



# **1GE DUAL MODE Modular ONT**

## **USER MANUAL**

**Version V1.0**

**Release Date 2021-10-17**

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# Chapter 1 Product Introduction

## 1.1 Product Description

G/EPON 1GE Modular ONT is support Dual mode(EPON and GPON), It can also be applied to a wide temperature environment.

The box is based on the mature Gigabit GPON/EPON technology, highly reliable and easy to maintain. And it is fully compliant with technical regulations such as ITU-T G.984.x and IEEE802.3ah.



Figure 1-1: 1GE Dual Mode Modular ONT

## 1.2 Special features

- Integrated auto detecting, auto configuration, and auto firmware upgrade technology.
- Support OAM/OMCI remote configuration and maintenance.
- Support rich VLAN, DHCP Server and IGMP snooping multicast feature.
- Fully compatibility with OLT based on Broadcom/PMC/Cortina chipset.
- Support 802.1D&802.1ad bridging and 802.1p CoS.
- Configuration free, plug and play, easy to use.

## 1.3 Technical Parameter

Technical items	Descriptions
PON interface	1 SC/UPC connector(EPON PX20+ and GPON Class B+) Receiving sensitivity: $\leq -28\text{dBm}$ Transmitting optical power: $0\sim+4\text{dBm}$ Transmission distance: 20KM
Wavelength	Tx1310nm,Rx 1490nm
Optical interface	SC/UPC connector
Interface	1x 1000Mbps Ethernet interfaces, Full, SFP connector.
Operating condition	$0^{\circ}\text{C}\sim 50^{\circ}\text{C}$ , 10% $\sim$ 90% (non-condenseing)
Storing condition	$-30^{\circ}\text{C}\sim 60^{\circ}\text{C}$ , 10% $\sim$ 90% (non-condenseing)
Power supply	DC3.3V
Power consumption	$\leq 4\text{W}$
Dimension	$14.1\text{mm}\times 79\text{mm}\times 13.6\text{mm}$ (H $\times$ W $\times$ D)
Net weight	35g

