



# **EchoLife Gateway PON Terminal**

## **Quick Start**

FCC ID:QISHG8247HB



## Safety Precautions

To use the device properly and safely, read the safety precautions carefully before using the device and strictly observe these precautions when using the device.

### Safety precautions:

- Do not look directly into the optical port without eye protection.
- Keep the device out of the reach of children as the components or accessories may be swallowed.
- The power supply voltage of the device must meet the requirements on the input voltage of the device.
- Do not use any power adapters that are not in the standard configuration. Otherwise, the device may be abnormal or unsafe.
- If the power adapter is damaged and its internal circuit is exposed due to man-made factors, do not touch the exposed circuit, which may bring safety risks.
- Prevent objects, such as metal, from entering the device through the heat dissipation hole.
- Dry your hands before connecting or disconnecting cables. Stop the device and switch off the power before connecting or disconnecting cables.
- Switch off the power and disconnect all cables, including the power cable, optical fiber, and network cable, during periods of lightning activities. The socket-outlet shall be installed near the power adapter and shall be easily accessible. Before use the power adapter, please check no damage on the adapter.
- Do not lead the strength member of the optical fiber or other metal parts indoors. Do not install telephone lines, network cables, power adapters or power adapter cables outdoors. Adopting these measures will help prevent device damage and bodily injuries which are especially prone during thunderstorms.
- Install the device according to the requirements of the manufacturer. To be specific, reserve at least 10 cm for heat dissipation at the top and four sides of the device, keep the device away from flammable objects, highly magnetic or electric devices, such as microwave ovens, refrigerators, and mobile phones.
- Do not place any object on the device, so that the device will not be damaged due to overheating or deformation.
- If an abnormality occurs, for example, liquid entering the device, smoke, unusual sound, and smell, stop the device immediately, switch off the power, disconnect all cables (such as the power cable, optical cable, and network cable) to the device, and contact the authorized service center.
- Do not disassemble the device without permission. In the case of a device fault, contact the authorized service center.
- Dispose of the packing materials, expired batteries, and old or abandoned devices in accordance to local laws and regulations (recycling them is strongly recommended).
- Do not change the structure, safety design, or performance design of the device without prior authorization.

### Fireproof precautions:

- Keep the device away from large heat source equipment, bare flames, and high-power devices, such as electric heaters, candles, and blow drier, to eliminate safety risks.
- If there are aged cables or power socket facilities on the power supply line to or near the device, replace them in time to eliminate safety risks. The power supply voltage of the device must meet the input voltage requirement.

## Product Overview

Product	Function
HG8247 series	<ul style="list-style-type: none"><li>■ 4 Ethernet ports</li><li>■ 2 POTS ports</li><li>■ 1 USB port</li><li>■ 1 CATV port</li><li>■ Wi-Fi access</li></ul>

### NOTE

- The devices that support Wi-Fi access are classified into devices equipped with external antennas and devices equipped with internal antennas.
- If some device types are not in the preceding list, refer to <http://www.huawei.com>.

## Technical Specifications

- Power adapter input: 100–240 V AC, 50–60 Hz
- System power supply: See the nameplate on the device.
- Ambient temperature: 0°C to +40°C
- Ambient humidity: 5%–95% (non-condensing)

For other technical specifications, see the following table.

GPON Terminal	Weight (Including the Power Adapter)	Maximum System Power Consumption
HG8247 series	About 500 g	≤18 W

