi-Fi 7)

- Main FTTR: **Huawei OptiXstar V261a-20** provides 1 x 2.5 GE + 3 x GE + 1 x POTS + 1 x USB2.0 *+ 2.4 GHz & 5 GHz Wi-Fi 7+1 x optical port (FTTR port). Uplink is XGSPON (by default).
- Sub FTTR: **Huawei OptiXstar K251a-20** provides 1 x 2.5 GE+1 x GE + 2.4 GHz & 5 GHz Wi-Fi 7+ 1 x optical port (FTTR port).

1.2 FTTR Wi-Fi Connection

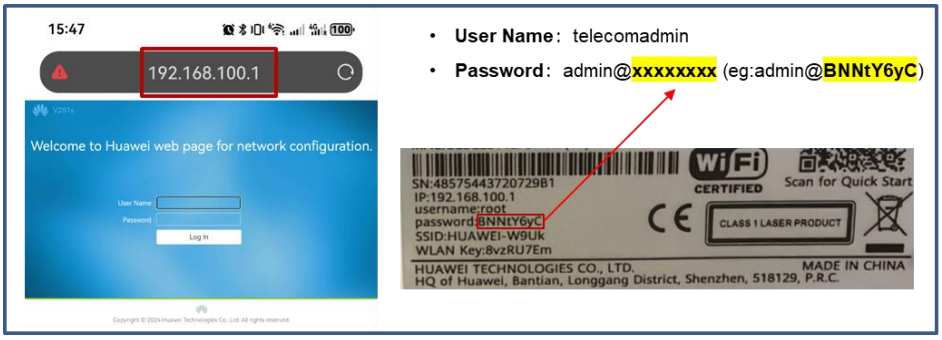
1) Power on main FTTR equipment, wait about 2 minutes for the Wi-Fi ready.

2) Connect to FTTR Wi-Fi by using Wi-Fi information on the nameplate (back of the Main FTTR: SSID means Wi-Fi name and WLAN Key means password).



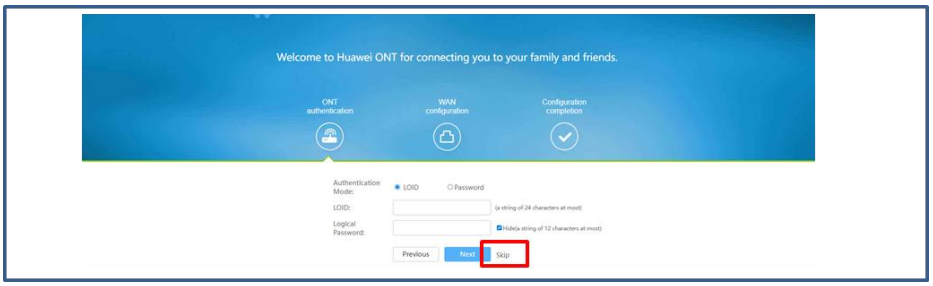
1.3 FTTR Internet Configuration

1) Login to Main FTTR: Enter default IP address 192.168.100.1 in the address bar of your browser.



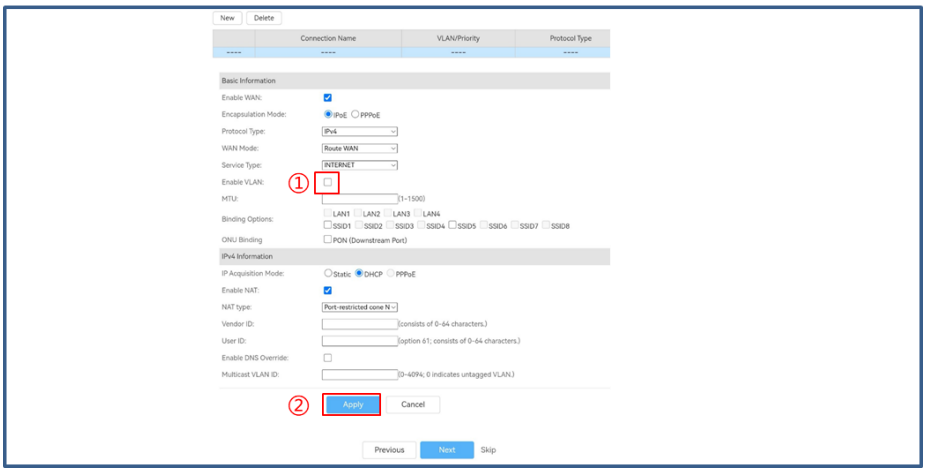
2) Select “On the ONT web page”, then Click “Next”.