## 1.4 Application chart

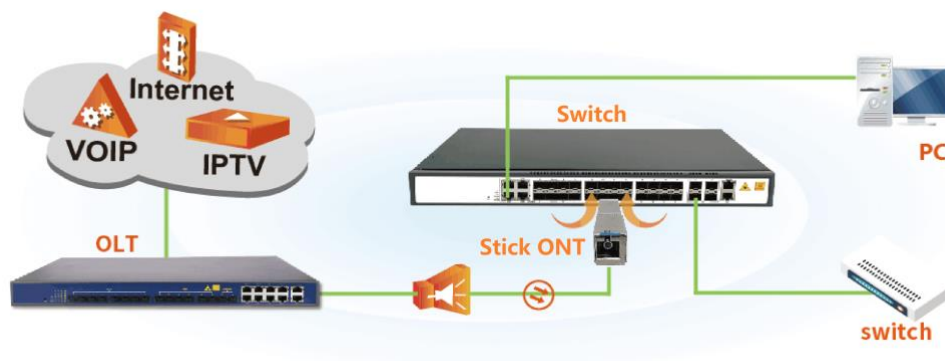


Figure 1-2: Application chart

## 1.5 Functional characteristics

### Functional characteristics

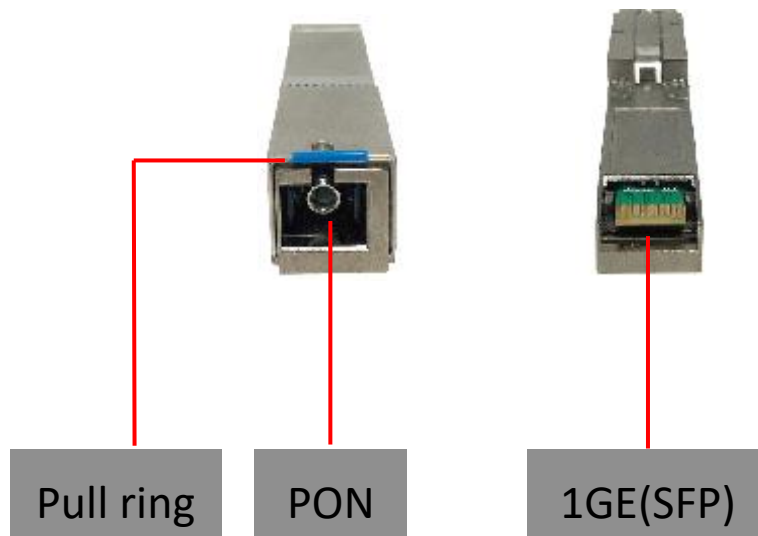


Figure 1-3: functional characteristics

Name	Function
PON	Connect to OLT by SC type fiber connector, single mode optical fiber cable.
LAN	Connect PC or other devices with Ethernet port by Cat5 cable, RJ-45
DC 12V	Connect with power adapter. DC 12V, 0.5A.
RST	Press RST button over 10 seconds, ONT restores factory default and reboots.
RF OUT	Connect to STB or TV.

## Chapter 2 Quick Installation

### 2.1 Standard Packing Contents

When you received our product, please check carefully to make sure that our products whether have some defects or not. If something wrong with shipping, please contact carrier; other damage or lack of some parts, please contact with dealer.

Contents	Quantity
Dual Mode Modular ONT	1 pcs

### 2.2 Quick Installation

1. Apply power to the unit. Connect the module ONT to the switch optical port to power on the ONT.
2. Connecting the optical fiber cable to the unit.
  - a) Remove the protective cap of the optical fiber.
  - b) Clean the end of the optical fiber with an optical fiber end cleaner.
  - c) Remove the protective cap of the ONT optical interface (PON interface). Connect the fiber to the PON port on the unit.

Note: When measuring the optical power before connecting to the ONT, it is recommended to use a PON Inline Power Meter.

While connecting, please note:

- Keep the optical connector and the optical fiber clean.
  - Make sure there are no tight bends in the fiber and that the bending diameter is greater than 6cm. Otherwise, the optical signal loss may be increased, to the extent that signal may be unavailable.
  - Cover all optic ports and connectors with protective cap to guard against dust and moisture when the fiber is not used.
3. After the ONU is started, the ONT will link-up with the optical port of the switch, and you can check whether the ONT is successfully registered on the OLT. If you need to access the ONT webpage, use a PC to connect to the switch, and match the link between the PC and the optical port of switch connected to the ONT, then you can access the ONT management interface (192.168.1.1).
  4. Check all signal levels and services on all the ONT communication ports.

## Chapter 3 Configuration

After finishing the basic connection configuration, you can use its basic function. In order to satisfy individuation service requirements, this chapter provides the user parameter modification and individuation configuration description.

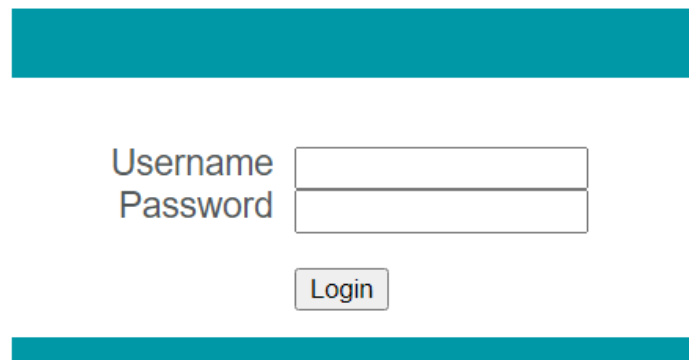
This model of ONT is designed as modular SFU(single family unit, bridge mode). When it works, VLAN of LAN port should be configured by OLT.

### 3.1 Login

The device is configured by the web interface. The following steps will enable you to login:

1. Conform “2.2 Quick Installation” to install;
2. The device default IP is 192.168.1.1;
3. Open your web browser, type the device IP in address bar;
4. Entry of the user name and password will be prompted. Enter the default login user name and password.

