



# **AP214H GPON ONT**

**User Manual**

**Revision C**

## ACT 214H GPON HGU ONT

### User Manual

ACT Document Number: ACT 214H GPON HGU ONT

User Manual Revision C

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This document is produced to assist professional and properly trained personnel with installation and maintenance issues for the product. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.

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#### Revision History

Revision	Date	Reason for Change
A	12/17/2018	Initial release
B	01/07/2019	Updated pictures
C	04/09/2019	Minor updates

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## Chapter 1 Product Introduction

### 1.1 Product Description

AP214H GPON ONT is designed as HGU (Home Gateway Unit) in different FTTH solutions. The carrier-class FTTH application provides data service access. It is based on mature and stable, cost-effective XPON technology. XPON can switch automatically with EPON and GPON mode when it accesses to the EPON OLT or GPON OLT. It adopts high reliability, easy management, configuration flexibility and good quality of service (QoS) guarantees to meet the technical performance of the module of Telecom EPON CTC3, and GPON Standard of ITU-TG.984.



Figure 1-1: AP214H GPON ONT

### 1.2 Special Features

- Support EPON and GPON Mode
- Support ONU auto-discovery/Link detection/remote upgrade of software
- WAN connections support Route and Bridge mode
- Route mode supports PPPoE/DHCP/ static IP
- Support WIFI Interface and multiple SSID
- Support QoS and DBA
- Support port vlan configuration
- Support Firewall function and IGMP snooping multicast feature
- Support LAN IP and DHCP Server configuration;
- Support Port Forwarding and Loop-Detect
- Support TR069 remote configuration and maintenance
- Support Pots interface for VoIP Service
- Support CATV interface for Video Service
- Specialized design for system breakdown prevention to maintain stable system

## 1.3 Technical Parameters

Item	Description
PON Interface	1 G/EPON port (EPON PX20+ and GPON Class B+) Receiving sensitivity: $\leq -27$ dBm Transmitting optical power: 0 dBm to +4 dBm Transmission distance: 20 km
Wavelength	TX: 1310 nm, RX: 1490 nm SC/UPC Connector
Optical Interface	(SC/APC Connector for CATV) 1 FXS, RJ11 connectors Support: G.711/G.723/G.726/G.729 codec Support: T.30/T.38/G.711 Fax mode, DTMF Relay
POTS interface	Line testing according to GR-909
LAN Interface	LAN port for GE and FE automatic adaptive mode. Full/Half, RJ45 connector
CATV Interface	RF, optical power: +2 to -18dBm Optical reflection loss: $\geq 45$ dB Optical receiving wavelength: $1550 \pm 10$ nm RF frequency range: 47 to 1000MHz, RF output impedance: $75\Omega$ RF output level: 78dB $\mu$ V AGC range: 0 to -15dBm MER: $\geq 32$ dB@-15dBm
Wireless	Compliant with IEEE802.11b/g/n, Operating frequency: 2.400-2.4835GHz Support MIMO, Rate up to 300Mbps, 2T2R, 2 external antenna 5dBi, Support: multiple SSID Channel: Auto Modulation type: DSSS, CCK and OFDM Encoding scheme: BPSK, QPSK, 16QAM and 64QAM
Push-Button	3, For Function of Reset, WLAN, WPS Temperature: 0 °C to +50 °C
Operating Condition	Humidity: 10 % to 90 %(non-condensing) Temperature: -30 °C to +60 °C
Storing Condition	Humidity: 10 % to 90 %(non-condensing)
Power Supply	DC 12V/1A
Power Consumption	$\leq 6$ W
Dimension	155mm×92mm×34mm(L×W×H)
Net Weight	$\leq 0.24$ Kg

Table 1: Technical parameters

## 1.4 Application Chart

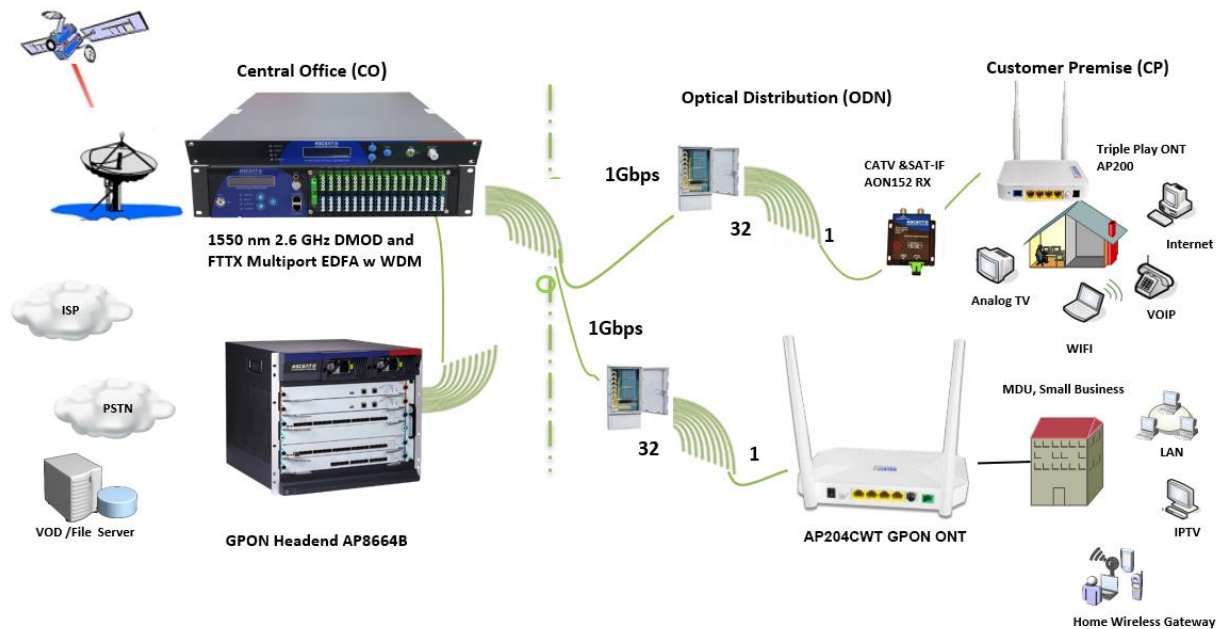


Figure 1-2: Application chart

## 1.5 Panel Description

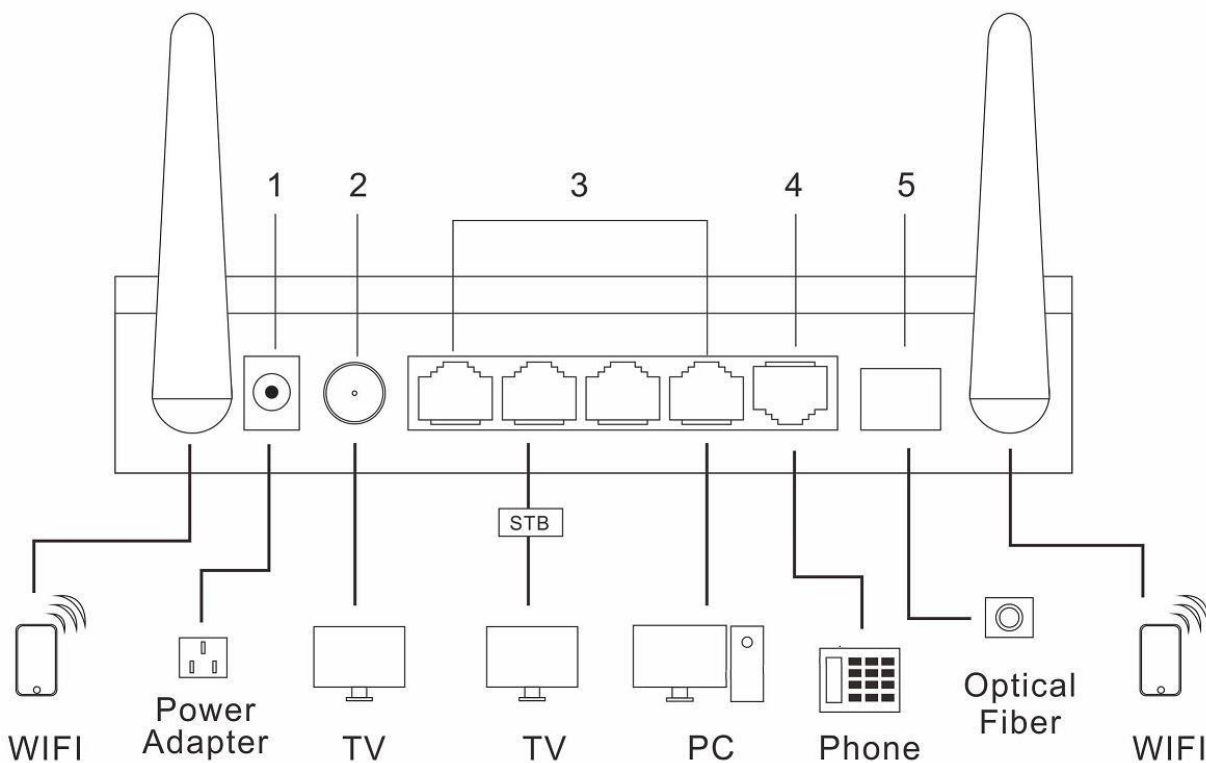


Figure 1-3: Rear View for multiple port

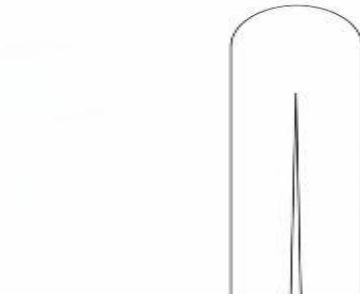


Figure 1-4: Push button Panel



Figure 1-5: LED Panel

LED	Status	Description
POWER	On	The device is powered up.
	Off	The device is powered down.
	On	The device has registered to the PON system.
PON	Blink	The device is registering the PON system.
	Off	The device registration is incorrect.
LOS	Blink	The device does not receive optical signals.
	Off	The device has received optical signal.
SYS	On	The device system runs normally.
	Off	The device system runs abnormally.
	On	The WIFI interface is up.
WIFI	Blink	The WIFI interface is sending or/and receiving data (ACT).
	Off	The WIFI interface is down.
WPS	Blink	The WIFI interface is securely establishing a connection.
	Off	The WIFI interface does not establish a secure connection.
FXS	On	Phone has registered to the SIP Server.
	Blink	Phone has registered and data transmission (ACT).
	Off	Phone registration is incorrect.
	On	Ethernet connected properly (LINK).
LAN1 to LAN4	Blink	Ethernet is sending or/and receiving data (ACT).
	Off	Ethernet connection exception or not connected.
Worn (CATV)	On	Input optical power is higher than 3dbm or lower than -13dbm
	Off	Input optical power is between -13dbm and 3dbm
Normal (CATV)	On	Input optical power is between -13dbm and 3dbm
	Off	Input optical power is higher than 3dbm or lower than -13dbm

Table 2: Panel Lights Description

## Chapter 2 Quick Installation

### 2.1 Standard Packing Contents

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

Contents	Description
ONU	1 pcs
Power Adapter	1 pcs
User Manual	1 pcs ( Optional )

Table 3: Packing Contents



Figure 2-1: Actual package content

### 2.2 Quick Installation

- Connecting the optical fiber cable to the unit.
- Remove the protective cap of the optical fiber.
- Clean the end of the optical fiber with an optical fiber end cleaner.
- Remove the protective cap of the ONU optical interface (PON interface). Connect the fiber to the PON port on the unit.

