

**Single PON port
AirLive GPON OLT-121
WEB USER MANUAL
For FW 1.1.1 and Higher.**

airlive®

V2.0

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Chapter 1 System Description

1.1 Overview

1.1.1 OLT Introduction

The Web management user manual is for the OLT listed in Table 1-1. After you have completed installation, connection and commissioning of the equipment, you can start on configuring various services and functions for the equipment.

Table 1-1 OLT interfaces

| Products | | Single PON port GPON OLT |
|--------------------|------------------|---------------------------------------|
| Chassis | Racks | 1U |
| 1G/10G Uplink Port | QTY | 3 |
| | Copper | 2*100/1000M auto-negotiation |
| | SFP(Independent) | 1*SFP+ (SFP+ is compatible with 10GE) |
| GPON Port | QTY | 1 |
| | Fiber Type | 9/125μm SM |
| Management Mode | | Console, WEB, Telnet and CLI |

1.1.2 OS Requirement

For OLT management, it supports or requires the following operation system.

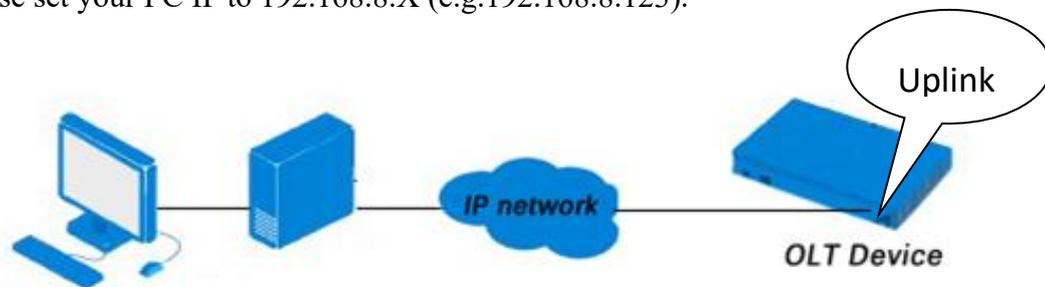
Table 1-2 Operation System requirement

| CPU | Memory | DISK | Video Card | Operating System |
|----------------------|--------------|-----------------|---|---|
| Frequency above 2GHz | 2GB Or above | 10GB Disk space | 65000 color resolving capability 1024*768 and above | Windows2008 Windows XP Windows 7 Windows 8 Windows 10 |

1.2 Connection

Connect the OLT Uplink port to IP network. The OLT default management IP is 192.168.8.200.

Please set your PC IP to 192.168.8.X (e.g.192.168.8.123).



Chapter 2 OLT Information

2.1 Login

Follow the steps to login:

1. Conform “1.2 Connection” to connect;
2. The device default IP address is 192.168.8.200;
3. Open your web browser, type the device IP in the address bar;
4. Entry of the username and password will be prompted. Enter the default login User Name and Password.

The default username and password is "admin/Xpon@Olt9417#".

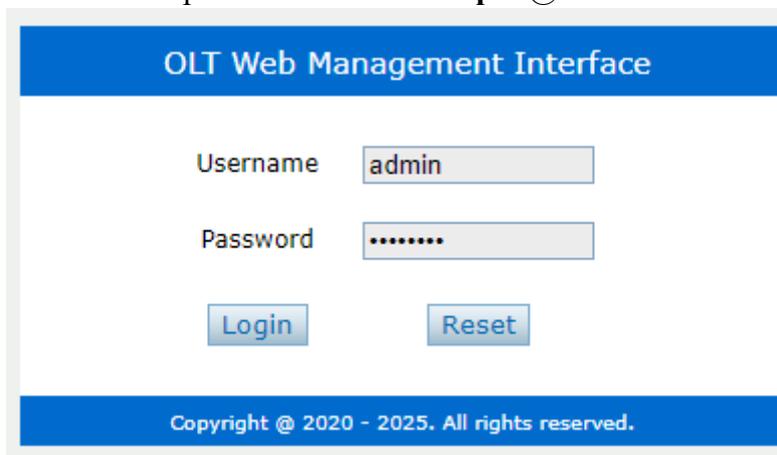


Figure 2-1-1: Login

2.2 Device Information

The OLT ports connection status are shown in the top of the interface, and about the OLT basic information.

OLT Information → Device Information

This part shows the OLT information such as system name, serial number, hardware version, firmware version, MAC address and system time. The system name can be modified in need.

The screenshot shows the AirLive web interface for a GPON OLT. The left sidebar contains navigation options: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, and System Configuration. The main content area is titled 'Device Information' and includes a 'Save' button in the top right. Below the title is a 'Device Status' section with icons for PON1, GE1, GE2, and GE3. The 'Device Basic Information' section features a table with the following data:

| Device Basic Information | | | |
|--------------------------|---------------------------|------------------|--------------------------------------|
| System Name | gpon-olt | Serial Number | AT121C70002 |
| Hardware Version | V3.1.1 | Software Version | V1.0.7 |
| MAC Address | 00:4F:5B:00:00:04 | Temperature | 42°C |
| System Time | 1970 /1 /1 12:17:25 | Running Time | 0 Days 4 Hours 17 Minutes 26 Seconds |
| CPU Usage | 5% | Memory Usage | 48% |
| License Limit | Unlimited | License Time | Permanent |
| Software Created Time | Tue, 23 May 2023 11:48:43 | Device Model | GPON-OLT |

Below the table, a red warning message states: "It is recommended to change your default password for this device for security and safety reasons." A "ChangeNow" button is provided to address this warning.

Figure 2-2-1: Device Information

Chapter 3 OLT Configuration

3.1 VLAN

OLT equipment switch engine is fully compliant with the IEEE802.1Q VLAN standard and has the following main features:

- Support Port-based VLAN and IEEE802.1Q VLAN.
- Support full 512 VLAN at the same time, VLAN range is 1~4094.

All switch ports, including uplink ports and downlink ports, support VLAN partition. VLAN 1 is the system reserved VLAN, it includes all switch ports which are untag mode. Please do not use VLAN:0,1, 2, 9, 8, 10, 4000, 4005, 4012-4017, 4095, These are system reserved VLAN's.

3.1.1 Create VLAN

OLT Configuration → VLAN

In this user interface, you can create new VLAN.

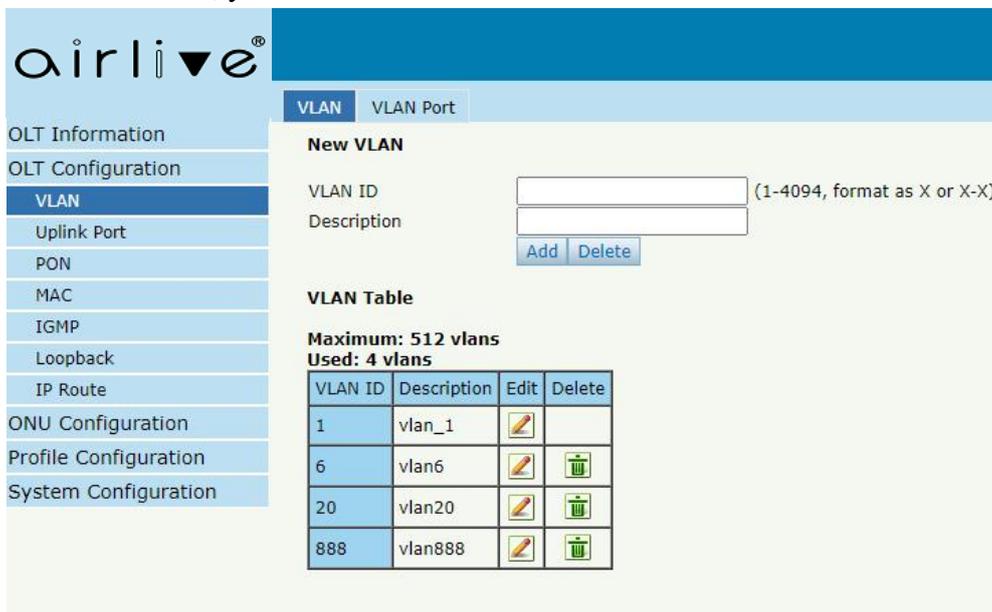


Figure 3-1-1: Create New VLAN

3.1.2 VLAN Port

OLT Configuration → VLAN → VLAN Port

Assign the ports to the VLANs that have been created. You can choose the tag or untag VLAN mode.

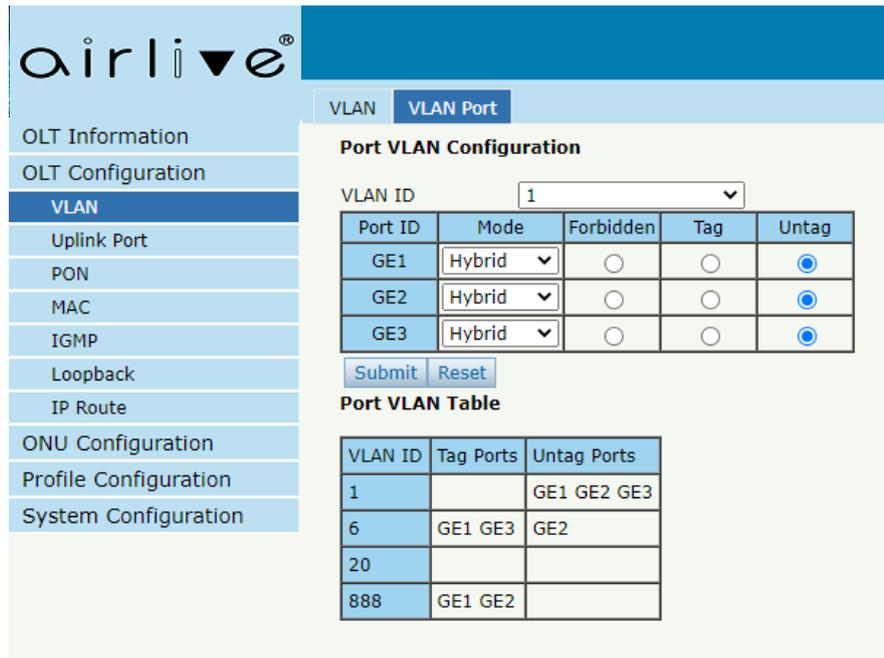


Figure 3-1-2: Add VLAN Port

3.1.3 QinQ/Translation

OLT Configuration → VLAN → QinQ/Translation

In this page, VLAN QinQ and VLAN translation can be configured. VLAN QinQ and translation are applied to the incoming direction of port traffic.

Figure 3-1-3: VLAN QinQ/Translation

3.1.4 P2P

OLT Configuration → VLAN → P2P

In this page, P2P functionality can be enabled based on VLAN.

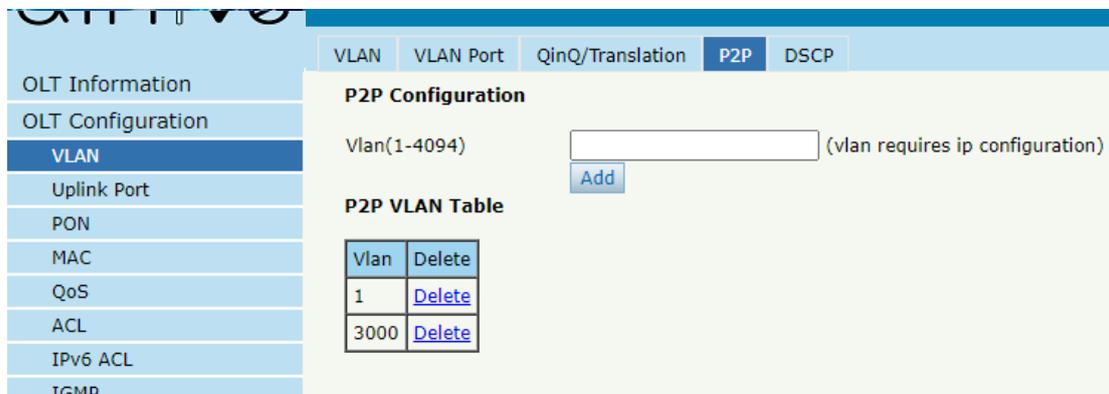


Figure 3-1-4: P2P Function

3.1.5 DSCP

OLT Configuration → VLAN → DSCP

In this page, you can manually configure the DSCP value of IP packets, set the DSCP mapping to a new DSCP, and support the configuration of IP DSCP mapping VLAN priority.

The screenshot displays the 'DSCP' configuration page in the OLT web interface. The left sidebar lists various configuration categories, with 'VLAN' selected. The main content area is divided into several sections:

- IP DSCP Configuration:** Includes a field for 'IP DSCP value' set to 'auto' and a 'DSCP' field. A 'Submit' button and an 'Auto' button are present.
- DSCP To New DSCP:** A table for mapping existing DSCP values to new ones. The 'DSCP' row lists values 0, 8, 16, 24, 32, 40, 48, and 56. The 'New DSCP' row lists corresponding values 0, 8, 16, 24, 32, 40, 48, and 56. A 'Submit' button is located below the table.
- Notice:** A red notice states 'Support DSCP-to-DSCP in IPv4.'
- IP DSCP Mapping Vlan Priority Configuration:** Includes a 'Status' dropdown menu set to 'Disable', a 'DSCP' field, and a 'New COS' field. A 'Submit' button is at the bottom.
- IP DSCP Mapping Vlan Priority Table:** Two tables showing DSCP to COS mappings.

| DSCP | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| COS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Edit | | | | | | | | | | | | | | | | |

| DSCP | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| COS | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Edit | | | | | | | | | | | | | | | | |

Figure 3-1-5: DSCP Configuration

3.2 Uplink Port

GE ports traffic statistics and basic configuration setting.

3.2.1 Information

OLT Configuration → Uplink Port → Information

This user interface displays traffic statistics of uplink ports.

| Port ID | Link Status | Speed | Rx Bytes | Rx Packets | | | | Tx Bytes | Tx Packets | | | | Collisions | Errors |
|---------|-------------|------------|--------------|------------|-----------|-----------|-----------|-------------|------------|-----------|-----------|-----------|------------|--------|
| | | | | Packets | Unicast | Broadcast | Multicast | | Packets | Unicast | Broadcast | Multicast | | |
| GE1 | Down | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GE2 | Up | 1000M Full | 368580049015 | 429162977 | 379368125 | 38810682 | 3660328 | 74231801339 | 293581333 | 284277316 | 6825321 | 2478696 | 0 | 0 |
| GE3 | Down | - | 0 | 0 | 0 | 0 | 0 | 4213905987 | 45599873 | 1674165 | 38492215 | 5433493 | 0 | 0 |

Figure 3-2-1: GE Traffic Statistics

3.2.2 Configuration

OLT Configuration → Uplink Port → Information

This user interface is used to configure port related functions and characteristic parameters of uplink port, such as port attributes, PVID, flow control, rate limit, storm suppression and so on.

| Port ID | Description | Admin Status | Speed | Flow Control | PVID | Storm(0 64-13000kbps) | | Rate(0 64-100000kbps) | | MAC Limit(0-16384) |
|---------|-------------|-------------------------------------|----------|--------------------------|------|-----------------------|---------|-----------------------|--------|--------------------|
| | | | | | | Broadcast | Unicast | Ingress | Egress | |
| GE1 | | <input checked="" type="checkbox"/> | Auto | <input type="checkbox"/> | 1 | 1496 | 1496 | 0 | 0 | 0 |
| GE2 | | <input checked="" type="checkbox"/> | Auto | <input type="checkbox"/> | 6 | 1496 | 1496 | 0 | 0 | 0 |
| GE3 | | <input checked="" type="checkbox"/> | 10G Full | <input type="checkbox"/> | 1 | 1496 | 1496 | 0 | 0 | 0 |

Figure 3-2-2: Uplink Ports Configuration

Illustrations of each parameter:

| Parameters | Illustration |
|-----------------|--|
| Port ID | GE port has two types, copper (GE1 to GE2) and fiber SFP (GE3). |
| Description | Descriptions or remarks of port. |
| Admin Status | Active or inactive status of port. It is enabled by default. |
| Speed | Configuring Port Rate. |
| Flow Control | Enable or disable flow control function of uplink port to control congestion. It is disabled by default. |
| PVID | Default VLAN ID of the port. |
| Broadcast | Broadcast storm suppression. |
| Unknown Unicast | Unknown unicast storm suppression. |
| Ingress Rate | Port ingress rate. |
| Egress Rate | Port egress rate. |
| MAC limit | Number of MAC address can be learnt in the port. |

3.2.3 Optical Information

OLT Configuration → Uplink Port → Optical Information

This page can be used to view the optical port temperature, voltage, current, transmitted and received optical power and other parameters

The screenshot shows the 'airlive' web interface. On the left is a navigation menu with options: OLT Information, OLT Configuration, VLAN, Uplink Port (selected), PON, and MAC. The main content area has tabs for Information, Configuration, and Optical Information (selected). Below the tabs is the 'Optical Transceiver' section, which contains a table with the following data:

| Port ID | Temperature(Degree) | Voltage(V) | Bias Current(mA) | Transmit Power(dBm) | Received Power(dBm) |
|---------|---------------------|------------|------------------|---------------------|---------------------|
| GE3 | N/A | N/A | N/A | N/A | N/A |

Below the table is a 'Refresh' button.

Figure 3-2-3: Optical Information

3.3 PON

3.3.1 Information

OLT Configuration → PON → Information

This user interface is used to displays parameters of PON port, such as PON module port current temperature, Voltage, current, transmit power.

The screenshot shows the 'airlive' web interface. On the left is a navigation menu with options: OLT Information, OLT Configuration, VLAN, Uplink Port, PON (selected), MAC, IGMP, and Loopback. The main content area has tabs for Optical Information (selected), Traffic Statistics, Configuration, and Range. Below the tabs is the 'Optical Transceiver' section, which contains a table with the following data:

| Port ID | Temperature(°C) | Voltage(V) | Bias Current(mA) | Transmit Power(dBm) |
|---------|-----------------|------------|------------------|---------------------|
| PON1 | 62.414 | 3.352 | 8.290 | 7.110 |

Figure 3-3-1: PON Information

3.3.2 Traffic Statistics

OLT Configuration → PON → Traffic Statistics

| Interface | Rx Packets | | | Tx Packets | | | Collisions | Errors |
|-----------|------------|-----------|-----------|------------|-----------|-----------|------------|--------|
| | Packets | Broadcast | Multicast | Packets | Broadcast | Multicast | | |
| PON1 | 294494417 | 6001912 | 3239478 | 424224313 | 40826096 | 3044776 | 0 | 0 |

Figure 3-3-2: Traffic Statistics

3.3.3 Configuration

OLT Configuration → PON → Configuration

This page is used to configure functions and characteristic parameters of the PON port, such as port attributes, storm suppression, and rate limiting.

| Port ID | Description | Admin Status | Storm(0 64-1000000kbps) | | Rate(0 64-1000000kbps) | |
|---------|-------------|-------------------------------------|-------------------------|---------|------------------------|--------|
| | | | Broadcast | Unicast | Ingress | Egress |
| PON1 | | <input checked="" type="checkbox"/> | 1496 | 1496 | 0 | 0 |

Figure 3-3-3: PON configuration

3.3.4 ALS Configuration

OLT Configuration → PON → Configuration

This page is used to configure port status. When the function is turned on and PONLOS is detected, the laser will be turned off. If the restart mode is auto, set the number of cycles to turn on the laser and the duration for how many seconds. If an ONU is found during the turning on of the laser, keep the laser on until the PONLOS signal is received again.

If it is in manual mode, after turning off the laser, it needs to be manually restarted using the no shutdown command.

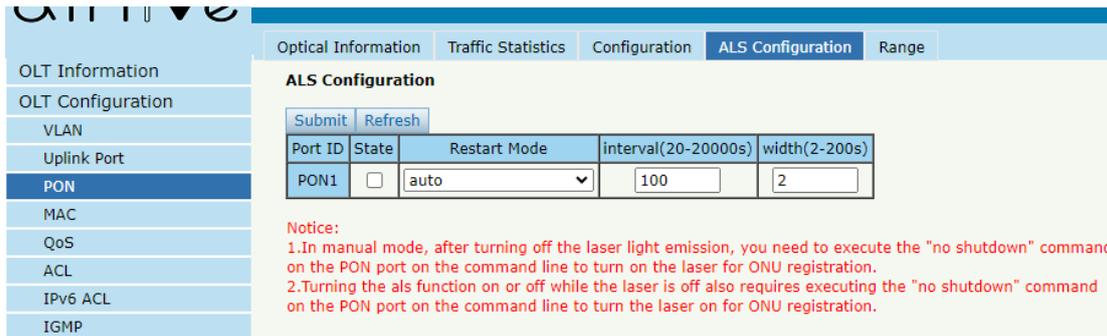


Figure 3-3-4: ALS Configuration

3.3.5 Range

OLT Configuration → PON → Range

When ONU is more than 20km away from OLT, you need to configure PON distance range. The difference between minimum and maximum should not be more than 20km. The unit is 100m.

For example, ONU is 25km away from OLT, the minimum is 50 and the maximum is 250.

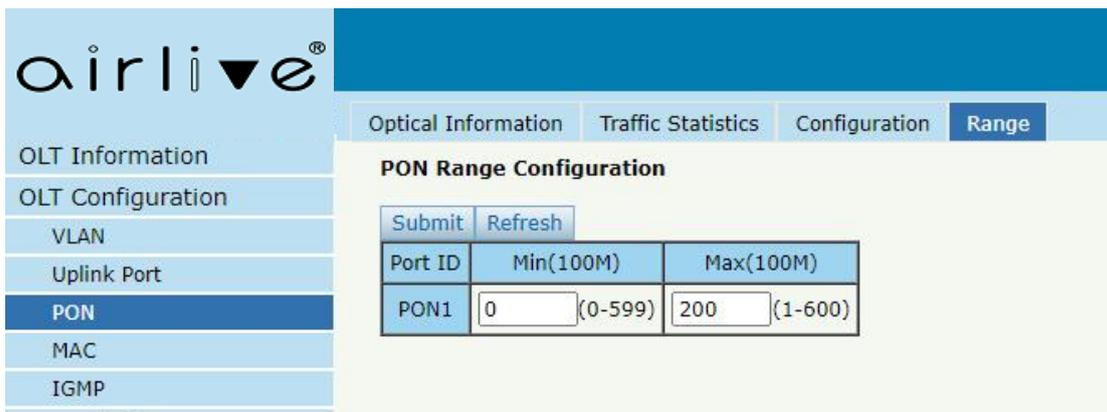


Figure 3-3-5: PON Range Configuration

3.4 MAC

In this section, you can check MAC address table of OLT, set MAC aging time and add MAC address manually.

3.4.1 MAC Table

OLT Configuration → MAC → MAC Table

This table displays MAC addresses that OLT has learned at PON ports and GE ports.

The screenshot shows the 'MAC Address Table' configuration page in the AirLive web interface. The left sidebar lists various configuration options, with 'MAC' selected. The main content area includes search filters for 'Port ID' (set to 'ALL'), 'Input Mac', and 'mac numbers' (set to '4'). A 'Search' button is present. Below the filters are 'Clean' and 'Refresh' buttons. The resulting table is as follows:

| VLAN ID | MAC | Type | Physical Port |
|---------|-------------------|---------|---------------|
| 1 | C8:4D:44:25:2D:C9 | Dynamic | GE 0/2 |
| 100 | 00:4F:4B:B2:15:DA | Dynamic | GE 0/1 |
| 100 | 00:4F:5B:00:01:25 | Dynamic | GPON |
| 100 | 00:4F:4B:B2:15:D9 | Dynamic | GE 0/1 |

Figure 3-4-1: MAC Address Table

3.4.2 PON MAC Table

OLT Configuration → MAC → PON MAC Table

This table displays MAC addresses that OLT has learnt at PON ports.

The screenshot shows the 'PON MAC Table' configuration page in the AirLive web interface. The left sidebar is the same as in the previous screenshot, with 'MAC' selected. The main content area includes search filters for 'Pon ID' (set to 'ALL') and a 'Refresh' button. The resulting table is as follows:

| Index | VLAN ID | MAC | Pon:Onu | Gempport Index |
|-------|---------|-------------------|---------|----------------|
| 1 | 100 | 00:4f:5b:00:01:25 | 1:2 | 1 |

Figure 3-4-2: PON MAC Table

3.4.3 Configuration

OLT Configuration → MAC → Configuration

The default MAC aging time of OLT is 300s, user can change the value between 10~1000000s. Also, user can add MAC address to the OLT manually.

The screenshot displays the AirLive web interface for MAC Configuration. On the left is a navigation menu with options: OLT Information, OLT Configuration (VLAN, Uplink Port, PON, MAC, IGMP, Loopback, IP Route), ONU Configuration, Profile Configuration, and System Configuration. The 'MAC' option is selected. The main content area has three tabs: 'MAC Table', 'PON MAC Table', and 'Configuration'. The 'Configuration' tab is active, showing two sections: 'MAC Aging Configuration' and 'Add MAC Address'. In the 'MAC Aging Configuration' section, 'Automated Aging' is set to 'Enable' and 'Aging Time' is '300' (with a range of 10-1000000s). A 'Submit' button is present. The 'Add MAC Address' section includes fields for 'VLAN ID' (set to 1), 'MAC Address' (with a format hint '(HH:HH:HH:HH:HH:HH)'), 'Type' (radio buttons for 'Static' and 'Dynamic', with 'Static' selected), and 'Port ID' (set to 'GE1'). 'Add' and 'Delete' buttons are at the bottom of this section.

Figure 3-4-3: MAC Configuration

3.5 QoS

OLT Configuration → QoS → QoS

When bandwidth is insufficient or there is congestion in the network, queue scheduling can ensure that high priority data traffic passes through the device first. Traffic will be mapped to the queue based on its priority and transmitted within the queue.

OLT supports a total of 8 queues. The queue scheduling modes include strict priority (SP), weighted loop (WRR), and mixed mode (SP-WRR).

Strict priority scheduling ensures the bandwidth occupied by high priority traffic. Traffic with lower priority will only pass through when there is remaining bandwidth.

QoS Configuration

QoS Status: (dropdown)

QoS Mode: (dropdown)

| Queue ID | Queue Priority |
|----------|----------------|
| Q1 | 1 |
| Q2 | 2 |
| Q3 | 3 |
| Q4 | 4 |

QoS Rules

Access List ID: (1-100)

Queue ID: (1-4)

DSCP: (0-63)

Source MAC: (HH:HH:HH:HH:HH:HH)

Source IP: Mask

Source Port: (0-65535)

Destination IP: Mask

Destination Port: (0-65535)

Protocol: (dropdown)

QoS Rule Table

| List ID | Queue ID | DSCP | Source MAC | Source IP | Source Port | Destination IP | Destination Port | Protocol | Delete |
|---------|----------|------|------------|-----------|-------------|----------------|------------------|----------|--------|
|---------|----------|------|------------|-----------|-------------|----------------|------------------|----------|--------|

Figure 3-5-1: Qos Configuration

3.6 ACL

In order to filter packets, network devices need to set a series of rules to determine the content that needs to be filtered. These packets can only be filtered if they match the rules. Access control lists can achieve this function. The matching criteria for access control list rules can be source address, destination address, Ethernet type, VLAN, protocol port, etc. These access control list rules can also be used in other situations, such as the classification of flows in quality of service. Access control list rules can contain one or more sub rules with different matching conditions.

This device supports the following types of access control lists.

3.6.1 IP/MAC Filter

OLT Configuration → ACL → IP/MAC Filter

The filter is mainly based on IP/MAC addresses, including source IP address and destination IP address, source MAC address and destination MAC address.

Access List Configuration

Access List ID: (1-7999)

Filter Action: Deny Permit

Filtering Direction:

Source MAC: (HH:HH:HH:HH:HH:HH)

Source IP: Mask:

Source Port: (0-65535)

Destination IP: Mask:

Destination Port: (0-65535)

Protocol: (0-255)

Access Lists Configured

| List ID | Source MAC | Source IP | Source Port | Destination IP | Destination Port | Protocol | Filtering Direction | Filter Action | Delete |
|---------|-------------------|-----------|-------------|----------------|------------------|----------|---------------------|---------------|--------|
| 1 | 6c:68:a4:c6:bb:a1 | | | | | | Input | Deny | |

Figure 3-6-1: IP/MAC Filter

3.6.2 Configuration

OLT Configuration → ACL → Configuration

The main configuration controls the access list status and effective period.

Access List status

Access List status:

Effective Period

Effective Period: : ~ : (HH:MM ~ HH:MM)

Notice: This switch is used to enable or disable the ACL at any time, does not affect the timing function.

Notice: The function will be turned off if the effective and ineffective times are the same.

Figure 3-6-2: Configuration

3.7 IPv6 ACL

This section is about the IPv6 security configuration of OLT. IPv6 access control lists can allow or deny data transmission or access through IPv6 packets.

3.7.1 IPv6/MAC Filter

OLT Configuration → IPv6 ACL → IPv6/MAC Filter

The filter is mainly based on IPv6/MAC addresses, including source and destination IPv6 addresses, as well as source and destination MAC addresses.

| List ID | Source MAC | Source IPv6 | Source Port | Destination IPv6 | Destination Port | Protocol | Filtering Direction | Filter Action | Delete |
|---------|------------|-------------|-------------|------------------|------------------|----------|---------------------|---------------|--------|
| 1 | | 2023::33/64 | | | | | Input | Deny | |

Figure 3-7-1: IPv6/MAC Filter

3.7.2 Configuration

OLT Configuration → IPv6 ACL → Configuration

The main configuration controls the access list status and effective period.

| List ID | Source MAC | Source IPv6 | Source Port | Destination IPv6 | Destination Port | Protocol | Filtering Direction | Filter Action | Delete |
|---------|------------|-------------|-------------|------------------|------------------|----------|---------------------|---------------|--------|
| 1 | | 2023::33/64 | | | | | Input | Deny | |

Figure 3-7-2: Configuration

3.8 IGMP

3.8.1 Group Member

OLT Configuration → IGMP → Group Member

When there is a multicast group produced, the group will display in this table.



