

EMS User Guide

GPON OLT P1200-08

Version: V1.0

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About This Manual

This manual is applicable to TP-Link GPON OLT products, The contents of this document include TP-Link PON Element Management System (hereinafter refer to as "EMS") software installation and operation guidelines. Users should learn this document first when beginning to operate GPON OLT device.

CONTENTS

1	Softwa	re Intro	duction	1
	1.1	Softwa	are Information	1
	1.2	Functi	onal Features	1
2	EMS S	oftware	Installation	1
3	EMS S	tart-Up.		2
	3.1	EMS S	Server Start-Up	2
	3.2	EMS (Client Start-Up	2
	3.3	Login	EMS	2
4	EMS S	oftware	Framework Introduction	3
	4.1	Main V	Nindow Introduction	3
	4.2	Device	e Management Window	5
5	Add an	d Delet	e Management Object	5
	5.1	Add a	nd Delete Location	5
	5.2	Add ai	nd Delete Device	7
6	GPON	OLT Ma	anagement	9
	6.1	OLT C	hassis Management	9
	6.2	OLT C	hassis Management	10
	6	5.2.1	View System Status	.11
	6	5.2.2	OLT Management Configuration	12
	6	5.2.3	OLT and ONU Upgrade Management	14
	6	5.2.4	OLT Uplink Port Attribute Configuration	15
	6	5.2.5	OLT trunk(LACP) Configuration	16
	6	5.2.6	OLT Port Mirror Configuration	18
	6	5.2.7	OLT Mac Address Management	20
	6	5.2.8	Uplink Port Broadcast Storm Suppression Configuration	22
	6	5.2.9	OLT Port VLAN Management	24
	6	5.2.10	OLT STP Management	40
	6	5.2.11	ACL Management	44
	6	5.2.12	OLT QoS Configuration	51
	6.3	OLT P	ON Card Management	54
	6	5.3.1	OLT PON Port Basic Configuration	55
	6	5.3.2	View OLT PON Port Optical Module Information	56
	6	5.3.3	OLT DBA Profile Configuration	56

		6.3.4	OLT line Profile Configuration	59				
		6.3.5	OLT Service (business) Profile Configuration	65				
		6.3.6	OLT Traffic Profile Configuration	76				
		6.3.7	PON Radio Storm Suppression	77				
		6.3.8	ONU Auto Authentication	79				
		6.3.9	ONU VOIP Service Configuration	85				
		6.3.10	Upgrade ONU					
	6.4	PON	Port Is Managed Separately					
7	Mana	age ONU	Device					
	7.1	Introd	luction of ONU Management					
	7.2	ONU	Basic Information Management					
		7.2.1	View Basic Information of ONU					
		7.2.2	ONU Capability Set Information View					
		7.2.3	ONU Optical Link Information	100				
	7.3	ONU	Port Management	101				
		7.3.1	Basic Configuration of ONU Port	101				
		7.3.2	ONU Port Access Mode Vlan Configuration	101				
		7.3.3	ONU Port Rate Limit	102				
	7.4	ONU	CATV Management	103				
	7.5	ONU	VOIP Service Configuration	104				
		7.5.1	ONU VOIP Service IP Configuration	104				
		7.5.2	ONU VOIP Registered Tel-number Configuration	106				
		7.5.3	View ONU VOIP Registered State	108				
8	Oper	ation Log	gs Management	109				
9	Alarn	n Logs M	anagement	111				
10	Data	base Mai	nagement	114				
11	11 User Management115							
12	2 Device Upgrade116							
13	3 Device Search Function							
14	End .			119				

1 Software Introduction

1.1 Software Information

The EMS software is a C/S architecture integrated device management platform, which is designed based on SNMP protocol.

The EMS need following operational environment:

OS: Windows XP/2000/Vista/7/8/10

Hardware: at least 2.4GHz CPU, 512M memory

Software: JAVA 1.5, MySQL 5.0

1.2 Functional Features

The EMS software has following main features:

- > Based on standard SNMP protocol
- > Support multi-user access, C/S structure
- > Support centralization management of TP-Link GPON serial products
- > Support discovering topology automatically, TreeView, modifying topology manually
- Support all functional configuration
- Support division of management rights
- > Support real-time alarm and historic alarm log query
- Support perfect log management
- > Use single database and Support database backup and import functions
- > Support real-time performance collection and port traffic statistics.
- > Use third-party open database platform

2 The EMS Software Installation

The EMS install file has integrated the database software by default, so as long as the EMS is installed, the corresponding database software is also installed simultaneously. if your computer has installed the database software already, you don't need to uninstall it, it will not disturb the EMS software installation.

It's easy to install the EMS, just need to click 'Next Step', and you will finish it.

When you finish the installation of the EMS, you will find two Shortcuts in the installation directory



and

or

desktop

for

server



Note: When the EMS installation finished successfully, you can start it directly.

3 The EMS Start-Up

The architecture of EMS is C/S (Server and Client), Server and Client. You should start Server program before start Client program.

3.1 EMS Server Start-Up

Run the TP-Link PON EMS Server (hereinafter refer to as "EMS Server") program, we will find

icon **s**in the system tray after the Server runs successfully

Note: EMS Server start-up time is no longer than 30 seconds. If the program runs more than 30 seconds, it means the program doesn't start properly.

3.2 EMS Client Start-Up

Run the TP-Link PON EMS Client (hereinafter refer to as "EMS Client") program after the EMS Server program starts. The EMS Client and EMS Server can be run on the same computer or two independent computers with reliable intercommunication.

Note: To ensure operational performance of software, it is recommended that the EMS Server and EMS Client be installed on the same computer or different computers in the same LAN.

After the EMS Client starts successfully, the login page will appears as follows:

Login			×			
<i>s</i>	User name: Password:	admin				
Lang	uage 〇 簿体由文	I	English			
Ad	Vance>>	ок	Cancel			

3.3 Login EMS

If the EMS Server and EMS Client are installed on the same computer, enter the user name and password and login directly. If the Server and Client are installed on different computers, you must click the **'Advance'** and configure, page appears as follows:

Login			>	×			
P	User name: Password:	admin					
Lang	uage						
	○ 简体中文		English				
Ad	vance<<	ОК	Cancel				
Conn	Connection deploy						
Poll S	erver: 127.	0.0.1	Port: 8888				
Time	out(Sec): 5						

Configurations are as follows: change poll server's IP to the server's IP which EMS server runs on, port and Timeout Keep the default.

Note: The default user is "admin", password is "1234" for client to login.

After login the EMS Client successfully, you will see the main page. The typical page appears as follows:

P Element Management System System Alarm Config Perform	nance Help					-	σ×
🕘 😃 🚇 📥							
Top Tree GPON Switch Control Ca Pon Module	() (?) (() () () () () () () () () () () () (-
	ONU						-
4 I F	Map						
Clear Severity Handler	Trap Object NE IP Address	s Time	Resume Time	Descript			

At this point, The EMS Server and EMS Client programs have been started successfully.

4 EMS Software Framework Introduction

4.1 Main Window Introduction

After login successfully, system will enter main window management page.

Provide Contraction	n menu topology tool bar	Topology window
Device list window	Мар	-
Char Severity Handler	Trap Olged NE IP Address Time Resuma Time Descript	real-time alarm operation log window

As shown above, the EMS Client main window is divided into the following sections:

Main menu:

Main menu contains System, Alarm, Configure, Performance and Help parts. Their main features are as follows:

> Main Menu

Including System Configuration, MIB Browser, Database Maintenance and User Manage, etc.

Alarm Menu

Alarm Query, Configure Trap Rule and System Log are within this menu.

Configuration Menu

Top-tree update, device add/delete, device configuration, map update and device upgrade features are located in this menu.

Performance Menu

Including performance monitor and alarm threshold configuration.

> Help menu

Change software skin, language and about information.

Device list window:

The device list window shows all the devices under management currently. The device list can directly observe whether the device is online, whether there is an alarm. You can enter into the management window of the device by double click the device.

The OLT device has 5 level management object in the device list window, the machine box, exchange control module, PON module, PON port and ONU level.

Topology window:

Windows of topology is the main display area of the EMS software, according to the management device, user can move device to right position on regional background map for visual management. Double click the device object on the topology diagram, you can enter the device management window to perform various operations on the device.

The administrator can add or modify the passive network part of the topology diagram manually,

such as the optical splitters in PON network, to make the topology same to the actual network layout.

Real-time alarm and Operational log:

The real-time alarm window shows the abnormal alarm information of the current management device, such as alarm object, alarm time, alarm content, etc.

The operation log window records all the operations of the EMS, so it's convenient to trace who has operated it.

4.2 Device Management Window

For device management, EMS is mainly through the corresponding device management window to operate. Through the Configuration menu or double click the device icons located on Top-tree or topology map, manager can open the device management windows. Following are several typical examples:

P Device Inform	sation		×							
Contraction of the				Pon Card Management						
		1 2 3 4 5 6 7 8		्राप्त के स्वित के स्वित के स्वित के		ف شقيقية	فرف رغاغاغا			an an
16 XD 77 77					Port Properties					
MONTRULING SE SE	dēs dis deizdija		9 10 11 12 MGMT	O TOPAN DEN	Portfeame	Operationtitatus	Admin Status	Partitula Of SminyleEnable	Pertitiva Othenourtmane	Machddr Learn Wardikim
100000000000000000000000000000000000000					Pon-1	30	umatria	tabe	futue	0
and the second					Pon-2	down	enable	taise .	fater	0
				FonPort Information	Pon-3	down	anobia	faile	Telos	0
System Basic Inf	ormation			PosPort Optical Module Info	Pon-4	30445	snable	faile	fatos	
Quetarn Dax minter	o description	System 010 13614190723210		- SBA Profile Config	Pon 5	doen	ecobie	taise	faise	0
Constant Description		CITER OF THE PARTY OF THE PARTY		- Line Profile Config Banka Profile Config	F00.8	doen	endore	72/54	1004	-8
Running Times	1 day, 1 hours, 50 minutes, 57 seconds.	Contactiliay contact		- Traffic Profile Condig	P06-7	acon .	ECODE	1404	TRO1	
		Laurence Manager		Broadcast Starm Suppression	PUB-0	aces.	inane.	Neos	inou.	
				ONU Awa Pine Liat ONU Awa Arzh Tura Di U Awa Arzh Tura Pata Server Ba Agantisto Ba Agantisto Ba Agantisto Dupilitag Contig Dupilitag Contig Dupilitag Contig Dupilitag Contig Dupilitag Contig Dupilitag Contig						
	Refres	h					Ref	esh Bot		

System Management Window

PON Card Management

	8888 888 888 888 888 888 888 888 888 8		ă ă ă ă			gponOnuRunState gponOnuConfigState	online	gponOnuType gponOnuMatchState	sfu-hgu match	
	System tells				gponOnuSn	TPLG00004321	gponOnuDistance	5 m		
MOR GPON	OLT DeviceType	GPON	BeardCard Nam	GPONOLT	1	gponOnuLineProfileId	1	gponOnuServiceProfileId	1	
m Bhatua	SerialNumber	D411-1708000005	vendorfilarne	GPON OLT		gponOnuMainSoftwareVer	sion 0.8.0 1.1	gponOnuStandbySoftwareVersion	154 104 0 0 12	
inent Config Jograda Managament	systemTime	2000/1/2 01:52:41	RunningTimes	1 day, 1 hours, 52 manutes, 35 seconds.						
and Altitude	Hardwareversion with		Software/wrsion	Sofwardwision 213		Ono Capability Informatio			and the second	
land Million	Frame links	1944		and a second		gponOnuFlowControlType	pqAndCar	gponOnuPonPortNum 1		
ress Management (caelStormSuppress)	PotPotNam	1	SnPethan	18		gponOnuEthPortNum	4	gponOnuPotsPortNum 2		
Ai Management	Pan Sectore Pan Ope		Pan Operations	personounus up		gponOnuCatePortNum	0 gponOnuGemPort			
VLAN Config	Priver suit Annees 1				gponOnuTcontNum	15				
2 Config					ONU Optical Link Information					
200al 041						gponOnuOpticalTemperate	re 61.68°C	gponOnuOpticalTxPower	2.65dBm	
nagement Group						gponOnuOpticalRxPower	-12.08dBm	gponOnuOpticalLaserBlasCurrent	18.78mA	
INTE ACL RULE						anno Oru Ortical/oitana	3.241		MODO-STAST	
tonal Config		Ration	Base Cortly	Retort	_					

Switch and Control Card Window

ONU management window

5 Add and Delete Management Object

5.1 Add and Delete Location

For convenience of managing numerous devices, divide them in different regions according to

their deployed locations is normally needed. According to following steps to divide management regions:

1) Add a Location node on the Top-tree list. Showing as follows:

🖓 Element Man	agement System	
<u>S</u> ystem <u>A</u> larm	Config Performance Help	
i i i i i i i i i i i i i i i i i i i	Pon Module	Add Logation manu
🖃 🛃 Top Tree	Add Add Add Location	Add Location menu
	Modify Ad Add Location	
Add Location	X Delete	
shortcut	Change <u>M</u> ap	
	U <u>p</u> load Map	
	Device Upgrade	

As above figure, through 'Add Location' menu or its shortcut, open add location operate window, as following:

Add Location	×
Parent Node:	Top Tree 👻
Location:	
Map:	
ОК	Cancel

Operation steps:

i. Select the parent node for new added node;

ii. Input the name of new node;

iii. Select map for the new location node (The map should be upload first), when select this node on top-tree, the topology area will apply this map;

2) Location node delete



As above figure, right click the selected location node and delete it.

5.2 Add and Delete Device

Note: Before using EMS to manage an EPON device, you need to login OLT system to enable SNMP functions and to configure the read-write community. The read the community is public, and write community is private by default.

Configuration and view commands are as follows: (see CLI user Manual for more relevant configuration view commands).



OLT(config)#

Next, you need to add the device to the EMS manually, and the operation of adding a GPON OLT device is as follows.

1) Add OLT



As above figure, through 'Add Device' sub-menu or its shortcut to open the device add window and add device.

₽ Add Device	×
Location:	Top Tree 🗨
Device Type:	P1200-16
Device Name:	
IP:	
Read community:	•••••
Write community:	••••••
Poll Interval(Sec.):	5
Snmp set Timeout(Sec):	5
Snmp get Timeout(Sec):	5
<u>0</u> K	Cancel

As above figure, the new added device need configure following parameters:

Location

Select the location node where the added device should be located.

Device Type

Select the device type for the new added device. The EMS can manage all TP-Link GPON OLT products. So, it is needed to select correct device type. Select P1200-08 for TP-Link 8-port GPON OLT device.

Device Alias

In order to recognize the managed device easily, a suitable alias is normally needed instead of IP Address or MAC Address. This device alias will be displayed in the device list area.

IP Address

Input the management IP Address of the new added element device, which can be in-band or out-band IP Address.

Read and Write Community

EMS software is designed based on SNMP protocol to communicate with managed devices. Read and write community is used by SNMP protocol as access password. Community value inputted here should be the same with which configured in managed device, such EMS can communicate with the managed device successfully.

Polling Interval and SNMP Read and Write Timeout Value

EMS software will poll the managed device periodically with a configured time interval. Normally, the poll interval can use the default value. SNMP read and write timeout values are the longest wait time for EMS to wait response from managed device. Usually, the default value is suitable. Manager can also revise these values according to the real network performance situation.

When the above parameters are configured, click OK button to finish the device add operation. When success, the new added device's icon will appear in the device list and topology area. Showing as following figure:



2) Delete OLT

Obsolete or unwanted device in device list can be deleted from EMS. Right click on the selected device icon and select Delete option to delete a device.

Note:

i. Deleted device can't be restored and need to be added when need.

ii. All the information of the deleted device will also be removed from EMS.

iii. None any configurations on the deleted device itself will be changed.

6 GPON OLT Management

OLT device mainly consists of OLT chassis, Switch and Control module, PON Card module and ONU Device management module. The following sections describe the management of EMS software for these parts.

6.1 OLT Chassis Management

Double click the OLT chassis icon to open the chassis management window. Typically as following figure:

	Povice Informa	tion		×			
PWR1 SPR5 P1 P5 GE1 GE5 GE6 GE13 PWR2 XE1 P2 P5 GE2 GE6 GE10 GE14 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 SVS XE2 P3 P7 GE3 GE7 GE11 GE15 CE16 CE16 CE16 CE16 CE16 CE16 CE16 CE16							
	System Basic Infor	mation					
	System Description	description	System OID	.1.3.6.1.4.1.8072.3.2.10			
1	Running Times	1 day, 1 hours, 59 minutes, 57 seconds.	ContactWay	contact			
	System Name	name	Location	location			
		Refresh					

OLT chassis management includes following several parts.

Front Panel

The equipment panel parts display the power supply of the device and the status of each port indicator light in real time. The meaning of the indicator is subject to the panel label.

When EMS can't connect with the OLT this window will change to gray color.

Basic Information

This section shows the system description, system OID, running time, contact information, system name, location and other basic information. Click 'Refresh' button can refresh the above information.

6.2 Control Card Management

Double click 'Switch Control Card' icon in device list to open the 'Control Card Management' window. Typical as following figure:

Control Card Management					×
PWR1 SPR5 P1 P2 PWR2 201 E02 PWR2 PWR2 201 E02 PR PWR3 201 E02 P1 E02 PWR3 MGM3L42MM P4 P3	GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE11 GE15 GE4 GE8 GE12 GE16		1 2 3 00 00 00 0		7 8 13 14 15 16 Console 7 8 9 10 11 12 MGMT R3T
OLT Device GPON	System Info OLT DeviceType SerialNumber systemTime HardwareVersion Frame Info PonPort Num Fan Stot Number Power Stot Number	B 11-1708000005 2000/1/2 02:00:42 V1.1 x 8 as 1 rs 1	Set	BoardCard Name vendorName RunningTimes SoftwareVersion SniPort Num Fan OperationSta	BPON OLT GPON OLT 1 day, 2 hours, 0 minutes, 33 seconds. 2.1.3 18 18 18 tus up

Following management features are contained on this window:

- ✓ view or set device basic information;
- ✓ view or set the IP address, the trap address, SNMP management parameters, etc;
- ✓ upgrade OLT device`s firmware;
- ✓ view and set the uplink ports, such as the admin status of port, and the port rate;
- ✓ Swap TRUNK functionality (link aggregation) configuration;
- ✓ MAC address table management;
- ✓ Uplink ports storm suppression management;
- ✓ OLT port VLAN configuration management;
- ✓ OLT IGMP configuration;
- ✓ OLT STP configuration;
- ✓ ACL management configuration;
- ✓ QoS configuration;

Following sections in this part introduce the management features contained in the control card management window.

6.2.1 View System Status

Double click the 'Switch Control Card' icon on the left side of the main page to open the 'Control Card Management' window and enter the 'System Status' to view the page.

Control Card Management					×
PWR1 SPRS P1 P2 PWR2 X01 P2 P SYS X02 P3 P7 MGMTLARM P4 P	GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE11 GE15 GE4 GE8 GE12 GE16		3 <u>1 2</u> 3 1 00 00 00 1	4 5 6 00 00 00 0	7 8 9 10 11 12 MGMT
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management SniProadcastStormSuppressi Port VLAN Translation Vian List Port VLAN Translation OIn0 Config StP Management Stp Global Set Stp Port Set ACL Management Group ACL Rule Apply to Port ACL Qos Global Config	System Info OLT DeviceType SerialNumber systemTime HardwareVersion Frame Info PonPort Num Fan Slot Number Power Slot Numb	B 1 s 1 ners 1	h Set	BoardCard Name vendorName RunningTimes SoftwareVersion SniPort Num Fan OperationSta	e GPON OLT GPON OLT 1 day, 2 hours, 0 minutes, 33 seconds. 2.1.3 18 atus up Reboot

System info

Display Board card name, serial number, vendor Name, system time, software and hardware version number, device running time and other information.

Frame info

Display PON port number, GE port number, fan slot numbers, and fan operation status.

Save config

The button of 'Save Config' is mainly for saving all configuration of OLT.

Reboot

Click 'Reboot' button, and OLT will reboot.

Set

The button of 'Set' is used for setting system time.

6.2.2 OLT Management Configuration

Double click the 'Switch Control Card' icon on the left side of the main page to open the 'Control Card Management' window and enter the 'Management Config' page:

Control Card Management				×
PWR1 SPRS P1 P5 PWR2 XG1 P7 SV5 XG2 P3 P7 MGMTLLERM R3 P3	GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE11 GE15 GE4 GE8 GE12 GE16		1 2 3 4 5 6 00 00 00 00 00	7 8 13 14 15 16 Console 7 8 9 10 11 12 MGMT RST
OLT Device CPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard TurukGroupConfig SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressiv Port VLAN Manegement Vian List Port VLAN Translation Oin@ Config STP Management Stp Global Set Stp Cort Set ACL Management Group ACL Rule Current ACL RULE Apply to Port ACL Qos Global Config	System Info OLT DeviceType SerialNumber systemTime HardwareVersion Frame Info PonPort Num Fan Stot Number: Power Stot Numb	GPON DA11-1708000005 2000/1/2 02:00:42 V1.1 ers 1 1 Refresh	BoardCard Nar vendorName RunningTimes SoftwareVersio SniPort Num Fan OperationS	a GPON OLT GPON OLT 1 day, 2 hours, 0 minutes, 33 seconds. 18 18 18 18 18 18 18 18 18 18

System info

View inband IP address, outband IP address, subnet mask, gateway, inband VLAN.

Instructions:

- 1) Inband management comes from uplink port and needs to add management VLAN for uplink port.
- 2) Outband management comes from MGMT port and needs to add IP for MGMT port.
- Normally, modify the IP of management and device parameters, EMS will lose connection with device, user need to modify management IP of device in EMS, only in this way, can we connect device again.

Trap address

Alarm receiving address is the destination IP address which alarm information sent to, when the alarm occur, GPON OLT will sent Data Packet of 'SNMP TRAP' to the management PC, usually, trap address is same to the PC's IP which start EMS, Users can set four trap addresses mostly.

[Example of trap address configuration]

Example: configure trap information as follows :host name is 1234,Alarm reception address is 192.168.5.135, The alarm port is 162, community is public.

Control Card Management							>
PWRI SPRS PI P PWR2 XCI P2 P SYS XC2 P3 P MCMTNLARM PI P	55 GE1 GE5 GE9 GE13 56 GE2 GE6 GE10 GE14 57 GE3 GE7 GE1 GE15 58 GE4 GE8 GE12 GE16		5 6 7 8 11 11 11 11	1 2 3 00 00 00 0	4 5 6 7 10 00 00 00 0		Console RST MGMT
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressi Port VLAN Manegement Van List Port VLAN Config Port VLAN Config Stp Of Set Stp Port Set ACL Management Group ACL Rule Apply to Port ACL Qos Global Config	System Info InbandipAddress InbandipSubnetMas InbandMacAddress InbandipGateway Trap Address Selected Host Nar	192.168.100.24 k 255.255.255.0 0.0.0.0	Trap Address Host Name Trap Address Trap Port Community	Gancel	outbandlpAddress outbandlpSubnetMask outbandMacAddress inbandVlanld	192.168.1.100 255.255.255.0 E0-67-B3-00-CD-7B Community	100
	Select All	Delete			Refresh	Add	

6.2.3 Device Upgrade Management

Double click the 'Switch Control Card' icon on the left side of the main page to open the 'Control Card Management' window and enter the 'Device Upgrade Management' page.

The configuration management interface can upgrade the software of OLT.

Note: before upgrading, you need to ensure that there is an upgrade file. The FTP server need to connect with OLT.

[Example of device upgrade configuration]

Example: Upgrade firmware via FTP server which IP is 192.168.5.153.

	Control Card Management	>	<
b	PWR2 SPRS P1 F5 PWR2 XG1 P2 P5 SYS XG2 P3 F7 MGMTLARM P4 F8	6 6 6 6 6 7 1 2 3 4 1 1 6 Console 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1	•
	OLT Device GPON	Upgrade Configure IP 0.0.0 User Name Password User Name Password	

6.2.4 OLT Uplink Port Attribute Configuration

Double click the 'Switch Control Card' icon on the left side of the main page to open the 'Control Card Management' window and enter the 'Switch Card Attribute' page.

	Control Card Management											×
	PWR1 SPR5 P1 P5 PWR2 XG1 P2 P6 SY5 XG2 P3 P7 MGMTRLARM P4 P8	GE1 GE5 GE9 GE GE2 GE6 GE10 GE GE3 GE7 GE11 GE GE4 GE8 GE12 GE	13 14 1 2 15 1 1	345 1010	678	1 2 10 00	3 4 5 00 00 01	6 7 8 1 00 00 0		15 16 (11 12	Console RST MGMT	
		Port Properties	;									
ſ	OLT Device GPON	Port ID	Admin Status	Operation Statu s	Media Type	AutoNegotiatio n Status	AutoNegotiatio n Mode	PerfStatsOf15 minuteEnable	PerfStatsOf24h ourEnable	LastStatusCha	MacAddr Learn MaxNum	Port Isolation E
r	System Status	GE1	up	down	fiber	full-1000	full-1000	false	false	9334100	0	false
L	Management Config	GE2	up	down	fiber	full-1000	full-1000	false	false	9334100	0	false
L	Device Upgrade Management	GE3	up	down	fiber	full-1000	full-1000	false	false	9334100	0	false
L	SwitchCard Attribute	GE4	up	down	fiber	full-1000	full-1000	false	false	9334100	0	false
L	SwitchCard FrunkGroupConfig	GE5	up	down	fiber	full-1000	full-1000	false	false	9334100	0	false
L	MacAddress Management	GE6	up	down	fiber	full-1000	full-1000	false	false	9334100	0	false
L	SniBroadcastStormSuppressi	GE7	up	down	fiber	full-1000	full-1000	false	false	9334100	0	false
•	Port VLAN Manegement	GE8	up	down	fiber	full-1000	full-1000	false	false	9334100	0	false
	Vlan List	GE9	up	down	twistedPair	auto-negotiate	auto-negotiate	false	false	9334100	0	false
4	- Port VLAN Config	GE10	up	down	twistedPair	auto-negotiate	auto-negotiate	false	false	9334100	0	false
	- Port VLAN Translation	GE11	up	down	twistedPair	auto-negotiate	auto-negotiate	false	false	9334100	0	false
I.	QinQ Config	GE12	up	down	twistedPair	auto-negotiate	auto-negotiate	false	false	9334100	0	false
	Stp Clobal Sat	GE13	up	down	twistedPair	auto-negotiate	auto-negotiate	false	false	254000	0	false
L	Sto Port Set	GE14	up	down	twistedPair	auto-negotiate	auto-negotiate	false	false	9334100	0	false
	ACL Management Group	GE15	up	down	twistedPair	auto-negotiate	auto-negotiate	false	false	9334100	0	false
Ľ	ACL Rule	GE16	up	down	twistedPair	auto-negotiate	auto-negotiate	false	false	9334100	0	false
L	- Current ACL RULE	XGE1	up	down	fiber	full-10000	full-10000	false	false	9334100	0	false
L	Apply to Port ACL	XGE2	up	down	fiber	full-10000	full-10000	false	false	9334100	0	false
L	Qos Global Config											
						Refre	sh Se	et				

The '**Switch Card Attribute**' management page is mainly used to configure and view the attribute parameters of OLT 's uplink port (GE photoelectric port and 10GE uplink port). The parameters are described as follows:

Admin Status

Set the uplink port state to enable or disable. When the port is set to 'Up', the port is opened and

when the port is set to 'Down', the port is closed, 'testing' status is not available currently.

Operation Status

Displays the current link state of the uplink port, when the uplink port connects with the end devices, the operation state is displayed as **'Up '**; when the uplink port does not connect with any end devices, the operation state is displayed as **'Down '**, and the running state only shows but can't be configured.

> Media Type

Show the media type of the uplink port, the default interface of GE1-GE8 is the optical interface, and the media type is shown as **'Fiber'.** the default interface of GE9-GE16 is the electrical interface, and the media type is shown as **'Twisted Pair '**; XGE1 and XGE2 are uplink port of 10GE.

Auto Negotiation Status

Display the uplink port rate and duplex mode, 1000M full duplex, 100M full duplex, 10M full duplex and auto negotiation status.

Auto Negotiation Mode

Configure the uplink port rate and duplex mode, 1000M full duplex, 100M full duplex, 10M full duplex and auto negotiation mode.

PerfStats Of 15 minute Enable

Configure PerfStats Of 15 minute Enable of uplink port, 'False' means stop performance statistics of every fifteen minutes on uplink port. 'True' means start performance statistics of Every fifteen minutes on uplink port.

PerfStats Of 24 hour Enable

Configure PerfStats Of 24 hours Enable of uplink port, '**False**' means stop performance statistics of every 24 hours on uplink port. '**True**' means start performance statistics of every 24 hours on uplink port.

Last Status Change time

Show the change cycle of performance statistics time, and the time of performance statistics changes every 300ms.

Mac Addr Learn Max Num

Limit the number of MAC addresses (0-8092) that are permitted to pass by the uplink port, set to '0' means no limit, set to '1-8092' to limit the number of MAC addresses which permitted to pass by the uplink port.

Port Isolation Enable

Set up data isolation or not between one uplink port and others. **'False'** means uplink port can access to each other. **'True'** means uplink port can't access to the other uplink port.

6.2.5 OLT trunk(LACP) Configuration

The device supports the link aggregation protocol LACP which conforms to the IEEE802.3 ad standard. The LACP protocol is used to bundle multiple uplink ports together to form a single logical connection to increase the bandwidth of the link and realize backup functions of uplink port, which means when a port is broken, other ports can still communicate.

Double click the 'Switch Control Card' icon on the left side of the main interface to open the

'Control Card Management' window and enter the 'Switch Card Trunk Group Config' page.