**Note:** When measuring the optical power before connecting to the ONU, it is recommended to use a PON Inline Power Meter. The receiver optical power should be between -7dbm and -28 dbm by using 1490nm.

While connecting, please note:



- Keep the optical connector and the optical fiber clean.
- Make sure there are no tight bends in the fiber and that the bending diameter is greater than 6cm. Otherwise, the optical signal loss may be increased, to the extent that signal may be unavailable.
- Cover all optic ports and connectors with protective cap to guard against dust and moisture when the fiber is not used.
- Apply power to the unit. If the product has the power button, please push the power button before used.
- After the ONU is power ON, Indicators should light up as for normal operation. Check whether the PON interface status LED (PON) is on continuously. If it is, the connection is normal; otherwise there is either problem of the physical connection or the optical level at either end. This may be caused by either too much or too little attenuation over the optical fiber. Please refer to the Panel Lights Description for normal LED activity.
- Check all signal levels and services on all the ONU communication ports.

## Unit Installation Adjustment

Installing the ONU on a horizontal surface (Bench top)

Put the ONU on a clean, flat, sturdy bench top. You must keep the clearance for all sides of the unit to more than 10cm for heat dissipation.

## Chapter 3 Configuration

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

### 3.1 Login

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

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

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

*The Administration account is able to access and modify all settings of ONU. It also can modify user account's username and password.*

*The normal account can only be used to view configurations, status and configure few parameters.*



Administrator

UserName

PassWord

Language English ▾

Login Reset

Figure 3-1: Login

## 3.2 Status

This part shows the main information of device and the active status about major services.

### 3.2.1 Device Information

This page shows the basic information about device, such as Device Type, PON MODE, Device Model, PON MAC /SN, Software Version, Register State.

Status						<a href="#">Exit</a>	
	Status	Network	Security	Application	Admin	Diagnosis	Help
	Device Info	Network Info	User Info	Remote Admin Status			
Device Basic Information							Device Model
Device Type		1G3F+WIFI+CATV					
Device Access Type:		GPON HGU ONU					
Device Model:		AP204C-GF-TV-N-S-1					
Device MAC:		db:29:16:45:0d:7a					
PON SN:		ACTL16450d7a					
Hardware Version:		V1.0					
Software Version:		V6.001.R.P					
PON Register State:		Unregistered					
Uptime:		0 Days 0 Hours 8 Minutes 48 Seconds					

Figure 3-2: Device Information

## 3.2.2 Network Info

### 3.2.2.1 IPv4 WAN Connection Information

This page shows IPv4 WAN connection information you have configured.

Status

Status

Network

Security

Application

Admin

Diagnosis

Help

Device Info

Network Info

User Info

VOIP Status

Remote Admin Status

IPv4 Connection Status

IPv4 Connection Status

PON Status

WAN Name	Status	Connection Mode	Enable	VLAN	IP Address
1_TR069_R_VID_46	Connecting	DHCP	Enable	46	
2_INTERNET_R_VID_0	Connected	DHCP	Enable	0	172.19.0.101/255.255.0.0

WAN Name	WAN Mac	Gateway	DNS
1_TR069_R_VID_46	a8:bf:3c:00:e7:6a		
2_INTERNET_R_VID_0	a8:bf:3c:00:e7:69	172.19.0.1	172.19.0.1, 202.96.128.166

Figure 3-3: IPv4 WAN Information

### 3.2.2.2 IPv6 WAN Connection Information

This page shows IPv6 WAN connection information you have configured.

Figure 3-4: IPv6 WAN information

### 3.2.2.3 PON Information

This page shows the PON information, including Optical module information, Link Status, Performance statistics.

Figure 3-5: PON Status

## 3.2.3 User Information

### 3.2.3.1 LAN Interface Information

This page shows the Ethernet port information, including LAN Link Information, Transceiver statistics.

The screenshot shows the 'Status' menu with the 'Network' tab selected. Under 'Network', 'User Info' is chosen, displaying 'Ethernet Interface' information. The left sidebar lists 'Ethernet Interface', 'WLAN Information', and 'DHCP Server Pool'. The main content area shows a table for Ethernet interface details and a table for LAN interface statistics.

IP Address	192.168.1.1
IPv6 Global Address	fe80::1
MAC Address	a8-bf-3c-00-e7-63

LAN Interface	Link State	Mode	Rate	Rx/Tx Packets	Rx/Tx Bytes
LAN1	Disconnected	Auto	Auto	756/872	261609/143690
LAN2	Disconnected	Auto	Auto	0/719	0/60716
LAN3	Connected	Full Duplex	100M	1056/1203	471683/236775
LAN4	Disconnected	Auto	Auto	31/740	12703/60717

Figure 3-6: LAN Interface Information

### 3.2.3.2 WLAN Interface Information

This page shows the WLAN Interface information, including basic WIFI information and WIFI Client information.

The screenshot shows the 'Status' menu with the 'Network' tab selected. Under 'Network', 'User Info' is chosen, displaying 'WLAN Information'. The left sidebar lists 'Ethernet Interface', 'WLAN Information', and 'DHCP Server Pool'. The main content area shows a table for WLAN interface details and a table for WLAN client statistics.

WIFI State	Enable
Channel	6
RX Packets	1283
TX Packets	644
RX Bytes	214873
TX Bytes	83123
RX Error Packets	0
TX Error Packets	0
SSID1 Name	WIFI-e76a
Encryption Status	WPA/WPA2-PSK

Index	Mac	Signal(dBm)	RX/TX Rate	Rx/Tx Packets	Rx/Tx Bytes
1	80:2b:f9:c5:74:21	-77	65Mbps/72.2Mbps	121/34	23038/4981

Figure 3-7: WLAN Interface Information

## 3.2.3.3 DHCP Pool Information

This page shows the DHCP Pool Information, including the dhcp client information.

Status

Ethernet Interface  
WLAN Information  
DHCP Server Pool

Status

Network

Security

Application

Admin

Diagnosis

Help

Device Info

Network Info

User Info

VOIP Status

Remote Admin Status

Client Name	IPv4 Address	IPv6 Address	MAC Address	Remaining Lease
unknown_6c-2b-59-33-d6-e4	192.168.1.72		6c:2b:59:33:d6:e4	86099

Figure 3-8: DHCP Pool Information

## 3.2.4 VoIP Status

### 3.2.4.1 Phone Register Status

This page shows the register status of POTS1. Attention, you need to configure the part of VoIP Configuration. Otherwise, it couldn't be registered.

Status						<a href="#">Exit</a>			
	Status	Network	Security	Application	Admin	Diagnosis	Help		
	Device Info	Network Info	User Info	VOIP Status	Remote Admin Status				
Register Status									
Phone Number	<table><tr><td>POTS1</td><td>Unregistered</td></tr></table>						POTS1	Unregistered	
POTS1	Unregistered								

Figure 3-9: Phone Register Status

## 3.2.4.2 Phone Number Information

This page shows the Phone number you had configured, if you haven't configured the phone number, it would be blank in this part.

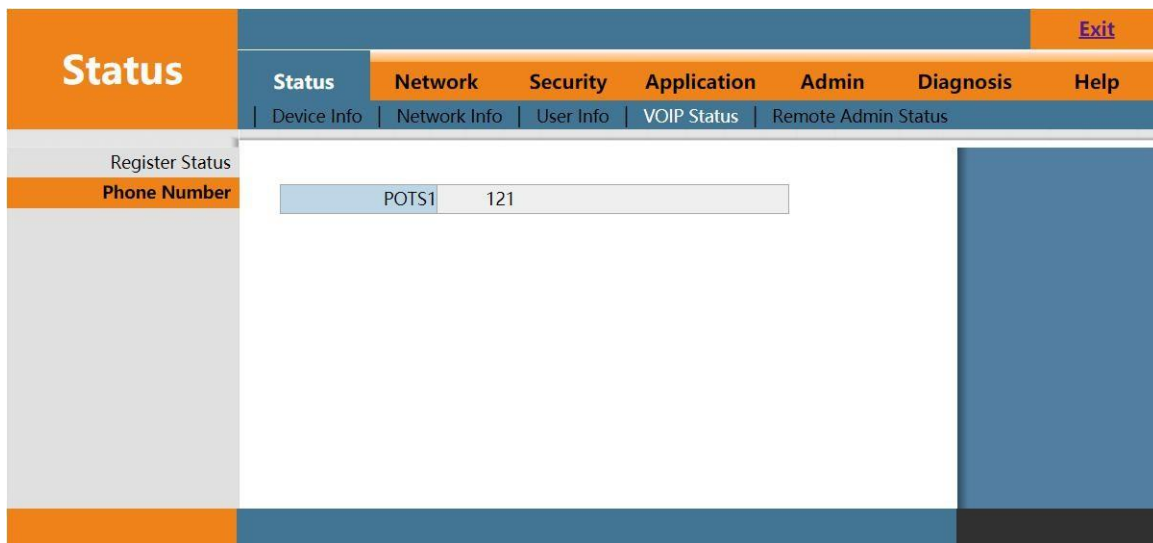


Figure 3-10: Phone Number Information

## 3.2.5 Remote Admin Status

### 3.2.5.1 TR069 Connection Status

This page shows the TR069 Inform Status and Remote Connection status.

