

**WDS1U4PGE / WDS1U8PGE  
(Cortina chipset)  
EPON OLT CLI User Manual**



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## **1 Overview**

### **1.1 Introduction**

This manual is applicable to Wodaplug 1U4PGE and 1U8PGE EPON OLT products , This document is for those who perform all tasks for the EPON OLT once it has been successfully installed. Users of this Guide should understand EPON technology and have experience configuring EPON devices.

Wodaplug OLT system could support inband and outband network management mode and EMS network management based on SNMP.

The user can use several different network interfaces to do network management, such as those listed below:

- SNMP Management
- CLI Management

This manual introduce CLI configuration function of EPON OLT.

In the initial setup step of OLT, there are two ways based on CLI management to login system:

- Terminal Emulation of CONSOLE port (RJ-45)
- Telnet of management port (RJ-45)

### **1.2 Command Explanations in each Section**

Commands are usually presented in the following ways:

- Tables for specific functions or features that include important parameters
- Specific commands that are part of examples
- A table at the end of each Section that includes all commands and descriptions of all parameters.

### **1.3 Command Presentation in Examples**

When a command is presented in an example, it follows the exact syntax and parameter values that match the

example configuration. If a command is very long, a (->) is used to note the command continues on the next line.

## 1.4 Command Syntax

The syntax rules for a Command and its parameters use the following conventions throughout this document:

- Blackface letter indicates command itself or command keyword
- “<>”                      The text inside it is the required parameters
- [] = Optional              The text inside it is the optional parameters
- | = Option (OR)          The multiple items which are divided are multi-select required parameters, indicating that must select one of them.
- “<x-y>”                      Valus rang from x to y. One is selected.

## 1.5 Editing Functions, Keystrokes, and Abbreviations

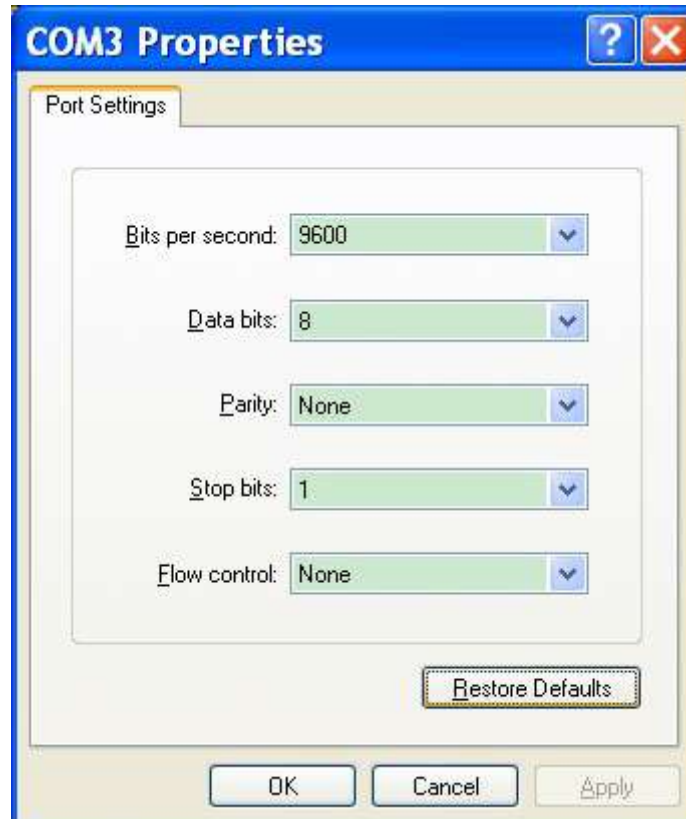
The product supports line editing, line recall, and abbreviations, so that command line input and editing can be done very quickly once command syntax and the line editing commands are learned.

Action	Key Sequence
Move cursor within command line	left and right arrow
Delete character to left of cursor	[Delete] or [Backspace]
Clear command line	[Ctrl/U]
Recall previous command in command history	CTRL/P or up arrow
Recall next command in command history	CTRL/N or down arrow
Automatically complete a partially entered command keyword	[Tab] or [Ctrl/I]

## 2 Configuration Preparation

### 2.1 Console Port Connection

There is a Console port in the front panel of Switch Control Card .The command line configuration interface is enabled via console port connecting to the NMS's superior terminal. Super terminal's basic configuration is as follows:



### 2.2 Network Connection

EPON OLT support inband management (CAT5 connect to ge1-ge8 port) and outband management (CAT4 cable to management port).After Telnet to CLI interface ,we can manage the GEAPON products.

**Default outband(inband) network management IP:192.168.1.100**

### 3 CLI Command Mode

OLT CLI use the layered command structure ( Command mode ). Every command mode provides subset of CLI command. The available CLI command depends on those command modes which have been activated currently.

#### 3.1 User Login EPON CLI System

System provide two login accounts default as follows:

Username	Password
admin	admin
guest	Null

After you log in successfully, the following interface pops up :

```
admin login

Username:admin
Password:*****

Entry level 2(manager) successfully!

epon#

-----

guest login

Username:guest

Entry level 1(visitor)

epon>
```

#### 3.2 CLI Command Help

When the command lines shows : epon> or epon#, user can input the configuration command to mange or inquire the configuration information .

OLT CLI command provides various help and shortcut keys. Next table lists main shortcut keys of obtaining help and methods in CLI command.

**CLI command Help**

Method	Function
Type "?" in any CLI command level	Show all available commands
Partial command+"? "	Show the initial command list of the specific character string(There is no space between the command and the question mark)
Command+Space +"? "	Show the completer syntax and the brief instruction of command
Partial command +<tab>	System will automatically complete the command or keyword
Ctrl-P" or the up arrow key ↑	Invoke the executed command previously.

For example 1:

epon#?

- auth - configure authentication mode for Olt
- igmp-snooping - configure IGMP Snooping
- logout - exit the CLI system
- mac-address - ctrl-card dynamic mac address table management
- mirror - configure switch mirror
- olt - configure OLT
- ping - test that a remote host is reachable
- reset - reset the values
- rmon - configure RMON
- rstp - rapid spanning tree protocol configuration
- show - show system configuration
- swmode - set basic switch mode
- swport - enter switch port config mode
- system - configure system
- tracert - trace the route to host
- trunk - enter trunk config mode
- vlan - enter vlan config mode

For example 2:

epon# s?

swmode                      swport                      system                      show  
epon# s

For example 3:

epon#show + [ ? ]

- auth - show olt auth mode
- igmp-snooping - show igmp snooping configurations
- mac-address - mac-address
- mirror - show switch mirror configurations
- olt - show olt's configuration

qinq	- show QinQ configuration
rmon	- show RMON
rstp	- Display RSTP information
running-config	- show current running-configuration
startup-config	- show current startup-configuration
swmode	- show swmode
swport	- display port attribute information
system	- show system configuration
trunk	- show trunk configuration
vlan	- show vlan configuration

### 3.3 Configure Terminal

The command mode allows the user to change equipment configuration. The changed configuration can be saved into OLT flash memory and used when system is started next time.

Configuration mode allows distributing and modifying each port separately for the specific parameters (Optical Line Terminal).

For example1: epon# swport ge1  
System prompt is epon(GE-1)#

For example2: epon# olt 1  
System prompt is epon(olt-1)#

ONU configuration mode is the sub-mode of configuration command mode of olt, and is used to configure the logical port parameters of ONU

For example: epon(olt-1)# onu 60  
System prompt is epon(olt-1/onu-60)#

## 4 System Management

### 4.1 Change system user and password

<b>Command Grammar</b>	epon# <b>system user &lt;old-password&gt; &lt;new-user&gt; &lt;new-password&gt; &lt;confirm-password&gt;</b>
<b>Function</b>	Change system user and password
<b>&lt;old-password&gt;</b>	Old password

<new-user>	New username
<new-password>	New password
<confirm-password>	Comfirm password

## 4.2 configure system hostname

Command Grammar	epon# <b>system hostname</b> <hostname>
Function	configure system hostname
<hostname>	System hostname

### 【Example】

Example 1: setting OLT hostname is WODAPLUG

<pre>epon# system hostname WODAPLUG WODAPLUG#</pre>
---

## 4.3 System Configuration File

### Backup OLT Configuration File

Command Grammar	epon# <b>system configurations backup olt</b> <tftp-server>
Function	Backup OLT configuration File to PC, firstly, the tftp server should be ready.
<tftp-server>	Tftp server ip address, eg: 192.168.1.130

### 【Example】

Example 1: Backup OLT configuration file to PC:

<pre>epon# system configurations backup olt 192.168.2.133 Backup olt configurations file to host 192.168.2.133. Remote filename: olt_cfg_backup_20000101055726.tar.gz.</pre>
--

```
epon#
```

### Restore OLT configuration from PC

<b>Command Grammar</b>	epon# <b>system configurations download olt &lt;tftp-server&gt; &lt;filename&gt;</b>
<b>Function</b>	Restore OLT configuration from PC, firstly, the tftp server and configurefile should be ready.
<b>&lt;tftp-server&gt;</b>	Tftp server ip address, eg: 192.168.1.130
<b>&lt;filename&gt;</b>	The Configuration File. eg: olt_cfg_backup_20000101055726.tar.gz

#### 【Example】

Example 1: Restore OLT configuration from PC:

```
epon# system configurations download olt 192.168.2.130
olt_cfg_backup_20000101063321.tar.gz
Download olt configurations file from host 192.168.2.130.

epon#
```

### Backup ONU Configuration File

<b>Command Grammar</b>	epon# <b>system configurations backup onu &lt;tftp-server&gt;</b>
<b>Function</b>	Backup ONU configuration File to PC, firstly, the tftp server should be ready.
<b>&lt;tftp-server&gt;</b>	Tftp server ip address, eg: 192.168.1.130

#### 【Example】

Example 1: Backup ONU Configuratin to PC:

```
epon# system configurations backup onu 192.168.2.130
Backup onu configurations file to host 192.168.2.130.
Remote filename: onu_cfg_backup_20000101060207.tar.gz.

epon#
```

Restore ONU Configuration File from PC

<b>Command Grammar</b>	epon# <b>system configurations download onu</b> <tftp-server> <filename>
<b>Function</b>	Restore ONU configuration from PC, firstly, the tftp server and configurefile should be ready.
<tftp-server>	Tftp server ip address, eg: 192.168.1.130
<filename>	The Configuration File. eg: olt_cfg_backup_20000101055726.tar.gz

【Example】

Example 1: Restore ONU configuration from PC:

epon#	system	configurations	download	onu	192.168.2.130
	onu_cfg_backup_20000101060207.tar.gz				
Download onu configurations file from host 192.168.2.130.					
epon#					

Backup OLT/ONU Configuration File automatically

<b>Command Grammar</b>	epon# <b>system configurations auto-backup</b> <admin>,<backup-type>,<interval>,<server>
<b>Function</b>	Backup OLT/ONU configuration File to PC automatically, firstly, the tftp server should be ready.
<admin>	Disable: close auto-backup function Enable:open auto-backup function
<backup-type>	<olt   onu   all >
<interval>	Auto-backup interval,<1-365> day
<server>	Tftp server ip address, eg: 192.168.1.130

## 4.4 Configuration Management

### Factory Default Configuration

<b>Command Grammar</b>	epon# <b>system default</b>
<b>Function</b>	Set the device back to factory default configuration. Remark : the device would reboot.

### Save Configuration

<b>Command Grammar</b>	epon# <b>system save &lt;all&gt; or &lt;olt&gt;</b>
<b>Function</b>	Save device configuration.
<b>&lt;all&gt;</b>	Take this parameter will save all device , include all olt and all onu.
<b>&lt;olt&gt;</b>	Take this parameter only save olt configuration.

### Show current running- configuration

<b>Command Grammar</b>	epon# <b>show running-config &lt;all&gt; ,&lt;auth&gt; ,&lt;olt&gt;,&lt;onu&gt; or &lt;swith&gt;</b>
<b>Function</b>	show current running-configuration
<b>all</b>	show current all running-configuration Include OLT and ONU
<b>auth</b>	show current auth running-configuration
<b>olt</b>	show OLT running-configuration
<b>onu</b>	show ONU running-configuration
<b>swith</b>	show current swith running-configuration

Show current startup-configuration

<b>Command Grammar</b>	epon# <b>show startup-config</b> <all> ,<auth> , <olt>,<onu> or <swith>
<b>Fuction</b>	show current startup-configuration
<b>all</b>	show current all startup-configuration
<b>auth</b>	show current auth startup-configuration
<b>olt</b>	show olt startup-configuration
<b>onu</b>	show onu startup-configuration
<b>swith</b>	show current switch startup-configuration

Reboot System

<b>Command Grammar</b>	epon# <b>system reboot</b>
<b>Function</b>	Reboot OLT.

## 4.5 Sytem update firmware

system update Olt 's firmware

<b>Command Grammar</b>	epon# <b>system update firmware</b> <firmware> tftp-server <ip>
<b>Fuction</b>	Sytem update olt's firmware Tftp server and firmware file should be ready
<b>&lt;firmware&gt;</b>	update system firmware
<b>&lt;ip&gt;</b>	tftp server IP address

upgrade all onu(s) by CTCS

<b>Command Grammar</b>	epon# <b>system update onu</b> <tftp-server> <file> <type>
<b>Fuction</b>	upgrade all onu(s) by CTC Tftp server and firmware file should be ready
<tftp-server>	tftp server IP address
<file>	image name
<type>	device type

## 4.6 Log Management

### Backup Log

<b>Command Grammar</b>	epon# <b>system log backup</b> <server-ip>
<b>Function</b>	Backup system log to PC, firstly, tftp server should be ready.
<server-ip>	Tftp server ip address, eg: 192.168.1.130

#### 【Example】

Example 1: Backup system log to PC:

```
epon# system log backup 192.168.2.130
Backup local log file to host 192.168.2.130 successfully, remote filename:
log_backup_20000101002224.txt!
```

#### 【Example】

Example 2: Show system all log:

```
epon# show system log all
```

Flush log

<b>Command Grammar</b>	epon# <b>system log flush</b>
<b>Function</b>	Flush all system log.