Figure 3-8-1: Group Member

3.8.2 Global

OLT Configuration → IGMP → Global

IGMP basic configuration mainly contains parameters of query packet and member timeout. When IGMP status is enabled, OLT works at IGMP snooping mode. IGMP snooping is the process of listening to Internet Group Management Protocol (IGMP) network traffic. The feature allows a network switch to "listen in" on the IGMP conversation between hosts and routers. By listening to these conversations, the switch maintains a map of which devices need which IP multicast streams. Multicasts may be filtered from the ports which do not need them and thus controls which ports receive specific multicast traffic. When IGMP status is disabled, OLT works at transparent mode.

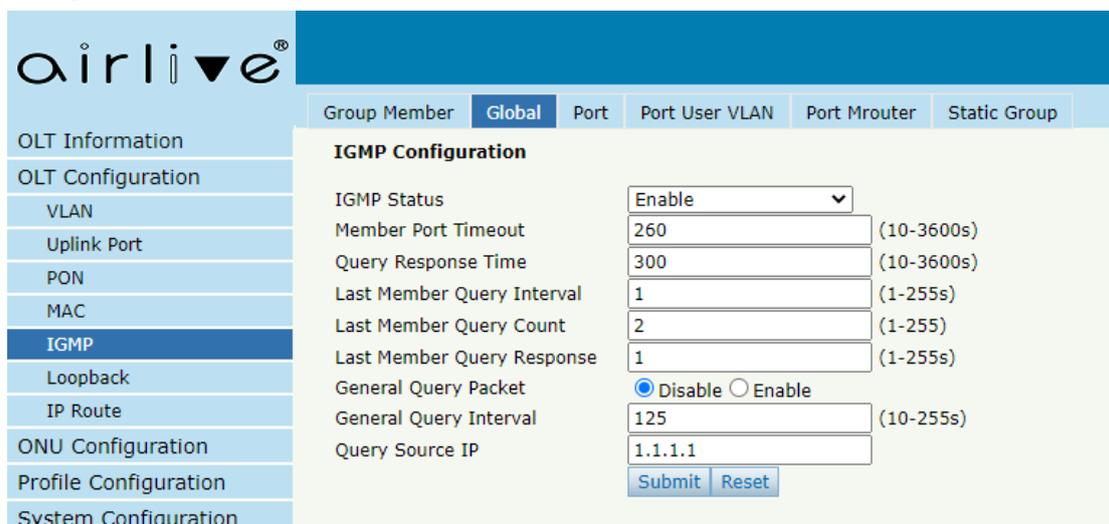


Figure 3-8-2: IGMP Global

3.8.3 Port

OLT Configuration → IGMP → Port

This configuration is used to set the maximum number of multicast groups, filter and fast leave mode.

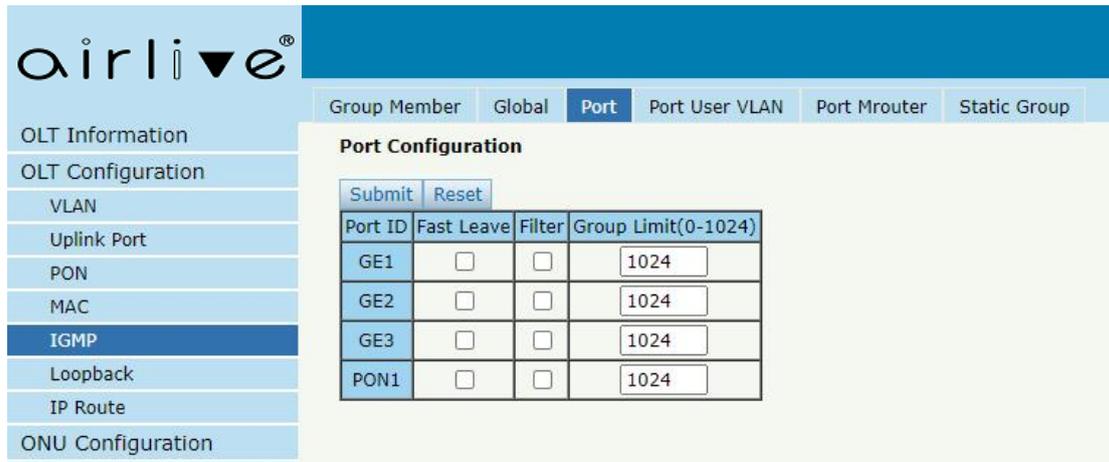


Figure 3-8-3: IGMP Port

3.8.4 Port User VLAN

OLT Configuration → IGMP → Port User VLAN

This configuration is used to configure IGMP VLAN for OLT. Generally, PON ports should be configured, and user VLAN and group VLAN are the same. If user VLAN and group VLAN are different, multicast VLAN will be translated.

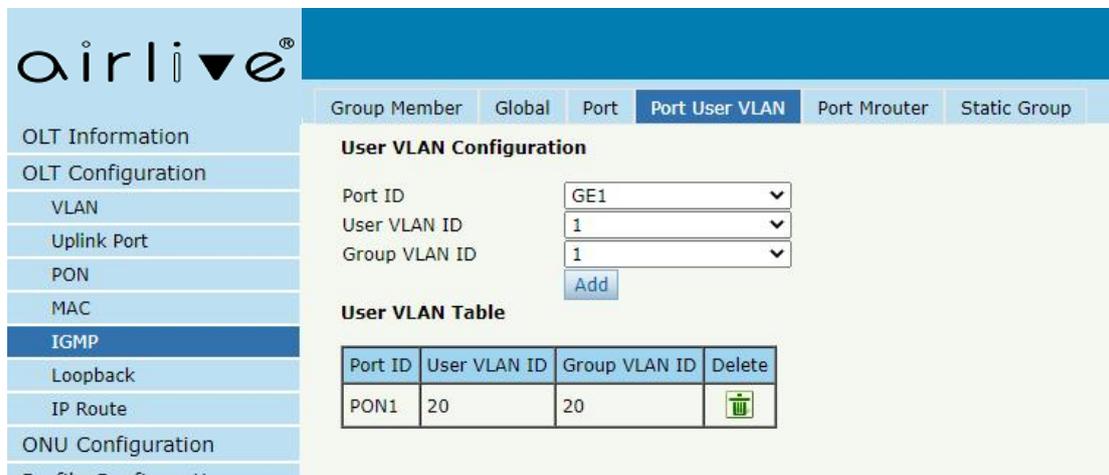


Figure 3-8-4: IGMP Port User VLAN

3.8.5 Port Mrouter

OLT Configuration → IGMP → Port Mrouter

Multicast router port is used to transmit IGMP signal messages. Generally, OLT uplink ports should be set as multicast router ports.

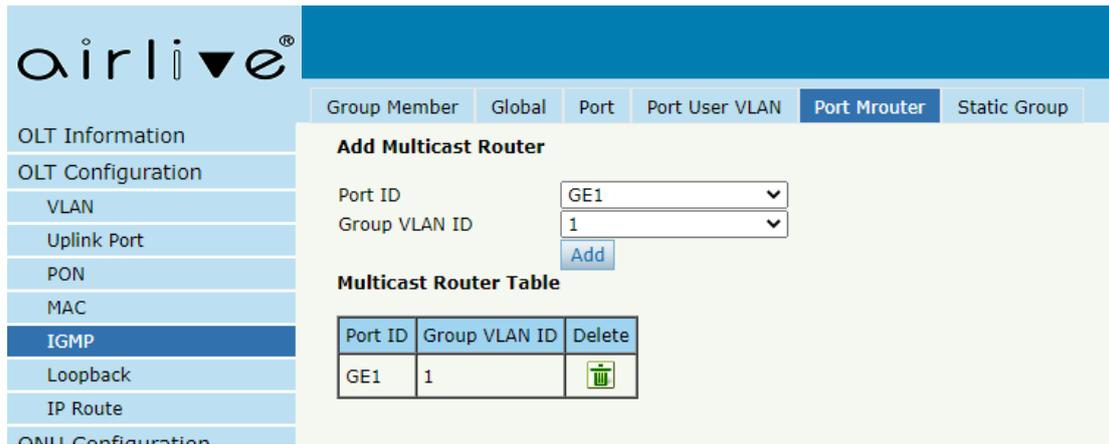


Figure 3-8-5: IGMP Port Mrouter

3.8.6 Static Group

OLT Configuration → IGMP → Static Group

This configuration is used to bind multicast IP address and VLAN ID.

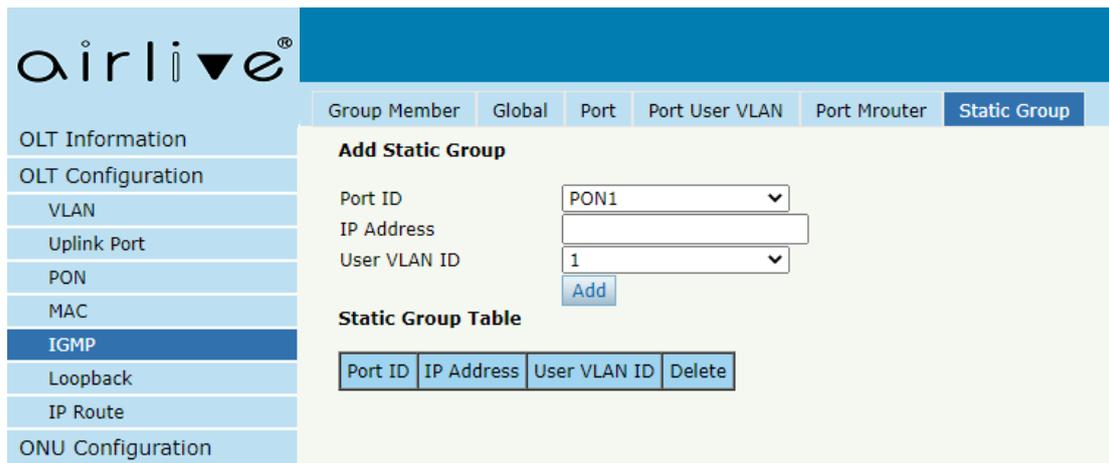


Figure 3-8-6: IGMP Static Group

3.9 IPv6 MLD

3.9.1 Group Member

OLT Configuration → IPv6 MLD → Group Member

When a MLD group is generated, it will be displayed in this table.

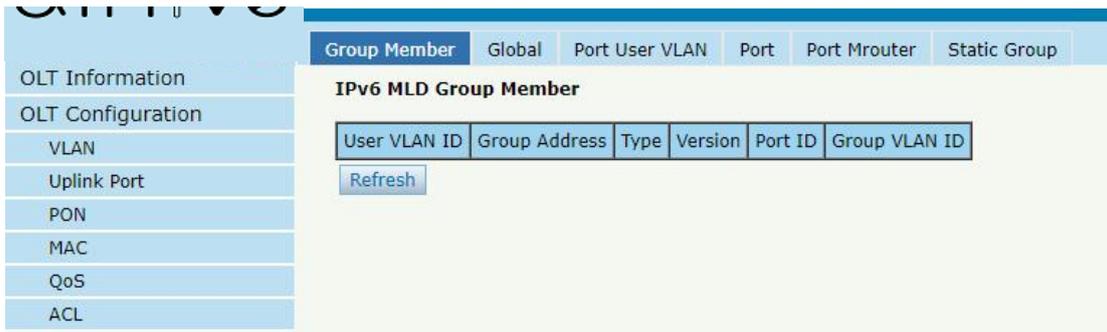


Figure 3-9-1: Group Member

3.9.2 Global

OLT Configuration → IPv6 MLD → Global

The basic configuration of MLD mainly includes query packet parameters and member timeout parameters. When MLD mode is enabled, OLT operates in MLD listening mode. MLD monitoring is the process of monitoring Internet group management protocol (MLD) network traffic. This feature allows network switches to "listen" to MLD conversations between hosts and routers. By monitoring these conversations, the switch maintains a mapping of which devices require which IP MLD streams. MLD can enter line filtering from ports that do not require them, thereby controlling which ports receive specific MLD traffic. When MLD status is disabled, OLT operates in transparent mode.

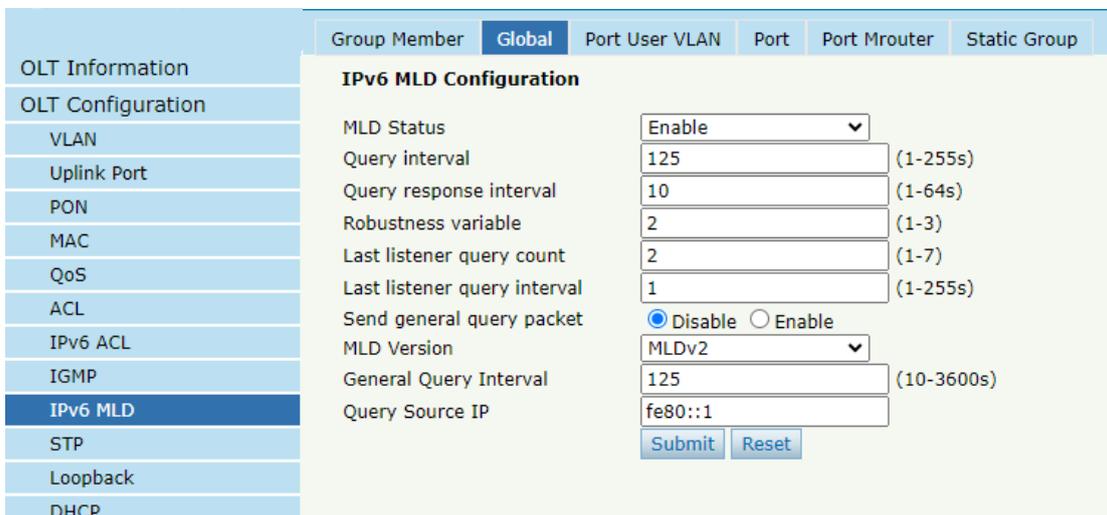


Figure 3-9-2: Global

3.9.3 Port User VLAN

OLT Configuration → IPv6 MLD → Port User VLAN

This configuration is used to configure MLD VLAN for OLT. Generally, PON ports should be configured, with the same user VLAN and group VLAN. If they are different, the MLD data VLAN will be converted and forwarded.

The screenshot shows the 'Port User VLAN' configuration page. The left sidebar lists various configuration categories, with 'IPv6 MLD' selected. The main content area has several tabs, with 'Port User VLAN' active. It features a 'User VLAN Configuration' section with three dropdown menus: 'Port ID' set to 'GE1', 'User VLAN ID' set to '1', and 'Group VLAN ID' set to '1'. An 'Add' button is located below these fields. A 'User VLAN Table' is displayed below, containing one row with 'GE1' in the 'Port ID' column, '1' in the 'User VLAN ID' column, '1' in the 'Group VLAN ID' column, and a delete icon in the 'Delete' column. A 'Refresh' button is positioned at the bottom of the table.

Figure 3-9-3: Port User VLAN

3.9.4 Port

OLT Configuration → IPv6 MLD → Port

This configuration is used to set the group limit, filtering, and fast departure mode for MLD ports.

The screenshot shows the 'Port Configuration' page. The left sidebar is consistent with the previous figure, with 'IPv6 MLD' selected. The main content area has tabs for 'Group Member', 'Global', 'Port User VLAN', 'Port', 'Port Mrouter', and 'Static Group', with 'Port' selected. The 'Port Configuration' section contains a table with the following data:

| Port ID | Fast Leave | Group Limit(0-256) |
|---------|--------------------------|--------------------|
| GE1 | <input type="checkbox"/> | 256 |
| GE2 | <input type="checkbox"/> | 256 |
| GE3 | <input type="checkbox"/> | 256 |
| PON1 | <input type="checkbox"/> | 256 |

Below the table are 'Submit' and 'Reset' buttons.

Figure 3-9-4: Port

3.9.5 Port Mrouter

OLT Configuration → IPv6 MLD → Port Mrouter

The MLD router port is used to transmit MLD signal messages. Usually, the line port on the OLT should be set as a MLD router port.

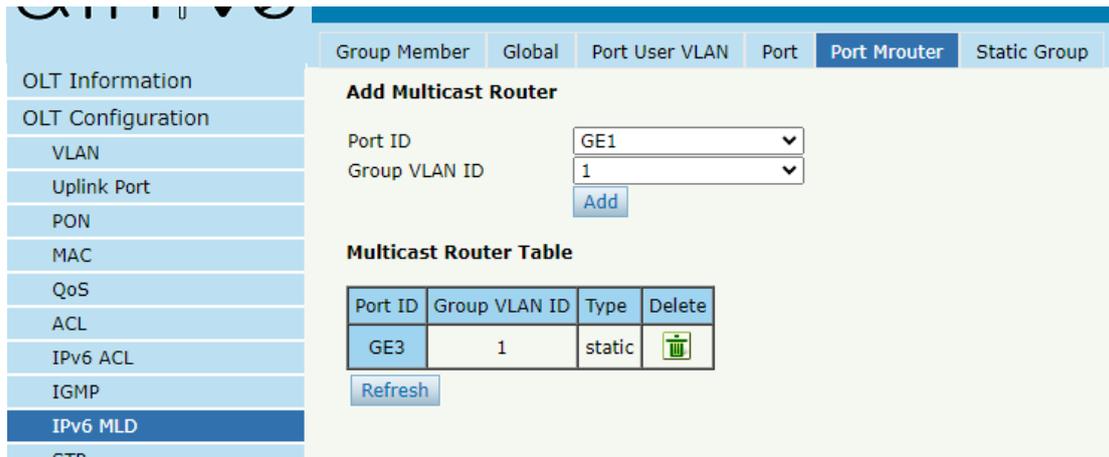


Figure 3-9-5: Port Mrouter

3.9.6 Static Group

OLT Configuration → IPv6 MLD → Static Group

This configuration is used to bind MLD IPv6 addresses and VLAN ID.



Figure 3-9-6: Static Group

3.10 STP

The spanning tree protocol is a second layer protocol that eliminates network loops by selectively blocking redundant network links. It also has the feature of link backup.

3.10.1 RSTP

The Fast Spanning Tree Protocol (RSTP) is defined by the IEEE 802.1w standard, which has been improved on the basis of STP to achieve fast convergence of network topology. Its "speed" is reflected in the fact that when a port is selected as the root port and designated port, the delay for it to enter forwarding state will be greatly

reduced, thereby shortening the time required for the network to ultimately reach topological stability.

3.10.1.1 Information

OLT Configuration → STP → Information

The RSTP information mainly displays the spanning tree protocol parameters of the root bridge device.

The screenshot shows the RSTP Information configuration page. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, **STP**, Loopback, DHCP, DHCPv6, IPv6 SLAAC, IP Route, and IPv6 Route. The main content area has three tabs: Information (selected), Global, and Port. Under the Information tab, there is a section titled 'RSTP Information' containing a table with the following data:

| | Root | Bridge |
|---------------|-------------------|-------------------|
| Cost | 0 | |
| Port | CPU | |
| Priority | 32768 | 32768 |
| MAC Address | 00:50:C2:01:02:03 | 00:50:C2:01:02:03 |
| Hello Time | 2s | 2s |
| Max Age | 20s | 20s |
| Forward Delay | 15s | 15s |

Below the RSTP Information table is a section titled 'RSTP Port Status' with a 'Refresh' button. Below the button is a table with the following data:

| Port ID | Role | State | Cost | Priority | Point To Point |
|---------|--------|------------|-------|----------|----------------|
| GE1 | Design | Forwarding | 20000 | 128 | Enable |

Figure 3-10-1: RSTP Information

3.10.1.2 Global

OLT Configuration → STP → Global

This page is used to set the parameters of the device's spanning tree protocol, including spanning tree protocol switch, priority, hello time, maximum aging time, and forwarding delay.

Figure 3-10-2: RSTP Global

3.10.1.3 Port

OLT Configuration → STP → Port

This page is used to set port fast spanning tree protocol parameters, including spanning tree protocol switches, priority, cost, edge ports, and point-to-point.

| Port ID | Status | Priority (0-240) | Cost (0-200000000) | admin Edge | Operating Edge | Point To Point |
|---------|-------------------------------------|------------------|--------------------|--------------------------|--------------------------|-------------------------------------|
| GE1 | <input checked="" type="checkbox"/> | 128 | 20000 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE2 | <input checked="" type="checkbox"/> | 128 | 20000000 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| GE3 | <input checked="" type="checkbox"/> | 128 | 2000000 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Figure 3-10-3: RSTP Port

3.11 Loopback

Loopback can detect loop ports and process loop ports.

3.11.1 Information

OLT Configuration → Loopback → Information

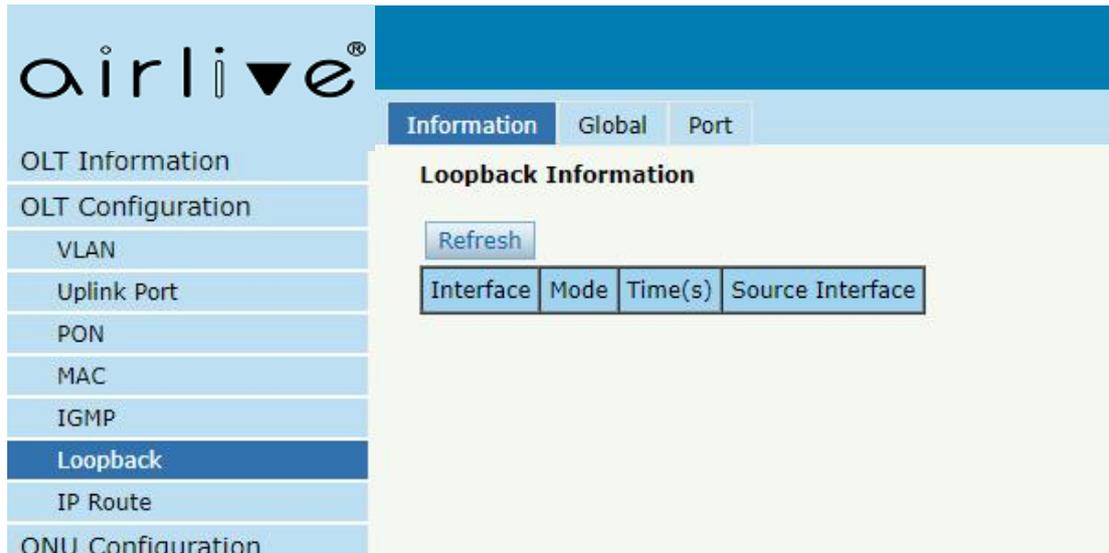


Figure 3-11-1: Loopback Information

3.11.2 Global

OLT Configuration → Loopback → Global

This page is used to enable or disable loopback detect, set the loopback range, mode, and aging time, loopback packet sending mode and packet sending interval.

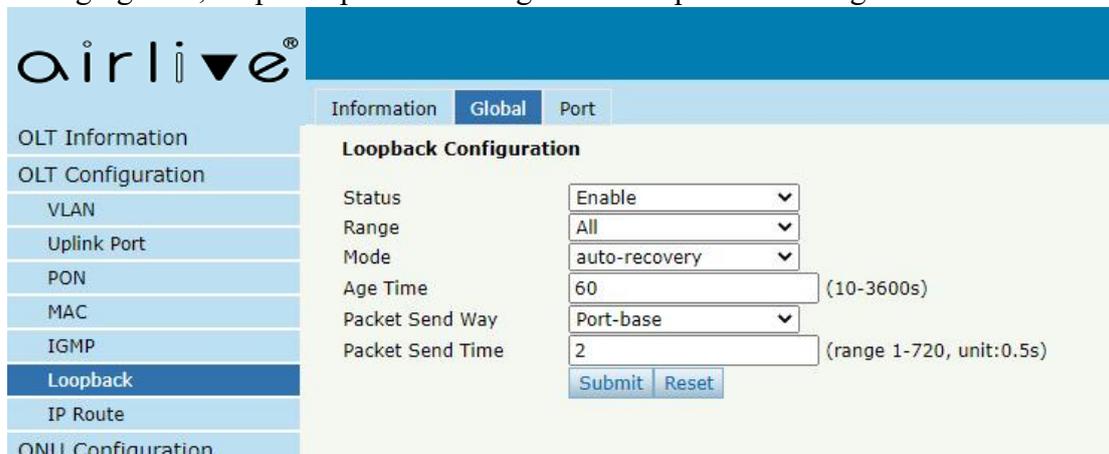


Figure 3-11-2: Loopback Global

3.11.3 Port

OLT Configuration → Loopback → Port

Loopback port configuration is used to specify the port range of loopback function. Loopback will take effect on the port when it is checked.

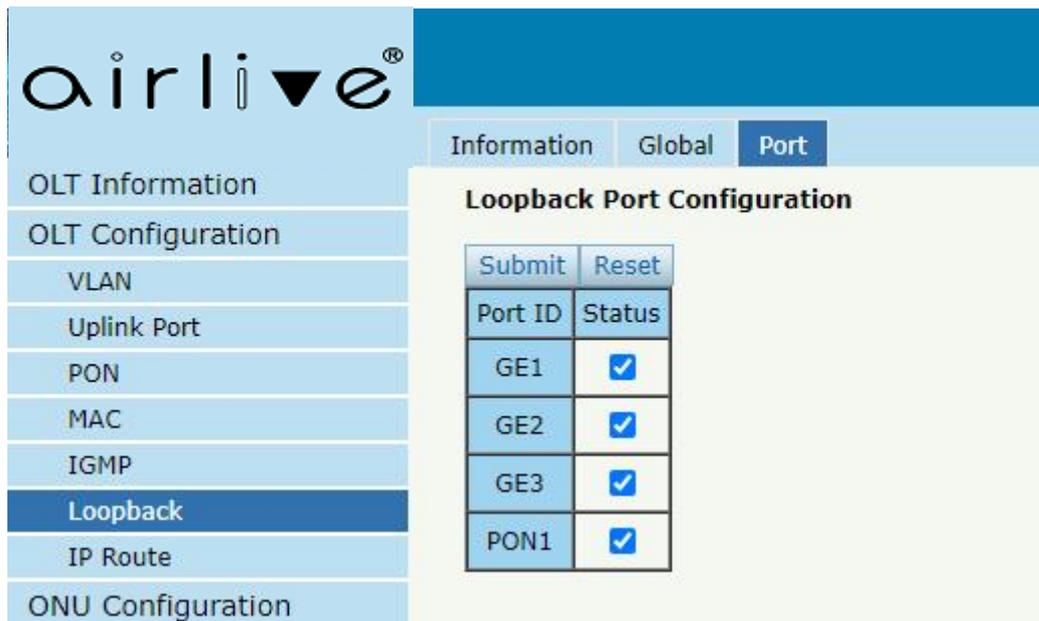


Figure 3-11-3: Loopback Port

3.12 DHCP

OLT can support the following DHCP functions.

- DHCP server
- DHCP proxy
- DHCP relay

3.12.1 DHCP Server

3.12.1.1 Lease

OLT Configuration → DHCP → DHCP Server → Lease

This table displays the MAC addresses, host names and IP addresses, and lease terms assigned to them.

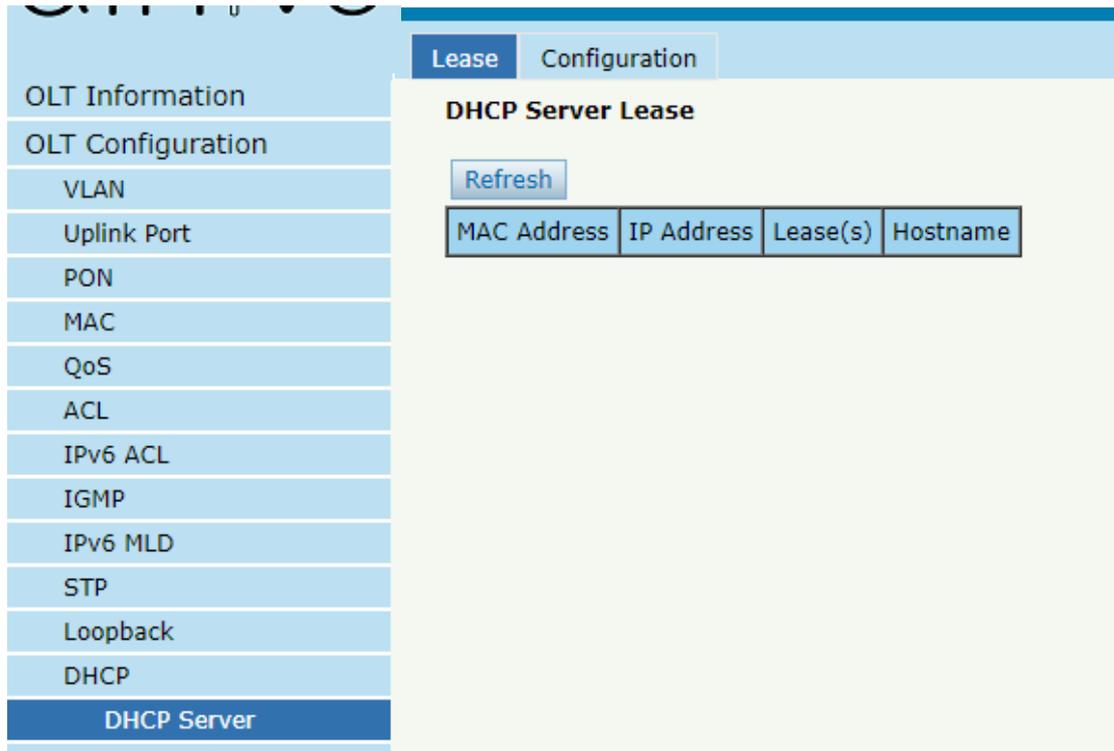


Figure 3-12-1: Lease

3.12.1.2 Configuration

OLT Configuration → DHCP → DHCP Server → Configuration

Sometimes devices require dynamic IP addresses, but there are no special DHCP servers in the network. These configurations can solve this problem. OLT will be a DHCP server in the network and allocate IP addresses to other devices.