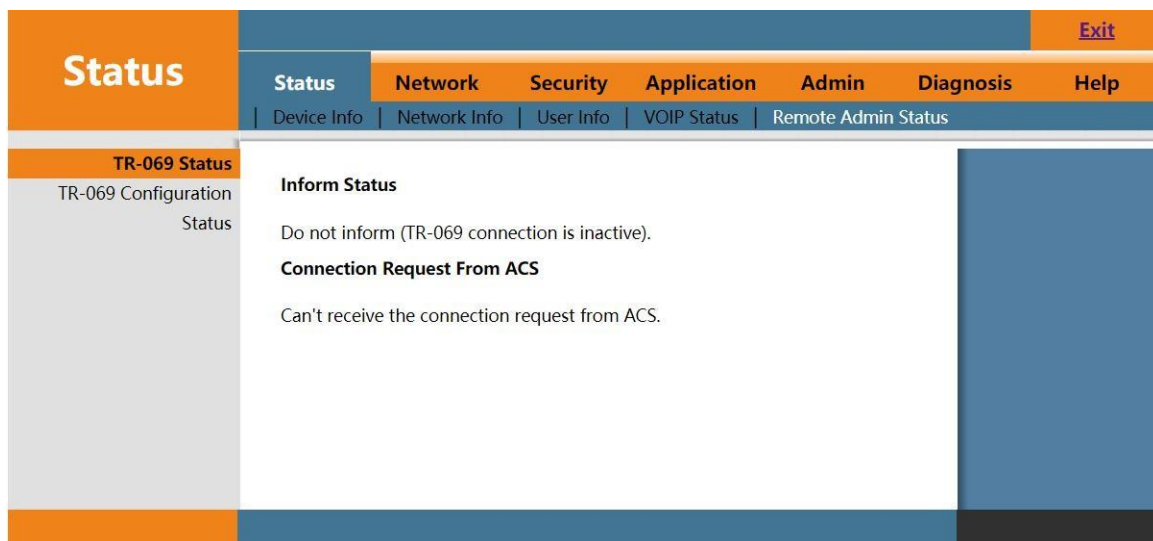


Figure 3-11: TR069 Connection Status



## 3.2.5.2 TR069 Configuration Status

This page shows the TR069 Configuration Status.

Status	Exit						
	Status	Network	Security	Application	Admin	Diagnosis	Help
	Device Info	Network Info	User Info	VOIP Status	Remote Admin Status		
TR-069 Status							
TR-069 Configuration Status	<b>Configuration by ACS Status</b> Can't receive configuration from ACS						

Figure 3-12: TR069 Configuration Status

## 3.3 Network

### 3.3.1 WAN Configuration

This page allows the user to configure WAN connections. You can add/delete/modify WAN connections here. The device default settings about TR069 WAN and Route\_Internet WAN Connections .

Network	Status	Network	Security	Application	Admin	Diagnosis	Help
	WAN	Port Binding	LAN	QoS	WLAN	Remote Admin	Time Admin
Internet Connection	<b>WAN Setting</b> Connection Name: 1_TR069_R_VID_46 Delete: <input type="checkbox"/> Enable: <input checked="" type="checkbox"/> Mode: Route NAT: <input type="checkbox"/> Service Type: TR069 Enable VLAN: <input checked="" type="checkbox"/> VLAN ID: 46 Multicast VLAN: -1 (Range: 1 to 4095, -1 means no use) 802.1p: 0 LAN Port Binding: <input type="checkbox"/> LAN1 <input type="checkbox"/> LAN2 <input type="checkbox"/> LAN3 <input type="checkbox"/> LAN4 SSID Port Binding: <input type="checkbox"/> SSID1 <input type="checkbox"/> SSID2 <input type="checkbox"/> SSID3 <input type="checkbox"/> SSID4  <b>IP Protocol</b> IP Protocol Mode: IPv4						

Figure 3-13: WAN Setting

Parameter		Description
Connection Name		The list of WAN connection name that would be created according to the detail WAN Configuration. If you want to create a new WAN connection, please select "Create a new WAN connection" and input other Parameter at the same time and then click "OK" button. If you want to edit WAN connection, please select the wan connect name you want to edit and change some Parameter and then click "OK" button.
Delete		If you want to delete one connection, please select the wan connection you want to delete and then check "Delete" option.
Enable		Enable or Disable the WAN Connection you have choosed.
Mode		Route/Bridge. The device works on route mode with this WAN connection.
NAT		If you select Route WAN Connection, the NAT option is default enable.If you select Bridge WAN connection, the NAT option is default disable. Checked indicates the NAT Function is enabled.
Service Type		Service mode indicates what the wan connection is used for. There are INTERNET, TR069, Other and VoIP for choosing.
VLAN	Enable VLAN	Checked indicates the packets are transmitted by the PON port take VLAN tag. Unchecked indicates the packets are transmitted by the PON port don't take VLAN tag.
	VLAN ID	Input the VLAN ID you want to set. Range is 0 to 4094. Input 0 means don't use any VLAN.
Multicast VLAN		Input the VLAN ID you want to set, according to the IPTV Configuration. This option default value is -1, means no use.
802.1P		Select VLAN priority you want to set. Range is 0 to 7.
LAN Port Binding		Checked the LAN Port indicates that lan interface would act with this wan connection Route or Bridge.
SSID Port Binding		Checked the SSID Port indicates that lan interface would act with this wan connection route or bridge.
IP Protocol Mode		IPv4, IPv6, IPv4/IPv6
MTU		Max transfer unit. Default Value (in Byte): 1500(static/DHCP) or 1492(PPPoE).
WAN IP Mode		IPoE/PPPoE/Static
PPPoE	Username	PPPOE account.
	Password	PPPOE password.
	Keep Alive Time	The PPP Link maintenance time. This parameter value default is 60S.
	PPPoE Mode	Continous or Connect on Demand
	Service Name	This option is not required generally, but if the PPPoE Server checks the option, you should input according to ISP.

## 3.3.2 Port Binding

### 3.3.2.1 Binding Mode

This page supports the LAN or SSID binding mode based on VLAN. Users could deploy different VLAN configuration according to actual demands.

Network		Exit
Status	Network	Security
Application	Admin	Diagnosis
Help		
WAN	Port Binding	LAN
QoS	WLAN	Remote Admin
Time Admin	Route Admin	
<b>Binding Mode</b> Port Isolation <div> LAN1 Binding Mode: Port-based Bind ▼ </div> <div> LAN2 Binding Mode: Port-based Bind ▼ </div> <div> LAN3 Binding Mode: Port-based Bind ▼ </div> <div> LAN4 Binding Mode: Port-based Bind ▼ </div> <div> SSID1 Binding Mode: Port-based Bind ▼ </div>		

Figure 3-14: Port Binding Mode

### 3.3.2.2 Port Isolation

This page allows the user to deploy whether ports need communicate with each other. If the Port Isolation function is enabled, all the ports can't access each other.

Network		Exit
Status	Network	Security
Application	Admin	Diagnosis
Help		
WAN	Port Binding	LAN
QoS	WLAN	Remote Admin
Time Admin	Route Admin	
<b>Binding Mode</b> <b>Port Isolation</b> <div> Port Isolation <div> <input type="radio"/> Enable <input checked="" type="radio"/> Disable </div> </div>		

Figure 3-15: Port Isolation

## 3.3.3 LAN Configuration

### 3.3.3.1 LAN IPv4 Address Settings

This page supports the management of the ONU's IPv4 address, DHCP Server management, including address distribution and relevant parameters distribution, such as lease time, address pool range, dns distribution.

The screenshot shows the 'Network' configuration page with the 'IPv4 Setting' tab selected. The interface includes a top navigation bar with 'Exit' and a sub-menu with 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Under 'Network', there are links for 'WAN', 'Port Binding', 'LAN', 'QoS', 'WLAN', 'Remote Admin', 'Time Admin', and 'Route Admin'. The 'IPv4 Setting' section contains the following fields:

- IP Address: 192.168.1.1
- Subnet Mask: 255.255.255.0
- Enable DHCP: ☒
- Lease Time: 1 Day
- IP Pool: 192.168.1.2 ~ 192.168.1.100

Figure 3-16: LAN IPv4 Address Settings

The screenshot shows the 'DNS Settings' page. It contains the following fields:

- Enable DNS Relay: ☒
- Primary DNS: 192.168.1.1
- Secondary DNS: 8.8.8.8

Figure 3-17: DNS Settings

Parameter	Description
IP Address	LAN IP address.
Subnet Mask	LAN IP Subnet Mask.
Enable DHCP	Enable ONU DHCP Server.
Lease Time	Lease time of the ONU DHCP Server
IP Pool	The address range of DHCP Pool
Enable DNS Relay	Whether to enable DNS Realy
Primary DNS	The Primary DNS of DHCP Server
Secondary DNS	The Secondary DNS of DHCP Server

## 3.3.3.2 LAN IPv6 Settings

This page supports the management of the LAN IPv6 address, including LAN IPv6 Address Settings, LAN IPv6 DHCP configuration, RA Configuration

**Network** Exit

**Status** **Network** **Security** **Application** **Admin** **Diagnosis** **Help**

WAN | Port Binding | **LAN** | QoS | WLAN | Remote Admin | Time Admin | Route Admin

IPv4 Setting  
**IPv6 Setting**

IPv6 Link Local Address:

Prefix Mode:

IPv6 Prefix:

Prefix Preferred Lifetime:  s

Prefix Valid Lifetime:  s

Enable RA: ☒

ManagementFlag: ☐

OtherConfigFlag: ☒

Max Interval Sent Time:  s

Min Interval Sent Time:  s

Enable DHCPv6 Server: ☒

Star IPv6 Address:  (IP Addr last 64 bits)

End IPv6 Address:  (IP Addr last 64 bits)

DNSv6 Type:

DNSv6 Mode:

WAN Interface:

Figure 3-18: LAN IPv6 Address Settings

## 3.3.4 .1 QoS Configuration

### 3.3.4.1 QoS Settings

This page allows the user to configure QoS (quality of service) parameters, including enable option, uplink Bandwidth, Rule template and Scheduling Police.

**QoS Settings**  
Rules Settings

Enable QoS configuration: ☐

Uplink Bandwidth:  (0-1024000)Kbps

Scheduling Polic:

Business Classification

Rule template:

Queue	Priority	Enable
Q1	Highest	<input checked="" type="checkbox"/>
Q2	High	<input checked="" type="checkbox"/>
Q3	Middle	<input checked="" type="checkbox"/>
Q4	Low	<input checked="" type="checkbox"/>

Business name	Queue
TR069	1
VOIP	2
IPTV	3
OTHER	4

Figure 3-19: QoS Settings

Parameter	Description
Enable QoS Configuration	Enable or Disable QoS function
Uplink Bandwidth	The Max rate of uplink transmission
Scheduling Policy	SP/WRR/CAR
Rule Template	The various template about different services

### 3.3.4.2 Rule Settings

This page allows the user to deploy detail Queues through flow classification, such as LAN Port, Ethernet Type , Protocol, Vid, Source Mac, Destination Mac, Source IP, Destination IP, Source Port, Destination Port and etc...