Control Card Management						×
PWR3 SPRS P3 P5 PWR2 X21 P2 P8 SYS X22 P3 P7 MGCMTLARM P4 P8	60 68 68 68 67 68 68 68 1 2 3 68 68 68 68 1 2 3 68 68 68 68 1 1 2 3		4 5 6 7 0 00 00 00		15 16 Conso 15 16 Lonso 11 12 MGM	RST T
OLT Davies GRON	Trunk Group Config					
	TrunkGroup ID TrunkGroup Member	TrunkGroup Name	TrunkGroup Policy	Operation Status	Actual Speed	Admin Status
Oustan Otatus	1	lag1	srcMac	down	0	up
Management Config	2	lag2	srcMac	down	0	up
Device Upgrade Management	3	lag3	srcMac	down	0	up
	4	lag4	srcMac	down	0	up
	5	lag5	srcMac	down	0	up
SwitchCard Mirror	6	lag6	srcMac	down	0	up
MacAddress Management	7	lag7	srcMac	down	0	up
SniBroadcastStormSuppressi	8	lag8	srcMac	down	0	up
Port VLAN Manegement	9	lagL9	srcMac	down	0	up
Port VI AN Config	10	lagL10	srcMac	down	0	up
- Port VLAN Translation	11	lagL11	srcMac	down	0	up
QinQ Config	12	lagL12	srcMac	down	0	up
STP Management	13	lagL13	srcMac	down	0	up
- Stp Global Set	14	lagL14	srcMac	down	0	up
Stp Port Set	15	lagL15	srcMac	down	0	up
ACL Management Group	16	lagL16	srcMac	down	0	up
ACL Rule		Refresh Set	Config (configur	e trunk group member	port)	

The features of OLT LACP are as follows:

- > Link aggregation function is mainly applied to all uplink port;
- > The default aggregation group is 16;
- > All port can be added to a aggregation group;
- Support several equalization algorithms based on the source and destination MAC address, source and destination IP address;
- Each port can be assigned to only one aggregation group and cannot be assigned to multiple aggregation groups at the same time.

LACP Function parameter on EMS are as follows:

Trunk Group ID

Show number of link aggregation groups available by default on OLT, default number is 1-16, link aggregation groups can't be added, only can be modified and configured.

Trunk Group Member

Show which uplink port members are already in the link aggregation group.

Trunk Group Name

Name of the link aggregation group.

Trunk Group Policy

Select a strategy of link aggregation negotiation, which can be negotiated in several ways, such as the source and destination MAC address, source, and destination IP address.

Operation Status

Show the configuration state of the link aggregation group, the 'Up' indicates that the configured link aggregation group is successful and has taken effect, **'Down'** indicates that the configured link

aggregation group is unsuccessful and hasn't taken effect.

Actual Speed

Shows the current negotiation rate of the link aggregation group.

Admin Status

Configure the management status of the link aggregation group, **'Up'** to enable the link aggregation group and **'Down'** to disable the link aggregation group.

[Example of link aggregation configuration]

Example: Add GE1 and GE3 to link aggregation group 1, named 1234, with source MAC and destination MAC negotiation.

	×
Ригазија рад св.	
OLT Device GPON 0 10 11 12 000000 System Status System Status Actual Speed Admin Statu System Status 10 1	

6.2.6 OLT Port Mirror Configuration

Port mirror function is used to copy the packets of Source port to other port (destination port), the user can monitor the packets which copy to the destination port to monitor network and debug. All uplink port and PON port can be set to source or destination ports.

Double click the 'Switch Control Card' icon on the left side of the main page to open the 'Control Card Management' window and enter the 'Switch Card Mirror' page.

Control Card Management															×
PWR4 SPR5 P1 F6 GE1 PWR2 XG2 57 F7 GE2 SYS XG2 52 F7 GE3 MGM7LLARM P2 F6 GE4	GE5 GE9 GE13 GE6 GE10 GE14 GE7 GE11 GE15 GE8 GE12 GE16		2 3 ·	4 5 9 💷	67 000	。 D	1 2 00 00 1	° 4	5 6 00 00	7 8 80 80	13 9		L6 Com L2 MG	sole R\$T MT	
OLT Device GPON	ource Port Ingress Direct														
System Status Management Config		ge1	ge2	ge3	ge4	ge5	ge6	ge7	ge8	ge9	ge10	ge11	ge12	ge13	
SwitchCard Attribute SwitchCard TrunkGroupConfig	Egress Direct	_ ge14	_ gets	geno	xge i	xge2	pon1	pon2	pon3	pon4	pon5	pono	pon/	pon8	
SwitchCard Mirror MacAddress Management		ge1	ge2	ge3	ge4	ge5	ge6	ge7	ge8	ge9	ge10	ge11	ge12	ge13	
Port VLAN Manegement Vian List	entination Dort	_ gc 14	_ get5	ge to	xge i		Don't	ponz	- pons	p014	D polio	Doug	Dout	D boug	
A Port VLAN Config Port VLAN Translation QinQ Config	esunation Port			🗌 ge1	🔲 ge2	🗌 ge3	🔲 ge4	🗌 ge5	🔲 ge6	🗌 ge7	🗌 ge8	🔲 ge9			
STP Management Stp Global Set				🗌 ge10	🗌 ge11	🗌 ge12	🗌 ge13	🗌 ge14	🗌 ge15	🗌 ge16	🗌 xge1	🗌 xge2			
Stp Port Set ACL Management Group ACL Rule Current ACL RULE Apply to Port ACL															
Qos Global Config						Refre	sh	Set		Clear					

Source port

Specify the source port that needs to be captured and analyzed. User should know the concepts of **'Ingress Direct'** and **'Egress Direct'** first:

'Egress Direct' means the direction of the packets leave the port; **'Ingress Direct'** means the direction the packets enter the port.

When only one direction is checked, OLT will copy packets of one direction to the destination port. When both directions are selected, all packets are mirrored to the destination port.

Destination port

The port that receives packets of the source port.

The configuration of the ports is as follows:

- 1) select the source port. All ports can be selected as the source port, each port has 'Ingress Direct' and 'Egress Direct'.
- 2) **specify the destination port**. You can specify one of the ports as the destination port, and all source port packets will be forwarded to the specified destination port.

[Example of port mirror configuration]

Example: check ge2 in the 'Ingress Direct' and 'Egress Direct' and select ge8 in 'Destination port' then click 'Set' button. All traffic of ge2 are mirrored to ge8 port.

Control Card Management														×
PWR1 SRR PI IS GEL G PWR2 201 57 10 10 10 10 10 10 10 10 10 10 10 10 10	GE5 GE9 GE13 GE6 GE10 GE14 GE7 GE11 GE15 GE8 GE12 GE16	123 0 0 0 0	4 5 21 121	67 000	。 9	1 2 00 00	3 4 30 00	5 6 88 88	7 8 00 00	13 9	14 15 10 11	16 Com 12 MG	sole RST MT	
OLT Device GPON	ource Port ngress Direct													
System Status	<u> </u>	ge1 🔲 ge2	🔲 ge3	🔲 ge4	🔲 ge5	🔲 ge6	🔲 ge7	🔲 ge8	🔲 ge9	🔲 ge10	🗌 ge11	🗌 ge12	🔲 ge13	
Device Upgrade Management SwitchCard Attribute	9	ge14 🔲 ge15	🗌 ge16	🗌 xge1	🗌 xge2	pon1	pon2	pon3	pon4	🗌 pon5	pon6	pon7	pon8	
SwitchCardTrunkGroupConfig	gress Direct	ge1 🔲 ge2	ge3	ge4	ge5	🔲 ge6	ge7	🔲 ge8	ge9	🗌 ge10	🗌 ge11	🗌 ge12	🔲 ge13	
MacAddress Management SniBroadcastStormSuppressio	9	ge14 🗌 ge15	🔲 ge16	🔲 xge1	🗌 xge2	🔲 pon1	pon2	pon3	🔲 pon4	🔲 pon5	🔲 pon6	🗌 pon7	pon8	
Port VLAN Manegement Vian List Port VI ANI Config	estination Port													
Port VLAN Translation OinQ Config			🔲 ge1	🔲 ge2	🗌 ge3	🔲 ge4	🔲 ge5	🔲 ge6	🔲 ge7	🔲 ge8	🔲 ge9			
Stp Global Set			🗌 ge10	🔲 ge11	🗌 ge12	🔲 ge13	🗌 ge14	🗌 ge15	🔲 ge16	🗌 xge1	🔲 xge2			
Stp Port Set														
ACL Rule														
Apply to Port ACL														
					Refre	sh	Set		Clear					

6.2.7 OLT MAC Address Management

Double click the 'Switch Control Card' icon on the left side of the main page to open the 'Control Card Management' window and enter the 'Mac Address Management' page.

Control Card Management					×
PWR1 SRRS P2 R5 PWR2 2021 P7 SVS X022 P5 F7 MGMTL280M 74 F6	सि सि सि सी सि सि सी सि 1 2 3 4 सि सि सी सी मा सि सि सी सी मा		4 5 6 7 8 00 00 00 00	9 10 11 12 MGMT RST	
OLT Device GPON	MacAddress Management MacAddress AgingTime(s)	300 - Set		MacAddress Clear none	▼ Set
System Status Management Config	MacAddress List MacAddress	VLAN ID	MacAddr Type	Port ID	
SwitchCard Attribute SwitchCard Attribute SwitchCard TunkGroupConfig SwitchCard Mirror MacAddress Management SmiBroadcastStormSuppressi Port VLAN Manegement Port VLAN Config Port VLAN Translation OnD Config STP Management St Global Set St Port Set ActL Management Group ActL Management Current ACL RULE Apply to Port ACL Gos Global Config	E0-67-B3-00-CD-7C	100 Refresh A	static dd Delete	сри	

MAC Address Management

MAC address management window is used to configure OLT's mac address aging time and clear MAC address, view the MAC address information which OLT has learnt, including MAC address, VLAN ID, type of MAC address, port ID, parameters are as follows:

Mac address aging time

Set OLT's MAC address aging time. The MAC address that OLT learned will be cleaned automatically after this time.

Mac address clear

Choose a type of mac address in 'Mac Address Clear' then click the 'Set' button, the MAC address of the specified type will be cleaned.

Mac Address List

The MAC address list mainly displays the MAC address that have learned by OLT, including the VLAN of the MAC address, the type and the port where the MAC address is learnt. The parameters we can view or configured in the MAC address list are as follows:

• Mac Address

Specified mac address, format as: xx-xx-xx-xx-xx or xx:xx:xx:xx:xx:xx.

• VLAN ID

Display the vlan of mac address which from uplink port or pon port and the the vlan which we set for static mac address.

• Mac Addr Type

There are three options, static, blackhole, and dynamic.

Static represents a static MAC address. When the source MAC address of the packet matches this static MAC address, it will be forwarded. The static MAC address will not be cleaned after the aging time.

Blackhole represents the black hole of the MAC address. If the source MAC address of the message is matched with this MAC address, it is discarded and not allowed to be circulated.

Dynamic represents a MAC address automatically learnt by OLT, it will be cleaned after the aging time.

Port ID

Show the port which MAC address learned from.

Click the 'Add' button to bring up a window of 'Add MAC'. We can add a static MAC address to the MAC address table.

₽ Add Mac	×
Port	GE1
VLAN ID	1 *
Мас Туре	static 💌
MacAddress	
	<u>O</u> K <u>C</u> ancel

After finishing configuration, click 'Confirm' button, at the same time, MAC address list will show

this new added mac-address entry.

'Delete' button: Choose a specified mac-address entry in MAC address list, clicking **'Delete'** button can delete this entry.

Control Card Management					\times
PWR3 SPR5 P3 P5 PWR2 X01 F2 P6 SY5 X02 F3 F7 MGMTRLARM F4 F8	60.65.66.60. 1 2 3 4 60.67.66.67.66.66. 1 2 3 4 60.67.66.67.66.66. 1 2 3 4 60.67.66.67.66.66. 1 2 3 4 60.67.66.67.66.66. 1 1 2 3 4	5678 1 1 1 1 1	1 2 3 4 5 6 7 8 30 30 30 30 30 30 30 30	9 10 11 12 MGMT RST	
OLT Device GPON	MacAddress Management MacAddress AgingTime(s) MacAddress List	300 + Set		MacAddress Clear none	▼ Set
– System Status – Management Config – Device Upgrade Management – SwitchCard Attribute	MacAddress E0-67-B3-00-CD-7C	VLAN ID 100	MacAddr Type static	Port ID cpu	
SwitchCardTrunkGroupConfig SwitchCard Mirror MacAddress Management SnilFroadcastStormSuppressi Port VLAN Manegement Port VLAN Config Port VLAN Translation Gring STP Management Stp Global Set Stp Ort Set ACL Management Group ACL Rule Current ACL RULE Apply to Port ACL Qos Global Config		Prom	pt X Clear successfully! :E0-67-B3-00-CD-7C 通定		

Click 'Refresh' button to update MAC address list.

6.2.8 Uplink Port Broadcast Storm Suppression Configuration

Storm suppression function is used to let the uplink port suppress the unicast storms, multicast storms and broadcast storms to prevent these storms from adversely impacting the network performance.

Double click the 'Switch Control Card' icon on the left side of the main page, open the 'Control Card Management' window, enter the 'SNI Broadcast Storm Suppression' management page configuration.

Γ	Control Card Management							×
	PWR2 SPRS P2 F5 PWR2 XG1 F2 F6 SVG XG2 F3 F7 MGM78LARM P4 F8	GE1 G GE2 G GE3 G GE4 G	ES GEB GEL3 FE GED GEL4 1 2 FF GEL1 GEL5 ES GEL2 GEL6	34567 İ.İ.İ.İ.İ.İ.İ	8 <u>1 2 3 4</u> 2 1 100 00 00 00 00	5 6 7 8 00 00 00 00	3 14 15 16 Cons 9 10 11 12 MiGi	
		SNI B	roadCast Storm Suppress	ion				
		Port I	D Unicast Storm Ena	ble UnicastStorm InPack te(pps)	et Ra MulticastStormEnable	MulticastStorm InPacket F ate(pps)	R Broadcast Storm Enable	BroadcastStorm InPacket Rate(pps)
L	System Status	GE1	false	0	false	0	false	0
L	Management Config	GE2	false	0	false	0	false	0
L	SwitchCard Attribute	GE3	false	0	false	0	false	0
L		GE4	false	0	false	0	false	0
L	- SwitchCard Mirror	GE5	false	0	false	0	false	0
L	MacAddress Management	GE6	false	0	false	0	false	0
L	SniBroadcastStormSuppression	GE7	false	0	false	0	false	0
1	Port VLAN Manegement	GE8	false	0	false	0	false	0
	Vlan List	GE9	false	0	false	0	false	0
٩ı	Port VLAN Config	GE10	false	0	false	0	false	0
L	Port VLAN Translation	GE11	false	0	false	0	false	0
Ι,	STD Management	GE12	false	0	false	0	false	0
Ľ	- Stp Global Set	GE13	false	0	false	0	false	0
L	Stp Port Set	GE14	false	0	false	0	false	0
	ACL Management Group	GE15	false	0	false	0	false	0
L	ACL Rule	GE16	false	0	false	0	false	0
L	- Current ACL RULE	XGE1	false	0	false	0	false	0
L	Apply to Port ACL	XGE2	false	0	false	0	false	0
L	Qos Global Config							
					Refresh	Set		

✓ Unicast / multicast / broadcast storm suppression enabled

When '**True**' is selected, the unicast / multicast / broadcast storm suppression function of the port is enabled.

When 'False' is selected, the unicast / multicast / broadcast storm suppression function of the port is disabled.

✓ Unicast / multicast / broadcast inpacket rate

This parameter is used to configure the packet rate limitation, when the unicast/multicast/broadcast packet rate is higher than the limitation, the storm suppression function will be enabled, and the corresponding traffic will be suppressed. The limitation value should be between 1-1488100 pps.

[Example of storm suppression configuration]

Example: The unicast storm suppression function is set to **True** and the unicast inpacket rate is 5000 pps. The multicast storm suppression function is set to **True** and the multicast inpacket rate to 5000 pps. The broadcast storm suppression function is set to **True** and the broadcast inpacket rate to 5000 pps. Click **'Set'** button after the configuration, a prompt window will pop up and click the **'OK'** button to complete the configuration.

Control Card Management Nuta 576 71 77 Nuta 576 71 77 Nuta 576 71 77 Sis 32 72 Sis 32 72 MGMTULSIM R4 83	GE1 GE5 GE9 GE2 GE6 GE1 GE3 GE7 GE1 GE4 GE8 GE1	683 9684 1 2 3 1685 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 5 6 7 8 1 1 1 1 1 1	1 2 3 4 00 00 00 00	5 6 7 8 30 30 30 30	3 14 15 16 Cons 9 10 11 12 MGA	
OLT Device GPON	Port ID	ast Storm Suppression Unicast Storm Enable	UnicastStorm InPacket Ra te(pps)	MulticastStormEnable	MulticastStorm InPacket F ate(pps)	R Broadcast Storm Enable	BroadcastStorm InPacket Rate(pps)
System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management Order Management Order Management Order Management Order Management Order Management Order Management Order Management Status Stp Port VLAN Translation Order Config Stp Management Stp Port Set Act Management Group Order Act Management Group Order Act Management Group Order Management Order Manag	GE1 GE2 GE3 GE4 GE5 GE6 GE7 GE8 GE9 GE10 GE11 GE11 GE13 GE14 GE15 GE16 XGE1 XGE1	faise faise	0 0	Taise Taise	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	faise faise faise faise faise faise faise faise faise faise faise faise faise faise faise faise faise faise faise faise	0 0

6.2.9 OLT Port VLAN Management

VLAN (Virtual Local Area Network), is a kind of technology that logically divided the LAN into multiple segments based on user demand (functions, departments or applications, etc.) without considering the physical location of the virtual network. VLAN technology allows a network administrator to divide a physical network into different logical segments (VLAN), each containing a set of devices with the same requirements.

The advantage of VLAN technology is that the traffic within a VLAN will not be forwarded to other VLANs, thus helping to control network traffic, simplify network management and improve network security.

The VLAN configuration of the GPON system is divided into the VLAN configuration of the OLT and the VLAN configuration of the ONU part. The VLAN management of the **'Switch Control Card'** section refers to the VLAN configuration of the OLT part.

The VLAN function of the OLT part of the TP-Link GPON system is as follows:

- ✓ Support Port-based VLAN and IEEE802.1Q VLAN.
- ✓ Support full 4K VLAN group, VID range 1~4094.
- ✓ VLAN 1 is the system reserved VLAN, it includes all switch ports, all ports are UNTAG mode.
- ✓ All switch ports, including uplink ports and downlink ports support VLAN Partition.

6.2.9.1 OLT Port VLAN Management

Double click the **'Switch Control Card'** icon on the left side of the main page, open the **'Control Card Management'** window, and enter the **'VLAN List**' page. Typical page is as follows:

Control Card Management				×
PWR1 SPRS P1 PWR2 XG1 P2 SYS XG2 P3 MGM73L3RM P4	5 GE1 GE5 GE9 GE13 6 GE2 GE6 GE10 GE14 1 7 GE3 GE7 GE11 GE15 8 GE4 GE8 GE12 GE16	2345678 111111111111111111111111111111111111	1 2 3 4 5 6 7 8 00 00 00 00 00 00 00 00 00 00 00 00 00	R\$T
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard TrunkGroupConfig SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressi Port VLAN Config Port VLAN Config Port VLAN Translation Ging Config STP Management Stp Global Set Stp Port Set ACL Management Group ACL Rule Current ACL RULE Apply to Port ACL Gos Global Config	VLAN List Selected VLAN ID 1 Ma 100 Ma 200 Ma 300 Ma	LAN Name Tag Port an1	UnTag Port GE1-GE9;GE10-GE12;GE16;XGE1;XGE2;Pon1-Pont GE13 GE14 GE15 Refresh Add	Modfiy 3; Config Config Config Config

The VLAN list has 'Selected', 'VLAN ID', 'VLAN Name', 'Tag Port', 'Untag Port', 'Modify' items. Here's a brief introduction to these projects:

Select

Use to select a VLAN entry.

VLAN ID / VLAN Name

VLAN ID displays all the VLAN ID that are available on the current OLT. VLAN Name displays the name of the current existing VLAN.

Tag Port / Untag Port

In the Port of Tag Port, the egress packets will be tagged with a VLAN Tag. In the Port of Untag Port, the VLAN tag of the egress packets will be stripped off.

6.2.9.2 Modify OLT VLAN

Each VLAN entry has a 'Config' button, which is used to modify the VLAN's 'Tag Mode' and 'Member Port' as shown below, click 'Confirm' button to complete the configuration after setting up.

	₽ Tag/UN	Tag Port					×	ç
0	VLAN ID	1						$\left \right $
0	Tag Model	tag					•	
	Member Po	rt						
	GE1	GE2	GE3	GE4	GE5	GE6		
	GE7	GE8	GE9	GE10	GE11	GE12		
	🗌 GE13	GE14	GE15	GE16	XGE1	XGE2		
	Pon1	Pon2	Pon3	Pon4	Pon5	Pon6		
	Pon7	Pon8						
			<u>О</u> К	<u>C</u> ance	1			

6.2.9.3 Add OLT VLAN

Here is a 'Add' button in the 'VLAN List' page. Click the button to add a VLAN ID to the OLT, and the configuration completes after click 'OK' button.

Control Card Management			×
PWP3 5PP5 P3 PWP3 2 201 52 5V5 X02 P3 MGMTPLAMM P4	席	1 2 3 4 5 6 7 8 00 00 00 00 00 00 00 00 00 00 00 00 00	Console
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Attribute MacAddress Management MacAddress Management Port VLAN Kanagement Port VLAN Config Port VLAN Config Port VLAN Config STP Management Stp Global Set Stp Ort Set ACL Rule ACL Rule Apply to Port ACL Cos Global Config	VLAN List Selected VLAN ID VLAN Name Tag Port	UnTag Port	Modfly

6.2.9.4 OLT Port VLAN Configuration

Double click the 'Switch Control Card' icon on the left side of the main page, open the 'Control Card Management' window, and enter the port 'VLAN Configuration' page. Typical page is as follows.

Control Card Management					×
PWR3 SPRS P3 P PWR2 XG1 P2 P SY6 XG2 P3 P MGMTRLARM P3 P	5 GE1 GE5 GE9 GE13 6 GE2 GE6 GE10 GE14 7 GE3 GE7 GE11 GE15 8 GE4 GE3 GE12 GE16		1 2 3 4 5 6 7 8 00 00 00 00 00 00 00 00	13 14 15 16 Console 9 10 11 12 MGMT RST	
AGMANCAMAN PAPERAL AGMANCAMAN PAPERAL SwitchCard Attribute SwitchCard Attribute SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressi Port VLAN Manegement Vian List Port VLAN Config Port VLAN Translation OniD Config STP Management Stp Global Set Stp Port Set ACL Rule Current ACL RULE Apply to Port ACL	GEA GES GEA GEA <th>Vian Priority 0</th> <th>PVid 100 200 300 1</th> <th>9 10 11 12 MGMT VLANMode access acces</th> <th>Modfiy Config</th>	Vian Priority 0	PVid 100 200 300 1	9 10 11 12 MGMT VLANMode access acces	Modfiy Config
	PON7 PON8	0 0	1 1 Refresh	access access	Config Config V

Port ID

Displays the corresponding port number, GE represents the uplink port, XGE represents the Gigabit port, PON represents the PON interface.

VLAN Priority

Displays the priority of the current port VLAN, which shows the value of 0-7, the minimum priority of 0, and the highest priority of 7.

Port VLAN (PVID)

Displays the default VLAN for the current port, which shows the value of 1-4094. If you want to configure the VLAN of a port to a new one, you need to make sure the new VLAN is added to the OLT already.

VLAN Mode

Displays the VLAN mode of the current port, where the modes that can be displayed are: access, hybrid, trunk.

Modify

Double click the '**Config'** button to configure the VLAN priority, port VLAN ID(PVID), and VLAN mode of the corresponding port. Click the '**Set'** button to complete the configuration. As shown in the following figure.

← Control Card Management →			×
PWRB SPRS P1 F5 PWR2 XG1 P2 F6 SYS XG2 P3 F7 MGMRLARM R4 F8	GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE11 GE15 GE4 GE3 GE12 GE16	1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 3 4 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 4 15 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16 1 5 16	
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Mirror MacAddress Management SnilPoadcastStormSuppressiv Port VLAN Manegement Vian List Port VLAN Config Strp Management Stp Global Set Stp Port Set ACL Rule ACL Rule ACL Rule ACL Rule ACL Rule ACL Rule ACL Rule ACL Config	Port VLAN Config Port ID PVid Port VLAN Trunk Device ID	Vian Priority 0 300 + VLANMode trunk Refresh Set Back P ADD Trunk VLAN VLAN ID Like as 1.2 or 3-6 QK Cancel	
		Add Delete	

The packets in different VLAN modes are handled as follows:

	Actions (in	the ingress direction)	
VLAN mode	Untagged packet	Tagged packet	egress direction)
Access	Tag the packet with the PVID.	 If the VLAN ID of received packet is the same as the PVID. Drop the packet if its VLAN ID is different from the PVID. 	Remove the VLAN ID and tag and send out the packet.
Trunk	Tag the packet with the PVID.	 Receive the packet if its VLAN is carried on the port. Drop the packet if its VLAN is not carried on the port. 	 Removing the tag and send out the packet if its VLAN ID is the same as the PVID of this port. Send out the packet without removing the tag if its VLAN is carried on the port but is different from the PVID.
Hybrid			 Drop the packet if its VLAN is not carried on the port.

		If the VLAN of the packet
		is carried on the port, send
		the packet out. The VLAN
		tag of the packet will be
		removed if the port is
		configured as UNTAG in
		this VLAN. And the VLAN
		tag will be kept if the port
		is configured as TAG in
		this VLAN.
	1	

6.2.9.4.1 OLT Port Access Mode VLAN Configuration

Example: Configure GE1 port as access mode, priority is 2, PVID is 100. The steps are as follows: (PON port configuration is the same)

Step 1:

Double click the 'Config' button in the column of GE1 in the port VLAN configuration page.

Control Card Management					×
PWR3 SPR5 P2 F5 PWR2 X02 P2 F6 SVS X02 P3 F7 MGMTLLERM F4 F8	611 615 619 613 612 616 610 614 613 617 611 615 614 613 612 615			7 8 9 10 11 12 Media	e Rșt
OLT Device GPON	Port ID GE1 GE2 GE3	VIan Priority 0 0 0 0	PVid 1 1 1 1	VLANMode access access access access	Modfiy Config Config Config Config
Management Coning Device Upgrade Management SwitchCard Attribute SwitchCardTrunkGroupConfig SwitchCardTwror	GE4 GE5 GE6 GE7 GE8	0 0 0 0	1 1 1 1 1 1	access access access access access	Config Config Config Config Config
MacAddress Management - SniBroadcastStormSuppressi - Port VLAN Manegement - Vlan List	GE9 GE10 GE11 GE12 GE13	0 0 0 0 0	1 1 1 1 1 100	access access access access access	Config Config Config Config Config
Port VLAN Config Port VLAN Translation QinQ Config STP Management Stn Global Set	GE14 GE15 GE16 XGE1	0 0 0 0 0	200 1 1 1	access trunk access access	Config Config Config Config Config
Stp Port Set Stp Port Set ACL Management Group ACL Rule Current ACL RULE	PON1 PON2 PON3 PON4	0 0 0 0 0	1 1 1 1 1 1 1	access trunk access access access	Config Config Config Config Config
Apply to Port ACL Qos Global Config	PON5 PON6 PON7 PON8	0 0 0 0	1 1 1 1 1	access access access access access	Config Config Config Config
			Refresh		

Step 2:

At this point, the Port VLAN Config page will appear as follows. Set the VLAN priority to 2, the PVID to 100, and the VLAN mode select to access. Then click the **'Set'** button and click the **'OK'** button to complete the configuration.

Control Card Management			\times
PWR1 SPRS P1 P PWR2 XG1 P2 P SVS XG2 P3 P MGM78LARM P4 P	5 GE1 GE5 GE9 GE13 6 GE2 GE6 GE10 GE14 7 GE3 GE7 GE11 GE15 8 GE4 GE3 GE12 GE16	1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 2 3 4 5 6 7 8 1 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 2 Mont 1 1 1 1 2 Mont 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressi Port VLAN Manegement Vian List Port VLAN Config Port VLAN Translation Gin 2 Config Stp Management Stp Global Set Stp Port Set ACL Rule ACL Rule ADL RULE ADL RULE ADL RULE ADL RULE ADL RULE ADL RULE ADL RUL	Port VLAN Config Port ID PVid	Vian Priority 2 100 VLANMode access Refresh Set Back Prompt X Set [Vian Priority 2: PVid:100], success internet internet	

Step 3:

Click the 'Back' button to view the modified configuration.

6.2.9.4.2 OLT Port Trunk Mode VLAN Configuration

Example: Configure GE3 port as trunk mode, priority is 3, PVID is 200, trunk VLAN is101-103. The steps are as follows:

Step 1:

Double click the 'Config' button in the column of GE3 in the port VLAN configuration page.

Control Card Management					×
PWRILS PRS P1 P PWRILS XG1 P2 P SVG XG2 P3 P MGMTRLARM P4 P	6 GE1 GE5 GE9 GE13 6 GE2 GE6 GE10 GE14 7 GE3 GE7 GE11 GE15 6 GE4 GE8 GE12 GE16		1 2 3 4 5 6 7 8 00 00 00 00 00 00 00	9 10 11 12 MGMT	
OLT Device GPON	Port ID GE1 GE2 GE3 GE4 GE5 GE6 GE7 GE8 GE9 GE10 GE11 GE12 GE13 GE14 GE15 GE16 XGE2 PON1 PON2 PON2 PON3	Vian Priority 0	PVid 1 1 1 1 1 1 100 1 100 1 100 1	VLANMode access trunk access trunk access trunk access	Modfly Config
	PON4 PON5 PON6 PON7 PON8	0 0 0 0 0	1 1 1 1 1 Refresh	access access access access access access	Config Config Config Config Config Config

Step 2:

At this point, the following page will appear. Firstly, change the VLAN Mode to trunk in this page.

P Control Card Management			×
PWR2 SPRS P2 P2 PWR2 XC1 P2 P SY6 XC2 P3 P MGMT8LARM P4 P	GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE11 GE15 GE4 GE8 GE12 GE16	1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 3 14 15 16 1 3 14 15 16 1 15 16 1 15 16 1 15 16 1 15 16 1 15 16 1 15 16 1 15 15 16 1 15 15 15 15 15 15 15 15 15 15 15 15	
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management Port VLAN Manegement Port VLAN Config Port VLAN Config Port VLAN Config Stp Port Set Current ACL Rule ADP to Port ACL Qos Global Config	Port VLAN Config Port ID GE3 PVid	Vian Priority 200 VLANMode access	3.