**【Example】**

Example 1: Flush system all log:

```
epon# system log flush
Flush log file successfully!
epon#
```

## 4.7 SNMP Management

SNMP Read Community

<b>Command Grammar</b>	epon# <b>system snmp community read-only &lt;community&gt;</b>
<b>Function</b>	Set SNMP Read Community.
<b>&lt; community &gt;</b>	Read Community , the string's length should not lenger than 16 chars. eg : public.

SNMP Write Community

<b>Command Grammar</b>	epon# <b>system snmp community read-write &lt;community&gt;</b>
<b>Function</b>	Set SNMP Write Community .

<b>&lt; community &gt;</b>	Write Community ,the string's length should not lenger than 16 chars. eg : private.
----------------------------	--

#### Trap IP Configuration

<b>Command Grammar</b>	epon# <b>system snmp trap-ip &lt;index&gt; &lt;ip-addr&gt;</b>
<b>Function</b>	Set the SNMP Trap IP Address, could set up to 4 trap ip
<b>&lt;index&gt;</b>	index : 1-4.
<b>&lt;ip-addr&gt;</b>	IP Address. Eg: 192.168.1.130

## 4.8 Network Address Management

<b>Command Grammar</b>	epon# <b>system ipconfig</b>
<b>Function</b>	Configure the Network Address of inband and outband manage IP.

#### 【Example】

Example 1: Show command parameter

```
epon#system ipconfig           // enter“? ”
<ip>                           - ip address, example: 192.168.0.233
<netmask>                       - netmask address, for example: 255.255.255.0
<gateway>                       - gateway
```

#### Network Parameter Configuration

<b>Command Grammar</b>	epon# <b>system ipconfig &lt;ip&gt; &lt;netmask&gt; &lt;gateway&gt;</b>
<b>Function</b>	Configure inband and outband management IP address netmask

	gateway。
< ip>	IP address. eg: 192.168.1.100
< netmask>	Netmask. eg: 255.255.255.0
< gateway >	Gateway. eg: 192.168.1.254

**【Example】**

Example 1: Configure the manage ip to 192.168.1.100, netmask to: 255.255.255.0, gateway to 192.168.1.254:

```
epon# system ipconfig 192.168.1.100 255.255.255.0 192.168.1.254
```

Example 2: Show the Network IP address Parameter

```
epon# show system ipconfig
Out band fast-ethernet ip address: 192.168.1.100 , netmask is: 255.255.255.0.
Gateway address is: 192.168.1.1
epon#
```

**Management VLAN Configuration**

<b>Command Grammar</b>	epon# <b>system mgmt-vlan &lt; vid&gt;</b>
<b>Function</b>	Configure the management vlan id.
< vid>	VLAN ID: 1 ~ 4094

**Configure system mtu**

<b>Command Grammar</b>	epon# <b>system mtu &lt; mtu&gt;</b>
<b>Function</b>	Configure system maximum transmission unit.
< mtu>	Scope:<1518-2047>, unit: byte

## 4.9 configuration

Configure system time automatically by NTP

<b>Command Grammar</b>	epon# <b>sys date ntp</b> <admin> <interval><server>or<timezone>
<b>Function</b>	Configure system time automatically by NTP

Configure system time manually

<b>Command Grammar</b>	epon# <b>system date manual</b> <time>
<b>Function</b>	Configure system time manually
<b>&lt;time&gt;</b>	Time format: YYYY.MM.DD-hh:mm:ss

### 【Example】

Example1: manually system time is 2015.12.12 10h:10m:10s

```
epon# system date manual 2015.12.12-10:10:10
```

## 4.10 show system configuration

Show system infor

<b>Command Grammar</b>	epon# <b>show system infor</b>
<b>Function</b>	show system infor

### 【Example】

Example1: show device system infor

```
epon# show system infor
Software Version      : 2.2.01s(Jan 9 2015)
```

Hardware Version	: Unknown
MAC	: e0-67-b3-00-00-00
Serial Number	: Unknown
System Time	:
System Temperature	:
FAN[1]	: Normal
FAN[2]	: Normal
FAN[3]	: Normal

**Show system ipconfig**

<b>Command Grammar</b>	epon# <b>show system ipconfig</b>
<b>Function</b>	show ipconfig

**【Example】**

Example 1: show system ipconfig

epon# show system ipconfig
Out band fast-ethernet ip address: 192.168.1.100 , netmask is: 255.255.255.0.
Gateway address is: 192.168.1.1
MNGMT-VID : 1

**Show system log**

<b>Command Grammar</b>	epon# <b>show system log &lt;all&gt; or &lt;tail&gt;</b>
<b>Function</b>	show device system log
<b>tail</b>	show the tail of the log file
<b>all</b>	Show the all logs

**【Example】**

Example 1: show the tail of the log file

epon# show system log tail
01/01/00 00:44:42 Bridge Max Age : 30
01/01/00 00:44:49 Bridge Max Age must be less than or equal to twice the the Bridge Forwarding Delay minus 1. <sup>1</sup>

```

01/01/00 00:44:49 Bridge Forwarding Delay : 20
01/01/00 00:44:54 Bridge Max Age must be less than or equal to twice the the Bridge
Forwarding Delay minus 1.
01/01/00 00:44:54 Bridge Forwarding Delay : 20
01/01/00 00:00:22 Receive from rstp bpdu handle message queue failed!
01/01/00 00:00:25 (cdtDeviceStateSet) Slot 1 olt 1~4 deregistered.
01/01/00 00:00:25 (cdtDeviceStateSet) Slot 1 olt 5~8 deregistered.
01/01/00 00:01:15 (cdtDeviceStateSet) Slot 1 olt 5~8 registered.
01/01/00 00:01:29 (cdtDeviceStateSet) Slot 1 olt 1~4 registered.
01/01/00 00:01:40 onu-1-1-25 (llid-0,mac-e0-67-b3-07-24-0c,ctc-30)online...
01/01/00 00:00:22 Receive from rstp bpdu handle message queue failed!
01/01/00 00:00:25 (cdtDeviceStateSet) Slot 1 olt 1~4 deregistered.
01/01/00 00:00:25 (cdtDeviceStateSet) Slot 1 olt 5~8 deregistered.
01/01/00 00:01:15 (cdtDeviceStateSet) Slot 1 olt 1~4 registered.
01/01/00 00:01:29 (cdtDeviceStateSet) Slot 1 olt 5~8 registered.
01/01/00 00:01:37 onu-1-1-25 (llid-0,mac-e0-67-b3-07-24-0c,ctc-30)online...
01/01/00 00:00:22 Receive from rstp bpdu handle message queue failed!
01/01/00 00:00:23 Receive from rstp bpdu handle message queue failed!
01/01/00 00:00:26 (cdtDeviceStateSet) Slot 1 olt 1~4 deregistered.
01/01/00 00:00:26 (cdtDeviceStateSet) Slot 1 olt 5~8 deregistered.
01/01/00 00:01:16 (cdtDeviceStateSet) Slot 1 olt 1~4 registered.
01/01/00 00:01:30 (cdtDeviceStateSet) Slot 1 olt 5~8 registered.
01/01/00 00:32:14 onu-1-1-25 (llid-0,mac-e0-67-b3-07-24-0c,ctc-30)online...
epon#
    
```

Show system memory

<b>Gommand Grammar</b>	epon# <b>show system memory</b>
<b>Function</b>	show system memory

【Example】

Example1: show system memory

epon# show system memory					
	total	used	free	shared	buffers
Mem:	61428	25712	35716	0	0
-/+ buffers:	25712	35716			
Swap:	0	0	0		

Show system mgmt-vlan

<b>Command Grammar</b>	epon# <b>show system mgmt-vlan</b>
<b>Function</b>	show system mgmt-vlan

【Example】

Example 1: show system mgmt-vlan

epon# show system mgmt-vlan system mgmt-vlan : 1
---

Show system snmp

<b>Command Grammar</b>	epon# <b>show system snmp</b>
<b>Function</b>	Show system snmp

【Example】

Example 1: show system snmp

epon# show system snmp Read-only community : public Read-write community : private
--

## 4.11 Configure system ONU template

Enable/Disable system ONU template CATV port

<b>Command Grammar</b>	epon# <b>system onu-template-config-system catv &lt;admin&gt;</b>
<b>Function</b>	enable/disable system ONU template CATV port
<b>&lt;admin&gt;</b>	Enable: Open the system ONU template CATV port Disable: Close the system ONU template CATV port

**【Example】**

Example1: enable system ONU template CATV port

```
epon# system onu-template-config-system catv enable
```

**Enable/Disable system ONU template fec function**

<b>Gommand Grammar</b>	epon# <b>system onu-template-config-system ctc fec &lt;admin&gt;</b>
<b>Function</b>	enable/disable system ONU template fec function
<b>&lt;admin&gt;</b>	Enable: Open the system ONU template fec function Disable: Close the system ONU template fec function

**【Example】**

Example1: enable system ONU template fec function

```
epon# system onu-template-config-system ctc fec enable
```

**Enable/Disable system ONU template igmp fast-leave function**

<b>Gommand Grammar</b>	epon# <b>system onu-template-config-system ctc igmp fast-leave &lt;state&gt;</b>
<b>Function</b>	enable/disable system ONU template igmp fast-leave function
<b>&lt;admin&gt;</b>	Enable: Open the system ONU template igmp fast-leave function Disable: Close the system ONU template igmp fast-leave function

**【Example】**

Example1: enable system ONU template igmp fast-leave function

```
epon# system onu-template-config-system ctc igmp fast-leave enable
```

**configure system ONU template igmp mode**

<b>Gommand</b>	epon# <b>system onu-template-config-system ctc igmp mode &lt;mode&gt;</b>
----------------	---

<b>Grammar</b>	
<b>Function</b>	configure system ONU template igmp mode
<b>&lt;mode&gt;</b>	mode,{igmp-mld-snooping controllable-igmp-mld pass-through}

**【Example】**

Example1: setting system ONU template igmp mode is igmp-mld-snooping

```
epon# system onu-template-config-system ctc igmp mode igmp-mld-snooping
```

**Enable/Disable system ONU template VOIP port**

<b>Gommand Grammar</b>	epon# <b>system onu-template-config-system pots ctc admin &lt;admin&gt;</b>
<b>Function</b>	enable/disable system ONU template voip port
<b>&lt;admin&gt;</b>	Enable: Open the system ONU template VOIP port Disable: Close the system ONU template VOIP port

**【Example】**

Example1: enable the system ONU template voip port

```
epon# system onu-template-config-system pots ctc admin enable
```

## 4.12 Configure user ONU template

**Enter user ONU template config mode**

<b>Gommand Grammar</b>	epon# <b>system onu-template-config-user &lt;templateID&gt;</b>
<b>Function</b>	Enter user onu template config mode
<b>&lt;templateID&gt;</b>	user onu template id :1-255

**【Example】**

Example1: enter user onu template config mode

```
epon# system onu-template-config-user 1
```

```
epon(onu_template-1)#
```

configure user ONU template capacity

<b>Gommand Grammar</b>	epon(onu_template-1)# <b>config capacity &lt;catvNum&gt; &lt;portNum&gt; &lt;potsNum&gt; &lt;templateName&gt;</b>
<b>Function</b>	configure user ONU template capacity
<b>&lt;catvNum&gt;</b>	The number of catv port
<b>&lt;portNum&gt;</b>	The number of ethernet port
<b>&lt;potsNum&gt;</b>	The number of voip port
<b>&lt;templateName&gt;</b>	The name of template

【Example】

Example1: setting user ONU template capacity is 1 CATV port、4 ethernet port and 1 VOIP port and the name is template1

```
epon(onu_template-1)# config capacity 1 4 1 template1
```

Enable/Disable user ONU template user port

<b>Gommand Grammar</b>	epon(onu_template-1)# <b>config uni &lt;unild&gt; ctc admin &lt;admin&gt;</b>
<b>Function</b>	enable/disable user ONU template user port
<b>&lt;unild&gt;</b>	User port ID :<1-24>
<b>&lt;admin&gt;</b>	Enable: Open the user ONU template user port Disable: Close the user ONU template user port

【Example】

Example1: enable the user ONU template user port

```
epon(onu_template-1)# config uni 1 ctc admin enable
```

configure user ONU template egress-policing

<b>Gommand Grammar</b>	epon(onu_template-1)# <b>config uni &lt;unild&gt; ctc egress-policing &lt;max-rate&gt;</b>
<b>Function</b>	configure system ONU template egress port rate
<b>&lt;unild&gt;</b>	User port ID :<1-24>
<b>&lt;max-rate&gt;</b>	0-1000000(kbps)

configure user ONU template ingress-policing

<b>Gommand Grammar</b>	epon(onu_template-1)# <b>config uni &lt;unild&gt; ctc ingress-policing &lt;max-rate&gt;</b>
<b>Function</b>	configure system ONU template ingress port rate
<b>&lt;unild&gt;</b>	User port ID :<1-24>
<b>&lt;max-rate&gt;</b>	0-1000000(kbps)

Enable/Disable user ONU template auto negotiation function

<b>Gommand Grammar</b>	epon(onu_template-1)# <b>config uni &lt;unild&gt; ctc auto-nego &lt;admin&gt;</b>
<b>Function</b>	enable/disable user ONU template auto negotiate function
<b>&lt;unild&gt;</b>	User port ID :<1-24>
<b>&lt;admin&gt;</b>	Enable: Open the user ONU template auto negotiate function Disable: Close the user ONU template auto negotiate function

Enable/Disable user ONU template auto flow control function

<b>Gommand</b>	epon(onu_template-1)# <b>config uni &lt;unild&gt; ctc flow-ctrl &lt;admin&gt;</b>
----------------	---

