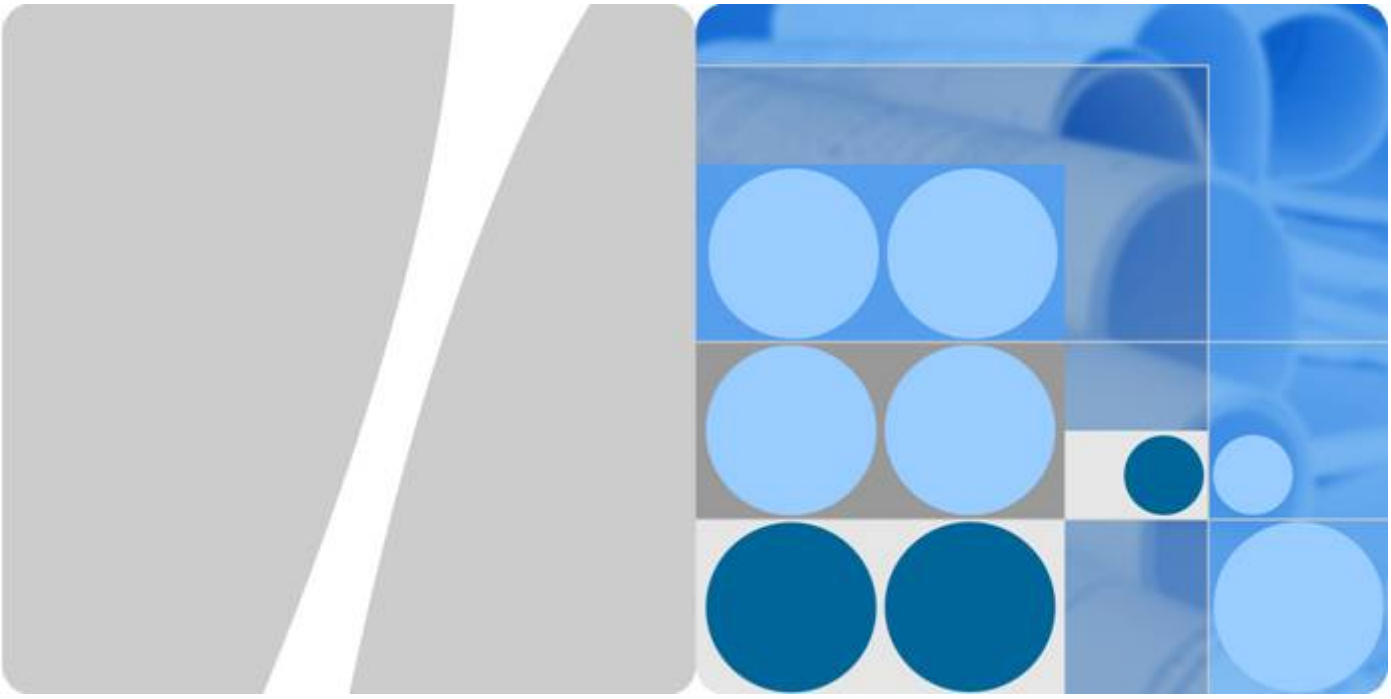

EchoLife HG8242H/HG8240H/HG8240F/HG8110H GPON Terminal

V300R013C00

Product Description

Issue 01

Date 2013-08-08

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About This Document

Product Version

The following table lists the product versions related to this document.

Product Name	Product Version
EchoLife HG8242H/HG8240H/HG8240F/HG8110H	V300R013C00

Overview

GPON terminal EchoLife ONT is an indoor optical network terminal (ONT) designed for home users. This document provides the appearance, key features, and technical specifications of the ONT, which helps you know the ONT quickly.

NOTE

Each ONT supports different types and counts of ports. Contents in this document may not be supported by all ONTs. For differenes between ONTs, see **1.3 Specifications Differences Between Different Product Models**.

Symbol Conventions

The following symbols may be found in this document. They are defined as follows:

Symbol	Description
DANGER	**DANGER** indicates a hazard with a high level or medium level of risk which, if not avoided, could result in death or serious injury.
WARNING	**WARNING** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
CAUTION	**CAUTION** indicates a potentially hazardous situation that, if not avoided, could result equipment damage, data loss, performance degradation, or unexpected results.

Symbol	Description
TIP	Indicates a tip that may help you solve a problem or save your time.
NOTE	Provides additional information to emphasize or supplement important points of the main text.

Change History

Changes between document issues are cumulative. Therefore, the latest document issue contains all changes made in previous issues.

Issue 01 (2013-08-08)

This is the first official release for the V300R013C00 version.

Contents

1 Introduction

1.1 Product Positioning

EchoLife GPON terminal V300R013C00 is an indoor optical network terminal (ONT) designed for home users. Its upper shell adopts the natural heat dissipation material, and its optical port adopts the dust-proof design with a rubber plug. The ONT is eye-pleasing and energy-efficient. It can be deployed on a workbench or mounted on a wall, meeting users' deployment requirements in different scenarios.

The ONT provides the more convenient and efficient remote management function. It supports the TR-069 and ONT Management and Control Interface (OMCI) protocols and manages all home terminals in a unified manner, implementing remote fault diagnosis, service provisioning, and performance statistics.

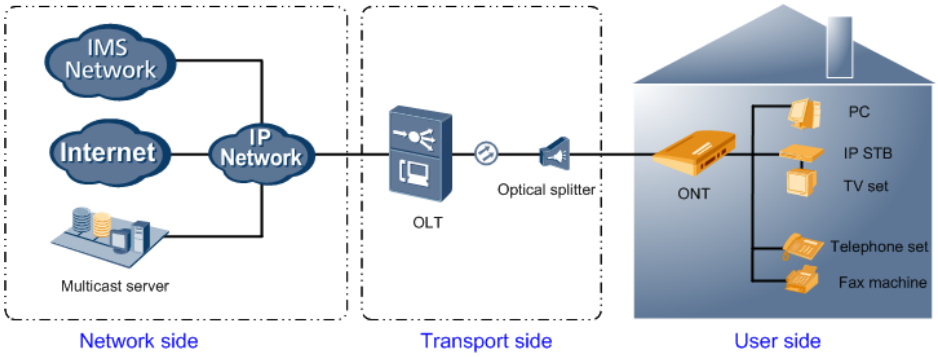
By using the Gigabit-capable Passive Optical Network (GPON) technology, the ONT provides a high-speed data channel through a single optical fiber with an upstream rate of 1.244 Gbit/s and a downstream rate of 2.488 Gbit/s. In this way, you can enjoy the high-speed data service, quality voice service, and superior video service.

1.2 Network Applications

As a network terminal, the ONT is deployed at the GPON access layer and connects the home user to the Internet through the optical upstream port.

Figure 1-1 shows the position of the ONT on a network.

Figure 1-1 Network topology of the ONT



- In the upstream direction, the ONT is connected to the optical splitter and the networkside OLT through the passive optical network (PON) port, namely the OPTICAL port, to provide the integrated access service.
- In the downstream direction, the ONT is connected to various terminals through the abundant LAN-side ports, implementing the triple play service.
  - Ethernet port, which can be connected to terminals such as the PC, STB, and video phone to provide the high-speed data and video services.