Rules Settings

**Classification rules**

LAN Port:

Ethernet Type:

Protocol:

Tos/Dscp:

Tos/Dscp:

Tci:

Vid:

Pbit:

Source MAC:

Destination MAC:

Source Start IP:

Source End IP:

Destination Start IP:

Destination End IP:

Source Start Port:

Source End Port:

Destination Start Port:

Figure 3-20: Rules Settings

### 3.3.5 WLAN Configuration

This page allows the user to deploy WLAN (WiFi) Configuration, including WLAN Enable option, SSID Name, Encryption options.

Parameter	Description
Enable	Checked indicates that WLAN function is enabled. Unchecked indicates that WLAN function is disabled.
Mode Selection	The Standard of WLAN Mode: B, G, N, B/G, B/G/N
Band Width	20MHz, 20/40MHz
SSID List	SSID1, SSID2, SSID3, SSID4. Support multiple SSID. SSID1 enable, SSID2/SSID3/SSID4 disable
SSID Name	WiFi name
SSID Broadcast	Enable indicates that WLAN client could find the SSID Disable indicates that WLAN client couldn't find the SSID

Encryption	Open, WEP, WPA/WPA2 Personal, WPA/WPA2 Enterprise
WPA Password	The password of SSID
WPS Enable	Enable or disable WPS function

**Network**

Status

Network

Security

Application

Admin

Diagnosis

Help

WAN

Port Binding

LAN

QoS

WLAN

Remote Admin

Time Admin

Route Admin

WLAN Configuration

Basic Configuration

Enable:

☒

Mode Selection:

B/G/N Mixed Mode ▾

Channel Selection:

Auto ▾

Band Width:

20MHZ ▾

Advanced Config

Rate:

Auto ▾

TX Power:

100% ▾

DTIM Interval Settings:

1

Beacon Interval:

100 ▾

SSID Settings

SSID List:

SSID1 ▾

SSID Name:

WIFI-

e76a

SSID Enable:

Enable ▾

SSID Broadcast:

Enable ▾

Encryption:

WPA/WPA2 Personal ▾

WPA Version

WPA1/WPA2 ▾

WPA Encryption:

TKIP/AES ▾

WPA Password:

12345678

WPS Enable

Enable ▾

WPS Mode:

PBC ▾

WPS Connection

Figure 3-21: WLAN Basic Configuration and Advanced Configuration



## 3.3.6 Remote Admin

This page allows the user to deploy TR069 Remote Management Configuration, including Server Address, Server User Name, Server Password, Client Username, Client Password and Cycle Reporting Interval, enable or disable Cycle Reporting.

The screenshot shows the 'TR069 Admin' configuration page. The interface has a top navigation bar with 'Network' selected, and a sub-menu with 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. The 'Network' sub-menu is further divided into 'WAN', 'Port Binding', 'LAN', 'QoS', 'WLAN', 'Remote Admin', 'Time Admin', and 'Route Admin'. The 'Remote Admin' sub-menu is selected. The main content area contains the following fields:

- Enable Cycle Reporting: ☒
- Cycle Reporting Interval:  Second
- Server Address:
- Server User Name:
- Server Password:
- Client User Name:
- Client Password:

At the bottom right, there are 'OK' and 'Cancel' buttons.

Figure 3-22: TR069 Configuration

## 3.3.7 Time Configuration

This page allows the user to configure NTP Client function. For this, the user can get current time from the NTP Server.

The screenshot shows the 'Time Admin' configuration page. The left sidebar has 'Time Management' selected. The main area is titled 'Time Server Settings' and contains the following fields:

- Enable NTP: ☒
- Current Time:
- Time Server 1: Custom
- Time Server 2:
- Time server 3:
- Time server 4:
- Time server 5:
- Time Channel:
- Sync Cycle:  (0-259200)Seconds
- Time Zone:

At the bottom right, there are 'OK' and 'Cancel' buttons.

Figure 3-22: Time Admin

### 3.3.8 Route Configuration

This page allows the user to configure statics route function. For this, the user could deploy more options about network.

The screenshot shows the 'Static Route Settings' configuration page. The left sidebar has 'Static Route Settings' selected. The main area is titled 'Static Route Settings' and contains the following fields:

- IP Protocol:
- Destination IP Address:
- Destination Subnet Mask:
- IPV4 Interface:
- Gateway Address:

Below these fields is an 'Add' button. At the bottom, there is a table with the following headers: Destination Address, Destination Mask, Gateway, Interface, and Delete.

At the bottom right, there are 'OK' and 'Cancel' buttons.

Figure 3-23: Static Route Configuration

## 3.4 Security

### 3.4.1 Firewall

#### 3.4.1.1 Security Level

This page allows the user to set the level of the firewall. Low, Medium, High, three options are Available.

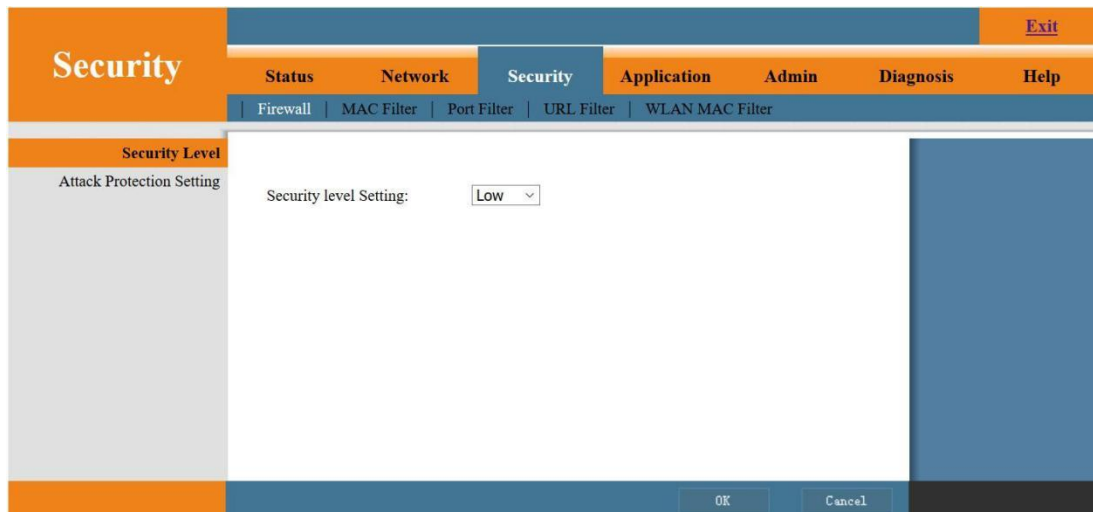


Figure 3-24: Security Level

#### 3.4.1.2 Attack Protection Setting

This page allows the user to set the protection against DOS attacks.

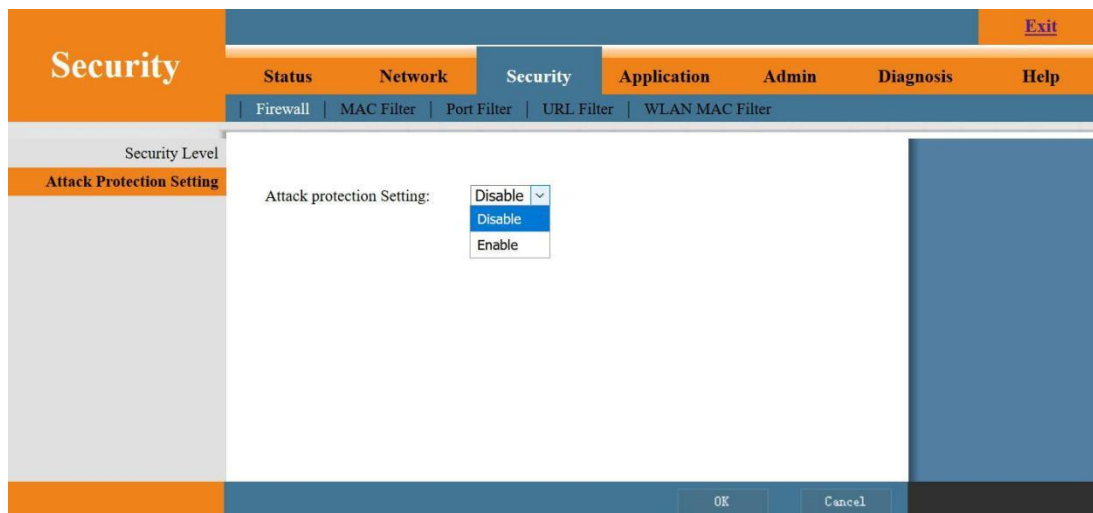


Figure 3-25: Attack Protection Configuration

## 3.4.2 MAC Filter

This page allows the user to set the relevant parameters of the MAC filter function, including black-list and white-list. The black-list indicates that forbidden access, white-list indicates that allow access.

The screenshot shows the 'Security' configuration page for the AP214H GPON HGU ONT. The page has a top navigation bar with 'Exit' and a main menu with 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Under 'Security', there are sub-menus: 'Firewall', 'MAC Filter', 'Port Filter', 'URL Filter', and 'WLAN MAC Filter'. The 'MAC Filter' sub-menu is selected, and the 'MAC Filtering' section is active. The 'MAC Filter Settings' section includes:
 

- 'Enable MAC Filtering:' with an unchecked checkbox.
- 'MAC Address:' with an empty text input field.
- 'Filtering rules:' with a dropdown menu set to 'Black-list' and an 'Add' button below it.
- 'MAC Filters Default Rule:' with a dropdown menu set to 'Allow Acc'.

 Below these settings is a table with three columns: 'Filter Mode', 'Mac Address', and 'Delete'. At the bottom right of the page are 'OK' and 'Cancel' buttons.

Figure 3-26: MAC Filter

## 3.4.3 Port Filter

This page allows the user to set the port filtering function. The rules are based on Source IP range and Destination IP range

**Security**

Status Network **Security** Application Admin Diagnosis Help

Firewall MAC Filter Port Filter URL Filter WLAN MAC Filter

**Port filtering**

**Port Filter Settings**

Enable Port Filter: ☐

Port Filter Mode: Blacklist

Source IP Start:

Source IP End:

Destination IP Start:

Destination IP End:

Protocol: ALL

Filter mode	Source IP Start ~ Source IP End	Source Port Start ~ Source Port End	Destination IP Start ~ Destination IP End	Destination Port Start ~ Destination Port End	Protocol	Delete

OK Cancel

Figure 3-27: Port Filter

### 3.4.4 URL Filter

This page allows the user to set the URL filter function(Attention, it supports http website not https website).

