

Echolife ONT Quick Start

Safety Information

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:

- Store devices and accessories in temperature -10°C to $+35^{\circ}\text{C}$ and relative humidity 30%–85% RH for at most 9 months. If the ambient temperature or relative humidity is overhigh or overflow, the device may be faulty.
- Used only indoors. Do not lead metallic cables, such as network cables and telephone lines outdoors.
- 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.
- Install the device in strict compliance with the requirements of the supplier. Reserve a space of at least 10 cm above and around the device for heat dissipation. During the installation, keep the device away from electric appliances that generate strong magnetic or electric fields, such as microwave ovens, refrigerators, and mobile phones.
- The described input voltage range should comply with the local power grid. For example, the input voltage of the adapter is 200–240 V AC for European Union; the input voltage of the adapter is 100–140 V AC for America.
- If the power adapter is damaged and its internal circuit is exposed due to manmade factors, do not touch the exposed circuit, which may bring safety risks.
- Only power adapters delivered with the device can be used. Otherwise, the device may be abnormal or unsecure.
- Dry your hands before connecting or disconnecting cables. Stop the device and switch off the power before connecting or disconnecting cables.
- Do not place any object on the device, so that the device will not be damaged due to overheating or deformation.
- Prevent objects, such as metal, from entering the device through the heat dissipation hole.
- 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.
- 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.
- The device should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

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.

Laser Safety

Detailed description:

- Keep the optical ports of the module clean, and cap them when they are not used.
- Prevent the end faces of the optical interfaces of the module from being damaged by hard objects.
- Exercise caution when removing and reinserting the fibers for the SC optical ports on the module. Do not damage the ceramic sockets of optical components.
- The goldfinger unit of the module supports no more than 50 times of removal and reinsertion.
- Laser products that are safe during use, including long-term direct intrabeam viewing, even when exposure occurs while using optical viewing instruments (eye loupes or binoculars). Class 1 also includes high power lasers that are fully enclosed so that no potentially hazardous radiation is accessible during use (embedded laser product). Intrabeam viewing of Class 1 laser products which emit visible radiant energy may still produce dazzling visual effects, particularly in low ambient light.
- Do not look into fiber end faces without eye protection using an optical meter (such as magnifier and microscope) within 100 mm, unless you ensure that the laser output is disabled. When operating an optical meter, observe the operation requirements.
- This device complies with IEC 60825-1: 2007-03 Rules.

Output average power:

- Under normal circumstances, the maximum optical output average power of the optical module is 8.0dBm. In the abnormal case, output average power of the optical module is less than 11 dBm.

Nameplate information:

- Class 1 warning sign is written on the product label, which is posted on the product.
- "Complies with 21 CFR 1040.10 and 1040.11 except for deviations Pursuant to Laser Notice No.50,dated June 24,2007" is written on the product label, which is posted on the product.
- The manufacturer's address and production date information is reflected in the product label, which is attached on the above of the product.

Feature	Agency	Standard
Laser Eye Safety	FDA/CDRH	CDRH 21 CFR 1040 and Laser Notice 50
Laser Eye Safety	TÜV	IEC 60825-1:2007, Edition 2 IEC 60825-1:2014, Edition 3 IEC 60825-2:2004+A1:2006+A2:2010
Electrical Safety	TÜV	EN 60950

Product Overview

Product	Function
HG8245 series	<ul style="list-style-type: none">● 4 Ethernet ports● 2 POTS ports● 1 USB port● Wi-Fi access
HG8247 series	<ul style="list-style-type: none">● 4 Ethernet ports● 2 POTS ports● 2 USB ports● 1 CATV port● Wi-Fi access



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
HG8245 series	About 320 g	18 W
HG8247 series	About 400 g	24 W



NOTE

If the appearance of the product in this document differs from the actual product, the actual product prevails.

Installing the GPON Terminal



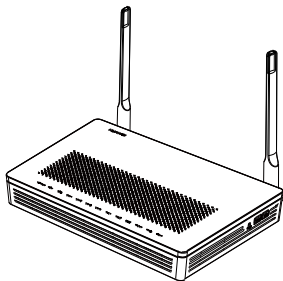
CAUTION

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.
5. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Mounting a GPON terminal on the desk

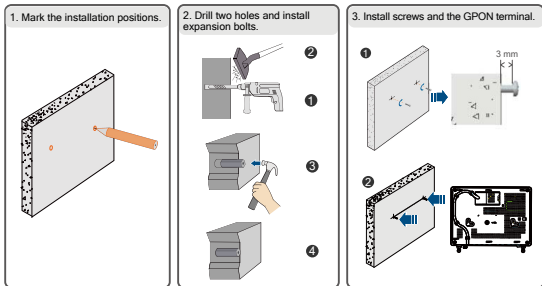
The figure below uses an HG8247H as an example to show the ONT that is horizontally placed on a desk.



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

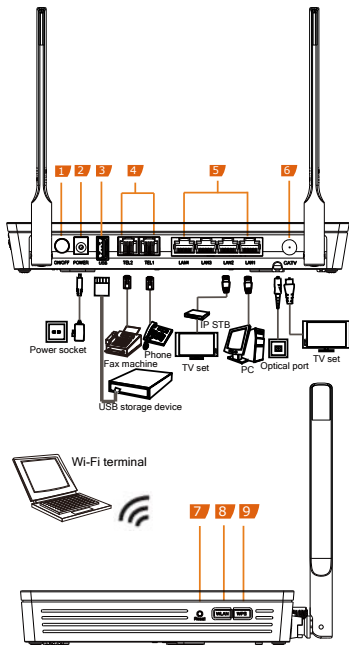
This terminal is mainly placed horizontally on a desk. When it is mounted onto a wall, the silkscreen of its indicator is reversed. If you have a special requirement on the silkscreen, purchase another terminal.

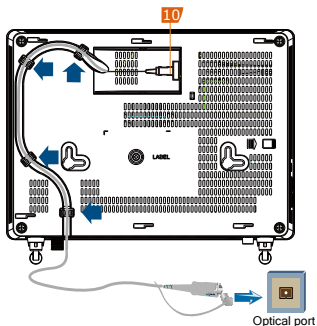
Connecting Cables

Ports on GPON terminals of all 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, see the description for connections of the external device. This document lists connections of typical devices.

 NOTE

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





1. Power switch	2. Power port	3. USB port
4. POTS port	5. Ethernet port	6. CATV port
7. Reset	8. WLAN switch	9. WPS switch
10. Optical port		

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 PON 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, root (user name), and adminHW (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**

If the ONT supports 2.4 GHz wireless and 5 GHz wireless, Choose the **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.

5. In order to avoid the possibility of exceeding the Europe radio frequency exposure limits, human proximity to the equipment shall not be less than 20 cm.

Indicator Description

Table 1-1 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	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 1-2.	
POWER	Steady green	The terminal is powered on.
	Off	The power supply is cut off.

Table 1-2 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.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, 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 in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not 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 one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and 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 Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement. This device complies with Part 15 of the FCC Rules. Operation is subject to the following.

two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



NOTE

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

FAQs

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 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.

Qualification Card



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BOM number: 3150xxxx



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.



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