Before enabling the DHCP server, you must configure an IP address for the VLAN.

| DHCP Server Configuration | |
|--|--------|
| DHCP Server | Enable |
| VLAN ID | 1 |
| <input type="button" value="Submit"/> <input type="button" value="Reset"/> | |

| DHCP Server Settings | |
|--|---------------------|
| Start IP Address | 192.168.60.231 |
| End IP Address | 192.168.60.254 |
| Subnet Mask | 255.255.255.0 |
| Gateway | 0.0.0.0 |
| Static DNS 1 | 0.0.0.0 |
| Static DNS 2 | 0.0.0.0 |
| Static DNS 3 | 0.0.0.0 |
| WINS | 0.0.0.0 |
| Client Lease Time | 864000 (60-864000s) |
| <input type="button" value="Submit"/> <input type="button" value="Reset"/> | |

Figure 3-12-2: DHCP Server Configuration

3.12.2 DHCP Relay

Due to the DHCP process using broadcast to generate request messages, servers and clients usually need to be in the same network segment. DHCP relay can solve the problem that DHCP servers and clients do not exist in the same network.

3.12.2.1 Configuration

OLT Configuration → DHCP → DHCP Relay → Configuration

This page is used to configure the IP and working VLAN of DHCP relay servers.

The screenshot displays the 'DHCP Relay' configuration page. On the left, a navigation menu includes: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCP Server, **DHCP Relay**, and DHCP Snooping. The main area has tabs for 'Configuration', 'Global', and 'Port'. Under 'Configuration', there is a section for 'Add Relay Server' with input fields for 'Server IP' and 'VLAN ID' (set to 1), and an 'Add' button. Below this is a 'Relay Server Table' with the following data:

| Server IP | VLAN ID | Delete |
|---------------|---------|--------|
| 192.168.1.166 | 1 | |

Figure 3-12-3: DHCP Relay Configuration

3.12.2.2 Global

OLT Configuration → DHCP → DHCP Relay → Global

This page is used to configure the Option 82 function of DHCP relay. After receiving the DHCP request message, the DHCP relay will process the message according to whether it contains Option 82 and the processing strategy and padding mode configured by the user, and forward the processed message to the DHCP server.

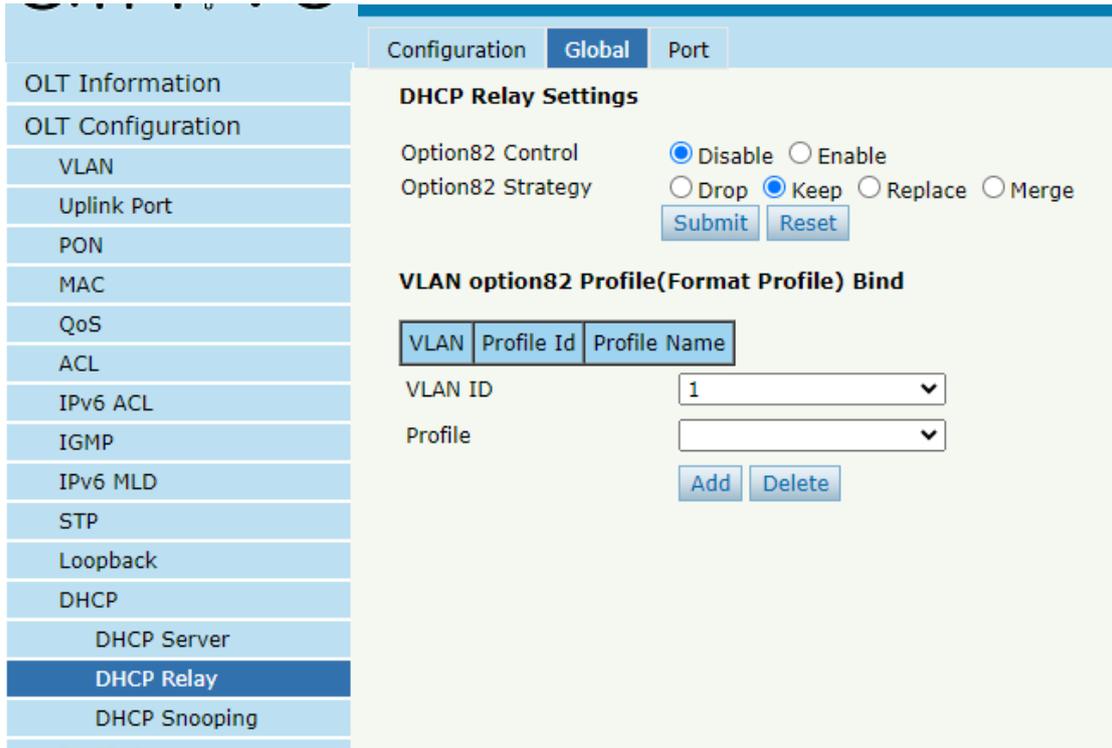


Figure 3-12-4: DHCP Relay Global

3.12.2.3 Port

OLT Configuration → DHCP → DHCP Relay → Port

This page is used to configure the Option 82 line ID and remote ID of the port.

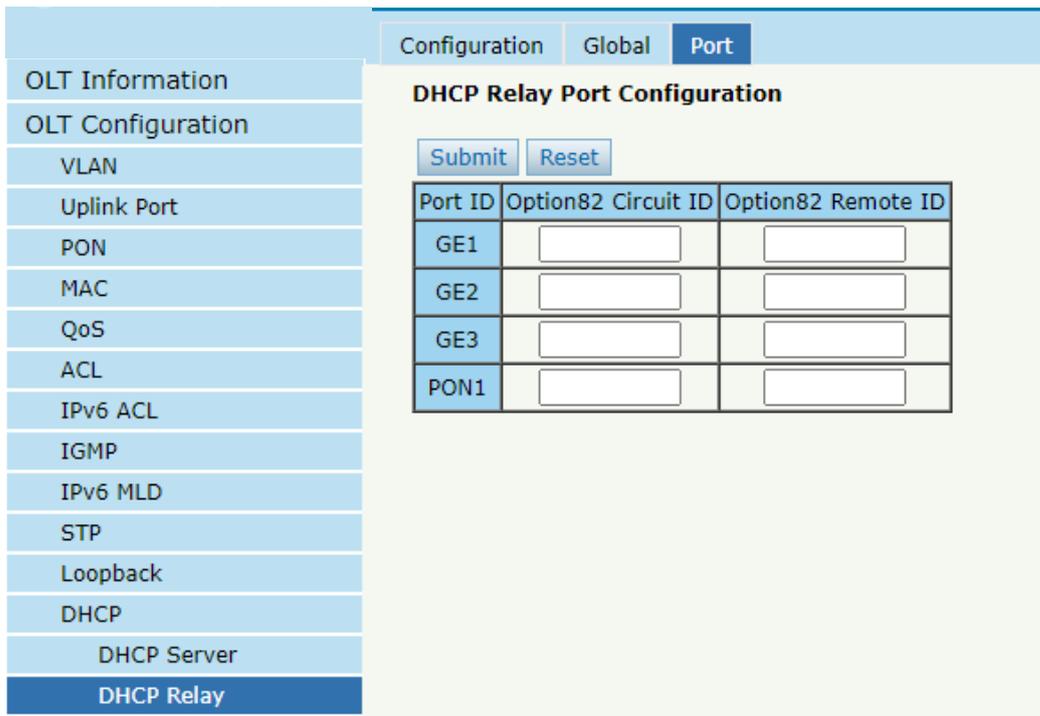


Figure 3-12-5: DHCP Relay Port

3.12.3 DHCP Snooping

DHCP Snooping is a security feature of DHCP that ensures that clients obtain IP addresses from legitimate servers and record the correspondence between DHCP client IP and MAC.

3.12.3.1 Bind List

OLT Configuration → DHCP → DHCP Snooping → Bind List

This page is used to display the correspondence information between DHCP client IP and MAC detected by DHCP.

The screenshot shows the 'Bind List' configuration page for DHCP Snooping. The left sidebar contains a menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, QoS, ACL, IPv6 ACL, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCP Server, DHCP Relay, DHCP Snooping (highlighted), and DHCPv6. The main content area has tabs for 'Bind List', 'Global', 'Port', and 'Static Bind'. Below the tabs is the title 'DHCP Snooping Bind List' and four buttons: 'FlushAll', 'FlushStatic', 'FlushDynamic', and 'Refresh'. A table with the following columns is displayed: MAC Address, IP Address, Lease, VLAN ID, Port ID, and Type.

Figure 3-12-6: Bind List

3.12.3.2 Global

OLT Configuration → DHCP → DHCP Snooping → Global

The global configuration of DHCP Snooping mainly includes Option 82 global settings, listening VLAN configuration, and VLAN based Option 82 template (format template) binding.

The screenshot displays the DHCP Snooping Global configuration interface. On the left is a navigation menu with categories like OLT Information, OLT Configuration, and DHCP. The main content area has tabs for Bind List, Global, Port, and Static Bind. The Global tab is active, showing the following configuration sections:

- DHCP Snooping Configuration:** DHCP Snooping is set to 'Enable'. There are 'Submit' and 'Reset' buttons.
- DHCP Snooping Settings:**
 - Option82 Control: Enable
 - Option82 Strategy: Keep
 - Overspeed Recovery: Enable
 - Overspeed Recovery Interval: 30 (3-3600s)
 - Binding Delete Time: 60 (1-3600s)
- VLAN ID List:** A table with 'List' and 'vlan3000' entries. Below it, 'VLAN ID' is set to 1. There are 'Add' and 'Delete' buttons.
- VLAN option82 Profile (Format Profile) Bind:** A table with columns 'VLAN', 'Profile Id', and 'Profile Name'. Below it, 'VLAN ID' is set to 1. There are 'Add' and 'Delete' buttons.

Figure 3-12-7: DHCP Snooping Global

3.12.3.3 Port

OLT Configuration → DHCP → DHCP Snooping → Port

This interface is used to configure DHCP Snooping parameters for ports that include port types, Option 82 parameters, and rate limits.

All ports default to untrusted ports. Option 82 parameters, 'Option 82 Circuit ID' and 'Option 82 Remote ID', are valid for untrusted ports. 'Restricted speed' refers to the maximum speed at which a port can receive DHCP packets.

Bind List Global **Port** Static Bind

DHCP Snooping Port Configuration

Submit Reset

| Port ID | Type | Option82 Circuit ID | Option82 Remote ID | Limit Rate(0-4096pps) |
|---------|-----------|----------------------|----------------------|--------------------------------|
| GE1 | Untrust ▼ | <input type="text"/> | <input type="text"/> | <input type="text" value="0"/> |
| GE2 | Untrust ▼ | <input type="text"/> | <input type="text"/> | <input type="text" value="0"/> |
| GE3 | Untrust ▼ | <input type="text"/> | <input type="text"/> | <input type="text" value="0"/> |
| PON1 | Untrust ▼ | <input type="text"/> | <input type="text"/> | <input type="text" value="0"/> |

Figure 3-12-8: DHCP Snooping Port

3.12.3.4 Static Bind

OLT Configuration → DHCP → DHCP Snooping → Static Bind

When a host needs a fixed IP address allocated by a DHCP server from a specific port, DHCP listening for static binding is very useful.

Bind List Global Port **Static Bind**

Add DHCP Snooping Bind

MAC Address (HH:HH:HH:HH:HH:HH)

VLAN ID ▼

IP Address

Port ID ▼

Lease (60-1000000s)

Add

Static DHCP Snooping Bind Table

| MAC Address | VLAN ID | IP Address | Port ID | Lease | Delete |
|-------------------|---------|---------------|---------|-------|--------|
| 00:00:01:00:00:99 | 1 | 192.168.1.171 | GE1 | 1000 | |

Figure 3-12-9: Static Bind

3.13 DHCPv6

DHCPv6 is a network protocol used to configure IPv6 addresses, IPv6 prefixes, DNS, domains, and other network parameters for hosts running on IPv6 networks.

3.13.1 DHCPv6 Server

3.13.1.1 DHCPv6 Bind Information

OLT Configuration → DHCPv6→DHCPv6 Server → DHCPv6 Bind Information

The DHCPv6 binding information displays the IPv6 address assigned to the host.

| Client | DUID | Type | Address | Preferred LifeTime | Valid LifeTime | Expire Time |
|---------|------|------|---------|--------------------|----------------|-------------|
| Refresh | | | | | | |

Figure 3-13-1: DHCPv6 Bind Information

3.13.1.2 DHCPv6 Server Enable

OLT Configuration → DHCPv6→DHCPv6 Server → DHCPv6 Server Enable

Select VLAN, fill in the DHCPv6 pool name, enable the DHCPv6 service, and then add the VLAN to the table. Before enabling the DHCPv6 service, it is necessary to complete the configuration of VLAN IPv6 address and server address pool information.

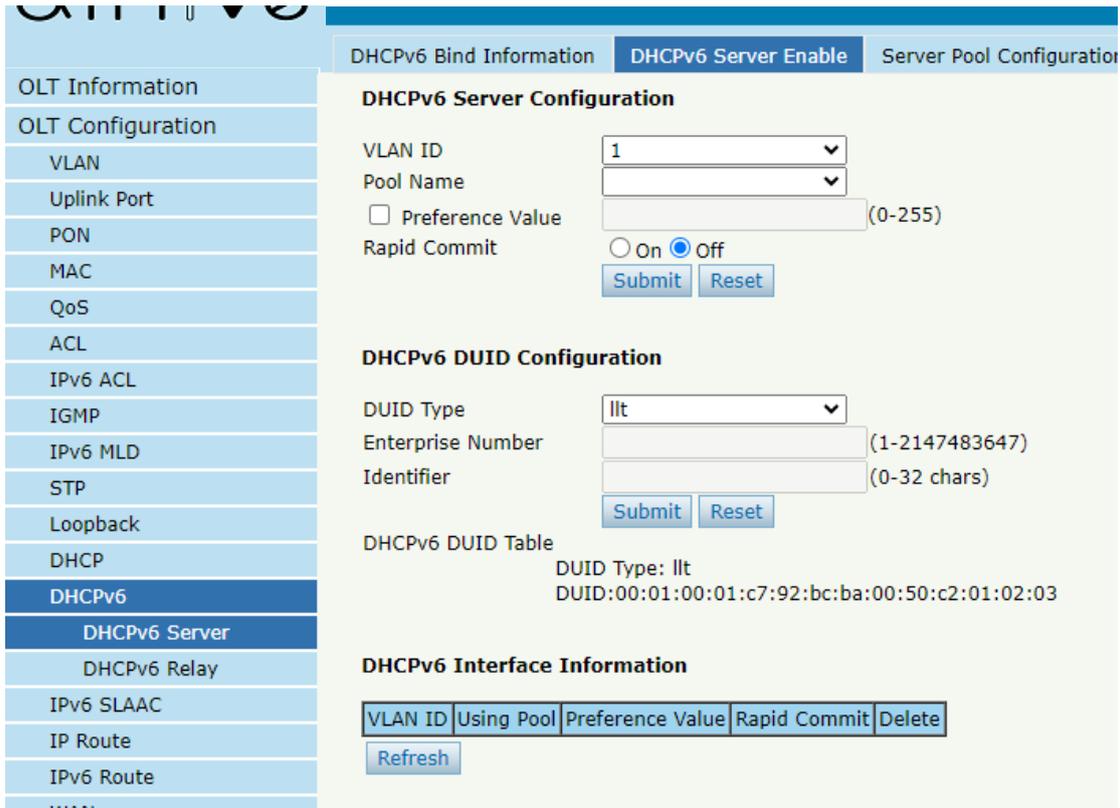


Figure 3-13-2: DHCPv6 Server Enable

3.13.1.3 Server Pool Configuration

OLT Configuration → DHCPv6 → DHCPv6 Server → Server Pool Configuration
 DHCPv6 address pool specifies the range of IPv6 addresses. Here, you can also provide the effective time, preferred time, DNS, and domain for DHCPv6 clients.

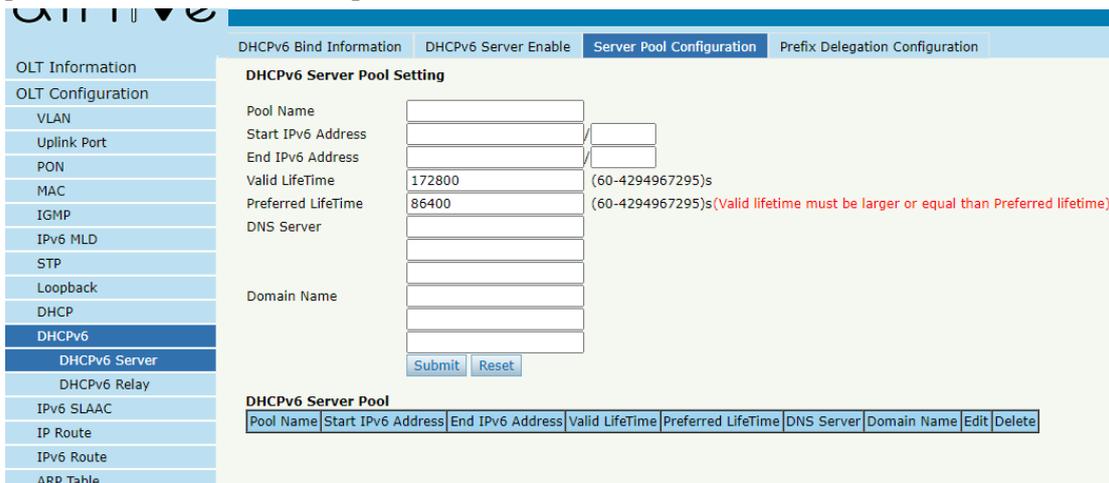


Figure 3-13-3: Server Pool Configuration

3.13.1.4 Prefix Delegation Configuration

OLT Configuration → DHCPv6 → DHCPv6 Server → Prefix Delegation Configuration

This page supports configuring DHCPv6 prefix proxy, which can configure the prefix information, address prefix validity time, and preferred time allocated by the DHCPv6 service.

The screenshot shows the web interface for configuring DHCPv6 Prefix Delegation. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCPv6, DHCPv6 Server, and DHCPv6 Relay. The 'DHCPv6' menu item is selected. The main content area has four tabs: DHCPv6 Bind Information, DHCPv6 Server Enable, Server Pool Configuration, and Prefix Delegation Configuration. The 'Prefix Delegation Configuration' tab is active. Under the heading 'DHCPv6 Prefix Delegation Setting', there are four input fields: 'Pool Name' (a dropdown menu), 'Prefix Delegation' (a text input field), 'PD ValidLifeTime' (a text input field with '(60-4294967295)s' as a hint), and 'PD PreferLifeTime' (a text input field with '(60-4294967295)s' as a hint). Below these fields are 'Submit' and 'Reset' buttons. At the bottom, there is a table titled 'DHCPv6 Server Pool' with the following columns: Pool Name, prefix address, Valid LifeTime, Preferred LifeTime, and Delete.

Figure 3-13-4: Prefix Delegation Configuration

3.13.2 DHCPv6 Relay

OLT Configuration → DHCPv6 → DHCPv6 Relay → Configuration

This page supports dynamically obtaining network configuration parameters such as IPv6 address/prefix through DHCPv6 relay, and supports Option 37 and Option 38 functions.

| VLAN ID | Server IPv6 | Remote id | Subscriber id | Delete |
|---------|-------------|-----------|---------------|--------|
|---------|-------------|-----------|---------------|--------|

Figure 3-13-5: DHCPv6 Relay Configuration

3.14 IPv6 SLAAC

IPv6 networks use the ICMPv6 routing discovery protocol. When an IPv6 host connects to the network for the first time, it automatically configures based on the information obtained from route discovery/prefix discovery. Route discovery/prefix discovery refers to the ability of a host to discover local routers and obtain configuration parameters such as neighbor information and current network prefix from RA packets when connected to an IPv6 network.

3.14.1 IPv6 SLAAC

OLT Configuration → IPv6 SLAAC → IPv6 SLAAC

When an IPv6 host uses stateless address configuration (stateless address auto configuration), the OLT will send it an RA packet. This page is used to configure the parameters of RA messages.

| VLAN ID | Suppress RA | Send RA Time (1-1800s) | RA LifeTime (0-9000s) | Reachable Time (0-3600000ms) | Suppress RDNSS | M | O | Router Preference | MTU (1280-1500) |
|---------|-------------------------------------|------------------------|-----------------------|------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------|-----------------|
| 1 | <input checked="" type="checkbox"/> | 200 | 600 | 30000 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | MEDIUM | 1500 |
| 3000 | <input checked="" type="checkbox"/> | 200 | 600 | 30000 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | MEDIUM | 1500 |

Submit

Figure 3-14-1: IPv6 SLAAC

3.14.2 IPv6 SLAAC Prefix

OLT Configuration → IPv6 SLAAC → IPv6 SLAAC Prefix

When IPv6 hosts use stateless address auto configuration, OLT can provide IPv6 prefix. The host will generate an IPv6 address with a prefix.

IPv6 SLAAC Prefix Configuration

VLAN ID: 1

ND Prefix:

ND Prefix Length:

Valid LifeTime: 2592000 (0-4294967295)s

Preferred LifeTime: 604800 (0-4294967295)s

(Valid lifetime must be larger or equal than Preferred lifetime)

Add

IPv6 SLAAC Prefix

| VLAN ID | ND Prefix | Valid LifeTime | Preferred LifeTime | Delete |
|---------|-----------|----------------|--------------------|--------|
| | | | | |

Refresh

Figure 3-14-2: IPv6 SLAAC Prefix

3.14.3 RDNSS

OLT Configuration → IPv6 SLAAC → RDNSS

Recursive DNS Server (RDNSS) is a DNS server in the IPv6 network protocol. This interface supports configuring RA messages to carry recursive DNS server information.

OLT Information

OLT Configuration

- VLAN
- Uplink Port
- PON
- MAC
- IGMP
- IPv6 MLD
- STP
- Loopback
- DHCP
- DHCPv6
- IPv6 SLAAC**
- IP Route

IPv6 SLAAC | IPv6 SLAAC Prefix | **RDNSS**

RDNSS Configuration

VLAN ID: 1

Sequence: (0-8)

Lifetime: 600 (60-4294967295s)

DNSServer:

Notice: Lifetime must be at least or equal 3 * sent RA time

Submit Reset

RDNSS Table

| VLAN ID | Sequence | DNSServer | DNSServer | DNSServer | Lifetime | Delete |
|---------|----------|-----------|-----------|-----------|----------|--------|
| Refresh | | | | | | |

Figure 3-14-3: RDNSS

3.15 IP Route

3.15.1 VLAN IP

OLT Configuration → IP Route → VLAN IP

This configuration is used to configure IP address for VLAN. When the VLAN is added to a port, you can access OLT by the IP address from the port.

airlive®

OLT Information

OLT Configuration

- VLAN
- Uplink Port
- PON
- MAC
- IGMP
- Loopback
- IP Route**
- ONU Configuration
- Profile Configuration
- System Configuration

VLAN IP

VLAN IP Configuration

VLAN ID: 1

IP Address: 192.168.6.111

Subnet Mask: 255.255.255.0

Submit Reset

VLAN IP Table

| VLAN ID | IP Address | Subnet Mask | Delete |
|---------|---------------|---------------|--------|
| 1 | 192.168.6.111 | 255.255.255.0 | |
| 6 | 192.168.8.111 | 255.255.255.0 | |

Figure 3-15-1: VLAN IP

3.15.2 Static Route

OLT Configuration → IP Route → Static Route

Static routing is a form of routing where routers use manually configured routing items. In many cases, static routing is manually configured by network administrators. Unlike dynamic routing, static routing is fixed and will not change even if the network environment is changed or reconfigured.

After configuring the VLAN IP address, adding static routing can enable communication between networks on different network segments.

The screenshot shows the 'Static Route' configuration page in the OLT web interface. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, and IP Route (which is currently selected). The main content area has two tabs: 'VLAN IP' and 'Static Route'. The 'Static Route' tab is active and displays the 'Add Static Route' form. This form has three input fields: 'Destination IP', 'Destination Mask', and 'Gateway', followed by an 'Add' button. Below the form is the 'Static Route Table', which is a table with four columns: 'Destination IP', 'Destination Mask', 'Gateway', and 'Delete'. The table contains one row with the following values: '0.0.0.0', '255.255.255.0', '192.168.6.1', and a delete icon.

| Destination IP | Destination Mask | Gateway | Delete |
|----------------|------------------|-------------|--------|
| 0.0.0.0 | 255.255.255.0 | 192.168.6.1 | |

Figure 3-15-2: Static Route

3.16 IPv6 Route

3.16.1 VLAN IPv6

OLT Configuration → IPv6 Route → VLAN IPv6

Configure IPv6 addresses for the created VLAN.

The screenshot shows the 'VLAN IPv6' configuration page in the AirLive OLT web interface. The left sidebar contains a navigation menu with options like OLT Information, OLT Configuration, VLAN, Uplink Port, PON, MAC, IGMP, IPv6 MLD, STP, Loopback, DHCP, DHCPv6, IPv6 SLAAC, IP Route, IPv6 Route (selected), and ARP Table. The main content area has two tabs: 'VLAN IPv6' and 'IPv6 Static Route'. Under 'VLAN IPv6 Configuration', there are input fields for 'VLAN ID' (set to 1), 'IPv6 Address', and 'Prefixlen', along with 'Submit' and 'Reset' buttons. Below this is a 'VLAN IPv6 Table' with the following data:

| VLAN ID | IPv6 Address | Prefixlen | Delete |
|---------|-------------------------|-----------|--------|
| 1 | fe80::250:c2ff:fe01:203 | | |
| 0 | fe80::250:c2ff:fe01:203 | | |

Figure 3-16-1: VLAN IPv6

3.16.2 IPv6 Static Route

OLT Configuration → IPv6 Route → IPv6 Static Route

This page is used to manually add IPv6 static routing. Even if the network topology has changed, static routing will not alter the configuration.

The screenshot displays the 'IPv6 Static Route' configuration page. On the left, a navigation menu includes 'OLT Information', 'OLT Configuration', and various network settings. The 'IPv6 Route' option is highlighted. The main area shows the 'Add IPv6 Static Route' form with three input fields: 'Destination IPv6', 'Destination Prefixlen', and 'Gateway'. An 'Add' button is positioned below these fields. Below the form is the 'IPv6 Static Route Table', which contains one row of data:

| Destination IPv6 | Destination Prefixlen | Gateway | Delete |
|------------------|-----------------------|---------|--------|
| 6000:: | 64 | 2000::1 | |

Figure 3-16-2: IPv6 Static Route

3.17 WAN

This function is used to set the OLT working mode to three layers, which can be used as a router, with GE3 as the WAN side, PON, GE1, and GE2 as the LAN side. The OLT can perform DHCP, PPPOE, and static IP upstream for internet access.

3.17.1 WAN

OLT Configuration → **WAN** → **WAN**

This page is used to configure WAN and display WAN business status.

Figure 3-17-1: WAN Status

3.17.2 LAN

OLT Configuration → WAN → LAN

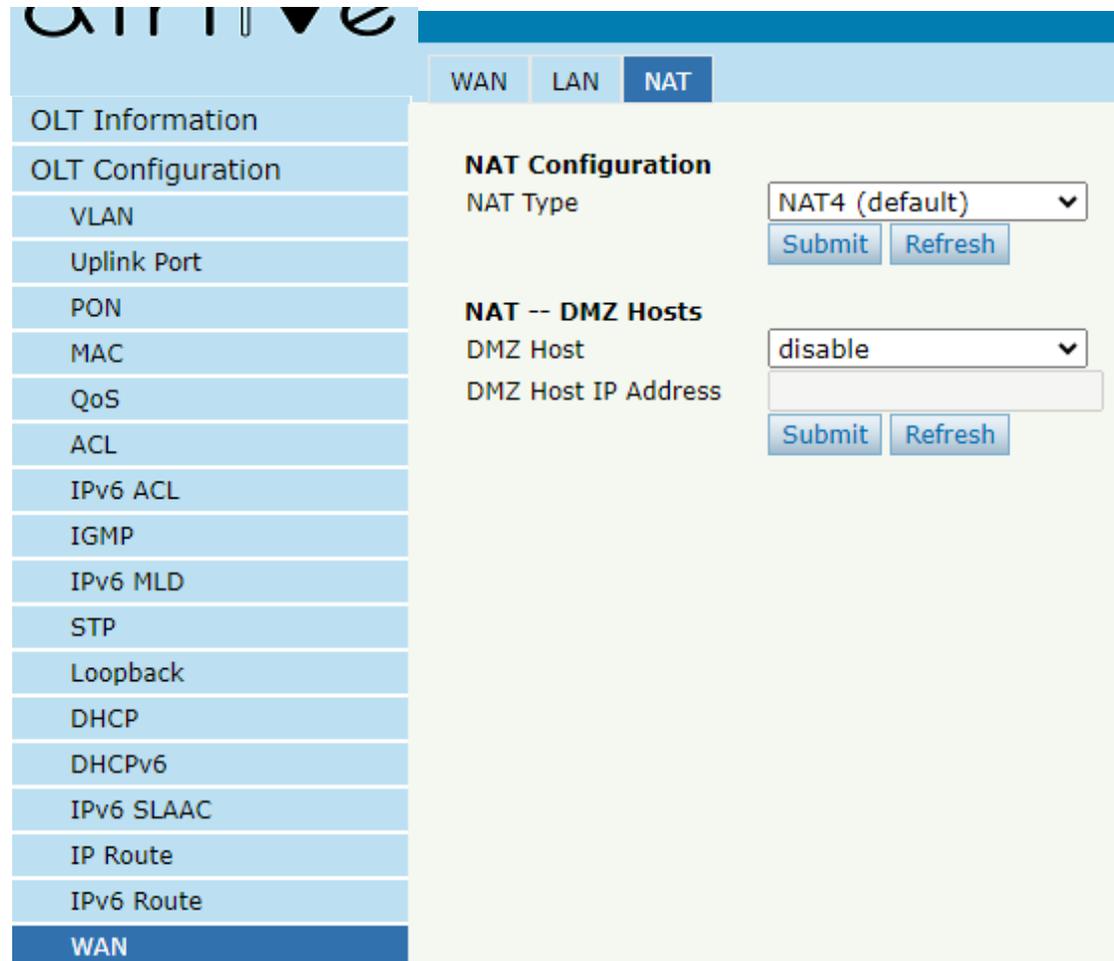
This page is configured with LAN side IP address and DHCP server.

