

F200D-8P

Quick Start

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1 Device Appearance



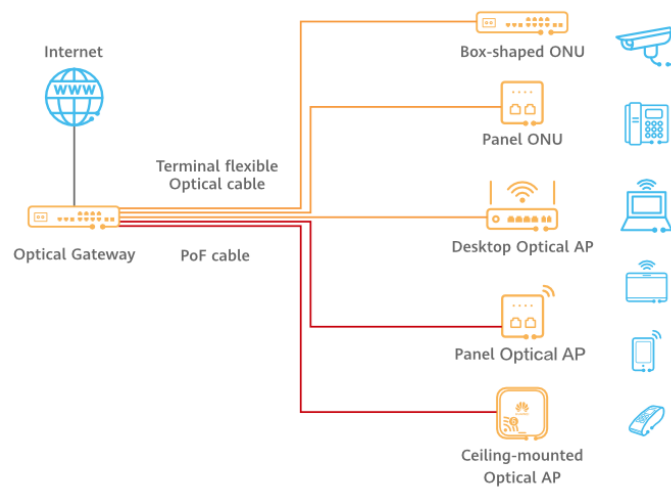
NOTE

- This product is a Class A product and may cause radio interference. Users need to take anti-interference measures if necessary.
- The figures shown in this document may differ from the actual products, but the differences do not affect the functions of the products.

Port/ Button	Description
PON	Connects to an SC/UPC optical connector to support GPON upstream transmission.
GE1-GE8	Works as an Ethernet interface to support 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s auto-sensing and PoE/PoE+.
Power	Connects to a power cable.
Reset	Resets the device. Press and hold the button for less than 10 seconds and release it to restart the device, or press and hold the button for longer than 10s to restore factory settings. NOTE Exercise caution when restoring the device to factory settings. After the device is restored to factory settings, it may fail to access the Internet. If a device cannot access the Internet after being restored to factory settings, contact the service provider for help.

2 Typical Application

Figure 2-1 MiniFTTO networking scenario



3 Device Installation

OptiXstar F200D-8P can be placed on a desktop, mounted on a wall, or installed in a network box.