### NOTE

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

## Installing the GPON&XG-PON Terminal

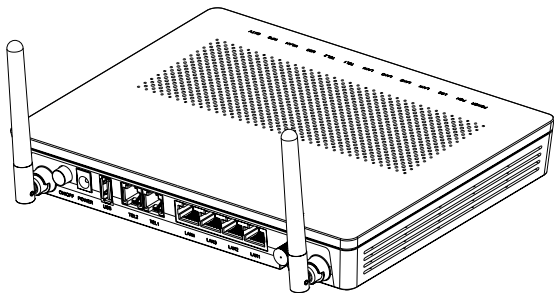


### Caution

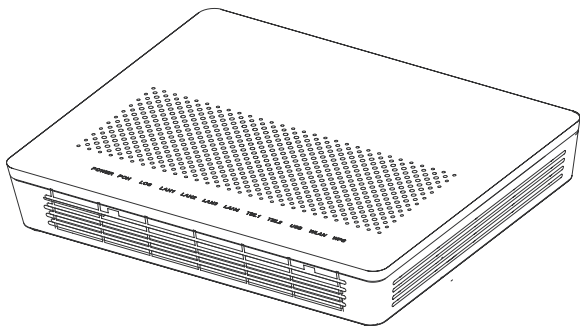
1. Do not install PON terminals outdoors or on the outdoor cabinets.
2. PON terminals can be mounted onto a wall or be placed on a workbench. Do not install PON terminals in other modes, such as the ceiling.
3. The terminal cannot be connected to other devices such as GPON terminals, switch and router.
4. After the PON terminal is installed with a foot-stand, do not remove the foot-stand unless it is necessary. When you remove the foot-stand, apply force evenly on the two sides of the foot-stand to avoid damages to the PON terminal.

## Mounting a GPON terminal on the desk

At present, only HG8247H ONTs are equipped with external antennas. The figure below shows an HG8247H that is horizontally placed on a desk.



The figure below uses an HG8247H ONT as an example to show the ONT that is horizontally placed on a desk.



## Mounting terminal vertically on the desk

(Only supported by some product models)

The following figure uses an HG8247H ONT as an example to show the ONT that is vertically placed on a desk.

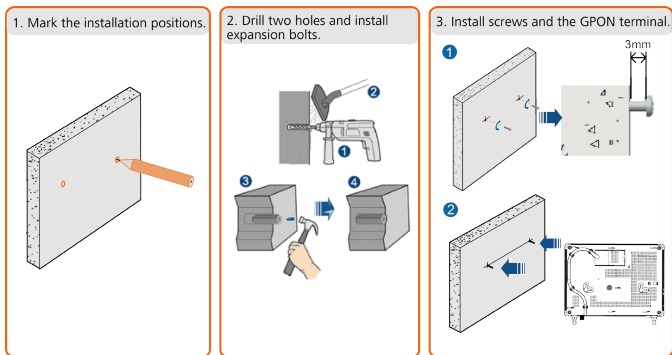
# Mounting a GPON Terminal Onto The Wall

(Only supported by some product models)

**Step 1** Mark the positions of two holes used for mounting a GPON terminal, ensure that the two holes have the same spacing as the two mounting holes.

**Step 2** Select a proper drill according to the outer diameter of the screws. Use a hammer drill to drill the marked positions on the wall. Then clean the wall and install two expansion bolts.

**Step 3** Use a screwdriver to fasten the screws into the expansion bolts, leaving the heads of the screws 3 mm over the wall. Then install the GPON terminal to the screws.

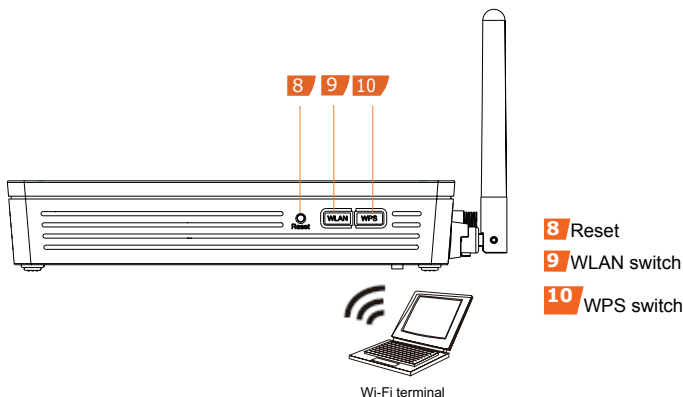
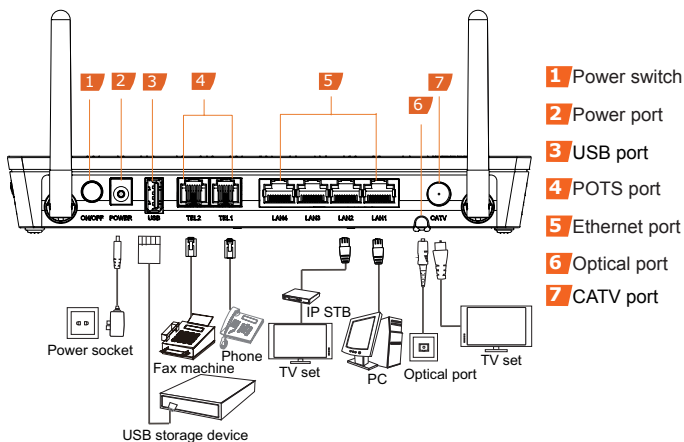