    NOTE

    Each Ethernet port allows only 1 user access.

- TEL port, which can be connected to the telephone set or fax machine to provide the superior and cost-effective voice over IP (VoIP), fax over IP (FoIP), and modem over IP (MoIP) services.

  NOTE

  Each TEL port allows only 1 user access.

1.3 Specifications Differences Between Different Product Models

This topic introduces the specification differences between ONTs in V300R013C00, specifically, features supported by different ONTs.

ONT Type	Ethernet Access	Voice Access	CATV	3.2 Quality CATV Service Transmission	4.2 FE Port Specifications	4.3 GE Port Specifications	4.5 CATV Port Specifications
HG8242H	4xGE	2xPOTS	Yes	Yes	No	Yes	Yes
HG8240H	4xGE	2xPOTS	No	No	No	Yes	No
HG8240F	4xFE	2xPOTS	No	No	Yes	No	No
HG8110H	1xGE	1xPOTS	No	No	No	Yes	No

NOTE

- In the preceding table, Yes indicates that the feature is supported while No indicates not supported.
- The preceding table lists only differences supported by products.

1.4 Product Overview

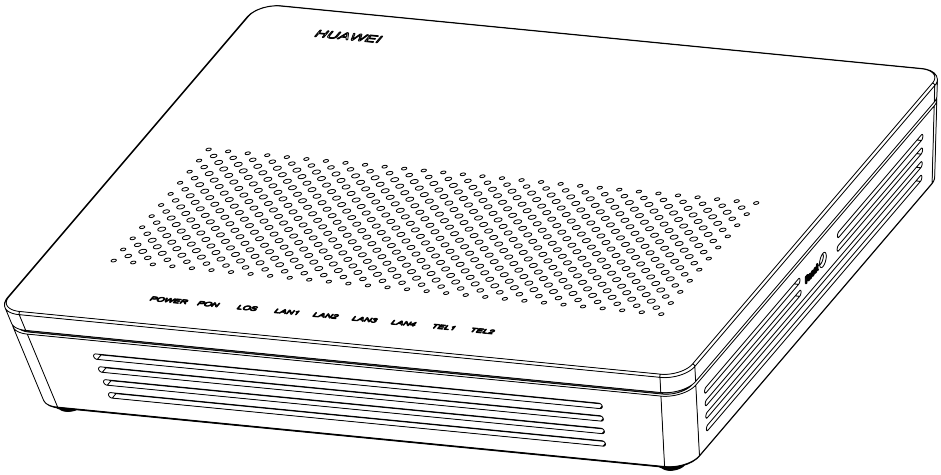
This topic introduces the appearances, ports, and LEDs of ONTs in V300R013C00.

1.4.1 HG8240H

Introduced the appearance, interfaces, LEDs and device parameters of the HG8240H.

Appearance

Figure 1-2 Appearance of the HG8240H



Port/Button

Figure 1-3 and Figure 1-4 show the ports on the rear panel and side panel of the HG8240H respectively.

Figure 1-3 Ports and buttons on the rear panel of the HG8240H

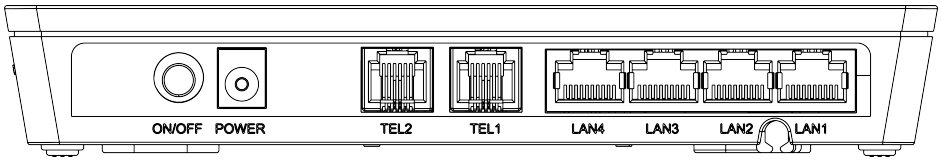


Table 1-1 Description of ports and buttons on the rear panel of the HG8240H

Port/Button	Function
ON/OFF	Indicates the power button. It is used to power on or power off the device.
POWER	Indicates the power port, used to connect to the power adapter or backup battery unit.
TEL1–TEL2	Indicates VoIP telephone ports (RJ-11), used to connecting to the ports on telephone sets.
LAN1–LAN4	Indicates auto-sensing 10/100/1000M Base-T Ethernet ports (RJ-45), used to connect to PCs or IP set-top boxes (STBs).

Figure 1-4 Ports and buttons on the side cover of the HG8240H

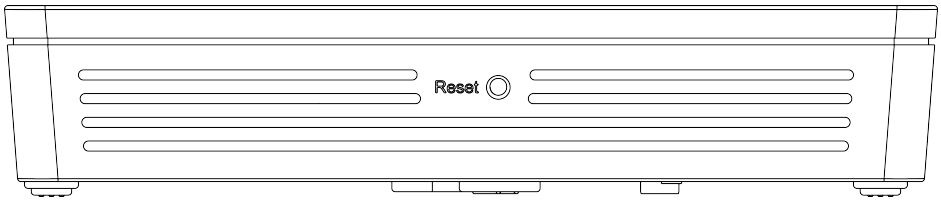


Table 1-2 Description of ports and buttons on the side cover of the HG8240H

Port/Button	Function
Reset	Indicates the reset button. Press the button for a short time to reset the device; press the button for a long time (longer than 10s) to restore the device to the default settings and reset the device.

Figure 1-5 shows optical ports on the HG8240H.

Figure 1-5 Optical ports on the HG8240H

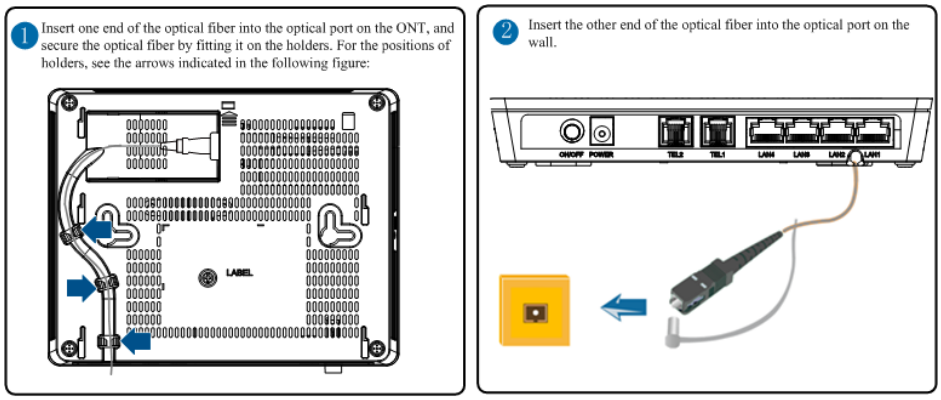


Table 1-3 Description of optical ports on the HG8240H

Port/Button	Function
OPTICAL	Indicates an optical port. The optical port is equipped with a rubber plug and is connected to an optical fiber for upstream transmission. The type of the optical connector connected to the OPTICAL port is SC/APC.