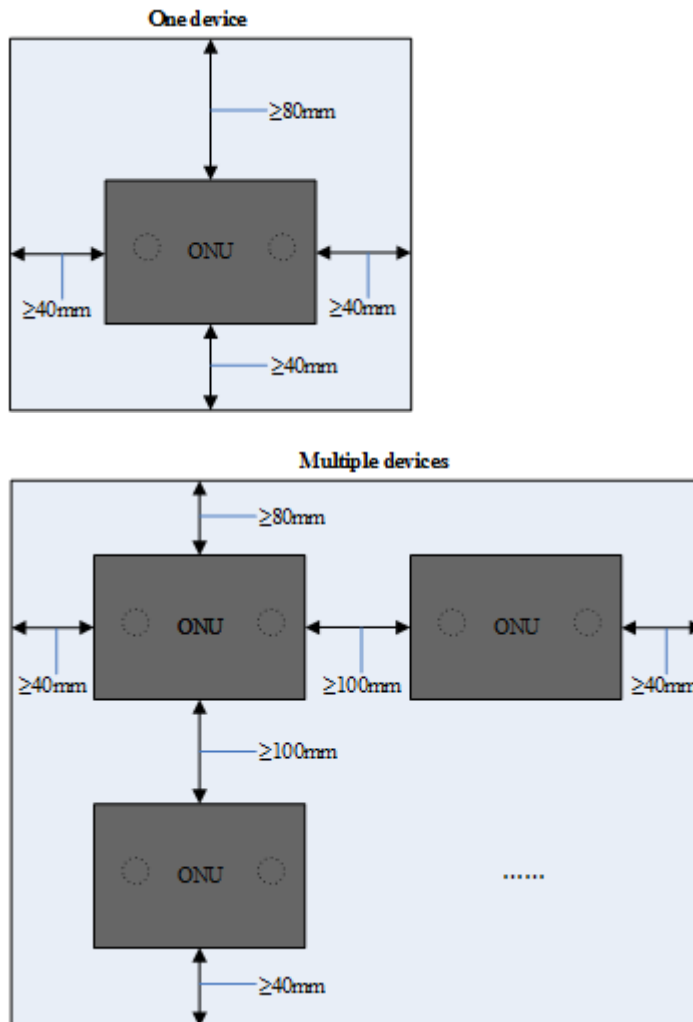
NOTICE

- OptiXstar F200D-8P is an optical network terminal. F200D-8P is also called ONU for short.
 - Do not stack ONUs that are placed horizontally.
 - Do not expose the device outdoors.
 - It is recommended that adapters and fibers not be vertically installed above ONUs.
 - Use the standard power adapter provided by Huawei to supply power to the device. Otherwise, the device may not work properly or security risks may be introduced.
 - Do not route Ethernet cables or adapter cables outside a network box.
 - Install the device in a confined area, such as a network box. Only professional personnel are allowed to operate and maintain the device.
 - The device can be used indoors or outdoors. When used outdoors, the device must be installed in a network box, cables must be routed in a secure way, and an outdoor surge protective device (SPD) must be installed at the power port to prevent lightning strikes from damaging the device. Suggestions for installing an SPD:
 1. It is recommended that a Huawei-certified SPD be installed at the power port of the network box. The ground cable of the SPD should be securely connected and as short as possible (length < 20 cm and diameter > 6 mm²). The key specifications requirements are as follows:
 - Surge specifications: 20 kA in differential and common mode
 - Maximum continuous operating voltage: 385 V AC
 - Voltage protection level: 1.8 kV
 2. Other layout and grounding requirements for the SPD in the network box:
 - Impedance requirements: The impedance between the ground bar of the network box and the ground is less than 10 ohms, and the impedance between the SPD and the ground bar is less than 0.1 ohm.
 - Cable length requirements: To ensure that the network box is reliably grounded, the ground cable of the network box should be shorter than 30 m. It is recommended that a cable longer than 5 m be coiled to connect the power SPD and the ONU power port.
 - Layout requirements: A power SPD (able to withstand 20 kV lightning strike) is installed close to the ONU between the circuit breaker and ONU power socket. Ensure that the distance between the AC power cable and network cable is longer than 50 cm. Keep the network cable as short as possible and do not route the excessive network cable in parallel with the AC power cable (recommended length of parallel routing < 50 cm).
 3. Other specifications (including waterproof, temperature, and humidity requirements) are consistent with those for other ONU products.
-

Space for Heat Dissipation

NOTE

- The space requirements for heat dissipation indicated in the following figures are applicable to ONUs desktop flat, wall-mounted and network box installation.
- The heat dissipation sides are not allowed to have any contact with the wall or desktop.



Horizontally Placed on a Desktop

NOTICE

Do not stack products that are placed horizontally on a desktop.



Mounting on the wall

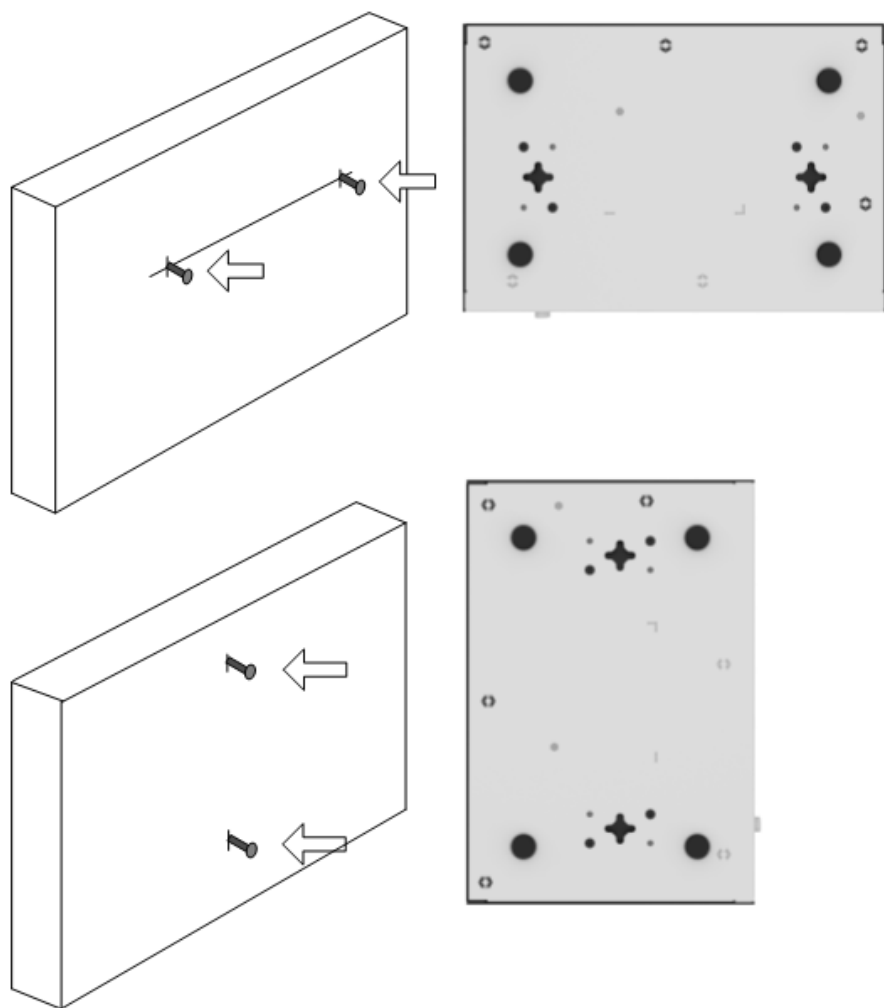
It is recommended that the port be facing down to prevent other objects such as dust from falling in for wall mounting, as shown in the following figure.