**Security**

Status Network **Security** Application Admin Diagnosis Help

Firewall MAC Filter Port Filter URL Filter WLAN MAC Filter

**URL Filter Settings**

**URL Filter Settings**

Enable URL Filter: ☒

URL Address:

Filter Rules: Blacklist

Add

URL Filter Default Rules: Allow Access

Filter Mode	URL Address	Delete

OK Cancel

Figure 3-28: URL Filter

## 3.4.5 WLAN MAC Filter

This page allows the user to set the WLAN MAC filter function. If the wifi client mac address is in the black-list, it couldn't get access on the internet.

The screenshot shows the 'Security' configuration page with the 'WLAN MAC Filter' sub-tab selected. The page has a top navigation bar with 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this is a sub-navigation bar with 'Firewall', 'MAC Filter', 'Port Filter', 'URL Filter', and 'WLAN MAC Filter'. The main content area is titled 'WLAN MAC Filtering' and contains the following settings:

- WLAN MAC Filter Settings**
- Enable MAC Filtering: ☐
- MAC Address:
- Filtering rules: Black-list (dropdown menu)
- 
- WLAN MAC Filters Default: Allow Access (dropdown menu)
- Rule:
- Below the rule input is a table with three columns: Filter Mode, Mac Address, and Delete.

At the bottom right of the main content area are 'OK' and 'Cancel' buttons.

Figure 3-29: WLAN MAC Filter

## 3.5 Application

### 3.5.1 DDNS Configuration

This page allows the user to set DDNS function.

The screenshot shows the 'Application' configuration page with the 'DDNS Setting' sub-tab selected. The page has a top navigation bar with 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this is a sub-navigation bar with 'DDNS', 'Advanced NAT', 'VOIP', 'IGMP', 'UPNP', and 'VPN Service'. The main content area is titled 'DDNS Setting' and contains the following settings:

- WAN Interface: 2 INTERNET\_R\_VID (dropdown menu)
- Enable: ☐
- D-DNS Provider:  (dropdown menu)
- Domain Name:
- Username:
- Password:

At the bottom right of the main content area are 'OK' and 'Cancel' buttons.

Figure 3-30: DDNS Configuration

## 3.5.2 Advanced NAT Configuration

This page allows the user to set Advanced NAT function, including ALG Configuration, DMZ Settings, Virtual Host Settings. (Attention , there are some different description about Virtual Host Settings, such as Port Forwarding , Port Mapping)

### 3.5.2.1 ALG Configuration

The screenshot shows the 'Application' configuration page. The top navigation bar includes 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. The 'Application' sub-menu is expanded, showing 'DDNS', 'Advanced NAT', 'VOIP', 'IGMP', 'UPNP', and 'VPN Service'. The 'ALG Configuration' sub-menu is selected. The main content area displays the following settings:

- ☒ Enable FTP
- ☒ Enable PPTP
- ☒ Enable SIP
- ☒ Enable H323
- ☒ Enable RTSP
- ☒ Enable L2TP
- ☒ Enable IPSEC

A 'Save' button is located at the bottom of the configuration area.

Figure 3-31: ALG Configuration

### 3.5.2.2 DMZ Configuration

The screenshot shows the 'DMZ Settings' configuration page. The top navigation bar is the same as in Figure 3-31. The 'DMZ Settings' sub-menu is selected. The main content area displays the following settings:

- WAN Connection List:
- Enable DMZ: ☐
- LAN IP Address:

A 'Save' button is located at the bottom of the configuration area.

Figure 3-32: DMZ Configuration

## 3.5.2.3 Virtual Host Settings Configuration

The screenshot displays the 'Virtual Host Settings Configuration' page. The interface includes a top navigation bar with tabs: Status, Network, Security, Application (selected), Admin, Diagnosis, and Help. Below these are sub-tabs: DDNS, Advanced NAT, VOIP, IGMP, UPNP, and VPN Service. The left sidebar shows a tree structure with 'Application' expanded, containing 'ALG Configuration', 'DMZ Settings', and 'Port Mapping' (selected). The main configuration area contains the following fields:

- Service Name:
- Protocol Type:
- WAN Port Range:  ~
- WAN IP Range:  ~
- LAN Port Range:  ~
- LAN IP Address:
- Enable Port Mapping: ☐
- WAN Connection List:

An 'Add' button is located below the WAN Connection List field. At the bottom of the page, there is a table with the following headers:

WAN Port	WAN IP	LAN Port	LAN IP	Protocol	Status	Delete
----------	--------	----------	--------	----------	--------	--------

Figure 3-33:Virtual Host Settings Configuration

## 3.5.3 VOIP Configuration

This page allows the user set VOIP Configuration, including two parts, Basic and Advance configuration.



## 3.5.3.1 VOIP Basic Configuration

Application	Status	Network	Security	Application	Admin	Diagnosis	Help
	DDNS	Advanced NAT	VOIP	IGMP	UPNP	VPN Service	
<b>VoIP Basic</b>							
VoIP Advanced							
	Voice Mode:		SIP				
	Server Type:		IMS-SIP				
	Tone of Country:		India				
	Interface Binding:		N connection				
	SIP Local Port:						
	SIP Proxy:						
	SIP Proxy Address:						
	SIP Proxy Port:		5060				
	SIP Outbound Proxy:		<input checked="" type="checkbox"/>				
	SIP Outbound Proxy Address:		172.18.4.81				
	SIP Outbound Proxy Port:		5060				
	SIP Registrar:		<input checked="" type="checkbox"/>				
	SIP Registrar Address:		vskp.apsfilms.in				
	SIP Registrar Port:		5060				
	LCFO:		Close				
	Polarity Reversal:		Open				
	#Character Escape:		Open				
	Match Mode:		Maximum Match				
	Short Digit Timer:		5 (s)				
	Long Digit Timer:		20 (s)				
	Dail Tone Duration:		15 (s)				
	Call Waiting:		<input checked="" type="checkbox"/>				
	Call Forwarding:		<input checked="" type="checkbox"/>				
	Call Conference:		<input checked="" type="checkbox"/>				
	Min Flash Time:		150 (10-300ms)				
	Max Flash Time:		500 (200-1000ms)				
	Reg Expire:		3600 (s)				
	Register failed and retry interval:		60 (s)				
	Register Refresh Mode:		50%				
	Fax Mode:		Automatic				
	Enable HeartBeat:		<input type="checkbox"/>				
	HeartBeat Cycle:						
	Howler Tone Duration:		60 (s)				
	Busy Tone Duration:		40000 (ms)				
	No Answer Timer:		60000 (ms)				
	SIP DSCP:		24				

Blind Access Code:

Ask Access Code:

Enable Secondary Dialing:
☐

Outside Prefix:
 (s)

Enable Implicit Registration:
☐

**Dial plan**

(x, T)

SIP Accounts	1
SIP Accounts	<input type="text"/>
Authen User Name	<input type="text"/>
Password	<input type="text"/>
Conference Resource Access Code	<input type="text"/>
SIP Subscribe	<input type="checkbox"/>
Use Hot Line	<input type="checkbox"/>
Hot Line Mode	<input type="radio"/> Immediately <input type="radio"/> Delay
Hot Line Number	<input type="text"/>
Malicious-call Handle Mode	Softswitch Processing ▾
Malicious Call Tracking Activation Code	<input type="text"/>

OK

Cancel

Figure 3-34: VOIP Basic Configuration

### 3.5.3.2 VOIP Advanced Configuration

The screenshot displays the 'VOIP Advanced' configuration page. The interface includes a top navigation bar with tabs for 'Application', 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this, a sub-navigation bar shows 'DDNS', 'Advanced NAT', 'VOIP', 'IGMP', 'UPNP', and 'VPN Service'. The 'VOIP' tab is selected, and the 'VOIP Advanced' sub-tab is active. The configuration area contains the following settings:

Voice Mode:	SIP
Telephone Account	1
Enable Account	<input checked="" type="checkbox"/>
Echo Suppression	<input checked="" type="checkbox"/>
Send Gain	0 dB
Recv Gain	0 dB
Mute Compression	Close
PacketTime	20ms
Fax Mode	T30 Full-c
Priority 1 Codec	1
Priority 2 Codec	2
Priority 3 Codec	3
Priority 4 Codec	4
RTP DSCP:	46
RFC2198 Payload Value:	96 (96-127)
DTMF Transport Mode:	Inbound
DTMF RFC2833 Payload Type:	101 (97-101)

At the bottom of the page, there are 'OK' and 'Cancel' buttons.

Figure 3-35: VOIP Advanced Configuration

### 3.5.4 IGMP Configuration

This page allows the user to set IGMP SNOOPING, IGMP Proxy, MLD Configuration, MLD Proxy Configuration

The screenshot shows the 'Application' configuration page. The top navigation bar includes 'Status', 'Network', 'Security', 'Application' (selected), 'Admin', 'Diagnosis', and 'Help'. Below this is a sub-menu with 'DDNS', 'Advanced NAT', 'VOIP', 'IGMP' (selected), 'UPNP', and 'VPN Service'. The main content area is titled 'IGMP Setting'. It contains four settings: 'Enable Snooping' (checked), 'Enable PROXY' (checked), 'Enable MLDSNOOPING' (unchecked), and 'Enable MLDPROXY' (unchecked). On the right side, there is a blue box labeled 'Enable Proxy'. At the bottom, there are 'OK' and 'Cancel' buttons.

Figure 3-36: IGMP Configuration

### 3.5.5 UPNP Configuration

This page allows the user to set UPNP function. If enable UPNP, the device would open Port Mapping automatically according to what the client used.

The screenshot shows the 'UPNP Settings' page. The top navigation bar is the same as in Figure 3-36, but the 'UPNP' sub-menu item is selected. The main content area is titled 'UPNP Settings'. It contains one setting: 'Enable UPNP' (unchecked). On the right side, there is a blue box. At the bottom, there are 'OK' and 'Cancel' buttons.

Figure 3-37: UPNP Configuration

## 3.5.6 VPN Service

This page allows the user to set VPN Client configuration , including the parameters Protocol Type, Server address, Username and Password.