Figure 3-17-2: LAN

3.17.3 NAT

OLT Configuration → WAN → NAT

This page is used to configure the routing NAT mode for DMZ hosts.



The screenshot shows the NAT configuration page in the OLT web interface. The page is divided into a left sidebar and a main content area. The sidebar contains a list of configuration options, with 'WAN' selected. The main content area has three tabs: 'WAN', 'LAN', and 'NAT', with 'NAT' selected. The 'NAT Configuration' section includes a 'NAT Type' dropdown menu set to 'NAT4 (default)', with 'Submit' and 'Refresh' buttons below it. The 'NAT -- DMZ Hosts' section includes a 'DMZ Host' dropdown menu set to 'disable', a 'DMZ Host IP Address' text input field, and 'Submit' and 'Refresh' buttons below it.

Figure 3-17-3: NAT

3.18 ARP Table

Mainly displays OLT ARP table and ARP restriction function.

3.18.1 ARP Table

OLT Configuration → ARP Table → ARP Table

This page displays the OLT ARP table and allows manual addition of MAC.

The screenshot shows the 'ARP Table' configuration page. On the left, a navigation menu lists various OLT configuration options, with 'ARP Table' highlighted. The main content area is split into two tabs: 'ARP Table' (active) and 'ARP Restriction'. Under the 'ARP Table' tab, there are two sections: 'ARP Config' and 'ARP Table'.

ARP Config

IP Address: (A.B.C.D)
 MAC Address: (HH:HH:HH:HH:HH:HH)
 Type: Static Dynamic
 Interface: (dropdown menu)
 Buttons:

ARP Table

Buttons:

| IP Address | MAC Address | Type | Interface | Delete |
|---------------|-------------------|---------|-----------|---------------------------------------|
| 192.168.6.124 | a8:a1:59:98:eb:87 | Dynamic | Vlan1 | <input type="button" value="Delete"/> |

Figure 3-18-1: ARP Table

3.18.2 ARP Restriction

OLT Configuration → ARP Table → ARP Restriction

This page mainly configures the ARP learning rate and ARP restriction rules.

The screenshot shows the 'ARP Restriction' configuration page. The left sidebar is the same as in Figure 3-18-1, with 'ARP Table' selected. The main content area is split into two tabs: 'ARP Table' and 'ARP Restriction' (active). Under the 'ARP Restriction' tab, there are two sections: 'ARP Rate Limit' and 'ARP Restriction Rules'.

ARP Rate Limit

ARP Rate: (pps)
 Button:

ARP Restriction Rules

Access List ID: (1-100)
 Source MAC: (HH:HH:HH:HH:HH:HH)
 Source IP: Mask
 Button:

ARP Restriction Table

| List ID | Source MAC | Source IP | Delete |
|---------|------------|-----------|--------|
|---------|------------|-----------|--------|

Figure 3-18-2: ARP Restriction

Chapter 4 ONU Configuration

This chapter is about the ONU management by OLT.

4.1 ONU AuthList

4.1.1 ONU List

ONU Configuration → ONU AuthList → ONU List

All registered ONUs will be displayed in this interface. You can check ONU using profile, Registration mode and do some operations on every ONU.

| ONU ID | Status | Description | Model | Profile | Mode | Info | Action |
|-----------|--------|-------------|-------|---------|------|--------------|--|
| GPON0/1:1 | Online | GPON0/1:1 | G04D | default | Sn | LYTBac700b76 | Config Deactivate Delete Optical Info Detail Info Reboot |
| GPON0/1:2 | Online | GPON0/1:2 | G04D | default | Sn | LYTBac700b6f | Config Deactivate Delete Optical Info Detail Info Reboot |

Figure 4-1-1: ONU List

4.1.1.1 Config

ONU Configuration → ONU AuthList → ONU List → Config

Configure ONU parameter information which you selected.

| ONU ID | Status | Description | Model | Profile | Mode | Info | Action |
|-----------|--------|-------------|-------|---------|------|--------------|--|
| GPON0/1:1 | Online | GPON0/1:1 | G04D | default | Sn | LYTBac700b76 | Config Deactivate Delete Optical Info Detail Info Reboot |
| GPON0/1:2 | Online | GPON0/1:2 | G04D | default | Sn | LYTBac700b6f | Config Deactivate Delete Optical Info Detail Info Reboot |

Figure 4-1-2: Configure ONU

4.1.1.1.1 Tcont

ONU Configuration → ONU AuthList → ONU List → Config → Tcont

Create tcont ID and bind DBA profile. Tcont name is optional.

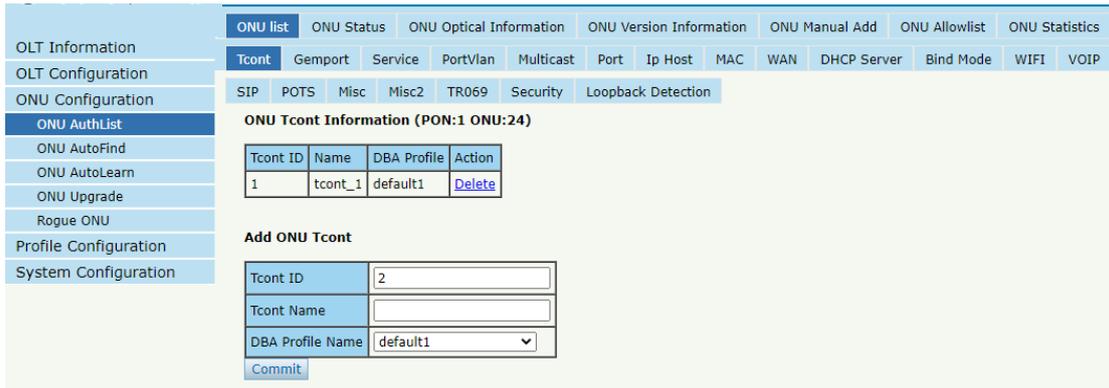


Figure 4-1-3: Create Tcont

4.1.1.1.2 Gempport

ONU Configuration → ONU AuthList → ONU List → Config → Gempport
 Create gempport ID and bind tcont ID.

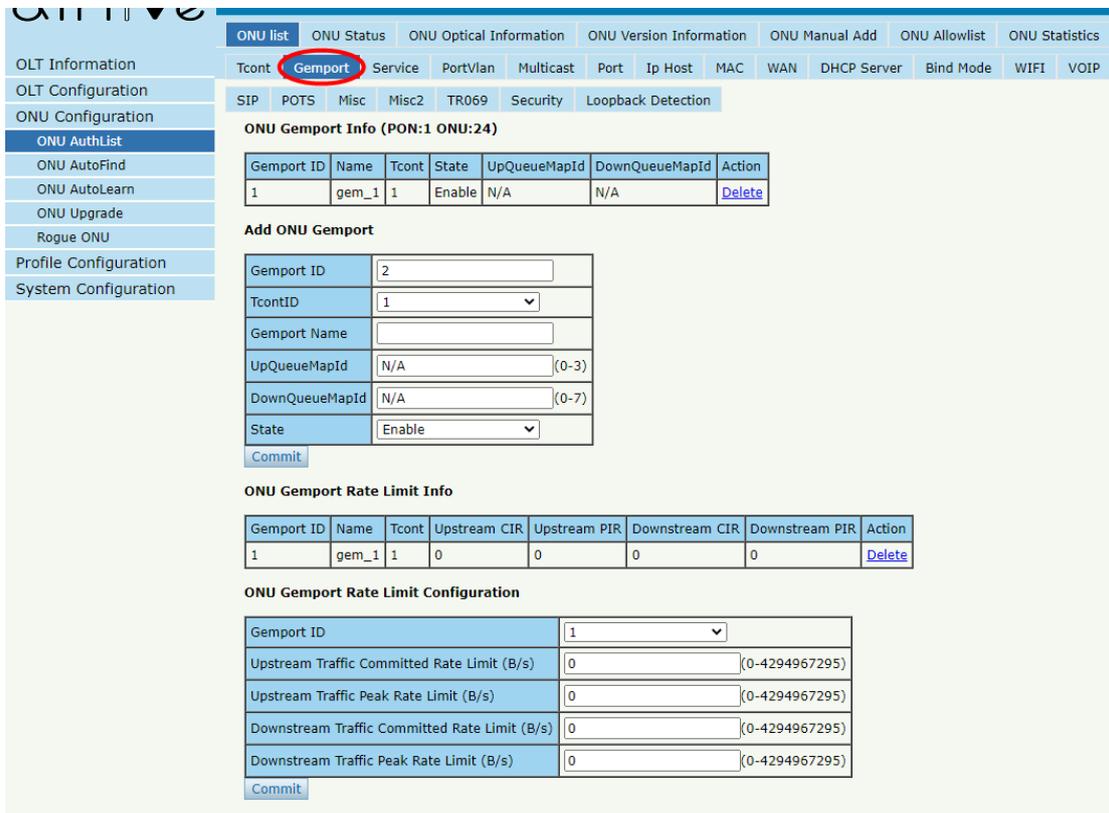


Figure 4-1-4: Create gempport

4.1.1.1.3 Service

ONU Configuration → ONU AuthList → ONU List → Config → Service
 Create a service, set the VLAN and VLAN mode and bind one gempport ID.

ONU Service Information (PON:1 ONU:24)

| ServiceName | Gemport | Vlan Mode | Vlan List | Port | Action |
|-------------|---------|-----------|-----------|------|------------------------|
| ser_1 | 1 | Tag | 3000 | N/A | Delete |

Add ONU Service

| | |
|-------------|--|
| ServiceName | ser_2 |
| Gemport ID | 1 |
| Vlan Mode | Tag |
| Vlan List | 3000 (X,X or X-X;0 for all;max 12 vlans) |
| PortType | N/A |

[Commit](#)

Figure 4-1-5: Create service

4.1.1.1.4 PortVlan

ONU Configuration → ONU AuthList → ONU List → Config → PortVlan

Set the VLAN mode of the ONU's port. For HGU, need to configure veip 1 transparent; for SFU, configure Ethernet port directly.

ONU PortVlan Info (PON:1 ONU:24)

| PortName | Mode | Vlan | Vlan Priority(tag) | Default Vlan(hybrid) | Default Priority(hybrid) | CVlan(translate) | CVlan Priority(translate) | SVlan(translate) | SVlan Priority(translate) | Action |
|----------|-------------|------|--------------------|----------------------|--------------------------|------------------|---------------------------|------------------|---------------------------|------------------------|
| veip_1 | Transparent | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Delete |

Add ONU PortVlan

| | |
|----------|-------------|
| Mode | Transparent |
| PortType | Eth |
| Port Id | |

[Commit](#)

Figure 4-1-6: Configure port VLAN mode

4.1.1.1.5 Multicast

ONU Configuration → ONU AuthList → ONU List → Config → Multicast

Set the Multicast VLAN of ONU and the Multicast VLAN mode of ONU's port.

Multicast VLAN

| ONU ID | Vlan List | Action |
|--------|-----------|----------------------------|
| 24 | N/A | Delete All |

[Add](#) [Delete](#) (100,103 or 105-108;max 12 vlans)

Multicast vlan tag strip

| | | |
|-----------|------|--------|
| Vlan Mode | Port | Action |
|-----------|------|--------|

[Add](#) (eth number)

Figure 4-1-7: Configure multicast VLAN

4.1.1.1.6 Port

ONU Configuration → ONU AuthList → ONU List → Config → Port

Set the basic configuration and speed limit of the ONU LAN port.

Please note that you can select the LAN port to configure on the ONU Port.

Port Basic Configuration (PON:1 ONU:24)

ONU Port: LAN1

Admin Status

Loopback

Port Speed: auto

MAC Limit(0-255): 0

Upstream Rate Limit Config

Upstream Rate-Limit CIR (kbps): 0

Upstream Rate-Limit PIR (kbps): 0

Downstream Rate Limit Config

Downstream Rate-Limit CIR (kbps): 0

Downstream Rate-Limit PIR (kbps): 0

Port Status

| Interface | Speed Status | Speed Config | Link Status | Admin Status | LOOP status | Max Frame | Upstream Rate-Limit (kbps) | Downstream Rate-Limit (kbps) |
|-----------|--------------|--------------|-------------|--------------|-------------|-----------|----------------------------|------------------------------|
| LAN1 | unknown | auto | down | enable | disable | 1632 | CIR:0 PIR:0 | CIR:0 PIR:0 |
| LAN2 | unknown | auto | down | enable | disable | 1632 | CIR:0 PIR:0 | CIR:0 PIR:0 |

Figure 4-1-8: ONU Port Configuration

4.1.1.1.7 Ip Host

ONU Configuration → ONU AuthList → ONU List → Config → Ip Host

Create IP host for ONU wan connection. It is used for ONU management.

Iphost Configuration Info (PON:1 ONU:24)

| Iphost ID | Description | IP Mode | IP Address | Mask | Gateway | DNS1 | DNS2 | VLAN | Priority | Action |
|-----------|-------------|---------|------------|------|---------|------|------|------|----------|--------|
| 1 | | DHCP | | | | | | | | |

Iphost Config

Iphost ID: 1

Description:

IP Mode: DHCP

DNS1(A.B.C.D):

DNS2(A.B.C.D):

Iphost VLAN Config

VLAN(0-4094):

Priority(1-15):

Figure 4-1-9: Configure IP host

4.1.1.1.8 MAC

ONU Configuration → ONU AuthList → ONU List → Config → MAC

Configure the MAC counts limit based on ONU or Gempport, and 0 means there is no

limit.

This interface can also display the learned MAC addresses of each LAN port of the ONU.

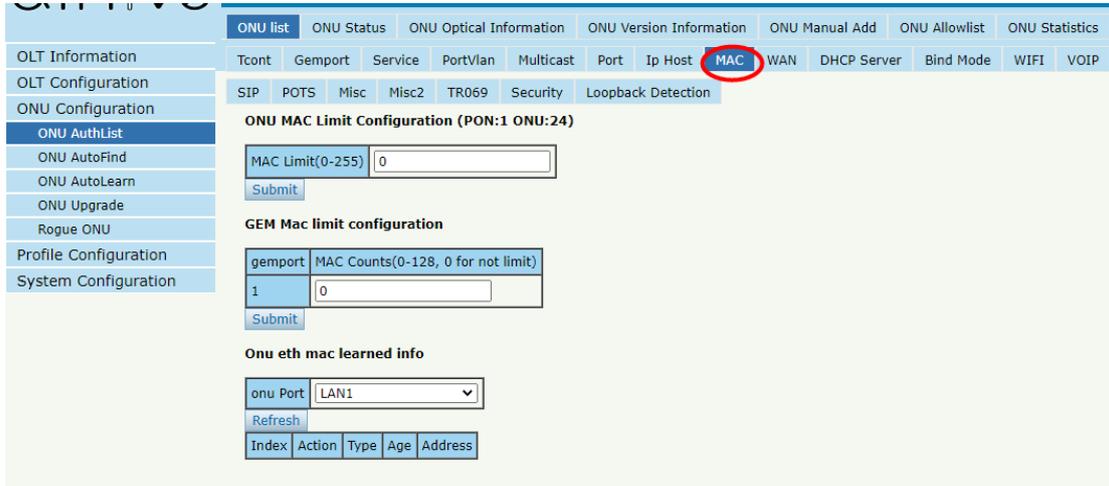


Figure 4-1-10: MAC Limit

4.1.1.1.9 WAN

ONU Configuration → ONU AuthList → ONU List → Config → WAN

ONU WAN connection is configured by private OMCI between OLT and ONU. When the connected ONU supports this function, the option "WAN" can be shown on this page.

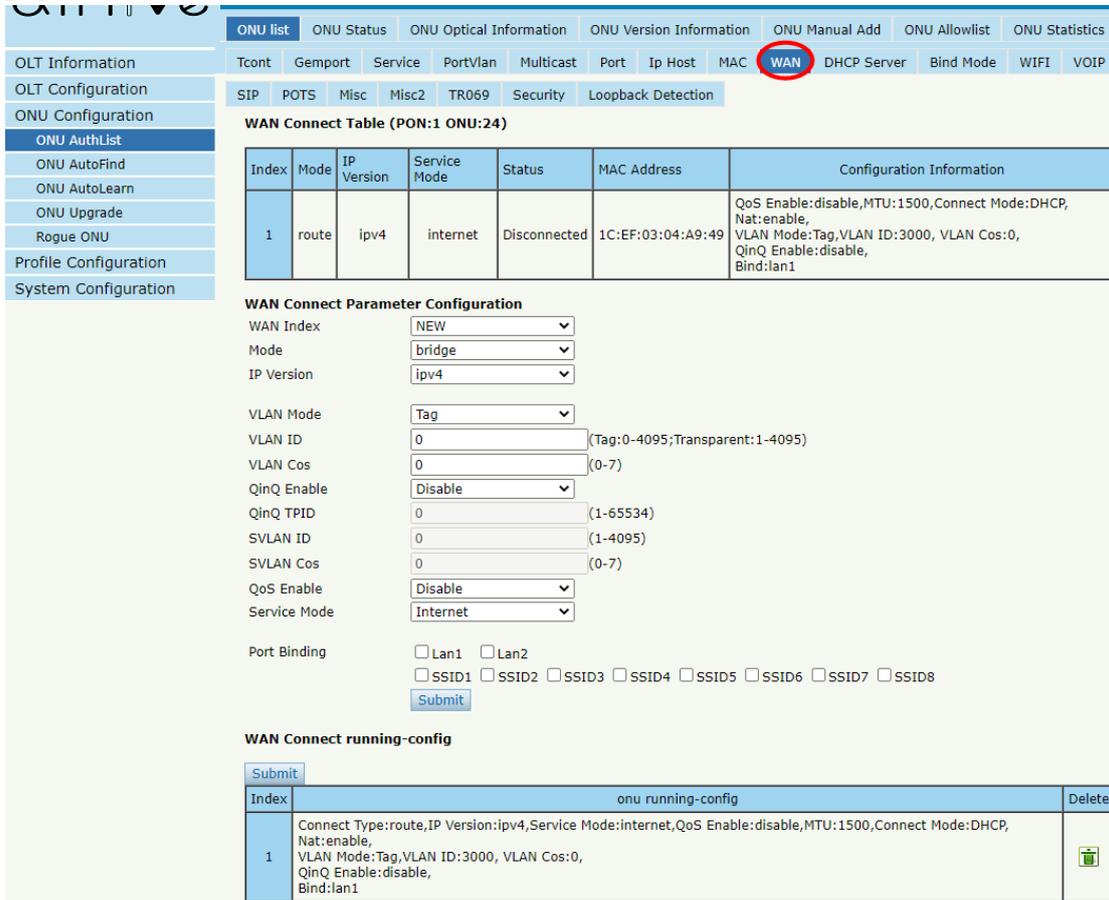


Figure 4-1-11: Configure WAN

4.1.1.1.10 DHCP Server

ONU Configuration → ONU AuthList → ONU List → Config → DHCP Server

ONU LAN and DHCP server are configured by private OMCI between OLT and ONU. When the connected ONU supports this function, the option "DHCP Server" can be shown on this page.

| ONU list | ONU Status | ONU Optical Information | ONU Version Information | ONU Manual Add | ONU Allowlist | ONU Statistics | | | | | | | |
|-----------------------|---|-------------------------|-------------------------|----------------|---------------|----------------|--------------------|-----|-----|--------------------|-----------|------|------|
| OLT Information | Tcont | Gempport | Service | Port/Vlan | Multicast | Port | Ip Host | MAC | WAN | DHCP Server | Bind Mode | WIFI | VOIP |
| OLT Configuration | SIP | POTS | Misc | Misc2 | TR069 | Security | Loopback Detection | | | | | | |
| ONU Configuration | DHCP Server Configuration (PON:1 ONU:24) | | | | | | | | | | | | |
| ONU AuthList | LAN IP Address: 192.168.1.1 | | | | | | | | | | | | |
| ONU AutoFind | LAN Subnet Mask: 255.255.255.0 | | | | | | | | | | | | |
| ONU AutoLearn | DHCP Server: Enable | | | | | | | | | | | | |
| ONU Upgrade | Lease Time: 86400 (0-4294967295) | | | | | | | | | | | | |
| Rogue ONU | Beginning IP Address: 192.168.1.33 | | | | | | | | | | | | |
| Profile Configuration | Ending IP Address: 192.168.1.254 | | | | | | | | | | | | |
| System Configuration | Pool Type: PC | | | | | | | | | | | | |
| | Master DNS: 202.96.128.86 | | | | | | | | | | | | |
| | Slave DNS: 8.8.8.8 | | | | | | | | | | | | |
| | Gateway: 192.168.1.1 | | | | | | | | | | | | |
| | <input type="button" value="Submit"/> | | | | | | | | | | | | |
| | LAN IPv6 Address: fe80::1 | | | | | | | | | | | | |
| | Prefix Mode: <input checked="" type="checkbox"/> Static | | | | | | | | | | | | |
| | Static Ipv6 Address: 2099:: | | | | | | | | | | | | |
| | LAN Prefixlen: 64 (48-64) | | | | | | | | | | | | |
| | DHCP Server Ipv6: Enable | | | | | | | | | | | | |
| | Preference Time: 10000 (0-4294967295) | | | | | | | | | | | | |
| | Valid Time: 20000 (0-4294967295) | | | | | | | | | | | | |
| | Beginning IPv6 Address: 0001:0001:0001:0001 (HHHH:HHHH:HHHH:HHHH)(Last 64 bits of IP address) | | | | | | | | | | | | |
| | Ending IPv6 Address: 0002:0002:0002:0002 (HHHH:HHHH:HHHH:HHHH)(Last 64 bits of IP address) | | | | | | | | | | | | |
| | Pool Type: PC | | | | | | | | | | | | |
| | DNSv6 Master: | | | | | | | | | | | | |
| | DNSv6 Slave: | | | | | | | | | | | | |
| | IPv6 Gateway: fe80::1 | | | | | | | | | | | | |
| | RA: <input checked="" type="checkbox"/> Active | | | | | | | | | | | | |
| | Manage: disable | | | | | | | | | | | | |
| | Other: enable | | | | | | | | | | | | |
| | Max Interval: 20 (1-1800)s | | | | | | | | | | | | |
| | Min Interval: 10 (1-1800)s | | | | | | | | | | | | |
| | <input type="button" value="Submit"/> | | | | | | | | | | | | |

Figure 4-1-12: ONU DHCP Server

4.1.1.1.11 Bind Mode

ONU Configuration → ONU AuthList → ONU List → Config → Bind Mode

ONU LAN bind mode is configured by private OMCI between OLT and ONU. When the connected ONU supports this function, the option "Bind Mode" can be shown on this page.

| ONU list | ONU Status | ONU Optical Information | ONU Version Information | ONU Manual Add | ONU Allowlist | ONU Statistics | | | | | | | |
|-----------------------|---|-------------------------|-------------------------|----------------|---------------|----------------|--------------------|-----|-----|-------------|------------------|------|------|
| OLT Information | Tcont | Gempport | Service | Port/Vlan | Multicast | Port | Ip Host | MAC | WAN | DHCP Server | Bind Mode | WIFI | VOIP |
| OLT Configuration | SIP | POTS | Misc | Misc2 | TR069 | Security | Loopback Detection | | | | | | |
| ONU Configuration | LAN Bind Mode Configuration (PON:1 ONU:24) | | | | | | | | | | | | |
| ONU AuthList | Port: LAN1 | | | | | | | | | | | | |
| ONU AutoFind | Bind Mode: N/A | | | | | | | | | | | | |
| ONU AutoLearn | <input type="button" value="Submit"/> | | | | | | | | | | | | |
| ONU Upgrade | | | | | | | | | | | | | |
| Rogue ONU | | | | | | | | | | | | | |
| Profile Configuration | | | | | | | | | | | | | |
| System Configuration | | | | | | | | | | | | | |

Figure 4-1-13: LAN Bind Mode Configuration

4.1.1.1.12 WIFI

ONU Configuration → ONU AuthList → ONU List → Config → WIFI

ONU WIFI is configured by private OMCI between OLT and ONU. When the connected ONU supports this function, the option "WIFI" can be shown on this page.

The screenshot shows the 'WIFI' configuration page in the AirLive OLT-121 web interface. The 'WIFI' tab is highlighted with a red circle. The page is divided into two main sections: 'WiFi Switch Configuration (PON:1 ONU:24)' and 'WiFi SSID Configuration'.

WiFi Switch Configuration (PON:1 ONU:24)

| | | | |
|----------------------|-----------------|----------------------|--|
| WiFi Status | enable | WiFi1 Status | enable |
| WiFi Area | FCC | WiFi1 Area | FCC |
| WiFi Standard | 802.11ac-A/N/AC | WiFi1 Standard | 802.11bgn |
| WiFi Channel | auto | WiFi1 Channel | 0 (ETSI/SPAIN/RUSSIAN/CN/World-wide:0-13;FCC/IC/NCC:0-11;FRANCE:0,10-13;MKK/MKK1/MKK2/MKK3/Global:0-14;ISREAL:0,3-13;0:auto) |
| WiFi Transmit Power | 20 (0-20dBm) | WiFi1 Transmit Power | 20 (0-20dBm) |
| WiFi Channel Width | 80 MHz | WiFi1 Channel Width | 20 MHz |
| WiFi EasyMesh Status | disable | | |

WiFi SSID Configuration

| | |
|------------------------|----------------|
| SSID | SSID1(WIFI0) |
| Name | FTTH-5G |
| WiFi Status | enable |
| Hide Status | disable |
| Network Authentication | WPAPSK/WPA2PSK |
| Encrypt Type | TKIP+AES |
| Shared Key | ***** |

Figure 4-1-14: WIFI Configuration

4.1.1.1.13 VOIP

ONU Configuration → ONU AuthList → ONU List → Config → VOIP

This page shows WAN information of VOIP service, including IP address and VLAN. You can also operate VOIP module on this page. When the connected ONU supports VOIP, the option "VOIP" can be shown on this page.

The screenshot shows the 'VOIP' configuration page in the AirLive OLT-121 web interface. The 'VOIP' tab is highlighted with a red circle. The page displays 'Voice Wan Information (PON:1 ONU:24)'.

Voice Wan Information (PON:1 ONU:24)

| | |
|-------------------|---------------------------------|
| Voice IP Mode | Static IP |
| IP Address | 0.0.0.0 |
| Network Mask | 0.0.0.0 |
| Default Gateway | 0.0.0.0 |
| Voice Client VLAN | 0 |
| Voice Priority | 0 |
| Set IAD Operation | Reregister Deregister Reset |

Figure 4-1-15: Voice Wan Information

4.1.1.1.14 SIP

ONU Configuration → ONU AuthList → ONU List → Config → SIP

ONU VoIP SIP parameter can be configured on this page, including SIP server, proxy server, digit map and so on. When the connected ONU supports VOIP, the option "SIP" can be shown on this page.

SIP Parameter Configuration (PON:1 ONU:24)

| | | |
|--|---------|----------------|
| Manage Port | 5060 | (1-65535) |
| Proxy Server IP Or Name/Port | 0.0.0.0 | 5060 (1-65535) |
| Backup Proxy Server IP Or Name/Port | 0.0.0.0 | 5060 (0-65535) |
| Register Server IP Or Name/Port | 0.0.0.0 | 5060 (1-65535) |
| Backup Register Server IP Or Name/Port | 0.0.0.0 | 5060 (0-65535) |
| Out Bound Server IP Or Name/Port | 0.0.0.0 | 5060 (1-65535) |
| Register Interval | 3600 | (1-1000000) |

SIP Digit Map Configuration

SIP Digit Map Block

Submit

Figure 4-1-16: SIP Parameter

4.1.1.1.15 POTS

ONU Configuration → ONU AuthList → ONU List → Config → POTS

ONU VoIP POTS account, password and other VOIP parameters of POTS can be configured on this page; the length of SIP account and password can't be more than 16 characters, the length of SIP username can't be more than 32 characters.

When the connected ONU supports VOIP, the option "POTS" can be shown on this page.

POTS Information

VoIP Port: Pots1

Port Status: Inactive

SIP User Parameter Configuration (PON:1 ONU:24)

Account active: Disable Enable

User Account:

User Name:

User Password:

Submit

Advanced Parameter Configuration

VAD:

Echo cancel:

Input gain(dB):

Output gain(dB):

Dtmf mode:

Submit

Figure 4-1-17: POTS Configuration

4.1.1.1.16 Misc

ONU Configuration → ONU AuthList → ONU List → Config → Misc

Misc includes other features of ONUs configured by private OMCI, such as reset default, CATV control, and so on.