<b>Grammar</b>	
<b>Function</b>	enable/disable user ONU template flow control function
<b>&lt;unild&gt;</b>	User port ID :<1-24>
<b>&lt;admin&gt;</b>	Enable: Open the user ONU template flow control function Disable: Close the user ONU template flow control function

Enable/Disable user ONU template auto loop-detect function

<b>Gommand Grammar</b>	epon(onu_template-1)# <b>config uni &lt;unild&gt; ctc loop-detect &lt;admin&gt;</b>
<b>Function</b>	enable/disable user ONU template loop detect function
<b>&lt;unild&gt;</b>	User port ID :<1-24>
<b>&lt;admin&gt;</b>	Enable: Open the user ONU template loop detect function Disable: Close the user ONU template loop detect function

configure user ONU template mac aging-time

<b>Gommand Grammar</b>	epon(onu_template-1)# <b>config uni &lt;unild&gt; ctc mac-aging-time &lt;timer&gt;</b>
<b>Function</b>	configure user ONU template mac aging-time
<b>&lt;unild&gt;</b>	User port ID :<1-24>
<b>&lt;timer&gt;</b>	Mac address aging time : 0-4294967295 second

configure user ONU template statistics function

<b>Gommand Grammar</b>	epon(onu_template-1)# <b>config uni &lt;unild&gt; ctc statistics &lt;monitoring-status&gt; &lt;monitoring-period&gt;</b>
----------------------------	--

<b>Function</b>	configure user ONU template mac aging-time
<b>&lt;unild&gt;</b>	User port ID :<1-24>
<b>&lt;monitoring-status&gt;</b>	The status of statistics function Enable:open the statistics function Disable:close the statistics function
<b>&lt;monitoring-period&gt;</b>	The period of statistics:<1-4294967295> second

## 5 Switch control card configuration

### 5.1 Storm Control

Enable/Disable Storm Control and Configure the Storm Control Parameter

<b>Command Grammar</b>	epon# <b>swport</b> <port> storm-ctrl <type> <enable> <rate>
<b>Function</b>	Enable or Disable Storm Control function and configure the storm control parameter
<b>&lt;type&gt;</b>	By now, support the follow :  bcast-mcast-dlf, broadcast multicast dlf broadcast-multicast broadcast-dlf multicast-dlf
<b>&lt;enable&gt;</b>	Enable: Open the storm control function Disable: Close the storm control funcion
<b>&lt;rate&gt;</b>	The control rate : 0-33554431(kbps)

## 5.2 Port managemnet

enter switch port config mode

<b>Command Gtammar</b>	epon# <b>swport</b> <port>
<b>Function</b>	enter switch port config mode. Noting: ge1-ge8 is eth port, ge9-ge16 is PON port
<b>&lt;port&gt;</b>	Switch port number ,<ge1-ge16>

### 【Example】

Example 1: Enter Sithch port ge1 config mode

```
epon# swport ge1
epon(GE-1)#
```

- epon(GE-1)# ?** Enter“?”show the current directory :
- admin** - enable or disable current port
  - admit-frame** - set port access frame type
  - auto-nego** - enable auto-nego
  - def-pri** - set port default priority
  - exit** - exit current mode
  - flow-ctrl** - set port flow control
  - learning** - configure switch port learning
  - pvid** - configure the PVID
  - rate-ctrl** - configure rate-control
  - speed** - configure the SPEED
  - storm-ctrl** - Configurate storm control, support broadcast | mult
- icast | unknown unicast
- vlan** - add or del vlan list
- Global command:**
- logout** - exit the CLI system
  - ping** - test that a remote host is reachable
  - show** - show system configuration
  - tracert** - trace the route to host

Port parameters

Enable current port

<b>Command Grammar</b>	epon(GE-1)# <b>admin enable</b>
<b>Function</b>	Configuration current port enable

Disable current port

<b>Command Grammar</b>	epon(GE-1)# <b>admin disable</b>
<b>Function</b>	Disable current port

Set port access frame type

<b>Command Grammar</b>	epon(GE-1)# <b>admit-frame &lt;type&gt;</b>
<b>Function</b>	set port access frame type
<b>&lt;type&gt;</b>	all : all of packet. tagged : only receive tag packet untagged:only receive untag packet .

Set port default priority

<b>Command Grammar</b>	epon(GE-1)# <b>def-pri &lt;priority&gt;</b>
<b>Function</b>	Configure the switch port default pvid, when switch port receive packet witch no tag, it will give the packet default pvid, that is the

	default 802.1p priority.
<b>&lt;priority&gt;</b>	Config priority ,valaue: <0-7>

**Set port flow-ctrl function**

<b>Command Grammar</b>	epon(GE-1)# <b>flow-ctrl &lt;admin&gt;</b>
<b>Funcion</b>	Configurate storm control
<b>&lt;admin&gt;</b>	disable : disable flow-ctrl function enable: enable flow-ctrl function

**Configure the pvid of port**

<b>Command Grammar</b>	epon(GE-1)# <b>pvid &lt;pvid&gt;</b>
<b>Function</b>	Configure the pvid of port
<b>&lt;pvid&gt;</b>	Optional parameters : 0-4094。

**Configure auto-nego of port**

<b>Command Grammar</b>	epon(GE-1)# <b>auto-nego</b>
<b>Function</b>	Configure auto-nego of port

**Configure the speed of port**

<b>Command Grammar</b>	epon(GE-1)# <b>speed &lt;speed&gt; duplex &lt;duplex&gt;</b>
<b>Function</b>	Configure the speed of port

<b>&lt;speed&gt;</b>	Effective parameter; <10m 100m 1000m>
<b>&lt;duplex&gt;</b>	Optional parameters <full half>

**Add vlan list of port**

<b>Command Grammar</b>	epon(GE-1)# <b>vlan add</b> <vidlist> <tag>
<b>Function</b>	Add vlan list port and set up tag mode
<b>&lt;vidlist&gt;</b>	vlan id list,<Combination of 1~4094>
<b>&lt;tag&gt;</b>	Mark way is optional parameters , Given tag parameters is out of the packet with the tag The tag parameter default is out of the packet without the tag

**【Example】**

Example 1: create Vlan2-100 with the TAG TAG, create vlan101-200 without the TAG markup under the exchange ge1 port

```
epon(GE-1)# vlan add 2-100 tag
epon(GE-1)# vlan add 101-200
```

**Delete the vlan list of port**

<b>Command Grammar</b>	epon(GE-1)# <b>vlan delete</b> <vidlist>
<b>Function</b>	Delete the vlan list of port
<b>&lt;vidlist&gt;</b>	vlan id list,<Combination of 1~4094>

**【Example】**

Example 1: delete vlan 2-200 of ge1 port

```
epon(GE-1)# vlan del 2-200
```

Show swport current configuration information

<b>Command Grammar</b>	epon# <b>show swport ge1 attribute</b>
<b>Function</b>	Show swport current configuration information

【Example】

Example 1:show swport current configuration of ge1 port information

```
epon# show swport ge1 attribute
                                GE-1 STATE
Link-State           : Link-down
Admin-State          : Enable
Flow-Control         : Disable
Speed-State          : 1000
Duplex-State         : Full
Learning             : Disable
Egress-Rate-Limit   : Disable
Ingress-Rate-Limit  : Disable
Priority              : 0
PVID                  : 1
```

Configuration ingress-port rate

<b>Command Grammar</b>	epon(GE-1)# <b>rate-ctrl ingress &lt;rate&gt;</b>
<b>Function</b>	Configuration ingress-port rate
<b>&lt;rate&gt;</b>	0-1000000(kps)

Configuration egress-port rate

<b>Command Grammar</b>	epon(GE-1)# <b>rate-ctrl egress &lt;rate&gt;</b>
<b>Function</b>	Configuration engress-port rate
<b>&lt;rate&gt;</b>	0-1000000(kps)

### 5.3 Configure switch mode

Show vlan state

<b>Command Grammar</b>	epon# <b>show swmode vlan</b>
<b>Function</b>	Show vlan state

#### 【Example】

Example 1: show swmode vlan :

epon# show swmode vlan VLAN STATUS : Disable
---

Configure vlan enable/disable

<b>Command Grammar</b>	epon# <b>swmode vlan &lt;mode&gt;</b>
<b>Function</b>	Enable/disable the vlan function
<b>&lt;mode&gt;</b>	Enable :enable vlan Disable :disable vlan

### 5.4 MAC address management

Configure mac-address aging timeout

<b>Command Grammar</b>	epon# <b>mac-address aging &lt;timeout&gt;</b>
<b>Function</b>	Configure mac-address management timeout 。
<b>&lt;timeout&gt;</b>	MAC aging time :range : 0-65535s



<b>&lt;member&gt;</b>	ge1-ge16
<b>&lt;tag&gt;</b>	Mark way is optional parameters , Given tag parameters is out of the packet with the tag The tag parameter default is out of the packet without the tag

**【Example】**

Example 1: add ge1,ge2 and ge3 as vlan100 member and set up tag, add ge4 and ge5 as vlan100 member and set up untag:

```
epon(vlan-100)#member add ge1-ge3 tag
epon(vlan-100)#member add ge4-ge5
```

**Delete vlan port member**

<b>Command Grammar</b>	epon(vlan-100)# <b>member del</b> <i>&lt;member&gt;</i>
<b>Function</b>	Delete vlan port member.
<b>&lt;member&gt;</b>	ge1-ge16.

**Delete vlan**

<b>Command Grammar</b>	epon(vlan-100)# <b>delete</b> <i>&lt;vlanList&gt;</i>
<b>Function</b>	Delete vlan.
<b>&lt;vlanlistt&gt;</b>	Delete vlan list , Valid values :the combination of 1-4094 , Example : delete vlan 10,20,30 delete vlan 100-120 delete vlan 10,100-110,200

Show vlan configuration of vlan

<b>Command Grammar</b>	epon# <b>show vlan &lt;vlanId&gt;</b>
<b>Function</b>	Show vlan configuration of vlan
<b>&lt;vlanId&gt;</b>	all : show all current vlan configuration 。 1-4094 : show current vlan-id configuration。

**【Example】**

Example 1: show all current vlan configuration:

```
epon# show vlan all
-----
VLAN ID: 1
Tagged ports:
  none
Untagged ports:
    ge-9   ge-10   ge-11   ge-12   ge-13   ge-14   ge-15   ge-16
    ge-1   ge-2    ge-3    ge-4    ge-5    ge-6    ge-7    ge-8
-----
VLAN ID: 100
Tagged ports:
    ge-1
Untagged ports:
  none
```

## 5.6 Rstp configuration management

Enable/disable RSTP configuration

<b>Command Grammar</b>	epon# <b>rstp &lt;state&gt;</b>
<b>Function</b>	Enable/disable RSTP Function
<b>&lt;state&gt;</b>	enable:enable Rstp Function disable:disable Rstp Function

**【Example】**

Example 1: enable Rstp function

```
epon# rstp enable
Enable RSTP successful!
```

Example 2: disable Rstp function

```
epon# rstp disable
Disable RSTP successful!
```

**Configure Rstp bridge maxage aging time**

<b>Command Grammar</b>	epon# <b>rstp bridge maxage &lt;aging&gt;</b>
<b>Function</b>	Configure Rstp bridge maxage aging time
<b>&lt;aging&gt;</b>	Range: 6-40 Bridge Max Age must be less than or equal to twice the the Bridge Forwarding Delay minus 1.

**【Example】**

Example 1: if the forward delay is a maximum of 15 s, configuring the biggest aging time is 28s

```
epon# rstp bridge maxage 28
Configure RSTP max age successful!
```

**Configure Rstp bridge delay time**

<b>Command Grammar</b>	epon# <b>rstp bridge fdelay &lt;fdelay&gt;</b>
<b>Function</b>	Configure Rstp bridge fdelay time
<b>&lt;fdelay&gt;</b>	Range: 4-30s

**【Example】**

Example 1: configuring Rstp bridge delay time is 15s

```
epon# rstp bridge fdelay 15
Configure RSTP forward delay successful!
```

Configure Rstp bridge priority

<b>Command Grammar</b>	epon# <b>rstp bridge priority</b> <prio>
<b>Function</b>	Configure Rstp bridge priority
<b>&lt;prio&gt;</b>	Range:p0-p65535

**【Example】**

example1: setting Rstp bridge priority is 0

epon# rstp bridge priority p0 Configure RSTP bridge priority successful!
---

Configure max counts of Rstp packet per second

<b>Command Grammar</b>	epon# <b>rstp hold-count</b> <count>
<b>Function</b>	Configure max counts of Rstp packet per second
<b>&lt;count&gt;</b>	Range:1-10

**【Example】**

Example 1: Configure transmit 10 hold-counts of Rstp per second

epon# rstp hold-count 10 Configure RSTP transmit holle packet limit successful!
--

Configure Rstp port piority

<b>Commad Grammar</b>	epon# <b>rstp port</b> <protid> <b>priority</b> <prio>
<b>Function</b>	Configure Rstp port priority
<b>&lt;protid&gt;</b>	Range ; ge1-ge16
<b>&lt;prio&gt;</b>	Value :p0,p16,p32,p48,p64,p80,p96,p112,p128,p144,p160,p176,p192,p208,p224,p240

**【Example】**

Example 1: setting ge1 port priority is 0

```
epon# rstp port priority ge1 p0
GE(1)'s priority configuration successful!
```

**Configure Rstp port path-cost**

<b>Command Grammar</b>	epon# <b>rstp port</b> <i>&lt;protid&gt;</i> <b>path-cost</b> <i>&lt;pathcost&gt;</i>
<b>Function</b>	Configure Rstp port path-cost
<b>&lt;protid&gt;</b>	Port
<b>&lt;pathcost&gt;</b>	Port path cost

**【Example】**

Example 1: setting ge1 path-cost of Rstp is 2000

```
epon# rstp port ge1 path-cost 2000
GE(1)'s path cost configuration successful!
```