The screenshot shows the 'VPN Service' configuration page. The interface has a top navigation bar with 'Application' selected, and sub-tabs for 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this is a secondary bar with 'DDNS', 'Advanced NAT', 'VOIP', 'IGMP', 'UPNP', and 'VPN Service'. The main content area is titled 'VPN' and contains the following fields:

- Enable VPN: ☐
- Status: Disconnected
- Get IP: ☐
- Protocol Type: A dropdown menu with 'l2tp' selected and 'pptp' visible in the list.
- MTU:
- Server Address:
- User Name:
- Password:

At the bottom right of the form are 'OK' and 'Cancel' buttons.

Figure 3-38: VPN Service Setting

## 3.6 Admin

### 3.6.1 User Management

This page allows the user to change normal account password.

The screenshot shows the 'User Management' page. The interface has a top navigation bar with 'Admin' selected, and sub-tabs for 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this is a secondary bar with 'User', 'Device', 'Log', 'LOID', 'Language', 'CATV', 'Access Control', 'LoopBack', and 'Port Admin'. The main content area is titled 'User Management' and contains the following fields:

- Users Name:
- Enter New Password:
- Repeat New Password:

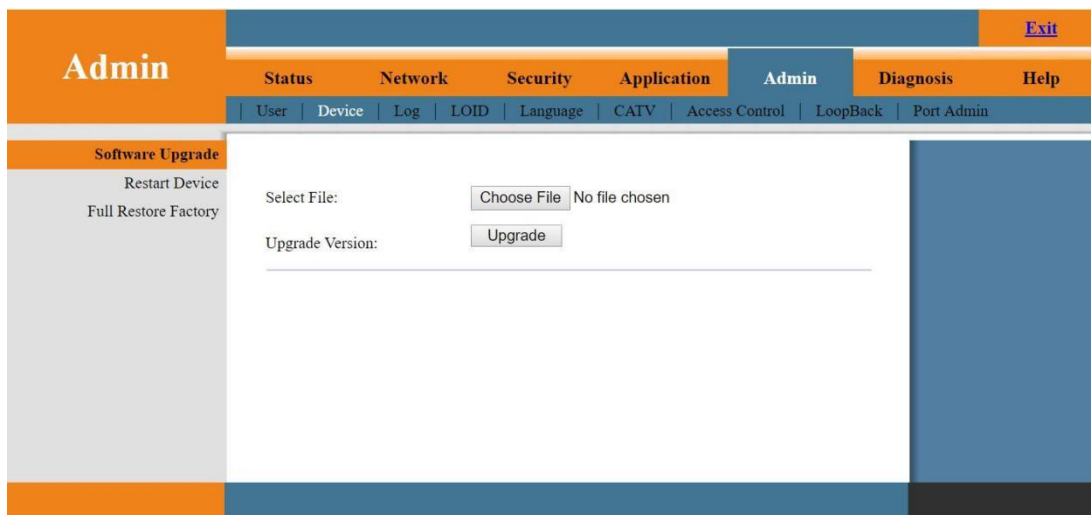
At the bottom right of the form are 'OK' and 'Cancel' buttons.

Figure 3-39: User management

## 3.6.2 Device Management

### 3.6.2.1 Software Upgrade

This page allows the user to update the software of the device. Click the “Choose File” button to select the software and then click the “Upgrade” button to update. When the device upgrade succeeded, it would reboot automatically. The whole process of upgrade will take 3 minutes.

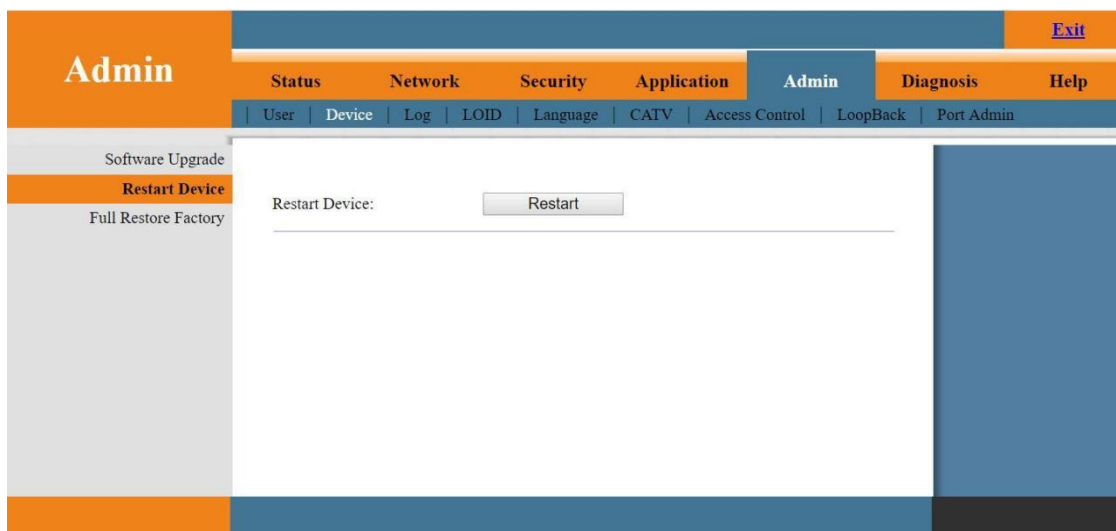


The screenshot shows the 'Admin' interface with a sidebar menu on the left containing 'Software Upgrade', 'Restart Device', and 'Full Restore Factory'. The main content area has a top navigation bar with 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this is a sub-navigation bar with 'User', 'Device', 'Log', 'LOID', 'Language', 'CATV', 'Access Control', 'LoopBack', and 'Port Admin'. The 'Software Upgrade' section is active, showing a 'Select File:' label, a 'Choose File' button, and the text 'No file chosen'. Below this is an 'Upgrade Version:' label and an 'Upgrade' button.

Figure 3-40: Software Upgrade

### 3.6.2.2 Reboot

This page allows the user to reboot the device. After reboot, the normal configuration wouldn't be changed. The whole process of reboot will take 1-2 minutes.



The screenshot shows the 'Admin' interface with a sidebar menu on the left containing 'Software Upgrade', 'Restart Device', and 'Full Restore Factory'. The main content area has a top navigation bar with 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this is a sub-navigation bar with 'User', 'Device', 'Log', 'LOID', 'Language', 'CATV', 'Access Control', 'LoopBack', and 'Port Admin'. The 'Restart Device' section is active, showing a 'Restart Device:' label and a 'Restart' button.

Figure 3-41: Restart Device

## 3.6.2.3 Restore Default

This page allows the user to restore the device. After restore the device, the whole configuration would be changed to default configuration. The whole process of restore factory will take 1-2 minutes.

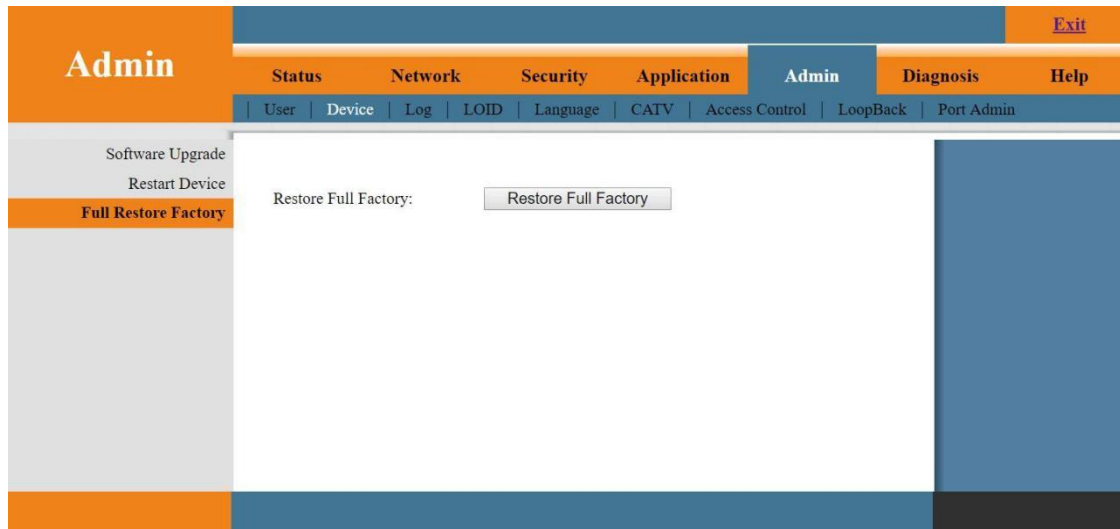


Figure 3-42: Restore Default

## 3.6.3 Log File Configuration

### 3.6.3.1 Log Level

This page allows the user to different level about Write Level and Display Level. There are many available options, such as Emergency, Alert, Critical, Error, Warning, Notice, Informational, Debug.

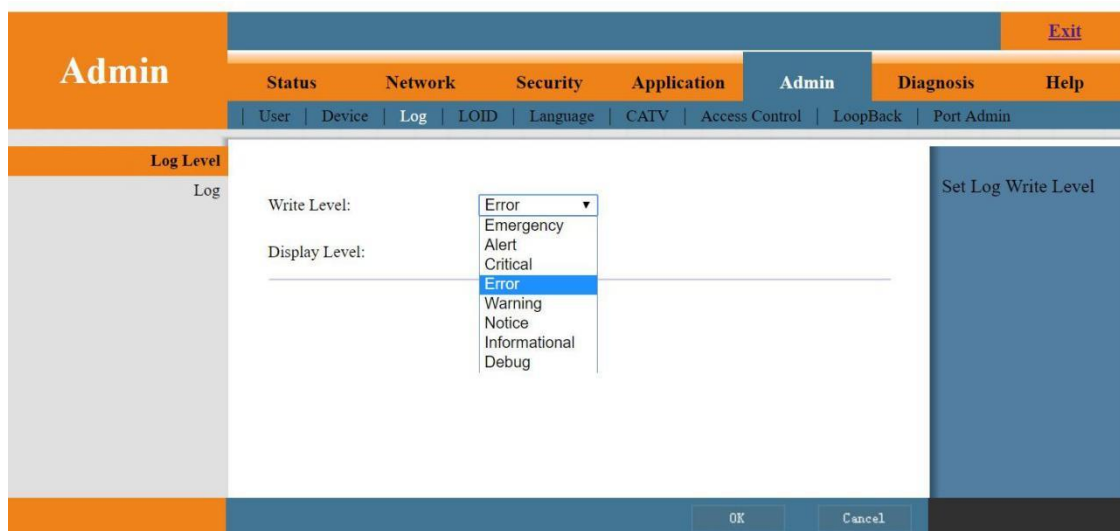


Figure 3-43: Log Level

## 3.6.3.2 Log

This page shows the device running status according to the log display level.