## NOTE

This terminal is mainly placed horizontally on a desk. When it is mounted onto a wall, the silkscreen of its indicator is reversed. If you have a special requirement on the silkscreen, purchase another terminal.

## Connecting Cables

This document uses the HG8247H as an example to describe the connections. Ports on GPON terminals of other types may be different. Therefore, connect cables based on the ports that are actually supported by the device. If the external device is different from the device in the figure, refer to the description for connections of the external device.



Step 1 Use an optical fiber to connect the optical port to the ONT and the optical port on the wall.

- The optical ports of the XG-PON terminals are at the back of the device. For how to connect the optical ports, see the following figure (The HN8247H is used as an example here.):

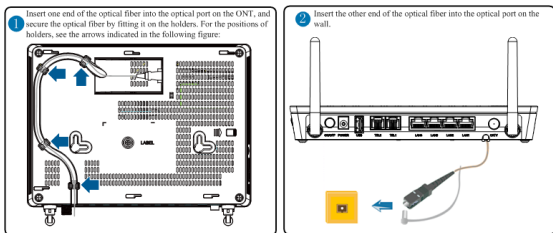


**NOTE**

1. The optical fiber connectors of the HN8xxx series are SC/UPC .
2. To ensure normal use of fibers, make sure that the fiber bend radius is larger than 30 mm.



- The optical ports of the HG8047 series, are at the back of the device
- For how to connect the optical ports, see the following figure



#### NOTE

- The optical 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 bend radius is larger than 30 mm.

**Step 2** Use a coaxial cable to connect the **CATV** port to a TV set or set top box (STB).

**Step 3** Use a network cable to connect the **LAN/10G LAN** port to a PC or the Ethernet port on the IP STB.

**Step 4** Use a phone line to connect the **TEL** port to a phone or fax machine.

**Step 5** Use a power adapter to connect the **POWER** port to the power socket.

#### NOTE

The preceding figure connects the power adapter as an example. When connecting the backup battery unit, please see the usage guide to the backup battery for details.

**Step 6** Use a USB data cable to connect the **USB** port to the USB storage device.

**Step 7** Press the **WLAN** switch to enable the Wi-Fi access function. By default, this function is enabled.

**Step 8** Press the **WPS** switch to enable the WPS encryption function.

#### NOTE

Before enabling the WPS encryption function of a PON terminal, ensure that the function is set in the system software in advance. After successful setting, press the **WPS** switch for the settings to take effect.

## Logging in to the Web Configuration Window

**Step 1** Set the IP address of the PC in the same subnet as the management IP address of the GPON terminal.



### NOTE

You can find the default management IP address on the nameplate of the device.

**Step 2** Enter the management IP address of the PON terminal in the address bar of Internet Explorer and press **Enter**.

The login window is displayed.

**Step 3** In the login window, select your preferred language, enter the user name and password ( printed on the nameplate of the device.), and click **Login**. After the password is authenticated, the Web configuration window is displayed.



### NOTE

-Shipped from different manufacture batches, the nameplates of some devices do not have the IP address, user name, and password printed. In such a case, log in to the device using 192.168.100.1 (or 192.168.1.1), root (user name), and admin (password).

-If you do not perform any operations after logging in to the system for five minutes, you will exit the system and the system automatically returns to the login interface.

-The system will be locked if you input incorrect user name and password three consecutive times. One minute later, it will be unlocked.

-Change the initial password after logging in to the web page.