*By default, there are two user levels for management. Administration level user name is "admin", password is "stdONU101".*



Username

Password

Login

**Figure 3-1: Login**

### 3.2 System Status

This part shows the main information of product.

### 3.2.1 System Status

This page shows the device basic information, such as Device Model, Hardware Version, Software Version, PON SN and so on.

ONU Stick Module	ONU Stick Module																				
	<a href="#">System Status</a>   <a href="#">Advanced Config</a>   <a href="#">System Management</a>   <a href="#">User Management</a>																				
<b>System Status</b>	<b>Device Status</b> This page shows the current status and some basic settings of the device.																				
<b>PON Status</b>	<table border="1"> <thead> <tr> <th colspan="2">System</th> </tr> </thead> <tbody> <tr> <td>Device Name</td> <td>PON Bridge</td> </tr> <tr> <td>Uptime</td> <td>1 min</td> </tr> <tr> <td>Firmware Version</td> <td>V1.9.0-200325</td> </tr> <tr> <td>CPU Usage</td> <td>18%</td> </tr> <tr> <td>Memory Usage</td> <td>32%</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">LAN Configuration</th> </tr> </thead> <tbody> <tr> <td>IP Address</td> <td>192.168.1.1</td> </tr> <tr> <td>Subnet Mask</td> <td>255.255.255.0</td> </tr> <tr> <td>MAC Address</td> <td>006d61546618</td> </tr> </tbody> </table> <input type="button" value="Refresh"/>	System		Device Name	PON Bridge	Uptime	1 min	Firmware Version	V1.9.0-200325	CPU Usage	18%	Memory Usage	32%	LAN Configuration		IP Address	192.168.1.1	Subnet Mask	255.255.255.0	MAC Address	006d61546618
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Subnet Mask	255.255.255.0																				
MAC Address	006d61546618																				

Figure 3-2: System Status

### 3.2.2 PON Status

This page shows the device basic information, such as PON information, PON mode and so on.

ONU Stick Module	ONU Stick Module																																				
	<a href="#">System Status</a>   <a href="#">Advanced Config</a>   <a href="#">System Management</a>   <a href="#">User Management</a>																																				
<b>System Status</b>	<b>PON Status</b> This page shows the current system status of PON.																																				
<b>PON Status</b>	<table border="1"> <thead> <tr> <th colspan="2">PON Status</th> </tr> </thead> <tbody> <tr> <td>Vendor Name</td> <td>VSOL</td> </tr> <tr> <td>Part Number</td> <td>V2801F</td> </tr> <tr> <td>Temperature</td> <td>47.417969 C</td> </tr> <tr> <td>Voltage</td> <td>3.346300 V</td> </tr> <tr> <td>Tx Power</td> <td>-inf dBm</td> </tr> <tr> <td>Rx Power</td> <td>-9.175380 dBm</td> </tr> <tr> <td>Bias Current</td> <td>17.252000 mA</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">EPON LLID Status</th> </tr> </thead> <tbody> <tr> <th>index</th> <th>Status</th> </tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>0</td></tr> <tr><td>2</td><td>0</td></tr> <tr><td>3</td><td>0</td></tr> <tr><td>4</td><td>0</td></tr> <tr><td>5</td><td>0</td></tr> <tr><td>6</td><td>0</td></tr> <tr><td>7</td><td>0</td></tr> </tbody> </table> <input type="button" value="Refresh"/>	PON Status		Vendor Name	VSOL	Part Number	V2801F	Temperature	47.417969 C	Voltage	3.346300 V	Tx Power	-inf dBm	Rx Power	-9.175380 dBm	Bias Current	17.252000 mA	EPON LLID Status		index	Status	0	0	1	0	2	0	3	0	4	0	5	0	6	0	7	0
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Figure 3-3: PON Status



## 3.3 Advanced Config

### 3.3.1 EPON Config

This page is used to configure the parameters for your EPON network access.