LEDs

Figure 1-6 LEDs on the HG8240H

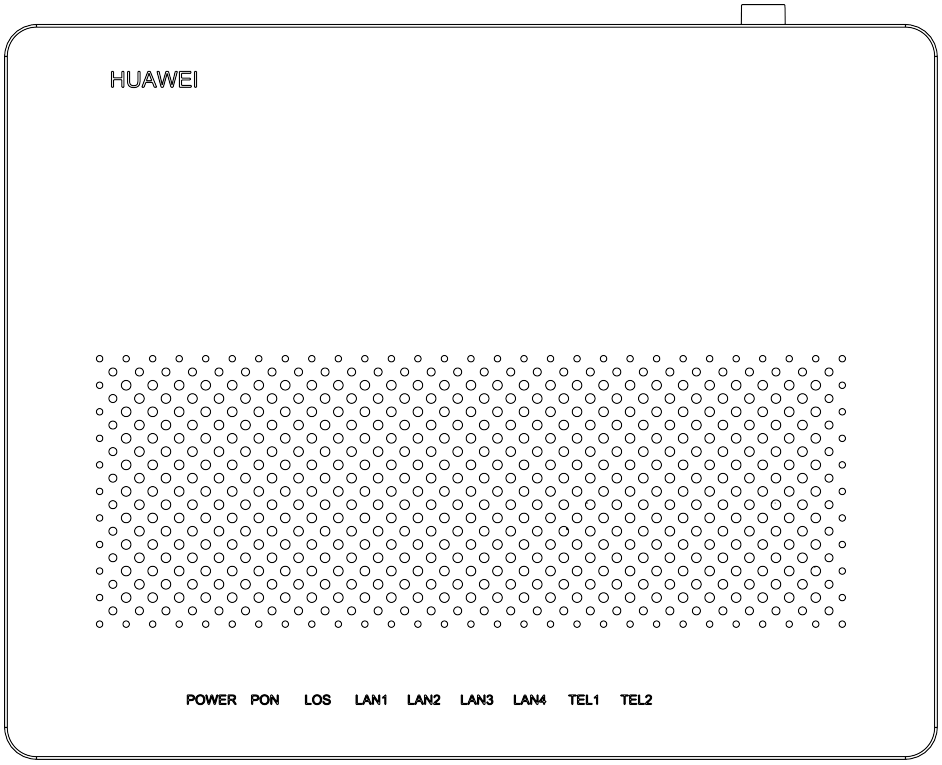


Table 1-4 Indications of the LEDs on the HG8240H

LED	Description	Status	Description
POWER	Power supply LED	Always on	The device is powered on.
		Off	The power supply is cut off.
PON	Authentication LED	See **Table 1-5**.	
LOS	Connection LED	See **Table 1-5**.	
LAN1–LAN4	Ethernet port LED	Always 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.

LED	Description	Status	Description
TEL1–TEL2	Voice telephone port LED	Always on	The HG8240H is registered with the softswitch but no service flows are transmitted.
		Blinking	Service flows are transmitted.
		Off	The HG8240H is not powered on or fails to be registered to the softswitch.

Table 1-5 Indications of the PON and LOS LEDs

No.	LED Status		Description
	PON	LOS	
1	Off	Off	The ONT is disabled by the OLT.
2	Blinks quickly (twice per second)	Off	The ONT is attempting to set up a connection to the OLT.
3	Always on	Off	The connection between the ONT and the OLT is set up.
4	Off	Blinks slowly (once two seconds)	The Rx optical power of the ONT is lower than the optical receiver sensitivity. The ONT is not connected to optical fibers or does not receive optical signals.
5	Blinks quickly (twice per second)	Blinks quickly (twice per second)	The OLT detects that the device is a rogue ONT.
6	Blinks quickly (twice per second)	Blinks slowly (once two seconds)	The Rx optical power of the ONT does not within the range (–27 dBm to –8 dBm) of the Rx sensitivity.
7	Blinks slowly (once two seconds)	Blinks slowly (once two seconds)	The hardware is faulty.

Device parameters

The device parameters include the ONT's size, weight, operating environment, and power parameters and equipment power consumption.

Table 1-6 HG8240H device parameters

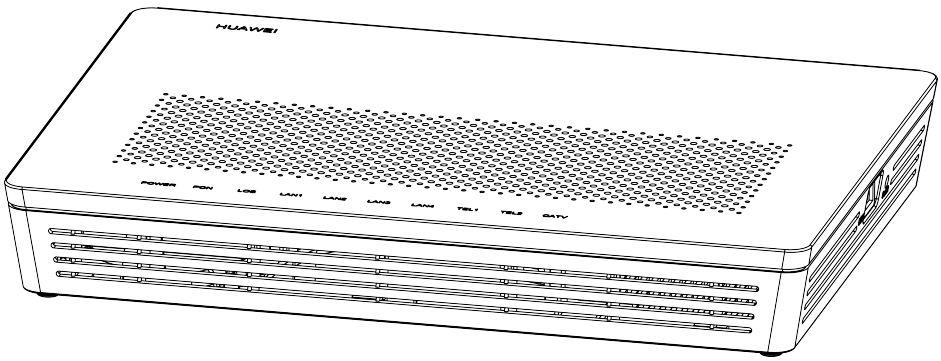
Parameter	Specifications
Dimensions (length x width x height)	176 mm x 138.5 mm x 28 mm
Weight	About 500 g
Working environment	Operating temperature: 0ºC to +40ºC
	Environment humidity: 5% RH to 95% RH (non-condensing)
	Pressure environment: 86 kPa to 106 kPa
	Altitude: 2000 m
Power specifications	Power adapter input: 100 V AC to 240 V AC, 50 Hz to 60 Hz
	System power supply: 11 V DC to 14 V DC, 1 A
Power consumption	● Static power consumption: 4 W ● Maximum power consumption: 10 W

1.4.2 HG8242H

Introduced the appearance, interfaces, LEDs, and device parameters of the HG8242H.

Appearance

Figure 1-7 Appearance of the HG8242H



Port/Button

Figure 1-8 and Figure 1-9 show the ports on the rear panel and side panel of the HG8242H respectively.

Figure 1-8 Ports and buttons on the rear panel of the HG8242H

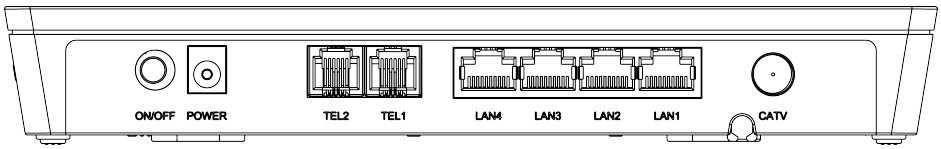


Table 1-7 Description of ports and buttons on the rear panel of the HG8242H

Port/Button	Function
ON/OFF	Indicates the power button. It is used to power on or power off the device.
POWER	Indicates the power port, used to connect to the power adapter or backup battery unit.
TEL1-TEL2	Indicates VoIP telephone ports (RJ-11), used to connecting to the ports on telephone sets.
LAN1-LAN4	Indicates auto-sensing 10/100/1000M Base-T Ethernet ports (RJ-45), used to connect to PCs or IP set-top boxes (STBs).
CATV	Indicates an RF port, used to connect to a TV set.