1. Mark two positions with the same spacing as that between the two mounting holes of the ONU 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.

NOTE

It is recommended that the screw diameter be less than or equal to 4 mm, the nut diameter be 6 to 8 mm, and the length should not be less than 20 mm.

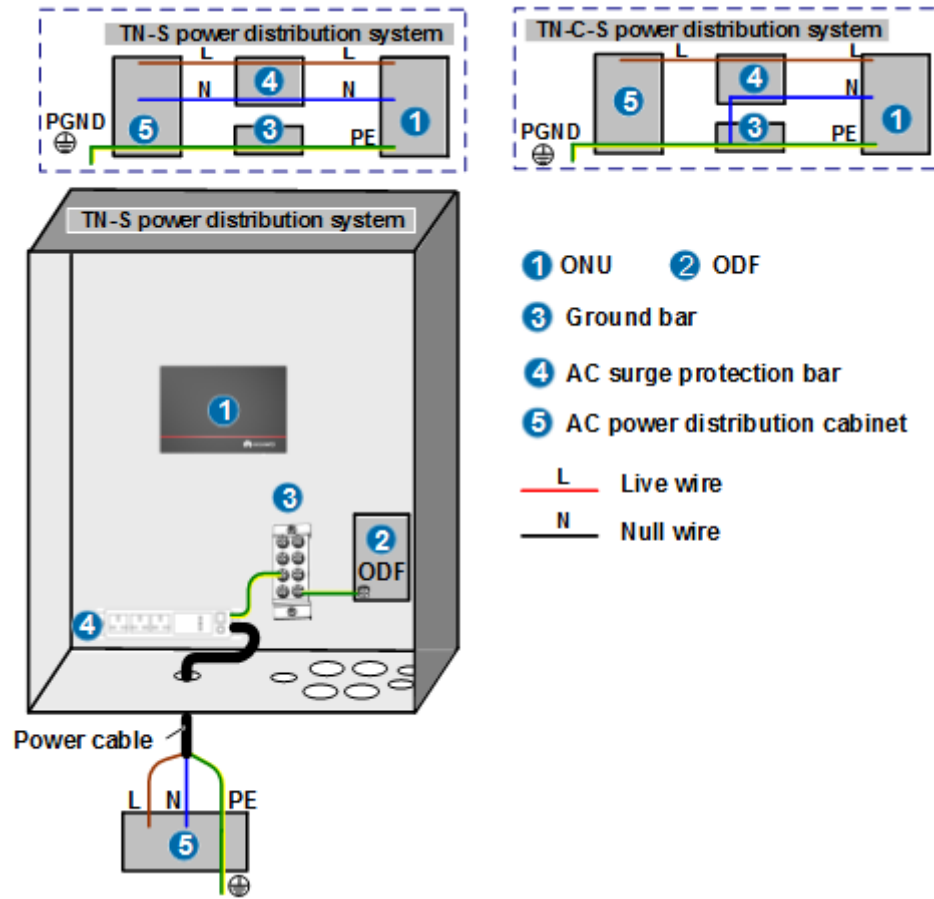
3. Use a screwdriver to fasten the screws into the expansion bolts, reserving 5 mm ends out of the wall, and mount the ONU onto the screws.