ONU Stick Module	ONU Stick Module																																							
	System Status	Advanced Config	System Management	User Management																																				
EPON Config  LAN Config	<b>EPON Settings</b> This page is used to configure the parameters for your EPON network access.																																							
	LOID: <input type="text" value="user"/> LOID Password: <input type="password"/> <input type="button" value="Apply Changes"/>																																							
<b>LLID MAC mapping Table:</b>																																								
<table border="1"> <thead> <tr> <th>index</th> <th>LLID</th> <th>Status</th> <th>MAC</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0x7fff</td> <td>0</td> <td>00:6d:61:54:66:18</td> </tr> <tr> <td>1</td> <td>0x7fff</td> <td>0</td> <td>00:00:00:00:00:00</td> </tr> <tr> <td>2</td> <td>0x7fff</td> <td>0</td> <td>00:6d:61:54:66:1a</td> </tr> <tr> <td>3</td> <td>0x7fff</td> <td>0</td> <td>00:00:00:00:00:00</td> </tr> <tr> <td>4</td> <td>0x7fff</td> <td>0</td> <td>00:6d:61:54:66:1c</td> </tr> <tr> <td>5</td> <td>0x7fff</td> <td>0</td> <td>00:00:00:00:00:00</td> </tr> <tr> <td>6</td> <td>0x7fff</td> <td>0</td> <td>00:6d:61:54:66:1e</td> </tr> <tr> <td>7</td> <td>0x7fff</td> <td>0</td> <td>00:00:00:00:00:00</td> </tr> </tbody> </table>					index	LLID	Status	MAC	0	0x7fff	0	00:6d:61:54:66:18	1	0x7fff	0	00:00:00:00:00:00	2	0x7fff	0	00:6d:61:54:66:1a	3	0x7fff	0	00:00:00:00:00:00	4	0x7fff	0	00:6d:61:54:66:1c	5	0x7fff	0	00:00:00:00:00:00	6	0x7fff	0	00:6d:61:54:66:1e	7	0x7fff	0	00:00:00:00:00:00
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7	0x7fff	0	00:00:00:00:00:00																																					
<input type="button" value="Apply Changes"/>																																								

Figure 3-4: EPON Config

### 3.3.2 LAN Config

This page is used to configure the LAN interface of your Device. Here you may change the setting for IP addresses, Subnet mask, etc..

ONU Stick Module	ONU Stick Module			
	System Status	Advanced Config	System Management	User Management
EPON Config  LAN Config	<b>LAN Interface Settings</b> This page is used to configure the LAN interface of your Device. Here you may change the setting for IP addresses, subnet mask, etc..			
	InterfaceName: br0 IP Address: <input type="text" value="192.168.1.1"/> Subnet Mask: <input type="text" value="255.255.255.0"/> <input type="button" value="Apply Changes"/>			

Figure 3-5: LAN Config

## 3.3 System Management

### 3.3.1 Flow Statistics

This page shows the packet statistics for transmission and reception regarding to network

interface.

**ONU Stick Module**

System Status | Advanced Config | System Management | User Management

This page shows the packet statistics for transmission and reception regarding to network interface.

Interface	Rx pkt	Rx err	Rx drop	Tx pkt	Tx err	Tx drop
LAN	510	0	0	525	0	0

Refresh Reset Statistics

Figure 3-6: Flow Statistics

### 3.3.2 Backup/Restore

This page allows you to backup current settings to a file or restore the settings from the file which was saved previously. Besides, you could reset the current settings to factory default.

**ONU Stick Module**

System Status | Advanced Config | System Management | User Management

**Backup and Restore Settings**

This page allows you to backup current settings to a file or restore the settings from the file which was saved previously. Besides, you could reset the current settings to factory default.

Backup Settings to File: Backup...

Restore Settings from File: Choose File No file chosen Restore

Reset Settings to Default: Reset

Figure 3-7: Backup/Restore

### 3.3.3 Logout

This page is used to logout from the Device.

**ONU Stick Module**

System Status | Advanced Config | System Management | User Management

**Logout**

This page is used to logout from the Device.

Logout

Figure 3-8: Logout

### 3.3.4 Language Select

This page is used to set language.