**Configure Rstp edge-port**

<b>Command Grammar</b>	epon# <b>rstp port</b> <i>&lt;protid&gt;</i> <b>edgecfg</b> <i>&lt;edge&gt;</i>
<b>Function</b>	Configure Rstp edge-port
<b>&lt;protid&gt;</b>	Switch port
<b>&lt;edge&gt;</b>	<p>edge: edge            none-edge:none edge            auto : Automatic negotiation</p> <p>Note: the edge of the port don't need after discarding - learning - forwarding steps, and direct conversion to the forwarding state, the rest of the ports need to pass the above process</p>

**【Example】**

Example 1: setting ge1 is edge of Rstp

```

epon# rstp port ge1 edgecfg edge
GE(1)'s edge attribute configuration successful!
    
```

Example 2: setting ge1 is auto configuration

```

epon# rstp port ge1 edgecfg auto
GE(1)'s edge attribute configuration successful!
    
```

**Configure Rstp p2p port**

<b>Command Grammar</b>	epon# <b>rstp port &lt;protid&gt; p2pcfg &lt;p2p&gt;</b>
<b>Function</b>	Configure Rstp p2p port
<b>&lt;protid&gt;</b>	Switch port
<b>&lt;p2p&gt;</b>	Shared p2p :p2p port auto : Automatic negotiation Note: p2p port to allow rapid transition to the forwarding state, shard port need through discarding - learning - forwarding steps forward to transition to the state

**【Example】**

Example: setting ge1 port is p2p port

```

epon# rstp port ge1 p2pcfg p2p
GE(1)'s link type configuration successful!
    
```

**Configure Rstp protocol version check**

<b>Command Grammar</b>	epon# <b>rstp port &lt;protid&gt; p2pcfg mcheck</b>
<b>Function</b>	Configure Rstp protocol version check
<b>&lt;protid&gt;</b>	Switch port

**【Example】**

Example:1 Configure Rstp protocol version check

```
epon# rstp port ge1 mcheck
GE(1) force version successful!
```

Show Rstp information

<b>Command Grammar</b>	epon# <b>show rstp &lt;protid&gt;</b>
<b>Function</b>	Show Rstp information
<b>&lt;protid&gt;</b>	Switch port

**【Example】**

Example 1: show Rstp information

```
epon# show rstp
RSTP Bridge Status:
RSTP Setting           :Enable
Bridge ID [PRI-MAC]    :1-e0:67:b3:00:00:00
Bridge Hello Time      :2 sec
Bridge Max Age         :25 sec
Bridge Forward Delay   :15 sec
Transmit Hold Count    :10
Root Bridge ID         :1-e0:67:b3:00:00:00
Root Path Cost         :0
RSTP Port Status:
GE Mode Pri PathCost  EdgeC EdgeO P2pC  P2pO  State      Role
1 RSTP 1 2000 Auto Edge P2P P2P LinkDown UNKNOWN
2 RSTP 128 20000 Auto NEdge Auto P2P LinkDown UNKNOWN
3 RSTP 128 20000 Auto NEdge Auto P2P LinkDown UNKNOWN
4 RSTP 128 20000 Auto NEdge Auto P2P LinkDown UNKNOWN
5 RSTP 128 20000 Auto NEdge Auto P2P LinkDown UNKNOWN
6 RSTP 128 20000 Auto NEdge Auto P2P LinkDown UNKNOWN
7 RSTP 128 20000 Auto NEdge Auto P2P LinkDown UNKNOWN
8 RSTP 128 20000 Auto NEdge Auto P2P LinkDown UNKNOWN
Total 8 RSTP ports dumped.
```

## 5.7 Trunk configuration managemnet

Enter trunk config mode

<b>Command Grammar</b>	epon# <b>trunk</b> <tid>
<b>Function</b>	Enter trunk config mode
<b>&lt;tid&gt;</b>	Range:1-4

**【Example】**

Example 1: enter trunk 1 config mode view

epon# trunk 1 epon(trunk-1)#
---------------------------------

Add port of trunk member

<b>Command Grammar</b>	epon(trunk-1)# <b>member add</b> <member>
<b>Function</b>	Add trunk's member
<b>&lt;member&gt;</b>	Porttlist

**【Example】**

Example 1 :add ge1-ge2 port of trunk 1 member

epon(trunk-1)# member add ge1-ge2
-----------------------------------

Delete port of trunk member

<b>Command Grammar</b>	epon(trunk-1)# <b>member del</b> <member>
<b>Function</b>	Delete port of trunk member
<b>&lt;member&gt;</b>	Portlist

**【Example】**

Example1: delete ge1-ge2 of trunk 1 member

```
epon(trunk-1)# member del ge1-ge2
```

#### Delete trunklist configuraion

<b>Command Grammar</b>	epon(trunk-1)# <b>delete</b> <trunkList>
<b>Function</b>	Delete trunklist configuration
<b>&lt;trunklist&gt;</b>	Range: 1-4

#### 【Example】

Example1: delete list 1-2 configuration of trunklist

```
epon(trunk-1)# delete 1-2
```

#### Show trunk information

<b>Command Grammar</b>	epon# <b>show trunk</b> <trunkid>
<b>Function</b>	Show trunk information
<b>&lt;trunkid&gt;</b>	all : all of trunklist 。 1-4 : Specify the trunk group information

#### 【Example】

Example 1: show all trunklist information

```
epon# show trunk all
TRUNK-1 Member PORTS:
    GE-1
    GE-2
TRUNK-2 Member PORTS:
    GE-3
    GE-4
```

## 5.8 Rmon network monitoring and configuration

clear all ports statistics

<b>Command Grammar</b>	epon# <b>rmon statistics clear-all</b>
<b>Function</b>	Clear all ports statistics

Delete the specified port configuration information

<b>Command Grammar</b>	epon# <b>rmon statistics clear &lt;port&gt;</b>
<b>Function</b>	Delete the specified port configuration information
<b>&lt;port&gt;</b>	Interface, refer to above 2.3

### 【Example】

Example1: Delete the statistics RMON statistics from the GE1 interface

```
epon# rmon statistics clear ge1
```

rmon history configuration

Add rmon history configuration

<b>Command Grammar</b>	epon# <b>rmon history add &lt;port&gt; &lt;entry-number&gt; &lt;buckets-number&gt; &lt;interval&gt; &lt;owner&gt;</b>
<b>Function</b>	Rmon history configuration
<b>&lt;port&gt;</b>	Switch port
<b>&lt;entry-number&gt;</b>	History index , range:1-65535
<b>&lt;buckets-number&gt;</b>	History Record number , range 1-65535
<b>&lt;interval&gt;</b>	The time interval of history

<b>&lt;owner&gt;</b>	Belongs to user
----------------------	-----------------

**【Example】**

Example 1: configure ge1 port rmon 's index is 1, interval is 5, buckets-number is 5, owner is user1

```
epon# rmon history add ge1 1 5 5 user1
```

Delete rmon history configuration

<b>Command Grammar</b>	epon# <b>rmon history del &lt;entry-number&gt;</b>
<b>Function</b>	Delete rmon history configuration
<b>&lt;entry-number&gt;</b>	History index, range:1-65535

rmon event configuration

add rmon event configuration

<b>Command Grammar</b>	epon# <b>rmon event add &lt;entry-number&gt; &lt;description&gt; &lt;type&gt; &lt;owner&gt;</b>
<b>Function</b>	Add rmon event configuration
<b>&lt;entry-number&gt;</b>	Event index , range : 1-65535
<b>&lt;description&gt;</b>	Description information
<b>&lt;type&gt;</b>	<p>none ; no log and no trap</p> <p>log : Record the log information</p> <p>trap : Record the trap information</p> <p>log-trap:Record the log and trap information</p>
<b>&lt;owner &gt;</b>	Belongs to user

**【Example】**

Example 1: add rmon event 100

```
epon# rmon event add 100 rmon-event log yx
```

**delete rmon event**

<b>Command Grammar</b>	epon# <b>rmon event del</b> <i>&lt;entry-number&gt;</i>
<b>Function</b>	Delete rmon event
<b>&lt;entry-number&gt;</b>	Range:1-65535

**【Example】**

Example 1: delete rmon event 100

```
epon# rmon even del 100
```

**rmon alarm configuration**

add rmon alarm configuration

<b>Command Grammar</b>	epon# <b>rmon alarm add</b> <i>&lt;entry-number&gt;</i> <i>&lt;alarm-variable&gt;</i> <i>&lt;interval&gt;</i> <i>&lt;type&gt;</i> <i>&lt;rising-value&gt;</i> <i>&lt;rising-event&gt;</i> <i>&lt;falling-value&gt;</i> <i>&lt;falling-event&gt;</i> <i>&lt;owner&gt;</i>
<b>Function</b>	Add rmon alarm
<b>&lt;entry-number&gt;</b>	Range:1-65535
<b>&lt;alarm-variable&gt;</b>	Oid ,snmp oid
<b>&lt;interval&gt;</b>	Sampling interval
<b>&lt;type &gt;</b>	delta: Refers to two time interval only absolute: Refers to achieve value within a specified period
<b>&lt;rising-value&gt;</b>	Range:2147483648 - +2147483647
<b>&lt;rising-event&gt;</b>	Rising event
<b>&lt;falling-value&gt;</b>	range : 2147483648 - +2147483647
<b>&lt;falling-event&gt;</b>	Falling event
<b>&lt;Owner&gt;</b>	owner

**【Example】**

Example 1: add alarm configuration that oid is 1.3.6.1.2.1.16.1.1.1.4.1 ,*interval* 5s *rising-value* 40000, *Rising-event* is 1, *falling-event* 20000, *falling-event* is 1, *type* is *absolute*

```
epon# rmon alarm add 1 1.3.6.1.2.1.16.1.1.1.4.1 5 absolute 40000 1 20000 1 yx
```

Delete rmon alarm configuration

<b>Command Grammar</b>	epon# <b>rmon alarm del</b> <entry-number>
<b>Function</b>	Delete rmon alarm configuration
<b>&lt;entry-number&gt;</b>	Event index , range:1-65535

**【Example】**

Example1: delete rmon alarm 1

```
epon# rmon alarm del 1
```

Show rmon statistics information

<b>Command Grammar</b>	epon# <b>show rmon statistics</b> <port>
<b>Function</b>	Show rmon port statistics information
<b>&lt;port&gt;</b>	Device port

**【Example】**

Example 1: show rmon statistics ge1

```
epon# show rmon statistics ge1
      GE-1 Statistics:
etherStatsOctets      : 0                , etherStatsPkts      : 0
etherStatsBroadcastPkts : 0                , etherStatsMulticastPkts : 0
etherStatsUndersizePkts : 0                , etherStatsOversizePkts  : 0
etherStatsFragments   : 0                , etherStatsJabbers       : 0
etherStatsCRCAlignErrors : 0                , etherStatsCollisions    : 0
etherStatsDropEvents   : 0
Packets received according to length:
64      : 0                , 65-127      : 0                , 128-255    : 0
```

256-511 : 0	, 512-1023 : 0	, 1024-1518 : 0
-------------	----------------	-----------------

Show rmon history information

<b>Command Grammar</b>	epon# <b>show rmon history &lt;port&gt;</b>
<b>Function</b>	Show rmon history information about port
<b>&lt;port&gt;</b>	Switch port

**【Example】**

Example 1: show rmon history ge1

<pre> show rmon history ge1   HistoryControlEntry 100 owned by yx is VALID   Samples interface      : GE-1   Sampling interval     : 5(sec) with 5 buckets max   Sampled values of record 1 :     dropevents          : 0                , octets                : 0     packets              : 0                , broadcast packets      : 0     multicast packets    : 0                , CRC alignment errors   : 0     undersize packets    : 0                , oversize packets      : 0     fragments            : 0                , jabbers                : 0     collisions           : 0                , utilization             : 0   Sampled values of record 2 :     dropevents          : 0                , octets                : 0     packets              : 0                , broadcast packets      : 0     multicast packets    : 0                , CRC alignment errors   : 0           </pre>	
--	--

show rmon event information

<b>Command Grammar</b>	epon# <b>show rmon event &lt;entry-number&gt;</b>
<b>Function</b>	Show rmon event information
<b>&lt;entry-number&gt;</b>	Event entry-number , 0 means all of event

**【Example】**

Example 1: show rmon event 1 information

```
epon# show rmon event 1
    EventEntry 1 owned by log is VALID
    Description : log
    Will cause log when triggered.
```

**Show rmon eventlog information**

<b>Command Grammar</b>	epon# <b>show rmon eventlog &lt;entry-number&gt;</b>
<b>Function</b>	Show rmon eventlog information
<b>&lt;entry-number&gt;</b>	Event entry-number ,0 means all of eventlog

**【Example】**

Example 1: show rmon eventlog 1

```
epon# show rmon eventlog 1
    logEntry 1 is VALID.
    Generates eventLog 1.1 at 01/01/00 00:31:25
    Description : The alarm formula defined in prialarmEntry 1,
                 less than(or =) 4000 with alarm value 0. Alarm sample type is delta.
    Generates eventLog 1.2 at 01/01/00 03:13:25
    Description : The alarm formula defined in prialarmEntry 2,
                 less than(or =) 20000 with alarm value 0. Alarm sample type is
absolute.
```

**Show rmon alarm information**

<b>Command Grammar</b>	epon# <b>show rmon alarm &lt;entry-number&gt;</b>
<b>Function</b>	Show rmon alarm information
<b>&lt;entry-number&gt;</b>	Alarm entry-number, 0 means all of alarm

**【Example】**

Example 1: show all of alarm of rmon information

```
epon# show rmon alarm 0
    AlarmEntry 1 owned by yx is VALID
    Samples type : absolute
```