Step 3:

Then, set the VLAN priority to 3, the PVID to 200, Click the **"Set"** and then click **"OK**" in the pop-up window.


Step 4:

Click 'Add' button, add '101-103' at the 'Add Trunk VLAN' window and click the 'OK' button, then click "OK" button in the pop-up window to complete the configuration.

Control Card Management	×
PWR1 SPR5 21 P2 PWR2 XG1 P2 P SYS XG2 P3 P MGMTLL3RM P3 P	Image: Construction of the construc
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management Oline Port VLAN Manegement Oline Ot VLAN Config Port VLAN Translation Oino Config Stp Global Set Stp Ort Set ACL Rule ACL Rule ACL Rule ACL RULE Apply fo Port ACL Qos Global Config	Port VLAN Config Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk Port VLAN Trunk QK QK QK Add

Step 5:

Click 'Back' button to view modified configurations.

6.2.9.4.3 OLT Port Hybrid Mode VLAN Configuration

Example: Configure GE4 port as hybrid mode, priority is 4, PVID is 300, The hybrid mode allows VLAN 301 with tag, VLAN 302 without tag. The steps are as follows:

Step 1:

Double click the 'Config' button in the column of GE4 in the port VLAN configuration page.

Control Card Management					×
PWR2 SPR5 P1 P PWR2 XQ1 P2 P SV5 XQ2 P3 P MGMTRLARM PA P3	6E1 6E5 6E9 6E13 6E2 6E6 6E10 6E14 6E3 6E7 6E1 6E15 6E4 6E8 6E12 6E16		1 2 3 4 5 6 7 8 00 00 00 00 00 00 00 00	9 10 11 12 MGMT	
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Mirror MacAddress Management SoliProadcastStormSuppressiv Port VLAN Manegement Port VLAN Config Port VLAN Config Port VLAN Translation CinC Config STP Management Stp Global Set Stp Ort Set ACL Management Group ACL Rule Current ACL RULE	Port ID GE1 GE2 GE3 GE4 GE5 GE6 GE7 GE10 GE11 GE12 GE3 GE4 GE5 GE6 GE7 GE10 GE11 GE12 GE13 GE14 GE15 GE16 XGE1 XGE2 PON1 PON2 PON3	Vian Priority 2 0 3 4 0	PVid 100 1 200 300 1 1 1 1 1 1 1 1 1 1 1 1 1	VLANMode Mismi VLANMode access access access	Modfiy Config Co
☐ Apply to Port ACL ☐ Qos Global Config	PON5 PON6 PON7 PON8	0 0 0 0	1 1 1 1 Refresh	access access access access access	Config Config Config Config

Step 2:

At this point, the following page will appear. Firstly, switch VLAN mode into hybrid mode in this page.

Control Card Management	Х
PWR2 SPRS P1 P PWR2 XG1 P2 P SYS XG2 P3 P MGMTRLARM P4 P	8 61: 65: 65: 66: 73 9 61: 65: 66: 66: 74: 1 9 61: 65: 66: 66: 66: 66: 66: 66: 66: 66: 66
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressi Port VLAN Kanegement Vian List Port VLAN Translation On Config STP Management Stp Global Set Stp Port Set ACL Rule AC	Port VLAN Config Port UD Vian Priority 4 Pvid 300 ⁻ VLANMode access Refresh Set Back Prompt Set Vian Priority.4;Pvid:300],success Back

Step 3:

Then, set the VLAN priority to 4, the PVID to 300, Click the **"Set"** and then click **"OK**" in the pop-up window.

Control Card Management		
PWR1 SPRS P1 P PWR2 XG1 P2 P SYS XG2 P3 P MGM78LARM P3 P	6 GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE1 GE15 GE4 GE8 GE12 GE16	
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressi Port VLAN Management Vian List Port VLAN Config Port VLAN Translation Gind Config StP Management Stp Global Set Stp Port Set ACL Rule Current ACL RULE Apply to Port ACL Qos Global Config	Port VLAN Config Port ID PVid	Vian Priority 300 - VLANMode access Refresh Set Back Prompt X i Set[Vian Priority:4,PVid:300],success iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii

Step 4:

The allowed untag and tag VLAN of the hybrid mode need to be added in the **'VLAN List'**. You can refer to chapter 6.2.9.2 and 6.2.9.3.

Control Card Management				×
PWR1 SPR5 P1 PWR2 XG1 P2 SV5 XG2 P3 MGMTRLARM P1	5 GE1 GE5 GE9 GE13 6 GE2 GE6 GE10 GE14 1 2 7 GE3 GE7 GE11 GE15 6 GE4 GE8 GE12 GE16		1 2 3 4 5 6 7 6 00 00 00 00 00 00 00 0	8 13 14 15 16 Console 9 10 11 12 MiGMT RST
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute NacAdress Management NacAdress Management Port VLAN Config Port VLAN Config Port VLAN Config STP Management Stip Global Set Stip Port Set ACL Management Group ACL Rule Apply to Port ACL ADD Global Config	VLAN List Selected VLAN ID 1 Vian 10 100 Vian 10 200 Vian 20 300 Vian 30	Vame Taq Port Tag/UNTag Port VLAN ID 1 Tag Model tag Member Port GE1 GE2 GE3 GE7 GE8 GE9 GE13 GE14 ØGE15 Pon1 Pon2 Pon3 Pon7 Pon8	UnTan Po 55 76 76 76 76 76 76 76 76 76 76	rt Modfly EB;GE8;GE9;GE10-GE12;GE16;XGE1;XGE2;Pon1-P Config GE15 Config GE15 Config Config

Add VLAN 301 with tag:

Add VLAN 302 with untag:

Control Card Management			
PWRLSPRS P1 PWR2XG3 P2 SYSXG2 P3 MGMTRLARM P4	5 673 675 676 673 5 672 676 675 674 1 2 3 7 673 677 673 675 675 1 6 6 674 678 672 675		
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute Ovidth Card Attribute	VLAN List Selected VLAN ID VLAN Name 1 Vlan1 C 200 Vlan200 F 300 Vlan300 F	ag Port E15 on1 on1	UnTag Port Modify GE2;GE5;GE6;GE8;GE9;GE10-GE12;GE16;XGE1;XGE2;Pon1-P Config GE1;GE7;GE13 Config GE2;GE14;GE15 Config GE4 Config
SwitchCard Mirror SwitchCard Mirror MacAddress Management SoniBroadcastStormSuppressi Port VLAN Management Oral List Port VLAN Config Port VLAN Config		Tag/UNTag Port VLAN ID Tag Model untag Member Port	
QinQ Config STP Management Stp Global Set Stp Port Set ACL Rule ACL Rule Current ACL RULE Analy to Port ACL		GE1 ♥ GE2 GE3 GE4 ♥ GE5 GE7 ♥ GE8 ♥ GE9 ♥ GE10 ♥ GE1 GE13 GE14 GE15 ♥ GE16 ♥ XGE ♥ Pon1 ♥ Pon2 ♥ Pon3 ♥ Pon4 ♥ Pon3	i
Qos Global Config	Select All Delete	QK Cancel	

6.2.9.5 OLT Port VLAN Translation Configuration

The OLT port VLAN translation means the CVLAN from the user side (means PON ports) of the OLT is translated into the SVLAN on the network side (means uplink ports). Details are as follows.

Double click the 'Switch Control Card' icon on the left side of the main page, turn on the 'Control Card Management' window, and enter the 'Port VLAN Translation' page. Typical page is as follows.

P Control Card Management			×
PWR1 SPRS P1 P5 PWR2 X01 P2 P6 SVS X02 P3 P7 MGMTL48M P4 P6	GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE11 GE15 GE4 GE3 GE12 GE16		14 15 16 Console 10 11 12 MSMT
OLT Device GPON	Port GE1 CVLAN ID Port VI AN Transla	1 × SVLAN ID	▼ 1 ⁻ -
Management Config	Port Name	CVLAN ID SVLA	N ID
SevichCard Attribute SwitchCard Attribute SwitchCard Attribute SwitchCard Minore MacAddress Management SniBroadcastStormSuppressie Port VLAN Manegement Vital List Port VLAN Config Port VLAN Config STP Management Sin Config STP Management Stic Global Set Store Act. Rule Current ACL. RULE Apply to Port ACL Qos Global Config		Refresh Set Delete	

Port VLAN Translation page can be used to view and configure the port, CVLAN ID, and SVLAN ID. The following will be a brief introduction.

Port

Display the corresponding port number, GE represents the uplink port, XGE represents the 10G port, PON represents the PON interface, the serial number represents the number of ports.

CVLAN ID

Represents the VLAN before the translation (VLAN of the PON port), with a value of 1-4094.

SVLAN ID

Represents the converted VLAN (VLAN of the uplink port), with a value of 1-4094.

'Set' button

When you have configured the above items, you can click the '**Set'** button to complete the configuration. At this point, the translate item will appear in the VLAN translation list.

'Delete' button

Select the entry you want to delete in the VLAN translation list and click the '**Delete**' button to delete the specified entry.

[Example of VLAN Translation Configuration]

Example: Converts a packet with a VLAN of 100 on the user side of the GE1 port to VLAN 200 on the network side. The configuration steps are as follows.

Step 1:

Click on the **'Port VLAN Translation'**, Select GE1 in the right page, CVLAN set to 100, SVLAN set to 200, click on the following **'Set'** button, and then click the **'OK'** button in the **'Prompt'** window to complete the configuration.

Control Card Management			×
PWR1 SPR5 P1 F5 PWR2 XG1 P2 P6 SV5 XG2 P3 F7 MGMTLARM P4 F8	GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE11 GE15 GE4 GE3 GE12 GE16		13 14 15 16 Console 9 10 11 12 MGMT RST
OLT Device GPON	Port GE1 CVLAN ID Port VLAN Translat	1 - SVLAN ID	[♥] 1 ⁺ +
Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management SwitchCard Mirror MacAddress Management Orit VLAN Manegement Port VLAN Manegement Oring Config STP Management Offic Config Stp Port Set Act Management Group Act Management Act Management Group Act Management Act Management Act Management Act Management Act Management Act Management Act Management Act Management Act Management Act Management Act Management	Port Name	CVLAN ID Prompt X i Add CVLAN:1 -SVLAN:1 GE1 success 通行 Refresh Set Delete	SVLAN ID

Step 2:

Click the 'Refresh' button to view the VLAN translation list that you just configured.

Control Card Management				×
PWR1 SPRS P1 F5 PWR2 X01 F2 P6 SYS X02 F2 F7 MGMTLARM F4 F8	बि. बी. बी. बी. बी. दी. बी. बी. 1 2 3 4 5 बी. बी. बी. बी. बी. कि. कि. कि. कि. बी. बी. बी. बी. बी. की. की. की. की. की.	6 7 8 1 2 3 4 5 • • • • • • • • • • • • • • • • • • •	6 7 8 9 10 11 12 MGMT R5T	
OLT Device GPON	Port GE1			▼
System Status	- Port VI AN Translation			
Management Config	Port Name	CVI AN ID	SVI AN ID	
- SwitchCard Attribute	GE1	1	1	
SwitchCardTrunkGroupConfig				
- SniBroadcastStormSuppressi				
Port VLAN Manegement				
Port VLAN Translation				
QinQ Config				
Stp Global Set				
Stp Port Set				
ACL Management Group				
- Current ACL RULE				
Apply to Port ACL				
Qos Global Config				
		Refresh Set	Delete	
Į				

6.2.9.6 OLT Port QinQ VLAN Configuration

QinQ technology (also known as Stacked VLAN or Double VLAN). The standard is from IEEE 802.1ad, which encapsulates the user's private VLAN tag in the public VLAN tag, so that the packet carries the two-layer VLAN tag through the operator's backbone network (public network).

QinQ technology effectively extends the number of VLAN by stacking two 802.1Q headers in Ethernet frames so that the number of VLAN can be up to 4096x4096.

TP-Link GPON QinQ configurations are mainly accomplished in the PON Port.:

Double click the 'Switch Control Card' on the left side of the main page to open the 'Control Card Management' window and enter the 'QinQ Config' page. The typical page is as follows.



The QinQ config window can be used to view and configure the PON port ID, Start VLAN ID, End VLAN ID, Outer VLAN ID, and Outer VLAN Priority. The following will be a brief introduction.

Port Name

Displays the corresponding port number, PON represents the PON interface, the serial number followed by represents the port number.

Start VLAN ID, End VLAN ID, Outer VLAN ID

Start Customer VLAN ID (CVLAN): Represents the initial VLAN ID (when entering the PON port) of the inner layer VLAN, with the value of 1-4094;

END Customer VLAN ID (CVLAN): Represents the termination VLAN ID (when entering the PON port) of the inner layer VLAN, with a value of 1-4094;

Service provider VLAN (SVLAN): Represents another layer of VLAN after the inner layer VLAN, with a value of 1-4094;

When a packet enters the PON port with the VLAN ranges from the start VLAN to the end VLAN, a layer of outer VLAN (SVLAN) is added to the packet, and the packet at this time is a packet with double layer VLAN.

SVLAN Priority

Represents the priority of SVLAN, with a value of 0-7, in which 0 is the lowest priority and 7 is the highest priority.

'Add' button

Click the **'Add'** button pops up the window as shown below. In this window, you can configure the start CVLAN, end CVLAN, SVLAN, and priority. Click **'OK'** button to complete the configuration.

Add QinQ	×
Start CVLAN End CVLAN	
SVLAN	1
Priority	copy cvlan pri 🗨
<u>o</u> ĸ	Cancel

'Set' button

When you have added all the items, you can click the 'Set' button to complete the configuration.

'Delete' button

Select the items to be deleted in the QinQ config list, and then click '**Delete**' button to delete the specified entry.

[Example of VLAN QinQ Configuration]

Example: PON 8 received VLAN100-103 packets are marked with a layer of outer VLAN 200, the priority of 0.

Step 1:

Click the **'Add'** button, pop up the **'Add QinQ'** window, configure the start VLAN to 100, end VLAN to 103, SVLAN to 200, the priority to 0. Then click **'OK'**.

	~
Рийса сяль ра ла ла 1 2 3 5 6 7 8 1 2 3 4 15 16 Console Рийса хай 57 78 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4	
OLT Device @PON Image: Pon-1 On Config System Status Management Config Stat/Vanid Device Uprate Management SwithCard Athibute SwithCard Athibute SwithCard Mirror SwithCard Mirror Stat/Vanid SwithCard Mirror SwithCard Mirror SwithCard Mirror SwithCard Mirror SoliBroadcastStomSuppressi Stat CVLAN Port VLAN Manegement System System Stat VAN Tanslation SwithCard Mirror Sp Fort Set CAL Management for pp ACL Rule OK Cos Global Config Refresh Set Add	

Step 2:

Click the 'OK' button in the prompt window that appears.

Control Card Management					
PWR3 SPRS P3 P3 PWR2 XG1 P2 P SYS XG2 P3 P7 MGMTBLARM P4 P6	GE1 GE5 GE9 GE13 GE2 GE6 GE10 GE14 GE3 GE7 GE1 GE15 GE4 GE8 GE12 GE16		1 2 3 4 40 40 40 40 1		4 15 16 Console 0 11 12 MGMT RST
OLT Device GPON	Port Name Pon-1				
System Status	StartVlanId	EndVlanId	CosDetermine	SVIanId	SVIAN Priority
Device Upgrade Management SwitchCard Mirror MacAddress Management SnitchCard Mirror MacAddress Management SnitchCard Mirror MacAddress Management SnitchCard Mirror MacAddress Management SnitchCard Mirror Port VLAN Manegement Port VLAN Translation Oind Config STP Management Stp Port Set Act. Management Group Act. Rule Current ACL RULE Apply to Port ACL Oos Global Config		Prompt	Add QinQ[CVLAN: 1-1,SVL 确定	Add Delete	

At this point, we can see our newly added QinQ entries in the QinQ config list.

Control Card Management					×
PWR2 SPRS P1 P PWR2 XG1 P2 P SVS XG2 P3 P MGMTBLARM P4 P	5 GE1 GE5 GE9 GE13 6 GE2 GE6 GE10 GE14 7 GE5 GE7 GE11 GE15 8 GE4 GE8 GE12 GE16		1 2 3 4 5 6 00 00 00 00 00		5 16 Console 1 12 MGMT RST
OLT Device GPON	Port Name Pon-1				v
	StartVlanId	EndVlanId	CosDetermine	SVIanId	SVIAN Priority
Management Config	1	1	NO	1	0
Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressi Port VLAN Manegement Port VLAN Translation Oin Config STP Management Stp Global Set Stp Adagement Group ACL Rule ACL Rule Aply to Port ACL Gos Global Config		Refresh	Set Add	Delete	

6.2.10 OLT STP Management

STP is the abbreviation of spanning tree protocol. The protocol can be applied to the loop network, through a certain algorithm to achieve path redundancy, while the loop network is trimmed into a loopless tree network.

The main application of the spanning tree protocol is to avoid the network loopback in the LAN and solve the "broadcast storm" problem of the ring-to-ring Ethernet network. In a sense, it is a kind of network protection technology that can eliminate the loop connection caused by mistake or accident.

6.2.10.1 STP Global Config

Double click the 'Switch Control Card' icon on the left side of the main page, open the 'Control Card Management' window and enter the 'STP Global Set' window of 'STP Management'.

Control Card Management						×
PWR2 SPRS P2 P2 PWR2 XC1 P2 P SY6 XC2 P3 P MGMT8LARM P4 P	681 685 685 683 682 685 681 685 1 683 687 681 685 1 684 686 682 686 1	2 3 4 5 6 7 8 • • • • • • •	1 2 3 4 00 00 00 0	5 6 7 8 1 10 10 10 10	13 14 15 16 9 10 11 12	Console RST MGMT
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Minote SwitchCard Attribute SwitchCard Minor MacAddress Management Ont VLAN Config Port VLAN Config Port VLAN Config Port VLAN Config Of VIAN Config Strp Management Stip Global Set Stp Port Set ACL Rule ADJ VI Set ACL Rule ADJ VI Port ACL Cos Global Config	Stp Global Set STP Version(STP/RSTP) TimeSinceTopologyChange DesignatedRoot RootPort HelloTime(s) ForwardDelay(s) BridgeHelloTime(s) BridgeTxRate(kbps)	Imp 0 hours, 0 minutes, 0 seconds. 00:00:00:00:00 0 0	2 - 3 - - -	Priority TopologyChangeTimes RootCost MaxAgeTime(s) HoldTime(s) BridgeMaxAge(s) BridgeForwardDelay(s) STP Enable	0 0 0 1 33 1 false	32,768 + - 20 + - 15 + - -

As shown above, in '**STP Global Set**' page, you can view the STP Version, Priority, Time Since Topology Change, Topology Change Times, Designate Root, Root Cost, Root Port, Max Age Time(s), Hello Time(s), Hold Time(s), Forward Delay(s), Bridge Tx Rate(kbps)and STP Enable State. Among them, Priority, Max Age Time(s), Hello Time(s), Forward Delay(s), Bridge Tx Rate(kbps) and STP Enable State can be modified. Specific parameters are introduced as follows:

STP Global Set

> STP Version

The default setting of system is RSTP.

> Priority

Bridge priority is used to select the root bridges of the network. The smaller the value, the higher the priority, the greater chance of being selected as the root bridge. You can set a bridge with a priority value of 0, 4096, 8192, 12288,16384, 20480, 24576, 28672, 32768, 36864, 40960, 45056, 49152,53248, 57344 and 61440.

Time Since Topology Change

The duration of switching from the previous topology state to the current state.

Topology Change Times

The number of topology changes caused by the change of the port or link state in the network topology.

Designate Root

You can designate root bridge through bridge priority. In case of not designating priority, the smaller the MAC address, and the greater the chance of being the designated root bridge.

Root Cost

To calculate the link cost, the port with the lowest root link cost will become the forwarding port in case of forwarding the same network bridge ID. The legal range is 1 ~ 20000000.

Root Port

The number of ports that are passed by the path of from non-root bridge to the root bridge.

Max Age Time

The lifetime of the BPDU message received from the adjacent bridge of Designated port. The legal range is 6~40, in s.

Hello Time

Set the bridge how often to send a BPDU message. The setting range time is 1~2, in s.

➢ Hold Time

When the network bridge changes in topology, maintaining the time of monitoring and learning state before sending packets.

Forward Delay

With downward compatibility STP network bridge, for port of working in the STP mode, forwarding delay timer designated the port before the transition to the learning state the time of in discarding state, and before the learning state transition to the forwarding state in the time of learning state. The legal range is 4~30, in s.

> Bridge Tx Rate

Set the number of maximum sending BPDU messages in 1 second. The setting range of 1~10, in frame/s.

STP Enable State Configuration

Open or close the RSTP function by setting the 'RSTP State' to 'Enable' or 'Disable'.

Note: When you set Max Age Time, Hello Time, Forward Delay, first input setting value, then click **'Set'** button, finally click **'Refresh'** button, thus configuring successfully. And consistent with three contents shown below.

6.2.10.2 STP Port Config

Double click the 'Switch Control Card' icon on the left side of the main page, open the 'Control Card Management' window and enter the 'STP Port Set' window of 'STP Management'.

Control Card Management পদের চলত হয় দদের ফরত হয় দদের মন্দ্র হয় স্বর্গ মন্দ্র স্বর্গ মন্দ্র হয় স্বর্গ মন্দ্র হয় স্বর্গ মন্দ্র মন্দ্র হয় স্বর্গ মন্দ্র হয় স্বর্গ মন্দ্র স্বর্গ মন্দ্র হয় স্বর্গ মন্দ্র স্বর্গ মন্দ্র হয় স্বর্গ মন্দ্র স্বর্গ মন্দ্র স্বর্গ মন্দ্র স্বর্গ মন্দ্র স্বর্গ মন্দ্র স্বর্গ মন্দ্র স্বর্গ মন্দ্র স্বর্গ মন্দের্ব স্বর্গ মন্দ্র স্বর্গ মন্দ্র স্	6E1 6E5 6E9 6E2 6E6 6E20 6E3 6E7 6E1 6E4 6E5 6E12	GE13 GE14 1 GE15 D	2 3 4 11 1 1 1	567 000	8 1 1	2 3 1 00 00 1	4 5 6 10 100 100	7 8 00 00	13 14 9 10	15 16 Cor 11 12 M	sole RST	>
OLT Device GPON	Device ID	PortStatus	PortPriority	PortPathCost	DesignatedR oot ID	ForwardTrans	ProtocolMigra ionEnable	a EdgePortAdr inStatus	n EdgePortOp Status	er PortPointToP ointAdminSta	PortPointToP t ointOperStatu	Port STPEnab led
Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Mitnote SwitchCard Mitnor MacAddress Management SniBroadcastStormSuppressi Port VLAN Manegement Vian List Port VLAN Config Port VLAN Config Port VLAN Config Port VLAN Config Port VLAN Config StP Management Stp Global Set Stp Port Set ACL Management Group ACL Rule Current ACL RULE Apply to Port ACL Qos Global Config	GE1 GE2 GE3 GE4 GE5 GE6 GE7 GE8 GE9 GE10 GE11 GE12 GE13 GE14 GE15 GE16 XGE1 XGE2	disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled disabled	128 128 128 128 128 128 128 128 128 128	20000 20000 20000 20000 20000 20000 20000 20000 20000 20000 20000 20000 20000 20000 20000 20000 20000	00:00:00:00:00: 00:00:00:00:00: 00:00:00: 00:00:00: 00:00:00: 00:00:00: 00:00:00: 00:00:00: 00:00:00: 00:00:00: 00:00:00: 00:00:00: 00:00: 00:00:00: 00:00:	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise Taise	NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge NEdge	false false false false false false false false false false false false false false false false false	auto auto auto auto auto auto auto auto	true true true true true true true true	taise faise faise faise faise faise faise faise faise faise faise faise faise faise faise faise

As shown above, in **'STP Port Set'** page, you can view Device ID, Port Status, Port Priority, Port Path Cost, Designated Root ID, Forward Transitions, Protocol Migration Enable, Edge Port Admin Status, Edge Port Oper Status, Port Point to Point Admin Status, Port Point to Port Oper Status and Port STP Enabled Status. In addition, you can modify Port Priority, Port Path Cost, Protocol Migration Enable, Edge Port Admin Status and Port Point to Point Admin Status. Specific parameters are introduced as follows:

Port Status

STP Port Status has five types, including disable, learning, listening, forwarding and blocking.

Disable: In the invalid status, to be a valid port, first switch to the blocking port.

Learning: In the learning state, the port is adding addresses to its forwarding database, but does not forward packets.

Listening: In the listening state, the port is waiting to receive BPDU packet, and BPDU may tell the port to return to the blocking state.

Forwarding: In the forwarding state, the port is forwarding the packet.

Blocking: In the blocking state, the port is blocked and can not forward or receive packets.

Port Priority

When the link cost and the sending network bridge ID is the same, the lowest priority port will be the forward port. The parameter value can be set to $0 \sim 440$, and the step length is 16.

Designated Root ID

The BID in the BPDU message consists of two parts, the bridge priority and the bridge MAC. The bridge ID is only. Switches selects the smallest BID switch as the root bridge in the network.

Forward Transitions

The port consists of five status. Status transitions need to go through status transition time.

Protocol Migration Enable

This means that the device supports RTSP, and if the port is enabled, the port will automatically migrate to STP compatible mode when the port is connected to the device running the STP protocol. **'True'** means opening this function, and **'False'** means closing this function.

Edge Port Admin Status

You can use this option to set whether it is an edge port. **'Edge'** is an edge port, and **'NEdge'** is a non - edge port.

Edge Port Oper Status

This option indicates whether the current port is in the edge port state. 'False' indicates that the port is not in an edge state, and 'Ture' indicates the status of the port on the edge. The edge port does not need to go through the 'Discarding-learning-forwarding' step and directly switch to the forwarding status.

Port Point to Point Admin Status

You can use this option to set whether the port is a point-to-point port, including 'Auto', 'Ture' and 'False' three options. 'Ture' is to set this port to point-to-point port, and 'False' is to set this port to non point-to-point port. 'Auto' is dependent on the STP protocol itself. Point-to- point ports allow fast switching to forwarding status, and non point-to-point ports need to go through discarding-learning-forwarding step to switch to forwarding status.

Port Point to Port Oper Status

The option is to specify the point-to- point port state in which the current port is actually located.

Prompt: Some of the parameter explanations are described in the previous section, which are not repeated here. You can go to the previous section to inquire.

6.2.11 ACL Management

ACL is **'Access Control List'**. Through configuring a serial of matching rules to filter specific data packets, thus identifying objects that needs to be filtered. After identifying specific objects, according to preset policy permitting or denying the corresponding data packets pass. The process of ACL filter message flow prepares for QoS.

6.2.11.1 Configuration ACL Rule

ACL has three types, including basic ACL, its Id range from 2000 to 2999, only matching source IP address; advanced ACL, its Id range from 3000 to 4999, being able to matching source IP address, destination IP address, source port, destination port, DSCP and IP message type; link ACL, its Id range from 5000 to 5999, being able to match source mac, destination mac, VLAN Id and Ethernet type.

6.2.11.1.1 Basic ACL Configuration

Double click the **'Switch Control Card'** icon on the left side of the main interface, open the **'Control Card Management'** window and enter the **'ACL Rule'** window of **'ACL Management'** page. Click the pull-down menu of ACL Type, and choose basic acl(2000-2999) option.

Control Card Management		×
PWKI SPPS PI PWK2 XGI P2 SVS XG2 P3 MGMTLLARM P4	6 61 65 66 61 65 66 61 66	
OLT Device GPON	ACL Type basic ad(2000-2999)	-
System Status	ACL List Rule Index Que	ery
Management Config Device Upgrade Management SwitchCard Attribute	Basic Config Matched SourselP ACL Action	-
SwitchCard Mirror MacAddress Management SoliPoadcastStormSuppressiv Port VLAN Management SoliPoadcastStormSuppressiv Port VLAN Config Port VLAN Config OinQ Config STP Management	SourseIP Wildcard-Mask	
Stp Global Set Stp Port Set	Mark Model value(0-7)	0 -
ACL Management Group ACL Rule	Apply to port	
Current ACL RULE	Port Direction	
Qos Global Config	Refresh Set Delete	

As above 'Basic ACL' page, you can set the following configuration parameters:

ACL List

ACL List, the set of ACL entries, this can inquire one of ACL according to inputting ACL Id and rule id.

Rule Index

ACL Rule Index, also rule id, and the range of value is 1-16.

Basic configuration

Matched source IP

Configure matched source IP address of ACL Rule, in this format: A.B.C.D.

ACL Action

ACL Action configuration, including '**permit**', '**deny**' and '**mark**' three options, indicates specific parameters of permitting or denying matching.

Source IP Wildcard-Mask

Configure matched source IP Wildcard-Mask address of ACL Rule. IP Wildcard-Mask address is reverse address of IP sub-net mask. Example for: IP is 192.168.5.123, and its IP Wild-Mask is 0.0.0.225.

Mark Model

This is Mark Model, only applied in when ACL Action is 'mark', including 'null', '802.1p', 'VLAN id',' TOS PRECEDENCE' and 'DSCP'.

≻ 802.1p

For the traffic priority LAN level 2 QoS/CoS protocol, the protocol header includes a 3-bit priority field with a value range of 0-7, which supports grouping packets into various traffic types.

VLAN id

VLAN identifier, with a value range of 0-4094.

> TOS PRECEDENCE

TOS is a field of IP Message, with indicating type of service. PRECEDENCE is a 3bit field in TOS to indicate IP priority with a value range of 0-7.

> DSCP

DSCP is 'Differentiated Services Code Point', Which provides the standard of differentiated service for QoS with a 6bit field, the value range is 0-63.

Apply to port

> Port

ACL Rule applies to ports, including uplink ports and PON ports.

Direction

ACL Rule applies to direction of port, including 'ingress' and ' egress'.