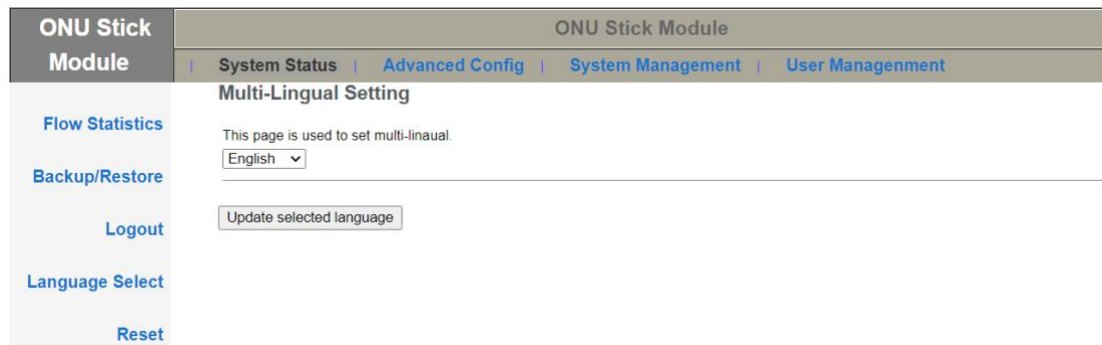


Figure 3-9: Language Select

### 3.3.5 Reset

This page is used to commit changes to system memory and reboot your system.

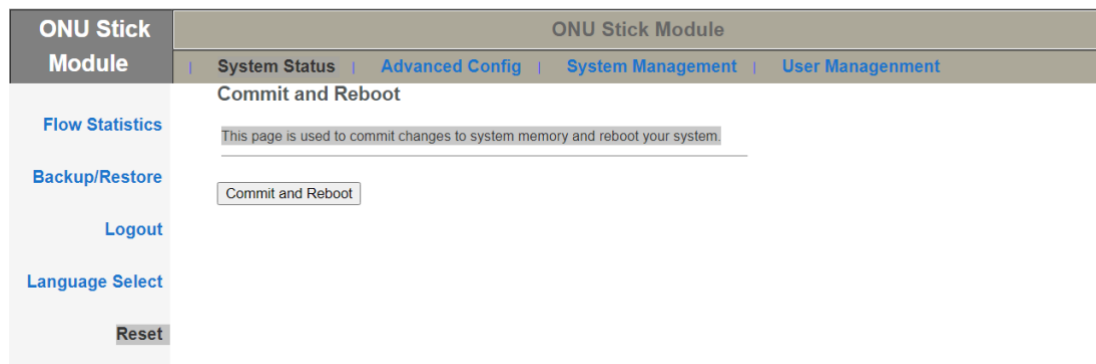


Figure 3-10: Reset

## 3.4 User Management

### 3.4.1 PON Statistics

This page allows user to check statistics of PON interface.

ONU Stick Module	ONU Stick Module			
	System Status	Advanced Config	System Management	User Management
PON Statistics  Account Manage	PON Statistics			
	Bytes Sent		25725	
	Bytes Received		0	
	Packets Sent		116	
	Packets Received		0	
	Unicast Packets Sent		2	
	Unicast Packets Received		0	
	Multicast Packets Sent		104	
	Multicast Packets Received		0	
	Broadcast Packets Sent		10	
	Broadcast Packets Received		0	
	FEC Errors		0	
	HEC Errors		0	
	Packets Dropped		0	
	Pause Packets Sent		0	
	Pause Packets Received		0	

Figure 3-11: PON Statistics

3.4.2 Account Management

This page is used to set the account to access the web server of your Device. Empty user name and password will disable the protection.

ONU Stick Module	ONU Stick Module
	<a href="#">System Status</a>   <a href="#">Advanced Config</a>   <a href="#">System Management</a>   <a href="#">User Management</a>
PON Statistics	This page is used to set the account to access the web server of your Device. Empty user name and password will disable the protection.
Account Manage	<div>UserName: <input type="text" value="admin"/></div> <div>Old Password: <input type="password"/></div> <div>New Password: <input type="password"/></div> <div>Confirmed Password: <input type="password"/></div> <div><input type="button" value="Apply Changes"/></div>

Figure 3-12: Account management