The screenshot shows the 'Misc' configuration page in the web interface. The left sidebar contains a navigation menu with items like 'OLT Information', 'OLT Configuration', 'ONU Configuration', 'ONU AuthList', 'ONU AutoFind', 'ONU AutoLearn', 'ONU Upgrade', 'Rogue ONU', 'Profile Configuration', and 'System Configuration'. The main content area is titled 'Misc Control Operation' and contains several configuration sections:

- Misc Control Operation:** Includes 'Save configuration' (Save), 'Restore default' (Restore), 'IGMP configuration' (IGMP Enable checkbox, Submit), 'STP configuration' (STP Enable checkbox, Submit), and 'Port isolate' (Port isolate Enable checkbox, Submit).
- Speed Limit Configuration:** Includes 'Upstream limit' (0) and 'DownStream limit' (0) with a 'Submit' button.
- Mac Table Configuration:** Includes 'mac age time' (0), 'Pon mac limit' (0), and 'Lan mac limit' (0) with a 'Submit' button.
- Mac Address Table:** Includes a 'Clean' button.

Figure 4-1-18: Misc Configuration

4.1.1.1.17 Misc2

ONU Configuration → ONU AuthList → ONU List → Config → Misc2

Misc2 includes the NAT type and UPnP configuration of ONUs configured by private OMCI.

The screenshot shows the 'Misc2' configuration page in the web interface. The left sidebar is similar to the previous screenshot. The main content area is titled 'Misc2 Control Operation (PON:1 ONU:24)' and contains the following configuration sections:

- ONU NAT Type:** Includes 'NAT Type' (NAT1) with 'Submit' and 'Refresh' buttons.
- ONU UPnP Configuration:** Includes 'UPnP Status' (disable) and 'WAN Index' (1) with 'Submit' and 'Refresh' buttons.

Figure 4-1-19: Misc2 Configuration

4.1.1.1.18 TR069

ONU Configuration → ONU AuthList → ONU List → Config → TR069

ONU TR069 is configured by private OMCI between OLT and ONU.

It supports configuring TR069 management parameters and STUN server configurations.

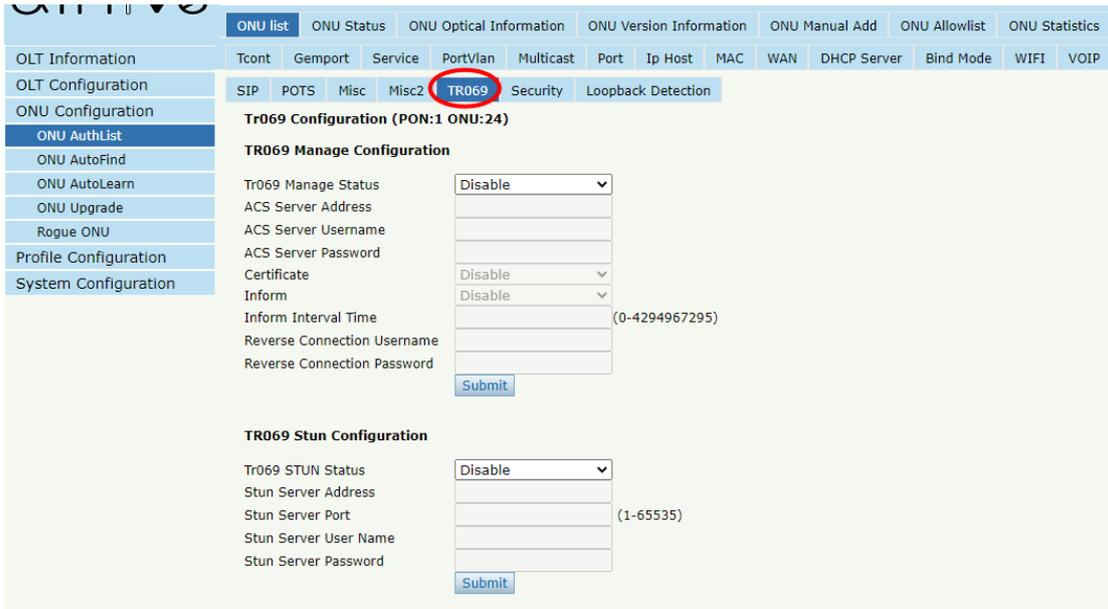


Figure 4-1-20: TR069 Configuration

4.1.1.1.19 Security

ONU Configuration → ONU AuthList → ONU List → Config → Security

ONU Security is configured by private OMCI between OLT and ONU.

It supports you to modify ONU passwords, firewall level, and device access rules.

Please note that if you need to enable the device's access protocol, you need to first modify the firewall level to low or disabled.

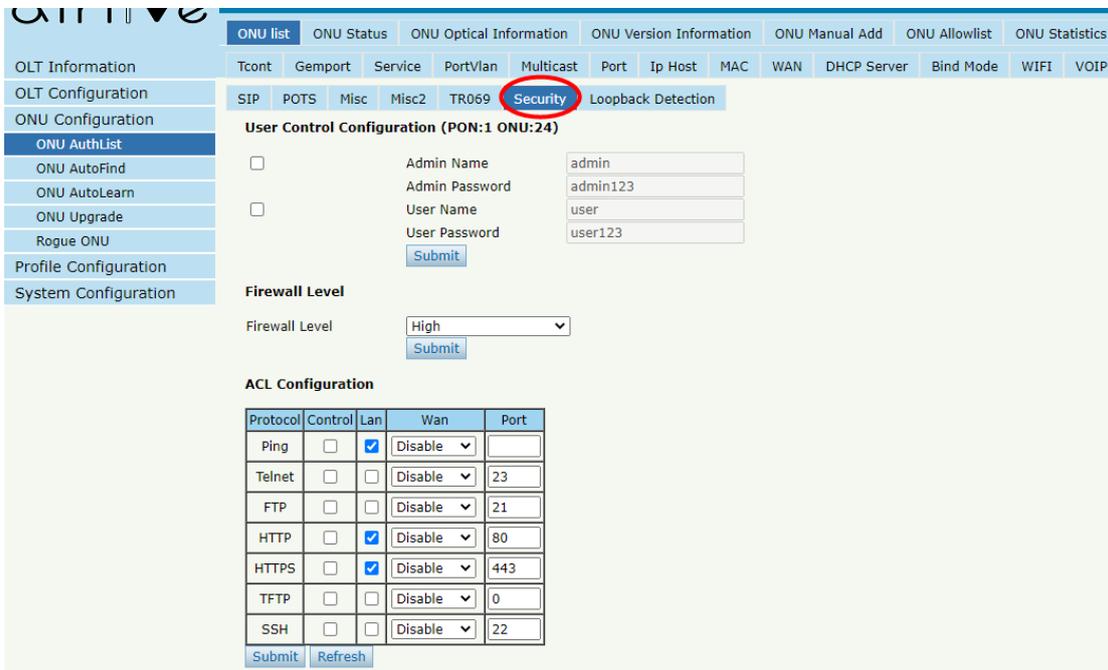


Figure 4-1-21: Security Configuration

4.1.1.1.20 Loopback Detection

ONU Configuration → ONU AuthList → ONU List → Config → Loopback Detection

ONU Loopback Detection is configured by private OMCI between OLT and ONU. It supports configuring the loop detection status and parameters of the ONU.

Loopback Detection Configuration (PON:1 ONU:24)

Please note that not all onu support Destination MAC Type, Port Closing Time, Alarm and Portdislooped configuration.

| | | |
|----------------------|-------------------|---|
| Status | enable | |
| Check Interval | 1000 | (1-60000)ms |
| Recover Interval | 60 | (1-1800)s |
| Ethernet Type | fffa | (HHHH) |
| VLAN ID | 0 | (0-4094; 0 means no vlan is configured) |
| Destination MAC Type | Broadcast Address | |
| Port Closing Time | 60 | (1-1800)s |
| Alarm | enable | |
| Portdislooped | enable | |

Submit Refresh

Figure 4-1-22: Loopback Detection Configuration

4.1.1.2 Deactivate

ONU Configuration → ONU AuthList → ONU List → Deactivate (Activate)

Deactivate the ONU which you selected, the ONU will be disabled and the registration failed. Activate selected ONU, this ONU will register successfully.

ONU Authentication Information

Port ID: PON1
Search Mode: All
Search Info:
ONU Count: 20/24

Delete All Delete Offline Refresh

| ONU ID | Status | Description | Model | Profile | Mode | Info | Action |
|-----------|---------|-------------|---------|---------|------|--------------|---|
| GPON0/1:1 | Online | GPON0/1:1 | G04D | default | Sn | LYTBac700b76 | Config Deactivate Delete Optical Info Detail Info Reboot |
| GPON0/1:2 | Offline | GPON0/1:2 | unknown | default | Sn | LYTBac700b6f | Config Activate Delete Optical Info Detail Info Reboot |

Figure 4-1-23: Deactivate/Activate ONU

4.1.1.3 Delete

ONU Configuration → ONU AuthList → ONU List → Delete

Delete the ONU which you selected, the ONU will be deleted and the registration failed. All the configurations related this ONU will be deleted as well.

ONU Authentication Information

Port ID: PON1
Search Mode: All
Search Info:
ONU Count: 21/24

Delete All Delete Offline Refresh

| ONU ID | Status | Description | Model | Profile | Mode | Info | Action |
|-----------|--------|-------------|-------|---------|------|--------------|--|
| GPON0/1:1 | Online | GPON0/1:1 | G04D | default | Sn | LYTBac700b76 | Config Deactivate Delete Delete Optical Info Detail Info Reboot |
| GPON0/1:2 | Online | GPON0/1:2 | G04D | default | Sn | LYTBac700b6f | Config Deactivate Delete Optical Info Detail Info Reboot |

Figure 4-1-24: Delete ONU

4.1.1.4 Optical Info

ONU Configuration → ONU AuthList → ONU List → Optical Info

Check the Optical Information of ONU PON module which you selected.

The screenshot shows the 'ONU Optical Information' page in the AirLive web interface. The page is divided into two main sections: 'ONU Authentication Information' and 'ONU Optical Info'.

ONU Authentication Information:

- Port ID: PON1
- Search Mode: All
- Search Info: [Empty]
- ONU Count: 21/24
- Buttons: Delete All, Delete Offline, Refresh

| ONU ID | Status | Description | Model | Profile | Mode | Info | Action |
|-----------|--------|-------------|-------|---------|------|--------------|--|
| GPON0/1:1 | Online | GPON0/1:1 | G04D | default | Sn | LYTBac700b76 | Config Deactivate Delete Optical Info Detail Info Reboot |
| GPON0/1:2 | Online | GPON0/1:2 | G04D | default | Sn | LYTBac700b6f | Config Deactivate Delete Optical Info Detail Info Reboot |

ONU Optical Info:

Back

| | |
|----------------------------|---------------------|
| Interface | pon_0/1 |
| GEM_blocklen | 48 |
| Sf Threshold | 5 |
| Sd Threshold | 9 |
| Alarm | enable |
| Alarm disable interval | 0 |
| Total T-CONT number | 12 |
| Piggyback DBA rpt mode | mode 0 only |
| Rx optical level | -11.04 |
| Lower rx optical threshold | onu internal policy |
| Upper rx optical threshold | onu internal policy |
| Tx optical level | 1.79 |
| Lower tx optical threshold | onu internal policy |
| Upper tx optical threshold | onu internal policy |
| ONU response time | 0 |
| Power feed voltage | 3.42(V) |
| Laser bias current | 21.40(mA) |
| Temperature | 32.35(C) |
| Distance | 1(m) |

Figure 4-1-25: Optical Info of ONU

4.1.1.5 Detail Info

ONU Configuration → ONU AuthList → ONU List → Detail Info

Check the Detail Info of the ONU which you selected.

The screenshot shows the 'ONU Authentication Information' page in the AirLive web interface. The page is divided into two main sections: 'ONU Authentication Information' and 'ONU Optical Info'.

ONU Authentication Information:

- Port ID: PON1
- Search Mode: All
- Search Info: [Empty]
- ONU Count: 21/24
- Buttons: Delete All, Delete Offline, Refresh

| ONU ID | Status | Description | Model | Profile | Mode | Info | Action |
|-----------|--------|-------------|-------|---------|------|--------------|--|
| GPON0/1:1 | Online | GPON0/1:1 | G04D | default | Sn | LYTBac700b76 | Config Deactivate Delete Optical Info Detail Info Reboot |
| GPON0/1:2 | Online | GPON0/1:2 | G04D | default | Sn | LYTBac700b6f | Config Deactivate Delete Optical Info Detail Info Reboot |

Figure 4-1-26: Click Detail info

The screenshot displays the 'Detail Information' and 'Device Capability' sections for an ONU. The 'Detail Information' table includes fields such as Description (GPON0/1:1), Main software version (GEXv1.1.6), Standby software version (GEXv1.1.7), Vendor ID (HWTC), Version (V1.0), SN (LYTBac700b76), Admin Status (unlock), Battery monito (false), Security mode (aes), Product code (0), Total priority queue num (128), Total traffic schedule num (12), Traffic management option (priority&rate controlled), Operate status (enable), Equipment ID (G04D), OMCC Version (128), Security capability (aes), Model (N/A), Survival time (N/A), TotalGemPortNum (127), SysUpTime (991592 s), Region code (0), Product SN (N/A), and Chip info (0). The 'Device Capability' table lists various parameters like TCONT number (12), GEM port number (127), Total priority queue number (128), up priority queue number (96), down priority queue number (32), Traffic scheduler number (12), Traffic management option (priority&rate controlled), Total UNI number (4), Chip info (4), 40GE number (0), 25GE number (0), 10GE number (0), 5GE number (0), 2.5GE number (0), GE number (0), FE number (3), CES UNI number (0), POTS UNI number (0), Video UNI number(num:slot/port): (0:0/0), WIFI UNI number (0), XDSL UNI number (0), IP host number (3), IPv6 host number (0), VEIP number (0), Operation Id (0), CTC spc Version (CTC 2.0), CUC spc Version (N/A), ONU Type (SFU), and Tx power supply control (Not support).

Figure 4-1-27: Detail info of ONU

4.1.1.6 Reboot

ONU Configuration → ONU AuthList → ONU List → Reboot

Reboot ONU which you selected.

The screenshot shows the 'ONU Authentication Information' section with fields for Port ID (PON1), Search Mode (All), Search Info, and ONU Count (21/24). Below this is a table of ONU entries. The 'Reboot' link for the first entry (GPON0/1:1) is highlighted with a red arrow.

| ONU ID | Status | Description | Model | Profile | Mode | Info | Action |
|-----------|--------|-------------|-------|---------|------|--------------|--|
| GPON0/1:1 | Online | GPON0/1:1 | G04D | default | Sn | LYTBac700b76 | Config Deactivate Delete Optical Info Detail Info Reboot |
| GPON0/1:2 | Online | GPON0/1:2 | G04D | default | Sn | LYTBac700b6f | Config Deactivate Delete Optical Info Detail Info Reboot |

Figure 4-1-28: Reboot ONU

4.1.2 ONU Status

ONU Configuration → ONU AuthList → ONU Status

This pages shows the ONU information of the activity. User can check "Last Register Time", "Last Deregister Reason" and "Active Time" of each ONU.

| ONU ID | Admin State | OMCC State | Phase State | Description | Last Register Time | Last Deregister Time | Last Deregister Reason | Alive Time |
|-----------|-------------|------------|-------------|-------------|---------------------|----------------------|------------------------|-------------|
| GPON0/1:1 | enable | enable | working | GPON0/1:1 | 1970:01:01 08:01:18 | N/A | N/A | 11 11:27:39 |
| GPON0/1:2 | enable | enable | working | N/A | 1970:01:12 19:23:36 | N/A | Manual Deactivate | 00:05:21 |
| GPON0/1:3 | enable | enable | working | NEO | 1970:01:01 08:01:07 | N/A | N/A | 11 11:27:50 |
| GPON0/1:4 | enable | enable | working | N/A | 1970:01:01 08:01:07 | N/A | N/A | 11 11:27:50 |

Figure 4-1-29: ONU Status

4.1.3 ONU Optical Info

ONU Configuration → ONU AuthList → ONU Optical Info

This page displays ONU Rx and Tx power. A batch of ONU optical power information can be shown in a list. Clearly to check the register power when register issue happens.

| ONU ID | Description | RX Power | TX Power |
|-----------|-------------|----------|----------|
| GPON0/1:1 | GPON0/1:1 | -11.04 | 1.79 |
| GPON0/1:2 | N/A | -11.52 | 2.09 |
| GPON0/1:3 | NEO | -22.44 | 2.40 |
| GPON0/1:4 | N/A | -15.74 | 2.29 |

Figure 4-1-30: ONU Optical Info

4.1.4 ONU Version Information

ONU Configuration → ONU AuthList → ONU Version Information

This page displays the main and standby software versions of the ONU. You can display the version information of a batch of ONUs in the list.

| ONU ID | Description | Main software version | Standby software version | Version |
|-----------|-------------|-----------------------|--------------------------|---------|
| GPON0/1:1 | GPON0/1:1 | GEXv1.1.6 | GEXv1.1.7 | V1.0 |
| GPON0/1:2 | N/A | GEXv1.1.6 | GEXv1.1.7 | V1.0 |
| GPON0/1:3 | NEO | 1.0.36 | 1.0.29 | V1.0 |
| GPON0/1:4 | N/A | 1.0.38 | 1.0.38 | V3.21 |

Figure 4-1-31: ONU Version Info

4.1.5 ONU Manual Add

ONU Configuration → ONU AuthList → ONU Manual Add

You can manually add ONU to a selected PON port. ONU will appear in the ONU list after you added.

Figure 4-1-32: Add ONU Manually

4.1.6 ONU Allowlist

ONU Configuration → ONU AuthList → ONU Allowlist

You can set up an allowlist on this page.

Allowlist can restrict ONU registration based on SN. It allows ONUs within one or more segments to register, while other ONUs cannot register and go online.

Figure 4-1-33: ONU Allowlist

4.1.7 ONU Statistics

ONU Configuration → ONU AuthList → ONU Statistics

This page displays the number of incoming and outgoing packets for batch ONUs.

| ONU ID | Input bytes | Input packets | Output bytes | Output packets |
|-----------|-------------|---------------|---------------|----------------|
| GPON0/1:1 | 1668179554 | 7447377 | 4407740822 | 7264425 |
| GPON0/1:2 | 2126826402 | 11326942 | 17455662980 | 16118866 |
| GPON0/1:3 | 6629453487 | 25404833 | 37790728939 | 32987999 |
| GPON0/1:4 | 6204231680 | 29023071 | 53116789640 | 45278011 |
| GPON0/1:5 | 12773306787 | 61880501 | 1250072414637 | 112564647 |

Figure 4-1-34: ONU Statistics Info

4.2 ONU AutoFind

This chapter is about the configuration and management of automatic discovery ONUs.

4.2.1 Automatic Discovery

ONU Configuration → ONU AutoFind → Automatic Discovery

All ONUs which are authenticated failed or not authenticated will be displayed in this interface. You can check the serial number of ONUs. Then click Add to authenticate ONU.

| Index | Sn | SnPw | loid | loidpw | Action |
|-------|--------------|------|------|--------|---------------------|
| 1 | GPON001726bc | NULL | NULL | NULL | Add |

Figure 4-2-1: Automatic Discovery

| | Automatic Discovery | Aging Time | | | | | | | | | | | | |
|---|--|------------|--------------|---|---------|----|-----------|----|--------|--------------|-------------|---------|---|--|
| OLT Information | Add Onu <table border="1"> <tr> <td>PON Num</td> <td>1</td> </tr> <tr> <td>ONU Num</td> <td>25</td> </tr> <tr> <td>Auth Mode</td> <td>Sn</td> </tr> <tr> <td>Onu Sn</td> <td>GPON001726bc</td> </tr> <tr> <td>ONU Profile</td> <td>default</td> </tr> <tr> <td colspan="2"> <input type="button" value="Submit"/> <input type="button" value="Back"/> </td> </tr> </table> | | PON Num | 1 | ONU Num | 25 | Auth Mode | Sn | Onu Sn | GPON001726bc | ONU Profile | default | <input type="button" value="Submit"/> <input type="button" value="Back"/> | |
| PON Num | | | 1 | | | | | | | | | | | |
| ONU Num | | | 25 | | | | | | | | | | | |
| Auth Mode | | | Sn | | | | | | | | | | | |
| Onu Sn | | | GPON001726bc | | | | | | | | | | | |
| ONU Profile | | | default | | | | | | | | | | | |
| <input type="button" value="Submit"/> <input type="button" value="Back"/> | | | | | | | | | | | | | | |
| OLT Configuration | | | | | | | | | | | | | | |
| ONU Configuration | | | | | | | | | | | | | | |
| ONU AuthList | | | | | | | | | | | | | | |
| ONU AutoFind | | | | | | | | | | | | | | |
| ONU AutoLearn | | | | | | | | | | | | | | |
| ONU Upgrade | | | | | | | | | | | | | | |
| Rogue ONU | | | | | | | | | | | | | | |
| Profile Configuration | | | | | | | | | | | | | | |
| System Configuration | | | | | | | | | | | | | | |

Figure 4-2-2: Add ONU

4.2.2 Aging Time

ONU Configuration → ONU AutoFind → Aging Time

It allows you to configure the retention time of automatically discovered ONU information. The default configuration is 5 minutes.

| | Automatic Discovery | Aging Time | | | | |
|-----------------------|--|------------|------------|------------|------|-----|
| OLT Information | Aging Time Config Port ID: <input type="text" value="PON1"/> Aging Time: <input type="text" value="300"/> (60-3600s) <input type="button" value="Commit"/> <input type="button" value="Refresh"/> <table border="1"> <thead> <tr> <th>PON</th> <th>Aging Time</th> </tr> </thead> <tbody> <tr> <td>PON1</td> <td>300</td> </tr> </tbody> </table> | | PON | Aging Time | PON1 | 300 |
| PON | | | Aging Time | | | |
| PON1 | | | 300 | | | |
| OLT Configuration | | | | | | |
| ONU Configuration | | | | | | |
| ONU AuthList | | | | | | |
| ONU AutoFind | | | | | | |
| ONU AutoLearn | | | | | | |
| ONU Upgrade | | | | | | |
| Rogue ONU | | | | | | |
| Profile Configuration | | | | | | |
| System Configuration | | | | | | |

Figure 4-2-3: Aging Time

4.3 ONU AutoLearn

4.3.1 ONU AutoLearn

ONU Configuration → AutoLearn → ONU AutoLearn

ONU can automatically authenticate after enabling PON port automatic learning. At

the same time, OLT supports automatic binding templates based on PON ports. There are also plug and play enabled switches on this interface.

Note: this autolearn feature is disabled by default.

| PON ID | Enable | Line Profile | Srv Profile | Alarm Profile | Pri Profile | Format Profile |
|--------|---------|--------------|-------------|---------------|-------------|----------------|
| PON1 | Disable | N/A | N/A | N/A | N/A | N/A |

Figure 4-3-1:ONU AutoLearn

4.3.2 ONU AutoBind

ONU Configuration → AutoLearn → ONU AutoBind

Input the Equipment ID and bind the profile you need

Note: you must create a profile first.

| Equipment ID | ONU Profile | Line Profile | Service Profile | Alarm Profile | Pri Profile | Format Profile | Action |
|--------------|-------------|--------------|-----------------|---------------|-------------|----------------|--------|
|--------------|-------------|--------------|-----------------|---------------|-------------|----------------|--------|

Select Equipment ID Matching Type

Matching Type: Exact Matching

Add ONU Automatic Bind

Equipment ID:

ONU Profile: default

Line Profile: vlan6

Service Profile: tag6

Alarm Profile: alarm_profile_1

Pri Profile: pri_1

Format Profile: format_1

Figure 4-3-2: Bind profile

4.3.3 ONU AutoDelete

ONU Configuration → AutoLearn → ONU AutoDelete

It supports periodic checking and deleting offline ONUs and this feature is disabled by default.

ONU AutoLearn | ONU AutoBind | **ONU AutoDelete**

Offline ONU Auto Delete Configuration

Auto Delete:

Timeout Value: mins (Should be a multiple of five. Range:5-44640 mins.)

Figure 4-3-3: ONU AutoDelete

4.3.4 ONU Scheduled Reboot

ONU Configuration → AutoLearn → ONU Scheduled Reboot

Configure ONU to automatically restart based on time.

ONU AutoLearn | ONU AutoBind | ONU AutoDelete | **ONU Scheduled Reboot** | ONU Pre Configure

Current Time

Sun Sep 29 15:34:03 2024

ONU Scheduled Reboot Configuration

ONU Scheduled Reboot:

Port ID:

Select ONU: (1 or 1-3 or 1,2)

Schedule Reboot:

Fix Time (Monthly): Day Hour Minute

ONU Reboot Table

| ONU ID | Reboot Types | Reboot Time | Action |
|--------|--------------|-------------|--------|
|--------|--------------|-------------|--------|

Figure 4-3-4: ONU Scheduled Reboot

4.3.5 ONU Pre-Configure

ONU Configuration → AutoLearn → ONU Pre-Configure

Manually add a pre-registration configuration to the ONU list in PON, and when the ONU is registered with that ID, it will automatically bind the configuration settings.

ONU AutoLearn ONU AutoBind ONU AutoDelete ONU Scheduled Reboot **ONU Pre Configure**

Add ONU Pre Configure

| | |
|-----------------|-------------------|
| Port ID | PON1 |
| ONU ID | (1 or 1-3 or 1,2) |
| ONU Profile | default |
| Line Profile | line_1 |
| Service Profile | service |

Submit Delete

ONU Pre Configure Table

Clean Refresh

| ONU ID | ONU Profile | Line Profile | Service Profile | Alarm Profile | Pri Profile | Format Profile | Action |
|-----------|-------------|--------------|-----------------|---------------|-------------|----------------|--------|
| GPON0/1:2 | default | line_1 | service | N/A | N/A | N/A | |

Figure 4-3-5: ONU Pre-Configure

4.4 ONU Upgrade

ONU firmware can be upgraded by OLT. OLT supports manual upgrade and automatic upgrade.

4.4.1 UpLoad Image

ONU Configuration → ONU Upgrade → ONU Image

Upload ONU firmware image which you need, the image will upload to OLT's RAM.

UpLoad Image Manual Upgrade Upgrade Status Auto Upgrade Auto Upgrade Status

Firmware Upload

Select File: No file chosen

Figure 4-4-1: Upload image

4.4.2 Manual Upgrade

ONU Configuration → ONU Upgrade → Manual Upgrade

Select the ONU image and the ONU that needs upgrade, click Commit button to start upgrading. You can upgrade the same ONU model under one PON port each time.

The screenshot shows the 'Manual Upgrade' tab selected in the top navigation bar. On the left is a sidebar menu with 'ONU Upgrade' highlighted. The main content area is titled 'Select ONU Firmware' and contains a table with columns 'Firmware Name', 'Select', and 'Action'. Below this is the 'Upgrade ONU Firmware' section, which includes a 'PON ID' dropdown menu set to 'PON1', an 'ONU ID' input field with a placeholder 'x or x-y', and an 'Upgrade Mode' dropdown menu set to 'Mix'. A 'Commit' button is located at the bottom left of this section.

Figure 4-4-2: Manual Upgrade

4.4.3 Upgrade Status

ONU Configuration → ONU Upgrade → Upgrade Status

When ONU is upgrading, the upgrading status will be shown on this page.

The screenshot shows the 'Upgrade Status' tab selected in the top navigation bar. The sidebar menu on the left has 'ONU Upgrade' highlighted. The main content area is titled 'Upgrade Info' and contains a table with columns 'Selected', 'PON 0 ONU', and 'Action'. The 'Selected' column has a 'File' entry, and the 'Action' column has an 'Abort' link. Below this is the 'Upgrade Progress' section, which includes a 'Refresh' button and a table with columns: 'PON', 'ONU', 'Action', 'Status', 'Process', 'Fail Reason', and 'Commit Time'.

Figure 4-4-3: ONU Upgrade Status

4.4.4 Auto Upgrade

ONU Configuration → ONU Upgrade → Auto Upgrade

After uploaded the ONU firmware image, configured automatic upgrade conditions, once the ONU which has the same equipment ID and different software version comes online, they will be upgraded automatically.

Each type of ONU has its own equipment ID, which you can check in ONU detail info.

Note: please upload the ONU firmware in advance on the upload image interface

Figure 4-4-4: Auto Upgrade

4.4.5 Auto Upgrade Status

ONU Configuration → ONU Upgrade → Auto Upgrade Status

When ONU is auto upgrading, the upgrading status will be shown on this page.

Figure 4-4-5: Auto Upgrade Status

4.5 Rogue ONU

ONU Configuration → Rogue ONU

After enabled rogue ONU detection, if there is a rogue ONU trying to register, it will appear in the list.

OLT Information

OLT Configuration

ONU Configuration

ONU AuthList

ONU AutoFind

ONU AutoLearn

ONU Upgrade

Rogue ONU

Profile Configuration

System Configuration

Rogue ONU Configuration

Rogue ONU Detect Configuration

| PON | Detect state | Measurement | Alloc to scan | Auto shutdown | Operation | Algorithm |
|-------|--------------|-------------|---------------|---------------|-----------|-----------------|
| PON 1 | disable | silent | all | manual | reboot | Early Detection |

Change Configuration

Commit

| | |
|---------------|------------------------|
| PON | 1 ▼ |
| Detect state | Disable ▼ |
| Measurement | Silent ▼ |
| Alloc to scan | All ▼ |
| Auto shutdown | Disable ▼ |
| Shutdown type | reboot ▼ |
| Algorithm | Early Rogue Detector ▼ |

Rogue ONU List

| PON | ONU | Keywords | Time | State |
|-----|-----|----------|------|-------|
|-----|-----|----------|------|-------|

Figure 4-5-1: Rogue ONU detect

Chapter 5 Profile Configuration

This chapter is about the ONU profile configuration. It is designed for batch ONU management by OLT.

5.1 ONU Profile

The ONU profile is used for ONU authorization, and each type of ONU must specify only one ONU profile when authorization. The ONU profile specifies the capability of this ONU.