[Example of Basic ACL configuration]

Example: Configure a basic ACL, and ID is 2001. Source IP is 192.168.5.205, and Rule Action is **'permit'**, as show below:

Control Card Management	×	:
PWR1 SPRS P1 F5 PWR2 X01 P2 P6 SVS X02 P3 F7 MGMTLLARM P4 F8	•••••••••••••••••••••••••••••	
OLT Device GPON	ACL Type basic ad(2000-2999)	
System Status	ACL List Query	
— Management Config — Device Upgrade Management — SwitchCard Attribute	Basic Config Matched SourseIP 192.168.5.205 ACL Action	
 SwitchCardTrunkGroupConfig SwitchCard Mirror MacAddress Management 	SourseIP Wildcard-Mask 0.0.0.255	
 SniBroadcastStormSuppression Port VLAN Manegement Vian List 		
A Port VLAN Config Port VLAN Translation QinQ Config		
STP Management Stp Global Set		
Stp Port Set	Apply to port	
- ACL Rule - Current ACL RULE	Port Direction	
Qos Global Config	Refresh Set Delete	

After completing those configurations, the configuration takes effect through the **'Set'** button at the bottom of page, thus creating a basic ACL Rule successfully. Deleting a ACL rule created through the **'Delete'** button. Updating a ACL Rule created through the **'Refresh'** button.

6.2.11.1.2 Advanced ACL Configuration

Double click the **'Switch Control Card'** icon on the left side of the main interface, open the **'Control Card Management'** window and enter the **'ACL Rule'** window of **'ACL Management'**. Click the pull-down menu of ACL Type, and choose advanced acl(3000-4999) option.

Control Card Management			×
PWR2 SPRS P2 F5 PWR2 XED F2 F6 SYS XE2 F3 F7 MGMTLARM F4 F8	0E1 0E5 0E9 0E3 0E2 0E9 0E10 0E14 1 0E3 0E7 0E11 0E15 1 0E3 0E7 0E11 0E15 1 1 0E3 0E7 0E11 0E15 1 1 0E4 0E3 0E12 0E16 1 1		
OLT Device GPON	ACL Type advanced acl(300)-4999)	-
System Status	ACL List	Rule Index	Query
Management Config Device Upgrade Management	Basic Config		
SwitchCard Attribute	Matched SourselP	Matched DestinationIP	
	Matched SoursePort	0 + Matched DestinationPort	0 -
MacAddress Management	Matched Dscp	0 Matched lpMessageType	0 +
Port VLAN Manegement	ACL Action	SourselP Wildcard-Mask	
Vian List Port VLAN Config	Matched DestinationIPMask		
Port VLAN Translation QinQ Config STP Management		(IP Message Type:<0-255>,ip(0),icmp(1),ipinip(4),tcp(6),udp(17))	
- Stp Global Set	Mark Model	value(0-7)	0 -
- Stp Port Set	Apply to port		
- ACL Rule	Port		
Apply to Port ACL Qos Global Config		Refresh Set Delete	
,			

As above 'Advanced ACL Rule' page, compared with 'Basic ACL Rule' page, also set the following configuration parameters.

Basic configuration

Matched destination IP

Configure matched destination IP address of ACL Rule, in this format: A.B.C.D.

Matched source port

Configure matched source port Id of ACL Rule to match IP Protocol to TCP/UDP, ranging from 0 to 65535.

Matched destination port

Configure matched destination port Id of ACL Rule to match IP Protocol to TCP/UDP, ranging from 0 to 65535.

Matched DSCP

Configure matched DSCP of ACL Rule. DSCP is 'Differentiated Services Code Point'. In the TOS identification byte of each data packet IP header, taking advantage of used 6 bit and unused 2 bit to prioritize by coding value. DSCP user 6 bit, the value range of 0-63.

Matched IP Message Type

Configure matched IP Message Type of ACL Rule, including IP, ICMP, IPINIP, UDP, TCP and so on, the value range of 0-255.

Matched Destination IP Wildcard-Mask

Configure matched destination IP Wildcard-Mask address of ACL Rule. IP Wildcard-Mask address is reverse address of IP sub-net mask. Example for: IP is 192.168.5.205, and its IP Wild-Mask is 0.0.0.255.

[Example of Advanced ACL configuration]

Example: Configure an advanced ACL, and ID is 3001. Rule Action is '**Permit**', as show below:

2 Control Card Management				×
PWR3 5R5 P1 P5 PWR2 X01 P2 P6 SY5 X02 P3 P7 MGMTULARM P4 P5	68. 68. 68.3 67. 67.6 68.0 1 67.5 67.7 67.1 1 67.6 67.7 67.1 1 67.6 67.7 67.1 1			Console MGMT RST
OLT Device GPON	ACL Type advanced acl(300	0-4999)		•
System Status	ACL List 30001		Rule Index 1	Query
Management Config	Basic Config			
SwitchCard Attribute	Matched SourselP	192.168.5.205	Matched DestinationIP	
SwitchCardTrunkGroupConfig SwitchCard Mirror	Matched SoursePort		0 Matched DestinationPort	0 *
MacAddress Management	Matched Dscp		0 Matched IpMessageType	0 -
Port VLAN Manegement	ACL Action		SourselP Wildcard-Mask 0.0.0.255	
- Vlan List Port VLAN Config	Matched DestinationIPMask	0.0.0.255		
Port VLAN Translation QinQ Config E- STP Management		(IP Message	Type:<0-255>,ip(0),icmp(1),ipinip(4),tcp(6),udp(17))	
Stp Global Set	Mark Model		value(0-7)	0
ACL Management Group	Apply to port			
- Current ACL RULE	Port		▼ Direction	•
Apply to Port ACL Qos Global Config		Refi	resh Set Delete	
e				

After completing those configurations, the configuration takes effect through the **'Set'** button at the bottom of page, thus creating an advanced ACL Rule successfully. Deleting a ACL rule created through the **'Delete'** button. Updating a ACL Rule created through the **'Refresh'** button.

6.2.11.1.3 Link ACL Configuration

Double click the **'Switch Control Card'** icon on the left side of the main interface, open the **'Control Card Management'** window and enter the **'ACL Rule'** window of **'ACL Management'**. Click the pull-down menu of ACL Type, and choose link acl(5000-5999) option.

P Control Card Management			×
PWR1 SPR5 P1 F5 PWR2 701 F2 F6 SYS 702 F2 F7 MGM/3LARM F4 F6	GE1 GE3 GE3 GE3 GE2 GE6 GE1 GE3 1 2 GE3 GE7 GE1 GE1 1 2 GE3 GE7 GE1 GE1 1 2 GE3 GE7 GE1 GE1 1 2 GE4 GE3 GE7 GE1 1 1	2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
OLT Device GPON	ACL Type advanced acl(300	0-4999)	-
	ACL List	Rule Index 1 Qu	Jery
Management Config	Basic Config		
SwitchCard Attribute	Matched SourselP	Matched DestinationIP	
SwitchCard Mirror	Matched SoursePort	0 - Matched DestinationPort	0 -
	Matched Dscp	0 Matched IpMessageType	0
Port VLAN Manegement Vian List	ACL ACIION	SourseiP Wildcard-Mask	
Port VLAN Config	Matched Destination Phase		
QinQ Config		(IP Message Type:<0-255>,ip(0),icmp(1),ipinip(4),tcp(6),udp(17))	
- Stp Global Set	Mark Model	value(0-7)	0
ACL Management Group	Apply to port		
- ACL Rule - Current ACL RULE	Port	▼ Direction	-
Apply to Port ACL Qos Global Config		Refresh Set Delete	

As above 'Link ACL Rule' page, compared with 'Basic and Advanced ACL Rule' page, also set the following configuration parameters.

Basic configuration

Matched source MAC

Configure matched source MAC address of ACL Rule, only applied in link ACL Rule, in the format: AA-BB-CC-DD-EE-FF

Matched destination MAC

Configure matched destination MAC address of ACL Rule, only applied in link ACL Rule, in the format: AA-BB-CC-DD-EE-FF $_{\circ}$

Match VLAN Id

Configure matched VLAN of ACL Rule, only applied in link ACL Rule. The value range of Id is 1-4094.

Match Ethernet Type

Configure matched Ethernet data frame type of ACL Rule, only applied in link ACL Rule, including IP(2048), ARP(2054), SNMP(33100), mpls-unicast(34887), mpls-multicast(34888) and so on.

Matched source MAC wildcard mask

Configure matched source MAC wildcard mask of ACL Rule, only applied in link ACL Rule. MAC wildcard mask of a single host is 00-00-00-00-00-00. MAC wildcard mask of any host is FF-FF-FF-FF-FF-FF.

Matched destination MAC wildcard mask

Configure matched destination MAC wildcard mask of ACL Rule, only applied in link ACL Rule. MAC wildcard mask of a single host is 00-00-00-00-00. MAC wildcard mask of any host is FF-FF-FF-FF-FF-FF.

[Example of LINK ACL configuration]

Example: Configure a link ACL, and ID is 5001. Add outer VLAN 500 to MAC address. As shown below:

Control Card Management			×
PWRR SPRS P1 P PWRR XG3 P2 P SVG XG2 P3 P MGMTRLARM P4 P	621 625 620 623 622 625 620 624 1 623 627 621 625 1 623 627 621 625 1	2 3 4 5 6 7 8 1 3 14 15 16 1 3 14 15 16	
OLT Device GPON	ACL Type advanced acl(300	0-4999)	•
	ACL List 5001	Rule Index 1	Query
Management Config	Basic Config		
SwitchCard Attribute	Matched SourselP	Matched DestinationIP	
	Matched SoursePort	Matched DestinationPort	0 -
MacAddress Management	Matched Dscp	0 - Matched IpMessageType	0
Port VLAN Manegement	ACL Action	SourseIP Wildcard-Mask 00-00-00-00	
Port VLAN Config	Matched DestinationIPMask	00-00-00-00-00	
Port VLAN Translation QinQ Config STP Management		(IP Message Type:<0-255>,ip(0),icmp(1),ipinip(4),tcp(6),udp(17))	
Stp Global Set	Mark Model	value(0-7)	0 -
ACL Management Group	Apply to port		
Current ACL RULE	Port	▼ Direction	•
Apply to Port ACL		Refresh Set Delete	

After completing those configurations, the configuration takes effect through the **'Set'** button at the bottom of page, thus creating a link ACL Rule successfully. Deleting a ACL rule created through the **'Delete'** button. Updating a ACL Rule created through the **'Refresh'** button.

6.2.11.2 View OLT ACL Rule

Double click the 'Switch Control Card' icon on the left side of the main interface, open the 'Control Card Management' window and enter the 'Current ACL Rule' window of 'ACL Management' page.



As shown in the figure above, you can view the previously created ACL rule entries on the **'Basic Configuration'** page, where the contents are set in this page. In this page can also delete a ACL, first select an ACL rules, and then click **'Delete'** or **'Delete ACL'** button to delete the ACL rules which not applied directly to the port, if you want to delete the ACL which has been applied to the port, can only remove the binding with the port, and then delete. Update the configuration rules information by the 'Refresh' button.

6.2.11.3 View OLT Port Applied ACL Rule

Double click the 'Switch Control Card' on the left side of the main page to open the 'Control Card Management' window and enter the 'Apply to Port ACL' window of the 'ACL Management Group'.



As above, you can see the ACL that you created and applied to port, including the port number, ACL ID, and the direction of the application port .Through the '**delete**' button, you can delete a ACL rule and update the rule information of the configuration through the '**Refresh**' button.

6.2.12 OLT QoS Configuration

QoS Refers to a network can use a variety of basic technology, to provide better services for the specified network application, is a kind of network optimizing mechanism, is used to solve the problem of network delay and blocking issue.

Double click the 'Switch Control Card' icon on the left side of the main interface, open the 'Control Card Management' window and enter the 'Qos Global Information' page.

Control Card Management	X
PWR1 SPRS P1 P PWR2 XG1 P2 P SYS XG2 P3 P MGM7LLARM P4 P	8 61 65 613 1 1 15 16 Console 9 612 67 67 1 2 3 5 6 7 8 7 6 7 8 7 6 7 8 7 6 7 8 7 6 7 8 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8
OLT Device GPON System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Minor MacAddress Management SniBroadcastStormSuppressi Port VLAN Konfig Port VLAN Config Port VLAN Config Port VLAN Config STP Management Statust Statust A Statust A Config STP Management Current ACL Rule Apply to Port ACL Cos Global Config	Qos Global Set MaxQueueCount 4 Device BaseQos Map cos0-> queue0 cos2-> queue1 cos5-> queue2 queue3 Device BaseQos Policy Policy Mode[sp Queue2 Queue3 Queue3

'Qos Global Information' management page mainly can configure 'Device BaseQos Map', 'Device BaseQos Policy', 'Queue Wieght' and 'Queue Bandwidth'. The parameters are described as follows:

Qos system parameter

Max queue count

System sets max queue count to 4. it's range from queue 0 to queue 3.

Qos management mode

System set Qos management mode to deviceBased.

Device BaseQos Map

Qos mapping table is corresponding relationship between priority and port queue. This can configure queue corresponding to the priority. The fault configuration is showing in the following table:

priority	Cos 0	Cos 1	Cos 2	Cos 3	Cos 4	Cos 5	Cos 6	Cos 7
queue	Queue 0	Queue 0	Queue 1	Queue 1	Queue 2	Queue 2	Queue 3	Queue 3

Device BaseQos Policy

Queue schedule has three modes, including sp-strict priority, WRR- Weighted Round Robin and SP+WRR. The details are follows.

> SP

Applying this mode, the system is scheduled to be dispatched strictly according to the priority of queue. Only when the high-priority queue is empty, the packets of the low priority queue can be dispatched.

> WRR

Applying this mode, it needs to configure a weight for each queue, according to the weight between the queue scheduling in turn, ensure each queue can have a certain amount of services. When the priority is the same, the weight is not the same, the larger the weight of the queue, the longer the scheduling time.

➢ SP+WRR

This mode combines the advantages of SP and WRR, and adopts SP mode when dealing with some critical business, and adopts WRR mode when dealing with some business with low real-time requirement.

Queue weight

Applying in the WRR and SP+WRR two modes, the sum of four queue weight is required to be 100. And in the WRR mode, the value of weight can't be set to 0.

Queue bandwidth

Set the size of bandwidth occupied by each queue, its range from 0kbps to 1024000kbps.

[Example of QoS configuration]

Example: Set Qos schedule mode to SP, the specific configuration is shown below:

Control Card Management	x
PWR2 SRS P2 RS PWR2 X01 P2 P6 SNS X02 P3 P7 MCMTLLARM P4 R5	•••••••••••••••••••••••••••••
OLT Device GPON	Qos Global Set MaxQueueCount 4 MangementMode deviceBased
System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAdfress Management SniBroadcastStormSuppressik Port VLAN Manegement - Vlan List - Port VLAN Config - Port VLAN Config - Port VLAN Config - Stp Global Set - Stp Global Set - Stp Global Set - Stp On Set Card Rule - Current ACL RULE - Apply to Port ACL - Dos Global Config	Device BaseQos Map cos0> queue0

Example 2: Set Qos schedule mode to WRR, the specific configuration is shown below:

Example 3: Set Qos schedule mode to SP+WRR, the specific configuration is shown below:

OLT Device GPON Cos Global Set System Status Device BaseQos Map Management Gonfig Device Grow System Card Attribute Cos 1-2 System Status Device Grow Out Config Cos 2-2 System Card Attribute Cos 1-2 System Status Cos 1-2 Out Config Cos 2-2 System Card Attribute Cos 2-2 System Card Attribute Cos 2-2 SwitchCard Attribute Cos 2-2 SwitchCard Attribute Cos 2-2 SwitchCard Attribute Cos 2-2 SwitchCard Murger Cos 2-2 Cos 2-2 Cos 2-2 Cos 2-2 Cos 2-2 <th>Control Card Management</th> <th>;</th>	Control Card Management	;
OLT Device GPON Qos Global Set System Status ManagementMode deviceBased Device Upgrade Management SwitchCard Attribute SwitchCard Attribute Cos0-> queue1 SwitchCard Attribute Cos0-> queue1	PWR1 SPR5 P1 F5 PWR2 X01 F2 P8 SYS X02 F3 F7 MGMTLARM P4 F5	6 6 6 6 6 7 8 1 2 3 4 15 16 Console 6 67 6 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 <t< td=""></t<>
System Status Device BaseQos Map Management Config cos0-> queue0 Device Upgrade Management cos1-> queue0 SwitchCard Attribute cos2-> queue1 SwitchCard Turuk/GroupConfig cos2-> queue1	OLT Device GPON	Qos Global Set MaxQueueCount 4 MangementMode deviceBased
MacAdress Management SnBroadcastStormSuppressi Port VLAN Manegement Van List Port VLAN Translation Gin Q Config B STP Management Stp Global Set Stp Fort Set ACL Management Group ACL Rule Current ACL RULE Apply to Port ACL Qoes Global Config	System Status Management Config Device Upgrade Management SwitchCard Attribute SwitchCard Attribute SwitchCard Mirror MacAddress Management SniBroadcastStormSuppressiv Port VLAN Manegement VIAN Config Port VLAN Config Port VLAN Config STP Management Stip Global Set Stream ACL Rule ACL Rule ACL Rule Apply to Port ACL Cos Global Config	Device BaseQos Map cos0-> queue0

Note: In the WRR mode, the value of weight can't be set to 0. If the value of weight has 0, Qos schedule mode is SP+WRR.

6.3 OLT PON Card Management

This section introduces OLT PON Card Management function.

Double click the '**PON Module**' icon on the left side of the main page and enter the '**PON Card Management'** window. The typical page is shown below:

Pon Card Management						>
PWRA SRR PWR2 XCC SYS XCC MCMTLLAR	5 M M GEI GEI GEI GEI GEI 1 P2 P5 GE2 GEI GEI GEI 2 P3 77 GEI GEI GEI GEI M P4 78 GE4 GEI GEI GEI 5 M P4		78123 1111 00 00 00	4 5 6 7 8 60 00 00 00	13 14 15 16 Consc 9 10 11 12 MGM	Ie RST
	Port Properties	1	1	1		
OLT Device GPON 👻	Port Name	OperationStatus	Admin Status	PerfStatsOf15minuteEnable	PerfStatsOf24hourEnable	MacAddr Learn MaxNum
	Pon-1	up	enable	false	false	0
	Pon-2	down	enable	false	false	0
- PonPort Information	Pon-3	down	enable	false	false	0
PonPort Optical Module Info	Pon-4	down	enable	false	false	0
- DBA Profile Config	Pon-5	down	enable	false	false	0
Line Profile Config	Pon-6	down	enable	false	false	0
Service Profile Config	Pon-7	down	enable	false	false	0
Traffic Profile Config	Pon-8	down	enable	false	false	0
ONU Auto Find List ONU Auth List ONU Auth Auth Rule Pots Server Sip Agent Info Sip Right Flag Config Digit Map Config Pots Profile ONU Upgrade						
			Refresh	Set		

Through this window the user can do the following management:

- ✓ Some basic management of PON port of OLT;
- ✓ PON port storm suppression configuration;

- ✓ all kinds of template (DBA profile, line profile, service profile, traffic profile);
- ✓ Pots Server configuration
- ✓ ONU upgrade
- ✓ Authenticate the registration of the ONU;
- ✓ View the optical power information of the PON port;

The following sections describe the functional modules involved in the PON card management window.

6.3.1 OLT PON Port Basic Configuration

Double click the 'PON Module' icon on the left side of the main page to enter the 'PON port information' page of the 'PON card management window':

₽ Pon Card Management						×
PWRA SPR PWR2 XCI SYS XC2 MCM TLAK	M M GE1 GE3 GE3			4 5 6 7 8 00 00 00 00	13 14 15 16 Conso 9 10 11 12 MGM	R\$T
	Port Properties					
OLT Device GPON	Port Name	OperationStatus	Admin Status	PerfStatsOf15minuteEnable	PerfStatsOf24hourEnable	MacAddr Learn MaxNum
	Pon-1	up	enable	false	false	0
	Pon-2	down	enable	false	false	0
- PonPort Information	Pon-3	down	enable	false	false	0
- PonPort Optical Module Info	Pon-4	down	enable	false	false	0
- DBA Profile Config	Pon-5	down	enable	false	false	0
- Line Profile Config	Pon-6	down	enable	false	false	0
- Service Profile Config	Pon-7	down	enable	false	false	0
- Traffic Profile Config	Pon-8	down	enable	false	false	0
ONU Aufo Find List ONU Aufo Find List ONU Aufo Aufh List ONU Aufo Aufh List Sip Agent Info Sip Right Flag Config Digit Map Config Pots Profile ONU Upgrade						
			Refresh	Set		

The **'PON port information'** property page configures and views the PON port property parameters of the OLT. The parameters are described below:

Port Name

Displays the PON port name on the OLT. This parameter is unchangeable.

Operation Status

Display the current PON port operation state, the status displays as **'UP'** when connects to an ONU or the ONU has registered under the PON port; the state displays as **'Down'** when not connected or the ONU unregistered under the PON port.

Admin Status

You can configure the PON port of the OLT to be enabled or disabled. Configure **'Enable'** to turn on the PON port; Configure **'Disable**' to turn off the PON port; The default status is **'Enable'**.

PerfStats Of 15minutes Enable

Displays the management status of the "15 minutes performance statistics", administrators can configure this parameter to 'True' or 'False'.

When set to 'True', the corresponding PON port will report the performance statistics information

every 15 minutes.

PerfStats Of 24hour Enable

Shows the management status of the "24 hours performance statistics", administrators can configure this parameter to 'True' or 'False'.

When set to **'True'**, the corresponding PON port will report the performance statistics information every 24 hours.

MacAddr Learn MaxNum

Configure the maximum number of MAC addresses can be learned by the corresponding PON port of the OLT, in the range of 0 to 8092.

6.3.2 PON Port Optical Module Information

Double click the 'PON Module' icon on the left side of the main page to enter the 'PON port optical module info' page of the 'PON card management window':

₽ Pon Card Management										×
୧୦୦୦ ୧୦୦୦ ୨୦୦୦ ଅନ୍ତି ୨୦୦୦ ଅନ୍ତି MGM ସ: ସେହା	P1 P5 GE1 GE5 P2 P6 GE2 GE6 P3 P7 GE3 GE7 P4 P6 GE4 GE3	GE9 GE13 GE10 GE14 1 2 GE11 GE15 1 1	345 1010 010		2 3 4 80 80 80 1	5 6 7 8 00 00 00 0		15 16 Cons 11 12 MG	RST	
	PonPort Optical	Module Info								
OLT Device GPON	gponOltPortId	gponOltPortDdmTe mperature	gponOltPortDdmVol age	t gponOltPortDdmTxBia sCurrent	gponOltPortDdm TxPower	gponOltPortDdm RxPower	gponOltTranscei erVendor	v gponOltTranscei verProductName	gponOltTranscei erVersion	gponOltTranscei verSerialNumber
	Pon-1	39.7	3.40	27	3.75	-13.69	ANSAOEN	AS60PG43205	10	PG0317040700
PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Regesiter ONU Aufo Find List ONU Aufo Find					Refresh]				,

Enter this page to view the status of the PON port optical module, includes the temperature, voltage, current, vendor information, transmit power, etc.

6.3.3 OLT DBA Profile Configuration

OLT profile is used to limit upstream bandwidth of each service of the ONU. This section mainly describes how to view, create, modify and delete DBA profile.

6.3.3.1 View DBA Profile

Double click the '**PON Module**' icon on the left side of the main page to enter the '**DBA Profile Config'** page of the '**PON card management'** window, you can view fault DBA profile and created DBA profile:

Pon Card Management							×
PWR2 SPR PWR2 XG SYS XG MGMTLAR	S P1 F5 GE1 GE5 GE9 G 1 P2 P5 GE2 GE8 GE7 G 2 P3 P7 GE3 GE7 GE1 G 1M P4 P8 GE4 GE8 GE1 G	213 214 1 2 3 4 5 1 215 1 1 1 1 1 1 1 216 1 1 1 1 1 1	6781 1010 101 101	2 3 4 5 6 10 00 00 00 00 0		15 16 Console 1 12 MGMT RST	
	DBA Profile Config	field apopDboBrofileName	apopDhoBrofileTupo	anon Dho Brofilo Fiv Boto	an an Dha Brafila An aura B	an an Dha Brafila May Pata	an on Dho Brofile Bind Num
OLT Device GPON	Descriptio	gpondbarromervarre	gponicibarionierype	gponobarionerixRate	ate	gponobarionemaxRate	gponobarionebindivum
	2	dba-profile_2	max	0	0	1200000	3
- PonPort Information	0	dba-profile_0	fix	1024	0	0	3
 PonPort Optical Module into DBA Frolite Config Line Profile Config Bravice Profile Config Traffic Profile Config Proadcast Storm Suppression ONU Auto Find List ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Right Flag Config Dig Agent Info Sip Right Flag Config Pots Profile ONU Upgrade 							
	Select All Dele	ite		Refresh Set	Add		

The parameters are described below:

> DBA profile

Display configured DBA Profile ID, and DBA profile ID is unique.

> DBA profile name

Display the name of the configured DBA Profile.

> DBA Type

Display configured DBA profile type, there are 5 types of DBA can be chosen, including `fix`, `assure`, `assure+max`, `max`, `fix+assure+max`.

Fix Rate

Configure and display uplink DBA fix bandwidth. The unit is kbps.

Assure Rate

Configure and display uplink DBA assure bandwidth. The unit is kbps.

Max Rate

Configure and display uplink DBA max bandwidth. The unit is kbps.

Number of mapping rules

Display how many T-CONTs are binding with this DBA profile.

6.3.3.2 Create DBA Profile

In the page of 'DBA Profile Config', click 'Add' button to pop up 'Add DBA Profile' window:

Pon Card Management							×
PWR0 SFRS PWR2 XG1 SFS XG2 MGM71LGR	: PM 등 GEL GES GES GEL3 P2 P6 GE2 GES GEL0 GEL4 1 P3 P7 GES GE7 GEL1 GEL5 1 M PA P6 GEL4 GEL3 GEL2 GEL5					5 16 Console 1 12 MGMT RST	
OLT Device GPON	DBA Profile Config pponOnu gponDbaProfileId Descriptio 2 0	gponDbaProfileName dba-profile_2 dba-profile_0 PA Ary Profile 1 DBA Try Fix Rate Assure Max Rat	gponDbaProfileType max fix d DBA Profile shile Id shile Id fix e fix e fix c fix fix c fix fix fix c fix c fix c fix c fix c fix fix fix fix c fix c fix fix fix fix fix fix fix fix fix fix	gponDbaProfileFixRate 0 1024 X 1 1 28 0 0 0 0 0	gponDbaProfileAssureR ate 0 0	gponDbaProfileMaxRate 1200000 0	gponDbaProfileBindNum 3 3
	Select All Delete			Refresh Set	Add		

The page can create an uplink DBA profile, specified DBA profile id, DBA profile name, DBA profile type and configure the corresponding uplink data rate. Then click 'OK' to create the DBA Profile.

[Example of DBA Profile configuration]

Example: Create a DBA Profile that its ID is 50, name is 'up speed limit', and type is 100M fix bandwidth.

Pon Card Management							×
C PWRLSPR PWR2 XC SV5 XC MGMTLLR	5 원 동 동1 65 65 68 68 1 월 동 동 672 65 68 68 1 월 동 672 65 68 68 1 월 동 673 68 68 1 월 5 8 68 1 월 5 8 68 1 68 68 68 1 8 68	2 3 4 5 6 19 19 19 19 19		° 4 5 6		15 16 Console	
OLT Device GPON	DBA Profile Config gponCnu gponDbaProfileId Descriptio 2 0 0	gponDbaProfileName dba-profile_2 dba-profile_0 Profile 1 DBA Try Fix Rate Assure Max Rate	gponDbaProfileType max fix J DBA Profile offile Id Name Rate Rate	gponDbaProfileFixRate 0 1024 X 1 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 2 8 1 8 1	gponDbaProfileAssureR ate 0	gponDbaProfileMaxRate 1200000 0	gponDbaProfileBindNum 3 3
	Select All Delete			Refresh Set	Add		

6.3.3.3 Modify DBA Profile

In the page of '**DBA Profile Config**', users can modify some parameters of the DBA Profile, then click '**set**' button to let the new parameter take effect.

Pon Card Management							×
PWR1 SR PWR2 X0 915 X0 MGM1L8	· 편 통 6월 6년 6년 6월 6년 3 1 전 통 6월 6월 6월 6월 6월 1 2 전 F 중 6월 6월 6월 6월 1 2 전 F 중 6월 6월 6월 1 2 전 F 6월 6월 6월 10 1 2 전 F 7 6월 10 10 10 10 10 10 10 10 10 10 10 10 10	2 3 4 5 6 1011111		: aa aa aa aa aa aa		5 16 Console 1 12 MGMT RST	
	DBA Profile Config						
OLT Device GPON	gponOnu gponDbaProfileId Descriptio	gponDbaProfileName	gponDbaProfileType	gponDbaProfileFixRate	gponDbaProfileAssureR ate	gponDbaProfileMaxRate	gponDbaProfileBindNum
	2	dba-profile_2	max	0	0	1200000	3
- PonPort Information	0	dba-profile_0	fix	1024	0	0	3
OUP of Control Control DBA Profile Control Une Profile Control Service Profile Control Traffic Profile Control Traffic Profile Control ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Right Flag Control Orlight Map Control Ontrol lect All Delete			Refresh	Add			

6.3.3.4 Delete DBA Profile

In the 'DBA Profile config' page, you can also delete some DBA profiles by select it then click `delete' button.

