1FE+1GE+1POTs EPON ONU
User Manual
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1. Introduce

The 1FE+1GE+1POTS terminal devices ONU are designed for fulfilling FTTH and dual play service demand of fixed network operators or cable operators. These boxes are based on the mature EPON technology, which have high ratio of performance to price, Layer 2/3, and high quality VoIP as well. They are highly reliable and easy to maintain, with guaranteed QoS for different service, Full compatible with IEEE802.3ah technical requirement standards.

1.1 Applications

1.2 Function

- **Interfaces**
  - EPON interface standard, SC/PC
  - Ethernet interface: one FE and one GE interfaces, RJ-45, comply with IEEE802.3 and IEEE802.3u standards.
  - POTS interface: RJ-11

- **Technical Features**
  1FE+1GE+1POTS has the following features.
► Broadband service access: connected to Internet through the EPON access method.
► Ethernet service access: Provides GE/FE Ethernet interfaces, connected to the there to devices, such as the user PC. Provides the Internet access and IPTV services.
► POTS service access: Supports SIP, H.248 protocol.
► Security: Provides multi-level authentication based on the device, user and service, and provides the data channel encryption for safety.
► QoS: Provides QoS services meeting the requirements of various services for the local devices and network
► Network management: Provides multi-mode network management.

1.3 Interface

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEL</td>
<td>Connect the telephone with FXS port by telephone wire.</td>
</tr>
<tr>
<td>FE/GE</td>
<td>Connect PC with EPON HGU Ethernet port by RJ-45 Cat5 cable.</td>
</tr>
<tr>
<td>POWER</td>
<td>Connect with power adapter (DC12 V)</td>
</tr>
<tr>
<td>ON/OFF</td>
<td>Power turn on/off</td>
</tr>
<tr>
<td>PON</td>
<td>Connect port with EPON network by SC/PC type, single mode optical fiber cable</td>
</tr>
</tbody>
</table>

1.4 LED Description

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
</table>
| LOS       | EPON optical signals
<p>|           | On: Optical power lower than receiver sensitivity ; Off: Optical in normal |</p>
<table>
<thead>
<tr>
<th>PON</th>
<th>ONU Register</th>
<th>On: Success to register to OLT; Blinking: In process of registering to OLT; Off: In process of registering to OLT;</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEL</td>
<td>Telephone port status</td>
<td>On: The connection between the TEL port and the voice server has been set up Blinking: The voice service of the TEL port is established; Off: The connection between the TEL port and the voice server is not set up.</td>
</tr>
<tr>
<td>FE/GE</td>
<td>LAN port status</td>
<td>On: Ethernet connection is normal; Blinking: Data is being transmitted through the Ethernet port; Off: Ethernet connection is not set up;</td>
</tr>
<tr>
<td>PWR</td>
<td>Power status</td>
<td>On: The ONU is power on; Off: The ONU is Power off;</td>
</tr>
</tbody>
</table>

1.5 Environmental parameter

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
<td>160mm(L) x 120mm(W) x 33mm (H)</td>
</tr>
<tr>
<td>Rated current</td>
<td>1.0 A</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>12 V DC</td>
</tr>
<tr>
<td>Operation temperature</td>
<td>0℃—50℃</td>
</tr>
<tr>
<td>Operation humidity</td>
<td>5%—95%</td>
</tr>
</tbody>
</table>

2. Introduce configuring the network

2.1 Prepare for login the ONU web management

Before you login the ONU, you should confirm the connect between the ONU and your PC is normal.

Step 1 Configuring the IP address of your PC to 192.168.100.X (2~254), subnet mask is 255.255.255.0.

Step 2 Ping IP address of the ONU (Default address is 192.168.100.1). If the PC can get right reply from Ping command, it is mean the connecting between the PC and ONU is normal.

[Figure 1]
Note:
Please don't power off the ONU in the process of managing the ONU by the WEB interface.

2.2 Login ONU

Step 1 Open the explorer browser and input the IP address "http://192.168.100.1" (ONU default IP).

Step 2 You need the user name and password for login. The default user name and password are on the label of the ONU bottom. Default administrator user name and password is "CUAdmin" and "CUAdmin".

[Figure 2]
After you login the ONU as the administrator, you can check, configure and change the configuration of the ONU. Some of configuring and changing will take effect only after restart the ONU.