Figure 3-44: Log

## 3.6.4 LOID

This page allows the user to set the LOID and Password, this is other mode for OLT Authorize

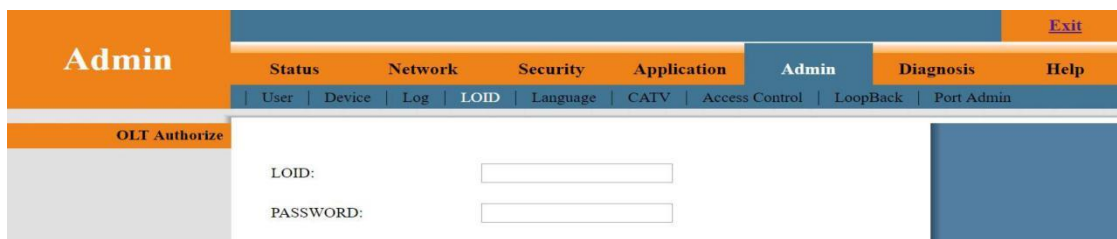


Figure 3-45: LOID Configuration

## 3.6.5 Language

This page allows the user to choose the language between English and Sample Chinese.



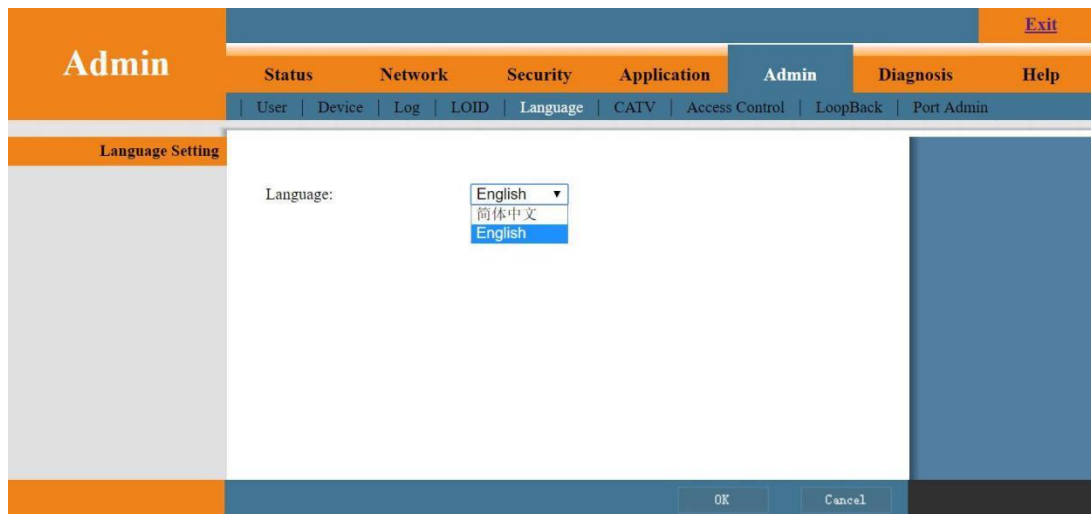


Figure 3-46: Language Setting

### 3.6.6 CATV

This page allows the user to get the current CATV information and set Output Level Attention value, RF Switch On/Off.

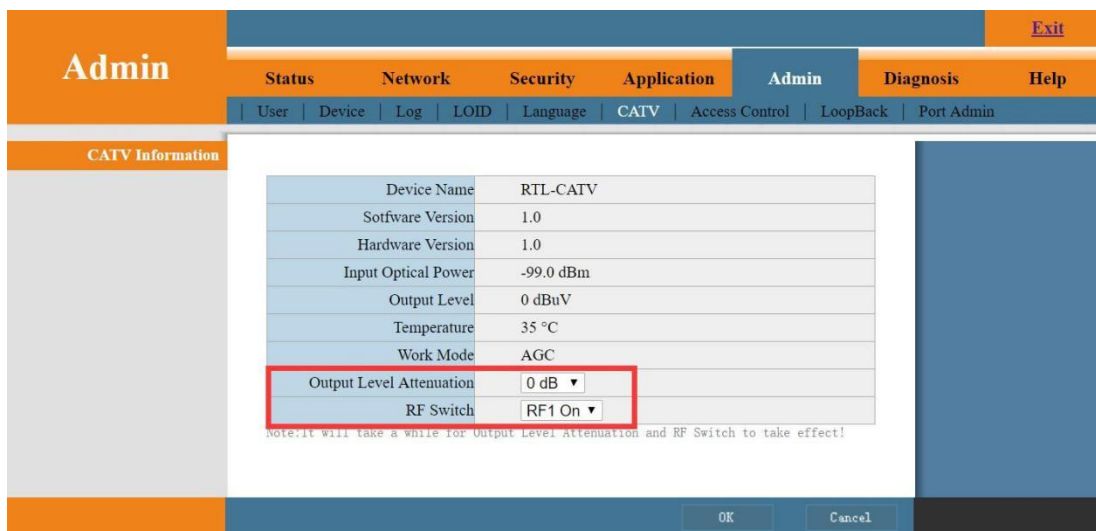


Figure 3-47: CATV Information

### 3.6.7 Access Control

This page allows the user to set the access control function, including three access services (telnet, http, Ping) from LAN and WAN side. User also can modify the port about WAN access.

The screenshot shows the 'Access Control' configuration page. The interface has a top navigation bar with 'Admin' selected, and sub-tabs for 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this is a secondary navigation bar with 'User', 'Device', 'Log', 'LOID', 'Language', 'CATV', 'Access Control', 'LoopBack', and 'Port Admin'. The 'Access Control' sub-tab is active. The main content area has a table with columns: ServerName, LAN, WAN, and WAN Port. The rows are TELNET, HTTP, and Ping. TELNET and HTTP have checkboxes for LAN and WAN, and input fields for WAN Port (23 and 80 respectively). Ping has checkboxes for LAN and WAN. At the bottom are 'OK' and 'Cancel' buttons.

ServerName	LAN	WAN	WAN Port
TELNET	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	23
HTTP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	80
Ping	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Figure 3-48: Access Control

### 3.6.8 LoopBack

This page allows the user to set the Loop Detection, including Sending Interval, Loopback Recovery Time.

The screenshot shows the 'LoopBack Detection' configuration page. The interface has a top navigation bar with 'Admin' selected, and sub-tabs for 'Status', 'Network', 'Security', 'Application', 'Admin', 'Diagnosis', and 'Help'. Below this is a secondary navigation bar with 'User', 'Device', 'Log', 'LOID', 'Language', 'CATV', 'Access Control', 'LoopBack', and 'Port Admin'. The 'LoopBack' sub-tab is active. The main content area has a form with the following fields: Destination Mac (Broadcast Addr), LoopBack Admin (checked), Ethernet Type (fffa), Ethernet Tag Vlan (0), Ethernet Tag Priority (0), Send Interval (2), Packet Count per Time (8), and Loopback Recovery Time (30). At the bottom are 'OK' and 'Cancel' buttons.

Figure 3-49: Loopback Detection

### 3.6.9 Port Admin

This page allows the user to set the Port configuration. If the lan port is enabled, user can connect the device by cable. Otherwise, if the lan port is disabled, user can't connect the device by cable.

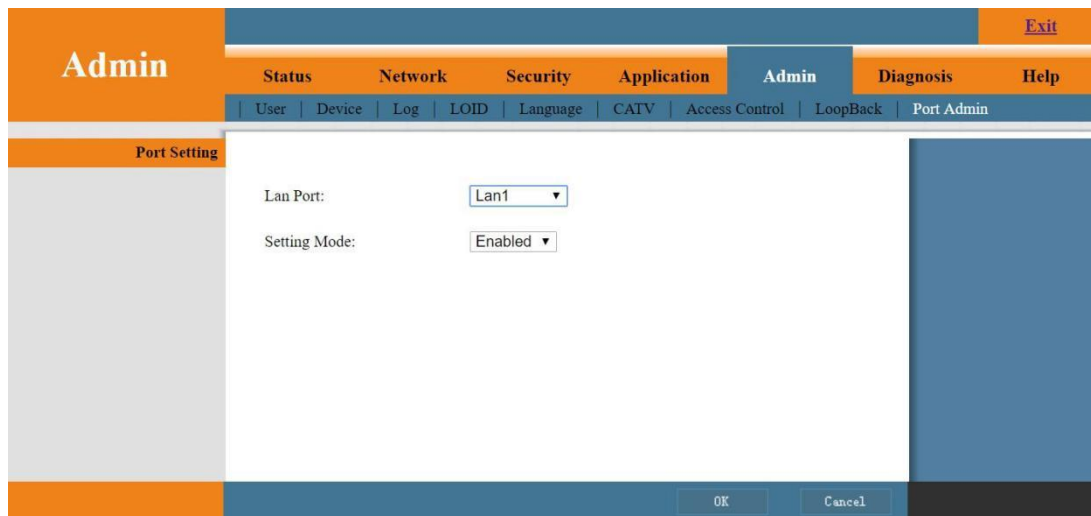


Figure 3-50: Port Setting

## 3.7 Diagnosis

### 3.7.1 Network Diagnosis

#### 3.7.1.1 PING/Tracert Test

This page shows about the ping test. Users can diagnose connection status between ONU and other devices.

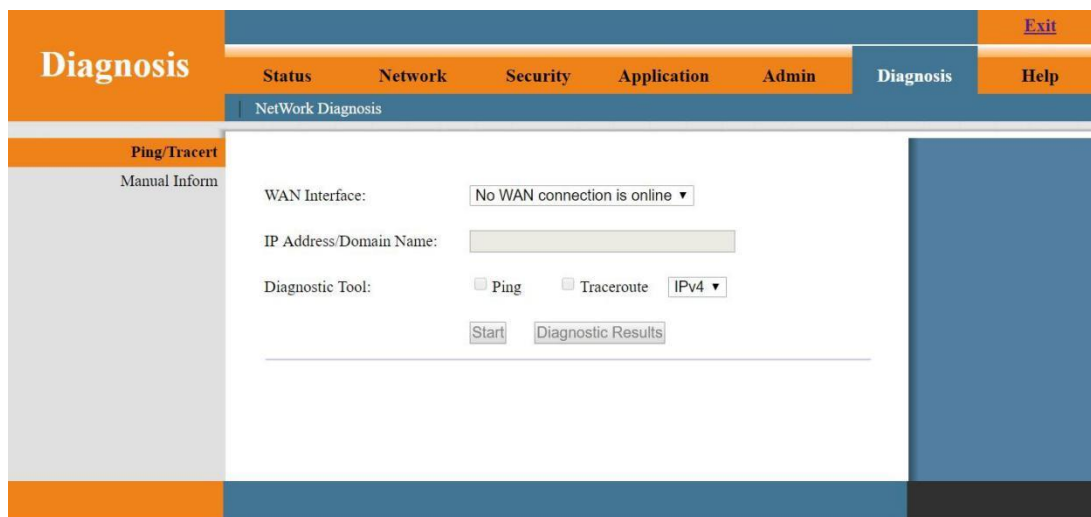


Figure 3-51: PING Diagnosis

#### Parameter

WAN Interface

IP Address or Domain Name

Diagnostic Tool

#### Illustration

Select the WAN Connection interface you want to test.