## Configuring Wi-Fi Parameters

**Step 1** Choose the **WLAN** tab and choose **WLAN Basic Configuration**.



### NOTE

HN8247H is different from GPON terminal, Choose the **Advanced Configuration>WLAN** tab and choose **2.4G Basic Network Settings**. (If you want to configure 5G Wi-Fi, choose **5G Basic Network Settings**.)

**Step 2** In the pane, select the **Enable WLAN** option box. In the dialog box that is displayed, set the basic Wi-Fi parameters, including the SSID, authentication mode, and encryption mode. For example,

-SSID Name: WirelessNet (the name of a wireless network searched by the Wi-Fi terminal)

-Authentication Mode: WPA Pre-Shared Key

-Encryption Mode: TKIP

-WPA PreSharedKey: Password (the authentication password for the Wi-Fi terminal to access a wireless network)

**Step 3** Click **Apply**.

 NOTE

ONT supporting Wi-Fi (such as HG8247H), a wireless network coverage is subject to the number, thickness, and positions of walls, materials, ceilings, or other objects that radio signals traverse. Besides, material type and background radio frequency (RF) noise also affect the coverage of a wireless network. You can maximize the coverage of a wireless network using the following methods:

**1. Decrease the number of walls and ceilings between HG8247H and other network devices.**

Each wall or ceiling reduces the coverage of a wireless network by one to 30 meters. Install HG8247H at a proper place to avoid walls or ceilings whenever possible.

**2. Observe the straight line rule when installing network devices.**

The distance for which signals have to traverse at a 45° corner of two 0.5 meter-thick walls reaches approximately one meter. To better receive signals, devices should be installed at places where signals can directly traverse walls or ceilings.

**3. Note the impact of building materials on the wireless network coverage.**

A metal door or aluminum wall may limit the coverage of a wireless network. Install access points, wireless routers, and computers, so signals can traverse walls or open passageways. Materials and objects such as FRP products, metal products, insulative walls, filing cabinets, bricks, and concrete weaken radio signals.

**4. When connecting ONT (such as HG8247H) to a wireless network, keep it far from the following devices:**

- Electronic devices or components that produce RF noises (keep a distance of more than 2 meters between such a device and HG8247H.)
- 2.4 GHz wireless mobile phones or X-10 devices (such as microwave ovens, home security systems, blue-tooth devices, and refrigerators) that greatly weaken or even eliminate radio signals. Even if a 2.4 GHz wireless mobile phone is not connected to a wireless network, the phone base still sends signals that interfere the wireless network.

## Indicator Description

Table 1 Indicator status description 1

Indicator	Status	Description
CATV	Always on	The CATV function is enabled and CATV signals are received.
	Off	The CATV function is disabled or CATV signals are not received.
WPS	Steady on	The WPS function is enabled.
	Blinking	A Wi-Fi terminal is accessing the system.
	Off	The WPS function is disabled.
WLAN	Steady on	The WLAN function is enabled.
	Blinking	Data is being transmitted on the WLAN port.
	Off	The WLAN function is disabled.
USB	Steady on	The USB port is connected and is working in the host mode, but no data is transmitted.
	Blinks twice a second	Data is being transmitted on the USB port.
	Off	The system is not powered on or the USB port is not connected.
TEL1–TEL2	Steady on	The terminal is registered with the softswitch but no service flows are transmitted.
	Blinking	Service flows are transmitted.
	Off	The terminal is not powered on or fails to be registered to the softswitch.
LAN1–LAN4/ 10G LAN	Steady on	The Ethernet connection is in the normal state.
	Blinking	Data is being transmitted on the Ethernet port.
	Off	The Ethernet connection is not set up.
LOS/PON	See Table 2.	
POWER	Steady green	The terminal is powered on.
	Off	The power supply is cut off.

Table 2 Indicator status description 2

Status No.	Status		Description
	PON	LOS	
1	Off	Off	The PON terminal is prohibited by the upper-layer device or blinks abnormally , contact the service provider for help.
2	Blinks twice a second	Blinks twice a second	
3	Blinks twice a second	Off	The PON terminal attempts to set up a connection with its upper-layer device.
4	Steady on	Off	A connection is set up between the PON terminal and its upper-layer device.
5	Off	Blinks once two seconds	The PON terminal is not connected to optical fibers or does not receive optical signals.
6	Blinks once two seconds	Blinks once two seconds	The hardware is faulty.