Pon Card Management							×
C PWR1 SPR PWR2 XG 9% XG MGMTLLR	이 문 6만 6만 6만 6만 6만 7 1 전 16 6만 6만 6만 6만 1 2 전 17 등 6만 6만 6만 6만 1 1 전 17 등 17 6만 6만 6만 1 1 만 17 등 17 6만 6만 6만 10 0 1 만 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 3 4 5 6 1 1 1 1 1 1				5 16 Console 1 12 MGMT RST	
OLT Device GPON PonPort Information PonPort Optical Module Info DBA Profile Config Inne Profile Config Service Profile Config Traffic Profile Config ONU Regesiter ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Find Fight Figs Config Olgit Map Config Olgit Map Config Olgit Map Config Olgit Map Config ONU Upgrade	DBA Profile Config goonOnu (goonDbaProfileId Descriptio 2 el 0	gponDbaProfileName dba-profile_2 dba-profile_0 Prompt i	gponDbaProfileType max fx Set Fail, do not meet max> 译研定	gponDbaProfileFixRate 0 1024 =(fix + assure)	ponDbaProfileAssureR ate 0 0	gponDbaProfileMaxRate 1200000 0	gponDbaProfileBindNum 3 3
	Select All Delete			Refresh Se	t Add		

6.3.4 Line Profile Config

The GPON ONU line profile describes the binding relationship between the T-CONT and DBA profiles, the QoS model of the business traffic and the mapping relationships between the GEM Port and ONT side business.it is mainly used to configure DBA, T-CONT and GEM Port information, the ONU line correlation property is configured in the line profile, for the same ONU, you only need to configure once to save the configuration workload. The ONU management mode whether for OMCI or SNMP, will need to bind the GPON ONU line when adding ONU, and if not specified, the system will automatically bind ONU to the default line profile 0. After executing command success, user will enter the corresponding GPON ONU line profile configuration mode

and set the related properties of the GPON ONU line profile.

6.3.4.1 View line profile

Double click the **"PON Module"** on the left side of the main page and enter the **"line Profile Configure"** page of the **"PON Card Management"** window, which will show the line profile created on OLT:

Pon Card Management						×
PWRLSPR PWR2 XG SYS XG MGMTLLS	S 121 175 GE1 GE5 GE3 GE3 1 172 175 GE2 GE5 GE1 GE1 GE1 2 173 177 GE3 GE7 GE1 GE1 GE1 144 176 GE4 GE8 GE1 GE1 G	1 2 3 4 5 6 7 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 2 3 4 5 00 00 00 00 00		15 16 Console L1 12 MGMT RST	
	Line Profile					
OLT Device GPON	Selected gponLineProfileId	gponLineProfileName	gponLineProfileTcontNum	gponLineProfileGemNum	gponLineProfileBindNum	Operation
	1	lineprofile_1	2	1	2	Detailed
- PonPort Information	2	lineprofile_2	2	3	2	Detailed
- PonPort Optical Module Info	3	lineprofile_3	2	1	1	Detailed
- DBA Profile Config						
- Line Profile Config						
Traffic Profile Config						
- Broadcast Storm Suppression						
ONU Auto Find List						
ONU Auth List						
ONU Auto Auth Rule						
Pots Server Sin Agent Info						
Sip Right Flag Config						
Digit Map Config						
Pots Profile						
- ONU Upgrade						
	Select All Delete		Refresh	Set Add		

The parameters in the line profile are described in detail below:

➤ Line Profile ID:

Show the ID of line profile, this parameter is unique;

Profile Name:

Show the name of the configured line profile.

➤ Tcont Num:

Show the number of T-CONT in the line profile. currently support maximum 4 T-CONTs. range: 0-3.

➢ Gem Port:

Show the number of GEM port in the line profile, currently support up to 24 GEMs, range: 1-24.

➢ Bind Num:

Show the number of ONUs bound to this line profile.

6.3.4.1.1 Create Line Profile

There are many steps to add a line profile.

Step 1 (create line profile ID):

In **'Line Profile Config'** page, click **"add**" button will pop up a **'Add Line Profile'** window, in the window input customized Line Profile ID, Profile Name and click **'OK'**:

Pon Card Management									>
PWRS SPE PWRS XCI SVG XCZ MCMTRLAR	S F 1 F 2 F	41 PS GE 22 P6 GE 23 P7 GE 24 P8 GE	1 65 65 653 2 676 670 6734 1 2 3 677 671 675 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 4 2 12 	5678 •••••••••	1 2 3 4 5 [33][33][33][33][33][33][5 16 Console 12 MGMT RST	
	F	Line Profil	9						
OLT Device GPON		Selected	gponLineProfileId	gponLin	eProfileName	gponLineProfileTcontNum	gponLineProfileGemNum	gponLineProfileBindNum	Operation
			1	lineprofi	e_1	2	1	2	Detailed
- PonPort Information			2	lineprofi	e_2	2	3	2	Detailed
- PonPort Optical Module Info			3	lineprofi	e_3	2	1	1	Detailed
DBA Profile Config Line Profile Config Service Profile Config Traffic Profile Config Traffic Profile Config ONU Auto End List ONU Auto Find List ONU Auto List ONU Auto Auth Rule Pots Server Sip Agent Info Oig Right Flag Config Oigt Profile Okt Profile ONU Upgrade					Add Line Profile Line Profile Id Profile Name	X 1+ 			
		Select A	II Delete			Refresh	Set Add		

Step 2 (create T-CONT id)

In 'Line Profile Configure' page, double-click the 'Detailed' button in the line of the line profile you want to configure, then you can enter the 'Tcont Config' page;

Pon Card Management						×
C PWRL SPR PWR2 XG SVG XG MGMTLLAR	8 ल ल ल लग तर तर तर तर तर तर तर तर तर तर तर तर तर	345678 1111 111 111 111	1 2 3 4 5 00.00.00.00		5 16 Console 1 12 MGMT RST	
	Line Profile					
OLT Device GPON	Selected gponLineProfileId	gponLineProfileName	gponLineProfileTcontNum	gponLineProfileGemNum	gponLineProfileBindNum	Operation
	1	lineprofile_1	2	1	2	Detailed
- PonPort Information	2	lineprofile_2	2	3	2	Detailed
- PonPort Optical Module Info	3	lineprofile_3	2	1	1	Detailed
- DBA Profile Config						
Line Profile Config						
Traffic Profile Config						
Broadcast Storm Suppression						
ONU Regesiter						
ONU Auto Find List						
ONU Auto Auth Rule						
Pots Server						
Sip Agent Info						
Digit Map Config						
Pots Profile						
- ONU Upgrade						
	Delet áll		Defeab	Cot Add		
	Delete		Reffesh	Sei Add		

In the **'Tcont Config'** page, click **'Add'** to add a T-CONT. Input Tcont id, and select one DBA profile to bind, then click **`OK**` to add it.

Pon Card Management			×
PWR2 SP PWR2 XG SVS XG MGMTLA		1 2 3 4 5 6 7 8 00 00 00 00 00 00 00 00 00 00 00 00 00	RST
OLT Device GPON ▼ PonPort Information PonPort Optical Module Info DBA Profile Config Une Profile Config Traffic Profile Config Bradcast Storn Suppression B ONU Agestiter ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Right Flag Config Digit Map Config Pots Profile ONU Upgrade	Tcont Config geonChu Descriptio n 1 0 Add Tcont Line Profile Id Tcont Id DBA Profile Id TCont Id DBA Profile Id	gponLineProfileTcontDbaProfileId dba-profile_0 X dba-profile_0 X dba-profile_0 Q gancel	Operation Detailed Detailed
	Select All Delete	Refresh Set Add Back	

Step 3 (create GEM port) :

In the **'Tcont Config'** page, double-click the **'Detailed'** button in the line of the T-CONT you want to configure, you can enter the **'Gem Config'** page,

Pon Card Management	X
C PWR2 SPR PWR2 XG SVS XG MGMTLAT	R R
OLT Device GPON	gponLineProfileMappingMode Man Set
	Selected gponLineProfileGemId gponLineProfileGemTcontld gponLineProfileGemUpCar gponLineProfileGemDownCar gponLineProfileGemMapNum Operation
PonPort Information PonPort Information PonPort Optical Module Info DBA Profile Config Ime Profile Config Traffic Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto List ONU Auto Auth Rule Pols Server Sip Right Flag Config Digit Map Config Oligit Map Config ONU Upgrade	Image: state of the state o
	Select All Delete Refresh Set Add Back

In the **'Gem config'** page click **'Add'** to add a GEM port, input the Gem id, and then bind a traffic profile of up and down (the default doesn't have to bind the traffic profile). Click **`OK`** to add the GEM port:

PonPort Information 1 0 1 0 1 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0	Pon Card Management							×
OLT Device Gem Config PonPort Information Selected PonPort Information 1 PonPort Information 1 Selected opponLineProfileGemUpCar oponLineProfileGemDownCar Selected opponLineProfileGemUpCar oponLineProfileGemDownCar Selected opponLineProfileGemIcontid oponLineProfileGemUpCar Selected OpponLineProfileContig imponLineProfileGemIcontid Selected OpponLineProfileContig imponLineProfileGemIcontid ONW Repetiter ONU Auto List ONU Auto List oponLineProfileGemIcontid Selecter Selecter Selecter oponLineProfileGemIcontid		P1 P5 G8 P2 P6 G8 P3 P7 G8 P4 P8 G8	1 65 65 663 2 675 650 674 1 2 3 677 671 675 1 1 1 4 673 672 673 6	345678 111 11 11 11 11	1 2 3 4 5 [10]10]10]10]		16 Console 12 MGMT RST	
PonPort Information PonPort Information DBA Profile Config Selected gponLineProfileGemId gponLineProfileGemId gponLineProfileGemUownCar gponLineProfileGemMapNum Operation DBA Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Auth List		-Gem Conf	ia	gponLineProfile	MappingMode vlan	Set		
PonPort Information 1 Detailed PonPort Optical Module Info DBA Profile Config X Line Profile Config X Line Profile Config Service Profile Config Gem Id 1 Broadcast Storm Suppression Gem Id 1 ONU Auto Find List UpCar DownCar ONU Auto Auth Rule DownCar DownCar Bross Server Sip Right Plag Config DownCar Sip Right Plag Config ONU Upgrade Image: Config		Selected	gponLineProfileGemId	gponLineProfileGemTcontld	gponLineProfileGemUpCar	gponLineProfileGemDownCar	gponLineProfileGemMapNum	Operation
	PonPort Information PonPort Optical Module Info DBA Profile Config Service Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Auto Find List ONU Auto Find List ONU Auto Hult ONU Auto Auth Rule Pots Server Sip Agent Info Sip Agent Info Sip Agent Info ONI Auto Sonfig Pots Profile ONU Upgrade		1	Add Gem Config Line Profile Id 3 Gem Id 1 UpCar DownCar	In. X	0	1	Detailed

In this page, double-click the **'Detailed'** button below the **'Operation'** to enter the **'Gem Mapping'** page and create the gem mapping. Select a gem port, and then click **'Delete'** to remove a gem port; You can select vlan, vlan priority and vlan + priority, and then click **'Set'**.

Step 4(create GEM mapping) :

In '**Gem Configure**' page, double-click the '**Detailed**' button in the line of the GEM you want to config, then you can enter the '**Gem Mapping**' page.

Pon Card Management						×
C PWR2 3R4 975 XG2 975 XG2 MGM7LA8	s ल हि हो। ही हि हि ही है । हरे हि ही ही ही ही ही है । हरे ही ही ही ही ही ही है । हरे ही ही ही ही ही ही है । जी ही ही ही ही ही ही ही ही ही ही ही ही ही	345678 İİİİİİİİİİ	1 2 3 4 5 00 00 00 00 00		16 Console 12 MGMT RST	
OLT Device GPON	Gem Config	gponLineProfil	eMappingMode vlan	Set		
	Selected gponLineProfileGemId	gponLineProfileGemTcontld	gponLineProfileGemUpCar	gponLineProfileGemDownCar	gponLineProfileGemMapNum	Operation
PonPort Information PonPort Information DBA Profile Config Line Profile Config Service Profile Config Traffic Profile Config Traffic Profile Config ONU Auto Find List ONU Auto Find List ONU Auto Lint List ONU Auto Lint List ONU Auto Lint Config Sip Right Flag Config Digt Map Config ONU Upgrade	<u>∎</u> <u>₹</u>	1	0	p	1	Detailed
	Select All Delete		Refresh Set	Add Back		

In the **'Gem mapping'** configuration page, click **'Add'** to add a GEM mapping. Input the Gem Map id and the Map vlan, then click **`OK`** to add the GEM mapping item:

Pon Card Management				;
אינע אינע אינע אינע אינע אינע אינע אינע	रू स ह व्ये क क क क क त ज ज के क क क क क त ज ज के क क क क क ज क क क क क त Gen Manajaa			15 16 Console 11 12 MGMT R3T
OLT Device GPON	Selected ponLineProfileGemid	aponLineProfileGemMapId 1 Add Gem Mapping Line Profile Id Mapping Model Man Gem Id Gem Id GemMap Id Priority 0 QK Cancel	gponLineProfileGemMapVlan 300	gponLineProfileGernMapPriority -
	Select All Delete	Refr	esh Add Back	

In this page, user can select an entry, then click 'Delete' to remove a GEM mapping.

Now, we complete the creation of the line profile, we can click the **'Back'** button back to the Line Profile page and view the created line profile. (refer chapter 6.3.4.1)

6.3.4.2 Modify Line Profile

The name of the line profile can be modified in the Line Profile page.

Double-click the **'Detailed'** button in the line of the line profile you want to modified, we can modify the **T-CONT** and **GEM** of the line profile binding.

6.3.4.3 Delete Line Profile

In the main page of the **'Line Profile'**, you can select a line profile and click the 'Delete' button to delete the line profile.

Note: the line profile can only delete the unbound, if the line profile has been bound, the delete operation of the profile should be done before the ONU is deleted or bound ONU to other line profile.

Pon Card Management							×
PWR1 SPRS PWR2 XG1 SYS XG2 MGMTRLARM	P1 P5 GE1 GE5 GE6 P2 P6 GE2 GE6 GE7 P3 P7 GE3 GE7 GE3 A P4 P8 GE4 GE8 GE7	6 683 10 684 1 2 3 4 11 685 1 1 1 1 12 686				16 Console 12 MGMT RST	
	Line Profile						
OLT Device GPON 👻	Selected gponLine	eProfileId gpor	nLineProfileName	gponLineProfileTcontNum	gponLineProfileGemNum	gponLineProfileBindNum	Operation
	1	liner	profile 1	2	1	2	Detailed
DepDed Information	2	linep	profile 2	2	3	2	Detailed
- PonPort Ontical Module Info	3	linep	profile_3	3	1	1	Detailed
Line Profile Config Service Profile Config Traffic Profile Config Grupe Server ONU Auto Find List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto Server Sip Right Flag Config Digit Map Config Pots Profile ONU Upgrade	Select All	Delete	Prompt	× ing or can not delete! 前注	Set Add		

6.3.5 OLT Service (business) Profile Configuration

The GPON ONU service profile provide service profile configuration channel for OLT which use the OMCI (ONT Management and Control page) method manage.

The ONU service correlation properties are concentrated in the service profile for configuration. the same business only need to be configured only once to save configuration workload. When ONU management mode is OMCI

When adding ONU, you need to bind the GPON ONU business profile, which will automatically bind if not specified will bind the ONU to the default business profile 0. After the command executes successfully, we enter the corresponding GPON ONU service profile configuration Mode, we can set the associated properties of the GPON ONU service profile.

6.3.5.1 View Service Profile

Double click the **'PON Module'** icon on the left side of the main page and enter the **'Service Profile Configure'** page of the **'PON Card Management'** window, which will show the service profile created on OLT:

Pon Card Management									:
PWR1 SPRS PWR2 XC1 SYS XC2 MGMTLLARM	P1 P5 G P2 P6 G P3 P7 G M P4 P8 G	1 GE5 GE9 GE13 2 GE6 GE10 GE14 1 5 GE7 GE11 GE15 14 GE8 GE12 GE16	2 3 4 5 6 1 1 1 1 1 1				15 16 Console 11 12 MGMT RST		
	- Service P	rofile							
OLT Device GPON	gponOnu Descriptio	gponSrvProfileId	gponSrvProfileName	gponSrvProfileEthNum	gponSrvProfilePotsNum	gponSrvProfileCatvNum	gponSrvProfileBindNum	VLAN	IGMP
		1	srvprofile_1	1	0	0	1	Config	Config
- PonPort Information		2	srvprofile_2	4	2	0	1	Config	Config
- PonPort Optical Module Info		3	srvprofile_3	1	0	0	2	Config	Config
DBA Profile Config		4	srvprofile_4	1	0	0	1	Config	Config
Service Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Auto Erind List ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Agent Info Sip Agent Info Digit Map Config Pots Profile ONU Upgrade									
	Select	All Delete			Refresh Se	t Add			

the parameters in the service profile are described in detail below:

Profile id

Show the configured service profile ID, It is unique;

Profile Name

Show the name of the configured service profile.

➢ Eth Num

The number of ONU Ethernet (eth) ports bound to the service profile; The value "**Adapt**" indicates that the number of Ethernet ports can be adapted to the ONU, and no manual configuration is required. For example, the actual number of ethernet ports of the ONU bound to the service profile is 4, we can select 4 or Adapt.

Pots Num

The number of ONU POTS ports to bind to the service profile, ranging from 0 to 8; The "Adapt" parameter indicates that the number of post ports can be adapted to the ONU, and no manual configuration is required. For example, the actual number of actual post ports of the ONU bound to the service profile is 2, we can select 2 or Adapt.

Catv Num

The number of ONU CATV ports to bind to the service profile, ranging from 0 to 8; The "Adapt" parameter indicates that the number of CATV ports can be adapted to the ONU, and no manual configuration is required. For example, the actual CATV port number of the ONU bound to the service profile is 1, we can select 1 or Adapt.

Bind Num

Shows the times that the service profile is bound by the ONU.

> VLAN

Configure the ONU port VLAN for the service profile binding.

IGMP

Configure the ONU port IGMP configuration for this service profile binding.

6.3.5.2 Create Service Profile

In the **'Service Profile'** in the main page, click **"Add"** button, specify the service profile ID, name and number of each port to bind ONU, and then click **'OK'** button to complete the basic create for service profile:

Pon Card Management					>
C PWR1 SP8 PWR2 X03 SY5 X02 MGMTL0	전 등 6월 6월 6월 6월 6월 57 등 6월 6월 6월 6월 57 등 6월 6월 6월 6월 58 등 6월 6월 6월 6월 4 월 6 64 6월 6월 6월	2 3 4 5 6 7 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		9 10 11 12 MGMT RS	
OLT Device GPON	Service Profile pponOru pponSr.Profiled 2 3 3 4 5	gponSrvProfileName gponSrvProfileS srvprofile_1 1 srvprofile_2 4 srvprofile_3	thNum gponSivProfilePotsNum gpon 0 0 0 2 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	SrvProfileCahNlum gponSrvProfileBindNun 1 1 2 1	n VLAN IGMP Config Config Config Config Config Config Config Config
	Select All Delete		Refresh Set	Add	

6.3.5.2.1 ONU VLAN Configuration In Service Profile

In the main page of the 'Service Profile', double-click the 'Configure' button in the 'VLAN' column of the entry you want to configure to enter the 'Vlan Configure' page:

Pon Card Management									×
คพัฒ ราตะ คพัตร 200 ราช 200 พ.ชานายเลือ		1234 11111	567 11 11 11 1		6 66 66 66 66	7	14 15 16 10 11 12	Cansole RST MGMT	
OLT Device GPON	VLAN Config gponCnu gponSrvProfileId Descriptio 1 1 1 1	gponSrvProfilePort Type eth eth	gponSrvProfilePortI d 1 1	gponStvProfilePort VlanEtryld 1 2	gponStvProfilePort VlanMode translation translation	gponStvProfilePort VlanStvlan 1 100	gponSrvProfilePort VlanSpri any any	gponSnProfilePort Cvlan 1 100	gponSrvProfilePort VlanCpri any any
	Select All Delete			Refresh	Set	Add	Back		

The following is a description of VLAN related configuration in service profiles:

➢ select

Select the eth port of ONU.

Profile Id
Show the service profile of current modified ONU vlan

Port Type

Show the port type of ONU and is shown by default in the name of the eth (Ethernet) port.

Eth Port Id

Show the serial number of the ONU port, and if the ONU is 4, it will appear from top to bottom 1-4.

Vlan Entry Id

The configured VLAN index number, if the port is configured with multiple VLANs, It will be displayed from 1-x.

Vlan mode

Translation: the translation model here has two meanings:

When the ONU port SVLAN and CVLAN configured under the translation mode are the same, the configuration is configured with the ONU trunk mode under the VLAN;

When the ONU port SVLAN and CVLAN configured in translation mode are different, the ONU port VLAN transformation mode is configured to convert the ONU to the SVLAN on the network side.

QinQ: the port configuration of the ONU is configured with QinQ VLAN mode. In QinQ mode, the VLAN from ONU is on the outer layer and the VLAN is forwarded to the top. The downstream data will strip off the outer VLAN tag and then forward it down.

Transparent: the port configuration of the ONU is configured with VLAN transmission mode, which can be directly forwarded either with VLAN tag or VLAN tag in the VLAN transmission mode.

Svlan

Configure the SVLAN on the network side for a range of 1-4094.

Svlan priority

Configure priority of the SVLAN on the side of the network, the values range 0-7 and any, 0 has the lowest priority, and 7 has the highest priority. Any means any priority.

Cvlan

The CVLAN configured on the network side ranges 1-4094.

Cvlan priority

The priority of the CVLAN configured on the network side is 0-7 and any, 0 has the lowest priority, and 7 has the highest priority. Any indicates any priority.

6.3.5.2.1.1 ONU Transmission Mode VLAN Configuration

In 'service profile' main page, double-click 'Configure' button under 'VLAN' of the need to configure, enter the 'Vlan Configure' page, in the column of 'Vlan Mode' choose 'transparent' and the ONU VLAN mode can be set to transparent:

Pon Card Management										×
୧୦୦୦ ଅନ୍ତର ୨୦୦୦ ଅନ୍ତର ୨୦୦୦ ଅନ୍ତର MGM TL ଜିନ୍ଦ	P1 P5 GE1 G P2 P6 GE2 G P3 P7 GE3 G M P4 P8 GE4 G	365 GE9 GE13 366 GE10 GE14 367 GE11 GE15 368 GE12 GE16	1 2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 	5 6 7 10 10 10 10	1 2 0 00 00 0	3 4 5 6 0 00 00 00	7 8	14 15 16 10 11 12	Console RST MGMT	
	VLAN Config									
OLT Device GPON	gponOnu gp Descriptio	onSrvProfileId	gponSrvProfilePort Type	gponSrvProfilePortl d	gponSrvProfilePort VlanEntryld	gponSrvProfilePort VlanMode	gponSrvProfilePort VlanSvlan	gponSrvProfilePort VlanSpri	gponSrvProfilePort Cvlan	gponSrvProfilePort VlanCpri
	1		eth	1	1	transparent	1	any	1	any
PonPort Information			eth	1	2	translation	100	any	טטר	any
 Line Profile Config Service Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Auto Find List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto List ONU Auto List Sip Right Flag Config Digt Agent Info Sip Right Flag Config Pots Profile ONU Upgrade 	Select All	Prompt i Set	failed,The VLAN tran	slation or QinQ func	tion has been alread 通过 研究 Refresh	ly configured on the	ONT port or Priority of	× error. Back		

6.3.5.2.1.2 ONU Trunk Mode VLAN Configuration

In the main page of the 'Service Profile', double-click the 'Configure' button in the 'VLAN' column in the back of the VLAN service profile, and enter the 'VIan Configure' page. The specific configuration steps are as follows:

Note: pvid in trunk mode needs to be configured in port native - vlan in. refer to chapter 7.3.2.

Example: configure ONU trunk VLAN 100, 200, 300, PVID to 100.

Step 1:

In the 'Vlan Configure' page, select 'translation' of 'vlan mode' and then click 'Set' button to set the ONU port VLAN to translation mode:

PonPort Information PonPort Information 1	Pon Card Management									×
OLT Device CPON VLAN Config geonOnu goonSnProfilePort geonSnProfilePort geonSnProfilePort geonSnProfilePort geonSnProfilePort geonSnProfilePort geonSnProfilePort VanNode VianSpri Cvfan any PonPort Information 1 1 1 VanNode VianSpri Cvfan any PonPort Information 1 1 2 translation 100 any 100 any DBA Profile Config server server server Nu Aub Find List 00U Aub Auth List 00U Aub Auth List 00U Aub Auth Config server Server Profile Server Server Server Server Server Server Server Seled All Delete Server Setver Aud Bertu	PWR1 SPR PWR2 XC SYS XC MGMTLL8	8 P1 P5 6E1 6E5 6E9 6E3 1 P2 P6 6E2 6E6 6E30 6E4 2 P3 P7 6E3 6E7 6E1 6E5 1 P3 P7 6E3 6E7 6E1 6E5	1 2 3 4 2 1 1 1 1 1 1	5 6 7		a aa aa aa	7 8	14 15 16 14 15 16 14 12	Console RST MGMT	
	OLT Device GPON	VLAN Config gponOnu gponSrvProfileId Descriptio 1 1 1 Select All Delete	gponSrvProfilePort Type eth eth	gponSrvProfilePortI d 1 1	gponSivProfilePort VianEnfrjdd 2	gponSrvProfilePort VianMode translation	gponSrvProfilePort VianSvlan 1 100	gponSryProfilePort VianSpri any any Back	gponSrvProfilePor Cvtan 1 100	gponSrvProfilePort VlanCpri any any

Step 2:

Click "Add" button, configure trunk VLAN 100,200,300 to the ONU port, need three times to add

this 3 VLANs, because every time can only add one VLAN, the screenshot below to add a trunk VLAN 300 to illustrate, SVLAN and CVLAN configuration for the same VLAN 300 which is trunk VLAN configuration mode:

Pon Card Management					×
	동 현 동 6월 6월 6월 6월 1 월 52 동 6월 6월 6월 6월 1 2 3 월 52 동 6월 6월 6월 6월 6월 1 2 3 월 52 동 6월 6월 6월 6월 10월 10월 10월 10월 10월 10월 10월 10월 10월 10	4 5 6 7 8 1 2 8 • • • • • • • • • • • • • • • • • • •	4 5 6 7 8 1 101 100 100 100	13 14 15 16 Console 9 10 11 12 MGMT	ST
OLT Device GPON	VLAN Config gponOnu gponSrvProfileId gponSrvProfileP Descriptio 1 eth 1 eth Select All Delete	ort gponSrvProfilePort gponSrvProfilePort g d VianEntryid VianEntryid VianEntryid VianEntryid Vian Model I I Entry Id I Vian Model I translation SVLAN I CVLAN CVLAN CVLAN CVLAN CVLAN CVLAN CVLAN S QK Cancel	gponSrvProfilePort gponSrvProfil VlanMode VlanSvlan Translation 100 VlanSvlan 100 VlanSvlan 100 VlanSvlan 100 VlanSvlan 100 VlanSvlan 100 VlanSvlan 100 VlanSvlan 100 VlanSvlan	ePort gponSrvProfilePort gponSrv VlanSpri Cvlan any 1 any 100	ProfilePort VlanCpri any any any

Step 3:

Return to the 'Vlan Configure' page to view the successful trunk VLAN 300:

Pon Card Management									×
C PWR4 SPR5 P PWR2 XG1 P PYR2 XG2 P3 MGMTLARM PA	। । । । । । । । । । । । । । । । । । ।	1234 İİİİİİİ	5 6 7 8 1 1 1 1 1	1 2 3 U 00 00 0	0 00 00 00		14 15 16 14 15 16 10 11 12	Console RST MGMT	
OLT Device GPON PonPort Information PonPort Optical Module Info DBA Profile Config Inne Profile Config Broadcast Storm Suppression ONU Regesiter ONU Auto Find List	LAN Config ponOnu gponSivProfileId escriptio 1 1 1 1 1	gponSrvProfilePort Type eth eth eth	gponSrvProfilePortl d 1 1	gponSrvProfilePort VlanEntryld 1 2	gponSrvProfilePort VlanMode translation translation	gponStvProfilePort VlanSvlan 1 300	gponStvProfilePort VlanSpri any 1	gponSrvProfilePort Cvlan 1 300	gponSrvProfilePort VlanCpri any 1
	Select All Delete			Refresh	Set	Add	Back		

6.3.5.2.1.3 ONU Conversion Mode VLAN Configuration

In the main page of the 'Service Profile', double-click the 'Configure' button in the 'VLAN' column of the VLAN service profile you want to configure, and enter the 'Vlan Configure' page. The specific configuration steps are as follows:

Note: PVID in translation mode needs to be configured in port native – vlan, refer chapter 7.3.2.

Example: configure port VLAN of ONU which converted from 101 to 201,102 to 202, 103 to 203,

and PVID to 100.