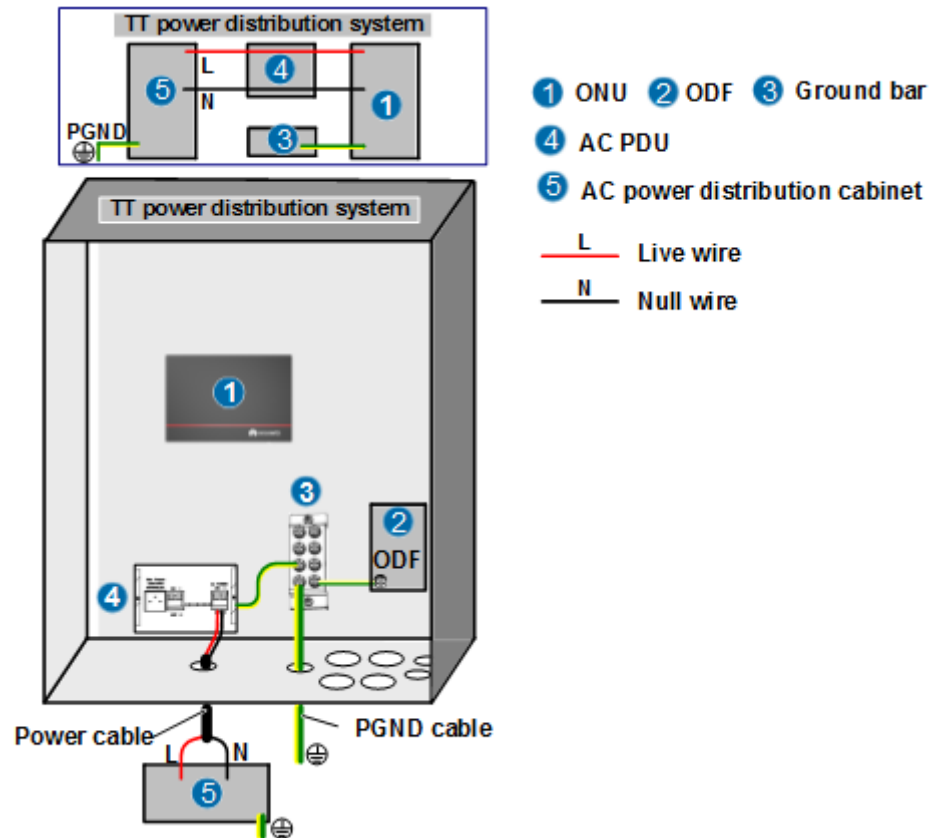
Mounting in the network box

NOTICE

- Do not use an enclosed network box and ensure that the air intake and exhaust vents are not blocked to ensure proper heat dissipation of the ONU.
 - If the network box is installed indoors or in a corridor that is free from rain, the network box must meet the requirements of IP31 protection. ("IP" is short for international protection. The first number indicates a class for preventing the solid particle from entering the device and the second number indicates a class for preventing water from entering the network box. "3" means that solid particles with diameters equal to or larger than 2.5 mm can be prevented from entering the box. "1" means that the drips fallen vertically cannot damage the device.)
 - If the network box is installed outdoors or in a corridor that is exposed to rain, the network box must meet the requirements of IP55 protection. ("5" means that the network box cannot completely prevent dust from entering, but the amount of dust that enters the network box does not damage the device. "5" means that the water sprayed from different directions to the network box does not damage the device.)
 - The method for installing the ONU in a non-Huawei network box depends on the network box specifications. When the ONU is installed in a non-Huawei network box, the preceding heat dissipation space rules must be observed.
-
- **Guide for Grounding the Network Box of TN-S and TN-C-S Power Distribution Systems**