5.1.1 Information

Profile Configuration → ONU profile → Information

The table displays ONU profile list. You can also do some operations, such as deleting and checking details info.

| Profile ID | Profile Name | Max Tcont | Max Gempport | Max Veip | Action |
|------------|--------------|-----------|--------------|----------|-------------------------|
| 0 | default | 255 | 255 | 1 | Details |

Figure 5-1-1: ONU profile list

5.1.2 Add Profile

Create a new ONU profile what you need. Generally, ONU has two different types. SFU type (only using bridge mode):

Usually, only need to set correct eth port and POTS port number of ONU, others can be kept default.

The screenshot shows the 'Add Profile' configuration page in the AirLive web interface. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, ONU Profile (highlighted), DBA Profile, Line Profile, Service Profile, Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area has tabs for 'Information' and 'Add Profile', with 'Add Profile' being the active tab. Below the tabs is a 'Commit' button and a form with the following fields:

| | |
|-------------------------|---------------|
| Profile ID | 1 |
| Profile Name | onu_profile_1 |
| Description | onu_profile_1 |
| Max Tcont | 8 |
| Max Gemport | 32 |
| Max eth | 1 |
| Max pots | 0 |
| Max Iphost | 2 |
| Max Ipv6host | 0 |
| Max Veip | 0 |
| Service ability | Disable |
| Service ability N:1 | yes |
| Service ability 1:M | yes |
| Service ability 1:P | yes |
| Wifi mgmt via non OMCI | Disable |
| Omci send mode | async |
| Default multicast range | none |

Figure 5-1-2: Add SFU profile

HGU type (with the routing wan connection mode):

For HGU type, need to set correct eth port and POTS port number, and set Veip to be 1, keep others default.

The screenshot shows the 'Add Profile' configuration page in the AirLive web interface. The sidebar on the left lists various configuration categories, with 'ONU Profile' selected. The main form contains the following fields:

| Information | | Add Profile |
|-------------------------|---------------|-------------|
| Profile ID | 1 | |
| Profile Name | onu_profile_1 | |
| Description | onu_profile_1 | |
| Max Tcont | 8 | |
| Max Gemport | 32 | |
| Max eth | 4 | |
| Max pots | 2 | |
| Max Iphost | 2 | |
| Max Ipv6host | 0 | |
| Max Veip | 1 | |
| Service ability | Disable | ▼ |
| Service ability N:1 | yes | ▼ |
| Service ability 1:M | yes | ▼ |
| Service ability 1:P | yes | ▼ |
| Wifi mgmt via non OMCI | Disable | ▼ |
| Omci send mode | async | ▼ |
| Default multicast range | none | ▼ |

Figure 5-1-3: Add HGU profile

5.2 DBA Profile

DBA is a bandwidth allocation strategy that changes uplink bandwidth assigned to each T-CONT in real time according to the instant service status of each ONU. There are five BW types supported and make sure that fixed \leq assured \leq max.

5.2.1 DBA Profiles

Profile Configuration → DBA Profile → DBA Profiles

The table displays DBA profile list. You can also do some operations, such as delete and modify.

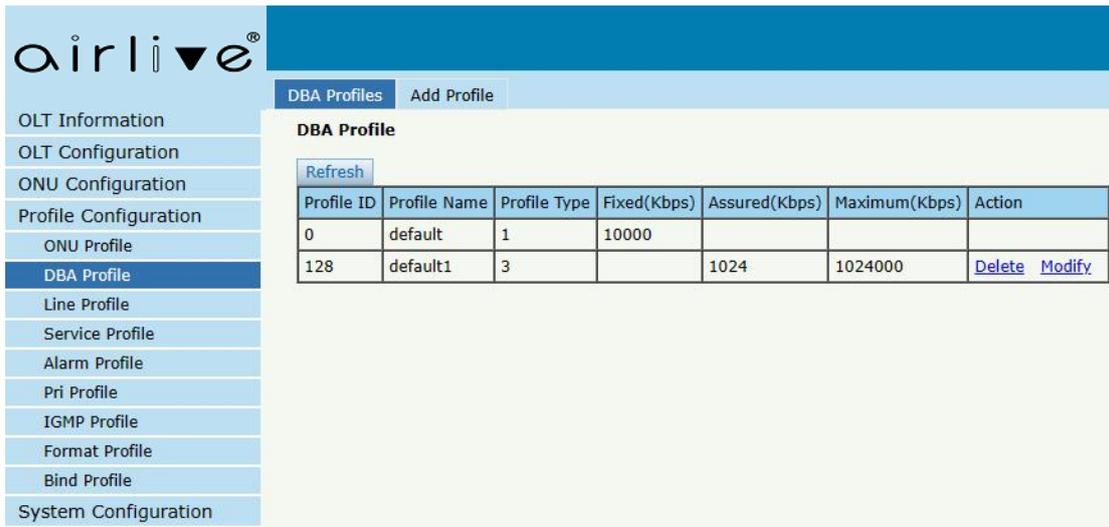


Figure 5-2-1: DBA profile list

5.2.2 Add Profile

Profile Configuration → DBA Profile → Add profile

There are five types of DBA profile. In general, we use type3.

| BW Type | Delay Sensitive | Applicable T-CONT Types | | | | |
|---------|-----------------|-------------------------|--------|--------|--------|--------|
| | | Type 1 | Type 2 | Type 3 | Type 4 | Type 5 |
| Fixed | Yes | √ | | | | √ |
| Assured | No | | √ | √ | | √ |
| Maximum | No | | | √ | √ | √ |

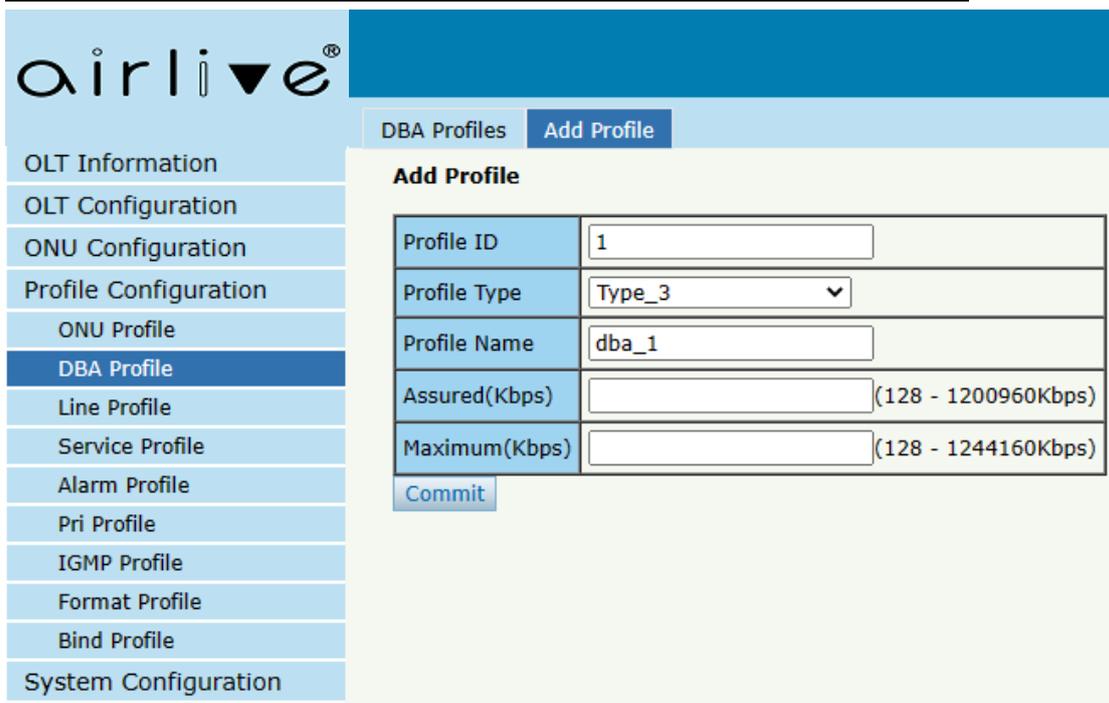


Figure 5-2-2: Add DBA profile

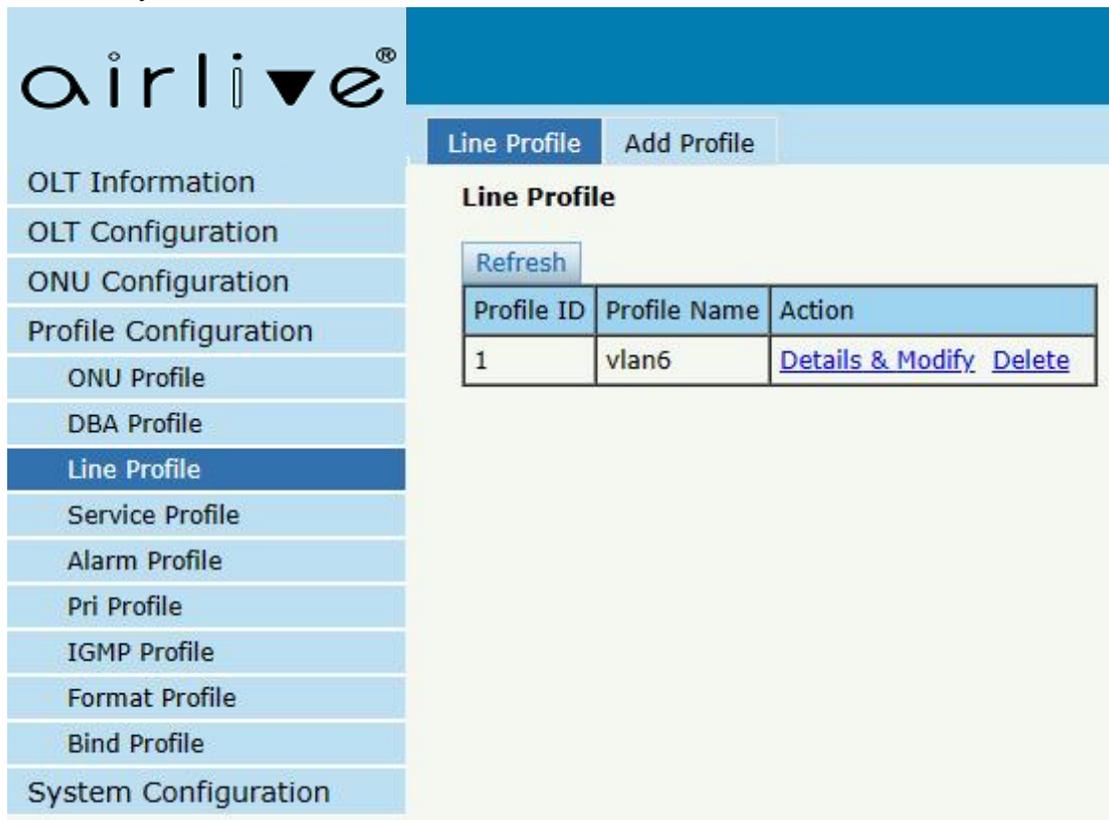
5.3 Line Profile

Line profile is used to configure the ANI side services of ONU such as t-cont, gem-port, service-port, and so on.

5.3.1 Line Profile

Profile Configuration → Line Profile → Line Profile

The table displays Line profile list. You can also do some operations, such as delete and modify.



The screenshot shows the AirLive web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (highlighted), ONU Profile, DBA Profile, Line Profile (highlighted), Service Profile, Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area is titled 'Line Profile' and contains a 'Refresh' button and a table with the following data:

| Profile ID | Profile Name | Action |
|------------|--------------|---|
| 1 | vlan6 | Details & Modify Delete |

Figure 5-3-1: Line Profile list

5.3.2 Add Profile

Profile Configuration → Line profile → Add profile

Create a new line profile, set the profile name.

airlive®

OLT Information

OLT Configuration

ONU Configuration

Profile Configuration

ONU Profile

DBA Profile

Line Profile

Service Profile

Alarm Profile

Pri Profile

IGMP Profile

Format Profile

Bind Profile

System Configuration

Line Profile Add Profile

Add Profile

Profile ID

Profile Name

Add

Figure 5-3-2: Add Line Profile

5.3.3 Display or Modify Line Profile Info

Profile Configuration → **Line Profile** → **Line Profile** → **Details & Modify**
 In the interface of line profile list, click Details&Modify to edit the profile.

Line Profile Add Profile

Line Profile

Refresh

| Profile ID | Profile Name | Action |
|------------|--------------|---|
| 1 | vlan6 | Details & Modify Delete |
| 2 | line_2 | Details & Modify Delete |
| 3 | line_3 | Details & Modify Delete |

Click

Figure 5-3-3: Modify Line Profile

5.3.3.1 Tcont

Profile Configuration → Line Profile → Line Profile → Details & Modify → Tcont

Add Tcont ID and bind DBA profile.

The screenshot shows the AirLive web interface. On the left is a navigation menu with options like OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, and System Configuration. The 'Line Profile' option is selected. The main content area has a breadcrumb trail: 'Line Profile → Add Profile'. Below this, there are tabs for 'Tcont', 'Gemport', 'Service', and 'Multicast Vlan', with 'Tcont' selected. The main content is titled 'Tcont Information(Line Profile:2)'. It contains a table with the following data:

| Tcont ID | Name | DBA Profile | Action |
|----------|---------|-------------|------------------------|
| 1 | tcont_1 | default1 | Delete |

Below the table is an 'Add Tcont' section with a form:

| | | |
|------------------|---------------------------------------|-----------|
| Tcont ID | <input type="text" value="2"/> | (1 ~ 255) |
| Tcont Name | <input type="text"/> | |
| DBA Profile Name | <input type="text" value="default1"/> | ▼ |

An 'Add' button is located below the form.

Figure 5-3-4: Add Tcont

5.3.3.2 Gemport

Profile Configuration → Line Profile → Line Profile → Details & Modify → Gemport

Add gemport ID and bind tcont ID.

You can also limit the forwarding speed according to the Gemport ID.

Gempport Info(Line Profile:2)

| Gempport ID | Name | Tcont | COS | Downstream | State | UpQueueMapId | DownQueueMapId | Action |
|-------------|-------|-------|-----|------------|--------|--------------|----------------|------------------------|
| 1 | gem_1 | 1 | N/A | default | Enable | N/A | N/A | Delete |

Add Gempport

| | | |
|--------------------|--------------------------------------|----------|
| Gempport ID | <input type="text" value="2"/> | (1~~255) |
| Tcont ID | <input type="text" value="1"/> | ▼ |
| Gempport Name | <input type="text"/> | |
| COS | <input type="text" value="N/A"/> | (0-7) |
| Downstream Traffic | <input type="text" value="default"/> | ▼ |
| UpQueueMapId | <input type="text" value="N/A"/> | (0-3) |
| DownQueueMapId | <input type="text" value="N/A"/> | (0-7) |
| State | <input type="text" value="Enable"/> | ▼ |

[Add](#)

Figure 5-3-5: Add Gempport

ONU Gempport Rate Limit Info

| Gempport ID | Name | Tcont | Upstream CIR | Upstream PIR | Downstream CIR | Downstream PIR | Action |
|-------------|-------|-------|--------------|--------------|----------------|----------------|------------------------|
| 1 | gem_1 | 1 | 0 | 0 | 0 | 0 | Delete |

ONU Gempport Rate Limit Configuration

| | | |
|---|--------------------------------|----------------|
| Gempport ID | <input type="text" value="1"/> | ▼ |
| Upstream Traffic Committed Rate Limit (B/s) | <input type="text" value="0"/> | (0-4294967295) |
| Upstream Traffic Peak Rate Limit (B/s) | <input type="text" value="0"/> | (0-4294967295) |
| Downstream Traffic Committed Rate Limit (B/s) | <input type="text" value="0"/> | (0-4294967295) |
| Downstream Traffic Peak Rate Limit (B/s) | <input type="text" value="0"/> | (0-4294967295) |

[Commit](#)

Figure 5-3-6: ONU Gempport Rate Limit Configuration

5.3.3.3 Service

Profile Configuration → Line Profile → Line Profile → Details & Modify → Service

Add service, set the VLAN mode and VLAN ID and bind one Gempport ID.

The screenshot shows the 'Add Service' configuration page in the AirLive web interface. The left sidebar contains a navigation menu with 'Line Profile' selected. The main content area has tabs for 'Tcont', 'Gemport', 'Service', and 'Multicast Vlan', with 'Service' being the active tab. The page title is 'ServiceInformation(Line Profile:2)'. Below the title is a table with the following data:

| ServiceName | Gemport | Vlan Mode | Vlan List | Port | Action |
|-------------|---------|-----------|-----------|------|------------------------|
| ser_1 | 1 | Tag | 6 | N/A | Delete |

Below the table is the 'AddService' form with the following fields:

- ServiceName: ser_2
- Gemport ID: 1
- Vlan Mode: Tag
- Vlan List: 6 (X,X or X-X;0 for all;max 12 vlans)
- Port Type: N/A

An 'Add' button is located at the bottom of the form.

Figure 5-3-7: Add Service

5.3.3.4 Multicast VLAN

Profile Configuration → Line Profile → Line Profile → Details & Modify → Multicast Van

Set the Multicast VLAN of ONU.

The screenshot shows the 'Configure Multicast VLAN' page in the AirLive web interface. The left sidebar contains a navigation menu with 'Line Profile' selected. The main content area has tabs for 'Tcont', 'Gemport', 'Service', and 'Multicast Vlan', with 'Multicast Vlan' being the active tab. The page title is 'Multicast VLAN List(Line Profile:2)'. Below the title is a table with the following data:

| Line Profile ID | Line Profile Name | Vlan List | Action |
|-----------------|-------------------|-----------|----------------------------|
| 2 | line_2 | N/A | Delete All |

Below the table is the 'Add/Del Multicast Vlan (max 12 vlans)' form with the following field:

- Mvlan List: (100,103 or 105-108)

'Add' and 'Delete' buttons are located at the bottom of the form.

Figure 5-3-8: Configure Multicast VLAN

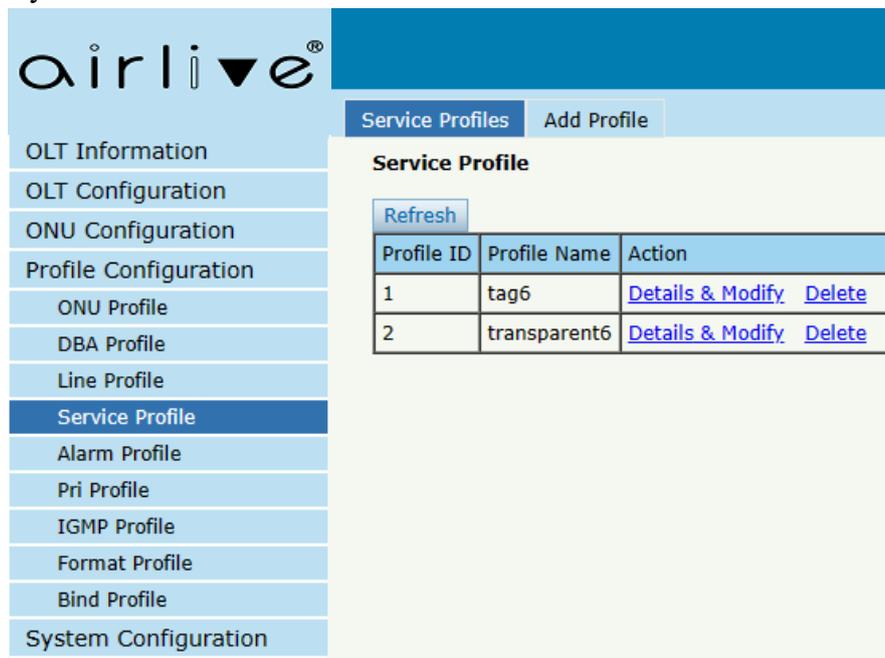
5.4 Service Profile

The service configuration file is used to configure the UNI side and multicast of the ONU.

5.4.1 Service Profile

Profile Configuration → **Service Profile** → **Service Profile**

The table displays service profile list. You can also do some operations, such as delete and modify.



The screenshot shows the AirLive web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, ONU Profile, DBA Profile, Line Profile, Service Profile (highlighted), Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area is titled 'Service Profile' and includes a 'Refresh' button and a table with the following data:

| Profile ID | Profile Name | Action |
|------------|--------------|---|
| 1 | tag6 | Details & Modify Delete |
| 2 | transparent6 | Details & Modify Delete |

Figure 5-4-1: Service Profile List

5.4.2 Add Profile

Profile Configuration → **Service Profile** → **Add Profile**

Add a new service profile, set the profile name.

The screenshot shows the 'Add Profile' form in the AirLive web interface. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (highlighted), ONU Profile, DBA Profile, Line Profile, Service Profile (highlighted), Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area has a 'Service Profiles' tab and an 'Add Profile' button. Below this, the 'Add Profile' form is displayed with the following fields:

| | |
|--------------|-------|
| Profile ID | 3 |
| Profile Name | srv_3 |

An 'Add' button is located below the form fields.

Figure 5-4-2: Add Service profile

5.4.3 Display or Modify Line Profile Info

Profile Configuration → **Service Profile** → **Service Profile** → **Details & Modify**
 In the interface of service profile list, click Details&Modify to edit the profile.

The screenshot shows the 'Service Profile' list in the AirLive web interface. The left sidebar contains a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (highlighted), ONU Profile, DBA Profile, Line Profile, Service Profile (highlighted), Alarm Profile, Pri Profile, IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area has a 'Service Profiles' tab and an 'Add Profile' button. Below this, the 'Service Profile' section is displayed with a 'Refresh' button and a table:

| Profile ID | Profile Name | Action |
|------------|--------------|---|
| 1 | tag6 | Details & Modify Delete |
| 2 | transparent6 | Details & Modify Delete |
| 3 | srv_3 | Details & Modify Delete |

A red arrow points to the 'Details & Modify' link for profile 3.

Figure 5-4-3: Modify service profile

5.4.3.1 PortVlan

Profile Configuration → **Service Profile** → **Service Profile** → **Details & Modify** → **PortVlan**

Set the VLAN mode of the ONU's port. For HGU, need to configure veip 1 transparent; for SFU, configure Ethernet port directly.

The screenshot shows the 'PortVlan' configuration page. The table below represents the data shown in the 'PortVlan Info(Service Profile:1)' section:

| Port Name | Mode | Vlan | Vlan Priority(tag) | Default Vlan(hybrid) | Default Priority(hybrid) | CVlan(translate) | CVlan Priority(translate) | SVlan(translate) | SVlan Priority(translate) | Action |
|-----------|------|------|--------------------|----------------------|--------------------------|------------------|---------------------------|------------------|---------------------------|--------|
| eth_0/1 | Tag | 6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Delete |
| eth_0/2 | Tag | 6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Delete |
| eth_0/3 | Tag | 6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Delete |
| eth_0/4 | Tag | 6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Delete |

The 'Add PortVlan' form includes the following fields:

- Mode: Transparent (dropdown)
- PortType: Eth (dropdown)
- Port ID: (text input)
- Commit button

Figure 5-4-4: Port VLAN mode

5.4.3.2 Multicast Vlan Strip

Profile Configuration → **Service Profile** → **Service Profile** → **Details & Modify** → **Multicast VLAN Strip**

Set the multicast VLAN mode of ONU's port.

The screenshot shows the 'Multicast VLAN Strip' configuration page. The table below represents the data shown in the 'Multicast VLAN List (Service Profile:1)' section:

| Vlan Mode | Port | Action |
|-----------|------|--------|
| | | |

The 'Add/Del Multicast Strip' form includes the following fields:

- Strip Eth Number: (text input)
- Confirm button

Figure 5-4-5: Port Multicast VLAN Mode

5.4.3.3 Port

Profile Configuration → Service Profile → Service Profile → Details & Modify → Port

Set the rate negotiation mode of the ONULAN interface. You can also choose whether to enable ports or not, and even limit the rates of different LAN ports.

The screenshot displays the 'Port Basic Configuration' page for 'Service Profile:1'. The left sidebar contains a navigation menu with items like 'OLT Information', 'Service Profile', and 'System Configuration'. The main content area has a breadcrumb trail: 'Service Profiles' > 'Add Profile' > 'PortVlan' > 'Multicast VLAN Strip' > 'Port' > 'Iphost Config'. Below the breadcrumb, the 'Port Basic Configuration' section includes a dropdown for 'ONU Port' (set to 'LAN1'), checkboxes for 'Admin Status' and 'Loopback' (both checked), and a 'Port Speed' dropdown (set to 'auto'). A 'Submit' button is located below these options. The 'Upstream Rate Limit Config' section contains two input fields for 'Upstream Rate-Limit CIR (kbps)' and 'Upstream Rate-Limit PIR (kbps)', both set to '0', with a 'Commit' button below. The 'Downstream Rate Limit Config' section also has two input fields for 'Downstream Rate-Limit CIR (kbps)' and 'Downstream Rate-Limit PIR (kbps)', both set to '0', with a 'Commit' button below.

Figure 5-4-6: Port Basic Configuration

5.4.3.4 Iphost Config

Profile Configuration → Service Profile → Service Profile → Details & Modify → Iphost Config

Add Iphost for ONU wan connection. Iphost is used for ONU management.

The screenshot displays the 'Iphost Config' page. On the left is a navigation menu with categories like OLT Information, ONU Configuration, Profile Configuration, and System Configuration. The 'Service Profile' section is active. The main content area is titled 'Iphost Configuration Info (Service Profile:1)' and contains a table with columns: Iphost ID, Description, IP Mode, IP Address, Mask, Gateway, DNS1, DNS2, VLAN, Priority, and Action. Below this is the 'Iphost Config' form with input fields for Iphost ID, Description, IP Mode (a dropdown menu currently showing 'DHCP'), DNS1(A.B.C.D), and DNS2(A.B.C.D). A 'Commit' button is located below the form. The 'Iphost VLAN Config' section has input fields for 'VLAN(0-4904)' and 'Priority(1-15)', also with a 'Commit' button below it.

Figure 5-4-7: Iphost Config

5.5 Alarm Profile

Alarm profile is used to configure the parameters of ONU alarm.

5.5.1 Profile Info

Profile Configuration → Alarm Profile → Profile Information

The table displays alarm profile list.

The screenshot shows the 'Alarm Profile' page. The left navigation menu is visible, with 'Alarm Profile' selected. The main content area has a 'Refresh' button and a table listing alarm profiles. The table has the following data:

| Profile ID | Profile Name | State | Rx Power Alarm Threshold | Tx Power Alarm Threshold | Sf Threshold/Sd Threshold | Action |
|------------|-----------------|--------|--------------------------|--------------------------|---------------------------|------------------------|
| 1 | alarm_profile_1 | enable | -27 ~ -8 | 1 ~ 5 | 5 / 9 | Delete |

Figure 5-5-1: Alarm Profile List

5.5.2 Add Profile

Profile Configuration → Alarm Profile → Add Profile

Add new alarm profile, set the threshold of alarm generation.

The screenshot shows the 'Create Alarm Profile' configuration page in the AirLive web interface. The left sidebar lists various configuration categories, with 'Alarm Profile' selected. The main content area shows a form with the following fields:

| Create Alarm Profile | |
|----------------------|-------------------|
| Alarm Name | alarm_profile_2 |
| Alarm State | Enable |
| Rx Low Power | -27 (-27 ~ -8)dBm |
| Rx High Power | -8 (-27 ~ -8)dBm |
| Tx Low Power | 1 (1 ~ 5)dBm |
| Tx High Power | 5 (1 ~ 5)dBm |
| Sf Threshold | 5 (3 ~ 8) |
| Sd Threshold | 9 (4 ~ 10) |

A 'Commit' button is located at the bottom of the form.

Figure 5-5-2: Add Alarm Profile

5.6 Pri Profile

Pri Profile is the profile which the parameters are configured by private OMCI, including WAN, SIP, WIFI, CATV, DHCP Server, and so on.

5.6.1 Pri Profile

Profile Configuration → Pri Profile → Pri Profile

The table displays private profile list. You can also do some operations, such as delete and modify.

The screenshot displays the AirLive web interface. On the left is a navigation sidebar with the following menu items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, ONU Profile, DBA Profile, Line Profile, Service Profile, Alarm Profile, Pri Profile (highlighted), IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area is titled 'Pri Profile' and includes a 'Refresh' button and a table with the following data:

| Profile ID | Profile Name | Action |
|------------|--------------|---|
| 1 | pri_1 | Details & Modify Delete |

Figure 5-6-1: Pri Profile

5.6.2 Add Profile

Profile Configuration → Pri Profile → Add profile

Add a private profile, set the profile name.

The screenshot displays the AirLive web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, ONU Profile, DBA Profile, Line Profile, Service Profile, Alarm Profile, Pri Profile (highlighted), IGMP Profile, Format Profile, Bind Profile, and System Configuration. The main content area is titled 'Add Profile' and contains two input fields: 'Profile ID' with the value '2' and 'Profile Name' with the value 'pri_2'. Below these fields is an 'Add' button. At the top of the main content area, there are two tabs: 'Pri Profile' and 'Add Profile'.

Figure 5-6-2: Add Pri Profile

5.6.3 Display or Modify Pri Profile Info

Profile Configuration → **pri Profile** → **pri Profile** → **Details & Modify**

In the interface of pri profile list, click Details&Modify to edit the profile.