Variable formula	: 1.3.6.1.2.1.16.1.1.1.4.15<etherStatsOctets.15>
Sampling interval	: 10(sec)
Rising threshold	: 40000(linked with event 1)
Falling threshold	: 20000(linked with event 1)
When startup enables	: risingOrFallingAlarm
Latest value	: 0

## 5.9 Mirror port configuration management

### Enable/disable mirror fuction

<b>Command Grammar</b>	epon# <b>mirror admin</b> <admin>
<b>Function</b>	Enable/disable mirror function.
<b>&lt;admin&gt;</b>	enable:enable mirror fuction disable: disable mirror fuction

#### 【Example】

Example 1: enable mirror function

```
epon# mirror admin enable
      Set switch mirror enable successful !
```

Example 2: disable mirror function

```
epon# mirror admin disable
      Set switch mirror disable successful !
```

### Configure mirror source\_port

<b>Command Grammar</b>	epon# <b>mirror source_port</b> <port> <type>
<b>Function</b>	Configure mirror source_port
<b>&lt;port&gt;</b>	Switch port

<b>&lt;type&gt;</b>	none: soure_port have no set egress: the packet of out_flow ingress: the packet of in_flow  full : packet both of out_flow and in_flow
---------------------	--

**【Example】**

Example 1: configure ge1 ingress mirror

```
epon# mirror source_port ge1 ingress
      Set switch mirror source port: 1 successful!
```

Example 2: configure soure\_port ge2 egress mirror

```
epon# mirror source_port ge2 egress
      Set switch mirror source port: 2 successful!
```

Example 3, configure ge3 both of out\_packet and in\_packet

```
epon# mirror source_port ge3 full
      Set switch mirror source port: 3 successful!
```

**Configure mirror dest\_port**

<b>Command Grammar</b>	epon# <b>mirror dest_port &lt;port&gt;</b>
<b>Function</b>	Configure mirror dest_port
<b>&lt;port&gt;</b>	Switch port

**【Example】**

Example 1: configure dest\_port ge8

```
epon# mirror dest_port ge8
      Set switch mirror destnation port: 8 successful
```

**Show mirror information**

<b>Command Grammar</b>	epon# <b>show mirror</b>
------------------------	--------------------------

<b>Function</b>	Show mirror information
-----------------	-------------------------

**【Example】**

Example 1: show mirror information

```
epon# show mirror
===== SWITCHC MIRROR CONFIG =====
Admin           : enable
destinationPort : ge8
sourceIngressPorts : ge2 ge3
sourceEgressPorts : ge1 ge3
sourceVlan      :
```

## 5.10 Igmp-snooping monitoring and configuration

### Enable/disable igmp snooping function

<b>Command Grammar</b>	epon# <b>igmp-snooping admin</b> <admin>
<b>Function</b>	Enable/disable igmp snooping function
<b>&lt;admin&gt;</b>	<disable enable>

### Enable/disable igmp snooping fast-leave function

<b>Command Grammar</b>	epon# <b>igmp-snooping fast-leave</b> <admin>
<b>Function</b>	Enable/disable the igmp snooping fast-leave function
<b>&lt;admin&gt;</b>	<disable enable>

### Enable/disable igmp snooping drop-unknown function

<b>Command Grammar</b>	epon# <b>igmp-snooping drop-unknown</b> <admin>
<b>Function</b>	Enable/disable the igmp snooping drop-unknown function
<b>&lt;admin&gt;</b>	<disable enable>

Configure igmp snooping host-aging-time

<b>Command Grammar</b>	epon# <b>igmp-snooping host-aging-time &lt;aging&gt;</b>
<b>Function</b>	configure IGMP Snooping host aging time
<b>&lt;aging&gt;</b>	Aging time:<1~3000>s

Enable/disable igmp snooping querier function

<b>Command Grammar</b>	epon# <b>igmp-snooping querier &lt;admin&gt;</b>
<b>Function</b>	Enable/disable the igmp snooping querier function
<b>&lt;admin&gt;</b>	<disable enable>

Configure igmp snooping querier query interval

<b>Command Grammar</b>	epon# <b>igmp-snooping querier interval &lt;time&gt;</b>
<b>Function</b>	configure igmp query interval
<b>&lt;time&gt;</b>	Query interval : <2~3000>S

Configure igmp snooping querier max-response-time

<b>Command Grammar</b>	epon# <b>igmp-snooping querier max-response-time &lt;time&gt;</b>
<b>Function</b>	configure igmp query max rsp time
<b>&lt;time&gt;</b>	Query interval : <1~25>S

Configure igmp snooping querier source\_ip

<b>Command Grammar</b>	epon# <b>igmp-snooping querier source_ip &lt;source_ip&gt;</b>
------------------------	--

Function	configure igmp query source ip
<source_ip>	<X.X.X.X>

Configure igmp snooping querier router-aging-time

Command Grammar	epon# <b>igmp-snooping router-aging-time &lt;aging&gt;</b>
Function	configure IGMP Snooping router aging time
<aging>	<1~3000>S

add/delet igmp-snooping static port

Command Grammar	epon# <b>igmp-snooping static &lt;operation&gt; &lt;multicast_ip&gt; &lt;vlan&gt; &lt;port&gt;</b>
Function	add or delete static igmp port
<operation>	operation, <add del>
<multicast_ip>	multicast ip address, <x.x.x.x>
<vlan>	vlan id, <1~4095>
<port>	port, <ge1-ge8, pon1-pon8>

### 5.11 clear all learned mac address

Command Grammar	epon# <b>reset mac-address-table</b>
Function	clear all learned mac address

## 6 OLT Management

### 6.1 OLT basic configure management

Enter OLT Management

<b>Command Grammar</b>	epon#olt <oltID>
<b>Function</b>	Enter olt configure mode
<oltID>	Pon ID : 1-8。

#### 【Example】

Example 1: enter olt's first pon configure mode:

```
epon#olt 1
epon(olt-1)#
```

#### epon(olt-1)# ?

acl	- configure olt level acl
admin	- enable or disable this PON
alarm	- enable or disable the message of Alarm!
exit	- exit current mode
mac-address-table	- configure mac-address-table
offline-onu	- add or delete offline onu
onu	- configure onu
optical	- olt optical diagnose
p2p	- configure p2p
packet-filter	- enable or disable packet filter
qinq	- configure QinQ
tpid	- configure olt default tpid
Global command:	
logout	- exit the CLI system
ping	- test that a remote host is reachable
show	- show system configuration
tracert	- trace the route to host

Enable/disable OLT port

<b>Command Grammar</b>	epon(olt-1)# <b>admin</b> <enable   disable>
<b>Function</b>	enable/disable OLT PON port. Default status is enable.
<b>&lt;enable&gt;</b>	Enable OLT PON port 1.
<b>&lt;disable&gt;</b>	Disable OLT PON port 1.

Long light checking Function

Configuration all of onu about long light checking Function

<b>Command Grammar</b>	epon(olt-1)# <b>optical</b> <b>lao</b>
<b>Function</b>	ON optical tests under all the ONU, ONU luminous fault to kick off

Configure the specified onu about long checking function

<b>Command Grammar</b>	epon(olt-1)# <b>optical lol</b> <llid_1> <llid_2> <llid_3>
<b>Function</b>	Light tests specified under the PON ONU, luminous fault to kick off

Configure p2p Function

<b>Command Grammar</b>	epon(olt-1)# <b>p2p</b> <enable   disable>
<b>Function</b>	Enable/disable OLT P2P function, when enable this function, each onu register to this pon can reach each other without uplink switch
<b>&lt;enable&gt;</b>	Enable P2P
<b>&lt;disable&gt;</b>	Disable P2P

Configure out-tpid Function

<b>Command Grammar</b>	epon(olt-1)# <b>tpid out-tpid &lt;tpid&gt;</b>
<b>Function</b>	Configure acl default tpid
<b>&lt;tpid&gt;</b>	0x8100, 0x9100, 0x88a8

## 6.2 OLT ACL Configure

Delete One ACL

<b>Command Grammar</b>	epon(olt-1)# <b>acl &lt;aclid&gt; delete</b>
<b>Function</b>	Delete the aclid's acl
<b>&lt;aclid&gt;</b>	Acl id number : <1-30>

**【Example】**

Example 1: delege olt 1 acl 1:

```
epon(olt-1)# acl 1 delete
Delete ACL 1 successfuly.
```

Delete Current OLT All ACL

<b>Command Grammar</b>	epon(olt-1)# <b>acl delete</b>
<b>Function</b>	Delete current olt's all acl

**【Example】**

Example 1: delete olt1's all acl:

```
epon(olt-1)# acl delete
```

Delete ACL 1 successfully.

Add OLT ACL

<b>Command Grammar</b>	epon(olt-1)#acl <aclid> rule <direction> <precedence> matching "matching string" action "action string"
<b>Function</b>	Add one acl in current olt
<b>&lt;aclid&gt;</b>	value : <1-40>
<b>&lt;direction&gt;</b>	Acl direction : <upstream downstream>
<b>&lt;precedence&gt;</b>	Acl priority : <4-7>
<b>matching string</b>	String to match, format is : "proto=12 dst-port=34". Support the parameters as blow: [dst-mac src-mac] <xx:xx:xx:xx:xx:xx> [tag-num] <0 1 2 more> [top-vid inner-vid] <vid vidL-vidH>, vid:1~4094 [top-8021p inner-8021p] <8021p 8021pL-8021pH>, 8021p:0~7 [eth-type] <0~65535> [dscp] <0~63> [proto] <0~65535> [dst-ip src-ip] <x.x.x.x> [dst-port src-port] <0~65535>
<b>action string</b>	Action string, format as "8021p 7 dscp 63". Support the parameters as blow : [cos] <0~7> [8021p] <0~7> [dscp] <0~63> [fwd] <deny> [rate] cir <> cbs <> pir <> pbs <> [top-vlan   inner-vlan] <pop   push vid <1~4094>   swap vid <1~4094>

【Example】

Example 1: Filtering the upstream frame of destination MAC address is 00:00:00:00:00:02

```
epon(olt-1)# acl 1 r u 4 m "dst-mac=00:00:00:00:00:02" a "fwd deny"
```

Example 2: Filtering the downstream of destination MAC address is 00:00:00:00:00:01, tagged is with external VLAN 4094:

```
epon(olt-1)# acl 2 r d 4 m "dst-mac=00:00:00:00:00:01" a "top-vlan push vid 4094"
```

Example 3: Filtering the upstream frame with vlan 100, tagged it with external VLAN 200:

```
epon(olt-1)# acl 3 r u 4 m "top-vid=100" a "top-vlan push vid 200"
```

Example 4: Filtering the upstream frame of destination IP address is 198.19.1.2, tagged it with external vlan 1000:

```
epon(olt-1)# acl 1 r u 4 m "dst-ip=198.19.1.2" a "top-vlan push vid 1000"
```

Example 5: Filtering the upstream frame of destination port is port-2, tagged it with external vlan 1000:

```
epon(olt-1)# acl 1 r u 4 m "dst-port=2" a "top-vlan push vid 1000"
```

## 6.3 OLT MAC Management

### Configure OLT MACAge Time

<b>Command Grammar</b>	epon(olt-1)# <b>mac-address-table aging-time &lt;aging-time&gt;</b>
<b>Function</b>	Configure current olt's mac age time
<b>&lt;aging-time&gt;</b>	Age time: <0~65535> sec, when configure age time to 0, the mac will not ageout

### 【Example】

Example 1: configure current olt's age time to 200s:

```
epon(olt-1)# mac-address-table aging-time 200
Set slot 1 olt 1 bridge cfg successfully!
```

### Flush current olt's mac table list

<b>Command</b>	epon(olt-1)# <b>mac-address-table flush</b>
----------------	---

<b>Grammar</b>	
<b>Function</b>	Flush current olt's mac table list

**Enable OLT MAC Learning function**

<b>Command Grammar</b>	epon(olt-1)# <b>mac-address-table learning enable</b>
<b>Function</b>	Enable current olt's mac learning function

**Disable OLT MAC Learning Function**

<b>Command Grammar</b>	epon(olt-1)# <b>mac-address-table learning disable</b>
<b>Function</b>	Disable current olt's mac learning function

**Enable MAC Move**

<b>Command Grammar</b>	epon(olt-1)# <b>mac-address-table move enable</b>
<b>Function</b>	Enable mac move

**Disable MAC Move**

<b>Command Grammar</b>	epon(olt-1)# <b>mac-address-table move disable</b>
<b>Function</b>	Disable mac move

## 6.4 OLT Auth

### Disable OLT Auth

<b>Command Grammar</b>	epon# <b>auth disable</b>
<b>Function</b>	Disable auth function, when the olt auth is disable, onu will register automatically.

### Add/Delete/Show Whitelist

#### Add white member

<b>Command Grammar</b>	epon# <b>auth whitelist add &lt;oltID&gt; onu &lt;onu&gt;</b>
<b>Function</b>	Add white member. It will enable the Auth function when first add black member
<b>&lt;oltID&gt;</b>	Pon ID : 1-8
<b>&lt;onu&gt;</b>	ONU-MAC , format : 00-01-02-AB-CD-EF

Example 1: add on witch MAC 00-1b-62-48-5b-09 to whitelist:

```
epon# auth whitelist add 1 onu 00-1b-62-48-5b-09
Add ONU (00-1b-62-48-5b-09) to slot 1 PON 1 whitelist successfully.
```

#### Delete white member

<b>Command Grammar</b>	epon# <b>auth whitelist delete &lt;oltID&gt; &lt;onu&gt;</b>
<b>Function</b>	Delete white member
<b>&lt;oltID&gt;</b>	Pon ID : 1-8
<b>&lt;onu&gt;</b>	ONU-MAC , format : 00-01-02-AB-CD-EF.