Figure 1-9 Ports and buttons on the side cover of the HG8242H

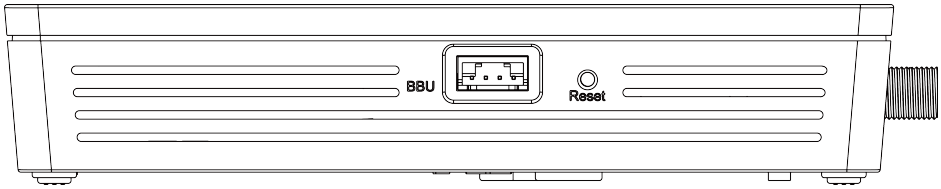


Table 1-8 Description of ports and buttons on the side cover of the HG8242H

Port/Button	Function
BBU	Indicates an external backup battery monitoring port, used to connect to the backup battery unit for battery monitoring.
Reset	Indicates the reset button. Press the button for a short time to reset the device; press the button for a long time (longer than 10s) to restore the device to the default settings and reset the device.

Figure 1-10 shows optical ports on the HG8242H.

Figure 1-10 Optical ports on the HG8242H

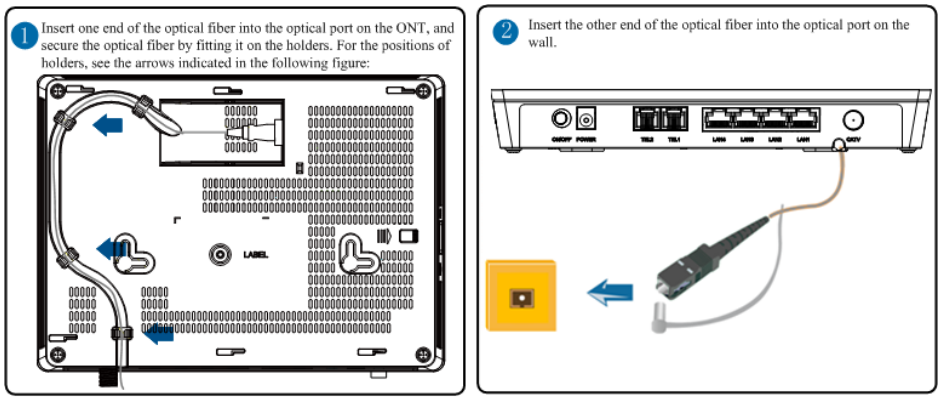


Table 1-9 Description of optical ports on the HG8242H

Port/Button	Function
OPTICAL	Indicates an optical port. The optical port is equipped with a rubber plug and is connected to an optical fiber for upstream transmission. The type of the optical connector connected to the OPTICAL port is SC/APC.

LEDs

Figure 1-11 LEDs on the HG8242H

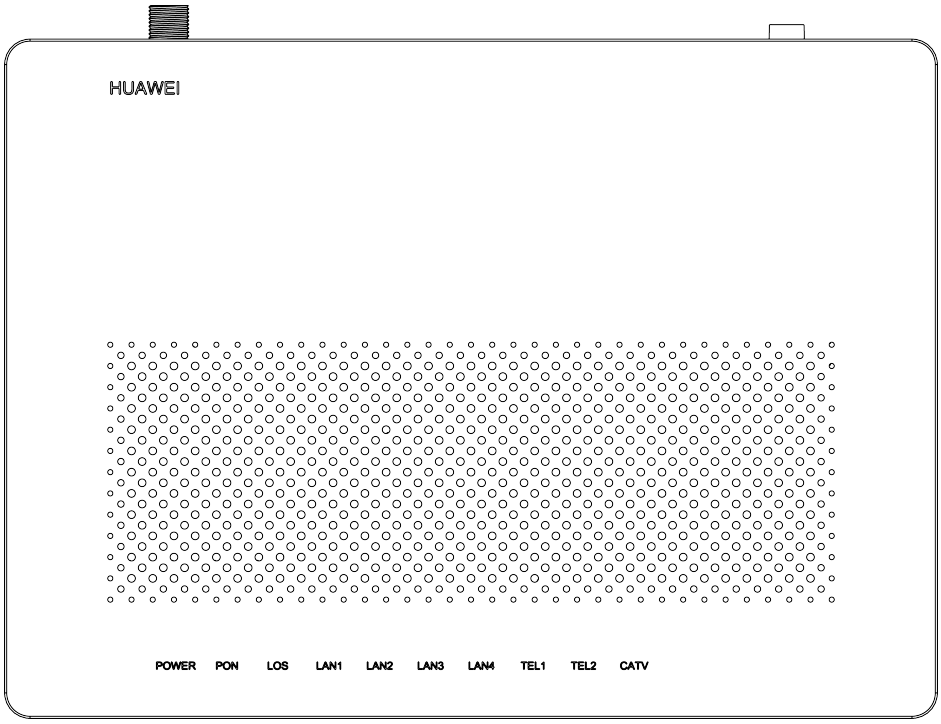


Table 1-10 Indications of the LEDs on the HG8242H

LED	Description	Status	Description
POWER	Power supply LED	Green: steady on	The device is powered on.
		Green and red: steady on	Lithium or NiMH battery power supply has substituted for the mains supply.
		Off	The power supply is cut off.
PON	Authentication LED	See **Table 1-11**.	
LOS	Connection LED	See **Table 1-11**.	
LAN1-LAN4	Ethernet port LED	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.
TEL1-TEL2	Voice telephone port LED	Steady on	The HG8242H is registered with the softswitch but no service flows are transmitted.
		Blinking	Service flows are transmitted.
		Off	The HG8242H is not powered on or fails to be registered to the softswitch.
CATV	CATV port LED	Steady on	The CATV function is enabled and CATV signals are received.
		Off	The CATV function is disabled or CATV signals are not received.

Table 1-11 Indications of the PON and LOS LEDs

No.	LED Status		Description
	PON	LOS	
1	Off	Off	The ONT is disabled by the OLT.
2	Blinks quickly (twice per second)	Off	The ONT is attempting to set up a connection to the OLT.

No.	LED Status		Description
	PON	LOS	
3	Always on	Off	The connection between the ONT and the OLT is set up.
4	Off	Blinks slowly (once two seconds)	The Rx optical power of the ONT is lower than the optical receiver sensitivity. The ONT is not connected to optical fibers or does not receive optical signals.
5	Blinks quickly (twice per second)	Blinks quickly (twice per second)	The OLT detects that the device is a rogue ONT.
6	Blinks quickly (twice per second)	Blinks slowly (once two seconds)	The Rx optical power of the ONT does not within the range (–27 dBm to –8 dBm) of the Rx sensitivity.
7	Blinks slowly (once two seconds)	Blinks slowly (once two seconds)	The hardware is faulty.

Device Parameters

The device parameters include the ONT's size, weight, operating environment, and power parameters and equipment power consumption.

