Chapter1: Overview

1.1 Product Description

EPON/XPON 1GE ONU is designed as HGU (Home Gateway Unit),it meets telecom operators FTTO (Office), FTTB (Building), FTTH(Home) broadband speed, SOHO broadband access, video surveillance and other requirements. It can switch automatically with EPON and GPON mode when it access to the EPON OLT or GPON OLT. Based on mature and stable, cost-effective XPON technology, high reliability, easy management, configuration flexibility and good quality of service (QoS) guarantees to meet the technical performance of the module of China Telecom EPON CTC3.0 and GPON Standard of ITU-TG.984.X.
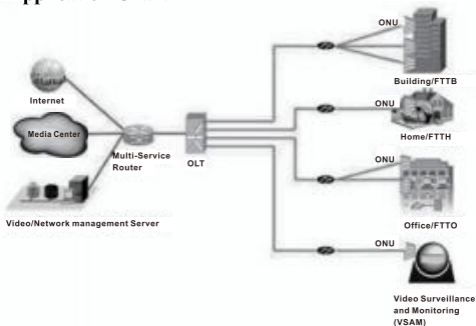
1.2 Application Chart

Figure 1   Application Chart

1.3 Technical parameters

Technical item	1GE(HGU)
PON interface	1 G/EPON port(EPON PX20+ and GPON Class B+)
Wavelength	Tx1310nm, Rx1490nm
Optical interface	SC connector
LAN interface	1x 10/100/1000Mbps auto adaptive Ethernet interface. RJ45 connector
LED	4, For Status of PWR,LOS,PON,Link/ACT
Push-Button	2,For Function of Power on/off, Reset
Operating condition	Temperature:0℃～50℃ Humidity:10%～90% (non-condensing)
Storing condition	Temperature:-20°C-60°C Humidity:10%～90% (non-condensing)
Power supply	DC 12V/0.5A
Power consumption	<3W
Dimension	120mm×78mm×30mm
Net weight	0.13Kg

Table 1　Technical parameters

Chapter2: Installation

2.1 Installation Requirements

To avoid equipment damage caused by improper use and personal injury, please observe the following precautions:

- Do not place the device near water or in damp places, in order to prevent water or moisture from entering the device.
- Do not put the device in an unstable place, avoid falling damage to equipment.
- Make sure that the supply voltage of the device matches the required voltage value.
- Do not open the equipment chassis without permission.
- Unplug before cleaning the power plug; prohibit the use of liquid cleaning.

Installation Environment requirements

ONU equipment must be installed in the interior, and to ensure the following conditions:

- Confirmation at the ONU installation at sufficient space to facilitate cooling machine.
- ONU suitable operating temperature of 0℃～50℃, humidity 10% to 90%.

Electromagnetic Environment

ONU equipment in use can be affected by external electromagnetic interferences, such as radiation and conduction through the impact on the device, this should note the following:

- Device workplace should avoid radio transmitters, radar stations, and high-frequency interface from power equipment.
- User cable typically require alignment indoors if outdoor lighting traces measures should.

Equipment Installation

ONU product is a fixed configuration cassette equipment. site equipment installation is relatively simple. Simply install the device on a specified place, connecting the upstream fiber subscriber line connections, connect the power cable. Actual operation is as follows:
1. Installed on the desktop
Place the machine on a clean bench, this installation is relatively simple, you can observe the following operation:
- Ensure the smooth workbench.
- Around the device enough space for heat dissipation.
- Do not place objects on the device.
2. Mounted on the wall
- Observation ONU equipment chassis two cruciform recess, in accordance with the position of the groove, instead two screws in the wall
- The original selected two mounting screws gently snap into recesses aligned.
- Slowly let go, so that the device under the support of the screw hanging on the wall.

2.2 Panel lights on

LED	Status	Description
PWR	ON	The device is powered up.
	Off	The device is powered down.
LOS	Blink	Device does not receive optical signals.
	Off	Device has received optical signal.
PON	ON	The device has registered to the PON system.
	Off	The device registration is incorrect.
	Blink	The device is registering the PON system.
LINK/ACT	ON	Port is connected properly (LINK).
	Off	Port connection exception or not connected.
	Blink	Port is sending or/and receiving data (ACT).

Table 2   Panel lights on

2.3 Equipment List

Contents	Quantity
ONU	1 pcs
Power adapter	1 pcs
User manual	1 pcs

Table 3 Equipment List

Chapter3: Web Management

EPON/XPON 1GE ONU provides simple Web management functions, including Device Information, modify Lan IP address, modify/add/delete wan connection, Firewall service Reboot/Restore, firmware upgrade etc...