- In the case of the TN-C-S and TN-S AC power distribution systems, you are advised to use the PE wire of the AC power cable for the ONU grounding connection. The PE wire of the AC power cable for the corridor of the building is already grounded properly.
- Connect the ground bar and all the internal devices using the ground cable (the cross-sectional area of the ground cable must be greater than or equal to 6 mm²), and the ground bar to the network box in an equipotential manner through a metallic structure.
- Connect the grounding point of the strength member of the optical fiber to the ground bar through a ground cable, or connect this grounding point to the network box in an equipotential manner through a metallic structure.
- When the PE line of the AC power cable in the corridor of the building does not meet the grounding requirement, ground the network box through an external ground cable (PGND cable) and ensure that the strength member of the optical fiber is disconnected from the device ground point.
- Decouple the surge protector from the ONU power source using a power cable of 3-5 m.
- **Guide for Grounding the Network Box of the TT Power Distribution System**



- In the case of the TT power distribution system, you are advised to use an external ground device. For example, use a grounding device dedicated for buildings (such as the ground flat steel, ground stud, and ground bar) or the base steel bar of the reinforcement concrete of the building, or deploy a new ground grid.
 - Use the ground cable (the cross-sectional area of the ground cable must be greater than or equal to 6 mm²) to connect the ground bar and all the internal devices, and the ground bar to the network box in an equipotential manner through a metallic structure.
 - Connect the external ground cable (PGND cable) of the network box to the external ground device. As specified by the grounding standard, the cross-sectional area of the external ground cable must be greater than or equal to 16 mm².
- **Guide to Ground the Strength Member**

Table 3-1 Engineering Responsibilities

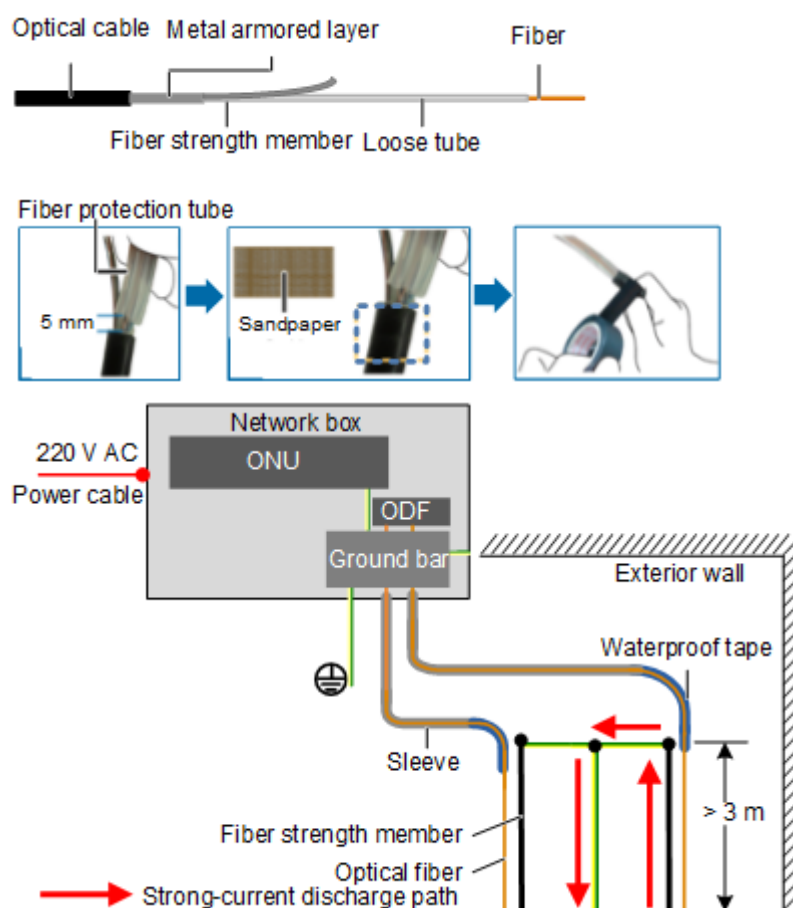
Optical Cable Provider	Engineering Party	Recommended Solution	Remarks
Huawei	Huawei	Solution 1 is preferred. If solution 1 fails to implement, Huawei is required to communicate with the customer about engineering risks and sign a memorandum with the customer before using solution 2.	If solution 1 is used, the engineering quality must strictly comply with engineering specifications. If solution 2 is used, the network box must be securely grounded. In addition, a metal protective cover must be installed between the fiber strength member and network box fixing points, preventing sparks from spreading if the fiber strength member connects to a heavy-current power line.
	Customer	Solution 1	If the engineering does not comply with solution 1, the customer must take consequences.
Customer	Huawei	Requirements: During engineering, do not route the fiber strength member into the network box. In addition, ground the fiber strength member and the network box separately. Install the network box and ONU based on the instructions provided in this document.	The customer must ensure that the fiber strength member is not be routed inside the network box. Otherwise, the customer must take consequences.