Table 1-12 HG8242H device parameters

Parameter	Specifications
Dimensions (length x width x height)	220 mm x 160 mm x 32 mm
Weight	About 500 g
Working environment	Operating temperature: 0ºC to +40ºC
	Environment humidity: 5% RH to 95% RH (non-condensing)
	Pressure environment: 86 kPa to 106 kPa
	Altitude: 2000 m
Power specifications	Power adapter input: 100 V AC to 240 V AC, 50 Hz to 60 Hz
	System power supply: 11 V DC to 14 V DC, 2 A

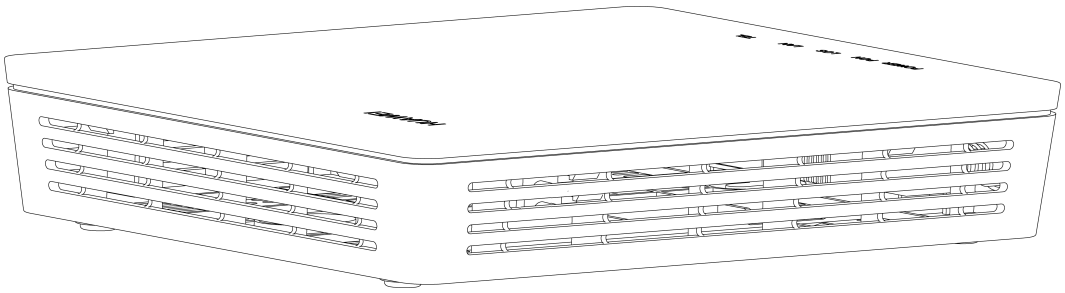
Parameter	Specifications
Power consumption	● Static power consumption: 5.5 W ● Maximum power consumption: 14 W

1.4.3 HG8110H

Introduced the appearance, interfaces, LEDs and device parameters of the HG8110H.

Appearance

Figure 1-12 Appearance of the HG8110H



Port/Button

Figure 1-13 and Figure 1-14 show the ports on the rear panel and side panel of the HG8110H respectively.

Figure 1-13 Ports and buttons on the rear panel of the HG8110H

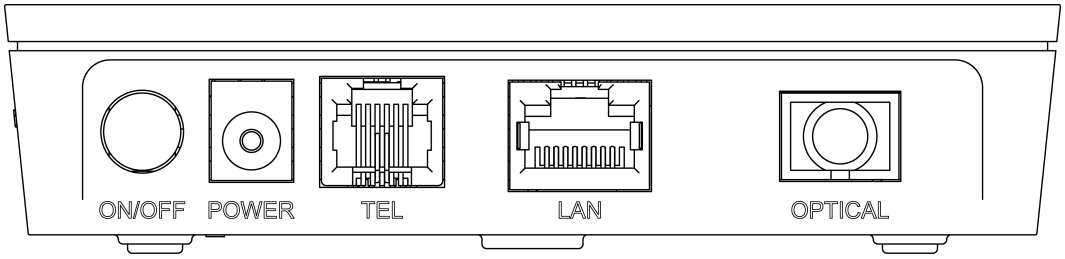


Table 1-13 Description of ports and buttons on the rear panel of the HG8110H

Port/Button	Function
OPTICAL	Indicates an optical port. The optical port is equipped with a rubber plug and is connected to an optical fiber for upstream transmission. The type of the optical connector connected to the OPTICAL port is SC/APC.
LAN	Indicates auto-sensing 10/100/1000M Base-T Ethernet ports (RJ-45), used to connect to PCs or IP set-top boxes (STBs).
TEL	Indicates VoIP telephone ports (RJ-11), used to connecting to the ports on telephone sets.
POWER	Indicates the power port, used to connect to the power adapter or backup battery unit.
ON/OFF	Indicates the power button. It is used to power on or power off the device.

Figure 1-14 Ports and buttons on the side cover of the HG8110H

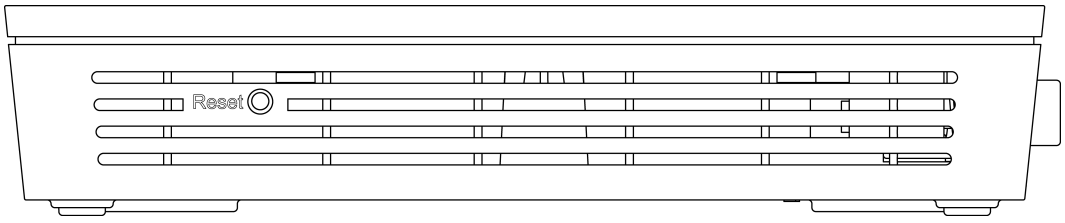


Table 1-14 Description of ports and buttons on the side cover of the HG8110H

Port/Button	Function
RESET	Indicates the reset button. Press the button for a short time to reset the device; press the button for a long time (longer than 10s) to restore the device to the default settings and reset the device.

LEDs

Figure 1-15 LEDs on the HG8110H

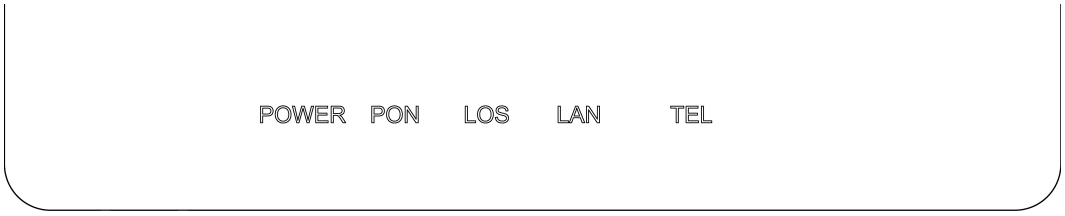


Table 1-15 Indications of the LEDs on the HG8110H

LED	Description	Status	Description
POWER	Power supply LED	Green: always on	The device is powered on.
		Orange: always on	The power supply is cut off.
PON	Authentication LED	See **Table 1-16**.	
LOS	Connection LED	See **Table 1-16**.	
LAN	Ethernet port LED	Always on	The Ethernet connection is in the normal state.
		Blinks	Data is being transmitted on the Ethernet port.
		Off	The Ethernet connection is not set up.
TEL	Voice telephone port LED	Always on	The connection to the voice server is set up.
		Blinks quickly (twice per second)	The connection to the voice server is set up and the telephone is in the off-hook or ringing state.
		Blinks slowly (once two seconds)	The ONT is registering with the voice server.
		Off	The connection to the voice server is not set up.

Table 1-16 Indications of the PON and LOS LEDs

No.	LED Status		Description
	PON	LOS	
1	Off	Off	The ONT is disabled by the OLT.
2	Blinks quickly (twice per second)	Off	The ONT is attempting to set up a connection to the OLT.
3	Always on	Off	The connection between the ONT and the OLT is set up.