3) Click “Skip”



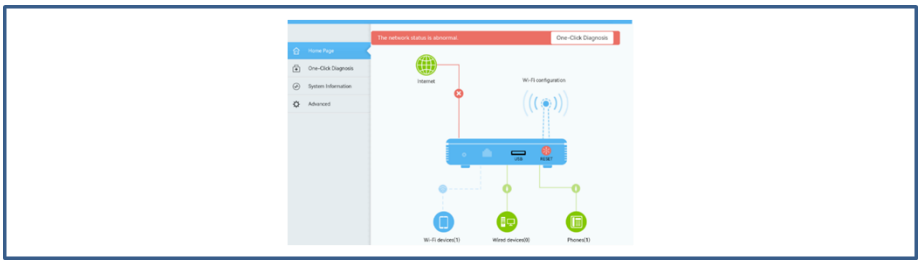
4) Click “New”

5) Configure WAN: Remove Checkmark of “Enable VLAN”, then click “Apply”



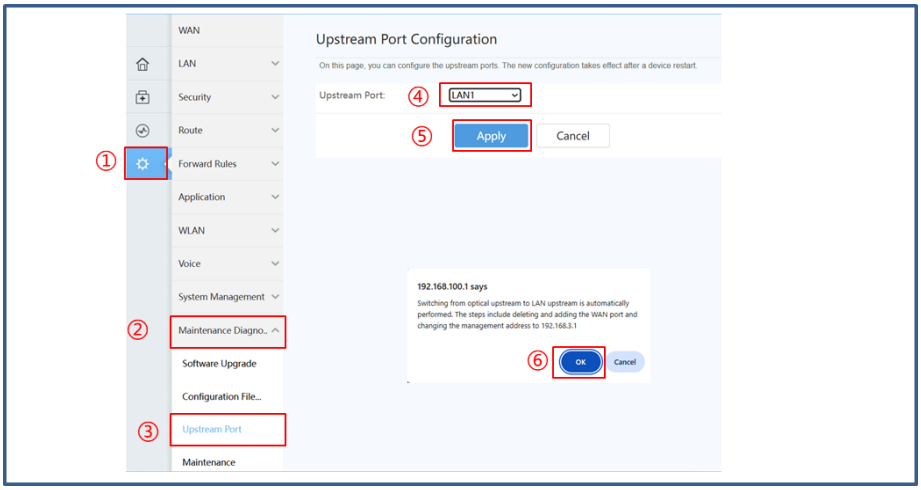
6) Click “Next”, wait for the progress bar finished, then click “Return to Home Page”

Then you get below webpage.



7) **Configure Upstream as WAN Connection:**

- Choose: ①Advanced-> ②Maintenance diagnosis -> ③Upstream Port
- Change upstream port from “PON” to ④ ‘LAN1’
- Click ⑤’ Apply’, then click ⑥OK. The device will **restart**, please wait for about 3 minutes for Wi-Fi back to normal.



Congratulations, you have successfully configured a FTTR network!

1.4 Check the Configuration (Optional)

- **Attention**: after configuration done, the default IP address will be changed to 192.168.3.1.
- Use the same user name & password to login.

1.5 Deploy FTTR Network

Connect the “LAN 1 Port - 2.5GE” of the Main FTTR to your modem to get the Internet. To get full speed, please use at least cat6 ethernet cable.