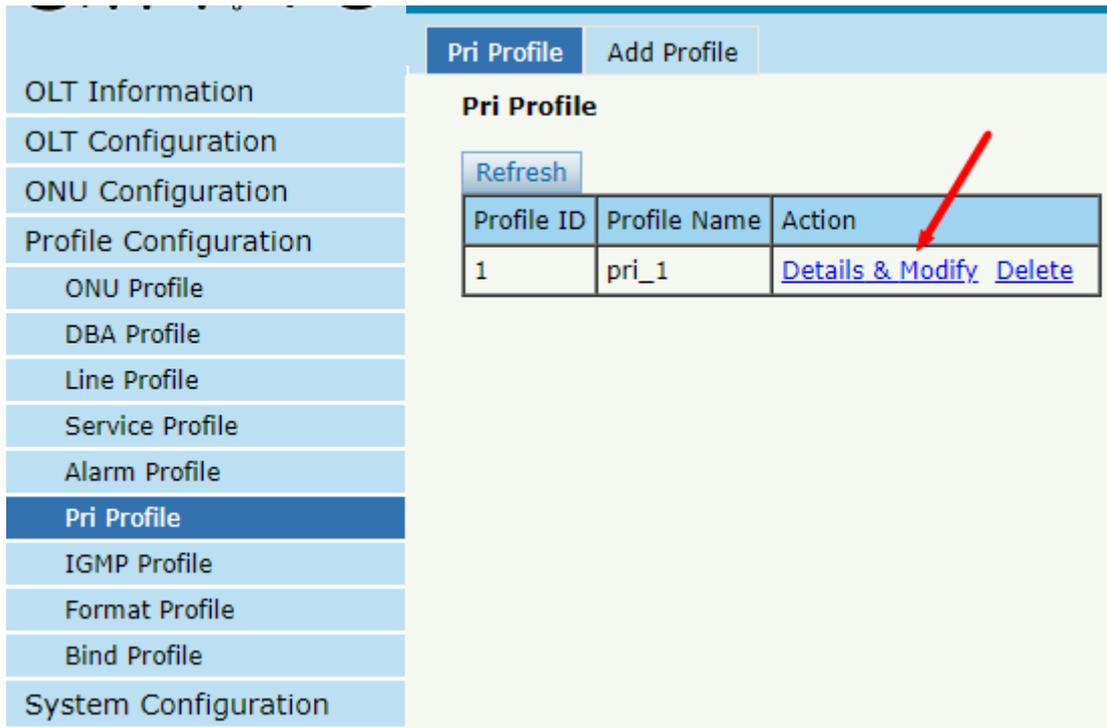


Figure 5-6-3: Modify Pri Profile

5.6.3.1 WAN

Profile Configuration → **pri Profile** → **pri Profile** → **Details & Modify** → **WAN**
Add IPv4 single-stack WAN connection for Pri Profile.

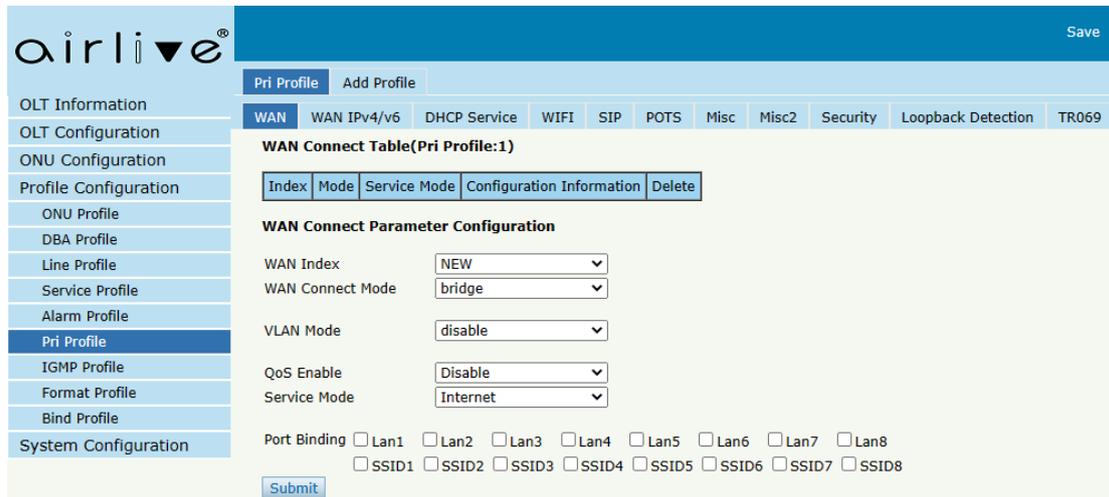


Figure 5-6-4: WAN Configuration

5.6.3.2 WAN IPv4/v6

Profile Configuration → **pri Profile** → **pri Profile** → **Details & Modify** → **WAN**
IPv4/v6

Add IPv4/IPv6 dual-stack WAN connections for Pri Profile.

Figure 5-6-5: WAN IPv4/v6 Configuration

5.6.3.3 DHCP Service

Profile Configuration → **pri Profile** → **pri Profile** → **Details & Modify** → **DHCP Service**

Configure IPv4/v6 DHCP server parameters for Pri Profile.

Figure 5-6-6: DHCP Service

5.6.3.4 WIFI

Profile Configuration → **pri Profile** → **pri Profile** → **Details & Modify** → **WiFi**

Configure WiFi parameters for Pri Profile.

airlive® Save Log Status ONU list Logout

Pri Profile Add Profile

WAN WAN IPv4/v6 DHCP Service **WiFi** SIP POTS Misc Misc2 Security Loopback Detection TR069

WiFi Switch Configuration(Pri Profile:1)

WiFi Status enable
 WiFi Area ETSI
 WiFi Standard 802.11bgn
 WiFi Channel 0 (ETSI/SPAIN/RUSSIAN/CN/World-wide:0-13;FCC/IC/NCC:0-11;FRANCE:0,10-13;MKK/MKK1/MKK2/MKK3/Global:0-14;ISREAL:0,3-13;0:auto)
 WiFi Transmit Power 0 (0-20dBm)
 WiFi Channel Width 40 MHz

WiFi Status enable
 WiFi Area ETSI
 WiFi Standard 802.11ac-A/N/AC/ax
 WiFi Channel auto
 WiFi Transmit Power 0 (0-20dBm)
 WiFi Channel Width 80 MHz
 WiFi EasyMesh Status enable

WiFi SSID Configuration

SSID SSID1(WIFI0)
 Name input WIFI Name
 WiFi Status disable

Submit

Figure 5-6-7: WIFI Configuration

5.6.3.5 SIP

Profile Configuration → pri Profile → pri Profile → Details & Modify → SIP
 Configure SIP parameters for Pri Profile.

airlive® Pri Profile Add Profile

WAN WAN IPv4/v6 DHCP Service WiFi **SIP** POTS Misc Misc2 Security Loopback Detection TR069

SIP Parameter Configuration(Pri Profile:1)

Manage Port 5060 (1-65535)
 Proxy Server IP Or Name/Port 0.0.0.0 5060 (1-65535)
 Backup Proxy Server IP Or Name/Port 0.0.0.0 0 (0-65535)
 Register Server IP Or Name/Port 0.0.0.0 5060 (1-65535)
 Backup Register Server IP Or Name/Port 0.0.0.0 0 (0-65535)
 Out Bound Server IP Or Name/Port 0.0.0.0 5060 (1-65535)
 Register Interval 3600 (1-10000000)

SIP Digit Map Configuration

SIP Digit Map Block

Submit

Figure 5-6-8: SIP Configuration

5.6.3.6 POTS

Profile Configuration → pri Profile → pri Profile → Details & Modify → POTS
 Configure POTS parameters for Pri Profile.

The screenshot shows the 'POTS' configuration page. On the left is a navigation menu with categories like OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, and System Configuration. The 'Pri Profile' sub-menu is active. The main content area has tabs for WAN, WAN IPv4/v6, DHCP Service, WIFI, SIP, POTS, Misc, Misc2, Security, Loopback Detection, and TR069. The 'POTS' tab is selected, showing a 'POTS Port' dropdown set to 'Pots1'. Below this are two sections: 'SIP User Parameter Configuration(Pri Profile:1)' with fields for 'Account active' (radio buttons for Disable/Enable), 'User Account', 'User Name', and 'User Password', and a 'Submit' button; and 'Advanced Parameter Configuration' with dropdowns for 'VAD' and 'Echo cancel' (both set to 'Disable'), and input fields for 'Input gain(dB)' and 'Output gain(dB)' (both set to '0'), and a 'Dtmf mode' dropdown set to 'Transparent'. A 'Submit' button is at the bottom.

Figure 5-6-9: POTS Configuration

5.6.3.7 MISC

Profile Configuration → pri Profile → pri Profile → Details & Modify → MISC

Some misc configurations, including CATV switches, speed limits, limit the number of MAC learning, and so on.

The screenshot shows the 'MISC' configuration page. The navigation menu and tabs are similar to the previous screenshot, but the 'Misc' tab is selected. The main content area has tabs for WAN, WAN IPv4/v6, DHCP Service, WIFI, SIP, POTS, Misc, Misc2, Security, Loopback Detection, and TR069. The 'Misc' tab is selected, showing 'Misc Control Operation(Pri Profile:1)' with a table of checkboxes for 'CATV Enable', 'IGMP Enable', 'STP Enable', and 'Port Isolate Enable', each with a 'Submit' button. Below this is 'Speed Limit Config' with input fields for 'Upstream limit' and 'Downstream limit' (both set to '0') and a 'Submit' button. At the bottom is 'MAC Table Config' with input fields for 'mac Age Time', 'Pon mac limit', and 'Lan mac limit' (all set to '0') and a 'Submit' button.

Figure 5-6-10: MISC Configuration

5.6.3.8 MISC2

Profile Configuration → pri Profile → pri Profile → Details & Modify → MISC2

Some misc configurations, including NAT Type and UPnP Status.

Figure 5-6-11: MISC2 Configuration

5.6.3.9 Security

Profile Configuration → **pri Profile** → **pri Profile** → **Details & Modify** → **Security**

Configure security parameters for Pri Profile.

Figure 5-6-12: Security Configuration

5.6.3.10 Loopback Detection

Profile Configuration → **pri Profile** → **pri Profile** → **Details & Modify** → **Loopback Detection**

Configure Loopback Detection parameters for Pri Profile.

Loopback Detection Configuration(Pri Profile:1)

| | | |
|----------------------|-------------------|---|
| Status | enable | |
| Check Interval | 1000 | (1-60000)ms |
| Recover Interval | 60 | (1-1800)s |
| Ethernet Type | fffa | (HHHH) |
| VLAN ID | 0 | (0-4094; 0 means no vlan is configured) |
| Destination MAC Type | Broadcast Address | |
| Port Closing Time | 60 | (1-1800)s |
| Alarm | enable | |
| Portdislooped | enable | |

[Submit](#) [Refresh](#)

Figure 5-6-13: Loopback Detection Configuration

5.6.3.11 TR069

Profile Configuration → pri Profile → pri Profile → Details & Modify → TR069
 Configure TR069 parameters for Pri Profile.

| Type | Active | Configuration content |
|----------------------------|--------------------------|--|
| TR069 Manage Configuration | <input type="checkbox"/> | TR069 Manage Status: Disable ACS Server Address: <input type="text"/> ACS Server Username: <input type="text"/> ACS Server Password: <input type="text"/> Certificate: Disable Inform: Disable Inform Interval Time: <input type="text"/> (0-4294967295) Reverse Connection Username: <input type="text"/> Reverse Connection Password: <input type="text"/> |
| TR069 Stun Configuration | <input type="checkbox"/> | TR069 STUN Status: Disable Stun Server Address: <input type="text"/> Stun Server Port: <input type="text"/> (1-65535) Stun Server User Name: <input type="text"/> Stun Server Password: <input type="text"/> |

[Submit](#)

Figure 5-6-14: TR069 Configuration

5.7 IGMP Profile

5.7.1 IGMP Profile

Profile Configuration → IGMP Profile → IGMP Profile

The table displays IGMP profile list. You can also do some operations, such as delete and modify.

The screenshot displays the AirLive web interface. On the left, a navigation menu lists various configuration options, with 'IGMP Profile' highlighted. The main content area is titled 'IGMP Profile' and includes a 'Refresh' button and a table listing existing profiles.

| Profile ID | Profile Name | Action |
|------------|--------------|---|
| 1 | igmp_1 | Details & Modify Delete |

Figure 5-7-1: IGMP Profile list

5.7.2 Add Profile

Profile Configuration → **IGMP Profile** → **Add profile**

Add new IGMP profile, set the profile name.

The screenshot shows the 'Add Profile' form in the AirLive web interface. The left sidebar remains the same. The main content area is titled 'Add Profile' and contains two input fields: 'Profile ID' with the value '2' and 'Profile Name' with the value 'igmp_2'. An 'Add' button is located below the input fields.

Figure 5-7-2: Add Profile

5.7.3 Display or Modify IGMP Profile Info

Profile Configuration → IGMP Profile → IGMP Profile → Details & Modify

In the interface of IGMP profile list, click Details&Modify to edit the profile.

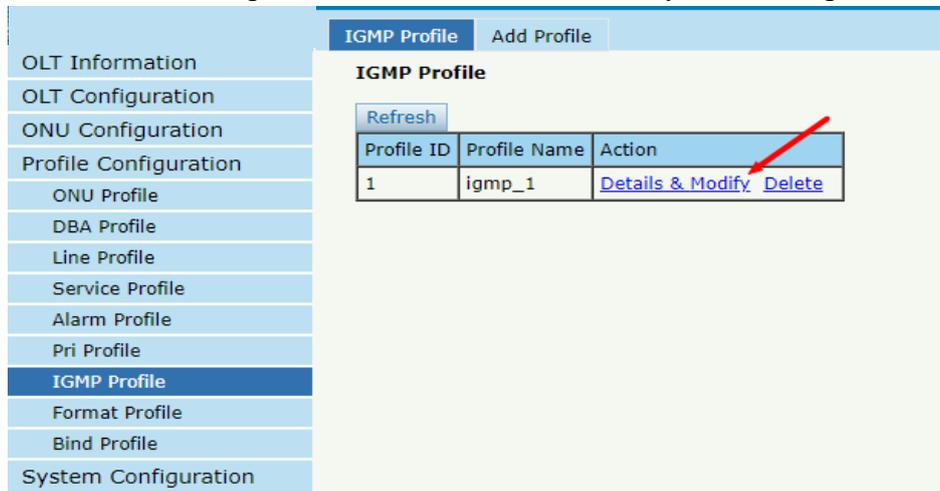


Figure 5-7-3: Modify IGMP profile

5.7.3.1 Config

Profile Configuration → IGMP Profile → IGMP Profile → Details & Modify → Config

Set IGMP/MLD protocol parameters as required.

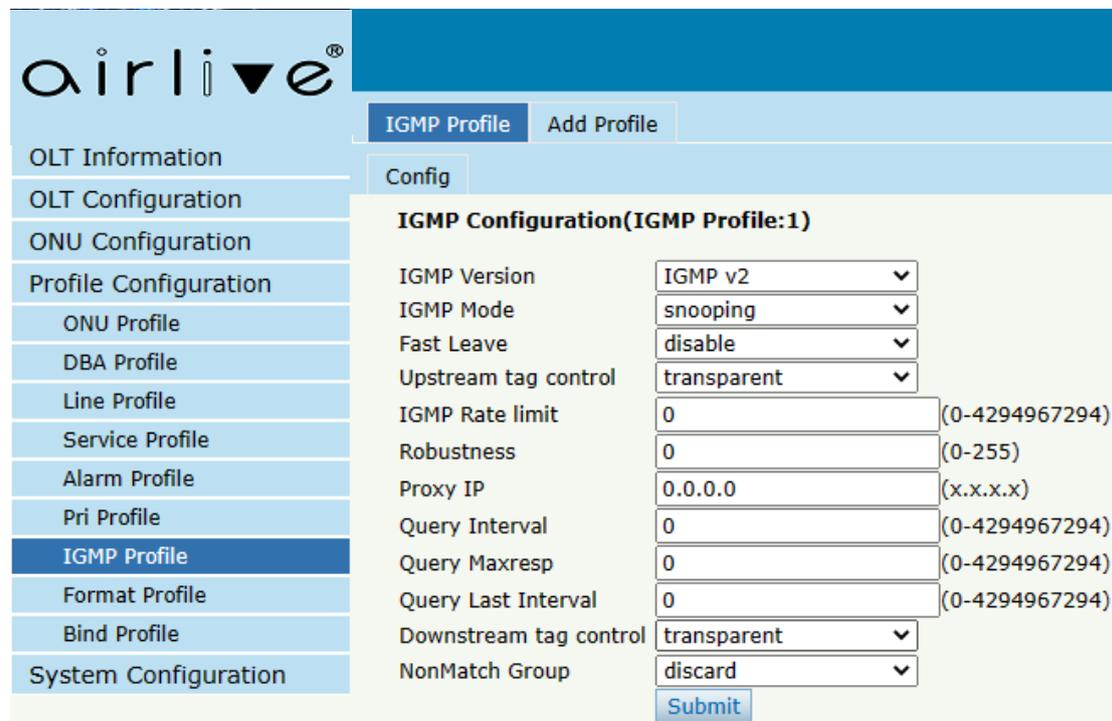


Figure 5-7-4: IGMP Configuration

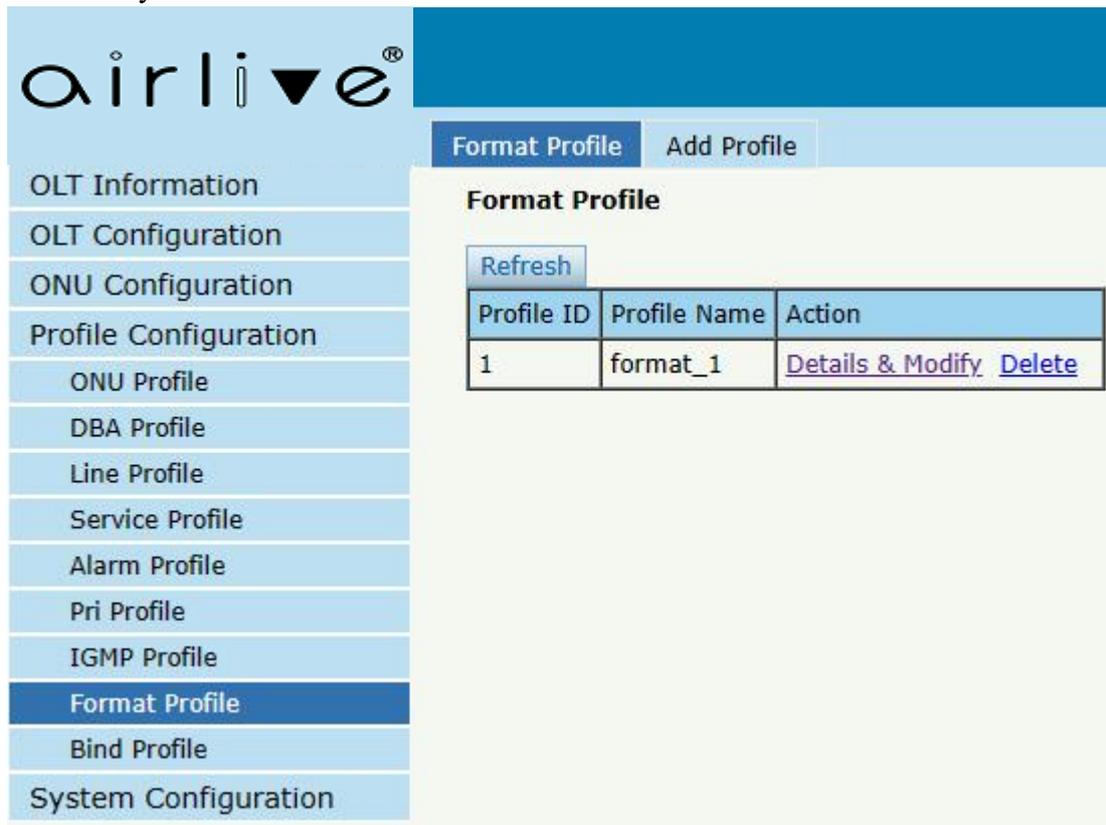
5.8 Format Profile

Format profile is mainly used to configure the DHCP option format of ONU.

5.8.1 Format Profile

Profile Configuration → **Format Profile** → **Format Profile**

The table displays Format profile list. You can also do some operations, such as delete and modify.



The screenshot shows the AirLive web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (highlighted), ONU Profile, DBA Profile, Line Profile, Service Profile, Alarm Profile, Pri Profile, IGMP Profile, Format Profile (highlighted), Bind Profile, and System Configuration. The main content area is titled 'Format Profile' and contains a 'Refresh' button and a table with the following data:

| Profile ID | Profile Name | Action |
|------------|--------------|---|
| 1 | format_1 | Details & Modify Delete |

Figure 5-8-1: Format Profile list

5.8.2 Add Profile

Profile Configuration → **Format Profile** → **Add profile**

Add new format profile, set the profile name.

The screenshot shows the AirLive web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration (selected), ONU Profile, DBA Profile, Line Profile, Service Profile, Alarm Profile, Pri Profile, IGMP Profile, Format Profile (highlighted), Bind Profile, and System Configuration. The main content area is titled 'Format Profile' and 'Add Profile'. It contains a form with two input fields: 'Profile ID' with the value '2' and 'Profile Name' with the value 'format_2'. Below the fields is an 'Add' button.

Figure 5.8-2: Add Format Profile

5.8.3 Display or Modify Format Profile Info

Profile Configuration → **Format Profile** → **Format Profile** → **Details & Modify**

In the interface of Format profile list, click Details&Modify to edit the profile.

The screenshot shows the AirLive web interface. On the left is the same navigation menu as in Figure 5.8-2, with 'Format Profile' selected. The main content area is titled 'Format Profile' and 'Add Profile'. It contains a 'Refresh' button and a table with the following data:

| Profile ID | Profile Name | Action |
|------------|--------------|---|
| 1 | format_1 | Details & Modify Delete |

A red arrow points to the 'Details & Modify' link in the 'Action' column.

Figure 5-8-3: Modify Format profile

5.8.3.1 Config

Profile Configuration → Format Profile → Format Profile → Details & Modify → Config

Set DHCP option parameters as required.

airlive®

Format Profile Add Profile

OLT Information
OLT Configuration
ONU Configuration
Profile Configuration
 ONU Profile
 DBA Profile
 Line Profile
 Service Profile
 Alarm Profile
 Pri Profile
 IGMP Profile
 Format Profile
 Bind Profile
System Configuration

Config

Switch Configuration

Option82 ▼
Option18 ▼
Option37 ▼
PPPoE Plus ▼

Format Type Configuration

Format Type ▼

Circuit ID / Remote ID Configuration

ID ▼
Index
Type ▼

Circuit ID / Remote ID Table

| ID | Type |
|------------|-------|
| Circuit ID | cvlan |

Figure 5-8-4: Format Profile Configuration

5.9 Bind Profile

Profile Configuration → Bind Profile

After profile is configured, it is necessary to bind it to ONU.

Profile Bind

ONU Profile Bind

Port ID: PON1

[Refresh](#)

| ONU ID | ONU Profile | Line Profile | Service Profile | Alarm Profile | Pri Profile | Format Profile | Bind |
|--------|-------------|--------------|-----------------|---------------|-------------|----------------|------------------------|
| 1 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |
| 2 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |
| 3 | default | N/A | N/A | N/A | N/A | N/A | Config |
| 4 | default | N/A | N/A | N/A | N/A | N/A | Config |
| 5 | default | N/A | N/A | N/A | N/A | N/A | Config |
| 6 | default | N/A | N/A | N/A | N/A | N/A | Config |
| 7 | default | N/A | N/A | N/A | N/A | N/A | Config |
| 8 | default | N/A | N/A | N/A | N/A | N/A | Config |
| 9 | default | N/A | N/A | N/A | N/A | N/A | Config |
| 10 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |
| 11 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |
| 12 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |
| 13 | default | (ID: 1) | (ID: 2) | N/A | N/A | N/A | Config |
| 14 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |
| 15 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |
| 16 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |
| 17 | default | (ID: 1) | (ID: 1) | N/A | N/A | N/A | Config |

Figure 5-9-1: Bind profile

Profile Bind

ONU Profile Binding Config (PON:1 ONU:1)

| ONU ID | Line Profile | Service Profile | Alarm Profile | Pri Profile | Format Profile |
|--------|--------------|-----------------|---------------|-------------|----------------|
| 1 | vlan6 | tag6 | N/A | N/A | N/A |

[Commit](#)

Figure 5-9-2: Select Profile

Chapter 6 System Configuration

This chapter is about the global management of OLT.

6.1 System Log

6.1.1 System Log

System Configuration → **System Log**

This page displays OLT system alarms and events.

The screenshot shows the 'System Log' page in the AirLive web interface. The page has a blue header with the 'airlive' logo and a 'Save' button. Below the header, there are three tabs: 'System Log', 'Alarm', and 'Threshold Alarm'. The 'System Log' tab is selected. On the left side, there is a navigation menu with various system configuration options. The main content area contains the 'Alarm Log Table' section, which includes search filters for 'Select Counts' (set to 200), 'Alarm Type' (set to ALL), 'Description', and 'Download Log Type' (set to txt). There is a 'Submit' button and a 'Download' button. Below the filters, there is a table with 12 rows of log entries. The table has columns for 'No.', 'Time', 'Level', and 'Message'. The entries include system time changes, user logouts, and ONU power low clear events.

| No. | Time | Level | Message |
|-----|---------------------|-------|--|
| 1 | 1970/01/12 17:56:49 | major | System Time Change change by ntp. |
| 2 | 1970/01/12 17:55:48 | major | User Logout User admin logouted from 192.168.8.34 on web |
| 3 | 1970/01/12 17:55:28 | major | ONU PON TX Power Low Clear PON 0/1 ONU 4 sn MONU1ce7a103 |
| 4 | 1970/01/12 17:55:27 | major | ONU PON TX Power Low Clear PON 0/1 ONU 4 sn MONU1ce7a103 |
| 5 | 1970/01/12 17:52:49 | major | ONU PON TX Power Low Clear PON 0/1 ONU 4 sn MONU1ce7a103 |
| 6 | 1970/01/12 17:52:48 | major | ONU PON TX Power Low Clear PON 0/1 ONU 4 sn MONU1ce7a103 |
| 7 | 1970/01/12 17:51:39 | major | System Time Change change by ntp. |
| 8 | 1970/01/12 17:50:55 | major | User Login User admin logged in from 192.168.8.86 on web |
| 9 | 1970/01/12 17:49:59 | major | ONU PON TX Power Low Clear PON 0/1 ONU 4 sn MONU1ce7a103 |
| 10 | 1970/01/12 17:49:58 | major | ONU PON TX Power Low Clear PON 0/1 ONU 4 sn MONU1ce7a103 |
| 11 | 1970/01/12 17:48:15 | major | ONU PON TX Power Low Clear PON 0/1 ONU 4 sn MONU1ce7a103 |
| 12 | 1970/01/12 17:48:14 | major | ONU PON TX Power Low Clear PON 0/1 ONU 4 sn MONU1ce7a103 |

Figure 6-1-1: System Log

6.1.2 Alarm

System Configuration → **System Log** → **Alarm**

It contains all the alarms of OLT. User can choose the different alarms to "Print", "Record", "Trap" and "Remote".



Figure 6-1-2: Alarm

| options | Illustration |
|---------|--|
| Print | Alarm and event show in console and telnet, but not show in syslog, EMS and remote log server. |
| Record | Alarm and event show in syslog, but not show in console, telnet, EMS and remote log server. |
| Trap | Alarm and event show in EMS, but not show in console, telnet, syslog and remote log server. |
| Remote | Alarm and event show in remote log server, but not show in console, telnet, syslog and EMS. |

6.1.3 Threshold Alarm

System Configuration → **System Log** → **Threshold Alarm**

This page is used to configure OLT temperature threshold, CPU-usage threshold and memory- usage threshold, PON optical threshold.

The screenshot displays the AirLive web interface. On the left is a navigation menu with options: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log (selected), Device Management, User Management, Gateway, DNS, System Time, Mirror, and Login Management. The main content area is titled 'Threshold Alarm Configuration' and includes a sub-section for 'PON Optical Alarm Configuration'.

Threshold Alarm Configuration

| Type | Print | Record | Trap | Remote | Alarm Threshold | Clear Threshold |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------------------------|-----------------------------------|
| Temp High (°C) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| Temp Low (°C) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| CPU Usage High (%) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| MEM Usage High (%) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |

Buttons:

PON Optical Alarm Configuration

Port ID:

| Type | State | Alarm Threshold | Clear Threshold |
|---------------------|--------------------------|-----------------------------------|-----------------------------------|
| Tx Power High (dBm) | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| Tx Power Low (dBm) | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| Tx Bias High (mA) | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| Tx Bias Low (mA) | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| Vcc High (V) | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| Vcc Low (V) | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| Temp High (°C) | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |
| Temp Low (°C) | <input type="checkbox"/> | <input type="text" value="0.00"/> | <input type="text" value="0.00"/> |

Buttons:

Figure 6-1-3: Threshold Alarm

6.2 Device Management

6.2.1 Firmware Upgrade

System Configuration → Device Management → Firmware Upgrade

You can upgrade the OLT firmware on this page. OLT will reboot automatically with the new firmware after upgraded when you select the option “Reboot After Upgrade”.

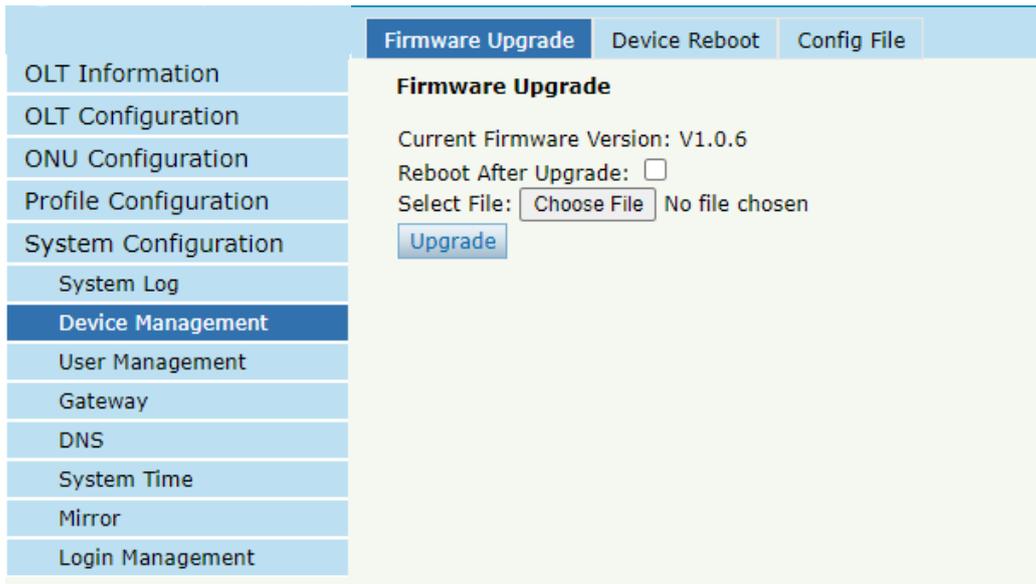


Figure 6-2-1: Firmware Upgrade

6.2.2 Device Reboot

System Configuration → Device Management → Device Reboot

You can reboot the entire system on this page. Please do save the configuration before reboot.