No.	LED Status		Description
	PON	LOS	
4	Off	Blinks slowly (once two seconds)	The Rx optical power of the ONT is lower than the optical receiver sensitivity. The ONT is not connected to optical fibers or does not receive optical signals.
5	Blinks quickly (twice per second)	Blinks quickly (twice per second)	The OLT detects that the device is a rogue ONT.
6	Blinks quickly (twice per second)	Blinks slowly (once two seconds)	The Rx optical power of the ONT does not within the range (–27 dBm to –8 dBm) of the Rx sensitivity.
7	Blinks slowly (once two seconds)	Blinks slowly (once two seconds)	The hardware is faulty.

Device parameters

The device parameters include the ONT's size, weight, operating environment, and power parameters and equipment power consumption.

Table 1-17 HG8110H device parameters

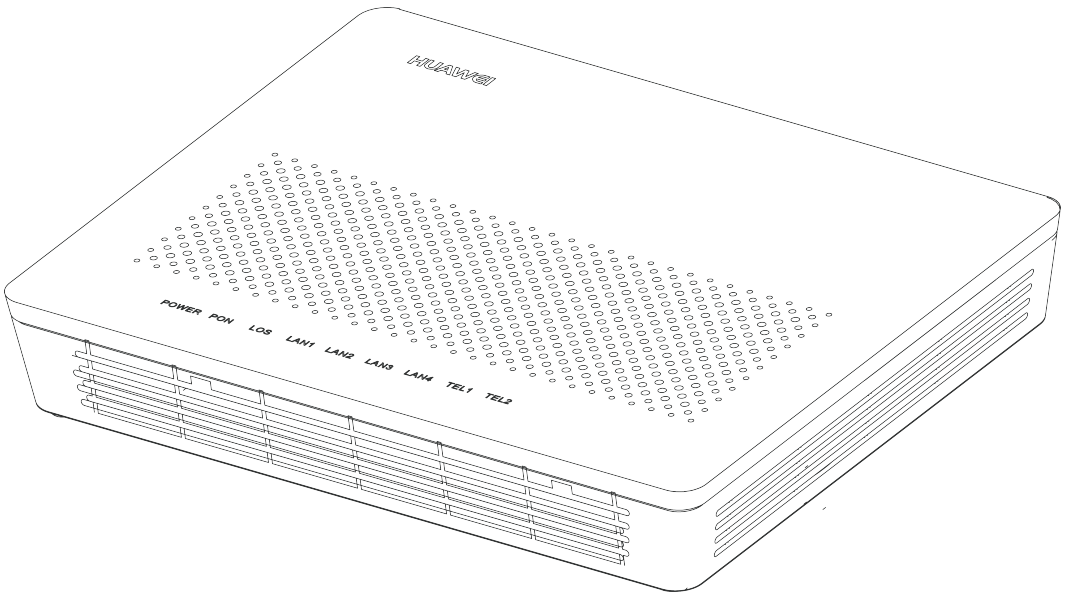
Parameter	Specifications
Dimensions (length x width x height)	134 mm x 114 mm x 27 mm
Weight	About 500 g
Working environment	Operating temperature: 0ºC to +40ºC
	Environment humidity: 5% RH to 95% RH (non-condensing)
	Pressure environment: 86 kPa to 106 kPa
	Altitude: 2000 m
Power specifications	Power adapter input: 100 V AC to 240 V AC, 50 Hz to 60 Hz
	System power supply: 11 V DC to 14 V DC, 1 A
Power consumption	● Static power consumption: 3.5 W ● Maximum power consumption: 5.5 W

1.4.4 HG8240F

Introduced the appearance, interfaces, LEDs and device parameters of the HG8240F.

Appearance

Figure 1-16 Appearance of the HG8240F



Port/Button

Figure 1-17 and Figure 1-18 show the ports on the rear panel and side panel of the HG8240F respectively.

Figure 1-17 Ports and buttons on the rear panel of the HG8240F

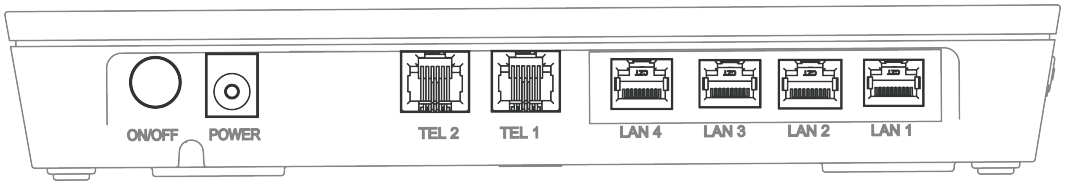


Table 1-18 Description of ports and buttons on the rear panel of the HG8240F

Port/Button	Function
LAN1 to LAN4	Indicates auto-sensing 10/100M Base-T Ethernet ports (RJ-45), used to connect to PCs or IP set-top boxes (STBs).

Port/Button	Function
TEL1 and TEL2	Indicates VoIP telephone ports (RJ-11), used to connecting to the ports on telephone sets.
POWER	Indicates the power port, used to connect to the power adapter or backup battery unit.
ON/OFF	Indicates the power button. It is used to power on or power off the device.

Figure 1-18 Ports and buttons on the side cover of the HG8240F

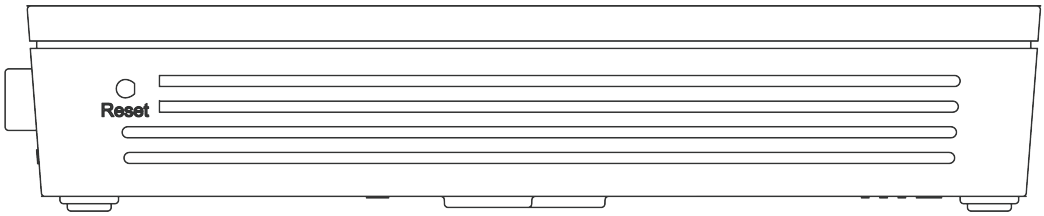


Table 1-19 Description of ports and buttons on the side cover of the HG8240F

Port/Button	Function
Reset	Indicates the reset button. Press the button for a short time to reset the device; press the button for a long time (longer than 10s) to restore the device to the default settings and reset the device.

Figure 1-19 shows optical ports on the HG8240F.

Figure 1-19 Optical ports on the HG8240F

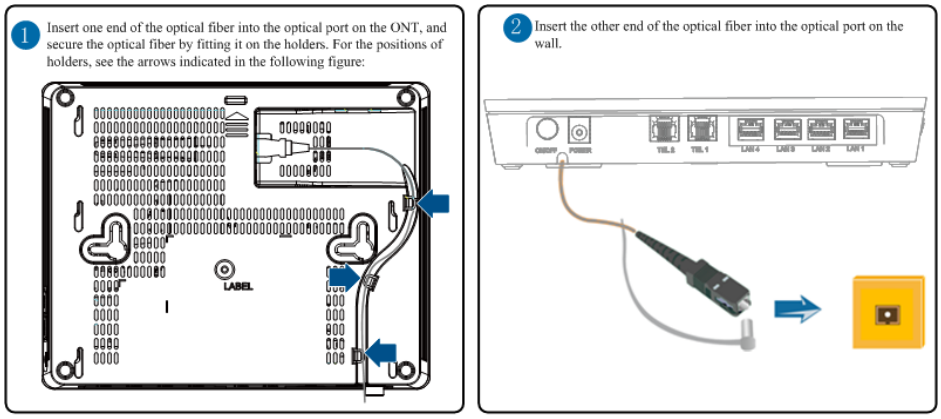


Table 1-20 Description of optical ports on the HG8240F

Port/Button	Function
OPTICAL	Indicates an optical port. The optical port is equipped with a rubber plug and is connected to an optical fiber for upstream transmission. The type of the optical connector connected to the OPTICAL port is SC/APC.