## ErP Product Information

Hereby, Huawei Technologies Co.,Ltd. declares that the product meets the directive 2009/125/EC and its implementation regulation (EC) NO 1275/2008 amended by (EC) 278/2009,(EC) 642/2009,(EU) 617/2013,(EU) 801/2013,and its implementation regulation (EC) NO 278/2009.

The power consumption of product in networked standby if all wired network ports are connected and all wireless network ports are activated is less than 12 W.

For the product information displayed on the manufacturers' freely accessible websites required by (EU) No 801/2013 , please visit <http://support.huawei.com>.

To turn on or off the wireless network function, press the WLAN button on the side panel of the ONT.

The **LOS** indicator blinks.

- If the LOS indicator blinks once two seconds, check whether the pigtail fiber is properly connected and the connector is clean.
- If the GPON terminal blinks twice a second, contact the service provider for help.

The **PON** indicator is off.

- Check whether the **OPTICAL** port and optical fiber is properly connected.
- The GPON terminal fails to register with the upper-layer device. Contact the service provider for help.

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

- The GPON terminal provides 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 it with another phone.

How to reset the GPON terminal?

- Press **Reset** by using a needle-type object.

How can I restore factory defaults?

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



# Warranty Card

Thank you for choosing Huawei Technologies Co., Ltd. To get better services, please read this warranty card carefully, fill in the required information, and preserve this card in good condition.

## User Information

Personal or  
company's full name: \_\_\_\_\_

Address/Postal Code: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

Product Type: \_\_\_\_\_

Product Serial Number: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Invoice Number: \_\_\_\_\_

Dealer's Name: \_\_\_\_\_

Dealer's Address: \_\_\_\_\_

Dealer's Telephone: \_\_\_\_\_

Preserve well. No reissue.

Dealer's Seal



# Limited Warranty

Subject to the exclusions contained below, Huawei Technologies Co., Ltd. (Huawei for short) warrants its access terminals ("Products") to be free from defects in materials and workmanship under normal consumer usage for one year from the date of purchase of the product ("Warranty period"). During the warranty period, a Huawei authorized service partner shall remedy defects in materials and workmanship free of charge.

## Special Notice:

1. The warranty card shall be applicable only after being stamped by the dealer.
2. The warranty card must be preserved in good condition and free of any scratch or alteration.
3. To claim such service for defects that are not included in the following exclusion terms, the warranty card and the invoice that records that product serial number shall be presented to a Huawei authorized service partner.

## Exclusions:

In any of the following cases, the warranty card becomes unenforceable or inapplicable without prior notice:

1. The defects are caused by improper handling in transportation and assembly.
2. The defects are caused by the fact that the product is dismantled or altered by anyone that is not from a Huawei authorized service partner.
3. The defects are caused by the fact that the product is used in a harsh environment that is not suitable for the operation of the product.
4. The defects are caused by any force majeure including but not limited to fire, earthquake, lightning, and tsunami.
5. The defects are caused by the fact that the product is used or handled incorrectly, roughly or not as instructed in the applicable User Guide.
6. The normal wear and tear, including but not limited to the normal wear and tear of the shell and the power module, shall not be covered by the limited warranty.
7. The warranty card is altered or illegible, or the product serial number recorded on the warranty card is inconsistent with the actual one imprinted or labeled on the product.

In any case that is not covered by this limited warranty or should the warranty expire, Huawei shall charge for the service(s) claimed for the products if the product is still remediable. Huawei reserves all rights to interpret this limited warranty.



Huawei Technologies Co., Ltd.

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Shenzhen 518129  
People's Republic of China  
Website: <http://www.huawei.com>





## Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device does not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and complies with the Class B digital device limits, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference cannot occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by taking one of the following actions:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operation within 2.412-2.4835GHz frequency range is restricted to indoor environment.  
This device meets all the other requirements specified in Part 15E, Section 15.247 of the FCC Rules.

### Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of **20cm** between the radiator & your body.

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