- a. **Grounding solution 1: The fiber strength member is isolated from the network box and grounded outside the network box.**

This solution prevents the introduction of sudden heavy currents into the network box, thereby protecting the device inside the network box against heavy currents. (A long-distance armored optical cable may introduce sudden heavy currents into the network box if the outer insulation layer is broken and connects to a heavy-current power line.)

Solution 1 is implemented as follows:

- Strip the outer insulation layer and armored tube from the fiber strength member at the ground point. Then, clean bare optical fibers and use a protection tube to protect them. (Use outdoor tubes in outdoor scenarios and common tubes in indoor or corridor scenarios. Use waterproof tape produced by 3M or COTRAN.)
- Use a piece of sandpaper to polish burrs at the stripped position of the optical cable. Then, use insulation tape to wrap the stripped optical cable. When wrapping the waterproof tape, ensure that fiber cores are force-free.
- Cut excess fiber strength member for grounding.



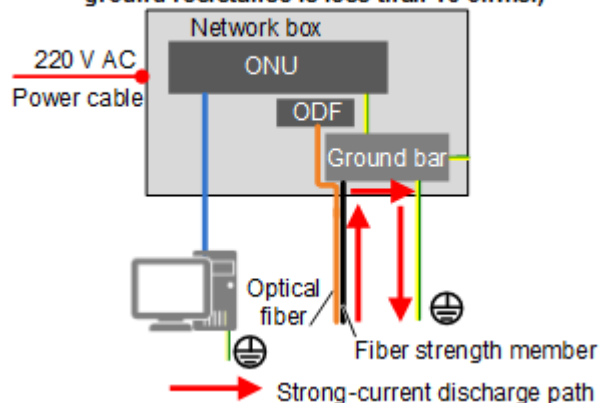
NOTICE

- During onsite operations, ensure that optical fibers are force-free and the bend radius is greater than 40 mm. Otherwise, services may become abnormal or even fail due to degraded signal transmission.
- The fiber strength member must be securely grounded. In addition, the ground point of the fiber strength member must be at least 3 meters above the ground (which prevents manual touching), and no combustible materials are around the ground point within a distance of 0.3 m. If the fiber strength member fails to be securely grounded, it must be insulated. Otherwise, the fiber strength member may introduce heavy currents if it connects to a heavy-current power line, threatening human safety.

b. **Grounding solution 2: The fiber strength member is grounded inside a network box.**

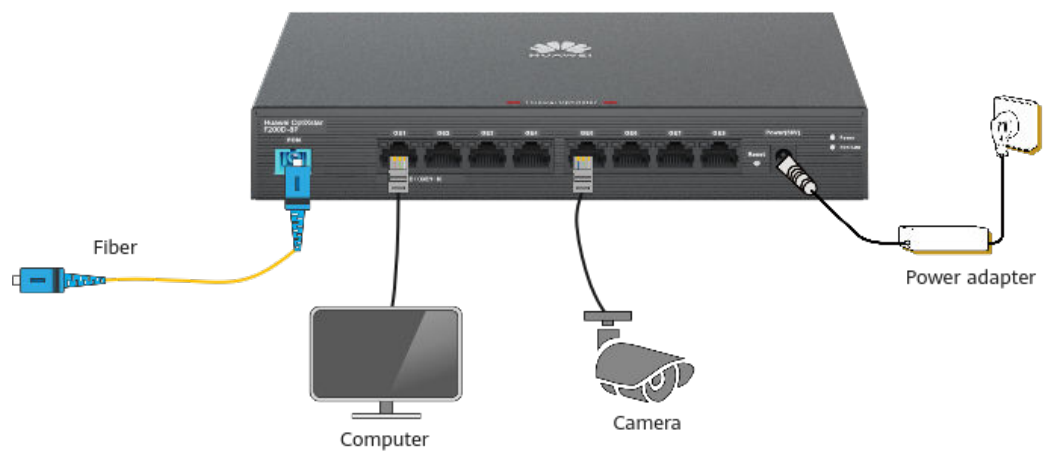
The fiber strength member must be connected to a ground bar at the ground point using a ground cable. The ground point can connect to the network box using a metal in an equipotential manner. When the fiber strength member connects to a heavy-current power line, heavy currents may be discharged inside the network box using the ground bar. If this happens, sparks may occur at the contact point between the fiber strength member and the ground bar, which may burn the device and the network box. To prevent this issue from occurring, use solution 1.