LEDs

Figure 1-20 LEDs on the HG8240F

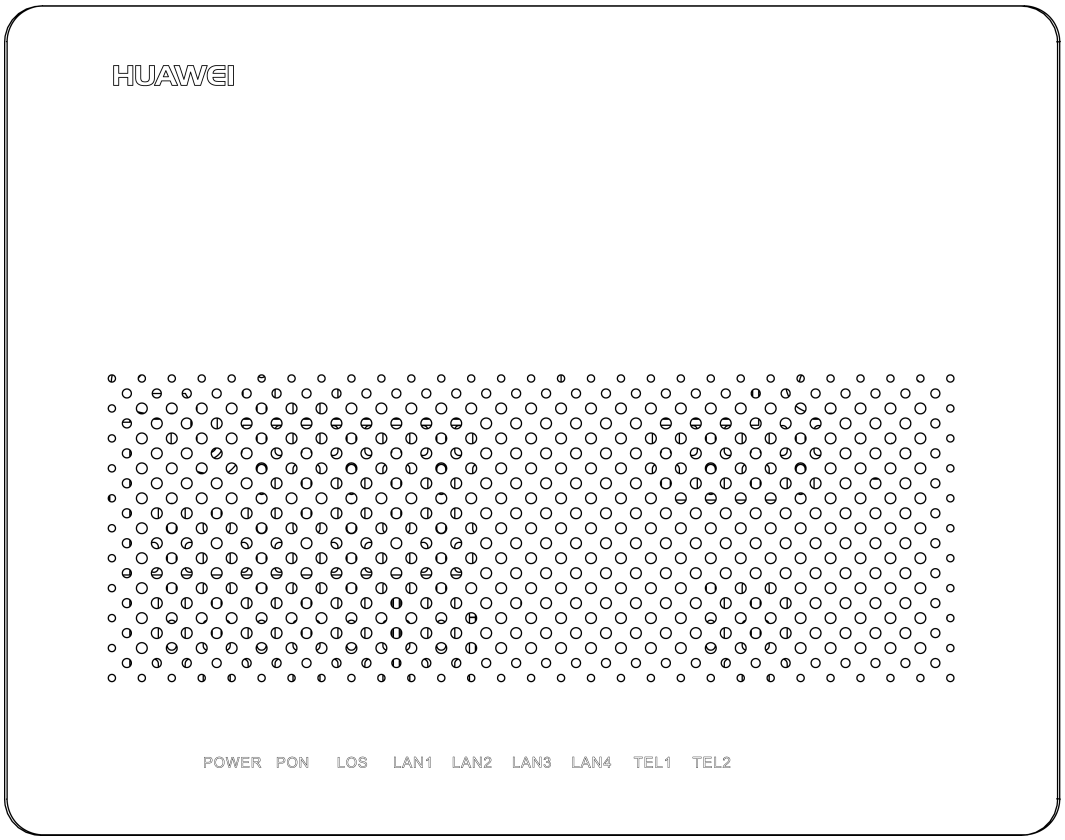


Table 1-21 Indications of the LEDs on the HG8240F

LED	Description	Status	Description
POWER	Power supply LED	Green: always on	The device is powered on.
		Orange: always on	The power supply is cut off.

LED	Description	Status	Description
PON	Authentication LED	See **Table 1-22**.	
LOS	Connection LED	See **Table 1-22**.	
LAN1–LAN4	Ethernet port LED	Always on	The Ethernet connection is in the normal state.
		Blinks	Data is being transmitted on the Ethernet port.
		Off	The Ethernet connection is not set up.
TEL1–TEL2	Voice telephone port LED	Always on	The connection to the voice server is set up.
		Blinks quickly (twice per second)	The connection to the voice server is set up and the telephone is in the off-hook or ringing state.
		Blinks slowly (once two seconds)	The ONT is registering with the voice server.
		Off	The connection to the voice server is not set up.

Table 1-22 Indications of the PON and LOS LEDs

No.	LED Status		Description
	PON	LOS	
1	Off	Off	The ONT is disabled by the OLT.
2	Blinks quickly (twice per second)	Off	The ONT is attempting to set up a connection to the OLT.
3	Always on	Off	The connection between the ONT and the OLT is set up.
4	Off	Blinks slowly (once two seconds)	The Rx optical power of the ONT is lower than the optical receiver sensitivity. The ONT is not connected to optical fibers or does not receive optical signals.
5	Blinks quickly (twice per second)	Blinks quickly (twice per second)	The OLT detects that the device is a rogue ONT.

No.	LED Status		Description
	PON	LOS	
6	Blinks quickly (twice per second)	Blinks slowly (once two seconds)	The Rx optical power of the ONT does not within the range (–27 dBm to –8 dBm) of the Rx sensitivity.
7	Blinks slowly (once two seconds)	Blinks slowly (once two seconds)	The hardware is faulty.

Device parameters

The device parameters include the ONT's size, weight, operating environment, and power parameters and equipment power consumption.

Table 1-23 HG8240F device parameters

Parameter	Specifications
Dimensions (length x width x height)	176 mm x 138.5 mm x 28 mm
Weight	about 235 g
Working environment	Operating temperature: 0ºC to +40ºC
	Environment humidity: 5% RH to 95% RH (non-condensing)
	Pressure environment: 86 kPa to 106 kPa
	Altitude: 2000 m
Power specifications	Power adapter input: 100 V AC to 240 V AC, 50 Hz to 60 Hz
	System power supply: 11 V DC to 14 V DC, 1A
Power consumption	● Static power consumption: 5.5 W ● Maximum power consumption: 7.5 W

2 Product Functions and Features

This chapter describes the key characteristics of the V300R013C00 version supported by the ONT.