Step 1:

In the 'Vlan Configure' page, select 'translation' of 'vlan mode' and then click 'Set' button to set the ONU port VLAN to translation mode:

Wind Ster Fig Fig And the decided of the decided o	Pon Card Management									×
OLT Device GPON VLAN Config PonPort Information goonSn/ProfilePort goonSn/ProfilePort goonSn/ProfilePort VanSvlan vlanSvlan <	C PWR1 SPR PWR2 X21 SV5 X22 MCMTLERM	M M M GE1 GE5 GE3 GE1 GE5 GE3 GE1 GE3 GE1 GE3 GE1 GE3 GE1 GE3 GE1 GE3 GE1 GE3 GE1 GE3		5 6 7	1 2 1 1 2	, 4 5 6 10 100 100 100		14 15 16 14 15 16 10 11 12	Console RST MGMT	
	OLT Device GPON	VLAN Config gponOnu gponSrvProfileId Descriptio 1 1 1 Select All Delete	gponSrvProfilePort Type eth eth	gponSrvProfilePorti d 1 1	gponSrvProfilePort VianEntryId 2 2	gponSrvProfilePort VlamMode translation translation	gponSivProfilePort VianSivAn 1 100 Add	gponSrvProfilePort VianSpri any any Back	gponStvProfilePort CVan 1 100	gponSrvProfilePort VlanCprl any any

Step 2:

Click 'Add' button, add transformation VLAN to the ONU port for 101 to 201,102 to 202,103 to 203, need three times to add the three transformations, because every time can only add one VLAN to convert, the following screenshots to configure VLAN is 103 to 203:

Pon Card Management									×
C PWRA SPR PWRA X00 SYS X02 MCIMTULAR	M R CE1 CE3 <thce3< th=""> <thce3< th=""> <thce3< th=""></thce3<></thce3<></thce3<>	1 2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					14 15 16 14 15 16 16 11 12	Console RST MGMT	
OLT Device GPON	VLAN Config pponOnu gponSryProfileId Descriptio 1 1 1 1 1 1 1 1 1 1 1 1 1	gponSrvProfilePort Type eth eth	gponSn/ProfilePorti d Add Sn/Profile V Eth Port [Entry Id [Vian Model [SVLAN Priority [CVLAN Priority [QK	gponSrvProfilePort VianEntryId 4 1 1 ranslation <u>Cancel</u>	gponSrvProfilePort VlanMode X 2 103 2 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 2 3 2 2 2 3 2	gponStvProfilePort VlanSvlan 1 100	gponSivProfilePort VlanSpri any any	gponSrvProfilePor Cvlan 1 100	gponStvProfilePort VlanCpri any any
	Select All Delete			Refresh	Set	Add	Back		

Pon Card Management									×
PWR2 57 PWR2 37 SYS 37 MG1/17L/3	RS P1 P5 GE1 GE5 GE9 GE13 51 P7 P5 GE2 GE6 GE10 GE14 52 P5 P7 GE3 GE7 GE11 GE15 FM P4 P6 GE4 GE3 GE12 GE16			1 2 1 00 00 0	4 5 6 0 00 00 00		14 15 16 14 15 16 10 11 12	Console MGMT RST	
OLT Device GPON	VLAN Config gponOnu gponSrvProfileId Descriptio 1 1 1	gponSrvProfilePort c Type c eth 1 eth 1	gponSrvProfilePorti d	gponSivProfilePort VlanEntryId 2	gponSrvProfilePort VlantMode translation translation	gponSivProfilePort VlanSvlan 1 103	gponSrvProfilePort VlanSpri any any	gponSrvProfilePort CVan 1 203	gponSrvProfilePort VlanCpri any any
	Select All Delete			Refresh	Set	Add	Back		

Step 3:

Return to the '**Vlan Configure**' page to view the VLAN transformation that adds success 103 to 203:

Pon Card Management									×
PWRLSPR PWR2 XG2 SYS XG2 MGMTLAR	5 M K CEL CE CE CE CEL 1 P2 P6 CE2 CE CE CEL 2 P3 P7 CE3 CE7 CEL M M R CE4 CE3 CE7 CEL 2 P3 P7 CE3 CE7 CE1 2 P3 P7 CE3 CE7 CE1 2 P3 P7 CE3 CE7 CE1 2 P3 P7 CE3 2 P3 P7		5 6 7	1 2 1 1 2	4 5 6 0 00 00 00	7 8 80 80	14 15 16 14 15 16 10 11 12	Console RST MGMT	
OLT Device GPON	VLAN Config gponOnu gponSrvProfileId Descriptio 1 1 1 1	gponSrvProfilePort Type eth eth	gponSrvProfilePortl d 1 1	gponSrvProfilePort VianEntryId 1 2	gponSrvProfilePort VlanMode translation translation	gponSivProfilePort VianSulan 1 103	gponSrvProfilePort VlanSpri any any	gponSrvProfilePort CVan 1 203	gponSrvProfilePort VlanCpri any any
	Select All Delete			Refresh	Set	Add	Back		

6.3.5.2.1.4 ONU QinQ Mode VLAN Configuration

In the main page of the 'Service Profile', double-click the 'Configure' button in the 'VLAN' column of the service profile you want to configure, and enter the 'Vlan Configure' page. The specific configuration steps are as follows:

Note: PVID in translation mode needs to be configured in port native – vlan, refer to chapter 7.3.2.

Example: configure the outer VLAN (SVLAN) of QinQ to 1000, the inner VLAN (CVLAN) to 2000, and PVID to 3000.

Step 1:

Click **'Add'** button, configure ONU port VLAN mode for QinQ, SVLAN for 1000, and CVLAN for 2000:

Pon Card Management										×
C PVVRL SPE PVVR2 XG SVS XG MGM/RLAR	5 P1 P5 GE1 P2 P6 GE1 P3 P7 GE3 M P4 P8 GE4	1 GE5 GE9 GE13 2 GE6 GE10 GE14 3 GE7 GE11 GE15 1 GE8 GE12 GE16	1234 1100	567 (1) (1) (1) (1)	8 1 2 0 00 00 0	3 4 5 6 10 00 00 00		14 15 16 10 11 12	Console MGMT RS	т
	VLAN Conf	ïg								
OLT Device GPON	gponOnu Descriptio	gponSrvProfileId	gponSrvProfilePort Type	gponSrvProfilePorti d	gponSrvProfilePort VlanEntryld	gponSrvProfilePort VlanMode translation	gponSrvProfilePor VlanSvlan 1	t gponSrvProfilePor VlanSpri anv	t gponSrvP Cvlan	rofilePort gponSrvProfilePort VlanCpri
PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Bradcast Storm Suppression ONU Regesiter ONU Regesiter ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Rule Pots Server Sip Agent Info Sip Agent Info Sip Right Flag Config Did Hap Config Pots Profile ONU Upgrade		11	eth eth	Add SrvProfile N Eth Port Eth Port Entry Id (Vlan Model SVLAN SVLAN CV	1 aqinq cancel		100 103	any any	100 203	any any any any any any any any any
	Select A	VI Delete]		Refresh	Set	Add	Back		
Pon Card Management	5 P1 P5 GE P2 P6 GE 1 P3 P7 GE M P4 P8 GE	1 655 659 6513 2 656 650 6514 3 657 651 6515 4 653 652 652	1 2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1	567 1111	° 1 2 D 00 00 1	30 100 00 100	7 8 19	14 15 16 10 11 12	Console	×
Pon Card Management	5 P1 P5 G2 P2 P6 G2 P3 P7 G3 M P4 P5 G2 VLAN Conf	1 GE9 GE9 GE33 2 GE9 GE30 GE34 3 GE7 GE31 GE35 1 GE8 GE32 GE36 1 G	1 2 3 4 	s 6 7 1 1	8 <u>1</u> 2 21 (00)(00)(3 4 5 6	7 8 111 111 9 9	14 15 16 10 11 12	Console MGMT RS	×
Pon Card Management Pore Card Management Pore 2 Size Pore 2 S	Pi Pi Pi Pi Pi Pi Pi Pi Pi Pi Pi Pi Ni Ri Ri VLAN Confi gponOnu Descriptio	រ	1 2 3 4	5 6 7	s 1 2 gponSrvProfilePort	3 4 5 6 10 100 100 100 gponSrvProfilePort VanMade	7 8 10 10 10 10 10 10 10 10 10 10	t gponSrvProfilePor	Console MGMT RS MGMT Cylan	T TofilePort gponStvProfilePort
Pon Card Management	전 등 관 전 등 관 전 등 전 제 제 명 관 VLAN Conf gponOnu Descriptio	। রন্ট রন্ট রন্টিঃ 2 রন্টর রেট্ট রেট র র্রি রেট রেট র রিট রেট ig gponSrvProfileId 1	1 2 3 4	S 6 7 ponSrvProfilePorti d	8 1 2 9 00 00 10 10 9 00 SrvProfilePort VlanEntryId 1	3 4 5 6 10100 00100 gponSrvProfilePort VlanMode translation	7 8 1 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	t gponSrvProfilePor VianSpri any	t gponStvP Cvlan	rofilePort gponSrvProfilePort
Pon Card Management wria size wria size ors: control of the size ors: control of the size ors: control of the size ors: control of the size ors: ors	PI PS EI PI PS PI EI PI PS PI EI PI PS PI EI M RI EI VLAN Conf gponOnu Descriptio	। জেঁত জেঁত জেঁৱ 2 জেঁত জেঁৱ জেঁৱ 3 জেঁত জেঁৱ জেঁৱ 1 জেঁত জেঁৱ জেঁৱ gponStvProfileId 1 1	1 2 3 4 ponSr/ProfilePort Type eth eth	5 6 7 gponSrvProfilePortl d 1	a 1 2 gponSrvProfilePort VlanEntryld 1 2	3 4 5 6 10 00 00 00 gponSr/ProfilePort VlanMode translation translation	7 8 gponSrvProfilePor VlanSvlan 1 100	14 15 16 10 11 12 I gponSrvProfilePor VlanSpri any any	t gponSrvP Cvlan 1	rofilePort gponSn/ProfilePort VlanCpri any any
Pon Card Management Pon Card Management PonPort Information PonPort Information PonPort Optical Module Info DBA Profile Config Erradical Storm Suppression ONU Auto Find List	S PA S GEL PA S GEL PA S GEL PA S S GEL PA S S S S S S S S S S S S S S S S S S S	485 485 485 485 485 2 485 485 2 485 485 2 485	1 2 3 4 pponSrvProfilePort Type eth eth eth	5 6 7 gponSvProfilePortl 1 1 1	gponSrvProfilePort VianEntryId 2 3 Prompt () Modity Vian	3 4 5 6 d D D D D D D D D D D D D D D D D D D D	7 8 gponSrvProfilePor VlanSvlan 1 100 103	14 15 16 10 11 12 1 gponSrvProfilePor VlanSpri any any any any	t gponSrvP Cvlan 1 100 203	TofliePott gponStvProfilePott VlanCpri any any any

Step 2:

Return to the **'Vlan Configure'** page to view the added SVLAN as 1000, and CVLAN 2000 of QinQ VLAN:

Pon Card Management										×
PWR3 SPR PWR2 XG1 SYS XG2 MGMT6LAR	P1 P5 G8 P2 P6 G8 P3 P7 G8 M P4 P8 G8	1 GE5 GE9 GE13 2 GE6 GE10 GE14 3 GE7 GE11 GE15 4 GE3 GE12 GE16	1 2 3 4 1 1 1 1 1 1	5 6 7 1 1 1 1 1	1 2 0 00 00 0	3 4 5 6 10 100 100 100	7 8	14 15 16 10 11 12	Console MGMT RST	
	VLAN Con	fig								
OLT Device GPON	gponOnu Descriptio	gponSrvProfileId	gponSrvProfilePort Type	gponSrvProfilePorti d	gponSrvProfilePort VlanEntryld	gponSrvProfilePort VlanMode	gponSrvProfilePort VlanSvlan	gponSrvProfilePort VlanSpri	gponSrvProfilePort Cvlan	gponSrvProfilePort VlanCpri
		1	eth	1	1	translation	1	any	1	any
- PonPort Information		1	eth	1	2	translation	100	any	100	any
- PonPort Optical Module Info		1	eth	1	3	translation	103	any	203	any
- DBA Profile Config		1	eth	1	4	qinq	2000	any	1000	any
Traffic Profile Config Broadcast Storm Suppression ONU Auto Find List ONU Auto Auth List ONU Auto Auth Rule Pots Server Sip Agent Info Sip Agent Info Digit Map Config Pots Profile ONU Upgrade			1							

6.3.5.2.2 ONU IGMP Configuration In Service Profile

Note: the IGMP service on OLT and ONU currently is passable, and IGMP related configuration is not work in the present OLT, here is a simple introduction.

In the main page of the service profile, double-click the "Configure" button below the "IGMP" column of the VLAN, and enter the "IGMP Configure" page:

Pon Card Management						×
PWRASER PWR2XC SYEXCON	5 M R 61 65 69 613 1 2 76 62 65 66 613 2 75 77 65 61 61 61 61 1 61 61 61 61 1 61 61 61 61		7 8 1 2 3 1 1 1 2 3	4 5 6 7 8 00 00 00 00	13 14 15 16 Consc 9 10 11 12 MGW	RST
OLT Device GPON PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Gradicat Storm Suppression ONU Regesiter ONU Auto Find List ONU Auto Find List ONU Auto Rule Pots Perver Sip Agent Info Sip Right Flag Config Doit Map Config Pots Profile ONU Upgrade	IGMP Config gponSrvProfileId 1	gponSrvProfileMcMode igmp-snooping	gponSrvProfileUpIgmpFwdMo e transparent	1 gponSrvProfileUpIgmpTCI	gponSrvProfileDnMcMode untag	gponStvProfileDnMcTCI 0
	Select All		Refresh	Set Back		

The following is a description of the configuration of ONU IGMP in service profiles:

Profile Id

Show the service profile id that currently needs to do the multicast configuration.

Multicast Model

The working mode of IGMP is: `igmp-snooping`, `igmp-proxy`, `igmp-snooping-proxy`

(1) igmp - proxy

Set the IGMP forwarding mode of ONU as proxy.

IGMP proxy is the multicast agent. The IGMP proxy intercept and handling the IGMP message between the user and the multicast router and then forwards it to the upper multicast router. From a user perspective, the system is a multicast server equivalent; From an upper point of view, the system is a multicast user equivalent. The IGMP proxy mode reduces the multicast protocol traffic of the network side.

(2) igmp snooping

Set the IGMP mode of ONU to IGMP snooping. IGMP snooping is the multicast listening. IGMP Snooping retrieves the relevant information of maintenance group by listening to the IGMP message that communicates between the user and the multicast router to maintain items. The system does not do any processing of the broadcast VLAN message.

(3) igmp snooping - proxy

Igmp-snooping - proxy does not currently apply.

Igmp Forward

The IGMP forwarding mode is not applicable at this moment, the default transparent can be used, and the VLAN processing mode of the downstream multicast data is handled according to the single VLAN of the ONU port.

6.3.5.3 Service Profile Modification

In the main page of the **'service profile'**, the name and the number of ONU ports of the profile can be directly modified.

Double-click the **'Configure'** button below the VLAN or IGMP on the **'Service Profile'** main page to modify parameters such as VLAN and IGMP which the service profile binding. here no longer illustration. We can know the details by the VLAN and IGMP configuration instructions.

6.3.5.4 Delete Service Profile

In the main page of the service profile, you can select a service profile and then click the **'Delete'** button to delete the entire service profile information:

Note: the service profile can only delete in unbound status, if the service profile is already bound, the delete operation of the profile will be done after the ONU is deleted or the other service profile is used.

Pon Card Management								:
PWR1 SPRS PWR2 XC1 SYS XC2 MCMTLLARM	5 M R C1 C15 C5 C5 C13 72 R C2 C15 C5 C5 C13 73 R C2 C15 C5 C10 C14 75 R C2 C15 C5 C11 C13 M N R C4 C18 C5 C5 C16		7812	3 4 5 6 100 00 00 00 00		15 16 Console 15 16 Rst 11 12 MGMT		
	Service Profile							
LT Device GPON	gponOnu gponSrvProfileId Descriptio	gponSrvProfileName	gponSrvProfileEthNum	gponSrvProfilePotsNum	gponSrvProfileCatvNum	gponSrvProfileBindNum	VLAN	IGMP
	✓ 1	srvprofile_1	1	0	0	1	Config	Config
PonPort Information	2	srvprofile_2	4	2	0	1	Config	Config
- PonPort Optical Module Info	3	srvprofile_3	1	0	0	2	Config	Config
Service Profile Config - Traffic Profile Config Broadcast Storm Suppression - ONU Auto Find List - ONU Auto Find List - ONU Auto Auth Rule - Pots Server - Sip Agent Info - Sip Right Flag Config - Digit Mag Config - Digit Mag Config - ONU Upgrade			Seleted nothing or can r	iot delete!				

6.3.6 OLT Traffic Profile Configuration

The traffic profile on GPON OLT is mainly applied to the ONU port for the port speed limit. Applying to an ACL for speed limits for a particular message, because we need to create it in advance when using this profile, a chapter is used to specify some configuration parameters for the profile:

Double click the **"PON Module"** on the left side of the main page and enter the **"Traffic Profile Configure"** page of the **"PON Card Management"** window. The typical page is as shown below:

Pon Card Management	x
C PWR2 SP PWR2 XG SV5 XG MCM76LA	हिन्द्र ह तो तो तो तो तो तो तो तो तो तो तो तो तो
OLT Device GPON	Traffic Profile Config gponOnu gponTrafficProfileId gponTrafficProfileCfgCir gponTrafficProfileCfgCis gponTrafficProfileCfgPis gponTrafficProfileCfgCis gponTrafficProfileCfgPis gponTrafficProfileCfgCis gponTrafficProfileCfgPis gponTrafficProfileCfgCis gponTraffis
	Select All Delete Refresh Set Add

Some parameters in the traffic profile configuration are explained below:

Profile id

Show the configured traffic profile id, which can be used later when you need to bind the traffic profile.

➢ Profile name

Show the configured traffic profile name, which can be modified when you need to bind the traffic profile.

ensure information rate (CIR)

To show and modify the guaranteed bandwidth, the effect of bandwidth is to ensure that the traffic rate can reach its guaranteed bandwidth when the traffic is congested. The default minimum configuration is 64kbps, and the unit is kpbs.

> peak information rate (PIR)

The maximum bandwidth is shown and modified, and the maximum bandwidth is only a limited effect. The limit of the traffic can not exceed its maximum bandwidth. The default minimum configuration is 128kbps, and the unit is kpbs.

ensure the burst length (CBS)

Show and modify the guarantee burst length, that is the instantaneous ability to pass the promise burst traffic, the default minimum configuration is 2000bytes, the unit is byte.

peak burst length (PBS)

Show and modify peak burst length, peak burst size, the default minimum configuration is 2000bytes, the unit is byte.

Bind Num

Show times the traffic profile has been applied.

[Example of traffic profile configuration]

Example: add a traffic profile which id is 200, name is **'GPON TEST'**, ensure bandwidth is 20M and the maximum bandwidth is 100M.

Pon Card Management	X
C PWR1 SRR PWR2 X01 SYS X02 MCMTLAR	s M R GE GE GE GE GE GE GE GE GE GE GE GE GE
OLT Device GPON	Traffic Profile Config gponOnu gponTrafficProfileId gponTrafficProfileCfgCir gponTrafficProfileCfgPir gponTrafficProfileCfgCbs gponTrafficProfileCfgDbs gponTrafficProfileBindNu Descriptio
PonPort Information PonPort Information PonPort Optical Module Info DBA Profile Config Inter Profile Config Franc Profile Config ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Right Flag Config Digit Map Config Digit Map Config ONU Upgrade	Add Traffic Config X Profile Id 2001 Profile Name GPON TEST CIR 20,000 PIR 100,000 CBS 2,000 PBS 2,000 QK Cancel
	Select All Delete Refresh Set Add

6.3.7 PON Broadcast Storm Suppression

The number of the broadcast network frame increase sharply and affects normal network communication, broadcast storm will occupy a considerable network bandwidth, cause the entire network cannot work normally. Broadcast storm control is allowing the port to filter the broadcast storm that appears on the network. When the broadcast storm control is enabled, the port will

automatically discard the broadcast frames received when the broadcast frames received from the port are accumulated to the predetermined threshold value. When the function disabled or broadcast frames don't come to limit, the broadcast frames will be broadcast to other ports of OLT.

Double click the '**PON Module**' icon on the left side of the main page and enter the '**Broadcast Storm Suppression'** page of the '**PON Card Management'** window. The typical page is as shown below:

Pon Card Management							×
PWRLSPE PWR2 XCL SV5 XC2 MCMTRLAR	P1 P5 GE1 P2 P6 GE2 P3 P7 GE3 V1 P4 P8 GE4	65 69 683 669 680 684 1 2 667 681 685 1 1 68 682 684	345678 1911 1911 1911 1911 1911 1911	1 2 3 4 	5 6 7 8 13 13 13 13 13 13 13 13 13 13 14 15 16 17 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 11	14 15 16 Console 14 15 16 Monole 10 11 12 Monot	RST
	PonBroado	astStormSuppression					
OLT Device GPON	Port ID	UnicastStorm Enable	UnicastStorm InPacket Rate pps)	(Multicast Storm Enable	MulticastStorm InPacket Rat (pps)	e Broadcast Storm Enable	BroadcastStorm InPacket Ra te(pps)
	Pon-1	false	0	false	0	false	0
- PonPort Information	Pon-2	false	0	false	0	false	0
- PonPort Optical Module Info	Pon-3	false	0	false	0	false	0
- DBA Profile Config	Pon-4	false	0	false	0	false	0
Line Profile Config	Pon-5	false	0	false	0	false	0
Service Profile Config	Pon-6	false	0	false	0	false	0
Iraffic Profile Config Dreadeast Sterm Suppression	Pon-7	false	0	false	0	false	0
Contractast Storm Suppression	Pon-8	false	0	false	0	false	0
ONU Auto Find List ONU Auth List ONU Auto Auth Rule ONU Auto Auth Rule Sir Server Sip Right Flag Config Digit Map Config Poligt Ronfig Fordite ONU Upgrade							
				Refresh	Set		

Entering this page can set and enable the storm suppression and setting speed of various storm suppression for OLT's PON.

The following is a description of the storm control parameters of the PON port of OLT.

> Port ID

Show the PON index number that needs to be configured for storm suppression.

Unicaststorm Enabled

Enable or disable the unknown unicast storm suppression function of the PON, select 'true' to enable and 'flase' to disable.

UnicastStorm InPacket Rate

Configure unknown unicast storm suppression rate for PON port, the unit is PPS.

Multicast Storm Enabled

Enable or disable the unknown multicast storm suppression function of the PON, select 'true' to enable and 'flase' to disable.

MulticastStorm InPacket Rate

Configure multicast storm suppression rate for PON port, the unit is PPS.

Broadcast Storm Enable

Enable or disable the broadcast storm suppression function of the PON, select 'true' to enable and 'flase' to disable.

Broadcast Storm InPacket Rate

Configure broadcast storm suppression rate for PON port, the unit is PPS.

6.3.8 ONU Auto Authentication

Before GPON authentication, the OLT needs to open the automatic discovery function of the PON, then find the ONU in the automatic list, and finally add the ONU to authentication.

The authentication steps of GPON is mainly divided into the following parts.

6.3.8.1 Open ONU Auto Discovery and Auth

Double click the **'PON Module'** icon on the left side of the main page and enter the **'ONU Auto Find List'** page of the **'PON Card Management'** window:

Pon Card Management	X
PWR1 SPR5 PWR2 XG1 SYS XG2 MGMTLJAR	र प्राह तम तम तम तम तम तम तम तम तम तम तम तम तम
	ONU Auto Find List
	PonPort AutoFind Enable Search ONU of those PonPort
	PonPort-1 • enable odisable Set Pon1 Pon2 Pon3 Pon4 Pon5 Pon6 Pon7 Pon8 All
PonPort Information PonPort Optical Module Info DBA Profile Config	gponOnu gponOltPortid gponOnuAutofindId gponOnuAutofindSn gponOnuAutofindPasswd gponOnuAutofindVendorl gponOnuAutofindEquipm gponOnuAutofindSoftwar rd d entiD eVersion
Line Profile Config Service Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Regesiter ONU Auto Eind List ONU Auto Eind List ONU Auto Eind List ONU Auto Eind List ONU Auto Rule Pots Server Sip Agent Info Sip Right Flag Config Digit Mag Config Pots Profile ONU Upgrade	
	Select All Refresh auth

We can do many operations in this page, we can enable the automatic find function of the ONU of PON, check the automatical but not auth ONU, and verify the ONU of automatic find.

Enables PON automatic find

Turn on the ONU auto find function of the specified PON ports, and only the ONU connected to the PON will be displayed.

Select the specified PON port, select **'enable'** (open) or **'disable'** (not open), and then click the **'Set'** button.

View the PON's ONU

When the ONU auto find function is opened, you can select a PON port to view which ONU is found under the PON port.

Select the specified PON port and click the 'Search' button.

Authentication

Auth the ONU which we found on this page.

[Example of enable the ONU automatic find + authentication configuration]

Example: start the ONU automatic authentication of PON1, then add the ONU of the PON1 finding and bind to the created line profile and service profile.

Step 1:

Enable the automatic find function of PON1 in the 'ONU Auto Find List' page:

Pon Card Management	X
PWRI SPRS PWRZ XGI SYS XGZ MGMTLGRA	「「「「「「「「」」」」」」」」」」」」」」」」」」」」」」」」」」」」
	ONU Auto Find List
	PonPort AutoFind Enable Search ONU of those PonPort
	PonPort-1 💌 🖲 enable 🗇 disable Set 🖉 Pon1 🔤 Pon2 🔤 Pon3 🔤 Pon4 🔄 Pon5 🔄 Pon6 🔄 Pon7 🔄 Pon8 🔄 All
PonPort Information PonPort Optical Module Info DBA Profile Config	goonOnu goonOltPortId goonOnuAutofindId goonOnuAutofindIsm goonOnuAutofindPasswo goonOnuAutofindVendori goonOnuAutofindEquipm goonOnuAutofindSoftwar rd d entID eVersion
Line Profile Config Service Profile Config Traffic Profile Config Broadcast Storm Suppression	
ONU Regesiter ONU Auto Find List ONU Auth List	
ONU Auto Auth Rule Pots Server Sip Agent Info	
Sip Right Flag Config Digit Map Config Pots Profile	
ONU Upgrade	
	Select All Refresh auth

Step 2:

Find ONU at the 'Search ONU of those PonPort':

Pon Card Management			×
Рพทิม รศห คพัทธ 7421 ราช 7422 Mithina เมือง	। जूल हो। की की की की। इन्हें ही, की की की की की की की की की की की की की		Console MGMT RST
	ONU Auto Find List		
OLT Device GPON	PonPort AutoFind Enable	Search ONU of those PonPort	
	PonPort-1 enable disable Set	Pon1 Pon2 Pon3 Pon4 Pon5 Pon6 Pon7	Pon8 All Search
PonPort Information PonPort Optical Module Info DBA Profile Config	gponOnu gponOltPortId gponOnuAutofindId Descriptio	gponOnuAutofindSn gponOnuAutofindPasswo gponOnuAutofindVendorl gponOnu rd d	AutofindEquipm gponOnuAutofindSoftwar eVersion
Line Profile Config Service Profile Config Traffic Profile Config ONU Auto Eriod List ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Right Flag Config Digit Map Config Ontig Pots Profile ONU Upgrade			
	Select All	Refresh auth	

Step 3:

Select ONU, Click the 'auth' button, and select the line and service profile created before:

6.3.8.2 View Registered ONU And Register ONU Independently

Double click the **'PON Module'** icon on the left side of the main page and enter the **'ONU Auth List'** page of the **'PON Card Management'** window:

In this page, you can view the ONU information that has been registered and manually add the authentication ONU, detailed description of some of the more important parameters as follows:

Check the registered ONU

You can query All (All) registered ONU of OLT or registered under specific PON port (pon1-pon8).

The relevant ONU parameter as follows:

> Auth Mode

It shows that the registered mode of ONU. GPON is certified by SN. The ONU authentication mode supported on OLT is: sn, sn + password and password.

ONU Sn

Show the registered ONU's SN in port, the SN of ONU must be the ASCII value of 12 bits.

Password

If ONU is registered by the SN + password or password authentication mode, the ONU authentication password will be displayed here.

➤ Line Id

Shows which line profile id is binding on the ONU, and double-clicking the id to displays detailed information about the line profile configuration.

Profile Information	\times	
=====Line Profile Info====== Profile-ID : 1 Profile-name : lineprofile_1 Binding times : 2 Mapping mode : vlan		si
<t-cont 1=""> DBA-Profile ID :2 <gem 1="" id=""> GEM-CAR-UP: - GEM-CAR-DOWN: - Mapping-ID VLAN Priority 1 100 - <t-cont 0=""> DBA-Profile ID :0</t-cont></gem></t-cont>		
		re
<u>O</u> K <u>C</u> ancel		

> Service Id

Shows which service profile id is binding on the ONU, and double-clicking the id displays the details of the service profile configuration.

🕈 🖓 Profile Ir	formation							×
Profile-ID Profile-name Binding times	er Profile Info==: : 1 : srvprofile_1 : 1 Port-number							Â
ETH	1							
POTS	0							
CATV	0							
Multicast mo	de	· iamp-snoopi	na					
Multicast forv	vard mode		: transpart					
Multicast forv	ward VLAN		: 0					
Upstream IG	MP packet forw	ard mode	: translation					
Upstream IG	MP packet forw	ard VLAN	1-					
Upstream IG	MP packet prior	rity	:-					
Port-type	Port-ID	Service-type	Index	S-VLAN	S-PRI	C-VLAN	C-PRI	
ETH	1	translation	1	1	-	1	-	
ETH	1	translation	2	100	-	100	-	
ETH	1	translation	3	103	-	203	-	
ETH	1	translation	4	2000	-	1000	-	
			<u>о</u> к	<u>C</u> ancel				

Run State

The running state can reflect whether the ONU is online or not. The state of 'online' state indicates that ONU has been registered and launched. The 'offline' state indicates that the ONU is not registered, and it is necessary to check whether the light power of the ONU is normal.

Config Statue

The configuration statue can reflect whether OLT send the configuration file to ONU successfully. The **'failed'** status indicates that the default configuration is not recognized by the ONU, which requires the positioning analysis. **'success'** shows that the status indicates that the default configuration of OLT is recognized by the ONU.

Match State

Match statue can reflect the ONU port whether actual ability and binding service profile configuration of port capacity match, **'match'** status show that port number of ONU service profile configuration is match to ONU actual report; **'mismatch'** status show that port number of ONU service profile configuration is not match to ONU actual report, need to see the actual reported ONU port number, and then configure the ONU port number in the ONU service profile.

Active Status

The active state indicates whether the ONU is active, and the 'active' indicates that ONU has

been activated on OLT; 'deactive' means that ONU is not activated on OLT.

add authentication and auth ONU manually

If you know the auth SN or password of ONU in advance, you can register the ONU with the "Add" button on this page.

Pon Card Management							×
C PWR1 SP PWR2 X SV5 XX MGMTLA	해 한 평 6월 6월 6월 6월3 1 57 56 6월 6월 6월 6월 1 2 3 4 17 57 57 6월 6월 6월 6월 19 19 57 57 6월 6월 6월 6월 19 19 19 19 19 19 19 19 19 19 19 19 19 19 1	5 6 7 8 1 2 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 6 7 8 10 00 00 00	13 14 15 9 10 11	16 Console 12 MGMT	RST	
OLT Device GPON	ONU Auth List Search ONU Image: Pon1 Pon2 Pon3 Pon4 gponOnu gponOnuld gponOnuAuth Descriptio Id Id ode 1 1 Sn Id Id 1 2 Sn Id Id Id 1 3 Sn Id	J of those PonPort Add ONU Auth PonPort Id Pon-1 ONU ID I Auth Model Sn ONU SN Password Id Nume Line Profile Name Ine Srv Profile Name Srv Cancel	Search	vic gponOnuRunSi ate offline offline offline offline offline	goonOnuConfi gState success initial initial initial initial	gponOnuMatch State mismatch initial initial initial	gponOnuDeact ve active active active active active active
	Select All Active Deactive	Delete	Refresh	Add			

active or deactive ONU

In the 'ONU Auth List' page, select an ONU to active or deactivate the ONU that has been registered.