3.1 Login webpage

The following is the default device configuration information.
● Local (LAN access) Username: **admin**, Password: **admin**
● LAN port management IP address: **192.168.1.1**

Sign in

http://192.168.1.1

Your connection to this site is not private

Username admin

Password ••••••

Sign in   Cancel

Figure 2 Web login

3.2 Basic Configuration

Device Status

This page shows the current status and some basic settings of the device.

System	
Device Name	Modem Router
Uptime	20min
Firm ware Version	V1.9.0-191017
CPU Usage	0%
Memory Usage	34%
Name Servers	
IP v4 Default Gateway	
IP v6 Default Gateway	

LANConfiguration	
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
DHCP Servers	Enabled
MAC Address	a8bf3c010203

WAN Configuration						
Interface	VLAN ID	Connection Type	Protocol	IP Address	Gateway	Status
nas0_0	0	INTERNET	Bridged			up

Refresh

Figure 3 Device Information

Device Menu displays the current device base information. Including Firmware Version, LAN IP Address ,Mac address and WAN connection Status.

Note: Some of the device information may be changed by manufacturer.

PON WAN

This page is used to configure the parameters for PONWAN

new link ▼

Enable VLAN: ☐

VLAN ID: 802.1p_Mark ▼

Channel Mode: Bridged ▼
                Bridged
Enable NAPT: IPoE
Admin Status: PPPoE ◯ Disable
Connection Type: Other

Enable IGMP-Proxy: ☐

Port Mapping

☐ LAN_1

Apply Changes   Delete

Figure 4WAN Configuration

PON WAN Menu display the detail wan connection configuration, including the vlan ID , Channel Mode and Connection Type.

Note: For this page, according to local network, customer can mark the vlan ID and choose the Bridge/IPoE/PPPoE for Internet.

IP/Port Filtering

Entries in this table are used to restrict certain types of data packets though the Gateway. Use of such filters can be helpful in securing or restricting your local network.

Default Action ○ Deny ● Allow   [Apply Changes]

Protocol: [TCP ▼] Rule Action ● Deny ○ Allow
Source IP Address: [   ]   Subnet Mask: [   ]   Port: [   ]-[   ]
Destination IP Address: [   ]   Subnet Mask: [   ]   Port: [   ]-[   ]
[Add]

Current Filter Table:

Select	Protocol	Source IP Address	Source Port	Destination IP Address	Destination Port	Rule Action

[Delete Selected] [Delete All]

Figure 5 Services Configuration

Commit and Reboot

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

[Commit and Reboot]

Figure 6 Commit and Reboot

Reboot: The operation to commit changes and reboot the device.

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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

Restore Settings to Default: Reset

Figure 7 Backup and Restore

Backup: The operation to backup current settings.
Restore Settings from File: The operation allows to restore the settings from the correct saved file.
Restore to default: The operation to reset the current settings to factory default.
Note: Press RST button over 10 seconds, ONU can restore factory default and reboot.

Firmware Upgrade

This page allows you upgrade the firmware to the newer version. Please note that do not power off the device during the upload because this make the system unbootable.

Choose File | No file chosen

Upgrade | Reset

Figure 8 Firmware Upgrade

Firmware upgrade: The operation allows upgrade the firmware to the new version. Click the "choose file" button to select the software and click the "Upgrade" button to update.
Note: During the upgrade process, please don't power off the device .Otherwise it will make the system broken.

Chapter4: Trouble shooting

1. After power , why are all the lights lit?
Reasons:
1) Power connection errors;
2) Power is not normal.
Solution:
1) Check that the power cable is connected;
2) The rear panel of the power supply is turned on.
2. Why does the LED of LAN not light?
Reasons:
1) Network cable is damaged or loose connection;
2) Cable type errors;
3) Long lines outside the allowable range.
Solution:
1) Replace the network cable, and pay attention to the standard Ethernet cable must be parallel or crossing lines.
3. Why is the led of LOS always blinking?
Reasons:
1) the optical cable is broken
2) the optical line error.
Solution:
1) Inspect fiber is connected property, change the new optical cable.
2) Contact your ISP.
4. Why does the led of PON flashed instead of always on ?
Reasons:
1) Fiber optic connector is loose;
2) Fiber optic connector is dust;
3) optical line terminal error;
Solution:
1) Inspect fiber is connected property;
2) Cotton ball with alcohol swabbing fiber optic connectors;
3) Contact your ISP.
5. After working for some time to stop working?
Reasons:
1) Power supply is not working properly;
2) The equipment from overheating.
Solution:
1) Check if there is contact with abnormal voltage is too high or too low;
2) Check the ambient conditions, vents are nominal ventilation.