Input the destination IP address or domain name you want to ping.

Select the way between Ping and Traceroute

## 3.7.1.2 Manually Inform

This page allows the user to test tr069 inform function.

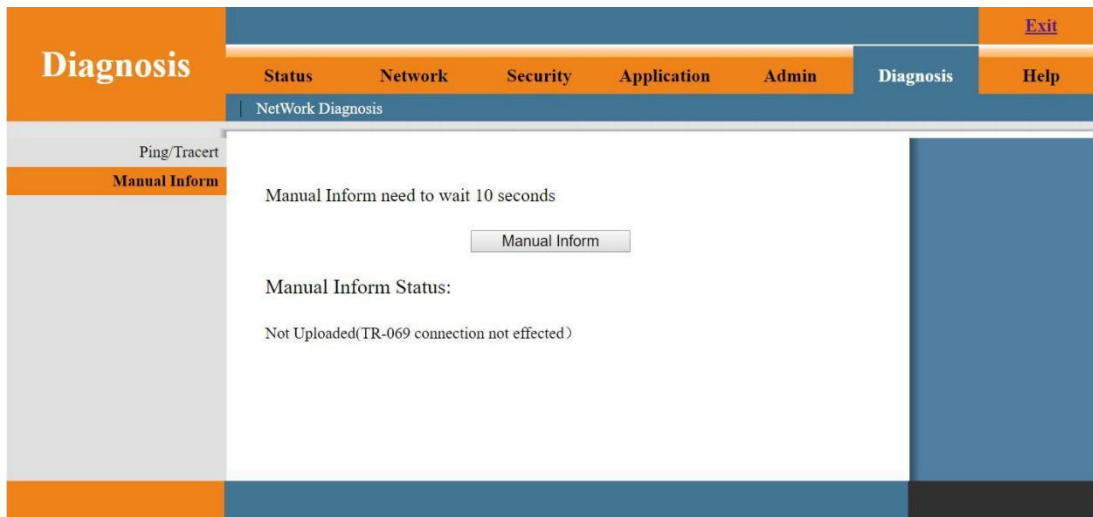


Figure 3-52: Manually Inform Use Tr069

## 3.8 Help

The Help information of ONU displays instruction and prompt of each web UI.

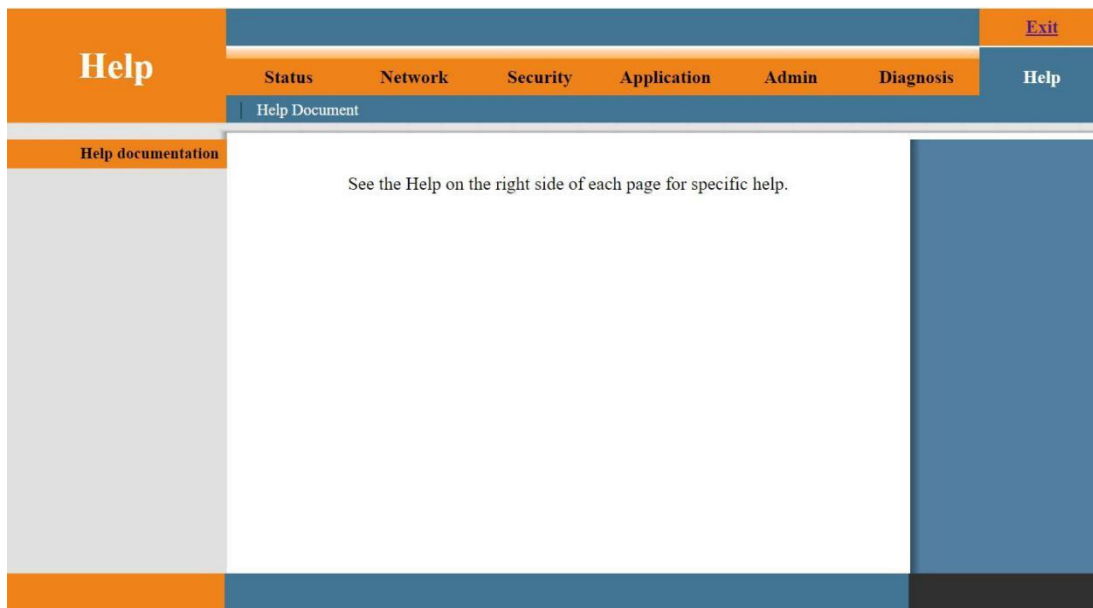


Figure 3-53: Help information

## Chapter 4 Examples

### 4.1 Internet Service

There are two configuration methods for Internet service. One works on Bridge WAN and another works on Route WAN.

#### 4.1.1 Requirement

##### 4.1.1.1 Scenario 1:

Client binds on bridge mode, service VLAN is 10. User client gets IP address from DHCP Server.

##### 4.1.1.2 Scenario 2:

Client binds on route mode, service VLAN is 10. ONU gets IP address by PPPoE.

#### 4.1.2 Steps

For scenario 1 and scenario 2, it needs to configuring VLAN in OLT side and WAN connection in ONU web.

##### 4.1.2.1 Bridge and Route mode for Internet service

In this example, we take Huawei MA5680T for example, to introduce how to configure Internet service.

##### Huawei MA5680T Configurations

1. Create VLAN

```
MA5680T(config)#vlan 10 smart
```

2. Configure uplink port's VLAN

```
MA5680T(config)#port vlan 10 0/19 1
```

```
MA5680T(config)#interface giu 0/19
```

```
MA5680T(config-if-giu-0/19)#native-vlan 1 vlan 10
```

3. Configure DBA profile

```
MA5680T(config)#dba-profile add profile-id 12 profile-name test type3 assure 102400 max 899968
```

4. Configure line profile

```
MA5680T(config)#ont-lineprofile epon profile-id 11 profile-name test
```

```
MA5680T(config-epon-lineprofile-11)#l2id dba-profile-id 12
```

MA5680T(config-epon-lineprofile-11)#commit

5. Configure service profile

MA5680T(config)#ont-srvprofile epon profile-id 6 profile-name test

MA5680T(config-epon-srvprofile-6)#ont-port eth 4

MA5680T(config-epon-srvprofile-6)#commit

6. Authorize ONU

MA5680T(config)#interface epon 0/5

MA5680T(config-if-epon-0/5)#ont add 1 0 mac-auth a8bf-3c00-e76a oam ont-lineprofile-id 11  
ont-srvprofile-id 6

7. Configure service-port

MA5680T(config)#service-port 27 vlan 10 epon 0/5/1 ont 0 multi-service user-vlan 10

8. Configure ONU bridge mode or Route mode by ONU web

Figure 4-1: Bridge Mode

**Attention:**

- If you choose bridge mode, please binds correct LAN interface.

- Bridge Internet service for client get the IP Address by PPPoE, if client get the IP Address by DHCP, it would get the IP from LAN DHCP Server.
- Bridge Other service for client get the IP Address by DHCP/PPPoE from ISP

The screenshot displays the 'Network' configuration page of the AP214H GPON HGU ONT. The 'WAN Setting' section is active, showing the configuration for '2 INTERNET\_R\_VID\_10'. The 'Mode' is set to 'Route'. The 'Service Type' is 'INTERNET'. The 'Enable VLAN' checkbox is checked, and the 'VLAN ID' is '10'. The 'Multicast VLAN' is '-1'. The '802.1p' is '0'. The 'LAN Port Binding' checkboxes for LAN1, LAN2, LAN3, and LAN4 are all checked. The 'SSID Port Binding' checkboxes for SSID1, SSID2, SSID3, and SSID4 are all unchecked. The 'IP Protocol' section shows 'IP Protocol Mode' set to 'IPv4' and 'MTU' set to '1480'. The 'WAN IP Settings' section shows 'WAN IP Mode' set to 'PPPoE' and 'PPPoE Agent Enable' unchecked. The 'PPPoE Configuration' section shows 'User Name' as 'pppoetest', 'Password' as '\*\*\*\*\*', 'Keep alive Time' as '60' seconds, 'PPPoE Mode' set to 'Continuous', and 'Service Name' as an empty field. A sidebar on the right contains a note: 'Select Channel Mode: In Bridge mode, Connection Type INTERNET is use for PPPoE, OTHER is use for IPoE(DHCP) and PPPoE.' At the bottom, there are 'OK' and 'Cancel' buttons.

Figure 4-2: Route Mode for PPPoE

## Attention:

- If you choose Route mode, please check the service is Internet, otherwise the WAN Connection get the IP address, the user client could not surf the internet.
- Please enable LAN DHCP Server, otherwise user client couldn't get the IP address from LAN DHCP Server.

## Chapter 5 FAQ

1. After power, why are all the lights lit?

Reasons:

- a. Power connection errors;
- b. Power is not normal.

Solution:

- a. Check that the power cable is connected;
- b. The rear panel of the power supply is turned on.

2. Why does LED of LAN not light?

Reasons:

- a. Network cable is damaged or loose connection;
- b. Cable type errors;
- c. Long lines outside the allowable range.

Solution:

- a. Replace the network cable, and pay attention to the standard Ethernet cable must be parallel or crossing lines.

3. Why is LED of LOS always blinking?

Reasons:

- a. Fiber failure;
- b. Center office equipment failure.

Solution:

- a. Inspect fiber is connected property, is connected to the correct connector, optical power is normal;
- b. Contact your operator.

4. Why does LED of PON flashes instead of always on?

Reasons:

- a. Fiber optic connector is loose;
- b. Central office equipment failure;
- c. Fiber optic connector is dust.

Solution:

- a. Inspect fiber is connected property;



- b. Cotton ball with alcohol swabbing fiber optic connectors;
  - c. Contact your operator.
5. Why does ONU stop working after working for a long time?

Reasons:

- a. Power supply is not working properly;
- b. The equipment from overheating.

Solution:

- a. Check if there is contact with abnormal voltage is too high or too low;
- b. Check the ambient conditions, vents are nominal ventilation.



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