6.3.8.3 Register ONU Automatically

GPON OLT support automatic auth ONU function, if the OLT enable the function of automatic auth and configured automatic auth rules in advance, ONU can automatically register according to the configuration.

Double click the **"PON Module"** on the left side of the main page and enter the 'ONU Auto Auth rule" page of the "PON Card Management" window:

Pon Card Management						×
PWRB SPR PWRZ XGI SVS XGZ MGM/TLAR	5 M B GE GE GE GE GE 1 P2 P5 GE GE GE GE GE 2 P3 P7 GE GE GE GE GE GE M M R GE GE GE GE GE GE GE	123456 İ.İ.İ.İ.İ.İ		4 5 6 7 8 10 100 100 100	13 14 15 16 Console 9 10 11 12 MGMT	RŞT
OLT Device GPON PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Fraint Profile Config ONU Regester ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Agent Info Sip Right Flag Config Digit Hap Config ONU Upgrade	AutoAuth Enable PonPort List PonPort-1 Auto Auth Rule Config gponOl/AutoAuthRuleId	gponOllAutoAuthVendorld	gponOllAutoAuthEquipmentID	oAuth Model all rt AutoAuth enable gponOllAutoAuthSoftwareVersi on	gponOllAutoAuthLineProfileId	gponOlfAutoAuthSrvProfileId
			Refresh	Add Delete		

We can configure rules of register ONU function on GPON OLT automatically in this page, and some parameters will be given to illustrate:

AutoAuth Enable

This option enables or disable the global auto auth ONU function on OLT.

AutoAuth Model

Configure auto auth rules of the ONU on the OLT, we can choose all (all) ONU adopt automatic auth certification, according to ONU model (equid) automatic auth certification, according to the ONU manufacturer (vendor) automatic auth certification, according to ONU model (equid) + ONU software version (swer) automatic auth certification.

PonPort List

Specify which PON port to open ONU automatic auth function.

Port AutoAuth

enable or disable the ONU automatic auth function of a PON.

Add rules of auto auth

The 'add' button on the page can add an auto auth rule.

[Example of ONU automatic registration configuration]

Example: enable the automatic registration function of PON1 on OLT, the automatic registration rules are based on the ONU model of ONT 1GE, automatic binding line profile: ontline profile_50, service profile: ontsrvprofile_50.

Pon Card Management			×
PWRS SRA PWR2 XG SV5 XG MCM/RLAR	역 동 전 전 전 전 전 전 1 2 동 전 전 전 전 전 5 동 전 전 전 전 전 5 동 전 전 전 전 5 동 전 전 전 전 5 5 5 7 전 5 5 7 전 5 5 7 전 5 5 7 전 5 5 7 전 5 5 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		T
	AutoAuth Enable enable	✓ AutoAuth Model all	-
	PonPort List PonPort-1	✓ Port AutoAuth enable	-
DesDet Information	Auto Auth Rule Config		
PonPort Optical Module Info DBA Profile Config Service Profile Config Service Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Auto Find List ONU Auto Find List ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Right Flag Config Dipt Mag Config Pots Profile ONU Upgrade	gponOtlAutoAuthRuleId gponOtlAu	toAuthVenc P Set Auto Auth Rule X rsi gponOltAutoAuthLineProfileI g gponOltAutoAuthRuleId 1 gponOltAutoAuthRuleId 1 gponOltAutoAuthRuleId 1 gponOltAutoAuthRuleId 1 gponOltAutoAuthRuleId 1 gponOltAutoAuthRuleId 1 gponOltAutoAuthRuleId 1 gponOltAutoAuthRuleId 1 gponOltAutoAuthSoftwareVersion 1 Line Profile Name striprofile_1 QK Cancel	oonOltAutoAuthSrvProfileId

6.3.9 ONU VOIP Service Configuration

TP-Link GPON OLT supports configuring ONU SIP, but in the real deployment, some of the ONU only support SIP configuration through TR-069, and can not be configured by OMCI. In that case, you should not do the SIP configuration on OLT. The following sections describe the SIP voice configuration on OLT:

6.3.9.1 SIP Proxy Server Profile Settings

Double click the **'PON Module'** icon on the left side of the main page and enter the **'SIP Agent Info'** page of the **'PON Card Management '**window:

Pon Card Management												×
ิ พิมพิม ร.ศ. พ.ศ. 2 พิม ราร หรือ พ.ศ.ศ.ศ.นาณ	P1 P5 G P2 P6 G P3 P7 G	E1 GE5 GE9 GE E2 GE5 GE10 GE E3 GE7 GE11 GE E4 GE3 GE12 GE	13 14 1 15 1 1	2 3 4 1 1 1 1	\$ 6 0 0 1	78	1 2 3 00 00 00	4 5 100 00	6 7 8 60 80 80		16 Console 16 RST 12 MGMT	
OLT Device GPON	Sip Agent gponOnu Description	gponSipAge ntProfileId	gponSipAge ntProfileNan e	gponSipAge ntProfileRtpE scp	gponSipAge ntProfileRtpl inPort	gponSipAge IntProfileRtpl axPort	gponSipAge IntProfileSign alDscp	gponSipAge ntProfileSign alPort	gponSipAge ntProfileSign alTransferMo	gponSipAgentProfile RegistrationExpiratio n	gponSipAgentProfile RegistrationReregHe adStartTime	gponSipAgentProfile gpon VoiceMailSubscriptio Proxy nExpiration
PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Traffic Profile Config Traffic Profile Config ONU Regester ONU Auth Find List ONU Auth Find List ONU Auth Crind List ONU Auth Auth Rule Pots Server Sip Agent Info Sip Right Flag Config Digit Map Config Digit Map Config ONU Upgrade		0	sipagent_0	46	<u> 50000</u>	60000	24	5070	hqb	600	300	3600
	Select	All Dele	te				Re	fresh	Set	Add		

In this page, user usually need to configure the following parameters. For the other parameters , please keep it as default value.

gponSipAgentProfileSignalPort

Configure the SIP registration server port number on the ONU, default is 5070, can be set according to your SIP register server configuration.

> gponSipAgentProfileProxyServerUrl

Configure the proxy server address on the ONU, which is generally the IP address or domain name.

> gponSipAgentProfileRegistrationServerUrl

Configure the registration server address on the ONU, which is generally the IP address or domain name.

> gponSipAgentProfileVoiceMailServerUrl

Configure the voice mail server address on the ONU, which is generally IP address or domain name.

gponSipAgentProfileConfFactory

Configure the meeting server address on the ONU, which is generally the IP address or domain name.

gponSipAgentProfileBindNum

Show times that the SIP Agent profile is bound by ONU.

[Example of SIP proxy server configuration]

Example: create a SIP agent profile with ID 1, with a port number of 5060, and the proxy server and registration server IP address set to 192.168.5.254

Step 1:

Click the 'Add' button to add a SIP proxy server profile:

Pon Card Management	×
C PWRLSRR PWR2 XGS SYS XG MGMTLLSR	
OLT Device GPON	Sip Agent Info gponONU gponSipAge

Pon Card Management		×
PWR15P PWR2 XX SYS XX MCMTLA		
OLT Device PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Profile Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Auto Find List ONU Auto Find List ONU Auto List ONU Auto Auth List ONU Auto Auth List ONU Auto Auth Rule Pots Server Sip Agent Info Sip Agent Info Pots Profile ONU Upgrade	Sip Agent Info gponOnu gponSipAge	AgentProfile gpon allSubscriptio Prox tion
	Select All Delete Refresh Set Add	

Step 2:

Configure the SIP registration port to 5060, the SIP registration server and the proxy server address to 192.168.5.254:

Pon Card Management												×
PWR2 SRR PWR2 XG1 SYS XG2 MGMTLAR	2 P1 P5 GE1 P2 P6 GE2 P3 P7 GE3 M P4 P8 GE4	GE5 GE9 GE13 GE6 GE10 GE14 GE7 GE11 GE15 GE8 GE12 GE16		34	567 1001		1 2 3 0 00 00	4 5 00 00 0	6 7 8 10 10 10 9	14 15 16 (14 15 16 (14 15 16 (14 15 16 (16 11 12 (10 11 12 (10 11 12 (10 11 12 (10 11 12 (10 11 12 (10 10 (Console RST MGMT	
OLT Device GPON	- Sip Agent In IponSipAge	nfo gponSipAge ntProfileNam	gponSipAge	gponSipAge	gponSipAge IntProfileRtpM	gponSipAge IntProfileSign	gponSipAge ntProfileSion	gponSipAge ntProfileSign	gponSipAgentProfile RegistrationExpiratio	gponSipAgentProfile RegistrationReregHe	gponSipAgentProfile VoiceMailSubscriptio	gponSipAgentPro ProxyServerUri
PonPort Information		e	scp	inPort	axPort	alDscp	alPort	alTransferMo de	n	adStartTime	nExpiration	
- PonPort Optical Module Info DBA Profile Config		GPON	46	50000	60000	24	5060	udp	600	300	3600	192.168.5.254
Line Profile Config Service Profile Config Traffic Profile Config Groadcast Storm Suppression ONU Auto Find List ONU Upgrade	4	sipagen_u	40	80000	00000	∥ ∥	5070	μαρ	200	300	3000	
	Select A	II Delete					Refr	esh	Set Ad	d		

Element Management System System Alarm Confin Performan	ce Help												- a ×	č
GPON GPON Switch Control Ca Pon Module	0		5 = \0	×										
		Pon Card Management									×			
		েন্দ্রার ১টার প্রমান ১টার প্রমান ১টার মন্ট্রান্দ্র এটা মন্ট্রান্দ্র এটা				ڡ۫ٳڡ۫ٳڡ۫ٳڡ۫				16 Console 12 MGAIT RST				
		OLT Device GPON	Sip Agent Info InSipAge gponSipAge rofileRtpD ntProfileRtpli InPort	gponSipAge gp IntProfileRtpIIIntl axPort all	onSipAge ProfileSign Dscp	gponSipAge gponSipA ntProfileSign ntProfileS alPort alTransfe	ge gponSipAgentProfile Ign RegistrationExpiration Mon	gponSipAgentProfile RegistrationReregHi adStartTime	gponSipAgentProfile e VoiceMailSubscriptic nExpiration	gponSipAgentProfile PromServerUri	gponSipAgentProfile gpc RegistrationServerUn Voi			-
		PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Service Profile Config	50000	60000 24 60000 24		de 5060 udp 5070 udp	600 600	300 300	3600 3600	192 168 5 254				
Prompt	Мар	Traffic Profile Config Broadcast Storm Suppression											英,,半	
Set (gponSipAgentProfileSig	malPort 5060,gpor	ISIpAgentProfileRegistrationExpiration:	600.gponSipAgentProfileF	legistrationRere;)HeadStarfT	'ime:300;gponSipAgen	ProfileVoiceMailSubscri	otionExpiration:3600.gp	oonSipAgentProfilePro	xyServerUlt: 192, 168,5	254.gponSipAgentProfileRe	gistrationServerUn:]->(gponS	pAgen	۲
		- Digit Map Config - Pols Profile - ONU Upgrade												
			Select All Dele	ite			r Refresh	Set	Add		•]		
Trap Log Operation log													Divis 70x	
Current User:admin 10/28/2017 17	07:28 admin Que	ry [gponOnuDescription;gponOltPortid;	gponOnuAutofindid;gponO	OnuAutofindSn.gp	onOnuAuto	findPassword.) succes	s; Device: Top Tree->GP	ON->Pon Module					0.2%	-

6.3.9.2 SIP Extension Business Profile Settings

Double click the **'PON Module'** icon on the left side of the main page and enter the **'Sip Right Flag Configure'** page of the **'PON Card Management'** window:

Pon Card Management									×
PWRLSPR PWR2 XG SYS XG MGMTLLR	S P1 P5 GE1 GE5 G 1 P2 P6 GE2 GE6 G 2 P3 P7 GE3 GE7 G 1 M M P8 GE4 GE3 G	E9 GE13 E10 GE14 1 2 E11 GE15 1 1	34 1 00	5 6 7 8 1 1 1	1 2 3 4 5 6 00 00 00 00 00 00		14 15 16 Console 10 11 12 MGMT	\$T	
OLT Device GPON	Sip Right Flag Con gponOnu gponSi Descriptio FlagPri n	fig pRight gponSipRigh fileId FlagProfileN me	f gponSipRigh a FlagProfileCa IIWaiting	tt gponSipRightFlagProfi a	leCallProcess	gponSip FlagProf IIPresen	Right gponSipRightFlagProfi leCa Hotline ation	le gponSipRigh FlagProfileH tlineNum	nt gponSipRight o FlagProfileBi ndNum
 PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Bravice Profile Config Traffic Profile Config Bradcast Storm Suppression ONU Augestiter ONU Auto Find List ONU Auto Auth Rule DOUS Server Sip Right Flag Config Dight Map Config Dight Map Config ONU Upgrade 	0 Select All	sipright_0	enable	Threeparty,Callhold,	Refresh	disable			0

In this page, user can enable the call waiting, call transfer, call display and other extension functions. Click the **'Add'** button to add a SIP extension business profile, which is configured as follows:

Pon Card Management					×
Pon Lard Management	5 전 등 6만 6만 6만 6만 6만 52 등 6만 6만 6만 6만 6만 53 등 6만 6만 6만 6만 6만 50 등 6만 6만 6만 6만 6만 6만 50 pRight Flag Config gponOnu gponSipRigh(g Description FlagProfiled for Description FlagProfiled for FlagProfiled for FlagProfiled for flagProfiled	1 2 3 4 5 6 7 8 D D D D D D D D D D	1 2 3 4 5 6 7 8 00 00 00 00 00 00 00 00 00 eCallProcess	acconsilpRight geonsilpRightFlagPr	e RST rofile gponSipRigh(gponSipRigh(FlagProfileHo FlagProfileBi
PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Traffic Profile Config Traffic Profile Config ONU Auto Find List ONU Auto Find List ONU Auto Auth Rule Pots Server Sip Right Flag Config Dight Map Config Dight Map Config ONU Upgrade	n	Sipringhtflag Id Profile Name Call Watting Presentation HotLine Nummber Process Threeparty Calltransfer Callhold HotLine QK	1	isentation	tlineNum ndNum
	Select All Delete		Refresh Set	Add	

➤ call waiting

Configure the ONU SIP voice call waiting function with both enable and disable options.

➤ call processing

Threeparty: enable or disable the three-way call feature of the ONU SIP voice.

Calltransfer: enable or disable the call transfer function of the ONU SIP voice.

Callhold: open and close the ONU SIP voice call waiting.

Callhold: start and close the ONU SIP voice call ban.

DoNotdisturb: the ability to turn on and close ONU SIP voice.

Conference: open and close the ONU SIP Conference function.

➤ hotline

Hotline: open or close the SIP voice Hotline function of ONU.

HotlineDelay: open or close the SIP voice helpline delay function of ONU

[Example of SIP extension business profile configuration]

Example: create a SIP extension business profile with id 1 and open the hotline number 88884444.

Step 1:

Click the 'Add' button to add a SIP extension business profile:

2 Pon Card Management									>
PUT Cald Wallsgehent PWR3 SP PWR2 SK SVS SK MCMTRA	5 P1 F5 6E1 6E5 6E6 6E1 1 F2 F6 6E2 6E6 6E1 2 F3 F7 6E3 6E7 6E1 6E1 M F4 F8 6E4 6E3 6E7 2E1	3 4 1 2 3 4 5 1 1 2 3 4	5678	i <u>1 2 3 4 5</u> [00 00 00 00 00	6 7 8 00 00 00		16 Console	T	
	Sip Right Flag Config								
OLT Device GPON	gponOnu gponSipRight Descriptio FlagProfileId	aponSipRiahl aponSipRiah F 🖓 Add SipRightFlag	t oponSipRightFlag	ProfileCallProcess	apor X	SipRight gpo ProfileCa Hol	nSipRightFlagProfile line	gponSipRig FlagProfileH	ht gponSipRight Io FlagProfileBi
PonPort Information		Sipringhtflag Id			1	Sentation			
- PonPort Optical Module Info - DBA Profile Config		Profile Name		GPON TEST		ne			U
- Line Profile Config		Call Waitting Preceptation							
- Traffic Profile Config		HotLine Nummber			0				
ONU Regesiter		Process							
- ONU Auto Find List - ONU Auth List		🗌 Threeparty 🔲 Cal	ltransfer 🛛 Callh	old 🔲 Callpark 🔲 doNotdisturb	Conference				
ONU Auto Auth Rule Pots Server		HotLine							
Sip Agent Info			🔲 Hotlin	e 🔲 HotlineDelay					
Digit Map Config									
ONU Upgrade			<u>0</u> K	Cancel					
	Select All Delete			Refresh	Set A	dd			
ļ									
Pop Card Management									>
PWRISP PWRZ XC SYS XC MCMTRLA	5 P1 P5 GE1 GE5 GE9 GE1 1 P2 P6 GE2 GE6 GE10 GE1 2 P3 P7 GE3 GE7 GE11 GE1 MM P4 P6 GE4 GE8 GE12 GE1	3 4 1 2 3 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5676 1111	1 2 3 4 5 1 00 00 00 00 00	6 7 8 80 80 80		16 Console	т	
	Sip Right Flag Config								
OLT Device GPON	gponOnu gponSipRight Descriptio FlagProfileId	gponSipRight gponSipRight FlagProfileNa FlagProfileCa	t gponSipRightFlag a	ProfileCallProcess	gpor Flag	SipRight gpo ProfileCa Ho	nSipRightFlagProfile line	gponSipRig FlagProfileH	ht gponSipRight Io FlagProfileBi
	n	me liwaiting			IIPre	sentation		tiinervum	naivum
- PonPort Optical Module Info	0	sipright_0 enable	Threeparty,Callho	ld,	disat	le			0
Line Profile Config									
- Service Profile Config Traffic Profile Config									
Broadcast Storm Suppression ONU Regesiter									
ONU Auto Find List				Prompt	×				
ONU Auto Auth Rule				Add SipRightFlag 1,succ	ess				
 Pots Server Sip Agent Info 				确定					
Sin Right Flag Config					_				
Digit Map Config									
Digit Map Config Pots Profile ONULLIpgrade									
Digit Map Config Pots Profile ONU Upgrade									
Digit Map Config Pots Profile ONU Upgrade									
Digit Map Config Pots Profile ONU Upgrade									
Digit Map Config Pots Profile ONU Upgrade									
Digit Map Config Pots Profile	Select All Delete			Refresh	Set	dd			

Step 2:

The 'SipRight Flag config' page can look at the SIP extension business profile that has been added to it:

Pon Card Management											×
PWR1 5P PWR2 X0 5Y5 X0 MGMTLA	IS P1 P5 G 1 P2 P6 G 2 P3 P7 G RM P4 P8 G	E1 GE5 GE9 GE E2 GE6 GE10 GE E3 GE7 GE11 GE E4 GE8 GE12 GE	13 14 1 2 15 1 1	34 11010	5678	1 2 3 4 00 00 00 00	5 6 7 8 86 86 86 86	13 14 9 10	15 16 Console 15 16 Console 11 12 MGMT RST		
OLT Device GPON PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Trafile Profile Config Trafile Profile Config ONU Auto Find List ONU Auth List O	Sip Right gponOnu Description n	Flag Config gponSipRigh FlagProfileId 1 0	(gponSipRigh FlagProfileNa me GPON TEST sipright_0	gponSipRigh FlagPofileCa IIWalting enable enable	gponSipRightFlagProfi	leCallProcess		gponSipRight FlagProfileCa IIPresentation disable disable	gponSipRightFlagProfile Hotine	gponSipRigh FlagProfileH tlineNum	gponSipRigh FlagProfileBi ndNum 0 0
	Select	All Delet	e			Refresh	Set	Add			

6.3.9.3 Set SIP Number Diagram Profile

Double click the '**PON Module'** icon on the left side of the main page and enter the '**Digit Map** config' page of the '**PON Card Management'** window:

Pon Card Management							×
PWIRI SPIKS PI PS PWIRI 2 Kill P7 PS PWIRI 2 Kill P7 PS SYS VK2 PS P7 MICMITULISM PA PS	621 635 635 623 622 635 620 624 1 2 635 637 635 635 1 2 643 637 632 635 1 1 2	3456 1111 1110	7 8 1 2 3 2 1 2 1 6 6 6 6 6 6 6	4 5 6 7 8 00 00 00 00 00		Console MGMT RST	
Digitm	ap Profile						
OLT Device GPON gponO Descri n	Dnu gponDigitMapProfileId iptio	gponDigitMapProfileName	gponDigitMapProfileCritica IDialTime	gponDigitMapProfileCfgPa rtialDialTime	gponDigitMapProfileCfgDi gitmapFormat	gponDigitMapProfileBindN um	Token Info
- PonPort Information	0	digitmap_0	4000	16000	h248	0	Detailed
Use Aronie Config Service Profile Config Traffic Profile Config Traffic Profile Config Fradcast Storm Suppression ONU Regesiter ONU Auto Find List Onu Auto Find List On	elect All Delete		1	Refresh Add	Set		

In this page, you can set the SIP Digit Map profile and dial matching rules for ONU, and the configuration parameters are as follows:

Critial dial time(s)

Set the timeout time of the exact match rule for the ONU SIP digit map, and the time unit is 's'.

Partial dial time(s)

Set the timeout time of the matching rule for the ONU SIP digit map, the time unit is s.

Digitmap format

Set the format of the digit map to match the ONU SIP digit map, with notDefined, h248, NCS, vendorSpecific options.

Bind Num

Show times the SIP map profile is bound by ONU.

Token infor

Configure ONU SIP to match the number of matching rules, double click the '**Token Infor**' button, and open the SIP voice dial rule configuration page of ONU.

[Example of SIP digit map profile configuration]

Example: set up a SIP digit map profile with id 1, with a minimum of 8-digit phone Numbers.

Step 1:

Click 'Add' button to add a SIP digiet map profile:



Step 2:

Double click the 'Add' button of the 'Detailed' button of digit map profile 'Token Infor' that you just created, and enter the' Dial Plan' configuration page:



Step 3:

On the '**Dial Plan'** page, click '**Add**' to add a dial rule to match the 8-digit phone number, and 8 x can be configured in the matching rule.

Pon Card Management			
PWR2 SP PWR2 KG SVS KG MGM7LA	ਨੇ ਸੁੱਲ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ ਦੇ		8 9 10 11 12 MGMT R5T
	Dial Plan		
OLT Device GPON	gponOnu gponDigitMapProfileId	gponDigitMapProfileDialPlanId 1	gponDigitMapProfileDialPlanToken X.L
PonPort Information PonPort Optical Module Info DBA Profile Config Line Profile Config Traffic Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Regesiter ONU Auto Fuld List ONU Auto Auth Rule Pots Server Sip Agent Info Sip Agent Info Sip Agent Info Dig A		Add DialPlan Config X DigitMap Id DialPlan Id DialPlan Token XXXXXXXX QK Cancel	
Pon Card Management	· Select All Delete Select All Delete 다 전 전 613 615 615 613 1 2 3 4 다 전 전 613 615 613 1 2 3 4 다 전 전 613 615 613 1 2 3 4 다 전 1 2 3 4 다 전 1 2 3 4	Refresh Add 5 6 7 8 1 2 3 4 5 6 7 1 1 2 3 4 5 6 7 6 1 2 3 4 5 6 7 6 1 2 3 4 5 6 7 6 1 2 3 4 5 6 7 6 1 0	Set Back
	Dial Plan	an an DiaitMan Brafia Dia Bland	anapDigittlapBrofileDialDianTeken
OLT Device GPON			Z.L
PonPort Information PonPort Optical Module Info			
DBA Profile Config Line Profile Config Service Profile Config Traffic Profile Config Broadcast Storm Suppression ONU Auto Find List ONU Auth List ONU Auth List ONU Auth List Sip Right Flag Config Digit Map Config Digit Map Config Ordine ONU Upgrade		Prompt (j) Set DialPlan 1.success! 顾定	×

Step 4:

In the '**Dial Plan'** configuration page, you can view the matching rule of the phone number that you just created.



6.3.9.4 Set SIP Post Profile

Double click the '**PON Module'** icon on the left side of the main page and enter the '**Post profile'** configuration page of the '**PON Card Management'** window:

₽ Pon Card Management						×
2 PWR1 SP55 PWR2 X21 SY5 X22 MGMTLIAM	P1 P5 GE1 GE5 G P2 P6 GE2 GE6 G P3 P7 GE3 GE7 G # P4 P8 GE4 GE3 G	E9 CE13 E0 CE14 1 2 3 4 E1 CE15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	567812 1010101016166	3 4 5 6 7 8 133 133 133 133 133 133	13 14 15 16 Console 9 10 11 12 MGMT	RST
OLT Device GPON	Pots Profile Confi gponOnu gponP Descriptio	g otsProfileId gponPotsProfile_0 pots_profile_0	Name gponPotsProfileImpedance mp150nf7500hm2700hm	gponPotsProfileSignali gp ingCode n ioopStart gai	onPotsProfileRxGai gponPotsProfil n0dB gain0dB	eTxGair(gponPotsProfileBindN um 0
	Select All	Delete		Refresh	Add	

The main part of this page is to configure some of the hardware related parameters of the ONU post port, which can be added and adjusted as needed, not detailed in detail.

6.3.10 Upgrade ONU

Double click the ' **PON Module'** icon on the left side of the main page, open the '**PON Card Management'** window and enter the '**ONU upgrade'** page:

The configuration management page can be used in batches or individual upgrades of ONU software.

Note: before upgrading, you need to ensure that there is an upgrade file. The FTP server can

connect with OLT.

[Example of the ONU device upgrade]

Example: upgrade the software of the ONU, through the FTP server of 192.168.5.209.

Step 1:

First, ensure that the computer is connected to an OLT inband or outband management port, and the computer can properly ping the IP of the inband or outband management port.

Step 2:

Configure the FTP server on your computer to access the username and password as well as the file storage path:

No log file open - WFTPD		
File Edit View Logging Messages Secur	ity Help	
[# -001] 2017/8/21 10:32:31 Welcome to WF	TPD - we are listening at the pseudo-address 0.0.0.0.	
[# -001] 2017/8/21 10:32:31 But you might b	e reached at a number of other addresses.	
[# -001] 2017/8/21 10:32:31 Check with your	network administrators for the address that is reachable from the Internet	
[# -001] 2017/8/21 10:32:31 WFTPD is lister	ning on port 21, standard ftp killed by WM, ENDSESSION message	
[# -001] 2017/8/21 10:32:31 [# -001] 2017/8/21 10:32:31 [# -001] 2017/8/21 10:32:31	User / Rights Security Dialog	
	User Name: yao 💌 Done	
	User yao	
	New User Delete Change Pass	
	Restrict to home directory and below	
	Home JSERS\ADMINISTRATORNDESKTOR Browse	
	Help Rights >>	
		4
For Help, press F1	1 socket 0 users NUM	A /

Step 3:

Operation of upgrade EMS on the ONU:

Pon Card Management				×
PWR1 SPR PWR2 X00 SYS X00 MCM7148	호 전 등 6월 6월 6월 6월 1 1 월 월 6월 6월 6월 6월 6월 1 2 월 월 6월 6월 6월 6월 6월 1 1 월 1 월 1 월 1 월 1 월 1 월 1 월 1 월 1 월			14 15 16 Console 10 11 12 MGMT RT
OLT Device GPON	Upgrade Configure FTP Configure IP 192.168.5.209 User Name Pon Port	01 02 03 0	File Name Password 4 0.5 0.6 0.7 0.8 @ All	
Producast Storm Suppression ONU Regesiter ONU Auto Find List ONU Auto Find List ONU Auto Auth Rule ONU Auto Auth Rule ONU Auto Auth Rule Ords Server Sip Agent Info Sip Right Flag Config Digit Map Config ONU Upgrade	Progress Transfer Status idle	gpenOnuld 1 2 3 4 5 5 Refresh D	gponOnuSn TPLG00004321 TPLG06010701 TPLG06010701 TPLG06010711 TPLG06010712	gponOnuRunState online offline offline offline offline

Step 4:

It is suggested that the upgrade operation of ONU is completed successfully.

6.4 PON Port Is Managed Separately

Double click on the **'Port-1'** icon on the left side of the main page and enter the **'PON Card management'** page. The typical page is as follows:

	Pon Card Management			×
	PWR1 SPRS P1 P5 GE1 GE5 PWR2 XG1 P2 P6 GE2 GE6 SVS XG2 P3 P7 GE3 GE7 MGM7LLARM P4 P8 GE4 GE8	तक ब्रह्म 3 बहुत बहुत 4 5 6 7 बहुत बहुत कि कि कि कि कि कि कि बहुत 2 बहुत	≗ <u>1 2 8 4</u> ⊡ <u>88 88 88 88</u>	5 6 7 8 13 14 15 16 Cons 5 6 7 8 9 10 11 12 MGP
þ	Pon Port Pon-1			▼
	Basic Config			
	OperationStatus	up	Admin Status	enable 🗨
	PortIsolation Enable	true 🗸	PerfStatsOf15minuteEnable	false
	PerfStatsOf24hourEnable	false	Port Name	pon1
e		Refresh	Set	

In this page, user mainly conduct a separate configuration operation on the PON of OLT, and the specific parameter configuration is as follows:

> OperationState

Display OLT's PON operation state, "**down**" state indicates that OLT has no registration ONU under the PON of OLT; The "**up**" state shows that the PON of OLT is registered ONU.

Admin Status

You can display and open the PON port of OLT, and **'enable'** open the PON; **'disable'** closes the PON.

PortIsolation Enable

Show that the PON port isolates manage state, and the administrator can configure this option, which has two states, **'true'** and **'false'** respectively.