【Example】

Example 1: move onu with MAC 00-1b-62-48-5b-09 out from whitelist:

```
epon# auth whitelist delete 1 onu 00-1b-62-48-5b-09
01/01/00 01:47:59 onu-1-1-1 (ctc-30) offline...
Delete ONU (00-1b-62-48-5b-09) from slot 0 PON 1 whitelist successfully.
```

#### Show whitelist

<b>Command Grammar</b>	epon# <b>show auth whitelist</b>
<b>Function</b>	Show whitelist

#### 【Example】

Example 1: show whitelist:

```
epon# show auth whitelist
whitelist onu mac:
pon-1    00-1b-62-48-5b-09
pon-2    00-13-25-00-dd-01
Total is 2.
```

#### Add/Delete/Show Blacklist

##### Add black member

<b>Command Grammar</b>	epon# <b>auth blacklist add &lt;oltID&gt; onu &lt;onu&gt;</b>
<b>Function</b>	Add black member. It will enable the Auth function when first add black member
<b>&lt;oltID&gt;</b>	Pon ID : 1-8
<b>&lt;onu&gt;</b>	ONU-MAC , format : 00-01-02-AB-CD-EF。

#### 【Example】

Example 1: add a black member that mac is 00-1b-62-48-5b-09:

```
epon# auth blacklist add 1 onu 00-1b-62-48-5b-09
01/01/00 02:15:41 onu-1-1-1 (ctc-30) offline...
Add ONU (00-1b-62-48-5b-09) to slot 1 PON 1 blacklist successfully.
```

##### Delete Black Member

<b>Command</b>	epon# <b>auth blacklist delete &lt;oltID&gt; onu &lt;onu&gt;</b>
----------------	--

<b>Grammar</b>	
<b>Function</b>	Delete black member
<b>&lt;oltID&gt;</b>	Pon ID : 1-8
<b>&lt;onu&gt;</b>	ONU-MAC , format : 00-01-02-AB-CD-EF

**【Example】**

Example 1: move onu with MAC 00-1b-62-48-5b-09 out from blacklist:

```
epon# auth blacklist delete 1 onu 00-1b-62-48-5b-09
Delete ONU (00-1b-62-48-5b-09) from slot 1 PON 1 blacklist successfully.
```

**Show blacklist**

<b>Command Grammar</b>	epon# <b>show auth blacklist</b>
<b>Function</b>	Show blacklist

**【Example】**

Example 1: show blacklist:

```
epon# show auth blacklist
blacklist onu mac:
pon-1    00-1b-62-48-5b-09
pon-2    00-13-25-00-dd-01
Total is 2.
```

**OLT hybrid Auth Mode Configure**

**Enable hybrid auth mode**

<b>Command Grammar</b>	epon# <b>auth ctc-mode hybrid</b>
<b>Function</b>	enable hybrid auth mode

**【Example】**

Example 1: enable hybrd auth mode:

```
epon# auth ctc-mode hybrid
Set slot 1 hybrid-auth mode successfully.
```

### OLT LOID Auth Mode Configure

#### Enable loid auth mode

<b>Command Grammar</b>	epon# <b>auth ctc-mode loid</b>
<b>Function</b>	enable LOID auth mode

#### 【Example】

Example 1: enable loid auth mode

epon# auth ctc-mode loid Set slot 1 loid-auth mode successfully.
---

#### Add loid account

<b>Command Grammar</b>	epon# <b>auth ctc-mode add-loid &lt;loid&gt; password &lt;password&gt;</b>
<b>Function</b>	Add LOID account
<b>&lt;loid&gt;</b>	{MAX 24 Chars}
<b>&lt;password&gt;</b>	{MAX 12 Chars}

#### 【Example】

Example 1: add one loid account, name: cdt, password:cdt:

epon# auth ctc-auth loid add cdt password cdt
---

#### Delete loid account

<b>Command Grammar</b>	epon# <b>auth ctc-mode delete-loid &lt;loid&gt; password &lt;password&gt;</b>
<b>Function</b>	Delete LOID account
<b>&lt;loid&gt;</b>	{MAX 24 Chars}
<b>&lt;password&gt;</b>	{MAX 12 Chars}

#### 【Example】

Example 1: delete a loid account:

```
epon(olt-8)# auth ctc-auth loid delete cdt password cdt
```

#### OLT MAC Auth Mode Configure

<b>Command Grammar</b>	epon# <b>auth ctc-mode mac</b>
<b>Function</b>	Enable OLT MAC Auth Mode

## 6.5 Configure packet\_filter of OLT PON port

Packet\_filter of OLT PON port about DHCP function

<b>Command Grammar</b>	epon(olt-1)# <b>packet-filter dhcp &lt;admin&gt;</b>
<b>Function</b>	Filter upstream flow about dhcp servers packet
<b>&lt;admin&gt;</b>	enable:enable packet-filter dhcp disable : disable packet-filter dhcp

#### 【Example】

Example 1: enable dhcp packet\_filter function of olt

```
epon(olt-1)# packet-filter dhcp enable
```

EOC MME packet-filter function

<b>Command Grammar</b>	epon(olt-1)# <b>packet-filter eoc_mme &lt;admin&gt;</b>
<b>Function</b>	EOC MME packet filter
<b>&lt;admin&gt;</b>	enable:enable eoc_mme function disable : disable eoc_mme function

#### 【Example】

Example 1: enable eoc\_mme packet-filter function

```
epon(olt-1)# packet-filter eoc_mme enable
```

Netbios packet-filter function

<b>Command Grammar</b>	epon(olt-1)# <b>packet-filter netbios</b> <admin>
<b>Function</b>	netbios packet filter
<b>&lt;admin&gt;</b>	enable:enable netbios function disable : disable netbios function

**【Example】**

Example 1: enable netbios packet-filter function

epon(olt-1)# packet-filter netbios enable
---

8306\_rtk\_loopback packet-filter function

<b>Command Grammar</b>	epon(olt-1)# <b>packet-filter 8306_rtk_loopback</b> <admin>
<b>Function</b>	8306_rtk_loopback packet filter
<b>&lt;admin&gt;</b>	enable:enable 8306_rtk_loopback function disable : disable 8306_rtk_loopback function

**【Example】**

Example 1: enable 8306\_rtk\_loopback packet-filter function

epon(olt-1)# packet-filter 8306_rtk_loopback enable
---

## 6.6 Configure trap alarm and message alarm function of ONU

Configure message alarm about ONU off the electricity

<b>Command</b>	epon(olt-1)# <b>alarm onuDyingGasp</b> <admin>
----------------	--

<b>Grammar</b>	
<b>Function</b>	ONU off the electricity ,it can print GASP message on the console
<b>&lt;admin&gt;</b>	enable: enable message fuction. disable : disable message function.ο

**【Example】**

Example 1: Configure GASP message function, ONU off the electricity ,it can print GASP message on the console

```
epon(olt-1)# alarm onuDyingGasp enable
```

**Configure trap alarm about ONU off the electricity**

<b>Command Grammar</b>	epon(olt-1)# <b>alarm onuDyingGaspTrap &lt;admin&gt;</b>
<b>Function</b>	ONU off the electricity,it can send trap message about GASP
<b>&lt;admin&gt;</b>	enable:enable send trap of onu Dying Gasp! disable : disable send trap of onu Dying Gasp!ο

**【Example】**

Example 1: after ONU off the electricit , TRAP alarm will be sended to SNMP management software

```
epon(olt-1)# alarm onuDyingGaspTrap enable
```

## 6.7 Configure QinQ function

**Add QinQ configuration**

<b>Command Grammar</b>	epon(olt-1)# <b>qinq enable &lt;qinq-vid&gt; raw-vlan-id-inbound &lt;vlan-list&gt;</b>
<b>Function</b>	Configure QinQ function
<b>&lt;qinq-vid&gt;</b>	Outbound vlan
<b>&lt;vlan-list&gt;</b>	inbound vlan list

**【Example】**

Example 1: setting QinQ configuration that inbound vlan\_list is 50-90 and setting outbound vlan is 100

```
epon(olt-1)# qinq enable 100 raw-vlan-id-inbound 50-90
```

**Delete QinQ configuration**

<b>Command Grammar</b>	epon(olt-1)# <b>qinq disable &lt;qinq-vid&gt;</b>
<b>Function</b>	delete QinQ f configuration
<b>&lt;qinq-vid&gt;</b>	Outbond vlan

**【Example】**

Example 1: delete QinQ configuration that and setting outbound vlan is 100

```
epon(olt-1)# qinq disable 100
```

## 6.8 Configure offline ONU

Add offline ONU and bind the template with ONU

<b>Command Grammar</b>	epon# <b>offline-onu add &lt;onuID&gt; &lt;onuMAC&gt; &lt;templateID&gt;</b>
<b>Function</b>	Add offline ONU and bind the template with ONU. Template just can only bind the offline ONU that no-bind with any template before. If offline ONU have binded template before, you need to delet the template.
<b>&lt;onuID&gt;</b>	onuID will be used when ONU online
<b>&lt;onuMAC&gt;</b>	ONU mac address
<b>&lt;templateID&gt;</b>	When ONU online in the first time, OLT will set the ONU configuration by template

delete offline ONU

<b>Command Grammar</b>	epon(olt-1)# <b>offline-onu del &lt;onuID&gt;</b>
<b>Function</b>	delete offline ONU. It must to delete offline ONU in OLT list before binding a new template with ONU
<b>&lt;onuID&gt;</b>	Outbond vlan

## 6.9 Show olt configuration information

### Show olt attribute information

<b>Command Grammar</b>	epon# <b>show olt &lt;oltID&gt; attribute</b>
<b>Function</b>	Show olt attribute information
<b>&lt;oltID&gt;</b>	Pon port ID , range:1-8。

**【Example】**

Example1: show olt attribute information:

<pre>epon(olt-1)# show olt 1 attribute Slot 1 olt 1 attributes:   Fw Version       : 4.2.7.58   Cfg Version      : 1.7.3.14   Loader Version   : cefabeba   LLID Support     : 64   LLID Registered  : 3   LLID Online      : 3</pre>	
---	--

### Show olt optical information

<b>Command Grammar</b>	epon# <b>show olt &lt;oltID&gt; optical</b>
------------------------	---

<b>Function</b>	Show olt optical information.
<b>&lt;oltID&gt;</b>	Pon port ID , range:1-8

**【Example】**

Example1: show olt optical information

<pre>epon# show olt 1 optical Slot 1 olt 1 optical informations: Temperature      : 45.28 (C) Voltage          : 2.30 (V) Current          : 1.23 (mA) Tx Power         : -6.45 (dBm) Rx Power         : 0.00 (dBm)</pre>	
---	--

**Show olt online-onu information**

<b>Command Grammar</b>	epon# <b>show olt &lt;oltID&gt; online-onu</b>
<b>Function</b>	Show olt online-onu information.
<b>&lt;oltID&gt;</b>	Pon port ID , range:1-8.

**【Example】**

Example1: show olt online-onu information:

<pre>epon(olt-1)# show olt 1 online-onu</pre>				
onuld	mac	type	CTC-Ver	distance
onu-03	e0:67:b3:00:00:06	FD104HC	30	6m
onu-10	00:a1:02:01:30:d8	FD111H	20	6m
onu-11	e0:67:b3:07:d4:78	FD104HL	21	6m

**Show olt acl information**

<b>Command Grammar</b>	epon# <b>show olt &lt;oltID&gt; acl</b>
------------------------	---

<b>Function</b>	Show olt acl information。
<b>&lt;oltID&gt;</b>	Pon port ID , range:1-8。

**【Example】**

Example1: show olt acl information:

```
epon(olt-1)# show olt 1 acl
===== SLOT 1 OLT 1 ACL 1 =====
Direction      : upstream
Precedence     : 4
Matching string : "dscp=63 "
Action string   : "dscp=0 "
```

**Show olt auth mode information**

<b>Command Grammar</b>	epon# <b>show auth mode</b>
<b>Function</b>	Show olt auth mode information

**【Example】**

Example1: show olt auth mode information:

```
epon# show auth mode
Slot 1 current auth-mode is disable.
```

**Show olt port staus information**

<b>Command Grammar</b>	epon(olt-1)# <b>show olt &lt;oltId&gt;admin</b>
<b>Function</b>	Show olt port staus information
<b>&lt;oltId&gt;</b>	Pon port ID , range:1-8

**【Example】**

Example1:show olt port staus

```
epon(olt-1)# show olt 1 admin
```

Slot 1 olt 1 admin status: Enable.

### Show olt alarm information

<b>Command Grammar</b>	epon(olt-1)# <b>show olt &lt;oltid&gt; alarm</b>
<b>Function</b>	Show olt alarm information
<b>&lt;oltid&gt;</b>	Pon port ID , range:1-8。

**【Example】**

Example1: show olt ararm information

```
epon# show olt 1 alarm
Onu Power Alarm          : Disable
Onu Power Alarm Trap     : Disable
```

### Show olt learning-mac information

<b>Command Grammar</b>	epon(olt-1)# <b>show olt &lt;oltid&gt; mac-address-table &lt;onu&gt;</b>
<b>Function</b>	Show olt learning-mac information
<b>&lt;oltid&gt;</b>	Pon port ID , range:1-8。
<b>&lt;onu&gt;</b>	<b>Don't pick up parameters:show mac address of all port</b> With parameters :show mac address of specified port

**【Example】**

Example1: show mac address of all port .

```
epon# show olt 5 mac-address-table
===== SLOT 1 OLT 5 MAC Address Table =====
Index   MAC Address           ONU   VID   Aging(s)
  1     3C:97:0E:FD:0C:69     02    0     3234
=====
                    1 MAC Address Table Entries Found
```

### Show olt p2p information

<b>Command Grammar</b>	epon# <b>show olt &lt;oltid&gt; p2p</b>
<b>Function</b>	Pon port ID , range:1-8。
<b>&lt;oltid&gt;</b>	Pon port ID , range:1-8。 。

**【Example】**

Example1: show olt p2p information

```
epon# show olt 1 p2p
Slot 1 olt 1 p2p status: Enable
```

### Show olt packet-filter information

<b>Command Grammar</b>	epon# <b>show olt &lt;oltid&gt; packet-filter &lt;type&gt;</b>
<b>Function</b>	Show olt packet-filter information
<b>&lt;oltid&gt;</b>	Pon port ID , range:1-8。

**【Example】**

Example1: show olt packet-filter information

```
epon# show olt 1 packet-filter dhcp
===== SLOT 1 OLT 1 Packet Filter=====
DHCP : enable
```

### Show olt tpid out-tpid

<b>Command Grammar</b>	epon# <b>show olt &lt;oltid&gt; tpid out-tpid</b>
<b>Function</b>	Show olt tpid out-tpid
<b>&lt;oltid&gt;</b>	Pon port ID , range:1-8。

## 7 ONU Management

### 7.1 Show ONU Basic Information

#### Show Online ONU

<b>Command Grammar</b>	epon# <b>show olt 7 online-onu</b>
<b>Function</b>	Use this command in any mode can check to the specified PON port of the Online-ONU.