Secure grounding of the network box and the device (The ground resistance is less than 10 ohms.)

**NOTICE**

If the ground bar of the network cabinet fails to securely ground, ensure that the fiber strength member is disconnected from the ground bar and that the fiber strength member is properly insulated. Otherwise, heavy currents may be discharged using the network ports on the local and peer devices, which may damage these network ports.

4 Cable Connections



NOTE

- The fiber connector type is SC/UPC and the color is blue. Do not use other types of connectors. Otherwise, the optical power may be abnormal.
- The preceding figures are for reference only.

5 Indicator Information

Table 5-1 Indicator status description

Indicator	Color	Status	Description
POWER	Green	Steady on	The device is powered on.
		Off	The device is powered off.
PON/LOS	Green	Blinking rapidly (twice per second)	The PON port is connecting to the upper-layer device.
		Steady on	The PON port is connected to the upper-layer device.
	Red	Blinking slowly (once every two seconds)	The PON port is not connected with a fiber or has no optical signal.
		Steady on	The PON port is prohibited by the upper-layer device or sends optical signals abnormally. Contact the service provider for help.
	Yellow	Blinking slowly (once every two seconds)	The hardware of the terminal connected to the PON port is faulty.
GE1-GE8	Green	Steady on	The Ethernet connection is normal.
		Blinking	The Ethernet port is transmitting or receiving data.
		Off	The Ethernet connection is not set up.
PoE indicators (GE1-GE8)	Yellow	Steady on	PoE power is supplied by a port.
		Off	PoE power is not supplied by a port.

 NOTE

Added the one-click indicator blinking function to V500R023C00.

When you use the one-click indicator blinking function on the app, all indicators blink alternately for 2 minutes. In this way, you can find the location of the ONU.

6 Technical Specifications

Item	Specifications
Dimensions (H x W x D)	220 mm x 150 mm x 35 mm (excluding rubber pad)
System power supply	56 V DC, 2.67 A
Power adapter input	100–240 V AC, 50/60 Hz
Operating temperature	–10°C to +55°C
Operating humidity	5%–95%, non-condensing
Weight	About 1.2 kg
Static power consumption	9 W
Maximum power consumption	12 W (PoE ports without PDs) 135 W (PoE ports with PDs with the maximum power consumption)

7 FAQs

How to Log in to the WebUI of an ONU in a MiniFTTO Network?

NOTE

The actual WebUI may be different from the description. The actual WebUI prevails.

Method 1:

After an ONU is connected to a MiniFTTO network, an IP address is automatically allocated to the ONU. You can use this IP address to access the ONU.

NOTE

You can obtain the IP address in either of the following ways:

- Log in to the WebUI of the gateway OLT and choose **System Information > User Device Information** to view the IP address of an ONU.
- Check on eSight. The login password is the same as the common user password of the gateway OLT.

Method 2:

Log in to the WebUI of the gateway OLT, choose **System Information > Network Information**, and click **Click to Login** under the gateway icon. The ONU WebUI is displayed.

How to Configure ONU Network Settings in a MiniFTTO Network?

After an ONU is connected to a MiniFTTO network, the network settings of the gateway OLT are synchronized to the ONU. Therefore, no ONU configuration is required.

How Do I Restore Factory Settings?

Press the reset button using a needle-shaped object for more than 10 seconds to restore the device to factory settings and restart the device. If the indicator (except the power indicator) is off and then on, the system is reset.