PerfStatsOf15 minutesEnable

Display 15 minutes of performance statistics to enable the managed state, the administrator can configure this option, which has two states: 'true' and 'false' respectively.

When set to **'true'**, the 15-minute performance statistics for the pon port will be enabled; When configured as**' false '**, the 15-minute performance statistics for the pon port will be disabled.

PerfStatsOf24hourEnable

Show the 24 hour performance statistics to enable the managed state, the administrator can configure this option, which has two states: 'true' and 'false' respectively.

When set to **'true'**, the function of the 24-hour performance statistics of the pon port will be enabled; When configured as**' false'**, the function of the 24-hour performance statistics for the pon port will be disabled.

Port Name

The name of the configuration PON can be displayed.

7 Manage ONU Device

7.1 Introduction of ONU Management

The ONU is the client device in the GPON system. The management of EMS software for ONU is carried out through the OLT connected to it. OLT's management of ONU is carried out by the OMCI management message based on itu-tg. 984. X standard.

EMS software support for a variety of types and models of ONU management, such as 1 FE ONU, 4 FE ONU, 8 FE ONU, 1 GE + WIFI ONU, 1 GE + CATV ONU, 4 FE + 2 POTS ONU, 4 FE + 1 CATV ONU, 4 FE + 2 + 1 CATV ONU POTS and so on.

This section with the commonly used 4FE + CATV ONU as an example to introduce the EMS software of ONU management, different port configuration type of data ONU, and more types of business data ONU part way through EMS software management basically the same, different parts in the device described in the relevant documents to type.

The ONU management window is opened by the corresponding ONU device icon on the left device tree of EMS software, and the ONU device is managed by the function parameters on the corresponding function page. The typical ONU management window page is shown below:

♀ [olt:GPON]>Pon Module>Port	-1>[00:43:21]ONU-1			×					
Onu Basic Information	Onu Basic Information	Basic Information							
	gponOnuRunState	online	gponOnuType	sfu-hgu					
	gponOnuConfigState	success	gponOnuMatchState	match					
	gponOnuSn	TPLG00004321	gponOnuDistance	5 m					
	gponOnuLineProfileId	1	gponOnuServiceProfileId	1					
	gponOnuMainSoftwareVersio	n 0.8.0_1.1	gponOnuStandbySoftwareVersion	154.104.0_0.12					
	ONU Capability Information								
	gponOnuFlowControlType po	AndCar	gponOnuPonPortNum 1						
	gponOnuEthPortNum 4		gponOnuPotsPortNum 2						
	gponOnuCatvPortNum 0		gponOnuGemPortNum 256						
	gponOnuTcontNum 15	5							
	ONU Optical Link Information	n							
	gponOnuOpticalTemperature	61.68°C	gponOnuOpticalTxPower	2.65dBm					
	gponOnuOpticalRxPower	-12.08dBm	gponOnuOpticalLaserBiasCurrent	18.78mA					
	gponOnuOpticalVoltage	3.24V							
		Refresh	Reboot						

As shown in the figure above, the ONU device management includes the following contents:

View ONU Basic information(ONU Basic information, ONU capability information, view ONU Optical link information)

- > ONU port information view and configuration
- > ONU CATV function configuration

The following sections describe the contents of the ONU administration.

7.2 ONU Basic Information Management

7.2.1 View Basic Information of ONU

The basic information of ONU can be viewed mainly, which can see the running state of ONU, the configuration status of ONU, the ONU ranging, and the hardware and software version of ONU, and the partial status description has been specified in section # 6.3.8.2.

Double click on the left side of the main page to manage the ONU, enter the ONU management page, and click **'ONU Basic Information'** to enter the page to see the basic information of the ONU device:

P [olt:GPON]>Pon Module>Por	rt-1>[00:43:21]ONU-1			×						
Onu Basic Information	Onu Basic Information									
Enrontinioniation	gponOnuRunState	online	gponOnuType	sfu-hgu						
	gponOnuConfigState	success	gponOnuMatchState	match						
	gponOnuSn	TPLG00004321	gponOnuDistance	5 m						
	gponOnuLineProfileId	1	gponOnuServiceProfileId	1						
	gponOnuMainSoftwareVersion	0.8.0_1.1	gponOnuStandbySoftwareVersion	154.104.0_0.12						
	ONU Capability Information									
	gponOnuFlowControlType pqA	AndCar	gponOnuPonPortNum 1							
	gponOnuEthPortNum 4		gponOnuPotsPortNum 2							
	gponOnuCatvPortNum 0		gponOnuGemPortNum 256							
r	gponOnuTcontNum 15									
	ONU Optical Link Information									
	gponOnuOpticalTemperature (61.68°C	gponOnuOpticalTxPower	2.65dBm						
	gponOnuOpticalRxPower	-12.08dBm	gponOnuOpticalLaserBiasCurrent	18.78mA						
	gponOnuOpticalVoltage 3	3.24V								
		Refresh	Reboot							

7.2.2 ONU Capability Set Information View

The information of the ONU capability is mainly to see the number of ETH port number, CATV port number, post number and the support number of GPON related parameters such as gemport and tcont.

Double click on the left side of the main page to manage the ONU, enter the ONU admin page, and click **'ONU Basic Information'** to enter this page to view the port ability information of the ONU device.

₽ [olt:GPON]>Pon Module>Po	0:43:21]ONU-1	X						
Onu Basic Information ETH Port Information	u Basic Information							
	onOnuRunState online gponOnuType	sfu-hgu						
	onOnuConfigState success gponOnuMatchState	match						
	nOnuSn TPLG00004321 gponOnuDistance	5 m						
	nOnuLineProfileId 1 gponOnuServiceProfileId	1						
	onOnuMainSoftwareVersion 0.8.0_1.1 gponOnuStandbySoftware	eVersion 154.104.0_0.12						
	ONU Capability Information							
	onOnuFlowControlType pqAndCar gponOnuPonPortNum	1						
	onOnuEthPortNum 4 gponOnuPotsPortNum	n 2						
	onOnuCatvPortNum 0 gponOnuGemPortNur	n 256						
	nOnuTcontNum 15							
	U Optical Link Information							
	onOnuOpticalTemperature 61.68°C gponOnuOpticalTxPower	2.65dBm						
	onOnuOpticalRxPower -12.08dBm gponOnuOpticalLaserBias	Current 18.78mA						
	onOnuOpticalVoltage 3.24V							
	Refresh Reboot							

7.2.3 ONU Optical Link Information

The optical link information of ONU is mainly to check the optical link information of the PON of ONU, such as: ONU receiving optical power information, and ONU transmitting optical power information.

Double click on the left side of the main page to manage the ONU, enter the ONU management page, and click **'ONU Basic Information'** to enter the page to view the optical link information of the device's PON.

₽ [olt:GPON]>Pon Module>Port	t-1>[00:43:21]ONU-1			×				
Onu Basic Information	Onu Basic Information							
	gponOnuRunState	online	gponOnuType	sfu-hgu				
	gponOnuConfigState	success	gponOnuMatchState	match				
	gponOnuSn	TPLG00004321	gponOnuDistance	5 m				
	gponOnuLineProfileId	1	gponOnuServiceProfileId	1				
	gponOnuMainSoftwareVersion	0.8.0_1.1	gponOnuStandbySoftwareVersion	154.104.0_0.12				
	ONU Capability Information							
	gponOnuFlowControlType pq	AndCar	gponOnuPonPortNum 1					
	gponOnuEthPortNum 4		gponOnuPotsPortNum 2					
	gponOnuCatvPortNum 0		gponOnuGemPortNum 256					
	gponOnuTcontNum 15							
	ONU Optical Link Information							
	gponOnuOpticalTemperature	61.68°C	gponOnuOpticalTxPower	2.65dBm				
	gponOnuOpticalRxPower	-12.08dBm	gponOnuOpticalLaserBiasCurrent	18.78mA				
	gponOnuOpticalVoltage	3.24V						
		Refresh	Reboot					

Note: GPON ONU registration for ONU receives light power requirement is very high, here on this side of the ONU receives the light power range must be between -8 ~ -27, OLT can automatically discover to the ONU, otherwise the OLT will always prompt ONU receives light power is too high. And it's easy to burn off the PON module of ONU if the ONU is too high.

7.3 ONU Port Management

This chapter is mainly about the ONU port configuration, which involves a lot of features is very important, such as ONU port access mode of the vlan configuration, ONU port speed limit and ONU port management state of open, etc.

7.3.1 Basic Configuration of ONU Port

The basic configuration of ports involves the opening and closing of ONU ports, the rate of ONU port and the ONU flow control function.

Double click on the left side of the main page to manage the ONU, enter the ONU management page, and click **'ETH Port Information'** to enter this page to do basic operations on the ONU port:

P [olt:GPON]>Pon Module>Port-1>[00:43:21]ONU-1 X									
Onu Basic Information	ONU ETH Info)							
	gponOnuEth PortId	gponOnuEthF ortNativeVIanI d	gponOnuEth PortNativeVIa nPriority	gponOnuEthP ortInboundCa rId	gponOnuEth PortOutbound Carld	gponOnuEthF ortSpeedAnd Duplex	gponOnuEth PortFlowCtrl	gponOnuEthP ortOperationa IState	gponOnuEth PortState
	1	100	0			autoNeg	disable	enable	down
- T									
				Refres	h	Set			

7.3.2 ONU Port Access Mode Vlan Configuration

In the 'service profile configuration' described in # 6.3.5.2.1 ONU trunk, passthrough mode, transformation, QinQ vlan configuration, but for the access mode of the vlan configuration ONU, need to configure in the ONU port management page, specific configuration is as follows:

Double-click on the left side of the main page to manage into the ONU management page, click **'ETH port information'** into the page to configure ONU port vlan access patterns, the following figure configuration ONU port access mode of vlan is 100, priority is 1:

u Basic Information	ONU ETH Info								
n'r ortinornauon	gponOnuEth Portld	gponOnuEthP ortNativeVIanI d	gponOnuEth PortNativeVIa nPriority	gponOnuEthP ortInboundCa rId	gponOnuEth PortOutbound Carld	gponOnuEthP ortSpeedAnd Duplex	gponOnuEth PortFlowCtrl	gponOnuEthP ortOperationa IState	gponOnuEt PortState
	1	100	0			autoNeg	disable	enable	down

7.3.3 ONU Port Rate Limit

Speed limit on the GPON OLT ONU port need to limit traffic profile is created in # 6.3.6 in advance, and bound to the ONU port on line in the ONU port management.

double-click on the left side of the main page to manage into the ONU management page, click on the **'ETH Port Information'** into the page you can configure the ONU port rate limit, for example the ONU port speed limit of 10 M as follows:

Step 1:

Create a flow profile with fixed bandwidth of 10M in advance:

Pon Card Management							×
PWRA SPR PWRA XCO SYS XCO MCMTLAR	5 M 75 GE GE GE GE GE 72 F6 GE GE GE GE GE 15 F7 GE GE GE GE GE 16 M 74 F8 GE GE GE GE GE 16 M 74 F8 GE GE GE GE GE GE	2 3 4 5 6 1 1 1 1 1 1		3 4 5 6 100 00 00 00 0		5 16 Console 1 12 MGMT RST	
OLT Device GPON	Traffic Profile Config gponOuu gponTrafficProfileid Descriptio	gponTrafficProfileName	gponTrafficProfileCfgCir 10240	gponTrafficProfileClgPlr 10240	gponTrafficProfileClgCbs	gponTrafficProfileClgPbs	gponTrafficProfileBindNu m 0
	Select All Delete			Refresh Set	Add		



Bind the traffic profile for the speed limit 10M to the ONU port.

Pon Module>Port-1	>[00:43:21]ON	IU-1							×
Onu Basic Information	ONU ETH Info								
Littrottinomatori	gponOnuEthP ortId	gponOnuEthP ortNativeVlanId	gponOnuEthP ortNativeVIanP riority	gponOnuEthP ortInboundCarl d	gponOnuEthP ortOutboundC arld	gponOnuEthP ortSpeedAndD uplex	gponOnuEthP ortFlowCtrl	gponOnuEthP ortOperational State	gponOnuEthP ortState
	1	100	0	10m	10m	autoNeg	disable	enable	down
				Refre	sh	Set			

Step 3:

Then click the 'set' button to complete the speed limit of the ONU port.

7.4 ONU CATV Management

Double click ONU managed in the left of main page, entering ONU management page, and click **'CATV Config'** to open or close CATV function.

Note: Before managing ONU's CATV function, users need to configure ONU's CATV port numbers at #6.3.5 service profile configuration.
P [olt:GPON]>Pon Module>Port-1>[00:43:21]ONU-1 X								
Onu Basic Information	ONU CATV Info							
Pots Port Config	gponOnuCatvPortId	gponOnuCatvPortOperationalState						
- IP Config	1	enable						
Add Sip User		enable						
Sip User Information		disable						
CATV Config								
	Refresh	Set						

7.5 ONU VOIP Service Configuration

Double click ONU managed in the left of main page, entering ONU management page, and click **'Pots Port Config'** to configure ONU Pots Service.

Note: Before configuring ONU's Pots Service, users need to configure ONU's Pots port numbers at #6.3.5 service profile configuration.

7.5.1 ONU VOIP Service IP Configuration

The IP configuration of the ONU Pots service is a major indication that ONU needs to configure an IP address (static IP address or DHCP access dynamic IP) before communicating to the pots server.

Double click ONU managed in the left of main page, entering ONU management page, and click **'IP Config'** to configure ONU Pots Service WAN IP.

₽ [olt:GPON]>Pon Module>Port	Iolt:GPON]>Pon Module>Port-1>[00:43:21]ONU-1 X									
Onu Basic Information	ONU Pots IP	ONU Pots IP Config								
- Pots Port Config - IP Config - Add Sip User	gponOnulp Hostld	gponOnulp CfgMode	gponOnulp CfgVlanId	gponOnulp CfgVlanPri	gponOnulp Cfglp	gponOnulp CfgMask	gponOnulp CfgGateway	gponOnulp CfgPriDns	gponOnulp CfgSlaveDn s	gponOnulp CfgMacAddr ess
CATV Config										
-										
			Refres	sh	Set	Add		elete		

[Example of ONU Pots WAN IP Configuration]

Example: Configuring ONU Pots service WAN IP is static 192.168.1.111, the gateway is 192.168.1.254, and WAN vlan is 100.

Step 1:

Click 'Add' button to configure ONU Pots service WAN IP:

₽ [olt:GPON]>Pon Module>Port-1>[00:4	Iolt:GPON]>Pon Module>Port-1>[00:43:21]ONU-1 X									
Onu Basic Information	ONU Pots IP Config									
Pots Port Config Pots Port Config Pots Port Config Add Sip User Add Sip User	Onulp gponOnulp d CfgMode	gponOnulp CfgVlanId	gponOnulp CfgVlanPri	gponOnulp Cfglp	gponOnulp CfgMask	gponOnulp CfgGateway	gponOnulp CfgPriDns	gponOnulp CfgSlaveDn s	gponOnulp CfgMacAddr ess	
CATV Config	? A	dd ONU IP C	onfig		×					
	IP Hos Model	st Id	static							
	VLAN VLAN	Id [100 +					
	IpAdd	ress	192.168.1.11	1						
	GateV	κ /ay	255.255.255. 192.168.1.25	6 64						
	Main I Slave	DNS Server	8.8.8.8							
		<u>0</u> K		<u>D</u> ancel						
		Refres	h	Set	Add	D	elete			

7.5.2 ONU VOIP Registered Tel-number Configuration

Mainly introduces the ONU Pots service this piece of registered tel-number, registered user name and Profile binding configuration.

Double click ONU managed in the left of main page, entering ONU management page, and click **'Add Sip User'** to configure ONU Pots Service registered tel-number.

Pon Module>Port-	P [olt:GPON]>Pon Module>Port-1>[00:43:21]ONU-1 X X							
Onu Basic Information	ONU Pots Sip Use	er Add						
Pots Port Config IP Config Add Sip User Sin User Information	gponOnuSipPstn Userld	gponOnuSipPstn UserName	gponOnuSipPstn UserPassword	gponOnuSipPstn UserTelephoneN umber	gponOnuSipPstn UserAgentProfilel d	gponOnuSipPstn UserDigitMapProf ileld	gponOnuSipPstn UserSipRightFlag ProfileId	
- CATV Config								
r								
		Ref	resh	Set A	.dd De	lete		

[Example of ONU Pots registered tel-number Configuration]

Example: Configuring ONU Pots Service registered tel-number is 88889999, registered user name and user password is admin/admin, and binding created all kinds of SIP Profile id 1.

Step 1:

Click 'Add' button to configure ONU Pots Service registered tel-number and user name and so on:

	Pon Module>Port	-1>[00:43:21]ONU-	1					×
l	Onu Basic Information	ONU Pots Sip Use	r Add					
	ETH Port Information Pots Port Config Add Sip User Sip User Information CATV Config	gponOnuSipPstn Userld	gponOnuSipPstn UserName	gponOnuSipPstn UserPassword	gponOnuSipPstn UserTelephoneN umber	gponOnuSipPstn UserAgentProfilel d	gponOnuSipPstn UserDigitMapProf ileId	gponOnuSipPstn UserSipRightFlag ProfileId
	- CALV COMING		Add Sip U User Id User Name Password Tel Number SipAgent Id DigitMap Id SipRightFlag I	Jser ADMIN ADMIN 8888 d DK Can				
	₽ [olt:GPON]>Pon Module>Port	-1>[00:43:21]ONU-1	Ref	resh S	Set A	dd De	lete	
Ì	Onu Basic Information	ONU Pots Sin Use	r Add					
	ETH Port Information Pots Port Config IP Config Add Sip User Sip User Information CATV Config	gponOnuSipPstn UserId	gponOnuSipPstn UserName	gponOnuSipPstn UserPassword	gponOnuSipPstn UserTelephoneN umber	gponOnuSipPstn UserAgentProfileI d	gponOnuSipPstn UserDigitMapProf ileId	gponOnuSipPstn UserSipRightFlag ProfileId
			Prompt	pots sip user 1,su	×			
n				确定				
			Ref	resh	Set A	dd De	lete	

Step 2:

Return 'Add SIP User' to view and modify tel-number configuration:

Iolt:GPON]>Pon Module>Port-1>[00:43:21]ONU-1 X								
Onu Basic Information	ONU Pots Sip User Add							
- Pots Port Config - IP Config Add Sin User	gponOnuSipPstn Userld	gponOnuSipPstn UserName	gponOnuSipPstn UserPassword	gponOnuSipPstn UserTelephoneN umber	gponOnuSipPstn UserAgentProfilel d	gponOnuSipPstn UserDigitMapProf ileId	gponOnuSipPstn UserSipRightFlag ProfileId	
Sip User Information	1	ADMIN	ADMIN	8888	0	0	0	
CATV Config		Ref	Tresh	Set	idd De	lete		

7.5.3 View ONU VOIP Registered State

It mainly introduces whether the ONU Pots service has been registered successfully and whether the Pots state is normal or not.

Double click ONU managed in the left of main page, entering ONU management page, and click **'Sip User Information'** to view ONU Pots Service registered state and phone state:

Inite General State Point And State Inite General State Point And State									
Onu Basic Information	ONU Pots Sip User Ir	nfo							
Pots Port Config IP Config	gponOnuSipPstnUs erld	gponOnuSipPstnUs erState	gponOnuSipPstnUs erHookState	gponOnuSipPstnUs erCodec	gponOnuSipPstnUs erServerStatus	gponOnuSipPstnUs erSessionType			
Add Sip User	1	lock	onhook	G.722	PortNotConfigured	Idle/done			
Bip User Information CATV Config									
			Refr	esh					

8 Operation Logs Management

It's convenient for administrator to view historic records of EMS operation. EMS provides operation logs query function. Open **'Operation Logs'** window of **'Alarm'** menu to view historic operation records. The typical interface is shown below:



The following 'Operation Logs ' window shows :

₽ System Log				×
Filter	UserName	Log	DateTime	
From Time: 2017-10-28 17:25:18				
End Date: 2017-10-28 17:25:18				
User name: All 💌				
Page record: 50				
Search Back up				
				-
-				
		Previous Next	Ci	rrent Page 0/0

As pictured above, inquiring operation logs according to operation period and operation users, the result of query can be saved as a single file.

[Example of operation logs management]

Example: Inquire and save admin user's operation event from June 21,2017 10:13:58 to August 21,2017 10:13:58.

Step 1:

Choose specified time from left drop-down menu of From Time and End Date. User name chooses 'Admin' . page record chooses '50', then click 'Search' button, displaying log events in the right, and click 'Back up'.

₽ System Log				×
Filter	UserName	Log	DateTime	
From Time: 2017-10-28 17:25:18				
End Date: 2017-10-28 17:25:18				
User name: All 🗨				
Page record: 50				
Search Back up				
	,	Previous Next	Cu	rrent Page 0/0

Step 2:

Choose specified dictionary to make a backup of admin user's operation logs.

•	Save As		×
- 保	存: 🗖	cache 💌	a 🔒 🗖 🔡 🗄
k			
文的	牛名:		
文的	牛类型:	Excel file	•
			保存取消

9 Alarm Logs Management

It's convenient for administrator to search alarm record of EMS operation. EMS provides alarm filter , backup and query function.

As shown below, open 'Alarm Query' window of 'Alarm' menu to search alarm information. You

can set alarm filter conditions in the left page, including alarm time, alarm status, alarm severity, alarm element, alarm page record count and alarm type. Clicking **'Filter'** menu can view alarm information meeting filter conditions in the right. Clicking **'Reset'** menu can reset filter conditions. Clicking **'Save As'** menu can save query information to chosen dictionary.

🕈 Alarm Filter						×
- Time:	Clear	Severity	Handler	Trap Object	NE IP Address	∇ Time
		Minor			/127.0.0.1:62595	10/26/2017
From Time: 2017-08-09 19:56:41		Minor			/127.0.0.1:62595	10/26/2017
End Date: 2017-11-07 19:56:41						
Days 50 Current Time						
Alarm Status Severity						
Handler Oritical						
No Handler						
Minor						
MIN						
Network Element Page record count						
NE Selected Alarms: 50						
Select Trap Name						
Select ALL Deselect All						
🕑 Illegal user login						
ONU port detect circle						
ONU user port circle eliminate						
ONU DYING_GASP						
ONU UNIPort Down ONU UNIPort Down ONU ONU ONU ONU ONU ONU ONU ON						
Digit Filler Depart Filler	•					•
Start Filter Reset Filter Save As			Previous	s Next	Cu	rrent Page 1/1

As shown below, open 'Config Trap Rule' window of 'Alarm' menu to configure alarm rule. Choose device type in the left. On the right is corresponding alarm rule information. Firstly, You can choose 'Yes' or 'No' of filter menu to modify alarm rules. Secondly, click 'Apply' menu. Finally, choose 'Yes' button from the pop-up menu. Clicking 'Refresh' button can update alarm rule information. Clicking 'Close' button can close current page.

Config Trap Rule			:	×
System	Trap Name	Severity	Filter	
EPON 1U4P	ONU port detect circle	Major	No	-
	ONU user port circle	Infomation	No	
	ONU DYING_GASP	Major	No	
EPON_2U8P	ONU UNIPort Down	Minor	No	
EPON_1U2P	ONU UNIPort Up	Information	No	
EPON 1U16P	ONU Offline	Minor	No	
B1000.00	ONU Online	Infomation	No	
P 1200-08	Logic Link Linkdown	Major	No	
	Logic Link Linkup	Infomation	No	Ш
1	ONU Traffic Change	Minor	No	1
	Link ID Resource Ex	Major	No	
-	Illegal Regist	Major	No	
-	OLT Traffic Change	Minor	No	1
	Switch Port Traffic C	Major	No	1
	Switch Port Linkdown	Critical	No	1
	Switch Port Linkup	Infomation	No	1
	SFP Plug out	Minor	No	1
	SFP Plug in	Infomation	No	1
	Fan Status Change	Infomation	No	1
	Power Status Change	Minor	No	1
	ONU offline	Minor	No	1
	ONU online	Infomation	No	-
	Refresh Ap	ply Close		

As shown below, open '**Trap Window'** of '**Alarm'** menu to inquire all alarm information. You can set alarm From Time, End time and Page record. Clicking '**Search'** button can view alarm information on the right. Clicking '**Backup'** button can save alarm information to chosen dictionary.

🛓 Traps						_		×
Filter	Clear	Severity	Handler	Trap Object	NE IP Address		Time	e
From Time: 2017-10-02 20:00:54		Minor			/127.0.0.1:62595	10/26/	2017 10	0:45:35
From Time. 2017-10-02 20:00:54		Minor			/127.0.0.1:62595	10/26/	2017 1):45:33
End Date: 2017-11-03 20:00:54								
Page record: 50								
Search Back up								
-								
	4							
	•		Previo	us Next		C	urrent P	age 1/1
			110110					-ge

10 Database Management

EMS database management function includes database backup ,database restore, ONU name backup, ONU name restore .

EMS configuration information, such as added device node, device port id name, user name and so on, is saved in EMS database file. In order to configurations not to be lost when system is abnormal, users can backup database regular intervals. Users have access to past configuration information via restoring database in case of software upgrade, operation system installation, system error or management server change.



Choose 'Database Backup/Restore' bar of 'System' menu to execute database backup and restore operation. Database backup by fault database filename

Backup database file type is **'.sql'** file. Filename by system auto-generated, and file is saved fault database document folder. After database backup, users can copy those database files to other location.

Open 'Database Restore' window when database restore, as shown below:

2 TO Link DON Element Management Lotters			1 × 1
System Alarm Config Performance Hein			
		_	
B GPON			
Pon Module			
B 🟉 Port-1			
00.4321			
(01 07 01)			
[01.07.11] GPON			-
[01:07:12]			
Port-3			
Port-4			
Porto			
Port-7			
Port-8			
	Restore Database ×		
	Please select the database's backup file		
			-
Map			
Clear Seventy Handler Trap Object NE IP Address Time Resume Time			_
	OK Cancel		

This window lists all database files by user backup before, choose a database file to execute database restore operation. If user's backup database is not in fault location, user need to copy the file to EMS fault saving path, then restore database file. EMS fault database saving path is **'..\EMS\EMS Server\backup DB'** dictionary.

ONU name backup and restore method is the same as database backup and restore method.

11 User Management

EMS support multi-user operation and set different operation rights for different users, thus improving system operation security. By user management operation, administrator can add, delete and modify existing user information.

Open 'User Manager' window of 'System' menu to execute user information management.

User Manager			×
Account	Name	Phone	Right
admin	admin		System Admin
			=
			-
1.			-
Login Name:	User	name:	
Password:	Pass	word Confirm:	
Phone:	Diabl	System A	dmin –
Phone:	Right	System A	

As shown above, the following is user management operations:

Add user

Input login name, user name and password into text-box at the bottom of window, and choose

operation right, then click 'Add User' button, thus account set up successfully. Click 'Save' button to save updated user information.

Delete user

Choose a user account which needs to delete from current user lists, click 'Delete User' button

to delete the user.

Modify user information

Choose a user account which needs to modify from current user lists, and can view current the user's information at the bottom of window. After modifying user information, clicking 'Save User'

button it is save changed user information.

User account privilege

EMS Support 'System Admin', 'Net Manager' and 'Comm User' three user rights. 'System Admin' level is the highest privilege, has all the operation rights of EMS software. 'Net Manager' level has all of operation rights, expect of user account management function. 'Comm User' is the lowest privilege, the users with this privilege only can view management information and have not the rights to do any set operations.

12 Device Upgrade

EMS software support device firmware on-line upgrade. The main procedure for device upgrade has two step. First, download firmware files to target device via FTP server to be upgraded. The target device will go through the whole firmware upgrade process according to upgrade commands received from EMS.

Device upgrade steps are introduced as follows:

1. FTP Server configure

First open FTP server, then configure file path and IP address. IP address and OLT mgmt port's IP address should in the same network segment.

As shown below:

No log file open - WFTPD	_	×
File Edit View Logging Messages Security Help ## -001] 2017/8/21 10:58:42 Welcome to WFTPD - we are listening at the pseudo-address 0.0.0.0. ## -001] 2017/8/21 10:58:42 The first address assigned to your system is 192.168.5.205 ## -001] 2017/8/21 10:58:42 User / Rights Security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X ## -001] 2017/8/21 10:58:42 Werk of the security Dialog X <th></th> <th> </th>		
Home C:\Users\cd\Desktop\ Browse Help Rights >>		
For Help, press F1 1 socket 0 users		/

2. Copy upgrade file to root dictionary of FTP Server

3. Parameter configure

1) Choose 'Configure' -> 'Device Upgrade' from main interface, as shown below:

₽ Element Management System					
System Alarm Config Performa	nce <u>H</u> elp				
💽 🚯 🔯 🗾 🔺 [
Top Tree GPON Switch Control Ca Pon Module Port-1 O0:43:21					K
	Мар				
Clear Severity Handler	Trap Object	NE IP Address	Time	Resume Time	

Povice Upgrade		×
Top Tree->GPON	Upgrade Configure	
	FTP Configure	
	IP 0.0.0.0 File Name	
	User Name Password	
	Progress	
	Transfer Status lidle	
	Refresh Download to Device Upgrade Reboot	
		Cancel

Figure 1: Device upgrade

2) Input FTP Server's IP address and upgrade filename in the interface.

3) Input FTP Server's user name and password.

4) Click **'Download Device'** button , **'Upgrade'** button and **'Reboot'** button in turn, completing OLT's upgrade.

13 Device Search Function

EMS support device search function. When there are more OLT and ONU devices connected EMS, we can find a device from a number of devices via EMS 's search function.

The specific operation method is as follows:

Right-click '**Top Tree**' of EMS main page , and click '**Search**' , then input device name in '**Key Word**' of pop-up '**Search Box**'.

P TP-Link PON Element Management System	
System Jarm Contig Eerformance Belp	
🙆 💪 🥥 📃 🔺 🗋	
Switch Composition Pon Module	
B Port-1	
(0.43.24) - Witteen (05.10.20)	
[01:07:01]	
[01.07.12] OPON	
- Port-2	
Port-4	
Port-5	
-	
- E Port-8	
	Search X
Man	
	Nyword
Clear Severity Handler Trap Object NE IP Address Time Resume Time	OK Cancel

14 End

Thanks for choosing our company products!