#### 【Example】

Example1: show online-onu

```
epon# show olt 7 online-onu
```

onuld	mac	type	CTC-Ver	distance
onu-12	e0:67:b3:00:00:04	FD112GM	30	6m
onu-13	e0:67:b3:00:00:14	FD114GM	30	6m
onu-14	e0:67:b3:07:14:04	FD101HC	30	6m
onu-23	e0:67:b3:07:18:02	FD104HC	30	6m

#### Show ONU Version

<b>Command Grammar</b>	epon# <b>show olt 7 onu &lt;onuid&gt; ctc sn</b>
<b>Function</b>	Show online-onu version.
<b>&lt;onuid&gt;</b>	Designate online-onu onuid with value range from 1-64.

#### 【Example】

Example1: show onu version

```
epon# show olt 7 onu 12 ctc sn
```

onu model	: 0x3131326d
onu base-MAC	: e0-67-b3-00-00-04
onu hardware Ver:	V1.0
onu software Ver:	V2.0.2

Show ONU Capabilities

<b>Command Grammar</b>	epon# <b>show olt 7 onu &lt;onuid&gt; ctc capabilities</b>
<b>Function</b>	Show online-onu capabilities.
<b>&lt;onuid&gt;</b>	Designate online-onu onuid with value range from 1-64.

Show ONU Optical

<b>Command Grammar</b>	epon# <b>show olt 7 onu &lt;onuid&gt; ctc optical</b>
<b>Function</b>	Show online-onu optical.
<b>&lt;onuid&gt;</b>	Designate online-onu onuid with value range from 1-64.

## 7.2 ONU Management Mode

<b>Command Grammar</b>	epon(olt-7)# <b>onu &lt;onuid&gt;</b>
<b>Function</b>	enter ONU management mode to configure ONU.
<b>&lt;onuid&gt;</b>	designate onuid with valid value 1-64.

**【Example】**

Example1: enter onu 1 managemnet mode:

epon(olt-7)#onu 1 epon(olt-7/onu-1)#
---

**epon(olt-7/onu-1)#** input "?" to show the following directory:

- catv** - enable or disable CATV
- ctc** - CTC configuration mode
- default** - restore to default setting
- deregister** - deregister current onu
- exit** - exit current mode
- info** - onu device user information
- link** - enter link configure mode

- pon - configure onu PON
- pots - configure VOIP port
- protect - enable or disable to isolate the uni(s)
- save - save current ONU configuration
- uni - configure UNI
- Global command:
- logout - exit the CLI system
- ping - test that a remote host is reachable
- show - show system configuration
- tracert - trace the route to host

### 7.3 ONU Basic Operation and Management

#### Reboot ONU

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>ctc reboot</b>
<b>Function</b>	reboot ONU.

#### Deregister ONU

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>deregister</b>
<b>Function</b>	deregister ONU.

#### Configure ONU FEC

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>ctc fec &lt;oper&gt;</b>
<b>Function</b>	Configure ONU fec.
<b>&lt;oper&gt;</b>	value <enable/disable> enable : enable ONU FEC function disable : disable ONU FEC function

### Restore ONU to Default Settings

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>default</b>
<b>Function</b>	restore ONU to default settings.

#### 【Notes】

This command will delete all configuration of the ONU, restored to the factory default configuration, and will automatically restart ONU.

### Configure ONU Sys Management IP

<b>Command Grammar</b>	epon(olt-2/onu-4)# <b>ctc mng-ip &lt;ip&gt; &lt;netmask&gt; &lt;gateway&gt; &lt;CVLAN&gt; &lt;SVLAN&gt;</b>
<b>Function</b>	configure onu sys management ip.
<b>Parameters</b>	<p>&lt;ip&gt; - example: 192.168.12.122</p> <p>&lt;netmask&gt; - example: 255.255.255.0</p> <p>&lt;gateway&gt; - example: 192.168.0.1</p> <p>&lt;CVLAN&gt; - 0-4094</p> <p>&lt;SVLAN&gt; - 0-4094</p>

### Save Current ONU Configuration

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>save</b>
<b>Function</b>	Save current onu configuration.

### upgrade ONU software

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>ctc upgrade &lt;tftp-server&gt; &lt;image-file&gt;</b>
<b>Function</b>	Upgrade ONU software versions
<b>&lt;tftp-server&gt;</b>	Tftp server Ip

<code>&lt;image-file&gt;</code>	File name
---------------------------------	-----------

## 7.4 Configure ONU IGMP

### ONU IGMP Global Configuration

#### clear-all-multicast-ctrl-group

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>ctc igmp clear-all-multicast-ctrl-group</b>
<b>Function</b>	clear all multicast ctrl group.

#### Configure ONU IGMP fast-leave

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>ctc igmp fast-leave &lt;oper&gt;</b>
<b>Function</b>	Configure ONU igmp fast-leave function.
<b>&lt;oper&gt;</b>	value <enable/disable> enable : enable igmp fast-leave disable : disable igmp fast-leave

#### Configure ONU IGMP Mode

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>ctc igmp mode &lt; mode &gt;</b>
<b>Function</b>	configure ONU igmp mode.
<b>&lt;mode&gt;</b>	valid value : < gmp-mld-snooping controllable-igmp-mld igmp-snooping-only controllable-igmp pass-through> Some of the parameters may not support, the default is gmp-mld-snooping.

Configure ONU UNI Port IGMP

**configure igmp group**

<b>Command Grammar</b>	epon(olt-5/onu-7/uni-1)# <b>ctc igmp max-group &lt;groups&gt;</b>
<b>Function</b>	configure igmp group.
<b>&lt;groups&gt;</b>	designate number of igmp groups with valid value <0-255>.

**Configure igmp vlan**

<b>Command Grammar</b>	epon(olt-5/onu-7/uni-1)# <b>ctc igmp vlan-list &lt;vlanTagList&gt;</b>
<b>Function</b>	configure igmp vlan.
<b>&lt;vlanTagList&gt;</b>	valid value : 1-4094 , or null

**Configure vlan tag**

<b>Command Grammar</b>	epon(olt-5/onu-7/uni-1)# <b>ctc igmp tag-handle &lt;oper&gt;</b>
<b>Function</b>	configure igmp vlan tag or untag.
<b>&lt; Parameters &gt;</b>	value : not-strip-vlan-tag strip-vlan-tag switch

## 7.5 Enter ONU Link Mode

**enter ONU link mode**

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>link &lt;linkID&gt;</b>
<b>Function</b>	enter ONU link mode.

<b>&lt;linkID&gt;</b>	valid value : <1-8>
-----------------------	---------------------

Configure ONU Link Upstream SLA

<b>Command Grammar</b>	epon(olt-7/onu-1/link-1)# <b>sla upstream</b> <fix> <cir> <pir> <weight>
<b>Function</b>	configure ONU LINK upstream speed limit.
<b>&lt;fix&gt;</b>	valid value : <0~950000>Kbps
<b>&lt;cir&gt;</b>	valid value : <1~950000>Kbps
<b>&lt;pir&gt;</b>	valid value : <512~1000000>Kbps
<b>&lt;weight&gt;</b>	valid value : <1~20>

Configure ONU Link Downstream SLA

<b>Command Grammar</b>	epon(olt-7/onu-1/link-1)# <b>sla downstream</b> <pir> <burst> <weight>
<b>Function</b>	configure ONU LINK downstream speed limit.
<b>&lt;pir&gt;</b>	valid value : <512~1000000>Kbps
<b>&lt;burst&gt;</b>	valid value : <128~16383>*256Byte
<b>&lt;weight&gt;</b>	valid value : <0~15>

Configure ONU Link Acl

<b>Command Grammar</b>	epon(olt-7/onu-1/link-1)# <b>acl</b> <Aclid> rule <direction> <precedence> <b>matching</b> <matching string> action <action string>
------------------------	---

<b>Function</b>	configure ONU link acl rule.
<b>&lt;aclid&gt;</b>	valid value : 1-8
<b>&lt;direction&gt;</b>	parameters : upstream downstream
<b>&lt;precedence&gt;</b>	valid value : <4-7>
<b>&lt;matching string&gt;</b>	<p>parameters :</p> <p>[dst-mac] &lt;xx:xx:xx:xx:xx:xx&gt;.  [src-mac] &lt;xx:xx:xx:xx:xx:xx&gt;.  [tag-num] &lt;0   1   2   more&gt;.  [top-vid] &lt;vid   vidL-vidH&gt;, vid:1~4094.  [inner-vid] &lt;vid   vidL-vidH&gt;, vid:1~4094.  [top-8021p] &lt;8021p   8021pL-8021pH&gt;, 8021p:0~7.  [inner-8021p] &lt;8021p   8021pL-8021pH&gt;, 8021p:0~7.  [eth-type] &lt;0~65535&gt;.  [dscp] &lt;0~63&gt;.  [proto] &lt;0~65535&gt;.  [dst-ip] &lt;x.x.x.x&gt;.  [src-ip] &lt;x.x.x.x&gt;.  [dst-port] &lt;0~65535&gt;.  [src-port] &lt;0~65535&gt;.</p>
<b>&lt;actionstring&gt;</b>	<p>parameters :</p> <p>[cos] &lt;0~7&gt;.  [8021p] &lt;0~7&gt;.  [dscp] &lt;0~63&gt;.  [fwd] deny.  [rate] cir &lt;cir&gt; cbs &lt;cbs&gt; pir &lt;pir&gt; pbs &lt;pbs&gt;,  cir, pir: &lt;0~1000000&gt;Kpbs. cbs, pbs: &lt;0~4095&gt;KB  [top-vlan] pop.  [top-vlan] push vid &lt;1~4094&gt;.  [top-vlan] swap vid &lt;1~4094&gt;.  [inner-vlan] pop.  [inner-vlan] push vid &lt;1~4094&gt;.  [inner-vlan] swap vid &lt;1~4094&gt;.</p>

【Example】

Example1: configure ONU link acl 1 rule

```
epon(olt-7/onu-1/link-1)#acl 1 rule upstream 4 matching dst-mac=00:11:11:11:11:11 action fwd
=deny
```

## 7.6 enable/disable ONU port isolate function

Command Grammar	epon(olt-7/onu-1)# <b>protect</b> <i>&lt;admin&gt;</i>
Function	Enable/disable ONU port isolate function.
<i>&lt; admin&gt;</i>	<enable   disable>

## 7.7 Configure ONU pon statistics

Command Grammar	epon(olt-7/onu-1)# <b>pon ctc statistics</b> <i>&lt;monitoring-status&gt;</i> <i>&lt;monitoring-period&gt;</i>
Function	Configure ONU pon statistics
<i>&lt; monitoring-status&gt;</i>	<disable   enable>
<i>&lt; monitoring-period&gt;</i>	1-4294967295 second

## 7.8 Enable/disable ONU CATV port

Command Grammar	epon(olt-7/onu-1)# <b>catv</b> <i>&lt;state&gt;</i>
Function	Enable/disable ONU CATV port
<i>&lt; admin&gt;</i>	<enable   disable>

## 7.9 Enter ONU Uni Port Management Mode

Command Grammar	epon(olt-7/onu-1)# <b>uni</b> <i>&lt;uni&gt;</i>
-----------------	--

<b>Function</b>	enter the ONU uniport management mode to configure the ONU uni parameter.
<b>&lt; uni&gt;</b>	designate ONU uni port with valid value <1-24>.

**【Example】**

Example1: enter the ONU uni port 1 management mode:

```
epon(olt-7/onu-1)#uni 1
epon(olt-7/onu-1/uni-1)#
```

**epon(olt-7/onu-1/uni-1)# ?** input "?" to show the following directory:

- ctc** - ctc management mode
- exit** - exit current mode
- Global command:**
- debug** - debug
- disable** - entry guest level
- logout** - exit the CLI system
- show** - show system configuration

Configure ONU Uni Port Parameters

**Show ONU Uni port information**

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>show olt 7 onu 1 uni 1 ctc attribute</b>
<b>Function</b>	Using the command in any mode,can display the current ONU uni port parameter properties.