Type	Features
GPON features	● Class B+ optical power budget ● Authentication modes of SN, password, and SN+password
Voice features	● Session Initiation Protocol (SIP), H.248 ● Voice media streams and signaling streams separation
Multicast features	● IGMP V2&V3 snooping ● Dynamically controllable multicast
Security features	● MAC address filtering ● Anti-DoS
Device maintenance	● Local service configuration, query, and software upgrade on the webpage ● Automatic remote service provisioning, device management, and software upgrade through OMCI ● Query of the information about the ONT optical transceiver ● Loop line test and circuit test ● Intelligent monitoring
Reliable features	● Dual system protection of the software
Ethernet features	● VLAN filtering, VLAN transparent transmission ● VLAN N:1 aggregation and VLAN 1:1 switch

Type	Features
Power-saving features	● Dynamic power adjustment

NOTE

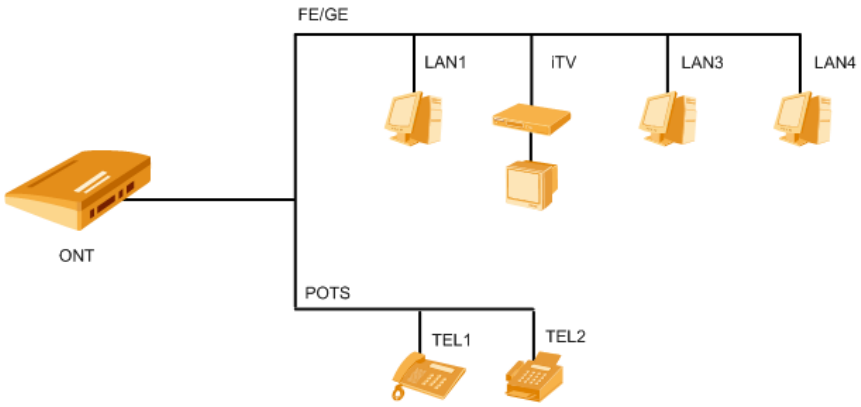
For details about the features, see the *Feature Description*.

3 Product Highlights

3.1 Comprehensive Triple Play Service

On the LAN side, the ONT provides abundant hardware ports to implement multiple access services, including the Internet access, voice, and video services, providing users with the comprehensive triple play service.

Figure 3-1 Comprehensive Triple Play Service



NOTE

- Each Ethernet port allows only 1 user access.
- Each TEL port allows only 1 user access.
- ONTs of different models provide different ports.

3.2 Quality CATV Service Transmission

The ONT provides the quality CATV service transmission through the CATV port.

The CATV service transmission of the ONT has the following features:

- Controls and queries the status of the CATV port remotely.
- Connects to multiple through one CATV port.
- Supports the optical port of the APC type with a return loss larger than 60 dB, ensuring the quality of the CATV service.

NOTE

Only HG8242H supports CATV.

3.3 Convenient Automatic Provisioning, Maintenance, and Management of the Remote Service

The ONT applies the TR-069 and OMCI management, manages terminal services without additional IP networks, which facilitates automatic provisioning, maintenance, and management of the remote service.

The remote service management of the ONT has the following features:

- Supports configuring the global profile and issuing the XML configuration file on the NMS. To provision ONT services in batches and adjust the network, only a few changes are required.
- Supports user-defined upgrade policies configured through the NMS. The device is automatically upgraded after being powered on and no manual operation is required.
- Supports remote performance management of the ONT through the NMS. By collecting the performance data, the network performance exception can be monitored in real time.
- Supports remote fault locating of the ONT through the NMS. Through alarm reporting and remote loopback diagnosis, the fault can be located remotely, which decreases the maintenance cost.

4 Port Specifications

This section describes the interface indicators parameter of the ONT.

4.1 GPON Port Specifications
This topic describes specifications and standards compliance of the GPON interfaces.

4.2 FE Port Specifications
This topic describes the specifications and standards compliance of Fast Ethernet (FE) ports.

4.3 GE Port Specifications
This topic describes the specifications and standards compliance of Gigabit Ethernet (GE) ports.

4.4 POTS port
This topic describes the specifications and standards for the plain old telephone service (POTS) port supported by the ONT.

4.5 CATV Port Specifications
This topic describes the specifications of cable TV (CATV) ports.

4.1 GPON Port Specifications

This topic describes specifications and standards compliance of the GPON interfaces.

Table 4-1 GPON port specifications

Parameter	Specifications
Transmission rate	Rx: 2.488 Gbit/s Tx: 1.244 Gbit/s
Connector	SC/APC
Maximum reach	20 km
Standard compliance	ITU-T G.984.2 CLASS B+
Center wavelength	Tx: 1310 nm Rx: 1490 nm
Tx optical power	0.5 dBm to 5.0 dBm
Extinction ratio	> 10 dB
Minimum receiver sensitivity	-27 dBm
Maximum overload optical power	-8 dBm

4.2 FE Port Specifications

This topic describes the specifications and standards compliance of Fast Ethernet (FE) ports.

Table 4-2 Specifications of a FE port

Parameter	Specifications
Connector type	RJ-45
Port rate	10 Mbit/s or 100 Mbit/s
Maximum transmission distance	100 m
Working mode	Auto-adaptive 10 Mbit/s or 100 Mbit/s
Cable specifications	Category 5 UTP
Compliant standard	IEEE 802.3i IEEE 802.3u

4.3 GE Port Specifications

This topic describes the specifications and standards compliance of Gigabit Ethernet (GE) ports.

Table 4-3 Specifications of a GE port

Parameter	Specifications
Connector type	RJ-45
Port rate	10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s
Maximum transmission distance	100 m
Working mode	Auto-adaptive 10 Mbit/s, 100 Mbit/s or 1000 Mbit/s
Cable specifications	Category 5 UTP
Compliant standard	IEEE 802.3i IEEE 802.3u IEEE 802.3ab

4.4 POTS port

This topic describes the specifications and standards for the plain old telephone service (POTS) port supported by the ONT.

Table 4-4 POTS Port Specifications

Parameter	Specifications
Connector type	RJ-11
Transmission rate	64 kbit/s
Cable type	Twisted pair
Line coding	Pulse code modulation (PCM)
Frame protocol	Time division multiplexing (TDM)
Standard compliance	ITU-T Q.551 ITU-T Q.552

4.5 CATV Port Specifications

This topic describes the specifications of cable TV (CATV) ports.

Table 4-5 Specifications of a CATV port

Parameter	Specifications
Connector type	F-type
Bandwidth	54-870 MHz
Output resistance	75 ohms
Cable specifications	CATV cable

NOTE

Only HG8242H supports CATV.

5 Acronyms and Abbreviations

C	
CATV	Community Antenna Television
D	
DBA	Dynamic Bandwidth Assignment
DoS	Denial of Service
F	
FoIP	FAX over IP
FTTH	Fiber To The Home
G	
GPON	Gigabit-capable Passive Optical Network
I	
IGMP	Internet Group Management Protocol
M	
MoIP	Modem over IP
N	
NMS	Network Management System
O	
OAM	Operations, Administration, and Maintenance
OLT	Optical Line Terminal
OMCI	Optical Network Termination Management and Control Interface
ONT	Optical Network Terminal
P	
PLOAM	Physical Layer OAM

PON	Passive Optical Network
PSTN	Public Switched Telephone Network
R	
RTCP	Real-time Transport Control Protocol
RTP	Real-time Transport Protocol
S	
SIP	Session Initiation Protocol
SSID	Service Set Identifier
STB	Set Top Box
V	
VLAN	Virtual Local Area Network
VoIP	Voice over IP