Login success, a “Device Info” windows will show as bellow. There are eight item of the status function. It is Summary, WAN, Statistics, Route, ARP, DHCP, Voice and optic.
2.3 ONU Authentication

1. In the navigation tree on the left, choose Management> ONU Authentication. In the pane on the right, you can view or change the authentication mode for the registration of the ONU on the OLT, as shown in Figure.

   ![ONU Authentication Diagram](image)

2. LOID authentication mode.
   As the previous figure, you should enter the LOID and Password. This will be used in the authentication with the OLT.
3. Password authentication mode.
   Enter the password and SN.

   ![Password Authentication Diagram](image)

2. Click Apply to apply the configuration

*Note: Suggest you use the Chrome Internet Explorer to avoid display problem.*
2.3 LAN Configuration

1. In the navigation tree on the left, choose Advanced Setup> LAN Port Work Mode. In the pane ONU the right, determine whether the LAN port works mode.
   1) RG: LAN port works in layer 3 mode, that is, the gateway mode;
   2) ONU: LAN port works in layer 2 mode, that is, the bridge mode;

Note: As the LAN Port configure to ONU mode, the port can't visit the ONU WEB interface after you connect the ONU with OLT.

2.4 WAN Configuration

**WAN in route mode:** The ONU functions as a gateway. The IP address of the ONU can be obtained through DHCP, Static, or PPPoE. The IP address of the PC connected to the ONU can be obtained from the DHCP address pool of the ONU or can be set manually.

**WAN in bridge mode:** The ONU functions as a relay and does not process data. The ONU does not obtain the IP address allocated by the upper-layer device and it does not allow manual configuration of a static IP address. The IP address of the device connected to the ONU can be obtained through DHCP, PPPoE, or static.
2.4.1 Add WAN Connection PPPOE

Step 1: Add WAN service interface by click the “ADD” button on WAN configuration page.

Step 2: Select the WAN connection and Click “Next” to enter the WAN service configuration page as below.

Step 3: Chose the PPPoE and select the service type, enter the priority and VLAN ID. Click “NEXT” button to go to the next page.
Step 4: Enter the PPP Username and Password provided by ISP.

Step 5: Select default gateway.
Step 6: Select the DNS.

Step 7: Show the WAN configuration, click the “Apply/Save” button.

Step 8: Show the all WAN connection.
2.4.2 Add WAN Connection IPOE

**Step 1-2:** It is the same as the WAN Connection PPPoE.

**Step 3:** Select the IPOver Ethernet, configure the VLAN and priority.

**Step 4:** Select the dynamic or static IP mode.
**Step 5:** Configure the NAT, Firewall and IGMP multicast.

**Step 6-8:** It is same as PPPoE configure process.

### 2.4.2 Add WAN Connection As Bridging

**Step 1-2:** it is the same as the WAN Connection PPPoE.
**Step 3:** Select the Bridging mode

**Step 4:** Next configure process is the same as PPPoE.
2.5 Voice Configuration

This topic describes how to configure the voice service through the Web page.

2.5.1 Select Protocol

2.5.2 H.248 Setting

Selected Voice -> H.248 Setting, configure the binding WAN interface, MGC address and Port, codec in this page.
2.5.3 SIP Setting

1. Selected Voice > SIP Basic Seething> Service Provider0, configuring the SIP Registrar, SIP Proxy, SIP Account, Password etc.
2. Selected Voice> SIP Advance seething> Service Provider0, to configure the Call waiting, Call forwarding number, Anonymous Calling ect.
2.6 IPTV Configuration

2.6.1 IGMP Proxy

In the WAN Connection creating page, you can enable the IGMP Proxy when the WAN Connection is not setting to bridging.

2.6.2 IGMP Snooping

In the Advanced Setup >LAN, you can configure the IGMP Snooping.
Standard Mode: Before the IGMP Report send, the multicast data will send to all bridging port, and after the IGMP Report have sent, only the ports in the IGMP Report can receive
multicast.
Blocking Mode: Only after the IGMP Report sent, the Report Port can receive multicast.

### 2.6.3 IGMP Snooping

You can set the IGMP Version, Query Interval, Maximum Multicast Groups in this page.