**【Example】**

Example1: show ONU uni port 1 information:

```
epon(olt-7/onu-1/uni-1)> show olt 7 onu 1 uni 1 ctc attribute
                ONU-7/1 UNI-1 Attibute
Link-State      : linkUp
Admin-State     : Enable
FlowCtrl-State  : Enable
AutoNego-State  : Enable
Ingress-Rate    : 0 kps
Egress-Rate     : 0 kps
```

**configure ONU Uni port storm control**

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>storm-ctrl</b> <type> <admin> <rate>
<b>Function</b>	Configure ONU Uni port storm control
<b>&lt;type&gt;</b>	<none   broadcast   multicast   broadcast-multicast   unknown-uc   broadcast-unknown-uc   multicast-unknown-uc   bc-mc-unknown-uc>
<b>&lt;admin&gt;</b>	<enable   disable>
<b>&lt;rate&gt;</b>	[0-16777215], unit(bps)

#### enable or disable ONU Uni port

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc admin</b> <oper>
<b>Function</b>	enable or disable ONU current port
<b>&lt;oper&gt;</b>	value <enable   disable> : enable : enable ONU port disable : disable ONU port

#### configure ONU Uni port auto-nego

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc auto-nego</b> <oper>
<b>Function</b>	enable or disable ONU uni port auto-nego
<b>&lt;oper&gt;</b>	value <enable   disable> : enable: enable ONU uni port auto-nego disable: disable ONU uni port auto-nego

#### configure ONU Uni port flow-ctrl

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc flow-ctrl</b> <oper>
<b>Function</b>	enable or disable ONU uni port flow-ctrl.
<b>&lt;oper&gt;</b>	value <enable   disable> :

	<p>enable : enable ONU uni port flow-ctrl</p> <p>disable : disable ONU uni port flow-ctrl</p>
--	---

#### Configure ONU Uni port Egress Rate

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc egress-policing &lt; max-rate&gt;</b>
<b>Function</b>	configure ONU uni port egress rate.
<b>&lt; max-rate&gt;</b>	designate max traffic ouput rate with value<0~1000000>kbps , a value of 0 indicates no speed limit.

#### Configure ONU Uni port ingress Rate

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc ingress-policing &lt; max-rate&gt;</b>
<b>Function</b>	configure ONU uni port ingress rate.
<b>&lt; max-rate&gt;</b>	designate max traffic input rate with value<0~1000000>kbps , a value of 0 indicates no speed limit

#### Configure ONU Uni port MAC agine-time

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc mac-aging-time &lt;timer&gt;</b>
<b>Function</b>	configure ONU uni port MAC aging-time.
<b>&lt; timer &gt;</b>	designate the MACs aging-time with value 0-4294967295 , a value of 0 indicates the MAC address is not aging.

#### configure ONU Uni port statistics

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc statistics &lt;monitoring-status&gt; &lt;monitoring-period&gt;</b>
<b>Function</b>	Configure statistics monitoring status and period.
<b>&lt;monitoring-sta</b>	designate statistics monitoring status with value <enable   disable>

<b>tus&gt;</b>	enable: enable statistics monitoring disable: disable statistics monitoring
<b>&lt;monitoring-period&gt;</b>	designate statistics monitoring status with value <1-4294967295>second

Configure ONU Uni Port Vlan Mode

Configure ONU Uni port VLAN aggregation mode (Our company does not support ONU)

<b>Command Grammar</b>	epon(olt-7/onu-1/uni-1)# <b>ctc vlan-mode aggregation &lt;tpid&gt; &lt;cos&gt; &lt;default-vlan&gt; aggregation-list (Matching)</b>
<b>Function</b>	configure the ONU uni port VLAN for aggregation mode.
<b>&lt;tpid &gt;</b>	designate vlan tpid , the default is 0x8100.
<b>&lt;cos&gt;</b>	designate vlan cos , valid value <0-7>.
<b>&lt;vlan&gt;</b>	designate ONU uni port aggregation mode vlan , valid value <1-4094> , the default is 1.
<b>Aggregation-list</b>	designate ONU uni port aggregation vlan list , maximum support 4.

【Example】

Example1: For the ONU uni port configuration VLAN mode for aggregation, 100 for default-vlan

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode aggregation 0x8100 7 100
```

Configure ONU Uni port VLAN tag mode

<b>Command Grammar</b>	epon(olt-7/onu-1/uni-1)# <b>ctc vlan-mode tag &lt;tpid&gt; &lt;cos&gt; &lt;vlan&gt;</b>
<b>Function</b>	configure the ONU uni port VLAN for tag mode.
<b>&lt;tpid &gt;</b>	designate vlan tpid , the default is 0x8100.

<b>&lt;cos&gt;</b>	designate vlan cos , valid value <0-7>.
<b>&lt;vlan&gt;</b>	designate ONU uni port tag mode vlan , valid value <1-4094> , the default is 1

**【Example】**

Example1: For the ONU uni port configuration VLAN mode for tag, 100 for VLAN

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode tag 0x8100 7 100
```

**Configure ONU Uni port VLAN trunk mode**

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc vlan-mode trunk &lt;tpid&gt; &lt;cos&gt; &lt;default-vlan&gt; vlan-list (Matching)</b>
<b>Function</b>	configure the ONU uni port VLAN for trunk mode.
<b>&lt;tpid &gt;</b>	designate vlan tpid , the default is 0x8100
<b>&lt;cos&gt;</b>	designate vlan cos , valid value <0-7>.
<b>&lt;vlan&gt;</b>	designate ONU uni port trunk mode vlan , valid value <1-4094> , the default is 1.
<b>Vlan-list</b>	Optional configuration, configuration can be through the VLAN list, the maximum support 60 VLAN number.

**【Example】**

Example1: For the ONU uni port configuration VLAN model for trunk, 100 for default-vlan, 200,2050 for vlan-list

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode trunk 0x8100 7 100 vlan-list 200,2050
```

**Configure ONU Uni port VLAN translation mode**

<b>Command Gamma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc vlan-mode translation &lt;tpid&gt; &lt;cos&gt; &lt;default-vlan&gt; translate-list</b>
<b>Function</b>	configure the ONU uni port VLAN for translation mode.
<b>&lt;tpid &gt;</b>	designate vlan tpid , the default is 0x8100.

<b>&lt;cos&gt;</b>	designate vlan cos , valid value <0-7>.
<b>&lt;vlan&gt;</b>	designate ONU uni port translation mode vlan , valid value <1-4094> , the default is 1.
<b>translation-list</b>	The specified uni port list of VLAN, maximum support 8 conversion list.

**【Example】**

Example1: For the ONU uni port configuration mode of VLAN translation, default-vlan 100, translation-list 200-300 300-400

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode trunk 0x8100 7 100 translation-list 200-300,300-400
```

**Configure ONU Uni port VLAN transparent mode**

<b>Command Gramma</b>	epon(olt-7/onu-1/uni-1)# <b>ctc vlan-mode transparent</b>
<b>Function</b>	configure the ONU uni port VLAN for transparent mode.

**【Example】**

Example1: For the ONU uni port configuration VLAN mode for transparent

```
epon(olt-7/onu-1/uni-1)> ctc vlan-mode transparent
```

**【Description】**

Different VLAN mode to deal with different frame types.

Transparent Mode:

Frame Direction	Frame Type	Approach
Upstream	Untag frame	Untag frame does not make any change, forwarding.
	Tag frame	Tag frame does not make any changes (original VLAN TAG), forwarding.
Downstream	Untag frame	Untag frame does not make any change, forwarding.
	Tag frame	Tag frame does not make any changes (original VLAN TAG), forwarding.

Tag Mode:

Frame Direction	Frame Type	Approach
-----------------	------------	----------

Upstream	Untag frame	Switch frames on port's default VLAN(VPID),forwarding.
	Tag frame	Discard the frame
Downstream	Untag frame	Discard the frame
	Tag frame	If the Downstream Tag frame VLAN ID equal to the configuration of the VID, According to VID forwarded to the appropriate UNI port, and stripping the tag; If the downstream Tag frame VLAN ID is not equal to the configuration of the VID, then the frame is discarded

Translation Mode:

Frame Direction	Frame Type	Approach
Upstream	Untag frame	Switch frames on port's default VLAN(VPID),forwarding.
	Tag frame	Tag frame VLAN ID in the configuration of the VID conversion list, forwarding; Tag frame VLAN ID is not in the configuration of the VID conversion list, frame discarding.
Downstream	Untag frame	Discard the frame
	Tag frame	Tag frame VLAN ID corresponds to the entry in the corresponding port of the VLAN Translation list (equal to the input VID configuration), According to the table to convert the VID to a corresponding VID (VID output), forwarding; If the VLAN ID in the corresponding port of the VLAN Translation list without a corresponding entry, discarding; If the TAG frame with VLAN ID as the "default VLAN", after the VLAN label forwarding is stripped down;

Trunk Mode:

Frame Direction	Frame Type	Approach
Upstream	Untag frame	Switch frames on port's default VLAN(VPID),forwarding.
	Tag frame	Tag frame VLAN ID belongs to the port "allowed by VLAN", forwarding; Tag frame VLAN ID does not belong to the port of the "permitted by VLAN," is discarded
Downstream	Untag frame	Discard the frame
	Tag frame	Tag frame VLAN ID belongs to the port "allowed by VLAN", forwarding; Tag frame VLAN ID belongs to the port "allowed by VLAN", forwarding; If the Tag frame VLAN does not belong to the port of the "permitted by VLAN," is discarded.

Show ONU Uni port vlan configuration

<b>Command Gramma</b>	epon(olt-7/onu-1/uni-1)#show olt 7 onu 1 uni 1 ctc vlan-mode
<b>Function</b>	Show ONU uni port vlan configuration

**【Example】**

Example1: Show ONU uni port vlan configuration:

```
epon(olt-7/onu-1/uni-1)> show olt 7 onu 1 uni 1 ctc vlan-mode
VLAN      MODE: translate
Default VLAN: TPID-0x8100, COS-6, VID-3
Traslate List:
           2000<->3000
           2050<->3050
```

## 7.10 Enter ONU VOIP Port Management Mode

<b>Command Grammar</b>	epon(olt-7/onu-1)# <b>pots &lt;pots&gt;</b>
<b>Function</b>	enter the ONU voip port management mode to configure the ONU uni parameter.
<b>&lt; pots&gt;</b>	designate ONU voip port with valid value <1-2>.

**【Example】**

Example1: enter the ONU VOIP port 1 management mode:

```
epon(olt-7/onu-1)#pots 1
epon(olt-7/onu-1/pots-1)#
```

**epon(olt-7/onu-1/pots-1)# ?** input "?" to show the following directory:

- ctc** - ctc management mode
- exit** - exit current mode
- Global command:**
- logout** - exit the CLI system
- ping** - test that a remote host is reachable
- show** - show system configuration
- tracert** - trace the route to host

Configure ONU VOIP Port Parameters

Show ONU VOIP port work status

<b>Command Gramma</b>	epon(olt-7/onu-1/pots-1)# <b>show olt 7 onu 1 pot 1 ctc status</b>
<b>Function</b>	Using the command in any mode,can display the current ONU VOIP port parameter properties.

【Example】

Example1: show ONU VOIP port 1 work status

epon(olt-7/onu-1/pots-1)# show olt 7 onu 1 pot 1 ctc status	
	ONU-7/1 POTS-1 Attibute
Admin-State	: Disable
IADPots-State	: Registering
IADPots-ServiceState	: Endlocal
IADPots-CodeMode	: G711A

Enable/disable the ONU VOIP port

<b>Command Gramma</b>	epon(olt-7/onu-1/pots-1)# <b>ctc admin &lt;admin&gt;</b>
<b>Function</b>	Enable or disable the onu voip port
<b>&lt; admin&gt;</b>	<p>&lt;enable   disable&gt; :</p> <p>enable    open the voip port</p> <p>disable   close the voip port</p>

【Example】

Example1: enable the ONU1 VOIP port 1

epon(olt-7/onu-1/pots-1)# ctc admin enable
--

Configure the VOIP port H.248 user TID

<b>Command</b>	epon(olt-7/onu-1/pots-1)# <b>ctc h248-user-tid &lt;User-TID&gt;</b>
----------------	---

<b>Gamma</b>	
<b>Function</b>	Configure the VOIP port h.248 user TID
<b>&lt; User-TID&gt;</b>	String, length :32 chars

**【Example】**

Example1: configure ONU 1 VOIP 1 H.248 user TID is 100

```
epon(olt-7/onu-1/pots-1)# ctc h248-user-tid 100
```

**Configure the VOIP port sip user parameter**

<b>Command Gamma</b>	epon(olt-7/onu-1/pots-1)# <b>ctc sip-user-config &lt;user-account&gt; &lt;user-name&gt; &lt;user-password&gt;</b>
<b>Function</b>	Configure ONU voip port SIPuser parameter
<b>&lt; user-account&gt;</b>	The number of user , string length:16 chars
<b>&lt;user-name&gt;</b>	User name , string length:32 chars
<b>&lt;user-password&gt;</b>	User password , string length:32 chars

**【Example】**

Example1: add a user in onu 1 voip port 1, the name is 222, the password is 222

```
epon(olt-7/onu-1/pots-1)# ctc sip-user-config 1 222 222
```

## 8 Equipment diagnosis information

### 8.1 Ping command test

<b>Command Grammar</b>	epon# <b>ping &lt;host&gt;</b>
----------------------------	--------------------------------

<b>Function</b>	Test equipment and network can reach the target host
<b>&lt;host&gt;</b>	Host ip address

**【Example】**

Example1: device ip: 192.168.1.100, host ip 192.168.1.234 host and device are The direct connection

```
epon(GE-1)# ping 192.168.1.234
PING 192.168.1.234 (192.168.1.234): 56 data bytes
64 bytes from 192.168.1.234: seq=0 ttl=64 time=8.559 ms
64 bytes from 192.168.1.234: seq=1 ttl=64 time=0.746 ms
64 bytes from 192.168.1.234: seq=2 ttl=64 time=0.561 ms
64 bytes from 192.168.1.234: seq=3 ttl=64 time=0.650 ms
```

## 8.2 Tracert checking the device the path of the host

<b>Command Grammar</b>	epon# <b>tracert &lt;host&gt;</b>
<b>Function</b>	Check the device the path of the host
<b>&lt;host&gt;</b>	Host ip address

**【Example】**

Example1: checking the device the path of the host。

```
epon(GE-1)# tracert 192.168.1.234
traceroute to 192.168.1.234 (192.168.1.234), 10 hops max, 38 byte packets
 1 192.168.1.234 (192.168.1.234) 4.698 ms 0.060 ms 0.069 ms
```

## Including Remarks

**Thanks to the use of the WODAPLUG Products!**