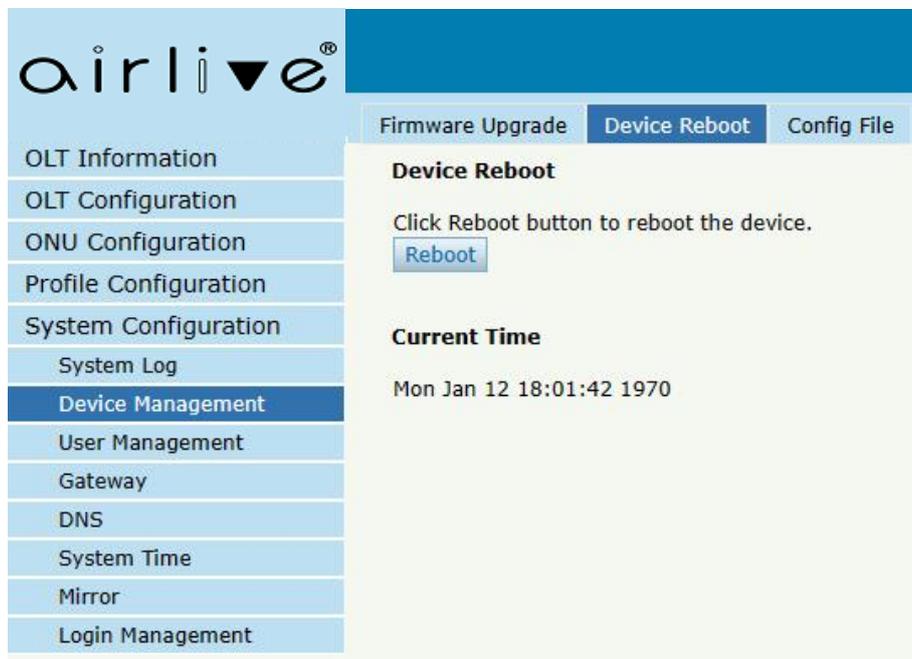


Figure 6-2-2: Device Reboot

6.2.3 Config File

System Configuration → Device Management → Config File

You can backup configuration, restore configuration, restore factory defaults and save configuration on this page.

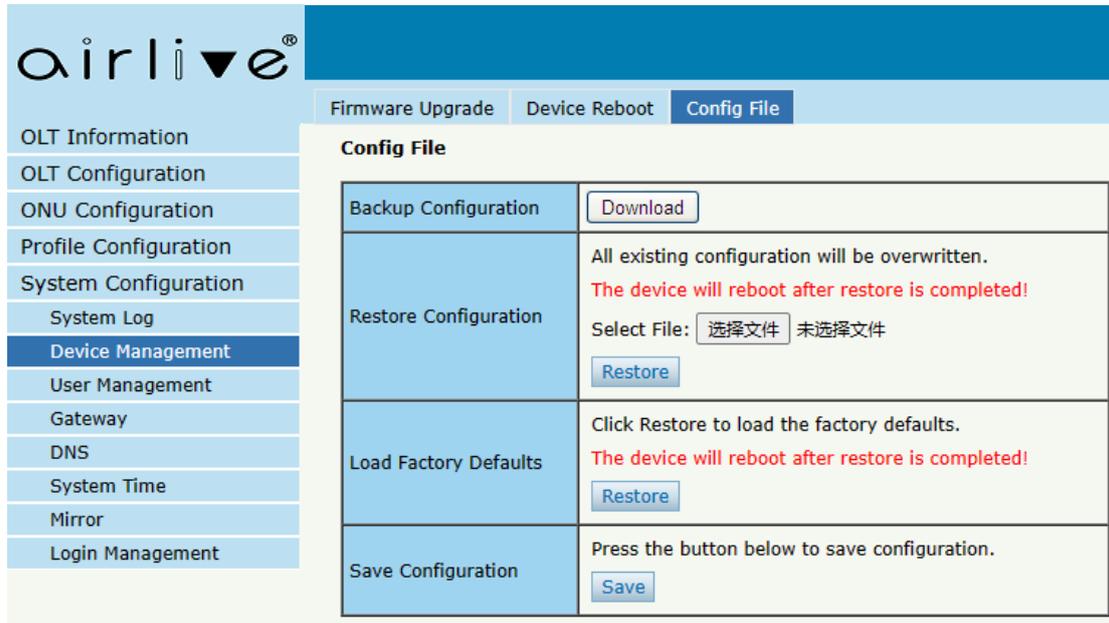


Figure 6-2-3: Config File Configuration

6.2.4 Advance Config File

System Configuration → Device Management → Advance Config File

You can automatically backup files on this page.

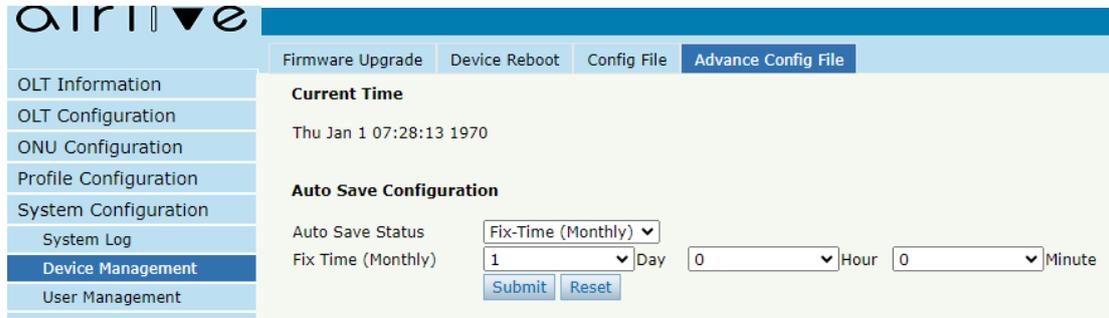


Figure 6-2-4: Advance Config File Configuration

6.3 User Management

System Configuration → User Management

Two types of user have been defined, Normal and Admin. There are limitations to normal user, and Admin user has no limits to full function of OLT. The default account member is **Admin** level.

User Manage

Add User

User Name

User Password

Confirm Password

User Role

Notice:

- 1.The password must contain at least 6 characters.
- 2.The password must contain at least two of the following combinations digit, uppercase letter, lowercase letter, Special characters (.:~_/@!~#\$%^&*()+=?\|[]{};'"<, > `).
- 3.The password can not be any user name.

User Table

| User Name | User Role | Edit | Delete |
|-----------|-----------|------|--------|
| admin | admin | | |

Figure 6-3-1: User Manage

6.4 SNMP

6.4.1 SNMPV1/V2

System Configuration → SNMP → SNMPV1/V2

This page is used to configure SNMP V1/V2 parameters for OLT management.

It is not recommended to modify the default community name in the following image, as it may cause the network management system to be unable to manage and configure it.

SNMPV1/V2 **SNMPV3** **Remote Server**

Add Community

Community Name

Access Right

Community Table

| Community Name | Access Right | Delete |
|----------------|--------------|--------|
| public | Read-Only | |
| private | Read-Write | |

Add Trap

Host IP

UDP Port (1-65535)

Community Name

SNMP Version

Trap Table

| Host IP | UDP Port | SNMP Version | Community Name | Delete |
|--------------|----------|--------------|----------------|--------|
| 192.168.6.66 | 162 | 1 | public | |

Figure 6-4-1: SNMPV1/V2

6.4.2 SNMPv3

System Configuration → SNMP → SNMPV3

This page is used to configure SNMP V3 parameters for OLT management.

The screenshot shows the SNMPV3 configuration page. The left sidebar lists various configuration options, with 'SNMP' selected. The main content area is titled 'SNMPV3' and contains the following sections:

- Add View:** Fields for View Name, Subtree (with a note '(Type:Object Identifier)'), and View Type (set to 'Include'). An 'Add' button is present.
- View Table:** A table with columns: View Name, Subtree, View Type, and Delete.
- Add Group:** Fields for Group Name, Access Level (set to 'No Auth'), Read View, Write View, and Notify View. An 'Add' button is present.
- Group Table:** A table with columns: Group Name, Access Level, Read View, Write View, Notify View, and Delete.
- Add User:** Fields for User Name, Group Name, Auth Type (set to 'None'), Auth Password, Private Type (set to 'None'), and Private Password. An 'Add' button is present.
- User Table:** A table with columns: User Name, Group Name, Auth Type, Private Type, and Delete.

Figure 6-4-2: SNMPv3

6.4.3 Remote Server

System Configuration → SNMP → Remote Server

This page is used to configure AirLive EMS, VINCE server IP.

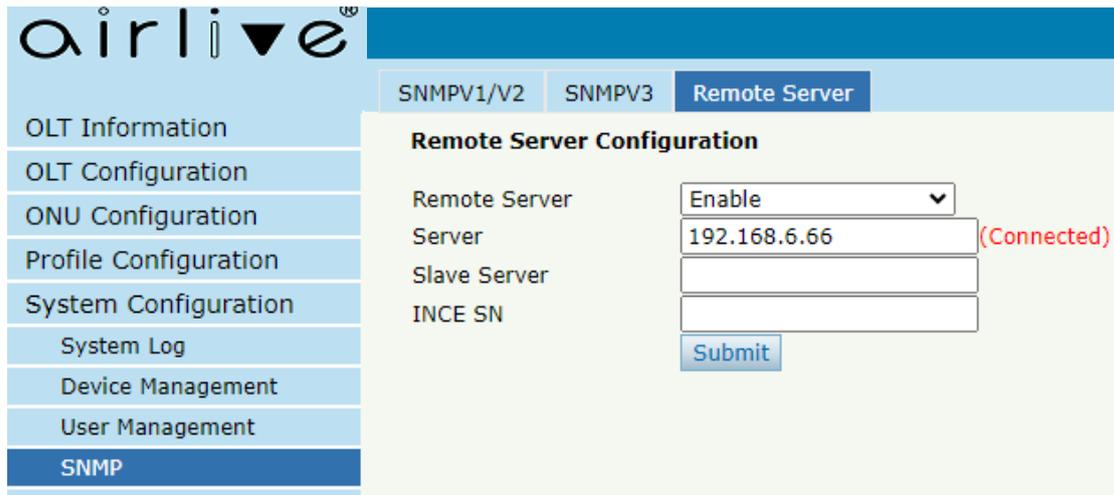


Figure 6-4-3: Remote Server

6.5 Gateway

System Configuration → Gateway

This page is used to configure the OLT gateway in case of that the OLT needs to access Internet or any Layer 3 network.



Figure 6-5-1: Gateway Configuration

6.6 DNS

DNS is used for domain name resolution. When OLT need to visit a site or a destination by domain, take NTP server for example, DNS is required.

6.6.1 IPv4 DNS

System Configuration → DNS → IPv4 DNS

This page is used to configure IPv4 DNS.



The screenshot displays the AirLive web interface for IPv4 DNS configuration. On the left is a navigation sidebar with the following menu items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, Gateway, DNS (highlighted), System Time, Mirror, and Login Management. The main content area is titled 'IPv4 DNS Configuration' and contains the following fields and buttons:

| | |
|--|--|
| Master DNS | <input type="text" value="202.96.128.86"/> |
| Slave DNS | <input type="text" value="8.8.8.8"/> |
| <input type="button" value="Submit"/> <input type="button" value="Reset"/> | |

Figure 6-6-1: IPv4 DNS

6.7 System Time

6.7.1 RTC

System Configuration → System Time → RTC

This page is used to set OLT system time. RTC stands for Real-Time Clock, it provides clock signal to the system. There is no battery inside OLT, so the time will not be saved after powered off.

| Year | Month | Day | Hour | Minute | Second |
|------|-------|-----|------|--------|--------|
| 1970 | 1 | 12 | 17 | 47 | 18 |

Submit Reset

Figure 6-7-1: RTC Setting

6.7.2 NTP

System Configuration → System Time → NTP

This page is used to configure NTP server. OLT will synchronize time with the NTP server at a given time.

Enable NTP Synchronization: Enable

NTP Timezone: (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi

Daylight Saving Time: [Dropdown]

Master NTP Server: ntp.aliyun.com

Slave NTP Server: [Empty]

Current Time: 1970 / 1 / 12 17:50:19

Submit Reset

Figure 6-7-2: NTP Configuration

6.8 FAN

System Configuration → FAN

This page is used to configure the working mode of the fan.

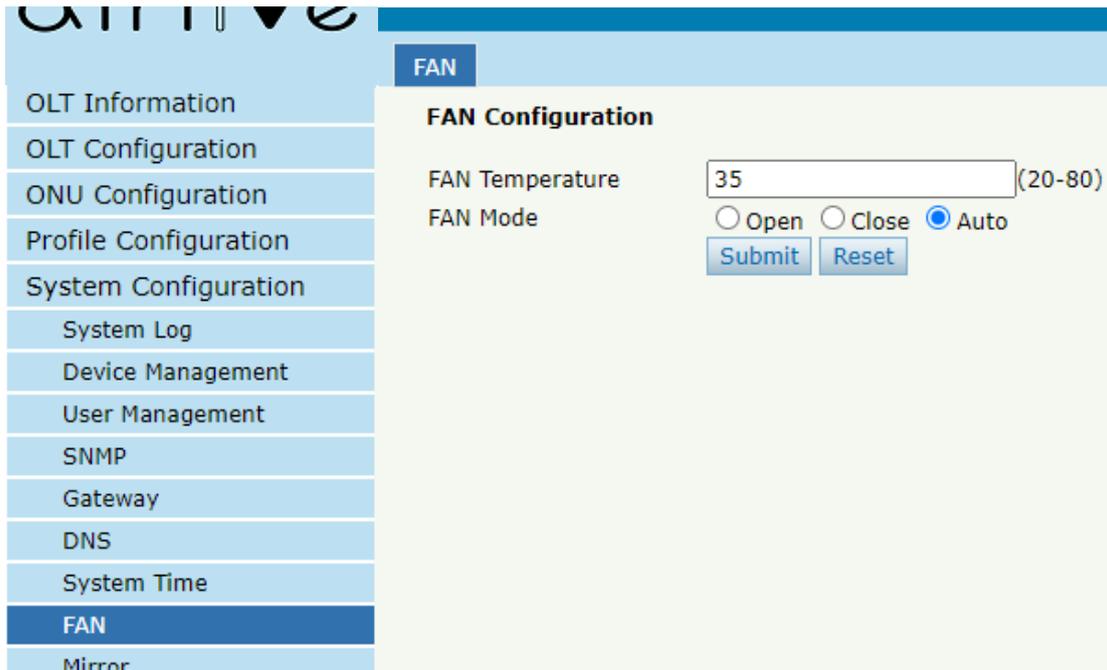


Figure 6-8-1: FAN

6.9 Mirror

System Configuration → Mirror

Port mirror is usually used for troubleshooting. It can forward incoming and outgoing packets from the source port to the destination port.

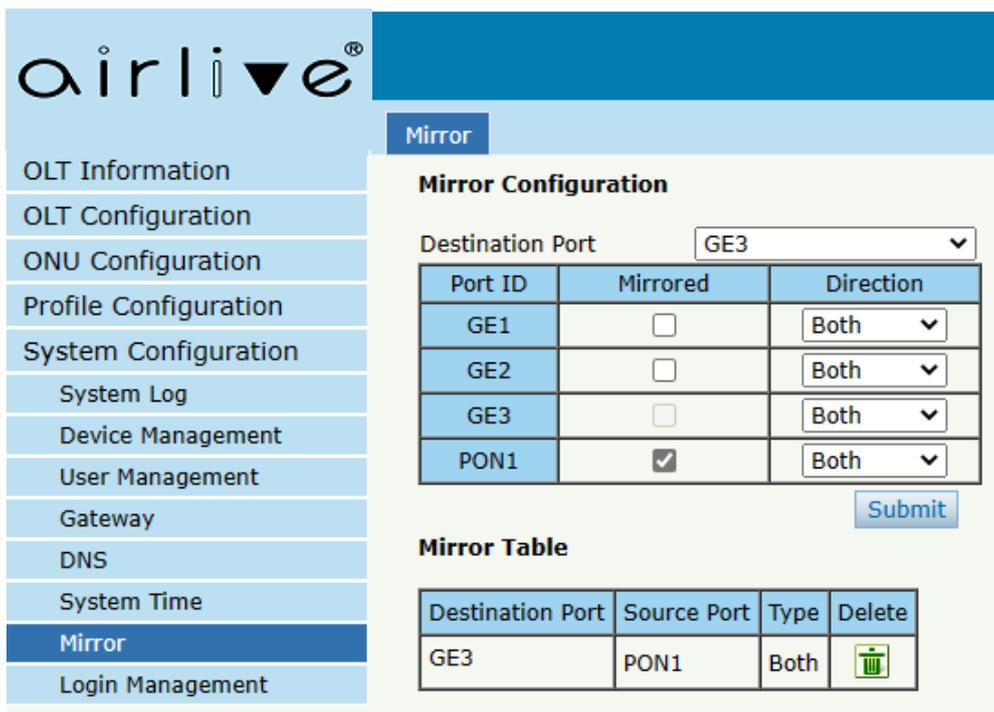


Figure 6-9-1: Mirror Configuration

6.10 Login Management

6.10.1 Login Access List

System Configuration → **Login Management** → **Login Access List**

This page is used to configure access rights for management. You can configure access rights for Telnet, Web, according to source IP address.

The screenshot shows the AirLive web interface for Login Access List Configuration. The sidebar menu on the left includes: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, Gateway, DNS, System Time, Mirror, and Login Management (highlighted). The top navigation bar includes: Login Access List (highlighted), Service Port, Login Configuration, and Telnet Management. The main configuration area contains:

- Login Access Status:** A dropdown menu set to "Disable" and a "Submit" button.
- Login Access List Configuration:** Radio buttons for "Deny" (selected) and "Permit", a dropdown menu for "Protocol" set to "Telnet", input fields for "Source IP" and "IP Mask", and an "Add" button.
- Login Access List:** A table with a "Clean" button above it. The table has columns: Filter Action, Protocol, Source IP, IP Mask, and Delete.

Figure 6-10-1: Login Access List Configuration

6.10.2 Service Port

System Configuration → **Login Management** → **Service Port**

This page is used to set Web, Telnet Port .

The screenshot shows the AirLive web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, Gateway, DNS, System Time, Mirror, and Login Management (highlighted in blue). At the top right, there are four tabs: Login Access List, Service Port (selected), Login Configuration, and Telnet Management. The main content area is titled "Service Port" and contains two input fields: "Web Port" with the value "443" and "(1-65535)", and "Telnet Port" with the value "23" and "(1-65535)". Below the input fields are "Submit" and "Reset" buttons.

Figure 6-10-2: Service Port Configuration

6.10.3 Login Configuration

System Configuration → **Login Management** → **Login Configuration**

This page is used to set login timeout and verification code switch .

The screenshot shows the AirLive web interface. On the left is a navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, Gateway, DNS, System Time, Mirror, and Login Management (highlighted in blue). At the top right, there are four tabs: Login Access List, Service Port, Login Configuration (selected), and Telnet Management. The main content area is titled "Web Configuration" and contains two input fields: "Login Timeout" with the value "10" and "(1-30 minutes)", and "Verification Code" with a dropdown menu set to "Disable". Below the input fields are "Submit" and "Reset" buttons.

Figure 6-10-3: Login Configuration

6.10.4 Telnet Management

System Configuration → **Login Management** → **Telnet Management**

This page displays the current telnet connection information. You can see the host IP

address and user name information that are currently accessing the OLT through telnet.

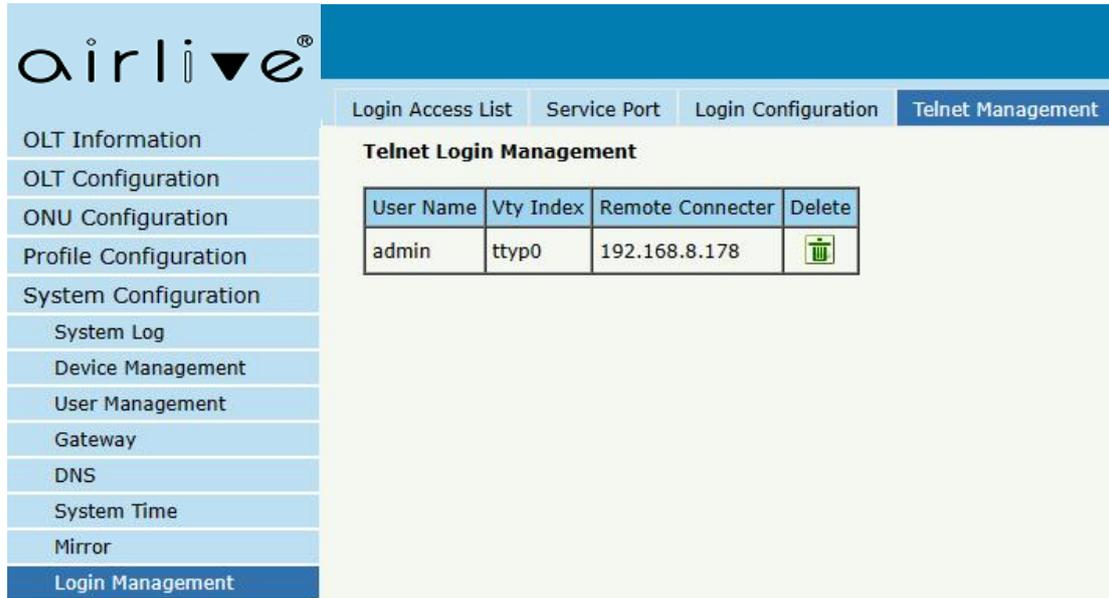


Figure 6-10-4: Telnet Management

6.11 SSH

6.11.1 SSH Enable

System Configuration → **SSH** → **SSH Enable**

This page is used to configure SSH protocol related parameters.

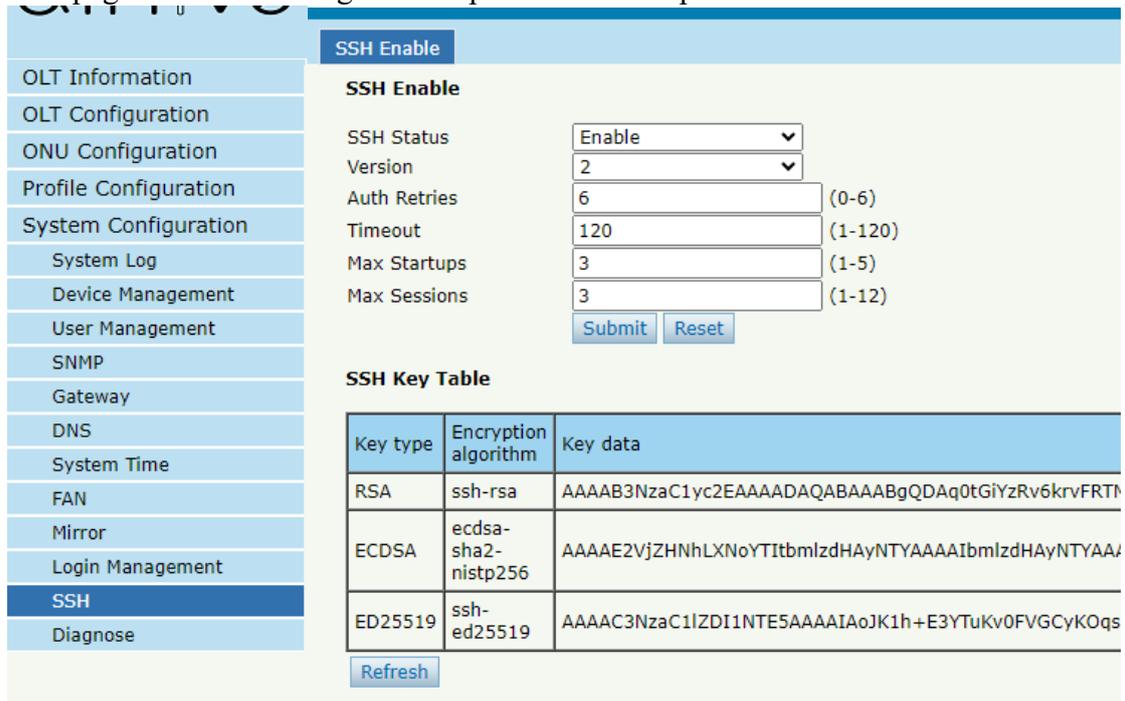


Figure 6-11-1:SSH Enable

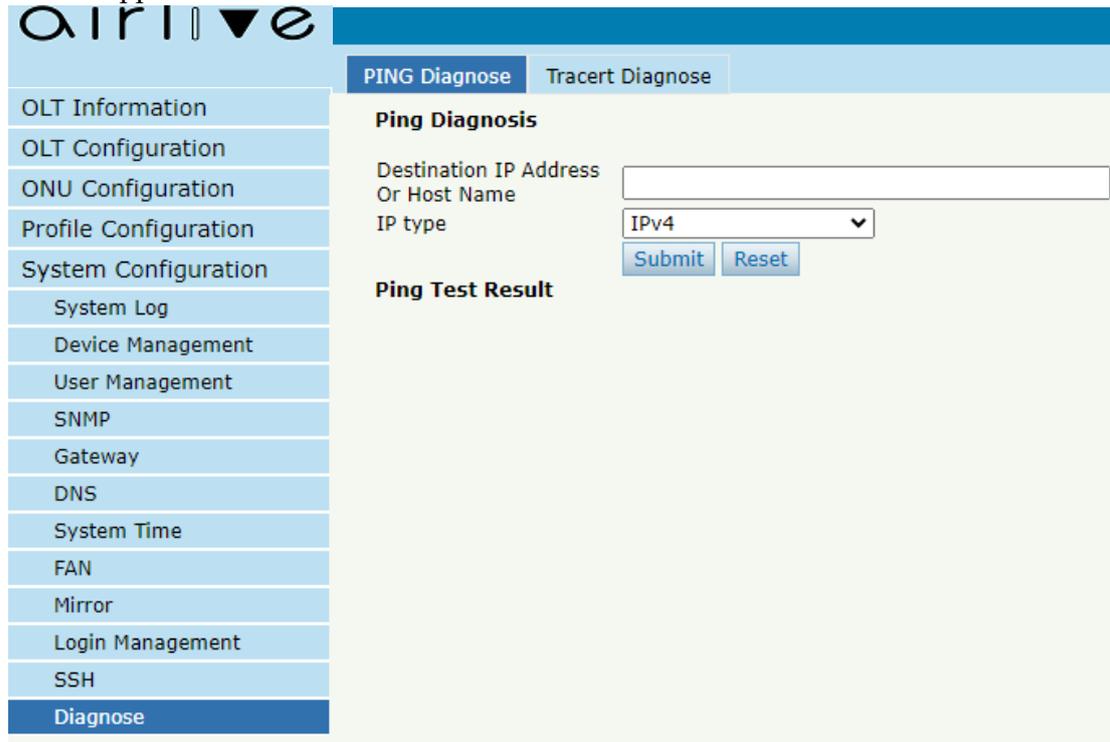
6.12 Diagnose

6.12.1 PING Diagnose

System Configuration→ Diagnose→ PING Diagnose

This page supports diagnosing network connections using the PING command.

PING supports IPv4 and IPv6 addresses.



The screenshot shows the 'PING Diagnose' web interface. On the left is a sidebar menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, Gateway, DNS, System Time, FAN, Mirror, Login Management, SSH, and Diagnose (highlighted). The main content area has two tabs: 'PING Diagnose' and 'Tracert Diagnose'. The 'PING Diagnose' tab is active and contains the following elements:

- Ping Diagnosis**
 - Destination IP Address Or Host Name:
 - IP type:
 - Submit Reset
- Ping Test Result**

Figure 6-12-1:PING Diagnose

6.12.2 Tracert Diagnose

System Configuration→ Diagnose→ Tracert Diagnose

This page supports using Tracert commands for route tracing to diagnose network connections.

The routing tracking function supports IPv4 and IPv6 addresses.

The screenshot displays the 'Tracert Diagnose' interface. On the left is a vertical navigation menu with the following items: OLT Information, OLT Configuration, ONU Configuration, Profile Configuration, System Configuration, System Log, Device Management, User Management, SNMP, Gateway, DNS, System Time, FAN, Mirror, Login Management, SSH, and Diagnose (highlighted). The main content area has two tabs: 'PING Diagnose' and 'Tracert Diagnose'. The 'Tracert Diagnose' tab is active and contains the following elements:

- Trace Route Diagnosis**: A section header.
- Destination IP Address Or Host Name**: A text input field.
- IP type**: A dropdown menu currently showing 'IPv4'.
- Submit** and **Reset**: Two buttons located below the IP type dropdown.
- Tracert Test Result**: A section header.
- Refresh**: A button located below the 'Tracert Test Result' header.

Figure 6-12-2:Tracert Diagnose

Thank You !